

Cost Estimates for all Structures:

NBI 03932, 04951, 04781 - PDF Page 2

NBI 15089 - PDF Page 3 (Estimate on PDF Page 37)

NBI 13688 - PDF Page 41

NBI 12629, 12630 - PDF Page 43

NBI 12596 - PDF Page 46

NBI 01751 - PDF Page 47

From: Greg Allen <greg.allen@srbok.com>
Sent: Monday, March 11, 2024 2:26 PM
To: Charles Sims <CSIMS@ODOT.ORG>
Cc: Michael Flynn <Michael.Flynn@odot.ok.gov>
Subject: [EXTERNAL] RE: US-60 cost estimates.

Charles,

We are currently anticipating that all three RCBs will be extended to both sides and will include standard wings and aprons. The following is currently planned:

			Left	Right	Cost
			Extension	Extension	Estimate
Bridge C	NBI 03982	3-10'x4'	2'	70'	\$275,000.
Bridge D	NBI 04951	5-10'x7'	60'	12'	\$865,000.
Bridge E	NBI 04781	2-8'x3', skewed	85'	16'	\$415,000.

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BRIDGE ASSESSMENT REPORT

**JP 35601(04)
SH-66 OVER SALT
CREEK
NBI 15089**

Lincoln County

Final Assessment Report

November 2022

Olsson Project No. 022-01427



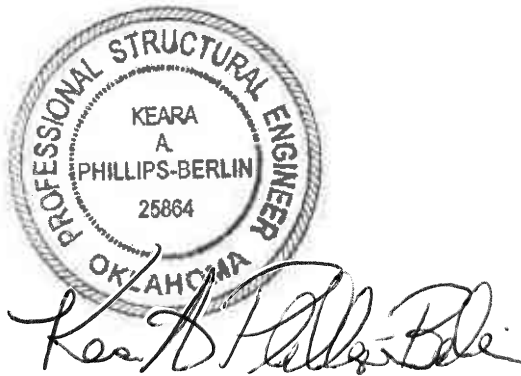
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ENGINEER'S CERTIFICATION

I hereby certify that this Bridge Assessment Report for the Bridge NBI 15089 carrying SH-66 over Salt Creek, was prepared by Olsson under my direct supervision for the Oklahoma Department of Transportation.



Keara Phillips-Berlin, PE, SE

Olsson

CA #2483

Exp. 6/30/2023

EXECUTIVE SUMMARY

Scope

The following reports summarize the Bridge Rehabilitation field assessment for Bridge NBI 15089 carrying SH-66 over Salt Creek in Lincoln County, OK. Olsson performed the bridge assessments for the Oklahoma Department of Transportation under contract CI2261A. All on-site assessments were performed by and under the direction of Professional Engineers licensed in the State of Oklahoma. Photo documentation of current site conditions is compiled herein.

Rehabilitation is to be performed under JP 35601(04).

NBI 15089 is composed of 3 (30'-60'-30') simply supported steel spans and has an overall curb-to-curb width of 28'-0" and raised 18" safety curbs. The bridge built in 1960 and at the time of assessment was last inspected in August of 2022. The bridge has a sufficiency rating of 59.0 and is considered At Risk because the deck and substructure each have a condition rating of 5 (fair). Superstructure has a rating of 6 (satisfactory).

Budget

The estimated construction costs are summarized below:

Proposed Repairs	Cost Estimate
<i>Option 1a – Deck Replacement and Beam Repair</i> - New Deck and Bridge Rail, Build-up Beam Sections, Replace Diaphragms, Paint Beams, Spot Repairs on Piers/Abutments, Encase Pier Caps and top of Piles, Bearing Replacement, Repair Undermining at Abutment, Rip Rap	\$621,000.00
<i>Option 2 – Superstructure Replacement – Match Existing Width</i> - New Deck, New Steel Girders & Diaphragms, Encase Pier Caps and top of Piles, Spot Repairs at Abutments, Undermining Repair and Rip Rap, Bearing Replacement	\$784,000.00
<i>Option 3 – Superstructure Replacement – Widen Bridge to 32' Clear</i> - New Deck, New Steel Girders & Diaphragms, Pier Cap Encasement and Substructure Repair and Retrofits, Undermining Repair and Rip Rap, Bearing Replacement	\$959,000.00
Full Bridge Replacement	\$1,310,000.00*

*New Bridge cost based on 32' Clear Roadway, 3 - (50,80,50) Span Structure, assuming \$210/SF, with minor roadway work, and is for comparison only.

These estimates include minor roadway adjustments but do not include costs associated with earthwork.

Existing Condition

The pourable joint seal at transverse deck joints have failed and there are significant and widespread cracks throughout the deck. There is evidence of previous long-term

water infiltration in each span, with accompanying loss of section in areas of the I-beams and diaphragms. Several beam ends have been previously repaired. There is section loss of the bottom flanges and webs of many beam lines, and these areas have active corrosion due to failed paint system. Additionally, several end diaphragms have complete section loss at the web and bottom flanges. Beams were painted in 2001 and bearings at Abutments have been previously replaced.

The piers are in overall fair condition, with areas of cracking and spall in the faces and underside of pier caps, as well as cracking and spall pedestals. Localized spall and exposed rebar is evident in concrete piles. Several areas are hollow upon mallet sounding.

Abutments 1 and 2 each have some cracking in the front face, backwall, and at the interface between the backwall and wingwall. Areas that were previously patched are hollow upon mallet sounding. There is undermining with exposed piles across the entire bridge width at Abutment 2 (East side).

Despite water infiltration, bearing assemblies at abutments are in overall good condition, with only a few areas of visible corrosion. These bearings were previously replaced. Bearings at piers are in more deteriorated condition, with some bearings having partial or full section loss to the vertical stiffener plates.

The existing concrete deck has pop-outs and potholes at several locations, some with exposed reinforcing. Longitudinal and transverse cracking is present throughout and is visible from both the top and underside of the deck. During the site visit, rainwater was visibly seeping through cracks in the deck in all spans, and at end joints. Water was pooling on the top of the abutment seats. The deck soffit also shows efflorescence and cracking, particularly at the piers. Areas of concrete barrier curb exhibit cracking. The steel guard rail has been recently painted.

Recommendations

Each bridge element, Deck, Superstructure, and Substructure, has items that require attention. The deck and substructure, however, are each rated a 5 (Fair), and it is these metrics that classify the bridge as At Risk of becoming structurally deficient. Olsson has compiled repair options to address the current condition of the bridge and raise it from the At Risk classification.

It is recommended that, at a minimum, the deck be replaced as cracking is widespread and causing continued deterioration of the superstructure. **Option 1 – Deck**

Replacement therefore includes replacing the concrete deck (matching the existing out-out dimension of 31' total), building up and painting damaged sections of the steel

girders, replacing damaged diaphragms, replacing the bearings at the piers, and addressing the substructure condition with localized repairs and encasement of the pier caps and concrete piles. **Option 2 – Superstructure Replacement** calls for the removal and replacement of the deck, steel beams and bearings, with localized repairs to the abutments, and encasement of the pier caps in Class A concrete to address damages and allow for new girders. New superstructure would match the current width of 31' total. Abutments may need modification to allow for new, taller beams and bearings. **Option 3 – Superstructure Replacement with Widening** includes replacing the existing deck, all beams and bearings, encasement of the pier caps and concrete piles, and also includes significant retrofits to the piers and abutments to allow for widening of the deck to 32' Clear Roadway.

All three Options share the same set of recommended General Repairs as listed below.

-General Repairs (included in Options 1, 2 and 3)

Loose and spalled concrete at the abutments and piers should be removed, the reinforcing steel cleaned and treated with a zinc-rich coating, and then repaired by encasing both the pier caps and top 4' of the concrete piles. Cracks in Abutment Seats and Backwall should be addressed with epoxy injection.

Bearings at abutments are in good condition but the bearings at piers should be replaced. If new beams are installed, all bearings should be replaced.

Cementitious Low-Strength Material (CLSM or Flowable Fill) shall be installed at the East Abutment. Riprap shall be installed at the West Abutment.

New Thrie-beam connections shall be installed at the end of the new bridge rail. Limited guardrail may be replaced in order to tie into new Thrie-beam connections, and to address any other damaged sections.

Per discussion with ODOT District 3 and Bridge representatives, the preferred repair option is Option 1 – Deck Replacement with encasement of pier caps and a minimum of 4' of the tops of the concrete piles. Piles on the West Pier shall be encased for the full exposed height above the groundline.

1. PROJECT LOCATION MAP

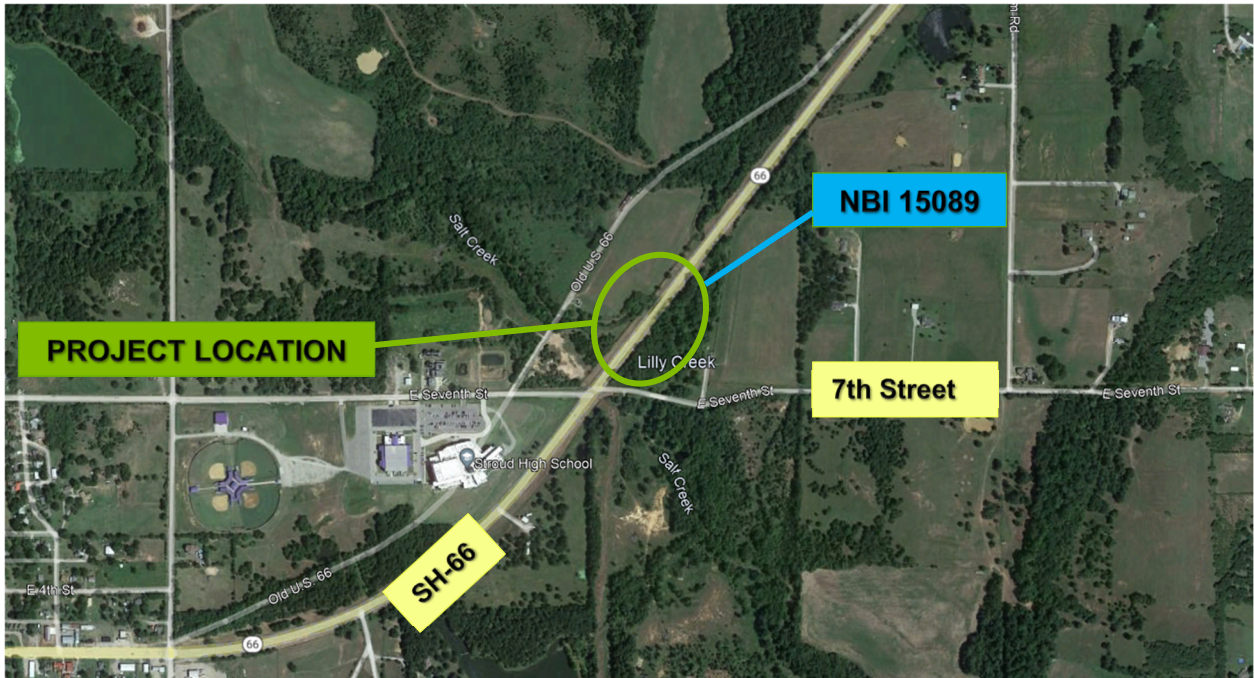
City: NE of Stroud, OK

County: Lincoln

Highway No.: SH-66

Crossing Feature: Salt Creek

NBI No.: 15089



2. CURRENT CONDITIONS

a. Deck

Deck bridge element includes Concrete Deck and Soffit, Deck Joints, Curbs, Traffic Rails, and Guardrail.

Existing Conditions

Regarding the NBI conditional rating, the Deck is in fair (5) condition, with map cracking in the concrete deck, pop-outs/potholes with exposed reinforcing throughout, and some minor cracking at the concrete rail. The wearing surface is no longer effective. Deck soffit is significantly degraded at joints. See Figures 1 – 4 and the Appendices for photo documentation.

Deck

Potholes and cracking are widespread, some with exposed reinforcing. Cracks are visible from the underside of the deck and actively leaking during site visit. Some pop outs have exposed reinforcing on the underside of the deck.

Soffit

The soffit has leeching and efflorescence in some locations. There are some areas of section loss at the bottom of the soffit, particularly at Joints at piers. The concrete safety curb has a few areas of cracking and some minor spall. Scupper drains are present in the deck and are draining adequately.

