

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

GENERAL: THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMITTAL REQUIREMENTS: AN OHIO REGISTERED ENGINEER SHALL PREPARE, SEAL AND DATE PLANS FOR A JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS, SUFFICIENT TO PERFORM THE WORK DESCRIBED IN THE PLANS. SUBMIT THREE SETS OF THESE PLANS TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:
 1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.

2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE JACKING POINTS.

3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.

4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.

5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.

6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.

7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.

8 METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

JACKING SYSTEM REQUIREMENTS: THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS. FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK. DO NOT USE JACKS ALONE TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. USE TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR. DO NOT USE SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM. HAVE SPARE EQUIPMENT AVAILABLE ON SITE IN ORDER TO PROCEED WITH THE JACKING IN THE EVENT OF BREAKDOWN. PROVIDE A LIST OF SPARE EQUIPMENT TO THE ENGINEER.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

JACKING OPERATION REQUIREMENTS: AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH. THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS. IF THIS 1 INCH LIMIT IS TO BE EXCEEDED, PROVIDE CALCULATIONS SHOWING THAT THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN
 ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN. THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PERFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

DESIGN AGENCY
 District 10
 Production Department
 Marietta, Ohio

DATE	REVIEWED	DRAWN	DESIGNED
0505838/0505846	JDC	JDC	JDC
STRUCTURE FILE NUMBER	CHECKED		

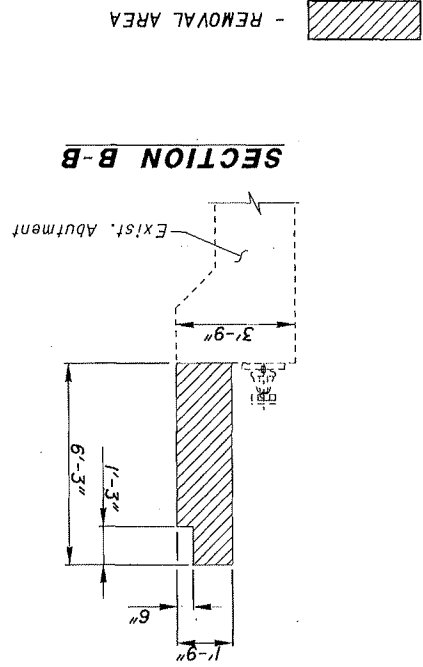
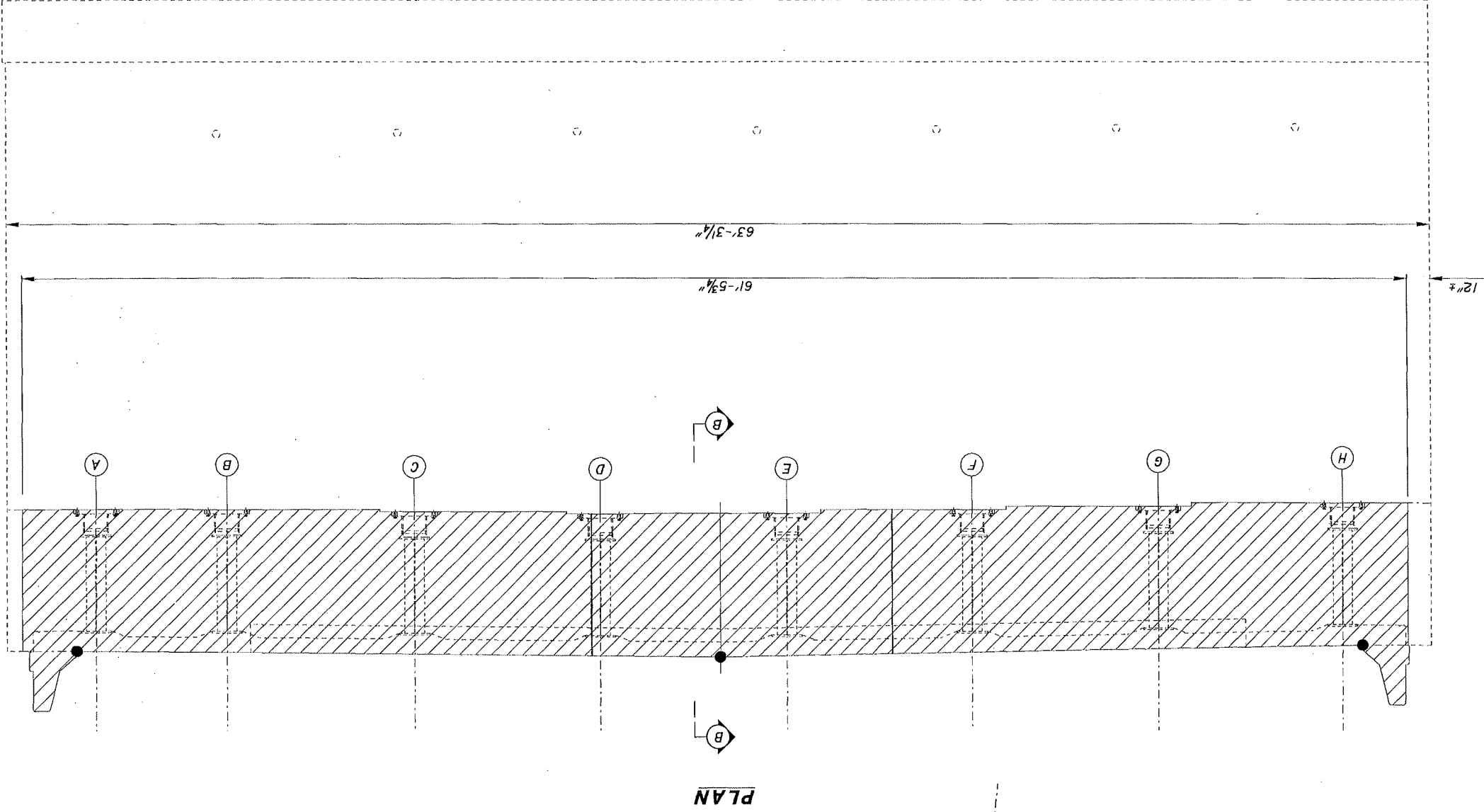
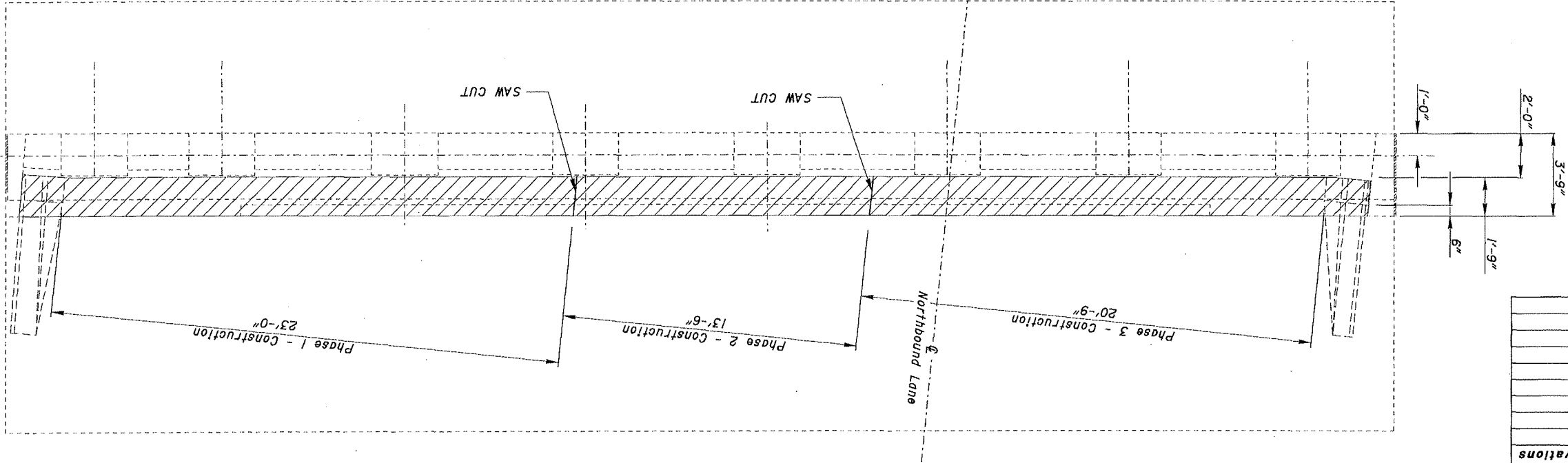
STRUCTURE NOTES & QUANTITIES

Bridge No. ATH-33-1537
 Over East State Street

ATH-33-15.36

4/23
 24
 43

Location	Existing Beam Seat Elevations
A	666.58±
B	666.60±
C	666.70±
D	666.80±
E	666.79±
F	666.62±
G	666.47±
H	666.30±



25 / 43

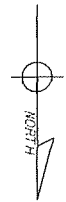
5 / 23

ATH-33-15.36

LEFT REAR ABUTMENT DETAILS
 BRIDGE No. ATH-33-1537
 OVER EAST STATE STREET

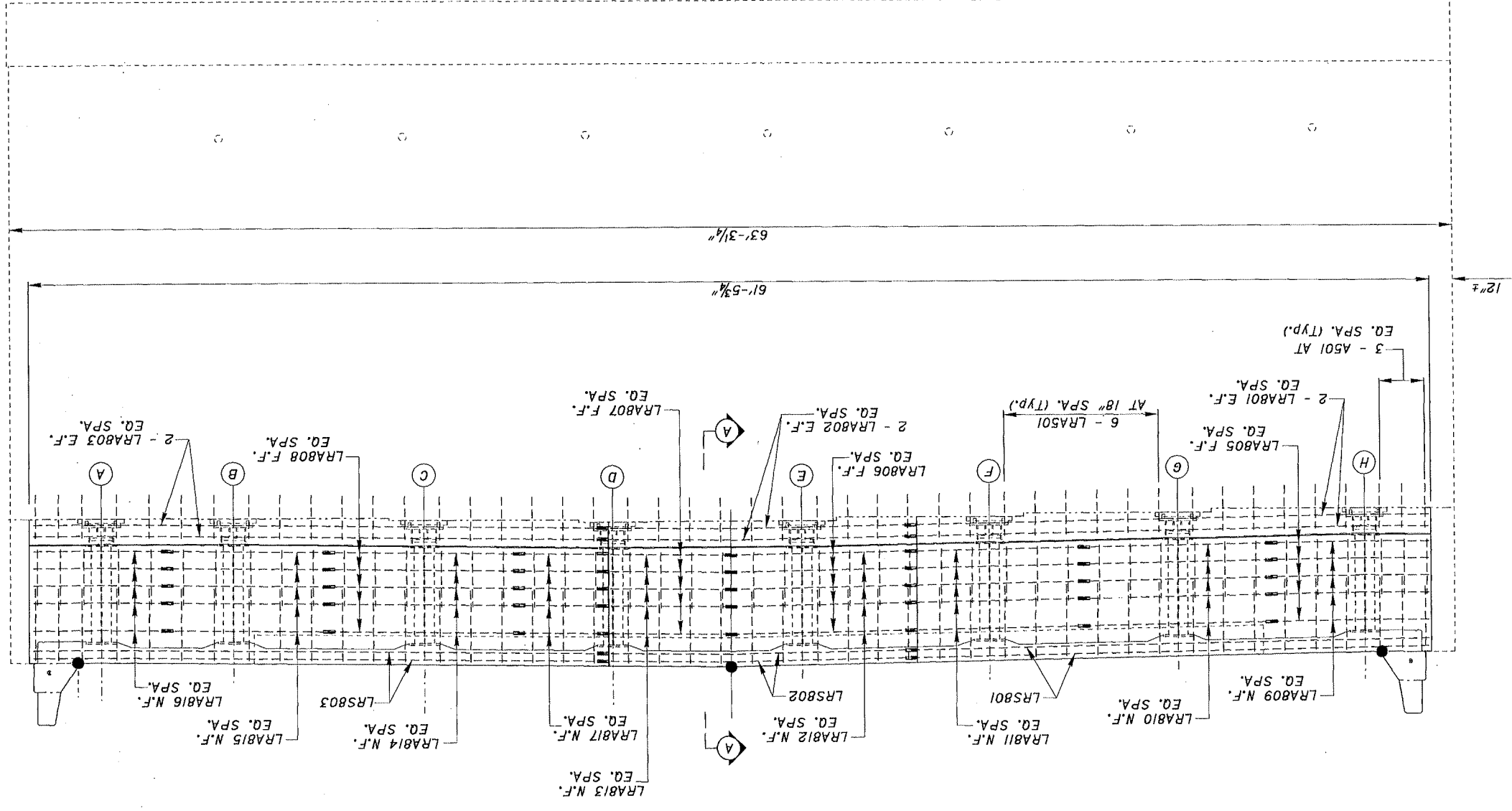
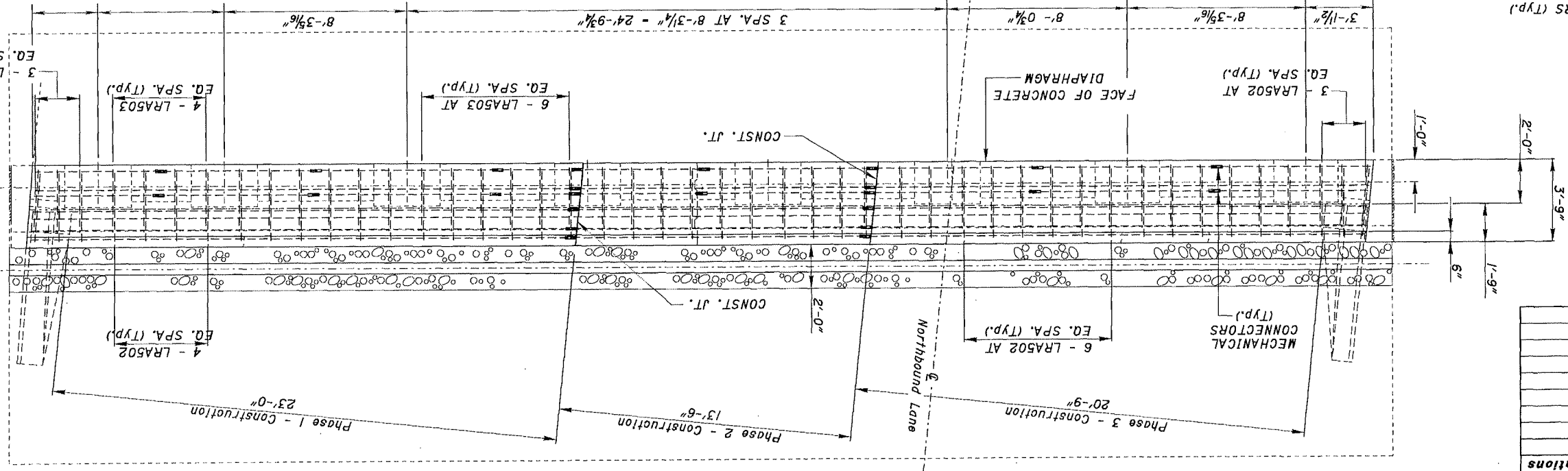
DESIGNED	Jcb	DRAWN	Gdk	REVISED	SKW	DATE	4-7-05
CHECKED	Jdc	REVISED	XX	STRUCTURE FILE NUMBER	0505838		

DESIGN AGENCY
 Ohio Department of Transportation
 District 10
 Marietta, Ohio



Location	Elevation
A	666.58±
B	666.60±
C	666.70±
D	666.80±
E	666.79±
F	666.62±
G	666.47±
H	666.30±

NOTE: (1) = MECHANICAL CONNECTORS (Typ.)



