

May 22, 2019

RE: Notice to Consultants
Request for Qualifications
Consulting Engineering Services
New Ballwin Road Bridge No. 349
0.55 miles south of Kiefer Creek Road
Federal Project No. BRO-B096(005)
TIP #5204E-19
St. Louis County Project No. CR-1773

The St. Louis County Department of Transportation is requesting the services of a well-qualified consulting engineering firm to perform the described professional services for the subject project. Qualifications-Based Selection (QBS), in accordance with RSMo. 8.285 through 8.291, will be used to determine the successful respondent. Note, St. Louis County Revised Ordinance SLCRO 107.071 is not applicable to the selection process for this contract.

General Description of Services Required:

The project involves the replacement of the New Ballwin Road Bridge No. 349 over Kiefer Creek, located 0.55 miles south of Kiefer Creek Road. Anticipated required elements include, but are not limited to:

- Hydraulics & FEMA No-Rise Certification
- Geotechnical Analysis & Design (as necessary)
- Structural Analysis & Design
- Roadway Design
- Drainage and Water Quality Design and MSD Permitting (as necessary)
- Miscellaneous Pick-Up Survey Work (as necessary)
- Utility Coordination (as necessary)
- Right-of-Way Plans
- Preliminary Plans
- Final Plans
- Job Special Provisions
- Construction Estimates
- Coordination with the Missouri Department of Transportation (MoDOT)

Services to Be Provided by St. Louis County Staff:

- Topographic Surveying
- Property Surveying
- Compilation of Bid Documents

- Compile and Submit Plans, Specifications, and Estimates (P,S, & E)
- Management of the Bidding Process
- Compile and Submit Concurrence in Award Request
- Contract Processing and Execution
- Compile and Submit Construction Notice to Proceed Request
- Construction Engineering
- Materials Testing

The anticipated project schedule is tied to East-West Gateway reasonable progress deadlines and is outlined below. Firms unable to meet these deadlines should not submit a Qualifications Statement.

Qualifications Statements Due:	June 11, 2019
Selection Announced:	June, 2019
Scoping Meeting:	June, 2019
Negotiation:	June, 2019 – July, 2019
Council Authorization/Contract Execution:	August, 2019 - October, 2019
Estimated Notice to Proceed Date:	October 28, 2019
Preliminary Plans Complete:	March, 2020
Right-of-Way Plans Complete:	June, 2020
Final Plans Complete:	March, 2021

Please limit your Qualifications Statement to no more than seven (7) pages. The submittal should include the following:

- A statement describing expressing your firm's interest in the project.
- Key project staff and their qualifications.
- Current workload and availability of key staff throughout the project.
- Project approach
- Details of other similar projects your firm has taken through final design in the recent past. Contact information should be provided for similar projects completed for other agencies.
- DBE Utilization Plan

Firms may submit a copy of their company's general qualifications separately as a single additional document. There is no length limit to this document. This supplemental information is not required and is not guaranteed to be considered in the scoring process. All project specific information should be included in the seven-page Qualifications Statement.

All prime consultants shall be prequalified with MoDOT. It is further required that your firm submit an Affidavit of Compliance with the federal work authorization program along with a copy of your firm's E-Verify Memorandum of Understanding (15CSR 60-15.020) be submitted with your firm's Statement of Qualifications. These items do not count towards the seven-page limit.

Qualifications Statements will be scored based on the following criteria:

- Overall Experience and Technical Competence – **30 points**
 - Project Manager has appropriate qualifications and has successfully managed similar projects (**10 points**)
 - Technical Leads have appropriate qualifications and have successfully performed on similar projects (**10 points**)
 - Project Team, including subconsultants, has experience working together on similar projects (**10 points**)
- Past Record of Performance – **20 points**
 - Prior projects presented are representative of the technical challenges of the project being solicited (**10 points**)
 - Prior projects include federal-aid projects for Missouri Local Public Agencies (**5 points**)
 - Performance on prior projects (**5 points**)
 - Provide project contact information for non-County projects.
 - LPA Federal-Aid Projects Preferred
- Capacity and Capability – **20 points**
 - Statements concerning Project Team availability appear realistic (**5 points**)
 - Record of meeting project schedules (**15 points**)
 - Provide complete project timelines for three recent projects:
 - Projects should be among those discussed in the “Past Record of Performance.” Projects must have been completed (through construction) in the past five (5) years
 - Timelines should include entire project life, from consultant selection through completion of construction. Milestones listed, when applicable, should include:
 - Consultant Selection
 - Consultant Contract was Fully Executed
 - Consultant Notice-to-Proceed
 - Preliminary Plan Approval
 - Right-of-Way Plan Approval
 - A-Date
 - P,S&E Approval
 - Right-of-Way Clearance
 - Bid Opening
 - Award
 - Construction NTP
 - Construction Time Allowed
 - Construction Completed.
 - Explanations should be provided for any milestones that appear to have significant delays.
 - Tabular format is preferred.
- Project Approach – **30 points**
 - Discuss items including, but not limited to:
 - Potential technical challenges and proposed solutions

- Opportunities for innovation
- Project-specific utility coordination approach
- Measures to be taken by project team to keep project on schedule

This project is classified as non-complex per the Department's revised QBS policy. Selection will be made based solely on the scoring of Statements of Qualification received and no interviews will be conducted.

A Disadvantaged Business Enterprise (DBE) goal of **18%** has been established for this project. DBE firms must be listed in the MRCC DBE Directory located on MoDOT's website at www.modot.gov, in order to be counted toward participation in any established DBE Goal. St. Louis County encourages DBE firms to submit as prime on any project for which they are qualified. Any sub-consultants needed to complete the professional services requested by St. Louis County must be listed.

If your firm would like to be considered for the consulting services, please e-mail your Qualifications Statement to Pam Thebeau, P.E., Supervisor, Project Managers at PThebeau@stlouisco.com as a PDF file. General qualifications shall also be submitted in PDF format. Any mailed or hand-delivered hard copy submittals will be discarded. All Qualifications Statements must be received by 2:00 p.m., local time, on June 11, 2019 to be considered for this project. Questions regarding this solicitation shall be submitted in writing via e-mail to the project contact above. Phone inquiries will not be accepted. Failure to comply with the requirements of the RFQ may negatively impact the evaluation of the consultant's Statement of Qualifications.

Pertinent project programming files, inspection reports, and existing plans are attached following this Notice.

<i>St. Louis County, New Ballwin Road Bridge No. 349 Replacement</i>	
Federal Aid No.:	BRO-B096(005); TIP #5204E-19
Location:	New Ballwin Road over Kiefer Creek
Proposed Improvement:	Bridge Replacement
Length:	0.10 miles
Approximate Construction Cost:	\$1,390,300
DBE Goal Determination	18%
Consultant Services Required:	<p>The project involves the replacement of the New Ballwin Road Bridge No. 349 over Kiefer Creek, located 0.55 miles south of Kiefer Creek Road.</p> <ul style="list-style-type: none"> • Hydraulics & FEMA No-Rise Certification • Geotechnical Analysis & Design (as necessary) • Structural Analysis & Design • Roadway Design • Drainage Design and Water Quality Design and MSD Permitting (as necessary) • Miscellaneous Pick-Up Survey Work (as necessary) • Utility Coordination (as necessary) • Right-of-Way Plans • Preliminary Plans • Final Plans • Job Special Provisions • Construction Estimates • Coordination with the Missouri Department of Transportation (MoDOT)
Other Comments:	<p><u>Services to Be Provided by St. Louis County Staff:</u></p> <ul style="list-style-type: none"> • Topographic surveying • Property surveying • Compilation of Bid Documents • Compile and Submit Plans, Specifications, and Estimates (P,S, & E) • Management of the Bidding Process • Compile and Submit Concurrence in Award Request • Contract Processing and Execution • Compile and Submit Construction Notice to Proceed Request • Construction Engineering • Materials Testing
Contact:	<p>Pamela R. Thebeau, P.E. Supervisor, Project Managers St. Louis County Department of Transportation PThebeau@stlouisco.com All questions and submittals via e-mail. Phone inquiries not accepted.</p>
Deadline:	June 11, 2019 at 2:00 p.m.



Off-System Bridge Funding (BRO)

Sponsoring Agency:

Project Title:

Federal Amount Requested:

PROJECT CHECKLIST AND SUBMITTAL REQUIREMENTS

The evaluation and scoring of all projects will be based on the answers provided in the application and the attachments submitted. Submit one electronic copy. Save the electronic copy as a PDF file using the following format:

BRO_[Sponsor]_[Project Name].pdf.

The materials should be submitted in the following order.

Project Application:

☐ **Completed BRO information form**

Attachment A:

☐ **Project location map** – depict the location of the project on a base map such as a town road map, GIS map, aerial photo, or another base map suitable to clearly show the project’s overall location. Provide on an 8 ½ x 11 page.

☐ **Detailed cost estimate** – use Estimate of Project Costs excel file provided.

☐ **Letter of permission from facility owner** – provide if sponsor does not own roadway.

☐ **Letter of support from match source** – provide if individual, business, other local public agency, or other third-party is providing matching funds.

Attachment B:

☐ **Photographs** – attach photo(s) of the current bridge.

☐ **Detailed map** – if applicable, provide a map showing:

☐ **Roadway realignment diagram** – if applicable, provide a diagram showing existing and proposed vertical or horizontal realignment of the connecting roadway.

☐ **Typical bridge section** – show details of before and after bridge improvements.

☐ **Bridge condition** – attach State-issued inspection report or other documentation from State DOT showing bridge condition.

☐ **Preventive maintenance activities** – provide documentation from FHWA showing its approval of proposed preventive maintenance plan. Include list showing at least the bridges that are part of the program, ADT, sufficiency rating, maintenance activity, maintenance cost, when the structure is due for replacement, and the cost to replace the structure (in present dollars). Documentation must show that project will extend life of bridges. Required only for preventive maintenance projects.