Joints and Approach Slabs

Finger-style expansion joints were previously retrofitted. Joint sealant has failed and water has infiltrated at piers and abutments. Bridge approaches are asphalt pavement with 32'-0" clear roadway. Concrete approach slabs have large diagonal cracks. Asphalt has been applied over the approaches and end joints and tapers on to existing bridge deck.

Bridge Rail/Guardrail Connection

The current concrete bridge safety curb has some minor cracking and areas of section loss but is in overall good condition. The bridge barrier/guardrail connection is a standard W-beam guardrail at the beginning of the bridge approach.



Fig. 1: Pop-outs and Pothole Repairs. Transverse Cracking in Deck. Deteriorated asphalt wearing surface.



Fig. 2: Cracking, Efflorescence, and active leaking at Underside of Deck. (Condition common throughout)



Fig. 3: Pop out with exposed Reinforcing Steel on Underside of Deck. Note corrosion of Top Flange.



Fig. 4: Underside of Soffit and Scuppers (Typical)



Fig. 5: Typical Retrofitted Finger-style Joint

b. Superstructure

Superstructure bridge element includes steel girders, diaphragms, and bearing assemblies.

Existing Conditions

Regarding the NBI conditional rating, the Superstructure is in satisfactory (6) condition.

There is evidence of water infiltration along underside of the bridge deck. Cracking in the concrete deck and leaking deck joints (which have been previously repaired, but now exhibit cracks and pop-outs) have allowed water access to the beam ends and diaphragms. Abutment bearings were replaced and some beam ends have been replaced.

Beam Ends

Several beam ends have experienced corrosion and section loss. Rust is visible at the contact plane of the top flange to the bridge deck on several girders. Some beam ends have been cut/replaced.

Webs and Flanges

Paint is worn in places and corrosion is showing through in multiple locations.

The top flanges of the beams show some rust and probable section loss. The extent of this will be difficult to determine until the deck is removed. Most end diaphragms at piers are significantly deteriorated, missing the bottom flanges and sections of the webs.

Bearings:

Bearing assemblies are exposed to water infiltration through leaking joints cracks in the deck. Moveable bearings have experienced some section loss. Abutment bearings were recently replaced.

Refer to Figure 6-8 and the Appendices for photo documentation.



Fig. 6: Corrosion and Beam Ends and Diaphragms. Corrosion at top flange of beam. Some (previously painted) section loss at bottom flange of beam, complete section loss at bottom flange of end diaphragms. Corrosion at Bearings. Previously Repaired Beam End



Fig. 7: Corrosion and Section Loss at Bearing and Beam End, West Pier.



Fig. 8: Bearings at Abutments (Typ)

c. Abutments

Existing Conditions

Regarding the NBI conditional rating, the Abutments are in fair (5) condition. See Figures 9-11 and the Appendices for photo documentation.

Abutment 1 (West):

There is moderate cracking and areas of localized delamination on the face of the abutment seat and in the backwall. Some erosion has occurred on the slope. At the time of the site visit, rain was actively passing through the bridge joint and pooling down the backwall.

Abutment 2 (East):

There is moderate longitudinal cracking and areas of localized delamination and spall on the face of the abutment seat.. Undermining has exposed approximately 12" of concrete piles under the abutment seat along the entire width of the bridge. There are diagonal cracks at the backwall/wingwall interface.



Fig. 9: Cracking in Abutment Seat and Exposed Piles at Abutment 2



Fig. 10a: Longitudinal Cracking in face of Abutment Seat (Abutment 2, Facing Northeast)



Fig. 10b: Front Face of Abutment Seat (Abutment 1, Facing West)



Fig. 11: Crack and Water Infiltration at Backwall, Abutment 1, South End.

d. Piers

Element includes Caps, Columns and Web-walls

Existing Conditions

Regarding the NBI conditional rating, the substructure, including the Piers, is listed as fair (5) condition.

There is moderate cracking and spall on both pier caps, particularly on ends. Pier 1 has a longitudinal crack almost the entire width of the cap, approximately 4" from the bottom face. Select pedestals are cracking and degrading. There are vertical cracks and some areas of spall on concrete piles. Refer to Figures 12-16 and the Appendices for photo documentation.



Fig. 12: Pier 1 – Pier 2, Facing West. Cracking in Cap. Spall at North Pile. Note water infiltration through deck joint.



Fig. 13. Pier 1, Facing East. Longitudinal crack along bottom edge



Fig. 14. Vertical Crack in Concrete Pile, Pier 1



Fig. 15. Cracks in Pedestal, Pier 2



Fig. 16. Cracking in Concrete Pile and underside of Pier Cap. Pier 1, Facing West

e. Utilities

Existing Conditions

No utilities are carried on the bridge. Overhead power runs parallel to the bridge but should not be impacted by rehabilitation efforts. An additional (unidentified) buried utility is located parallel to the power lines.



Fig. 17: Overhead Power – North Side of Bridge.



Fig. 18: Buried Utility access to the NW of site.

f. Miscellaneous

Barn Swallow Nests

Mud nests are present on the underside of the deck in several locations.



Fig. 19: Mud Swallow Nests.

3. OPTIONS

This bridge is At Risk for being classified as Structurally Deficient and has a Sufficiency Rating of 59.0. The conditional rating is due to the deteriorated condition of the deck and substructure, as well as damage to the superstructure. The following options describe actions which may be taken to improve the bridge rating. Options for Deck Replacement, Superstructure Replacement, and Superstructure Replacement with Widening are proposed.

a. Option 1 – Deck Replacement

Deck

- Deck
 - Remove existing deck and raised curb/barrier and replace with new 8” deck*
 - Match existing out-out dimensions of 31’*
- Joint
 - Install New Joints at Piers*
- Traffic Railing
 - Install new TR-4 Rail.*
- Sidewalk
- Deck Drains

Superstructure

- Beams
 - Sandblast, Build Up Damaged Sections (including areas previously addressed and top flange as needed)*
- Diaphragms
 - Replace Damaged Diaphragms.*
- Bearings
 - Sandblast clean and re-paint bearings.*
- Painting
 - Paint beams*
- Approach Slabs

Abutments

- Caps and Backwall
 - Epoxy inject cracks in abutments in areas not associated with area of delamination.*
 - Apply Special Concrete Finish to the tops and faces of the abutment and apply Water Repellant to all other exposed areas.*
- Erosion Repair
 - Fill void and encase exposed piles with CLSM at Abutment 2*
 - Install Rip-Rap at Abutments and Piers*

Piers Caps, Pedestals and Pier Walls

- Remove loose and delaminated concrete to a depth behind the reinforcing***
- Epoxy inject cracks in caps/columns in areas not associated with area of delamination.***
- Repair areas of spall and delamination with pneumatically placed mortar or cast-in-place concrete. (Alternate: Encase Pier Caps with 8" of Class A concrete on sides and Bottom.)***
- Once repairs have been made, apply a Special Concrete Finish to the tops and faces of the piers and apply Water Repellant to all other exposed areas.***
- Repair and Encase top 4' (minimum) of Concrete Piles, where vertical cracking is present.***

 Scour Repair**Miscellaneous** Other Major Action(s)

- Install new Thrie-beam connections and GET's.***
- Roadway transition to match final driving surface elevation, as needed.***

b. Option 2 – Superstructure Replacement with Matching Width

Deck

- Deck
 - Remove existing deck and raised curb/barrier and replace with new 8” deck**
 - Match existing out-out dimensions of 31’.**
- Joint
 - Install New Expansion Joints at Piers (or Pier, if 3-span continuous system is installed).**
- Traffic Railing.
 - Install new TR-4 Rail**
- Sidewalk
- Deck Drains

Superstructure

- Beams
 - Replace damaged steel beams with new steel sections (W36x170 used for cost estimate. Possible Savings with new 3-span Continuous instead).**
- Diaphragms
 - Replace diaphragm members and connections.**
- Bearings
 - Replace all bearings at Abutments and Piers.**
- Painting
- Approach Slabs

Abutments

- Caps, Pedestals, Backwall
 - Epoxy inject cracks in abutments in areas not associated with area of delamination.**
 - Retrofit backwall and pedestals (as needed) to account for new bearings and final Superstructure Depth.**
 - Apply Special Concrete Finish to the tops and faces of the abutment and apply Water Repellant to all other exposed areas.**
- Erosion Repair
 - Fill void and encase exposed piles with CLSM at Abutment 2**
 - Install Rip-Rap at Abutments and Piers.**

Piers

- Caps, Pedestals, Pier Walls
 - Remove loose and delaminated concrete to a depth behind the reinforcing**
 - Epoxy inject cracks in caps/columns in areas not associated with area of delamination.**

- Repair areas of spall and delamination with pneumatically placed mortar or cast-in-place concrete. (Alternate: Encase Pier Caps with 8" of Class A concrete on sides and Bottom.)

- Once repairs have been made, apply a Special Concrete Finish to the tops and faces of the piers and apply Water Repellant to all other exposed areas.

-Repair and Encase top 4' (minimum) of Concrete Piles, where vertical cracking is present.

Scour Repair

Miscellaneous

Other Major Action(s)

- Install new Thrie-beam connections and GET's.

-Roadway transition to match final driving surface elevation, as needed.

c. Option 3 – Superstructure Replacement with Widening

Deck

- Deck
 - Remove existing deck and raised curb/barrier and replace with new 8” deck**
 - Widen to 32’ Clear Roadway**

- Joint
 - Install New Expansion Joints at Piers. (or Abutments if 3-span continuous system installed)**

- Traffic Railing.
 - Install new TR-4 Rail**

- Sidewalk
- Deck Drains

Superstructure

- Beams
 - Replace damaged steel beams with new steel sections (W36x170 used for cost estimate. Possible Savings with new 3-span Continuous instead).**
 - Increase Beam Spacing to limit Soffit Overhang or Add Beam Line.**

- Diaphragms
 - Replace diaphragm members and connections.**

- Bearings
 - Replace all bearings at Abutments and Piers.**

- Painting
- Approach Slabs

Abutments

- Caps & Pedestals
 - Remove loose and delaminated concrete to a depth behind the reinforcing**
 - Epoxy inject cracks in caps/columns in areas not associated with area of delamination.**
 - Repair areas of spall and delamination with pneumatically placed mortar or cast-in-place concrete. (Alternate: Encase Pier Caps with 8” of Class A concrete on sides and Bottom.)**
 - Once repairs have been made, apply a Special Concrete Finish to the tops and faces of the piers and apply Water Repellant to all other exposed areas.**
 - Repair and Encase top 4’ of Concrete Piles, where vertical cracking is present.**
 - Adjust pedestal height to account for updated bearing height and beam if needed.**

- Erosion Repair
 - Fill void and encase exposed piles with CLSM**

Piers

- ☒ Caps, Pedestals, Pier Walls
 - Epoxy inject cracks in caps/columns in areas not associated with area of delamination.
 - Remove loose and delaminated concrete to a depth behind the reinforcing
 - Encase Pier Caps 9" on each side, and increase depth of cap to 4'
 - Install new pedestals as needed, depending on final Superstructure Depth
 - Once repairs have been made, apply a Special Concrete Finish to the tops and faces of the piers and apply Water Repellant to all other exposed areas.
- ☒ Scour Repair
 - Encase 4' of exposed piles at Pier with Class A Concrete

Miscellaneous

- ☒ Other Major Action(s)
 - Install new Thrie-beam connections and GET's.
 - Roadway transition to match final driving surface elevation, as needed.

d. Traffic Control

Substructure repairs may be completed without significant interruptions to traffic flow of SH-59B

The detour route for this bridge is 37.9 miles and the ADT is listed as 2100 in the most recent inspection report.

For the sake of structural redundancy, 3 beam lines are required to support traffic during all phases of demolition or construction. The existing bridge has 5 beam lines spaced at 6'-7" c-c (See Figure 21). With the use of temporary traffic signals, a single lane may remain open during at least the first phase of demolition and reconstruction. However, if 3 beam lines must be maintained, keeping a full lane open during the second phase is only possible if the superstructure is widened or with the addition of another beam line.

A possible sequence of construction for superstructure replacement with symmetrical widening, that allows for 1 lane open at all times, is included shown in Figure 22. This sequence assumes a total of 6 beam lines and would require retrofits to piers and abutments.

