

# SANDUSKY COUNTY, OHIO

## SURFACE REPAIRS OF SA 20-5.15 STATE STREET BRIDGE OVER THE SANDUSKY RIVER FREMONT, OHIO 2012

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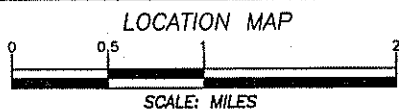
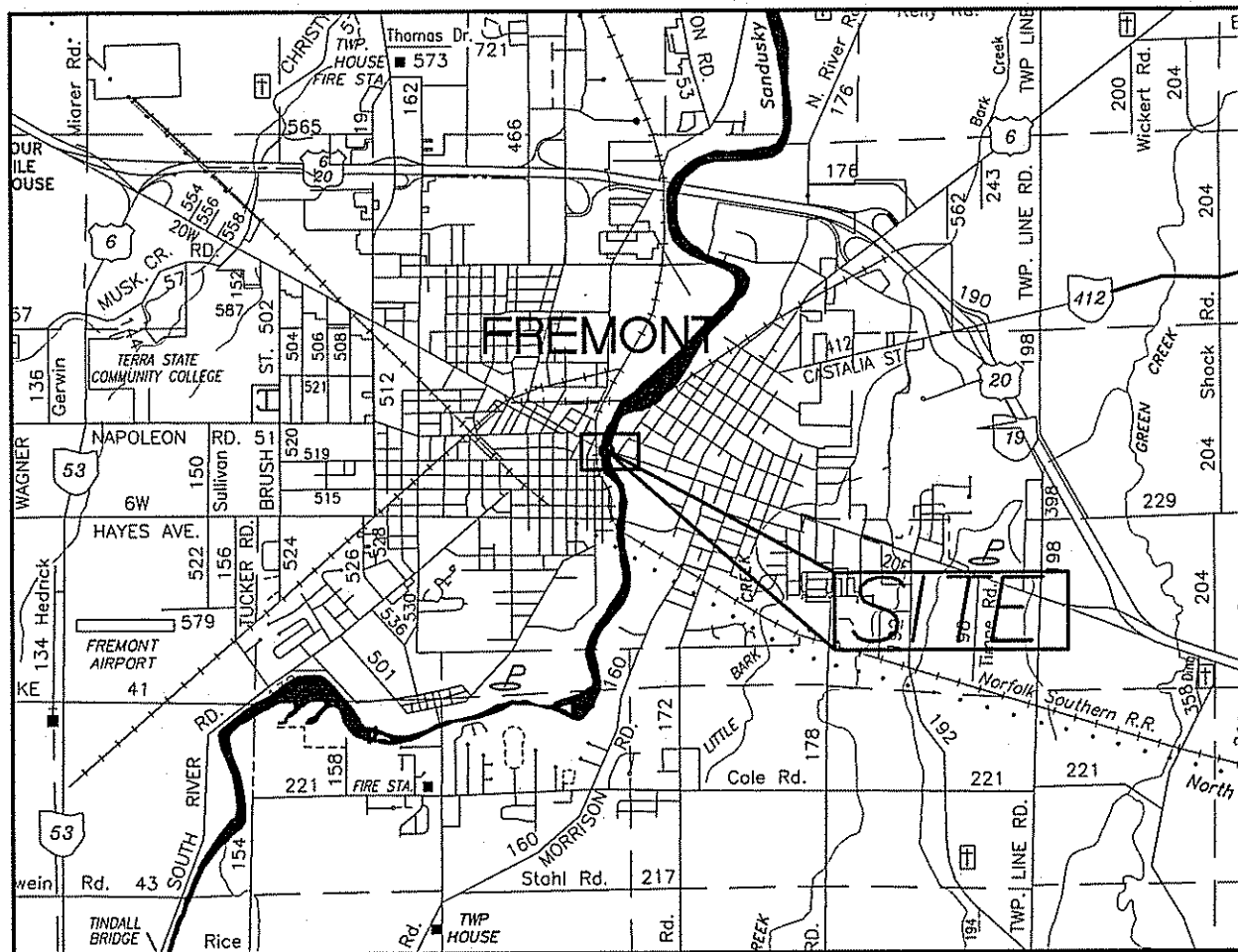
### DESIGN DESIGNATION

CURRENT ADT (2009) . . . . .	15,729
DESIGN YEAR ADT (2029) . . . . .	18,874
DESIGN SPEED. . . . .	40 M.P.H
FUNCTIONAL CLASSIFICATION . . . . .	PRINCIPAL ARTERIAL

### UNDERGROUND UTILITIES

TWO (2) WORKING DAYS  
**BEFORE YOU DIG**

Call 1-800-362-2764 (TOLL FREE) OHIO UTILITIES  
PROTECTION SERVICE NON-MEMBERS MUST BE  
CALLED DIRECTLY  
-AND-  
CALL 1-800-925-0988 (TOLL FREE)  
OHIO OIL & GAS PRODUCERS UNDERGROUND  
PROTECTION SERVICE



### PROJECT DESCRIPTION

THE PROJECT CONSISTS OF SURFACE REPAIRS OF THE CONCRETE ABUTMENTS, PIERS AND SUPERSTRUCTURE BY USING A COMBINATION OF CONCRETE PATCHING AND PNEUMATICALLY PLACED MORTAR.