SPONSOR INFORMATION															
Sponsoring agency:															
Secondary sponsor agency (if applicable):															
Chief Elected Official/Chief Executive Director:															
Name:					Title:										
Street address:															
City:				State:				County:				ZIP code:			
Project contact:															
Name:					Title:										
Agency:															
Street address:															
City:				State:				County:				ZIP code:			
Phone Number:					E-mail address:										
Application contact:															
Name:					Phone Number:										
E-mail address:															
PROJECT INFORMATION															
Project title:															
Project status: <input type="checkbox"/> New project <input type="checkbox"/> Continuation of STP-S/CMAQ/TAP project <input type="checkbox"/> Add to existing non-federally funded project					Is this application request for a piece of a larger project (phase) or the entire length of project? <input type="checkbox"/> Phase <input type="checkbox"/> Full project										
If project is a continuation of another project that was previously programmed in the TIP, provide TIP ID # of existing project and also explain this relationship: 															
If this project is a phase of a full project, how many phases are left to complete the project? Briefly explain each phase (i.e., project limits and general improvements): 															
Has your agency previously competed for funds for this specific project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown															
If yes, when?															
Estimated completion (construction) month/year:															

ROADWAY INFORMATION			
Name of street or facility to be improved:			
Does the sponsoring agency own and maintain this facility?			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <i>If no, a letter of support for this project is required from the facility owner.</i>			
Project length (miles):			
Feature crossed (i.e., Fee Fee Creek):			
Federal functional classification of road (per EWG) ¹ :			
Bridge sufficiency rating:			
Bridge identification number (federal ID):			
	CURRENT:	PROPOSED:	
Traffic volumes (AADT):	Year:	Year:	
Speed limit of street:			
Bridge width:			
Deck width:			
Number of through lanes:			
Number of turn lanes:			
Two-way left turn lanes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Typical lane width:			
Outside lane width:			
Shoulder width:			
On-street parking allowed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Curb and gutter?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Sidewalks?	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None	
Sidewalk width:			
Sidewalk condition:	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> None	n/a	
On-road bicycle facility ² ?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Shared-use path or sidepath?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Shared-use path or sidepath width:			
Located on transit route?	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a	
PREVENTIVE MAINTENANCE			
<i>Note: Complete only if preventive maintenance activity is proposed.</i>			
How many bridges are proposed?			
How will the maintenance activities extend the life of the bridge structures?			
<div style="height: 100px;"></div>			
Have the preventive maintenance activities been approved by FHWA?			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			

¹ East-West Gateway Functional Classification maps: <http://www.ewgateway.org/transportation-planning/roadway-functional-classification/>.

² On-road bicycle facility includes: bike lanes (separated, buffered, and standard) and shared-lane markings.

LAND ACQUISITION INFORMATION

Status of right-of-way acquisition:

- ☐ All acquired or none needed
☐ In process
☐ Not started

If applicable, list the number of parcels to be acquired (all properties, permanent and/or temporary easements, TSCL, and other rights-of-way):

If any residential or commercial displacements are anticipated, give details on how many and if they are residential and/or commercial:

Right-of-way acquisition by:

Right-of-way condemnation by:

Will the project traverse any public property, such as a public park that has used federal funds (i.e., Land and Water Conservation Funds) in the past?

- ☐ Yes ☐ No ☐ Unknown

UTILITY COORDINATION

Note: Project sponsor must coordinate with utilities prior to construction.

Will the project require the relocation of any utilities?

- ☐ Yes ☐ No ☐ Unknown

If yes, check the appropriate box to select the type of utility. Then give the names of the utility companies.

☐ Electric

☐ Phone

☐ Gas

☐ Water

☐ Cable TV

☐ Storm sewer

☐ Sanitary sewer

☐

☐

Give details concerning potential utility conflicts, problems, or issues:

Utility coordination completed by:

Designed by:

Inspected by:

RAILROAD COORDINATION

Does the project traverse any property owned by a railroad?

☐ Yes ☐ No ☐ Unknown

Is there a railroad within 500' of project limits?

☐ Yes ☐ No ☐ Unknown

Name of railroad:

Number of crossings impacted:

Are the crossings active?

☐ Yes ☐ No

Width of crossing:

What is the crossing type?

- ☐ Timber
☐ Rubberized
☐ Asphalt
☐ Concrete
☐ Other

Describe other:

PROJECT MAINTENANCE

List any regular maintenance tasks anticipated over the next 25 years:

Estimated annual cost to maintain facility and funding source:

AMERICANS WITH DISABILITIES ACT

Under the 1990 Americans with Disabilities Act (ADA), Title II requires public entities with more than 50 employees to complete a self-evaluation and create an effective ADA transition plan³.

Does your local public agency have more than 50 employees?

☐ Yes ☐ No ☐ Unknown

If yes, does your agency have an adopted ADA transition plan?

☐ Yes ☐ No ☐ Unknown

If your agency has an ADA transition plan, when was it adopted?

If ADA transition plan is not adopted, when is it expected to be adopted?

³ FHWA Questions and Answers about ADA/Section 504: https://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.cfm.

PROJECT DESCRIPTION

Provide a brief description of the purpose of the project and the scope of work. Be as specific as possible.

PROJECT DEVELOPMENT SCHEDULE

Note: Many stages can occur concurrently.

Activity Description	Start Date (MM/YYYY)	Finish Date (MM/YYYY)	Time Frame (Months)
Receive notification letter	11/2018	11/2018	1
Execute agreement (project sponsor and DOT)			
Engineering services contract submitted and approved*			
Obtain environmental clearances (106, CE-2, etc.)			
Public meeting/hearing			
Develop and submit preliminary plans			
Preliminary plans approved			
Develop and submit right-of-way plans			
Review and approval of right-of-way plans			
Submit and receive approval for notice to proceed for right-of-way acquisition (A-Date)*			
Right-of-way acquisition			
Utility coordination			
Develop and submit PS&E			
District approval of PS&E/advertise for bids*			
Submit and receive bids for review and approval			
Project implementation/construction			

* Finish date must match fiscal year for each milestone shown in **bold** text.

FINANCIAL PLAN

Note: Fiscal years are federal fiscal years (October 1 through September 30). Federal participation for a phase of work must not exceed 80%.

Activity	Starting Federal Fiscal Year	Total Phase Cost	BRO Funds	Sponsor Share	Sponsor Share Percentage
PE / Planning / Environmental Studies	FY				
Right-of-Way	FY				
Implementation	FY				
Construction Engineering	FY				
TOTAL PROJECT COST					
Identify the source(s) of local matching funds, and the amount for each source:					

SAFETY

Is the bridge structurally deficient or functionally obsolete?

- ☐ Structurally deficient
☐ Functionally obsolete

MULTIMODAL

Describe the existing conditions of the bicycle/pedestrian environment where the proposed facility will be constructed:

Does the proposed project incorporate any of the following bicycle-related improvements?

- ☐ Separated bike lane/cycle track/protected bike lane
☐ Shared-use path/trail
☐ Buffered bike lane
☐ Standard bike lane (not buffered)
☐ Marked shared roadway (shared-lane markings, "sharrow")
☐ Paved shoulder
☐ Other
☐ None

Describe other:

Does the proposed project incorporate any of the following pedestrian-related improvements?

- ☐ New sidewalks
☐ Sidewalk reconstruction
☐ Construction of new curb ramps
☐ Curb ramp reconstruction
☐ Railing or protective screening/concrete barrier
☐ Pedestrian-scale lighting
☐ Other
☐ None

Describe other:

Is the project within ½ mile of a school?

- ☐ Yes ☐ No ☐ Unknown

If yes, identify the school(s):

Is the project within ½ mile of an activity center, employment center, or community resource (i.e., a business district, retail center, medical facility, community center, park)?

☐ Yes ☐ No ☐ Unknown

If yes, identify all activity centers, employment centers, and/or community resources (planned or existing):

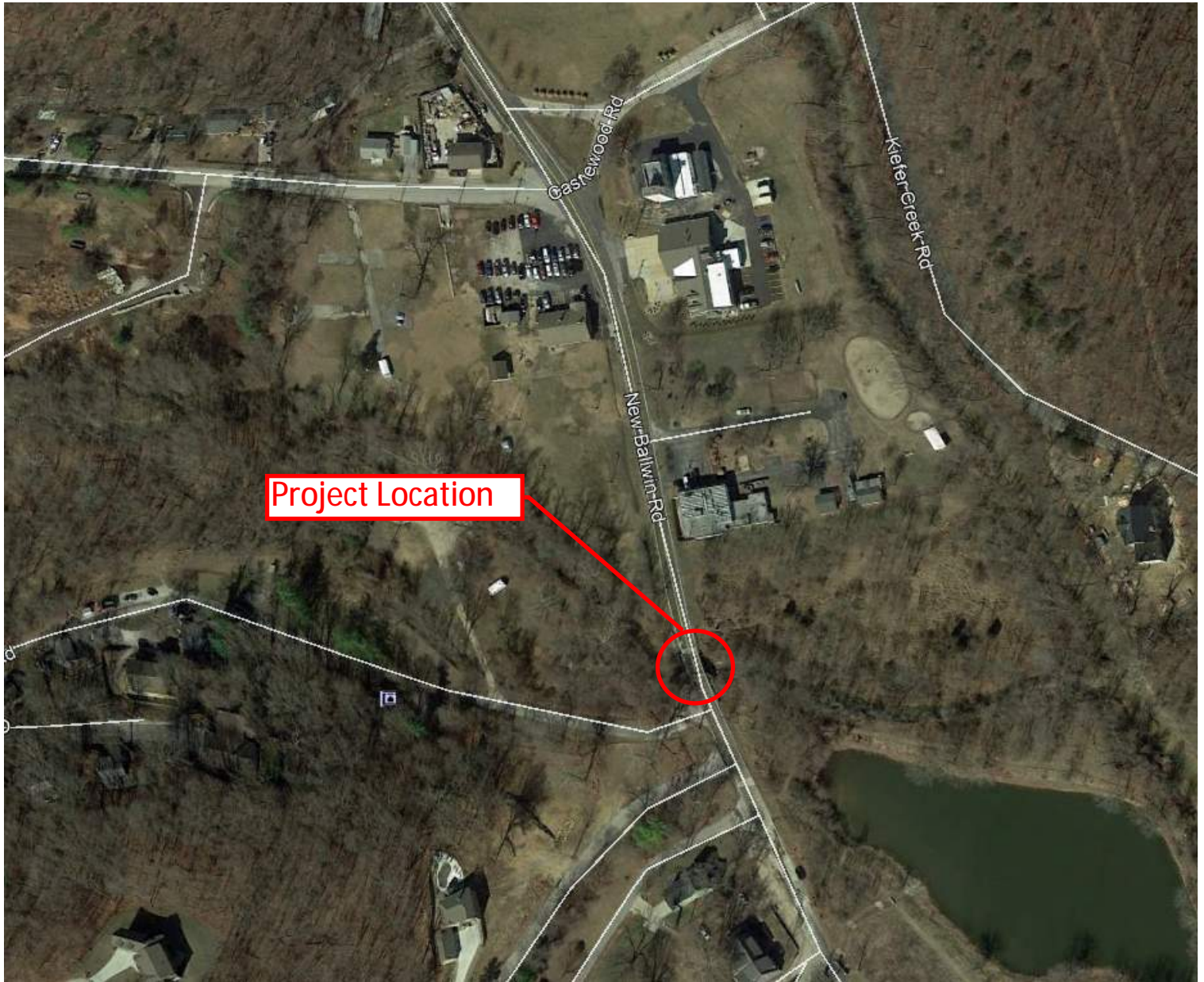
INTERMODAL CONNECTIONS

Does the facility have a posted weight limit?