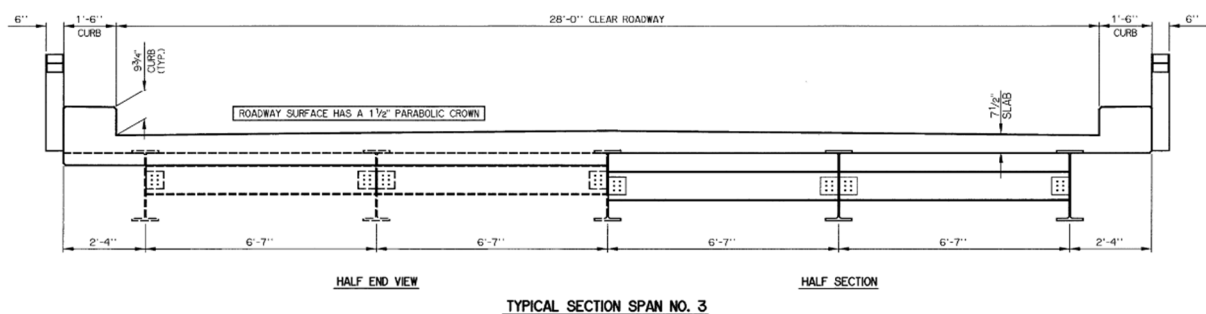


Fig. 20: Existing Cross Section – NBI 15089. Note that this is taken from Standard IB-5-31, and the bridge rail was at some point Replaced with a concrete bridge barrier.

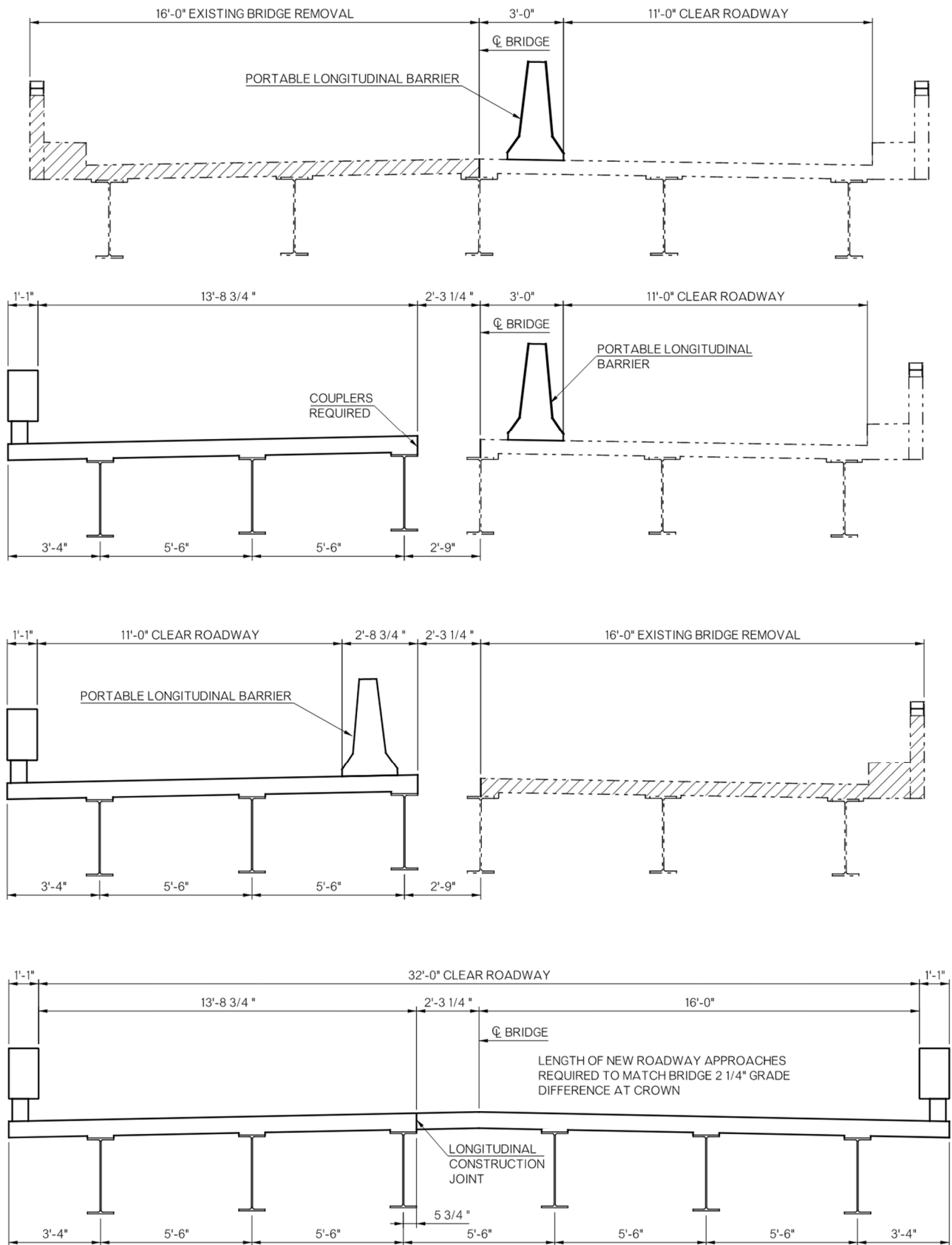


Fig. 21: Possible Phased Construction Sequence with Widening

e. Plan Requirements

The design plans for this project will resemble a set of PS&E documents for a standard ODOT project.

f. Recommended Actions

The classification of this bridge as “At Risk” is due to the deteriorated condition of the deck, superstructure, and substructure. The following recommended actions consist of the general repairs to the substructure required to improve the bridge rating, as well as two options to address the condition of the deck and superstructure. Options for Deck Replacement with Superstructure Repair, Superstructure Replacement, and Superstructure Replacement with Widening are proposed and will be discussed with the Department at the Preliminary Assessment Report meeting.

Substructure

The substructure has a condition rating of 5 (fair).

There is moderate cracking and spall in abutment seats, pier caps, pedestals and backwalls. Piles are exposed at Abutment 2.

These items should be addressed to increase the performance and lifespan of the structure. Areas of spall should be cleaned of loose and delaminated concrete, the reinforcing cleaned, and the areas repaired with pneumatically placed mortar or cast in place concrete and treated with corrosion inhibitor. Cracking should be treated with epoxy injection. Should new beams and bearings be installed, piers and abutments should be retrofitted to account for new structural depth. It is recommended that the top 4' of the piles should be encased to treat the vertical cracking. At the discretion of the Department, the Pier Caps may be encased with 8" of Class A concrete on sides and bottom face.

Deck

The deck currently has a condition rating of 5 (fair). This is related to the widespread presence of map cracking, leaching, and efflorescence, as well as the presence of potholes and pop-outs at locations of previous joint repairs. Cracks are actively allowing for water infiltration.

Moderate cracking is present on the safety curb, and efflorescence, cracking, and spall is visible at various locations of the soffit underside. The condition of the deck has allowed water to access the top flanges and ends of the steel beams, causing corrosion damage.

It is recommended that the deck be replaced.

Superstructure

The superstructure has a condition rating of 6 (satisfactory).

Despite the conditional rating, previous leaking at expansion joints as well as water infiltration through cracking in the deck has caused corrosion damage at several locations along the beam

lengths, particularly at the top flanges and at the end diaphragms at the piers. Some diaphragms have complete section loss at the bottom flanges. Diaphragms at piers exhibit some measure of staining and corrosion visible from underneath the paint.

Previous section loss at beam ends has been repaired via section replacement.

It is recommended that at a minimum the damaged diaphragms be replaced and the damaged sections of the beams be cleaned and built up as needed, once the extent of any damage is revealed with the removal of the existing deck.

The existing beams may be repaired concurrently with the replacement of the deck. Repairs would include cleaning and building up any areas that have experienced section loss, including areas that were previously painted. Such repairs would extend the life of the bridge.

Should new beams be installed, all bearings will need to be replaced. At the discretion of the Department, the bridge may be widened to 32' Clear Roadway. In this case, retrofits to the abutment seats, pier caps, and approaches will be required.

The improvements listed in this report will address the deterioration and improve the ratings of the individual bridge elements and should prevent this bridge from being classified as "At Risk" or Structurally Deficient.

4. ITEMIZED COST ESTIMATES

SH-66 over Salt Creek - Option 1 - Deck Replacement with Beam Repair						
ITEM		DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
411 (C)	5960	SUPERPAVE, TYPE S4(PG 64-22 OK)	(9) TON	\$ 95.00	360.00	\$ 34,200.00
412	3100	COLD MILLING PAVEMENT	(9) SY	\$ 2.00	720.00	\$ 1,440.00
501 (G)	1800	CLSM BACKFILL	CY	\$ 200.00	10.00	\$ 2,000.00
504(B)	1305	SAW-CUT GROOVING	SY	\$ 5.00	328.13	\$ 1,640.63
504(D)	6245	CONCRETE RAIL (TR4)	LF	\$ 110.00	245.30	\$ 26,983.00
506(A)	1322	STRUCTURAL STEEL	(1) LB	\$ 2.00	28752.00	\$ 57,504.00
507(A)	6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	\$ 2,000.00	10.00	\$ 20,000.00
507(B)	6174	STAINLESS STEEL EXP BEARING ASSEMBLY	EA	\$ 2,000.00	10.00	\$ 20,000.00
509	5000	ELASTOMERIC COATING	(2) SY	\$ 100.00	40.00	\$ 4,000.00
509(A)	0319	CLASS AA CONCRETE	(3) CY	\$ 700.00	100.00	\$ 70,000.00
509 (B)	0321	CLASS A CONCRETE	(4) CY	\$ 700.00	50.00	\$ 35,000.00
511 (A)	0332	REINFORCING STEEL	LB	\$ 1.50	10800.00	\$ 16,200.00
511 (B)	4269	EPOXY COATED REINFORCING STEEL	LB	\$ 1.50	21600.00	\$ 32,400.00
512(A)	1323	PAINTING EXISTING STRUCTURES	(5) LSUM	\$ 50,000.00	1.00	\$ 50,000.00
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)	SY	\$ 5.00	152.60	\$ 763.00
518 (B)	0300	SEALED EXPANSION JOINT	LF	\$ 300.00	57.67	\$ 17,299.80
520(A)	6058	PREPARATION OF CRACKS, ABOVE WATER	(6) LF	\$ 50.00	100.00	\$ 5,000.00
520(C)	6060	EPOXY RESIN, ABOVE WATER	(6) GAL	\$ 125.00	8.00	\$ 1,000.00
521(A)	6210	PNEUMATICALLY PLACED MORTAR	(10) SY	\$ 800.00	20.00	\$ 16,000.00
523 (C)	6570	DECK AREA SEALED (FLOODCOATS)	SY	\$ 12.00	390.00	\$ 4,680.00
601(B)	1230	TYPE I-A PLAIN RIPRAP	TON	\$ 45.00	180.00	\$ 8,100.00
619(B)	2500	REMOVAL OF BRIDGE ITEMS	(7) LSUM	\$ 15,000.00	1.00	\$ 15,000.00
619(B)	4780	REMOVAL OF GUARD RAIL	LF	\$ 4.00	540.00	\$ 2,160.00
623(A)	0932	BEAM GUARD RAIL-W-BEAM-SINGLE	LF	\$ 25.00	540.00	\$ 13,500.00
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	EA	\$ 2,000.00	4.00	\$ 8,000.00
641	1399	MOBILIZATION	LSUM	\$ 48,804.49	1.00	\$ 48,804.49
642(B)	0096	CONSTRUCTION STAKING LEVEL II	LSUM	\$ 7,500.00	1.00	\$ 7,500.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	(8) LSUM	\$ 45,000.00	1.00	\$ 45,000.00

