TUSCOLA COUNTY ROAD COMMISSION – 1733 S. MERTZ ROAD, CARO, MI 48723 PAGE **1** OF **4** 

# TUSCOLA COUNTY ROAD COMMISSION REQUEST FOR PROPOSAL PROFESSIONAL ENGINEERING AND BRIDGE DESIGN SERVICES Dutcher over Northwest Drain Bridge Design Letting Date: February 29, 2024 8:30am Addendum 001

Consultant:	
Address:	
Sign & Print:	
Data	
Phone & Fax:	
Email:	
<u>Bridge Design</u> : Structure No 10	471, Dutcher Road over the Northwest Drain, Gilford Township
Cost for Innovat	tive Design Package: \$
Proposed Innov	ative Process:
Estimated Const	truction Cost: \$
Cost for 2027 M	DOT Local Bridge Funding Application \$

Qualification statements/quote proposals shall be received no later than 8:45 AM Thursday February 1<sup>st</sup>, 2024, to Brent Dankert P.E., Acting County Highway Engineer. Late proposals <u>will</u> <u>not</u> be considered. See notice to bidder. Proposals must be delivered in a plainly marked and seal envelope. No electronic bids will be accepted.

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## **Proposal Intent**

The Tuscola County Road Commission seeks to hire a qualified, professional engineering team to provide design services, any necessary environmental permitting, and preparation of plans, specifications, and preliminary estimates of cost for the innovative design associated to Structure No. 10471, Dutcher Road over the Northwest Drain. The TCRC expects consultants proposing on this project to have the qualifications, experience, personnel, and overall understanding of the work.

## Background

Structure No. 10471, Dutcher Road over the Northwest Drain, has reached the point that it requires rehabilitation, and the TCRC is looking for an innovative design that will remove the current weight limit on the bridge and extend the service life of the structure. The existing bridge is a single-span structure with steel beams, a concrete deck, an HMA wearing surface, and concrete cantilever abutments. The bridge has a total length of 42 feet and a clear width of 38 feet. Dutcher Road is a Minor Collector Road with an average daily traffic of 295 vehicles per day. The Dutcher Road Bridge over the Northwest Drain maybe used for the Tuscola County Road Commission 2027 Local Bridge Application Program. The 2023 Application is included as reference. Final plans, special provisions, preliminary estimates of cost and Approved EGLE permit must be completed and submitted to the Tuscola County Road Commission by August of 2025. The design and deliverables must be in accordance with MDOT LAP standards and guidelines.

## **Proposal Submittal**

The Tuscola County Road Commission (TCRC) is soliciting qualification statements and quote proposals to perform bridge design services for the structure listed on page one. The proposal shall contain, at a minimum, the following items:

- Proposed bridge design including the innovative process the to be utilized to remove the weight limit on the structure and how this will extend the service life of the project. type of structure intended for the location and estimated cost of construction to build the proposed design.
- Qualifications for all team members Involved.
- An understanding of the requested design services.
- Design fee and breakdown
  - Cost to include hydraulic analysis, all permitting costs, and any other services necessary for a complete design.
  - If soil borings are necessary they shall be included in the fee.
  - Include an hourly fee schedule with the proposal.
- The proposed bridge design must follow all MDOT Local Agency design standards and guidelines and include the following:
  - A clear width of 32 feet inside-of-rail to inside-of-rail
  - Minimum of a 50-foot bridge approach
  - o Tuscola County Road Commission standard name plate

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- $\circ\,$  A final plan set with all necessary special provisions associated to the construction of the proposed design.
- The successful firm will be responsible for preparing a 2027 MDOT Local Bridge Application for the Tuscola County Road Commission. The 2023 Application is included for reference.
- •
- Final Deliverables
  - A signed and sealed completed plan set, a copy of all special provisions, load rating calculations and computations, a preliminary estimate of construction cost completed in MERL, and an electronic copy of all design files.

The following items shall not be included in the proposal:

- Any cost or qualifications for ROW or land acquisition. If these services are required, a cost will be determined prior to beginning the work.
- Any cost related to asbestos or lead testing. The Tuscola County Road Commission will be responsible for obtaining any testing or related items if deemed necessary.

## Scoring

The scoring of the submitted proposal will be based on the following criteria:

- 20% Innovation
- 20% Understanding of Services
- 20% Qualifications of Team
- 20% Design Fee
- 15% Past Performance
- 5% Location

## Award and Payment

Award will be made in the best interest of the Road Commission. Payment will be made by monthly invoicing. Please limit your package to a maximum of five (5) pages and submit your company's hourly fee schedule with the proposal. The completed first page of the RFP does not count towards the maximum 5 pages. Any questions should be made to Brent Dankert at highwayengineer@tuscolaroad.org or 989-751-3873.

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## Attachments

- Agreement
- Title IV and VI Compliance
- Current Bridge Inspection Report
- 2023 MDOT Programming Application
- Current Bridge Inspection
- Location map
- Existing Structure Plans
- The following additional documents from MIBRIDGE are available by request:

		-
Add Document	Edit Document Details	Delete Documents

Select	File Name 🔶	Description	Report Date	Report/Group 🝦	Category 🍦	Upload Date
	10471, Gilford Twp, Dutcher Rd, Bridge	Bridge Plans		Documents Tab	Plans/Sketches	10/28/2021
	<u>00037 - 10471.xml</u>	STR10471 xml File		Load Rating	Program File	02/14/2022
	10471 Load Rating 2019.05.29.pdf	STR10471 5/29/2019 LR Output		Load Rating	Program Output	02/14/2022
	10471 - 2015.05.12 Cross Section.pdf	2015 Cross Sections		Waterway	Cross Section	03/14/2019
	10471 - Level 1 Scour Analysis 12.03.	Level 1 Scour Analysis-OLD		Waterway	Level I	08/14/2019
	Updated Level 1-STR 10471.pdf	Updated Level 1 Scour Analysis-3-16-22		Waterway	Level I	03/16/2022

#### LIABILITY

The consultant shall always exercise extreme care and shall assume all liability for any damages resulting from their operation. Furthermore, they shall hold the Tuscola County Road Commission harmless from any such claims or damages.

## NON-COMPLIANCE WITH PROJECT SPECIFICATION PROVISIONS

Any variation from the specifications of the project herein without written approval from the Tuscola County Road Commission and/or its authorized representative may result in, at the discretion of the Tuscola County Road Commission, the voiding and/or cancelling of the acceptance of any contract, resulting from this project.

The Tuscola County Board of Road Commissioners reserves the right to accept or reject any or all proposals and to re-advertise or to accept the proposal, that in their opinion, is in the best interest of Tuscola County.

#### AGREEMENT

# TUSCOLA COUNTY ROAD COMMISSION – 1733 S. MERTZ ROAD, CARO, MI 48723 PAGE ${\bf 1}$ OF ${\bf 1}$

This agreement made this day of , 20 by and between the Board of Tuscola County Road Commissioners and \_\_\_\_\_ hereby agrees to undertake the following work 1. in the status of an independent contractor performing the following job: Perform all design and permit tasks pertaining to the professional bridge design for Structure No. 10471 on Dutcher Road over the Northwest Drain , shall at all 2. Said contractor, \_\_\_\_ times exercise extreme care and shall assume any and all liability for property damage or bodily injury resulting from the above operation by this employees, agents, assigns, sub-contractors and anyone else acting under his control or direction; and will indemnify, hold harmless and defend the Tuscola County Road Commission, its Commissioners or employees from any and all claims for property damage or bodily injury arising out of this Agreement. 3. Said contractor, \_\_\_\_\_, while engaged in said job shall maintain and furnish certificates of insurance, naming the Tuscola County Road Commission and Commissioners as an additional insured under the policy, with policy limits of \$500,000/\$1,000,000 for property damage and bodily injury, and shall furnish the Tuscola County Road Commission copies of said certificates of insurance prior to commencing any work on said project. \_\_\_\_\_, shall furnish Additionally, said contractor, \_\_\_\_\_ prior to start of said job with the Board of Tuscola County Road Commissioners, a policy of insurance certifying he carries and has in effect worker's compensation insurance on all those required to be covered under Michigan law. 4. The address of the Board of Tuscola County Road Commissioners is 1733 S, Mertz Rd., Caro, MI 48723. Witnessed:

Board of Tuscola County Road Commissioners

Contractor

Contractor bid will not be accepted unless the enclosed Agreement is Signed and Returned with you bid.

## TUSCOLA COUNTY ROAD COMMISSION TITLE IV COMPLIANCE APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- 1. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation, Title 49, code of Federal Regulations, Part 21 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment.
- 3. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulation, including employment practices when the contractor covers a program set forth in Appendix B of the Regulations.
- 4. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to non-discrimination on the grounds of race, color, or national origin.
- 5. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities us may be determined by the Tuscola County Road Commission to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses this information, the contractor shall so certify to the State high· way department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- 6. Sanctions for Non-compliance: In the event of the contractor's non-compliance with the non-discrimination provisions of this contract, the Tuscola County Road Commission Shall Impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
  - a) Withholding of payments to the contractor under the contract until the contractor complies, and/or
  - b) Cancellation, termination, or suspension of the contract, in whole or in part.
- 7. Incorporation of Provisions: The contractor shall Include the provisions of paragraphs (I) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives Issues pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Tuscola County Road Commission may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event u contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Tuscola County Road Commission to enter into such litigation to protect the interests of the County, and, in addition, the contractor may request the State highway department to enter into such litigation to protect the interests of the United States.

"The TUSCOLA COUNTY ROAD COMMISSION, in accordance with Title VI of the Civil Rights Act of 1964, 78-252, 42 U.S.C. 2000d-222d-4, the Civil Rights Act of 1987, P.L. 100-259, and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, Non- discrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprise firms will be afforded full oppo1iunity to submit bids in response to this invitation and will not be discriminated against on the grounds of Race, Color, Sex, Age, National Origin, or Handicap in consideration for an award. For additional compliance information, please see Appendix A."

STR 10471	BRIDGE SAFETY INS	PECTION REPORT	
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour

NBI INSPECTION			9504				
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date				
James Brock	ROWE Professional Services Company	24	05/24/2023				
GENERAL NOTES							
Assisted by: Ethan Kahlenberg Established directions: Dutcher Rd E/W, NW Drain N/S TCRC ID: B-GIL-P-10							
Weight limit signs in place on both ends of bridge YES							
Weight limit shown on signs at bridge	9	273243					
Required advance warning weight lim	it signs in place	NO					

#### Frequency Justification Comments (required when Poor Condition and frequency is equal to 24 months)

Bridge structural elements are in fair condition and can remain on a 24 month inspection cycle.

DECK				
	05/19	05/21	05/23	
1. Surface (SIA-58A)	5	6	6	HMA surface with chip seal application. Open transverse/longitudinal cracks up to 3/4 inches wide spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. (05/23) Chip seal. Open transverse/longitudinal cracks spaced 5' apart. Deep longitudinal crack along westbound, partially sealed. (05/21) Chip seal. Open transverse/longitudinal cracks; deep longitudinal crack along westbound (05/19)
2. Expansion Joints	5	Ν	Ν	End joints have been paved over. Reflective cracking above each reference line partially sealed with chip seal application. (05/23) End joints have been paved over; partially sealed transverse cracks (05/21) Paved over; partially sealed transverse cracks (05/19)
3. Other Joints	Ν	Ν	Ν	(05/23) (05/21) (05/19)
4. Railings	7	7	7	Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system with wood offset blocks. Light rust on railing posts. (05/23) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/21) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/21) Steel I-post barriers with two steel angle beams on the south and three steel angle beams on the north side of structure. Thrie beam retrofit has been placed in front of old barrier system. Light rust on railing posts. (05/19)
5. Sidewalks or Curbs	Ν	Ν	Ν	(05/23) (05/21) (05/19)
6. Deck Bottom Surface (SIA-58B)	7	7	7	Concrete deck. No deficiencies noted. (05/23) Concrete bottom surface, no deficiencies noted. (05/21) Concrete bottom surface, no deficiencies noted. (05/19)

STR 10471				BRIDGE SAFETY INS	PECTION REPORT	
Facility DUTCHER ROAD Feature NORTHWEST DR Location SEC 5-8 GILFORE Region / County Bay(4) / Tuscola(	AIN OUTLE D TWP	et 1	43.55 Leng 42 / Built 1970 Mate	ude         / Longitude           513         -83.6726           gth         / Width / Spans           37.7         1           t         Recon. / Paint / Ovly.           0         /           oright         /           beel         /         02 Multi	MDOT Structure ID 79200098000B020 Owner County: Tuscola(79) TSC Huron(28) Last NBI Inspection 0 05/24/2023 / 9504	Structure Condition Fair Condition(5)Image: Condition (5)Operational Status P Posted for load(273243) Scour Evaluation U Unknown Scour
7. Deck (SIA-58)	6	6	6	to 3/4 inches wide spaced Deck bottom: Concrete de Fascia: Both north and sou Deck surface: Chip seal. ( longitudinal crack along w Deck bottom: Concrete bo Fascia: Both north and sou Deck surface: Chip seal. (	5' apart. Deep longitudina ck. No deficiencies noted. th fascia spalled 35'. (05// Open transverse/longitudir estbound, partially sealed. ttom surface, no deficienci uth fascia spalled 35'. (05// Open transverse/longitudir Concrete bottom surface,	al cracks spaced 5' apart. Deep
8. Drainage				Off fascias. (05/23) Off fascias. (05/21) Off fascias. (05/19)		
SUPERSTRUCT	URE					
	05/19	05/21	05/23	3		
9. Stringer (SIA-59)	5	5	5	1990. Steel channel diaph beam 1s and 10s. Missing beam. Several tack welds holes through webs, (6) pa forming at beam ends. Pai fascia beam and 15% of th 10 steel I-beams with squa channel diaphragms at min and 10s. Missing splice plat tack welds at cover plate s webs, (6) pairs per beam. beam ends. Paint failure a 15% of the outside of north 10 steel I-beams with squa channel diaphragms at min and 10s. Several tack wel drilled holes through webs	ragms at midspan. Splice splice plates 3w at south at cover plate splices. Bea airs per beam. Painted over nt degradation and surface ne outside of north fascia be are end cover plates applie dspan. Splice Plates for co ates 3w at south fascia bea plices. Beam 1S, 6S and Painted over pitting evide nd surface rust covers 60% n fascia beam. (05/21) are end cover plates applie dspan. Splice Plates for co ds at cover plate splices. I a, (6) pairs per beam. Pain ange of beam 10s at west	ver plates applied in 4' +/- sections in Plates for cover plates loose and rusty at fascia beam and 4w at north fascia am 1S, 6S and 10S have pairs of drilled r pitting evident in some locations. Rust e rust covers 60% of the outside of south beam. (05/23) ed in 4' +/- sections in 1990. Steel over plates loose and rusty at beam 1s am and 4w at north fascia beam. Several 10S have pairs of drilled holes through nt in some locations. Rust forming at % of the outside of south fascia beam and ed in 4' +/- sections in 1990. Steel over plates loose and rusty at beam 1s Beam 1S, 6S and 10S have pairs of ted over pitting in some locations is abutment. Top flanges of fascia beams
10. Paint (SIA-59A)	6	5	5	throughout, especially at e fascia beam exhibits up to 15%. (05/23) New paint applied in 2011 throughout, especially at e fascia beam has 60% pain	dge of flanges and beam 6 60% paint degradation an , but without proper prep. 5 dge of flanges and beam 6 t failure and surface rust v	p. Scattered speckled rust is apparent ends. Outside web and flange of south d surface rust while north fascia has Scattered speckled rust is apparent ends. Outside web and flange of south while north fascia has 15%. (05/21) he prior as a result speckled rust is
11. Section Loss	2	2	2	flanges, and outside of fas Painted over pitting is evid flanges, and outside of fas Painted over pitting in som	cia beams. (05/23) ent in some locations. Rus cia beams. (05/21) le locations is evident. Rus	st is forming at beam ends, edge of st is forming at beam ends, edge of st on bottom flange of beam 10s at west rust on the outside. (05/19)
12. Bearings	7	6	6	heaviest along fascia's. (0 Steel plate bearings at eac (05/21)	5/23) ch beam end. Steel plates	have uniform surface rust throughout, have uniform surface rust throughout. have uniform surface rust throughout.
Modified by: BROC	KJ5252 on	05/24	/2023	Printed on 0 <sup>4</sup>	1/15/2024	Page 2 of 8