26
43

6 / 23

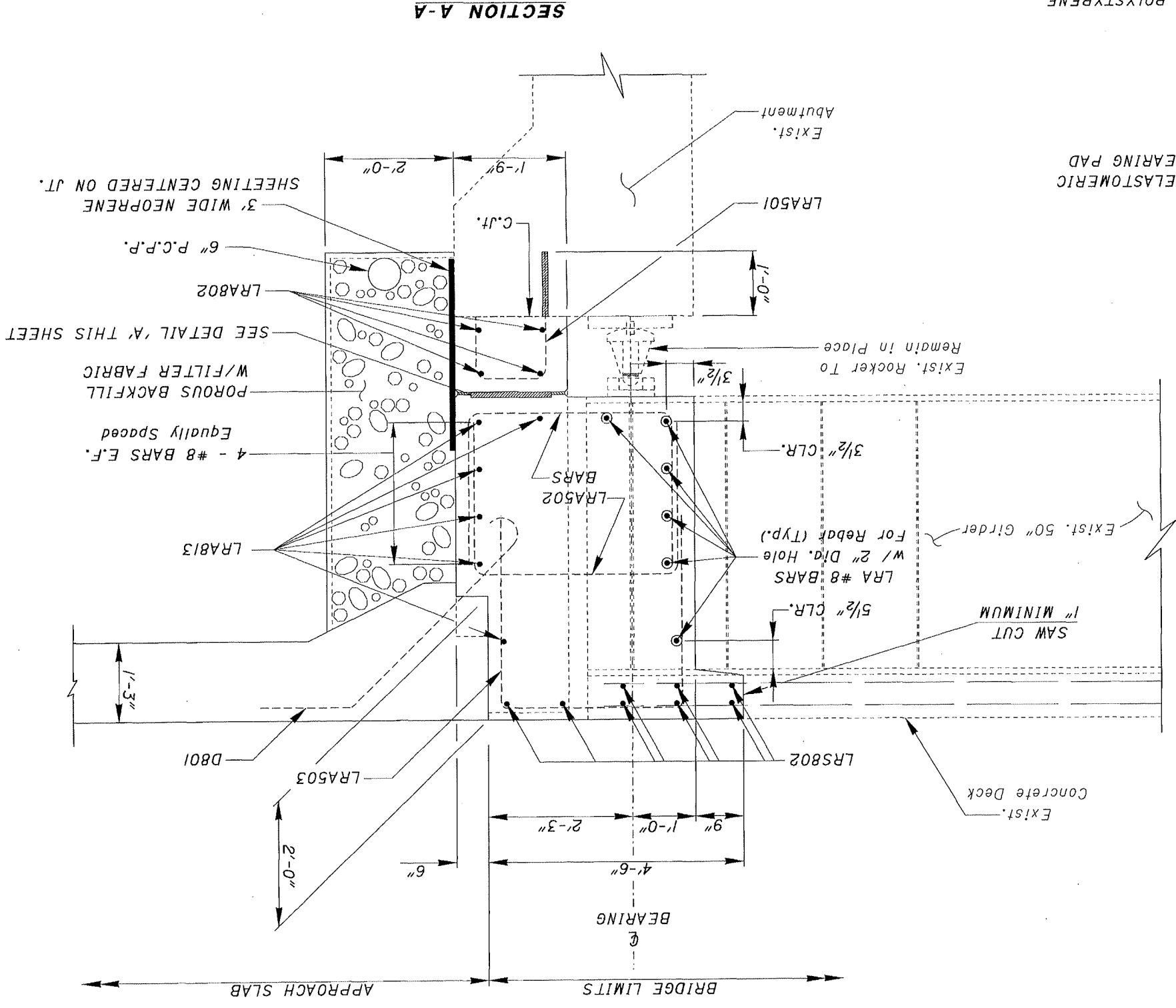
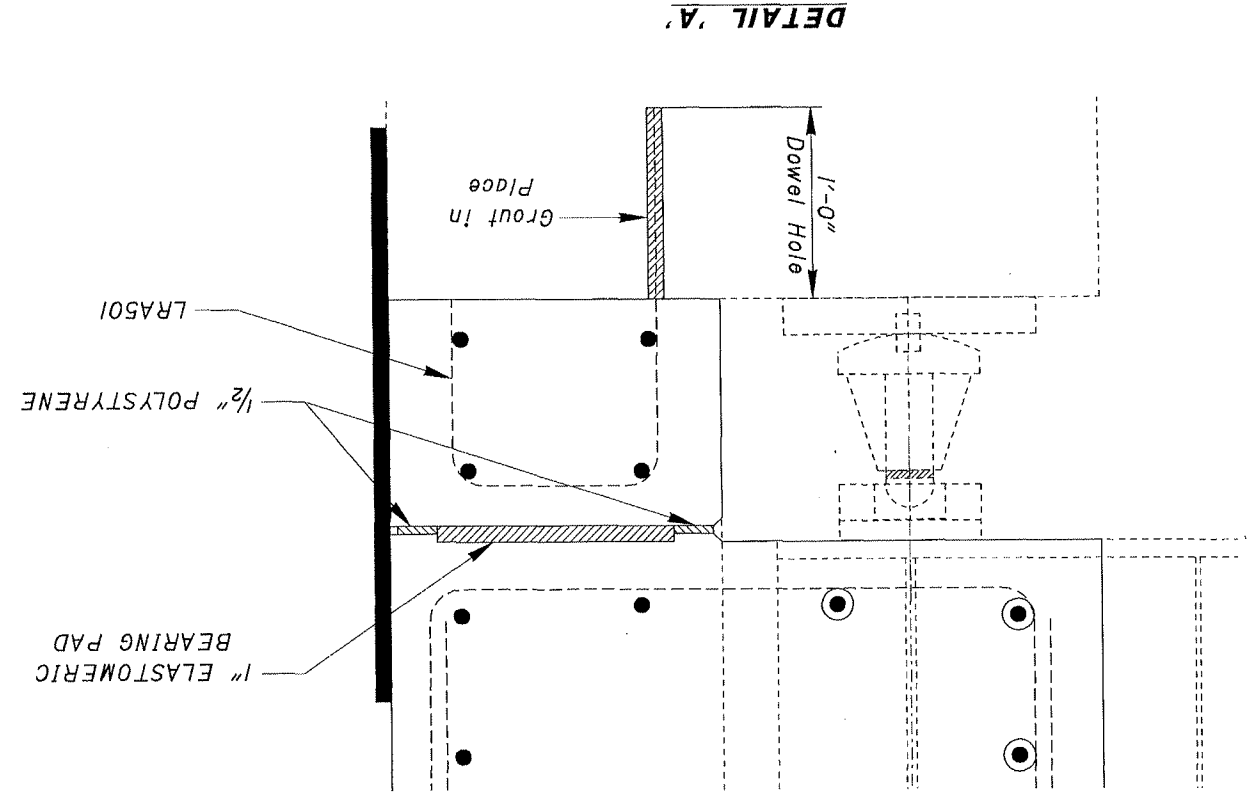
ATH-33-15.36

LEFT REAR ABUTMENT DETAILS

BRIDGE No. ATH-33-1537
OVER EAST STATE STREET

DESIGNED	CHECKED	DATE	DESIGN AGENCY
Job	Jdc	4-7-05	Ohio Department of Transportation
DRAWN	REVISED	DATE	DESIGN AGENCY
cdk	XX	4-7-05	District 10
			Marietta, Ohio
REVIEWED	STRUCTURE FILE NUMBER	DATE	DESIGN AGENCY
gkw	0505838	4-7-05	Ohio Department of Transportation

- NOTES:**
- 1.) MIN. CLEARANCE TO REBAR SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS.
 - 2.) MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125% OF THE YIELD STRENGTH OF THE REINFORCING STEEL.
 - 3.) ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE: PLACE THE CONCRETE ENCASE THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
 - 4.) FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-I-96.
 - 5.) FOR REINFORCING STEEL LIST, SEE STRUCTURE SHT. 8 OF 23.

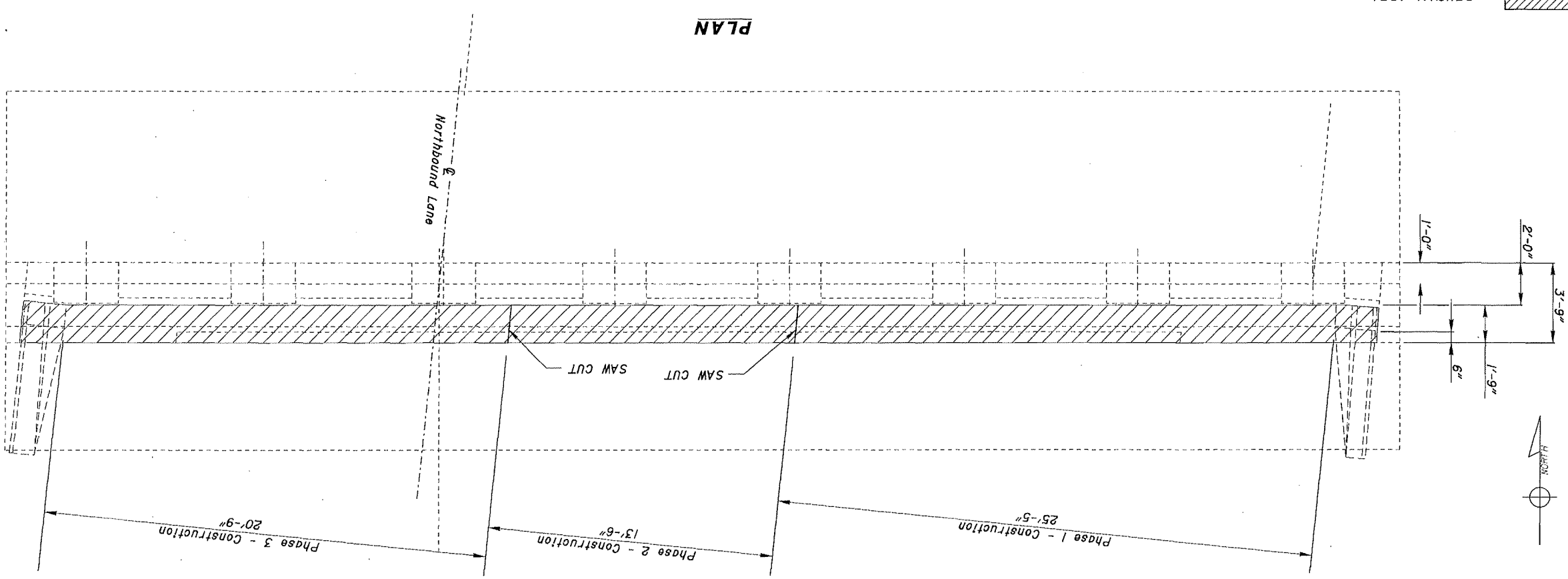
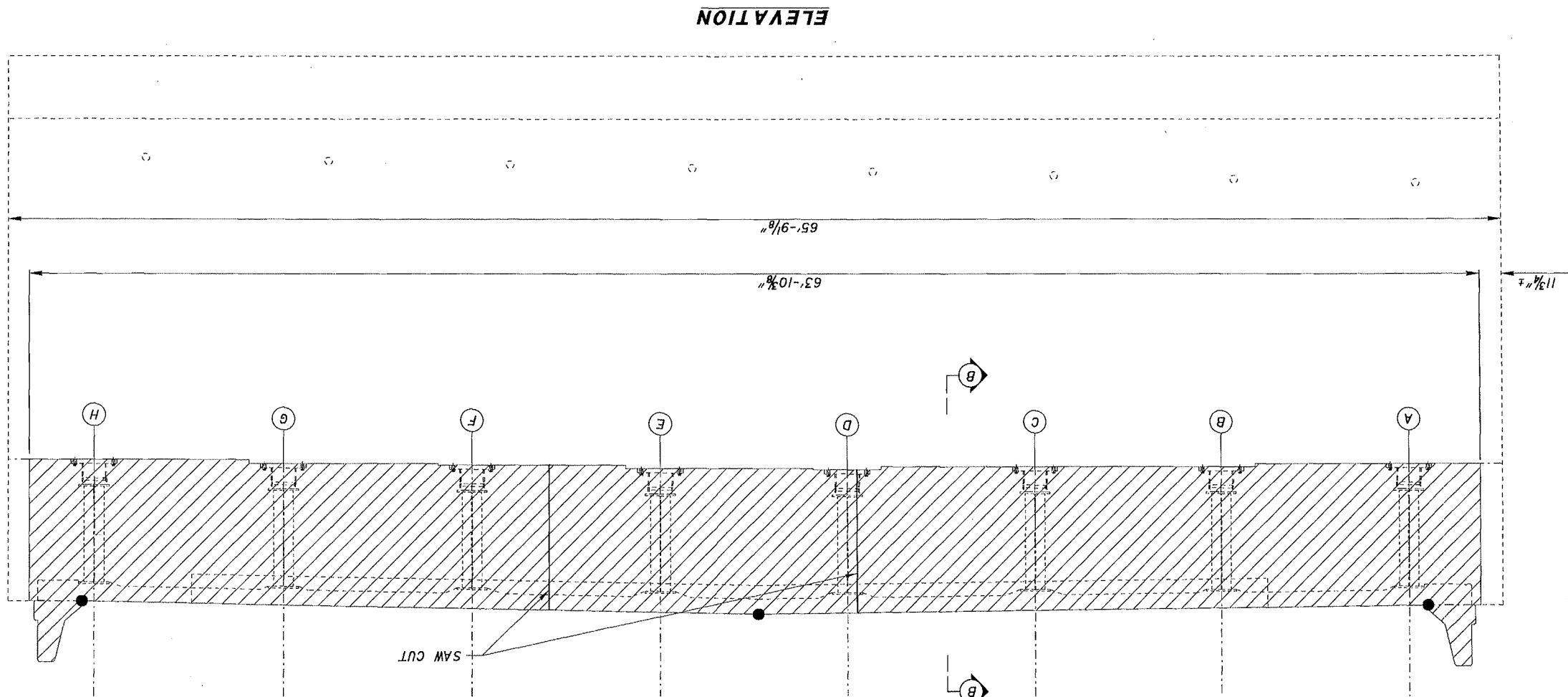


DESIGNED Job Jdc	DRAWN cck XX	REVIEWED SKW 0505838	DATE 4-7-05	DESIGN AGENCY Ohio Department of Transportation District 10 Marietta, Ohio
ATH-33-15.36				
LEFT REAR ABUTMENT				
BRIDGE No. ATH-33-1537 OVER EAST STATE STREET				
7/23				
27				
43				

REINFORCING SCHEDULE													
MARK	NUMBER			LENGTH EACH	UNIT WEIGHT lb./ft.	TOTAL WEIGHT (lb.)	TYPE	DIMENSIONS					
	REAR	FWD	TOTAL					A	B	C	R	INC	
LRA501	46			3'-10"	1.043	184	STR	2	2'-0"	1'-1"	1'-0"		
LRA801	4			23'-0"	2.670	246	STR						
LRA802	4			13'-6"	2.670	145	STR						
LRA803	4			24'-6 1/2"	2.670	263	STR						
LRA502	92			4'-10"	1.043	464	STR	2	2'-4"	3'-2"	2'-4"		
LRA503	46			7'-3"	1.043	348	STR	2	4'-5"	2'-10"	3'-0"		
LRA805	6			22'-6"	2.670	361	STR						
LRA806	6			8'-3"	2.670	133	STR						
LRA807	6			5'-3"	2.670	85	STR						
LRA808	6			25'-1"	2.670	402	STR						
LRA809	6			7'-1 1/2"	2.670	115	STR						
LRA810	6			8'-3"	2.670	133	STR						
LRA811	6			7'-6"	2.670	120	STR						
LRA812	6			7'-9"	2.670	125	STR						
LRA813	6			5'-10"	2.670	94	STR						
LRA814	6			8'-3"	2.670	133	STR						
LRA815	6			7'-0"	2.670	113	STR						
LRA816	6			5'-7 1/2"	2.670	91	STR						
LRA817	6			3'-8"	2.670	59							
LRS801	8			23'-0"	2.670	492	STR						
LRS802	8			13'-6"	2.670	289	STR						
LRS803	8			24'-6 1/2"	2.670	525	STR						
DB01	42			4'-11"	2.670	553		18	4'-6"	1'-0"	1'-0"		
TOTAL						5473							