- (1) Estimate based on replacement for approximately 30 percent of the existing structural steel, needed for repairs, including new patches, diaphragms, and miscellaneous steel that may need to be repaired after the removal of the deck.
- (2) Use CIM 1000 or Approved Equal on top face and top 6" of sides of pier caps and abutment seats. Sand blast surface prior to application.
- (3) For new 8" deck, matching existing out-out dimension of 31' (with TR-4 rail, results in 28'-10" Clear Roadway)
- (4) For encasement of top 4' (minimum) of concrete piles, and for 8" encasement of pier caps on sides and bottom.
- (5) Item consists of cleaning and painting all superstructure elements.
- (6) As directed by engineer for repair of damage at Piers and Abutments
- (7) Item includes removal of existing concrete deck, select bearings, portions of beams, and loose and damaged concrete at substructure.
- (8) Item includes all construction traffic control pay items, including **Portable Longitudinal Barrier, Signage, and Temporary Traffic Signal** required for phased superstructure replacement. This preliminary estimate is based on 180 Construction Days
- (9) Estimated milling/overlay required for roadway transition to new bridge deck. Assumes 100' on each bridge approach. Final to be determined in the field. Transition of 1" per 50' typical.
- (10) Token quantity for repairs at abutments

BASE SUBTOTAL (Including TC)	\$ 564,174.92
10% CONTINGENCY	\$ 56,417.49

TOTAL ESTIMATED PRELIMINARY PROJECT COST **\$ 620,592.41**

SH-66 over Salt Creek - Option 2 - Superstructure Replacement (Match Width)						
ITEM		DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
411 (C)	5960	SUPERPAVE, TYPE S4(PG 64-22 OK)	(8)	TON	\$ 95.00	360.00 \$ 34,200.00
412	3100	COLD MILLING PAVEMENT	(8)	SY	\$ 2.00	720.00 \$ 1,440.00
501 (G)	1800	CLSM BACKFILL		CY	\$ 200.00	10.00 \$ 2,000.00
504(B)	1305	SAW-CUT GROOVING		SY	\$ 5.00	328.13 \$ 1,640.63
504(D)	6245	CONCRETE RAIL (TR4)		LF	\$ 110.00	243.40 \$ 26,774.00
506(A)	4050	STRUCTURAL STEEL M270 GRADE 50W	(1)	LB	\$ 2.00	112200.00 \$ 224,400.00
507(A)	6170	STAINLESS STEEL FIXED BEARING ASSEMBLY		EA	\$ 2,000.00	15.00 \$ 30,000.00
507(B)	6174	STAINLESS STEEL EXP BEARING ASSEMBLY		EA	\$ 2,000.00	15.00 \$ 30,000.00
509	5000	ELASTOMERIC COATING	(2)	SY	\$ 100.00	40.00 \$ 4,000.00
509(A)	0319	CLASS AA CONCRETE	(3)	CY	\$ 700.00	100.00 \$ 70,000.00
509 (B)	0321	CLASS A CONCRETE	(4)	CY	\$ 700.00	50.00 \$ 35,000.00
511 (A)	0332	REINFORCING STEEL		LB	\$ 1.50	10800.00 \$ 16,200.00
511 (B)	4269	EPOXY COATED REINFORCING STEEL		LB	\$ 1.50	21600.00 \$ 32,400.00
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)		SY	\$ 5.00	152.60 \$ 763.00
518 (B)	0300	SEALED EXPANSION JOINT		LF	\$ 300.00	57.67 \$ 17,299.80
520(A)	6058	PREPARATION OF CRACKS, ABOVE WATER	(5)	LF	\$ 50.00	95.00 \$ 4,750.00
520(C)	6060	EPOXY RESIN, ABOVE WATER	(5)	GAL	\$ 125.00	8.00 \$ 1,000.00
521(A)	6210	PNEUMATICALLY PLACED MORTAR	(9)	SY	\$ 800.00	20.00 \$ 16,000.00
523 (C)	6570	DECK AREA SEALED (FLOODCOATS)		SY	\$ 12.00	384.40 \$ 4,612.80
601(B)	1230	TYPE I-A PLAIN RIPRAP		TON	\$ 45.00	180.00 \$ 8,100.00
619(B)	2500	REMOVAL OF BRIDGE ITEMS	(6)	LSUM	\$ 20,000.00	1.00 \$ 20,000.00
619(B)	4780	REMOVAL OF GUARDRAIL		LF	\$ 4.00	540.00 \$ 2,160.00
623(A)	0932	BEAM GUARDRAIL W-BEAM SINGLE		LF	\$ 25.00	540.00 \$ 13,500.00
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")		EA	\$ 2,000.00	4.00 \$ 8,000.00
641	1399	MOBILIZATION		LSUM	\$ 55,955.01	1.00 \$ 55,955.01
642(B)	0096	CONSTRUCTION STAKING LEVEL II		LSUM	\$ 7,500.00	1.00 \$ 7,500.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	(7)	LSUM	\$ 45,000.00	1.00 \$ 45,000.00

- (1) Estimate based on replacing existing beams with 5 new W36x170 in the same configuration as existing beams. Additional Beam Line may be required for phased construction, at the discretion of the Department.
- (2) Use CIM 1000 or Approved Equal on top face and top 6" of sides of pier caps and abutment seats. Sand blast surface prior to application.
- (3) For new 8" deck, matching existing out-out dimensions of 31' (resulting in 28'-10" clear roadway)
- (4) For encasement of top 4' of concrete piles, and for 8" encasement of pier caps on sides and bottom.
- (5) As directed by engineer for repair of damage at Piers and Abutments
- (6) Item includes removal of existing concrete deck, beams, diaphragms, bearings, and loose and damaged concrete at substructure. Also includes partial removal of approach slabs for joint replacement.
- (7) Item includes all construction traffic control pay items, including **Portable Longitudinal Barrier, Signage, and Temporary Traffic Signal** required for phased superstructure replacement. This preliminary estimate is based on 180 Construction Days
- (8) Estimated milling/overlay required for roadway transition to new bridge deck. Assumes 100' on each bridge approach. Final to be determined in the field. Transition of 1" per 50' typical.
- (9) Token quantity for repairs at abutments

BASE SUBTOTAL \$ 712,695.24
10% CONTINGENCY \$ 71,269.52

ESTIMATED BASE PROJECT COST \$ 783,964.76

SH-66 over Salt Creek - Option 3 - Superstructure Replacement - 32' Clear Roadway						
ITEM		DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
411 (C)	5960	SUPERPAVE, TYPE S4(PG 64-22 OK)	(8) TON	\$ 95.00	360.00	\$ 34,200.00
412	3100	COLD MILLING PAVEMENT	(8) SY	\$ 2.00	720.00	\$ 1,440.00
501 (G)	1800	CLSM BACKFILL	CY	\$ 200.00	10.00	\$ 2,000.00
504(B)	1305	SAW-CUT GROOVING	SY	\$ 5.00	375.00	\$ 1,875.00
504 (A)	5200	APPROACH SLAB	SY	\$ 200.00	150.00	\$ 30,000.00
504(D)	6245	CONCRETE RAIL (TR4)	LF	\$ 110.00	243.40	\$ 26,774.00
506(A)	4050	STRUCTURAL STEEL M270 GRADE 50W	(1) LB	\$ 2.00	134640.00	\$ 269,280.00
507(A)	6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	\$ 2,000.00	18.00	\$ 36,000.00
507(B)	6174	STAINLESS STEEL EXP BEARING ASSEMBLY	EA	\$ 2,000.00	18.00	\$ 36,000.00
509	5000	ELASTOMERIC COATING	(2) SY	\$ 100.00	40.00	\$ 4,000.00
509(A)	0319	CLASS AA CONCRETE	(3) CY	\$ 700.00	110.00	\$ 77,000.00
509 (B)	0321	CLASS A CONCRETE	(4) CY	\$ 700.00	60.00	\$ 42,000.00
511 (A)	0332	REINFORCING STEEL	LB	\$ 1.50	12960.00	\$ 19,440.00
511 (B)	4269	EPOXY COATED REINFORCING STEEL	LB	\$ 1.50	23760.00	\$ 35,640.00
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)	SY	\$ 5.00	180.00	\$ 900.00
518 (B)	0300	SEALED EXPANSION JOINT	LF	\$ 300.00	64.00	\$ 19,200.00
520(A)	6058	PREPARATION OF CRACKS, ABOVE WATER	(5) LF	\$ 50.00	95.00	\$ 4,750.00
520(C)	6060	EPOXY RESIN, ABOVE WATER	(5) GAL	\$ 125.00	8.00	\$ 1,000.00
521(A)	6210	PNEUMATICALLY PLACED MORTAR	(9) SY	\$ 800.00	20.00	\$ 16,000.00
523 (C)	6570	DECK AREA SEALED (FLOODCOATS)	SY	\$ 12.00	430.00	\$ 5,160.00
601(B)	1230	TYPE I-A PLAIN RIPRAP	TON	\$ 45.00	180.00	\$ 8,100.00
619(B)	2500	REMOVAL OF BRIDGE ITEMS	(6) LSUM	\$ 25,000.00	1.00	\$ 25,000.00
619(B)	4780	REMOVAL OF GUARDRAIL	LF	\$ 4.00	540.00	\$ 2,160.00
623(A)	0932	BEAM GUARDRAIL W-BEAM SINGLE	LF	\$ 25.00	540.00	\$ 13,500.00
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	EA	\$ 2,000.00	4.00	\$ 8,000.00
641	1399	MOBILIZATION	LSUM	\$ 61,713.95	1.00	\$ 61,713.95
642(B)	0096	CONSTRUCTION STAKING LEVEL II	LSUM	\$ 7,500.00	1.00	\$ 7,500.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	(7) LSUM	\$ 45,000.00	1.00	\$ 45,000.00

- (1) Estimate based on replacing existing beams with six lines of W36x170 (to accommodate phasing with 1 lane open at all times)
- (2) Use CIM 1000 or Approved Equal on top face and top 6" of sides of pier caps and abutment seats. Sand blast surface prior to application.
- (3) For new 8" deck with 32' clear roadway.
- (4) Additional concrete for Pier cap and Abutment retrofits. Assumes 8" encasement of pier cap, encasement of top 4' of piles, and 5 CY token quantity for additional retrofits, as needed
- (5) As directed by engineer for repair of damage at Piers and Abutments. Mostly at Abutments due to pier retrofits.
- (6) Item includes removal of existing concrete deck, beams, diaphragms, bearings, and loose and damaged concrete at substructure. Also includes removal of approach slabs.
- (7) Item includes all construction traffic control pay items, including **Portable Longitudinal Barrier, Signage, and Temporary Traffic Signal** required for phased superstructure replacement. This preliminary estimate is based on 180 Construction Days
- (8) Estimated milling/overlay required for roadway transition to new bridge deck. Assumes 100' on each bridge approach. Final to be determined in the field. Transition of 1" per 50' typical.
- (9) Token quantity for repairs at abutments

BASE SUBTOTAL \$ 833,632.95
 15% CONTINGENCY (to account for further retrofits) \$ 125,044.94

