

**CITY OF CHIPPEWA FALLS  
BOARD OF PUBLIC WORKS  
MEETING MINUTES  
MONDAY, FEBRUARY 3, 2020 – 5:30 PM**

The Board of Public Works met in City Hall on Monday, February 3, 2020 at 5:30 PM. Present were Director of Public Works Rick Rubenzer, Finance Manager Lynne Bauer, Alderperson Paul Olson and Darrin Senn. Absent was Mayor Greg Hoffman. Taylor Huppert of the CVCA/Heyde Center and Matt Gundry, PE of CBS Squared were also present at the meeting.

1. **Motion** by Olson, seconded by Bauer to approve the minutes of the January 13, 2020 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**
  
2. The Board of Public Works considered the attached Estimate for improving River Street between the west city limits and Fleet Street in conjunction with a WDOT project in 2022-23 resurfacing USH 53 between 40<sup>th</sup> Avenue and New Auburn. DPW Rubenzer stated that in order to be included in the project design, the city would be responsible for costs for replacement of the entire segment between the west city limits and Fleet Street. The 1.5 million dollar estimate does not include engineering or contingency costs. The River Street section under the US 53 on/off ramps would be full depth concrete repair with the remaining east and west segments a mill and overlay. He continued that if WDOT included the said segment in project design and the city later decided not to do it in conjunction with the WDOT project, that the city would still be responsible for 100% of the design costs. Also that if done with the WDOT project it would be done to typical WDOT standards and then WDOT would consider taking over jurisdiction after completion. Rubenzer stated that a mill and overlay had been done on River Street East of Fleet Street within the last ten years but that it hadn't held up well under the heavy duty truck and equipment traffic generated by the intermodal facility. He stated that the street department presently spent about 12-15 days per year pot hole patching and crack filling on the section of River Street being considered for replacement. The project is in the city Capital Improvement plan tentatively for 2023 with an estimate of just over two million dollars.  
**Motion** by Olson, seconded by Senn to NOT include the section of River Street between the west city limits and Fleet Street in the WDOT project scheduled for 2022-23. **All present voting aye. MOTION CARRIED.**
  
3. Matt Gundry, PE of CBS Squared appeared and presented the attached DRAFT Trans 213 Report for the Central Street Bridge. He went through one do nothing alternative, three rehabilitation of the existing bridge alternatives and one complete replacement of the bridge alternative. He noted that both the polymer and concrete overlay rehab alternatives were not suited for a bridge as distressed as the Central Street Bridge. He continued that both those alternatives also did not address the minimum required clearance height of fourteen feet. The exiting clearance height is 13' 8". He stated that the complete deck replacement alternative would most likely address the H15 minimum load rating requirement and the 14 foot clearance height requirement. In addition the stringers and floor beams exhibiting section loss could be sand blasted and painted or replaced as necessary. The board noted that keeping costs low was very important and that the Historical bridge in the neighborhood was the Spring Street Marsh Arch Rainbow bridge one block south. Discussion continued about the

historical value of the pedestrian railings and the Central Street truss bridge itself. It was noted that the bridge is a fracture critical bridge and may require more frequent inspections than the present one inspection every two years. Mr. Gundry concluded that structure ratings, load postings and cost estimates for each alternative would be included in the final report.

**Motion** by Senn, seconded by Olson to recommend the Common Council revise City of Chippewa Falls municipal code to restrict parking on the Central Street bridge so that extra bridge width would not be required to accommodate parking. Also that CBS Squared finalize cost estimates for all five alternatives, investigate the historical value of keeping the existing pedestrian walk railings and then present the final report. **All present voting aye. MOTION CARRIED.**

4. The Board of Public Works considered the attached proposed resolution of 2020 Special Assessment Rates. Director of Public Works Rubenzer noted that proposed rates for 2020 were based on actual prices paid in 2019 for the respective materials.

**Motion** by Olson, seconded by Bauer to recommend the Common Council approve the attached resolution of special assessment rates for 2020. **All present voting aye. MOTION CARRIED.**

5. The Board of Public Works considered the attached proposed alley special charge rate resolution for 2020. Director of Public Works Rubenzer noted that the proposed alley special charges were again based on the hot mix asphalt price paid in 2019. The proposed 2020 rate is \$8 per alley front foot of frontage.

**Motion** by Olson, seconded by Bauer to recommend the Common Council approve the attached proposed alley surfacing special charge resolution. **All present voting aye. MOTION CARRIED.**

6. Taylor Huppert appeared to support the attached Street Use Permit Application from the Chippewa Valley Cultural Association/Heyde Center for the Arts for Dinner over the Duncan on September 10, 2020. Ms. Huppert stated that the Heyde Center would like barricades brought to the Rainbow Bridge Dinner on the Duncan site this year due to volunteer difficulty obtaining vehicles to haul the barricades. The board discussed what an awesome event this is.

**Motion** by Senn, seconded by Olson to recommend the Common Council approve the attached Street Use Permit Application from the Chippewa Valley Cultural Association/Heyde Center for the Arts for Dinner over the Duncan on September 10, 2020. In addition, to charge the Chippewa Valley Cultural Association/Heyde Center for the Arts for the corresponding city services requested. **All present voting aye. MOTION CARRIED.**

7. **Motion** by Olson, seconded by Bauer to adjourn. **All present voting aye. MOTION CARRIED.** The Board of Public Works meeting adjourned at 6:15 P.M.

Richard J. Rubenzer, PE  
Secretary, Board of Public Works

**CITY OF CHIPPEWA FALLS  
BOARD OF PUBLIC WORKS  
MEETING MINUTES  
MONDAY, JANUARY 13, 2020 – 5:30 PM**

The Board of Public Works met in City Hall on Monday, January 13, 2020 at 5:30 PM. Present were Mayor Greg Hoffman, Director of Public Works Rick Rubenzer, Finance Manager Lynne Bauer and Alderperson Paul Olson. Absent was Darrin Senn. Also attending were Parks and Recreation Director Dick Hebert and Ryan Dolan.

1. **Motion** by Olson, seconded by Bauer to approve the minutes of the December 9, 2019 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**
  
2. Park and Recreation Director Dick Hebert appeared to request permission to utilize portions (98 acres) of the City utility west wellfield area in conjunction with Casper Park to construct a disc golf course. He stated that James Johnson, Tricia Thompson and himself had been looking for an opportunity to build one or more disc golf courses in Chippewa Falls for a number of years. Ryan Dolan appeared and stated he had assisted or designed two golf courses in Menomonie, Wisconsin and noted that this location had potential for a championship disc golf course. Mr. Hebert noted that the Park Board had not yet seen the proposal and that cost estimates weren't provided at this time. Mr. Dolan stated that there was an agreement with the City of Menomonie that the city would man one of the Menomonie disc golf courses three times per year. After discussion;  
**Motion** by Hoffman, seconded by Rubenzer to recommend the Common Council grant permission to use the City wellfields around Casper Park for one or more disc golf courses. In addition, that the design team bring back a design, construction estimate, maintenance agreement and use agreement to the Board of Public Works and Common Council for consideration. **All present voting aye. MOTION CARRIED.**
  
3. The Board of Public Works considered the request from Chippewa Falls Main Street Director Teri Ouimette to remove the loading zone on the south side of Grand Avenue approximately 90 feet west of Bridge Street. Ms. Ouimette indicated adjacent property owners approve the request.  
**Motion** by Olson, seconded by Rubenzer to recommend the Common Council omit the attached Municipal Code Chapter 7.10(4) and remove a loading zone on the south side of Grand Avenue west of Bridge Street and then making the loading zone a regular parking space. **All present voting aye. MOTION CARRIED.**
  
4. **Motion** by Olson, seconded by Bauer to adjourn. **All present voting aye. MOTION CARRIED.**  
The Board of Public Works meeting adjourned at 5:51 P.M.

  
Richard J. Rubenzer, PE  
Secretary, Board of Public Works

## Estimate 1190-08-79

ADD TO SFMA

Estimated Cost: \$1,507,787.50

Contingency: 0.00%

**Estimated Total: \$1,507,787.50**

Chippewa Falls - New Auburn  
40th Avenue - CTH B (NB & SB)  
USH 53  
Chippewa County

BUS 29/CTH X ESTIMATE (CROSS ROAD ONLY, NO RAMPS)  
CAT 0060 AND CAT 0070

**Base Date: 12/13/21**

Spec Year: 03

Unit System: E

Work Type: Concrete Paving

Highway Type: Freeway, Principal Arterial

Urban/Rural Type: Rural

Season: Winter

County: Chippewa

Latitude of Midpoint: 445626

Longitude of Midpoint: 912539

District: NW

Federal Project Number: N/A

State Project Number: 1190-08-79

Estimate Type: LET

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<b>Description</b> <b>Supplemental Description</b>				
<b>Group 0060: CITY OF CHIPPEWA FALLS ROADWAY ITEMS (PVT REPLACEMENT BETWEEN RAMP TERMINALS IN THIS CAT)</b>					
0010	204.0100 Removing Pavement	11,200.00	SY	\$4.500	\$50,400.00
0020	205.0100 Excavation Common ESTIMATED BASED ON AREA X DEPTH	6,200.00	CY	\$6.000	\$37,200.00
0030	213.0100 Finishing Roadway (project) 01. Bus 29	1.00	EACH	\$1,000.000	\$1,000.00
0040	305.0110 Base Aggregate Dense 3/4-Inch	150.00	TON	\$13.000	\$1,950.00
0050	305.0120 Base Aggregate Dense 1 1/4-Inch ASSUME 6" BAD (FULL DEPTH PVT REPLACEMENT)	4,000.00	TON	\$11.000	\$44,000.00
0060	415.0080 Concrete Pavement 8-Inch 8" PCC PER DOT PAVEMENT DESIGN REPORT	10,500.00	SY	\$40.000	\$420,000.00
0070	415.0210 Concrete Pavement Gaps	4.00	EACH	\$2,000.000	\$8,000.00
0080	455.0605 Tack Coat	150.00	GAL	\$3.000	\$450.00
0090	460.2000 Incentive Density HMA Pavement	2,370.00	DOL	\$1.000	\$2,370.00
0100	460.6244 HMA Pavement 4 MT 58-34 S	800.00	TON	\$85.000	\$68,000.00
0110	601.0409 Concrete Curb & Gutter 30-Inch Type A	2,500.00	LF	\$18.000	\$45,000.00
0120	611.0430 Reconstructing Inlets ASSUME NO PIPE REPLACEMENTS, STRUCTURE REPAIRS ONLY	10.00	EACH	\$900.000	\$9,000.00
0130	619.1000 Mobilization The historic mobilization calculator predicts the project to range from 2.6% to 5.4%. The statewide average for concrete pavement replacements is 3.6%. The average in the NW region for concrete pavement replacements is 4.9%. TARGET 5%	1.00	EACH	\$75,000.000	\$75,000.00
0140	634.0616 Posts Wood 4x6-Inch X 16-FT REPLACE ALL SIGNS, ESTIMATE ONLY	55.00	EACH	\$60.000	\$3,300.00
0150	637.2210 Signs Type II Reflective H	400.00	SF	\$20.000	\$8,000.00
0160	638.2602 Removing Signs Type II	40.00	EACH	\$23.500	\$940.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
0170	638.3000 Removing Small Sign Supports	55.00	EACH	\$22.000	\$1,210.00
0180	646.1020 Marking Line Epoxy 4-Inch	2,900.00	LF	\$0.800	\$2,320.00
0190	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	12,150.00	LF	\$1.250	\$15,187.50
0200	646.3545 Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	800.00	LF	\$7.500	\$6,000.00
0210	646.8120 Marking Curb Epoxy	500.00	LF	\$7.000	\$3,500.00
0220	649.0105 Temporary Marking Line Paint 4-Inch	25,000.00	LF	\$0.200	\$5,000.00
0230	650.4500 Construction Staking Subgrade	2,700.00	LF	\$0.050	\$135.00
0240	650.7000 Construction Staking Concrete Pavement	2,700.00	LF	\$0.600	\$1,620.00
0250	650.9910 Construction Staking Supplemental Control (project)	1.00	LS	\$1,000.000	\$1,000.00
0260	650.9920 Construction Staking Slope Stakes	2,700.00	LF	\$0.400	\$1,080.00
0270	715.0415 Incentive Strength Concrete Pavement	3,150.00	DOL	\$1.000	\$3,150.00
0280	740.0440 Incentive IRI Ride	4,700.00	DOL	\$1.000	\$4,700.00
0290	SPV.0105 TEMPORARY ITEMS FOR PRELIMINARY ESTIMATE Erosion Control and Finishing Items	1.00	LS	\$50,000.000	\$50,000.00
0300	SPV.0105 TEMPORARY ITEMS FOR PRELIMINARY ESTIMATE Traffic Control Items - This item is included for drums, signs, barricades, lights, and other misc items as well as unknown TC costs.	1.00	LS	\$50,000.000	\$50,000.00
0310	SPV.0105 Special 04. Construction Staking Concrete Pavement Joint Layout	1.00	LS	\$500.000	\$500.00
0320	SPV.0105 Misc, Unknowns, and Future Price Adjustments - Approx 10%	1.00	LS	\$130,000.000	\$130,000.00