STR 10471	BRIDGE SAFETY INSI	PECTION REPORT	
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Feature	Length / Width / Spans	Owner	
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Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour

## SUBSTRUCTURE

	05/19	05/21	05/23		
13. Abutments (SIA-60)	7	7	7	Concrete cantilever abutment walls. Minor hairline cracks above weep holes. There are three 2" diameter weep holes per wall. (05/23) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/21) Concrete abutment walls. Minor hairline cracks off weep holes. There are three 2" diameter weep holes per wall. (05/21)	
14. Piers (SIA-60)	Ν	Ν	Ν	(05/23) (05/21) (05/19)	
15. Slope Protection	Ν	Ν	Ν	(05/23) (05/21) (05/19)	
16. Channel (SIA-61)	7	6	6	Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. Entire channel is heavily vegetated at the south end. (05/23) Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. Entire channel is heavily vegetated at the south end. (05/21) Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/19)	
17. Scour Inspection	7	7	7	Probed, no scour noted. Water flows along 60% of east abutment and 5% of west abutment. (05/23) No water along either abutment. No scour noted. (05/21) Water along both abutments. Probed, no exposed footings. (05/19)	
APPROACH					
	05/19	05/21	05/23		
18. Approach Pavement	5	6	4	Chip sealed HMA approaches. Random reflective cracks up to 3/4 inches wide through chip seal. Estimate 1" of settlement at each approach. (05/23) Chip seal with random reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/21) Chip seal with reflective cracks through chip seal. Estimate 1" of settlement at each approach. (05/19)	
19. Approach Shoulders Sidewalks	6	6	4	Tapered HMA with chip seal applied and gravel shoulders in all four quadrants. Transverse cracks in all quadrants mostly sealed with chip seal application. Up to 1.5 inches of settlement in all quads. Rating based on settlement. (05/23) Tapered HMA and gravel shoulders in all four quadrants. Transverse cracks in all quadrants. NE - longitudinal crack (05/21) Tapered HMA shoulders in all four quadrants. Sealed transverse cracks in all quadrants. NE - longitudinal crack (05/19)	
20. Approach Slopes				Some large pieces of broken concrete along return wingwalls in all four quadrants, mostly along south end. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/23) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/21) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/21) Some large pieces of broken concrete along return wingwalls in all four quadrants. 1 on 2 grass covered slopes with a minor slumped bank in the southeast quadrant. Approach guardrail: thrie beam / type B. No impact damage. (05/19)	

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21. Utilities	Telephone pedestals betw with the one in the NW qua Large Ameritech access pa (05/23) There are two 2" diameter fascia. There are telephon NW quadrants, with the on panel box is also directly b	een the guardrail and return adrant lying in the brush. anel box is also directly beh galvanized steel conduits m he pedestals between the gu e in the NW quadrant lying ehind the guardrail in the N	barrier along the north fascia. In walls in the NE and NW quadrants, and the guardrail in the NE quadrant. In the guardrail in the NE quadrant. In the barrier along the north uardrail and return walls in the NE and in the brush. A large Ameritech access E quadrant. (05/21) mounted to barrier along the north
22. Drainage Culverts	(1) 12 inch dia CMP in NE( (05/21) (05/19)	Q (05/23)	
MISCELLANEOUS			
Guard Rail	C	Other Items	
Item	Rating It	em	Rating
36A. Bridge Railings	1 7	1. Water Adequacy	7
36B. Transitions		2. Approach Alignment	6
36C. Approach Guardrail		emporary Support	0 No Temporary Supports
36D. Approach Guardrail Ends		ligh Load Hit (M)	No
	S	pecial Insp. Equipment	2
	U	nderwater Insp. Method	1
False Decking (Timber) Removed	to Complete Inspection N	I/A - No False Decking	
Critical Feature Inspections (S	IA-92)		
	Freq Date		
92A. Fracture Critical 92B. Underwater 92C. Other Special	<u></u>		

92D. Fatigue Sensitive

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#### SUPPORTING IMAGES



Document Name: IMG\_2327.jpeg Category: Elevation Span Number: Comments: North elevation



Document Name: IMG\_9436.jpeg Category: Posting Span Number: Comments: Posting sign at west end of structure



9504 05/24/2023

Document Name: IMG\_2329.jpeg Category: Elevation Span Number: Comments: South elevation



Document Name: IMG\_9440.jpg Category: Posting Span Number: Comments: Posting sign at east end of structure

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Feature	Length / Width / Spans	Owner	
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Document Name: IMG\_9454.jpeg Category: Posting Span Number: Comments: Advanced posting sign west of structure



Document Name: IMG\_9444.jpeg Category: Railing Span Number: Comments: Railing, typical



Document Name: IMG\_9437.jpeg Category: Railing Span Number: Comments: Post 1W, north railing



Document Name: IMG\_2331.jpeg Category: Deck Span Number: Comments: Concrete deck bottom surface

STR 10471 BRIDGE SAFETY INSPECTION REPORT								
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Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status					
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)					
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation					
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour					



Document Name: IMG\_2333.jpeg Category: Deck Span Number: Comments: Concrete deck bottom surface



Document Name: IMG\_9442.jpeg Category: Deck Span Number: Comments: Chip sealed HMA surface



Document Name: IMG\_9441.jpeg Category: Deck Span Number: Comments: East reference line



Document Name: IMG\_2334.jpeg Category: Superstructure Span Number: Comments: Steel I-beams

STR 10471 BRIDGE SAFETY INSPECTION REPORT								
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition					
DUTCHER ROAD	43.5513 / -83.6726	43.5513 / -83.6726 79200098000B020						
Feature	Length / Width / Spans	Owner						
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)						
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status					
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)					
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation					
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour					



Document Name: IMG\_2328.jpeg Category: Substructure Span Number: Comments: East abutment



Document Name: IMG\_9438.jpeg Category: Channel Span Number: Comments: Looking south off structure



Document Name: IMG\_2330.jpeg Category: Substructure Span Number: Comments: West abutment



Document Name: IMG\_9443.jpeg Category: Channel Span Number: Comments: Looking north off structure