### SPECIFICATIONS

THE 2010 STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, SHALL GOVERN THIS IMPROVEMENT EXCEPT WHEN MODIFIED BY THE PLANS, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS OR PROPOSAL NOTES.

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		ENGINEERS SEAL:
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	
MT-95.31	07-17-09	TC-41.20	01-19-01			
MT-95.32	07-17-09	TC-42.20	01-21-11			
MT-95.50	04-17-09	TC-52.10	01-19-07			
MT-105.10	04-17-09	TC-52.20	01-19-07			
MT-110.10	01-16-09					

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND SPECIFICATIONS.

SANDUSKY COUNTY ENGINEER      8-2-12      DATE

PLANS PREPARED BY:  
SANDUSKY COUNTY ENGINEER  
2500 WEST STATE ST.  
FREMONT, OHIO 43420  
TEL. (419) 334-9731  
FAX. (419) 334-9733

FEDERAL PROJECT NO. \_\_\_\_\_  
 PID NO. \_\_\_\_\_  
 CONSTRUCTION PROJECT NO. \_\_\_\_\_  
 RAILROAD INVOLVEMENT **NONE**  
**SA 20-5.15**  
**STATE STREET BRIDGE**  
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## STANDARD SPECIFICATIONS

THE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2010 (ODOT CMS) SHALL GOVERN THE MAKING OF THIS IMPROVEMENT.

## DEFINITIONS AND TERMS

WHEREVER THERE APPEARS IN THE STANDARD SPECIFICATIONS (ODOT ITEMIZED CMS), SUPPLEMENTAL SPECIFICATIONS OR PROPOSAL NOTES, THE TERMS: "THE STATE", "DIRECTOR OF TRANSPORTATION", "DEPARTMENT", "DISTRICT CONSTRUCTION ENGINEER (DCE)", "ENGINEER", OR ANY OTHER TERM DESIGNATING ANY REPRESENTATIVE OR EMPLOYEE OF THE STATE OR ITS DEPARTMENT OF TRANSPORTATION, SUCH TERM SHALL, FOR THE PURPOSE OF THIS CONTRACT, BE CONSIDERED AND TAKEN AS MEANING AND DESIGNATING THE RESPECTIVE BOARD OFFICER OR EMPLOYEE OF SANDUSKY COUNTY WHOSE DUTY OR FUNCTION IT IS TO DEAL WITH THE SUBJECT MATTER IN CONNECTION WITH WHICH SUCH TERM IS USED AND SPECIFICALLY:

THE STATE DEPARTMENT	- SHALL MEAN SANDUSKY COUNTY - SHALL MEAN THE SANDUSKY COUNTY ENGINEER'S OFFICE
DIRECTOR	- SHALL MEAN THE SANDUSKY COUNTY ENGINEER, HIS DEPUTIES OR ANY ENGINEER DESIGNATED AS THE COUNTY ENGINEER'S REPRESENTATIVE
DISTRICT CONSTRUCTION	- SHALL MEAN THE DULY AUTHORIZED AGENT OR REPRESENTATIVE OF THE SANDUSKY COUNTY ENGINEER'S OFFICE ACTING WITHIN THE SCOPE OF HIS/HER AUTHORITY FOR THE PURPOSES OF ENGINEERING, CONSTRUCTION, AND ADMINISTRATION OF THE CONTRACT
LABORATORY	- SHALL MEAN ANY LABORATORY DESIGNATED BY THE COUNTY

## EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FIELD MEASUREMENTS. THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON THE RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON THE CONTRACTOR'S PRE-BID EXAMINATION OF THE EXISTING STRUCTURE. ALL PROJECT WORK, HOWEVER, SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

1978 PHYSICAL CONDITIONS AND REHABILITATION REPORT ALONG WITH 1980 REHABILITATION PLANS ARE ON FILE AT THE SANDUSKY COUNTY ENGINEER'S OFFICE, 2500 W. STATE STREET FREMONT, OHIO, 43420.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH ALL PERTINENT EXISTING DRAWINGS AND DETAILS RELEVANT TO THE PROJECT.

## WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

## UTILITIES

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

AT&T 130 N. ERIE STREET ROOM 714 TOLEDO, OHIO 43624 (419) 245-7491	AEP OHIO 1 RIVERSIDE PLAZA COLUMBUS, OH 43215 (614) 716-1000
CITY OF FREMONT WATER & SEWER MAINT. 700 CEDAR STREET FREMONT, OH 43420 (419) 332-3181	CITY OF FREMONT ENGINEER 323 SOUTH FRONT STREET FREMONT, OH 43420 (419) 334-8963
COLUMBIA GAS OF OHIO 3222 CENTRAL AVENUE TOLEDO, OHIO 43602 (800) 344-4077	SANDUSKY COUNTY ENGINEER 2500 WEST STATE STREET FREMONT, OH 43420 (419) 334-9731

CALL OHIO UTILITIES PROTECTION SERVICE TWO (2) WORKING DAYS BEFORE YOU DIG, TOLL FREE 1-800-362-2764 (NON-MEMBERS MUST BE CALLED DIRECTLY).