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
<u>Description</u>					
<u>Supplemental Description</u>					

Total for Group 0060:\$1,050,012.50

**Group 0061:** CITY OF CHIPPEWA FALLS ROADWAY ITEMS (MILL AND OVERLAY OUTSIDE OF RAMP TERMINALS; WILL COMBINE WITH CAT 0060 FOR FUTURE ESTIMATES)

0330	204.0109.S	82,400.00	SF	\$0.550	\$45,320.00
Removing Concrete Surface Partial Depth					
ASSUME 2" CONCRETE MILL					
0332	204.0110	2,600.00	SY	\$3.500	\$9,100.00
Removing Asphaltic Surface					
SHOULDER REMOVAL					
0335	204.0120	4,500.00	SY	\$5.000	\$22,500.00
Removing Asphaltic Surface Milling					
ASSUME 2" ASP MILL					
0360	204.0150	200.00	LF	\$4.000	\$800.00
Removing Curb & Gutter					
UNDISTRIBUTED					
0370	204.0165	1,400.00	LF	\$2.000	\$2,800.00
Removing Guardrail					
0380	211.0100	1.00	LS	\$5,000.000	\$5,000.00
Prepare Foundation for Asphaltic Paving (project) 1190-08-79 - Bus 29					
0390	211.0400	35.00	STA	\$115.000	\$4,025.00
Prepare Foundation for Asphaltic Shoulders					
PAVED SHOULDER PREP, NEED TO REPLACE SHOULDERS SINCE THEY WILL CARRY TRAFFIC AND THEY ARE IN POOR CONDITION					
0400	305.0500	17.00	STA	\$100.000	\$1,700.00
Shaping Shoulders					
0410	305.0504.S	1,350.00	CY	\$15.000	\$20,250.00
Hauling Excess Shoulder Material					
0420	455.0605	1,250.00	GAL	\$3.000	\$3,750.00
Tack Coat					
0430	460.6244	1,300.00	TON	\$85.000	\$110,500.00
HMA Pavement 4 MT 58-34 S					
ASSUME 2" MAINLINE MILL AND OVERLAY 6" ON SHOULDERS SINCE THEY WILL CARRY TRAFFIC					
0440	460.6644	1,550.00	TON	\$85.000	\$131,750.00
HMA Pavement 4 MT 58-34 V					
0450	601.0409	200.00	LF	\$18.000	\$3,600.00
Concrete Curb & Gutter 30-Inch Type A					
0460	611.0430	6.00	EACH	\$900.000	\$5,400.00
Reconstructing Inlets					
ESTIMATE ONLY					
0465	614.0010	1.00	EACH	\$30,000.000	\$30,000.00
Barrier System Grading Shaping Finishing					
GRADING AT THE LONG RUN OF GUARDRAIL					

<u>Line #</u>	<u>Item Number</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Extension</u>
	<b>Description</b>				
	<b>Supplemental Description</b>				
0470	614.2330 MGS Guardrail 3 K	1,600.00	LF	\$32.000	\$51,200.00
	ASSUME 3K REQUIRED DUE TO STEEP SLOPES ALONG RIVER				
0480	614.2610 MGS Guardrail Terminal EAT	2.00	EACH	\$2,300.000	\$4,600.00
0490	650.8000 Construction Staking Resurfacing Reference	3,900.00	LF	\$0.200	\$780.00

Total for Group 0061:\$453,075.00

**Group 0070:** Utility Adjustments (PRICES INCLUDES SAWCUTS, PAVEMENT PATCHING, COVER PLATES FOR PRELIM ESTIMATE)

0500	611.8110 Adjusting Manhole Covers	3.00	EACH	\$1,300.000	\$3,900.00
0510	SPV.0060 Special 01. Adjusting Water Valves	1.00	EACH	\$800.000	\$800.00

Total for Group 0070:\$4,700.00

**PRELIMINARY IMPROVEMENTS UNDER SCOPE  
DEVELOPMENT WITH THE CITY OF CHIPPEWA FALLS**

PAVEMENT DESIGN TO BE  
CONFIRMED WITH CITY

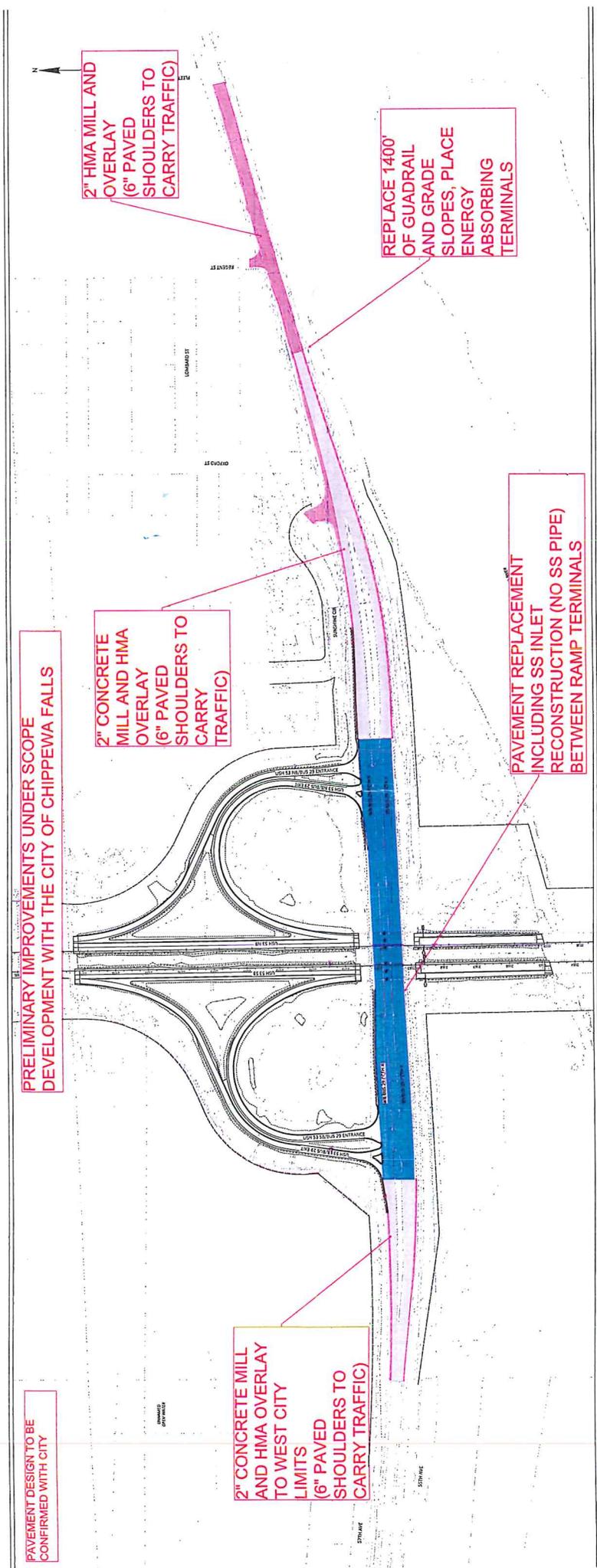
2" HMA MILL AND  
OVERLAY  
(6" PAVED  
SHOULDERS TO  
CARRY TRAFFIC)

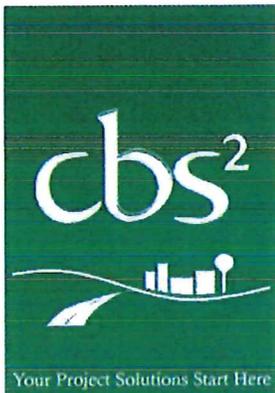
2" CONCRETE  
MILL AND HMA  
OVERLAY  
(6" PAVED  
SHOULDERS TO  
CARRY  
TRAFFIC)

2" CONCRETE MILL  
AND HMA OVERLAY  
TO WEST CITY  
LIMITS  
(6" PAVED  
SHOULDERS TO  
CARRY TRAFFIC)

REPLACE 1400'  
OF GUADRIL  
AND GRADE  
SLOPES, PLACE  
ENERGY  
ABSORBING  
TERMINALS

PAVEMENT REPLACEMENT  
INCLUDING SS INLET  
RECONSTRUCTION (NO SS PIPE)  
BETWEEN RAMP TERMINALS





January 21, 2020

Mr. Richard Rubenzer, Director  
City of Chippewa Falls Public Works  
30 W. Central Street  
Chippewa Falls, WI 54729

Re: Rehabilitation Study  
(Duncan Creek Bridge P-09-715)  
Central Street  
City of Chippewa Falls

Dear Mr. Rubenzer,

In accordance with our agreement in October 2019, we are providing you with this letter report which summarizes our finding and recommendations for the Central Street structure over Duncan Creek located in the City of Chippewa Falls, Chippewa County, Wisconsin.

#### EXISTING CONDITIONS

The existing structure (P-09-0715) is a single-span steel overhead truss bridge on full retaining concrete abutments founded on spread footings. The structure is located approximately 0.1 miles northeast of the intersection of Central Street and STH 124 in section 6, township 28 north, range 8 west. The structure was built in 1934 and underwent painting 1989. Other work on the structure includes an unrecorded concrete deck overlay that occurred over 15 years ago as well as a very recent asphalt overlay. The bridge is 135.0 feet long and has a clear roadway width of 30.0 feet between curbs. The overall width is 48.4 feet, which provides 9-foot sidewalks on both sides of the structure. Clearance over the roadway is recorded as 13.75 feet to the truss in the Wisconsin DOT Highway Structures Information System (HSI) and is signed as 13'-8" at the structure. The truss and steel railing separate pedestrian from vehicular traffic, and a steel ornamental railing exists at the edge of the sidewalk. The bridge is not skewed. Parking is permitted by local ordinance on this segment of Central Street, with no identified restrictions for the narrower segment on the bridge in either statute or signage.