☐ Yes ☐ No ☐ Unknown

If yes, what is the posted weight limit?

New Ballwin Road Bridge No. 349 (096B349)
St. Louis County, MO



Current Bridge Length (ft): 27 (single span)
Anticipated Bridge Length (ft): 29 (single span)
Anticipated Out-to-out width: 32

	QUANTITY	UNIT	UNIT PRICE	ESTIMATED COST	SUB-TOTAL
Removal of Improvements	1	Lump Sum	\$8,000	\$8,000	
Land Disturbance Permits	1	Lump Sum	\$1,000	\$1,000	
Erosion Control & SWPPP	1	Lump Sum	\$10,000	\$10,000	
Earthwork					\$19,000
Type 5 Aggregate Base (4" Thick)	360	SY	\$8	\$2,880	
Type "C" Bituminous Concrete (Pavement)	50	Tons	\$200	\$10,000	
Type "X" Bituminous Concrete (Base)	180	Tons	\$125	\$22,500	
Tack-Emulsified Asphalt (SS-1H)	40	Gal.	\$7	\$280	
Prime-Liquid Asphalt (MC30)	130	Gal.	\$10	\$1,300	
Bridge Approach Slab (Bridge)	156	SY	\$250	\$39,000	
Concrete Approach Pavement	213	SY	\$110	\$23,430	
Class "A" Underdrain	76	L.F.	\$30	\$2,280	
Bridge Anchor Section (Safety Barrier Curb)	4	Each	\$2,000	\$8,000	
Crashworthy Guardrail Terminal	4	Each	\$3,000	\$12,000	
Heavy Stone Revetment	250	S.Y.	\$55	\$13,750	
Standard Traffic Control Devices	1	Lump Sum	\$10,000	\$10,000	
Temporary Pavement (to connect to temp. bridge)	1	Lump Sum	\$25,000.00	\$25,000	
Miscellaneous (5% of above)				\$8,600	
Roadway Work					\$179,020
Removal of Bridges	1	Lump Sum	\$25,000	\$25,000	
Class I Excavation	223	C.Y.	\$80	\$17,840	
Structural Steel Piles (12 in.)	700	L.F.	\$125	\$87,500	
Dynamic Pile Testing	2	Each	\$2,500	\$5,000	
Pre-Bore for Piling	700	L.F.	\$55	\$38,500	
Pile Point Reinforcement	14	Each	\$130	\$1,820	
Class "B" Concrete (Substructure)	108	C.Y.	\$1,000	\$108,000	
Safety Barrier Curb (Bridges, Cast-in-Place)	160	L.F.	\$135	\$21,600	
Bridge Plaque	1	Each	\$1,000	\$1,000	
Class B-2 Concrete (Superstructure on Concrete NU Girder)	104	C.Y.	\$1,000	\$104,000	
Laminated Neoprene Bearing Pads	10	Each	\$350	\$3,500	
Prestressed Concrete Members, NU Girders	145	L.F.	\$250	\$36,250	
Reinforcing Steel (Bridges)	6,480	Lbs.	\$1.10	\$7,128	
Reinforcing Steel (Epoxy-Coated) (Grade 60)	4,160	Lbs.	\$2.00	\$8,320	
Vertical Drain at End Bents	2	Each	\$2,600	\$5,200	
Temporary Bridge	30	L.F.	\$4,000	\$120,000	
Bridges (Vehicular)					\$590,658
Detours	1	Lump Sum	\$5,000	\$5,000	
Misc. (Site Restoration)	1	Lump Sum	\$10,000	\$10,000	
Misc. (Mobilization, Office, etc.)				\$78,900	
Miscellaneous					\$93,900
TOTAL before contingencies					\$882,578
Contingencies (10% of above)				\$88,300	\$88,300
TOTAL with contingencies					\$970,878

RIGHT-OF-WAY COSTS

Appraised ROW	\$60,000	Utilities (Lump Sum)	\$50,000
Titles, Appraisals, Condemnation Costs @ 30%	\$18,000		
Total	\$78,000	Construction Cost	\$971,000
(Includes 10% Contingency, Rounded to Nearest \$1,000)		Admin. Eng. & Const. Supv.	\$145,650
		Survey & Design Engineering Cost	\$145,650
		Right-of-Way Cost	\$78,000
		Environmental	\$0
		Railroad	\$0
		Total Cost	\$1,390,300



New Ballwin Road Bridge No. 096B349
Looking East



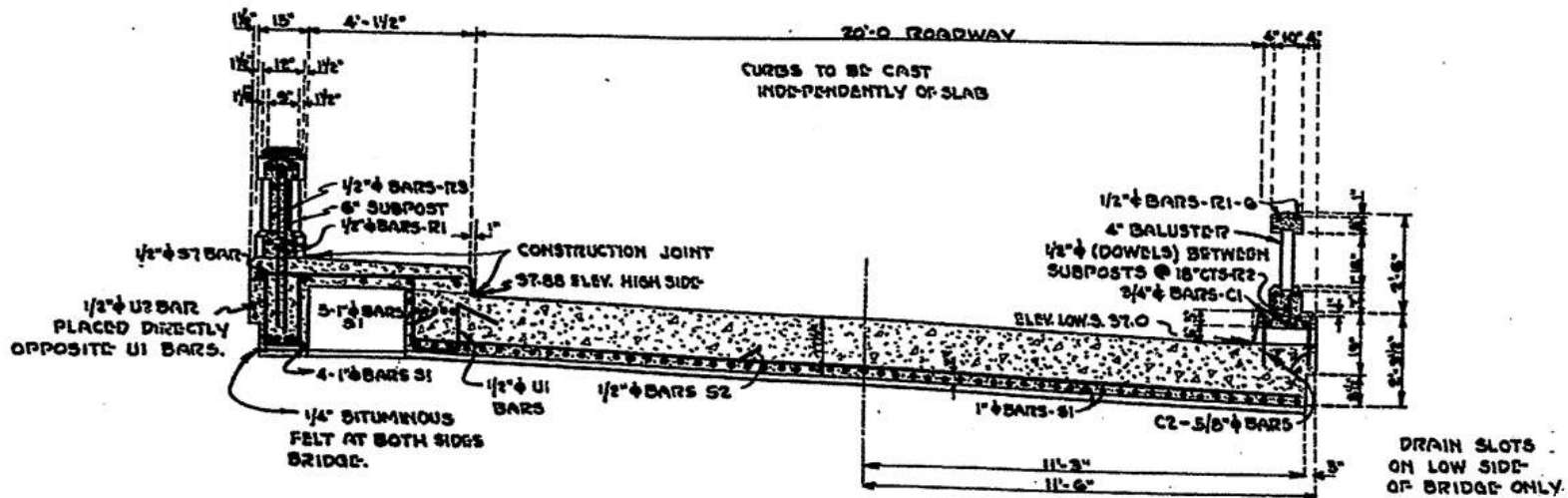
New Ballwin Road Bridge No. 096B349
Looking West



New Ballwin Road Bridge No. 096B349
Looking South

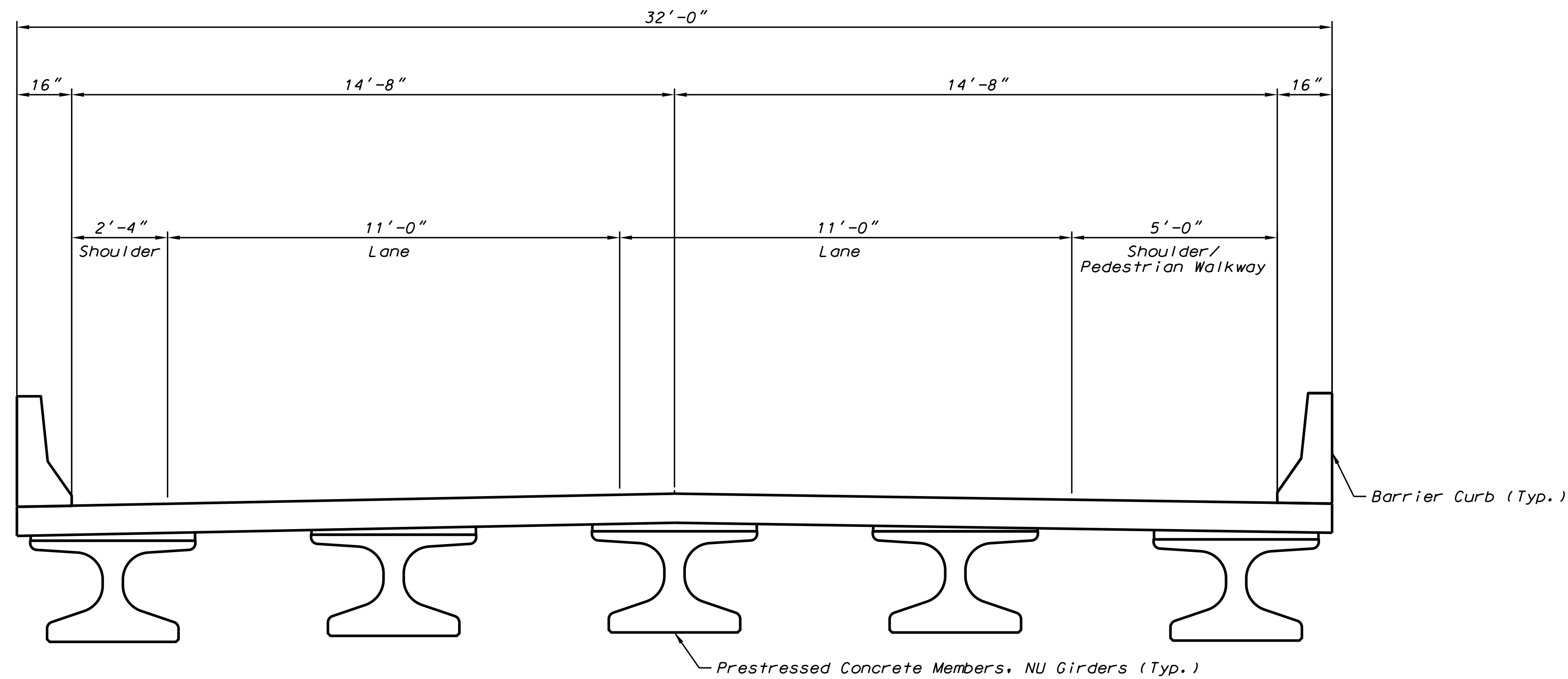


New Ballwin Road Bridge No. 096B349
Looking North



SECTION AT ABUTMENT

St. Louis County, MO
New Ballwin Road Bridge No. 096B349
Existing Bridge Cross Section



THIS DRAWING IS NOT TO SCALE, FOLLOW DIMENSIONS

BRIDGE SHEET NO.
OF

ST. LOUIS COUNTY BRIDGE NO.
349

MODOT BRIDGE NO.
096B349

COUNTY PROJECT NO.
CR-1773

FEDERAL PROJECT NO.

