HOUSE of REPRESENTATIVES
STATE OF MICHIGAN

Appropriations Requests for Legislatively Directed Spending Items

1. The sponsoring representative's first name:
   Noah

2. The sponsoring representative's last name:
   Arbit

3. The cosponsoring representatives' names. All cosponsors must be listed. If none, please type 'n/a.' A signed letter from the sponsor approving the co-sponsorship and a signed letter from the member wishing to co-sponsor are required. Attach letters at question #9 below.
   n/a

4. Name of the entity that the spending item is intended for:
   Cass Lakeside Community Association

5. Physical address of the entity that the spending item is intended for:
   4927 Greer Rd, West Bloomfield Township, MI 48324

6. If there is not a specific recipient, the intended location of the project or activity:
   n/a

7. Name of the representative and the district number where the legislatively directed spending item is located:
   Rep. Noah Arbit, House District 20

8. Purpose of the legislatively directed spending item. Please include how it provides a public benefit and why it is an appropriate use of taxpayer funding. Please also demonstrate that the item does not violate Article IV, S 30 of the Michigan Constitution.
   Cass Lakeside Community Association is the home-owners' association representing an economically diverse neighborhood of approximately 300 homes and nearly 700 residents in northern West Bloomfield Township, bordering Waterford Township. The neighborhood is comprised of numerous islets and canals, which are connected by bridges – privately owned by the neighborhood association. Almost all of the community's bridges and roads are in poor condition, but the community has struggled to pay for critical maintenance, and as it is a private HOA, has no ability to bond.

   The Algonquin Avenue Bridge was originally built in 1924. After a 2022 survey, it was

deemed to be in failing condition. The bridge is no longer safe for the public to use without concern. Even more concerning is that the bridge's load capacity has been reduced to 7 tons, which does not meet the 2015 fire code requirement for fire trucks. West Bloomfield Township has indicated they may be forced to cease emergency services to this part of the neighborhood because the bridge is no longer load rated to support even the smallest West Bloomfield fire truck. Repair of the bridge will improve the safety of residents, visitors, construction workers, and first responders entering and exiting the neighborhood in northern West Bloomfield, and extend the bridge's lifespan significantly.

This $1,000,000 appropriation to Cass Lakeside Community Association would fund half of the community's expected cost for the repair of the Algonquin Avenue Bridge.

9. Attach documents here if needed:
   Attachments added to the end of this file.

10. The amount of state funding requested for the legislatively directed spending item.
    1000000

11. Has the legislatively directed spending item previously received any of the following types of funding? Check all that apply.
    ["None"]

12. Please select one of the following groups that describes the entity requesting the legislatively directed spending item:
    Non-profit organization

13. For a non-profit organization, has the organization been operating within Michigan for the preceding 36 months?
    Yes

14. For a non-profit organization, has the entity had a physical office within Michigan for the preceding 12 months?
    Yes

15. For a non-profit organization, does the organization have a board of directors?
    Yes

16. For a non-profit organization, list all the active members on the organization's board of directors and any other officers. If this question is not applicable, please type 'n/a.'
    President: Robert Redner; Vice President: Michael Johnson; Secretary: Debbie Zielesch; Treasurer: Cathy O'Connell; Board Members: Christopher Laduke, Josh Barstow, Ken Russel, Wendy Rupp, Steve O'Connor

17. “I certify that neither the sponsoring representative nor the sponsoring representative's staff or immediate family has a direct or indirect pecuniary interest in the legislatively directed spending item.”
    Yes, this is correct

18. Anticipated start and end dates for the legislatively directed spending item:
    Anticipated Year of Construction: 2028