Facility         Latitude / Longitude         MDOT Structure ID         Structure Condition         Fair Condition           DUTCHER ROAD         43,5613 / 43,6726         792000380008000         Fair Condition(5)         Fair Condition(5)           Peature         Length / Width / Spans         Owner         Convert         Convert         Protectional (27)           NORTHWEST DRAIN OUTLET         12/37.7 / 1         Convert         Convert         Operational (27)           SEC 5-8 CLEORD TWP         1970 / / / 1995         Huron(28)         Prosted for load(27)         Scc.exect           Region / County         Material / Design         Last NB Inspection         Scc.exect         Scc.exect           Bay(4) / Tuscole(79)         3 Steel / 02 Multi Str Non Comp         05/24/2023 / 9504         U. Unknown Scour           Vare Rain Reconstructed         120         50 - Route Spring         Ascc.exect         Scc.exect           20 - Yoar Bain         128         Route Number         00000         50 - Route Spring         Scc.exect           20 - Yoar Bain         128         Route Number         00000         50 - Route Spring         Scc.exect           20 - Yoar Bain         128         Route Number         00000         50 - Route Spring         Scc.exect Spring           20 - Yoar Bain	STR 10471	S	TRUCTURE INVENTOR	Y AND APPRAISA	L	
DUTCHER ROAD         43.5813 / -83.6728         79200080008020         Fair Condition(5)           Feature         Longit / Width / Spans         Owner         County: Tuscola(79)           Location         Built / Record. / Paint / Ovly.         TSC         Operational Status           SEC 5-8 GLEORD TWP         1970 / / (1900)         1970 / / (1900)         Posted for load(2732-43)           Region / County         Material / Design         Last NBI Inspection         Scour Evaluation           Bay(4) / Tuscola(79)         3 Siteel / 02 Multi Str Non Comp 05/24/2023 / 9500         U Unknown Scour           Pridge History, Type, Materials         Route Carried By Structure(OM Record)         5A - Record Type         5B - Route Signing         5C - Level of Service	Facility	Latitu	de / Lonaitude	MDOT Structure ID	Structure Condition	
Feature         Length / Width / Spans         Owner           NORTHWEST DRAIN OUTLET 1         42 / 37.7 / 1         County: Tuscola(79)           SEC 5-6 GILFORD TWP         1970 / / 1995         TSC         Derational Status           Region / County         Basel / 02 Multi Str Non Comp         05/24/2023 / 9504         Denatoreal County           Bay(4) / Tuscola(73)         3 Steel / 02 Multi Str Non Comp         05/24/2023 / 9504         U/Inknown Scour           27 Year Bain         1920         58 - Record Type         58 - Record Type         58 - Record Type           30 - Yoar Paint         1920         58 - Record Type         58 - Record Type         58 - Record Type           59 - Roade Signing         50 - Roade Number           50 - Roade Number	•		•		Fair Condition(5)	
NORTHWEST DRAIN OUTLET 1         24         37.7         7.1         County: Tuscola(79)           Location         Built / Recon. / Paint / Ovy.         TSC         Operational Status           Region / County         Material / Design         Last NB Inspection         Score Faultation           Bay(4) / Tuscola(79)         3 Steel / 02 Multi Str Non Comp 05/24/2023 / 9504         U.Unknown Scour           27. Year Built         1970         5         Recore Type         5           106 - Year Reconstructed         1920         5         Recore Type         5           106 - Year Reconstructed         1920         5         Recore Type         5           107 - Year Fainted         1920         5         Recore Type         5           11 - Near Point         0.0000         5         Recore Type         5           12 - Sear Type         1         1         1         1           13 - Read Type         1         1         1         1           107 - Deck Type         1         1         1         1         1           17 - Sear Type         1         1         1         1         1         1           108 - Dest Type         1         1         1         1         <						-
Location         Built / Recon. / Faint / Ovy.         TSC         Operational Status           SEC 5-8 GLEFORD TWP         1970 / / 1995         Huron(28)         Posted for load(273243)           Bay(4) / Tuscola(79)         3 Steel / 02 Multi Str Non Comp         05242023 / 9504         U Unknown Scourt           Bridge History, Type, Materials         Sour Evaluation         U Unknown Scourt         U Unknown Scourt           Bridge History, Type, Materials         Sour Evaluation         1000000         55         Route Signing         56           Sour Year Online         100000         55         Fouris Signing         56         Fouris Signigning         56         Fouris		-	•			
SEC 5-8 GILFORD TWP         1970         /         / 1995         Huron(28)         P Posted for load(273243)           Region / County         Material / Design         Last NBI Inspection         Score Fauluation           Bay(4) / Tuscol(37)         3 Steel / 02 Multi Str Non Comp         05/24/2023 / 95/04         Unknown Scour           Bridge History, Type, Materials         Route Carried By Structure(ON Record)         Route Carried By Structure(ON Record)         Route Signing         A           27 - Year Built         1920         56 - Record Type         1         64 - Record Type         56 - Level of Service         56 - Level of Service         56 - Level of Service         57 - Service Type         57 - Level of Service         58 - Record Type         57 - Level of Service         58 - Record Type         57 - Level of Service         58 - Record Type         58 - Record T					Operational Status	
Region / County         Material / Design         Last NBI Inspection         Source relation           Bay(4) / Tuscola(79)         3 bitel / 02 Multi Str Non Comp         05/24/2023 / 9504         U Unknown Scour           Bridge History, Type, Materials         SA. Record Type         1         5A. Record Type         1           27. Year Bailtin structed         1995         5A. Record Type         1         5A. Record Type         1           28. Year Overlay         1995         5D. Fourte Number         00000         5DRoute Number         00000           29. Year Overlay         3         FD. Fourte Number         00000         5DRoute Number         5DRoute Number           29. Post Type         1         10RBest 3m Unchr: Nt         9         9         9         9         1D.         1D. Rest 3m Unchr: Nt			•		-	13)
Bay(4)         J Steel         0 2 Multi Str Non Comp         05/24/2023         9504         U Unknown Scour           Bridge History, Type, Materials         Brown Carried By Structure(ON Record)         Route Carried By Structure(ON Record)         Scource         Scource <t< td=""><td></td><td></td><td></td><td>. ,</td><td></td><td>43)</td></t<>				. ,		43)
Bridge History, Type, Materials         Route Carried By Structure(ON Record)         Route Under Structure (UNDER Record)           27 - Vear Built         1372         58 - Route Signing         4           20 - Year Painted         1395         55 - Route Signing         56 -	•		•	-		
27 · Var Built         1970         54 - Record Type         1         54 - Record Type           20 · Year Peinted         55 - Route Signing         4         55 - Route Signing         55 - Route Signing           20 · Year Overlay         1995         50 - Route Number         55 - Route Signing         55 - Route Signing           21 · Year Printed         100 - Best 3m Unclr-Rt         99 99         50 - Route Number         55 - Route Signing           27 · Start Type         1         10R - Best 3m Unclr-Rt         99 99         76 - Route Signing         10 - Best 3m Unclr-Rt           27 · Rait Type         1         10R - Best 3m Unclr-Rt         99 99         78 - Route Signing         10 - Best 3m Unclr-Rt           20 · Post Type         1         12 - Base Highway Network         11 - Nile Point         11 - Nile Point           107 · Dock Type         1         12 - Base Highway Network         12 - Base Highway Network         12 - Baset Munclr-Rt           108 - Post Type         1         12 - Baset Highway Network         12 - Baset Munclr-Rt         13 - Baset Munclr-Rt           108 - Post Type         1         12 - Baset Highway Network         12 - Baset Munclr-Rt         13 - Baset Munclr-Rt           107 - Dock Type         1         14 - Starker         10 - Stark-Highway Network         12 - Baset M	Bay(4) / Tuscola(79)	3 5166	er / 02 Multi Str Non Comp	05/24/2023 / 9504	U UNKNOWN SCOUL	
27 · Var Built         1970         54 - Record Type         1         55 - Route Signing           202 · Vaar Overlay         1995         50 - Route Signing         50 - Route Signing         50 - Route Signing           30 · Vaar Overlay         1995         50 - Route Signing         50 - Route Number         50 - Route Number           31 · Man Span Bridge Type         3         10 - Best 3m Uncir-Rt         99         90         10 - Best 3m Uncir-Rt         10 - Best 3m Uncir-Rt           37 - Rain Type         1         10 - Best 3m Uncir-Rt         99         90         70 - Route Number           37 - Rain Type         1         10 - Best 3m Uncir-Rt         99         90         70 - Route Number           37 - Rain Type         1         11 - Mile Point         10 - Best 3m Uncir-Rt         90         90           30 - Post Type         1         12 - Best 3m Uncir-Rt         90         90         70	Bridge History, Type,	Materials	Route Carried By Strue	cture(ON Record)	Route Under Structure (UN	DER Record)
106 - Year Reconstructed         58 - Route Signing         4         58 - Route Signing         59 - Route Signing         50 - Route Signing         50 - Route Number           203 - Year Overlay         1995         50 - Cuvel of Service         50 - Route Number         50 - Route Number         50 - Route Number           203 - Year Overlay         1995         50 - Route Number         000000         50 - Route Number         50 - Route Number           77 - Steal Type         1         10 Beat 3m Undri-Lt         0         100 - Beat 3m Undri-Rt         100 - Beat 3m Undri-Rt           73 - Part Type         1         11 - Mile Part         10 - Beat 3m Undri-Rt         10 - Beat 3m Undri-Rt         10 - Beat 3m Undri-Rt           107 - Dock Type         1         11 - Mile Part         10 - Beat 3m Undri-Rt         12 - Beat 3m Undri-Rt         10 - Beat 3m Undri-Rt           108 - Nemtrig Surface         6         13 - LRS Route-Subroute         13 - LRS Route-Subroute         13 - LRS Route-Subroute         13 - LRS Route-Subroute         14 - Beat 3m Undri-Rt         12 - Beat 3m Undri-Rt           108 - Boat Sing Surface         10 - Tot Facility         3         3 - Carcer Route			-	1		
203< Year Overlay         1395         50         Route Number         00000         50         Four Number           44         Agor Span Bridge Type         1         51         Four Sum Number         55         Four Sum Number	106 - Year Reconstructed			4		
43 - Main Span Endge Type         3         D2         5E - Direction Suffix         0<	202 - Year Painted		5C - Level of Service		5C - Level of Service	
44 - Appr Span Bridge Type         10L - Best 3m Unclr-It         0         0           7 - Sitel Type         10R - Best 3m Unclr-Rt         98         99           78 - Paint Type         10R - Best 3m Unclr-Rt         PR Number           79 - Rail Type         11 - Mile Point         11 - Mile Point         11 - Mile Point           107 - Deck Type         11 - Mile Point         12 - Base Highway Network         12 - Base Highway Network           1086 - Membrane         0         20 - Oll Facility         20 - Toll Facility         20 - Functional Class           34 - Skew         0         22 - Apt Randway With Rt         20 - Apt Randway With Rt         20 - Apt Randway With Rt           45 - Num Kan Spans         1         20 - Functional Class         20 - Apt Randway With Rt         20 - Apt Randway With Rt           24 - Skew         0         22 - Apt Randway With Rt         34 - Star			5D - Route Number	00000	5D - Route Number	
77 - Sieli Type       3       108 - Best 3m Unclr-Rt       9       99       90       108 - Best 3m Unclr-Rt       9       99       107 - Deck Type       1         79 - Rail Type       1       Mile Point       0       11 - Mile Point       12 - Base Highway Network       0       13 - LRS Route-Subroute       108 - Deck Type       13 - LRS Route-Subroute       10 - Detour Length       5       20 - Toil Facility		3 02	5E - Direction Suffix		5E - Direction Suffix	
Tay - Pair Type         I         PR Number         Control Section         PR Number           0 - Post Type         I         11 - Mile Point         III - Mile Point         III - Mile Point           107 - Deck Type         I         12 - Base Highway Network         III - Mile Point         III - Mile Point           108 - Membrane         0         19 - Detour Length         5         III - Mile Point         III - Mile Point           108 - Deck Protection         0         20 - Toll Facility         3         III - Mile Point         III - Mile Point           108 - Membrane         0         20 - Toll Facility         3         20 - Toll Facility         20 - Functional Class           34 - Skew         0         22 - APT         28 - Apre Nather Main Spans         22 - APT         28 - Apre Codeway Width         44 - III - Left Horizontal Clear         47 - Right Horizontal Clear         54 - Left Feature         54 - Left Feature         54 - Left Feature         54 - Right Feature						
Pa - Rail Type         Control Section         Control Section           107 - Deck Type         1         Nile Point         1           108 - Waring Surface         6         1         2.8 as Highway Network         0           108 - Waring Surface         0         1         2.8 as Highway Network         1           108 - Waring Surface         0         1         2.8 as Highway Network         1           108 - Waring Surface         0         2.0 Toll Facility         2.0 Toll Facility         2.0 Toll Facility           36 - Struct Flared         N         2.0 Toll Facility         2.0 Toll Facility         2.0 Toll Facility           26 - Functional Class         0.8         2.8 - Lanes On         2.9 - ADT         2.9 - ADT           30 - Year of ADT         2.0 Apr Roadway Width         4.1 2201         4.1 - Left Horizontal Clear         5.4 - Right Horizontal Clear           47 - Left Horizontal Clear         0         0.1 - STRAHNET         0.9 90         5.4 - Right Horizontal Clear         5.4 - Right Horizontal Clear           31 - Median         0         - Structure ADT         1.700         5.5 - Right Feature         9.0 90         9.0 90           31 - Inspection Data         0         - Structure ADT         1.700         5.6 - Left Horiz Clearance         <				99 99		
80 - Post Type         11 - Mile Point         11 - Mile Point         12 - Base Highway Network         12 - Base Highway Network           108 - Wearing Surface         6         13 - LRS Route-Subroute         0000022743.10         13 - Base Montroe         13 - Base Montroe           108 - Membrane         0         13 - Base Montroe         20 - Toll Facility         3         13 - Base Montroe         28 - Functional Class         28 - Functional Class         29 - ADT         28 - Lanes Under         29 - ADT         28 - ADT		1				
107 - Deck, Type       1       12 - Base Highway Network       12 - Base Highway Network         1084 - Wearing Surface       0       13 - LRS Route-Subroute       13 - LRS Route-Subroute         1086 - Deck Protection       0       13 - LRS Route-Subroute       19 - Detour Length       13 - LRS Route-Subroute         1086 - Deck Protection       0       20 - Toll Facility       20 - Toll Facility       20 - Toll Facility         3 - Struct Flared       N       32 - Appr Roadway With       34.1       20 - Toll Facility       29 - ADT         3 - Struct Flared       N       32 - Appr Roadway With       34.1       20 - Toll Facility       32 - Appr Roadway With       34.1         48 - Naw Span Length       42       - Service Type On       1 - 472 - Left Horizontal Clear       471 - Left Horizontal Clear       548 - Left Pacture       549 - Bight Horiz Clear         3 - Median       0 - Structure Appraisal       100 - STRAHNET						
1084 - Wearing Surface         6         13 - LRS Route-Subroute         0000022743 10         13 - LRS Route-Subroute           108B - Mombrane         0         19 - Detour Length         2         2         17 - LRS Route-Subroute         19           108B - Mombrane         0         2         - Toll Facility         3         20 - Toll Facility         2         - Toll Facility         - Toll Facility         2         - Toll Faci						
1088 - Neck Protection         0         19 - Detour Length         5         19 - Detour Length           1080 - Deck Protection         0         20 - Toll Facility         2         2         2         - Detour Length         2         2         - Detour Length         2         - Detou		H-				
Obsect - Deck Protection         0         20 - Toll Facility         3         20 - Toll Facility         20           Structure Dimensions         28A - Lanes On         980         28 - Functional Class         28 - ADT         28 - Stew         28 - ADT         28 - ADT         28 - ADT         29 - ADT         42B - Service Type Under         5.         5.         42B - Service Type Vinder         54B - Left Underclearance         99         99         54D - Right Clearance         99         99         54D - Right Clearance         99         99         54D - Right Clearance         91 - Service Type Vinder         55A - Reference Feature         N         42         42         42         42         42         42         42         42         42 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Structure Dimensions         26 - Functional Class         08         26 - Functional Class         26 - Functional Class           34 - Skew         0         29 - ADT         200         29 - ADT         29 - ADT           35 - Struct Flared         N         30 - Year of ADT         200         29 - ADT         30 - Year of ADT           46 - Num Appris Spans         0         32 - Appr Roadway Widh         41         1200         30 - Year of ADT           48 - Max Span Length         40         32 - Apr Type/Width         41         120         47R - Right Horizontal Clear           49 - Structure Length         42         Service Type On         1         47R - Right Horizontal Clear           50 - Width Right Cut/SW         0         36.4         548 - Left Underclearance         99         99           30 - Structure Appraisal         100 - STRAHNET         0         558 - Right Horiz Clearance         99         99           51 - Width Curb to Curb         34.8         102 - Traffic Direct         2         0         106 - STRAHNET         0         107 - Truck %         108 - Reference Peature         N           91 - Inspection Data         110 - Truck We ADT         1770         56 - Left Horiz Clearance         99. 99         99         92           92			0		5	
Build of Dimensions         28A - Lanes On         2         28B - Lanes Under         28B - Lanes Under           34 - Skew         0         22 - ADT         2009         29 - ADT         30 - Year of ADT         30 - Year of ADT         30 - Year of ADT         42B - Service Type Under         45           45 - Num Main Spans         0         32 - Appr Roadway Width         34.1         42B - Service Type Under         47						
34 - Skew         0         29 - ADT         880         29 - ADT         30           35 - Struct Flared         N         30 - Year of ADT         2009         30 - Year of ADT         30 - Year of ADT           45 - Num Main Spans         1         32 - Appr Roadway Width         4         122.01         31 - Struct Flared         30 - Year of ADT         5           48 - Max Span Length         40         32AB - Ap Pt Type/Width         4         122.01         47R - Rigth Horizontal Clear         47R - Rigth Horizontal Clear         47R - Rigth Horizontal Clear         54 - Left Horizontal Clear           50A - Width Kight Curb/SW         0         53 - Min Vert Cir Ov Deck         99         99         54 - Structure         94 - Structure         95 - Structure         94 - Structure         95 - Structure         94 - Structure         94 - Structure         94 - Structure         95 - Structure         94 - Structure         95 - Structure         94 - Structure         95 - Structure         94						
46 - Num Main Spans       1       30 - Year of AD1       2009       30 - Year of AD1         46 - Num Apprs Spans       0       32 - Appr Roadway Width       4       22 - Service Type Under       5         46 - Max Span Length       40       42 - Service Type On       1       47 Left Horizontal Clear       77 Right Horizontal Clear       77 Right Horizontal Clear       77 Right Horizontal Clear       54 Left Horizontal Clear       55 Right Horizontal Clear       56 Kight Feature       56 Kight Feature </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
46       Num Apprs Spans       0       32 - Appr Readway Width       341       42       47L       -Left Horizontal Clear         48       Max Span Length       40       42       -			30 - Year of ADT	2009	30 - Year of ADT	
48         Max Span Length         40         32/ME - Ap PVT Type/Virth         4         12/11           49         Structure Length         42         42         47         - Right Horizontal Clear           49         Structure Length         42         - Structure Length         42         -           50A         Width Left Cutr/SW         0         -         54         - Left Horizontal Clear           50A         Width Cutr Cutr/SW         0         -         53         -         54         - Left Horizontal Clear           50B         Width Cutr Cutr/SW         0         -         57         -         54         - Left Horizontal Clear           51         Width Cutr bo Cutr         34.8         100         -         57         -         Right Horiz Clearance         99 </td <td>•</td> <td></td> <td>32 - Appr Roadway Width</td> <td>34.1</td> <td>42B - Service Type Under</td> <td>5</td>	•		32 - Appr Roadway Width	34.1	42B - Service Type Under	5
49 - Structure Length         42         42 - Service Type On         1         47 - Kight Horizontal Clear           50A - Width Left Curb/SW         0         0         0.0         54A - Left Horizontal Clear         54A - Left Feature         54A - Left Feature           33 - Median         0         34.8         100 - STRAHNET         0.0         54A - Left Peature         54A - L					47L - Left Horizontal Clear	
50A - Width Left Curb/SW       0       47L - Left Holizontal Clear       00       36A - Left Peature       99       99         50B - Width Right Curb/SW       0       36A - Tar Right Horizontal Clear       36A - Tart Right Foature       99       99         51 - Width Curb to Curb       34A.       100 - STRAHNET       0       54D - Right Feature       99       99         52 - Width Out to Curb       34A.       100 - STRAHNET       0       54D - Right Clearance       99       99         112 - NBIS Length       Y       100 - STRAHNET       0       100 - STRAHNET       100 - STRAHNET       55B - Reference Feature       N         90 - Inspection Date       05/24/2023       115 - Year Future ADT       1270       56 - Left Horiz Clearance       99.9       99         92A - Frac Crit Req/Freq       N       36A - Bridge Railing       110 - Truck Network       100 - STRAHNET       100 - Truck Network       110 - Truck Network       110 - Truck Network       110 - Truck					0	