E-W GATEWAY TIP NO.

SD:

SD BASE MAP:

[illegible]

RESPONSIBILITY
I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part of the engineering project or survey.

NOT FOR
CONSTRUCTION

DATE: \$\$DATE\$\$

DESIGN DIVISION
1050 N. LINDBERGH BLVD.
1ST FLOOR
ST. LOUIS, MISSOURI 63132
(314) 615-8543

Saint Louis
COUNTY
TRANSPORTATION
PUBLIC WORKS

Daniel W. Dreisewerd, P.E., PTOE
Acting Director

NEW BALLWIN ROAD
BRIDGE NO. 349

**EXPLODED BRIDGE
CROSS-SECTION**

DESIGNED:
R.D. GATES

RAWN:
R.D. GATES

CHECKED:
P.R. THEBEAU

SHEET SEQUENCE:
1 OF 1



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B349

Federal ID : 15611

GENERAL STRUCTURE INFORMATION

[5D] Route :	00000	[41] Structure Status :	P-LOAD POSTED W/RESTRICT
[4] Place Code :	47450 MERAMEC	[9] Location :	S 31 T 45 R 5 E
[6] Features Intersected :	KIEFER CR	[22] Owner :	COUNTY
[7] Facility Carried :	NEW BALLWIN RD	[26] Functional Classification :	ULOCAL
[16] Latitude :	38 33 11.18 (DMS)	[21] Maintenance Responsibility :	COUNTY
[17] Longitude :	90 33 6.33 (DMS)	[11] Milepoint :	4.89 MILES

AGE AND SERVICE - GEOMETRIC DATA - MATERIAL

[27] Year Built :	1932	[106] Year Reconstructed :	
[49] Structure Length :	28 FT.	[51] Bridge Width :	20 FT. 4.8 IN.
[32] Approach Roadway Width :	20 FT. 0 IN.	[52] Deck Width :	26 FT. 0 IN.
[42B] Type of Service Under :	WATERWAY	[28A] Lanes On :	2
[19] Detour Length :	123.38 MILES	[28B] Lanes Under :	0

COMPONENTS	# SPANS	PRED	MATERIAL	CONSTRUCTION
MAIN SERIES	1	X	REINFORCED CONCRETE	SOLID SLAB
[107] Deck Type :			REINCONC	CIP
[108A] Wearing Surface :			ASPHALT	BITUMSEAL
[108B] Membrane :			NOTAPPLIC	NONE
[108C] Deck Protection :			NOTAPPLIC	NONE

AADT INFORMATION

[29] AADT on Structure :	772	[30] Year :	2018	[109] AADT Truck :	5 %
[114] Future AADT :	1,235	[115] Year :	2038	[102] Direction of Traffic :	2-WAY TRAFFIC

STRUCTURE POSTING

FIELD POSTING	Problem Code :	Problem Direction Code :
Category : S-15 TRUCK WEIGHT LIMIT 40 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 22 TONS WEIGHT LIMIT		
Ton 1 : 40	Ton 2 : 22	Ton 3 :

APPROVED POSTING	
Category : S-15 TRUCK WEIGHT LIMIT 40 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 22 TONS WEIGHT LIMIT	
Ton 1 : 40	Ton 2 : 22 Ton 3 :

COMPUTER GENERATED DEFICIENCY AND EVALUATION ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

<u>Rated Item</u>	<u>Rating</u>	<u>Rating Date</u>
[Item 67] Structure Evaluation Rating:	5-BETTER THAN MINIMUM	8/8/2002
[Item 68] Deck Geometry Rating:	3-BASICALLY INTOL CORRECT	6/30/2008
[Item 69] Underclearance:	N-NOT APPLICABLE	3/1/2002
Sufficiency Rating:	41.0 %	5/23/2012
Deficiency:	FUNCTIONAL	8/8/2002
Funding Eligibility:	FULL	1/18/2018
Estimated New Structure Length:	49 FT.	1/18/2018
Estimated Structure Cost:	\$161,670	1/18/2018
Estimated Total Project Cost:	\$242,505	1/18/2018
Year of Cost Estimate:	2018	1/18/2018

NOTE: The above structure length and cost estimates are computer generated using algorithms in the TMS system. These algorithms are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B349

Federal ID : 15611

****STRUCTURE GENERAL INSPECTION****

[90] Inspection Type: GENERAL

[91] Designated Frequency: 24

Inspection Responsibility:

Inspection Date: 1/25/2018

** Calculated Frequency: 11

Element Inspection Required: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

General Inspection Comments

Inspector

TOBY KEMPER
SCOTT R. NORRIS

Team Leader

X

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****UNDERWATER INSPECTION****

Inspection Category: DRY

[92B] Designated Frequency: 60

Inspection Responsibility:

Inspection Date: 1/25/2018

** Calculated Frequency: 23

NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Underwater Inspection Comments

Inspector

TOBY KEMPER
SCOTT R. NORRIS

Team Leader

X

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****SPECIAL INSPECTION****

Inspection Category: CHANNEL CROSS SECTIONS

[92C] Designated Frequency: 72

Inspection Responsibility:

Inspection Date: 8/4/2014

** Calculated Frequency:

NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Special Inspection Comments

Inspector

DANIEL R VALLEY
JAMES B.W. CARR (NTLQ)

Team Leader

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****OTHER SPECIAL INSPECTIONS****

Category

Frequency

Calculated Frequency**

Date

Inspection Responsibility

NBI

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B349

Federal ID : 15611

****GENERAL COMMENTS AND CONDITION RATINGS****

General Comments :

(LIVINR1, 05/12/2008)--A SINGLE SPAN REINFORCED CONCRETE SLAB STRUCTURE ON FULL HEIGHT GRAVITY REINFORCED CONCRETE ABUTMENT ON SPREAD FOOTING.

[Item 58]--Deck Condition Rating:

5-FAIR CONDITION

Rating Date: 05/02/2012

Deck Rating Comments

(MOBSLCO, 06/28/2018)--TOPSIDE: HEAVY RUTTING; 2 PATCHED POTHOLES ARE HOLDING, BUT ONE HAS A LARGE CRACK THROUGH THE CENTER; SEVERAL SPALLS ALONG TOP EDGE OF CURB ON WEST SIDE.

[Item 59]--Superstructure Condition Rating:

5-FAIR CONDITION

Rating Date: 05/02/2012

Superstructure Rating Comments

(MOBSLCO, 06/28/2018)--MAP CRACKING ALONG WESTERN EDGE OF SLAB UNDER CURB LINE WITH HEAVY EFFLORESCENCE AND RUST ABOUT FOUR FOOT WIDE ON SOUTH SIDE TO ABUTMENT AND ONE FOOT WIDE ON NORTH SIDE. LARGE SPALL ALONG DECK EDGE AT NE CORNER WITH TWO EXPOSED BARS. EFFLORESCENCE ALONG REST OF EAST EDGE AT JOINT OF FULL LENGTH PATCH. LONGITUDINAL CRACK AT CENTER FROM NORTH ABUTMENT FULL LENGTH.

[Item 60]--Substructure Condition Rating:

5-FAIR CONDITION

Rating Date: 02/21/2014

Compass Direction:

Substructure Rating Comments

(MOBSLCO, 06/28/2018)--LARGE VERTICAL FULL HEIGHT CRACK AT CENTER OF SOUTH ABUTMENT. SEPARATION OF BEARING AT WEST SIDE OF CRACK. DIAGONAL CRACKS IN SOUTH ABUTMENT AT TOP HALF OF STEM NEAR EACH WING WALL. DIAGONAL CRACKS AT TOP OF NE WING WALL WITH EFFLORESCENCE. DIAGONAL CRACK AT NW WING WALL. EFFLORESCENCE ON SOUTH ABUTMENT UNDER MAP CRACKS NEAR WEST EDGE. HAIRLINE VERTICAL CRACK IN NORTH ABUTMENT. FOOTING IS EXPOSED. NO UNDERMINING.

[Item 61]--Channel Condition Rating:

5-MAJOR DAMAGE

Rating Date: 02/21/2014

Rating Comments

(CARRJ3, 02/21/2014)--POOR ALIGNMENT UPSTREAM; WATER FLOWS UP AGAINST SOUTH ABUTMENT; HEAVY VEGETATION AND SEDIMENT ON NORTH SIDE.

[Item 62]--Culvert Condition Rating:

N-NOT APPLICABLE

Rating Date: 03/01/2002

Rating Comments

County = ST. LOUIS



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B349

Federal ID : 15611

****APPRAISAL RATINGS****

[Item 36A]--Bridge Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 03/28/2006

Rating Comments

[Item 36B]--Transition Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 03/28/2006

Rating Comments

[Item 36C]--Approach Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 03/28/2006

Rating Comments

[Item 36D]--Rail End Treatment Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 03/28/2006

Rating Comments

[Item 71]--Waterway Adequacy:

DECK/APPRCH OVERTOP SLIGHT

Rating Date: 03/01/2002

Rating Comments

[Item 72]--Approach Roadway Alignment:

6-SATISFACTORY

Rating Date: 08/08/2002

Rating Comments

(HOLZBJ, 08/08/2002)--MINOR REDUCTION IN SAFE OPERATING SPEED DUE TO HORIZONTAL ALIGNMENT.

