



Public Works Commission

Application for Financial Assistance

IMPORTANT: Please consult "Instructions for Financial Assistance for Capital Infrastructure Projects" for guidance in completion of this form.

Applicant	Applicant: _____	Subdivision Code: _____
	District Number: _____ County: _____	Date: _____
	Contact: _____ <small>(The individual who will be available during business hours and who can best answer or coordinate the response to questions)</small>	Phone: _____
	Email: _____	FAX: _____

Project	Project Name: _____	Zip Code: _____	
	Subdivision Type	Project Type	Funding Request Summary
	_____	<small>(Select single largest component by \$)</small>	<small>(Automatically populates from page 2)</small>
	SFN	1. Road	Total Project Cost: _____ .00
	_____	2. Bridge/Culvert	1. Grant: _____ .00
		3. Water Supply	2. Loan: _____ .00
	4. Wastewater	3. Loan Assistance/ Credit Enhancement: _____ .00	
	5. Solid Waste		
	6. Stormwater	Funding Requested: _____ .00	

District Recommendation (To be completed by the District Committee)

Funding Type Requested	SCIP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
<small>(Select one)</small>		
State Capital Improvement Program	RLP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
Local Transportation Improvement Program	Grant:	Amount: _____ .00
Revolving Loan Program	LTIP:	Amount: _____ .00
Small Government Program	Loan Assistance / Credit Enhancement:	Amount: _____ .00
District SG Priority: _____		

For OPWC Use Only

STATUS	Grant Amount: _____ .00	Loan Type: <input type="checkbox"/> SCIP <input type="checkbox"/> RLP
Project Number: _____	Loan Amount: _____ .00	Date Construction End: _____
_____	Total Funding: _____ .00	Date Maturity: _____
Release Date: _____	Local Participation: _____ %	Rate: _____ %
OPWC Approval: _____	OPWC Participation: _____ %	Term: _____ Yrs

1.0 Project Financial Information (All Costs Rounded to Nearest Dollar)

1.1 Project Estimated Costs

SCIP Financials

Engineering Services

Preliminary / Final Design: _____ .00

Construction Administration: _____ .00

Total Engineering Services: a.) _____ .00 _____ %

Right of Way: b.) _____ .00

Construction: c.) _____ .00

Permits, Advertising, Legal: e.) _____ .00

Construction Contingencies: f.) _____ .00

Total Estimated Costs: g.) _____ .00

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account: a.) _____ .00

Local Revenues: b.) _____ .00

Other Public Revenues:

Local / ODOT - Let: _____ d.) _____ .00

ODOT PID: _____

OEPA / OWDA: e.) _____ .00

CDBG: f.) _____ .00

Other: _____ g.) _____ .00

Subtotal Local Resources: i.) _____ .00 _____ %

OPWC Funds (Check all requested and enter Amount)

Grant: _____ % of OPWC Funds j.) _____ .00

Loan: _____ % of OPWC Funds k.) _____ .00 _____ yrs

Loan Assistance / Credit Enhancement: l.) _____ .00

Subtotal OPWC Funds: m.) _____ .00 _____ %

Total Financial Resources: n.) _____ .00 _____ %

OPWC Project Financial Information

Subdivision: Montgomery County

LTIP Financials

Project Name: MOT-Shank Road Bridge Replacement Project

Project Estimated Costs

(All Costs Rounded to Nearest Dollar)

Engineering Services

Estimated Engineering: 100,000 .00

Construction Administration: 30,000 .00

Total Engineering Services: 130,000 .00 10.0 %

Right of Way: 53,000 .00

Construction: 1,300,000 .00

Permits, Advertising, Legal: _____ .00

Construction Contingencies: 130,000 .00 10.0 %

Total Estimated Costs: 1,613,000 .00

Project Financial Resources

Local Resources

Local In-Kind or Force Account: _____ .00

Local Revenues: 173,000 .00

Other Public Revenues:

ODOT / FHWA PID: 113925 1,040,000 .00

OEPA / OWDA: _____ .00

Other: _____ .00

Subtotal Local Resources: 1,213,000 .00 75.2 %

OPWC Funds

Grant: 100 % of OPWC Funds 400,000 .00

Loan: 0 % of OPWC Funds _____ .00

Loan Assistance / Credit Enhancement: 0 .00

Subtotal OPWC Funds: 400,000 .00 24.8 %

Total Financial Resources: 1,613,000 .00 100.0 %

4.3 Project Description

A: SPECIFIC LOCATION (Supply a written location description that includes the project termini; a map does not replace this requirement.) 2000 character limit.

B: IDENTIFY THE PROBLEM (Describe the issue to be addressed) 2000 character limit.

C: PROJECT SCOPE (Describe the work to be completed) 2000 character limit.

D. How do you intend to promote this project? 1000 character limit.

E: Additional Notes From Applicant - 1000 character limit.

5.0 Project Officials

Changes in Project Officials must be submitted in writing from an officer of record.

5.1 Chief Executive Officer (Person authorized in legislation to sign project agreements)

Name: _____

Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

FAX: _____

E-Mail: _____

5.2 Chief Financial Officer (Can not also serve as CEO)

Name: _____

Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

FAX: _____

E-Mail: _____

5.3 Project Manager

Name: _____

Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

FAX: _____

E-Mail: _____

6.0 Attachments / Completeness review

Confirm in the boxes below that each item listed is attached (Check each box)

A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.

A certification signed by the applicant's chief financial officer stating the amount of all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.

A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's seal or stamp and signature.

A cooperative agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.

Farmland Preservation Review - The Governor's Executive Order 98-IIV, "Ohio Farmland Protection Policy" requires the Commission to establish guidelines on how it will take protection of productive agricultural and grazing land into account in its funding decision making process. Please include a Farm Land Preservation statement for projects that have an impact on farmland.

Capital Improvements Report. CIR Required by O.R.C. Chapter 164.06 on standard form.

Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements which may be required by your local District Public Works Integrating Committee.

7.0 Applicant Certification

The undersigned certifies: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission as identified in the attached legislation; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement for this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding from the project.

Certifying Representative (Printed form, Type or Print Name and Title)

Original Signature / Date Signed

**RESOLUTION NO. 23-1027
AUGUST 08, 2023**

RESOLUTION AUTHORIZING THE MONTGOMERY COUNTY ENGINEER'S OFFICE TO PREPARE AND SUBMIT APPLICATIONS TO PARTICIPATE IN THE OHIO PUBLIC WORKS COMMISSION (OPWC) STATE CAPITAL IMPROVEMENT PROGRAM (SCIP) OR THE LOCAL TRANSPORTATION IMPROVEMENT PROGRAM (LTIP), AND TO EXECUTE CONTRACTS AS REQUIRED FOR PROJECT APPLICATIONS TO BE SUBMITTED FOR FISCAL YEAR 2025, AS SHOWN IN ATTACHED EXHIBIT "A".

WHEREAS, the Montgomery County Engineer's Office has been notified that OPWC Program Funds will be available to jurisdictions within the area covered by the District 4 Public Works Integrating Committee for Fiscal Year 2025; and

WHEREAS, the OPWC's State Capital Improvement Program and the Local Transportation Improvement Program both provide financial assistance to political subdivisions for public infrastructure projects; and

WHEREAS, the Montgomery County Engineer's Office is planning to construct the capital improvements listed in Exhibit "A"; and

WHEREAS, the Montgomery County Engineer's Office commits to funding all local share project costs exceeding the total of the OPWC's grants and/or loans received; and

WHEREAS, the County Administrator is the County's authorized agent to sign the OPWC applications and subsequent contracts for project applications to be submitted for Fiscal Year 2025; and

WHEREAS, the Montgomery County Engineer's Office is authorized to provide additional information concerning the projects listed in Exhibit "A" and commits to meeting the reporting requirements for OPWC.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Montgomery County, Ohio, that the resolution authorizing the transmittal of the applications and entering into of any agreements necessary and appropriate for obtaining OPWC funds as described above for the projects listed in Exhibit "A", be and is hereby approved.

BE IT FURTHER RESOLVED that the Clerk shall certify a copy of this resolution to the County Engineer. The County Engineer shall forward a copy of the certified resolution to the OPWC's District 4 Public Works Integrating Committee. The resolution is also available on Montgomery County, Ohio's website at <http://www.mcoho.org>.

GES:th

**RESOLUTION NO: 23-1027
AUGUST 08, 2023**

CERTIFICATE

Ms. Dodge moved the adoption of the foregoing resolution. It was seconded by Mrs. Rice, and upon call of the roll the following vote resulted:

Ms. Dodge, aye; Mrs. Rice, aye; Mrs. Lieberman, aye: Carried.



I hereby certify that the foregoing is a true and correct copy of a resolution duly adopted by the Board of County Commissioners of Montgomery County, Ohio, on the 8th day of August, 2023.

THE BOARD OF COUNTY COMMISSIONERS HEREBY FINDS AND DETERMINES THAT ALL FORMAL ACTIONS RELATIVE TO THE ADOPTION OF THIS RESOLUTION WERE TAKEN IN AN OPEN MEETING OF THIS BOARD OF COUNTY COMMISSIONERS, AND THAT ALL DELIBERATIONS OF THIS BOARD OF COUNTY COMMISSIONERS, AND OF ITS COMMITTEES, IF ANY WHICH RESULTED IN FORMAL ACTION, WERE TAKEN IN MEETINGS OPEN TO THE PUBLIC, IN FULL COMPLIANCE WITH APPLICABLE LEGAL REQUIREMENTS, INCLUDING SECTION 121.22 OF THE REVISED CODE.



Emily Bradford, Clerk
Board of County Commissioners
Montgomery County, Ohio

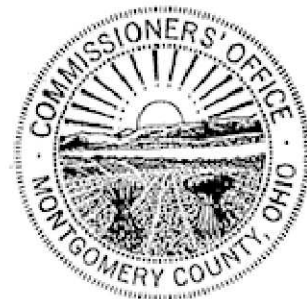


Exhibit A

Ohio Public Works Commission (OPWC) Round 2023-2024 State Capital Improvement Program (SCIP) and Local Transportation Improvement Project (LTIP) Applications

OPWC SCIP Project Application	Job Number	Program Manager	SCIP Total Project Costs	Total SCIP Request	SCIP Grant Request	SCIP Loan Request	MCEO Road A&G	Funds for Others Sources	SCIP Loan Term
Dayton-Cincinnati Retaining Wall	2020-07	Rick Splawinski	\$ 1,300,000	\$ 500,000	\$ 325,000	\$ 175,000	\$ 800,000	\$ -	10-years
Shank (MOR-44-4.80; PID 113925)	2020-23	Cedric McGhee	\$ 1,613,000	\$ 200,000	\$ 100,000	\$ 100,000	\$ 373,000	\$ 1,040,000	5-years
Wilmington Pike (KET-85-1.59)	2023-10	Henry Brierton	\$ 1,084,000	\$ 500,000	\$ 125,000	\$ 375,000	\$ 584,000	\$ -	10-years
Lutheran Church Road (JEF-19-3.83)	2022-27	David Shields	\$ 237,300	\$ 200,000	\$ 50,000	\$ 150,000	\$ 37,300	\$ -	5-years
Wellbaum Road (CLY-T0223-02.05)	2023-08	Brierton	\$ 430,000	\$ 200,000	\$ 100,000	\$ 100,000	\$ 230,000	\$ -	5-years
Amity Road (PER-T0056-2.00)	2023-05	Shields	\$ 483,500	\$ 200,000	\$ 100,000	\$ 100,000	\$ 283,500	\$ -	5-years
Social Row Road Widening, Phases 1 & 2 (PID 113360)	2020-17	Joe Dura	\$ 7,700,000	\$ 2,000,000	\$ 1,500,000	\$ 500,000	\$ 1,125,812	\$ 4,574,188	10-years

OPWC LTIP Project Application	Job Number	Program Manager	LTIP Total Project Costs	LTIP Grant Request		MCEO Road A&G	Funds for Others Sources	
Dayton-Cincinnati Retaining Wall	2020-07	Rick Splawinski	\$ 1,300,000	\$ 400,000		\$ 900,000	\$ -	
Shank (MOR-44-4.80; PID 113925)	2020-23	Cedric McGhee	\$ 1,613,000	\$ 400,000		\$ 173,000	\$ 1,040,000	
Wilmington Pike (KET-85-1.59)	2023-10	Henry Brierton	\$ 1,084,000	\$ 400,000		\$ 684,000	\$ -	
Lutheran Church Road (JEF-19-3.83)	2022-27	David Shields	\$ 237,300	\$ 118,650		\$ 118,650	\$ -	
Wellbaum Road (CLY-T0223-02.05)	2023-08	Henry Brierton	\$ 430,000	\$ 107,500		\$ 322,500	\$ -	
Amity Road (PER-T0056-2.00)	2023-05	David Shields	\$ 483,500	\$ 120,875		\$ 362,625	\$ -	
Social Row Road Widening, Phases 1 & 2 (PID 113360)	2019-10	Joe Dura	\$ 7,700,000	\$ 1,100,000		\$ 2,025,812	\$ 4,574,188	

MONTGOMERY COUNTY ENGINEER'S OFFICE CHIEF FINANCIAL OFFICERS CERTIFICATION

I, Ronelle Kinney, Comptroller, of the Montgomery County Engineer's Office, hereby certify that the Montgomery County Engineer's Office will have the amount of \$1,513,000.00 available in the Road A&G Fund. A Sum of \$100,000.00 amount will be used to repay the SCIP or RLP loan requested, and a sum of \$1,413,000.00 amount will be used to pay the remainder contractor balance for the MOT-Shank Road Bridge Replacement Project, CITY OF MORaine, COUNTY Job #2020-23, over a 5 year term.

Round PY38

Project Name: MOT-Shank Road Bridge Replacement

Loan Amount	\$100,000.00
Grant Amount	\$100,000.00
Road A&G	\$1,413,000.00

These funds will be available for repayment use July 1, 2024, immediately after formal project approval.



Ronelle Kinney, Comptroller
Montgomery County Engineer's Office

Date: 8/7/2023

MONTGOMERY COUNTY ENGINEER'S OFFICE CHIEF FINANCIAL OFFICERS CERTIFICATION

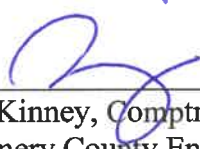
I, Ronelle Kinney, Comptroller, of the Montgomery County Engineer's Office, hereby certify that The Montgomery County Engineer's Office will have the amount of \$1,213,000.00 available in the Road A&G Fund and that this amount will be added to the LTIP grant amount of \$400,000 requested for the MOT-Shank Road Bridge Replacement Project, CITY OF MORAINÉ, COUNTY Job #2020-23.

Round PY38

Project Name: MOT-Shank Road Bridge Replacement

Grant Amount	\$400,000.00
Road A&G	\$1,213,000.00

These funds will be available for payment July 1, 2024, immediately after formal project approval.



Ronelle Kinney, Comptroller
Montgomery County Engineer's Office

Date: 8/7/2023



County Engineers Association of Ohio

6500 Busch Blvd., Suite 100 • Columbus, Ohio 43229-1738
(614) 221-0707 • Fax (614) 221-5761 • www.ceao.org

July 20, 2020

Paul W. Gruner, P.E., P.S.
Montgomery County Engineer
451 W. Third Street
Dayton, Ohio 45422-1260

Re: MOT-M0044-04.80 (SFN 5766737) Shank Road Bridge Replacement

Dear Mr. Gruner:

Your application for use of LBR funds to replace the above referenced bridge is approved for FY 2026. Under the CEAO's bridge funding policy, this project qualified for selection on the basis that each county is guaranteed at least one bridge if they have no bridges scheduled for the three years prior to the current funding year. Since it is being approved under the "4-year" criteria, it will not be subject to re-ranking against the new LBR applications next year. The project has an estimated FY 2026 construction cost of \$1,266,000 including construction engineering. The projected funding breakdown for the project is as follows:

Construction Contract Estimate (inflated to FY 26):	\$1,183,200
7% Construction Engineering Estimate (inflated to FY 26):	\$82,800
80% LBR:	\$1,012,800
20% Local Match:	\$253,200
Federal Max (at 80%):	\$1,204,720

By copy of this letter ODOT will be formally advised of this LBR funding approval. This should permit the programming to be completed upon your submittal of the required package to the ODOT District. Please advise CEAO of the PID number and milestone dates once the programming has been completed and the project schedule has been established. Please also coordinate with your MPO to ensure that this project is included in their TIP as appropriate. If you have any questions or need any further information, please feel free to contact this office.