DESIGNED Job CHECKED jdc	DRAWN OKK REVISED XX	DATE 4-7-05 STRUCTURE FILE NUMBER 0505838	DESIGN AGENCY Ohio Department of Transportation District 10 Marietta, Ohio
LEFT REAR REINFORCING SCHEDULE			
BRIDGE No. ATH-33-1537 OVER EAST STATE STREET			
ATH-33-15.36			
8 / 23			
28 43			

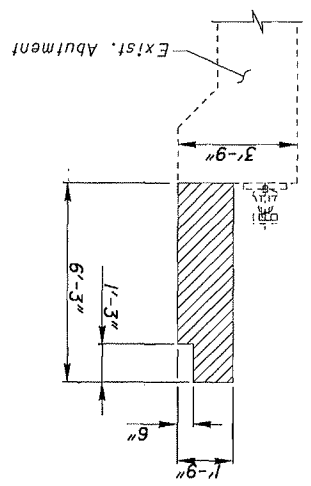
- REMOVAL AREA



ELEVATION

PLAN

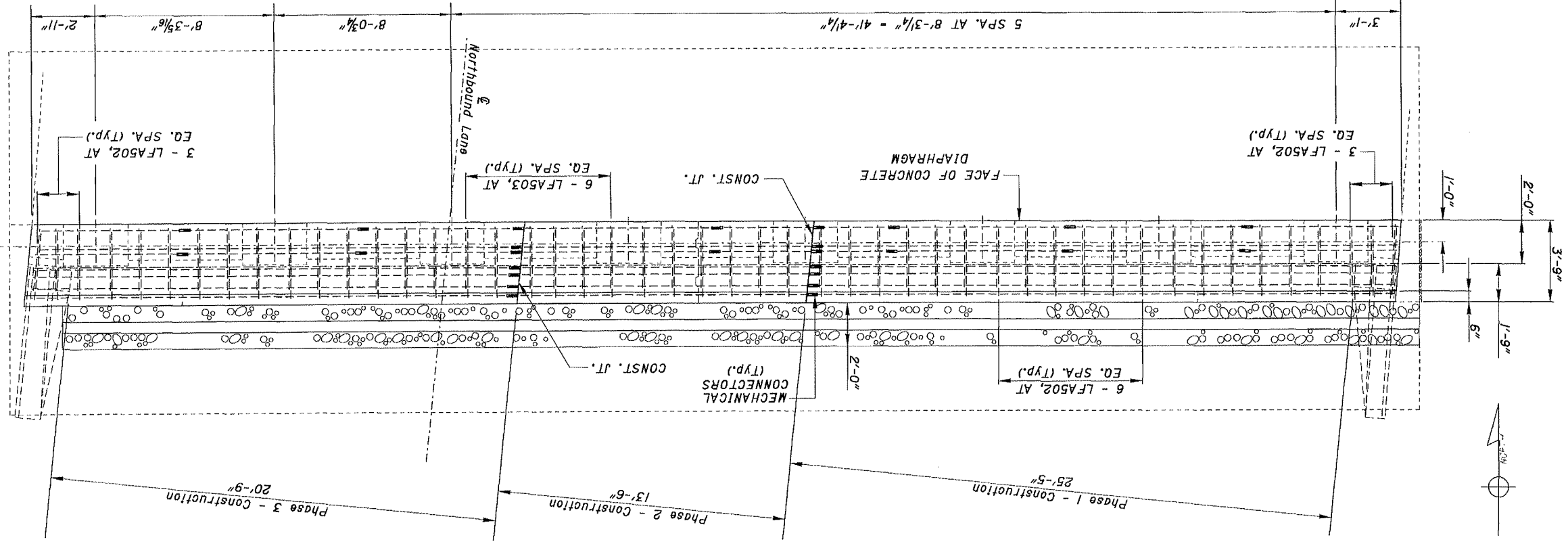
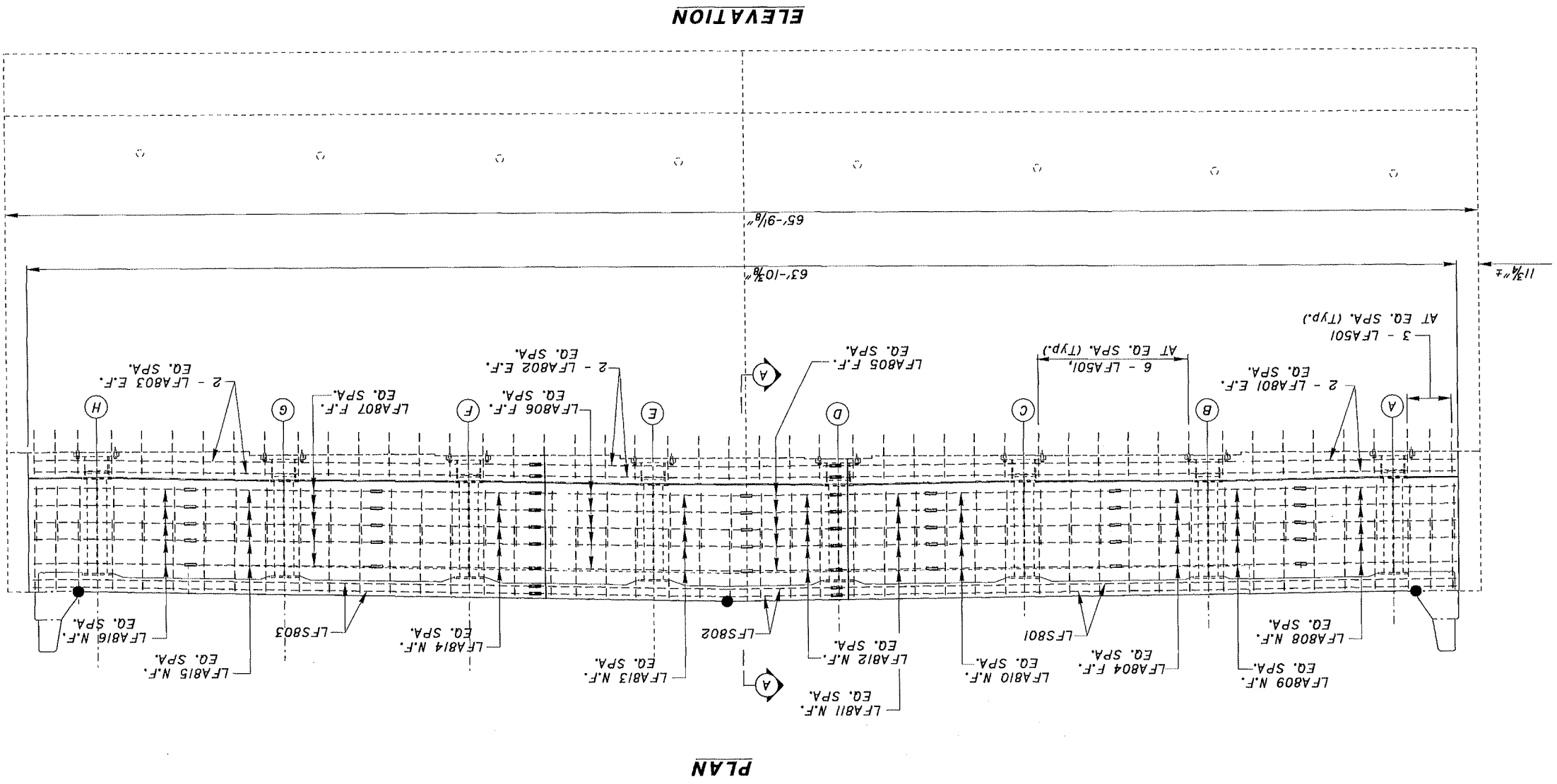
SECTION B-B



Location	Elevation
A	663.11±
B	663.24±
C	663.24±
D	663.37±
E	663.32±
F	663.17±
G	663.10±
H	662.93±

Existing Beam Seat Elevations

<p>ATH-33-15.36</p> <p>BRIDGE No. ATH-33-1537 OVER EAST STATE STREET</p> <p>LEFT FORWARD ABUTMENT DETAILS</p>	<p>DESIGNED Job/Jdc</p> <p>CHECKED Jdc</p> <p>DRAW CCK</p> <p>REVISED XX</p> <p>REVIEWED GKW</p> <p>STRUCTURE FILE NUMBER 0505838</p> <p>DATE 4-7-05</p> <p>DESIGN AGENCY Ohio Department of Transportation District 10 Marietta, Ohio</p>
---	--



NOTE: (I) = MECHANICAL CONNECTORS (Typ.)

Location	Elevation
A	663.11±
B	663.24±
C	663.24±
D	663.37±
E	663.32±
F	663.17±
G	663.10±
H	662.93±

Existing Beam Seat Elevations

43
30
10/23

ATH-33-15.36

LEFT FORWARD ABUTMENT DETAILS

BRIDGE No. ATH-33-1537
OVER EAST STATE STREET

DESIGNED Job	DRAWN COK	REVIEWED SKW	DATE 4-7-05
CHECKED jdc	REVISOR XX	STRUCTURE FILE NUMBER 0505838	

DESIGN AGENCY
Ohio Department of Transportation
District 10
Marietta, Ohio

NOTES:

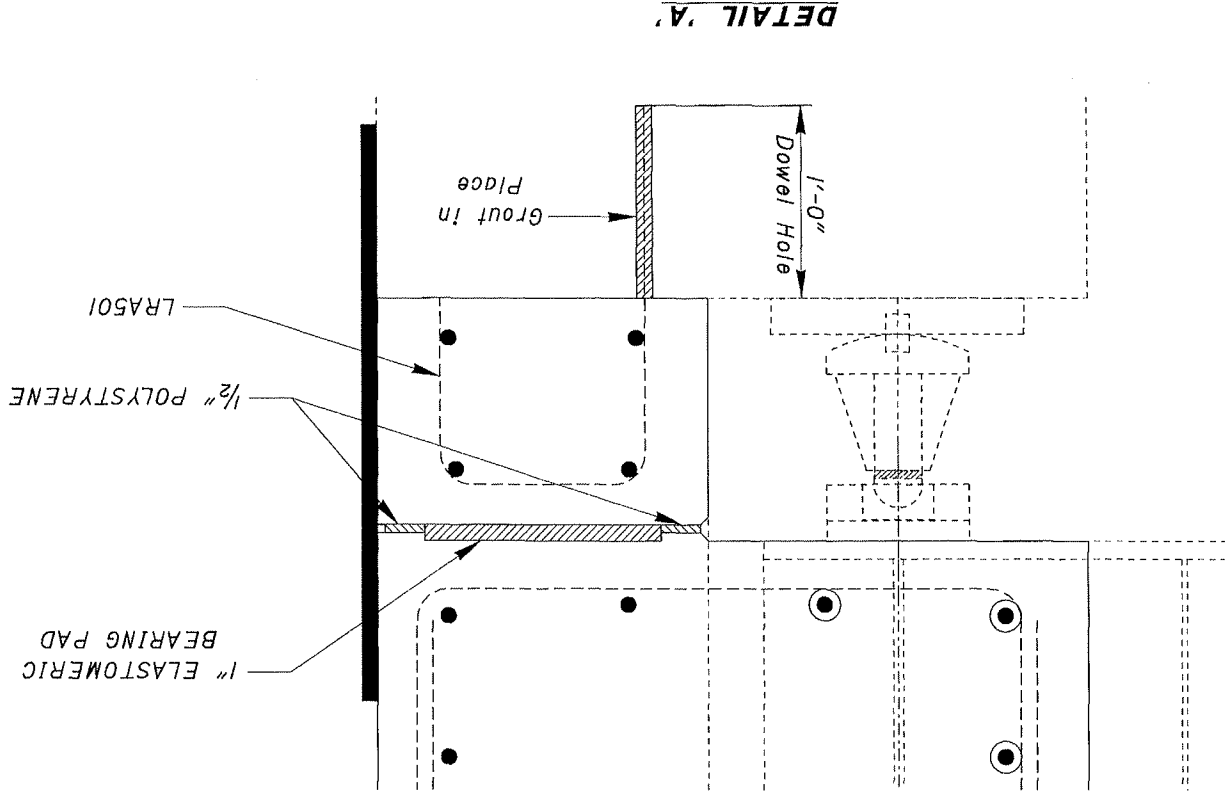
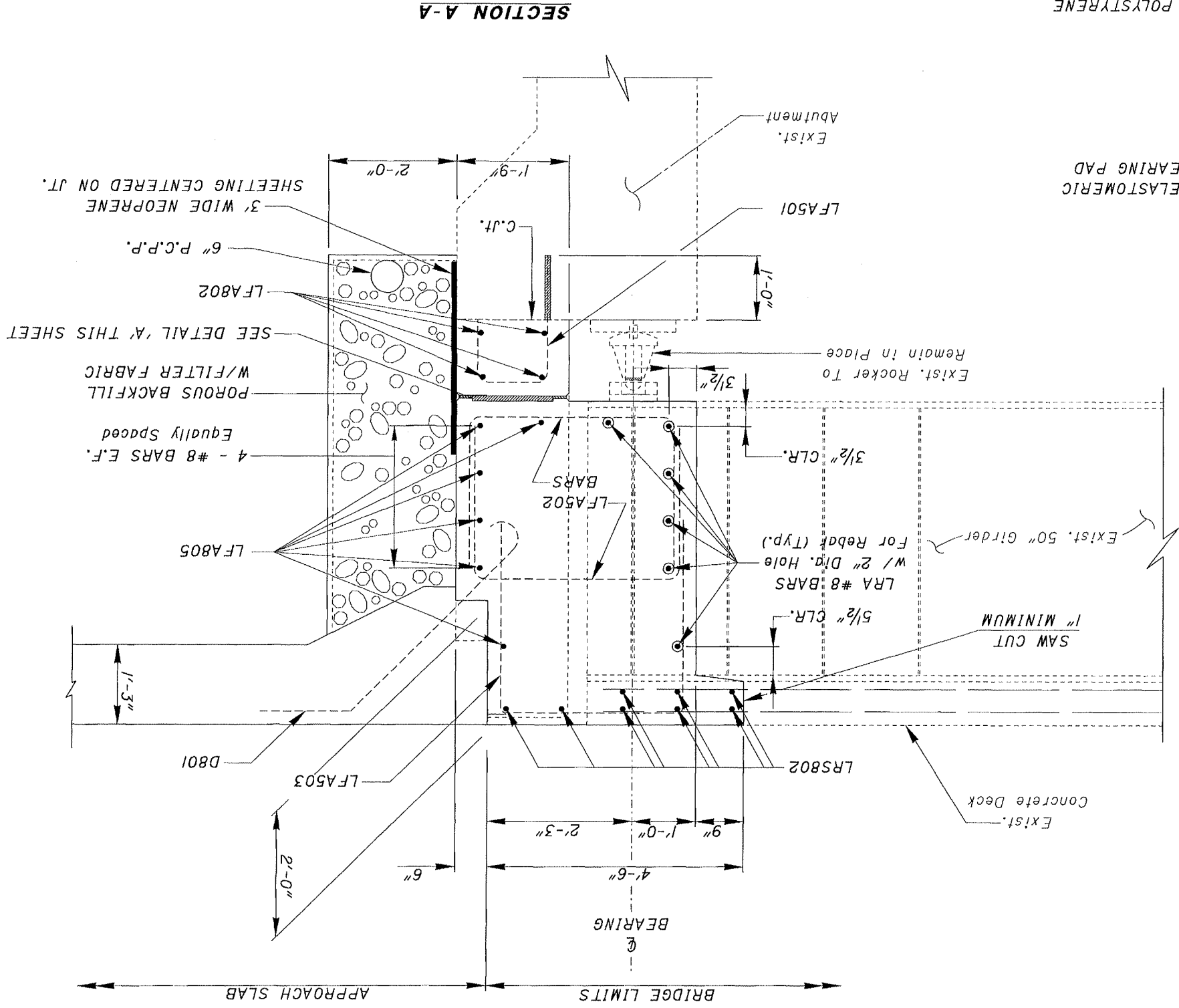
1.) MIN. CLEARANCE TO REBAR SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS.