[Item 113]--Scour Assessment:

5-FOUNDATION STABLE

Rating Date: 3/1/2002

Type of Scour Evaluation:

Rating Comments

(LIVINR1, 05/12/2008)--FOOTING EXPOSED ALL ALONG SOUTH ABUTMENT. FOUNDATION STABLE.

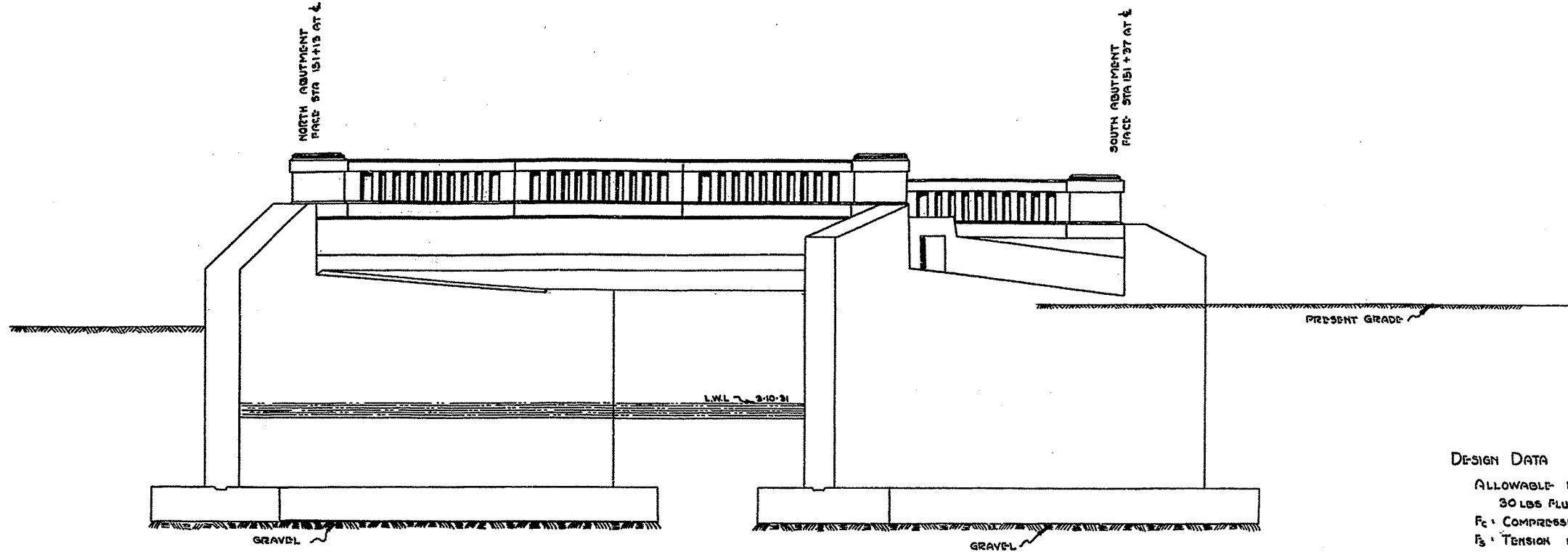
(LIVINR1, 05/12/2008)--SCOUR ALONG FOOTING OF SOUTH ABUTMENT AND SOUTHWEST WINGWALL.

Work Comments :

County = ST. LOUIS

COUNTY OF	DATE	SHEET	NO.
734	1932	2	15

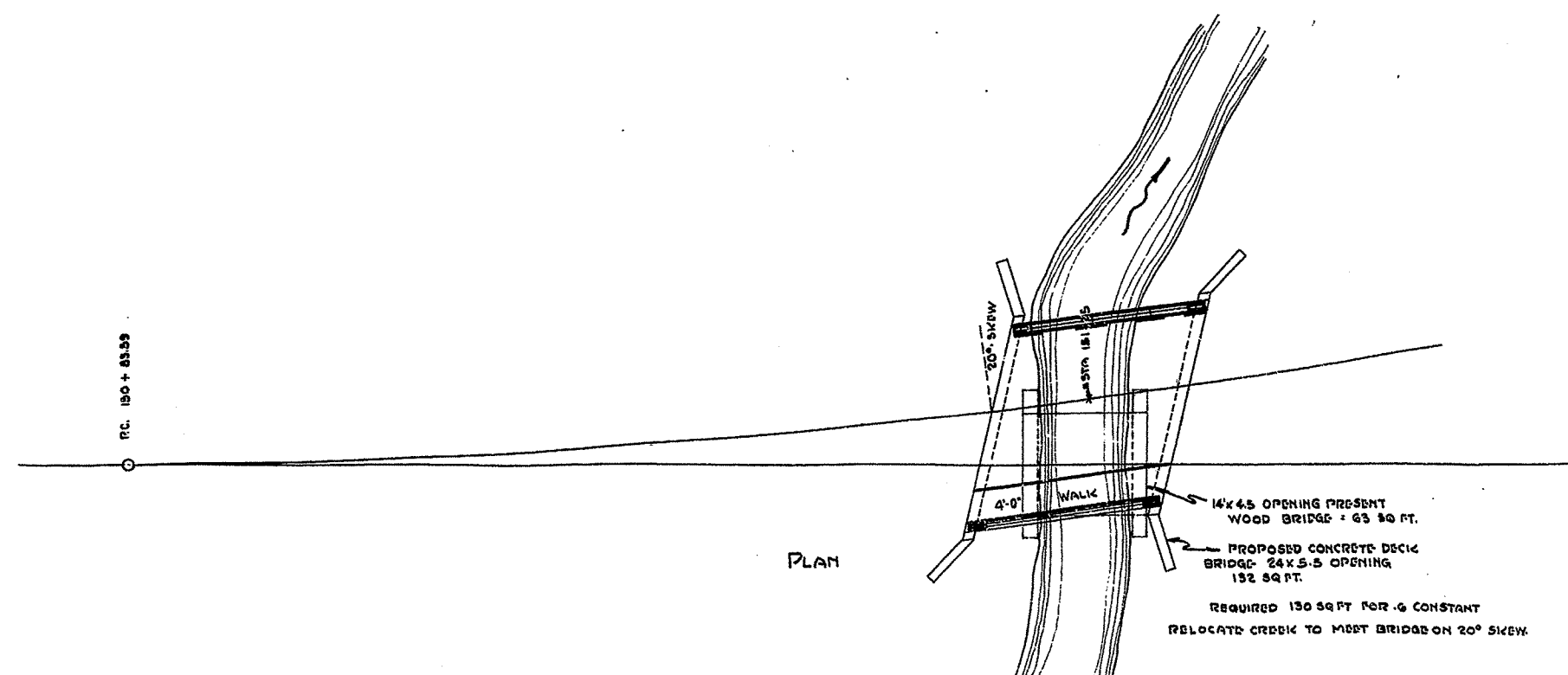
855



GENERAL ELEVATION

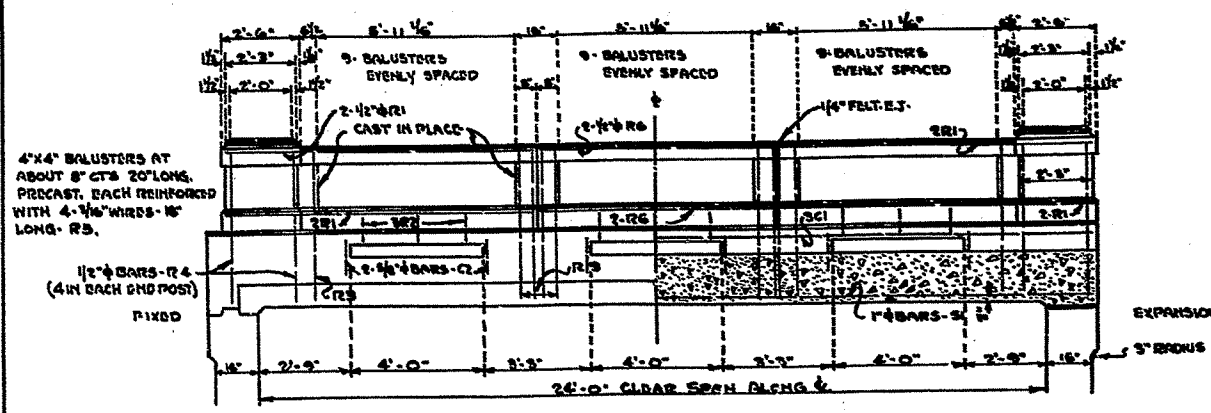
DESIGN DATA

ALLOWABLE PRESSURE ON ABUTMENTS
 30 LBS FLUID PRESSURE.
 F_c : COMPRESSION IN CONCRETE 650 LBS/PER SQ IN.
 F_s : TENSION IN STEEL 16 000 LBS/PER SQ IN.
 V : SHEAR IN CONCRETE 40 LBS/PER SQ IN.
 U : BOND STRESS - (NOT GREATER THAN) 120 LBS/PER IN.
 N : MODULUS RATIO 15
 SOIL TABLE GIVES ALLOWABLE BEARING POWER
 OF STIFF GRAVEL AS 4 TONS. THIS IS WELL
 ABOVE OUR PRESSURE OF 1 1/2 TONS MAXIMUM.

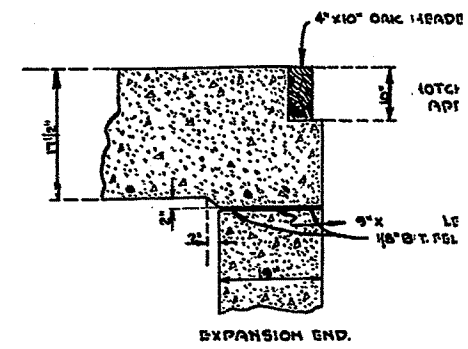
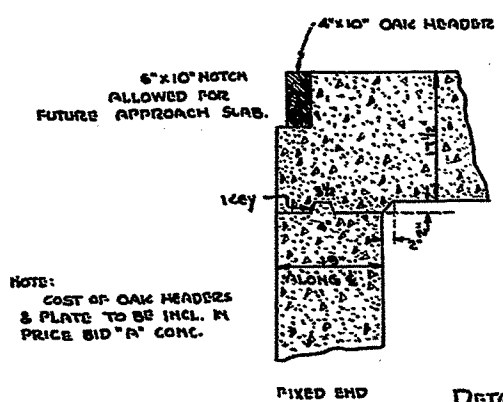


PLAN

REINFORCED - CONCRETE
 SLAB - BRIDGE
 24'-0" SPAN ALONG L
 STA 151+25.0
 BALLWIN
 OFFICE OF HIGHWAY
 CLAYTON, MO.