The ADT given in HSI is 3180 (2015) for this location. ADT is projected to be 3498 in 2035. Central Street is classified as an urban minor collector on the functional classification map approved August 11, 2016 and is listed as LOCAL-URBAN in HSI. The speed limit on this segment of Central Street is 25 miles per hour per Wisconsin statutes 346.57. Based on that information, an urban design class of 2a would be appropriate at this site. The minimum clear width between curbs for design class 2a streets with parking is 34 feet, with a desirable range of 46 feet to 48 feet. The available width between the vehicular railings and truss members precludes providing a 34-foot minimum clear width. Therefore, a future no-parking condition will be assumed for alternatives that retain the existing truss superstructure. A minimum width of 24 feet between curbs is required for design class 2a streets without parking, with a desirable range of 34 feet to 38 feet. Connections exist to sidewalks on the east side of the structure and multi-use paths on the west side of the structure.



The existing structure meets the NBI definition of poor condition with a deck rating of 4 or less. The deck has extensive spalling, delamination, and potholing with exposed and corroded reinforcement. Potholes in some areas correspond with delamination on the underside of the deck, presenting an increased risk of localized deck failure or punch thru. Approximately 15% of the deck was placed in Condition State 4 at the last inspection, indicating that the defects are severe and compromise the strength or serviceability. The outer steel stringers supporting the deck are corroded and have section loss. Likewise, floor beams 1 and 9 have slight section loss to the upper chords. Gusset plates at the connections to the lower chords of the truss are beginning to form pack rust. The abutments are in satisfactory condition. The substructure and superstructure are both rated in fair condition (NBI rating 5). The deck geometry rating of 3 is a result of substandard vertical clearance. The approach alignment rating of 3 reflects the need for substantial speed reduction on the approach to the bridge.

Per Chapter Trans 213 of the State of Wisconsin Administrative Code, a local bridge is eligible for funds under s. 84.18 of Status if the bridge:

- a) **Has been determined by the department to be a deficient bridge:** A deficient bridge is further defined as a bridge that is structurally deficient or functionally obsolete. Although the Administrative Code explicitly references federal regulations dated September 1992, some changes in definition have recently occurred on the Federal level. The Federal Highway Administration (FHWA) Pavement and Bridge Condition Performance Measures Final Rule, published January 2017, defines structurally deficient as a classification given to any bridge with any component in Poor or worse condition. The subject structure has a Deck Rating of Poor (4). Functionally obsolete is no longer tracked, though the structure would meet the 1992 definition with a deck geometry rating and approach alignment rating of Intolerable (3).
- b) **Has a sufficiency rating of 80 or less:** The sufficiency rating available from Wisconsin DOT Highway Structures Information (HSI) on January 21, 2020 is 53.2.
- c) **Has not been constructed or reconstructed within the past 10 years:** The last recorded rehabilitation to the structure was in 1989, over 30 years prior to the date of this report. The unrecorded deck overlay is understood to have occurred over 15 years ago.
- d) **Has not been programmed for construction by the department under s. 84.11(4) Stats:** The subject bridge does not appear in the latest list of State Transportation Improvement Projects (STIP).

Provided that rehabilitation can be shown to be cost effective, will add at least 10 years of life to the bridge, and will correct the deficiencies that caused the bridge to be deficient, rehabilitation funding can be used to improve this structure.

#### ALTERNATIVES

Five alternatives are considered for improving the structure. The costs associated with each alternative below include design services, state review, construction, construction engineering and other contingency items. The time period for the evaluation of alternatives is assumed to begin two years in the future.

The logo for CBS2, featuring the letters 'CBS' in a large, white, serif font, with a superscript '2' to the right. Below the letters is a stylized white graphic of a bridge or a road curving upwards.

Your Project Solutions Start Here

1. **No change.** The most recent inspection reports indicate extensive potholing and delamination of the deck with a high risk of localized deck failure. Deterioration is expected to accelerate as the potholed deck surface is less effective at shedding runoff, leading to increased leaching and corrosion of the reinforcement. Increased maintenance to the deck will be required to repair potholes and posting for load capacity reduction is expected. This alternative will not address the less-than-desirable roadway width of 30 feet. The structure inventory rating of HS-18 will remain for the time being. Given that the sufficiency rating is nearing 50, eligibility for replacement of this structure could be expected in as little as five years from the base date (ie. seven years in the future). Over that five-year period, maintenance costs to address the 5,000 SF of delamination and failing patches are expected to be approximately \$50,000 per year, based on average bid prices for concrete masonry deck patching and allowing for traffic control and other incidental costs.

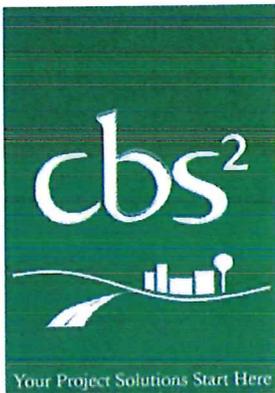
2. **Superstructure Rehabilitation with Polymer Deck Overlay** – *Prepare and patch the deck to repair delamination and potholing, and apply a polymer overlay to the deck. Repaint corroded portions of the truss and steel stringers. Apply concrete surface repair to spalled areas of the abutments.*

Wisconsin DOT recommends that the deck condition rating to be greater than 7 to be considered for polymer overlay. The subject deck rating is 4 and the distressed area is much greater than the 2% maximum recommended for this alternative. The deck age and presence of heavily corroded rebar indicates that chloride infiltration is advanced, another condition for which polymer overlay is poorly suited.

Deck geometry rating is assumed to remain at 3 with this option as removal of the overburden is not assured to increase the vertical clearance to 14' or more. Approach alignment rating is expected to improve to 6 (minor speed reduction required) with the minor approach work necessary to match the pavement with the new deck grade. Concrete surface repair to the abutments is expected to remedy the spalling, but not the cracking, resulting in a final substructure rating of 7. Repainting of the corroded truss areas would preserve the structure but would not address section loss. A final superstructure rating of 6 is assumed with some structural elements retaining some minor deterioration.

The Wisconsin DOT Bridge Manual provides that polymer overlays extend the life of a bridge deck 10-15 years. The rehabilitation would address the deficiencies in the superstructure leading to the poor condition rating, and result in the structure no longer falling under "structurally deficient" criteria. The expected sufficiency rating following this polymer deck overlay would be 86.6. The cost for this alternative is estimated to be \$X,XXX,XXX.

3. **Superstructure Rehabilitation with Low Slump Concrete Overlay** – *Remove the asphalt overlay. Prepare and patch the deck to remove delamination, remove any existing overlay, and apply a low slump concrete*



*overlay (LSCO) to the deck. Repaint corroded portions of the truss and steel stringers. Apply concrete surface repair to spalled areas of the abutments.*

Wisconsin DOT indicates that when greater than 25% of the upper deck surface or 5% of lower deck surface is distressed, a concrete overlay may not be as cost-effective as deck replacement. Overlays applied where significant reinforcement corrosion has occurred do not typically achieve full service life.

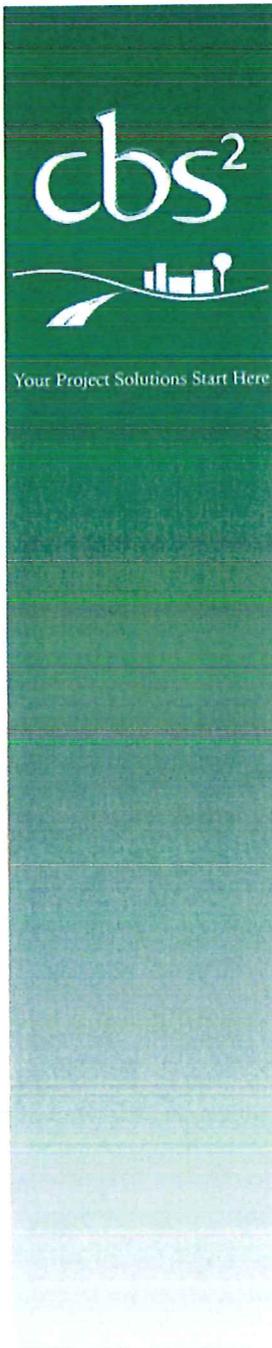
Deck geometry rating is assumed to remain at 3 with this option as removal of the overburden is not assured to increase the vertical clearance to 14' or more. Approach alignment rating is expected to improve to 6 (minor speed reduction required) with the minor approach work necessary to match the pavement with the new deck grade. Concrete surface repair to the abutments is expected to remedy the spalling, but not the cracking, resulting in a final substructure rating of 7. Repainting of the corroded truss areas would preserve the structure but would not address section loss. A final superstructure rating of 6 is assumed with some structural elements retaining some minor deterioration.

The Wisconsin DOT Bridge Manual provides that concrete overlays extend the life of a bridge deck 15-20 years. 15 years has been assumed in this study due to the heavy corrosion of the deck reinforcement and service life of the previous overlay. The rehabilitation would address the deficiencies in the superstructure leading to the poor condition rating, and result in the structure no longer falling under "structurally deficient" criteria. The expected sufficiency rating following this concrete deck overlay would be 86.6. The cost for this alternative is estimated to be \$X,XXX,XXX. This estimate assumes a large portion of the deck will require full deck repair.

- 4. Superstructure Rehabilitation with Deck Replacement** – *Remove the existing concrete deck and place a new reinforced concrete deck and sidewalk with the existing dimensions. Repair or strengthen the truss components, repainting as needed. Salvage, rehabilitate, and reinstall the existing decorative pedestrian railing. Apply concrete surface repair to spalled areas of the abutments.*

Wisconsin DOT requires the deck condition rating to be equal to or below 4 to be eligible for deck replacement. The current deck condition rating is 4, meeting this requirement. Another requirement is that the inventory rating of the rehabilitated structure remain at or above HS15. Given the current HS18 inventory rating and reduction in overburden, the inventory rating requirement will be met with this alternative.

The existing pedestrian railing at the outside edge of the sidewalk does meet the minimum 42-inch height required for pedestrian railings and is assumed to be acceptable for salvage and reinstallation with replacement of corroded posts as needed. However, the steel roadway railing is not expected to be approved for a deck replacement. Adequate space exists between the curb face and the truss to allow installation of vertical face parapet 'A' or the



more decorative 'TX' parapet, either of which are acceptable traffic barriers on low-speed roadways.

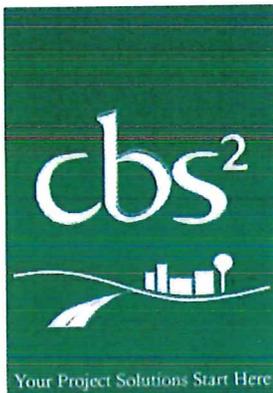
Deck geometry rating is assumed to remain at 3 with this option due to the improbability of increasing the vertical clearance to 14' or more. Approach alignment rating is expected to improve to 6 (minor speed reduction required) with the minor approach work necessary to match the pavement with the new deck grade. Concrete surface repair to the abutments is expected to remedy the spalling, but not the cracking, resulting in a final substructure rating of 7.

The Wisconsin DOT Bridge Manual provides that deck replacements extend the life of a bridge deck 40 or more years. The rehabilitation would address the deficiencies in the superstructure leading to the poor condition rating, and result in the structure no longer falling under "structurally deficient" criteria. The expected sufficiency rating following this deck replacement would be 86.6. The cost for this alternative is estimated to be \$X,XXX,XXX.

5. **Structure Replacement** – *Replace the existing structure with a new single-span prestressed concrete girder bridge with a 48-foot clear width and 62-foot overall width.*

The structure lies within the effective intersection area of E. Central Street and Rushman Drive, potentially requiring additional roadway widening on the structure for intersection radii and turn lanes. The proximity of the west end of the bridge to Rushman Drive will likely further require the use of more expensive full-retaining abutments rather than a longer structure. The full retaining abutment height is expected to be 20 feet or more in height. To use a standard abutment, the bridge length would need to be over 180 feet and in conflict with the intersection to the west and parking entrance to the east.