50B - Width Right Curb/SW         0         4/R - Kight Horizontal Clear         54B - Left UnderClearance         99         199           33 - Median         54B - Left UnderClearance         99         99         54B - Left UnderClearance         99         99           33 - Median         00 - STRAHNET         0         54B - Keity Horizontal Clear         99         99           52 - Width Curb to Outh         34.8         100 - STRAHNET         0         55A - Reference Year         N           512 - Vidth Out to Outh         37.7         102 - Traffic Direct         2         55A - Reference Year         N           90 - Inspection Date         05/24/2023         114 - Future ADT         100 - STRAHNET         0         55B - Right Horiz Clearance         0           92A - Frac Crit Reg/Freq         N         36A - Bridge Railing         1         110 - Truck Network         102 - Traffic Direct         103 - Bridge Railing         114 - Future ADT         115 - Year Future ADT         102 - Traffic Direct         103 - Traffic Direct         115 - Year Future ADT         116 - Year Future ADT	0					
33 - Median       0       53 - Min Vert Clr OV Deck       99       99       54 - Fright Peature         51 - Width Curb to Curb       33.4.8       100 - STRAHNET       0       54 - Fright Peature       99       99       99         21 - Width Curb to Curb       37.7       109 - Truck %       3       55 - Right Heature       N         112 - NBIS Length       Y       109 - Truck Network       0       55 - Right Horiz Clearance       0         90 - Inspection Data       114 - Future ADT       1202 - Traffic Direct       2029       100 - STRAHNET       100 - STRAHNET         91 - Inspection Date       06/5/24/2023       115 - Year Future ADT       2029       100 - STRAHNET       100 - STRAHNET         92A - Frac Cirl Rey/Freq       N       36A - Bridge Railing       1       110 - Truck Network       109 - Truck %       109 - Truck %         92B - Und Water Req/Freq       N       36A - Bridge Railing       1       110 - Truck Network       111 - Fukure ADT       110 - Truck %         92D - Fatigue Insp Date       7       73 - Structure Evaluation       0       114 - Future ADT       115 - Year Future ADT       116 - Struct %       113 - Structure Evaluation       114 - Future ADT       116 - Structure Eval			0			99 99
51 - Width Curb to Curb       34.8       102 - Traffic Direct       2       Under Clearance Year       N         112 - NBIS Length       Y       109 - Truck %       3       55 - Reference Feature       N         112 - NBIS Length       Y       109 - Truck %       3       55 - Reference Feature       N         90 - Inspection Data       05/24/2023       114 - Future ADT       1770       56 - Left Horiz Clearance       99.9         91 - Inspection Freq       24       Freeway       0       102 - Traffic Direct       99.9         92A - Frac Crit Reg/Freq       N       36A - Bridge Railing       1       104 - Truck %       109 - Truck %         93B - Cract Crit Reg/Freq       N       36A - Bridge Railing       1       114 - Future ADT       115 - Year Future ADT         92C - Oth Spec Insp Date       M       36D - Rail Termination       0       115 - Year Future ADT       115 - Year Future ADT         92D - Fatigue Reg/Freq       N       66       7 - Type of Work       37 1       1         93D - Fatigue Insp Date       16 - 7       67 - Structure Evaluation       4       2       96 - EangReg/Freq       33 - Beock Geometry       6       6       7 - Type of Work       37 1       1       1         94 - Bridge Cost       2						00 00
32 - Width Out to Out       37./       109 - Truck %       3       55A - Reference Feature       N         112 - NBIS Length       109 - Truck Network       0       55B - Right Horiz Clearance       99.9         90 - Inspection Data       05/24/2023       116 - Future ADT       1770       56 - Left Horiz Clearance       0         91 - Inspection Freq       24       Freeway       0       57A - Fac Crit Req/Freq       N         92A - Frac Crit Req/Freq       N       36A - Bridge Railing       1       109 - Truck %       109 - Truck %         93B - Und Water Req/Freq       N       36A - Bridge Railing       1       114 - Future ADT       109 - Truck %         93B - Und Water Insp Date       36A - Bridge Railing       1       114 - Future ADT       116 - Year Future ADT         93C - Oth Spec Insp Req/Freq       N       36C - Approach Rail       0       116 - Year Future ADT       116 - Year Future ADT         93D - Fatigue Req/Freq       N       66 - 7       7 - Structure Evaluation       4       7 - Year of Work       37 1       1         93D - Staigue Req/Freq       N       66 - 7       7 - Approach Alignment       6       95 - Roadway Cost       20       96 - Total Cost       332       10 - Praule Structure       95 - Roadway Cost       20       96	51 - Width Curb to Curb	34.8				99 99
112 - NBIS Length       Y       110 - Truck Network       0         Inspection Data       110 - Truck Network       0       55B - Right Horiz Clearance       0         90 - Inspection Data       114 - Future ADT       2029       100 - STRAHNET       0         91 - Inspection Freq       24       Free Way       0       100 - STRAHNET       102 - Traffic Direct       100 - STRAHNET         92A - Frac Crit Req/Freq       N       36A - Bridge Railing       1       110 - Truck Network       100 - STRAHNET       100 - STRAHNET         92B - Und Water Req/Freq       N       36A - Bridge Railing       1       110 - Truck Network       110 - Truck Network         92C - Oth Spec Insp Date       36B - Rail Transition       0       1115 - Year Future ADT       110 - Truck Network       1115 - Year Future ADT         92C - Oth Spec Insp Date       1       6B - Deck Geometry       6       6B - Deck Geometry       6       71 - Waterway Adequacy       7       75 - Type of Work       37 1       1         93 - Paint Rating       5       72 - Approach Alignment       6       95 - Roadway Cost       20       20       20         94 - Boidge Cost       322 - Structure Rating       5       71 - Historical Significance       5       31 - Design Load       4       4	52 - Width Out to Out	37.7				N
Inspection Data         114 - Future ADT         1770         56 - Left Horiz Clearance         0           90 - Inspection Date         05/24/2023         115 - Year Future ADT         2029         100 - STRAHNET         100           91 - Inspection Date         N         Structure Appraisal         102 - Traffic Direct         109 - Truck %           92A - Frac Crit Req/Freq         N         36A - Bridge Railing         1         114 - Future ADT         109 - Truck %           92B - Und Water Req/Freq         N         36A - Bridge Railing         1         114 - Future ADT         109 - Truck %           92B - Und Water Req/Freq         N         36D - Rail Termination         0         115 - Year Future ADT         115 - Year Future ADT           92C - Oth Spec Insp Date         67 - Structure Evaluation         4         75 - Type of Work         37   1           93D - Fatigue Req/Freq         N         68 - Deck Geometry         6         75 - Type of Work         37   1           93D - Stayley Insport         103 - Temporary Structure         96 - Total Cost         20         322           93D - Paint Rating         5         17 - Historical Significance         5         31 - Design Load         4           94 - Paint Rating         6         7         Historical Significance	112 - NBIS Length	Υ				
90 - Inspection Date       05/24/2023         91 - Inspection Freq       24         91 - Inspection Freq       24         92 - Frac Crit Req/Freq       N         92A - Frac Crit Req/Freq       N         93B - Und Water Req/Freq       N         93B - Und Water Req/Freq       N         93B - Und Water Insp Date       36A - Bridge Railing         92C - Oth Spec Insp Req/Freq       N         93D - Fatigue Req/Freq       N         93D - Fatigue Req/Freq       N         93D - Fatigue Insp Date       66 - 75 tructure Evaluation         93D - Fatigue Req/Freq       N         94 - Bridge Cost       285         95 - Superstructure Rating       6         62 - Culvert Rating       5         93 - Paint Rating       5         94 - Paint Rating       6         95 - Superstructure Rating       5         96 - Culvert Rating       7         98 - Border Bridge State	Inspection Dat	a			5	
91 - Inspection Freq       24       Free way       0       102 - Traffic Direct       103         92A - Frac Crit Req/Freq       N       Structure Appraisal       100 - Truck %       100 - Truck %<	-					<u> </u>
92A - Frac Crit Req/Freq       N       Structure Appraisal       109 - Truck %         93A - Frac Crit Insp Date       36A - Bridge Railing       1       110 - Truck Network         92B - Und Water Req/Freq       N       36B - Rail Transition       0       115 - Year Future ADT         92C - Oth Spec Insp Req/Freq       N       36C - Approach Rail       0       115 - Year Future ADT         92C - Fatigue Req/Freq       N       66 - Structure Evaluation       4       75 - Type of Work       37 1         93D - Fatigue Insp Date       67 - Structure Evaluation       68 - Deck Geometry       6       75 - Type of Work       32 1         93D - Fatigue Insp Date       10 - Truck %       113 - Opencent Rating       113 - Scour Criticality       94 - Bridge Cost       285         93A - Paint Rating       5       113 - Scour Criticality       97 - Year of Cost Estimate       2003         93A - Paint Rating       5       71 - Historical Significance       5       31 - Design Load       4         94 - Strugation Data       98 - Border Bridge State       98 - Border Bridge State       91 - Deen, Posted, Closed       92         93A - Paint Rating       6       37 - Historical Significance       5       31 - Design Load       4         98 - Navigation Control       0       988 - Bor	•					
93A - Frac Crit Insp Date       Image: Contempt and image: Contemp				nraical	100 <b>-</b> 101	
92B - Und Water Req/Freq       N       30A - Bidge Rail Transition       0       114 - Future ADT         93B - Und Water Insp Date       36B - Rail Transition       0       114 - Future ADT       115 - Year Future ADT         92C - Oth Spec Insp Req/Freq       N       36D - Rail Termination       0       115 - Year Future ADT       115 - Year Future ADT         92D - Fatigue Req/Freq       N       66 - Approach Rail       0       0       115 - Year Future ADT         92D - Fatigue Req/Freq       N       66 - Deck Geometry       6       0       75 - Type of Work       37 - 1         93D - Fatigue Insp Date       66 - Zr       71 - Waterway Adequacy       7       94 - Bridge Cost       285         78A - Und Water Rating       6       7       703 - Temporary Structure       95 - Roadway Cost       20         94 - Subgerstructure Rating       5       103 - Temporary Structure       96 - Total Cost       332       32         95 - Soubstructure Rating       6       7       103 - Temporary Structure       97 - Year of Cost Estimate       2003         96 - Otal Cost       98 - Border Bridge State       98 - Border Bridge %       11 - Design Load       4         62 - Culvert Rating       6       101 - Parallel Structure       N       64H - Fed Oper Rtg Method			-		110 - Truck Network	
93B - Und Water Insp Date       36C - Approach Rail       0       115 - Year Future AD1         92C - Oth Spec Insp Req/Freq       N       36D - Rail Termination       0       Proposed Improvements         93D - Fatigue Req/Freq       N       68 - Deck Geometry       6       71 - Vaterway Adequacy       7       75 - Type of Work       37       1         93D - Fatigue Insp Date       1       71 - Waterway Adequacy       7       94 - Bridge Cost       285       285         93B - Deck Rating       6       7       72 - Approach Alignment       6       95 - Roadway Cost       285         95A - Paint Rating       5       103 - Temporary Structure       96 - Total Cost       332       332       32         95A - Paint Rating       5       113 - Scour Criticality       U       97 - Year of Cost Estimate       2003         96 - Total Cost       332       332       31 - Design Load       4       4       4         97 - Year of Cost Estimate       2003       31 - Design Load       4       4       4       4         98 - Roardgation Data       37 - Historical Significance       5       31 - Design Load       4       4       4       4       4       4       4       4       4       4       5       <		Ν	<b>a a</b>	1	114 - Future ADT	
92C - Oth Spec Insp Red/Freq       36D - Rail Termination       0       Preeway         93C - Oth Spec Insp Date       0       67 - Structure Evaluation       4       75 - Type of Work       37   1         93D - Fatigue Insp Date       0       0       0       0       75 - Type of Work       37   1         93D - Fatigue Insp Date       1       71 - Waterway Adequacy       7       94 - Bridge Cost       285         93A - Paint Rating       6       7       72 - Approach Alignment       6       95 - Roadway Cost       20         93 - Superstructure Rating       5       13 - Temporary Structure       96 - Total Cost       332       332         93 - Paint Rating       5       13 - Scour Criticality       U       97 - Year of Cost Estimate       2003         94 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         94 - Paridge Cost       988 - Border Bridge State       64 - Popen Rtg Method       6       6         93 - Vertical Clearance       0       101 - Parallel Structure       N       64 - Fed Oper Rtg Method       6         93 - Vertical Clearance       0       10 - Parallel Structure       N       64 - Fed Oper Rtg Load       91         94 - Din & Hanger Code       <	93B - Und Water Insp Date				115 - Year Future ADT	
93C - Oth Spec Insp Date       N       67 - Structure Evaluation       4       Proposed Improvements         92D - Fatigue Req/Freq       N       68 - Deck Geometry       6       75 - Type of Work       37       1         93D - Fatigue Insp Date       1       69 - Underclearance       N       76 - Length of Improvement       42         176A - Und Water Insp Method       6       7       72 - Approach Alignment       6       95 - Roadway Cost       200         58/JB - Deck Surface/Bottom       6       7       72 - Approach Alignment       96 - Total Cost       332         59 - Superstructure Rating       5       113 - Scour Criticality       U       97 - Year of Cost Estimate       2003         60 - Substructure Rating       6       37 - Historical Significance       5       31 - Design Load       4         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       98B - Border Bridge %       63 - Fed Oper Rtg Method       6       6         63 - Navigation Data       98B - Border Bridge %       63 - Fed Oper Rtg Method       6       6         98 - Vertical Clearance       0       101 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6 <tr< td=""><td></td><td>N</td><td></td><td></td><td>Freeway</td><td></td></tr<>		N			Freeway	
92D - Fatigue Red/Freq       N       68 - Deck Geometry       6       75 - Type of Work       37       1         93D - Fatigue Insp Date       1       69 - Underclearance       N       76 - Length of Improvement       42         76A - Und Water Insp Method       6       7       77       94 - Bridge Cost       285         58 - Deck Rating       6       7       72 - Approach Alignment       6       95 - Roadway Cost       20         58 - Deck Surface/Bottom       6       7       103 - Temporary Structure       96 - Total Cost       332       97 - Year of Cost Estimate       2003         59 - Superstructure Rating       5       113 - Scour Criticality       U       97 - Year of Cost Estimate       2003         61 - Channel Rating       6       77 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       N       98 - Border Bridge State       98 - Border Bridge %       31 - Design Load       4         38 - Navigation Control       0       98 - Border Bridge %       64 - Fed Oper Rtg Method       6         39 - Vertical Clearance       0       143 - Pin & Hanger Code       64MA - Mich Oper Rtg Method       6         114 - Pier Protection       143 - Pin & Hanger Code       148 - No. of Pin & Hangers <td< td=""><td></td><td></td><td></td><td></td><td>Proposed Improve</td><td>ments</td></td<>					Proposed Improve	ments
93D - Fatigue insp Date       6       7         176A - Und Water Insp Method       1       7         58 - Deck Rating       6       7         58A/B - Deck Surface/Bottom       6       7         59 - Superstructure Rating       5       72         59 - Superstructure Rating       5       103 - Temporary Structure       96 - Total Cost       332         59 - Superstructure Rating       5       113 - Scour Criticality       0       97 - Year of Cost Estimate       2003         60 - Substructure Rating       6       7       7       96 - Total Cost       332       2003         61 - Channel Rating       6       7       113 - Scour Criticality       0       97 - Year of Cost Estimate       2003         62 - Culvert Rating       7       Historical Significance       5       31 - Design Load       4         98 - Border Bridge State       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         93 - Vertical Clearance       0       101 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6         93 - Vertical Clearance       0       Stay in Place Forms       64MA - Mich Oper Rtg       .59       .59         101 - Parallel Structure       143 - Pin & Hanger Code       64MC - Mich Op		N				
58 - Deck Rating       6       7       11 - Waterway Adequacy       7       94 - Bildge Cost       20         58A/B - Deck Surface/Bottom       6       7       103 - Temporary Structure       95 - Roadway Cost       20         59 - Superstructure Rating       5       103 - Temporary Structure       96 - Total Cost       332         60 - Substructure Rating       5       113 - Scour Criticality       0       97 - Year of Cost Estimate       2003         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       98A - Border Bridge State       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         73 - Vertical Clearance       0       101 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6         74 - Water Way Adequacy       143 - Pin & Hanger Code       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         114 - Pier Protection       114 - No. of Pin & Hangers       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6	0 1					
58A/B - Deck Surface/Bottom       6       7       72 - Approach Alignment       6       95 - Roadway Cost       20         59 - Superstructure Rating       5       103 - Temporary Structure       96 - Total Cost       332         59 - Substructure Rating       5       113 - Scour Criticality       97 - Year of Cost Estimate       2003         60 - Substructure Rating       6       7       7       7       7       7         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       98 - Border Bridge State       98 - Fed Oper Rtg Method       6         83 - Navigation Control       0       98 - Border Bridge %       64MA - Mich Oper Rtg Method       6         39 - Vertical Clearance       0       101 - Parallel Structure       N       64MB - Mich Oper Rtg Method       6         111 - Pier Protection       143 - Pin & Hanger Code       143 - Pin & Hanger Code       65 - Inv Rtg Method       6       6         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6       6       6         70 - Posting       0       0       0       0       0       0       0       0		1	71 - Waterway Adequacy	7	94 - Bridge Cost	285
59 - Superstructure Rating       5       103 - Temporary Structure       96 - Total Cost       332         59 - Paint Rating       5       113 - Scour Criticality       97 - Year of Cost Estimate       2003         60 - Substructure Rating       7       Miscellaneous       97 - Year of Cost Estimate       2003         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       N       98A - Border Bridge State       91 - Open, Posted, Closed       P         83 - Navigation Data       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         101 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6         97 - Vertical Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       59         114 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         114 - No. of Pin & Hangers       65 - Inv Rtg Method       6       6         116 - Lift Brdg Vert Clear       0       55       70 - Posting       0	5		72 - Approach Alignment	6	95 - Roadway Cost	20
59A - Paint Rating       5       Ins - Scour Criticality       0       97 - Year of Cost Estimate       2003         60 - Substructure Rating       7       Miscellaneous       Load Rating and Posting         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       N       98A - Border Bridge State       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         83 - Navigation Data       98B - Border Bridge %       101 - Parallel Structure       N       64HF - Fed Oper Rtg Load       .91         39 - Vertical Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6			103 - Temporary Structure		96 - Total Cost	
60 - Substructure Rating       7       Miscellaneous       Load Rating and Posting         61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       N       98A - Border Bridge State       41 - Open, Posted, Closed       P         Navigation Data       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         39 - Vertical Clearance       0       101 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6         40 - Horizontal Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         0       .55       .00       .55       .00       .55         70 - Posting       0       .55       .00       .55       .00			113 - Scour Criticality	U	97 - Year of Cost Estimate	2003
61 - Channel Rating       6       37 - Historical Significance       5       31 - Design Load       4         62 - Culvert Rating       N       98A - Border Bridge State       41 - Open, Posted, Closed       P         Navigation Data       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         39 - Vertical Clearance       0       01 - Parallel Structure       N       64MA - Mich Oper Rtg Method       6         40 - Horizontal Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         114 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         0       .55       70 - Posting       0			Miscellan	eous	Load Rating and P	osting
N       98A - Border Bridge State       41 - Open, Posted, Closed       P         Navigation Data       98B - Border Bridge %       63 - Fed Oper Rtg Method       6         38 - Navigation Control       0       101 - Parallel Structure       N       64F - Fed Oper Rtg Load       .91         39 - Vertical Clearance       0       54y in Place Forms       64MA - Mich Oper Rtg       .59         111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         0       .55       .00       .55       .00	0		37 - Historical Significance	5		
Navigation Data98B - Border Bridge % 101 - Parallel Structure EPA ID63 - Fed Oper Rtg Method638 - Navigation Control00004H - Fed Oper Rtg Load9139 - Vertical Clearance00004H - Mich Oper Rtg Method640 - Horizontal Clearance00004H - Mich Oper Rtg.59111 - Pier Protection143 - Pin & Hanger Code64MC - Mich Oper Truck17116 - Lift Brdg Vert Clear148 - No. of Pin & Hangers65 - Inv Rtg Method670 - Posting00	0		0		0	Р
101 - Parallel Structure       N       64F - Fed Oper Rtg Load       .91         38 - Navigation Control       0       EPA ID       64MA - Mich Oper Rtg Method       6         39 - Vertical Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         40 - Horizontal Clearance       0       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         70 - Posting       0       0       0	0					
39 - Vertical Clearance       0       EFAID       64MiA - Mich Oper Rtg Method       6         40 - Horizontal Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         66 - Inventory Load       .55       70 - Posting       0			5	Ν		.91
40 - Horizontal Clearance       0       Stay in Place Forms       64MB - Mich Oper Rtg       .59         111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Truck       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         66 - Inventory Load       .55       .55         70 - Posting       0						
111 - Pier Protection       143 - Pin & Hanger Code       64MC - Mich Oper Trück       17         116 - Lift Brdg Vert Clear       148 - No. of Pin & Hangers       65 - Inv Rtg Method       6         66 - Inventory Load       .55       70 - Posting       0			2			
116 - Lift Brdg Vert Clear         148 - No. of Pin & Hangers         65 - InV Rtg Method         6           66 - Inventory Load         .55         70 - Posting         0		Ť			•	
70 - Posting 0			148 - No. of Pin & Hangers		•	
193 - Overload Class					0	