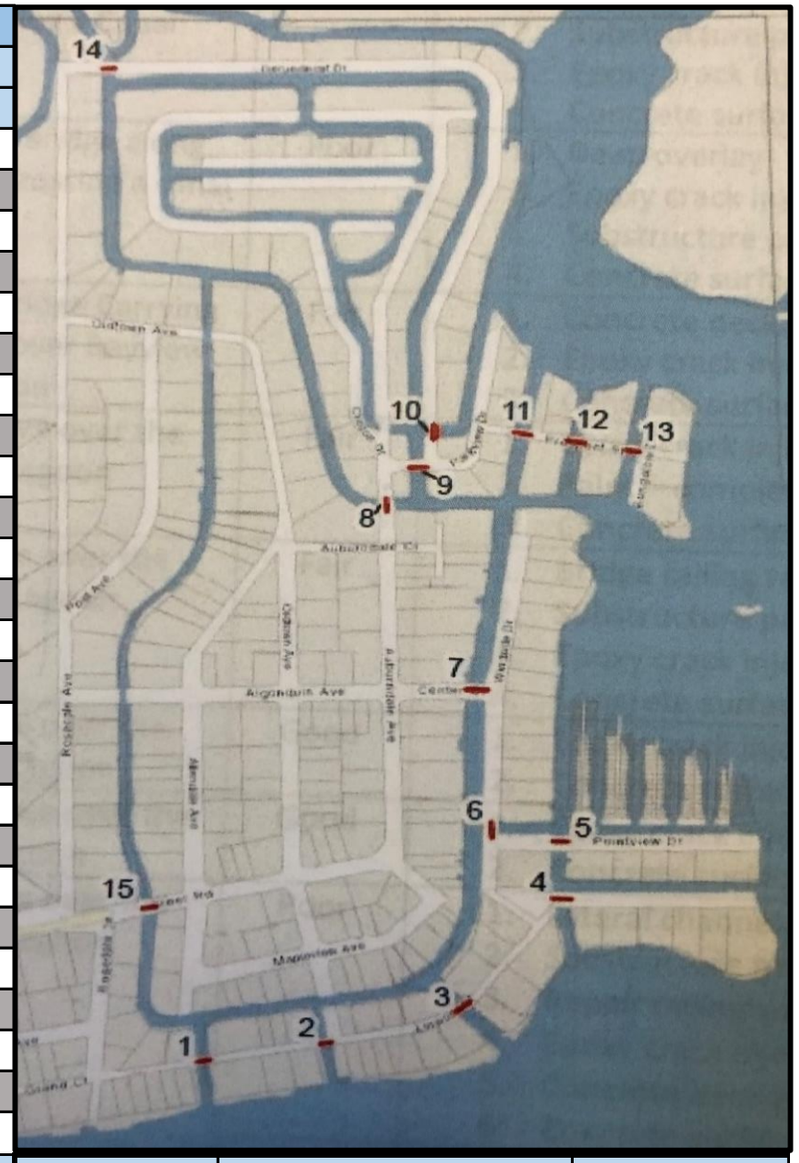
19. “I hereby certify that all information provided in this request is true and accurate.”
    Yes

Spicer Bridge Inspection and Load Rating Report (September 2022)

				Posting by Truck Type (Tons)				Urgency order	
Bridge	Span	Width	Roadway	1-Unit	2-Unit	3-Unit	Emergency Veh	Urgency	Repair order
1	34ft	17ft	Linwood Dr.	23	30	49	26	3	6
2	34ft	17ft	Linwood Dr.	23	30	49	26	3	8
4	34ft	10ft	Linwood Dr.	17	20	33	20	4	12
5	34ft	10ft	Point View Dr.	13	17	28	15	2	5
6	34ft	17ft	Windside Dr.	23	30	49	26	3	7
8	34ft	17ft	Auburndale Ave.	23	30	49	26	4	10
9	34ft	17ft	Parkview Ave.	17	19	32	19	2	3
10	34ft	17ft	Gerundecut Dr.	15	18	29	17	2	4
11	34ft	10ft	Prospect Dr.	12	14	23	13	3	11
12	34ft	10ft	Prospect Dr.	12	14	23	13	4	13
13	34ft	10ft	Prospect Dr.	12	14	23	13	4	14
14	34ft	17ft	Gerundecut Dr.	15	17	28	17	5	15
15	29ft	21ft	Greer Rd.	16	20	33	19	1	1

Truss Bridge Posting by Axle (Tons)

					Axle	Gross		
3	52ft	17ft	Linwood Dr.		9	15	3	9
7	52ft	17ft	Algonquin Dr.		4	7	1	2



Urgency	Urgency Scale	Bridges
1	Serious/Critical	7,15
2	Serious/Non-Critical	5,9,10
3	Moderate/Near Future	1,2,3,6
4	Intermidiate	4,8,11,12
5	Eventual	13,14