Sincerely,

Michele Risko
CSTP/LBR Program Manager

cc: S. Boyer, ODOT District 7; R. Castle, ODOT District 7; A. Stevenson, ODOT Central Office; File

MOT Shank Road Bridge Replacement Project
City of Moraine, Job #2020-23

ENGINEER'S ESTIMATE

REF NO.	ITEM	ITEM EXT	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
ROADWAY							
1	202	23000	PAVEMENT REMOVED	SQ YD	408	\$15.00	\$6,120.00
2	202	38000	GUARDRAIL REMOVED	FT	369	\$4.00	\$1,476.00
3	203	10000	EXCAVATION	CU YD	279	\$21.00	\$5,859.00
4	203	20000	EMBANKMENT	CU YD	327	\$52.00	\$17,004.00
5	204	10000	SUBGRADE COMPACTION	SQ YD	579	\$4.00	\$2,316.00
6	204	45000	PROOFROLLING	HOUR	1	\$168.00	\$168.00
7	606	15050	GUARDRAIL, TYPE MGS	FT	37.5	\$28.00	\$1,050.00
8	606	15051	GUARDRAIL, TYPE MGS	FT	12.5	\$36.00	\$450.00
9	606	26150	ANCHOR ASSEMBLY, MGS TYPE E	EACH	3	\$2,668.00	\$8,004.00
10	606	26151	ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN	EACH	1	\$3,016.00	\$3,016.00
11	606	35002	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	1	\$2,552.00	\$2,552.00
12	606	35003	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	EACH	1	\$2,784.00	\$2,784.00
13	606	35102	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	EACH	2	\$476.00	\$952.00
14	609	24510	CURB, TYPE 4-C	FT	59	\$61.00	\$3,599.00
							\$55,350.00
EROSION CONTROL							
15	659	00100	SOIL ANALYSIS TEST	EACH	2	\$129.00	\$258.00
16	659	00300	TOPSOIL	CU YD	141	\$50.00	\$7,050.00
17	659	00510	SEEDING AND MULCHING, CLASS 2	SQ YD	1264	\$4.00	\$5,056.00
18	659	14000	REPAIR SEEDING AND MULCHING	SQ YD	64	\$2.00	\$128.00
19	659	15000	INTER-SEEDING	SQ YD	64	\$2.00	\$128.00
20	659	20000	COMMERCIAL FERTILIZER	TON	0.18	\$1,200.00	\$216.00
21	659	31000	LIME	ACRE	0.27	\$100.00	\$27.00
22	659	35000	WATER	MGAL	7	\$2.00	\$14.00
23	832	30000	EROSION CONTROL	EACH	7780	\$1.00	\$7,780.00
							\$20,399.00
DRAINAGE							
24	602	20000	CONCRETE MASONRY	CY	0.21	\$3,400.00	\$714.00
25	611	04400	12" CONDUIT, TYPE B	FT	26	\$122.00	\$3,172.00
26	611	04600	12" CONDUIT, TYPE C	FT	57	\$86.00	\$4,902.00
27	611	98180	CATCH BASIN, NO. 3A	EACH	2	\$3,900.00	\$7,800.00
28	611	98470	CATCH BASIN, NO. 2-2B	EACH	1	\$2,500.00	\$2,500.00
							\$19,088.00
PAVEMENT							
29	301	46000	ASPHALT CONCRETE BASE, PG64-22 , (449)	CU YD	75	\$300.00	\$22,500.00
30	304	20000	AGGREGATE BASE	CU YD	94	\$84.00	\$7,896.00
31	407	10000	NON-TRACKING TACK COAT	GALLON	57	\$5.00	\$285.00
32	441	50000	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	CU YD	43	\$342.00	\$14,706.00
							\$45,387.00
TRAFFIC CONTROL							
33	626	00102	BARRIER REFLECTOR, TYPE 1	EACH	4	\$11.00	\$44.00

ENGINEER'S ESTIMATE

REF NO.	ITEM	ITEM EXT	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
34	626	00110	BARRIER REFLECTOR, TYPE 2	EACH	4	\$11.00	\$44.00
35	644	00100	EDGE LINE, 4"	MILE	0.14	\$8,000.00	\$1,120.00
36	644	00300	CENTER LINE	MILE	0.07	\$15,000.00	\$1,050.00
						SUBTOTAL	\$2,258.00
			STRUCTURE OVER 20 FEET				
37	202	11002	STRUCTURE REMOVED, OVER 20 FOOT SPAN	LUMP	1	\$162,000.00	\$162,000.00
38	202	22900	APPROACH SLAB REMOVED	SQ YD	107	\$46.00	\$4,922.00
39	202	23500	WEARING COURSE REMOVED	SQ YD	423	\$9.00	\$3,807.00
40	503	11100	COFFERDAMS AND EXCAVATION BRACING	LUMP	1	\$23,000.00	\$23,000.00
41	503	21100	UNCLASSIFIED EXCAVATION	CU YD	339	\$47.00	\$15,933.00
42	505	11100	PILE DRIVING EQUIPMENT MOBILIZATION	LUMP	1	\$23,000.00	\$23,000.00
43	507	00500	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	FT	810	\$13.00	\$10,530.00
44	507	00550	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	FT	910	\$35.00	\$31,850.00
45	507	00700	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	FT	510	\$14.00	\$7,140.00
46	507	00750	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	FT	570	\$55.00	\$31,350.00
47	507	99201	PREBORED HOLES, AS PER PLAN	FT	834	\$150.00	\$125,100.00
48	509	10000	EPOXY COATED REINFORCING STEEL	POUND	73096	\$1.00	\$73,096.00
49	509	30020	NO. 4 DEFORMED GFRP REINFORCEMENT	FT	5322	\$2.00	\$10,644.00
50	511	33312	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	CU YD	280	\$1,160.00	\$324,800.00
51	511	34450	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK PARAPET	CU YD	50	\$775.00	\$38,750.00
52	511	43510	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	CU YD	94	\$700.00	\$65,800.00
53	512	10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	SQ YD	329	\$28.00	\$9,212.00
54	512	33000	TYPE 2 WATERPROOFING	SQ YD	2	\$65.00	\$130.00
55	516	13600	1" PREFORMED EXPANSION JOINT FILLER	SQ FT	15	\$12.00	\$180.00
56	516	13900	2" PREFORMED EXPANSION JOINT FILLER	FT	74	\$12.00	\$888.00
57	516	14020	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	FT	86	\$35.00	\$3,010.00
58	516	41600	1" ELASTOMERIC BEARING PAD	SQ FT	31	\$116.00	\$3,596.00
59	516	21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	CU YD	78	\$85.00	\$6,630.00
60	518	40000	6" PERFORATED CORRUGATED PLASTIC PIPE	FT	121	\$10.00	\$1,210.00
61	518	40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL	FT	80	\$12.00	\$960.00
62	523	20001	DYNAMIC LOAD TESTING, AS PER PLAN	EACH	4	\$5,200.00	\$20,800.00
63	523	20501	RESTRIKE, AS PER PLAN	EACH	4	\$4,600.00	\$18,400.00
64	526	15011	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=13"), AS PER PLAN	SQ YD	141	\$290.00	\$40,890.00
65	601	20010	CRUSHED AGGREGATE SLOPE PROTECTION	CU YD	6	\$176.00	\$1,056.00
66	601	32101	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN	CU YD	259	\$116.00	\$30,044.00
						SUBTOTAL	\$1,088,728.00
			MAINTENANCE OF TRAFFIC				
67	614	11000	MAINTAINING TRAFFIC	LUMP	1	\$23,000.00	\$23,000.00
						SUBTOTAL	\$ 23,000.00
			INCIDENTALS				
68	623	10000	CONSTRUCTION LAYOUT STAKES	LUMP	1	\$16,790.00	\$16,790.00
69	624	10000	MOBILIZATION	LUMP	1	\$29,000.00	\$29,000.00
						SUBTOTAL	\$45,790.00

ENGINEER'S ESTIMATE

REF NO.	ITEM	ITEM EXT	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
---------	------	----------	------------------	------	----------	------------	-------------

Estimate Year 2025 **GRAND TOTAL = 1.3 million** \$1,300,000.00

I HEREBY CERTIFY THIS ESTIMATE BASED ON THE REALISTIC COST OF MATERIAL, EQUIPMENT, AND LABOR AVAILABLE FOR THIS PROJECT. I, THEREFORE, SET MY SEAL AS EVIDENCE TO MY BEST ENGINEERING JUDGMENT.

Cedric L. McGhee

PROJECT USEFUL LIFE = 69 YEARS

CEDRIC L. MCGHEE, P.E.
OHIO ENGINEER'S LICENSE #E-71286

08-07-23

DATE



MOT-Shank Road Bridge, PID #113925, Job #2020-23

A weighted useful life statement stamped/sealed and signed by a licensed professional engineer must be included with the project application.

This spreadsheet has formulas to make a weighted useful life calculation and is populated with an example for illustrative purposes. Items can be added to column a.

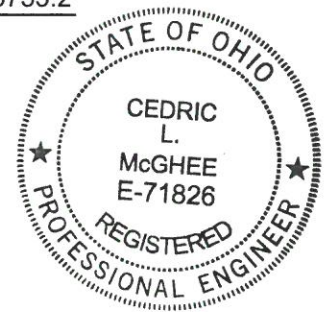
Weighted Useful Life & Design Service Capacity Calculations

Major Component	Cost (\$1,000)	Portion Repair / Replacement (%)	Repair / Replace Product	Useful Life (Years)	Useful Life Product
Full-depth road construction w/ drainage	163.224	100	16322.4	25	4080.6
Full-depth road construction w/o drainage				25	
Partial-depth road construction w/ drainage		100		15	
Partial-depth road construction w/o drainage				15	
Storm Sewers		100		40	
Sanitary Sewers		100		40	
Water Lines				40	
Bridge	1088.728	100	108872.8	75	81654.6
Pumps, Lift Stations				15	
Sidewalks		100		25	
Bike Facility		100		7	
Totals	1251.952		125195.2		85735.2

Weighted Useful Life: 68.5 Years

Design Service Capacity (Project Application, Section 2.0):

Portion Repair / Replace 100 %
 Portion New / Expansion %



USEFUL LIFE CERTIFICATION

I hereby certify that this project has an expected useful life of normal usage in this specific situation; in evidence, whereof, I have set my signature and seal as of this date.

Cedric L. McGhee

Project Manager

Date

Ohio Engineer's License #71826

OHIO PUBLIC WORKS COMMISSION

DISTRICT 4

FY25 Supplemental Questionnaire

Applicant: Montgomery County

Project Title: MOT-Shank Road Bridge Replacement Project

Application Summary:

Briefly describe the project:

The MOT-Shank Road Bridge Replacement Project is a bridge carrying a 2-lane local road in an urban setting in the City of Moraine OH. There are a few trees on both sides of the road. The project includes 1) full replacement of the existing bridge with installation of a new bridge in-kind. 2) Rock channel protection will be added to armor the foundations and channel banks. 3) The new bridge will be installed/ shifted a few feet to the east to align with the existing channel. 4) There will be moderate roadway improvements which include safety grading and new safety railing installation. 5) Erosion control will be installed to alleviate scour and/or erosion issues. Right of way easements and temporary easements will be necessary for access to build the walls and piers of the new structures. This project has minimal impacts to Possum Creek MetroPark. There are aerial facilities that will require utility coordination.

Priority:

Is this application your priority project? (Circle One)	
Yes <input type="radio"/>	No <input checked="" type="radio"/>

Generation of Revenue:

Will new user fees or assessments be assessed as part of this project? (Circle One)	
Yes <input type="radio"/>	No <input checked="" type="radio"/>
What will the new user fees or assessments be used for?	
n/a	

Additional Funding:

Will OPWC match, in part, a committed grant or loan? (Circle One)	
Yes <input checked="" type="radio"/>	No <input type="radio"/>
If no, was the project submitted to an appropriate agency for funding, but denied due to lack of funding? (Circle One)	
Yes – Appropriate Documentation Attached <input type="radio"/>	No <input type="radio"/>

Readiness of Project:

Will this project be <u>substantially</u> underway on or before June 1, 2025? (Circle One)	
Yes <input checked="" type="radio"/>	No <input type="radio"/>

Health & Safety:

Describe the specific health or safety issue being addressed by this project. What deficiency or condition is causing the health or safety issue?
The MOT-Shank Road Bridge Project addresses safety concerns caused by the condition of the existing structure. The bridge is in poor condition with a general appraisal rating of 4. Therefore, the structure is structurally deficient. The slab deck is heavily deteriorated with large cracks and delamination (layers of concrete separating). The deck edges have exposed steel for the entire length of the bridge. The substructure walls have the same signs of deterioration with concrete section loss (2" to 3" deep pockets). There are too many areas to patch or salvage the substructure in order to bring the structure back to a reasonable condition rating. The bridge has lasted 59 years and has exceeded its original life expectancy. The best feasible solution is to replace the whole bridge.

Addresses District Infrastructure Needs:

Is this project located in more than one community? (Circle One)		
Yes <input type="radio"/>		No <input checked="" type="radio"/>
What percentage of the community will be served by this project? (Circle One)		
Less than 25% <input checked="" type="radio"/>	25% to 40% <input type="radio"/>	More than 40% <input type="radio"/>

Economic Development

How many jobs are being created as a result of this project?	none
How many jobs will be retained as a result of this project?	none
Why is it necessary to fund this improvement to secure this development?	
N/A	
What type of industry is proposed in this development?	
N/A	

Relieve Existing Traffic Congestion:

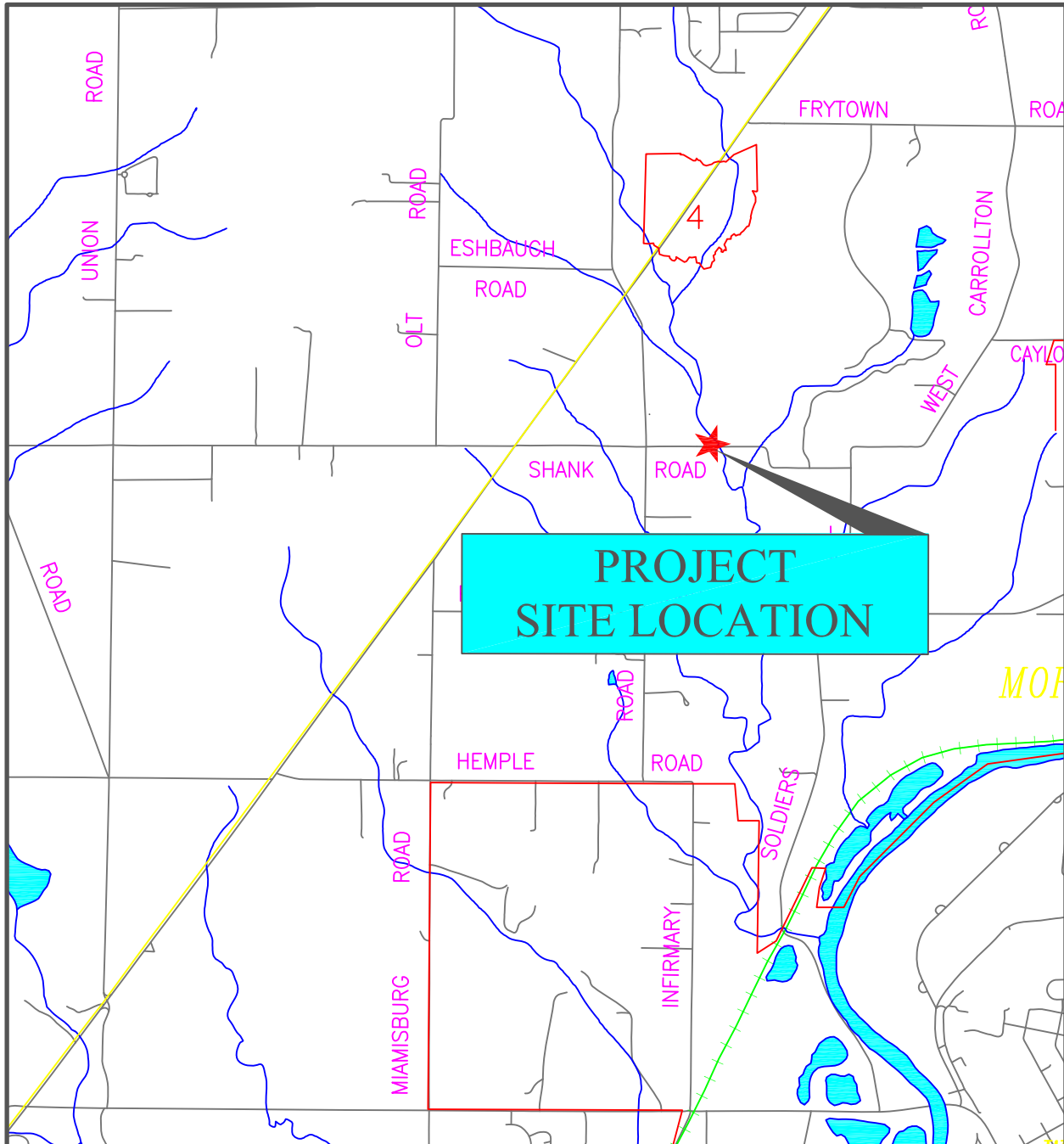
What is the level of service?	N/A
--------------------------------------	-----

Other Factors

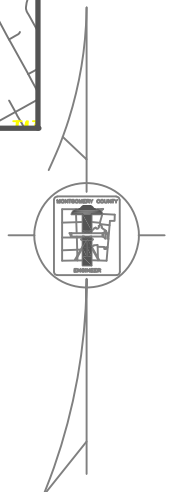
What other factors exist that make this project more important than other like projects?

