

**INDIANA  
DEPARTMENT OF TRANSPORTATION**

**CONTRACT INFORMATION**

**CONSTRUCTION PLANS  
SPECIAL PROVISIONS  
ADDITIONAL CONTRACT REQUIREMENTS**

**FOR**

**CONTRACT NO.** \_\_\_\_\_

**LETTING DATE:** \_\_\_\_\_

Certified By \_\_\_\_\_

Date \_\_\_\_\_

CONTRACT INFORMATION  
TABLE OF CONTENTS

CONTRACT NO.

This book shall be examined to determine that each page set out in the Contract Information Table of Contents, and the Special Provisions Table of Contents is attached, legible, and current.

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**CONTACT FOR CONTRACTORS**

DISTRICT CONSTRUCTION ENGINEER:

\*

**\*QUESTION FORM**

Contractors shall submit contract specific questions by completing the Question Form accessed from <http://netservices.indot.in.gov/cqa/>. The Department will attempt to have an answer on-line within two business days.

Retrieve the Question and Answer Form for a specific contract by going on-line in the same manner you retrieve Contract Information Books and Plans. <https://netservices.indot.in.gov/ViewDocs2.0/> will display the interface used for selection of contract letting documents. For the document category, select "Q and A Form".

**CONTACTS FOR DISTRICT PERSONEL ONLY**

PHONE:

PHONE:

PHONE:

PROPOSAL

TO THE  
INDIANA DEPARTMENT OF TRANSPORTATION

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DATE OF LETTING: September 15, 2010

TIME OF LETTING: 10:00 AM EASTERN DAYLIGHT SAVINGS TIME

LOCATION OF LETTING: N855 CONF RM, GOVERNMENT CENTER NORTH  
100 N. SENATE AVENUE  
INDIANAPOLIS, INDIANA 46204

LOCATION OF DEPOSIT: N855 GOVERNMENT CENTER NORTH  
100 N. SENATE AVENUE  
INDIANAPOLIS, INDIANA 46204

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\*\*\*\*\* STATE CERTIFIED \*\*\*\*\*

CONTRACT NUMBER: IB-33023-A PROJECT NUMBER: 0902256

STRUCTURE NUMBER: 421-39-6003

ROUTE: 421

LOCATION: ON US 421 FROM MADISON, IN. TO MILTON, KY

DESCRIPTION: DESIGN BUILD, BRIDGE REPLACEMENT

SEYMOUR DISTRICT

COUNTY : JEFFERSON

CONTRACT COMPLETION INFORMATION

CONTRACT COMPLETION DATE: November 30, 2012

INTERMEDIATE COMPLETION DATE September 21, 2012

ROAD CLOSURE TIME 365 CALENDAR DAYS

DBE GOAL: A contract provision goal of 3 percent of the contract bid price has been established as the minimum amount for contracting to disadvantaged business enterprises.

THE FOLLOWING DOCUMENTS ARE INCLUDED IN THE CONTRACT:

2010 STANDARD SPECIFICATIONS EFFECTIVE

LIST OF APPROVED OR PREQUALIFIED MATERIALS

STANDARD DRAWINGS LISTED ON STANDARD DRAWING INDEX EFFECTIVE 9-1-09

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ADDITIONAL REFERENCE MATERIAL MAY BE AVAILABLE ON THE INDOT WEBSITE. THE REFERENCE MATERIAL MAY INCLUDE, BUT IS NOT LIMITED TO PERMITS, ASBESTOS REPORTS, GEOTECHNICAL REPORTS, AND PRE-BID QUESTIONS AND ANSWERS. THE CONTRACTOR SHALL CONSIDER THE AVAILABLE ADDITIONAL REFERENCE MATERIAL IN PREPARATION OF THE PROPOSAL BID.

SCHEDULE OF PAY ITEMS REVISED:

LETTING DATE: September 15, 2010

CONTRACT ID: IB-33023-A

CONTRACTOR: \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 DESIGN BUILD, BRIDGE REPLACEMENT

0001	104-05404 DESIGN/BUILD NO. 1	LUMP	LUMP			.
0002	104-05404 DESIGN/BUILD NO. 2	LUMP	LUMP			.
0003	105-08520 CELLULAR TELEPHONE/RADIO	6.000 EACH		.		.
0004	105-08521 CELLULAR TELEPHONE/RADIO SERVICE	168.000 MOS		.		.
0005	105-08524 CELLULAR TELEPHONE/RADIO, ADDITIONAL MINUTES	1.000 DOL		1.00000		1.00
0006	109-08359 LIQUIDATED DAMAGES	1.000 DOL		1.00000		1.00
0007	109-08360 CONTRACT LIENS	1.000 DOL		1.00000		1.00
0008	109-08443 QUALITY ADJUSTMENTS, TEMPORARY TRAFFIC CONTROL DEVICES	1.000 DOL		1.00000		1.00
0009	109-08444 QUALITY ADJUSTMENTS, FAILED MATERIALS	1.000 DOL		1.00000		1.00

SCHEDULE OF PAY ITEMS REVISED:

LETTING DATE: September 15, 2010

CONTRACT ID: IB-33023-A

CONTRACTOR: \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0010	109-09489 PAYMENT ADJUSTMENT, PG ASPHALT BINDER	 1.000 DOL	 1.00000		 1.00	
0011	113-01614 PARTNERING OVERHEAD	 LUMP	 LUMP		 .	
0012	203-02000 EXCAVATION, COMMON , SCOUR COUNTERMEASURE	 162.000 CYS		 .	 .	
0013	203-02020 EXCAVATION, UNCLASSIFIED	 3000.000 CYS		 .	 .	
0014	203-51223 EXCAVATION, WATERWAY , SCOUR COUNTERMEASURE	 26618.000 CYS		 .	 .	
0015	211-02050 B BORROW	 3000.000 CYS		 .	 .	
0016	616-02320 GEOTEXTILES , SCOUR COUNTERMEASURE, FILTER BLANKET	 2446.000 SYS		 .	 .	
0017	616-06405 RIPRAP, REVTMENT , SCOUR COUNTERMEASURE	 242.000 TON		 .	 .	
0018	616-07656 RIPRAP , SCOUR COUNTERMEASURE, MODIFIED GRADATION	 29096.000 TON		 .	 .	
0019	628-09403 FIELD OFFICE, C	 30.000 MOS		 .	 .	
0020	628-09407 FIELD OFFICE COMPUTER SYSTEM, ADDITIONAL , 2 EACH	 60.000 MOS		 .	 .	

SCHEDULE OF PAY ITEMS REVISED:

LETTING DATE: September 15, 2010

CONTRACT ID: IB-33023-A

CONTRACTOR: \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0021	628-09408 MOBILE LAPTOP COMPUTER SYSTEM , 2 EACH	60.000 MOS	.		.	
0022	628-09409 MOBILE INTERNET SERVICE , 2 EACH	60.000 MOS	.		.	
0023	628-09944 HELPER BOAT	160.000 DAY	.		.	
0024	628-09945 DAYTIME SERVICE FOR FERRY OPERATIONS	365.000 DAY	.		.	
0025	628-09946 NIGHTTIME SERVICE FOR FERRY OPERATIONS	365.000 DAY	.		.	
0026	628-09947 IDLE TIME DURING FERRY OPERATIONS	420.000 HRS	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	

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**SCOPE OF SERVICES**

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**PROJECT IDENTIFICATION**

Project No.: 0902256  
Des. No.: 0902256  
Contract No.: IB-33023  
Structure No.: 421-39-6003 (Indiana designation)  
112B00001N (Kentucky designation)  
Route No.: US 421  
Counties: Jefferson, Indiana; Trimble, Kentucky  
District: Seymour  
Federal Oversight: Yes

**PROJECT LIMITS**

The US 421 bridge over the Ohio River project begins just west of the intersection of KY36 and US421 at station 30+25 Line "421"; to the intersection of Fillmore St and US421 at station 67+00 Line "421" for a total project length of approximately 0.696 miles. The project scope includes bridge pier rehabilitation, and construction of a new superstructure, new approach piers and abutments, approaches, retaining walls, and pedestrian bridge.

During the closure of the US 421 bridge over the Ohio River, this project will provide a ferry service between Milton Kentucky and Madison Indiana on the Ohio River. The ferry service will be free to all users. It will require the construction of a ramp to accommodate the ferry boats and parking and queuing areas for automobile traffic. This will be constructed between the river and the adjacent local streets. The project scope includes providing a ferry boat service and construction of the necessary pavement for ramp access, providing queuing and parking areas necessary for the ferry operations, and restoring these areas to their original condition or as directed by the scope of services and special provisions.

**INTENT OF CONTRACT**

The intent of the contract is to provide for the complete design, construction and completion in every detail of the work described. The intent of the contract plans is to define the Indiana Department of Transportation (INDOT) and Kentucky Transportation Cabinet's (KYTC) expectations. The Design/Builder shall perform all items of work covered and stipulated in the proposal, contract plans and Scope of Services and perform altered and extra work, furnish all labor, engineering, supervision, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the Scope of Services, specifications and terms of the contract. Should any misunderstanding arise as to the intent or meaning of the Scope of Services, contract plans, specifications, special provisions or proposal, or any discrepancy appear, the decision of the Engineer shall be final and conclusive. The Design/Builder shall attend the pre-bid meeting and field check to review the project to be eligible to submit a proposal. The Design/Builder shall attend partnering and pre-construction meetings, review the project, location of data sources, identify contact persons and review relevant Department operations. At the pre-construction meeting the Design/Builder shall review and clarify with the Engineer project issues, data needs and availability, and the sequence of events and team meetings that are essential to the successful completion of the proposed construction by the contract completion date.



## **DESIGN OF THE PROJECT**

The Design/Builder shall provide all necessary services to design all permanent and temporary portions of the project. All work shall conform to current Department, federal, and AASHTO standards, practices, policies, guidelines and specifications. Additional documents identified within the scope of work will be provided under separate cover as part of the contract documents. The Department's standards, practices, policies, guidelines and specifications shall control in case of a conflict. The standard of care for all such services performed or furnished under this Agreement will be the care and skill ordinarily used by members of the engineering profession practicing under similar conditions at the same time and locality.

Design firms prequalified with INDOT or KYTC shall perform only those tasks which they are prequalified to complete. The Design Team shall have INDOT pre-qualifications 5.6 Waterway permits, 7.1 Geotechnical Engineering Services, 8.2 Complex Road Design, 9.2 Level 2 Bridge Design, 10.3 Complex Roadway Sign Design, and 10.4 Lighting Design. The Design team shall have KYTC pre-qualifications in "Structure Design Greater than 500 ft spans", "Geotechnical Laboratory Testing Services", "Geotechnical Drilling Services" and "Geotechnical Engineering Services". They shall be sufficiently staffed and capable of performing the required work on this contract. These design firms would be subcontractors responsible for the design and engineering of the project. There may be multiple Consultants working on the Design/Builder team, however one Consultant shall be designated as the lead Consultant. The Design/Builder team shall include qualified engineers and surveyors to be in direct responsible charge of engineering and surveying endeavors, including engineers and surveyors who are professionally registered in the state of Indiana and engineers and surveyors who are professionally registered in the state of Kentucky. When services required are predominantly oriented toward other disciplines such as environmental, landscaping, transportation planning, or architectural applications, the Design/Builder shall assign other professionally competent registered personnel who shall be in charge of the work.

The Design/Builder shall provide information concerning potential organizational conflicts of interest in their technical proposal. The Design/Builder must disclose all relevant facts concerning any past, present or currently planned interests which may present an organizational conflict of interest once the contract is awarded. A consultant who assists the Department in the preparation of the RFP document and submits a technical proposal in response to the RFP is an example of a conflict of interest. For more information on conflict of interest, see Code of Federal Regulations Title 23 Section 636.116.

**SCOPE OF SERVICES**

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The Design/Builder shall submit the name, detailed qualifications, and experience of the design firms it plans to use on this project. The Design/Builder shall submit this information to the INDOT Design/Build Project Manager:

Mr. Kevin Hetrick, P.E.  
Project Manager  
INDOT Office of Project Management  
Indiana Government Center North, Room N642  
100 North Senate Avenue  
Indianapolis, IN 46204-2216  
Phone: (317) 232-5162  
e-mail: [khetrick@indot.in.gov](mailto:khetrick@indot.in.gov)

If the Design/Builder's planned design firms do not meet the Department's required qualifications for this contract, the Design/Builder will be notified and given the opportunity for appeal. The decision of the Department will be final.

Plans for the Indiana approach spans (Bridge Structure #3) shall be signed and stamped by an Indiana registered Professional Engineer and shall be developed in accordance with INDOT's plan preparation guidelines. Plans for the Kentucky approach spans (Bridge Structure #1) shall be stamped by a Kentucky registered Professional Engineer. Plans for the Steel Truss Bridge (Bridge Structure #2) shall be developed by Department standards and stamped by an Indiana or Kentucky registered Professional Engineer. Specifications, details and electronic files on disk in dgn and pdf format shall also be provided.

The Design/Builder shall obtain the Engineer's review of the plans and specifications, and during construction, answer questions, issue clarifications, and correct errors and omissions. At the completion of the work, prior to final acceptance of the construction, the Design/Builder shall furnish the Engineer as-built plans with tracings, engineering reports, design calculations, shop drawings, test results, daily reports, and final quantities in Estimator format with calculations, all certified by an Indiana registered Professional Engineer.

The Design/Builder shall identify and resolve any remaining utility conflicts and the plans and details shall reflect the resolutions and decisions accepted. No increase in contract time will be allowed for utility coordination and relocations. The Design/Builder shall call any utility meetings needed to ensure that the concerns are addressed on the plans involving utilities. The Design/Builder shall notify the Engineer at least two working days in advance of any utility meeting. The Engineer or their representative will be in attendance at all utility meetings. The Design/Builder shall provide 60% plans to the Engineer for KYTC's preparation of utility reimbursement agreement(s) for relocation of affected utilities located in Kentucky. The Engineer will authorize project funds for utility relocations eligible for reimbursement in accordance with the Department's policies and procedures. The Design/Builder shall coordinate the relocation of utility facilities through INDOT's and KYTC's normal practices as identified in INDOT's Utility Procedures and Accommodation Policy and KYTC's Utility and Rails manual.

**SCOPE OF SERVICES**

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The Design/Builder shall be responsible for working with the individual utilities to ensure that all utility concerns are addressed, performing any permit reviews that are required, and developing any required utility relocation plans. The Design/Builder shall provide two weeks of notice to utility owners before beginning work.

The Department will issue permits to the utilities relocating facilities that require relocation within the right of way.

The Design/Builder shall:

- a. Consult with the Engineer to understand the Department's requirements for the project and review available data.
- b. Develop maintenance of traffic plans in accordance with the contract plans and the Scope of Services.
- c. Maintain and make available to the Department a project record that includes a history of significant events such as changes and comments that influenced the development of the project.
- d. Perform any additional surveys required for this project.
- e. Perform any additional needed soil surveys, soil borings and geotechnical investigations, with appropriate analysis including global stability to produce the proposed design.
- f. Provide plans, specifications, and supporting documents for review by the Department required by the Scope of Services.
- g. Prepare a detailed estimate of quantities which shall be incorporated into the project schedule. This estimate will be used to establish project progress and as the basis for interim payments.
- h. At the direction of the Engineer, provide existing condition video documentation of any routes being utilized, in proximity of the project, as a result of the maintenance of traffic.

The Design/Builder shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications, geotechnical and other services furnished by the Design/Builder under this contract.

The Design/Builder shall provide a Design Quality Management Plan, which describes the Quality Control (QC) procedures to be utilized to verify, independently check, and review all design drawings, specifications, and other documentation prepared as a part of the contract. In addition the QMP shall establish a Quality Assurance (QA) program to confirm that the Quality Control procedures are followed. The Design/Builder shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The QMP may be one utilized by the Design/Builder, as part of their normal operation or it may be one specifically designed for this project. The Design/Builder shall submit a QMP within 15 working days of the written Notice to Proceed. A marked up set of prints from the Quality Control review will be sent in with each review submittal. The responsible Professional Engineers or Professional Surveyor that performed the Quality Control review, as well as the QA manager will sign a statement certifying that the review was conducted.

The Design/Builder shall, without additional compensation, correct all errors or deficiencies in the surveys, designs, drawings, specifications and/or other services.

No fabrication, casting, or construction will occur until all related design review and shop drawing review comments are resolved.

## **GENERAL INSTRUCTIONS**

### **Pre-qualification of Bidders:**

It is required that the bidder shall be an INDOT prequalified Contractor. The bidder shall select design firms (consultants) that are currently prequalified by INDOT or KYTC to perform the work types of this contract to form the Design/Builder team. Additional geotechnical work shall be performed by prequalified firms for both INDOT and KYTC.

### **Contact Persons:**

INDOT Project Manager: Mr. Kevin M.Hetrick, P.E.  
Project Manager  
INDOT Office of Project Management  
Indiana Government Center North, Room N642  
100 North Senate Avenue  
Indianapolis, IN 46204-2216  
Phone: (317) 232-5162  
e-mail: [khetrick@indot.in.gov](mailto:khetrick@indot.in.gov)

KYTC Project Manager: Mr. Gary Valentine, P.E.  
Assistant State Highway Engineer  
Department of Highways District #5 Office  
8310 Westport Road  
Louisville, KY 40242  
Phone (502)-210-5400  
e-mail: Gary.Valentine@ky.gov

## **PROPOSAL SUBMITTAL REQUIREMENTS**

Each Design/Builder shall submit a technical proposal that includes the corporate/firm names, addresses and telephone numbers of the Design/Builder. Each Design/Builder shall submit a separate cost proposal.

### **Submittal Format:**

Technical proposals shall be submitted in bound volume on standard 8.5" x 11" paper. Charts and exhibits may be larger, but must be folded to the standard size. The project schedule and Traffic Control Plan shall each be bound separately.

Design drawings shall be reduced to approximately one-half scale on 11"x17" paper and bound in a separate section of the technical proposal. For legibility, lettering size shall be at least 1/16 in. on the half-size drawings. Technical proposals will not be returned to applicants.

**SCOPE OF SERVICES**

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In addition, electronic files of the drawings in dgn and pdf format shall be submitted on a compact disc with the technical proposal. The technical proposal, including the technical approach report, project schedule, traffic control plan, and ferry operations and parking management plan shall be submitted on a compact disc in pdf format.

**Submittal Deadline:**

The technical proposal shall be delivered to Mr. Kevin Hetrick of the INDOT Office of Project Management, Indiana Government Center North, Room N642, Indianapolis, Indiana, 46204-2216 by 10:00 AM, Eastern Daylight Time, on or before September 6, 2010. Late deliveries will not be accepted.

The cost proposal shall be submitted as an electronic bid via Bid Express. It shall be submitted by 10:00 AM, Eastern Daylight Time, on or before September 15, 2010. Late submittals will not be accepted.

**Technical Proposal:**

The technical proposal shall define the proposed design. The technical proposal shall include the following:

<b>Technical Approach Report</b>	<b>(8 Sets and 1 CD)</b>
<b>Preliminary Plans</b>	<b>(8 Sets and 1 CD)</b>
<b>Project Schedule</b>	<b>(4 Copies)</b>
<b>Traffic Control Plan</b>	<b>(4 Copies)</b>
<b>Ferry Operations and Parking Management Plan</b>	<b>(4 Copies)</b>

**Technical Approach Report for Bridge Structure No. 2**

The Design/Builder shall submit a Technical Approach Report as part of the technical proposal. The Technical Approach Report shall define the Design/Builder's proposed structural systems, demonstrate the Design/Builder's expertise in the design and construction of the proposed work, and demonstrate clear understanding of the project.

As a minimum the following subjects shall be addressed in the approach:

Bridge Structure No. 2 superstructure including but not limited to: load path for lateral forces (wind, temperature, friction, braking, vessel collision, seismic, etc.), fracture critical members and redundancy, bearing fixity and associated pier response, and gusset plate detailing.

Bridge Structure No. 2 substructure including but not limited to: pier cap widening, pier stem rehabilitation and strengthening, caisson and foundation strengthening modifications, soil/structure interaction, foundation demands and capacity, scour countermeasures, bond and durability assessment of interface between existing and new concrete.