230 S Washington Avenue
Saginaw, MI 48607

Algonquin Dr over Woodland Lagoon
STR 7

Bridge Inspection Report
2022 Cass Lake Subdivision Bridge Eng. (15 Structures)

Prepared for:
Cass Lake Subdivision

August 2022
SGI Project No. 132341SG2022

Executive Summary

BRIDGE DATA

STR 7	**Algonquin Drive over Woodland Lagoon**
Location:	Cass Lake, MI
Year Constructed:	1924 - Estimated
Min. Vertical Clearance:	N/A
Posted Vertical Clearance:	N/A
Bridge Description	
Superstructure Type:	1-Span; Thru Truss
Abutment Type:	Concrete cantilever walls on steel piles
Pier Type:	N/A
Number of Lanes On:	Private Road; Single Lane
Number of Lanes Under:	N/A
Out-to-Out Deck Width:	14.7 ft
Bridge Length:	54.0 ft
Skew:	0°
Condition	
Deck Surface:	5 Fair: Moderate block cracking – longitudinal cracks
Joints:	N/A
Other Joints:	6 Fair: Cold joint at reference lines; signs of minor leaking
Railing:	5 Fair: Minor collision damage at Southeast bearing; several loose connectors
Sidewalks/Curbs:	N/A
Deck Bottom:	7 Good: Checks/shakes penetrate less than 5% of thickness
Deck:	7 Good: Checks/shakes penetrate less than 5% of thickness (based on deck bottom rating)
Superstructure:	3 Serious: 7” steel double c-channels with riveted 12.25”x0.25” cover plate thru-truss – hole through one c-channel at Southwest bearing, holes in gussets at Southwest, Northwest, and Northeast bearing, hole through horizontal leg of angle; steel floor beams – hole through inner gusset of floor-beam 1W on south side; 4”x10” full cut spike laminated timber slab as stringers – some splits on the bottom ¼” of fascia stringers
Paint:	4 Poor: Significant areas of corrosion and pack rust
Section Loss:	0 Failed: Holes in gusset plates require reduction of posted load or steel repairs based on structural analysis
Bearings:	3 Serious: Considerable deterioration in bearing areas
Abutment(s):	6 Fair: Spall in SW quad – patched, but patch has delaminated and spalled off; abutments probed – soft silt, but no scour noted on inspection
Pier(s):	N/A

Slope Protection:	N/A: Structure over water
Channel/Channel Protection:	7 Good: Minor erosion of Southeast quadrant; riprap in Northwest quadrant
Scour:	8 Good: Low flow with heavy silt in channel
Approach:	6 Fair: Minor settlement of hot mix asphalt in both approaches
Approach Shoulders:	N/A: No approach shoulders, sidewalks, or curb and gutter

Recommended repairs

Based upon the review of the field conditions, there are two alternatives:

Alternative 1:

- **Steel Repairs (Requires engineering design and plans)**
  - Bolt/weld steel plates to gussets with heavy deterioration
  - Grind/punch out rivets and replace with bolts on repaired plates and members
  - Cut and weld built-up c-channel to lap gap in truss channel
  - Weld plates to lap holes in angles
- **Seal or Replace Hot Mix Asphalt**
  - Seal block cracking in surface and end joints
  - or scarify hot mix asphalt and place thin, composite deck (Requires engineering design and plans)
- **Railing Repair**
  - Secure loose fasteners
  - Replace segments with collision damage
- **Timber Repair**
  - Inject epoxy/wood glue into fascia beam with shake
- **Paint**
  - Blast and paint full steel structure
- **Approach**
  - Replace 5’ of both approaches

Note: Estimates do not include design and construction administration

Alternative 2 (Requires engineering design and plans):

- **Superstructure**
  - Replacement
- **Substructure**
  - Scarify and repair bearing concrete & delaminated concrete
- **Approach**
  - Replace 5’ of both approaches

Note: Estimates do not include design and construction administration

Field Review Findings

Deck

Approaches

The hot mix asphalt approach pavements are in fair condition with minor settlement in both approaches. The west approach has alligator cracking with two hot mix asphalt cold patches along tire pathway. The east approach has alligator cracking and spalling within 30' of the East reference line.

Deck Surface

The deck surface is not visible and is based on the hot mix asphalt overlay surface. In general, the surface is in fair condition. There is block cracking approximately every 10' in-line with the floor beams and centerline of the roadway.