ESTIMATED BASE PROJECT COST \$ 958,677.89

5. BRIDGE INSPECTION REPORT

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.: 15089	Structure No.: 4108 1614 X	Local ID: -1	Suff. Rating: 59.00	ND																														
Bridge Description: 30ft.-60ft.-30ft. I-BM. SPANS WITH 2-18ft. SAFETY CURBS		INSPECTION																																
IDENTIFICATION		INSPECTION																																
1. State: Oklahoma 2. Division: Division 3 3. County: LINCOLN 4. City: STROUD Admin Area: Unknown 5a. On/Under: Route On Structure 5b. Kind of Hwy: State Hwy 5c. Lvl of Srvc: Mainline 5d. Route No.: 00066 5e. Dir. Sufx: N/A (NBI)		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Insp. Req.</th> <th>Insp. Done</th> <th>Freq.</th> <th>Insp. Date</th> <th>Next Insp.</th> </tr> </thead> <tbody> <tr> <td>NBI:</td> <td></td> <td>1</td> <td>24 months</td> <td>8/24/2022</td> <td>08/24/2024</td> </tr> <tr> <td>FC:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>UW:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>OS:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> </tbody> </table>			Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.	NBI:		1	24 months	8/24/2022	08/24/2024	FC:	N	0		NA	NA	UW:	N	0		NA	NA	OS:	N	0		NA	NA
Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.																													
NBI:		1	24 months	8/24/2022	08/24/2024																													
FC:	N	0		NA	NA																													
UW:	N	0		NA	NA																													
OS:	N	0		NA	NA																													
7. Facility Carried : S.H. 66 6. Feat. Intersect: SALT CREEK 9. Location: 1.74 MI E JCT SH 99 11. Mile Post: 16.255 mi 13. LRS Inv. / Sub Rte: / 16. Latitude: 35° 45' 17.12" 17. Longitude: 096° 38' 04.79" 98. Border Brdg: Unknown (P) % Responsible: 0.00 99. Border Brdg #: Unknown		CLASSIFICATION																																
STRUCTURE TYPE AND MATERIALS		CONDITION																																
43a/b. Main Span: Steel / Stringer/Girder 44a/b. Appr. Span: Unknown / Unknown (P) 45. # of Main Spans: 3 46. # of Appr. Spans: 0 107. Deck Type: Concrete-Cast-in-Place 108a. Wearing Surface: Bituminous 108b. Membrane: Unknown 108c. Deck protection: Unknown		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>58. Deck:</th> <th>59. Sup.:</th> <th>60. Sub:</th> </tr> </thead> <tbody> <tr> <td>5 Fair</td> <td>6 Satisfactory</td> <td>5 Fair</td> </tr> <tr> <td>62. Culvert: N/A (NBI)</td> <td colspan="2">61. Chan./Chan. Prot.: 5 Bank Prot Eroded</td> </tr> </tbody> </table>			58. Deck:	59. Sup.:	60. Sub:	5 Fair	6 Satisfactory	5 Fair	62. Culvert: N/A (NBI)	61. Chan./Chan. Prot.: 5 Bank Prot Eroded																						
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5 Fair	6 Satisfactory	5 Fair																																
62. Culvert: N/A (NBI)	61. Chan./Chan. Prot.: 5 Bank Prot Eroded																																	
19. Detour Length: 37.9 mi 27. Year Built: 1960 28a/b. Lanes on/und: 2 / 0 29. ADT: 2,100 30. Year of ADT: 2020 42a/b. Type of Svc on/und: Highway / Waterway		LOAD RATING AND POSTING																																
AGE AND SERVICE		31. Design Load: M 18 (H 20) 41. Post. Status: A Open, no restriction 70. Posting: 5 At/Above Legal Loads 63. Op / 65. Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor																																
10. Vert. Clearance: 99.99 ft 32. Appr Rwy Width: 40.00 ft 33. Median: No median 34. Skew: 0.00° 35. Struct. Flared: No flare 47. Horizontal Clr: 40.00 ft 48. Length Max Span: 60.04 ft 49. Struct. Length: 121.06 ft		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>H</th> <th>HS</th> <th>3-3</th> <th>EV3</th> <th>SHV</th> </tr> </thead> <tbody> <tr> <td>34.00</td> <td>48.00</td> <td>76.00</td> <td>60.00</td> <td>46.00</td> </tr> <tr> <td>21.00</td> <td>29.00</td> <td>46.00</td> <td>36.00</td> <td></td> </tr> </tbody> </table>			H	HS	3-3	EV3	SHV	34.00	48.00	76.00	60.00	46.00	21.00	29.00	46.00	36.00																
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34.00	48.00	76.00	60.00	46.00																														
21.00	29.00	46.00	36.00																															
GEOMETRIC DATA		APPRaisal																																
50a. Curb/Sdwk Width L: 0.00 ft 50b. Curb/Sdwk Width R: 0.00 ft 51. Width Curb to Curb: 28.00 ft 52. Width Out to Out: 30.84 ft Deck Area: 3,735.08 sq. ft 53. Min. Vert. Cl. Ovr Brg: 99.99 ft 54a. Min. Vt. Undclr. Ref.: N Feature not hwy c 54b. Min. Vert. Undclr.: 0.00 ft 55a. Min. Lat. Undclr. Ref.: N Feature not hwy 55. Min. Lat. Underclr. R: 0.00 ft 56. Min. Lat. Underclr. L: 0.00 ft		<table border="1" style="width:100%; border-collapse: collapse;"> <tbody> <tr> <td>36a. Brdg Rail: 1 Meets Standards</td> <td>68. Deck Geom.: 4 Tolerable</td> </tr> <tr> <td>36b. Transition: 1 Meets Standards</td> <td>69. Vert./Horiz. Undclr: Not applicable (NB)</td> </tr> <tr> <td>36c. Appr. Rail: 1 Meets Standards</td> <td>71. Waterway Adeq: 6 Equal Minimum</td> </tr> <tr> <td>36d. Appr. Rail Ends: 1 Meets Standard</td> <td>72. Appr. Alignment: 8 Equal Desirable Cr</td> </tr> <tr> <td>67. Str Evaluation: 5 Above Min Toler</td> <td>113. Scour Critical: 8 Stable Above Footr</td> </tr> </tbody> </table>			36a. Brdg Rail: 1 Meets Standards	68. Deck Geom.: 4 Tolerable	36b. Transition: 1 Meets Standards	69. Vert./Horiz. Undclr: Not applicable (NB)	36c. Appr. Rail: 1 Meets Standards	71. Waterway Adeq: 6 Equal Minimum	36d. Appr. Rail Ends: 1 Meets Standard	72. Appr. Alignment: 8 Equal Desirable Cr	67. Str Evaluation: 5 Above Min Toler	113. Scour Critical: 8 Stable Above Footr																				
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200c. Temperature: 80 200d. Weather: Ptly Cloudy 201. Struc. St. ASTM Desig.: -1 / 18 202. Waterprf. Membrane: -1 Date Installed: 01/01/1901 203. Type Exp. Device: Finger 204. Type of Railing: SFP-1 205. Material Quantity: 979.00 208a. Type of Abutment: Skeleton b. Type of Found.: Concrete Piling 209. Type of Pier/Found.: B / No Concrete Piling		PROPOSED IMPROVEMENTS																																
210. Foundation Elev.: 7,633.00 -1.00 -1.00 7,635.00 -1.00		<table border="1" style="width:100%; border-collapse: collapse;"> <tbody> <tr> <td>94. Bridge Cost: \$581,159</td> <td>75. Type of Work: 31 Repl-Load Capacity</td> </tr> <tr> <td>95. Roadway Cost: \$958,912</td> <td>76. Lngth of Improvement: 226.2 ft</td> </tr> <tr> <td>96. Total Cost: \$1,627,245</td> <td>114. Future ADT: 3,360</td> </tr> <tr> <td>97. Yr. of Cost Est.: 2015</td> <td>115. Yr. of Future ADT: 2040</td> </tr> </tbody> </table>			94. Bridge Cost: \$581,159	75. Type of Work: 31 Repl-Load Capacity	95. Roadway Cost: \$958,912	76. Lngth of Improvement: 226.2 ft	96. Total Cost: \$1,627,245	114. Future ADT: 3,360	97. Yr. of Cost Est.: 2015	115. Yr. of Future ADT: 2040																						
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97. Yr. of Cost Est.: 2015	115. Yr. of Future ADT: 2040																																	
211. Wear. Surf. Prot. Sys: None Date Installed: 01/01/1901 211c. Silane Reapplied 211d. Date : 213. Utilities Attached:		NAVIGATION DATA																																
214a. Posted Weight Limit: NR b. Posted Speed Limit: NR c. Narrow/1way Brdg Sign: Missing d. Vertical Clr. Sign: No Adv. Warning Sign: No e. Navigation Lights?: NA Working/Not Working: NA 215. Overpass: STATE HIGHWAY 218. Functionally Obsolete : - 220. Bridge Redecked : - 221. Substr. Cond. (U/W): 222. Fill Over RCB: 223. Appr. Slab/Rwy Cond.: 2 225. Paint Type/Ovrct: Inorganic Zinc 3Coat Sys N/A 226. Date Painted: 2002 227. Paint Color: Gray 233. Deck Forming: 238. School Bus Rte.: Current & Desired route 240. Appr. Rwy Type.: Asphalt/Bituminous 243. Grdr Spacing/No.: /		38. Nav. Control: Permit Not Required 39. Vert. Clearance: 0.0 ft 40. Horiz. Clearance: 0.0 ft 111. Pier Protect.: 1 Not Required 116. Lift Bridge Vert. Clr.: 0.0 ft 244. Span Lengths: 245. Girder Depth: 246a. Type of Overlay: Chipseal b. Overlay Thickness: 1.00 c. Overlay Date: 01/01/2006 d. Ovly Depth Changed >1": N 247. Protective Systems: 248. # Field Splices w/ Corrosion: 249. Scour Crit. POA Exists?: - 250. Headwall: 258. Plans w/Found. in ODOT File: - 259. Scour Eval. in ODOT File: - 263. Interchange at Intersection: No 264. Interstate Milepoint:																																
OKLAHOMA ITEMS		PROPOSED IMPROVEMENTS																																
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211. Wear. Surf. Prot. Sys: None Date Installed: 01/01/1901 211c. Silane Reapplied 211d. Date : 213. Utilities Attached:		75. Type of Work: 31 Repl-Load Capacity 76. Lngth of Improvement: 226.2 ft 114. Future ADT: 3,360 115. Yr. of Future ADT: 2040																																

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.: 15089	Structure No.: 4108 1614 X	Local ID: -1	Suff. Rating: 59.00	ND
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Inspection Date: 8/24/22 Adam Hill
 Invoice No.: Lincoln2022 Inspected With: Erik Cox

BRIDGE NOTES:

INSPECTION NOTES: 8/24/22

SOME DEEP EROS UNDER ABUT. # 2, DECK DRAINS & IN ALL DITCHES EXCEPT N-E. D. (FX) SOME CLEARING NEEDED.

ELEMENT CONDITION STATE DATA

Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4
12 / 4	Re Concrete Deck	sq.ft	3,735.10	0%	0.00	100%	3,720.10	0%	15.00	0%	0.00
FX- CURBS @ PIERS HAVE MINOR MISALIGNMENT. OPEN TRANSVERSE CRACKS TO SPANS # 2 & 3.											
510 / 4	Wearing Surfaces	sq.ft	3,735.10	0%	0.00	0%	0.00	0%	0.00	100%	3,735.10
PX- NO LONGER EFFECTIVE.											
107 / 4	Steel Opn Girder/Beam	ft	452.80	0%	0.00	100%	452.80	0%	0.00	0%	0.00
515 / 4	Steel Protective Coating	sq.ft	4,290.00	0%	0.00	0%	0.00	0%	0.00	100%	4,290.00
PAINT NOT EFFECTIVE.											
205 / 4	Re Conc Column	each	14.00	79%	11.00	14%	2.00	7%	1.00	0%	0.00
APPR 1.0 ft. OF 2 PILES EXP UNDER ABUT. # 2. PIER # 2, COL. # 1 2 ft. TALL X 1 ft. WIDE SPALL W/ EXP. REBAR, 30% SEC. LOSS TO REBAR.											
215 / 4	Re Conc Abutment	ft	62.30	91%	56.70	9%	5.60	0%	0.00	0%	0.00
234 / 4	Re Conc Pier Cap	ft	59.10	90%	53.10	10%	6.00	0%	0.00	0%	0.00
PX- PIER # 2, PEDESTALS # 1, 2 & 4 HAVE DELAMS AND OPEN CRACKS.											
301 / 4	Pourable Joint Seal	ft	55.80	0%	0.00	0%	0.00	0%	0.00	100%	55.80
PX- SEALANT HAS DEBONDED. JTS HAVE FAILED.											
310 / 4	Elastomeric Bearing	each	10.00	100%	10.00	0%	0.00	0%	0.00	0%	0.00
THESE BEARINGS ARE LOCATED @ ABUTS^ THEY WERE INSTALLED 4-02.											
311 / 4	Moveable Bearing	each	10.00	0%	0.00	0%	0.00	100%	10.00	0%	0.00
PX- ROLLERS @ BOTH PIERS HAVE SECTION LOSS. BEARING # 2, SPAN # 1, PIER # 1.											
313 / 4	Fixed Bearing	each	10.00	100%	10.00	0%	0.00	0%	0.00	0%	0.00
SEE NOTE FOR #107.											
321 / 4	Re Conc Approach Slab	sq.ft	2.00	0%	0.00	100%	2.00	0%	0.00	0%	0.00
APPR HAVE APPR 2in. LEVELUP.											
331 / 4	Re Conc Bridge Railing	ft	242.80	85%	206.80	15%	36.00	0%	0.00	0%	0.00
SOME VERTICAL CRACKS TO PARAPETS.											
859 / 4	Soffit	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
PX- RANDOM TRANSVERSE CRACKS SOME W/ LEACHING TO ALL BAYS.											
865 / 4	St.Open Gird End(5ft)	(LF)	155.00	0%	0.00	74%	114.00	27%	41.00	0%	0.00
PX- SEE NOTE FOR ELEM. # 963.											
870 / 4	Concrete Wingwall	(EA)	4.00	100%	4.00	0%	0.00	0%	0.00	0%	0.00
CLOSED DIAG. CRACKS APPROX. 1.5' LONG W/ LEACHING @ ALL CONNS.											
909 / 4	Pourable Fix Jt.Seal	(LF)	55.80	0%	0.00	100%	55.80	0%	0.00	0%	0.00
END JTS PARTIALLY COVERED W/ CHIP SEAL.											
916 / 4	St.Bearing Assembly	(LF)	10.00	100%	10.00	0%	0.00	0%	0.00	0%	0.00
-1											
958 / 4	Concrete Cracking SF	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00
PX- TRANSVERSE CRACKS IN DECK EVERY 2 ft. ARE OF MODERATE SIZE & DENSITY											
963 / 4	Steel Section Loss SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
UP TO 50% SECTION LOSS TO WEB AREA SPAN # 2. SOME AREAS HAVE BECOME ACTIVE DUE TO PAINT FAILURE.											
968 / 4	Erosion SF	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00
FX- SEE NOTE FOR # 205.											
974 / 4	Straight Gird.Diaphr	(EA)	10.00	0%	0.00	0%	0.00	100%	10.00	0%	0.00
PX-											

6. BRIDGE LOAD RATING SUMMARY

The Load Ratings below reflect the current condition of the bridges. The substructure repairs listed in this report will have no impact on the load rating on the bridge. Superstructure replacement will change the overall bridge rating, but that rating depends on the ultimate superstructure layout and structure design.