### **Preliminary Plans**

Road Plans: Plans shall conform to INDOT's plan preparation guidelines for preliminary field check plans as detailed in IDM 14-2.01(05) and shall include the following:

1. Title Sheet
2. Index Sheet:  
General notes as required and index of sheets-
3. Typical Cross Sections
4. Traffic Control Plan:  
Typical sections, phasing layout, advance signing, detour routes
5. Plan and Profile Sheets:  
Project limits, alignments and profiles, drainage features, roadside barrier locations, right-of-way
6. Construction Detail Sheets
7. Retaining Wall Layout with Summary of Wall Types
8. Temporary Erosion Control Layout
9. Proposed Sign Plan Sheet
10. Road Summary Sheet:  
Approach table, structure data table

Bridge Plans: Plans shall conform to INDOT's plan preparation guidelines for preliminary field check plans as detailed in IDM 14-2.04(04) and shall include the following:

1. Title Sheet
2. Index Sheet:  
General notes as required and index of sheets-
3. Typical Cross Sections
4. Layout Sheet
5. General Plan
6. Truss Spans (Bridge Structure No. 2)
  - a. Preliminary Plan of Substructure
    - i. Plan, Elevation, and Sections of Piers 2-6 – Plans shall indicate structural modifications to the piers for widening / strengthening as well as any required foundation repairs or strengthening.
    - ii. Scour Countermeasure Plan
  - b. Preliminary Plan of Superstructure
    - i. Typical Section
    - ii. Preliminary Framing Plan
    - iii. Truss Elevation – Approximate member depths and cross section shall be provided for top and bottom chord, verticals and diagonals.
    - iv. Portal Frame Elevation
    - v. Bearing Type and preliminary size
    - vi. Joint Type, Size and locations
    - vii. Preliminary Erection Procedure
    - viii. Preliminary Demolition Plan
    - ix. Cofferdam Plan – Schematic cofferdam plans for construction of piers 3-5, shall be submitted with the technical proposal. The schematics shall be representative of the Design/Builder's intent. The Department will submit the plan from the awarded design/builder to the USCG for approval.

**SCOPE OF SERVICES**

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- x. Temporary Causeway/Construction Access Plan
- xi. Cofferdam Plan – Schematic cofferdam plans for construction of piers 3-5, shall be submitted. The schematics shall be representative of the Design/Builder's intent.

The Department will submit items vii, viii, ix and x from the awarded Design/Builder to the USCG for approval.

- 7. Approach spans (Bridge Structure No's 1 & 3)
  - i. Abutment plan and elevation, wing wall elevation
  - ii. Pier elevation and section
  - iii. Construction phasing for substructure construction
  - iv. Framing Plan
  - v. Layout sheet
  - vi. General Plan
  - vii. Typical Sections

- 8. Pedestrian Bridge Structure (Bridge Structure No. 4)

- i. Title Sheet
- ii. Index Sheet:
  - General notes as required and index of sheets.
- iii. Typical Cross Sections
- iv. Layout Sheet
- v. General Plan

Ferry Plans: Plans shall conform to INDOT's plan preparation guidelines for preliminary field check plans as detailed in IDM 14-2.04(04) for roadways and shall include the following:

- a. Title Sheet
- b. Index Sheet:
  - General notes as required and index of sheets-
- c. KY Grading Plan
- d. KY Restoration Plan
- e. IN Grading Plan
- f. IN Restoration Plan
- g. Traffic Control Plan
- h. Detail Sheets

Bridge and Approach Lighting Plans

Lighting Plans: Plans shall conform to INDOT's plan preparation guidelines for Preliminary field check plans as detailed in IDM 14-2.08(02) and shall include the following

- a. Title Sheet
- b. Index and General Notes
- c. Lighting Plan Sheets
- d. Navigation Lighting Conceptual Electrical Service Schematic.

In addition, the Design/Builder shall submit a Level One Design Criteria Checklist and supporting calculations for any design item revised with the technical proposal.

**SCOPE OF SERVICES**

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**Project Management Schedule**

The project management schedule shall incorporate all major design and construction activities. The milestones shall include all witness and hold points, controlling items of work, partial completion dates, final completion dates, bridge closure and opening dates. The project management schedule shall be shown in chronological order with the witness and hold points incorporated with the associated construction activities. The project management schedule shall indicate the critical path for completion of the project. The project management schedule shall be prepared and maintained in the CPM format specified in the special provisions.

Controlling items of work are those that specifically and directly control the completion of the project or which control partial completion, lane closures, bridge closures and openings which are specified in the proposal or scope of services.

During the course of design and construction of the project, the schedule shall be adjusted to reflect realistic anticipated progress of the project. The Design/Builder shall furnish updates of the project management schedule to the Engineer in accordance with the special provision contained herein.

**Traffic Control Plan (TCP)**

The project traffic control plan shall address maintenance and protection of traffic within the construction zone, detour route locations, local road closures, construction operation phasing, access for construction equipment, and construction signage. Coordination procedures with local officials and municipalities for construction equipment access to the project site using local roads shall be addressed.

**Ferry Operations and Parking Management Plan**

The Ferry Operations and Parking Management Plan shall address how vehicle traffic will be managed for the ferry operation and how the service shall meet the capacity requirements. Additional details are provided in the Ferry Operations Special Provision. The Design / Builder shall prepare and submit this document.

**Cost Proposal:**

The cost proposal shall consist of one lump sum bid for Design/Build any additional pay items as listed in the Contract Information Book, and a schedule of values for the project. The lump sum bid shall include the cost of design, construction, insurance, and any other cost that may be incurred for the duration of the design/build contract.

The Design/Builder, with a complete understanding of existing conditions at the project site and a complete understanding of the scope of work, including all addenda acknowledged hereinafter, shall perform and complete the work as outlined in full and complete accordance with the requirements of these documents for a lump sum base bid.



**SCOPE OF SERVICES**

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The payment for work performed will be based on major, well-defined tasks related to the Design/Builder's construction project management schedule. The Design/Builder shall determine and submit a schedule of values that will identify values for each major task. The updated project management schedule shall include the percentage completed to date for each major task. These percentages shall be used by the Engineer to determine project payment. An example schedule of values is shown below:

<u>EXAMPLE ITEM</u>	<u>EXAMPLE VALUE</u>
Mobilization	2 %
Engineering	3 %
Clearing Right of Way	1 %
Demolition	10 %
Erosion Control	2 %
Approaches	5 %
Pedestrian Bridge	10 %
Bridge Substructure	20 %
Scour Countermeasures	
Caisson Strengthening	
Pier Cap Widening	
Bridge Superstructure	20 %
Steel Erection	
Bridge Deck Completion	
Earthwork	5 %
Drainage	5 %
Maintenance of Traffic	2 %
Signing	1 %
Demobilization	6 %
Ferry Operations	10 %
Ferry Approaches	3 %
	100 %

**AWARD OF CONTRACT**

The Project Review Team will review the Design/Builder’s technical proposal to evaluate whether it meets the requirements of the contract documents.

A score will be given by the Project Review Team based on the technical proposal as submitted. The Design/Builder shall address and remedy any and all deficiencies noted in writing prior to bid opening. Addressing these deficiencies will not change the score of the technical proposal.

All technical proposals will be scored before any cost proposals are opened. Technical proposals will be based on a scale of 0 to 100. The following criteria will be considered in determining the technical score:

<u>Criteria</u>	<u>Points</u>
<b>A. Technical Approach Report (subtotal 25 points)</b>	
1. Bridge No. 2 Superstructure	10
2. Bridge No. 2 Substructure	15
<b>B. Ferry Approach and Roadway Plans</b>	5
<b>C. Traffic Control Plan and Ferry Operations and Parking Management Plan</b>	5
<b>D. Bridge Plans (subtotal 40 points)</b>	
1. Bridge No. 2 Substructure Plans	
a. Piers 2-6 Comprehensive Drawings (3pts ea)	15
b. Scour Countermeasure Plan	5
2. Bridge No. 2 Superstructure Plans	10
3. Bridge No. 1 & 3 Substructure Plans	5
4. Bridge No. 1 & 3 Superstructure Plans	3
5. Bridge No. 4	2
<b>E. Cofferdam Plan for USCG</b>	5
<b>F. Preliminary Demolition Plan</b>	2
<b>G. Preliminary Erection Plan</b>	3
<b>H. Schedule</b>	15
<hr/>	
<b>TOTAL POSSIBLE POINTS</b>	<b>100</b>

**SCOPE OF SERVICES**

Schedules exceeding the designated completion dates or the duration of maximum closure will be considered non-responsive.

The Project Review Team will not consider a technical proposal receiving a score of less than 80 for further evaluation, and the cost proposal shall be returned unopened to the Design/Builder. The grading by the Project Review Team will be final.

Those Design/Builders whose technical proposals receive a score of 80 or more and who submit a valid bid proposal will receive a stipend of \$250,000.00. All rights to the technical proposals receiving a score of 80 or more are relinquished and the technical proposals will become property of the Department.

Those Design/Builders whose technical proposals are determined to be valid and responsive, with a score of 80 or more, will have their cost proposals opened at the bid letting. These cost proposals will be opened and read at a public bid letting with the lowest cost proposal determining the apparent low bidder. The contract will be awarded to the qualified Design/Builder with the lowest, responsive, and responsible bid.

**PROFESSIONAL LIABILITY INSURANCE REQUIREMENT**

The Design/Builder shall provide a project specific professional liability policy, naming the Consultant as named insured. Proof of insurance shall be required after award of the contract and prior to the notice to proceed. Based upon the construction cost of the project, the required limits of liability and policy terms are as shown in Table 1. The term of the policy should start at the notice to proceed date.

**TABLE 1: DESIGN-BUILD PROFESSIONAL LIABILITY INSURANCE AND POLICY TERMS**

<b>CONSTRUCTION COST</b>	<b>LIMITS OF LIABILITY</b>	<b>POLICY TERM</b>
\$ 100,000 - \$ 3,000,000	\$ 2,000,000 Each Claim \$ 2,000,000 Aggregate	3 Years
\$ 3,000,001 - \$ 5,000,000	\$ 3,000,000 Each Claim \$ 3,000,000 Aggregate	5 Years
Over \$ 5,000,000	\$ 5,000,000 Each Claim \$ 5,000,000 Aggregate	5 Years

**FERRY OPERATIONS LIABILITY INSURANCE REQUIREMENT**

The Design/Builder shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and other employee benefits acts, from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise out of or result from the Design/Builder's operations under this contract, whether such operations be by themselves or by any subcontractor or anyone directly or indirectly employed by them.

**SCOPE OF SERVICES**

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This insurance shall be written for not less than any limits of liability specified as a part of this contract, or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Design/Builder's obligations under this contract. Unless otherwise specified, insurance limits are as follows:

1. Workmen's compensation must be as required by law.
2. Protection and Indemnity Liability: (to include loading and unloading of passengers and vehicles). This coverage must be maintained with limits of at least \$400,000 per person and \$10,000,000 per occurrence.
3. Cargo Liability: This coverage must be maintained with limits of at least \$400,000 per person and \$10,000,000 per occurrence.
4. Vessel Pollution Liability: This coverage must be maintained with limits of at least \$400,000 per person and \$10,000,000 per occurrence.

All coverages must name INDOT, KYTC and all employees as "Additional Named Insureds".

**PROJECT SCHEDULE**

Pre-Bid Meeting: (Design/Builders are required to attend) July 7, 2010  
Clifty Falls State Park Overlook Room, Madison 9:00 AM Eastern

Field Check: (Design/Builders are required to attend)

The Design/Builder may call in advance or schedule the day of Pre-Bid Meeting

First Field Check	July 7, 2010	11:00 AM to 1:00 PM Eastern
Second Field Check	July 7, 2010	1:00 PM to 3:00 PM Eastern
Third Field Check	July 7, 2010	3:00 PM to 5:00 PM Eastern

Design/Builder's Submittal of Proposed Design Firm: On or before July 7, 2010  
(Acceptance of Design Firms within 5 business days)

Design Alternate Meetings: (maximum of two) As Requested  
No later than August 25, 2010

Submittal of Technical Proposals: September 6, 2010

Submittal of Cost Proposals/Bid Letting: September 15, 2010

Bridge closure limited to 365 calendar days

Bridge Open to Unrestricted Traffic Determined by Contractor's Schedule

Substantial Completion of Project: October 30, 2012

Contract Completion Date: April 1, 2013

Final As-Built Plans and Documentation Submitted by Design/Builder: April 1, 2013

The field check for Design/Builders shall be held with the Project Review Team and representatives of the Design/Builders. The purpose of this field check is to acquaint the Design/Builders with the project.

**SCOPE OF SERVICES**

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If requested, Design Alternate Meetings will be held with the Project Review Team and their representatives. The purpose of this meeting is to provide the Design/Builder the opportunity to present design alternates for approval by the Project Review Team. Design alternates must not necessitate a revision to the Scope of Services, Special Provisions, or Specifications. Design Alternates will be held confidential. Maintenance of traffic design alternates are exempt from the no revision requirements. The decision of the Project Review Team will be final.

**QUALITY CONTROL REQUIREMENTS**

The Design/Builder shall provide a detailed schedule of pay items in Estimator format, complete with item codes prior to any construction activity. The pay items shall conform to the applicable methods of measurement, pay items, and pay units.

The Design/Builder shall create and submit a list of items for the work to be performed under the contract item for Design/Build. The list shall be from INDOT's Site Manager master item list and shall list the Site Manager item code, the item description, and the unit of measure for each item. Each item shall also be assigned a quantity of "1" and a unit price of \$0.00. Contract line numbers shall not be assigned to any item on the list. The item list shall be submitted electronically in Estimator format prior to the start of work, but in no case later than 30 days after notice to proceed. The Design/Builder shall submit an update list as necessary throughout the life of the contract as new items are added. Update item lists shall also be submitted electronically in Estimator format and shall only include new items added since submittal of the previous filed. An update list shall be submitted monthly unless no new items have been added during the month.

**Witness and Hold Points:**

These are established points that provide the Project Review Team the opportunity to review, observe, or examine plans, operation and/or tests a minimum of two weeks, or as indicated next to the respective item below, prior to construction of the specified point. Reviews requiring input of outside agencies may require more review time as indicated in the respective special provisions. Witness points are points that require the Design/Builder to notify or submit identified items to the Engineer. Work may proceed beyond a witness point provided that proper notification has been given. Hold points are mandatory verification points that require the Design/Builder to notify or submit identified items to the Engineer beyond which work cannot proceed until written approval is given by the Engineer.

No construction shall take place before signed and stamped plans have been posted as released for construction on the FTP portal and an e-mail notification has been sent to the Project Engineer. If construction proceeds prior to a witness point submittal or hold point approval, all work performed is subject to non-payment.

These points are as noted in the special provisions and shall include, but are not limited to, the following:

**Design:**

Witness Points:

- a. Plan Sheets not defined as Hold Points
- b. Revisions to Approved Shop Plans
- c. Finalized Cross Sections
- d. Pipe Structure Details
- e. ADA Compliance
- f. Design Quality Management Plan

Hold Points:

- a. Rule 5 Permit for IDEM
- b. KPDES Permit from Kentucky Division of Water
- c. Final Maintenance of Traffic Details
- d. Maintenance of Traffic Level 1 Design Criteria Checklist
- e. Level 1 Design Criteria Checklist for Revised Design Items
- f. Finalized Typical Cross Sections
- g. Finalized Profile Grade
- h. Clearances and Geometrics for Structures
- i. Foundation Review for new construction
- j. Initial Structural Calculations and Details Submission for Structure #2(two weeks Department review – see Note 1)
- k. Intermediate Structural Calculations and Details Submission for Structure #2 (four weeks Department review – see Note 2)
- l. Final Structural Calculations and Details Submission for Structure #2 (two weeks Department review – see Note 3)
- m. Design Drawings and Calculations for Structures #1, #3 and #4
- n. Roadside Barrier Design
- o. LRFR Load Ratings for Bridges
- p. Steel Bridge Shop Plans
- q. Pre-stressed Concrete Shop Plans
- r. Drainage Calculations
- s. Additional Geotechnical Work
- t. Abutment and Wing Wall Design and Details
- u. MSE Wall Shop Plans
- v. Signing Plans and Shop Drawings
- w. Special Provisions other than for Structure #2
- x. Environmental Permit Revisions
- y. Scour countermeasures
- z. Ladders and Platforms Design Documents for Maintenance and Inspection Access
- aa. Permanent River Navigation Lighting Plan

**SCOPE OF SERVICES**

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Note 1 – Initial Structural Calculations and Details Submission for Structure #2. Information for Structure No. 2 listed below shall be included with this submission. Hold points may be per component rather than entire structure.

A. Preliminary Loads and Applications based on envisioned bearing types, including review of analysis software

1. Wind Buffeting Analysis
2. Barge Impact Loads
3. Seismic Loads
4. Other Longitudinal Forces including Braking and Thermal demands
5. FEM Modeling Approach for Piers
6. FEM Modeling and Approach for Truss

B. Piers 2 through 5 Pier Strengthening and Pier 6 Design

1. General Pier Geometry
2. Preliminary Pier 6 Foundation
3. Pier Strengthening Approach including Construction Sequence
4. Initial Results for Rock Socket and Foundation
5. Initial Results for Caisson Tension and Strengthening
6. Initial Results of Stem Demands and Strengthening
7. Initial Results of Pier Cap Demands and Design
8. Initial List of Proposed or Revised Special Provisions

C. Truss Superstructure Design

1. General Truss Geometry
2. Truss Floor System and Deck Serviceability Analysis Approach
3. Preliminary Floorbeam Connection Details and Design Approach including Fatigue Considerations.
4. Truss Bracing System Concept including Truss Bearings
5. Typical Truss Gusset Plate and Connection Details and Design Concepts
6. Truss Redundancy Analysis Approach for FCM Identification
7. Preliminary Truss Results and Initial Member Sizing
8. Initial List of Proposed Additional or Revised Special Provisions

D. Truss Superstructure Demolition and Erection Sequence and Schedule, including methodology and temporary supports.

Note 2 - Intermediate Structural Calculations and Details Submission for Structure #2 Information for Structure No. 2 listed below shall be included with this submission. This intermediate submission represent a 75% design stage and drawing completion. Hold points may be per component rather than entire structure.

A. Summary of Finalized Load Demands and Applications

1. Wind Buffeting Analysis
2. Barge Impact Loads
3. Seismic Loads
4. Other Longitudinal Loads including Braking and Thermal Demands
5. FEM Model for Pier Strengthening having schematics showing precise boundary conditions and load applications.
4. FEM Model for Truss Analysis having schematics showing precise boundary conditions, member and node fixity and load application

- B. Summary of Piers 2 through 5 Pier Strengthening and Pier 6 Design
  - 1. Pier 6 Foundation
  - 2. Construction Sequence of Pier Strengthening
  - 3. Analysis Rock Socket and Foundation
  - 4. Analysis and Design of Caisson Strengthening
  - 5. Analysis and Design of Pier Stem Strengthening
  - 6. Analysis and Design of Pier Cap Design
  - 7. Final Special Provisions
- C. Summary of Truss Superstructure Design
  - 1. Final Truss Geometry
  - 2. Truss Floor System and Deck Serviceability Analysis
  - 3. Floorbeam Top Flange Support and Connection Detail including Fatigue Design
  - 4. Truss Main Member Demands and Design
  - 5. Truss Gusset Plate and Connection Designs
  - 6. Truss Bracing System and Bearings Demands and Design
  - 7. Truss Redundancy Analysis and FCM Identification
  - 8. Contractor's Approach to Load Rating the Superstructure
  - 9. Final Special Provisions
- D. Truss Superstructure Demolition and Erection Drawings showing Sequence, Equipment, Methodology, Stresses, Schedule and location and demands of Temporary Supports

Note 3 - Final Structural Calculations and Details Submission for Structure #2. This is a 100% (Final Tracings) submittal whereby final calculations will follow as a final project deliverable. The additional information for Structure No. 2 listed below shall be included with the Final Submission. Hold points may be per component rather than entire structure.

- A. Summary of all Final Load Demands and Applications Results
- B. Summary of Piers 2 through 5 Pier Strengthening and Pier 6 Design
  - 1. Pier 6 Analysis and Design Summary Calculations
  - 2. Analysis Summary Calculations of Rock Sockets and Foundations
  - 3. Analysis and Design Summary Calculations of Caissons and Stem Strengthening
  - 4. Analysis and Design Summary Calculations for Pier Caps
- C. Final Truss Superstructure Design
  - 1. Truss Geometry including Camber Summary Calculations
  - 2. Summary Calculations of Deck and entire Floor System including expansion joints, sidewalks, railings, ADA requirements, stringers, floorbeams with all bearings and/or connections
  - 3. Analysis and Summary Calculations for Truss Member Design including all Gusset Connections
  - 4. Analysis and Summary Calculations of Truss Bracing and Truss Bearings
  - 5. Redundancy Analysis and FCM identification
  - 6. Bridge Load Rating for the Superstructure. Procedures for doing load ratings in the future, including permitting, will be included in the Maintenance Manual that is part of the project deliverables.
- D. Demolition and Erection Plans (100% complete)



**SCOPE OF SERVICES**

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**Construction:**

All construction activities as described in the standard specifications, supplemental specifications, special provisions and scope of services that require inspection by the Engineer shall be considered hold points. Hold points are mandatory verification points that require the Design/Builder to notify or submit identified items to the Engineer beyond which work cannot proceed until approval is given by the Engineer. The following is a partial list of construction hold points:

- a. Quality Control Plan for Erosion Control (Due two weeks after notice to proceed)
- b. Quality Control Plan for Painting Structural Steel
- c. Pre-Paving Conference
- d. Fabrication Inspections
- e. Reinforcing Bar Placement (clearances, sizes, splices, spacing checks)
- f. Structure Concrete Placement (forms, elevations, placement method, mix approval, curing plan)
- g. Falsework Plans
- h. Temporary Causeway Calculations and Drawings
- i. Temporary Cofferdam Calculations and Drawings
- j. Demolition and Removal of Existing Bridge
- k. Post Tensioning Technical Data and Details
- l. Structure Erection Details
- m. Maintenance of Traffic Set-up for Permanent Lane Closures

**Correspondence and Submittal Procedure:**

This section applies to post award submittals. The Design/Builder shall make all witness and hold point plan submittals to the following distribution list:

- a. Project Engineer
- b. Mr. Jason Bunselmeier, Seymour District Area Engineer
- c. Mr. Kevin Hetrick, INDOT Project Manager
- d. Mr. Gary Valentine, KYTC Project Manager

The Design/Builder's design Consultant will be subject to INDOT's standard plan review and rating procedures for quality assurance and consultant evaluation. Evaluations will be performed on design witness and hold point submittals. The designer must complete a Quality Assurance Form and include it with each submittal.

