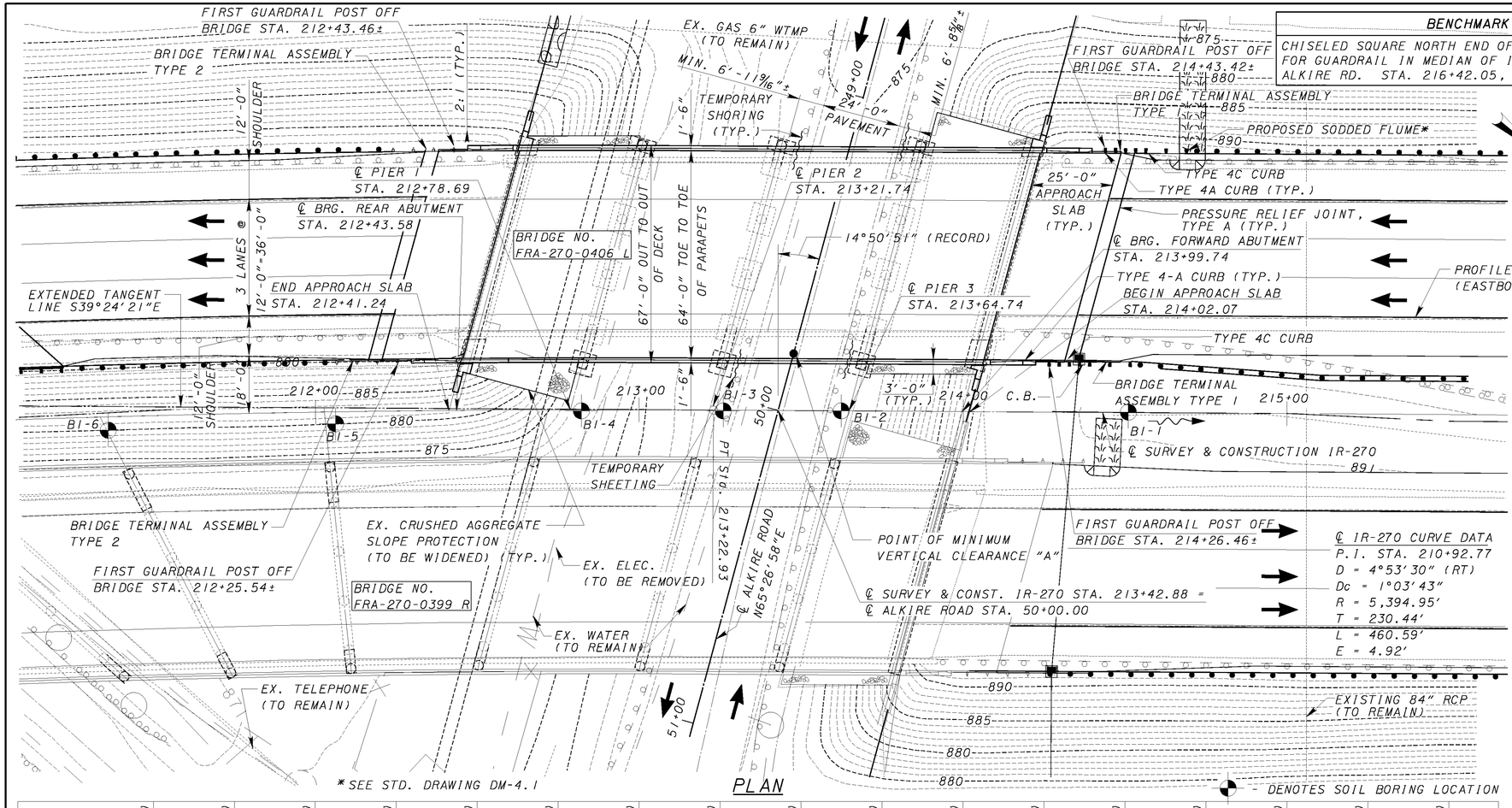


BENCHMARK H
CHISELED SQUARE NORTH END OF CONCRETE TIEDOWN FOR GUARDRAIL IN MEDIAN OF I-270 BRIDGE OVER ALKIRE RD. STA. 216+42.05, 10.12' RT. EL. 889.97