CALL OHIO OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE (OGPUPS) TOLL FREE 1-800-925-0988.

## PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR SHALL COLLECT, REMOVE, AND DISPOSE OF ALL DISCARDED MATERIALS AND SHALL LEAVE THE JOB SITE IN A CLEAN MANNER AND CONDITION. WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE. SEE GENERAL NOTE CONTAINMENT REQUIREMENTS. (UNDER ITEM 514-ADDITIONAL REQUIREMENTS)

## PRIOR INSPECTION OF WORK

PROSPECTIVE BIDDERS ARE REQUIRED TO MAKE AN INSPECTION OF THE BRIDGE IN THE FIELD AND TO REVIEW THE PLANS AND SPECIFICATIONS BEFORE SUBMITTING BIDS. SEE SECTION 102.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

## PRELIMINARY WALK-THROUGH

PRIOR TO COMMENCING WORK ON THE PROJECT, THE CONTRACTOR, PROJECT ENGINEER AND/OR COUNTY REPRESENTATIVE SHALL HAVE A FIELD REVIEW OF THE PROJECT SITE. THE CONTRACTOR SHALL DOCUMENT THE EXISTING CONDITION OF THE STRUCTURE BEFORE ALL CONSTRUCTION WORK BEGINS. THE OVERALL EXISTING CONDITION OF THE STRUCTURE SHALL BE FORMALLY AGREED UPON BY ALL PARTIES.

## CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

## ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

THIS ITEM HAS BEEN INCLUDED TO ALLOW THE CONTRACTOR TO DE-WATER THE AREAS AROUND THE PIERS AND SPANDREL WALLS IN ORDER TO BE ABLE TO ACCESS THE REPAIR AREAS. IMPACT TO THE SANDUSKY RIVER SHOULD BE KEPT TO A MINIMUM, INCLUDING THE DISRUPTION OF WATER FLOW. CONTRACTOR SHALL CLEAN UP AND REMOVE THE COFFERDAMS AFTER WORK IS COMPLETED TO THE SATISFACTION OF THE ENGINEER. THE COST FOR THE REMOVAL SHALL BE INCIDENTAL TO THE PROJECT AND SHALL BE INCLUDED IN THE PERTINENT ITEM.

MEANS AND METHODS OF DE-WATERING AND COFFERDAMS MATERIALS AND INSTALLATION SHALL BE CHOSEN BY THE CONTRACTOR WITH APPROVAL FROM THE ENGINEER.

## ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

AN EPOXY-URETHANE SEALER SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF THE BRIDGE FASCIA, ABUTMENTS, PIERS, AND PILASTERS FOR BOTH THE NORTH AND SOUTH ELEVATIONS. REFER TO SECTION 512.03 OF THE SPECIFICATIONS FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

MATERIALS USED SHALL BE CHEMASTERS EPX, AND TWO COATS OF CHEMASTERS DURAGUARD 310. OR APPROVED EQUAL. THE COLOR OF THE FINISHED SEALER SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION AND SHALL BE APPROVED BY THE ENGINEER.

## ITEM 519 - PATCHING CONCRETE STRUCTURES & ITEM 520 - PNEUMATICALLY PLACED MORTAR

ALL WORK PERFORMED ON THIS BRIDGE SHALL CONFORM WITH ITEM 519, PATCHING CONCRETE STRUCTURES AND ITEM 520, PNEUMATICALLY PLACED MORTAR, AS SPECIFIED IN THE 2010 EDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION MATERIALS AND SPECIFICATIONS (ODOT CMS).

QUANTITIES HAVE BEEN INCLUDED IN THIS PROJECT FOR BOTH ITEM 519 PATCHING CONCRETE STRUCTURES & ITEM 520 PNEUMATICALLY PLACED MORTAR. HOWEVER, CONTRACTOR SHALL USE ITEM 520 PNEUMATICALLY PLACED MORTAR REPAIR METHOD FOR MOST OF THE REPAIRS ON THIS PROJECT. ITEM 519 IS INTENDED TO BE USED ON AREAS WHERE THE DEPTH OF THE REPAIRS ARE 12" AND DEEPER. ITEM 519 SHALL NOT BE USED FOR REPAIRS UNDERNEATH THE ARCHES REGARDLESS OF DEPTH. THESE ITEMS SHALL ALSO INCLUDE THOROUGHLY CLEANING REINFORCING EXPOSED ON THE ORIGINAL STRUCTURE, OR EXPOSED AFTER REMOVALS, AS SPECIFIED IN ITEM 520.04, AND RESTORE ANY APPRECIABLE REDUCTION IN STEEL AREA, AS DIRECTED. THIS WORK SHALL ALSO INCLUDE THE FORMING AND FINISH WORK OF THE ARCHITECTURAL FEATURES OF THIS BRIDGE ON THE FASCIA, PILASTERS, PIERS, ETC. AS DIRECTED.

ESTIMATED REPAIR QUANTITIES:

BRIDGE COMPONENT	ESTIMATED SURFACE AREA
FASCIAS	2,200 SQ. FT.
ABUTMENTS	200 SQ. FT.
PIERS	700 SQ. FT.
PILASTERS	1,300 SQ. FT.
UNDER THE ARCHES	550 SQ. FT.