The future ratings stated below are based on LRFR Rating procedures, using a new 8" concrete deck and 6 lines of new W36x170 beams at 6'-7" spacing. Rating is subject to change if superstructure layout varies from these assumptions.

Current Inventory Rating

H: 21 tons

HS: 29 tons

Current Operating Rating

H: 34 tons

HS: 48 tons

Inventory Rating with Proposed Superstructure Replacement

LRFR

HL-93 Factor = 1.4

Operating Rating with Proposed Superstructure Replacement

LRFR

HL-93 Factor = 1.82

JP#22899(09) SH-66 over Bird Creek 90% Cost Estimate

Rogers County (2/14/2024)

PAY QUANTITIES						
0100 ROADWAY						
ITEM NO.	CODE NO.	DESCRIPTION	UNITS	QUANTITY	UNIT COST	COST
201(A)	1200	CLEARING AND GRUBBING	LSUM	1.00	30,000.00	\$ 30,000.00
202(A)	2200	UNCLASSIFIED EXCAVATION	CY	1,873.00	12.00	\$ 22,476.00
202(D)	2500	UNCLASSIFIED BORROW	CY	5,656.00	10.00	\$ 56,560.00
205(A)	6200	TYPE A-SALVAGED TOPSOIL	LSUM	1.00	15,000.00	\$ 15,000.00
221(B)	2300	TEMPORARY SILT FENCE	LF	2,119.00	3.00	\$ 6,357.00
221(E)	2600	TEMPORARY SILT DIKE	LF	96.00	9.00	\$ 864.00
221(H)	2900	(PL)TEMPORARY INLET SEDIMENT FILTER	EA	2.00	175.00	\$ 350.00
230(A)	7200	SOLID SLAB SODDING	SY	10,060.00	3.50	\$ 35,210.00
232(B)	9300	SEEDING METHOD B	AC	2.08	2,500.00	\$ 5,196.28
233(A)	0200	VEGETATIVE MULCHING	AC	2.08	1,300.00	\$ 2,702.07
241	3100	MOWING	AC	4.16	150.00	\$ 623.55
303(A)	1200	AGGREGATE BASE TYPE A	CY	510.00	55.00	\$ 28,050.00
307(K)	4200	STABILIZED SUBGRADE	SY	3,223.00	3.50	\$ 11,280.50
317	7100	CEMENT TREATED BASE	SY	2,897.00	17.50	\$ 50,697.50
325	0100	SEPARATOR FABRIC	SY	6,294.00	2.00	\$ 12,588.00
402(E)	2600	TRAFFIC BOUND SURFACE COURSE TYPE E	TON	323.00	28.00	\$ 9,044.00
407(B)	7300	TACK COAT	GAL	27.00	6.00	\$ 162.00
408	8100	PRIME COAT	GAL	2,026.00	4.00	\$ 8,104.00
411(C)	1430	SUPERPAVE, TYPE S4(PG 64-22 OK)	TON	81.00	140.00	\$ 11,340.00
413(D)	4510	RUMBLE STRIP METHOD PCC-CYC	LF	1,304.00	0.55	\$ 717.20
414(A)	5200	P.C.CONCRETE PAVEMENT(PLACEMENT)	SY	869.00	35.00	\$ 30,415.00
414(B)	5300	DOWEL JOINTED P.C.C.PAVT.(PLACEMENT)	SY	1,883.00	45.00	\$ 84,735.00
414(G)	5800	P.C. CONCRETE FOR PAVEMENT	CY	574.00	200.00	\$ 114,800.00
509(A)	0200	CLASS AA CONCRETE	CY	161.00	425.00	\$ 68,425.00
601(B)	1220	TYPE I-A PLAIN RIPRAP	TON	15.00	60.00	\$ 900.00
611(G)	7978	INLET GPI TYPE 2 (DES. 12)	EA	1.00	3,700.00	\$ 3,700.00
613(A)	5216	24" R.C.PIPE CLASS III	LF	22.00	110.00	\$ 2,420.00
613(L)	6716	24" PREFAB. CULVERT END SEC., ROUND	EA	1.00	1,200.00	\$ 1,200.00
619(B)	6360	REMOVAL OF CONCRETE PAVEMENT	SY	563.00	7.00	\$ 3,941.00
619(B)	6376	REMOVAL OF CONC.PAV.W/ASPH.OVERLAY	SY	1,686.00	8.00	\$ 13,488.00
619(B)	6392	REMOVAL OF EXISTING STRUCTURES	EA	2.00	1,000.00	\$ 2,000.00
619(B)	6396	REMOVAL OF GUARDRAIL	LF	836.00	7.00	\$ 5,852.00
619(C)	6600	SAWING PAVEMENT	LF	909.00	6.00	\$ 5,454.00
623	1100	(PL)GUARDRAIL CURBING	EA	4.00	600.00	\$ 2,400.00
623(A)	1200	BEAM GUARDRAIL W-BEAM SINGLE	LF	1,088.00	25.00	\$ 27,200.00
623(G)	1800	GUARDRAIL END TREATMENT (GET)	EA	5.00	3,000.00	\$ 15,000.00
623(I)	2050	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	EA	4.00	3,500.00	\$ 14,000.00
853	5100	DELINEATORS(TYPE 1, CODE 1)	EA	35.00	52.00	\$ 1,820.00
0100 ROADWAY SUBTOTAL					\$	705,072.10

PAY QUANTITIES						
0200 BRIDGE						
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANT.	UNIT COST	COST
501(B)	1300	SUBSTRUCTURE EXCAVATION COMMON	CY	190.00	\$ 30.00	\$ 5,700.00
501(G)	1800	CLSM BACKFILL	CY	208.00	\$ 225.00	\$ 46,800.00
504(A)	5200	APPROACH SLAB	SY	273.40	\$ 300.00	\$ 82,020.00
504(B)	5300	SAW-CUT GROOVING	SY	3,258.40	\$ 5.50	\$ 17,921.20
504(E)	5520	42" F-SHAPED PARAPET	LF	1,543.40	\$ 162.00	\$ 250,030.80
506(A)	7225	STRUCTURAL STEEL M270 GRADE 50W	LB	965,130.00	\$ 3.00	\$ 2,895,390.00
507(A)	8200	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	16.00	\$ 3,500.00	\$ 56,000.00
507(B)	8300	STAINLESS STEEL EXP. BEARING ASSEMBLY	EA	40.00	\$ 3,500.00	\$ 140,000.00
509(A)	0210	CLASS AA CONCRETE	CY	761.90	\$ 780.00	\$ 594,282.00
509(B)	0320	CLASS A CONCRETE	CY	446.10	\$ 900.00	\$ 401,490.00
510(C)	1450	SLOPE WALL (5")	SY	818.00	\$ 162.00	\$ 132,516.00
511(A)	2210	REINFORCING STEEL	LB	3,590.00	\$ 1.50	\$ 5,385.00
511(B)	2310	EPOXY COATED REINFORCING STEEL	LB	240,630.00	\$ 1.75	\$ 421,102.50
514(A)	5210	PILES, FURNISHED (HP 10X42)	LF	324.00	\$ 50.00	\$ 16,200.00
514(A)	5220	PILES, FURNISHED (HP 12X53)	LF	1,072.00	\$ 60.00	\$ 64,320.00
514(B)	5310	PILES, DRIVEN (HP 10X42)	LF	324.00	\$ 20.00	\$ 6,480.00
514(B)	5320	PILES, DRIVEN (HP 12X53)	LF	1,072.00	\$ 21.50	\$ 23,048.00
514(L)	6300	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00	\$ -	\$ -
515(A)	7200	WATER REPELLENT (VISUALLY INSPECTED)	SY	2,315.00	\$ 5.00	\$ 11,575.00
516(A)	8240	DRILLED SHAFTS 60" DIAMETER	LF	572.00	\$ 1,300.00	\$ 743,600.00
516(A)	8250	DRILLED SHAFTS 72" DIAMETER	LF	284.00	\$ 1,800.00	\$ 511,200.00
516(C)	8400	CROSSHOLE SONIC LOGGING	EA	4.00	\$ 2,700.00	\$ 10,800.00
517	9110	ELASTOMERIC COATING	SF	2,442.00	\$ 22.50	\$ 54,945.00
518(B)	0300	SEALED EXPANSION JOINTS	LF	121.50	\$ 480.00	\$ 58,320.00
523(A)	3200	SEALER CRACK PREPARATION	LF	114.00	\$ 4.50	\$ 513.00
523(B)	3300	SEALER RESIN	GAL	1.50	\$ 100.00	\$ 150.00
613(H)	6205	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	234.00	\$ 37.00	\$ 8,658.00
613(I)	6310	6" NON-PERF.PIPE UNDERDRAIN RND.	LF	140.00	\$ 25.00	\$ 3,500.00
619(D)	6700	REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM	1.00	\$ 200,000.00	\$ 200,000.00
0200 BRIDGE SUBTOTAL					\$	6,761,946.50

JP#22899(09) SH-66 over Bird Creek 90% Cost Estimate

Rogers County (2/14/2024)

PAY QUANTITIES						
0301 SIGNING AND STRIPING						
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANT.	UNIT COST	COST
805(A)	3252	(PL)REMOVAL OF EXISTING SIGNS	EA	3	175.0	525.0
850(A)	1200	SHEET ALUMINUM SIGNS	SF	6	45.0	270.0
851(C)	2420	2 1/4" SQUARE TUBE POST	LF	24	8.3	198.0
856(A)	8204	TRAFFIC STRIPE(MULTI-POLY.)(6" WIDE)	LF	3202.47	1.1	3,362.6
0301 SIGNING AND STRIPING SUBTOTAL						\$ 4,355.59