STR 10471	SAFETY INSPECTION REPORT - CORE ELEMENTS							
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition					
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)					
Feature	Length / Width / Spans	Owner						
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)						
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status					
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)					
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation					
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour					

NBI INSPECTION 2LNU								
Inspector N	ame	Agency / Company Nam	е		Insp. Freq.		Insp. Da	te
					24		10/23/19	97
CoRE ELE	MENTS						(Englis	sh Units)
Element Number	Element Name	Total Quantity	Unit	State 1	State 2	State 3	State 4	State 5
Decks/Slabs	S							
13/ 3	Conc Dk HMA No Memb	1582	(SF)	1582 100%	0 0%	0 0%	0 0%	0 0%
Superstruct	ure							
107/3	Pnted Stl Girder /Bm	420	(LF)	420 100%	0 0%	0 0%	0 0%	0 0%
330/ 3	Uncoated Metal Rail	85	(LF)	0 0%	85 100%	0 0%	0 0%	xxxxx xxxxx
Substructur	e							
215/ 3	Reinf Conc Abut	75	(LF)	75 100%	0 0%	0 0%	0 0%	xxxxx xxxxx

STR 10471 WORK RECOMMENDATIONS								
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition					
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)					
Feature	Length / Width / Spans	Owner						
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	2 / 37.7 / 1 County: Tuscola(79)						
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status					
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)					
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation					
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour					

## WORK RECOMMENDATIONS

Inspector Name	Agency / Company Name		Insp. Freq.	Insp. Date	
James Brock	ROWE Professional Services	Company	24	05/24/2023	
<b>RECOMMENDATIONS &amp; ACTIO</b>	N ITEMS				
Recommendation Type	Priority		Description	1	
Approach Repair	MU	Wedge approaches and seal cracks in HMA. Upgrade approach guardrail system to meet current standards. (2 (23)			
Seal Cracks	Н	Seal cracks in HMA (21) (23)			
Super Repair	Н	Beam repair to replace missing splice plates. (21) (23)			
Super Repl.	L C	Consider superstructure replacement due to weight restrictions. (2 (23)			
Other	н	Install adv	ance posting signs for	WB traffic. (21) (23)	

9504

		М	ICHIGA	N DEPAR	RTME	ENT OF	TRANS	POR	TATION		
STR 10471			scou	R CRITIC	CAL	BRIDG	E ACT	ION	PLAN		
Facility DUTCHER ROAD Feature NORTHWEST DRAIN OUTL		Latitude / Longitude         MDOT Structure ID           43.5513 / -83.6726         79200098000B020           Length / Width / Spans         Owner		3020	Fair Condition(5)						
Location SEC 5-8 GILFORD TWP Region / County Bay(4) / Tuscola(79)		Built / 1970 Materi	/ / ial / D	. / Paint / / 1995	5	и. Та Н Ца	ounty: T <b>SC</b> uron(28 <b>ast NBI</b> 5/24/202	) Insp	ection	Operational S P Posted for lo Scour Evalua U Unknown So	oad(273243) tion
PLAN OF ACTION AUTH	ORS										
Name	Age	ncy				Phone		Em	ail		Last Modified Date
Brent Dankert		er actir NER	ng as T	uscola		989-75 <sup>,</sup>	1-3873	brei	ntd@spicer	group.com	
William Green	Tuso Com	cola Co missio	ounty R	bad		989-550	)-3205	wgr	een@tusco	laroad.org	
Korrina Young	Spic Cou		up (acti	ng as Tus	cola	989-492	2-8001	korr m	ina.young@	spicergroup.co	
Hugh Dickie	Spic	er Gro	up			989-737	7-5031	hug	h.dickie@s	picergroup.com	08/08/2022
SCOUR VULNERABILITY Item 113 Scour Criticality Item 71 Waterway Adequ Level I Assessment Level II Analysis		U 7 N N	Sourc	ce of Item	113	,	Assesse	d			
Executive Summary Scour Unknown plans.	Evaluati	on									
Calculated Values											
Scour Analysis Event Freque Anticipated Surface Elevati Distance Below Bottom cho Anticipated Flow (cubic ft/s Anticipated Pressure Flow	on (ft) ord (ft) sec)	25 ye	ear	50 year	10	0 year	500 y	ear	Comments	5	

#### **Substructure Information**

Foundation	Normally in Water	Normal Water Depth (ft)	In Water (100 yr)	Footing Type	Depth Known	Soil Type
Abutment A	N	N/A		U Unknown	N	Unknown
Abutment B	N	N/A		U Unknown	N	Unknown

## **COUNTERMEASURE RECOMMENDATIONS**

O Only Monitoring Required

Estimated Cost \$

O Structural/Hydraulic Countermeasures Considered

**Countermeasure Comments** 

#### MONITORING PROGRAM

# Recommended Monitoring Requirements

No scour noted 5/19/21.

Туре	Frequency/ Amount	Comments
X Regular Inspection	24	
O Other Special Inspection		

	MICHIGAN DEPART	MENT OF TRANSPORTATION	
STR 10471	SCOUR CRITICA	L BRIDGE ACTION PLAN	
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLE	T 1 42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / O	vly. TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Nor	n Comp 05/24/2023 / 9504	U Unknown Scour
O Underwater Inspection			
O Stream Bed Cross Sections			
O Monitoring Devices (Fixed, S	Sonar, etc.)		
O Flood Monitoring - Initiate m	onitoring when any of the followin	g occur	
O NOAA Flood Warning (1	This includes both Flash Flood and	d Flood Warnings)	
O Flow Information			
O Discharge			
O Rainfall			
O WS Elevation	Measured from		
O Pressure Flow			
O Debris Accumulation			
Items to Watch During Monit	toring		
Foundation		Items to Watch	
Abutment A			
Abutment B			
Inspection Summary			
<b>T</b>			<b>A</b>
Туре	Latest Date Current Frec Completed	luency Inspector	Agency
Routine	05/24/2023 24	BROCKJ5252	ROWE Professional Services
			Company
Underwater			
Cross Section			
Scour Inspection			
High Flow Monitoring			
BRIDGE CLOSURE			
Conditions To Consider Brid	lge Closure		
O Water Surface Elevat	tion		
O Overtopping of Road	or Structure		
O Pressure Flow			
O High Debris Accumul	ation		
X Observed Structure	Movement/Settlement		
O Loss of Scour Counter	ermeasures		
Contacts Responsible for BF	RIDGE CLOSURE		
	itle	Agency	Phone Number Cell Number
	cting Highway Enginer	Tuscola County Road Commiss	
Contacts Responsible for OF		,	
	itle	Agency	Phone Number Cell Number
	cting Highway Enginer	Tuscola County Road Commiss	

STR 10471 SCOUR CRITICAL BRIDGE ACTION PLAN							
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition				
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)				
Feature	Length / Width / Spans	Owner					
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)					
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status				
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)				
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation				
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour				

## DETOUR ROUTE

#### **Possible Detour Route**

Dutcher Road east to Bradleyville Road south to Fairgrove Road west to Van Buren Road north to Dutcher Road west.

		E	Bridges/Culverts on	Detour Route	
Detour Bridge N	umbers	Feature In	tersected	Load Limitations	Scour Rating
10602		CENTER L	INE DRAIN		8
10397		NO NAM	E DRAIN		8
10404		GIBSON	I DRAIN		6
10470		VCCM&S	S DRAIN		5
10493	NOR	THWEST D	RAIN OUTLET 1		5
SCOUR INSPECTI	ONS				
Date	Туре	Freq	Inspector		Agency
05/11/2017	ROUTINE	24	Eric Rickert		Great Lakes Engineering Group
Comments	No scour noted.				
Recommendations	Appr. Pavement	Medium	Wedge approaches		
	Other	High	Install advance posti	ng signs for WB traffi	С.
05/24/2019	5/24/2019 ROUTINE 24		Ryan Lefere		Great Lakes Engineering Group, LLC
Comments Water along both at		abutments.	Probed, no exposed	footings.	
Recommendations	Approach Repair	Medium	Wedge approaches		
	Seal Cracks	Medium	Deck		
	Other	High	Install advance posti	ng signs for WB traffi	С.
05/19/2021	ROUTINE	24	Rich Kathrens, P.E.		Spicer Group, Inc.
Comments	No water along eit	ther abutme	nt. No scour noted.		
Recommendations	Approach Repair	Medium	Wedge approaches Upgrade approach g	and seal cracks in HN uardrail system to me	/A. eet current standards.
	Deck Patching	High	Seal cracks in HMA		
	Super Repair	High	Beam repair to repla	ce missing splice plat	tes.
	Super Repl.	Low	Consider superstruct	ure replacement due	to weight restrictions.
	Other	High	Install advance posti	ng signs for WB traffi	С.
05/24/2023	ROUTINE	24	James Brock		ROWE Professional Services Company
Comments	Probed, no scour	noted. Wate	er flows along 60% of	east abutment and 59	% of west abutment.
Recommendations	Approach Repair	Medium	Wedge approaches Upgrade approach g	and seal cracks in HN uardrail system to me	/A. eet current standards. (21) (23)
	Seal Cracks	High	Seal cracks in HMA	(21) (23)	
	Super Repair	High	Beam repair to repla	ce missing splice plat	tes. (21) (23)
	Super Repl.	Low	Consider superstruct	ure replacement due	to weight restrictions. (21) (23)
	Other	High	Install advance posti	na ciano for MR troffi	a (21) (22)

## **HIGH FLOW EVENTS**

## No Recorded High Flow Events

STR 10471	DGE ACTION PLAN			
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	<u></u>
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	<b>Operational Status</b>	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

STR 10471		L	OAD RA	TING AS	SSUMP	TIONS	5	
Facility		titude / Lo	-		MDOT			Structure Condition
DUTCHER ROAD		.5513 / -83			792000	980001	B020	Fair Condition(5)
Feature		ngth / Wid	th / Spar	IS	Owner	-	. (70)	
NORTHWEST DRAIN OUTLET 1		/ 37.7 / 1		<u>.</u> .	County	: Tusco	ola(79)	
		ilt / Recon.		•	TSC	20)		Operational Status
SEC 5-8 GILFORD TWP Region / County	-	70 / /	/ 1995	1	Huron(2		action	P Posted for load(273243) Scour Evaluation
Bay(4) / Tuscola(79)		a <b>terial / De</b> s Steel / 02 M	-	on Comp	Last N	-		U Unknown Scour
					03/24/2	.023 /	9304	O UNKNOWN SCOU
Rating Considers Field Condition	on of M	lembers:	Yes		Inspe	ction D	Date:	05/24/2019
Only minor pitting below paint not	ed.							
Most Recent Year Construct / R	econst	truct / Overl	av: 1	995				
			- <b>---</b>					
History of Work Impacting Load	<u>ratin</u>	<u>y.</u>						
Superstructure Component:	3 Stee	 əl			Bea	am fy:	36.0	ksi Beam f'c / fb: 3.0 ksi
Composite:	No	Νι	umber of	Beams:	10		Shop I	Drawings Verified: No
Beam Size(s) & Names (each span):	W21x	62, 10 each,	1 span.					
Deck: Thickness (in.):	7.5	Fy	/ f'c:	40.0	/ 3.0	ksi		Deck Design Load > H15: Yes
Wearing Surface: Mat'l:	HMA			Thic	kness (i	in.):	4.0	Unit Weight (pcf.): 145.0
		LEFT			(	CENTE	R	RIGHT
Barrier: Type / Weight (plf.):		Guardrail	/ 50.0				/	Guardrail / 50.0
Sidewalk: Width / Thick (in.):			/				/	/
Clear Roadway (ft.):	34.8							
Additional Loads:								
None. Unique Factors That Affect Cap	acity:							

STR 10471	LOAD RATING		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour

Compliance Issue: Compliance Verified: Analysis Program: Analysis Program Version: Rating Considers Field Condition of Members: Controlling component and failure mode: None No AASHTOWare Bridge Rating (BrR) 6.8.3 Yes Inspection Date:

05/24/2019

Interior beam, flexure

#### **NEW INVENTORY CODING**

NBI Item 63 - Operating Rating Method NBI Item 64F - Federal Operating Ratings MDOT Item 64MA - Michigan Operating Method MDOT Item 64MB - Michigan Operating Rating MDOT Item 64MC - Michigan Operating Truck

NBI Item 65 - Inventory Rating Method NBI Item 66 - Federal Inventory Rating

NBI Item 41 - Structure Open Posted Closed NBI Item 70 - Bridge Posting Posted By MDOT Item 141 - Posted Loading

MDOT Item 193A - Michigan Overload Class MDOT Item 193C - Overload Status 6 LFR in Rating Factor 0.91 6 LFR in Rating Factor 0.59 17 6 LFR in Rating Factor 0.55 P P Posted for load 0 0 - 59% or less Truck Type 273243

Sample Sign



R12-5

Analyzed By: Checked By: Casey Collings Eric Rickert Date: Date:

05/29/2019 05/29/2019

STR 10471	REQUEST FO		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour

No inspections available for bridge key 79200098000B020

STR 10471	OUTSTANDIN			
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	-
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	<b>Operational Status</b>	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour	

#### WORK RECOMMENDATIONS

DECKS/SLABS Request For Seal Cracks	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment		Co	omplete Date
<b>Comments</b> Seal cracks in HMA	(21) (23) (James Bro	ock 07/11/2023)		
SUPERSTRUCTUR Request For Super Repair	E Contact/User	Agency/Company Name	Estimated Quantity	Unit
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment		Co	omplete Date
<b>Comments</b> Beam repair to repla	ice missing splice plat	es. (21) (23) (James Brock 07/11/2023)		
Request For Super Repl.	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment		Co	omplete Date
Comments Consider superstruc OTHER	ture replacement due	to weight restrictions. (21) (23) (James Br	ock 07/11/2023)	
Request For Other	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment		Co	omplete Date
	ing signs for WB traffic rent Dankert 10/07/20:	c. (21) (23) (James Brock 07/11/2023) 20)		
<b>Request For</b> Approach Repair	Contact/User	Agency/Company Name	Estimated Quantity	Unit
Activity	Material	Other Material	Actual Quantity	Unit
Personnel Hours	Equipment		Co	omplete Date

STR 10471	OUTSTANDIN		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2023 / 9504	U Unknown Scour

Wedge approaches and seal cracks in HMA. Upgrade approach guardrail system to meet current standards. (21) (23) (James Brock 07/11/2023)

## TUSCOLA COUNTY ROAD COMMISSION APPLICATION FOR MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL BRIDGE FUND DUTCHER ROAD OVER NORTHWEST DRAIN OUTLET #1 (SN 10471) GILFORD TOWNSHIP T13N, R07E, SECTION 5 & 8 TUSCOLA COUNTY

## I. INTRODUCTION

The Dutcher Road Bridge over the Northwest Drain Outlet #1 is the first priority for Tuscola County to be rehabilitated in the 2023 fiscal year. Superstructure replacement is needed.