BENCHMARK I
MINE SPIKE NORTH SIDE 8" COTTONWOOD NEAR WEST R/W FENCE @ STA. 225+97.05, 145.65' LT., EL. 878.99

TRAFFIC DATA

IR-270
OPENING YEAR A.D.T (2013) = 80,780
OPENING YEAR A.D.T.T. (2013) = 12,925
DESIGN YEAR A.D.T. (2033) = 106,180
DESIGN YEAR A.D.T.T. (2033) = 16,989

APPROXIMATE BORING LOCATIONS

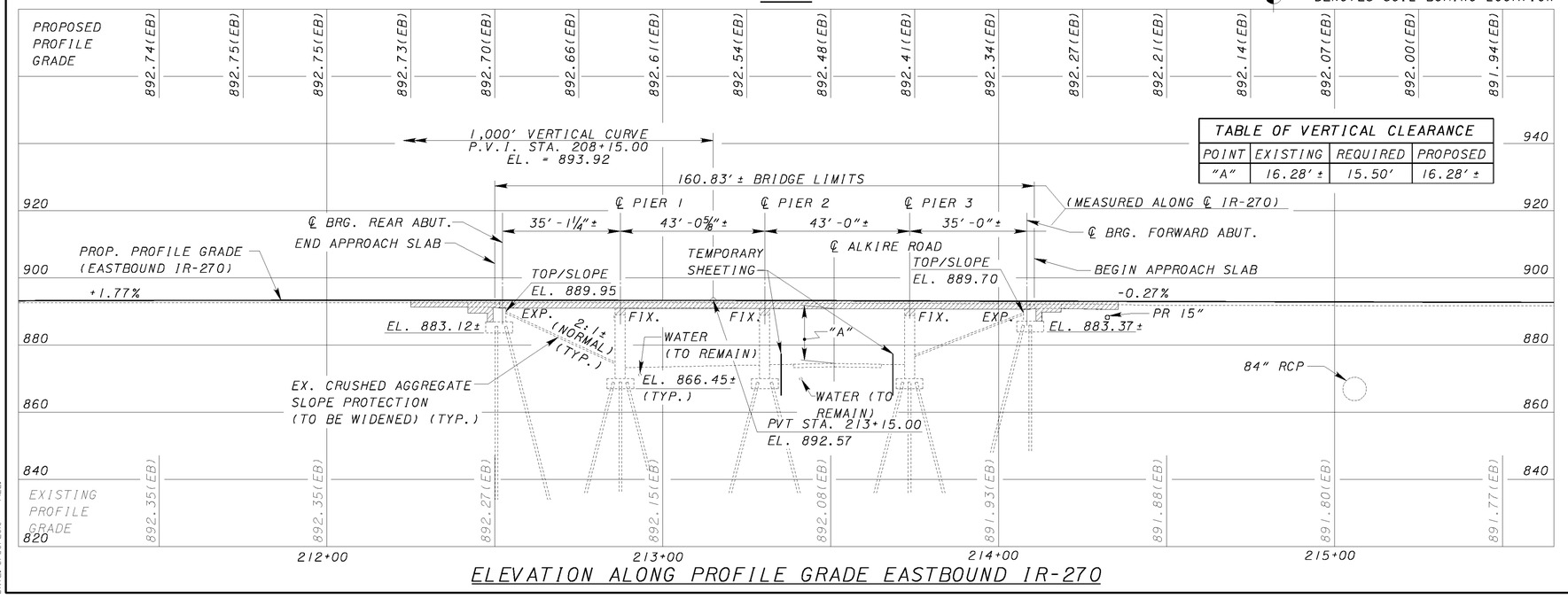
BORING	℄ IR-270 STATION	OFFSET TO ℄
B1-1	214+51.00	0.00'
B1-2	213+62.30	0.00'
B1-3	213+25.89	0.00'
B1-4	212+82.13	0.00'
B1-5	212+06.23	5.00' RT.
B1-6	211+36.15	5.00' RT.