None .

MOT-SHANK ROAD BRIDGE, REPLACEMENT PROJECT, JOB 2020-23 CITY OF MORAINE, MONTGOMERY COUNTY



AREA LOCATION MAP



Shank Road

Application Photos

Shank Road Wearing Surface is in good condition. There are some minor cracks sealed. There are several vegetation growth and trees along the edge of the structure that need to be cleared or removed on the south side of the road. Minimum impacts to the north side of the road due to Possum Creek MetroPark. There are aerial utilities that may need relocation during construction.



Discoloration of concrete; heavy cracking of the concrete slab with exposed steel along the full length of the deck edges. Chlorides seeping through the cracks of the slab with exposed rusted steel.



Some areas on the face of the abutment walls have several deterioration cracks with chlorides seeping through. The top of the abutment wall is heavily damaged showing large horizontal crack separating the slab from the wall. The foundation piles are heavily corroded with rust and section loss.



Inspector: Schaub,Mark
 Inspection Date: 06/07/2022

Structure Number: 5766737
 Facility Carried: Shank Road T0044

Bridge Inspection Report

Ohio Bridge Inspection Summary Report

MOT-T0044-0480 (5766737)

2: District 52010 - MORaine (MOT county)
 District 07

5A: Inventory Route 1 T0044

21: Major Maint A/B 02 - County Highway Agency /
 225 Routine Main A/B 02 - County Highway Agency /
 221 Inspection A/B 02 - County Highway Agency /
 220: Inv. Location MOR

7: Facility On Shank Road T0044
 6: Feature Ints Opossum Creek
 9: Location .6 MILE EAST OF SR 4
 Lat, Lon 39.702714 , -84.274647

Condition	Structure Type
-----------	----------------

58: Deck **4 - Poor Condition**
 58.01 Wearing Surface 9 - Excellent
 58.02 Joint 9- Excellent
59: Superstructure **4 - Poor Condition**
 59.01 Paint & PCS N - Not Applicable
60: Substructure **4 - Poor Condition**
61: Channel **6**
61.01 Scour **7 - Good**
62: Culverts **N - Not Applicable**
67.01 GA **4**

43: Bridge Type 2 - Concrete continuous
 01 - Slab
 N- Not Applicable
 45: Spans Main / Approach 3 / 0
 107: Deck Type 1 - Concrete Cast-in-Place
 408: Composite Deck U - Unknown
 414A Joint Type 1 4 - Poured
 414B: Joint Type 2 N - None
 108A: Wearing Surface 6 - Bituminous
 N- Not Applicable
 422: WS Date 07/01/2011
 423: WS Thick (in) 1.0
 482: Protective Coating N - None or Not Applicable
 483: PCS Date
 453: Bearing Type 1 N - None
 455: Bearing Type 2 N - None
 528: Foundn: Abut Fwd 1 - Steel H Piles (Other size)
 533: Foundn: Abut Rear 1 - Steel H Piles (Other Size)
 536: Foundn: Pier 1 1 - Steel H Piles (Other size)
 539: Foundn: Pier 2 N - None (Such as most Culverts)

Appraisal

Sufficiency Rating 57.0 SD/FO 1 - SD
 36: Rail, Tr, Gd, Term Std 0 0 1 1
 72: Approach Alignment 7 - Better than present minimum criteria
 113: Scour Critical 5 - Scour within limits of footing or piles
 71: Waterway Adequacy 6 - Occasional Overtopping of Approaches

Age and Service	
27: Year Built/ 106 Rehab	1964 / 0000
42A: Service On	1 - Highway
42B: Service Under	5 - Waterway
28A: Lanes on	02
28B: Lanes Under	00
19: Bypass Length	1
29: ADT	561
109: % Trucks (%)	4

Geometric

48: Max Span Length (ft) 45.0
 49: Structure Length (ft) 120.0
 52: Deck Width, Out-To-Out (ft) 24.0
 424: Deck Area (sf) 2880
 32: Appr Roadway Width (ft) 18.0
 51: Road Width, Curb-Curb (ft) 23.9
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 20
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 0
 336A: Min Vert Clrnce IR Cardinal (ft) 99
 336B: Min V Clr IR Non-Cardinal (ft) 0
 578: Culvert Length (ft) 0

Load Posting

41: Op/Post/Closed A - Open
 70: Posting 5 - Equal to or above legal loads
 70.01: Date
 70.02: Sign Type
 734: Percent Legal (%) 150
 704: Analysis Date 08/23/2012
 63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18

Inspections	
-------------	--

90: Routine Insp.	Months 12	06/07/2022
92A: FCM Insp.	N	0
92B: Dive Insp.	N	0
92C: Special Insp.	N	0
92D: UBIT Insp.	N	0
92E: Drone Insp.	N	0
Inspector	Schaub,Mark	

Inspector: Schaub,Mark
Inspection Date: 06/07/2022

Structure Number: 5766737
Facility Carried: Shank Road T0044

Bridge Inspection Report

loading.

Inspector: Schaub,Mark
Inspection Date: 06/07/2022

Structure Number: 5766737
Facility Carried: Shank Road T0044

Bridge Inspection Report

ODOT District: District 07

MOT-T0044-0480_(5766737)

Date Built: 07/01/1964

Major Maint: 02 - County Highway Agency

Facility Carried: Shank Road T0044

Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 02 - County Highway Agency

Feature Inters: Opossum Creek

Traffic Under: 5 - Waterway

Insp: 02 - County Highway

FIPS Code: 52010 - MORaine (MOT county)

Location: MOR

.6 MILE EAST OF SR 4

Resp A: Agency

Insp

Resp B:

Inspector

Schaub,Mark

Inspection Date

06/07/2022

Reviewer Shields,David

Inspector Comments - Deck and Approach

Deck

Floor/Slab (SF)

- Transverse hairline crack with efflorescence full width of bridge span 2, West 1/3 of span.
- Rebar shadows visible.
- Spans 1 and 3 have 6" test holes bored through the deck severing 1" rebar and additional spalling extending 3' each direction of the test hole.

Edge of Floor/Slab (LF)

- Bottom of slab spalling along entire edge on both sides, 30" typical and areas up to 48" wide, up to four adjacent debonded rebar exposed with section loss.
- Several rebar falling off structure.
- Damage up to 3" deep + or - in some areas, 2" typical.
- Face of slab deteriorating, several spalls and delaminations, vegetation growing in cracks along edge.

Bridge Wearing Surface (SF)

History :

- Deteriorated area mostly encompassing the East bound lane in span 1, **recommend heavy patching in this area or full overlay, deteriorated wearing surface is exposing top of deck.**
- Spalling and potholes in original concrete wearing surface, new asphalt overlay 2011.
- Random cracks, areas broken up in East bound lane, patched areas.

Current Condition :

- * Deck has been overlaid with asphalt 2022. *

Bridge Railing (LF)

- Railing to low, ~25".
- Most all bottom anchor bolts exposed.

Expansion Joint (LF)

- Paved over 2022.

Inspector: Schaub, Mark
Inspection Date: 06/07/2022

Structure Number: 5766737
Facility Carried: Shank Road T0044

Bridge Inspection Report

Approach

Approach Wearing Surface (EA)

- New asphalt wearing surface 2022.

Inspector Comments - General Appraisal

Superstructure

Slab (SF)

- Transverse hairline crack with efflorescence full width of bridge span 2, West 1/3 of span.
- Rebar shadows visible.
- Spans 1 and 3 have 6" test holes bored through the deck severing 1" rebar and additional spalling extending 3' each direction of the test hole.
- Bottom of slab spalling along entire edge on both sides, 30" typical and areas up to 48" wide, up to four adjacent debonded rebar exposed with section loss.
- Several rebar falling off structure.
- Damage up to 3" deep + or - in some areas, 2" typical.
- Face of slab deteriorating, several spalls and delaminations, vegetation growing in cracks along edge.

Substructure

Abutment Walls (LF)

- SE and NE corner of abutments have 12" to 18" loss of bearing, both abutments corners spalled off on east and west ends, deterioration extends 12" to 18" from ends with exposed rebar.
- Both abutments have heavy leakage coming through the seat area and are coated with efflorescence.

Pier Columns/Bents (EA)

- The two exterior H piles on each pier have advanced section loss with large corrosion holes, remaining interior H piles minor section loss and corrosion.
- Concrete protection around base of H piles breaking off and are undermined on the east pier.
- Large perforations to flange of H pile entire height, P-1 Rt.
- Large perforations to flanges of H piles near pier cap, P-1&2 Lt.
- Delaminations and spalling w/ exposed steel across pier cap.

Inspector: Schaub,Mark
Inspection Date: 06/07/2022

Structure Number: 5766737
Facility Carried: Shank Road T0044

Bridge Inspection Report

Substructure Scour (EA)

- Major portion of East bank had washed away during 2018 high water events, repaired in late 2019.
- After a 2019 high water event a interim inspection revealed that 75% of the length x entire height of the abutment cap was exposed with loss of material 3' below bottom of cap and 50% undermining with two piles exposed, repaired in late 2019.
- East abutment piles estimated length by plans 22', five piles spaced at 6'-7 3/4" on center.
- MCE Operations was notified and force account made repairs by placing scour protection in 2019.

Slope Protection (EA)

- See **Scour** notes.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Hydraulic Opening (EA)

-

Channel

Channel Protection (LF)

- Repairs made 2019, see **Scour** notes.

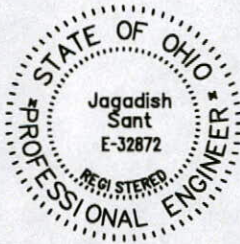
Scour Critical

Montgomery County Engineer's Office



Grey Boyer

Bridge Load Rating Report
Bridge: MOR-MO044-0480
Shank Rd over Possum Creek
SFN: 5766737



J. Sant

Jay Sant, P.E.
Senior Bridge Engineer

9/7/2012

Date



PRIME Engineering, Inc.

3000 Corporate Exchange Dr.
Suite 600
Columbus, OH 43231

TABLE OF CONTENTS

1. BRIDGE LOAD RATING REPORT SUMMARY	1
2. BARS-PC FILES (Input, lista.lis).....	2
3. OUTPUT FILES (Output, rate2.lis, flex.lis, report.lis)	3
4. EXISTING PLANS	18
5. REBAR LAYOUT FOR ANALYSIS	22

BRIDGE LOAD RATING REPORT
OFFICE OF STRUCTURAL ENGINEERING
OHIO DEPARTMENT OF TRANSPORTATION

SFN	BRIDGE NUMBER	COUNTY
5766737	MOR-MO044-0480	MONTGOMERY
ORIGINAL CONSTRUCTION YEAR	REHABILITATION YEAR	OVERALL STRUCTURE LENGTH (FT)
1964	-	120
FEATURE INTERSECTED:	SHANK ROAD OVER POSSUM CREEK	
SPECIAL ASSUMPTIONS & COMMENTS:	ORIGINAL DESIGN LOAD WAS CF-130. 2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES.	
RATING & ANALYSIS OPTION: SELECT FROM LIST ON THE LEFT WHERE APPROPRIATE		
LOAD RATING PURPOSE:	Deterioration	▲ ▼
RATING SOFTWARE	1- BARS	▲ ▼
BASIS OF ANALYSIS:	1- Plan Information Available	▲ ▼
METHOD OF ANALYSIS:	2- Load Factor (LF)	▲ ▼
DESIGN LOADING (ORIGINAL):	0- Other (CF-130 OHIO)	▲ ▼
STRUCTURE RATING SUMMARY		
LOADING TYPE	RATING FACTOR - RF (X.XX)	RATING LOAD ▲ ▼
INVENTORY CURRENT DESIGN	0.94	HS-20
OPERATING CURRENT DESIGN	1.57	HS-20
OHIO LEGAL - 2F1	2.73	OHIO LEGAL LOADS OVERALL MINIMUM RATING FACTOR
OHIO LEGAL - 3F1	1.91	150%
OHIO LEGAL - 4F1	1.75	OHIO LEGAL LOADS OVERALL CONTROLLING TRUCK
OHIO LEGAL - 5C1	1.55	OHIO LEGAL - 5C1
RATED BY, PE#	REVIEWED BY, PE#	REPORT DATE
ALEX SUN	RUEL H. MANUEL, PE 71169	8/23/2012
AGENCY/FIRM	PHONE NUMBER	EMAIL
PRIME ENGINEERING	614-839-0250	rmanuel@primeeng.com

SFN: 5766737

BRIDGE NO.: MOR-MO044-0480

RECORD										REC.NO.	
01	082212								*LF*	POST	100
03	1SPEC0512.0	0012	17.0	0004	17.0	0031	17.0	0004			200
03	2SPEC	17.0									300
02576673	PRIME LAS				112	64x	12000	x	2400	03	100
05576673	5766737	MOT M0044	0480								200
06576673	BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS										300
06576673	CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737										400
06576673	MOR-M0044-0480 SHANK RD over POSSUM CREEK										500
06576673	2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES										600
06576673	24 OUT TO OUT, 24 FT RDWY										700
06576673	3-SPAN 36-45-36										800
08576673S01	03	X	3600	X	4500	X	3600	RC	0.164		900
10576673S01	01				W 23.3		X	3600			1000
10576673S01	01				W 2.5		X	3600			1100
10576673S01	02				W 23.3		X	4500			1200
10576673S01	02				W 2.5		X	4500			1300
10576673S01	03				W 23.3		X	3600			1400
10576673S01	03				W 2.5		X	3600			1500
11576673S01	0101X	2200	01								1600
11576673S01	0102X	300	02								1700
11576673S01	0103X	400	03								1800
11576673S01	0104X	200	04								1900
11576673S01	0105X	500	05								2000
11576673S01	0201X	500	05								2100
11576673S01	0202X	200	04								2200
11576673S01	0203X	300	06								2300
11576673S01	0204X	200	03								2400
11576673S01	0205X	200	02								2500
11576673S01	0206X	1700	01								2600
11576673S01	0207X	200	02								2700
11576673S01	0208X	250	03								2800
11576673S01	0209X	300	06								2900
11576673S01	0210X	250	04								3000
11576673S01	0211X	400	05								3100
11576673S01	0301X	500	05								3200
11576673S01	0302X	200	04								3300
11576673S01	0303X	400	03								3400
11576673S01	0304X	300	02								3500
11576673S01	0305X	2200	01								3600
13576673S01	01	18.0		12.0		01	0.19	2.13			3700
13576673S01	01					02	2.18	16.12			3800
13576673S01	02	18.0		12.0		01	1.34	2.71			3900
13576673S01	02					02	2.18	16.12			4000
13576673S01	03	18.0		12.0		01	1.34	2.71			4100
13576673S01	03					02	1.63	16.12			4200
13576673S01	04	18.0		12.0		01	2.01	2.71			4300
13576673S01	04					02	1.09	16.12			4400
13576673S01	05	18.0		12.0		01	2.67	2.71			4500
13576673S01	05					02	1.09	16.12			4600
13576673S01	06	18.0		12.0		01	1.34	2.71			4700
13576673S01	06					02	1.09	16.12			4800

THE FOLLOWING STRUCTURES WERE SELECTED

576673

STRUCTURE I.D. = 576-673

 * STRUCTURE HEADER AND DESCRIPTION *

100-- 2 PRIME LAS EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS 1111
 TYPE = 112 YEAR = 64 LEN = 120.00 FT. WIDTH = 24.00 FT. 3 SPANS SP.LOAD =
 INV.LL.TRK.= OP.LL.TRK.=

 * STRUCTURE LOCATION AND PERMANENT IDENTIFICATION FACTORS *

200-- 5 BRIDGE= 5766737 DIST./CO.= 7 MO CONST. ROUTE = T M0044 CONST. SECT.= 0480 CONST. STA.= 0+ .
 MICROFILM REEL NO. DESIGN PLANS= COMPUTATIONS= CORRESPONDENCE=
 ROUTE I.D.= MARKED ROUTE =

 * COMMENTS *

300-- 6 0 BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
 400-- 6 0 CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
 500-- 6 0 MOR-M0044-0480 SHANK RD over POSSUM CREEK
 600-- 6 0 2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
 700-- 6 0 24 OUT TO OUT, 24 FT RDWY
 800-- 6 0 3-SPAN 36-45-36

 * MEMBER SPECIFICATIONS AND REQUIRED ANALYSIS-GIRDER, STRINGER AND FLOOR BEAM *

MEMBER ID	SPANS	SYMM	STIFF CODE	SPAN 1 (SPAN 4)	SPAN 2 (SPAN 5)	SPAN 3 (SPAN 6)	MATL CODE	ALLOWABLE STRESS FY	FB	FC*	FC**	LL DIST. FACTOR	END THRU FL.BM DECK	MAX INV	IMPACT OP.	FACTOR POST	ANALYSIS SPEC
900-- 8	S 1 1 3			36.000	45.000	36.000	RC	.00		.00		.164		.00	.00	.00	.00

 * SUPERIMPOSED DEAD LOADS-GIRDERS, STRINGERS AND FLOOR BEAMS *

MEMBER ID	SYMM	SPAN NO.	DISTANCE FR. LEFT SUPP.	LOAD TYPE	P OR W	LOAD W(L)	LOAD W(R)	LENGTH
1000--10	S 1	1	.000FT.	W		23.3	.0	36.000FT.
1100--10	S 1	1	.000FT.	W		2.5	.0	36.000FT.
1200--10	S 1	2	.000FT.	W		23.3	.0	45.000FT.
1300--10	S 1	2	.000FT.	W		2.5	.0	45.000FT.
1400--10	S 1	3	.000FT.	W		23.3	.0	36.000FT.
1500--10	S 1	3	.000FT.	W		2.5	.0	36.000FT.