CALCULATED  
CAB

CHECKED  
JRM

GENERAL NOTES

SA 20-5.15  
STATE STREET BRIDGE

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**METHOD OF MEASUREMENT**

IN ADDITION TO THE REQUIREMENTS OF CMS 519.07, AND CMS 520.12, THE FOLLOWING SHALL APPLY TO THIS CONTRACT:

THE QUANTITY SHOWN ABOVE IS APPROXIMATE AND SHALL BE USED FOR ESTIMATING PURPOSES ONLY. ACTUAL PAYMENT FOR EACH REPAIR WILL BE BASED ON THE ACTUAL NUMBER OF SQUARE FEET OF EXPOSED SURFACES FOR ALL COMPLETED AND APPROVED PATCHES, IRRESPECTIVE OF DEPTH OR THICKNESS OF THE PATCH.

**ITEM 614 – MAINTAINING TRAFFIC**

ALL WORK SHALL CONFORM TO APPLICABLE SECTIONS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE RIGHT LANE IN EACH DIRECTION OF TRAFFIC AND THE ADJACENT SIDEWALK MAY BE CLOSED DURING WORKING HOURS AND OVERNIGHT WHEN A SIGNIFICANT AMOUNT OF WORK IS BEING DONE ON A DAILY BASIS. ALL LANES OF TRAFFIC AND SIDEWALKS SHALL BE OPEN ON WEEKENDS OR WHEN WORK IS NOT IN PROGRESS UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL CLOSURES ARE SUBJECT TO THE ENGINEER'S APPROVAL. CLOSURES SHALL BE MADE WHENEVER DEEMED NECESSARY BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ARROW BOARDS AND BARRELS AS SHOWN ON THE TRAFFIC CONTROL PLAN. ALL ADVANCED WARNING SIGNS WILL BE PROVIDED, INSTALLED AND MAINTAINED BY THE COUNTY. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR BAGGING THE "MERGE" AND "RIGHT LANE CLOSED AHEAD" SIGNS WHEN A LANE(S) IS CLOSED AND UN-BAGGING THE SAME WHEN A LANE(S) IS OPEN.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614-MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**POLLUTION CONTROL**

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT WATER AND AIR POLLUTION DUE TO CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL ASSUME FULL AND COMPLETE RESPONSIBILITY FOR ANY DELAY IN WORK AND DAMAGES WHICH MAY OCCUR DUE TO NON-COMPLIANCE OF CURRENT LOCAL, STATE, AND FEDERAL WATER AND AIR POLLUTION LAWS.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DEBRIS OR OTHER MATERIAL FROM ENTERING THE SANDUSKY RIVER. THESE PRECAUTIONS MAY INCLUDE, BUT ARE NOT LIMITED TO NETTING, FALSEWORK, AND MATS. ANY MATERIAL WHICH ACCIDENTALLY ENTERS THE SANDUSKY RIVER SHALL BE REMOVED IMMEDIATELY.

DIRECT PAYMENT FOR ANY POLLUTION CONTROL WORK WILL NOT BE MADE. THE COST THEREOF SHALL BE INCLUDED IN THE COST OF OTHER PERTINENT ITEMS OF WORK.

GENERAL SUMMARY					
REF. NO.	ITEM	ITEM EXT.	TOTAL QUANTITY	UNIT	DESCRIPTION
1	103.05		LUMP	----	PREMIUM FOR CONTRACT PERFORMANCE BOND
2	503		LUMP	----	COFFERDAMS
3	512		1,555	S.Y.	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
4	519		600	S.F.	PATCHING CONCRETE STRUCTURES
5	520		4,350	S.F.	PNEUMATICALLY PLACED MORTAR
6	614	11000	LUMP	----	MAINTAINING TRAFFIC
7	624	10000	LUMP	----	MOBILIZATION

CALCULATED CAB	CHECKED JRM
<b>GENERAL NOTES/GENERAL SUMMARY</b>	
SA 20-5.15 STATE STREET BRIDGE	
6	3

S:\Carroll\Bridges\State Street Bridge\Structure Repairs 2015\Drawings (07-16-2015)



### DESIGN DESIGNATION

CURRENT ADT (2009) = 15,729  
 DESIGN YEAR ADT (2029) = 18,874  
 DESIGN SPEED = 40 MPH  
 FUNCTIONAL CLASS = PRINCIPAL ARTERIAL

CALCULATED  
 CAB  
 CHECKED  
 JRM

### EXISTING STRUCTURE

TYPE; FILLED SPANDREL, REINFORCED CONCRETE BARREL ARCHES.  
 SPANS; (5) 60'-6", 82'-6", 94'-0", 82'-6", 60'-6"  
 ROADWAY: 46'-0" F/F CURB  
 LOADING: HS 20-44  
 SKEW: 17°00'00"  
 ALIGNMENT: TANGENT  
 WEARING SURFACE: MONOLITHIC CONCRETE  
 STRUCTURAL FILE NUMBER: 7242298  
 DATE BUILT: 1926.  
 DATE REHABILITATED: 1981.