2.) MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125% OF THE YIELD STRENGTH OF THE REINFORCING STEEL.

3.) ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE, PLACE THE CONCRETE ENCASE THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.

4.) FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.

5.) FOR REINFORCING STEEL LIST, SEE STRUCTURE SHT. II OF 23



DESIGNED	CHKD	REVISED	DATE	DESIGN AGENCY
Job	GDK	XX	4-7-05	Ohio Department of Transportation
CHECKED	REVISED	XX	STRUCTURE FILE NUMBER	District 10
Jdc			0505838	Marietta, Ohio

LEFT FORWARD ABUTMENT
 BRIDGE No. ATH-33-1537
 OVER EAST STATE STREET

ATH-33-15.36

11/23
 31
 43

SUPERSTRUCTURE										
MARK	NUMBER		LENGTH EACH	UNIT WEIGHT lb./ft.	TOTAL WEIGHT (lb)	TYPE	DIMENSIONS			
	REAR	FWD					TOTAL	A	B	C
LF A501	48		3'-10"	1.043	192	2'-0"	1'-1"	1'-0"		
LF A502	96		7'-7"	1.043	760	2'-4"	3'-2"	2'-4"		
LF A503	48		10'-0"	1.043	501	4'-5"	2'-10"	3'-0"		
LF A801	4		22'-2 1/2"	2.670	238	STR				
LF A802	4		13'-6"	2.670	145	STR				
LF A803	4		22'-4"	2.670	239	STR				
LF A804	6		27'-9"	2.670	445	STR				
LF A805	6		4'-11"	2.670	79	STR				
LF A806	6		8'-6 1/2"	2.670	137	STR				
LF A807	6		22'-4"	2.670	358	STR				
LF A808	6		7'-0"	2.670	113	STR				
LF A809	6		8'-3"	2.670	133	STR				
LF A810	6		8'-3"	2.670	133	STR				
LF A811	6		3'-6"	2.670	56	STR				
LF A812	6		4'-9 1/4"	2.670	77	STR				
LF A813	6		9'-3 1/2"	2.670	149	STR				
LF A814	6		7'-3"	2.670	117	STR				
LF A815	6		8'-3"	2.670	133	STR				
LF A816	6		6'-9 1/2"	2.670	109	STR				
LF S801	8		27'-2 1/2"	2.670	582	STR				
LF S802	8		13'-6"	2.670	289	STR				
LF S803	8		22'-4"	2.670	478	STR				
D801	46		4'-11"	2.670	604	18	4'-6"	1'-0"	1'-0"	
TOTAL					6067					

32
43

12/23

ATH-33-15.36

LEFT FORWARD REINFORCING SCHEDULE

BRIDGE No. ATH-33-1537
OVER EAST STATE STREET

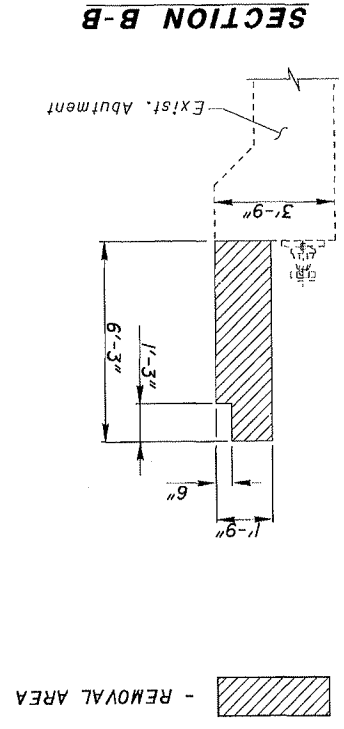
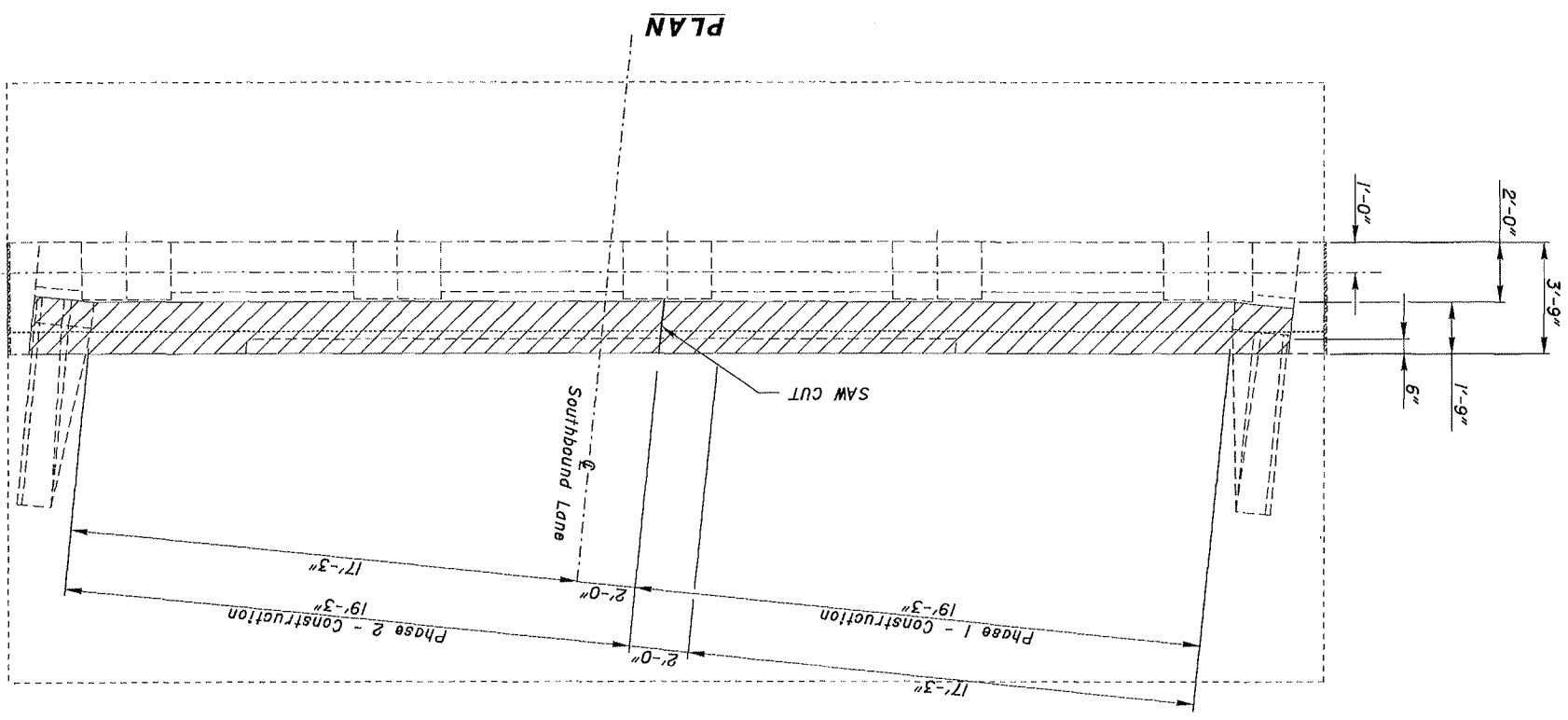
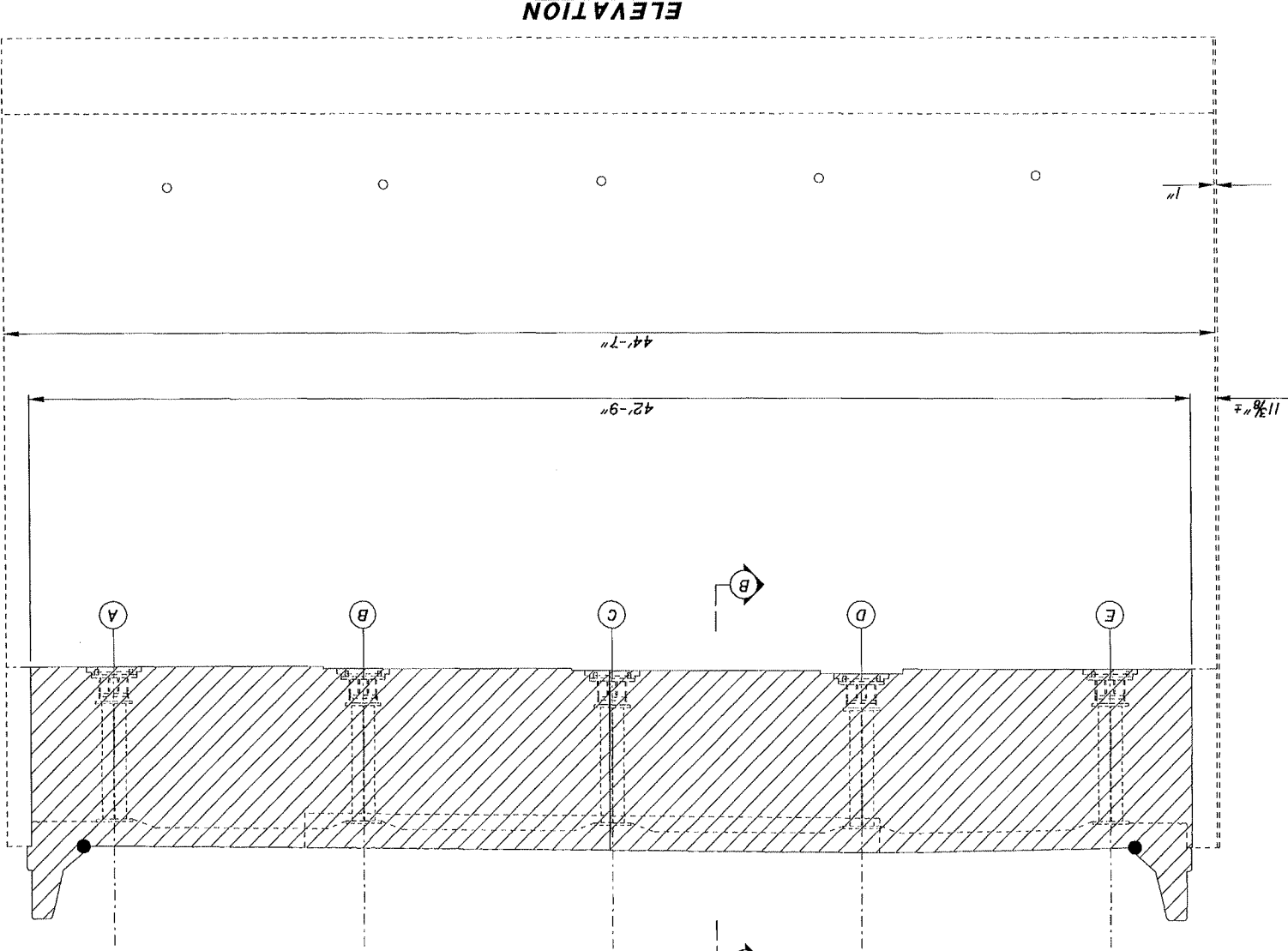
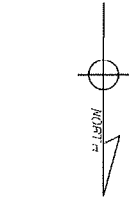
DESIGNED
Job
Jdc