The Dutcher Road Bridge was originally constructed in 1970. The bridge is a single-span structure with steel beams, a concrete deck, and a chip seal surface. The structure has concrete abutment walls. The bridge has a length of 42 feet and a clear width of 34.8 feet.

Dutcher Road is an east-west road and is classified as a Rural Minor Collector. The bridge is approximately 0.5 miles east of Van Buren Road. The average daily traffic on Dutcher Road over the Northwest Drain Outlet #1 is approximately 980 vehicles per day.

## II. GENERAL CONDITION OF THE DUTCHER ROAD BRIDGE

The Dutcher Road Bridge is currently posted at 27/32/43 tons. The deficiencies noted from a May 2019 inspection included the following:

- 10 steel I-beams with square end cover plates applied in 4' +/- sections in 1990. Steel channel diaphragms at midspan. Splice Plates for cover plates loose and rusty at beam 1s and 10s. Several tack welds at cover plate splices. Beam 1S, 6S and 10S have pairs of drilled holes through webs, (6) pairs per beam. Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside.
- Beams were painted in 2011, but speckled rust is already visible along all beams.
- Replacement of the bridge superstructure is needed due to the condition of the beams, the paint system, and the posting.

## III. NARRATIVE SUPPORTING THE APPLICATION

## A. Contact Person

The contact person for the Tuscola County Road Commission is:

Mr. Brent Dankert, P.E. Director of Engineering Tuscola County Road Commission 1733 Mertz Road Caro, MI 48723 Phone: 989-751-3873

B. Economic Importance

The economic importance of the Dutcher Road Bridge over the Northwest Drain Outlet #1 includes the following:

- Dutcher Road is an east-west road serving commuters, residential and agricultural users. Due to other posted bridges in the surrounding area, farmers have to detour around the bridge during spring planting and fall harvest costing additional travel time during the extremely tight planting and harvest time.
- C. Existing Impact of Closed Structure

The existing structure is posted for load which causes truck traffic to detour 8 miles to bypass this bridge due to the number of posted structures in the county. Additionally, if the bridge were to close the average daily traffic of 980 vehicles per day would have to follow the 8 miles detour.

D. Structure Maintenance

The Tuscola County Road Commission has performed an overlay in 1995 and painted the steel beams in 2011.

## IV. COST BREAKDOWN FOR DUTCHER ROAD BRIDGE

The following is the estimated cost for the replacement of the Dutcher Road Bridge over the Northwest Drain Outlet #1, SN 10471.

ITEM	COST ITEM		COST
Α.	Approach Construction	(A)	\$510,400
B.	Structure Construction	(B)	\$251,600
		Total (A&B)	\$762,000

## V. PRIORITY LIST

The following is the priority list for bridges in Tuscola County:

- 1. Dutcher Road over Northwest Drain Outlet #1, Superstructure Replacement
- 2. Akron Road over Northwest Drain Outlet #3, Replacement
- 3. Barnes Road (Mid) over Perry Creek, Replacement
- 4. Barnes Road (East) over Perry Creek, Replacement



## LAP - BRIDGE COST ESTIMATE WORKSHEET

	2020		LAP - B	RIDGE COST ESTIMATE	WORKSHE	ET		REV. 2/1/2020
				- CPM, REHAB, REPLA	CE -		DAT	E: 5/19/2020
OWNER:	Tuscola County	FISCAL	YEAR: 2023		Out to Out	Curb to Curb	ENGINEE	
REGION:	Вау			LENGT		WIDTH		, ,
TSC:	Huron	PR: 274310	MP: 1.335	42	.0 37.7	34.8	STRUCTURE I	
	100171011						BRIDGE I	D: N/A
DRIMA	LOCATION: ARY WORK ACTIVITY Su		D over NORTHWEST D	DECK ARE	A: 1,583	SFT	STR. TYP	- Steel
FININA	OTHER WORK:		nem	CLEAR ROADWA		SFT	51K. 11F	Multi-Stringer, W or I-Bea
	WORK ACTIVI	<u>ry</u>	Michigan Bridge De	esign Manual	QUANTITY	UNIT	UNIT COST	TOTAL
NEW BRIDG				esign standards and hydraulic requirements	s)			
	e or Multiple Spans, Grade e Span, Over Water	E Separation Length < 1	(add demo, appro 00ft (add demo, appro			SFT SFT	\$220.00 /SFT \$350.00 /SFT	
	ble Spans, Over Water	Length > 1			-	SFT	\$220.00 /SFT	
	ast Culvert	Length < 4			_	SFT	\$350.00 /SFT	
	RSTRUCTURE	0		· · · · ·				
	Superstructure, Grade Sep	aration	(incl. remove exist deck	/super; add MOT & approach)		SFT	\$170.00 /SFT	
	Superstructure, Over Wate			/super; add MOT & approach)	1,583.0	SFT	\$200.00 /SFT	\$316,600
WIDENING								
	ture Widening, ft		(incl. deck/super/sub wi	dening, add approach transition)		SFT	\$270.00 /SFT	
NEW DECK								
	Bridge Deck & Barrier		(incl. remove exist deck	/railing, add approach, MOT)		SFT	\$75.00 /SFT	
DEMOLITIO	- N							
	e Structure, Grade Separat	ion				SFT	\$33.00 /SFT	
	e Structure, Over Water				1	SFT	\$46.00 /SFT	
DECK REPA	AIR / TREATMENTS							
	e Railing Replacement		(incl. removal and repla	cement)		FT	\$400.00 /FT	
	rete Brush Block / Curb Pa	itch	(incl. hand chipping and		1	FT	\$24.00 /FT	
Concr	rete Barrier Patch		(incl. hand chipping and			SFT	\$45.00 /SFT	
	rete Deck Patch		(incl. hand chipping)			SFT	\$30.00 /SFT	
	Overlay		(incl. joint repl & hydro)			SFT SYD	\$33.00 /SFT	
	y Overlay nsion Joint Gland Replace	ment	(incl. warranty) (remove and replace ela	astomeric gland)		FT	\$30.00 /SYD \$85.00 /FT	
	nsion Joint Replacement	nent	(incl. removal)	astomene giand)	_	FT	\$600.00 /FT	
	Depth Patch		(		1	SFT	\$76.00 /SFT	
	er / Sealer		(penetrates cracks in br	idge deck)		SYD	\$15.00 /SYD	
	Overlay with WP membrar	10	· · · · · · · · · · · · · · · · · · ·	0404 HUBA 074 N		SYD	\$53.00 /SYD	
	ay Removal al Bridge Joints		(Epoxy: \$8/syd   Latex:	\$16/syd   HMA: \$7/syd)		SYD FT	\$16.00 /SYD \$16.00 /FT	
	ow Overlay		(incl. joint repl & hydro)			SFT	\$10.00 /FT \$22.00 /SFT	
	· · · · · · · · · · · · · · · · · · ·		(indi. joint repi & nyaro)		1	011	\$22.00 /01 I	
	UCTURE REPAIR	mont	(incl. temperany augment		1	<b>F</b> A	¢5 000 00 FA	
	ng Realignment / Replacer Straightening	nent	(incl. temporary support (incl. clean and coat)	(S)		EA	\$5,000.00 EA \$50,000.00 EA	
	Rust Repair		(greater than 3/8" separ	ration)	-	FT	\$500.00 /FT	
	- Complete		(incl. clean & coat)			SFT	\$30.00 /SFT	
	- Partial / Spot / Zone		(incl. clean & coat - \$20	k minimum)		SFT	\$60.00 /SFT	
	Beam End Blockout		(incl. temporary support			EA	\$7,200.00 EA	
	Hanger Replacement		(incl. temporary support			EA	\$8,000.00 EA	
	tural Steel Repair		(based on 6it length; to	r stiffeners use \$1,200 ea)		EA	\$3,000.00 EA	
	TURE REPAIR							
	tructure Patching		(measured x 2) replace			CFT CFT	\$300.00 /CFT	
	tructure Replacement tructure Horizontal Surface	Sealer	(incl. temporary support	is, excavation)		SYD	\$180.00 /CFT \$40.00 /SYD	
	orary Supports	Gealer	(add \$1,200 for ea stee	l beam - stiffeners)	-	EA	\$2,500.00 EA	
MISCELLAN				,			1 7 7	
	lating Concrete Block Syst	tem (ACB)				SYD	\$150.00 /SYD	
	rete Surface Coating					SYD	\$28.00 /SYD	
Culve	ert Cleanout					FT	\$30.00 /FT	
	y Crack Injection		(structural crack repair)			FT	\$50.00 /FT	
	Mesh Panels		(48" width, max 6'-6" ler			SFT	\$20.00 /SFT	
Press Riprar	sure Relief Joint			ncrete roadway exceeds 1,000ft) around perimeter of substructure)	400.0	FT SYD	\$100.00 /FT \$175.00 /SYD	\$70,000
	e Treatment		(penetrating sealer for c		400.0	SFT	\$4.50 /SFT	\$70,000
	Protection Repairs		(F)	,		SYD	\$100.00 /SYD	
Other	r i							
					STRUCTU	IRE CONST	RUCTION BUDGE	T \$386,600
ROAD WOR	ach Pavement, 12" RC		(incl. removal: add auch	, gutter, guardrail) 20' ea. end	60.0	SYD	\$175.00 /SYD	\$10,50
	bach Pavement, 12 RC		(incl. removal) 20' ea. o		80.0	FT	\$175.00 /STD \$56.00 /FT	\$10,50
	drail Anchorage to Bridge		(each quadrant)		4.0	EA	\$1,600.00 /EA	\$6,40
Guard	drail		(incl. removal) < 200ft l	beyond reference line		FT	\$28.00 /FT	
	drail Terminal		(each quadrant)		4.0	EA	\$2,300.00 /EA	\$9,20
Roadv Utilitie	way Approach Work		(beyond approach pave	ment)	1.0	LSUM LSUM	\$150,000.00 LSUM	
				<i></i>	1	LOUW	LSUM	1
TRAFFIC CO		It Cost to be determine	ed by Region or TSC Trat	TIC & Safety			Louis	
Part V Cross	Nidth Construction					LSUM EA	LSUM \$300,000.00 /EA	
	orary Traffic Signals				1	set	\$25,000.00 /EA	
	lagging					LSUM	LSUM	<u> </u>
RR FI					1.0	LSUM	\$10,000.00 LSUM	\$10,00
RR FI Detou						FIC CONST	RUCTION BUDGE	<b>T</b> \$190,58
								ψισ0,00
Detou								
Detou		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	r contingency for small pro		10	%	\$577,000.00	\$58,000
Detou	ION (es	0% - 20%) (use higher timate at 10%) sume 3% per year, be				%		\$58,000 \$64,000 \$63,000

TOTAL CONSTRUCTION BUDGET \$762,000 (Does not include PE or CE)

STR 10471		STRUCTURE INVENTOR	RY AND APPRAISA	 L		
Facility	Latitu	ide / Longitude	MDOT Structure ID	Structure Condition		
DUTCHER ROAD		13 / -83.6726	79200098000B020	Fair Condition(5)	3	
Feature		th / Width / Spans	Owner		-	
NORTHWEST DRAIN OUTL	-	37.7 / 1	County: Tuscola(79)			
Location		/ Recon. / Paint / Ovly.	TSC	<b>Operational Status</b>		
SEC 5-8 GILFORD TWP	1970	-	Huron(28)	P Posted for load(2732	43)	
Region / County		rial / Design	Last NBI Inspection	·		
Bay(4) / Tuscola(79)		el / 02 Multi Str Non Comp	-	5 Stable w/in footing		
Bay(4) / Tuscola(79)	3 316		03/24/2019 / 009/	5 Stable Will footing		
Bridge History, Type,	Materials	Route Carried By Stru	cture(ON Record)	Route Under Structure (UN	NDER Red	cord)
27 - Year Built	1970	5A - Record Type	1	5A - Record Type		
106 - Year Reconstructed		5B - Route Signing	4	5B - Route Signing		
202 - Year Painted 203 - Year Overlay	1995	5C - Level of Service 5D - Route Number	1 00000	5C - Level of Service 5D - Route Number		
43 - Main Span Bridge Type	3 02	5E - Direction Suffix	0	5E - Direction Suffix		
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt		
77 - Steel Type	3	10R - Best 3m Unclr-Rt	99 99	10R - Best 3m Unclr-Rt		
78 - Paint Type	1	PR Number		PR Number		
79 - Rail Type 80 - Post Type		Control Section 11 - Mile Point		Control Section 11 - Mile Point		
107 - Deck Type	1	12 - Base Highway Network	< 0	12 - Base Highway Network		
108A - Wearing Surface	6	13 - LRS Route-Subroute	000002743 10	13 - LRS Route-Subroute		
108B - Membrane	0	19 - Detour Length	5	19 - Detour Length		
108C - Deck Protection	0	20 - Toll Facility	3	20 - Toll Facility		
Structure Dimens	ions	26 - Functional Class 28A - Lanes On	08	26 - Functional Class 28B - Lanes Under		
34 - Skew	0	29 - ADT	980	29 - ADT		
35 - Struct Flared	N 1	30 - Year of ADT	2009	30 - Year of ADT		
45 - Num Main Spans 46 - Num Apprs Spans	0	32 - Appr Roadway Width	34.1	42B - Service Type Under	5	
48 - Max Span Length	40	32A/B - Ap Pvt Type/Width	4 22.01	47L - Left Horizontal Clear		
49 - Structure Length	42	42A - Service Type On 47L - Left Horizontal Clear	1 0.0	47R - Right Horizontal Clear 54A - Left Feature		
50A - Width Left Curb/SW	0	47R - Right Horizontal Clea		54B - Left Underclearance	99 9	99
50B - Width Right Curb/SW	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature		
33 - Median 51 - Width Curb to Curb	34.8	100 - STRAHNET	0	54D - Right Clearance	99 9	99
52 - Width Out to Out	37.7	102 - Traffic Direct	2	Under Clearance Year		
112 - NBIS Length	Y	109 - Truck % 110 - Truck Network	3	55A - Reference Feature 55B - Right Horiz Clearance	N 99.9	
Inspection Dat	a	114 - Future ADT	1770	56 - Left Horiz Clearance	0	
90 - Inspection Date	05/24/2019	115 - Year Future ADT	2029	100 - STRAHNET		
91 - Inspection Freq	24	Freeway	0	102 - Traffic Direct		
92A - Frac Crit Req/Freq	N	Structure Ap	opraisal	109 - Truck %		
93A - Frac Crit Insp Date 92B - Und Water Reg/Freg	N	36A - Bridge Railing	1	110 - Truck Network 114 - Future ADT		
93B - Und Water Insp Date		36B - Rail Transition	0	115 - Year Future ADT		
92C - Oth Spec Insp Req/Freq	N	36C - Approach Rail 36D - Rail Termination	0	Freeway		
93C - Oth Spec Insp Date		67 - Structure Evaluation	4	Proposed Improve	ments	
92D - Fatigue Req/Freq	N	68 - Deck Geometry	6	75 - Type of Work	37 1	
93D - Fatigue Insp Date 176A - Und Water Insp Method	1	69 - Underclearance	Ν	76 - Length of Improvement	42	
58 - Deck Rating	6	71 - Waterway Adequacy	7	94 - Bridge Cost	285	
58A/B - Deck Surface/Bottom	5 7	72 - Approach Alignment	6	95 - Roadway Cost	20	
59 - Superstructure Rating	5	103 - Temporary Structure 113 - Scour Criticality	5	96 - Total Cost 97 - Year of Cost Estimate	332 2003	
59A - Paint Rating	6	,				
60 - Substructure Rating	7	Miscellan		Load Rating and P	osting	
61 - Channel Rating 62 - Culvert Rating	7 N	37 - Historical Significance 98A - Border Bridge State	5	<ul><li>31 - Design Load</li><li>41 - Open, Posted, Closed</li></ul>	4 P	
0		988 - Border Bridge %		63 - Fed Oper Rtg Method	6	
Navigation Dat		101 - Parallel Structure	Ν	64F - Fed Oper Rtg Load	.91	
38 - Navigation Control 39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6	
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	.59	
111 - Pier Protection		143 - Pin & Hanger Code		64MC - Mich Oper Truck	17	
116 - Lift Brdg Vert Clear		148 - No. of Pin & Hangers		65 - Inv Rtg Method 66 - Inventory Load	6 .55	
-				70 - Posting	0	
				141 - Posted Loading	273243	
				193 - Overload Class		