PAY QUANTITIES						
0302 TRAFFIC CONTROL						
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANT.	UNIT COST	COST
857(A)	9200	CONSTRUCTION TRAFFIC STR.(PAINT)(4" WIDE)	LF	13600	\$0.30	\$4,080.00
871(B)	2300	CONST.ZONE IMPACT ATTEN.	SD	810	\$17.50	\$14,175.00
877(B)	4300	DELIVER PORTABLE LONGITUDINAL BARRIER	LF	336	\$30.00	\$10,080.00
877(C)	4400	RELOCATION OF PORT. LONGITUDINAL BARRIER	LF	2128	\$7.00	\$14,896.00
880(A)	6220	ARROW DISPLAY(TYPE C)	SD	560	\$9.00	\$5,040.00
880(B)	6300	CONSTRUCTION SIGNS 0 TO 6.25 SF	SD	9520	\$0.65	\$6,188.00
880(B)	6310	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	SD	11810	\$1.20	\$14,172.00
880(B)	6320	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	SD	6120	\$2.10	\$12,852.00
880(C)	6410	CONSTRUCTION BARRICADES(TYPE III)	SD	7660	\$2.75	\$21,065.00
880(C)	6420	WING BARRICADES	SD	1120	\$1.15	\$1,288.00
880(E)	6600	WARNING LIGHTS(TYPE A)	SD	19760	\$0.85	\$16,796.00
880(F)	6700	DRUMS	SD	41020	\$0.65	\$26,663.00
880(G)	6800	TUBE CHANNELIZERS	SD	10360	\$0.55	\$5,698.00
882(A)	8210	PORT.CHANGEABLE MESSAGE SIGN	SD	560	\$18.00	\$10,080.00
0302 TRAFFIC CONTROL SUBTOTAL						\$163,073.00

PAY QUANTITIES						
0600 STAKING						
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANT.	UNIT COST	COST
642(A)	3200	CONSTRUCTION STAKING LEVEL I	LSUM	1.00	130,000.00	\$ 130,000.00
0600 STAKING SUBTOTAL						\$ 130,000.00

PAY QUANTITIES						
0640 CONSTRUCTION						
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANT.	UNIT COST	COST
220	1100	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1.00	10,000.00	\$ 10,000.00
640(A)	1200	FIELD OFFICE	EA	1.00	15,000.00	\$ 15,000.00
641	2100	MOBILIZATION	LSUM	1.00	376,577.89	\$ 376,577.89
0640 CONSTRUCTION SUBTOTAL						\$ 391,577.89

TOTAL ESTIMATE \$ 8,141,025.08
10% CONTINGENCY \$ 814,102.51
GRAND TOTAL ESTIMATE \$ 8,955,127.59

SH-66 over Shell Creek

Description: Bridge Replacement



Summary

March 18, 2024

Engineer's Estimate of Probable Construction Cost

Item		Cost
Bridge	\$	3,718,906
Roadway	-	
Traffic Control	-	
Mobilization	-	
Construction Staking Level II/SWPPP	-	
Total Construction Costs	\$	3,718,906
Contingency (10%)	\$	371,890.61
Total	\$	4,090,797

SH-66 over Shell Creek

Description: Bridge Replacement



Summary of Bid Items					
Item No.	Description	Unit	Qty	Unit Price	Cost
Bridge A					
501(B)1307	SUBSTRUCTURE EXCAVATION COMMON	CY	195.00	\$30.00	\$5,850.00
501(G)6309	CLSM BACKFILL	CY	198.40	\$230.00	\$45,632.00
502 1000	TEMPORARY EARTH RETAINAGE	LSUM	1.00	\$10,100.00	\$10,100.00
504(A)1304	APPROACH SLAB	SY	275.30	\$300.00	\$82,590.00
504(B)1305	SAW-CUT GROOVING	SY	950.10	\$5.50	\$5,225.55
504(C)6250	SEALED EXPANSION JOINT	LF	93.20	\$540.00	\$50,328.00
504(D)6245	CONCRETE RAIL (TR4)	LF	450.70	\$125.00	\$56,337.50
506(A)1322	STRUCTURAL STEEL	LB	154,030.00	\$2.75	\$423,582.50
507(A)6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	15.00	\$3,300.00	\$49,500.00
507(B)6174	STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA	15.00	\$3,300.00	\$49,500.00
509 5000	ELASTOMERIC COATING	SF	1,523.00	\$24.00	\$36,552.00
509(A)1326	CLASS AA CONCRETE	CY	169.80	\$770.00	\$130,746.00
509(B)1328	CLASS A CONCRETE	CY	219.40	\$880.00	\$193,072.00
509(D)1331	CLASS C CONCRETE	CY	3.90	\$735.00	\$2,866.50
511(A)1332	REINFORCING STEEL	LB	980.00	\$1.60	\$1,568.00
511(B)6010	EPOXY COATED REINFORCING STEEL	LB	65,710.00	\$1.70	\$111,707.00
514(A)6010	PILES, FURNISHED (HP 10X42)	LF	102.00	\$52.00	\$5,304.00
514(A)6011	PILES, FURNISHED (HP 12X53)	LF	902.00	\$60.00	\$54,120.00
514(B)6292	PILES, DRIVEN (HP 10X42)	LF	102.00	\$20.00	\$2,040.00
514(B)6294	PILES, DRIVEN (HP 12X53)	LF	902.00	\$23.00	\$20,746.00
514(L)6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00	\$500.00	\$500.00
515(A)6013	WATER REPELLENT (VISUALLY INSPECTED)	SY	432.00	\$5.00	\$2,160.00
516(A)6096	DRILLED SHAFTS 60" DIAMETER	LF	252.00	\$1,260.00	\$317,520.00
516(C)6200	CROSSHOLE SONIC LOGGING	EA	1.00	\$2,500.00	\$2,500.00
601(B)1353	TYPE I-A PLAIN RIPRAP	TON	1,570.00	\$60.00	\$94,200.00
601(C)1355	TYPE I-A FILTER BLANKET	TON	140.00	\$51.00	\$7,140.00
613(H)6204	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	115.00	\$37.00	\$4,255.00
613(I)6207	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	50.00	\$35.00	\$1,750.00
619(D)1397	REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM	1.00	\$91,000.00	\$91,000.00

Bridge A Subtotal = \$1,858,392

Summary of Bid Items					
Item No.	Description	Unit	Qty	Unit Price	Cost
Bridge B					
501(B)1307	SUBSTRUCTURE EXCAVATION COMMON	CY	195.00	\$30.00	\$5,850.00
501(G)6309	CLSM BACKFILL	CY	198.40	\$230.00	\$45,632.00
502 1000	TEMPORARY EARTH RETAINAGE	LSUM	1.00	\$10,100.00	\$10,100.00
504(A)1304	APPROACH SLAB	SY	275.30	\$300.00	\$82,590.00
504(B)1305	SAW-CUT GROOVING	SY	950.10	\$5.50	\$5,225.55
504(C)6250	SEALED EXPANSION JOINT	LF	93.20	\$540.00	\$50,328.00
504(D)6245	CONCRETE RAIL (TR4)	LF	450.70	\$125.00	\$56,337.50
506(A)1322	STRUCTURAL STEEL	LB	154,030.00	\$2.75	\$423,582.50
507(A)6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	15.00	\$3,300.00	\$49,500.00
507(B)6174	STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA	15.00	\$3,300.00	\$49,500.00
509 5000	ELASTOMERIC COATING	SF	1,523.00	\$24.00	\$36,552.00
509(A)1326	CLASS AA CONCRETE	CY	169.80	\$770.00	\$130,746.00
509(B)1328	CLASS A CONCRETE	CY	219.40	\$880.00	\$193,072.00
509(D)1331	CLASS C CONCRETE	CY	3.30	\$735.00	\$2,425.50
511(A)1332	REINFORCING STEEL	LB	980.00	\$1.60	\$1,568.00
511(B)6010	EPOXY COATED REINFORCING STEEL	LB	65,710.00	\$1.70	\$111,707.00
514(A)6010	PILES, FURNISHED (HP 10X42)	LF	102.00	\$52.00	\$5,304.00
514(A)6011	PILES, FURNISHED (HP 12X53)	LF	913.00	\$60.00	\$54,780.00
514(B)6292	PILES, DRIVEN (HP 10X42)	LF	102.00	\$20.00	\$2,040.00
514(B)6294	PILES, DRIVEN (HP 12X53)	LF	913.00	\$23.00	\$20,999.00
514(L)6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00	\$500.00	\$500.00
515(A)6013	WATER REPELLENT (VISUALLY INSPECTED)	SY	432.00	\$5.00	\$2,160.00
516(A)6096	DRILLED SHAFTS 60" DIAMETER	LF	258.00	\$1,260.00	\$325,080.00
516(C)6200	CROSSHOLE SONIC LOGGING	EA	1.00	\$2,500.00	\$2,500.00
601(B)1353	TYPE I-A PLAIN RIPRAP	TON	1,480.00	\$60.00	\$88,800.00
601(C)1355	TYPE I-A FILTER BLANKET	TON	130.00	\$51.00	\$6,630.00
613(H)6204	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	115.00	\$37.00	\$4,255.00
613(I)6207	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	50.00	\$35.00	\$1,750.00
619(D)1397	REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM	1.00	\$91,000.00	\$91,000.00

Bridge B Subtotal = \$1,860,514

Bridge Subtotal = \$3,718,906

CONSTRUCTION COST ESTIMATE
J/P 34318(04) -- 60% Construction Cost Estimate
SH-66: From SH-102, East to US-177
June 7, 2023

ROADWAY ITEM

GROUP	CATEGORY	NO.	ITEM	QUANTITY	UNIT	UNIT COST	ITEM COST
0100	201(A)	1200	CLEARING AND GRUBBING	1.00	LS	\$30,000.00	\$30,000.00
0100	202(A)	2200	UNCLASSIFIED EXCAVATION	76,603.00	CY	\$12.00	\$919,236.00
0100	202(D)	2500	UNCLASSIFIED BORROW	11,505.00	CY	\$12.00	\$138,060.00
0100	205(A)	6200	TYPE A SALVAGED TOPSOIL	1.00	LS	\$100,000.00	\$100,000.00
0100	202(A)	7200	SOLID SLAB SODDING	93,654.00	SY	\$3.50	\$327,789.00
0100	233(A)	0200	VEGETATIVE MULCHING	39.02	AC	\$1,200.00	\$46,824.00
0100	303(A)	1200	AGGREGATE BASE TYPE A	9,224.00	CY	\$65.00	\$599,560.00
0100	307(K)	4200	STABILIZED SUBGRADE	47,603.00	SY	\$8.50	\$404,625.50
0100	325	0100	SEPARATOR FABRIC	45,997.00	SY	\$2.00	\$91,994.00
0100	402(A)	2600	TRAFFIC BOUND SURFACE COURSE TYPE E	13,137.00	TON	\$40.00	\$525,480.00
0100	407(B)	7300	TACK COAT	11,741.00	GAL	\$5.00	\$58,705.00
0100	408	8100	PRIME COAT	26,943.00	GAL	\$5.00	\$134,715.00
0100	409(A)	9200	FABRIC REINFORCEMENT	7,415.00	SY	\$3.50	\$25,952.50
0100	411(B)	1420	SUPERPAVE, TYPE S3 (PG 70-28)	6,890.00	TON	\$120.00	\$826,800.00
0100	411(B)	1430	SUPERPAVE, TYPE S3 (PG 64-22)	14,693.00	TON	\$110.00	\$1,616,230.00
0100	411(C)	1420	SUPERPAVE, TYPE S4 (PG 70-28)	4,465.00	TON	\$135.00	\$602,775.00
0100	411(C)	1430	SUPERPAVE, TYPE S4 (PG 64-22)	3,930.00	TON	\$130.00	\$510,900.00
0100	412	3100	COLD MILLING PAVEMENT	32,684.00	SY	\$4.00	\$130,736.00
0100	509(A)	0200	CLASS AA CONCRETE	270.00	CY	\$725.00	\$195,750.00
0100	509(D)	0500	CLASS C CONCRETE	458.00	CY	\$400.00	\$183,200.00
0100	511(A)	2200	REINFORCING STEEL	39,010.00	LB	\$1.50	\$58,515.00
0100	601(B)	1220	TYPE I-A PLAIN RIPRAP	64.00	TON	\$65.00	\$4,160.00
0100	609(B)	4360	2'-8" COMB. CRB. & GUT. (6" BARRIER)	1,814.00	LF	\$35.00	\$63,490.00
0100	610(B)	5310	6" CONCRETE DRIVE	34.00	SY	\$125.00	\$4,250.00
0100	611(G)	0354	INLET (SMD-TYPE 2)	2.00	EA	\$3,000.00	\$6,000.00
0100	611(G)	8000	INLET CDI RCB DES. 1	1.00	EA	\$8,000.00	\$8,000.00
0100	613(A)	5208	18" R.C. PIPE CLASS III	909.00	LF	\$100.00	\$90,900.00
0100	613(A)	5216	24" R.C. PIPE CLASS III	124.00	LF	\$125.00	\$15,500.00
0100	613(A)	5220	30" R.C. PIPE CLASS III	94.00	LF	\$160.00	\$15,040.00
0100	613(B)	5508	18" CORR. GALV. STEEL PIPE	774.00	LF	\$50.00	\$38,700.00
0100	613(B)	5536	48" CORR. GALV. STEEL PIPE	120.00	LF	\$140.00	\$16,800.00
0100	613(B)	5568	96" CORR. GALV. STEEL PIPE	345.00	LF	\$350.00	\$120,750.00
0100	613(B)	5604	21" x 15" CORR. GALV. STEEL PIPE ARCH	532.00	LF	\$70.00	\$37,240.00
0100	623(A)	1200	BEAM GUARDRAIL W-BEAM SINGLE	1,230.00	LF	\$28.00	\$34,440.00
0100	623(G)	1800	GUARDRAIL END TREATMENT (GET)	4.00	EA	\$2,700.00	\$10,800.00
0100	613(L)	5726	18" PREFAB CULVERT END SECTIONS (ROUND)	6.00	EA	\$1,250.00	\$7,500.00
0100	613(L)	6716	24" PREFAB CULVERT END SECTION (ROUND)	4.00	EA	\$1,300.00	\$5,200.00
0100	613(M)	6960	TYPE A4 CULVERT END TREATMENT	34.00	EA	\$2,300.00	\$78,200.00
0100	613(M)	6964	TYPE B4 CULVERT END TREATMENT	8.00	EA	\$2,200.00	\$17,600.00
0100	619(B)	6200	REMOVAL OF STRUCTURES & OBSTRUCTIONS	1.00	LS	\$50,000.00	\$50,000.00
0100	619(B)	6364	REMOVAL ASPHALT PAVEMENT	20,806.00	SY	\$5.00	\$104,030.00
0100	624(A)	3200	FENCE-STYLE WWF	1,062.00	LF	\$12.00	\$12,744.00
0100	624(C)	3400	FENCE-STYLE SWF (4 BARBED WIRE)	886.00	LF	\$9.00	\$7,974.00
0100	624(C)	3405	FENCE-STYLE SWF (5 BARBED WIRE)	13,240.00	LF	\$8.50	\$112,540.00
0100	624(C)	3625	FENCE-STYLE CLF (6' HIGH, CLASS B)	224.00	LB	\$110.00	\$24,640.00
							\$8,414,345.00