 * SECTION RANGE SPECIFICATIONS *

MEMBER ID	SYMM	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	SECTION NO. RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.	HYBRID CODE	GIRDER CODE	FY
1600--11	S 1	1	1	22.000FT.	1	0			.000FT.	.000FT.			0.
1700--11	S 1	1	2	3.000FT.	2	0			.000FT.	.000FT.			0.
1800--11	S 1	1	3	4.000FT.	3	0			.000FT.	.000FT.			0.
1900--11	S 1	1	4	2.000FT.	4	0			.000FT.	.000FT.			0.
2000--11	S 1	1	5	5.000FT.	5	0			.000FT.	.000FT.			0.
2100--11	S 1	2	1	5.000FT.	5	0			.000FT.	.000FT.			0.
2200--11	S 1	2	2	2.000FT.	4	0			.000FT.	.000FT.			0.
2300--11	S 1	2	3	3.000FT.	6	0			.000FT.	.000FT.			0.
2400--11	S 1	2	4	2.000FT.	3	0			.000FT.	.000FT.			0.
2500--11	S 1	2	5	2.000FT.	2	0			.000FT.	.000FT.			0.

2600--11	S 1	2	6	17.000FT.	1	0	.000FT.	.000FT.	0.	0.
2700--11	S 1	2	7	2.000FT.	2	0	.000FT.	.000FT.	0.	0.
2800--11	S 1	2	8	2.500FT.	3	0	.000FT.	.000FT.	0.	0.
2900--11	S 1	2	9	3.000FT.	6	0	.000FT.	.000FT.	0.	0.
3000--11	S 1	2	10	2.500FT.	4	0	.000FT.	.000FT.	0.	0.
3100--11	S 1	2	11	4.000FT.	5	0	.000FT.	.000FT.	0.	0.
3200--11	S 1	3	1	5.000FT.	5	0	.000FT.	.000FT.	0.	0.
3300--11	S 1	3	2	2.000FT.	4	0	.000FT.	.000FT.	0.	0.
3400--11	S 1	3	3	4.000FT.	3	0	.000FT.	.000FT.	0.	0.
3500--11	S 1	3	4	3.000FT.	2	0	.000FT.	.000FT.	0.	0.
3600--11	S 1	3	5	22.000FT.	1	0	.000FT.	.000FT.	0.	0.

* SECTION PROPERTIES (REINFORCED CONCRETE) - GIRDERS, STRINGERS, FLOOR BEAMS *

MEMBER ID	SECT. NO.	SAME AS	BFL ADR	H	A	B	B*	T	I	AS	D	COMP CODE
3700--13	S 1	1	0	18.00	.00	.00	12.00	.00	1	.19	2.13	
3800--13	S 1	1	0	.00	.00	.00	.00	.00	2	2.18	16.12	
3900--13	S 1	2	0	18.00	.00	.00	12.00	.00	1	1.34	2.71	
4000--13	S 1	2	0	.00	.00	.00	.00	.00	2	2.18	16.12	
4100--13	S 1	3	0	18.00	.00	.00	12.00	.00	1	1.34	2.71	
4200--13	S 1	3	0	.00	.00	.00	.00	.00	2	1.63	16.12	
4300--13	S 1	4	0	18.00	.00	.00	12.00	.00	1	2.01	2.71	
4400--13	S 1	4	0	.00	.00	.00	.00	.00	2	1.09	16.12	
4500--13	S 1	5	0	18.00	.00	.00	12.00	.00	1	2.67	2.71	
4600--13	S 1	5	0	.00	.00	.00	.00	.00	2	1.09	16.12	
4700--13	S 1	6	0	18.00	.00	.00	12.00	.00	1	1.34	2.71	
4800--13	S 1	6	0	.00	.00	.00	.00	.00	2	1.09	16.12	

SUMMARY OF RATING CALCULATIONS-----STRUCTURE MEMBER S 1 BARS-PC RELEASE 5.5
 INVENTORY AND/OR OPERATING ANALYSIS

INPUT CODING -- STRUCTURE 5766737 D/P STR. I.D.-- 576-673

DATE 8/22/12	INVENTORY	OPERATING
BY PRIME LAS	LIVE LOAD RATING	LIVE LOAD RATING
	HS20 HS 18.88	HS20 HS 31.47

STRUCTURE DESCRIPTION --	LOCATION --	MICROFILM REEL NUMBERS --
IDENTIFICATION 5766737	DISTRICT 7	DESIGN PLANS
TYPE 112	COUNTY MO	COMPUTATIONS
YEAR OF CONSTR. 1964	CONSTR. RTE. T M0044	CORRESPONDENCE
LENGTH 120.00 FEET	CONSTR. SEC. 0480	
ROADWAY WIDTH 24.00 FEET	CONSTR. STA. 0+ .	
NUMBER OF SPANS 3	KEY RTE.	
	MARKED RTE.	

ANALYST REMARKS --

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
 CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
 MOR-M0044-0480 SHANK RD over POSSUM CREEK
 2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
 24 OUT TO OUT, 24 FT RDWY
 3-SPAN 36-45-36

INVENTORY RATING SUMMARY --

MEMBER ID. S 1
 SPAN 2
 CRITICAL C.P. DIST. 22.5 FEET
 LIVE LOAD DESIGNATION HS20

	SHEAR (KIPS)
MEMBER CAPACITY	98.4
DL EFFECT	21.7

CAPACITY FOR (LL+I) 32.4
 ACTUAL (LL+I) 34.3

INVENTORY RATING HS 18.88

OPERATING RATING SUMMARY --

MEMBER ID. S 1
 SPAN 2
 CRITICAL C.P. DIST. 22.5 FEET
 LIVE LOAD DESIGNATION HS20

	SHEAR (KIPS)
MEMBER CAPACITY	98.4
DL EFFECT	21.7

CAPACITY FOR (LL+I) 54.0
 ACTUAL (LL+I) 34.3

OPERATING RATING HS 31.47

SUMMARY OF RATING CALCULATIONS-----STRUCTURE MEMBER S 1 BARS-PC RELEASE 5.5
 POSTING ANALYSIS

INPUT CODING -- STRUCTURE 5766737 D/P STR. I.D.-- 576-673

DATE	8/22/12	INVENTORY		OPERATING		POSTING	
BY	PRIME LAS	LIVE LOAD	RATING	LIVE LOAD	RATING	TRUCK TYPE	GROSS TONS
		HS20	HS 18.88	HS20	HS 31.47	VEH. 2F1	41.00
						VEH. 3F1	43.99
						VEH. 4F1	47.31

STRUCTURE DESCRIPTION --		LOCATION --		MICROFILM REEL NUMBERS --	
IDENTIFICATION	5766737	DISTRICT	7	DESIGN PLANS	
TYPE	112	COUNTY	MO	COMPUTATIONS	
YEAR OF CONSTR.	1964	CONSTR. RTE.	T M0044	CORRESPONDENCE	
LENGTH	120.00 FEET	CONSTR. SEC.	0480		
ROADWAY WIDTH	24.00 FEET	CONSTR. STA.	0+ .		
NUMBER OF SPANS	3	KEY RTE.			
		MARKED RTE.			

ANALYST REMARKS --

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
 CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
 MOR-M0044-0480 SHANK RD over POSSUM CREEK
 2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
 24 OUT TO OUT, 24 FT RDWY
 3-SPAN 36-45-36

TRUCK TYPE VEH.	2F1	TRUCK TYPE VEH.	3F1	TRUCK TYPE VEH.	4F1
MEMBER ID.	S 1	MEMBER ID.	S 1	MEMBER ID.	S 1
SPAN	1	SPAN	2	SPAN	2
CRITICAL C.P. DIST.	14.4 FEET	CRITICAL C.P. DIST.	22.5 FEET	CRITICAL C.P. DIST.	22.5 FEET

	SHEAR (KIPS)		SHEAR (KIPS)		SHEAR (KIPS)
MEMBER CAPACITY	98.4	MEMBER CAPACITY	98.4	MEMBER CAPACITY	98.4
DL EFFECT	22.3	DL EFFECT	21.7	DL EFFECT	21.7
CAPACITY FOR (LL+I)	53.4	CAPACITY FOR (LL+I)	54.0	CAPACITY FOR (LL+I)	54.0
ACTUAL (LL+I)	19.5	ACTUAL (LL+I)	28.2	ACTUAL (LL+I)	30.8
POSTING GROSS TONNAGE	41.0	POSTING GROSS TONNAGE	44.0	POSTING GROSS TONNAGE	47.3

SUMMARY OF RATING CALCULATIONS-----STRUCTURE MEMBER S 1 BARS-PC RELEASE 5.5
SPECIAL LOAD ANALYSIS

INPUT CODING -- STRUCTURE 5766737 D/P STR. I.D.-- 576-673

DATE	8/22/12	INVENTORY		OPERATING		SPECIAL LOAD	
BY	PRIME LAS	LIVE LOAD	RATING	LIVE LOAD	RATING	TRUCK TYPE	GROSS TONS
		HS20	HS 18.88	HS20	HS 31.47	VEH.SPEC	61.87

STRUCTURE DESCRIPTION -- LOCATION -- MICROFILM REEL NUMBERS --

IDENTIFICATION	5766737	DISTRICT	7	DESIGN PLANS
TYPE	112	COUNTY	MO	COMPUTATIONS
YEAR OF CONSTR.	1964	CONSTR. RTE.	T M0044	CORRESPONDENCE
LENGTH	120.00 FEET	CONSTR. SEC.	0480	
ROADWAY WIDTH	24.00 FEET	CONSTR. STA.	0+ .	
NUMBER OF SPANS	3	KEY RTE.		
		MARKED RTE.		

ANALYST REMARKS --

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
MOR-M0044-0480 SHANK RD over POSSUM CREEK
2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
24 OUT TO OUT, 24 FT RDWY
3-SPAN 36-45-36

TRUCK TYPE VEH. SPEC	
MEMBER ID.	S 1
SPAN	3
CRITICAL C.P. DIST.	.0 FEET

	SHEAR
	(KIPS)
MEMBER CAPACITY	-112.0
DL EFFECT	-41.7

CAPACITY FOR (LL+I)	-44.4
ACTUAL (LL+I)	-28.7

POSTING GROSS TONNAGE	61.9
-----------------------	------

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 576-673 BARS-PC RELEASE 5.5
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE 5766737 D/P STR. ID-- 576-673

INPUT CODING--

		INVENTORY		OPERATING	
DATE	8/22/12	LIVE LOAD	RATING	LIVE LOAD	RATING
BY	PRIME LAS	HS20	HS 18.9	HS20	HS 31.5

STRUCTURE DESCRIPTION--	LOCATION--	MICROFILM REEL NUMBERS--
IDENTIFICATION 5766737	DISTRICT 7	DESIGN PLANS
TYPE 112	COUNTY MO	COMPUTATIONS
YEAR OF CONSTR. 1964	CONSTR. RTE. T M0044	CORRESPONDENCE
LENGTH 120.00 FEET	CONSTR. SEC. 0480	
ROADWAY WIDTH 24.00 FEET	CONSTR. STA. 0+ .	
NUMBER OF SPANS 3	KEY RTE.	
	MARKED RTE.	

ANALYST REMARKS--

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
MOR-MOO44-0480 SHANK RD over POSSUM CREEK
2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
24 OUT TO OUT, 24 FT RDWY
3-SPAN 36-45-36

INVENTORY RATING SUMMARY

MEMBER I.D.	S 1
SPAN	2
CRITICAL C.P. DIST.	22.5 FEET
LIVE LOAD DESIGNATION	HS20

OPERATING RATING SUMMARY

MEMBER I.D.	S 1
SPAN	2
CRITICAL C.P. DIST.	22.5 FEET
LIVE LOAD DESIGNATION	HS20

	SHEAR
	(KIPS)
MEMBER CAPACITY	98.4
DL EFFECT	21.7
CAPACITY FOR (LL+I)	32.4
ACTUAL (LL+I)	34.3

	SHEAR
	(KIPS)
MEMBER CAPACITY	98.4
DL EFFECT	21.7
CAPACITY FOR (LL+I)	54.0
ACTUAL (LL+I)	34.3

INVENTORY RATING HS 18.88

OPERATING RATING HS 31.47

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 576-673 BARS-PC RELEASE 5.5
POSTING ANALYSIS

INPUT CODING--		STRUCTURE 5766737				D/P STR. ID-- 576-673	
		INVENTORY		OPERATING		POSTING	
DATE	8/22/12	LIVE LOAD	RATING	LIVE LOAD	RATING	TRUCK TYPE	GROSS TONS
BY	PRIME LAS						
		HS20	HS 18.88	HS20	HS 31.47	VEH. 2F1	41.0
						VEH. 3F1	44.0
						VEH. 4F1	47.3

STRUCTURE DESCRIPTION--		LOCATION--		MICROFILM REEL NUMBERS--	
IDENTIFICATION	5766737	DISTRICT	7	DESIGN PLANS	
TYPE	112	COUNTY	MO	COMPUTATIONS	
YEAR OF CONSTR.	1964	CONSTR. RTE.	T M0044	CORRESPONDENCE	
LENGTH	120.00 FEET	CONSTR. SEC.	0480		
ROADWAY WIDTH	24.00 FEET	CONSTR. STA.	0+ .		
NUMBER OF SPANS	3	KEY RTE.			
		MARKED RTE.			

ANALYST REMARKS--

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
MOR-MOO44-0480 SHANK RD over POSSUM CREEK
2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
24 OUT TO OUT, 24 FT RDWY
3-SPAN 36-45-36

POSTING RATING SUMMARY

TRUCK TYPE	VEH. 2F1	TRUCK TYPE	VEH. 3F1	TRUCK TYPE	VEH. 4F1
MEMBER I.D.	S 1	MEMBER I.D.	S 1	MEMBER I.D.	S 1
SPAN	1	SPAN	2	SPAN	2
CRITICAL C.P. DIST.	14.4 FEET	CRITICAL C.P. DIST.	22.5 FEET	CRITICAL C.P. DIST.	22.5 FEET
	SHEAR (KIPS)		SHEAR (KIPS)		SHEAR (KIPS)
MEMBER CAPACITY	98.4	MEMBER CAPACITY	98.4	MEMBER CAPACITY	98.4
DL EFFECT	22.3	DL EFFECT	21.7	DL EFFECT	21.7
CAPACITY FOR (LL+I)	53.4	CAPACITY FOR (LL+I)	54.0	CAPACITY FOR (LL+I)	54.0
ACTUAL (LL+I)	19.5	ACTUAL (LL+I)	28.2	ACTUAL (LL+I)	30.8
POSTING GROSS TONNAGE	41.0	POSTING GROSS TONNAGE	44.0	POSTING GROSS TONNAGE	47.3

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 576-673 BARS-PC RELEASE 5.5
SPECIAL LOAD ANALYSIS

STRUCTURE 5766737 D/P STR. ID-- 576-673

INPUT CODING--

		INVENTORY		OPERATING		SPECIAL LOAD	
DATE	8/22/12	LIVE LOAD	RATING	LIVE LOAD	RATING	TRUCK TYPE	GROSS TONS
BY	PRIME LAS						
		HS20	HS 18.88	HS20	HS 31.47	VEH.SPEC	61.9

STRUCTURE DESCRIPTION--	LOCATION--	MICROFILM REEL NUMBERS--
IDENTIFICATION 5766737	DISTRICT 7	DESIGN PLANS
TYPE 112	COUNTY MO	COMPUTATIONS
YEAR OF CONSTR. 1964	CONSTR. RTE. T M0044	CORRESPONDENCE
LENGTH 120.00 FEET	CONSTR. SEC. 0480	
ROADWAY WIDTH 24.00 FEET	CONSTR. STA. 0+ .	
NUMBER OF SPANS 3	KEY RTE.	
	MARKED RTE.	