New structures are expected to have a 75 year design life. The cost for this alternative is estimated to be \$1,824,660 and is based on an average stream crossing structure cost of \$163.50 per square foot of deck area (2018 year end costs). The length used to estimate deck area is the 180 feet needed for a traditional abutment with the understanding that a shorter bridge with full retaining abutments is expected to cost more per square foot.



**RECOMMENDATIONS**

Using the “Equivalent Uniform Annual Cost” (EUAC) to account for the different time frames represented in each alternative, a Life-Cycle Cost Analysis was performed to determine which alternative presented the most cost-effective solution. An interest rate of 5% was used in the analysis and the analysis assumes that the structure will be replaced after the life expectancy. Results are summarized in the following table:

Alternative	Clear Roadway Width	Inventory Rating	Initial Estimated Cost	Life Expectancy (Years)	Equivalent Uniform Annual Cost
1	30'	HS-18	\$0	5	\$ XXX
2	30'	HS-18	\$ XXX	10	\$ XXX
3	30'	HS-18	\$ XXX	15	\$ XXX
4	30'	HS-18	\$ XXX	40	\$ XXX
5	48'	>HS-20	\$ XXX	75	\$ XXX

Based on the above analysis alternative 4, deck replacement, is the most cost-effective solution. This alternative will return the structure sufficiency rating to above 80 and is expected to increase the life of the structure more than 10 years.

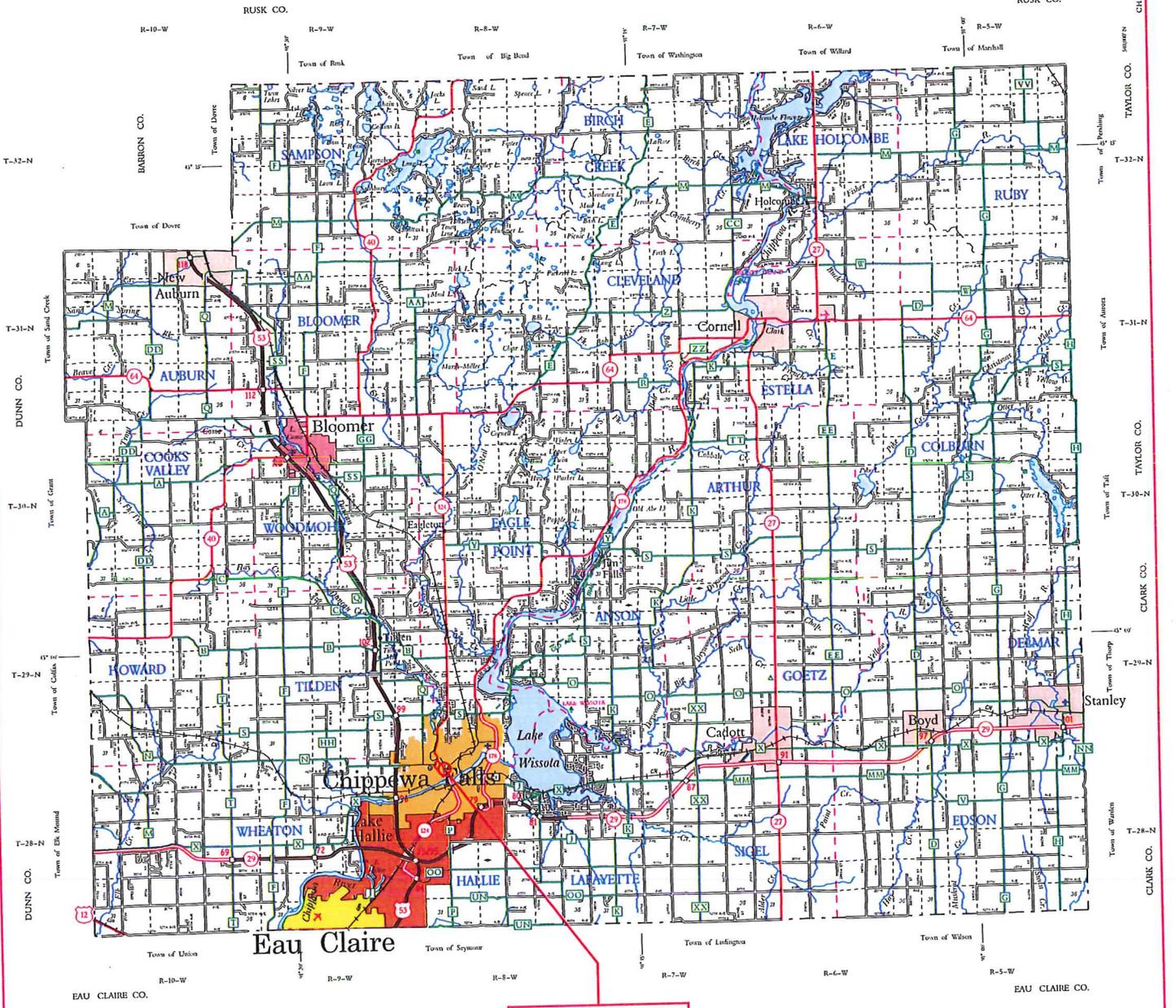
If you have any questions or comments concerning this report or our recommendations, please contact me at 715-861-7425 or mgundry@cbssquaredinc.com.

Sincerely,

Matt Gundry, P.E.  
CBS Squared, Inc.

- Attachments: Project Location Map (1 Page)  
Existing Bridge Plan (6 Pages)  
2019 Routine Bridge Inspection (16 Pages)  
Sufficiency Rating Tabulation (1 Page)  
Cost Estimates (XX Pages)

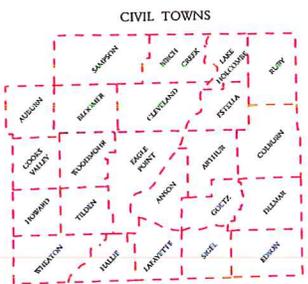
# LOCATION MAP



**STRUCTURE  
P-09-0715**

- ### LEGEND
- Freeway
  - Multi-lane Divided
  - U.S. or State Hwy
  - County Trunk Hwy
  - Town Road
  - Fireline
  - Railroad
  - State Trail
  - Interchange
  - Highway Separation
  - Interstate Highway No.
  - U.S. Highway No.
  - State Highway Letter
  - State Boundary
  - County Boundary
  - Section Line
  - Dam
  - Hospital
  - Airport
  - County Seat
  - Unincorporated Village
  - Fish Hatchery
  - Game Farm
  - Public Hunt or Fish Gids
  - Public Camp & Picnic Gids
  - Hangar Station
  - State Park
  - County Park
  - Wild Area
  - Water Feature
  - Wetland
  - Wetland
  - Northern Wisconsin Center for the Developmentally Disabled

→ For boundaries of public hunting and fishing grounds please contact the Department of Natural Resources



### SECTION NUMBERING OF A TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

### MILES OF HIGHWAY

as of Dec. 31, 2017

STATE ..... 239  
 COUNTY ..... 409  
 LOCAL ROAD ..... 104  
 OTHER ROAD ..... 18  
 TOTAL FOR COUNTY ..... 245

Land Area (2010 Census) ..... 1,018 sq mi  
 Population (2010 Census) ..... 25,111  
 County Seat ..... Chippewa Falls

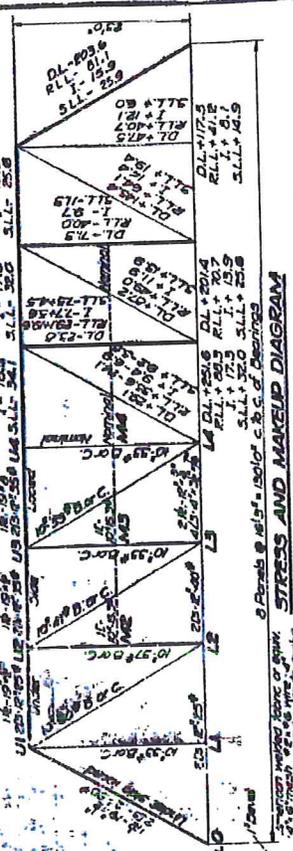


**CHIPPEWA CO.**  
 DEPARTMENT OF TRANSPORTATION  
 Madison, Wisconsin

SCALE 1" = 2 MILES

Compiled for  
 JAN 2019

Map compiled from USGS Quadangles  
 1:250,000 Series



**ESTIMATED QUANTITIES**

ITEM	QUANTITY	UNIT	PRICE	TOTAL
PREPARATION FOR STRUCTURES	1785	SQ. FT.	1.785	3.17
CONCRETE MASONRY	1785	SQ. FT.	1.785	3.17
BASE METAL REINFORCEMENT	1785	SQ. FT.	1.785	3.17
STEEL FRAME REINFORCEMENT	1785	SQ. FT.	1.785	3.17
STRUCTURAL STEEL	1785	SQ. FT.	1.785	3.17
CAST-IN-PLACE CONCRETE	1785	SQ. FT.	1.785	3.17
FLOOR FINISHES	1785	SQ. FT.	1.785	3.17
MECHANICAL FINISHES	1785	SQ. FT.	1.785	3.17
PAINTS	1785	SQ. FT.	1.785	3.17
WALL SHEET METAL CORNER SOFFETS	1785	SQ. FT.	1.785	3.17
WALL SHEET METAL CORNER SOFFETS	1785	SQ. FT.	1.785	3.17
WALL SHEET METAL CORNER SOFFETS	1785	SQ. FT.	1.785	3.17

- LIST OF DRAWINGS**
- 1. SUPERSTRUCTURE DETAILS X6226
  - 2. SUBSTRUCTURE DETAILS X6227
  - 3. PAILING DETAILS X6228
  - 4. SOUTH ABUTMENT DETAILS X6229
  - 5. NORTH ABUTMENT DETAILS X6230
  - 6. BILL OF MATERIALS X6231

**GENERAL NOTES**

For concrete preparations see Special Provisions on sheet 1001 of the contract. All concrete shall be placed in place and finished in accordance with the contract. The contractor shall be responsible for the additional cost of formwork, scaffolding, and other items not shown on the drawings. The contractor shall be responsible for the cost of all materials and labor not shown on the drawings. The contractor shall be responsible for the cost of all materials and labor not shown on the drawings.