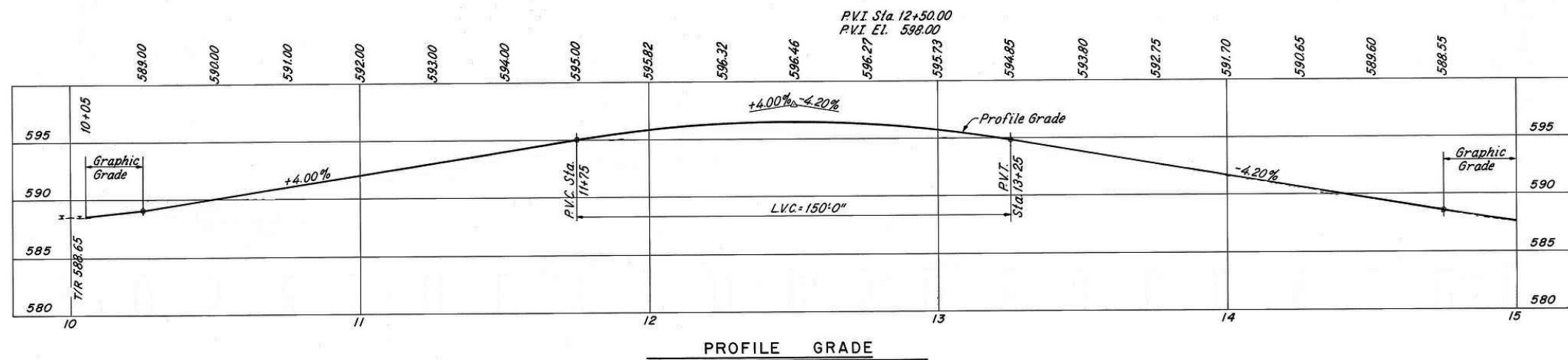
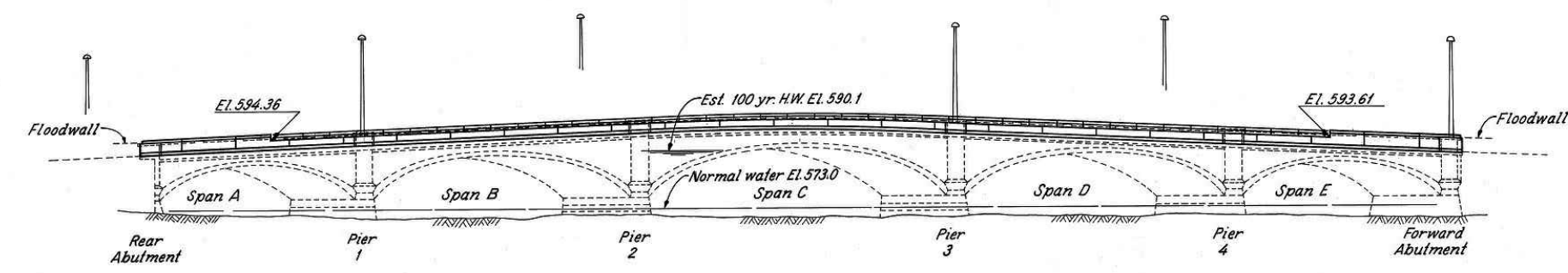
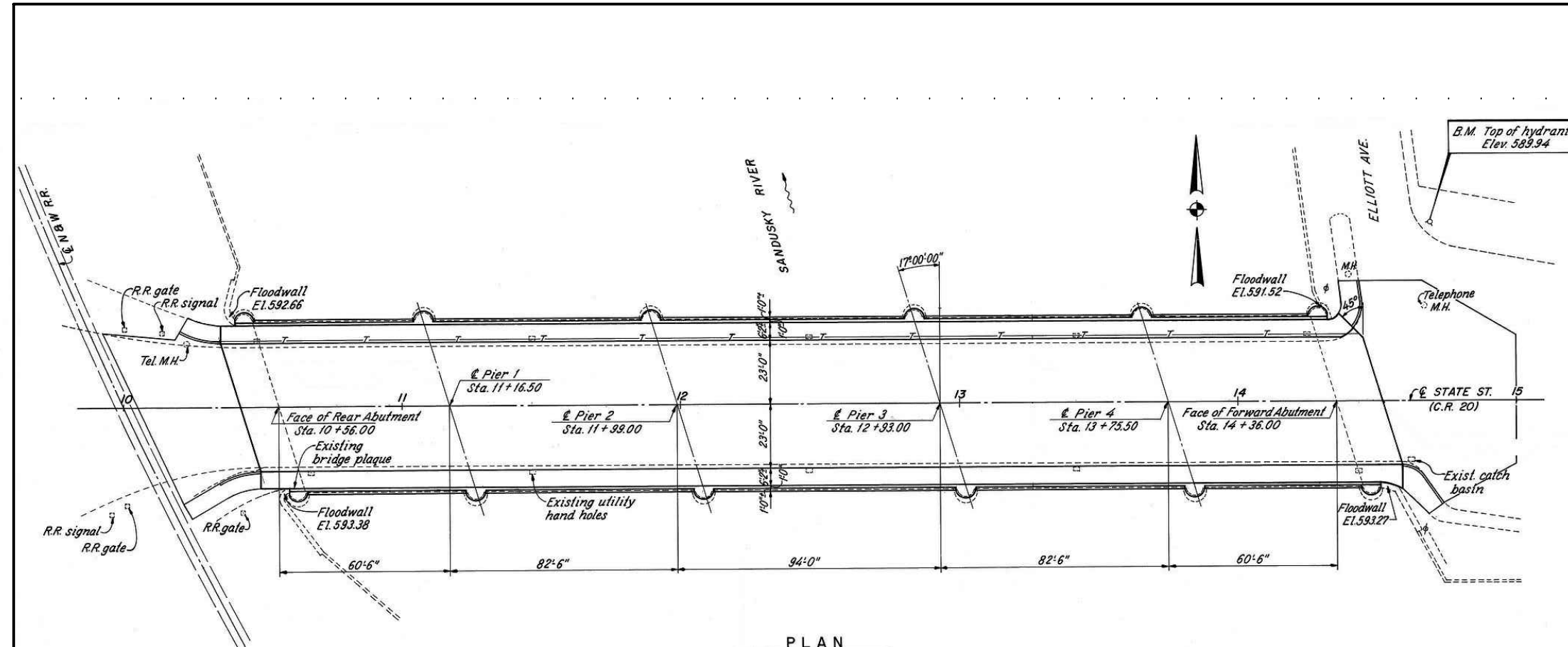
## GENERAL ELEVATION PLAN