DRAWN
cdk
xx

REVIEWED
SKM
STRUCTURE FILE NUMBER
0505838

DATE
4-7-05

DESIGN AGENCY
Ohio Department of Transportation
District 10
Mentel, Ohio



Location	Elevation
A	665.97±
B	666.05±
C	666.13±
D	666.24±
E	666.06±

Existing Beam Seat Elevations

33
43

13/23

ATH-33-15.36

RIGHT REAR ABUTMENT DETAILS

BRIDGE NO. ATH-33-1537
OVER EAST STATE STREET

DESIGNED	Job	DRAWN	OKK	REVISED	DATE
CHECKED	Jdc	REVISED	XX	0505646	4-7-05

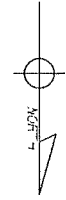
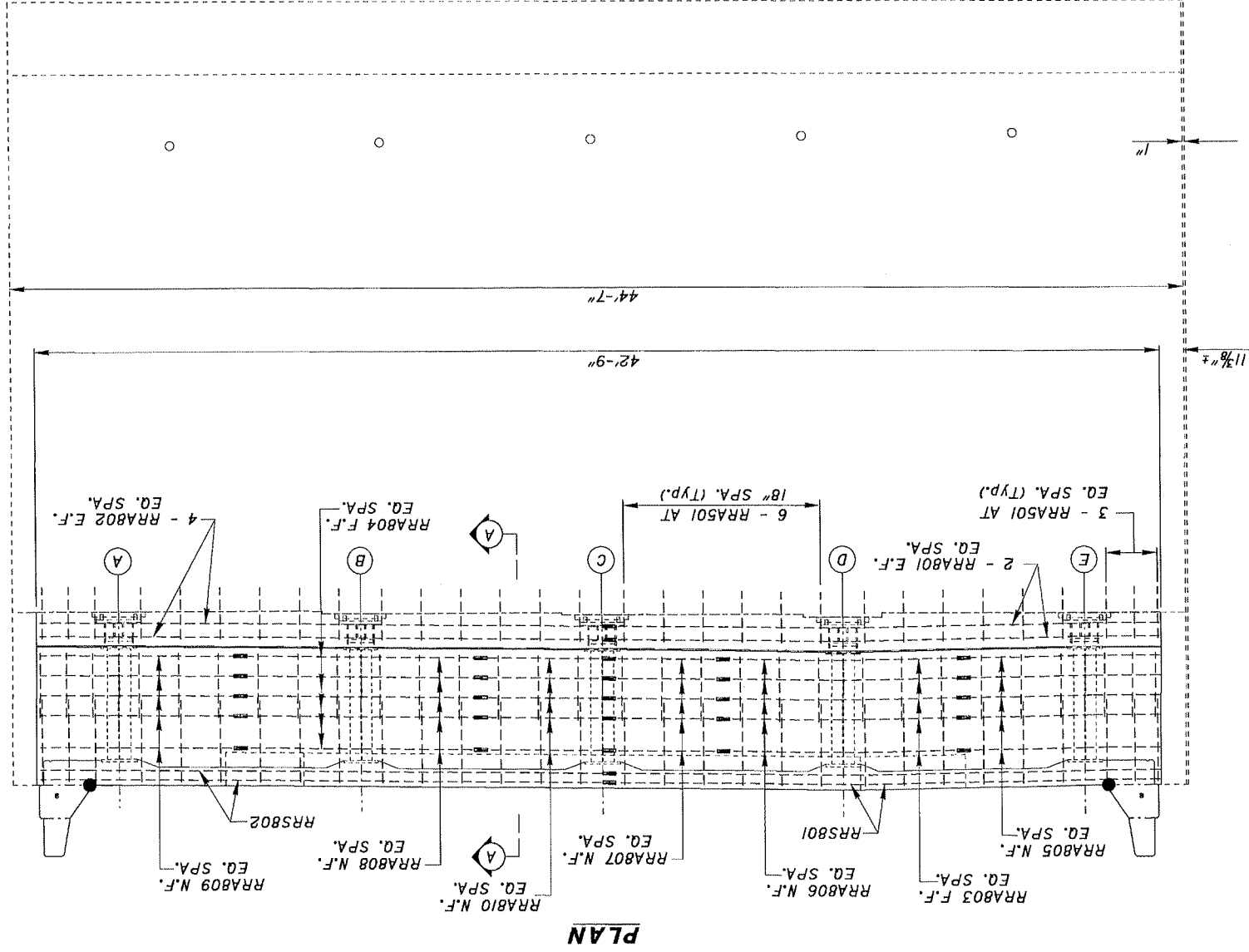
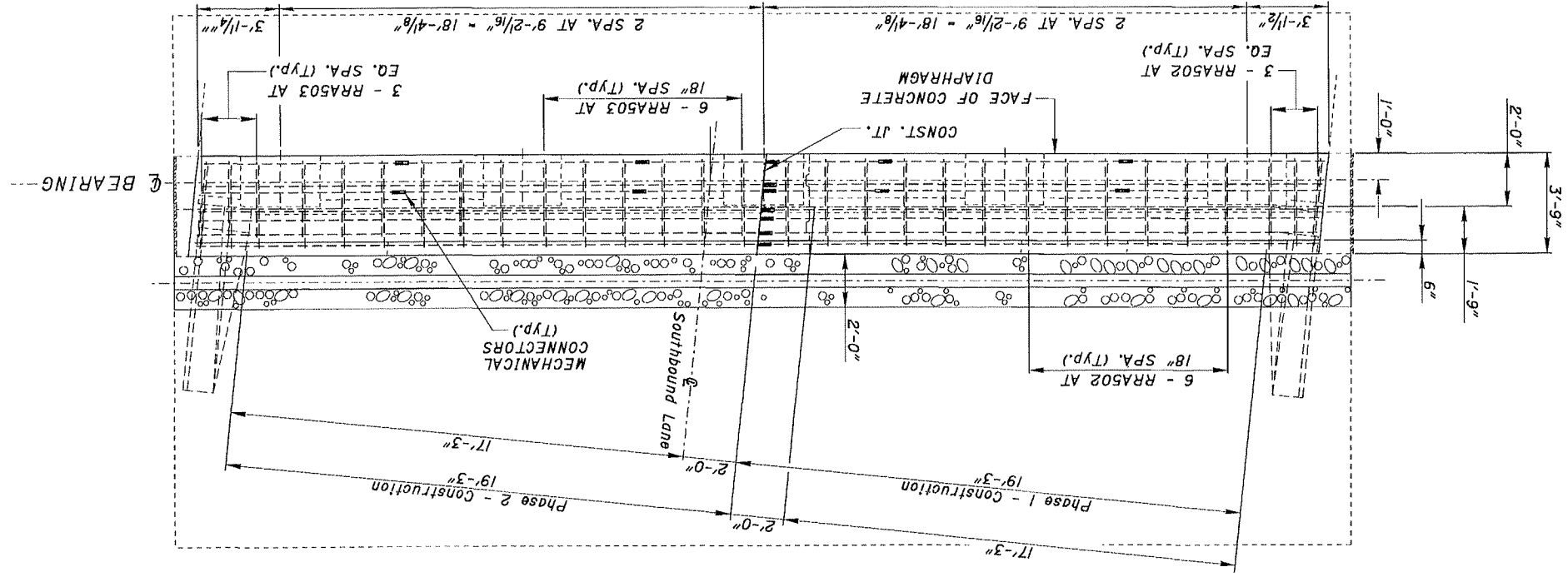
DESIGN AGENCY
Ohio Department of Transportation
District 10
Marietta, Ohio

DESIGNED	Jcb	DRAWN	gdk	REVISED	gkw	DATE
CHECKED	Jdc	REVISED	xx	STRUCTURE FILE NUMBER	0505846	4-7-05

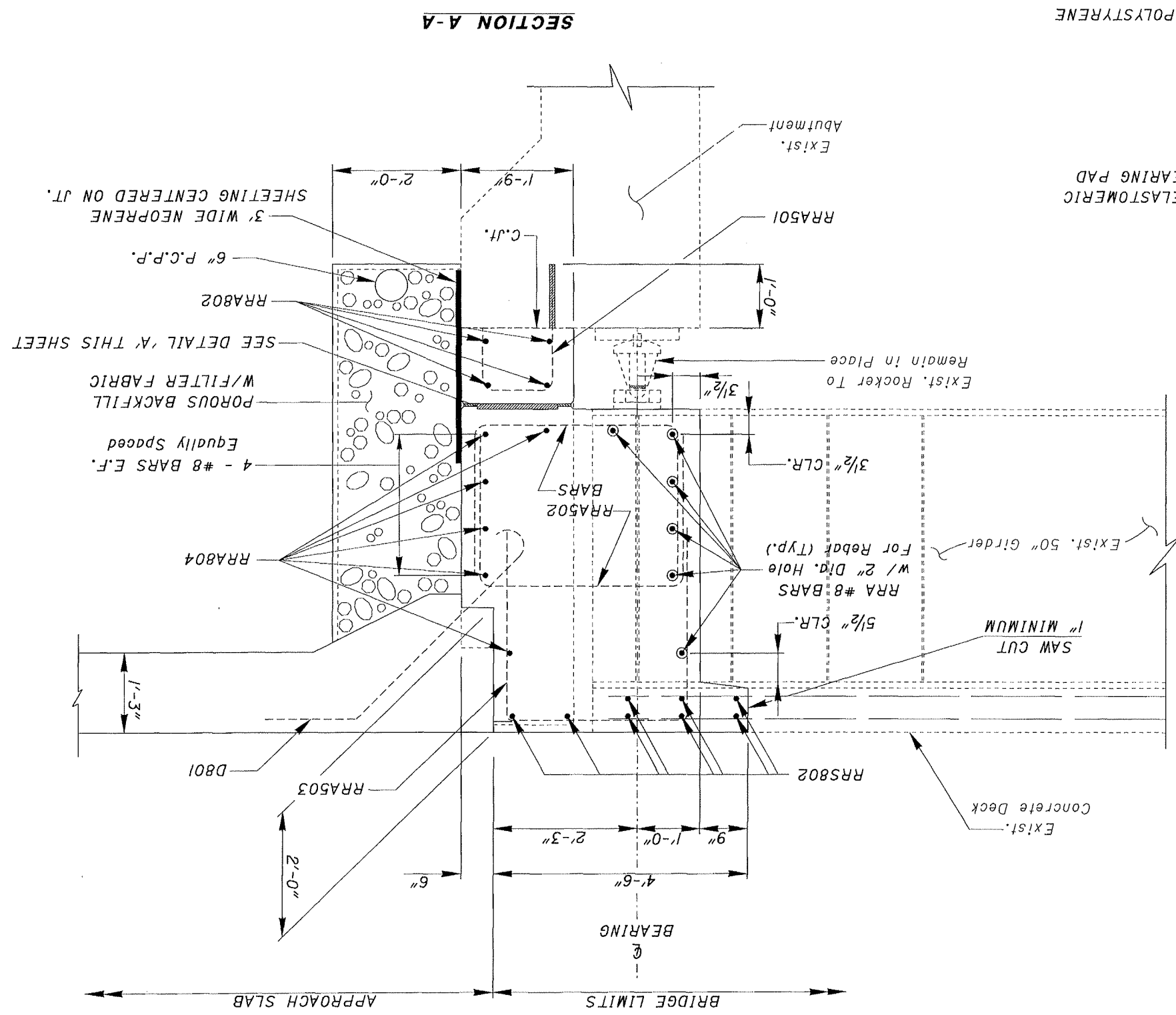
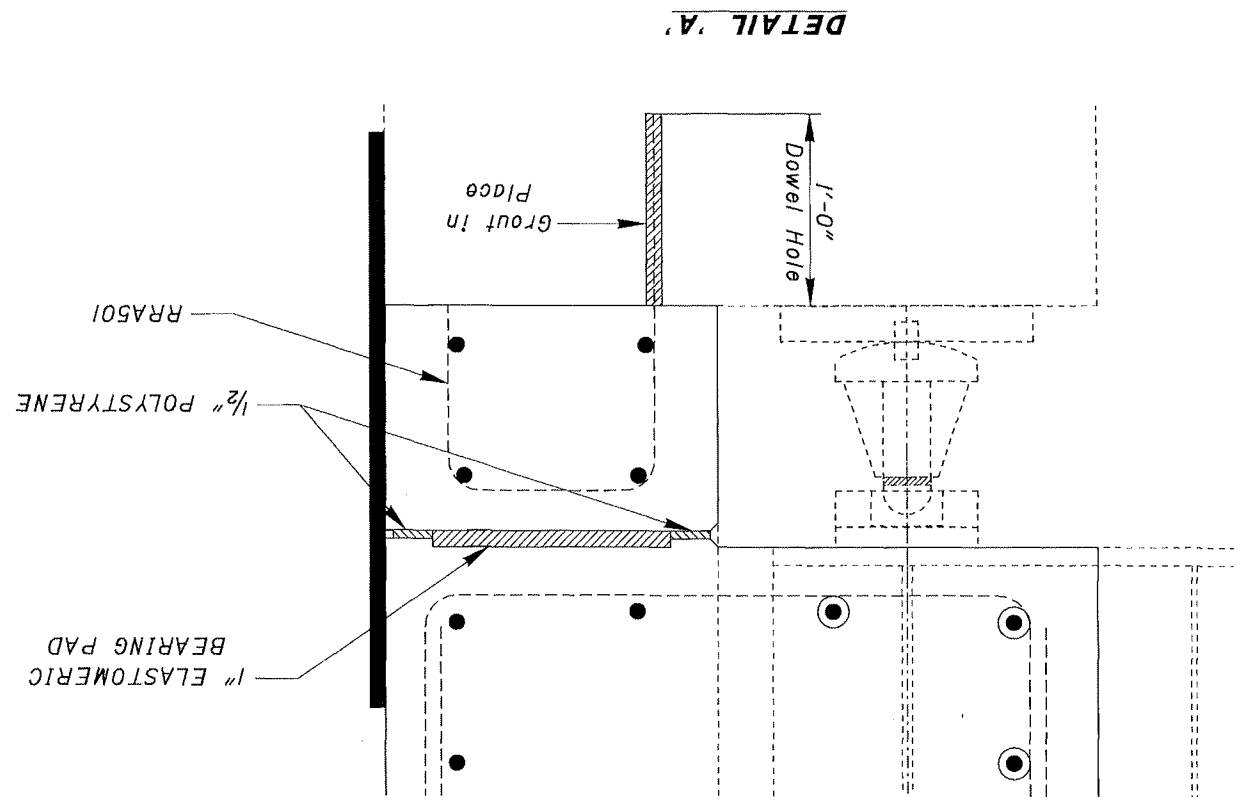
DESIGN AGENCY
Ohio Department of Transportation
District 10
Marietta, Ohio

Location	Elevation
A	665.97±
B	666.05±
C	666.13±
D	666.24±
E	666.06±

NOTE: (1) = MECHANICAL CONNECTORS (TYP.)



- NOTES:**
- 1.) MIN. CLEARANCE TO REBAR SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS.
 - 2.) MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125% OF THE YIELD STRENGTH OF THE REINFORCING STEEL.
 - 3.) ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE, PLACE THE CONCRETE ENCASING THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
 - 4.) FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.
 - 5.) FOR REINFORCING STEEL LIST, SEE STRUCTURE SHT. 16 OF 23



SEE DETAIL 'A' THIS SHEET
 3' WIDE NEOPRENE SHEETING CENTERED ON JT.
 6" P.C.P.P.
 RRAB02
 POROUS BACKFILL
 W/FILTER FABRIC
 4 - #8 BARS E.F.
 Equally Spaced
 RRAB04
 RRAS02
 RRAS04
 RRAS03
 RRAB01

43	35	15/23	ATH-33-15.36	RIGHT REAR ABUTMENT	DESIGNED Job Jdc	DRAWN Jock	REVIEWED SKW	DATE 4-7-05	Ohio Department of Transportation
				BRIDGE No. ATH-33-1537	CHECKED Jdc	REVISED xx	STRUCTURE FILE NUMBER 0505846		District 10
				OVER EAST STATE STREET					Marietta, Ohio

REINFORCING SCHEDULE													
MARK	NUMBER		LENGTH	WEIGHT UNIT lb./ft.	TOTAL WEIGHT (lb)	TYPE	DIMENSIONS				REAR	FWD	TOTAL
	REAR	FWD					A	B	C	R			
RAA501	30		3'-10"	1.043	120	2'-0"	1'-1"	1'-0"					
RAA502	60		7'-7"	1.043	474	2'-4"	3'-2"	2'-4"					
RAA503	30		10'-0"	1.043	313	4'-5"	2'-10"	3'-0"					
RAA801	4		21'-0"	2.670	225	STR							
RAA802	4		21'-6"	2.670	230	STR							
RAA803	6		21'-0"	2.670	337	STR							
RAA804	6		21'-6"	2.670	345	STR							
RAA805	6		7'-6 1/2"	2.670	121	STR							
RAA806	6		9'-2"	2.670	147	STR							
RAA807	6		4'-3"	2.670	68	STR							
RAA808	6		9'-2"	2.670	147	STR							
RAA809	6		7'-4 1/2"	2.670	119	STR							
RAA810	6		4'-11"	2.670	79	STR							
RRS801	8		21'-0"	2.670	449	STR							
RRS802	8		21'-6"	2.670	460	STR							
DB01	30		4'-11"	2.670	394	18	4'-6"	1'-0"	1'-0"				
TOTAL													
4028													