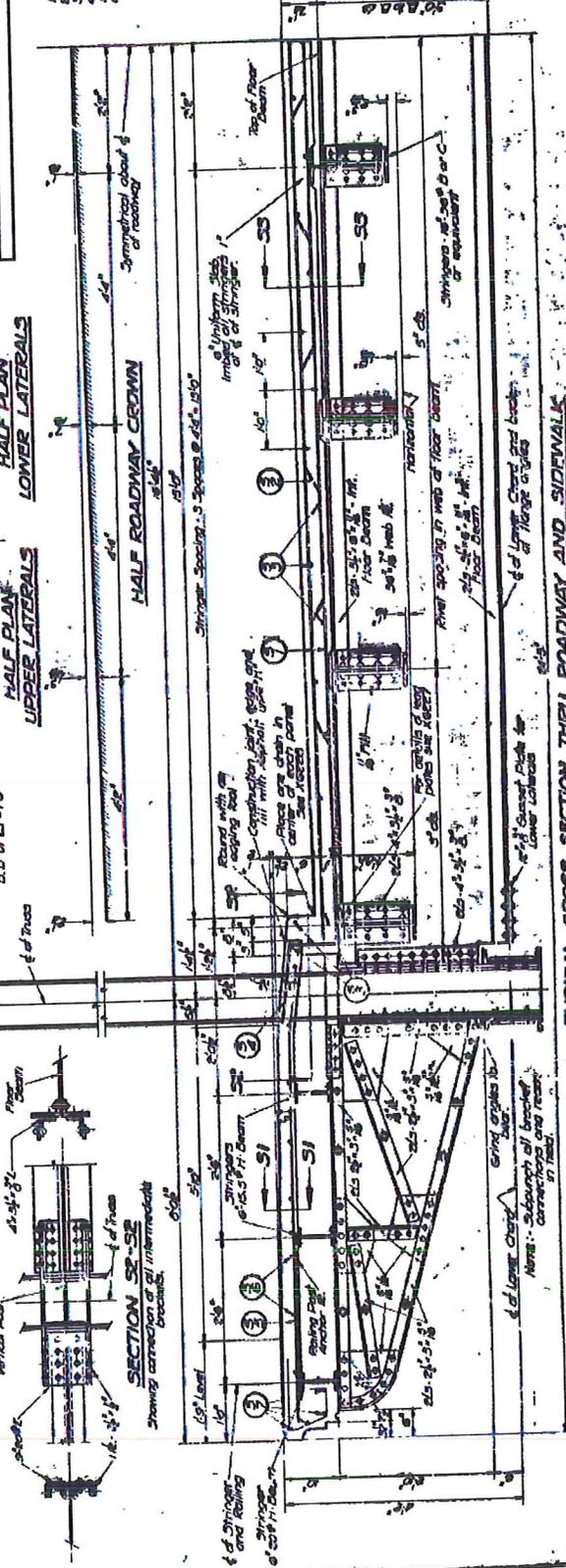
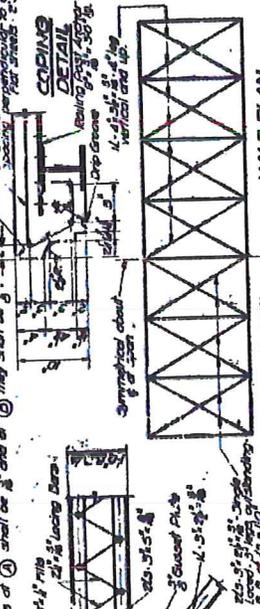
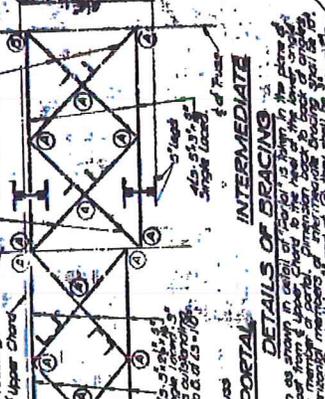
**1 OF 6**

UNIVERSITY MICROFILMS  
SERIALS ACQUISITION  
300 N ZEEB RD  
ANN ARBOR MI 48106

DATE  
CITY

PROJECT: CENTRAL STREET BRIDGE  
CITY OF CHICAGO

**STRUCTURE PLAN**



**TYPICAL CROSS SECTION THROUGH ROADWAY AND SIDEWALKS**

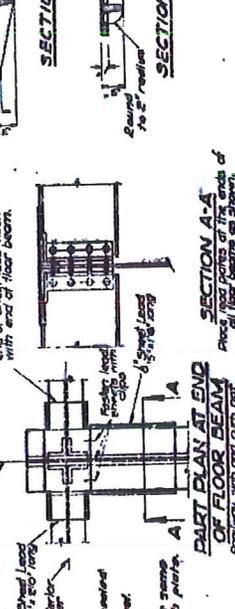
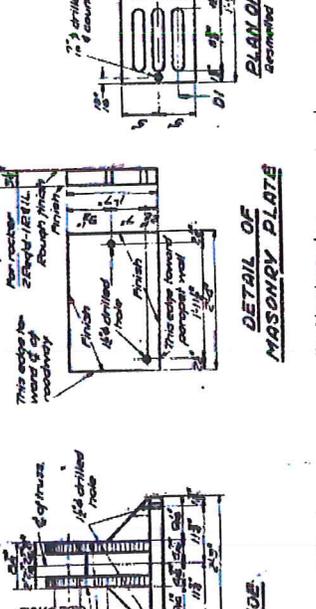
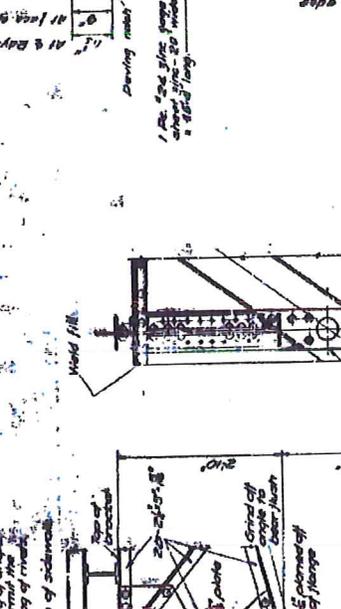
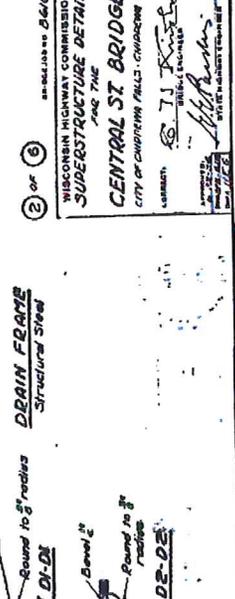
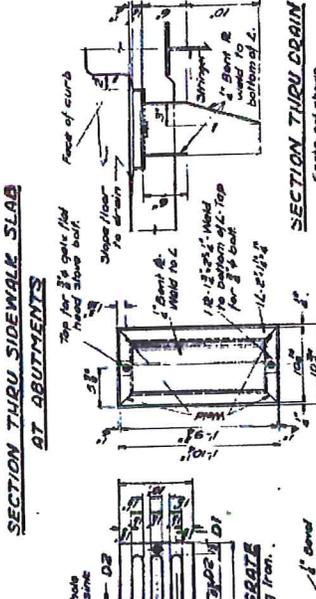
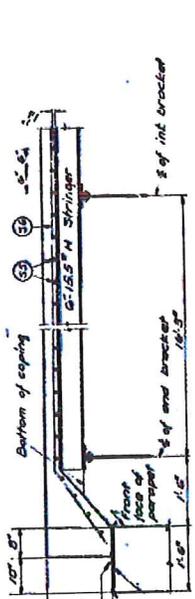
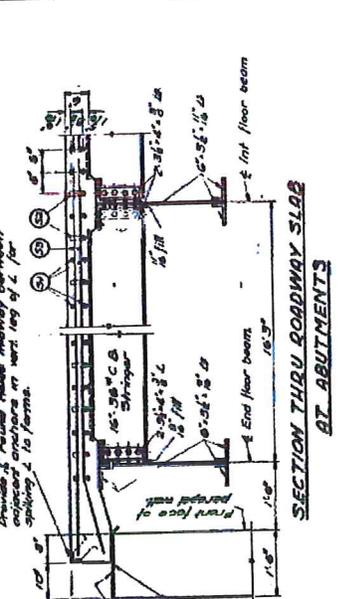
**SECTION 53-53**  
Vertical Roof

**SECTION 51-51**  
Showing connection of all intermediate bracing.

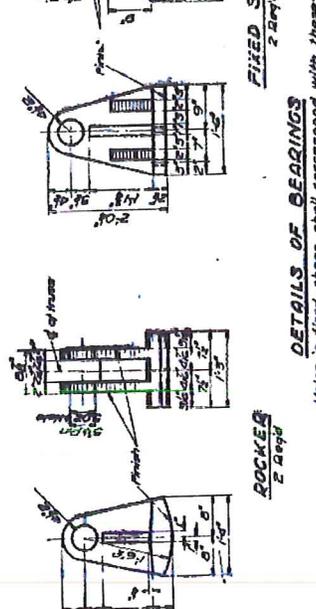
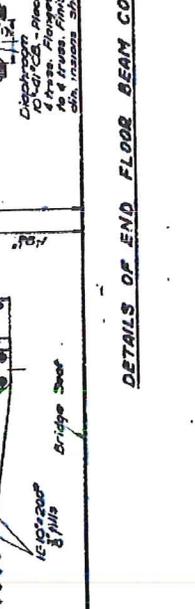
**SECTION 52-52**  
Showing connection of all intermediate bracing.

1972

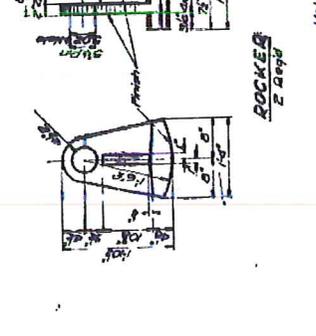
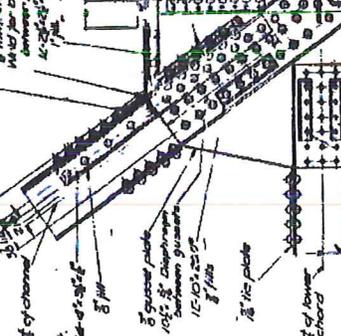
1. At 2nd floor beam, provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure.



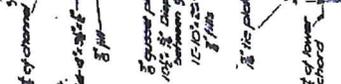
2. At 1st floor beam, provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure.



3. At 2nd floor beam, provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure.



4. At 1st floor beam, provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure. Provide 1/2" dia. steel pins, spaced 24" on center, for connection to roadway structure.



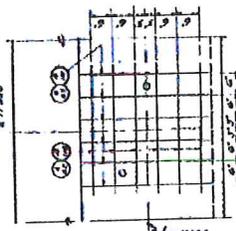
DETAILS OF END FLOOR BEAM CONNECTIONS  
 ROCKERS  
 FIXED SHOE  
 NOTES  
 SECTION A-A  
 PART PLAN AT END OF FLOOR BEAM



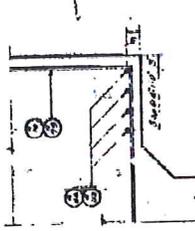
NR 547A (1935)

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1935	3	J. H. B.	3
1935	4	J. H. B.	4
1935	5	J. H. B.	5
1935	6	J. H. B.	6
1935	7	J. H. B.	7
1935	8	J. H. B.	8
1935	9	J. H. B.	9

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17-1199  
17-1200



GRID DETAIL



PART SECTION AT BOTTOM OF COLUMN

**SOUTH ABUTMENT ESTIMATED QUANTITIES**

Concrete	28,000 cu yds
Reinforcement	12,000 lbs
Steel fabric reinforcement	42,000 sq ft
Formwork	20,000 sq ft
Excavation	10,000 cu yds
Gravel	10,000 cu yds
Earthwork	10,000 cu yds

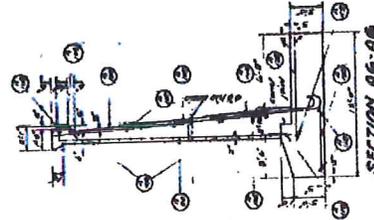
**GENERAL NOTES**

For concrete proportions see Special Provisions. Reinforcement shall be as shown on drawings unless otherwise specified by Division with a note. The form and finish shall be as shown on drawings.