			I	MICHIGAN DEPARTMENT (	OF TRANSPORTATI	ON	
STR 10471				BRIDGE SAFETY INSP	PECTION REPORT	-	
acility UTCHER ROAD eature ORTHWEST DRAIN OUTLET 1 ocation EC 5-8 GILFORD TWP egion / County ay(4) / Tuscola(79)		43.59 Leng 42 / Built 1970 Mate	ude         / Longitude           513         / -83.6726           gth         / Width / Spans           37.7         /           t         Recon. / Paint / Ovly.           0         /         /           erial         Design           eel         /         02	MDOT Structure ID 79200098000B020 Owner County: Tuscola(79) TSC Huron(28) Last NBI Inspectio 05/24/2019 / VU9>	Fair Condit ) Operation P Posted for n Scour Eva	tion(5)	
NBI INSPECTION	1						VU9
Inspector Name			A	Agency / Company Name	Ir	nsp. Freq.	Insp. Date
Ryan Lefere			G	Great Lakes Engineering Grou	up, LLC	24	05/24/2019
GENERAL NOTE	S						
TCRC ID: B-GIL-P-1	10						
Posted at 54 tons.							
No advanced postin	g sign east	t of str	ucture	at Quanicassee Rd.			
DECK 1. Surface (SIA-58A)	<b>05/15</b> 5	<b>05/17</b> 6	<b>05/1</b> 9 5	9 Chip seal. Open transverse (05/19)	e/longitudinal cracks;	deep longitudinal o	crack along westbound
(SIA-38A)				Chip seal, previous cracks HMA surface with block cra cracks along abutment refe	icks that are partially	) sealed. Reflective	unsealed transverse
2. Expansion Joints	Ν	N	5	Paved over; partially sealed (05/17) None present. (05/15)	d transverse cracks ((	05/19)	
3. Other Joints	Ν	Ν	Ν	(05/19) (05/17) (05/15)			
4. Railings	7	7	7	Steel I-post barriers with tw the north side of structure. Light rust on railing posts. ( Steel I-post barriers with tw the north side of structure. Light rust on railing posts. ( Steel I-post barriers with tw the north side of structure. (05/15)	Thrie beam retrofit ha 05/19) to steel angle beams Thrie beam retrofit ha 05/17) to steel angle beams	as been placed in fi on the south and th as been placed in fi on the south and th	ront of old barrier system. hree steel angle beams o ront of old barrier system. hree steel angle beams o
5. Sidewalks or Curbs	Ν	Ν	Ν	(05/19) (05/17) (05/15)			
6. Deck Bottom Surface (SIA-58B)	7	7	7	Concrete bottom surface, n Concrete bottom surface, n Concrete bottom surface, n	o deficiencies noted.	(05/17)	

STR 10471				BRIDGE SAFETY INSP	PECTION REPORT	
Facility DUTCHER ROAD Feature NORTHWEST DRAIN OUTLET 1 Location SEC 5-8 GILFORD TWP Region / County Bay(4) / Tuscola(79)			Latitude / Longitude 43.5513 / -83.6726 Length / Width / Spans 42 / 37.7 / 1 Built / Recon. / Paint / Ovly. 1970 / / 1995 Material / Design 3 Steel / 02 Multi Str Non Comp		MDOT Structure ID 79200098000B020 Owner County: Tuscola(79) TSC Huron(28) Last NBI Inspection 05/24/2019 / VLI9X	Structure Condition Fair Condition(5)Image: Condition(5)Operational Status P Posted for load(273243) Scour Evaluation 5 Stable w/in footing
7. Deck (SIA-58)	6	6	6	westbound. Deck bottom: 15' spalling; north - 35' spa Surface: Chip seal, previou Bottom Surface: No deficie Fascias: South fascia has	Concrete bottom surface, lling (05/19) is cracks partially filled. ncies noted. 15' of spalling, north fascia block cracks that are part utment reference lines. ncies noted.	al cracks; deep longitudinal crack along no deficiencies noted. Fascia: south - a spalled along full length. (05/17) ially sealed. Reflective unsealed along both fascias. (05/15)
8. Drainage				Off fascias. (05/19) (05/17) Off fascias. (05/15)		
SUPERSTRUCT	URE					
	05/15	05/17	05/19			
9. Stringer (SIA-59)	5	5	5	channel diaphragms at mic and 10s. Several tack weld drilled holes through webs, evident. Rust on bottom fla have scaled rust on the out There are 10 steel I-beams Steel channel diaphragms 1s and 10s. Several tack v holes through webs, (6) pa There are 10 steel I-beams Steel channel diaphragms	Ispan. Splice Plates for co ds at cover plate splices. E (6) pairs per beam. Pain nge of beam 10s at west a stide. (05/19) with square end cover pla- te midspan. Splice Plates velds at cover plate splice irs per beam. (05/17) with square end cover pla- te midspan. Splice Plates velds at cover plate splice	ed in 4' +/- sections in 1990. Steel wer plates loose and rusty at beam 1s Beam 1S, 6S and 10S have pairs of ted over pitting in some locations is abutment. Top flanges of fascia beams ates applied in 4' +/- sections in 1990. for cover plates loose and rusty at beam s. Beam 1S, 6S and 10S have pairs of ates applied in 4' +/- sections in 1990. for cover plates loose and rusty at beam s. Beam 1S, 6S and 10S have pairs of
10. Paint (SIA-59A)	6	6	6	lew paint applied in 2011, but blast cleaning not done prior as a result speckled rust is lready evident. (05/19) lew paint applied in 2011, but blast cleaning not done prior as a result speckled rust is lready evident. (05/17) lew paint applied in 2011, but blast cleaning not done prior as a result speckled rust is lready evident. (05/15)		
11. Section Loss	2	2	2	Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/19) Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/17) Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/17) Painted over pitting in some locations is evident. Rust on bottom flange of beam 10s at west abutment. Top flanges of fascia beams have scaled rust on the outside. (05/15)		
12. Bearings	7	7	7	(05/19) Steel plate bearings at eac (05/17)	h beam end. Steel plates	have uniform surface rust throughout. have uniform surface rust throughout. have uniform surface rust throughout.
SUBSTRUCTUR	E					
	05/15	05/17	05/19			
13. Abutments	7	7	7	Concrete abutment walls.	linor hairline cracks off w	eep holes. There are three 2" diameter

13. Abutments 7 (SIA-60)	77	Concrete abutment walls. Minor hairline cracks off weep holes. weep holes per wall. (05/19)	There are three 2" diameter
		Concrete abutment walls. Minor hairline cracks off weep holes. weep holes per wall. (05/17)	There are three 2" diameter
		Concrete abutment walls. Minor hairline cracks off weep holes. weep holes per wall. (05/15)	There are three 2" diameter
Modified by: LEEERER2005 c	n 10/25/2010	Printed on 06/01/2020	Page 2 of 11

STR 10471				BRIDGE SAFETY INSI	PECTION REPORT	
Facility DUTCHER ROAD Feature NORTHWEST DRAIN OUTLET 1 Location SEC 5-8 GILFORD TWP Region / County Bay(4) / Tuscola(79)			Latitude / Longitude 43.5513 / -83.6726 Length / Width / Spans 42 / 37.7 / 1 Built / Recon. / Paint / Ovly. 1970 / / 1995 Material / Design 3 Steel / 02 Multi Str Non Comp		MDOT Structure ID 79200098000B020 Owner County: Tuscola(79) TSC Huron(28) Last NBI Inspection 05/24/2019 / VU9X	Structure Condition Fair Condition(5)Image: Condition (5)Operational Status P Posted for load(273243) Scour Evaluation 5 Stable w/in footing
14. Piers (SIA-60)	Ν	Ν	Ν	(05/19) (05/17) (05/15)		
15. Slope Protection	Ν	Ν	Ν	(05/19) No slope protection under No slope protection under	the structure protecting the the structure protecting the	e abutment walls. (05/17) e abutment walls. (05/15)
16. Channel (SIA-61)	7	7	7	<ul> <li>Flow south to north. Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/19)</li> <li>Improved county drain with grass banks. Sloughing banks upstream and downstream of bridge. (05/17)</li> <li>Improved county drain. Stable banks with straight flow under structure. No scour along abutments. (05/15)</li> </ul>		
17. Scour Inspection		7	7	<ul> <li>Water along both abutments. Probed, no exposed footings. (05/19)</li> <li>No scour noted. (05/17)</li> <li>(05/15)</li> </ul>		
APPROACH						
	05/15	05/17	05/19	)		
18. Approach Pavement	6	6	5	approach. (05/19) Chip seal with reflective cra approach. (05/17)	acks through chip seal. Es	stimate 1" of settlement at each stimate 1" of settlement at each re. Sealed transverse and longitudinal
19. Approach Shoulders Sidewalks	6	6	6	Tapered HMA shoulders in - longitudinal crack (05/19) Tapered HMA shoulders in Tapered HMA shoulders in	n all four quadrants. (05/17	d transverse cracks in all quadrants. NE ) )
20. Approach Slopes				grass covered slopes with guardrail: thrie beam / type Some large pieces of broke grass covered slopes with Some large pieces of broke	a minor slumped bank in tl B. No impact damage. (C en concrete along return w a minor slumped bank in tl en concrete along return w	ingwalls in all four quadrants. 1 on 2 he southeast quadrant. Approach 95/19) ingwalls in all four quadrants. 1 on 2 he southeast quadrant. (05/17) ingwalls in all four quadrants. 1 on 2 he southeast quadrant. (05/15)
21. Utilities				There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/19) There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/17) There are two 2" diameter galvanized steel conduits mounted to barrier along the north fascia. (05/17)		
22. Drainage Culverts				(05/19) 12" diameter pipe in the so 12" diameter pipe in the so		
MISCELLANEOUS	5					
Guard Rail			_		other Items	
Item			Rati		em	Rating
36A. Bridge Railings 36B. Transitions 36C. Approach Guar 36D. Approach Guar	rdrail	ds	1 0 0 0	7: T	1. Water Adequacy 2. Approach Alignment emporary Support ligh Load Hit (M)	7 6 0 No Temporary Supports No
					-	

Printed on 06/01/2020

Modified by: LEFERER2005 on 10/25/2019

STR 10471	BRIDGE SAFETY INS	SPECTION REPORT		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	<u> 1</u>
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	<b>Operational Status</b>	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Com	p 05/24/2019 / VU9X	5 Stable w/in footing	
		<b>•</b> • • • • • •		
		Special Insp. Equipment Underwater Insp. Method	2 1	
False Decking (Timber) Removed			2 1	
False Decking (Timber) Removed Critical Feature Inspections (S	to Complete Inspection	Underwater Insp. Method	2 1	
••••	to Complete Inspection	Underwater Insp. Method	2 1	
Critical Feature Inspections (S	to Complete Inspection	Underwater Insp. Method	2 1	
••••	to Complete Inspection	Underwater Insp. Method	2 1	
Critical Feature Inspections (S 92A. Fracture Critical	to Complete Inspection	Underwater Insp. Method	2 1	

STR 10471 BRIDGE SAFETY INSPECTION REPORT					
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition		
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)		
Feature	Length / Width / Spans	Owner			
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)			
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status		
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)		
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation		
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing		

#### SUPPORTING IMAGES



Document Name: 77.JPG Category: Elevation Span Number: Comments: Looking south off



VU9X 05/24/2019

Document Name: 78.JPG Category: Elevation Span Number: Comments: Looking north off



Document Name: 84.JPG Category: Elevation Span Number: Comments: South



Document Name: 91.JPG Category: Elevation Span Number: Comments: South fascia, spalling

STR 10471 BRIDGE SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 92.JPG Category: Elevation Span Number: Comments: South



Document Name: 73.JPG

Category: Posting Span Number: Comments: West



Document Name: 72.JPG Category: Posting Span Number: Comments: East



Document Name: Dutcher Road bridge between Van Buren and Quanicassee 1.jpg Category: Posting Span Number: Comments: Advanced East

STR 10471 BRIDGE SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: Dutcher Road bridge between Van Buren and Quanicassee 2.jpg Category: Posting Span Number: Comments: East



Document Name: Dutcher Road bridge between Van Buren and Quanicassee 4.jpg Category: Posting Span Number: Comments: West



Document Name: Dutcher Road bridge between Van Buren and Quanicassee 3.jpg Category: Posting Span Number: Comments: Advanced West



Document Name: 70.JPG

Category: Approach Span Number: Comments: Advanced, west

STR 10471	BRIDGE SAFETY INSP	PECTION REPORT	
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing



Document Name: 71.JPG Category: Approach Span Number: Comments: Looking west



Document Name: 76.JPG Category: Approach Span Number: Comments: Deck surface



Document Name: 74.JPG Category: Approach Span Number: Comments: West



Document Name: 80.JPG Category: Approach Span Number: Comments: East

STR 10471	BRIDGE SAFETY INSI	PECTION REPORT	
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing



Document Name: 81.JPG Category: Approach Span Number: Comments: Southeast approach guardrail



Document Name: 83.JPG Category: Railing Span Number: Comments: North



Document Name: 82.JPG Category: Railing Span Number: Comments: South



Document Name: 88.JPG Category: Deck Span Number: Comments: Deck bottom

STR 10471	BRIDGE SAFETY INS	PECTION REPORT	
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing



Document Name: 75.JPG Category: Joints Span Number: Comments: West end joint



Document Name: 87.JPG Category: Superstructure Span Number: Comments: Beams



Document Name: 79.JPG Category: Joints Span Number: Comments: East end joint



Document Name: 89.JPG Category: Superstructure Span Number: Comments: Beam 1s, drilled holes

STR 10471 BRIDGE SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)	
Feature	Length / Width / Spans	Owner		
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing	



Document Name: 90.JPG Category: Superstructure Span Number: Comments: Beam 10s, drilled holes



Document Name: 85.JPG Category: Substructure Span Number: Comments: West abutment



Document Name: 93.JPG Category: Superstructure Span Number: Comments: Beam 10s, west abutment, scale



Document Name: 86.JPG Category: Substructure Span Number: Comments: East abutment