Deck Underside

The timber deck underside is in good condition with one (1/4") shake noted in the south fascia.

Joints

There are reflective cracks at the reference lines for both ends of the structure with no signs of leaking.

Railing

The thru truss acts as a railing for traffic and angles are bolted to the superstructure for pedestrian safety. Some bolts are loose and there are few areas of collision damage.

Superstructure

Floor-Beams

The floor-beams are in serious condition based on the section loss at the connection to the truss. There is some pack rust on the longitudinal stiffeners with minor loss of section to the rolled section. The paint is also peeling, suggesting the surface was not properly prepped when previously painted.

Truss

The superstructure has two thru trusses that are in serious condition based on the section loss at the bearings and gusset plates. Load analysis required a reduction of the posting based on severe loss of section at the bearings. Otherwise, the superstructure is in fair condition with paint peeling throughout.

Gussets

The upper gussets are in good condition with minor paint peeling at the corners. The lower gussets are in serious condition with distortion from moment being transferred through a single plate and holes through the gusset plates at all bearings and panel point L1 on the north side.

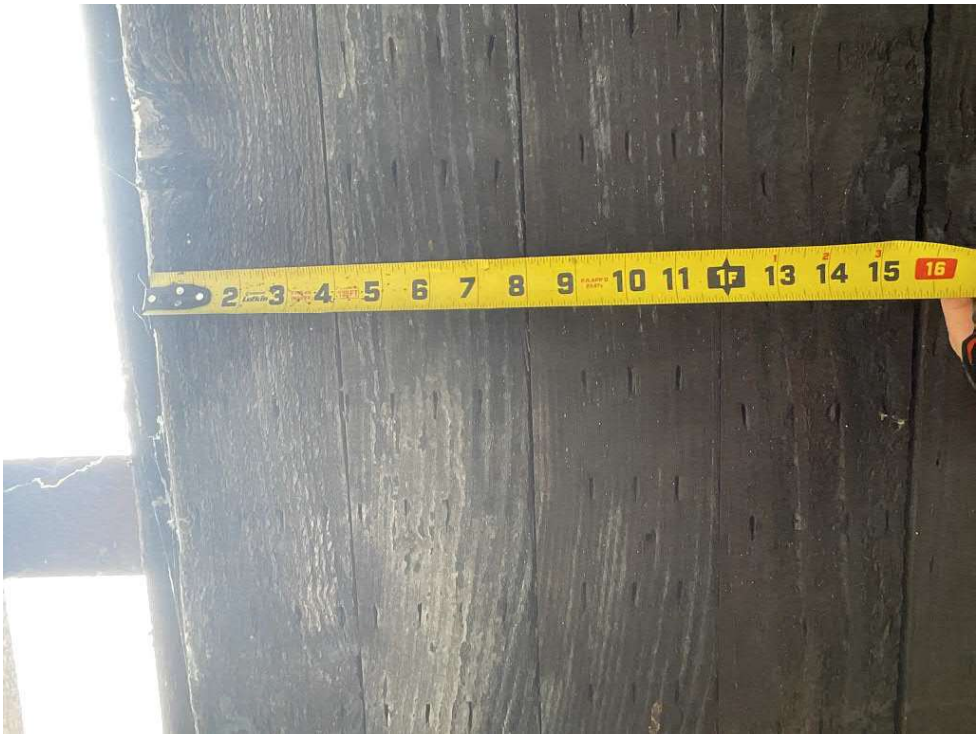
Substructure

Abutments

The concrete cantilever abutments are supported by steel piles and are in fair condition. There is a large spall in the Southwest quadrant, however, the concrete has delaminated and spalled off. The surface of both abutments has moderate scaling, but function as designed.