All review comments and questions from reviews shall be forwarded to Kevin Hetrick, Design/Build Project Manager. The Design/Build Project Manager will assemble and direct all questions and comments from reviews to the Design/Builder. The Design/Builder shall respond to the Design/Build Project Manager addressing all comments and questions from reviews.

**SCOPE OF SERVICES**

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Shop drawing approval shall be in accordance with the special provisions of this contract and is the responsibility of the Design/Builder. Approved shop drawings shall be submitted to the Project Engineer.

All correspondence shall be routed through the Engineer. Copies shall be submitted to:

- a. Mr. Jason Bunselmeier, Seymour District Area Engineer
- b. Mr. Kevin Hetrick, INDOT Project Manager
- c. Mr. Gary Valentine, KYTC Project Manager

**Electronic Posting of Plans:**

The Design/Builder will be provided with access to the project FTP portal. All plan, design, and shop drawing submittals shall be made electronically in pdf format through use of the FTP portal for this project. A complete set of working drawings including shop drawings and erections plan shall be maintained at all times on the FTP portal. This working plan set shall be updated when revisions are made. In addition to this, a file containing only the revised plans sheets shall also be posted when revisions are made. Current copies of all supporting design information shall be maintained as well in a similar fashion. E-mail notifications shall be sent to all interested parties as design information is posted to the FTP portal.

**FINAL DOCUMENTS**

On or before April 1, 2013 the Design/Builder shall furnish the Engineer final hard copy documentation which shall include but not be limited to: as-built plans, engineering reports, design calculations, shop drawings, test results, daily reports, and a final list of all items meeting the requirements previously described herein, except that the quantity for each item shall be the final as-built quantities in Estimator format (by Des. No.) with calculations, all certified by an Indiana registered Professional Engineer. Design calculations shall be provided for all bridge structures, earth retaining structures, roadside safety requirements, drainage structures, signing and lighting, etc. The final hard copy documentation shall be submitted as one complete package following the completion of all construction activity.

If the final documentation is not submitted to the Project Engineer on or before April 1, 2013, \$2,500.00 per calendar day will be assessed as liquidated damages, not as a penalty, but as damages sustained for each calendar day beyond April 1, 2013 that the final documentation is not provided.

**As-Built Plan Requirements:**

The Design/Builder shall prepare final as-built plans. The plans shall conform to INDOT's plan development and preparation guidelines for tracing submittal. The as-built plans shall be submitted to the Department as electronic data on disk in dgn, and pdf, and tiff files. Final as-built plans shall also be posted to the FTP portal and posted to ERMS in accordance with the current INDOT posting policy.

## **EXISTING PLANS AND CONSTRUCTION CONTRACTS**

INDOT will make available to the Design/Builder an electronic copy in pdf format of any available and relevant existing plans for the contract.

## **SCOPE OF WORK**

This project shall be designed according to:

1. Indiana Design Manual
  - i. Part IV “Hydrology/Hydraulics”,
  - ii. Chapter 14 “Plan Development”,
  - iii. Chapter 17 “Quantity Estimating”,
  - iv. Chapter 49 “Roadside Safety”,
  - v. Chapter 51, “Special Design Elements”,
  - vi. Chapter 53 “Geometric Design Criteria (New Construction/Reconstruction)”,
  - vii. Chapter 55 “Geometric Design of Existing Non-Freeways (3R)”,
  - viii. Part VI “Structural Design”,
  - ix. Part VII “Traffic Design”,
  - x. Part VIII “Work Zone Traffic Control”,
2. INDOT 2010 Standard Specifications,
3. Any other applicable INDOT standards and specifications, standard drawings and construction memorandums,
4. All reference to the AASHTO Standard Specifications from INDOT Codes and Specifications shall be interpreted to reference the AASHTO LRFD Bridge Design Specifications or the AASHTO LRFD Bridge Construction Specifications,
5. American Association of State Highway and Transportation Officials (AASHTO) “A Policy on Geometric Design of Highways and Streets” 2004,
6. AASHTO LRFD Bridge Design Specifications, 4<sup>th</sup> Edition and subsequent interim specifications. In case of conflict AASHTO supercedes the Indiana Design Manual,
7. AASHTO Manual of Bridge Evaluation, 2009 and 2010 interim,
8. The latest version of the Indiana Manual of Uniform Traffic Control Devices (MUTCD) including latest revisions,
9. Milton Madison Bridge Geotechnical Overview

**SCOPE OF SERVICES**

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10. The Structure Performance Criteria for Bridge Structure No.2, defined in the special provisions shall supercede the design criteria above for the 4 span main river bridge carrying Highway US421 over the Ohio River, including the steel truss superstructure replacement and the strengthening, widening and construction of the substructure piers and foundations.
11. The scope of work, contract plans and details set out in this document except as noted below.

<u>Description</u>	<u>Design Criteria</u>
Line "US421"	Minimum Radius & Superelevation Rate Minimum 11'-6" Vertical Clearance (High Street), Stopping Sight Distance Vertical Curve @ PVI Sta.32+00 "421".

These design elements do not meet current INDOT Level One design criteria. The Design/Builder is authorized to perpetuate this design element.

This is a Customary US Units project. All plans and submittals shall be in English units. A partial set of special provisions is contained herein. All dimensions are horizontal and are for the structure at 60°F, unless otherwise noted.

The following horizontal and vertical datum shall be used on this project, respectively.

- Horizontal: NAD 83
- Vertical: NAVD 88

Bridge plans shall be based on State Plane Coordinate System KY North Zone, using ground coordinates, and in U.S. Survey Feet.

Wherever the basis of payment is discussed in the aforementioned references, it shall be read, "The cost of this item shall be included in the contract lump sum bid price for design/build".

The Design/Builder shall provide all remaining utility coordination, permit revisions, geotechnical investigation, engineering, design, Rule 5 erosion control permit acquisition, Kentucky Pollution Discharge Elimination System permit acquisition, construction, construction engineering, as-built plans, and all necessary items to construct the project complete and in place.

The Design/Builder shall perform and provide documentation to the Department of a load rating for all bridge structures

The Design/Builder shall provide a "Construction, Maintenance, and Inspection Manual" as indicated in INDOT's Design Memo 08-10 and in accordance with INDOT Design Manual 70-1.03 for a Complex Bridge which addresses issues specific to the truss, existing pier strengthening and scour countermeasures. The manual shall address all maintenance activities and replacement procedures anticipated including but not limited to painting, deck replacement, bearing replacement and expansion joint replacement. The Design/Builder shall submit the manual table of contents for approval. The completed manual must be approved by the Department with as-built drawings prior to final payment.

**SCOPE OF SERVICES**

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All construction activities shall be in accordance with issued permits. Modifications to permits by amendment shall be the responsibility of the Design/Builder. No increase in contract time will be allowed for permit amendments.

**CONSTRUCTION REQUIREMENTS:**

The following work elements and the design elements shown in the contract plans shall be the minimum requirements for this project. As construction progresses and other work elements become apparent, the Design/Builder shall perform all work at the lump sum price for design/build.

**A. General**

1. One (1) type C field office is required for the duration of the project and for 6 months after project completion.
2. One (1) DVD compatible video camera, and one (1) digital camera that has a 6 mega pixel or greater resolution shall also be provided.
3. Partnering shall be required.
4. Single lane closures will be allowed on the bridge between 9 PM and 6 AM daily. The lane closure shall extend the entire length of the bridge. Vehicles shall not be allowed to queue on the bridge. The Department shall be notified two days in advance of any lane restriction. \$1,000.00 per hour will be assessed as liquidated damages, not as a penalty, but as damages sustained, for each hour or portion of an hour before 9 AM or beyond 6 AM that the bridge is closed to traffic.
5. KYTC will conduct structural inspections of the existing bridge from the beginning of contract until the Design/Builder closes the bridge for superstructure replacement. The KYTC inspections will be conducted at two month intervals lasting up to three working days per inspection. The Design/Builder shall coordinate with KYTC designated inspection team to allow access for inspection. KYTC will provide traffic control and lane closures for the inspection team. Time restrictions and liquidated damages will not apply to single lane closures associated with the KYTC inspections.

**B. Clearing Right-of-Way**

1. No tree clearing shall be performed from April 1 through September 30 on trees suitable for Indiana bat roosting (greater than 3 in. diameter at breast height).

**C. Design Criteria**

1. US 421: 4R, Urban Arterial, 2 Lanes 35 mph
2. Local Streets: 3R, Urban Local Streets 30 mph
3. Ferry Ramp, Storage and Parking Areas Indiana Design Manual, Chapter 51  
Special Design Elements
4. All design criteria shall meet or exceed minimum standards according to the applicable design tables except as noted in the Scope of Work.

**D. Roadway**

1. The preliminary profile grade may be revised providing the revised profile grade still meets all Department design criteria and the minimum vertical clearances
2. Embankments shall be constructed in accordance with Section 202 and recommendations in the Geotechnical Evaluation Report. Subsurface soil modifications shall be used in accordance with the recommendations in the Geotechnical Evaluation Report. Benching and structure backfill shall be constructed as recommended in the Geotechnical Evaluation Report for this project.
3. The typical section for US 421 shall be as shown in the plans.
4. Existing pavement to remain in place shall be milled 2.00 inches and overlaid with 165 #/SY QC/QA-HMA, 3,70, SURFACE 9.5mm on variable depth 3, 70, INTERMEDIATE 19 mm (220 #/SY minimum).
5. New HMA pavement consisting of 165 #/SY HMA SURFACE, TYPE C, on 275 #/SY HMA, INTERMEDIATE, TYPE C on 660 #/SY HMA, BASE TYPE C on SUBGRADE TREATMENT TYPE IA, shall be constructed for all travel lanes, auxiliary lanes and outside shoulders.
6. All concrete barrier shall be reflectorized with barrier delineators at 40' spacing.
7. Monuments shall be placed. Location of monuments shall be in accordance with Chapter 17-3.09 of the Indiana Design Manual. Right of Way monumentation will not be required in Kentucky.
8. Subgrade treatment IA shall be performed under the proposed pavement.
9. All disturbed areas shall be seeded in accordance with Section 621 of the Design Manual.
10. Unsuitable foundation soils shall be removed and replaced when encountered. This work will be measured and paid for in accordance with the special provision UNSUITABLE MATERIAL REMOVAL AND BACKFILL only if the unsuitable foundation soils were not depicted in the geotechnical evaluation report.
11. Any temporary widening constructed for maintenance of traffic operations shall consist of 165 #/SY HMA SURFACE, TYPE C, on 275 #/SY HMA, INTERMEDIATE, TYPE C on 660 #/SY HMA, BASE TYPE C on SUBGRADE TREATMENT TYPE IIIA. This pavement section shall not be left in place as a substitute for any full depth pavement shown in the plans.

**E. Bridge Structures General**

1. The Department will not entertain Design Alternate submittals related to the following:
  - Truss Superstructure for Bridge Structure No. 2,
  - Bridge Railings and
  - form liners.
2. Design Alternates may be proposed for alternate pier strengthening methods, including pier stem and pier caisson.

**SCOPE OF SERVICES**

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3. The proposed structures shall meet all INDOT design criteria. For Structure No. 2 the special provisions STRUCTURE PERFORMANCE CRITERIA and STRENGTHENING OF EXISTING PIERS shall govern over these General Criteria.
4. The proposed structures shall provide minimum vertical and horizontal clearances subject to the USCG Permit.
5. The proposed structures shall not alter hydraulic performance from the proposed structure shown in the contract plans. The Preliminary Hydraulic and Scour Analysis Report is available for information only.
6. All structures except the pedestrian structure shall be designed for HL-93 loading in accordance with the 2007 AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications and subsequent interim specifications. All structures shall be designed for actual dead loads and shall include an additional design load for a future-wearing surface at 35 pounds per square foot (except the pedestrian structure). Construction loading and the weight of all false work and stay-in-place forms shall be accounted for in the design.
7. Foundation design and construction shall be in accordance with the recommendations in the Milton Madison Bridge Geotechnical Overview
8. Bridge railing and railing transitions shall be Type TF-2 and 4'-2" tall.
9. Aluminum Pedestrian Railing shall be designed by the Design/Builder for AASHTO 13.8.2. Aluminum Pedestrian Railing shall be similar in appearance to plan details provided in the Contract Information Book and in accordance with special provisions.
10. The clear roadway for the structure shall consist of two 12 ft lanes bordered by 8 ft shoulders for a total clear width of 40 ft.
11. A sidewalk shall be constructed on the downstream side of the bridge. The minimum clear width provided for pedestrian traffic shall be 5 ft.
12. Surface seal top of decks, all exposed faces of the concrete railing and railing transitions, coping faces on superstructures, underneath side of bridge deck to the face of the beam, and all exposed faces on the substructures. The superstructure surfaces shall be sealed prior to opening the structures to traffic. If concrete beams are used, the outside face of the exterior beams shall be surface sealed.
13. Steel bridges shall be painted, in accordance with the special provision AESTHETIC REQUIREMENTS / ENVIRONMENTAL MITIGATION.
14. Approach slabs shall be detailed such that they will not be allowed to be poured concurrently with the bridge deck.
15. Drainage features shall be designed to eliminate or minimize the need for bridge deck drains. If bridge drainage is required, it shall be directed to riprap drainage turnouts located beyond a concrete bridge railing transition and outside of any retaining wall backfill. Freefall scuppers will be permitted over water.
16. Lightweight concrete shall not be permitted.
17. Subsurface conditions at the bridge site have been categorized as a Site Class B in accordance with AASHTO Section 3.10.3.1. The potential for liquefaction at the abutments and approach embankments shall be evaluated in accordance with AASHTO Section 10, Appendix A.

18. ADA requirements shall be met for all structures as required in the Public Rights-of-Way Accessibility Guidelines (PROWAG) and the ADA Accessibility Guidelines. When slopes in excess of 5% are present, level landings shall be provided for every 30" of rise. Pedestrian facilities shall be designed to minimize the longitudinal grade.

**F. Bridge Structure No. 1: File No. 421-39-6003 (US 421 over High Street – Kentucky Approach Spans)**

1. This structure shall be replaced. New substructure units shall be provided with the exception of Pier 2 (Existing Pier 9). Complete removal of the existing bridge structure shall be performed where indicated on the contract plans. Portions of abutment may remain. See special provisions "Removal of Existing Bridges."
2. The bridge structure shall consist of a minimum of 4 beams in the cross section.
3. A minimum clearance over High Street of 11'-6" shall be provided.
4. Piers shall be located a minimum of 14 ft clear from the edge of travel lanes on High Street.
5. The bridge abutment shall be protected with revetment riprap that is 18 inches deep over geotextiles.
6. New pier foundations shall be designed to resist scour.
7. The bridge shall be composite and shall minimize the number of expansion joints.
8. The bridge deck for steel or pre-stressed concrete beams shall be a minimum 8 in. thick class C concrete with epoxy coated reinforcing steel.
9. The use of Post-Tensioning is not permitted for the Structure No. 1 superstructure or substructures (excluding Pier 2).
10. The use of box beams or box girders is not permitted.

**G. Bridge Structure No. 2: File No. 421-39-6003 (US 421 over Ohio River)**

1. The superstructure of this bridge shall be replaced. Four existing piers 6, 7, 8 & 9 (now designated Piers 5, 4, 3 & 2 respectively) shall be rehabilitated in accordance with the special provisions, STRUCTURE PERFORMANCE CRITERIA (SPC) FOR BRIDGE NO.2 and STRENGTHENING OF EXISTING PIERS. One new pier (Pier 6) shall be constructed. Piers not rehabilitated within the limits of the superstructure shall be completely removed. The replacement bridge shall be a 4 span continuous truss as shown on the contract plans.
2. The truss profile geometry shall be in general accordance with the Plans. An even number of panels shall be used in all spans. The ratio of the maximum panel length over the minimum panel length shall be less than 1.25. Verticals and Diagonals shall maintain their orientation as shown on the Plans. The truss depth over all interior piers shall be equal and must not change by more than 4 ft from that shown on the plans. The truss depth in each span shall be equal and must not change by more than 4 ft from that shown on the plans. The difference between the maximum and minimum truss depth shall not be less than 36 ft nor more than 44ft. Adjustment of the vertical distance from the profile grade to the centerline of the bottom chord from that shown on the plans is permitted to accommodate the design of the floor system.



**SCOPE OF SERVICES**

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3. The bridge shall conform to the criteria given in the following documents
  - a. Special provisions for STRUCTURE PERFORMANCE CRITERIA (SPC) FOR BRIDGE NO.2
  - b. MILTON-MADISON BRIDGE GEOTECHNICAL OVERVIEW
  - c. Special provisions for STRENGTHENING OF EXISTING PIERS.
4. The following project specific reports provide loading and design parameters that shall be used in the design of the bridge. The Design/Builder is responsible for their use.
  - a. Study of Vessel Collision on Bridge Piers, Milton-Madison Bridge, prepared by Michael Baker Jr., Inc. dated March 2010.
  - b. Wind Engineering Study – Final Report, prepared by Rowan Williams Davies and Irwin Inc. Preliminary truss properties were utilized for the wind engineering study including some variation of bearing types. Wind pressures presented are influenced by the mode shape, corresponding frequencies and structure stiffness including bearing stiffness. The Design/Builder is responsible for utilizing a wind study expert to verify that the properties of the final truss design are applicable to the wind engineering study.
5. The following project specific reports are available for information only:
  - a. Pier Strengthening Report for existing piers 6-9
  - b. Evaluation of Milton Madison Bridge Substructures
  - c. Service Life Evaluation of Milton Madison Bridge River Piers
  - d. Other reports and documents that are posted to the project FTP portal website.
6. The proposed structure shall provide 90 ft clearance in the navigational channel for the river normal pool elevation of 420.00 ORD (418.7 NAVD 88).
7. Bridge deck shall be a minimum 8 in. thick class C concrete with epoxy coated reinforcing steel.
8. The bridge shall be composite and continuous over interior supports.
9. Cofferdams for river piers and caisson strengthening shall be designed and constructed in accordance with the special provisions.

**H. Bridge Structure No. 3: File No. 421-39-6003 (US 421 over Vaughn Drive Indiana Approach Spans)**

1. This structure shall be replaced. New substructure units shall be provided. Completely remove existing bridge structure where indicated on the contract plans. Portions of abutment may remain. See special provision REMOVAL OF EXISTING BRIDGES.
2. The bridge structure shall consist of a minimum of 4 beams in the cross section.
3. A minimum vertical clearance of 16 ft shall be provided over Vaughn Drive.
4. Piers shall be located a minimum of 14 ft clear from the edge of travel lanes on Vaughn Drive.
5. The bridge abutment shall be protected with revetment riprap that is 18 inches deep over geotextiles.
6. New pier foundations shall be designed to resist scour.
7. The bridge shall be composite and shall also be continuous over interior supports.
8. Bridge deck shall be a minimum 8 in. thick class C concrete with epoxy coated reinforcing steel.

9. The use of Post-Tensioning is not permitted for the Structure No. 3 superstructure or substructures (excluding Pier 6).
10. The use of box beams or box girders is not permitted.

**I. Bridge Structure No 4: Pedestrian Bridge Structure**

1. This structure shall meet all ADA requirements.
2. The minimum clear width provided for pedestrian traffic shall be 5 ft.
3. Bridge deck shall be a minimum 6 in thick class C concrete with epoxy coated reinforcing steel.
4. The pedestrian bridge railing shall match bridge structures 1, 2 and 3.
5. Design for 85 psf pedestrian loading in accordance with 2007 AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications and subsequent interim specifications.
6. Structure shall be designed for actual dead load, wind loads, and stream/ice loads and/or pressures as shown on the plans.
7. The ground below the structure shall be protected with revetment riprap that is 18 inches deep over geotextiles.
8. New pier foundations shall be designed to resist scour.
9. The use of Post-Tensioning is not permitted for the Structure No. 4 superstructure or substructures.
10. The use of box beams or box girders is not permitted.