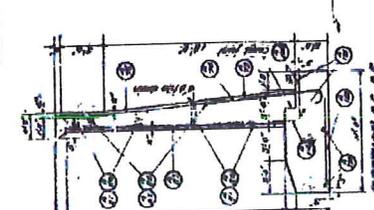
WEST VIRGINIA HIGHWAY COMMISSION  
SOUTH ABUTMENT DETAILS  
FOR THE  
**CENTRAL ST. BRIDGE**  
CITY OF CHARLESTON - CHAPMAN CO.  
DESIGNED BY  
J. H. B. BROWN  
SUPERVISOR OF HIGHWAYS  
APPROVED BY  
W. H. H. H. H. H.  
COMMISSIONER OF HIGHWAYS

**STRUCTURE PLAN**

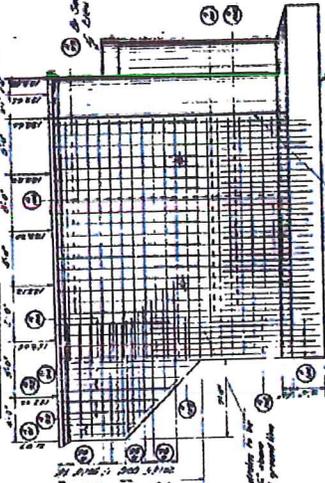
Note: For every reinforcement bar, check drawing for correct size and spacing.



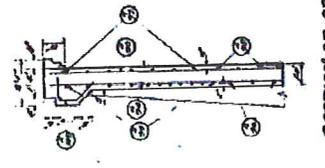
SECTION A6-A6



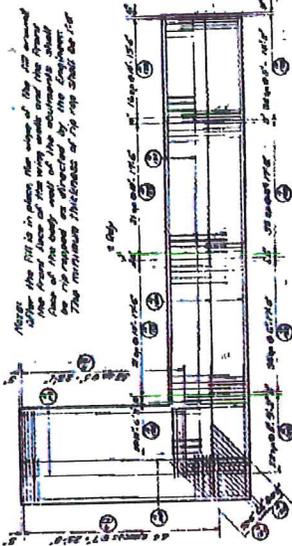
SECTION A5-A5



ELEVATION 3-3

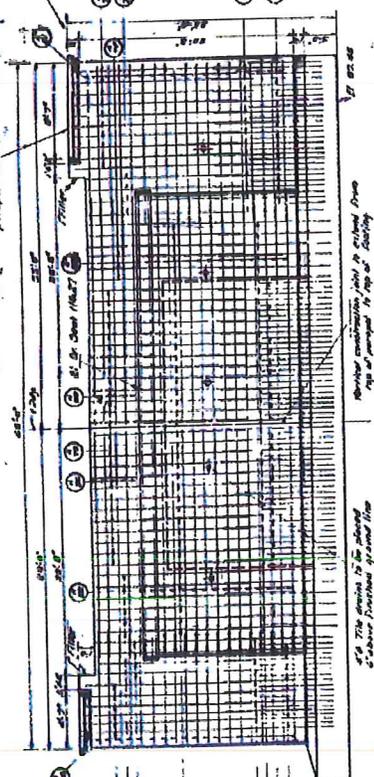


SECTION A7-A7



FOOTING PLAN

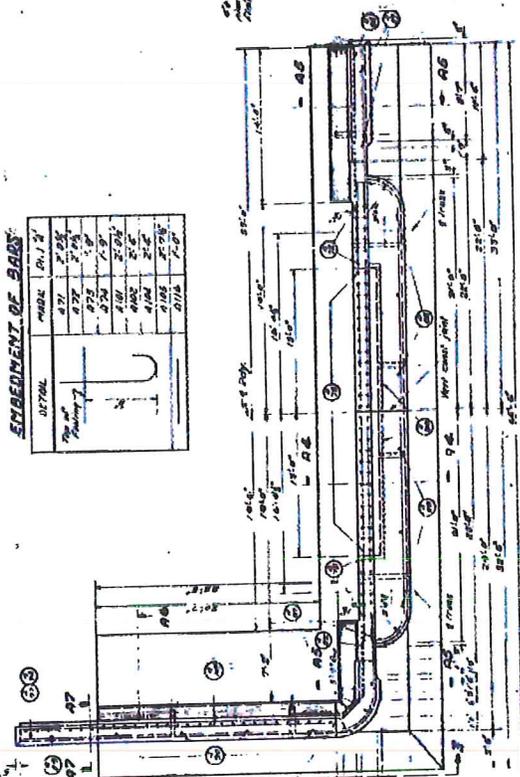
Note: After the fill is in place, the top of the footing shall be finished to the top of the abutment. The footing shall be finished to the top of the abutment. The minimum thickness of the top shall be 12 inches.



ELEVATION

**EMBEDMENT OF BARS**

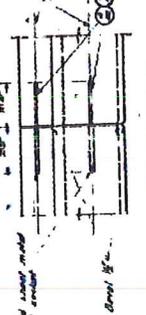
BAR	NO.	SIZE	EMBEDMENT
1	1	1/2"	12"
2	2	3/4"	12"
3	3	1/2"	12"
4	4	3/4"	12"
5	5	1/2"	12"
6	6	3/4"	12"
7	7	1/2"	12"
8	8	3/4"	12"
9	9	1/2"	12"
10	10	3/4"	12"
11	11	1/2"	12"
12	12	3/4"	12"
13	13	1/2"	12"
14	14	3/4"	12"
15	15	1/2"	12"
16	16	3/4"	12"
17	17	1/2"	12"
18	18	3/4"	12"
19	19	1/2"	12"
20	20	3/4"	12"



PLAN



VERTICAL IN JOINT



CONSTRUCTION JOINT DETAILS

VERTICAL IN BODY

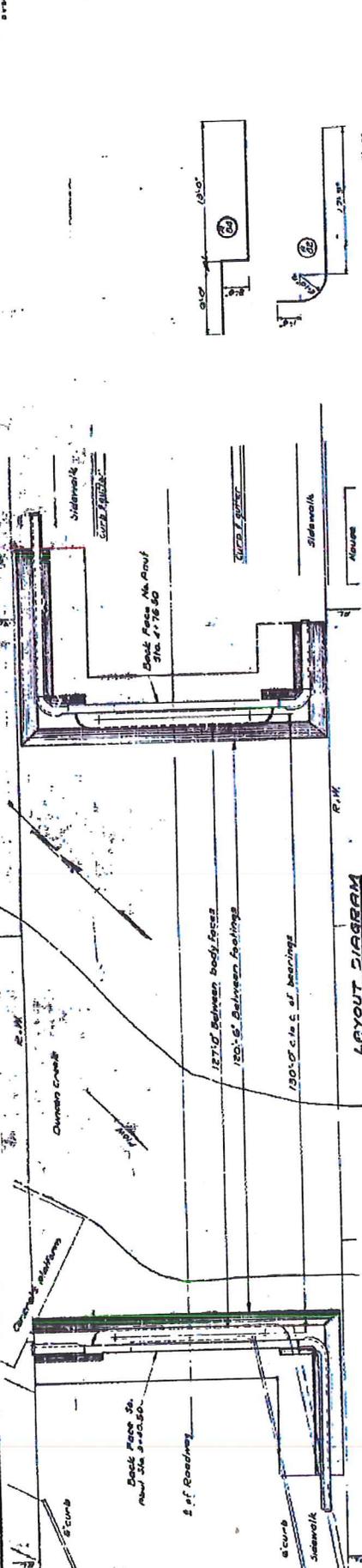
VERTICAL IN JOINT

CONSTRUCTION JOINT DETAILS

X 6229

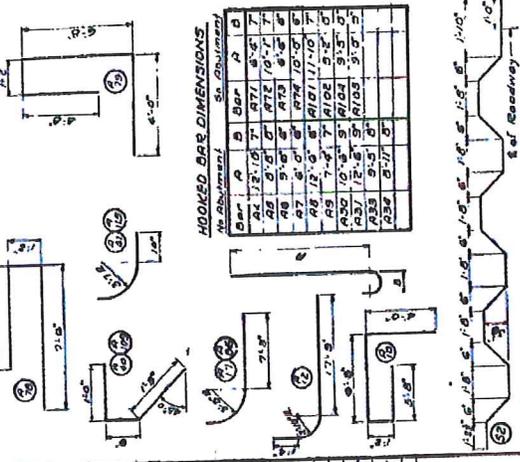


DATE	10-23-35	NO.	9
BY	S. A. T.	REV.	



LAYOUT OF BARS

NORTH ABUTMENT		SOUTH ABUTMENT		SUPERSTRUCTURE	
No.	Bar	Location	Location	No.	Bar
1	A1	Vertical in body	Vertical in body	1	A1
2	A2	Horizontal in body	Horizontal in body	2	A2
3	A3	Vertical in body	Vertical in body	3	A3
4	A4	Horizontal in body	Horizontal in body	4	A4
5	A5	Vertical in body	Vertical in body	5	A5
6	A6	Horizontal in body	Horizontal in body	6	A6
7	A7	Vertical in body	Vertical in body	7	A7
8	A8	Horizontal in body	Horizontal in body	8	A8
9	A9	Vertical in body	Vertical in body	9	A9
10	A10	Horizontal in body	Horizontal in body	10	A10
11	A11	Vertical in body	Vertical in body	11	A11
12	A12	Horizontal in body	Horizontal in body	12	A12
13	A13	Vertical in body	Vertical in body	13	A13
14	A14	Horizontal in body	Horizontal in body	14	A14
15	A15	Vertical in body	Vertical in body	15	A15
16	A16	Horizontal in body	Horizontal in body	16	A16
17	A17	Vertical in body	Vertical in body	17	A17
18	A18	Horizontal in body	Horizontal in body	18	A18
19	A19	Vertical in body	Vertical in body	19	A19
20	A20	Horizontal in body	Horizontal in body	20	A20
21	A21	Vertical in body	Vertical in body	21	A21
22	A22	Horizontal in body	Horizontal in body	22	A22
23	A23	Vertical in body	Vertical in body	23	A23
24	A24	Horizontal in body	Horizontal in body	24	A24
25	A25	Vertical in body	Vertical in body	25	A25
26	A26	Horizontal in body	Horizontal in body	26	A26
27	A27	Vertical in body	Vertical in body	27	A27
28	A28	Horizontal in body	Horizontal in body	28	A28
29	A29	Vertical in body	Vertical in body	29	A29
30	A30	Horizontal in body	Horizontal in body	30	A30
31	A31	Vertical in body	Vertical in body	31	A31
32	A32	Horizontal in body	Horizontal in body	32	A32
33	A33	Vertical in body	Vertical in body	33	A33
34	A34	Horizontal in body	Horizontal in body	34	A34
35	A35	Vertical in body	Vertical in body	35	A35
36	A36	Horizontal in body	Horizontal in body	36	A36
37	A37	Vertical in body	Vertical in body	37	A37
38	A38	Horizontal in body	Horizontal in body	38	A38
39	A39	Vertical in body	Vertical in body	39	A39
40	A40	Horizontal in body	Horizontal in body	40	A40
41	A41	Vertical in body	Vertical in body	41	A41
42	A42	Horizontal in body	Horizontal in body	42	A42
43	A43	Vertical in body	Vertical in body	43	A43
44	A44	Horizontal in body	Horizontal in body	44	A44
45	A45	Vertical in body	Vertical in body	45	A45
46	A46	Horizontal in body	Horizontal in body	46	A46
47	A47	Vertical in body	Vertical in body	47	A47
48	A48	Horizontal in body	Horizontal in body	48	A48
49	A49	Vertical in body	Vertical in body	49	A49
50	A50	Horizontal in body	Horizontal in body	50	A50
51	A51	Vertical in body	Vertical in body	51	A51
52	A52	Horizontal in body	Horizontal in body	52	A52
53	A53	Vertical in body	Vertical in body	53	A53
54	A54	Horizontal in body	Horizontal in body	54	A54
55	A55	Vertical in body	Vertical in body	55	A55
56	A56	Horizontal in body	Horizontal in body	56	A56
57	A57	Vertical in body	Vertical in body	57	A57
58	A58	Horizontal in body	Horizontal in body	58	A58
59	A59	Vertical in body	Vertical in body	59	A59
60	A60	Horizontal in body	Horizontal in body	60	A60
61	A61	Vertical in body	Vertical in body	61	A61
62	A62	Horizontal in body	Horizontal in body	62	A62
63	A63	Vertical in body	Vertical in body	63	A63
64	A64	Horizontal in body	Horizontal in body	64	A64
65	A65	Vertical in body	Vertical in body	65	A65
66	A66	Horizontal in body	Horizontal in body	66	A66
67	A67	Vertical in body	Vertical in body	67	A67
68	A68	Horizontal in body	Horizontal in body	68	A68
69	A69	Vertical in body	Vertical in body	69	A69
70	A70	Horizontal in body	Horizontal in body	70	A70
71	A71	Vertical in body	Vertical in body	71	A71
72	A72	Horizontal in body	Horizontal in body	72	A72
73	A73	Vertical in body	Vertical in body	73	A73
74	A74	Horizontal in body	Horizontal in body	74	A74
75	A75	Vertical in body	Vertical in body	75	A75
76	A76	Horizontal in body	Horizontal in body	76	A76
77	A77	Vertical in body	Vertical in body	77	A77
78	A78	Horizontal in body	Horizontal in body	78	A78
79	A79	Vertical in body	Vertical in body	79	A79
80	A80	Horizontal in body	Horizontal in body	80	A80
81	A81	Vertical in body	Vertical in body	81	A81
82	A82	Horizontal in body	Horizontal in body	82	A82
83	A83	Vertical in body	Vertical in body	83	A83
84	A84	Horizontal in body	Horizontal in body	84	A84
85	A85	Vertical in body	Vertical in body	85	A85
86	A86	Horizontal in body	Horizontal in body	86	A86
87	A87	Vertical in body	Vertical in body	87	A87
88	A88	Horizontal in body	Horizontal in body	88	A88
89	A89	Vertical in body	Vertical in body	89	A89
90	A90	Horizontal in body	Horizontal in body	90	A90
91	A91	Vertical in body	Vertical in body	91	A91
92	A92	Horizontal in body	Horizontal in body	92	A92
93	A93	Vertical in body	Vertical in body	93	A93
94	A94	Horizontal in body	Horizontal in body	94	A94
95	A95	Vertical in body	Vertical in body	95	A95
96	A96	Horizontal in body	Horizontal in body	96	A96
97	A97	Vertical in body	Vertical in body	97	A97
98	A98	Horizontal in body	Horizontal in body	98	A98
99	A99	Vertical in body	Vertical in body	99	A99
100	A100	Horizontal in body	Horizontal in body	100	A100