Name: IMG_0096 (1024x767)
Description: L1 south side floor beam connection

Name: IMG_0097 (1024x767)
Description: Structure 7 dimensions



Name: IMG_0098 (1024x768)
Description: Deck bottom

Name: IMG_0099 (1024x768)
Description: Timber slab

Name: IMG_0100 (1024x767)
Description: Dimensions

Name: IMG_0102 (1024x767)
Description: Structure 7 dimensions

Name: IMG_0103 (1024x768)
Description: Split in timber fascia

Name: IMG_0104 (1024x768)
Description: East abutment

Name: IMG_0105 (1024x768)
Description: West abutment

Name: IMG_0106 (1024x768)
Description: L1 North side, hole

Name: IMG_0107 (1024x768)
Description: L1 North side, hole

Name: IMG_0108 (1024x767)
Description: L1 north side, hole

Name: IMG_0202 (1024x768)
Description: Posting sign, west side

Name: IMG_0203 (1024x768)
Description: Deck surface

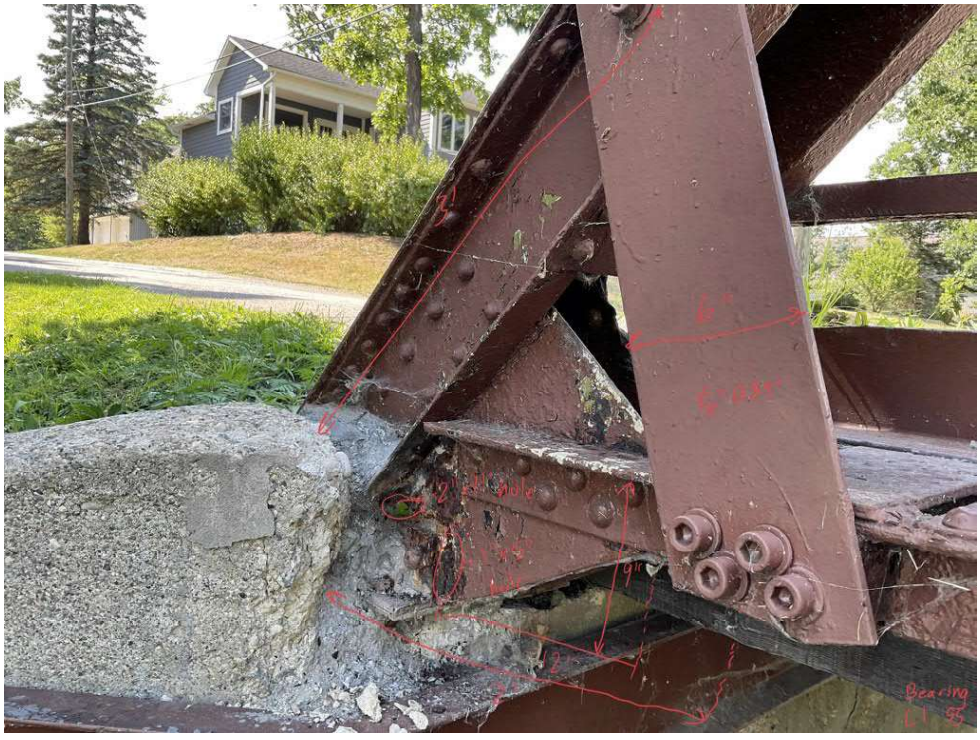
Name: IMG_0204 (1024x768)
Description: West approach