SECTION ALONG LOW. SIDE

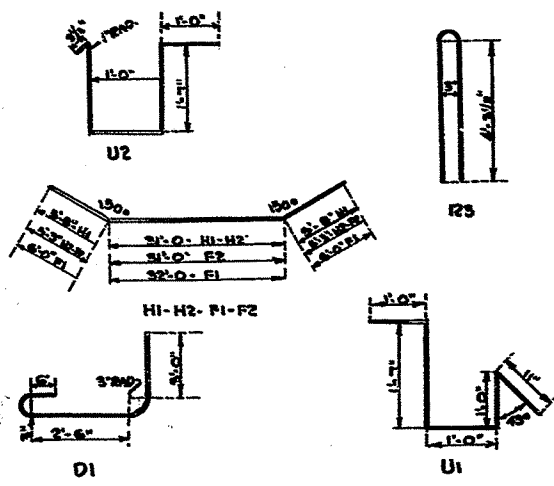


DETAILS OF NOTCH FOR FUTURE APPROACH SLAB AND BEARINGS.

BILL OF REINFORCING STEEL

✓ 16	1/2"	9'-3"	R1	RAIL
✓ 9	1/2"	9'	R2	LOW RAIL
✓ 20	1/2"	9'-0"	R3	SUBPOST
✓ 16	1/2"	4'-6"	R4	POST
✓ 216	3/8"	18'	R5	BALUSTER
✓ 8	1/2"	7'-0"	R6	RAIL
✓ 3	3/4"	26'-6"	C1	CURB
✓ 12	3/8"	15'	C2	"
✓ 64	1"	26'-9"	S1	SLAB
✓ 13	1/2"	22'-3"	S2	"
✓ 2	1/2"	19'-0"	S3	"
✓ 2	1/2"	15'-0"	S4	"
✓ 2	1/2"	11'-0"	S5	"
✓ 2	1/2"	7'-0"	S6	"
✓ 51	1/2"	5'-0"	S7	"
✓ 5	1/2"	26'-6"	S8	"
✓ 37	1/2"	5'-6"	U1	STRAINER
✓ 37	1/2"	5'-6"	U2	"

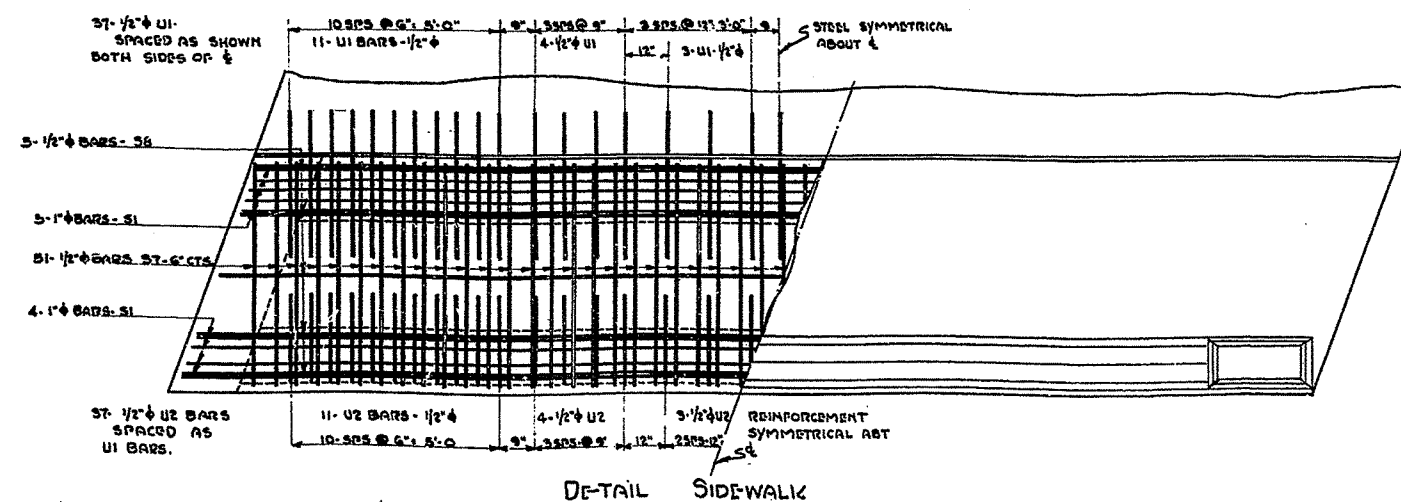
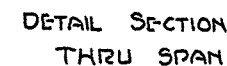
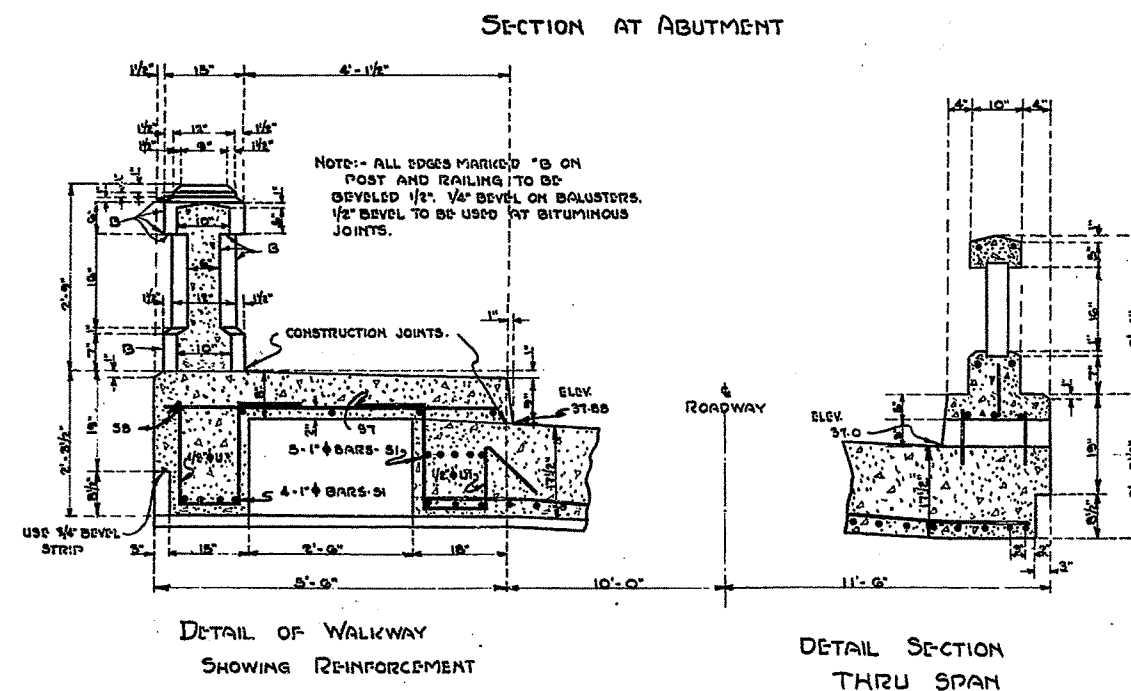
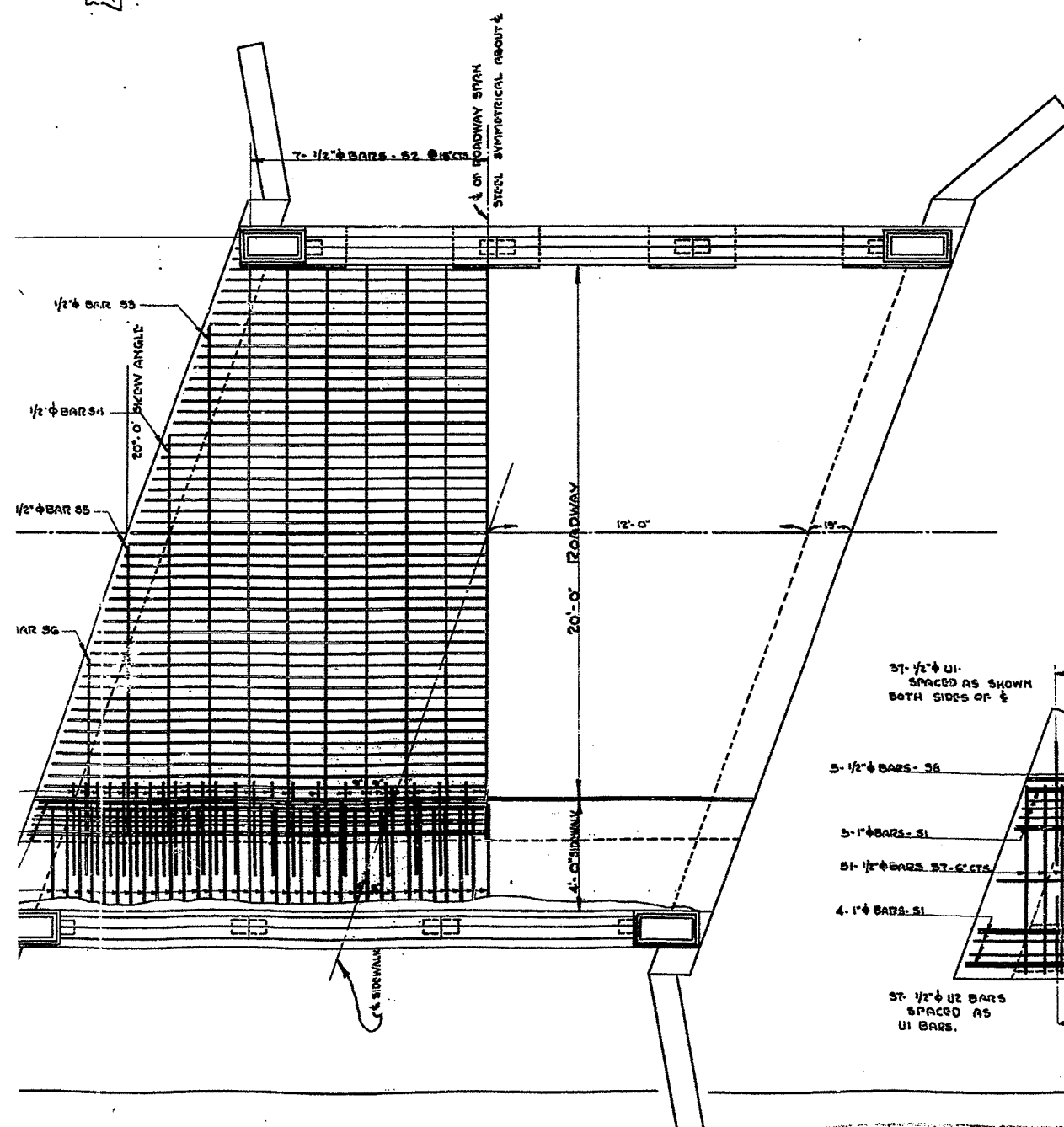
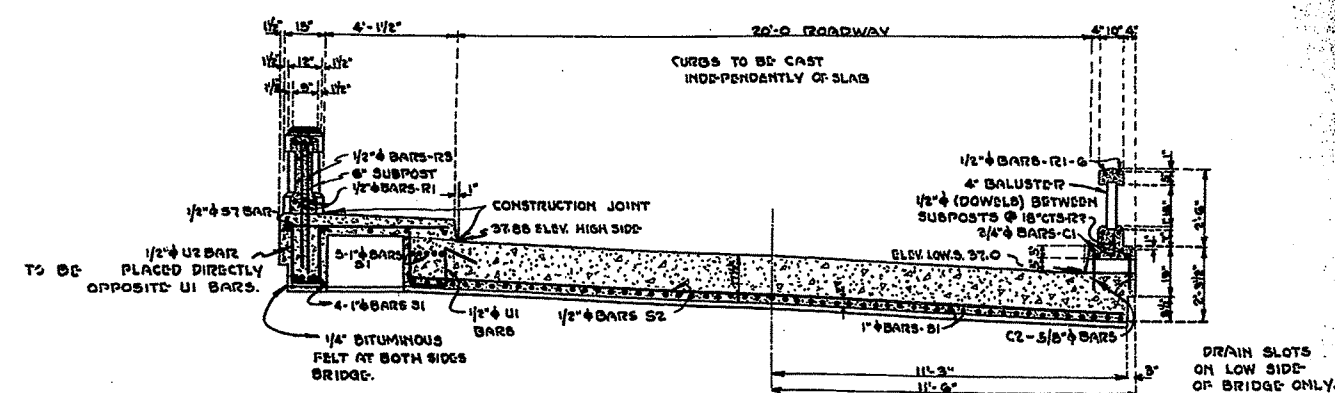
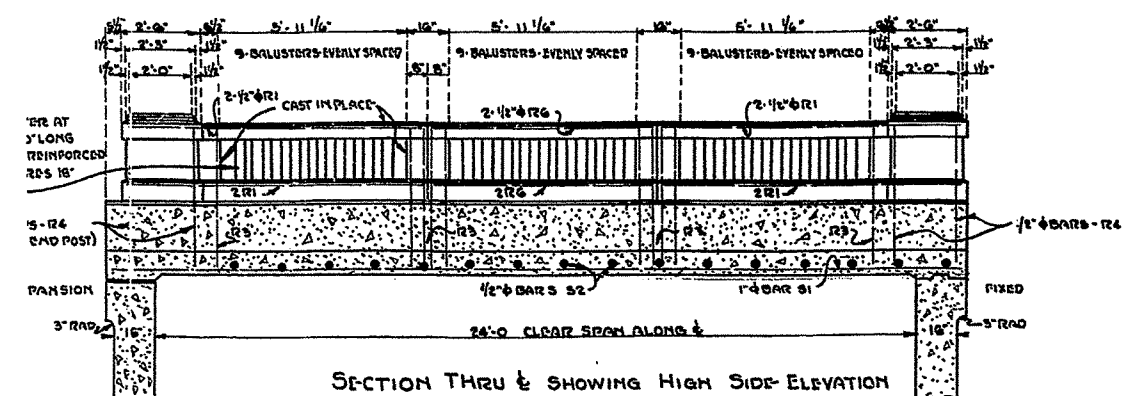
BENDING SKETCHES