**J. Navigation**

1. Permanent Navigation Clearances – A permit for bridge construction is pending the approval of the USCG. The required horizontal channel clearance of the navigation span shall be a minimum of 670 ft in accordance with the USCG permit. The required vertical channel clearance of the navigation span shall provide 90 ft vertical clearance to the river normal pool elevation of 420.00 ORD (418.7 NAVD 88).
2. Temporary Navigation Clearances – Vertical clearance during construction of 85 ft to the river normal pool elevation shall be maintained over the navigation channel at all times. Horizontal clearance of 550 ft shall be maintained at all times.
3. Coordination with USCG and work on navigable waterways – see special provisions.

**K. Retaining Wall Structures**

1. All walls shall be designed in accordance with all INDOT and AASHTO specifications. Foundation requirements shall be in accordance with the recommendations detailed in the Geotechnical Evaluation Report. Settlement and deflection tolerances shall be in accordance with AASHTO specifications.

**SCOPE OF SERVICES**

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2. Retaining wall types shall not include modular block walls, bin walls, gabion walls, or prefabricated modular walls. Extensible ground reinforcement shall not be used. Wall types are subject to approval by INDOT.
3. MSE wall proposals will only be considered when the leveling pad of the wall is above the Ohio River's Ordinary High Water (OHW) Elevation. MSE walls shall use 'Coarse Aggregate, Class A or higher, Size No. 8' for all backfill below the 100 Year Flood level. MSE wall proposals will only be considered where the Bridge Abutment is supported on a pile foundation. MSE walls shall be constructed in accordance with the special provisions contained herein. Other retaining wall types proposed for this project shall also conform to the construction tolerances defined in the MSE retaining wall special provision.
4. Material specifications for wall types other than MSE Walls shall be in accordance with INDOT's Specifications and AASHTO specifications. All permanent retaining wall components must be designed for a service life of 75 years, and 100 years if part of a bridge abutment. Timber elements shall not be used to resist permanent loads.
5. All retaining wall structures located within the clear zone shall be shielded by a traffic barrier.
6. Where exposed heights of retaining walls present grade differences greater than 2 feet, appropriate fall hazard protection in the form of chain link type fence or traffic barrier shall be installed on retaining wall structures.
7. Unsuitable foundation soils shall be removed and replaced when encountered. This work will be measured and paid for in accordance with the special provision UNSUITABLE MATERIAL REMOVAL AND BACKFILL only if the unsuitable foundation soils were not depicted in the Geotechnical Evaluation Report.

**L. Roadside Safety**

1. All clear zone obstructions and non-traversable hazards shall be mitigated in accordance with Chapter 49 of the Indiana Design Manual. The Design/Builder shall verify the location and length of all guardrail and barriers required.
2. All outside side slopes shall meet the requirements of Chapter 54, however clear zone shall be provided with a 4:1 side slope within the proposed right-of-way wherever possible. 3:1 slopes shall be provided beyond the clear zone within the proposed right-of-way wherever possible. Existing side slopes without guardrail which are steeper than 4:1 shall be flattened to 4:1. The maximum roadway side slopes behind guardrail shall not exceed a 2:1 slope.
3. All existing outside guardrail shall be replaced to the original limits, unless clear zone requirements can be met while maintaining positive drainage within the right-of-way. All required clear zone safety devices shall be replaced.
4. Bridge piers, applicable sign, light, roadway and bridge barrier ends, and median barrier ends shall be protected. Any existing castings that are obstructions within the clear zone shall be replaced with a traversable casting and grate.

**M. Erosion Control**

1. Erosion control measures shall be in accordance with Chapter 37 of the Indiana Design Manual and IDNR's "Indiana Handbook for Erosion Control in Developing Areas", all environmental permit requirements, applicable special provisions and KYTC requirements. The Design/Builder shall obtain necessary erosion control permits in Indiana (Rule 5) and Kentucky.

**N. Pavement Markings**

1. Thermoplastic shall be used for permanent center, lane, and edge lines on asphalt pavement. Epoxy paint shall be used for permanent markings on concrete.

**O. Drainage**

1. Existing storm sewer outlet pipes or cross culverts shall be extended as necessary to match new side slopes.
2. All existing drainage structures that will no longer be used shall either be removed and backfilled with structure backfill or filled with flowable backfill.
3. All existing drainage structures that will remain in place within the project right-of-way limits shall be cleaned in accordance with the special provision CLEANING OF EXISTING DRAINAGE SYSTEM.
4. Inlet spacing and ditch capacity calculations shall be performed to ensure roadway serviceability.

**P. Environmental**

1. Permitting: Any revisions to the plans made by the Design/Builder that result in additional impacts to streams, lakes, rivers, wetlands, or other waters shall require the Design/Builder to amend the 401 and 404 permits and obtain the corresponding regulatory agency approval.
2. On site mitigation included in 401 and 404 Permits.
3. Any construction activities that exceed the height shown in the FAA permit shall require the Design/Builder to amend the permit.
4. No additional time shall be added to the contract due to permit amendments.

**Q. Maintenance of Traffic**

1. The maintenance of traffic shall be in accordance with special provisions. All construction signs, except panel signs, shall use Diamond Grade Sheeting (ASTM Standard D 4956 Type VII, VIII or IX), or approved equal. All conflicting speed limit signs shall be revised to indicate the proper speed limit. All construction activity within construction clear zone shall be protected with temporary barriers.
2. All local roads shall remain open to traffic except as shown on the Plans and described in the Special Provision "Sequence of Operations".
3. Drainage shall be maintained at all times during all phases of construction.

**SCOPE OF SERVICES**

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4. Existing signs shall be maintained during construction.
5. Traffic shall not be detoured from the existing bridge until the ferry system is operational. Single lane closures with flagmen are permitted to facilitate pier construction prior to the commencement of ferry operations. Single lane closures will be permitted to occur between the hours of 9:00 PM and 6:00 AM.
6. A signed official detour route shall be posted until the US 421 Bridge reopens to traffic.
7. A ferry service between Milton and Madison shall be provided by the Design/Builder for the duration the US 421 bridge is closed to traffic.
8. A temporary boat dock shall be provided for Milton as shown on the Contract Plans and described in the special provision TEMPORARY MILTON BOAT DOCK.

**R. Permanent Signing**

1. The Design/Builder shall develop signing plans in accordance with the latest version of the Manual of Uniform Traffic Control Devices as adopted by INDOT and KYTC. The pedestrian facilities shall be signed for no bicycles.

**S. Transportation Management Plan (TMP)**

1. The Design/Builder shall be responsible for maintaining a Transportation Management Plan (TMP) that is in place in accordance with Chapter 81 of the Indiana Design Manual. The Department will provide a list of TMP members to the successful bidder. The TMP shall build upon the Traffic Control Plan (TCP) and the Ferry Operations and Parking Management Plan prepared as part of the Technical Proposal.

**T. Permanent Street or Bridge Lighting**

1. All existing roadway lighting outside of the construction area shall remain operational for the duration of the project.
2. All roadway lighting, which includes the bridge and approaches, shall be designed to provide the level and uniformity of illumination set forth by AASHTO's *An Informational Guide for Roadway Lighting*
3. Roadway Lighting Design Criteria
  - a. Lamp Lumen Depreciation Factor, *LLD* 0.90
  - b. Luminaire Dirt Depreciation Factor, *LDD* 0.87
  - c. Ballast Factor, *BF* 0.90 (or per manufacturer)
  - d. Average Maintained Horizontal Illuminance, *E<sub>h</sub>* (ft-cd) 0.8
  - e. Uniformity Ratio 4:1
  - f. Percent of Voltage Drop Permitted 5%
  - g. Pole Height 30 ft
  - h. Roadway Classification Intersection or City Street

**SCOPE OF SERVICES**

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4. Materials shall comply with INDOT specifications Section 807 “Highway Illumination” and section 920 Highway Illumination Materials. the pole structure shall be as per INDOT standard drawings 807-LTST-01 and 807-LTST-02.
  - a. Roadway luminaires shall be standard cobra-head style with glass refractor and shall be offered with minimum 6-year electrical parts warranty
  - b. Luminaire lamps shall be high pressure sodium 400 Watts
5. Luminaire Lateral Placement shall be either opposite or staggered.
6. Design/Builder shall provide all navigation lighting required for this project. Part 118 – Bridge Lighting and Other Signals provides the criteria which is highlighted in the *Bridge Administration Manual of the United States Coast Guard*, Enclosure 6, COMDTINST M 16590.5C.
7. Design/Builder shall provide a safe means to service all the lighting on the project acceptable to the Engineer.
8. Design/Builder shall provide lighting for the south sidewalk approach, walkway across the bridge, and down the entire pedestrian bridge ramp on the north end of the bridge.
9. Pedestrian Lighting Design Criteria:
  - a. Lamp Lumen Depreciation Factor, *LLD* 0.90
  - b. Luminaire Dirt Depreciation Factor, *LDD* 0.90
  - c. Ballast Factor, *BF* 0.90 (or per manufacturer)
  - d. Average Maintained Horizontal Illuminance, *E<sub>h</sub>* (ft-candles) 0.5
  - e. Uniformity Ratio 4:1
  - f. Pedestrian Stairways, *E<sub>h</sub>* (ft-candles) 0.5
  - g. Pedestrian Stairways, Uniformity Ratio 10:1
  - h. Percent of Voltage Drop Permitted 5%

**U. Construction Staging Areas**

In Madison, the Design/Builder may use the areas of Jaycee Park nearest the existing bridge (refer to the project plan details contained in the contract information book) for construction staging. If the Design/Builder decides to use another staging area, then the Design/Builder shall be responsible for environmental clearances and permits. If these areas of Jaycee Park are used by the Design/Builder, the measures included in the special provision CONSTRUCTION STAGING AREAS shall be completed by the Design/Builder.

In Milton, a construction staging area will be provided by KYTC adjacent to the bridge in Kentucky. If the Design/Builder decides to use another staging area, then the Design/Builder shall be responsible for environmental clearances and permits. If the provided staging area is used by the Design/Builder, the measures included in the special provision CONSTRUCTION STAGING AREAS shall be completed by the Design/Builder.

## **V. Ferry Service**

During the closure of the US 421 bridge over the Ohio River, the Design/Builder shall provide a ferry service between Milton, Kentucky and Madison, Indiana on the Ohio River. The ferry service shall be free to all users. It will require the construction of a ramp to accommodate the ferry boats, parking, and queuing areas for automobile traffic. This shall be constructed between the river and the adjacent local streets. The project scope includes providing a ferry boat service and construction of the necessary pavement for ramp access, queuing, and parking areas necessary for the ferry operations.

### **Site Improvements and Pavement**

1. The preliminary site plan may be revised providing the revised plan still meets all Department design criteria.
2. Embankments shall be constructed in accordance with section 202 and benching and structure backfill shall be constructed as recommended in the Standard Specification.
3. Paint shall be used for center lane, and edge lines on all pavement areas
4. All disturbed areas shall be seeded in accordance with section 621 and the Design Manual.
5. Erosion control measures shall be in accordance with Chapter 37 of the Indiana Design Manual, IDNR's "Indiana Handbook for Erosion Control in Developing Areas", all environmental permit requirements, applicable special provisions and KYTC requirements.
6. All outside slopes shall be provided with a 4:1 side slope within the proposed right-of-way wherever possible.
7. Unsuitable soils shall be removed and replaced when encountered. This work will be measured and paid for in accordance with the special provision UNSUITABLE MATERIAL REMOVAL AND BACKFILL .
8. Permitting: Any revisions to the plans made by the Design/Builder that result in additional impacts to streams, lakes, rivers, wetlands, or other waters shall require the Design/Builder to amend the 401 and 404 permits and obtain the corresponding regulatory agency approval. No additional time shall be added to the contract due to permit amendments.
9. No tree clearing shall be performed from April 1 through September 30 on trees suitable for Indiana bat roosting (greater than 3 in diameter at breast height).

### **Ferry Service General Conditions**

1. The Design/Builder shall notify the Project Engineer 60 days prior to closing the bridge.
2. The ferry shall begin operating 2 weeks prior to closing the bridge.
3. The maintenance of traffic shall be in accordance with the Transportation Management Plan, Plans and the special provisions.

**SCOPE OF SERVICES**

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4. A free ferry service between Milton and Madison shall be provided for the duration the US 421 bridge is closed to traffic. Queue storage spaces and additional parking shall be provided at the Milton Boat Ramp at the northern terminus of Ferry Street in Milton and at the Madison City Campground, southeast of the Vaughn Drive/Ferry Street intersection in Madison. The ferry service shall:
  - a. Be operational 24 hours per day, 7 days per week during the entire bridge closure period.
  - b. Be operational during all flood stages up to the OHW river elevation.
  - c. Maintain a schedule and necessary vessels to transport at least 240 passenger vehicles per hour Monday through Friday, from 5 AM to 9 PM.
  - d. Maintain a schedule and necessary vessels to transport at least 120 passenger vehicles per hour overnight, from 9 PM to 5 AM, and on weekends.
  - e. Include provisions for high occupancy vehicle (HOV) priority lanes. HOV shall be defined as four or more occupants per vehicle. Each ferry queuing area shall provide storage for at least 24 HOV at a time.
  - f. During major festivals, e.g. Madison Regatta, the ferry must be capable of transporting at least 240 passenger vehicles per hour to handle increased traffic volumes.
  - g. Ferries must be capable of transporting passenger vehicles, pedestrians, bicyclists, and a maximum truck size of 14,000 pounds gross vehicle weight. Pedestrians and bicyclists shall be given priority loading ahead of automobiles.
  - h. Dredge the existing river bed to accommodate the proposed ferries.
  - i. Pavement Section for the ferry staging, parking, and ramp areas shall be 165 #/SY HMA SURFACE TYPE B on 495 #/SY HMA BASE TYPE B on SUBGRADE TREATMENT TYPE IIIA. This pavement shall be maintained by the Design/Builder while the ferry is in use. Any repairs required shall be the responsibility of Design/Builder. This pavement shall be removed and the area restored to its original condition once traffic has been restored on the bridge. The Department reserves the right to request that this material be left in place.

The Design/Builder shall be responsible for securing necessary permits and licenses and ensuring all local, state, and federal guidelines are met.

**Public Awareness for Ferry Service:**

The Design/Builder shall provide and maintain the following items with real-time ferry information for each source:

- Two changeable message boards with wait times viewable from the entrance,
- An advisory radio station,
- A telephone hotline,
- Internet website, with a live video feed showing the ferry queues in both staging areas
- Social networking sites (for example Twitter or Face book)

The above public information sources shall be accessible at all times while the bridge is closed to traffic. This shall be functional two weeks prior to the bridge closing.



**Milton Ferry Staging Area:**

The Milton Boat Ramp area shall be improved to handle the anticipated traffic volumes and to facilitate safe ferry operations. The Design/Builder shall:

1. Provide a paved queuing space for at least 120 passenger vehicles without backing up onto connecting roadways and provide additional paved parking spaces for at least 40 passenger vehicles.
2. Provide adequate pavement markings, signage, and personnel to channel traffic and ensure consistent wait times for waiting passenger vehicles. During the first two weeks of the bridge closure, the Design/Builder shall hire local law enforcement personnel to be present at the loading/queuing area to maintain orderly traffic movements. If additional parking area is required once the ferry is operational, portions of the queuing area may be used for parking with the approval of the Department.
3. Provide a lighted temporary shelter for 10 pedestrians with seating.
4. Provide a lighted loading area for cars and pedestrians boarding the ferry. Lighting can be temporary in design. Lighting design criteria:
  - a. Ferry Staging and parking area, Average Maintained Horizontal Illuminance, *E<sub>h</sub>* (ft-candles) 3.0
  - b. Boarding Area, *E<sub>h</sub>* (ft-candles) 5.0
  - c. Uniformity Ratio 4:1
5. Provide separate temporary restroom facilities for both male and female patrons. The temporary restroom facilities must be maintained and kept cleaned.
6. Provide a sidewalk connection from the parking area to the ferry loading zone.
7. Provide a sidewalk connection from Ferry Street to the ferry loading zone.
8. Provide positive drainage for the pavement areas.
9. Once the bridge reopens to traffic, the boat ramp shall be returned to its existing condition or better within 30 working days of ferry operation closing. Paved areas on temporary easements shall be removed and the grounds re-seeded. Improvements that impair public use of the boat ramp shall be removed. The sidewalk connection to Ferry Street shall be left in place.
10. To protect archeological site 15M112, excavation shall not be deeper than 1 ft in the designated area as discussed in TEMPORARY FERRY STAGING AREA special provision. Geotextile shall be used under new pavement and sidewalks in this area and shall remain in place during the restoration process.

**Madison Ferry Staging Area:**

The Madison City Campground and undeveloped field to the south of the campground shall be improved to handle the anticipated traffic volumes and to facilitate safe ferry operations. The Design/Builder shall:

1. Provide a paved queuing space for at least 120 passenger vehicles without backing up onto connecting roadways and provide additional paved parking spaces for at least 50 passenger vehicles.
2. Provide adequate pavement markings, signage, and personnel to channel traffic and ensure consistent wait times for waiting passenger vehicles. During the first two weeks of the bridge closure, the Design/Builder shall hire local law enforcement personnel to be present at the loading/queuing area to maintain orderly traffic movements. If additional parking area is required once the ferry is operational, portions of the queuing area may be used for parking with the approval of the Department.

**SCOPE OF SERVICES**

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3. Provide a lighted temporary shelter for 10 pedestrians with seating.
4. Provide a lighted loading area for cars and pedestrians boarding the ferry. Lighting can be temporary in design. Lighting design criteria:
  - a. Ferry Staging and parking area, Average Maintained Horizontal Illuminance, *E<sub>h</sub>* (ft-candles) 3.0
  - b. Boarding Area, *E<sub>h</sub>* (ft-candles) 5.0
  - c. Uniformity Ratio 4:1
5. Provide separate temporary restroom facilities for both male and female patrons. One option is to maintain or improve the existing bathhouse at the Madison City Campground. The temporary restroom facilities must be maintained and kept cleaned.
6. Improvements within the campground shall not disturb or destroy the remaining concrete archways associated with the historic Madison waterworks.
7. Once the bridge reopens to traffic, the field south of the existing campground area (proposed ferry queuing area) shall be returned to its original condition or better within 30 working days of ferry operation closing. Temporary pavement shall be removed and the grounds re-seeded.
8. Any pavement laid in the existing campground area (proposed ferry parking area) shall be removed and the grounds re-seeded. The Department reserves the right to request that this material be left in place. The bathhouse and water/electrical hookup improvements will be provided by others.

**Local Ferry Task Force**

Elected officials and community leaders in Madison and Trimble County have formed a task force to coordinate local initiatives to improve operations of the ferry service. This group will work with major employers and local residents to set up programs to improve operations, independent of the Milton-Madison Bridge Project Team. The Design/Builder shall meet with the Local Ferry Task Force during the planning and design phases.

**EMS Requirements**

A paramedic team will be based in Milton for the duration of the bridge closure. Ambulances must be able to contact the ferry service provider via radio and shall be given top priority on the ferry if a river crossing is necessary. The ferry service provider shall provide radios for the local EMS services to communicate with the ferry crew when emergency priority for crossing the river is necessary. The Ferry Operator shall be required to notify the paramedic service when the ferry is not able to travel across the river.

**USCG Special Considerations**

1. The Ferry Vessel(s) must have a current USCG Certificate Of Inspection (COI) for the Route and services intended.
2. The Ferry Vessel(s) must have stability letter(s) that will state the Route and stability restrictions for the vessel(s).
3. All vessels must be operated by a Mariner Licensed for the Route and tonnage of the vessel.