Name: IMG_0205 (1024x767)
Description: East approach

Name: IMG_0206 (1024x768)
Description: South elevation

Name: IMG_0207 (1024x767)
Description: Dimensions

Name: IMG_0208 (1024x768)
Description: L0 South side, holes in bearing



Name: IMG_0209 (1024x767)
Description: Bearing L0 south side

Name: IMG_0210 (1024x767)
Description: L0 south side, hole

Name: IMG_0211 (1024x767)
Description: Hole thru plate

Name: IMG_0213 (1024x767)
Description: Dimensions

Name: IMG_0214 (1024x767)
Description: L1 south side

Name: IMG_0215 (1024x767)
Description: L1 south side

Name: IMG_0216 (1024x767)
Description: L1 south side

Name: IMG_0217 (1024x767)
Description: L1 south side

Name: IMG_0218 (1024x767)
Description: L0 north side

Name: IMG_0219 (1024x767)
Description: L0 north side

Name: IMG_0220 (1024x767)
Description: L1 north side

Name: IMG_0221 (1024x767)
Description: L1 north side

Name: IMG_0222 (1024x767)
Description: L1 north side

Name: IMG_0223 (1024x767)
Description: L1 north side

Name: IMG_0224 (1024x767)
Description: Simple span timber

Name: IMG_0225 (1024x767)
Description: Dimensions

Name: IMG_0226 (1024x768)
Description: Spall in south side of west abutment

Name: IMG_0227 (1024x767)
Description: U1 south side

Name: IMG_0228 (1024x767)
Description: U2 south side

Name: IMG_0229 (1024x767)
Description: U3 south side

Name: IMG_0230 (1024x767)
Description: U4 south side

Name: IMG_0231 (1024x767)
Description: U5 south side

Name: IMG_0232 (1024x767)
Description: U6 south side

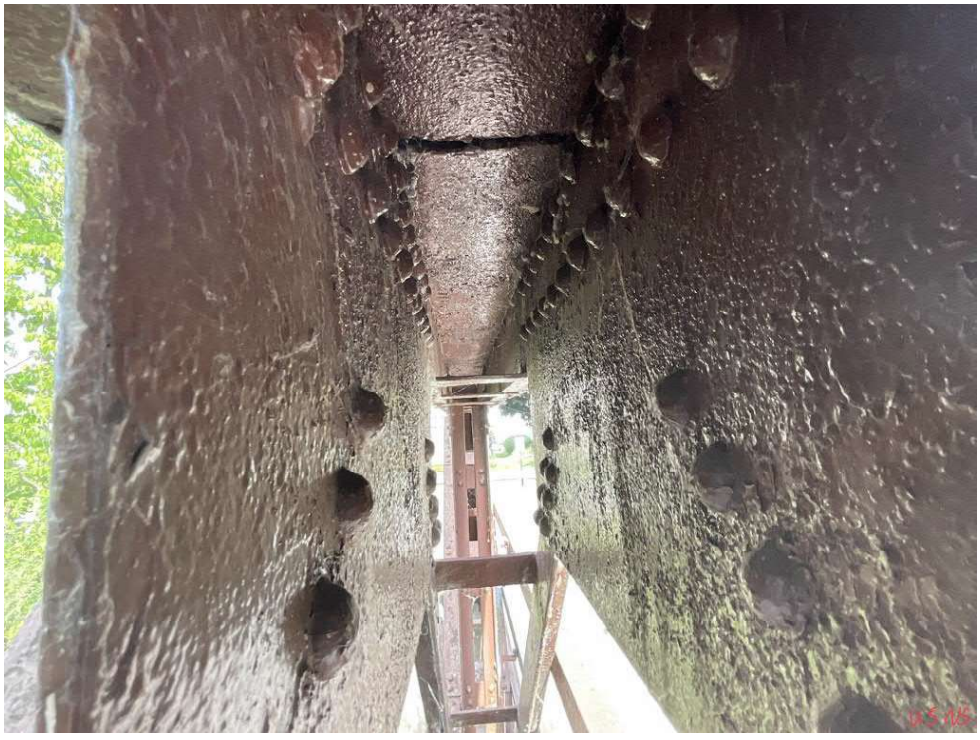
Name: IMG_0233 (1024x767)
Description: U7 south side