BRIDGE ITEMS

GROUP	ITEM	ITEM COST
0200	BRIDGE "A" CAPTAIN CREEK	\$124,900.00
0200	BRIDGE "B" SPRING CREEK	\$1,730,000.00

TRAFFIC ITEMS

GROUP	CATEGORY	NO.	ITEM	QUANTITY	UNIT	UNIT COST	ITEM COST
0300				1.00	LS	\$195,000.00	\$195,000.00

CONSTRUCTION ITEMS

GROUP	CATEGORY	NO.	ITEM	QUANTITY	UNIT	UNIT COST	ITEM COST
0640	641	2100	MOBILIZATION	1.00	LS	\$505,000.00	\$505,000.00
0640	642(B)	3300	CONSTRUCTION STAKING LEVEL II	1.00	LS	\$20,000.00	\$20,000.00

TOTAL COST \$10,989,245.00

CONTINGENCY 10.00%

TOTAL COST \$13,187,094.00



OPINION OF PROBABLE CONSTRUCTION COST

2000 N CLASSEN BOULEVARD, SUITE 1410 | OKLAHOMA CITY, OK 73106

(P) 405-848-2346 · (F) 405-848-2393

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PROJECT	SH-66 BRIDGE & APPROACH	DATE	9/26/2023
CLIENT	ODOT - DISTRICT 3	GROUP	OKLAHOMA TRANSPORTATION
SUBMITTAL	30% PLANS	COUNTY	LINCOLN COUNTY

ESTIMATED BY	QC CHECKED BY	STV PROJECT NUMBER	CLIENT PROJECT NUMBER
TGK	BJH	ODOT2200830.00	JP 35217(04)

ITEM	SPEC NO	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
BRIDGE						
1	-	REMOVAL OF EXISTING BRIDGE & CONSTRUCTION OF PROPOSED BRIDGE	1.00	LSUM	\$ 1,380,000.00	\$ 1,380,000
SECTION SUBTOTAL (1 BID ITEMS)						\$ 1,380,000

CONSTRUCTION						
2	220 1100	SWPPP DOCUMENTATION AND MANAGEMENT	1.00	LSUM	\$ 5,000.00	\$ 5,000
3	641 2110	MOBILIZATION	1.00	LSUM	\$ 119,420.00	\$ 119,420
SECTION SUBTOTAL (2 BID ITEMS)						\$ 124,420

ROADWAY						
4	201(A)1200	CLEARING AND GRUBBING	1.00	LSUM	\$ 5,000.00	\$ 5,000
5	202(A)2200	UNCLASSIFIED EXCAVATION	640.00	CY	\$ 15.00	\$ 9,600
6	202(D)2500	UNCLASSIFIED BORROW	280.00	CY	\$ 20.00	\$ 5,600
7	205(A)6200	TYPE A-SALVAGED TOPSOIL	1.00	LSUM	\$ 37,000.00	\$ 37,000
8	221(B)2300	TEMPORARY SILT FENCE	1,285.00	LF	\$ 4.00	\$ 5,140
9	221(E)2600	TEMPORARY SILT DIKE	162.00	LF	\$ 18.00	\$ 2,916
10	230(A)7200	SOLID SLAB SODDING	880.00	SY	\$ 5.00	\$ 4,400
11	233(A)0200	VEGETATIVE MULCHING	0.18	AC	\$ 2,000.00	\$ 362
12	303(A)1200	AGGREGATE BASE TYPE A	310.00	CY	\$ 85.00	\$ 26,350
13	307(K)4200	STABILIZED SUBGRADE	1,855.00	SY	\$ 10.00	\$ 18,550
14	402(E)2600	TRAFFIC BOUND SURFACE COURSE TYPE E	95.00	TON	\$ 50.00	\$ 4,750
15	407(B)7300	TACK COAT	467.02	GAL	\$ 5.00	\$ 2,335
16	408 8100	PRIME COAT	1,095.74	GAL	\$ 5.00	\$ 5,479
17	411(B)1330	SUPERPAVE, TYPE S3(PG 64-22 OK)	515.00	TON	\$ 130.00	\$ 66,950
18	411(C)1430	SUPERPAVE, TYPE S4(PG 64-22 OK)	205.00	TON	\$ 160.00	\$ 32,800
19	609(B)4360	2'-8" COMB.CRB.& GUT.(6" BARRIER)	639.00	LF	\$ 42.00	\$ 26,838
20	610(A)5200	4" CONCRETE SIDEWALK	162.67	SY	\$ 92.00	\$ 14,965
21	610(B)5310	6" CONCRETE DRIVEWAY	57.88	SY	\$ 120.00	\$ 6,945
22	611(A)7210	MANHOLE (4' DIA.)	1.00	EA	\$ 4,500.00	\$ 4,500
23	611(B)7300	ADD'L.DEPTH IN MANHOLE (4' DIA.)	3.00	VF	\$ 350.00	\$ 1,050
24	611(G)7710	INLET CI DES. 1 (STD)	3.00	EA	\$ 2,900.00	\$ 8,700
25	611(G)7754	INLET CI DES. 2 (STD)	3.00	EA	\$ 5,100.00	\$ 15,300
26	611(H)0410	ADD'L DEPTH IN INLET CI DES. 1	8.63	VF	\$ 360.00	\$ 3,107
27	611(H)0414	ADD'L DEPTH IN INLET CI DES. 2	9.95	VF	\$ 500.00	\$ 4,975
28	611(L)1600	JUNCTION BOXES	83.08	CF	\$ 150.00	\$ 12,462
29	613(A)5216	24" R.C.PIPE CLASS III	245.00	LF	\$ 120.00	\$ 29,400
30	613(J)6400	EDGE DRAIN CONDUIT-PERFORATED	480.00	LF	\$ 20.00	\$ 9,600
31	613(K)6500	EDGE DRAIN OUTLET LATERAL-NONPERFORATED	240.00	LF	\$ 20.00	\$ 4,800
32	613(L)6716	24" PREFAB. CULVERT END SEC., ROUND	2.00	EA	\$ 1,490.00	\$ 2,980
33	619(B)6364	REMOVAL OF ASPHALT PAVEMENT	1,679.22	SY	\$ 10.00	\$ 16,792
34	619(B)6380	REMOVAL OF CONCRETE DRIVEWAY	57.88	SY	\$ 15.00	\$ 868
35	619(B)6384	REMOVAL OF ASPHALT DRIVEWAY	107.59	SY	\$ 15.00	\$ 1,614
36	619(B)6396	REMOVAL OF GUARDRAIL	440.00	LF	\$ 5.00	\$ 2,200
37	623 1100	(PL)GUARDRAIL CURBING	4.00	EA	\$ 2,000.00	\$ 8,000
38	623(A)1200	BEAM GUARDRAIL W-BEAM SINGLE	265.00	LF	\$ 25.00	\$ 6,625
39	623(G)1820	GUARDRAIL END TREATMENT (31")	2.00	EA	\$ 3,000.00	\$ 6,000
40	623(I)2050	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	2.00	EA	\$ 3,000.00	\$ 6,000
SECTION SUBTOTAL (37 BID ITEMS)						\$ 420,953

STAKING						
41	642(B)3300	CONSTRUCTION STAKING LEVEL II	1.00	LSUM	\$ 18,900.00	\$ 18,900
SECTION SUBTOTAL (1 BID ITEMS)						\$ 18,900

TRAFFIC CONTROL						
42	823 6100	(SP)PORTABLE TRAFFIC SIGNAL SYSTEM	240.00	SD	\$ 160.00	\$ 38,400
43	880(B)6310	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	1,200.00	SD	\$ 1.50	\$ 1,800

PROJECT	SH-66 BRIDGE & APPROACH	DATE	9/26/2023
CLIENT	ODOT - DISTRICT 3	GROUP	OKLAHOMA TRANSPORTATION
SUBMITTAL	30% PLANS	COUNTY	LINCOLN COUNTY

ESTIMATED BY		QC CHECKED BY	STV PROJECT NUMBER	CLIENT PROJECT NUMBER			
TGK		BJH	ODOT2200830.00	JP 35217(04)			
ITEM	SPEC NO	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL	
44	880(B)6320	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	2,400.00	SD	\$ 3.00	\$ 7,200	
45	880(C)6410	CONSTRUCTION BARRICADES(TYPE III)	960.00	SD	\$ 1.50	\$ 1,440	
46	880(E)6607	WARNING LIGHTS(TYPE B)	2,400.00	SD	\$ 1.00	\$ 2,400	
47	880(F)6700	DRUMS	4,800.00	SD	\$ 0.75	\$ 3,600	
48	880(G)6805	CHANNELIZER CONES	4,800.00	SD	\$ 0.50	\$ 2,400	
49	882(A)8210	PORT.CHANGEABLE MESSAGE SIGN	480.00	SD	\$ 15.00	\$ 7,200	
SECTION SUBTOTAL (8 BID ITEMS)						\$ 64,440	
SIGNING & STRIPING							
50	805(A)3252	(PL)REMOVAL OF EXISTING SIGNS	4.00	EA	\$ 1,000.00	\$ 4,000	
51	850(A)1200	SHEET ALUMINUM SIGNS	64.00	SF	\$ 100.00	\$ 6,400	
52	851(C)2415	2" SQUARE TUBE POST	40.00	LF	\$ 80.00	\$ 3,200	
53	855(A)7204	TRAFFIC STRIPE(PLASTIC)(6" WIDE)	2,042.00	LF	\$ 2.00	\$ 4,084	
54	855(A)7208	TRAFFIC STRIPE(PLASTIC)(8" WIDE)	148.00	LF	\$ 2.00	\$ 296	
SECTION SUBTOTAL (5 BID ITEMS)						\$ 17,980	
PROJECT SUBTOTAL (54 BID ITEMS)						\$ 2,026,693	
CONTINGENCY 15%						\$ 304,004	
PROJECT SUBTOTAL TOTAL WITH 15% CONTINGENCY						\$ 2,330,697	

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.