43
36

16/23

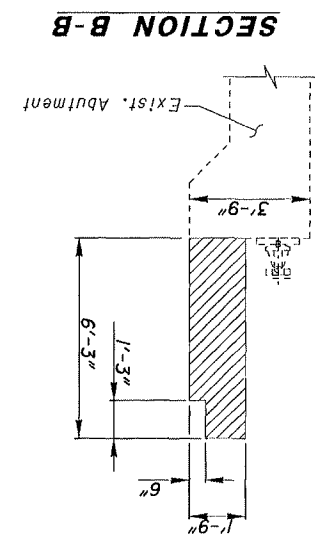
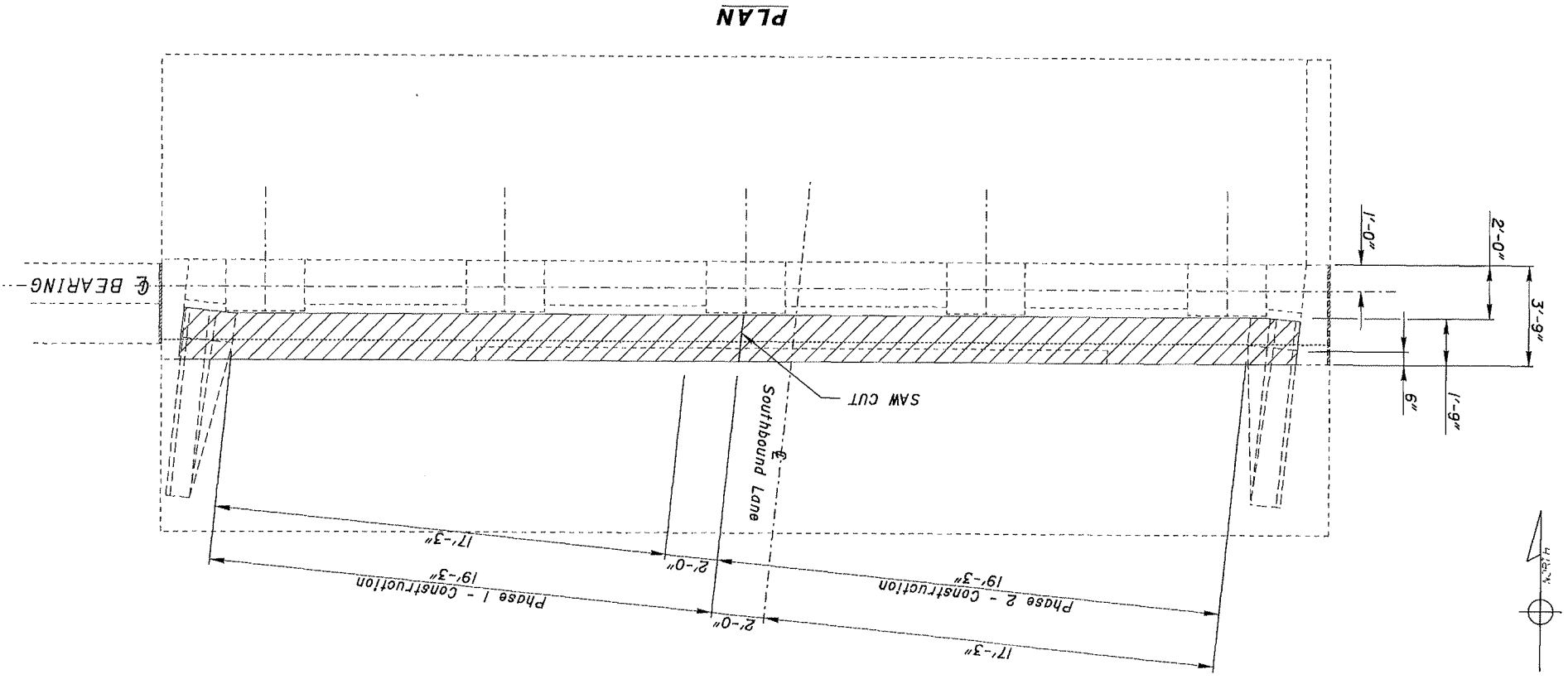
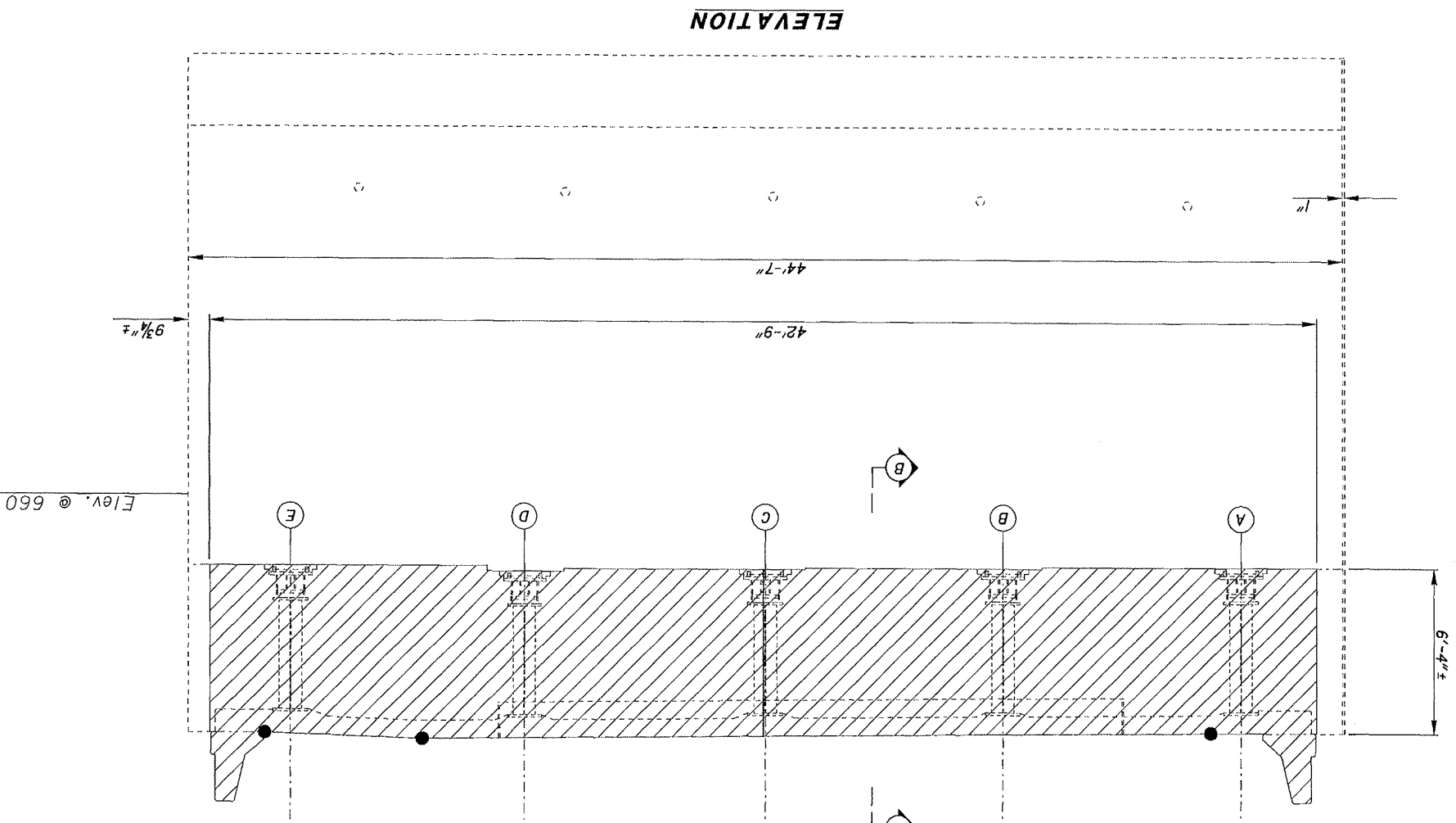
ATH-33-15.36

RIGHT REAR REINFORCING SCHEDULE

BRIDGE No. ATH-33-1537
OVER EAST STATE STREET

DESIGNED Job
CHECKED Jdc
DRAWN GAK
REVISED XX
REVISED GKW
STRUCTURE FILE NUMBER 0505846
DATE 4-7-05

DESIGN AGENCY
Ohio Department of Transportation
District 10
Marietta, Ohio

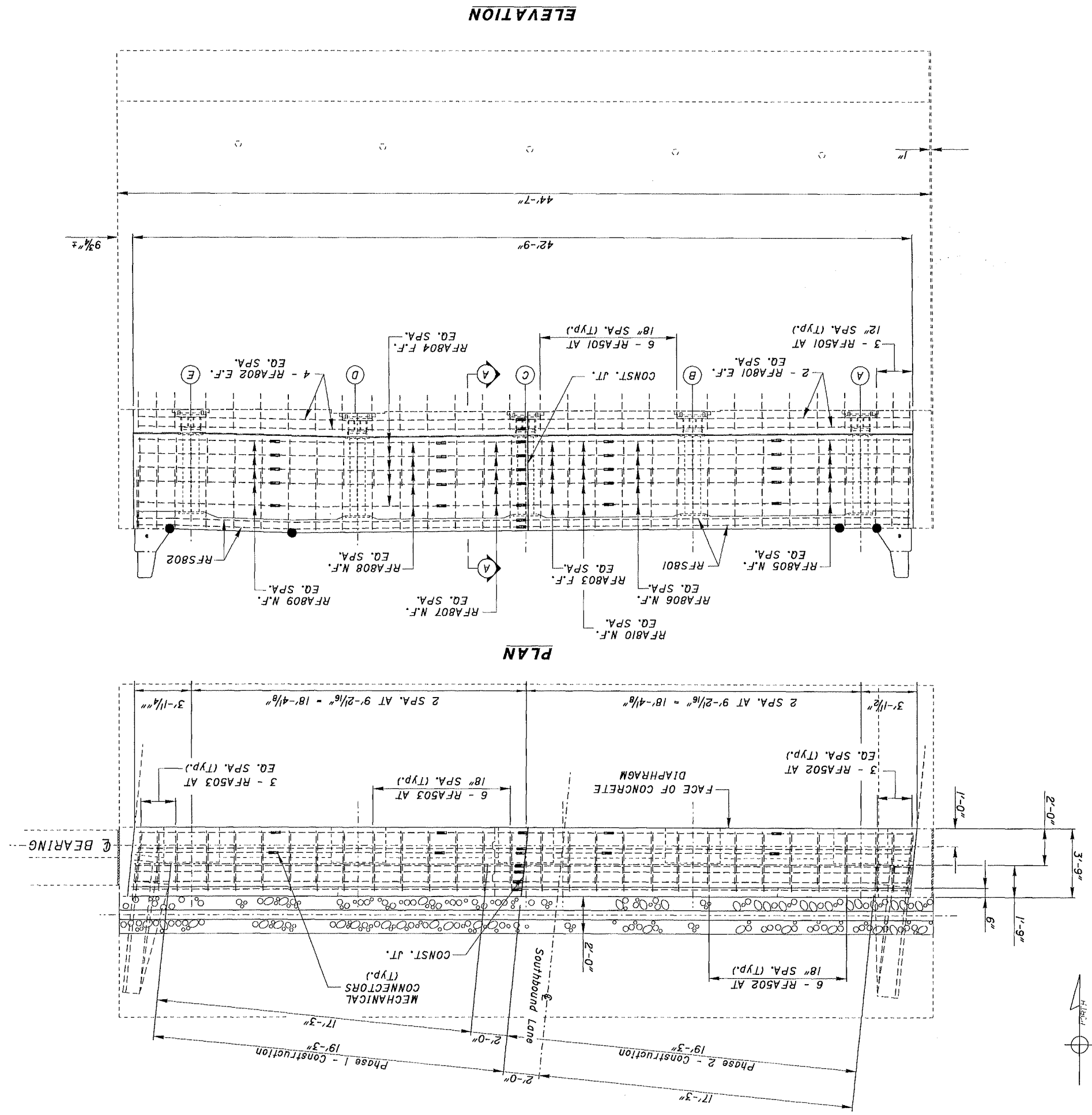


- REMOVAL AREA

Location	Elevation
A	662.68±
B	662.64±
C	662.79±
D	662.89±
E	662.69±

Existing Beam Seat Elevations

DESIGNED	DRAWN	REVIEWED	DATE
Job	cdk	GKW	4-7-05
CHECKED	REVISD	STRUCTURE FILE NUMBER	
jdc	xx	0505846	

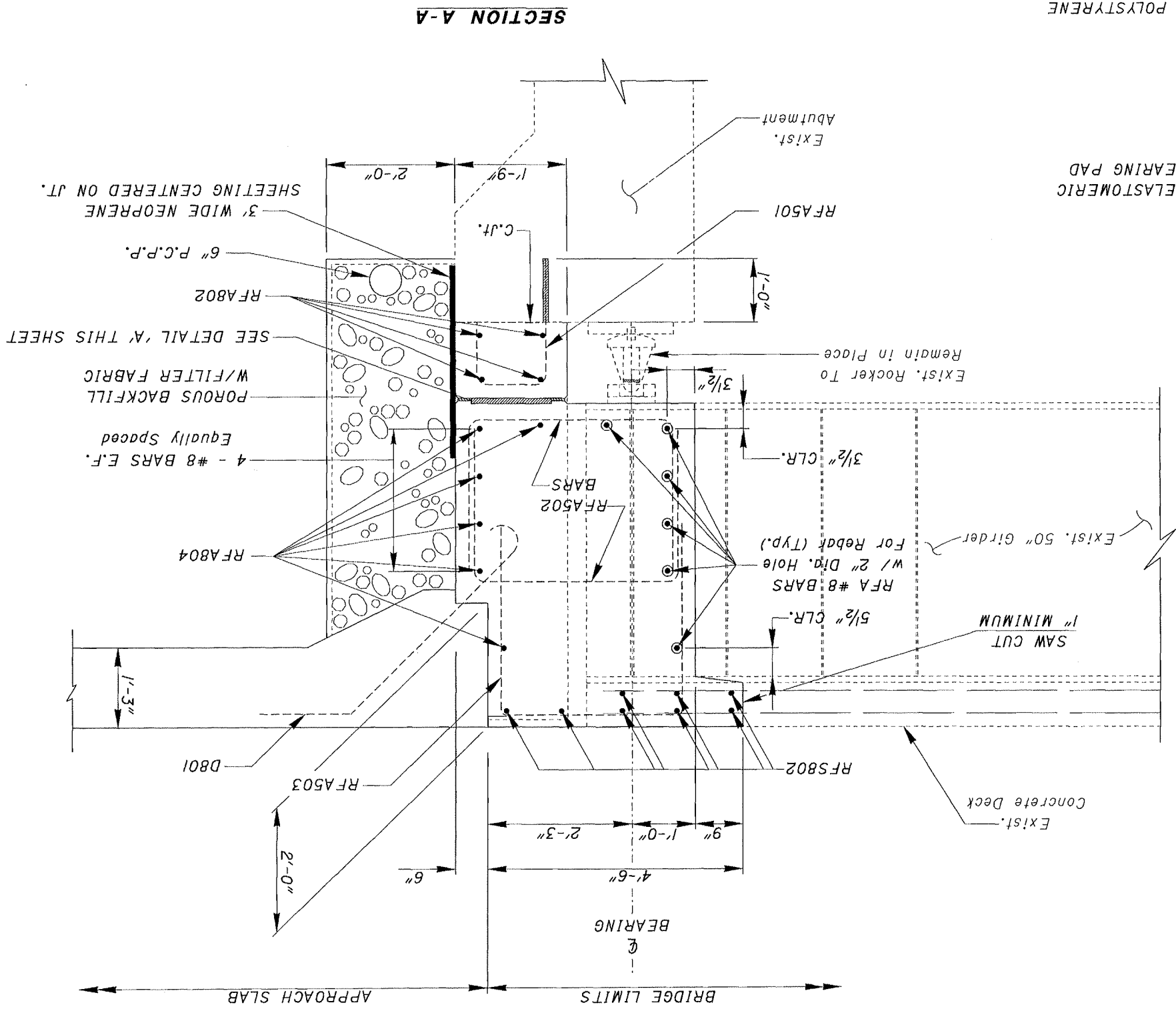
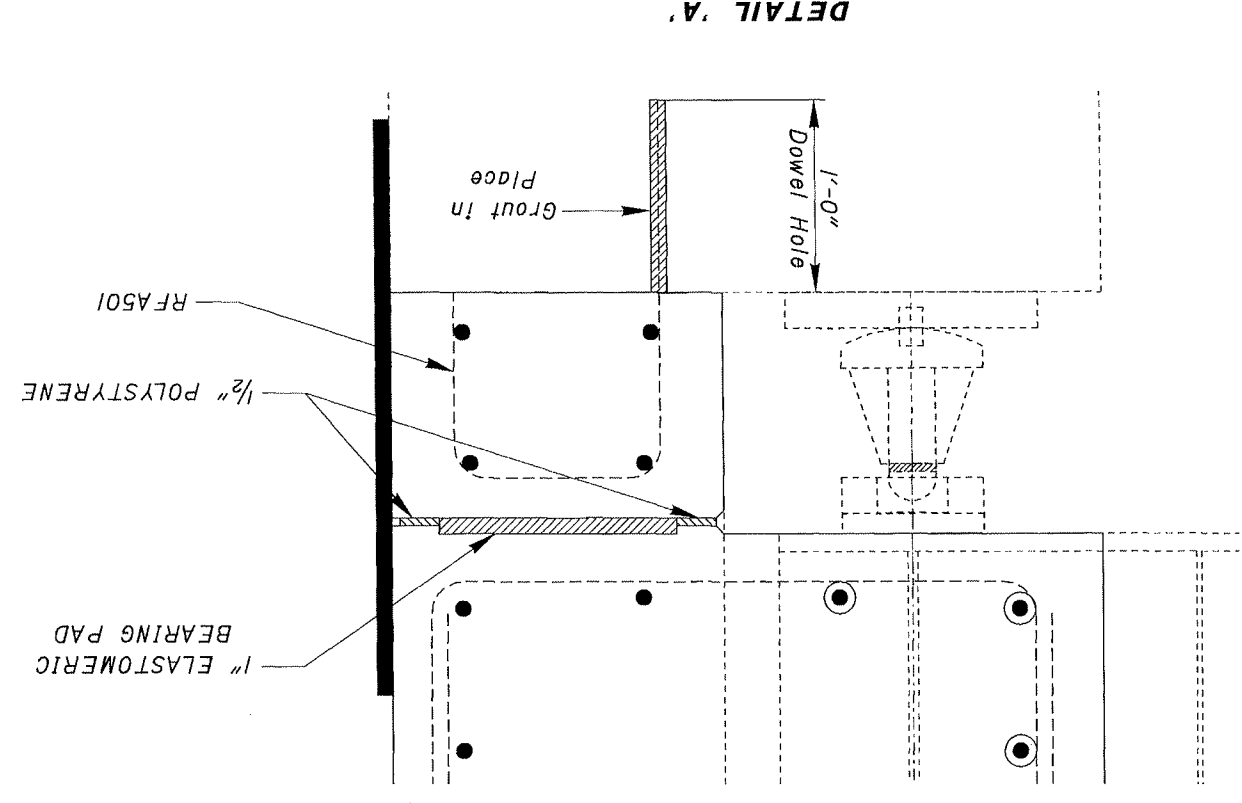


Location	Elevation
A	662.68±
B	662.64±
C	662.79±
D	662.89±
E	662.69±

NOTE: () = MECHANICAL CONNECTORS (Typ.)