STR 10471		STRUCTURE INVENTOR	RY AND APPRAISA	L	
Facility	Latitu	ude / Longitude	MDOT Structure ID	Structure Condition	
DUTCHER ROAD		13 / -83.6726	79200098000B020	Fair Condition(5)	
Feature		th / Width / Spans	Owner		
NORTHWEST DRAIN OUTL	-	37.7 / 1	County: Tuscola(79)		
Location		/ Recon. / Paint / Ovly.	TSC	<b>Operational Status</b>	
SEC 5-8 GILFORD TWP	1970	•	Huron(28)	P Posted for load(2732	(13)
Region / County		rial / Design	Last NBI Inspection	·	.43)
		el / 02 Multi Str Non Comp			
Bay(4) / Tuscola(79)	3 316		05/24/2019 / 0097	5 Stable w/in footing	
Bridge History, Type,	Materials	Route Carried By Stru	cture(ON Record)	Route Under Structure (UN	NDER Record
27 - Year Built	1970	5A - Record Type	1	5A - Record Type	
106 - Year Reconstructed		5B - Route Signing	4	5B - Route Signing	
202 - Year Painted		5C - Level of Service	1	5C - Level of Service	
203 - Year Overlay	1995	5D - Route Number	00000	5D - Route Number	
43 - Main Span Bridge Type	3 02	5E - Direction Suffix	0	5E - Direction Suffix	
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt	
77 - Steel Type	3	10R - Best 3m Unclr-Rt	99 99	10R - Best 3m Unclr-Rt	
78 - Paint Type 79 - Rail Type		PR Number Control Section		PR Number Control Section	
80 - Post Type		11 - Mile Point		11 - Mile Point	
107 - Deck Type	1	12 - Base Highway Network	k 0	12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subroute	000002743 10	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length	5	19 - Detour Length	
108C - Deck Protection	0	20 - Toll Facility	3	20 - Toll Facility	
Structure Dimens	ions	26 - Functional Class	08	26 - Functional Class	
34 - Skew	0	28A - Lanes On	2	28B - Lanes Under	
35 - Struct Flared	Ν	29 - ADT 30 - Year of ADT	980 2009	29 - ADT 30 - Year of ADT	
45 - Num Main Spans	1	32 - Appr Roadway Width	34.1	42B - Service Type Under	5
46 - Num Apprs Spans	0	32A/B - Ap Pvt Type/Width		47L - Left Horizontal Clear	0
48 - Max Span Length	40	42A - Service Type On	1	47R - Right Horizontal Clear	
49 - Structure Length	42	47L - Left Horizontal Clear	0.0	54A - Left Feature	
50A - Width Left Curb/SW 50B - Width Right Curb/SW	0	47R - Right Horizontal Clea		54B - Left Underclearance	99 99
33 - Median	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	
51 - Width Curb to Curb	34.8	100 - STRAHNET	0	54D - Right Clearance	99 99
52 - Width Out to Out	37.7	102 - Traffic Direct 109 - Truck %	2 3	Under Clearance Year 55A - Reference Feature	N
112 - NBIS Length	Υ	110 - Truck Network	0	55B - Right Horiz Clearance	99.9
Inspection Dat	a	114 - Future ADT	1770	56 - Left Horiz Clearance	0
90 - Inspection Date	05/24/2019	115 - Year Future ADT	2029	100 - STRAHNET	
91 - Inspection Freq	24	Freeway	0	102 - Traffic Direct	
92A - Frac Crit Req/Freq	Ν	Structure Ap	opraisal	109 - Truck %	
93A - Frac Crit Insp Date		36A - Bridge Railing	1	110 - Truck Network	
92B - Und Water Req/Freq	N	36B - Rail Transition	0	114 - Future ADT	
93B - Und Water Insp Date	N	36C - Approach Rail	0	115 - Year Future ADT	
92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date		36D - Rail Termination	0	Freeway	·····
92D - Fatigue Req/Freq	N	67 - Structure Evaluation	4	Proposed Improve	
93D - Fatigue Insp Date		68 - Deck Geometry	6	75 - Type of Work	37 1
176A - Und Water Insp Method	1	69 - Underclearance 71 - Waterway Adequacy	N 7	76 - Length of Improvement 94 - Bridge Cost	42 285
58 - Deck Rating	6	72 - Approach Alignment	6	95 - Roadway Cost	20
58A/B - Deck Surface/Bottom	5 7	103 - Temporary Structure		96 - Total Cost	332
59 - Superstructure Rating	5	113 - Scour Criticality	5	97 - Year of Cost Estimate	2003
59A - Paint Rating	6 7	Miscellan	0016	Load Rating and P	
60 - Substructure Rating 61 - Channel Rating	7	37 - Historical Significance	5	31 - Design Load	4
62 - Culvert Rating	N	98A - Border Bridge State	0	41 - Open, Posted, Closed	P
5		98B - Border Bridge %		63 - Fed Oper Rtg Method	6
Navigation Dat		101 - Parallel Structure	Ν	64F - Fed Oper Rtg Load	.91
38 - Navigation Control 39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	.59
111 - Pier Protection		143 - Pin & Hanger Code		64MC - Mich Oper Truck	17
116 - Lift Brdg Vert Clear		148 - No. of Pin & Hangers		65 - Inv Rtg Method	6
-				66 - Inventory Load 70 - Posting	.55 0
				141 - Posted Loading	273243
				193 - Overload Class	

STR 10471	WORK RECOMM		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing

#### WORK RECOMMENDATIONS

WORK RECOMMENDATIONS			VU9X		
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date		
Ryan Lefere	Great Lakes Engineering Group, LLC	24	05/24/2019		
RECOMMENDATIONS & ACTION ITEMS					
Recommendation Type	Priority	Description			
Approach Repair	Μ	Wedge approaches			
Seal Cracks	М	Deck			
Other	Н	Install advance posting signs for	WB traffic.		

STR 10471		LOAD F		SUMPTION	S		
Facility	Lat	titude / Longitud	e	MDOT Struct	ure ID	Structure Condition	<u>1</u>
DUTCHER ROAD	43.	5513 / -83.6726		79200098000	B020	Fair Condition(5)	
Feature	Lei	ngth / Width/Sp	ans	Owner			
NORTHWEST DRAIN OUTLET 1	42	/ 37.7 / 1		County: Tusc	ola(79)		
Location	Bu	ilt / Recon. / Paint	/ Ovly.	TSC		<b>Operational Status</b>	
SEC 5-8 GILFORD TWP	197	70 / / / / 199	95	Huron(28)		P Posted for load(273243)	
Region / County		terial / Design		Last NBI Ins		Scour Evaluation	
Bay(4) / Tuscola(79)	3 S	iteel / 02 Multi Str	Non Comp	05/24/2019 /	VU9X	5 Stable w/in footing	
Rating Considers Field Condition		embers: Yes	3	Inspection	Date:	05/24/2019	
Only minor pitting below paint not	ea.						
Most Recent Year Construct / R	econst	ruct / Overlay:	1995				
History of Work Impacting Load		-					
None.							
Superstructure Component:	3 Stee	I		Beam fy:	36.0	<b>ksi Beam f'c / fb:</b> 3.0	ksi
Composite:	No	Number of	of Beams:	10	Shop I	Drawings Verified: No	
Beam Size(s) & Names (each span):	W21x6	62, 10 each, 1 spar	۱.				
Deck: Thickness (in.):	7.5	Fy / f'c:	40.0 /	/ 3.0 ksi		Deck Design Load > H15: Yes	
Wearing Surface: Mat'l:	HMA		Thic	kness (in.):	4.0	Unit Weight (pcf.): 145.	0
		LEFT		CENT	ER	RIGHT	
Barrier: Type / Weight (plf.):		Guardrail / 50.	0		/	Guardrail / 50.0	
Sidewalk: Width / Thick (in.):		/			/	/	
Clear Roadway (ft.):	34.8						
Additional Loads:							
None.							
Unique Factors That Affect Cap	acity						
None.	aony.						

STR 10471	LOAD RATING		
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition
DUTCHER ROAD	43.5513 / -83.6726	79200098000B020	Fair Condition(5)
Feature	Length / Width / Spans	Owner	
NORTHWEST DRAIN OUTLET 1	42 / 37.7 / 1	County: Tuscola(79)	
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
SEC 5-8 GILFORD TWP	1970 / / / 1995	Huron(28)	P Posted for load(273243)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Bay(4) / Tuscola(79)	3 Steel / 02 Multi Str Non Comp	05/24/2019 / VU9X	5 Stable w/in footing

Compliance Issue: Compliance Verified: Analysis Program: Analysis Program Version: Rating Considers Field Condition of Members: Controlling component and failure mode: None No AASHTOWare Bridge Rating (BrR) 6.8.3 Yes Inspection Date:

05/24/2019

Interior beam, flexure

#### **NEW INVENTORY CODING**

NBI Item 63 - Operating Rating Method NBI Item 64F - Federal Operating Ratings MDOT Item 64MA - Michigan Operating Method MDOT Item 64MB - Michigan Operating Rating MDOT Item 64MC - Michigan Operating Truck

NBI Item 65 - Inventory Rating Method NBI Item 66 - Federal Inventory Rating

NBI Item 41 - Structure Open Posted Closed NBI Item 70 - Bridge Posting Posted By MDOT Item 141 - Posted Loading

MDOT Item 193A - Michigan Overload Class MDOT Item 193C - Overload Status 0.91 6 LFR in Rating Factor 0.59 17 6 LFR in Rating Factor 0.55 P P Posted for load 0 0 - 59% or less Truck Type

6 LFR in Rating Factor

Sample Sign

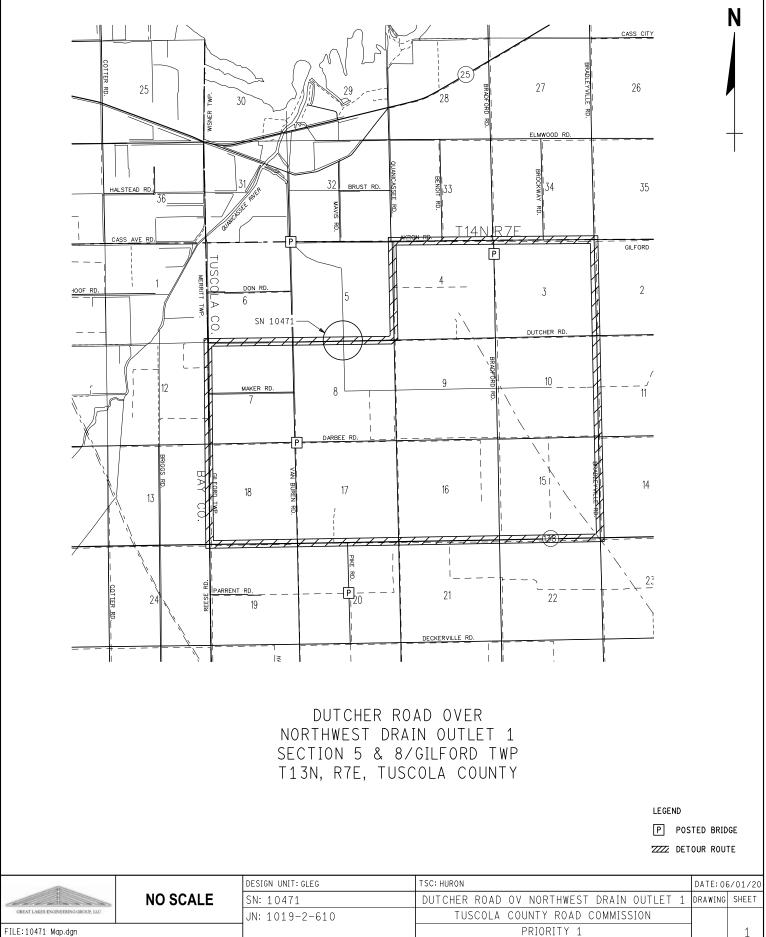


R12-5

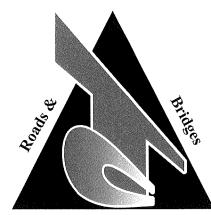
Analyzed By: Checked By: Casey Collings Eric Rickert Date: Date:

273243

05/29/2019 05/29/2019



FILE:10471 Map.dgn



Tuscola County Road Commission 1733 Mertz Caro, MI 48723 Phone 989 673-2128 Fax 989 673-3294

To Our Future

#### TUSCOLA COUNTY BOARD OF ROAD COMMISSIONERS RESOLUTION OF SUPPORT FOR THE SUPER STRUCTURE REPLACEMENT OF THE DUTCHER ROAD BRIDGE OVER THE NORTHWEST DRAIN OUTLET 1, SECTIONS 5 & 8 – GILFORD TOWNSHIP STRUCTURE NUMBER 10471

Commissioner Parsell offered the following resolution and moved for its adoption:

BE IT RESOLVED, the Tuscola County Board of Road Commissioners supports the application for State and/or Federal funding participation in the replacement of the Dutcher Road Bridge over the Northwest Drain Outlet 1 (Structure Number 10471),

BE IT FURTHER RESOLVED, that the Board of Road Commissioners, County of Tuscola, concurs that this replacement is urgently needed.

Motion supported and resolution adopted on a roll call vote:

AYES: Weber, Kennard, Matuszak, Parsell, Laurie NAYS: None

I hereby certify that the foregoing is a true and eorrect eopy of a motion made and adopted at a regular meeting of the Board held on the  $28^{\text{th}}$  day of May, 2020.

Signed: Secretary-Clerk of the Board

## VILLAGE of FAIRGROVE

5005 W. Center • PO Box 227 Fairgrove, MI 48733 Phone (989) 693- 6572 Fax (989) 693- 6881 e-mail: <u>VaillageofFairgrove@gmail.com</u> www.fairgrovevillage.org

April 14, 2020

Gilford Township 6230 Gilford Rd. Fairgrove, MI 48733

Tuscola County Road Commission 1733 Mertz Rd. Caro, MI 48723

To Whom it may Concern

The Village of Fairgrove is writing to increase support for the critical bridge funding for the Tuscola County Road Commission budget. This is a rural farm community and keeping this farming community operating is very important and voicing our support in this matter is our major concern. If there is more information you need for your consideration, we look forward to hearing from you.

Cristi Smith-

Village of Fairgrove Clerk- On behalf of the Village Council NEW E-MAIL: VIllageofFairgrove@gmail.com Phone: 989-693-6572 5005 Center St. P.O. Box 227 Fairgrove, MI 48733





#### **GILFORD TOWNSHIP**

Tuscola County 6230 Gilford Rd., Fairgrove, MI 48733 Hall Number: 989-693-6394 Fax Number: 989-693-6407

Tuscola County Road Commission

Gilford Township James E. Stockmeyer

#### To whom it concerns,

At our regular Township meeting held on April 11, 2019, It was asked of us to write a letter to your board in favor of replacing bridges in our Township that have weight limits on them. I know this can be a burden on some of the farmers with big equipment and trucks having issues making corners. I know there use to be critical bridge funding and its determined which ones are the most critical. Please consider looking into this issue and we are hoping that something could be done.

I'm sending you the map our resident, Rich Sylvester, gave us showing the bridges he feels are the most critical to there operation and to many of our bigger farmers in that area. He has said he talked to your board about this issue and you needed a letter from us.

Thank you,

Jane Esternuge

James E. Stockmeyer

# Sylvester Farms Richard, Nancy, & Mark Sylvester

3486 N. Quanicassee Rd. Fairgrove, MI 48733 sylvesterfarms@live.com 989-693-6046

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April 11, 2019

Gilford Township Board of Trustees Re: Bridges and narrow road in Gilford Township

I am requested the Gilford Township Board of Trustees write a letter to the Tuscola County Road Commission supporting bridge replacements and paving the gravel mile of Quanicassee Rd. in Gilford Township.

As residents and farm owners in Gilford Township our farm operation is being affected because of the limited use of many of the bridges in our township. I have enclosed a map of the north half of our township showing my areas of concern.

In the northern half of Gilford Township, where our farm operates, there are 7 bridges that have weight limits and 3 bridges that are too narrow to turn on with a semi-truck or farm equipment.

Another concern we have is a portion of Quanicassee Rd. north of Darbee Rd. that is too narrow, making it impossible for 2 semi-trucks to meet. This is not safe and very dangerous. We are in support of widening and paving this mile of Quanicassee Rd. from Darbee to Dutcher Rds. Years ago residents that owned land along a road that was being upgraded would pay towards that project. We would be willing to do that. We are also willing to give additional land for needed right of way, as I have told the Road Commission this in the past.

I previously discussed both of these issues at a Tuscola County Road Commission meeting in November 2018. Their board stated it would be better if I had Gilford Township Board support.

Please show your support of these projects in Gilford Township by writing a letter to the Tuscola County Road Commission requesting work be done on our bridges instead of putting up more weight limit signs and improving Quanicassee Rd. Thank you for your time and consideration.

Sincerely,

Richard Sylvester

Richard Sylvester Enclosure

### GILFORD PLAT T-13-N • R-7-E





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2

Pink Pink

Yellow

Bridges that are too narrow to Turn on with Jemi Truck or farm equipment

Bridges with Weight Limit

Orange

Green

Narrow road. Impassable with Trucks

Farm Shop

April 11, 2019 Richard Sylvester