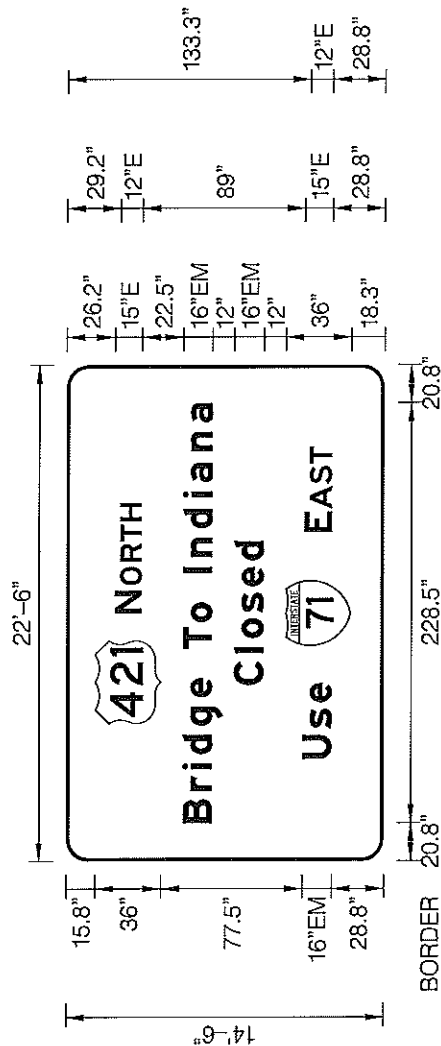






**SIGN DETAIL**

1:100



BORDER R=12" TH=2"

Panel Style: guide\_fwy\_overhead.ssi  
 Dimensions are in inches tenths

Panel Style: guide\_fwy\_overhead.ssi Letter locations are panel edge to lower left corner  
 M.U.T.C.D.: 2003 Edition

SIGN NUMBER	XIGD1
WIDTH x HGT.	22'-6" x 14'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Orange
LEGEND/BORDER	TYPE: Reflective COLOR: White/White

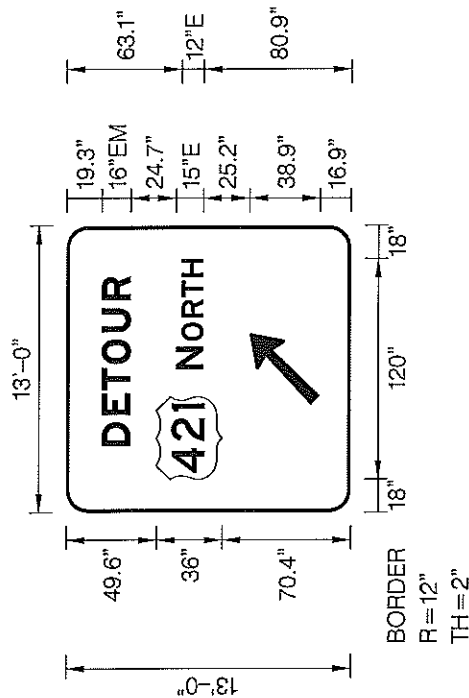
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M1_1	0	117	18.2	36	36

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N	O	R	T	H												E 2000
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B	r	i	d	g	e											EM 2000
20.8	38.2	50	58.2	73.7	89.2	99.8	115.8	130	140.9	156.9	165.6	181.1	198	206.2	223.2	238.7
C	l	o	s	e	d											EM 2000
95.8	113.2	121.4	135.5	149.6	163.6										78.4	1611.7
U	s	e														EM 2000
55.7	72.3	86.4													41.3	1611.7
E	A	S	T													E 2000
178.9	191.7	205.3	216.3												46.4	15.12



**SIGN DETAIL**

1:100



SIGN NUMBER	XIGD3
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BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Orange
LEGEND/BORDER	TYPE: Reflective COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	18	70.4	45	36
ARLONG	45	58.5	16.9	22.3	51.1

Panel Style: guide\_fw\_overhead.ssi  
 Dimensions are in inches.tenths  
 Letter locations are panel edge to lower left corner  
 M.U.T.C.D.: 2003 Edition

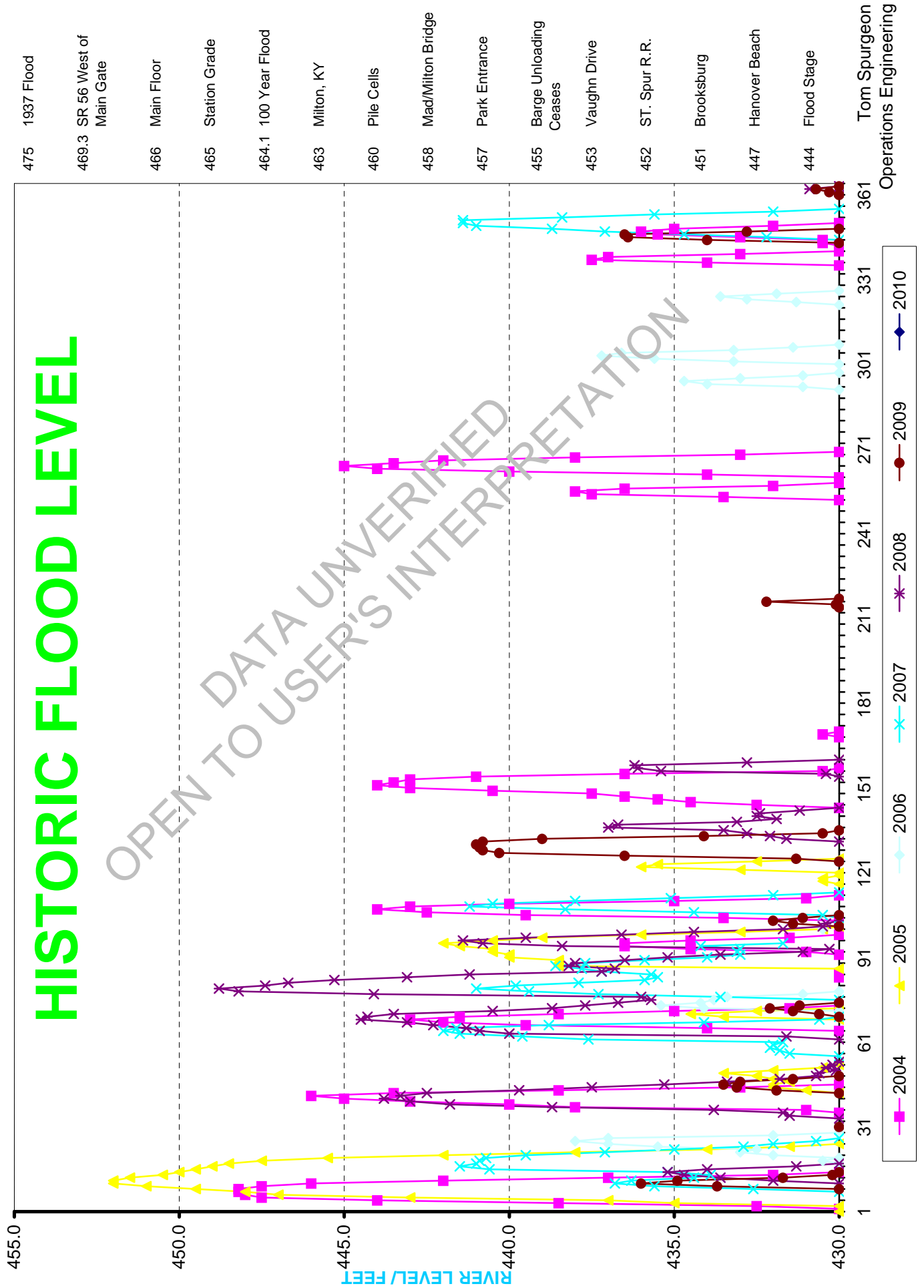
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D	E	T	O	U	R								
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N	O	R	T	H								E 2000	
78	93.3	106.2	117.2	128.3							59.9	15.12	





# CLIFTY CREEK STATION

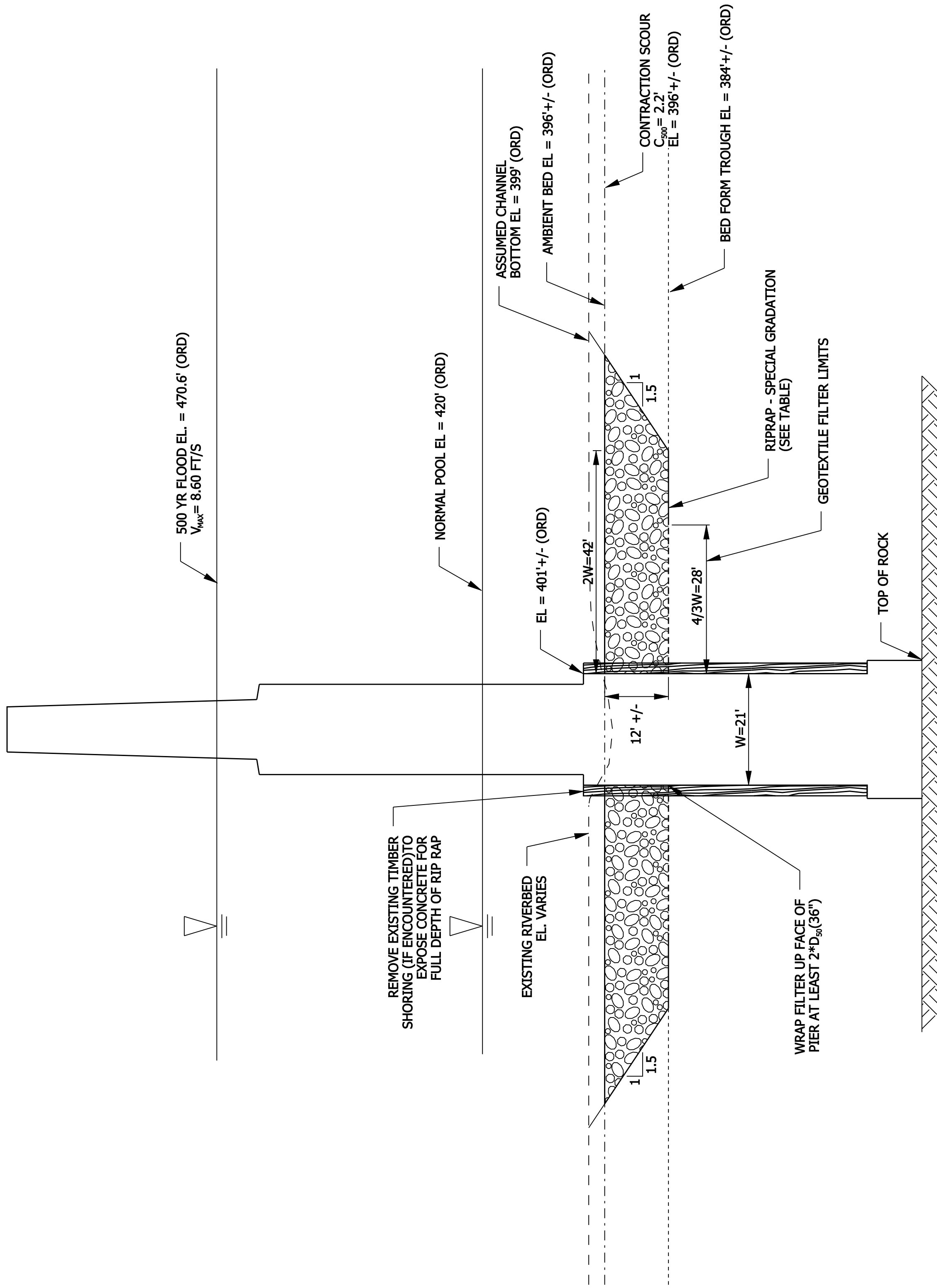
## HISTORIC FLOOD LEVEL





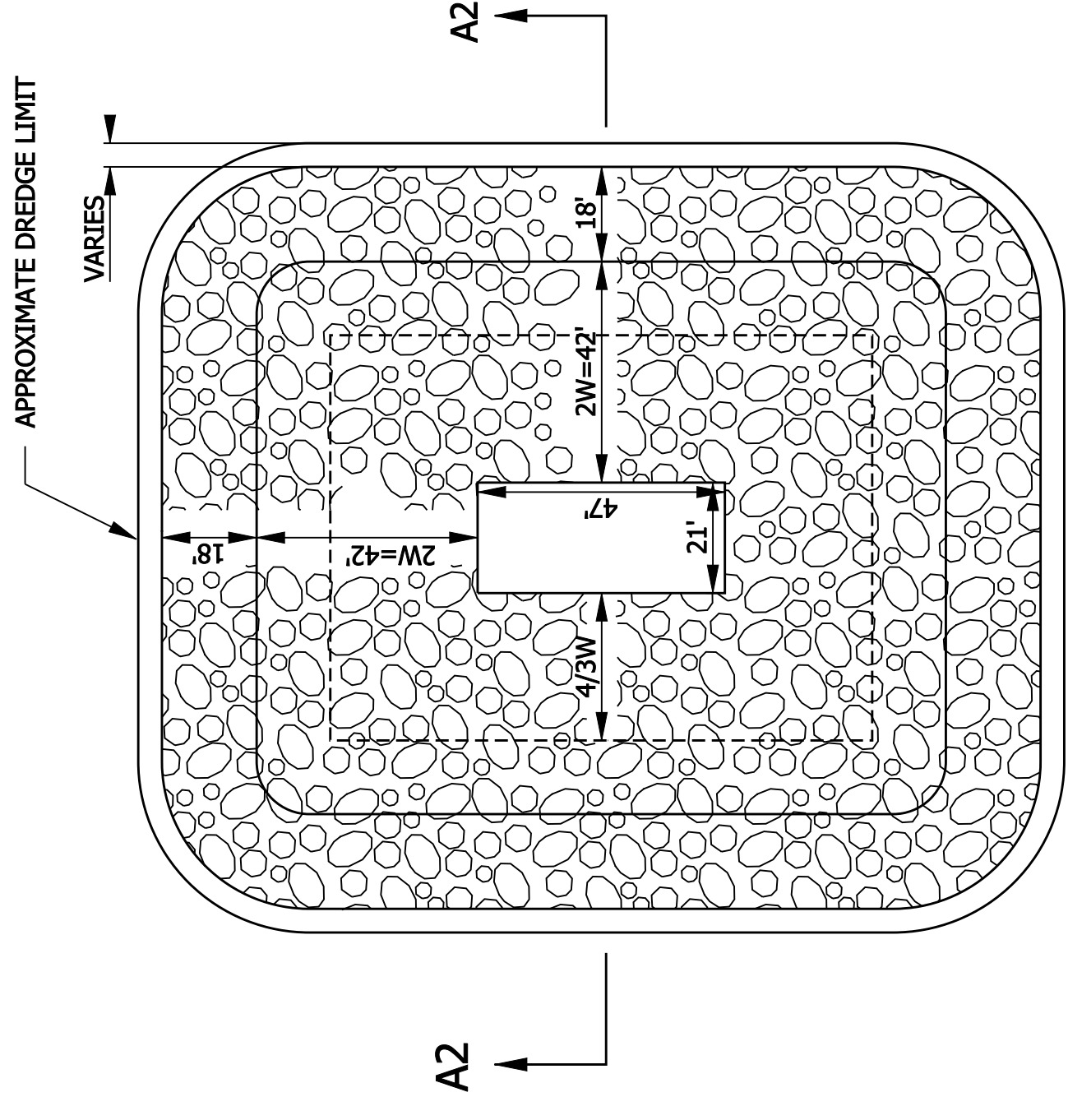
**DESIGN CONSIDERATIONS (PER REVISED HEC-23):**

1.  $V_{ws} = V_{max} K$   
 $V_{max} = \text{MAX VELOCITY} = 8.60 \text{ FT/S}$   
 $K = 1.17 \text{ FOR SQUARE NOSED PIERS}$   
 $D_{50} = 0.692(V_{ws})^2 / (S_g - 1)G$   
 $S_g = 2.65 \text{ FOR RIPRAP}$   
 $G = 32.2 \text{ FT/S}^2$   
 $D_{50} = 1.39' = 16.7'' \text{ USE } D_{50} = 18''$   
 $D_{100} = (2)D_{50} = 36''$
2. BED FORM DEPTH =  $1/2 * D(\text{MAX})$   
 TROUGH DEPTH =  $1/2 * \text{BED FORM DEPTH}$   
 $D = 500\text{YR FLOOD DEPTH} = 71.6'$   
 TROUGH DEPTH =  $71.6'/6 = 11.9'$  USE 12'
3. RIP RAP THICKNESS  $t = \text{GREATER OF } 3 * D_{50}, \text{ CONTRACTION SCOUR, LONG-TERM DEGRADATION OR DEPTH OF BEDFORM TROUGH.}$   
 $t = 12$
4. ONLY GEOTEXTILE FILTER USED PER: "IN CASES WHERE DUNE-TYPE BED FORMS MAY BE PRESENT, IT IS STRONGLY RECOMMENDED THAT ONLY A GEOTEXTILE FILTER BE CONSIDERED."
5. GEOTEXTILE FILTER EXTENDS TWO THIRDS OF THE EXTENTS OF THE RIP RAP LAYER (4/3 THE WIDTH OF THE PIER).
6. PIER DIMENSIONS ARE BASED ON ASSUMED CHANNEL BOTTOM. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DIMENSIONS PRIOR TO CONSTRUCTION.



**SECTION A2-A2**

**PLAN VIEW**



DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 \$DWTES \$TIMES \$MODELMMES \$FILES  
 \$RTDPRAS \$PENTBLAS \$SFILES

Minimum and Maximum Allowable Particle Size in Inches						
Nominal Riprap Median Particle Diameter	d <sub>15</sub>		d <sub>50</sub>		d <sub>100</sub>	
	Min	Max	Min	Max	Min	Max
18	11	15.5	17	20.5	23.5	27.5
						36

**REVISION**

**Baker**  
 MICHAEL BAKER JR., INC.  
 9750 ORMSBY STATION ROAD, SUITE 210  
 LOUISVILLE, KY 40223  
 PHONE (502) 339-3557  
 FAX (502) 339-4466

RECOMMENDED FOR APPROVAL: \_\_\_\_\_  
 DESIGN ENGINEER: \_\_\_\_\_  
 APRIL 1, 2010 DATE

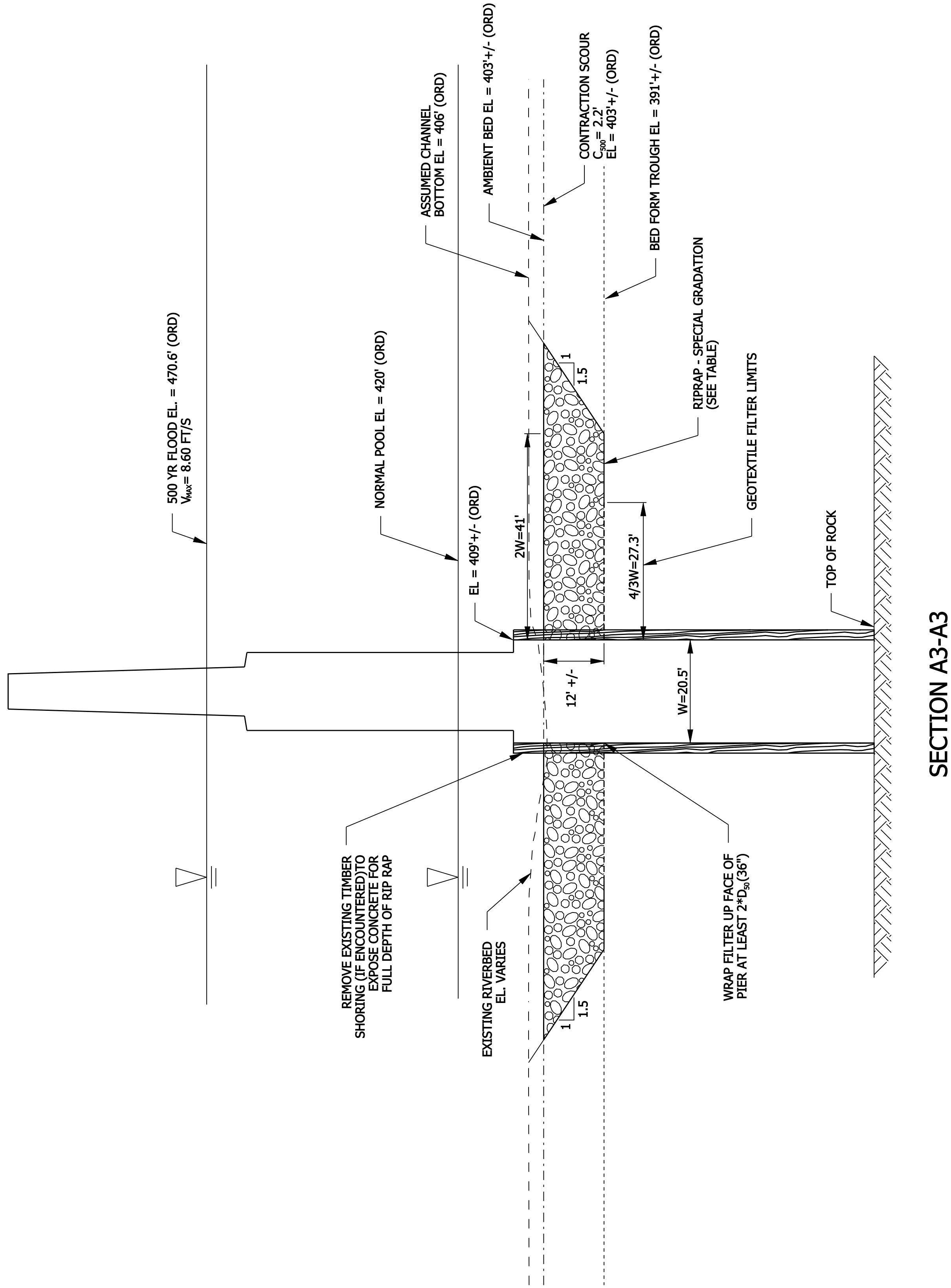
INDIANA  
 DEPARTMENT OF TRANSPORTATION

SCALE	BRIDGE FILE
SECTION: 1"=15'	421-39-6003
PLAN: 1"=30'	DESIGNATION
	0902256
SURVEY BOOK	SHEETS
	of 39
CONTRACT	PROJECT
IB-33023	0902256

SCOUR MITIGATION  
 PIER 4 (EXISTING PIER 7)

**DESIGN CONSIDERATIONS (PER REVISED HEC-23):**

1.  $V_{max} = V_{max} K_1$   
 $V_{max}$  = MAX VELOCITY = 8.60 FT/S  
 $K_1 = 1.7$  FOR SQUARE NOSED PIERS  
 $D_{50} = 0.692(V_{max})^2 / (S_s - 1)2G$
2. BED FORM DEPTH =  $1/3 * D_{50}$  (MAX)  
 THROUGH DEPTH =  $1/2 * D_{50}$  (MAX)  
 $D_{50} = 2.65$  FOR RIPRAP  
 $G = 32.2$  FT/S<sup>2</sup>  
 $D_{50} = 1.39' = 16.7"$  USE  $D_{50} = 18"$   
 $D_{50} = (2)D_{50} = 36"$
3. RIP RAP THICKNESS  $t$  = GREATER OF  $3 * D_{50}$ , CONTRACTION SCOUR, LONG-TERM DEGRADATION OR DEPTH OF BEDFORM TROUGH:  
 $t = 12'$
4. ONLY GEOTEXTILE FILTER USED PER: "IN CASES WHERE DUNE-TYPE BED FORMS MAY BE PRESENT, IT IS STRONGLY RECOMMENDED THAT ONLY A GEOTEXTILE FILTER BE CONSIDERED."
5. GEOTEXTILE FILTER EXTENDS TWO THIRDS OF THE EXTENTS OF THE RIP RAP LAYER (4/3 THE WIDTH OF THE PIER).
6. PIER DIMENSIONS ARE BASED ON AS-BUILT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DIMENSIONS PRIOR TO CONSTRUCTION.