ANALYST REMARKS--

BASED ON AASHTO LFD BRIDGE DESIGN SPECIFICATIONS
CONTINUOUS 18.0" CONCRETE SLAB; SFN 5766737
MOR-M0044-0480 SHANK RD over POSSUM CREEK
2" ASPHALT WEARING SURFACE INCLUDED BASED ON PHOTOS AND BR86 NOTES
24 OUT TO OUT, 24 FT RDWY
3-SPAN 36-45-36

SPECIAL LOAD SUMMARY

TRUCK TYPE	VEH.SPEC
MEMBER I.D.	S 1
SPAN	3
CRITICAL C.P. DIST.	.0 FEET
	SHEAR
	(KIPS)
MEMBER CAPACITY	-112.0
DL EFFECT	-41.7
CAPACITY FOR (LL+I)	-44.4
ACTUAL (LL+I)	-28.7
POSTING GROSS TONNAGE	61.9

DETAIL DATA AT MOMENT CHECK POINT FOR
REINFORCED CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 08/22/12

D/P STRUCTURE I.D. 576-673

MEMBER I.D.--S01

C.P. LOCATION

1.40

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 1

H	B	T	BP	AREA	IX	AS	D	ASP	DP	A	K	J
IN.	IN.	IN.	IN.	SQ.IN.	IN**4	SQ.IN.	IN.	SQ.IN.	IN.	IN.		
18.00	12.00	.00	12.00	+BEND 216.0	5832.0	2.18	16.12	.00	2.13	1.00	.000	.000
				-BEND 216.0	5832.0	.19	15.87	.00	1.88	1.00	.000	.000

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	POS AREA =					
Y-ORDINATE	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	1.817	-.777	.165	.000	.000	.000
N 2	3.654	-1.271	.277	.000	.000	.000
T 3	5.533	-1.523	.344	.000	.000	.000
H 4	7.475	-1.575	.370	.000	.000	.000
5	5.900	-1.467	.361	.000	.000	.000
P 6	4.428	-1.243	.324	.000	.000	.000
O 7	3.082	-.942	.263	.000	.000	.000
I 8	1.881	-.607	.185	.000	.000	.000
N 9	.847	-.279	.095	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
POS AREA	124.6	.0	8.6	.0	.0	.0
NEG AREA	.0	43.6	.0	.0	.0	.0

ALLOWABLE STRESS		MOMENT CAPACITY			
REINF. STEEL	CONC	CONC + BEND	REINF - BEND	REINF + BEND	CONC - BEND
PSI	PSI	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS
INVENTORY	20000.0	1600.0	98.4	9.0	98.4
OPERATING	28000.0	2400.0	98.4	9.0	98.4
POST VEH1	28000.0	2400.0	98.4	9.0	98.4
POST VEH2	28000.0	2400.0	98.4	9.0	98.4
POST VEH3	28000.0	2400.0	98.4	9.0	98.4
POST SPEC	28000.0	2400.0	98.4	9.0	98.4
***** TOTAL DL MOMENT EFFECT		***** AVAIL. CAPAC. FOR LL+IMPACT			
		TOP	TOP	BOT	BOT
		+BEND	-BEND	+BEND	-BEND
FT-KIPS		F-KPS	F-KPS	F-KPS	F-KPS
22.3	INVENTORY	32.0	17.5	32.0	17.5
	OPERATING	53.4	29.2	53.4	29.2
	VEH. 1	53.4	29.2	53.4	29.2
	VEH. 2	53.4	29.2	53.4	29.2
	VEH. 3	53.4	29.2	53.4	29.2
	SPECIAL	53.4	29.2	53.4	29.2

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .294 FOR -BEND)

LIVE LOAD	-----TRUCK LOAD-----						-----LANE LOAD-----				RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
	LL+IMP	LL	LOC.NO. 1 WHEEL	DIR	AXLE SPACE	LL+IMP	LL	LOC.CONC LOAD	LOC.CONC LOAD 2				
	FT-KIPS	FT-KIPS	FT.	FT.	FT-KIPS	FT-KIPS	FT.	FT.					
INV HS20 +BEND	32.5	25.0	.400	L	.0	23.4	18.0	14.400		.985	35.4	HS 19.7	
-BEND	9.7	7.5	73.001	R	.0	6.0	4.6	54.000	.000				
OPER HS20 +BEND	32.5	25.0	.400	L	.0	23.4	18.0	14.400		1.641	59.1	HS 32.8	
-BEND	9.7	7.5	73.001	R	.0	6.0	4.6	54.000	.000				
POST 2F1 +BEND	19.5	15.0	24.400	R						2.733	41.0		
-BEND	4.7	3.7	59.503	R									
POST 3F1 +BEND	27.5	21.2	24.403	R						1.941	44.6		
-BEND	7.1	5.5	63.501	R									
POST 4F1 +BEND	30.2	23.3	28.401	R						1.766	47.7		
-BEND	8.1	6.2	64.001	R									
POST SPEC +BEND	23.9	18.4	-32.602	L						2.231	89.2		
-BEND	5.6	4.3	42.497	L									

DETAIL DATA AT MOMENT CHECK POINT FOR
REINFORCED CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 08/22/12

D/P STRUCTURE I.D. 576-673
MEMBER I.D.--S01
C.P. LOCATION 2.00

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 2

H	B	T	BP	AREA	IX	AS	D	ASP	DP	A	K	J
IN.	IN.	IN.	IN.	SQ.IN.	IN**4	SQ.IN.	IN.	SQ.IN.	IN.	IN.		
18.00	12.00	.00	12.00	+BEND 216.0	5832.0	1.09	16.12	.00	2.71	1.00	.000	.000
				-BEND 216.0	5832.0	2.67	15.29	.00	1.88	1.00	.000	.000

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	POS AREA =					
Y-ORDINATE	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	-.858	-1.944	.412	.000	.000	.000
N 2	-1.664	-3.179	.694	.000	.000	.000
T 3	-2.367	-3.808	.860	.000	.000	.000
H 4	-2.913	-3.937	.925	.000	.000	.000
5	-3.251	-3.668	.903	.000	.000	.000
P 6	-3.329	-3.106	.809	.000	.000	.000
O 7	-3.095	-2.355	.657	.000	.000	.000
I 8	-2.497	-1.517	.462	.000	.000	.000
N 9	-1.482	-.698	.238	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
POS AREA	.0	.0	21.5	.0	.0	.0
NEG AREA	77.2	109.0	.0	.0	.0	186.2

***** ALLOWABLE STRESS

***** MOMENT CAPACITY

REINF. STEEL	CONC	CONC	REINF	REINF	CONC
PSI	PSI	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS
INVENTORY	20000.0	1600.0	51.0	112.0	51.0
OPERATING	28000.0	2400.0	51.0	112.0	51.0
POST VEH1	28000.0	2400.0	51.0	112.0	51.0
POST VEH2	28000.0	2400.0	51.0	112.0	51.0
POST VEH3	28000.0	2400.0	51.0	112.0	51.0
POST SPEC	28000.0	2400.0	51.0	112.0	51.0

***** TOTAL DL
MOMENT EFFECT

***** AVAIL. CAPAC. FOR LL+IMPACT

FT-KIPS	INVENTORY	TOP	TOP	BOT	BOT
		+BEND	-BEND	+BEND	-BEND
-41.7	48.6	80.9	44.4	80.9	44.4
	OPERATING	80.9	44.4	80.9	44.4
	VEH. 1	80.9	44.4	80.9	44.4
	VEH. 2	80.9	44.4	80.9	44.4
	VEH. 3	80.9	44.4	80.9	44.4
	SPECIAL	80.9	44.4	80.9	44.4

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD	-----TRUCK LOAD-----						-----LANE LOAD-----						RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
	LL+IMP	LL	LOC.NO. 1 WHEEL	DIR	AXLE SPACE	LL+IMP	LL	LOC.CONC LOAD	LOC.CONC LOAD 2						
	FT-KIPS	FT-KIPS	FT.		FT.	FT-KIPS	FT-KIPS	FT.	FT.						
INV HS20 +BEND	5.2	4.0	119.800	R	.0	3.3	2.5	95.400							
-BEND	24.7	19.0	31.000	L	.0	26.8	20.6	54.000	21.600			.995	35.8	HS 19.9	
OPER HS20 +BEND	5.2	4.0	119.800	R	.0	3.3	2.5	95.400							
-BEND	24.7	19.0	31.000	L	.0	26.8	20.6	54.000	21.600			1.659	59.7	HS 33.2	
POST 2F1 +BEND	2.7	2.1	102.602	R											
-BEND	11.9	9.2	59.503	R								3.733	56.0		
POST 3F1 +BEND	4.1	3.1	105.800	R											
-BEND	17.9	13.8	63.501	R								2.484	57.1		
POST 4F1 +BEND	4.6	3.5	109.000	R											
-BEND	20.3	15.6	64.001	R								2.188	59.1		
POST SPEC +BEND	3.8	3.0	86.999	L											
-BEND	28.7	22.1	66.004	R								1.547	61.9		

DETAIL DATA AT MOMENT CHECK POINT FOR
REINFORCED CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 08/22/12

D/P STRUCTURE I.D. 576-673
MEMBER I.D.--S01
C.P. LOCATION

2.50

***** SECTION PROPERTIES IN RANGE 6 OF SPAN 2

H	B	T	BP	AREA	IX	AS	D	ASP	DP	A	K	J
IN.	IN.	IN.	IN.	SQ.IN.	IN**4	SQ.IN.	IN.	SQ.IN.	IN.	IN.	IN.	IN.
18.00	12.00	.00	12.00									
				+BEND	216.0	5832.0	2.18	16.12	.00	2.13	1.00	.000
				-BEND	216.0	5832.0	.19	15.87	.00	1.88	1.00	.000

***** INFLUENCE LINE (SIMPLE SPAN)

***** ALLOWABLE STRESS ***** MOMENT CAPACITY

X-DIST (FT.) Y-ORDINATE	POS AREA =						REINF. CONC		CONC		REINF		REINF		CONC					
	STEEL	STEEL	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	+ BEND	- BEND	+ BEND	- BEND	+ BEND	- BEND	+ BEND	- BEND	+ BEND	- BEND				
	PSI	PSI	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	PSI	PSI	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS	FT-KIPS				
INVENTORY	20000.0	1600.0	98.4	9.0	98.4	9.0														
OPERATING	28000.0	2400.0	98.4	9.0	98.4	9.0														
POST VEH1	28000.0	2400.0	98.4	9.0	98.4	9.0														
POST VEH2	28000.0	2400.0	98.4	9.0	98.4	9.0														
POST VEH3	28000.0	2400.0	98.4	9.0	98.4	9.0														
POST SPEC	28000.0	2400.0	98.4	9.0	98.4	9.0														
	***** TOTAL DL *****						***** AVAIL.CAPAC.FOR LL+IMPACT *****													
	MOMENT EFFECT						TOP		TOP		BOT		BOT							
							+BEND		-BEND		+BEND		-BEND							
	FT-KIPS						F-KPS		F-KPS		F-KPS		F-KPS							
	21.7						INVENTORY		32.4		17.2		32.4		17.2					
							OPERATING		54.0		28.7		54.0		28.7					
							VEH. 1		54.0		28.7		54.0		28.7					
							VEH. 2		54.0		28.7		54.0		28.7					
							VEH. 3		54.0		28.7		54.0		28.7					
							SPECIAL		54.0		28.7		54.0		28.7					
POS AREA	.0	144.2	.0	.0	.0	.0	.0	144.2												
NEG AREA	27.9	.0	27.9	.0	.0	.0	.0	55.8												

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .294 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD	-----TRUCK LOAD-----						-----LANE LOAD-----						RATING FACT.	SAFE LOAD TONS	RATING VALUE
	LL+IMP	LL	LOC.NO. 1 WHEEL	DIR	AXLE SPACE	LL+IMP	LL	LOC.CONC LOAD	LOC.CONC LOAD 2	LOC.CONC LOAD	LOC.CONC LOAD 2				
	FT-KIPS	FT-KIPS	FT.		FT.	FT-KIPS	FT-KIPS	FT.	FT.	FT.	FT.				
INV HS20 +BEND	34.3	26.5	72.499	R	.0	24.4	18.9	58.500				.944	34.0	HS 18.9	
INV HS20 -BEND	6.8	5.2	119.800	R	.0	6.2	4.7	95.400	.000						
OPER HS20 +BEND	34.3	26.5	72.499	R	.0	24.4	18.9	58.500				1.574	56.6	HS 31.5	
OPER HS20 -BEND	6.8	5.2	119.800	R	.0	6.2	4.7	95.400	.000						
POST 2F1 +BEND	19.6	15.2	68.500	R								2.750	41.3		
POST 2F1 -BEND	3.5	2.7	102.602	R											
POST 3F1 +BEND	28.2	21.8	48.501	L								1.912	44.0		
POST 3F1 -BEND	5.3	4.1	105.800	R											
POST 4F1 +BEND	30.8	23.8	44.501	L								1.752	47.3		
POST 4F1 -BEND	6.0	4.6	109.000	R											
POST SPEC +BEND	23.1	17.9	46.501	L								2.333	93.3		
POST SPEC -BEND	5.0	3.8	86.999	L											

DETAIL DATA AT MOMENT CHECK POINT FOR
REINFORCED CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 08/22/12

D/P STRUCTURE I.D. 576-673
MEMBER I.D.--S01
C.P. LOCATION 3.00

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 3

H IN.	B IN.	T IN.	BP IN.	AREA SQ.IN.	IX IN**4	AS SQ.IN.	D IN.	ASP SQ.IN.	DP IN.	A IN.	K	J
18.00	12.00	.00	12.00									
				+BEND	216.0	5832.0	1.09	16.12	.00	2.71	1.00	.000
				-BEND	216.0	5832.0	2.67	15.29	.00	1.88	1.00	.000

***** INFLUENCE LINE (SIMPLE SPAN)

***** ALLOWABLE STRESS ***** MOMENT CAPACITY

X-DIST (FT.) Y-ORDINATE	POS AREA =	REINF. CONC		MOMENT CAPACITY	
		STEEL PSI	CONC PSI	REINF FT-KIPS	CONC FT-KIPS
***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)		INVENTORY	20000.0	1600.0	51.0
SPAN 1 SPAN 2 SPAN 3 SPAN 4 SPAN 5 SPAN 6		OPERATING	28000.0	2400.0	51.0
T 0 .000 .000 .000 .000 .000 .000		POST VEHI	28000.0	2400.0	51.0
E 1 .238 -.698 -1.482 .000 .000 .000		POST VEH2	28000.0	2400.0	51.0
N 2 .462 -1.517 -2.497 .000 .000 .000		POST VEH3	28000.0	2400.0	51.0
T 3 .657 -2.355 -3.095 .000 .000 .000		POST SPEC	28000.0	2400.0	51.0
H 4 .809 -3.106 -3.329 .000 .000 .000		***** TOTAL DL		***** AVAIL. CAPAC. FOR LL+IMPACT	
5 .903 -3.668 -3.251 .000 .000 .000		MOMENT EFFECT		TOP TOP BOT BOT	
P 6 .925 -3.937 -2.913 .000 .000 .000		FT-KIPS	-41.7	+BEND -BEND +BEND -BEND	
O 7 .860 -3.808 -2.367 .000 .000 .000		AREA		F-KPS F-KPS F-KPS F-KPS	
I 8 .694 -3.179 -1.664 .000 .000 .000		TOTALS		INVENTORY	
N 9 .412 -1.944 -.858 .000 .000 .000		AREA		OPERATING	
T 0 .000 .000 .000 .000 .000 .000		TOTALS		VEH. 1	
POS AREA 21.5 .0 .0 .0 .0 .0		AREA	186.2	VEH. 2	
NEG AREA .0 109.0 77.2 .0 .0 .0		TOTALS		VEH. 3	
		AREA		SPECIAL	

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD	-----TRUCK LOAD-----				-----LANE LOAD-----				RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
	LL+IMP	LL	LOC.NO. 1 WHEEL	DIR	AXLE SPACE	LL+IMP	LL	LOC.CONC LOAD			
INV HS20 +BEND	5.2	4.0	-2.799	L	.0	3.3	2.5	21.600			
-BEND	24.7	19.0	86.001	R	.0	26.8	20.6	63.000	95.400	.995	35.8 HS 19.9
OPER HS20 +BEND	5.2	4.0	-2.799	L	.0	3.3	2.5	21.600			
-BEND	24.7	19.0	86.001	R	.0	26.8	20.6	63.000	95.400	1.659	59.7 HS 33.2
POST 2F1 +BEND	2.7	2.1	14.402	L							
-BEND	11.9	9.2	57.498	L						3.732	56.0
POST 3F1 +BEND	4.1	3.1	11.205	L							
-BEND	17.9	13.8	53.500	L						2.484	57.1
POST 4F1 +BEND	4.6	3.5	8.000	L							
-BEND	20.3	15.6	52.998	L						2.188	59.1
POST SPEC +BEND	3.8	3.0	30.003	R							
-BEND	28.7	22.1	51.000	L						1.547	61.9