WISCONSIN HIGHWAY COMMISSION  
 BILL OF BARS LAYOUT  
 CENTRAL STREET BRIDGE  
 City of Chesham Falls - Chippewa Co.

Notes: See detail reinforcement dimensions apply along of bar.

1329-X

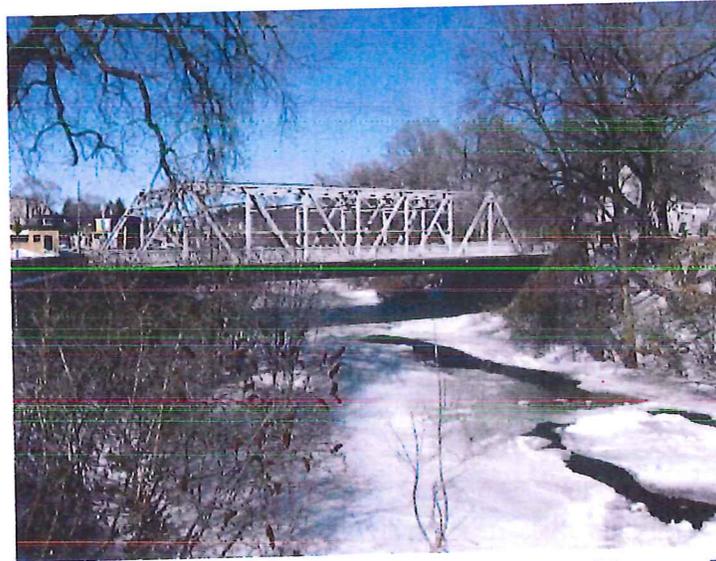
STRUCTURE PLAN



**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION**

**Inspection Report for  
P-09-715 ( CENTRAL ST. )**

**Central Street over Duncan Creek  
Feb 11, 2019**



Type	Prior	Frequency (mos)	Performed
Routine	09-27-18	24	X
Fracture Critical	09-27-18	24	X
Interim	03-01-15	0	
Load Posted Verification (dt2122)	02-24-15	0	
Reach All	09-27-18	24	X
SIA Review	09-27-16	48	

Latitude 44°56'13.50"N  
Longitude 91°23'28.30"W

Owner CITY  
Maintainer CITY

**Time Log**

**Team members**

Hours	Minutes	Team members
6	0	Jim Kast Craig Hampton

Inspector	Name	Number	Signature	Signature Date
	Krejci, Wayne J	6504	Wayne J Krejci E-signed by Wayne J Krejci(waynekrejci)	02-13-19

**BRIDGE INSPECTION REPORT**  
**Wisconsin Department of Transportation**  
**DT2007 2003 s.84.17 Wis. Stats.**

page 2

**Identification & Location**

Feature On: Central Street	Section Town Range: S06 T28N R08W	Structure Number: <b>P-09-715</b>
Feature Under: Duncan Creek	County: CHIPPEWA	Structure Name: CENTRAL ST.
Location 0.1 M E STH 124	Municipality: CHIPPEWA FALLS	

**Geometry**

measurements in feet, except where noted

Approach Roadway Width: 42	Bridge Roadway Width: 30.0	Total Length: 135.0
Approach Pavement Width: 42	Deck Width: 48.4	Deck Area (sq ft): 6560

**Traffic**

	Lanes	ADT	ADT year	Traffic Pattern
On	2	3180	2015	TWO WAY TRAFFIC

**Capacity**

**Load Rating**

Inventory rating: HS18	Overburden depth (in): 0.0	Last rating date: 02-14-14	Controlling:
Operating rating: HS27	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location:
Posting: 40 TON	Re-rate notes:		

**Classification**

Scour Critical Code(113): (8) STABLE-ABOVE TOP FOOTING	Q100 (ft <sup>3</sup> /sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficiency #: 53.2

**Span(s)**

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	STEEL	OVERHEAD TRUSS		130.4	Y

**Expansion joint(s)**

<b>Temperature:</b>	File:	New:
---------------------	-------	------

**Clearance**

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical On Cardinal	13.75		
Horizontal On Cardinal			

**Construction History**

Year	Work Performed	FOS id
1989	PAINTING	
1934	NEW STRUCTURE	

**Maintenance Items**

Item	Priority	Recommended by	Status	Status change
Superstructure - Steel Repair/Strengthen	HIGH	Krejci, Wayne J (6504)	IDENTIFIED	02/13/19
Replace some lower chord plate bracing. Clean and paint lower chord.				
IMP-Deck Replacement	HIGH	Krejci, Wayne J (6504)	IDENTIFIED	02/13/19

**BRIDGE INSPECTION REPORT**  
Wisconsin Department of Transportation  
DT2007 2003 s.84.17 Wis. Stats.

Structure No.: P-09-715

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**Elements**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	12		<b>Reinforced Concrete Deck</b>	SF	6,561	0	1,561	4,000	1,000
			Delamination - Spall - Patched Area	SF		0	0	0	1,000
		1080	<b>Spalls in bays 2,4,5 and over East abutment. Spalls have broken bottom mat of rebar. Spall in bay 2 coincides with potholes on top of deck. Threat of local failure possible in a couple locations. Spall located mainly in bay near centerline.</b>						
		1130	Cracking (RC) Transverse <b>and longitudinal cracking getting severe in bay 3 and 6 with loss of concrete a possibility soon.</b>	SF		0	1,561	4,000	0
		8000	Wearing Surface (Bare)	SF	6,561	4,461	2,100	0	0
		3210	Debonding/Spall/Patched Area/Pothole <b>Spall in bay 2 coincides with potholes on top of deck. Threat of local failure possible in a couple locations.</b>	SF		0	100	0	0
	3220	Crack (Wearing Surface) Transverse <b>spaced throughout deck. Some longitudinal.</b>	SF		0	2,000	0	0	
X	113		<b>Steel Stringer</b> 14 rows	LF	1,750	0	1,500	250	0
		1000	Corrosion <b>Outside stringers over lower chords, mostly near abutments showing section loss. Top flanges on rest of stringers over lower chords paint gone.</b>	LF		0	1,500	250	0
X	120		<b>Steel Truss</b>	LF	269	0	219	50	0
			Corrosion <b>Both trusses have slight section loss to lower chords. Mainly on inside channels on West ends. North truss worse NL0-NL1 NL1-NL2 Section loss to both channel webs and lower flanges. Plate bracing around these areas have section loss with distortion.</b>	LF		0	219	50	0
		8516	Painted Steel	SF	1,076	0	0	876	200
	3440	Effectiveness (Steel Protective Coatings) <b>Freckled rust on lower chords with paint flaking. Paint gone in few areas around plate bracing and connections.</b>	SF		0	0	876	200	
X	152		<b>Steel Floor Beam</b>	LF	288	0	224	64	0
		1000	Corrosion FB1 and FB 9 <b>top flanges worse with slight section loss towards connections. Top flanges of all other mainly toward connections.</b>	LF		0	224	64	0
X	162		<b>Steel Gusset Plate</b>	EA	26	0	0	26	0
		1000	Corrosion Bottom of gusset plates where connects to lower chord. <b>Pack rust beginning at edges.</b>	EA		0	0	26	0

**BRIDGE INSPECTION REPORT**  
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Structure No.: **P-09-715**

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X	215		Reinforced Concrete Abutment	LF	94	84	10	0	0	
		1080		Delamination - Spall - Patched Area	LF		0	4	0	0
				<b>East abutment</b> under North truss bearing. <b>West abutment</b> under South truss bearing						
1130		Cracking (RC)	LF		0	6	0	0		
		West abutment 2, East abutment 4								
X	311		Moveable Bearing	EA	2	0	2	0	0	
			East							
1000		Corrosion	EA		0	2	0	0		
		Freckled rust.								
X	313		Fixed Bearing	EA	2	0	2	0	0	
			West							
1000		Corrosion	EA		0	2	0	0		
		Freckled rust.								
X	330		Metal Bridge Rail	LF	269	0	229	40	0	
		1000		Corrosion	LF		0	229	40	0
				Rusted through at some posts.						
X	8400		Integral Wingwall	EA	4	4	0	0	0	

**Assessments**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9004		Drainage - Drainage Along Structure (Deck Drains)	EA	12	12	0	0	0
X	9009		Sidewalk Rebar showing North edge - 80 LF, South edge - 5 LF, 3 Longitudinal cracks South, 19 Transverse North, <b>Spalls spaced along edge where meets deck. Transverse cracking at connections.</b>	EA	268	0	108	160	0
X	9033		Signs - Vertical Clearance 13'-8"	EA	2	2	0	0	0
X	9034		Signs - Weight Limit Posting 40 TON	EA	4	4	0	0	0
X	9169		Lateral Bracing <b>Freckled rust paint flaking</b>	EA	8	0	8	0	0
X	9323		Approach Roadway - Asphalt	EA	2	0	2	0	0

**NBI Ratings**

	File	New
Deck	5	4
Superstructure	5	5
Substructure	6	5
Culvert	N	N
Channel	8	8
Waterway	8	8

**BRIDGE INSPECTION REPORT**  
**Wisconsin Department of Transportation**  
**DT2007 2003 s.84.17 Wis. Stats.**

**INSPECTION  
REPORT**

Structure No.: **P-09-715**

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**Structure Specific Notes**

--

**Inspection Specific Notes**

<b>Second part of Fracture Critical Inspection. Could not get A62 Truck until now.</b> <b>Consider lowering weight limit posting due to deck condition. Potholes in top of deck coinciding with spalls on bottom.</b>
--

**Inspector Site-Specific Safety Considerations**

--

**Structure Inspection Procedures**

Inspection done in two parts. 1st part requires scissors lift to inspect verticals, upper and middle connections. 2nd part requires A60 Reach-All Unit to inspect lower chord, floor beam and connections.
--

**Special Requirements**

	Chk	Hours	Cost	Comments
A62 Reach-All Unit	X	2.0		
Other Access Equipment	X			Scissors lift.
Traffic Control	X			City supplies.