**SECTION A3-A3**

Minimum and Maximum Allowable Particle Size in Inches						
Nominal Riprap Median Particle Diameter	$d_{15}$		$d_{50}$		$d_{85}$	
	Min	Max	Min	Max	Min	Max
18	11	15.5	17	20.5	23.5	27.5
						36

REVISION

DATE	REVISION

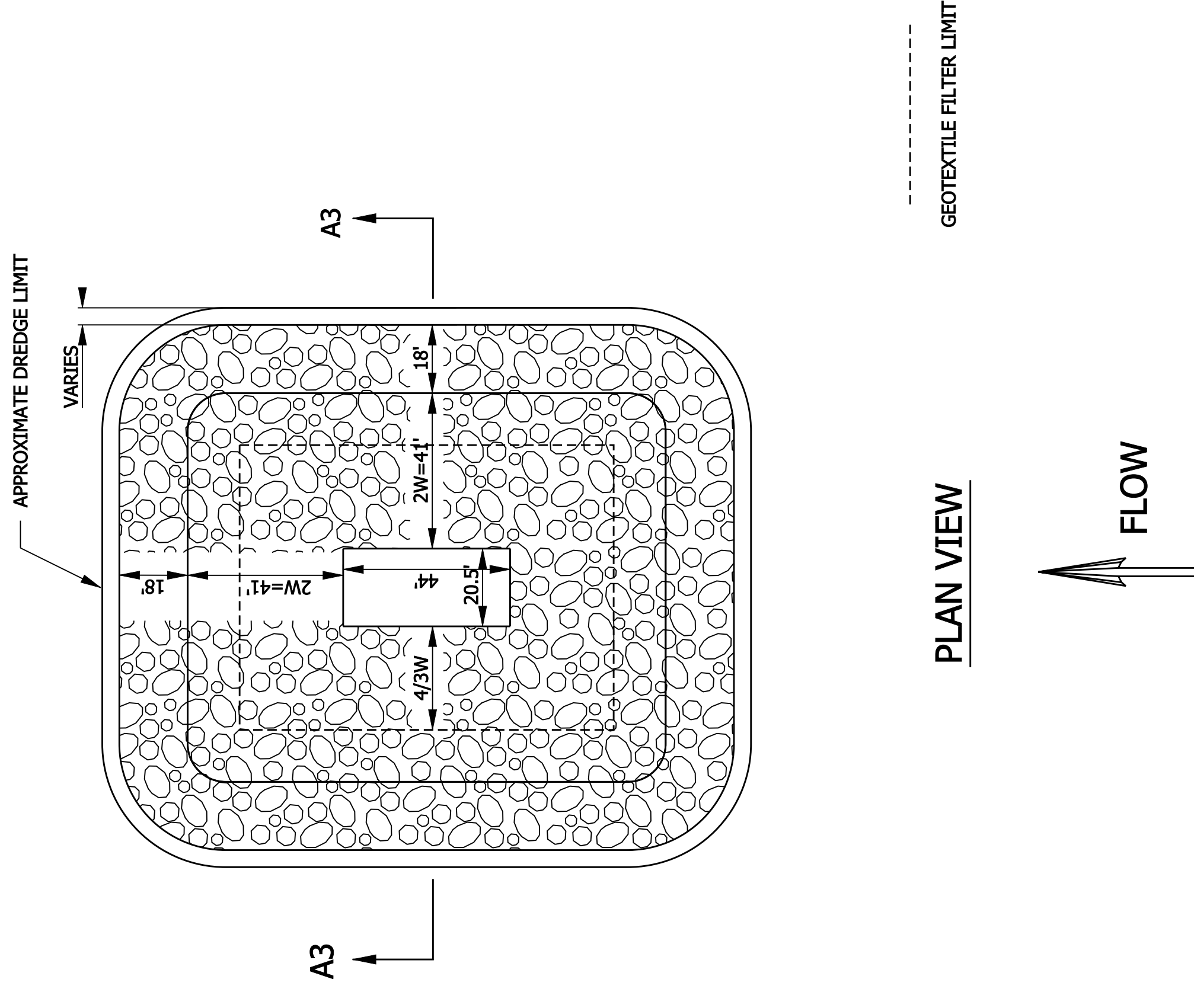


MICHAEL BAKER JR., INC.  
 9750 ORMSBY STATION ROAD, SUITE 210  
 LOUISVILLE, KY 40223  
 PHONE (502) 339-3557  
 FAX (502) 339-4466

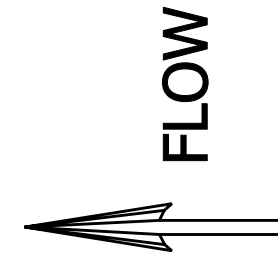
RECOMMENDED FOR APPROVAL: \_\_\_\_\_ DATE: APRIL 1, 2010  
 DESIGN ENGINEER: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_

INDIANA DEPARTMENT OF TRANSPORTATION  
**SCOUR MITIGATION PIER 5 (EXISTING PIER 6)**

SCALE: SECTION: 1"=15'  
 PLAN: 1"=30'  
 SURVEY BOOK: \_\_\_\_\_  
 CONTRACT: IB-33023  
 SHEETS: 39 of 39  
 PROJECT: 0902256

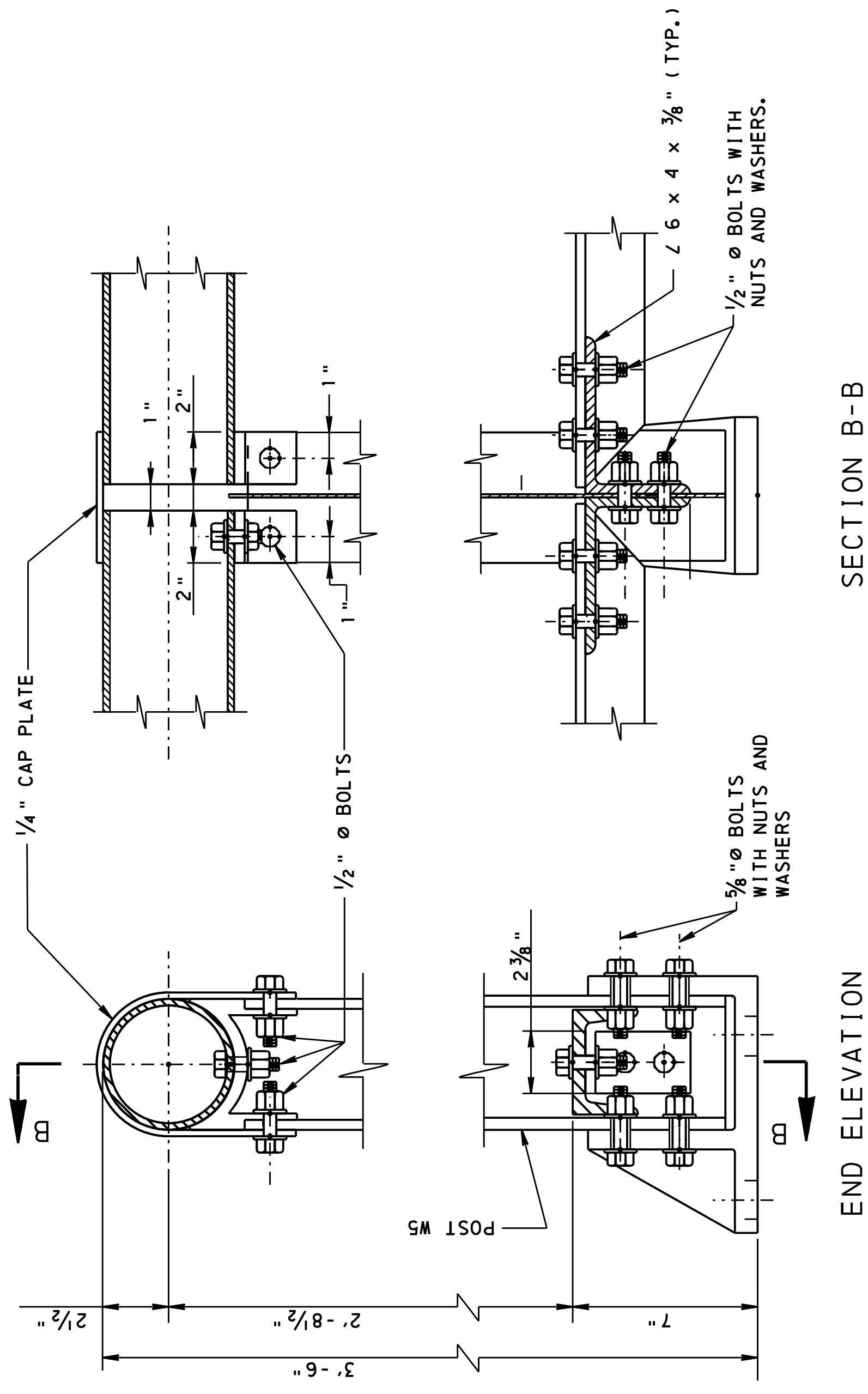


**PLAN VIEW**

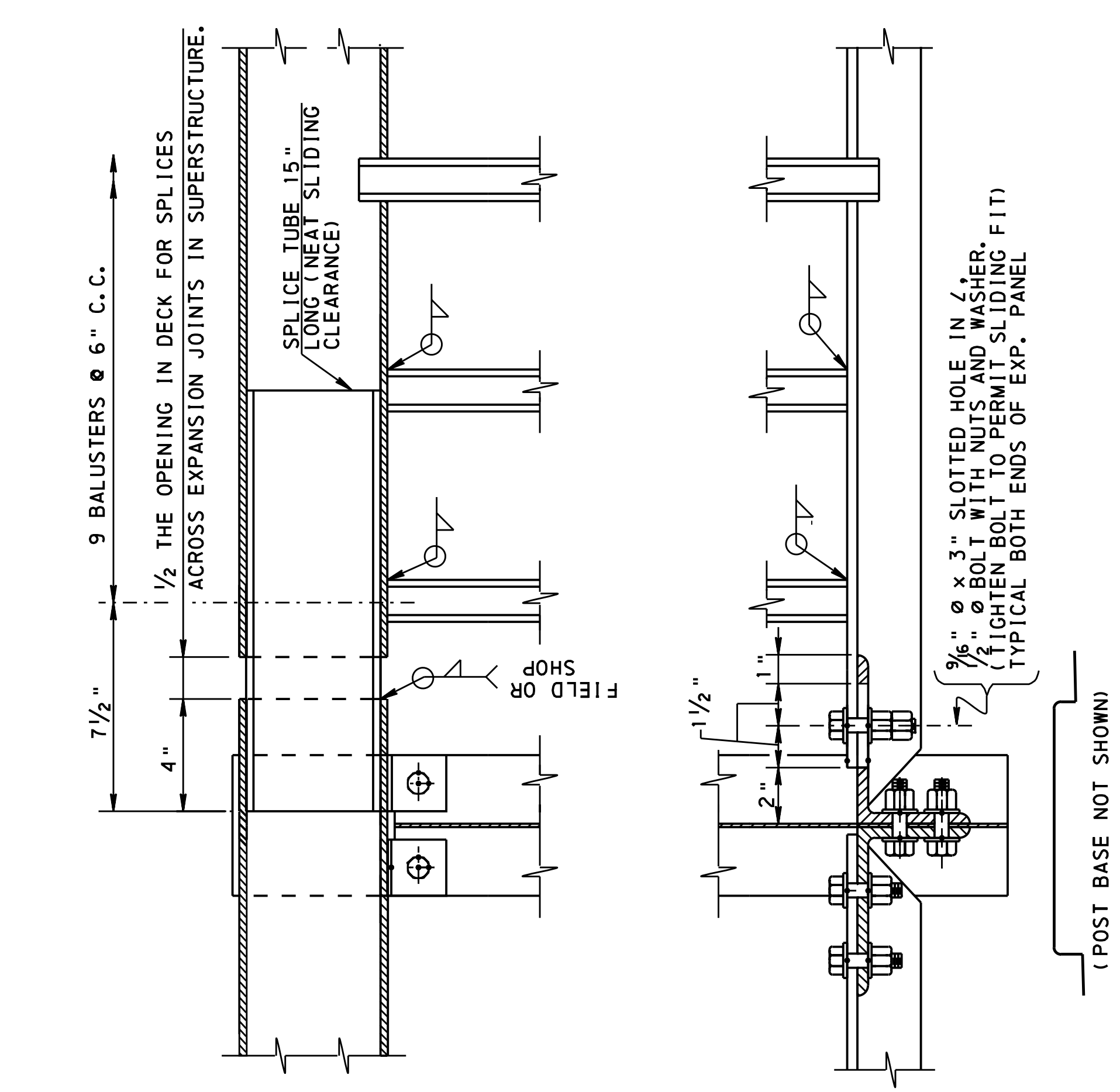




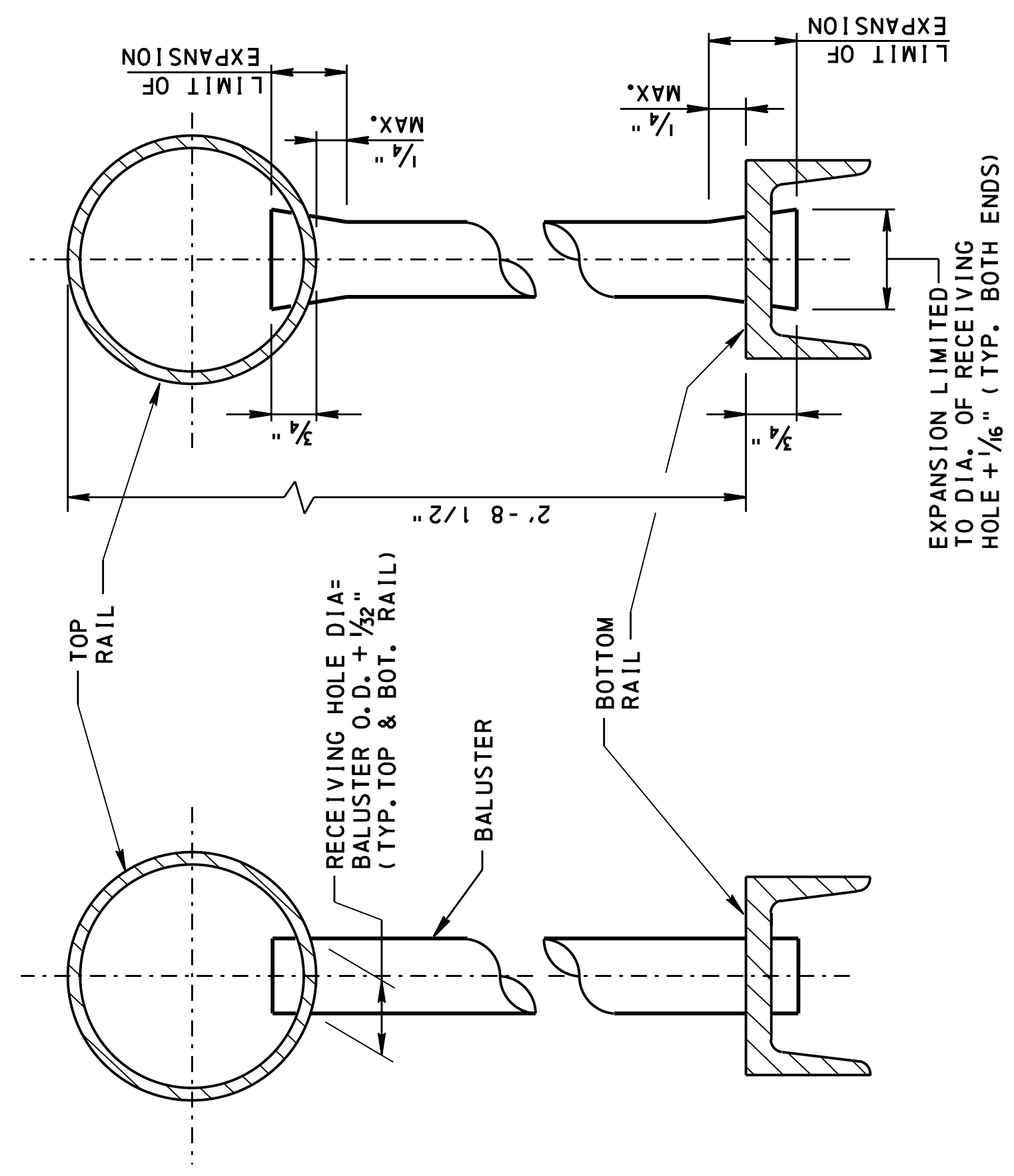




TYPICAL DETAIL AT POST



TYPICAL EXPANSION PANEL DETAIL



PRIOR TO EXPANDING

EXPANDED

BALUSTER DETAILS

EXPAND FULL CIRCUMFERENCE OF BALUSTER WITHIN THE LIMIT OF EXPANSION.