DETAIL DATA AT MOMENT CHECK POINT FOR
REINFORCED CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 08/22/12

D/P STRUCTURE I.D. 576-673
MEMBER I.D.--S01
C.P. LOCATION

3.60

***** SECTION PROPERTIES IN RANGE 5 OF SPAN 3

H IN.	B IN.	T IN.	BP IN.	AREA SQ.IN.	IX IN**4	AS SQ.IN.	D IN.	ASP SQ.IN.	DP IN.	A IN.	K	J
18.00	12.00	.00	12.00	216.0	5832.0	2.18	16.12	.00	2.13	1.00	.000	.000
				+BEND	216.0	5832.0	.19	15.87	.00	1.88	1.00	.000
				-BEND	216.0	5832.0	.19	15.87	.00	1.88	1.00	.000

***** INFLUENCE LINE (SIMPLE SPAN)

***** ALLOWABLE STRESS ***** MOMENT CAPACITY

X-DIST (FT.) Y-ORDINATE	POS AREA =	REINF. CONC		CONC		REINF		REINF		CONC	
		STEEL PSI	PSI	+ BEND FT-KIPS	- BEND FT-KIPS	+ BEND FT-KIPS	- BEND FT-KIPS	+ BEND FT-KIPS	- BEND FT-KIPS	+ BEND FT-KIPS	- BEND FT-KIPS
INVENTORY		20000.0	1600.0	98.4	9.0	98.4	9.0				
OPERATING		28000.0	2400.0	98.4	9.0	98.4	9.0				
POST VEH1		28000.0	2400.0	98.4	9.0	98.4	9.0				
POST VEH2		28000.0	2400.0	98.4	9.0	98.4	9.0				
POST VEH3		28000.0	2400.0	98.4	9.0	98.4	9.0				
POST SPEC		28000.0	2400.0	98.4	9.0	98.4	9.0				
		***** TOTAL DL		***** AVAIL. CAPAC. FOR LL+IMPACT							
		MOMENT EFFECT		TOP		TOP		BOT		BOT	
		FT-KIPS		+BEND		-BEND		+BEND		-BEND	
		22.3		F-KIPS		F-KIPS		F-KIPS		F-KIPS	
				INVENTORY		32.0		17.5		32.0	
				OPERATING		53.4		29.2		53.4	
				VEH. 1		53.4		29.2		53.4	
				VEH. 2		53.4		29.2		53.4	
				VEH. 3		53.4		29.2		53.4	
				SPECIAL		53.4		29.2		53.4	
				TOTALS		133.2		43.6			
POS AREA	8.6	.0	124.6	.0	.0	.0	.0	.0	.0	.0	.0
NEG AREA	.0	43.6	.0	.0	.0	.0	.0	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .294 FOR -BEND)

LIVE LOAD	-----TRUCK LOAD-----						-----LANE LOAD-----						RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
	LL+IMP	LL	LOC.NO. 1 WHEEL	DIR	AXLE SPACE	LL+IMP	LL	LOC.CONC LOAD	LOC.CONC LOAD 2	RATING	SAFE LOAD CAPACITY TONS	RATING VALUE			
	FT-KIPS	FT-KIPS	FT.	FT.	FT-KIPS	FT-KIPS	FT.	FT.							
INV HS20 +BEND	32.5	25.0	116.600	R	.0	23.4	18.0	102.600	.000	.985	35.5	HS 19.7			
INV HS20 -BEND	9.7	7.5	44.000	L	.0	6.0	4.6	63.000	.000						
OPER HS20 +BEND	32.5	25.0	116.600	R	.0	23.4	18.0	102.600	.000	1.641	59.1	HS 32.8			
OPER HS20 -BEND	9.7	7.5	44.000	L	.0	6.0	4.6	63.000	.000						
POST 2F1 +BEND	19.5	15.0	92.600	L						2.733	41.0				
POST 2F1 -BEND	4.7	3.7	57.498	L											
POST 3F1 +BEND	27.5	21.2	92.599	L						1.941	44.6				
POST 3F1 -BEND	7.1	5.5	53.500	L											
POST 4F1 +BEND	30.2	23.3	88.601	L						1.766	47.7				
POST 4F1 -BEND	8.1	6.2	52.998	L											
POST SPEC +BEND	26.6	20.5	90.601	L						2.006	80.2				
POST SPEC -BEND	5.6	4.3	74.500	R											

DATE 08/22/12

SUMMARY OF SHEAR ANALYSIS

D/P STRUCTURE I.D. 576-673

MEMB. ID	SPAN NO.	DIS LT	FRM SPRT	L R	DL SHEAR	SDL SHEAR	---INVENTORY---		---OPERATING---		--VEH. 1 --		--VEH. 2 --		--VEH. 3 --		--SPECIAL--					
							LL+I MAX.V	T L	LL+I MIN.V	T L	LL+I MAX.V	LL+I MIN.V	LL+I MAX.V	LL+I MIN.V	LL+I MAX.V	LL+I MIN.V	LL+I MAX.V	LL+I MIN.V	LL+I MAX.V	LL+I MIN.V		
S01	RC	1	.000	L	3.0	.3	5.4	T	.7	T	5.4	T	.7	T	2.8	.3	4.1	.5	4.4	.6	3.3	.4
		1	14.400	L	.2	.0	2.2	T	1.8	L	2.2	T	1.8	L	1.4	1.2	1.8	1.5	1.9	1.6	1.8	2.0
		2	.000	L	5.1	.6	6.2	T	.5	T	6.2	T	.5	T	3.0	.3	4.4	.4	5.0	.5	4.4	.4
		2	22.500	L	.0	.0	2.2	T	2.2	T	2.2	T	2.2	T	1.3	1.3	1.8	1.8	1.9	1.9	2.1	2.1
		3	.000	L	5.1	.6	6.0	T	.1	T	6.0	T	.1	T	3.0	.1	4.4	.1	4.9	.1	4.5	.1
		3	21.600	L	.2	.0	1.8	L	2.2	T	1.8	L	2.2	T	1.2	1.4	1.5	1.8	1.6	1.9	2.0	1.7
		3	36.000	L	3.0	.3	.7	T	5.4	T	.7	T	5.4	T	.3	2.8	.5	4.1	.6	4.4	.4	3.2

DETAIL DATA FOR FLEXURAL MEMBER

DATE 08/22/12

D/P STRUCTURE I.D. 576-673

NO. SPANS = 3
NOT SYMMETRICAL

MEMBER I.D.--S01

MATERIAL--RC

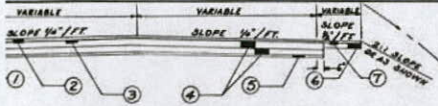
LL DIST. FACT. = .164

SUPERIMPOSED CONCENTRATED DL(S)

SPAN NO.	LENGTH FT.	RNG. NO.	LENGTH FT.	SEC. NO.	T	T	VAR CODE	DL DUE TO MEM. WEIGHT		SUPERIMPOSED DISTRIBUTED DL(S) LENGTH DISTRIBUTED*****				SUPERIMPOSED CONCENTRATED DL(S) DIST. FROM LT SUPPORT****					
								W(LT) LBS/FT	W(RT) LBS/FT	SPAN NO.	W(LT) LBS/FT	W(RT) LBS/FT	FT.	FT.	STIFF	SPAN LONG. NO.	P KIPS	FT.	
1	36.000	1	22.000	01	01			225.0	225.0	1	23.3	23.3	.000	36.000					
		2	3.000	02	02			225.0	225.0	1	2.5	2.5	.000	36.000					
		3	4.000	03	03			225.0	225.0	2	23.3	23.3	36.000	45.000					
		4	2.000	04	04			225.0	225.0	2	2.5	2.5	36.000	45.000					
		5	5.000	05	05			225.0	225.0	3	23.3	23.3	81.000	36.000					
2	45.000	1	5.000	05	05			225.0	225.0	3	2.5	2.5	81.000	36.000					
		2	2.000	04	04			225.0	225.0										
		3	3.000	06	06			225.0	225.0										
		4	2.000	03	03			225.0	225.0										
		5	2.000	02	02			225.0	225.0										
		6	17.000	01	01			225.0	225.0										
		7	2.000	02	02			225.0	225.0										
		8	2.500	3	3			225.0	225.0										
		9	3.000	6	6			225.0	225.0										
		10	2.500	4	4			225.0	225.0										
		11	4.000	5	5			225.0	225.0										
3	36.000	1	5.000	5	5			225.0	225.0										
		2	2.000	4	4			225.0	225.0										
		3	4.000	3	3			225.0	225.0										
		4	3.000	2	2			225.0	225.0										
		5	22.000	1	1			225.0	225.0										

CHECK POINTS RATED--

SPAN DIS FRM				SPAN DIS FRM			
NO.	LT	SPRT	FUNC	NO.	LT	SPRT	FUNC
FT.				FT.			
1			X	1			X
1	14.400	X	X X	1	36.000	X X X	X
1	36.000	X X X	X	2	.000	X X X	X
2	.000	X X X	X	2	22.500	X X X	X
2	22.500	X X X	X	2	45.000	X X X	X
2	45.000	X X X	X	3	.000	X X X	X
3	.000	X X X	X	3	21.600	X X X	X
3	21.600	X X X	X	3	36.000	X	X
3	36.000	X	X				



1/2" CONCRETE SURFACE COURSE TYPE "C" (1" THICK)
 1/2" COAT NO. 1, OR RT-2 @ 0.50 GAL. PER SQ. YD.
 1/2" FACE STONE 2 1/2" PER SQ. YD.
 COAT NO. 1, OR RT-2 @ 0.50 GAL. PER SQ. YD.
 1/2" BASE COURSE (TWO 1/2" COURSES)
 TYP. COURSE (1" THICK)
 1/2" BASE COURSE 6" THICK FOR TREATED BERMS
 COAT NO. 1, OR RT-2 @ 0.50 GAL. PER SQ. YD.
 1/2" FACE STONE 2 1/2" PER SQ. YD. FOR TREATED BERMS

MONTGOMERY COUNTY COMM.
 1783-539

GENERAL NOTES

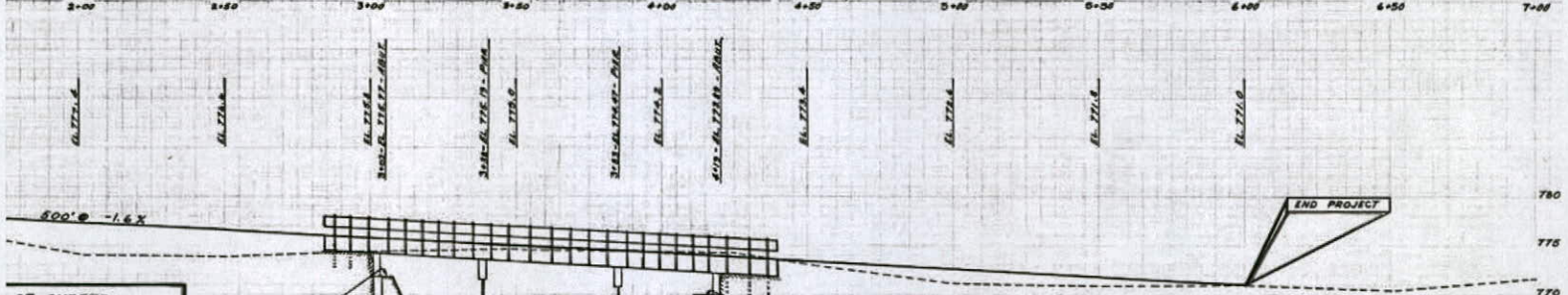
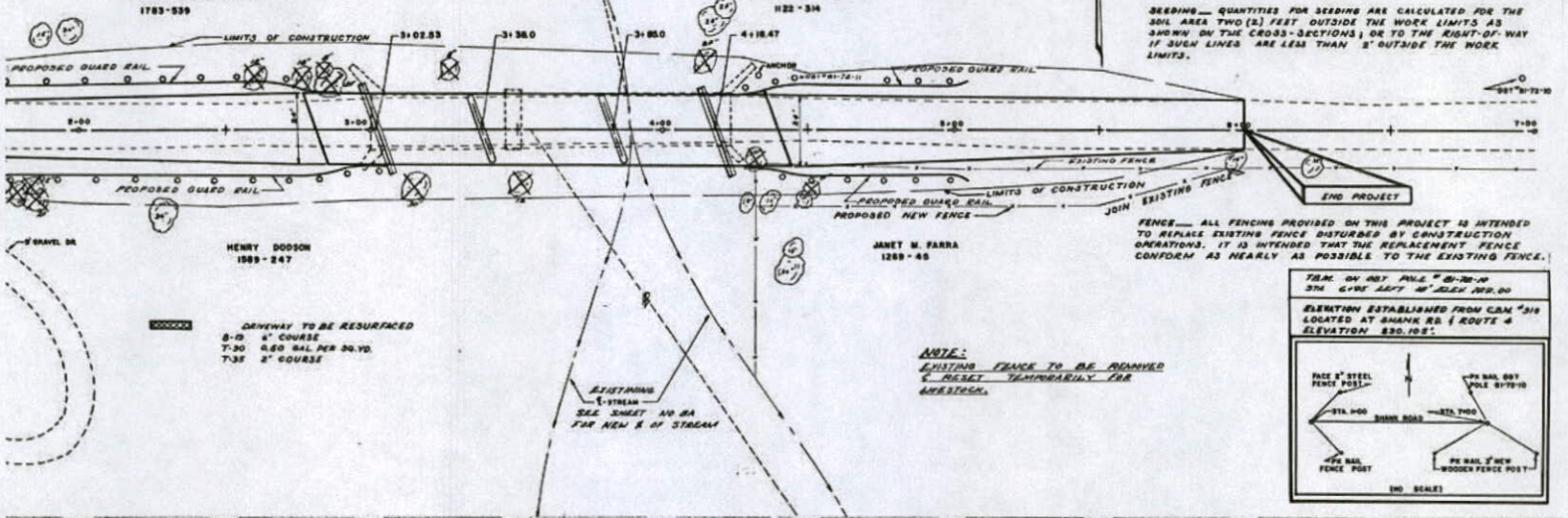
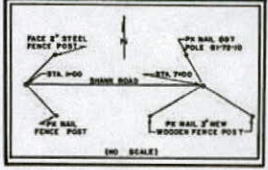
NOTES — THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING THROUGH ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS — THE ROUNDED CORNERS SHOWN ON STATE OF OHIO HIGHWAY STANDARD DWG. 82-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

SEEDINGS — QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREA TWO (2) FEET OUTSIDE THE WORK LIMITS AS SHOWN ON THE CROSS-SECTIONS; OR TO THE RIGHT-OF-WAY IF SUCH LINES ARE LESS THAN 2' OUTSIDE THE WORK LIMITS.

FENCE — ALL FENCING PROVIDED ON THIS PROJECT IS INTENDED TO REPLACE EXISTING FENCE DISTURBED BY CONSTRUCTION OPERATIONS. IT IS INTENDED THAT THE REPLACEMENT FENCE CONFORM AS NEARLY AS POSSIBLE TO THE EXISTING FENCE.

NOTE:
 EXISTING FENCE TO BE REMOVED & RESET TEMPORARILY FOR CONSTRUCTION.