18/23	38/43	ATH-33-15.36	RIGHT FORWARD ABUTMENT DETAILS	DESIGNED Job	DRAWN odk	REVIEWED GKW	DATE 4-7-05	DESIGN AGENCY Ohio Department of Transportation District 10 Marietta, Ohio
BRIDGE No. ATH-33-1537 OVER EAST STATE STREET				CHECKED Jdc	REVISED XX	STRUCTURE FILE NUMBER 0505846		

NOTES:
 1.) MIN. CLEARANCE TO REBAR SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS.
 2.) MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125% OF THE YIELD STRENGTH OF THE REINFORCING STEEL.
 3.) ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
 4.) FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-I-96.
 5.) FOR REINFORCING STEEL LIST, SEE STRUCTURE SHT. 20 OF 23



NOTES:

1.) MIN. CLEARANCE TO REBAR SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS.
 2.) MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125% OF THE YIELD STRENGTH OF THE REINFORCING STEEL.
 3.) ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
 4.) FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-I-96.
 5.) FOR REINFORCING STEEL LIST, SEE STRUCTURE SHT. 20 OF 23

DESIGNED	Job	CHK	REVISED	DATE	DESIGN AGENCY
CHECKED	Jdc	cdk	XX	4-7-05	Ohio Department of Transportation District 10 Middletown, Ohio
DRAWN					
REVISED					
DATE					
REVISED					
FILE NUMBER					
0505846					

RIGHT FORWARD ABUTMENT

ATH-33-15.36

19/23

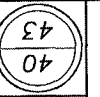
39
43

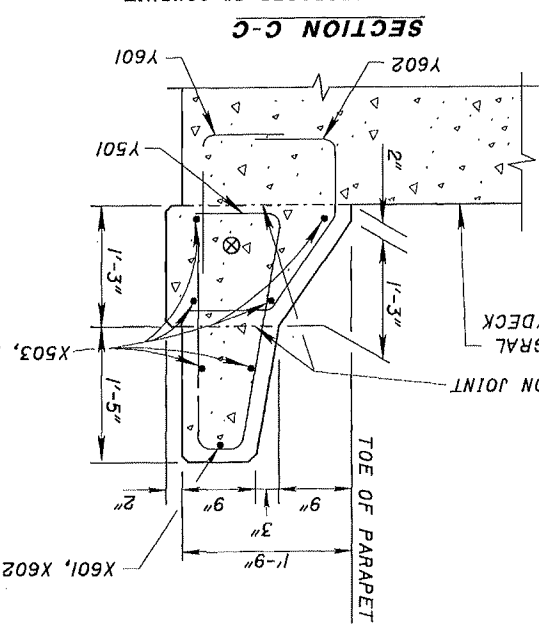
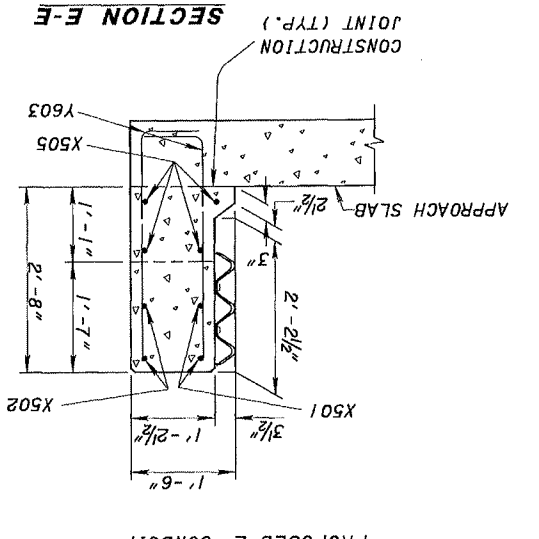
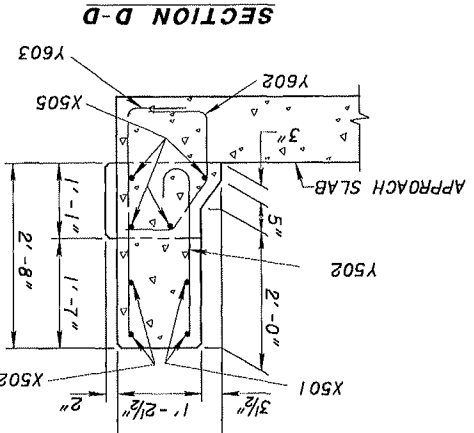
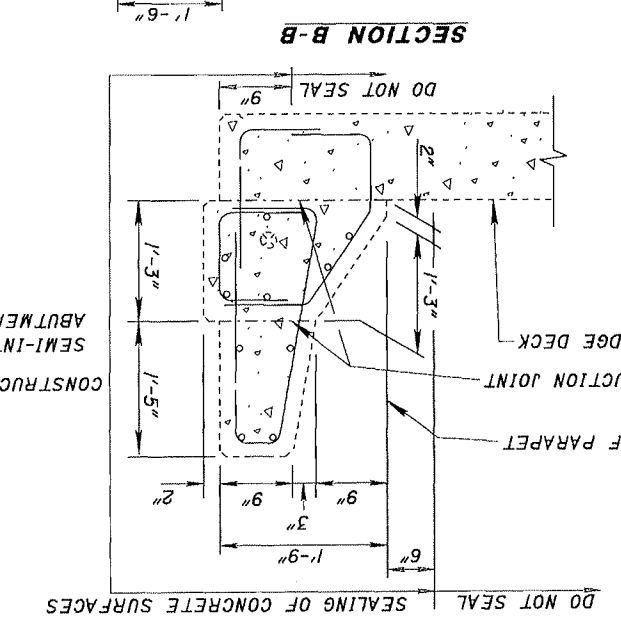
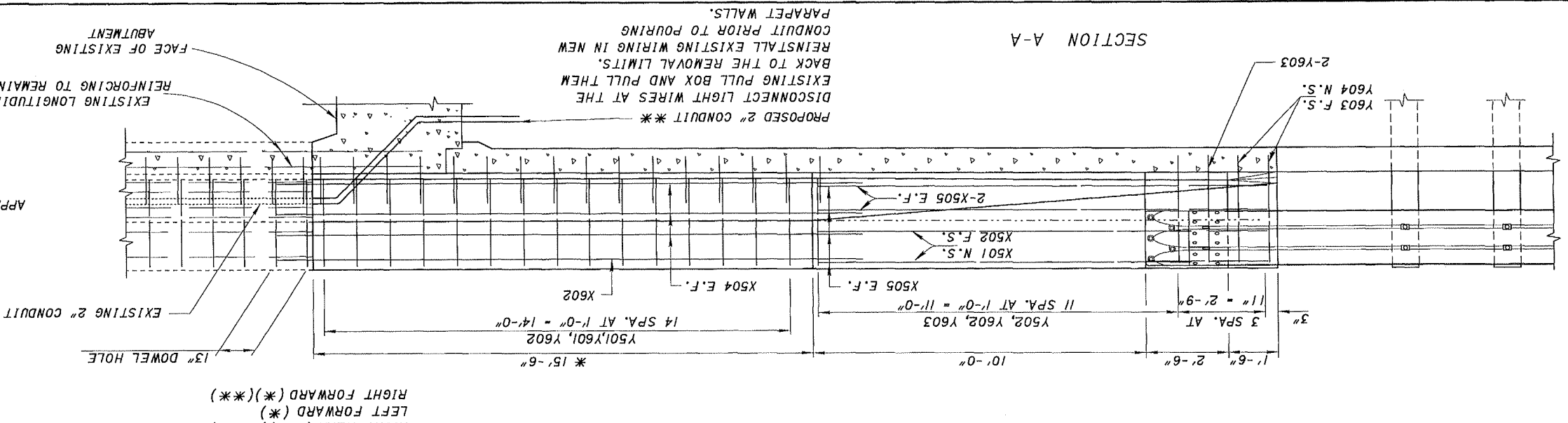
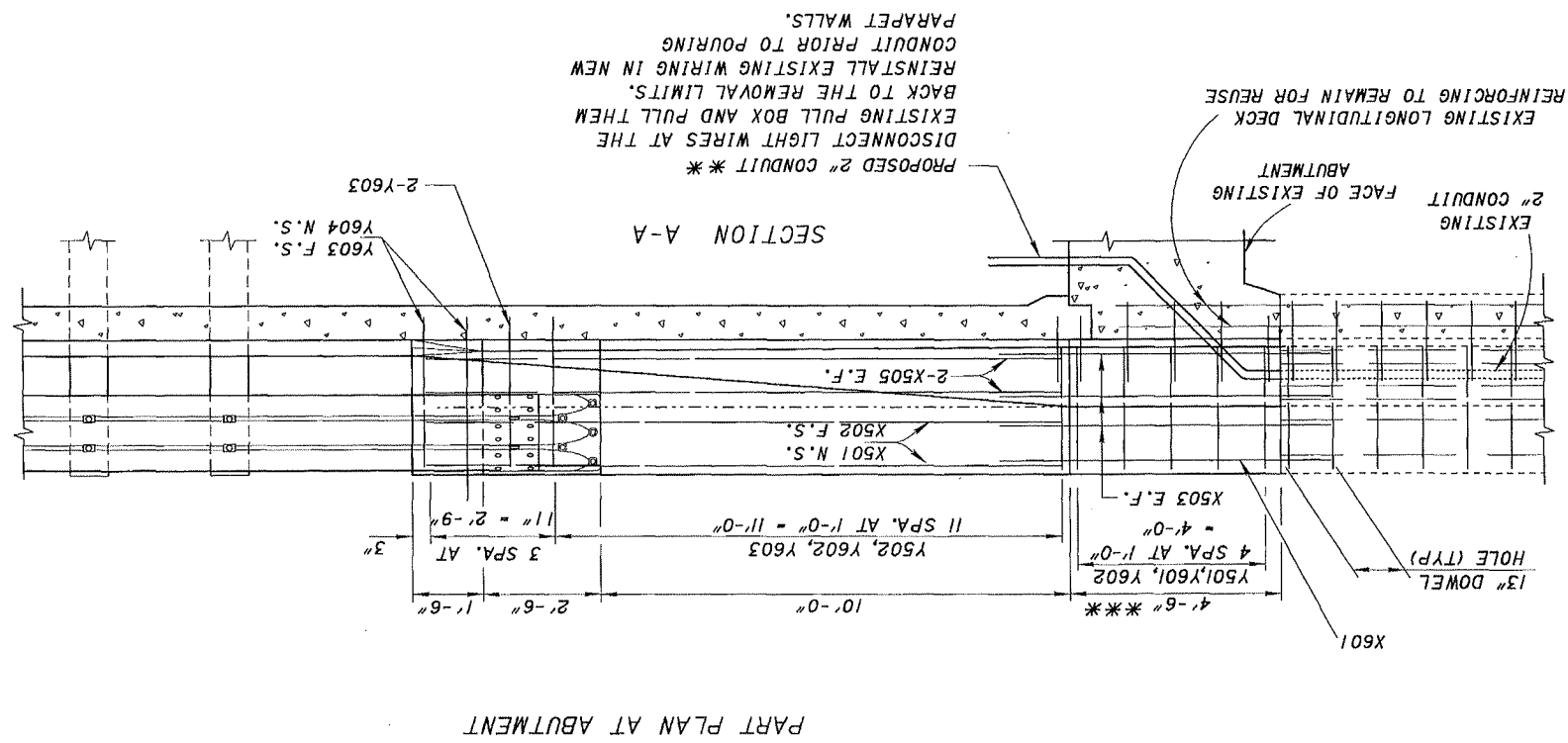
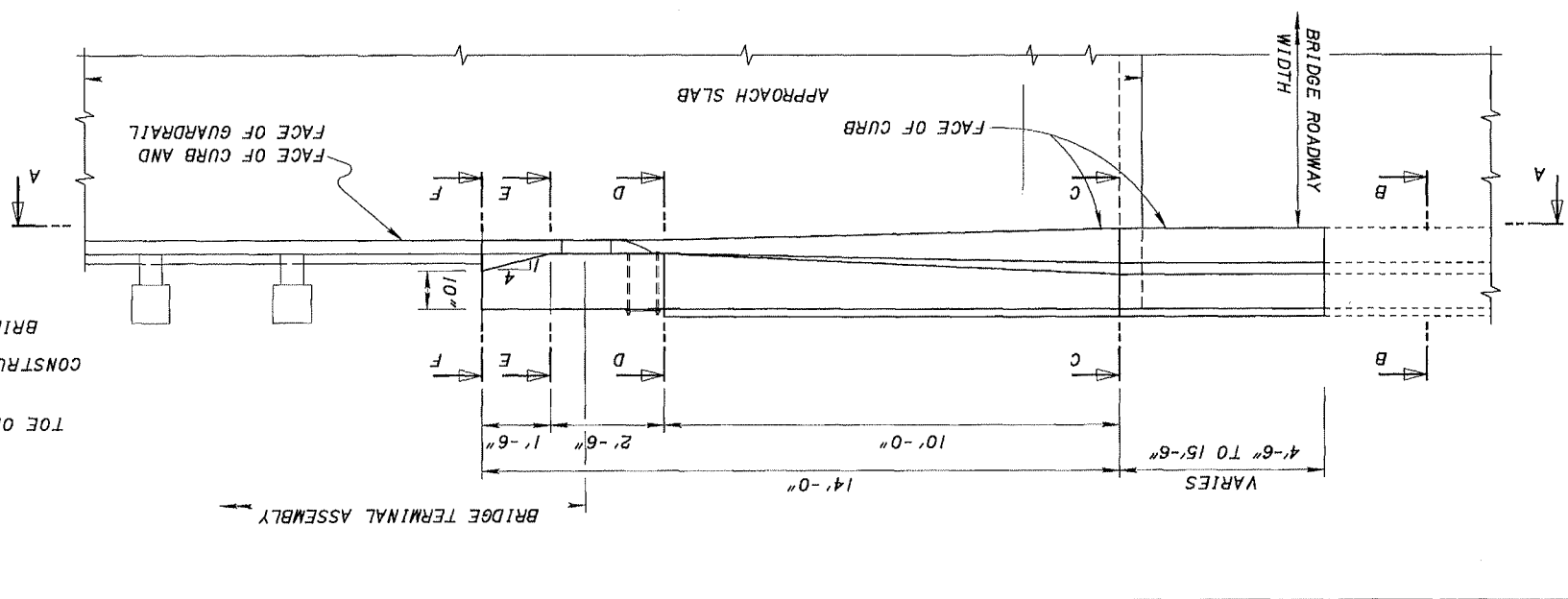
BRIDGE NO. ATH-33-1537
OVER EAST STATE STREET