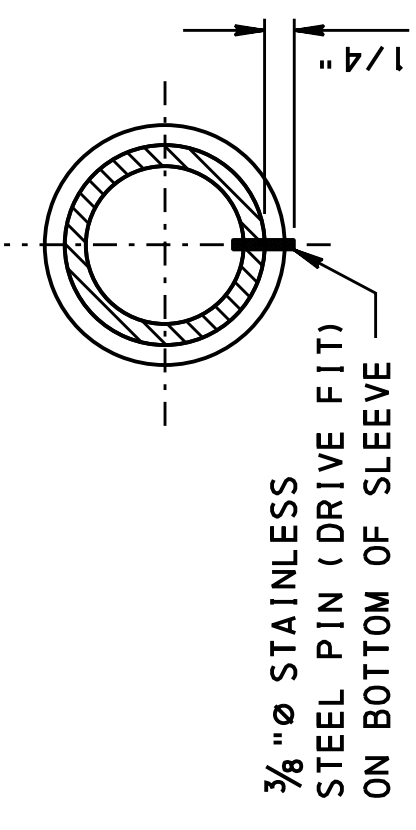
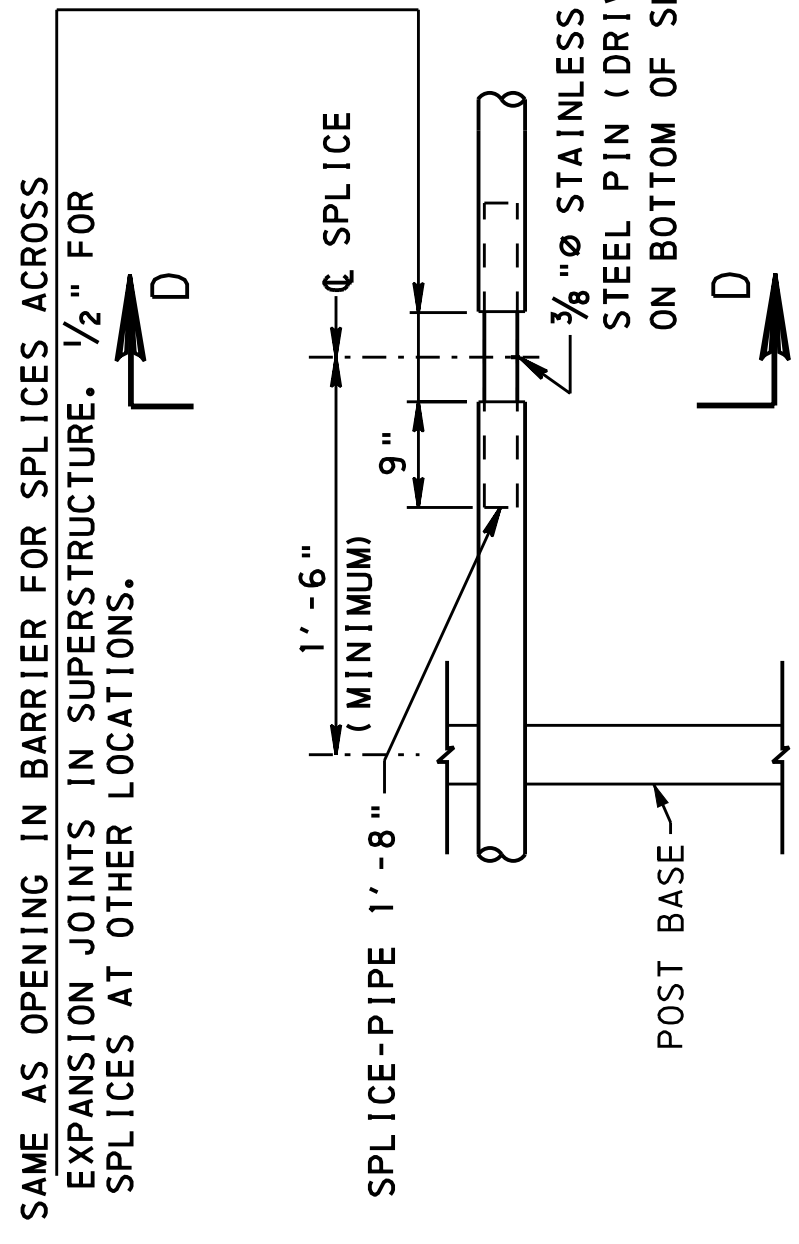
NOTES:

1. SEE SHEET 1 FOR OTHER NOTES.
2. THE DETAILS PROVIDED HERE ARE FOR EXAMPLE ONLY OF THE RAILING STYLE TO BE PROVIDED. THE DESIGN BUILDER SHALL DESIGN AND DETAIL THE RAILING IN ACCORDANCE WITH SPECIAL PROVISIONS AND PROJECT DESIGN CRITERIA. SEE HANDRAIL DETAILS SHEET FOR ADDITIONAL NOTES.

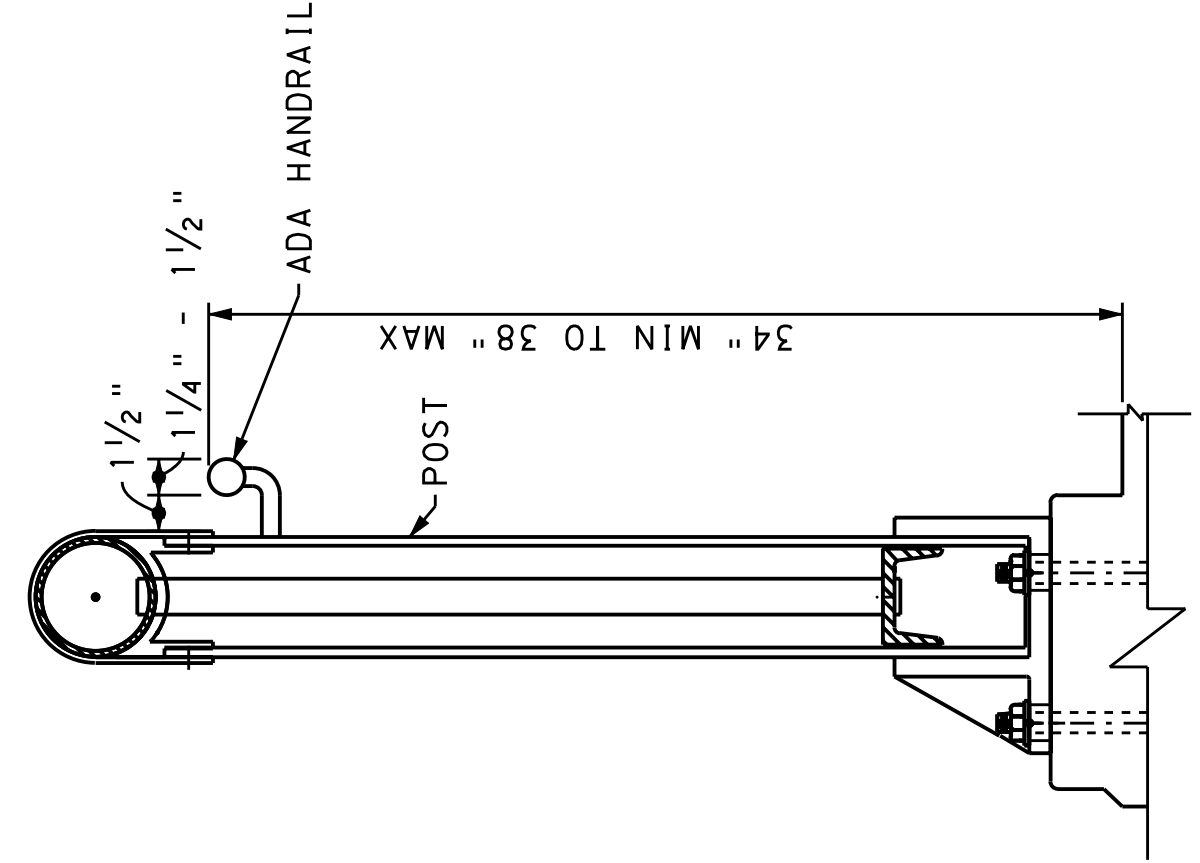
MILTON MADISON BRIDGE

ALUMINUM HANDRAIL

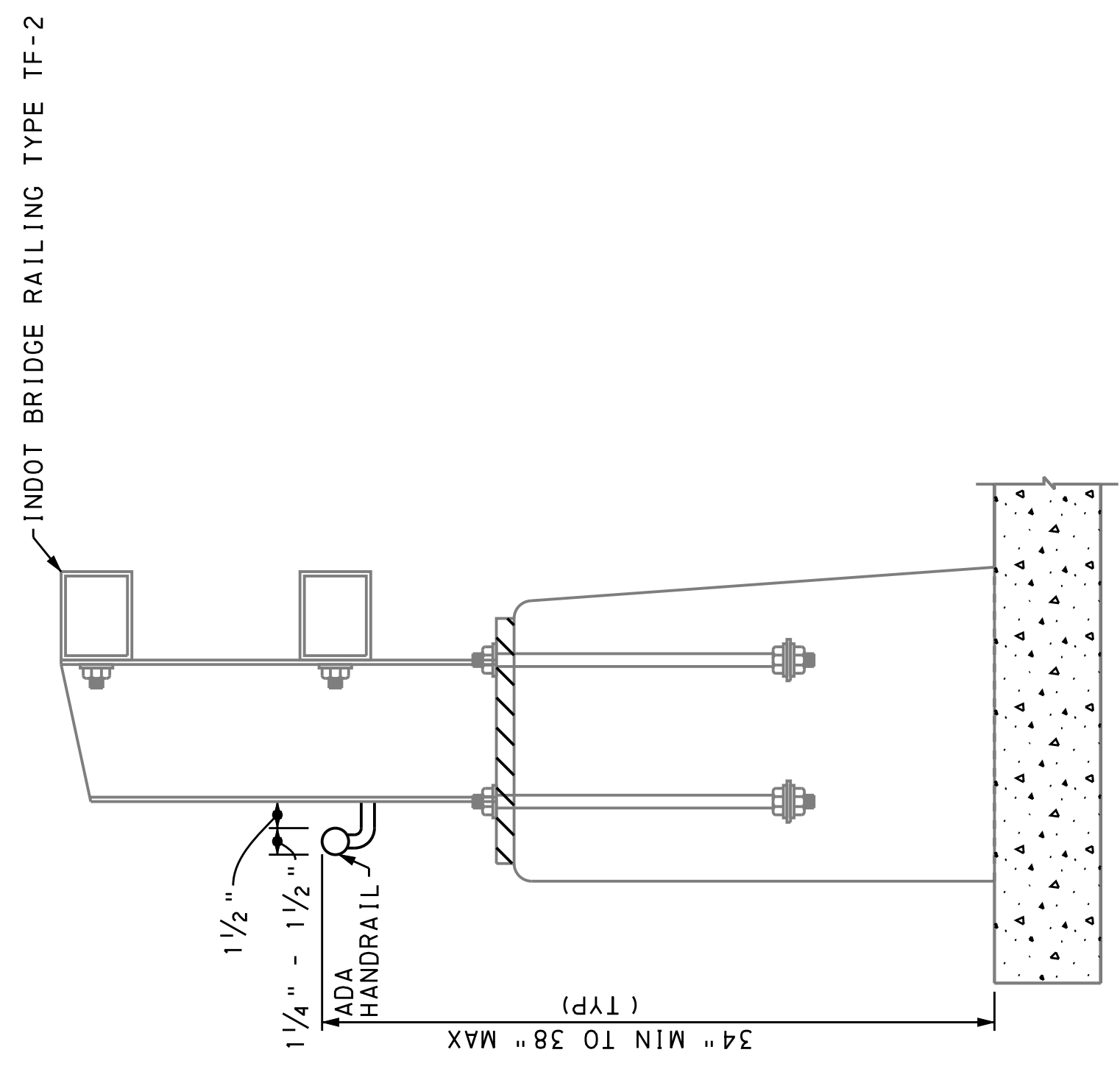




TYPICAL ADA HANDRAIL EXPANSION DETAIL



ADA HANDRAIL SECTION 1



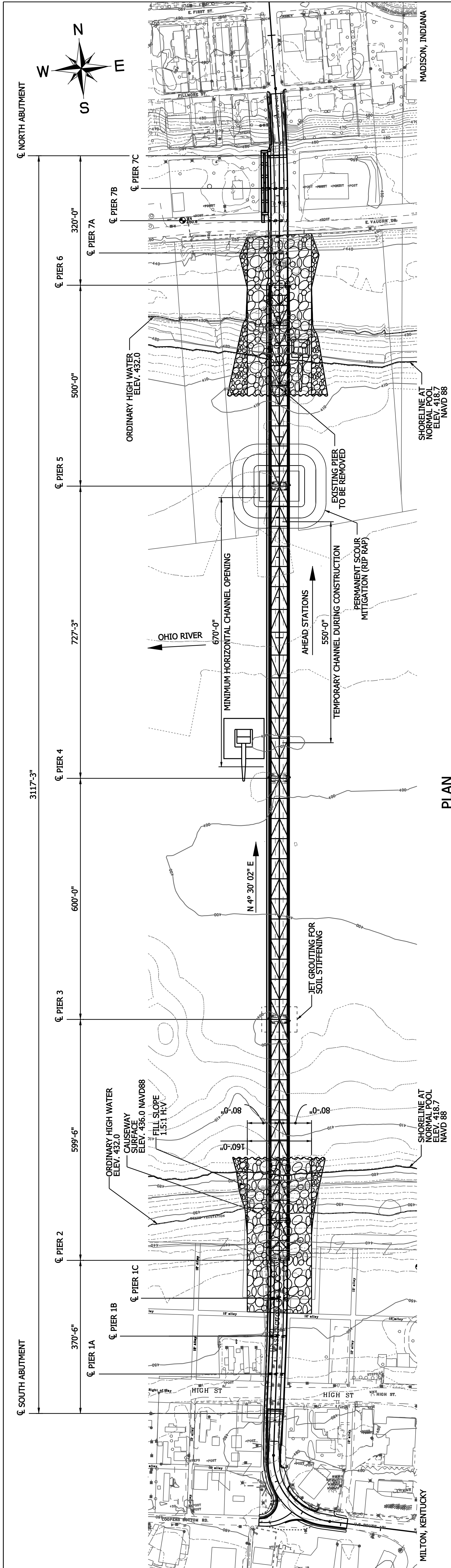
ADA HANDRAIL SECTION 2

NOTES:

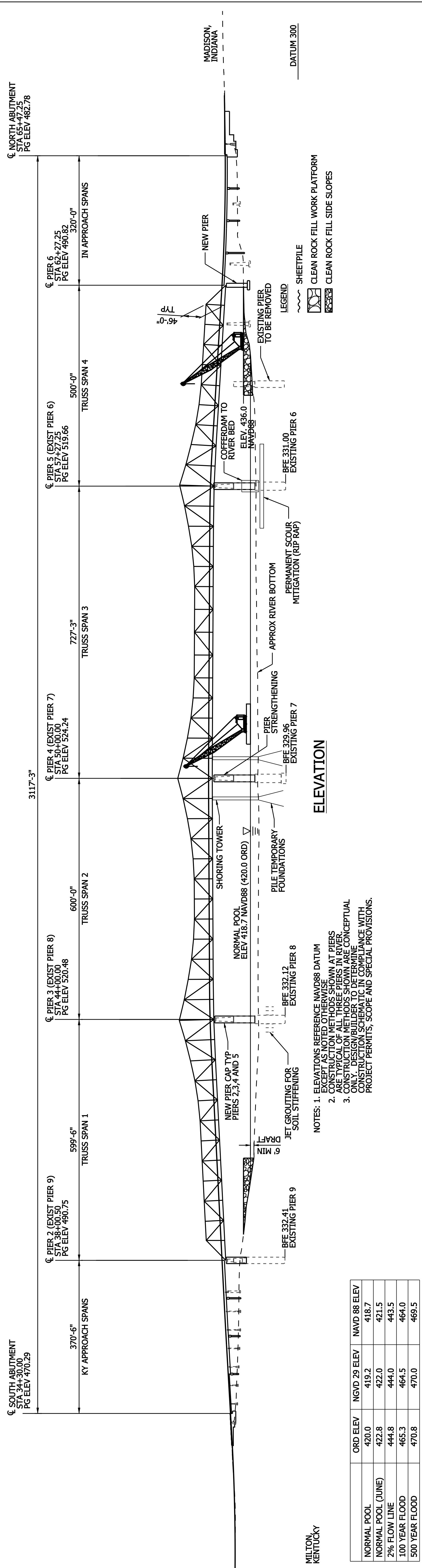
1. CONTINUOUS ALUMINUM ADA HANDRAILS SHALL BE PROVIDED ALONG BOTH SIDES OF SIDEWALK PATH FOR THE ENTIRE LENGTH OF BRIDGE AND PEDESTRIAN BRIDGE.
2. AT THE END OF AN ADA HANDRAIL RUN, THE ADA HANDRAIL SHALL EXTEND AT LEAST ONE FOOT BEYOND THE 5.0% LONGITUDINAL SLOPE. THE ADA HANDRAIL SHALL BE PARALLEL WITH THE SIDEWALK PATH SURFACE.
3. GRIPPING SURFACES SHALL BE CONTINUOUS.
4. THE MINIMUM CLEAR SPACE BETWEEN THE ADA HANDRAIL AND RAILING POST SHALL BE 1 1/2".
5. THE TOP OF THE ADA HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 34" AND 38" ABOVE THE WALKING SURFACE.
6. THE ENDS OF ADA HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED TO THE FLOOR, WALL, POST, ETC.
7. ADA HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
8. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF AN ADA HANDRAIL SHALL BE 1 1/4" TO 1 1/2", OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
9. ADA HANDRAIL DESIGN LOADS SHALL BE PER AASHTO 13.8.2.
10. NOTES 1 THROUGH 8 WERE OBTAINED FROM THE ADA STANDARDS FOR ACCESSIBLE DESIGN AND/OR CHAPTER 51 OF THE INDIANA DESIGN MANUAL. THE DESIGN BUILDER SHALL UTILIZE THE MOST CURRENT AND STRINGENT CRITERIA AT THE TIME OF DESIGN.
11. PROVIDE DRAIN HOLES AS NECESSARY.
12. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH SPECIAL PROVISIONS.
13. DO NOT PAINT ANY MATERIALS.
14. LOCATE ADA HANDRAIL SPLICES BETWEEN EXPANSION JOINTS AND AT OTHER LOCATIONS WHERE NECESSARY. PROVIDE ADA HANDRAILS AS LONG AS PRACTICAL.
15. DRILL WEEP HOLES IN ADA HANDRAILS AS REQUIRED IN THE FIELD.
16. THE DETAILS PROVIDED FOR THE EXPANSION DETAIL ARE FOR EXAMPLE ONLY. THE DESIGN BUILDER SHALL DESIGN AND DETAIL THE ADA HANDRAIL IN ACCORDANCE WITH SPECIAL PROVISIONS AND PROJECT DESIGN CRITERIA.
17. THE DESIGN BUILDER SHALL COORDINATE LOCAL APPROVAL, IF REQUIRED.
18. SEE SHEETS 1 AND 2 OF 3 FOR PEDESTRIAN HANDRAIL DETAILS.
19. THE DESIGN BUILDER SHALL PROVIDE ADDITIONAL INTERMEDIATE SUPPORTS BETWEEN POSTS AS NEEDED TO PREVENT THE ADA HANDRAIL FROM SAGGING.

**MILTON MADISON BRIDGE**

**ADA HANDRAIL DETAILS**



PLAN



ELEVATION

	ORD ELEV	NGVD 29 ELEV	NAVD 88 ELEV
NORMAL POOL	420.0	419.2	418.7
NORMAL POOL (JUNE)	422.8	422.0	421.5
2% FLOW LINE	444.8	444.0	443.5
100 YEAR FLOOD	465.3	464.5	464.0
500 YEAR FLOOD	470.8	470.0	469.5

ORD - OHIO RIVER DATUM

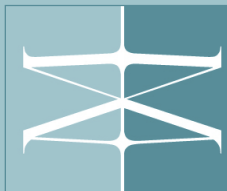
- NOTES:
- ELEVATIONS REFERENCE NAVD88 DATUM EXCEPT AS NOTED OTHERWISE.
  - CONSTRUCTION METHODS SHOWN AT PIERS ARE TYPICAL OF ALL THREE PIERS IN RIVER.
  - CONSTRUCTION METHODS SHOWN ARE CONCEPTUAL ONLY. DESIGN/BUILDER TO DETERMINE FINAL PROJECT PERMITS, SCOPE AND SPECIAL PROVISIONS.

DATE	REVISION	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>CONSTRUCTION SCHEMATIC ILLUSTRATING TEMPORARY IMPACTS</p>	SCALE	BRIDGE FILE
			1:120	421-39-6003
			SURVEY BOOK	DESIGNATION
			DESIGNED:	0902256
			DRAWN:	SHEETS
			CHECKED:	of
				39
			CONTRACT	PROJECT
			IB-33023	0902256

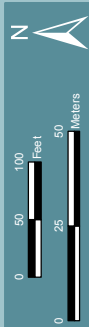


**KENTUCKY  
TRANSPORTATION  
CABINET**

**WilburSmith**



**MILTON-MADISON  
BRIDGE PROJECT**



**Legend**

Archaeological Sensitive Area

**Milton-Madison  
Bridge Project**

## CHAPTER 95: NOISE

---

### Section

[95.01](#) Unusual and loud noise prohibited

[95.02](#) Quiet zone established

### § 95.01 UNUSUAL AND LOUD NOISE PROHIBITED.

(A) Definitions. For the purpose of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

“COMMERCIAL.” All areas that are zoned to permit commercial businesses.

“DAYTIME.” 8:00 a.m. to 10:00 p.m. of the same day.

“NIGHTTIME.” 10:00 p.m. to 8:00 a.m. of the following day.

“PLAINLY AUDIBLE.”

(a) Any sound or noise produced by any source, or reproduced by a radio tape player, television, CD player, electronic audio equipment, musical instrument, sound amplifier or other mechanical or electronic sound-making device, or non-amplified human voice that can be clearly heard by a person, using his or her normal hearing, at a distance of 200 feet or more outside the real property line of the property, which is the source of the sound or noise if emanating from private property, or 200 feet from the source of the sound or noise if emanating from a public place.

(b) A sound or noise is also “PLAINLY AUDIBLE” if it can be clearly heard by a person using his or her normal hearing, while inside a residence, excluding enclosed porches, sun rooms or entryways.

(c) A sound or noise is also “PLAINLY AUDIBLE” if it emanates from inside a building or structure utilized as multiple residences, and can be clearly heard by a person, using his or her normal hearing, through the partitions separating the dwelling units (i.e., apartments).