**Underwater Probe Form  
P-09-715**

**General Site Conditions - Scour**

--

**General Site Conditions - Embankment Erosion/Conditions**

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**Substructure Notes**

Chk	Unit	Max Water Depth(ft)	Mode	Notes
X	Cardinal		Dry	
X	Non Cardinal		Dry	

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**Routine  
Document Comment/Description**

NW bearing  
NLO



page 8

**Routine**

**Document Comment/Description**

Spall bay 2



page 9

**Routine**

**Document Comment/Description**

Spalls bay 4 and 5



ReachAll

Document Comment/Description

East end spall



ReachAll

Document Comment/Description

Bay 4 spall



ReachAll  
Document Comment/Description

Bay 2 spall



**ReachAll**

**Document Comment/Description**

NL0 lower chord channels and plate bracing



**ReachAll**  
**Document Comment/Description**

Stringer above lower chord West end.





**Non-Image Documents**

<b>Type</b>	<b>Document</b>	<b>Document Comment/Description</b>	<b>Attached</b>
FractureCritical	p09-715_19_Fd1.pdf		X

## Sufficiency Rating Calculations

		Treatment Alternatives				
		1) Existing/Do Nothing	2) Truss Rehab & Polymer Deck Overlay	3) Truss Rehab & LSCO Deck Overlay	4) Truss Rehab & Deck Replacement	5) Structure Replacement
<b>S1</b>	Superstructure (59) Rating	5	6	6	8	9
	Substructure (60) Rating	5	7	7	7	9
	Inventory Rating	18	18	18	18	22
	IR (metric tons)	29.16	29.16	29.16	29.16	35.93
	A = (Lookup rating)	10	0	0	0	0
	B = (32.4 - IR) <sup>1.5</sup> *0.3254	1.90	1.90	1.90	1.90	0.00
	<b>S1 = 55 - (A+B) =</b>	<b>43.10</b>	<b>53.10</b>	<b>53.10</b>	<b>53.10</b>	<b>55.00</b>
<b>S2</b>	Deck (58) Rating	4	8	8	9	9
	Structure Evaluation (67) Rating	5	7	7	7	9
	Deck Geometry (68) Rating	3	3	3	3	9
	UnderClearance (69) Rating	N	N	N	N	N
	Water Adequacy (71) Rating	8	8	8	8	9
	Approach Alignment (72) Rating	3	6	6	6	9
	ADT (29)	3180	3180	3180	3180	3180
	Road Way Width (51) in meters	9.14	9.14	9.14	9.14	14.63
	Approach Width (32) in meters	9.14	9.14	9.14	9.14	14.63
	Number of Lanes (28)	2	2	2	2	2
	Structure Type (43)	10	10	10	10	6
	Vertical Clearance (53) in meters	4.19	4.19	4.19	4.19	99.99
	STRAHNET (100)	0	0	0	0	0
	Traffic Pattern (102)	2	2	2	2	2
	X = ADT/# Lanes	1590	1590	1590	1590	1590
	Y = Width/# Lanes	4.57	4.57	4.57	4.57	7.315
	A = (Lookup Deck)	3	0	0	0	0
	B = (Lookup Struct. Eval.)	1	0	0	0	0
	C = (Lookup Deck Geo.)	4	4	4	4	0
	D = (Lookup UnderClearance)	0	0	0	0	0
	E = (Lookup Waterway)	0	0	0	0	0
	F = (Lookup Approach)	4	0	0	0	0
	G = 5% if Bridge width + 2 < Road	0	0	0	0	0
	H =	15	0	0	0	0
	I =	2	2	2	2	0
	J = (A + B + C + D + E + F)	12	4	4	4	0
	<b>S2 = 30 - (J + (G + H) + I) =</b>	<b>1</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>30</b>
<b>S3</b>	ADT (29)	3180	3180	3180	3180	3180
	Detour Length (19) kilometers	3	3	3	3	3
	K = S1 + S2 / 85	0.52	0.91	0.91	0.91	1.00
	A = ADT * Detour X 15 / 200000K	0.86	0.49	0.49	0.49	0.44
	B = 2% if STRAHNET	0	0	0	0	0
	<b>S3 = 15 - (A + B)</b>	<b>14.14</b>	<b>14.51</b>	<b>14.51</b>	<b>14.51</b>	<b>14.56</b>
<b>S4</b>	Detour Length (19) kilometers	3	3	3	3	3
	Structure Type (43)	10	10	10	10	6
	Traffic Safety (36) Zero Digit Count	0	0	0	0	0
	A = detour <sup>4</sup> * 5.205x10 <sup>-8</sup>	0.00	0.00	0.00	0.00	0.00
	B = 5% if thru truss/arch, move,sus	5	5	5	5	0
	C = ZDC - 1 if ZDC >=2	0	0	0	0	0
	<b>S4 = A + B + C</b>	<b>5.00</b>	<b>5.00</b>	<b>5.00</b>	<b>5.00</b>	<b>0.00</b>
<b>SR = S1 + S2 + S3 + S4</b>	<b>53.2</b>	<b>86.6</b>	<b>86.6</b>	<b>86.6</b>	<b>99.6</b>	

**RESOLUTION REGARDING 2020 SPECIAL ASSESSMENT RATES**

**BE IT HEREBY RESOLVED BY THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN:**

That the following schedule be and is hereby adopted as the front foot special assessment rates to be charged against abutting property for the installation of the following facilities in the City of Chippewa Falls, WI.

1. Grading and Graveling - \$18.25 per front foot of abutting property.
2. Sanitary Sewer Main
  - a) New construction - \$28.00 per front foot of abutting property
  - b) Replacement - \$28.00 per front foot of abutting property, prorated for 75 year life of old main.
3. Water Main
  - a) New construction - \$29.50 per front foot of abutting property
  - b) Replacement - \$29.50 per front foot of abutting property, prorated for 75 year life of old main
4. Curb and Gutter
  - a) New construction - 100% of the cost, as bid annually.
  - b) Replacement - 100% of the cost of removal & replacement, as bid annually.
5. Preparation for Curb and Gutter on streets that have been graded and graveled in a previous year.
  - a) \$3.00 per front foot of abutting property.
6. Sanitary Sewer Laterals
  - a) New construction - 100% of the cost.
  - b) Replacement - \$1,085.00/each.
7. Water Services (Actual Cost) New and replacement, in accordance with Public Service Commission rules.
8. Sidewalks
  - a) New construction - 100% of the cost.
  - b) Replacement - 100% of the cost.
9. Driveways
  - a) New construction - 100% of the cost
  - b) Replacement - 100% of the cost

**Resolution No. 2020-**

- 10. Street Surfacing -Assessed per front foot of abutting property based on street width:
  - a) \$19.75 for 34' face of curb to face of curb or wider.
  
- 11. Retaining Walls
  - a) New construction - 100% of the cost.
  - b) Replacement - 100% of the cost.

All Resolutions in conflict herewith are hereby repealed.

This Resolution shall be effective immediately upon passage.

Dated this 4<sup>th</sup> day of February, 2020.

ADOPTED: \_\_\_\_\_

\_\_\_\_\_  
Council President

APPROVED: \_\_\_\_\_  
Mayor

ATTEST: \_\_\_\_\_  
City Clerk

DRAFT

**RESOLUTION REGARDING SPECIAL CHARGES  
FOR ALLEY SURFACING**

BE IT HEREBY RESOLVED BY THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS,  
WISCONSIN:

That alley paving authorized by the City Council be done with hot mix;

That property abutting the alley be charged at the rate of \$8.00 per front foot abutting the  
alley;

All resolutions in conflict herewith are hereby repealed;

This resolution shall be effective immediately upon passage.

Dated this 4<sup>th</sup> day of February, 2020.

ADOPTED: \_\_\_\_\_

\_\_\_\_\_  
Council President

APPROVED: \_\_\_\_\_

Mayor

ATTEST: \_\_\_\_\_

City Clerk

PUBLISHED: \_\_\_\_\_



# CITY OF CHIPPEWA FALLS STREET USE PERMIT APPLICATION

Rec'd 1/2/20

Applicant Name and Address: Taylor Huppert - 3 South High Street, Chippewa Falls, WI 54729	Applicant Phone Number: 715-726-9000
---	---

<input checked="" type="checkbox"/> Please check here if the applicant is the individual in charge of the event. If not, please indicate Name, Address and Phone Number of responsible individual.	Name, Address and Phone Number of the headquarters of the organization and responsible head of such organization: CVCA/Heyde Center for the Arts 3 South High Street, Chippewa Falls, WI 54729 715-726-9000
--	--

Name of the event: Dinner over the Duncan	Estimated number of persons participating: 125
--	---

Date and start and end times requested for street use:  
Thursday, September 10, 2020 from 2 pm - 10 pm

Accurate description of the portion of the street or streets being requested for use (attach maps if necessary):  
Portion of Spring Street to include Rainbow Marsh Bridge, from Hwy 124 to High Street.

Use, described in detail, for which the street use permit is requested:  
A formal dinner celebrating our community and the arts.

City services requested for the event (e.g., Street Department or Police Department staff time)  
Lights and outlets active by 2:00 pm on day of event, barricades delivered to location - event staff will set up.

The applicant agrees to indemnify, defend, and hold the City and its employees and agents harmless against all claims, liability, loss, damage or expense incurred by the City or account of any injury to, or death of, any persons or any damage to property caused by or resulting from the activities for which the permit is granted. This Street Use Permit for the event may be terminated by the Chippewa Falls Police Department if the health, safety, and welfare of the public appears to be endangered by the activities or if the event is in violation of any of the conditions of the permit or regulations adopted by the Common Council. **Applicant understands they shall be present when the Board of Public Works or City Council considers the request for Street Use Permit. Failure to appear may be grounds for denial of the requested permit.**

*Taylor Huppert* \_\_\_\_\_ 12/19/2019  
Signature of Applicant Date

### OFFICE USE ONLY

Estimated cost of City services requested (to be completed by Police Chief and Director of Public Works):  
*City Street Dept. staff to drop off and pick up traffic control barricades*  
*Estimate is 2 staff - 2 hrs each = 4 hrs @ \$50/hr = \$200*  
*Note from CPD 1/3/20* *1/2/20*

Requirements of Applicant:

Approved by: *[Signature]* 1-3-20 \_\_\_\_\_  
Signature of Chief of Police

*[Signature]* PE 1/02/2020 \_\_\_\_\_  
Signature of Director of Public Works

Recommendation of Board of Public Works (if required):  Approved  Denied

Decision of City Council (required):  Approved  Denied