### NOTES:

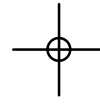
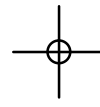
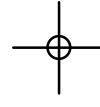
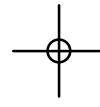
- STATIONS AND ELEVATIONS REFERENCED FROM REHABILITATION PLANS PREPARED BY RICHLAND ENGINEERING 1979.
- SEALING OF CONCRETE SURFACES SHALL NOT INCLUDE GUARDRAIL AREAS, SIDEWALKS, CONCRETE DECK, AND UNDERSIDE OF CONCRETE ARCHES.
- ONLY ONE LANE OF TRAFFIC AND SIDEWALK SHALL BE CLOSED AT ANY ONE TIME UNLESS AUTHORIZED BY THE ENGINEER.

## SA 20-5.15 STATE STREET BRIDGE

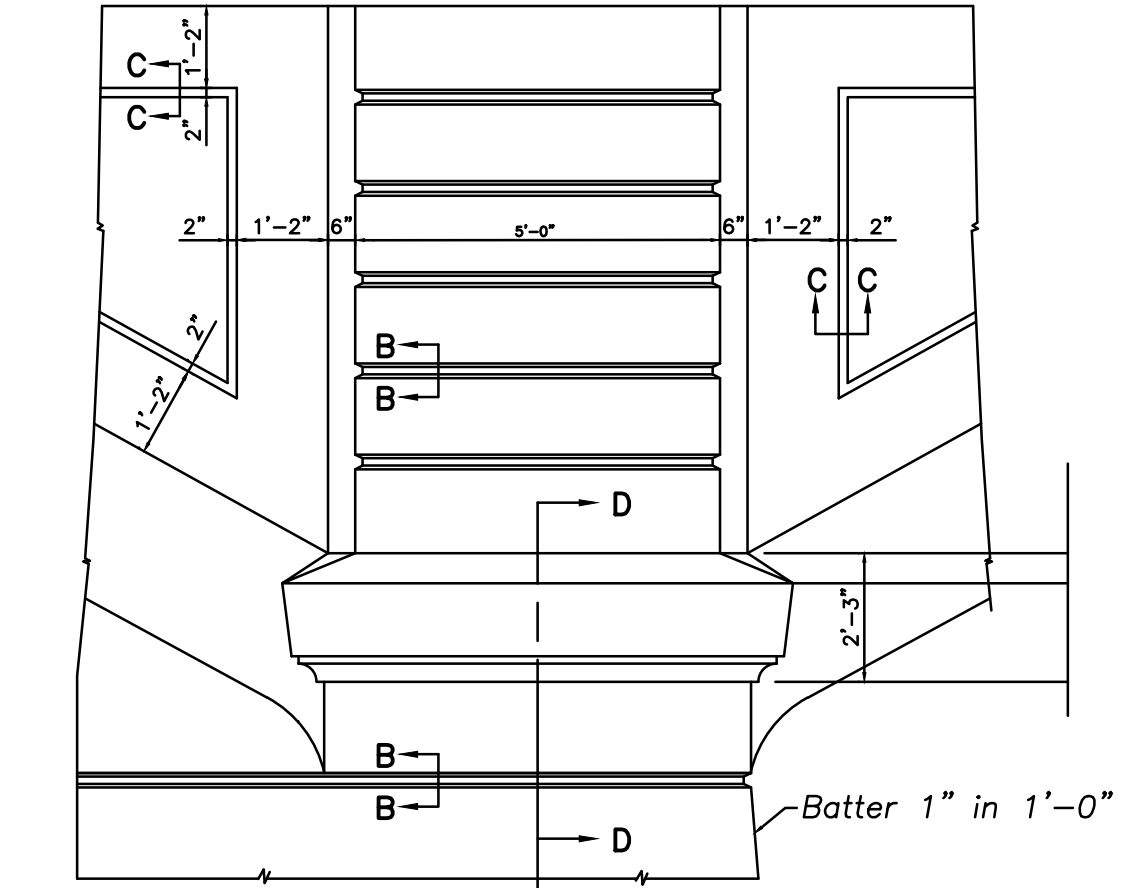
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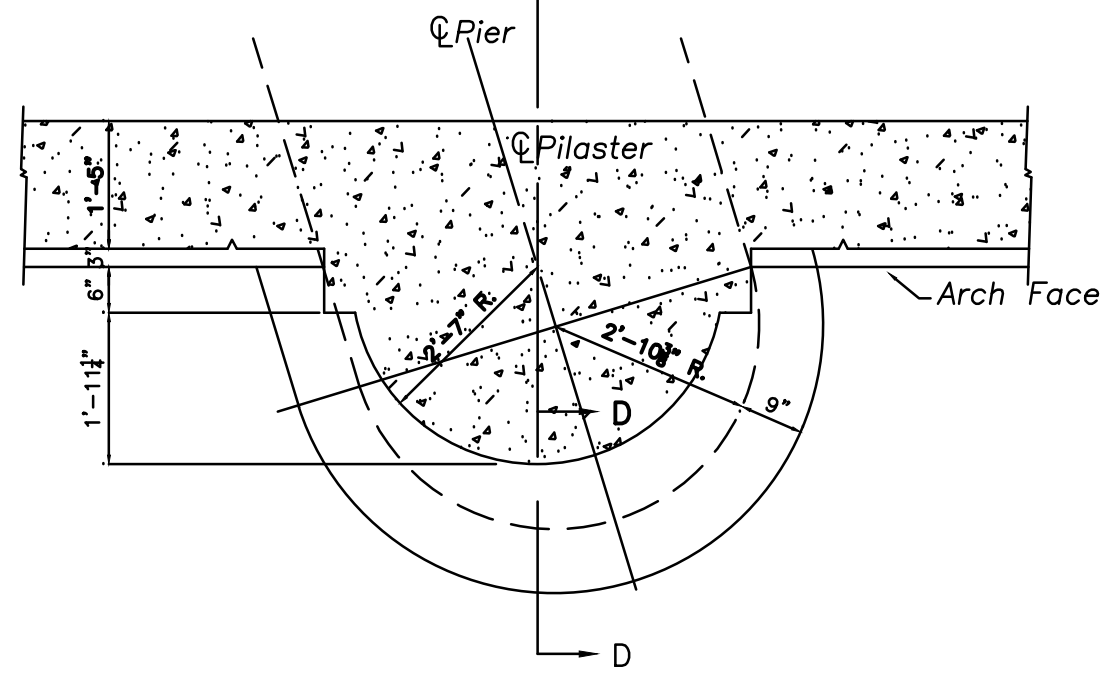
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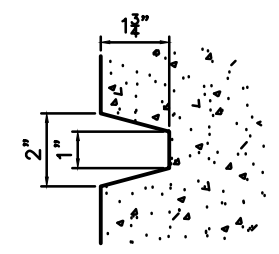
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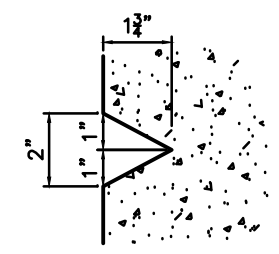
**ELEVATION**