“RESIDENTIAL.” All areas designated as “residential districts”, as well as hospitals, public and private schools, areas designated as planned development districts, and places of religious assembly.

(B) Prohibited acts. No person shall pay, use or operate any machine or device for the producing or reproducing of sound, including but not limited to, loudspeakers, radios, CD players, television sets, musical instruments, phonographs and cassette players, nor any other machine or tool that produces sound, nor shall any person operate any motor vehicle that contains a modified defective exhaust

system, if such machine, tool or vehicle is located in or on any of the following:

(1) Any public property, including any public right-of-way, highway, building, sidewalk, or public space, park or thoroughfare, and the sound generated therefrom is:

- (a) Plainly audible 200 feet or more from its source; or
- (b) Is at a decibel level that is greater than the maximum sound level as listed in the table below; or

(2) Any private property, and the sound generated therefrom is:

- (a) Plainly audible 200 feet or more outside of the property line; or
- (b) Is at a decibel level that is greater than the maximum sound level as listed in the table below; or
- (c) Otherwise fits the definition of “plainly audible” as defined above.

MAXIMUM SOUND LEVELS			
Residential		Commercial	
Daytime	Nighttime	Daytime	Nighttime
65 dBA*	55 dBA*	75 dBA*	65 dBA*

\* The dBA measurement is to be taken using a decibel meter at the complaining parties property line, or at least 60 feet from the property line of the source of the noise or sound. In addition, the dBA limitations apply, based upon from where the noise or sound originates; i.e., if the sound or noise originates from a residential area, then the 65 dBA/55 dBA limitation applies; if the sound or noise originates from a commercial area, then the 75 dBA/65 dBA limitation applies. The sound or noise shall be measured while the normal entrance and exit doors of any business or commercial operation are closed. Increases in sounds or noises occurring while persons enter and exit a business or commercial operation, in the normal course of business, shall not constitute a violation of the dBA levels established herein.

(C) Exemptions. The following are exempted from the provisions of this section:

- (1) Sounds emitted from authorized emergency vehicles;
- (2) Lawnmowers, weed blowers, garden tractors, construction and repair equipment, go-carts and power tools, when in good working order and properly muffled, if applicable, between the hours of 6:00 a.m. and 10:00 p.m. only;
- (3) Burglar alarms and other warning devices when properly installed, providing the cause for such alarm or warning device sound is investigated and turned off within a reasonable period of time;
- (4) Events approved by the Board of Public Works, including but not limited to: parades, festivals, carnivals, fairs, celebrations, concert performances, band and drum corps performances, and artistic performances, as well as any rehearsals for the same;

- (5) Attendant noise connected with the actual performance of school, not-for-profit and city-sponsored athletic or sporting events, and practices related thereto;
- (6) The emission of sound for the purposes of alerting persons to the existence of an emergency, or for the performance of emergency construction, repair or other work;
- (7) Sounds associated with legal fireworks;
- (8) Sounds associated with the use of Police Department firing range;
- (9) Sounds associated with normal conduct of legally established non-transient businesses, organizations and governmental entities, when such sounds are customary, incidental and within the normal range appropriate for such use;
- (10) Rubbish collection utilizing any mechanical equipment between the hours of 6:00 a.m. and 9:00 p.m., or during and after any city-designated festival or event;
- (11) Subject to the other provisions of this section, and any other applicable law, rule or regulation, those sounds associated with motor vehicles lawfully operating on city streets;
- (12) Sounds associated with equipment or animals lawfully utilized by handicapped persons to accommodate their handicap; and
- (13) Sounds associated with the operation of the municipal airport, aircraft, snow removal equipment, and/or street sweeping equipment.

(D) Penalty.

(1) Any person who violates the provisions of this section shall be subject to a fine, subject to the limitations set forth in IC 36-1-3-8, of not more less than:

First offense	Written warning
Second offense	\$50
Third offense	\$100
Fourth and subsequent offenses	\$150

(2) Citations for violation of this section may be issued by any sworn member of the Police Department.

(Am. Ord. 2008-24, passed 2-17-09)

**§ 95.02 QUIET ZONE ESTABLISHED.**

(A) The vicinity of the King's Daughters' Hospital within the following boundary; beginning at the north west corner of West and Third Streets; running west with the north line of Third Street to the east line of Broadway; north with the east line of Broadway to the south line of Fifth Street; east with the south line of Fifth Street to the west line of West Street; continuing south to the place of beginning, shall

be established a quiet zone.

(B) No person shall make, or cause to be made, or permit, or suffer to be made, within such quiet zone above described, any loud, unusual, or unnecessary noise or noises, or disturb or otherwise annoy the inhabitants of such quiet zone, and especially the occupants and patients of the King's Daughters' Hospital, with loud, unusual, or unnecessary noises, or disorder, or tumult of any kind.

('66 Code, § 96.01) (Ord., passed 5-19-16) Penalty, see [§ 10.99](#)

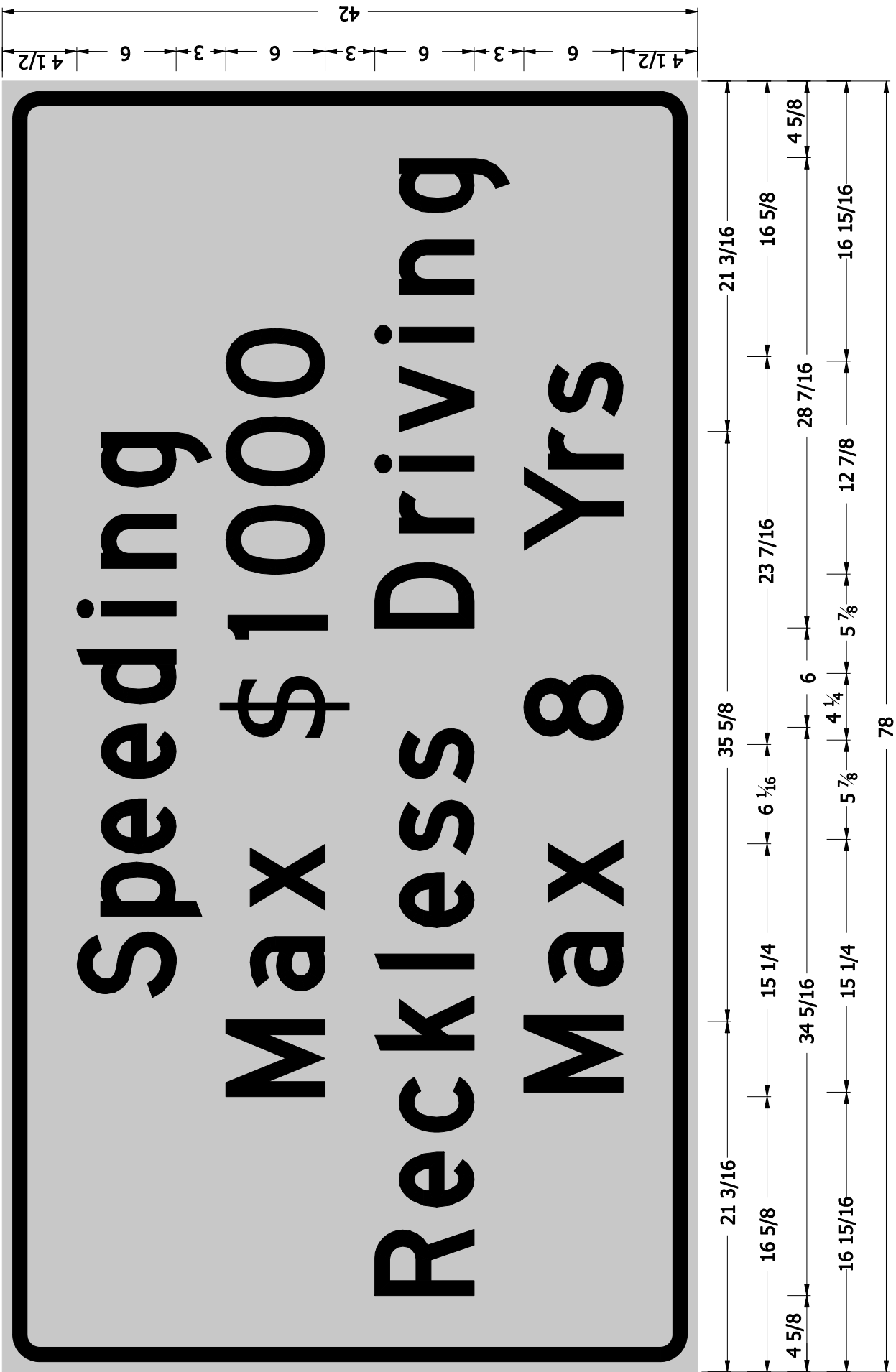
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9-03-07



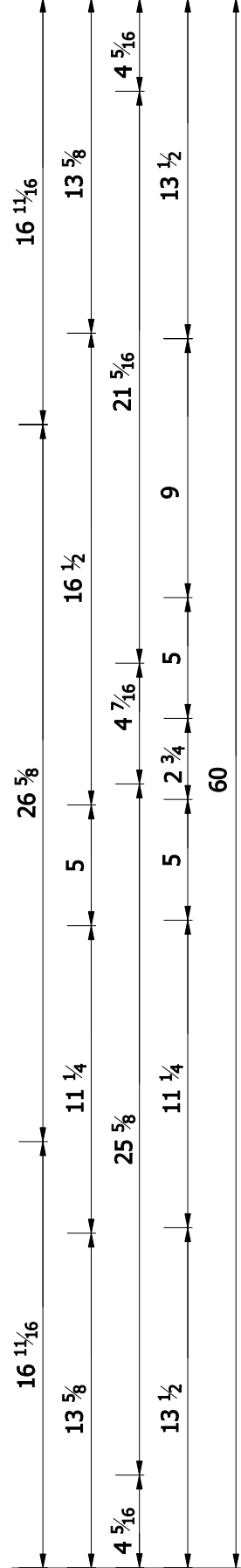
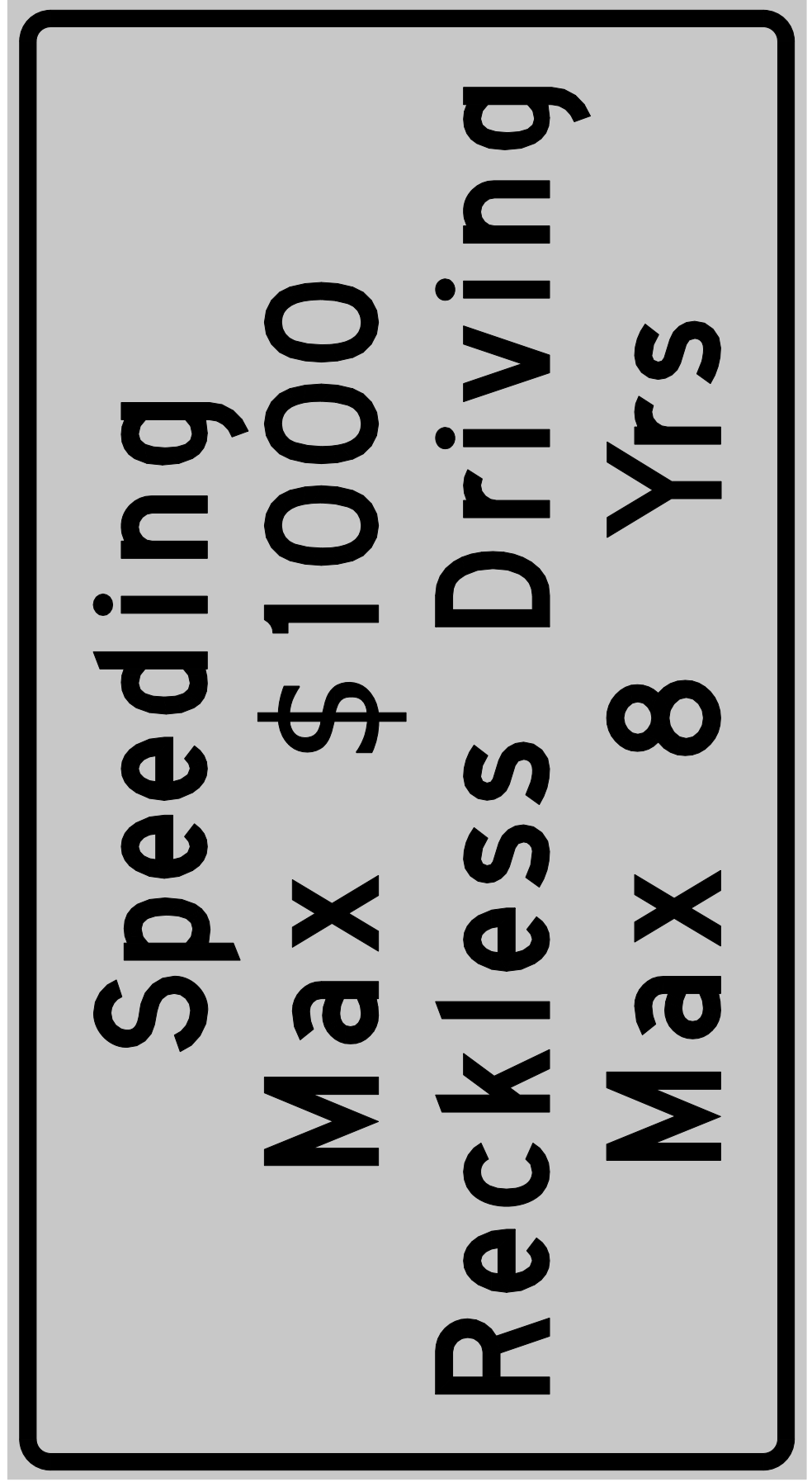
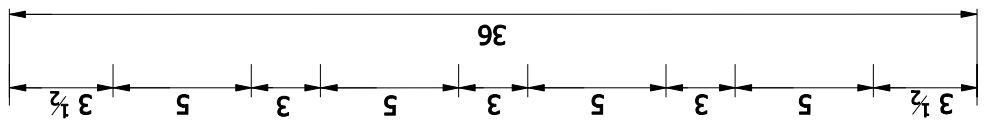
6 D UPPER AND LOWER; 2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;  
 [Speeding] D; [Max \$1000] D; [Reckless Driving] D; [Max 8 Yrs] D;

XG 20-7

INDIANA DEPARTMENT OF TRANSPORTATION

WORKSITE ADDED  
PENALTY SIGN 78 x 42



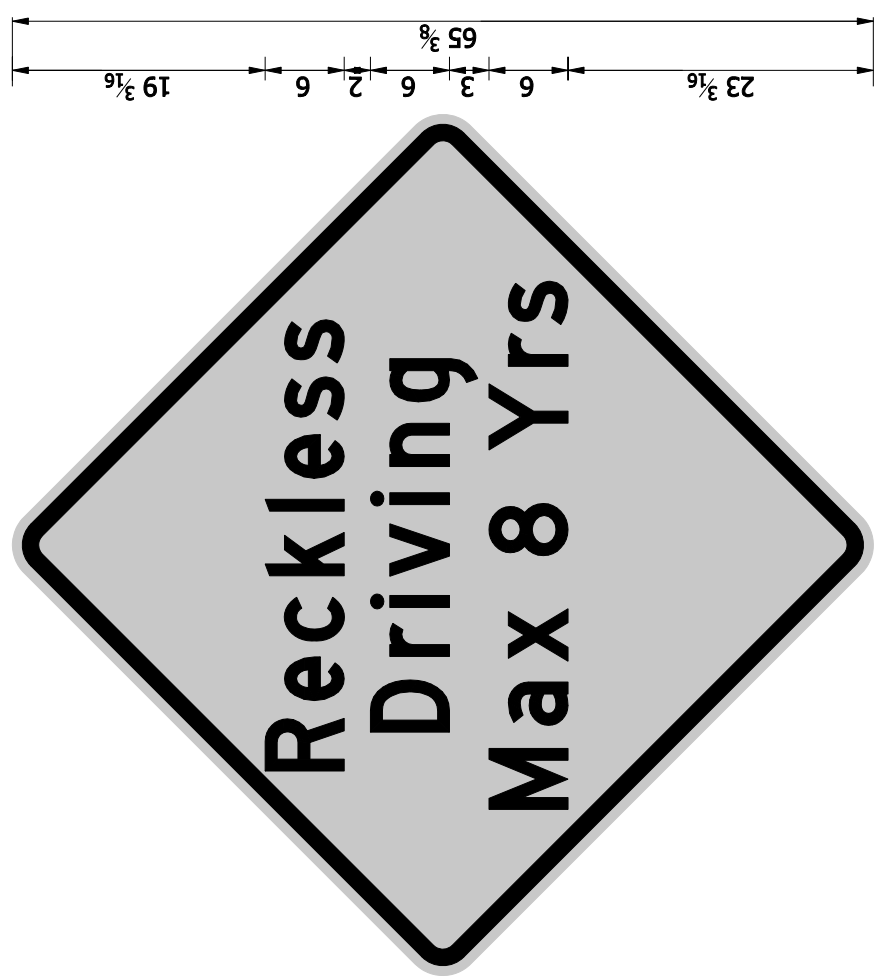


5 C UPPER AND LOWER; 2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;  
 [Speeding] C; [Max \$1000] C; [Reckless Driving] C; [Max 8 Yrs] C;

XG 20-7a

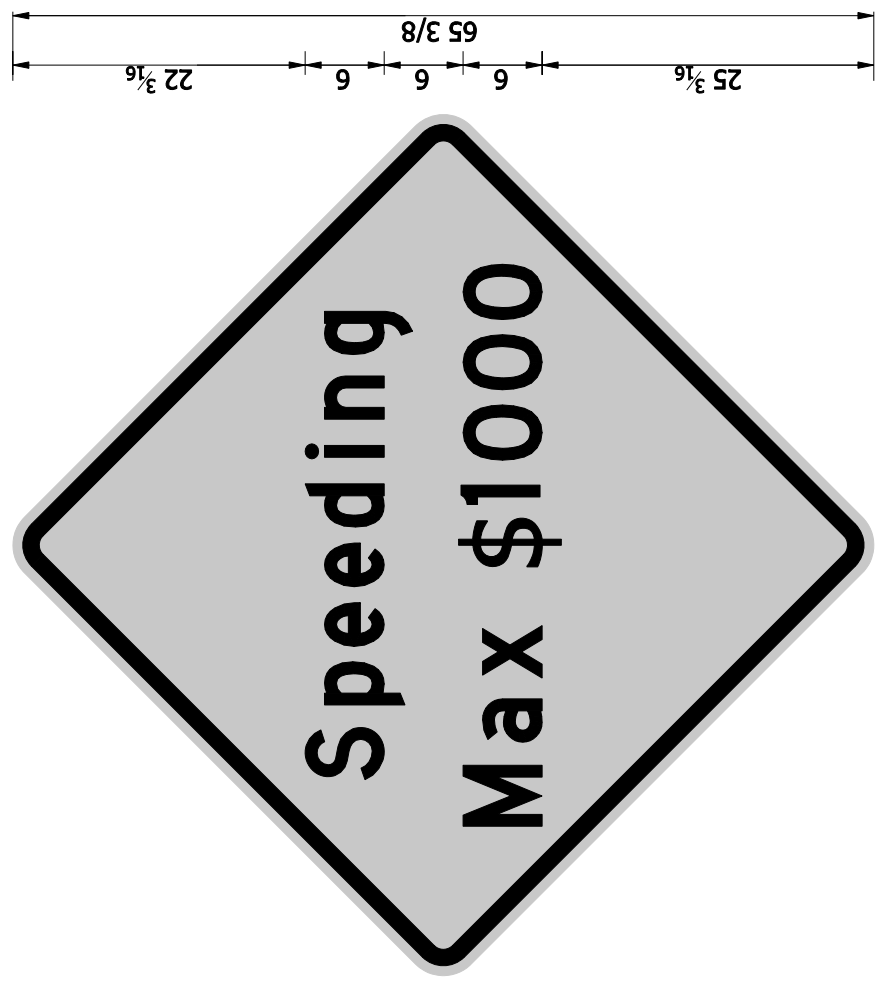
INDIANA DEPARTMENT OF TRANSPORTATION

WORKSITE ADDED  
 PENALTY SIGN 60 x 36



48x48 ; 6 D UPPER AND LOWER  
 48.000" across sides 3.000" Radius, 1.250" Border, 0.750" Indent, Black on Orange;  
 [Reckless] D; [Driving] D; [Max 8 Yrs] D;

XG20-7b



48x48 ; 6 D UPPER AND LOWER  
 48.000" across sides 3.000" Radius, 1.250" Border, 0.750" Indent, Black on Orange;  
 [Speeding] D; [Max \$1000] D;

XG20-7c

INDIANA DEPARTMENT OF TRANSPORTATION

WORKSITE ADDED  
PENALTY SIGNS 48 x 48