✓ 143	1/2"	8'-0"	V1	WALL
✓ 83	1/2"	6'-0"	V2	"
✓ 28	1/2"	4'-0"	V3	"
✓ 16	1/2"	42'-4"	H1	"
✓ 16	1/2"	41'-6"	H2	"
✓ 43	1/2"	4'-6"	T1	FOOTING
✓ 84	1/2"	6'-9"	D1	DOWELS
✓ 86	1/2"	3'-3"	D2	"
✓ 2	1/2"	44'-0"	F1	FOOTING
✓ 2	1/2"	41'-6"	F2	"
✓ 10	1/2"	34'-6"	TF	"

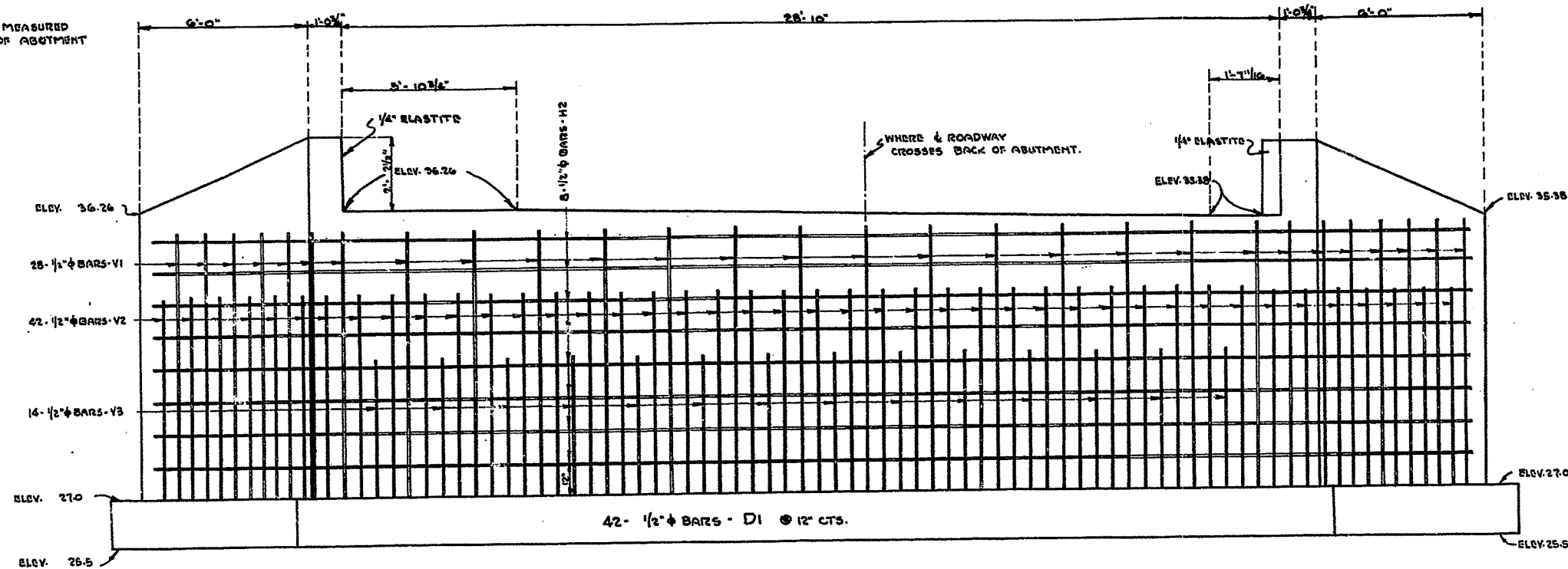
TOTAL ESTIMATED QUANTITIES			
ITEMS.	SUPERSTRUCTURE	SUBSTRUCTURE	TOT
CLASS "A" CONCRETE	40.7 CU YDS.		40
"B"		64.02 CU YDS.	64
"X"	3.1 CU YDS.		3
REINFORCING STEEL	2811.0#	6056.0#	38
BRIDGE EXCAVATION		245 CU YDS.	2
CHANNEL CHANGE	(SEE COMMON EXCAVATION ITEM 1)		

COST OF LEAD PLATES - BIT JOINTS - OAK & C. TO BE INCL. IN PRICE BID "A" CONC.

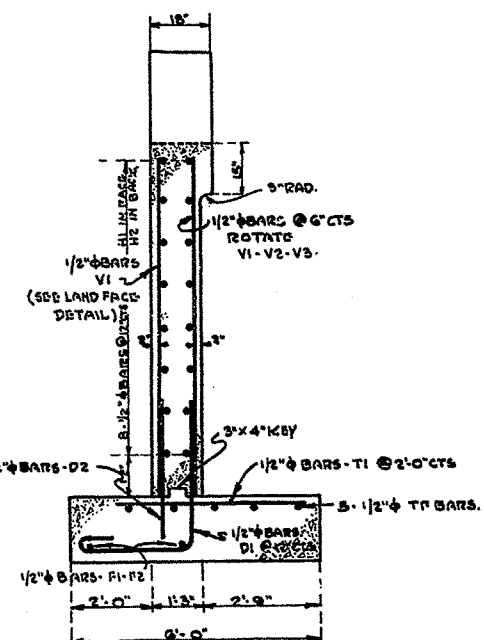


85

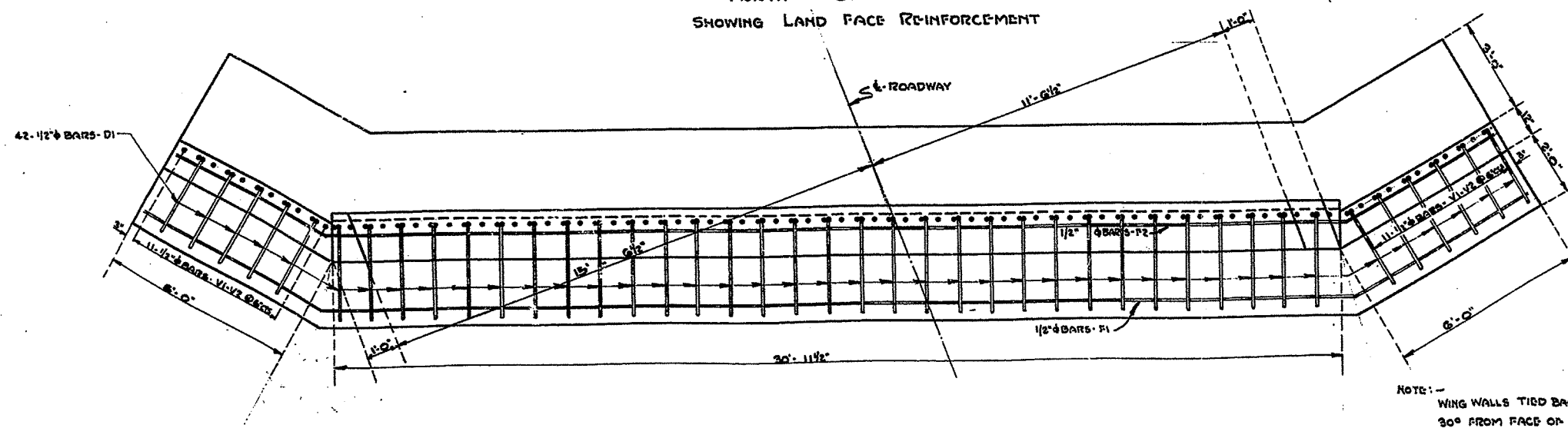
DISTANCES MEASURED
ALONG FACE OF ABUTMENT