OF SHEETS

SHEET NO.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50

REV. NO.	CHARACTER	DATE

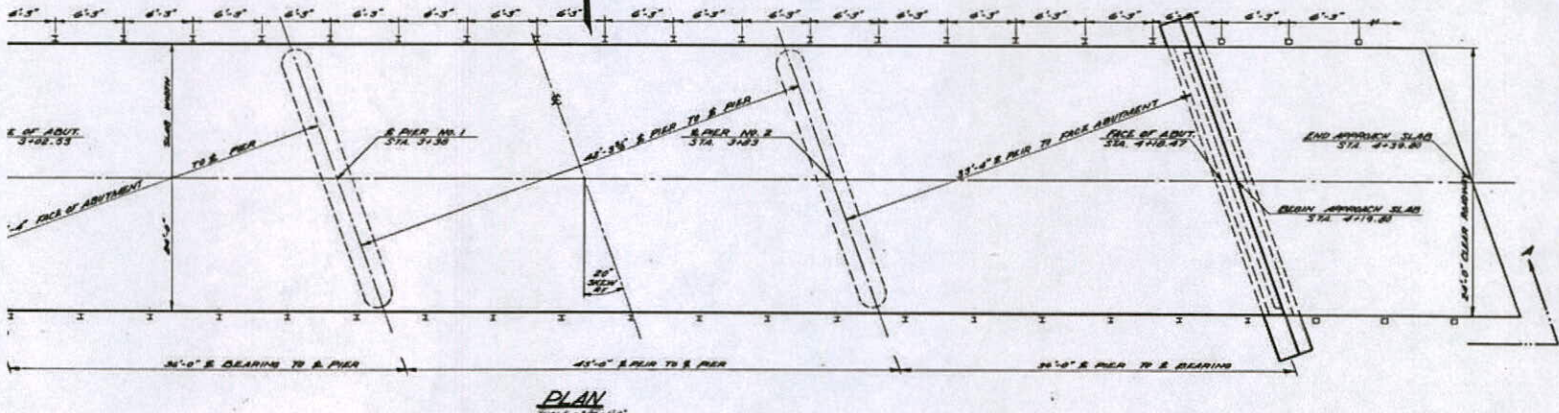
REPLACEMENT OF BR. JE-44-4.80
 MONTGOMERY COUNTY ENGINEER'S OFFICE
 101 NORTH MOSS AVE. - DAYTON 17, OHIO
 APPROVED: CARL H. BAUER, COUNTY ENGINEER
 SCALE 1 INCH EQUAL 20 FEET

SURVEY	DESIGN	DRAWN	CHECKED	JOB NO.	SHEET NO.
E-43 BY C.S.	E-44 BY B.L.	J. G.	B.L.	62-44	18

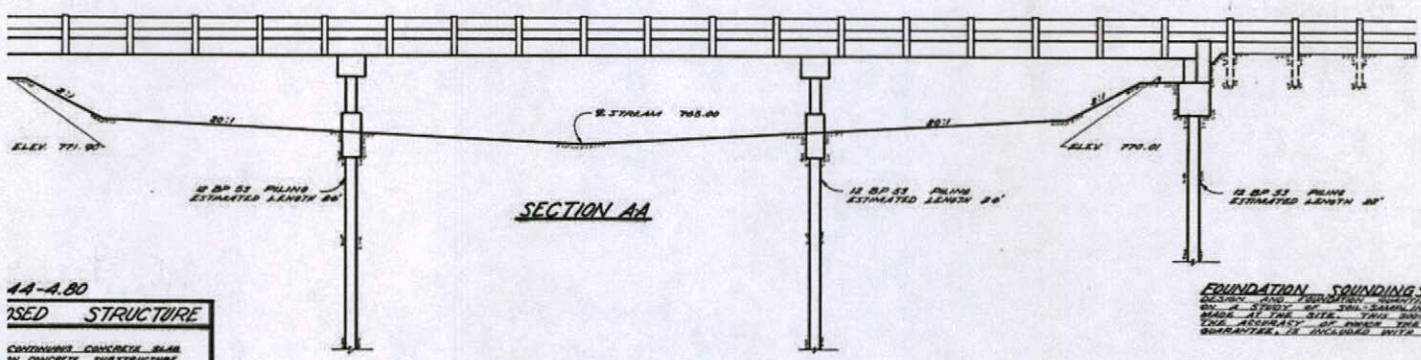
DWG. No. 4-6-38

8

ELEVATION



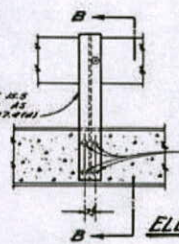
PLAN
SCALE 1/4"=1'-0"



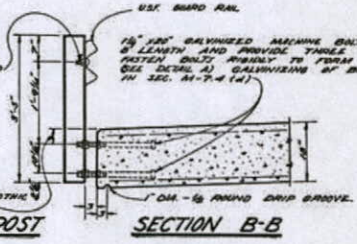
SECTION AA

4A-4.80
USED STRUCTURE
 CONTINUOUS CONCRETE SLAB IN CONCRETE SUBSTRUCTURE.
 20'-0" CLEAR.
 12'-0" CLEAR.
 12'-0" CLEAR.
 12'-0" CLEAR.
 12'-0" CLEAR.
 12'-0" CLEAR.
 12'-0" CLEAR.

FOUNDATION SOUNDINGS. FOUNDATION DESIGN AND FOUNDATION SETTLEMENT ARE BASED ON 10' DEEP TEST BORING LOGS OBTAINED MADE AT THE SITE. THIS SOUNDING INFORMATION IS FOR INFORMATION ONLY. THE CONTRACTOR SHALL NOT GUARANTEE IS INCLUDED WITH THE PLAN.



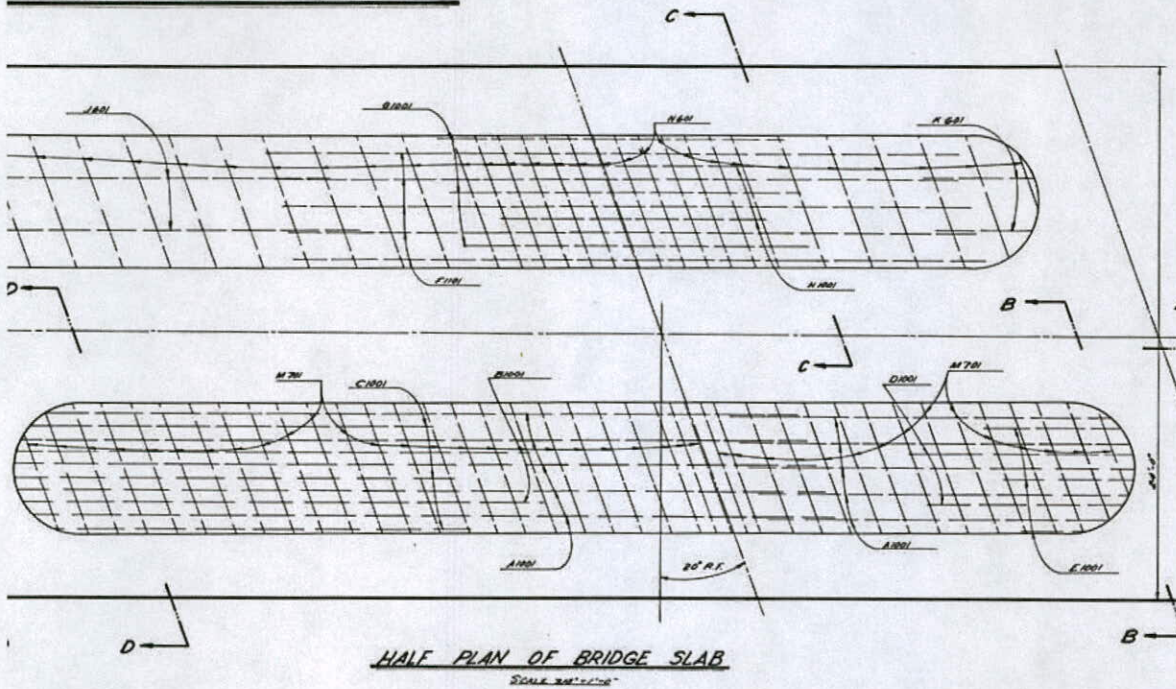
ELEVATION OF RAILING POST



SECTION B-B

REV. NO.	CHARACTER	DATE
	REPLACEMENT OF BR. JE - 44-4.80	
	SHANK ROAD, JEFFERSON TWP.	
	MONTGOMERY COUNTY ENGINEER'S OFFICE	
	101 NORTH MOSS AVE. - DAYTON 17, OHIO	
	APPROVED: CARL H. BAUER, COUNTY ENGINEER	
	SCALE AS SHOWN	
	SURVEY BY C.S.	JOB NO. 62-44
	DESIGN BY J.V.	SHEET NO. 3/8
	DRAWN BY C.S.	
	CHECKED BY G.L.E.	DWG NO. 4-G-38

RIDGE SLAB

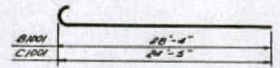


HALF PLAN OF BRIDGE SLAB

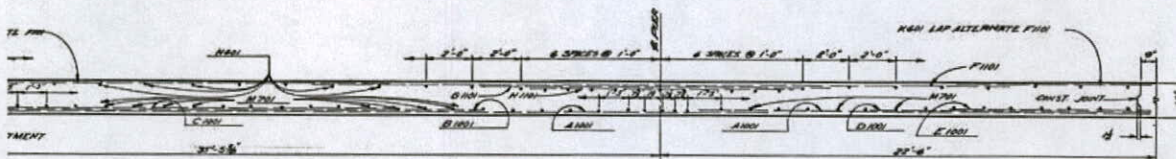
SCALE 3/8" = 1'-0"

REINFORCING STEEL				
MARK	NO	SIZES	LENGTH	WEIGHT
BRIDGE SLAB				
F1001	42	14	31'-3"	4,993
G1001	20	22	15'-11"	1,882
H1001	20	20	18'-8"	1,293
A1001	83	14	41'-6"	11,280
B1001	20	20	29'-9"	3,379
C1001	20	20	25'-10"	2,985
D1001	10	20	26'-0"	1,119
E1001	11	20	10'-10"	891
M1001	10	15'-24"	23'-0"	916
N1001	73	6'-24"	23'-0"	2,761
K1001	11	20	17'-11"	246
J1001	22	20	24'-6"	739
TOTAL				119,212

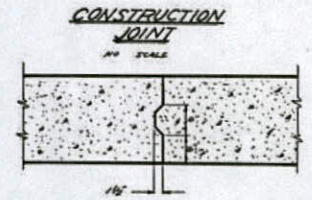
NOTE: BEND ALL EXTERIOR CONCRETE CORNERS 3/4"



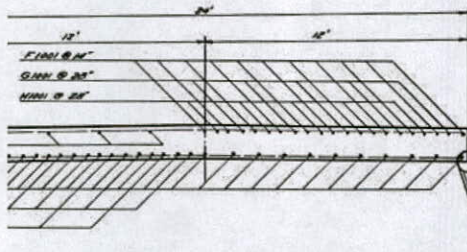
BENT BAR DETAIL
AS SCALE



SECTION A-A



CONSTRUCTION JOINT
AS SCALE



SECTION B-B & D-D

SECTION C-C

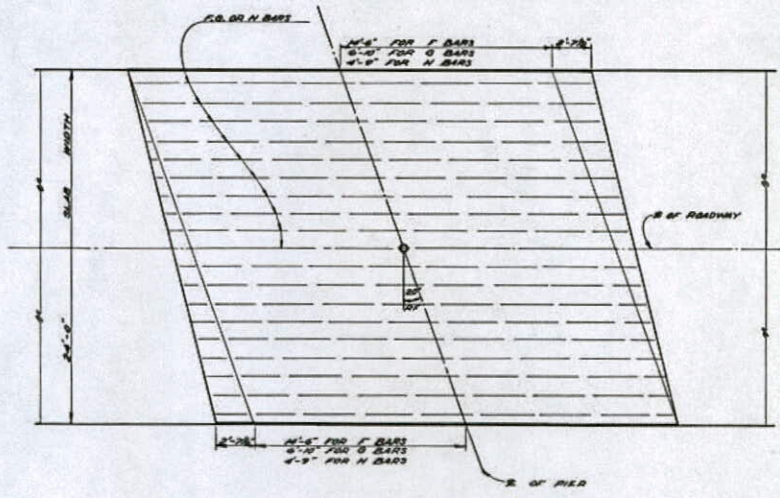
DESIGN LOADING IS CF-130.
CONCRETE SHALL BE CLASS "C" BASIC UNIT STRESS 4,000 p.s.i.
MINERALITE WEARING SURFACE OF 5/8" IS INCLUDED IN THE 18" SLAB DEPTH.
CAMBER OF 1/8" OF THE SPAN SHALL BE PLACED IN EACH SPAN TO ALLOW FOR DEAD LOAD DEFLECTION, THIS AMOUNT OF CAMBER REQUIRED BEFORE EXCESSIVE IS RELEASED. TO OBTAIN THIS, PROPER ALLOWANCE SHALL BE MADE FOR THE DEFLECTION OF FALSEWORK MEMBERS.
ONE CONSTRUCTION JOINT IN BRIDGE SHALL BE PLACED 8' OFF THE TRANSVERSE CENTERLINE OF THE MIDDLE SPAN TO LEAVE TRANSVERSE REINFORCING BARS.
REINFORCING STEEL CLEARANCE FROM FACE OF CONCRETE SHALL BE 1/2" FOR NO. 14 & 16 BARS AND 1" FOR ALL SMALLER BARS. (THE ABOVE CLEARANCES DO NOT INCLUDE MINERALITE WEARING SURFACE.)
REINFORCING STEEL - ASTM A101, A103, A105, A106, DEFORMED, INTERMEDIATE OR HARD GRADE. BASIC UNIT STRESS 20,000 p.s.i.

DETAIL OF DRIP GROOVE
1'-0" - 1/2" ROUND
DRIP GROOVE

NOTE:
SEE PAGE 3 FOR
PLACEMENT DIAGRAM
FOR 5.6. CH BARS.

REV. NO.	CHARACTER	DATE
REPLACEMENT OF BR. JE - 44 - 4.80 SHANK ROAD, JEFFERSON TWP.		
MONTGOMERY COUNTY ENGINEER'S OFFICE 101 NORTH MOSS AVE. - DAYTON 17, OHIO		
APPROVED: CARL H. BAUER, COUNTY ENGINEER		
SCALE AS SHOWN		
SURVEY BY C.S.	JOB NO. 62-44	SHEET NO. 6/8
DESIGN BY J.Y.		
DRAWN BY S.W.		
CHECKED BY G.L.S.	DWG NO. 4-6-38	

QUANTITIES		
CHARACTER	QUANT.	UNIT
ROADWAY		
METHOD "B"	45	CU YD
	1014	CU YD
B STUMPS	11	EACH
F (NOTE ON PAGE 1)	195	LN FT
(SEE NOTE ON PAGE 1)	195	LN FT
URSE 2'-4" COURSE	190	CU YD
F THICK	49	CU YD
OR RT-2 0.50 GAL PER SQ YD	400	GAL
RT-8 OR MS-2 0.50 GAL/SY & #6 STONE 28'/SY	840	SG YD
F 2" THICK	86	TONS
ORRER BEAM	412	LN FT
URSE FOR TREATED BERMS 6" THICK	64	CU YD
R RT-2 0.50 GAL /SY FOR TREATED BERMS	192	GAL
RT-8 OR MS-2 0.50 GAL/SY & #6 STONE 28'/SY		
F	384	SO YD
ON INCLUDING FERTILIZER	1000	SO YD
F APPROACH SLAB	106	SO YD
COURSE FOR DRIVES 8" THICK	4	CU YD
OR RT-2 0.50 GAL /SY FOR DRIVES	10	GAL
F 2" THICK FOR DRIVES	2	TONS
STRUCTURE		
S SHEETING	LUMP	
ATION	77	CU YD
F	1510	CU YD
F FOR SUPERSTRUCTURE B PER GAPS	168	CU YD
F FOR ABUTMENTS	31	CU YD
IER BEAM INCLUDING POST	42 792	LBS
	238	LN FT
P 53	LUMP	
NO. STRUCTURE	542	LN FT
SET RETARDING ADMIXTURE	18	CU YD
B STUMPS WITHIN STREAM EXCAVATION	158	UNITS
BOLTS (INCLUDING 3 EA. HEX NUTS & WASHER)	160	EACH
DIVISION JOINT MATERIAL	8	SG FT
ERRICADES	LUMP	
TRIAL INSURANCE	LUMP	