Name: IMG_0234 (1024x767)
Description: U1 north side

Name: IMG_0235 (1024x767)
Description: U2 north side

Name: IMG_0236 (1024x767)
Description: U3 north side

Name: IMG_0237 (1024x767)
Description: U4 north side



Name: IMG_0238 (1024x767)
Description: U5 north side

Name: IMG_0239 (1024x767)
Description: U6 north side

Name: IMG_0240 (1024x767)
Description: U7 north side

Name: IMG_0241 (1024x767)
Description: L4 South side

Name: IMG_0242 (1024x767)
Description: L4 south side

Name: IMG_0243 (1024x767)
Description: L4 south side

Name: IMG_0244 (1024x767)
Description: L4 north side

Name: IMG_0245 (1024x767)
Description: L4 north side

Name: IMG_0246 (1024x767)
Description: North channel

Name: IMG_0247 (1024x767)
Description: South channel

Name: IMG_0248 (1024x715)
Description: Clear roadway

Name: IMG_0249 (1024x767)
Description: L2 south side

Name: IMG_0250 (1024x767)
Description: L3 south side

Name: IMG_0251 (1024x767)
Description: L2 north side

Name: IMG_0252 (1024x767)
Description: L3 North side

Name: IMG_0253 (1024x767)
Description: Dimensions

Name: IMG_0254 (1024x767)
Description: Dimensions

BRIDGE COST ESTIMATE WORKSHEET

- CPM, REHAB, REPLACE -

REV. 02/5/2025

Anticipated year of construction:	2025								DATE:	2/5/2025
	2028									
Min. annual Inflation Limit:	3.00%					LENGTH	Out to Out	Curb to Curb	ENGINEER:	V. Guadagni
Max. annual Inflation Limit:	9.00%	LOCATION:	Algonquin Ave	over	Woodland Lagoon	54.0	18.0	14.7		
		PRIMARY WORK ACTIVITY		Bridge Replacement					STRUCTURE ID:	
OWNER:	Lakeside Park Sub	OTHER WORK:		Approach Work		EXISTING DECK AREA:	972	SFT	BRIDGE ID:	#N/A
REGION:	Metro		PR: #N/A	MP: #N/A		EXISTING CLEAR ROADWAY:	794	FT		
TSC:	#N/A					PROPOSED DECK AREA:	1,590.0	SFT	STR. TYPE:	#N/A
						PROPOSED CLEAR ROADWAY:	1,440.0	FT		