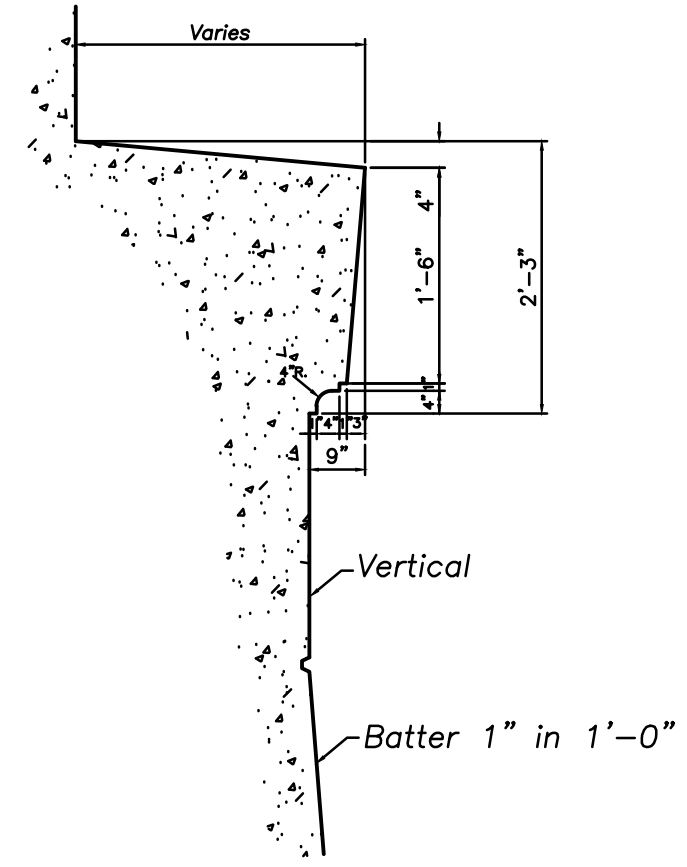
**SECTIONAL PLAN**



**SECTION B-B**



**SECTION C-C**



**SECTION D-D**

CALCULATED	CAB
CHECKED	JRM

**PILASTER DETAILS**

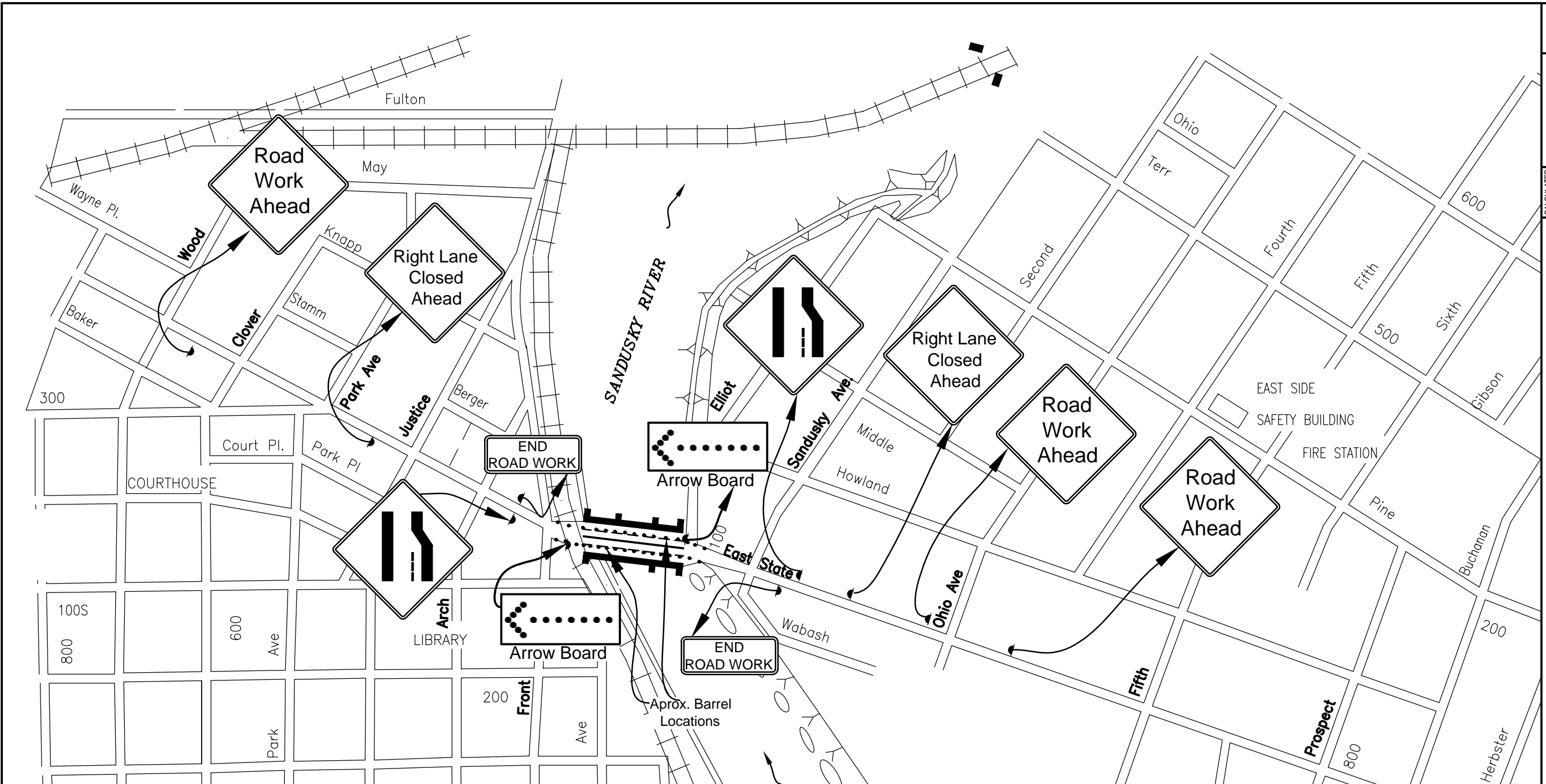
SA 20-5.15  
STATE STREET BRIDGE



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**TRAFFIC CONTROL PLAN**

SA 20-5.15  
STATE STREET BRIDGE



**NOTES:**

- ONLY ONE LANE OF TRAFFIC AND SIDEWALK SHALL BE CLOSED AT ANY ONE TIME UNLESS AUTHORIZED BY THE ENGINEER.
- ADVANCED TRAFFIC SIGNS AND SUPPORTS WILL BE INSTALLED AND MAINTAINED BY THE COUNTY. CONTRACTOR WILL BE RESPONSIBLE FOR BAGGING OR DISPLAYING THE CORRECT SIGNS FOR THE TYPE OF WORK OR LANE CLOSURE BEING DONE ON ANY PARTICULAR DAY. CONTRACTOR SHALL PROVIDE BARRICADES, BARRELS, ARROW BOARDS, FLAGGERS, LIGHTING, ETC.
- PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614—MAINTAINING TRAFFIC. UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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