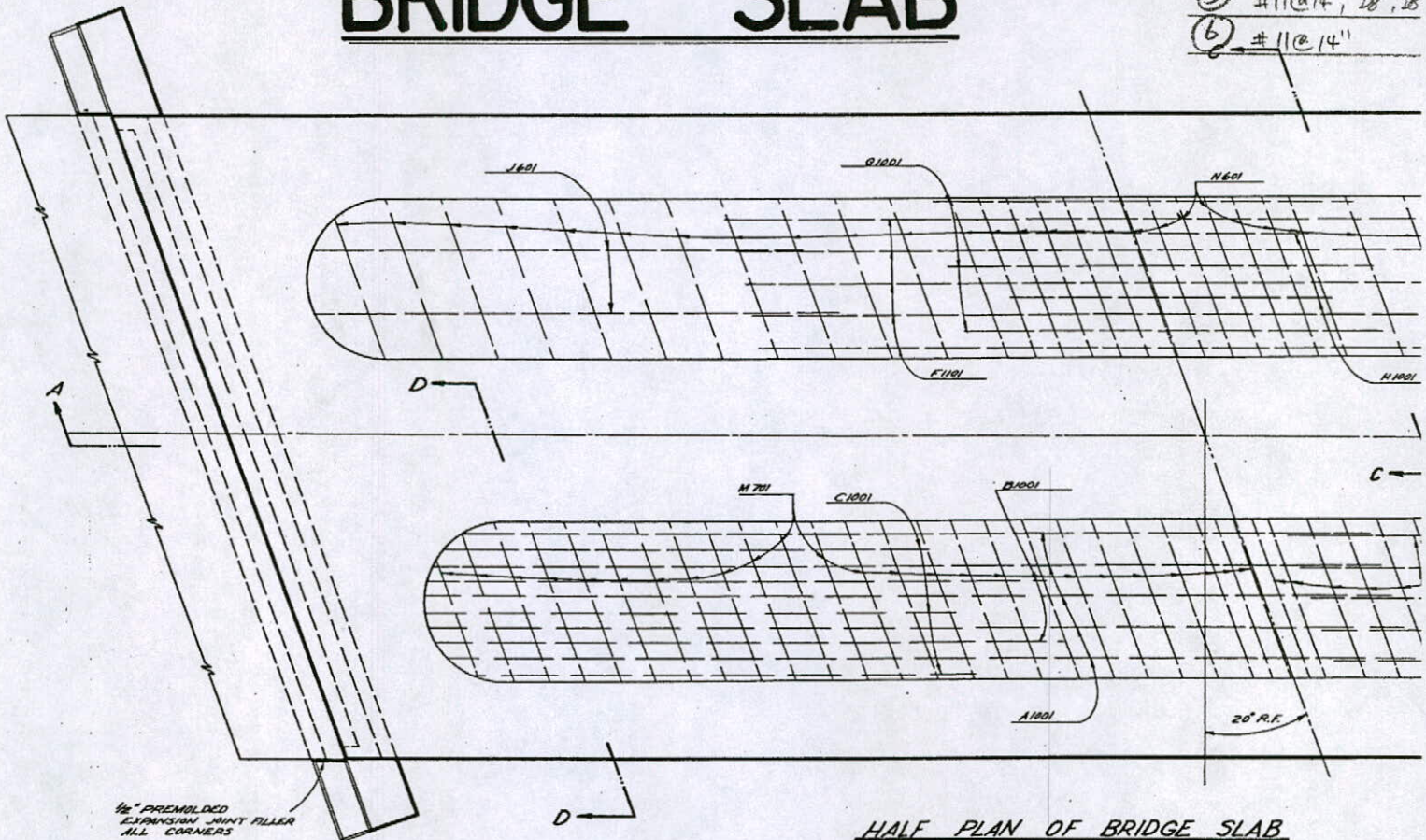


PLACEMENT DIAGRAM FOR F, G, & H BARS

REV. NO.	CHARACTER	DATE
REPLACEMENT OF BR. JE-44-4.80		
SHANK ROAD, JEFFERSON TWP.		
MONTGOMERY COUNTY ENGINEER'S OFFICE 101 NORTH MOSS AVE. - DAYTON 17, OHIO		
APPROVED: CARL H. BAUER, COUNTY ENGINEER		
NO SCALE		
SURVEY BY	CS	JOB NO. SHEET NO.
DESIGN BY	JY	62-44 3
DRAWN BY	SVA	
CHECKED BY	G.L.F.	DWG NO. 6-G-38

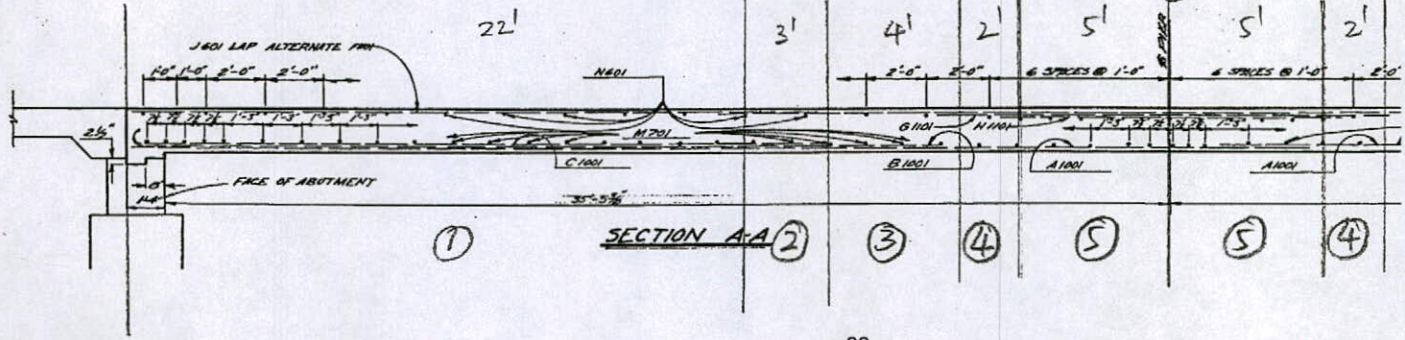
- ① #6 @ 28"
- ② #11 @ 14"
- ③ #11 @ 14"
- ④ #11 @ 14", 28"
- ⑤ #11 @ 14", 28", 28"
- ⑥ #11 @ 14"

BRIDGE SLAB



HALF PLAN OF BRIDGE SLAB

SCALE 3/4" = 1'-0"



Montgomery County Engineer's Office Traffic Department

Location : Shank Road
 Cross Street : at MOR.44-4.80
 By : KRL

Site: 23 Shank
 3/20/2023
 Monday

24 Hour Volume

Interval Start	Eastbound	Westbound	Combined	Interval Start	Eastbound	Westbound	Combined		
10:00 AM	0	3	5	10:00 PM	0	0	2		
10:15 AM	1		1	10:15 PM	0	1	1		
10:30 AM	1	2	3	10:30 PM	0	1	1		
10:45 AM	1	2	3	10:45 PM	0	0	0		
11:00 AM	1	6	0	11:00 PM	0	0	1		
11:15 AM	2		2	11:15 PM	0	0	0		
11:30 AM	1	0	1	11:30 PM	0	1	1		
11:45 AM	2	0	2	11:45 PM	0	0	0		
12:00 PM	0	8	4	3/21/2023 12:00 AM	0	0	0		
12:15 PM	5	1	6	12:15 AM	0	0	0		
12:30 PM	1	2	3	12:30 AM	0	3	0		
12:45 PM	2	1	3	12:45 AM	0	0	0		
1:00 PM	0	2	1	1:00 AM	0	0	0		
1:15 PM	1	1	2	1:15 AM	0	0	0		
1:30 PM	0	1	1	1:30 AM	0	0	0		
1:45 PM	1	0	1	1:45 AM	0	0	0		
2:00 PM	1	6	4	2:00 AM	0	0	0		
2:15 PM	2	1	3	2:15 AM	0	0	0		
2:30 PM	1	1	2	2:30 AM	0	0	0		
2:45 PM	2	2	4	2:45 AM	0	0	0		
3:00 PM	0	5	3	3:00 AM	0	0	0		
3:15 PM	1	1	2	3:15 AM	0	0	0		
3:30 PM	1	4	5	3:30 AM	0	5	0		
3:45 PM	3	2	5	3:45 AM	0	0	0		
4:00 PM	3	8	5	4:00 AM	0	0	0		
4:15 PM	2	2	4	4:15 AM	0	0	0		
4:30 PM	3	3	6	4:30 AM	0	0	0		
4:45 PM	0	7	7	4:45 AM	0	0	0		
5:00 PM	1	7	7	5:00 AM	1	3	2		
5:15 PM	0	4	4	5:15 AM	0	0	0		
5:30 PM	4	1	5	5:30 AM	0	0	0		
5:45 PM	2	1	3	5:45 AM	2	1	3		
6:00 PM	1	5	7	6:00 AM	1	9	1		
6:15 PM	2	0	2	6:15 AM	3	0	3		
6:30 PM	1	1	2	6:30 AM	1	0	1		
6:45 PM	1	4	5	6:45 AM	4	1	5		
7:00 PM	0	1	2	7:00 AM	2	6	3		
7:15 PM	1	0	1	7:15 AM	2	0	2		
7:30 PM	0	2	2	7:30 AM	1	0	1		
7:45 PM	0	1	1	7:45 AM	1	3	4		
8:00 PM	3	5	5	8:00 AM	0	4	5		
8:15 PM	1	1	2	8:15 AM	0	4	4		
8:30 PM	0	1	1	8:30 AM	3	0	3		
8:45 PM	1	1	2	8:45 AM	1	1	2		
9:00 PM	0	1	0	9:00 AM	2	5	0		
9:15 PM	0	0	0	9:15 AM	2	0	2		
9:30 PM	0	0	0	9:30 AM	0	0	0		
9:45 PM	1	0	1	9:45 AM	1	0	1		

Volume Totals					
	Eastbound	Westbound	Combined		
12:00 AM - 12:00 PM	36	16	52		
	(69.2%)	(30.8%)			
12:00 PM - 12:00 AM	48	65	113		
	(42.5%)	(57.5%)			
24 Hours	84	81	165		
	(50.9%)	(49.1%)			
Peak Hours					
12:00 AM - 12:00 PM					
	Eastbound	Westbound	Combined		
Started	6:15 AM	7:30 AM	6:15 AM		
Volume	10	7	11		
Factor	0.63	0.44	0.55		
12:00 PM - 12:00 AM					
	Eastbound	Westbound	Combined		
Started	3:45 PM	4:00 PM	4:00 PM		
Volume	11	17	25		
Factor	0.92	0.61	0.78		

Montgomery County Engineer's Office Traffic Department

Location : Shank Road
 Cross Street : at MOR.44-4.80
 By : KRL

Site: 23 Shank
 3/20/2023
 Monday

24 Hour Classification

Eastbound

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi
10:00 AM	3	0	2	0	0	1	0	0	0	0	0	0	0	0
11:00 AM	6	0	5	1	0	0	0	0	0	0	0	0	0	0
12:00 PM	8	0	5	3	0	0	0	0	0	0	0	0	0	0
1:00 PM	2	0	1	0	0	1	0	0	0	0	0	0	0	0
2:00 PM	6	0	3	3	0	0	0	0	0	0	0	0	0	0
3:00 PM	5	0	4	1	0	0	0	0	0	0	0	0	0	0
4:00 PM	8	0	6	1	0	1	0	0	0	0	0	0	0	0
5:00 PM	7	0	6	1	0	0	0	0	0	0	0	0	0	0
6:00 PM	5	0	3	2	0	0	0	0	0	0	0	0	0	0
7:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0
8:00 PM	5	0	5	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2023														
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	3	0	3	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	9	0	6	2	0	1	0	0	0	0	0	0	0	0
7:00 AM	6	0	4	2	0	0	0	0	0	0	0	0	0	0
8:00 AM	4	0	2	1	0	0	0	0	1	0	0	0	0	0
9:00 AM	5	0	4	1	0	0	0	0	0	0	0	0	0	0
Total	84	0	60	19	0	4	0	0	1	0	0	0	0	0
%		0.0	71.4	22.6	0.0	4.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0

Montgomery County Engineer's Office Traffic Department

Location : Shank Road
 Cross Street : at MOR.44-4.80
 By : KRL

Site: 23 Shank
 3/20/2023
 Monday

24 Hour Classification

Westbound

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi
10:00 AM	5	0	3	1	0	1	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	4	0	3	1	0	0	0	0	0	0	0	0	0	0
1:00 PM	3	0	1	1	0	1	0	0	0	0	0	0	0	0
2:00 PM	4	0	4	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	10	0	5	5	0	0	0	0	0	0	0	0	0	0
4:00 PM	17	0	14	3	0	0	0	0	0	0	0	0	0	0
5:00 PM	7	0	4	1	0	2	0	0	0	0	0	0	0	0
6:00 PM	7	0	6	1	0	0	0	0	0	0	0	0	0	0
7:00 PM	5	0	4	1	0	0	0	0	0	0	0	0	0	0
8:00 PM	5	0	3	2	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	2	1	1	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
3/21/2023														
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	2	0	2	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	3	0	3	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	5	0	4	0	0	1	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	81	1	58	16	0	6	0	0	0	0	0	0	0	0
%		1.2	71.6	19.8	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Montgomery County Engineer's Office Traffic Department

Location : Shank Road
 Cross Street : at MOR.44-4.80
 By : KRL

Site: 23 Shank
 3/20/2023
 Monday

24 Hour Speed

		Eastbound														
mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.	
10:00 AM	3	0	0	0	0	1	1	0	0	0	1	0	0	0	42.5	
11:00 AM	6	0	0	1	0	3	0	1	1	0	0	0	0	0	35.3	
12:00 PM	8	0	0	0	0	1	0	5	2	0	0	0	0	0	43.3	
1:00 PM	2	0	0	0	0	0	0	0	1	1	0	0	0	0	49.2	
2:00 PM	6	0	0	0	0	0	2	3	0	0	1	0	0	0	42.3	
3:00 PM	5	0	0	0	1	0	1	2	1	0	0	0	0	0	40.0	
4:00 PM	8	0	1	0	1	1	2	2	1	0	0	0	0	0	36.8	
5:00 PM	7	0	0	0	1	1	2	2	1	0	0	0	0	0	38.2	
6:00 PM	5	0	0	0	1	0	1	1	2	0	0	0	0	0	41.3	
7:00 PM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	40.3	
8:00 PM	5	0	0	0	0	3	1	0	1	0	0	0	0	0	36.4	
9:00 PM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	40.3	
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
3/21/2023																
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
5:00 AM	3	0	0	0	0	0	1	1	1	0	0	0	0	0	40.6	
6:00 AM	9	0	0	0	0	2	2	4	1	0	0	0	0	0	39.5	
7:00 AM	6	0	0	0	0	3	1	1	1	0	0	0	0	0	38.3	
8:00 AM	4	0	0	0	0	0	1	2	1	0	0	0	0	0	43.0	
9:00 AM	5	0	0	0	0	0	1	3	0	1	0	0	0	0	43.9	
Total	84	0	1	1	4	15	16	29	14	2	2	0	0	0	40.1	
%		0.0	1.2	1.2	4.8	17.9	19.0	34.5	16.7	2.4	2.4	0.0	0.0	0.0		
Average (Mean)		40.1 mph			Minimum 19.7 mph			Maximum 57.1 mph			Pace Range 33.9 - 43.9 mph			50 vehicles (59.5%)		
Percentile Speeds		<u>10%</u>		<u>15%</u>		<u>50%</u>		<u>85%</u>		<u>90%</u>						
(mph)		32.0		33.3		40.8		46.9		48.0						
Speeds Exceeded		<u>25 mph</u>		<u>35 mph</u>		<u>45 mph</u>		<u>55 mph</u>		<u>65 mph</u>		<u>75 mph</u>				
		97.6% (82)		75.0% (63)		21.4% (18)		2.4% (2)		0% (0)		0% (0)				

Montgomery County Engineer's Office Traffic Department

Location : Shank Road
 Cross Street : at MOR.44-4.80
 By : KRL

Site: 23 Shank
 3/20/2023
 Monday

24 Hour Speed

		Westbound														
mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.	
10:00 AM	5	0	0	0	0	2	2	1	0	0	0	0	0	0	35.3	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
12:00 PM	4	0	0	0	0	0	3	0	1	0	0	0	0	0	39.1	
1:00 PM	3	0	0	0	0	1	1	1	0	0	0	0	0	0	36.6	
2:00 PM	4	0	0	0	0	1	0	2	0	1	0	0	0	0	43.3	
3:00 PM	10	0	0	0	1	4	3	2	0	0	0	0	0	0	36.0	
4:00 PM	17	0	0	0	2	4	6	1	3	1	0	0	0	0	38.0	
5:00 PM	7	0	0	0	1	0	6	0	0	0	0	0	0	0	36.8	
6:00 PM	7	0	0	0	2	1	3	1	0	0	0	0	0	0	34.3	
7:00 PM	5	0	0	0	1	0	1	3	0	0	0	0	0	0	38.6	
8:00 PM	5	0	0	0	0	2	1	1	0	1	0	0	0	0	39.4	
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
10:00 PM	2	0	0	0	0	0	1	0	0	0	0	0	1	0	52.0	
11:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	34.3	
3/21/2023																
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
5:00 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	36.9	
6:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	32.1	
7:00 AM	3	0	0	0	0	2	0	0	0	0	1	0	0	0	39.5	
8:00 AM	5	1	0	0	2	1	0	0	1	0	0	0	0	0	29.6	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Total	81	1	0	0	9	20	29	12	5	3	1	0	1	0	37.3	
%		1.2	0.0	0.0	11.1	24.7	35.8	14.8	6.2	3.7	1.2	0.0	1.2	0.0		
Average (Mean)		37.3 mph			Minimum 14.6 mph			Maximum 65.5 mph			Pace Range 28.5 - 38.5 mph			50 vehicles (61.7%)		
Percentile Speeds		<u>10%</u>		<u>15%</u>		<u>50%</u>		<u>85%</u>		<u>90%</u>						
(mph)		29.2		30.7		36.6		43.7		45.0						
Speeds Exceeded		<u>25 mph</u>		<u>35 mph</u>		<u>45 mph</u>		<u>55 mph</u>		<u>65 mph</u>		<u>75 mph</u>				
		98.8% (80)		63.0% (51)		12.3% (10)		2.5% (2)		1.2% (1)		0% (0)				