	WORK ACTIVITY	MDOT Bridge Design Guides (increase deck area based on design standards and hydraulic requirements)	QUANTITY	UNIT	UNIT COST Model Predicted	UNIT COST Used		TOTAL (Price projection to 2028)
NEW BRIDGE								
	Single or Multiple Spans, Grade Separation	(add demo, approach, MOT)		SFT	507	507	/SFT	
	Single Span, Over Water Length < 100ft	(add demo, approach, MOT)	1,590.0	SFT	605	605	/SFT	$961,632.00
	Multiple Spans, Over Water Length > 100ft	(add demo, approach, MOT)		SFT	544	544	/SFT	
	Precast Culvert Length < 40ft	(add demo, approach, MOT)		SFT	654	654	/SFT	
	Railroad	(add demo, approach, MOT)		SFT	465	465	/SFT	
NEW SUPERSTRUCTURE								
	New Superstructure, Grade Separation	(incl. remove exist deck/super; add MOT & approach)		SFT	398	398	/SFT	
	New Superstructure, Over Water	(incl. remove exist deck/super; add MOT & approach)		SFT	263	263	/SFT	
	New Superstructure, Combined	(incl. remove exist deck/super; add MOT & approach)		SFT	277	277	/SFT	
WIDENING								
	Structure Widening, _____ ft	(incl. deck/super/sub widening, add approach transition)		SFT	1005	1005	/SFT	
NEW DECK								
	New Bridge Deck & Barrier	(incl. remove exist deck/railing, add approach, MOT)		SFT	160	160	/SFT	
DEMOLITION								
	Entire Structure, Grade Separation			SFT	46	46	/SFT	
	Entire Structure, Over Water		972.0	SFT	115	115	/SFT	$112,129.92
DECK REPAIR / TREATMENTS								
	Bridge Railing Replacement	(incl. removal and replacement)		FT	1966	1966	/FT	
	Concrete Brush Block / Curb Patch	(incl. hand chipping and formwork)		FT	64	64	/FT	
	Concrete Barrier Patch	(incl. hand chipping and formwork)		SFT	152	152	/SFT	
	Concrete Deck Patch	(incl. hand chipping)		SFT	83	83	/SFT	
	Deep Overlay	(incl. joint repl & hydro)		SFT	54	54	/SFT	
	Epoxy Overlay	(incl. warranty)		SYD	69	69	/SYD	
	Expansion Joint Gland Replacement	(remove and replace elastomeric gland)		FT	192	192	/FT	
	Expansion Joint Replacement	(incl. removal)		FT	1158	1158	/FT	
	Full Depth Patch			SFT	154	154	/SFT	
	Healer / Sealer	(penetrates cracks in bridge deck)		SYD	25	25	/SYD	
	HMA Overlay with WP membrane			SYD	133	133	/SYD	
	Overlay Removal			SYD	32	32	/SYD	
	(Latex Concrete Surface Removal)			SYD	32	32	/SYD	
	(Epoxy Overlay Removal)			SYD	26	26	/SYD	
	(HMA Surface Removal)			SYD	20	20	/SYD	
	Reseal Bridge Joints			FT	42	42	/FT	
	Shallow Overlay	(incl. joint repl & hydro)		SFT	48	48	/SFT	
SUPERSTRUCTURE REPAIR								
	Bearing Realignment / Replacement	(incl. temporary supports)		EA	6678	6678	EA	
	Heat Straightening	(incl. clean and coat)		EA	109426	109426	EA	
	Pack Rust Repair	(greater than 3/8" separation)		FT	723	723	/FT	
	Paint - Complete	(incl. clean & coat)		SFT	39	39	/SFT	
	Paint - Partial / Spot / Zone	(incl. clean & coat - $20k minimum)		SFT	52	52	/SFT	
	PCI Beam End Blockout	(incl. temporary supports)		EA	12617	12617	EA	
	Pin & Hanger Replacement	(incl. temporary supports)		EA	16879	16879	EA	
	Structural Steel Repair	(based on 6ft repair length)		EA	9497	9497	EA	
	Structural Steel Repair - Stiffener	(includes each side of beam)		EA	3173	3173	EA	
SUBSTRUCTURE REPAIR								
	Substructure Patching	(measured x 2) replace if repair area > 30%		CFT	453	453	/CFT	
	Substructure Replacement	(incl. temporary supports, excavation)		CFT	538	538	/CFT	
	Substructure Horizontal Surface Sealer			SYD	111	111	/SYD	
	Temporary Supports	(add Structural Steel Repair - Stiffener for ea steel beam)		EA	7481	7481	EA	
MISCELLANEOUS								
	Articulating Concrete Block System (ACB)			SYD	402	402	/SYD	
	Concrete Surface Coating			SYD	59	59	/SYD	
	Culvert Cleanout			FT	57	57	/FT	
	Epoxy Crack Injection	(structural crack repair)		FT	89	89	/FT	
	Metal Mesh Panels	(48" width, max 6'-6" length)		SFT	42	42	/SFT	
	Pressure Relief Joint	(use when approach concrete roadway exceeds 1,000ft)		FT	190	190	/FT	
	Riprap	(assume 10ft distance around perimeter of substructure)		SYD	463	463	/SYD	
	Silane Treatment	(penetrating sealer for concrete surfaces)		SFT	6	6	/SFT	
	Slope Protection Repairs			SYD	301	301	/SYD	
	Other	Section 106 review process	1.0	LSUM	0	7500	LSUM	$7,500.00
						STRUCTURE CONSTRUCTION BUDGET		$1,073,762
ROAD WORK								
	Approach Pavement, 12" RC	(incl. removal; add curb, gutter, guardrail) 40' ea. end	266.7	SYD	1015	1015	/SYD	$270,625.71
	Approach Curb & Gutter	(incl. removal) 40' ea. quadrant	80.0	FT	34	34	/FT	$2,753.92
	Guardrail Anchorage to Bridge	(each quadrant)	4.0	EA	4547	4547	/EA	$18,188.41
	Guardrail	(incl. removal) < 200ft beyond reference line	200.0	FT		41	/FT	$8,200.00
	Guardrail Terminal	(each quadrant)	4.0	EA		3900	/EA	$15,600.00
	Roadway Approach Work	(beyond approach pavement)		LSUM			LSUM	
	Utilities			LSUM			LSUM	
TRAFFIC CONTROL	*Unit Cost to be determined by Region or TSC Traffic & Safety*							
	Part Width Construction			LSUM			LSUM	
	Crossovers			EA			/EA	
	Temporary Traffic Signals			set			/set	
	RR Flagging			LSUM			LSUM	
	Detour		1.0	LSUM		$20,000.00	LSUM	$20,000.00
						RELATED ROAD/TRAFFIC CONSTRUCTION BUDGET		$335,368
CONTINGENCY	(10% - 20%) (use higher contingency for small projects)		15	%		$1,409,129.96		$211,369
MOBILIZATION	(estimate at 10%)		10	%		$1,620,499.46		$162,050

(Does not include PE or CE)

(Refer to programming guidelines or Suggested PE &CE tab in Bridge Cost Estimating Worksheet for CE,PE & PE-S)

TOTAL CONSTRUCTION BUDGET	$1,782,549
5.63 % Equivalent Inflation	Inflation Budget: $100,389
% CE	CE BUDGET $0
% PE	PE BUDGET $0
% PE-S	PE-S BUDGET $0