MARK	NUMBER			LENGTH EACH	UNIT WEIGHT (lb./ft.)	TOTAL WEIGHT (lb)	TYPE	DIMENSIONS				
	REAR	FWD	TOTAL					A	B	C	R	
RF A501			30	3'-10"	1.043	120	2	2'-0"	1'-1"	1'-0"		
RF A502			60	7'-7"	1.043	475	2	2'-4"	3'-2"	2'-4"		
RF A503			30	10'-0"	1.043	313	2	4'-5"	2'-10"	3'-0"		
RF A801			4	21'-6 1/2"	2.670	230	STR					
RF A802			4	21'-0 1/2"	2.670	225	STR					
RF A803			6	21'-5"	2.670	344	STR					
RF A804			6	21'-0 1/2"	2.670	337	STR					
RF A805			6	7'-6"	2.670	120	STR					
RF A806			6	9'-2 1/2"	2.670	148	STR					
RF A807			6	4'-5 1/2"	2.670	71	STR					
RF A808			6	9'-1 1/2"	2.670	146	STR					
RF A809			6	7'-5"	2.670	119	STR					
RF A810			6	4'-8 1/2"	2.670	75	STR					
RF S801			8	21'-5"	2.670	458	STR					
RF S802			8	21'-0 1/2"	2.670	450	STR					
DB01			30	4'-11"	2.670	395	18	4'-6"	1'-0"	1'-0"		
TOTAL												
4026												

RIGHT FORWARD ABUTMENT

REINFORCING SCHEDULE

	20/23	ATH-33-15.36	RIGHT FORWARD REINFORCING SCHEDULE BRIDGE No. ATH-33-1537 OVER EAST STATE STREET	DESIGNED Job CHECKED jdc	DRAWN ODK REVISED XX	REVISED GKW STRUCTURE FILE NUMBER 0505846	DATE 4-1-05	DESIGN AGENCY Ohio Department of Transportation District 10 Marietta, Ohio
--	-------	--------------	---	-----------------------------------	-------------------------------	--	----------------	---



NOTE:

FOR ADDITIONAL DETAILS AND NOTES SEE STD. DWG. BR-1M.

WESTBOUND BRIDGE:

LEFT REAR (**)(**)(**)

RIGHT REAR (**)(**)(**)

LEFT FORWARD (*)

RIGHT FORWARD (*)

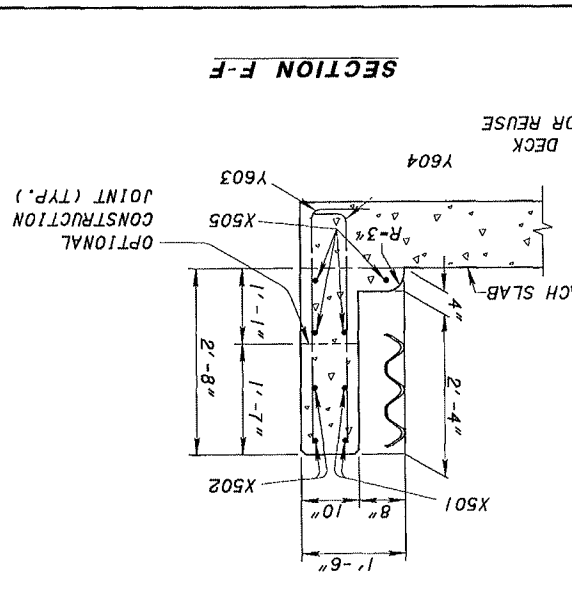
EASTBOUND BRIDGE:

LEFT REAR (**)(**)(**)

RIGHT REAR (**)(**)(**)

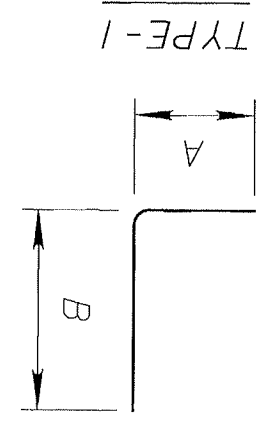
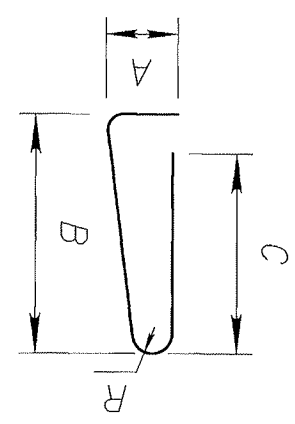
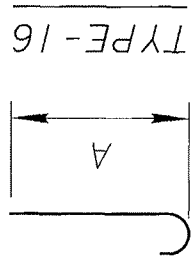
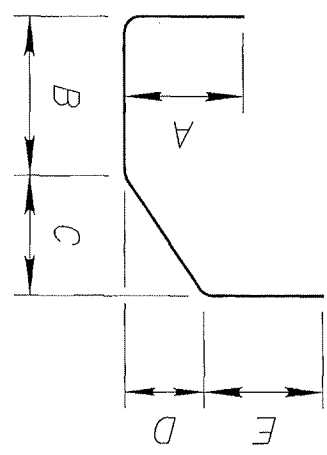
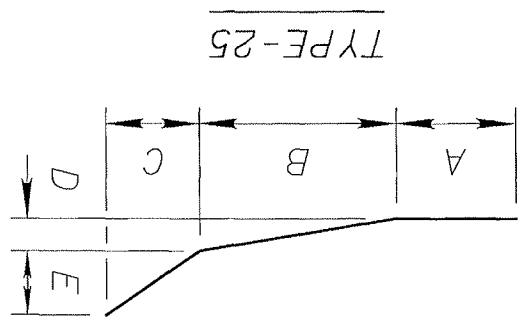
LEFT FORWARD (*)

RIGHT FORWARD (**)(**)(**)



REINFORCING SCHEDULE

MARK	No.	LENGTH EACH	UNIT WEIGHT (lb./ft.)	TOTAL WEIGHT (lb.)	DIMENSIONS				
					A	B	C	D	E
X501	2	13'-10"	1.043	29	10'-0"	2'-5"	1'-4"	0'-11/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	5	5'-4 1/2"	1.043	28	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X601	1	7'-0"	1.502	11	STR				
Y601	5	2'-10"	1.502	22	1	1'-0"	2'-0"		
Y602	17	3'-4 1/2"	1.502	87	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9 1/2"	1.502	92	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					448				
WEST BOUND LEFT REAR PARAPET									
X501	2	13'-10"	1.043	29	25	10'-0"	2'-5"	1'-4"	0'-11/2"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	5	5'-4 1/2"	1.043	28	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X601	1	7'-0"	1.502	11	STR				
Y601	5	2'-10"	1.502	22	1	1'-0"	2'-0"		
Y602	17	3'-4 1/2"	1.502	87	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9 1/2"	1.502	92	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					448				
WEST BOUND RIGHT REAR PARAPET									
X501	2	13'-10"	1.043	29	25	10'-0"	2'-5"	1'-4"	0'-11/2"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	5	5'-4 1/2"	1.043	28	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X602	1	18'-0"	1.502	27	STR				
Y601	15	2'-10"	1.502	64	1	1'-0"	2'-0"		
Y602	27	3'-4 1/2"	1.502	137	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9"	1.502	91	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					680				
WEST BOUND RIGHT FORWARD PARAPET									
X501	2	13'-10"	1.043	29	25	10'-0"	2'-5"	1'-4"	0'-11/2"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	15	5'-4 1/2"	1.043	84	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X602	1	18'-0"	1.502	27	STR				
Y601	15	2'-10"	1.502	64	1	1'-0"	2'-0"		
Y602	27	3'-4 1/2"	1.502	137	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9"	1.502	91	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					680				
WEST BOUND LEFT FORWARD PARAPET									
X501	2	13'-10"	1.043	29	25	10'-0"	2'-5"	1'-4"	0'-11/2"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	15	5'-4 1/2"	1.043	84	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X602	1	18'-0"	1.502	27	STR				
Y601	15	2'-10"	1.502	64	1	1'-0"	2'-0"		
Y602	27	3'-4 1/2"	1.502	137	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9"	1.502	91	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					680				



REINFORCING SCHEDULE

MARK	No.	LENGTH EACH	UNIT WEIGHT (lb./ft.)	TOTAL WEIGHT (lb.)	DIMENSIONS				
					A	B	C	D	E
X501	2	13'-10"	1.043	29	10'-0"	2'-5"	1'-4"	0'-11/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	15	5'-4 1/2"	1.043	84	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X602	1	18'-0"	1.502	27	STR				
Y601	15	2'-10"	1.502	64	1	1'-0"	2'-0"		
Y602	27	3'-4 1/2"	1.502	137	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9"	1.502	91	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					680				
WEST BOUND LEFT FORWARD PARAPET									
X501	2	13'-10"	1.043	29	25	10'-0"	2'-5"	1'-4"	0'-11/2"
X502	2	13'-10"	1.043	29	STR	STR	STR	STR	STR
X503	6	7'-0"	1.043	44	STR	STR	STR	STR	STR
X505	4	13'-10"	1.043	58	STR	STR	STR	STR	STR
Y501	15	5'-4 1/2"	1.043	84	23	0'-8"	2'-5"	2'-2"	2 1/4"
Y502	12	2'-11"	1.043	37	16	2'-4"			
X602	1	18'-0"	1.502	27	STR				
Y601	15	2'-10"	1.502	64	1	1'-0"	2'-0"		
Y602	27	3'-4 1/2"	1.502	137	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"
Y603	16	3'-9"	1.502	91	1	0'-9"	3'-2"		
Y604	2	3'-6"	1.502	11	1	0'-6"	3'-2"		
SUBTOTAL					680				

DESIGNED BY: Jdc

CHECKED BY: Jdc

DRAWN BY: Cdk

REVISED BY: xx

DATE: xx

STRUCTURE FILE NUMBER: 0505838

DESIGN AGENCY: Ohio Department of Transportation

District 10

Marietta, Ohio

LEFT REINFORCING SCHEDULE

BRIDGE No. ATH-33-1537

OVER EAST STATE STREET

22/23

42

43

REINFORCING SCHEDULE

MARK	No.	LENGTH EACH	UNIT WEIGHT (lb./ft.)	TOTAL WEIGHT (lb.)	TYPE	DIMENSIONS					
						A	B	C	D		
X501	2	13'-10"	1.043	29	STR	25	10'-0"	2'-5"	1'-4"	0'-1 1/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	29	13'-10"	1'-4"	1'-4"	0'-1 1/2"	0'-5"
X504	6	18'-0"	1.043	113	STR						
X505	4	13'-10"	1.043	58	STR						
Y501	15	5'-4 1/2"	1.043	84	STR	23	0'-8"	2'-5"	2'-2"	2 1/4"	
Y502	12	2'-11"	1.043	37	STR	16	2'-4"				
X602	1	18'-0"	1.502	27	STR						
Y601	15	2'-10"	1.502	64	STR	1	1'-0"	2'-0"			
Y602	27	3'-4 1/2"	1.502	137	STR	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"	0'-9"
Y603	16	3'-9"	1.502	91	STR	1	0'-9"	3'-2"			
Y604	2	3'-6"	1.502	11	STR	1	0'-6"	3'-2"			
SUBTOTAL						680					
EAST BOUND RIGHT REAR PARAPET											
X501	2	13'-10"	1.043	29	STR	25	10'-0"	2'-5"	1'-4"	0'-1 1/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	29	13'-10"	1'-4"	1'-4"	0'-1 1/2"	0'-5"
X504	6	18'-0"	1.043	113	STR						
X505	4	13'-10"	1.043	58	STR						
Y501	15	5'-4 1/2"	1.043	84	STR	23	0'-8"	2'-5"	2'-2"	2 1/4"	
Y502	12	2'-11"	1.043	37	STR	16	2'-4"				
X602	1	18'-0"	1.502	27	STR						
Y601	15	2'-10"	1.502	64	STR	1	1'-0"	2'-0"			
Y602	27	3'-4 1/2"	1.502	137	STR	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"	0'-9"
Y603	16	3'-9"	1.502	91	STR	1	0'-9"	3'-2"			
Y604	2	3'-6"	1.502	11	STR	1	0'-6"	3'-2"			
SUBTOTAL						448					

REINFORCING SCHEDULE

MARK	No.	LENGTH EACH	UNIT WEIGHT (lb./ft.)	TOTAL WEIGHT (lb.)	TYPE	DIMENSIONS					
						A	B	C	D		
X501	2	13'-10"	1.043	29	STR	25	10'-0"	2'-5"	1'-4"	0'-1 1/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	29	13'-10"	1'-4"	1'-4"	0'-1 1/2"	0'-5"
X504	6	18'-0"	1.043	113	STR						
X505	4	13'-10"	1.043	58	STR						
Y501	15	5'-4 1/2"	1.043	84	STR	23	0'-8"	2'-5"	2'-2"	2 1/4"	
Y502	12	2'-11"	1.043	37	STR	16	2'-4"				
X602	1	18'-0"	1.502	27	STR						
Y601	15	2'-10"	1.502	64	STR	1	1'-0"	2'-0"			
Y602	27	3'-4 1/2"	1.502	137	STR	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"	0'-9"
Y603	16	3'-9"	1.502	91	STR	1	0'-9"	3'-2"			
Y604	2	3'-6"	1.502	11	STR	1	0'-6"	3'-2"			
SUBTOTAL						680					
EAST BOUND RIGHT FORWARD PARAPET											
X501	2	13'-10"	1.043	29	STR	25	10'-0"	2'-5"	1'-4"	0'-1 1/2"	0'-5"
X502	2	13'-10"	1.043	29	STR	29	13'-10"	1'-4"	1'-4"	0'-1 1/2"	0'-5"
X504	6	18'-0"	1.043	113	STR						
X505	4	13'-10"	1.043	58	STR						
Y501	15	5'-4 1/2"	1.043	84	STR	23	0'-8"	2'-5"	2'-2"	2 1/4"	
Y502	12	2'-11"	1.043	37	STR	16	2'-4"				
X602	1	18'-0"	1.502	27	STR						
Y601	15	2'-10"	1.502	64	STR	1	1'-0"	2'-0"			
Y602	27	3'-4 1/2"	1.502	137	STR	14	0'-6"	0'-9"	0'-11 1/2"	0'-9"	0'-9"
Y603	16	3'-9"	1.502	91	STR	1	0'-9"	3'-2"			
Y604	2	3'-6"	1.502	11	STR	1	0'-6"	3'-2"			
SUBTOTAL						680					

LEFT REINFORCING SCHEDULE

BRIDGE No. ATH-33-1537
OVER EAST STATE STREET

ATH-33-15.36

23/23

43/43

DESIGNED	DATE	REVISED	DATE
Jdc	XX	XX	XX

Ohio Department of Transportation
District 10
Marietta, Ohio