NORTH ABUTMENT
SHOWING LAND FACE REINFORCEMENT

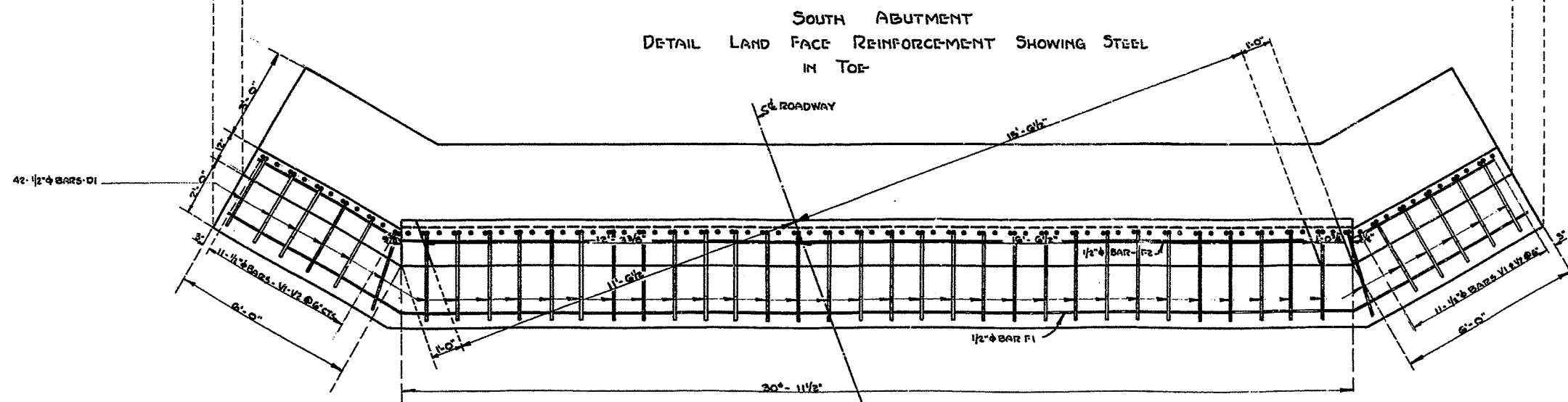


SECTION THRU WALL



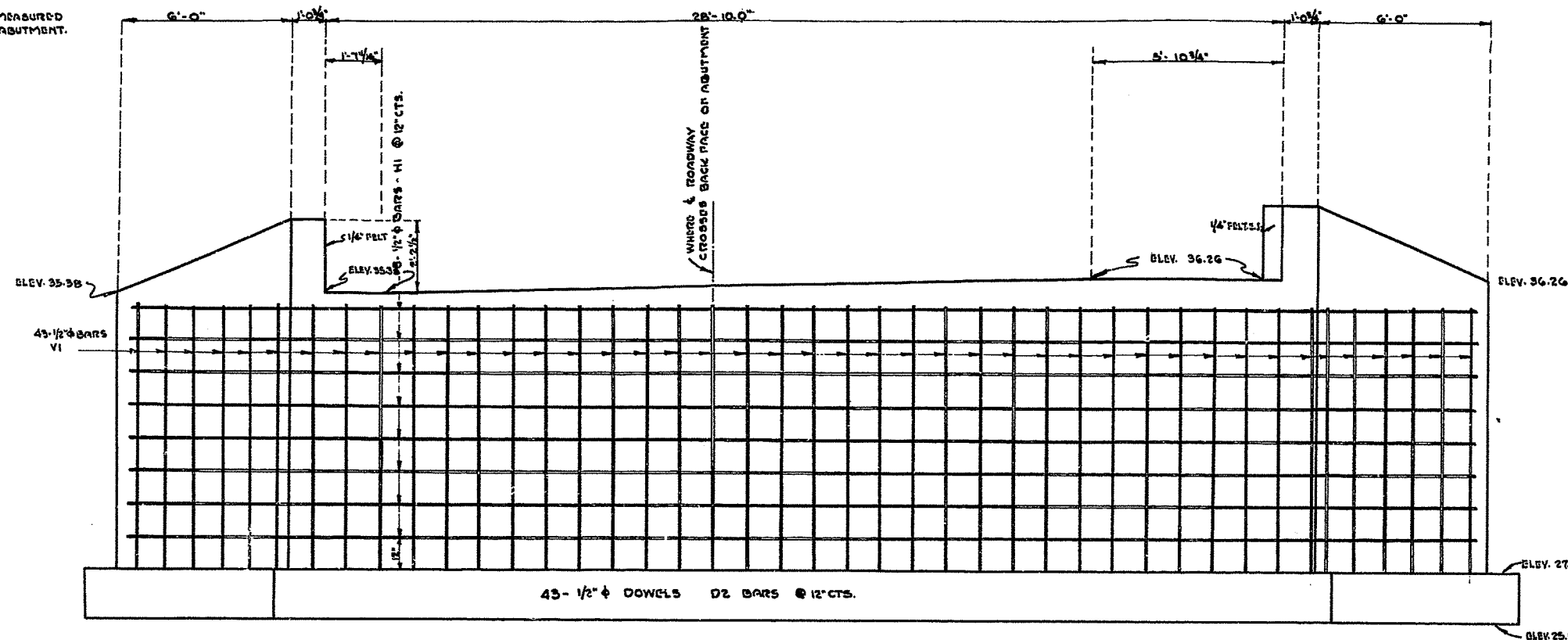
NOTE: -
WING WALLS TIED BACK ON
30° FROM FACE OF ABUTMENT.

955

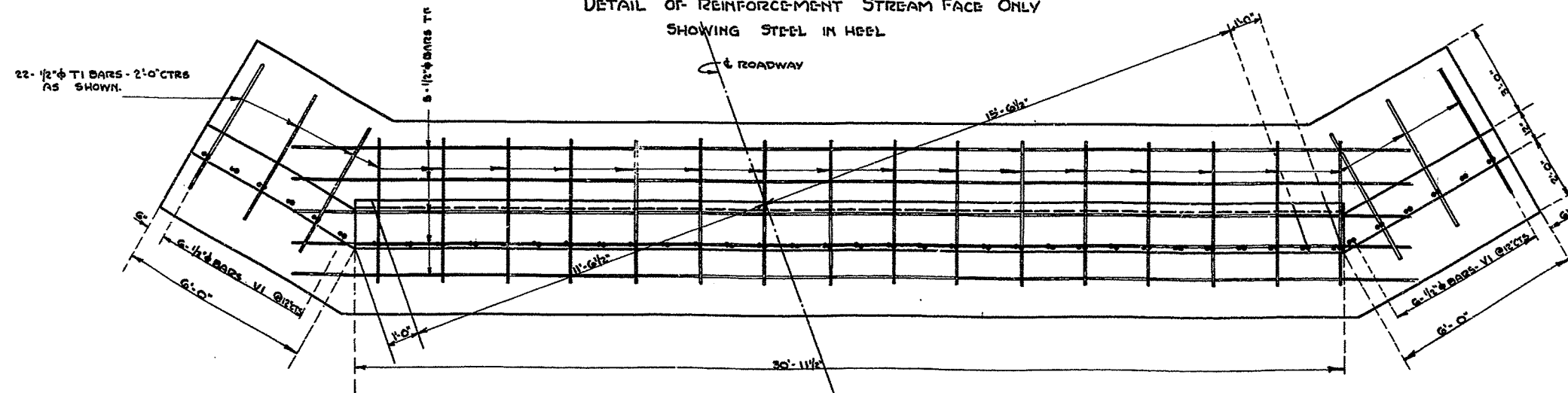


NOTE: -
WING WALLS TIED BACK
ON - 30° ANGLE FROM
FACE OF ABUTMENT.

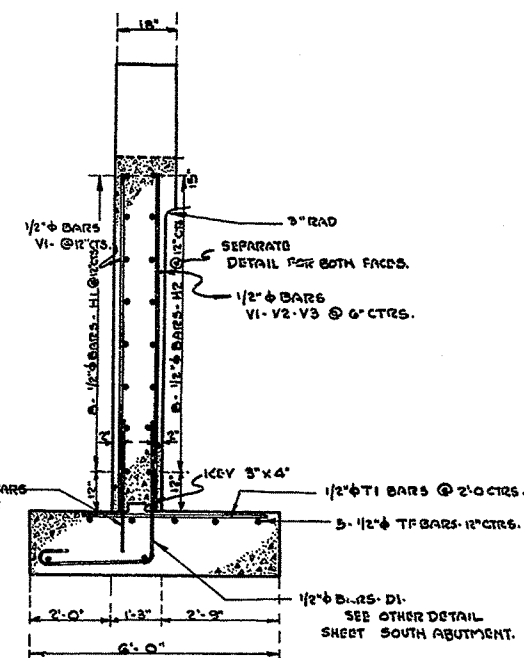
DISTANCES MEASURED
ALONG FACE OF ABUTMENT.



SOUTH ABUTMENT
DETAIL OF REINFORCEMENT STREAM FACE ONLY
SHOWING STEEL IN HEEL



NOTE:—
WING WALLS TIED BACK
ON 30° ANGLE FROM
FACE OF ABUTMENT.



SECTION THRU WALL

SEC