EXISTING STRUCTURE

TYPE: 4 SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE AND SUBSTRUCTURE
SPANS: 35'-0"±, 43'-0"±, 43'-0"±, 35'-0"± ℄ TO ℄ BEARINGS
ROADWAY: 53'-0"± FACE TO FACE OF PARAPETS
LOAD FREQUENCY: CF 2000(57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
SKEW: 14°50'51"±LEFT FORWARD
WEARING SURFACE: 2" ASPHALTIC CONCRETE
APPROACH SLAB: AS-1-54 (25'-0"± LONG)
SUPERELEVATION: VARIES
ALIGNMENT: TANGENT, 1°00'00"± CURVE RIGHT
DATE BUILT: 1968, REHABILITATED 1990
STRUCTURE FILE No.: 2512696

PROPOSED STRUCTURE

PROPOSED WORK: REHAB & WIDEN BRIDGE, REPLACE EXISTING SLAB BRIDGE & APPROACH SLABS, MODIFY & WIDEN SUBSTRUCTURES
TYPE: 4 SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE AND SUBSTRUCTURE
SPANS: 35'-1¼"±, 43'-0⅝"±, 43'-0"±, 35'-0"± ALONG ℄ IR-270
ROADWAY: 64'-0" TOE TO TOE OF PARAPETS
LOADING: HS25 AND ALTERNATE MILITARY LOADING (SUPERSTRUCTURE); HS20-44 AND ALTERNATE MILITARY LOAD (SUBSTRUCTURE); FWS 60 PSF
SKEW: 14°50'51" LEFT FORWARD (TO EXTENDED TANGENT)
WEARING SURFACE: 1" MONOLITHIC CONCRETE
ALIGNMENT: 1°03'43" CURVE RIGHT, TANGENT
APPROACH SLAB: AS-1-81 (25'-0" LONG)
SUPERELEVATION: VARIES
LONGITUDE: W 83°06'30"
LATITUDE: N 39°54' 47"



ELEVATION ALONG PROFILE GRADE EASTBOUND IR-270

TABLE OF VERTICAL CLEARANCE			
POINT	EXISTING	REQUIRED	PROPOSED
"A"	16.28'±	15.50'	16.28'±

NOTES:

1. THE EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. THE PROPOSED PROFILE GRADE IS ONLY WITHIN THE BRIDGE LIMITS. SEE ROADWAY PLANS FOR PAVEMENT ELEVATIONS BEYOND THE BRIDGE LIMITS.
3. A TEMPORARY VERTICAL CLEARANCE OF 14'-6" MUST BE MAINTAINED DURING CONSTRUCTION AT ALL TIMES OVER ALKIRE ROAD.
4. SEE ROADWAY PLANS FOR PAYMENT OF TYPE A PRESSURE RELIEF JOINTS (IF REQUIRED), TYPE 4C CURBS, AND SODDED FLUMES.
5. CONTRACTOR TO VERIFY LOCATION OF WATER LINE ADJACENT TO PIER 1 BEFORE CONSTRUCTION.

FOUNDATION DATA:

ALL NEW PILES SHALL BE 12" Ø CAST-IN-PLACE REINFORCED CONCRETE PILES. THE ESTIMATED LENGTHS ARE AS FOLLOWS:
REAR ABUTMENT: 50 FEET
PIERS: 35 FEET
FORWARD ABUTMENT: 40 FEET

DESIGN AGENCY: TranSystems, 105 SOURCE ROAD, SUITE 400, COLUMBUS, OHIO 43228
DATE: 4/5/10
REVIEWED: RER
STRUCTURE FILE NUMBER: 2512696
DRAWN: DJS
REVISED:
DESIGNED: MYC
CHECKED: RAP

FRANKLIN COUNTY
STA. 212+41.24
STA. 214+02.07

SITE PLAN

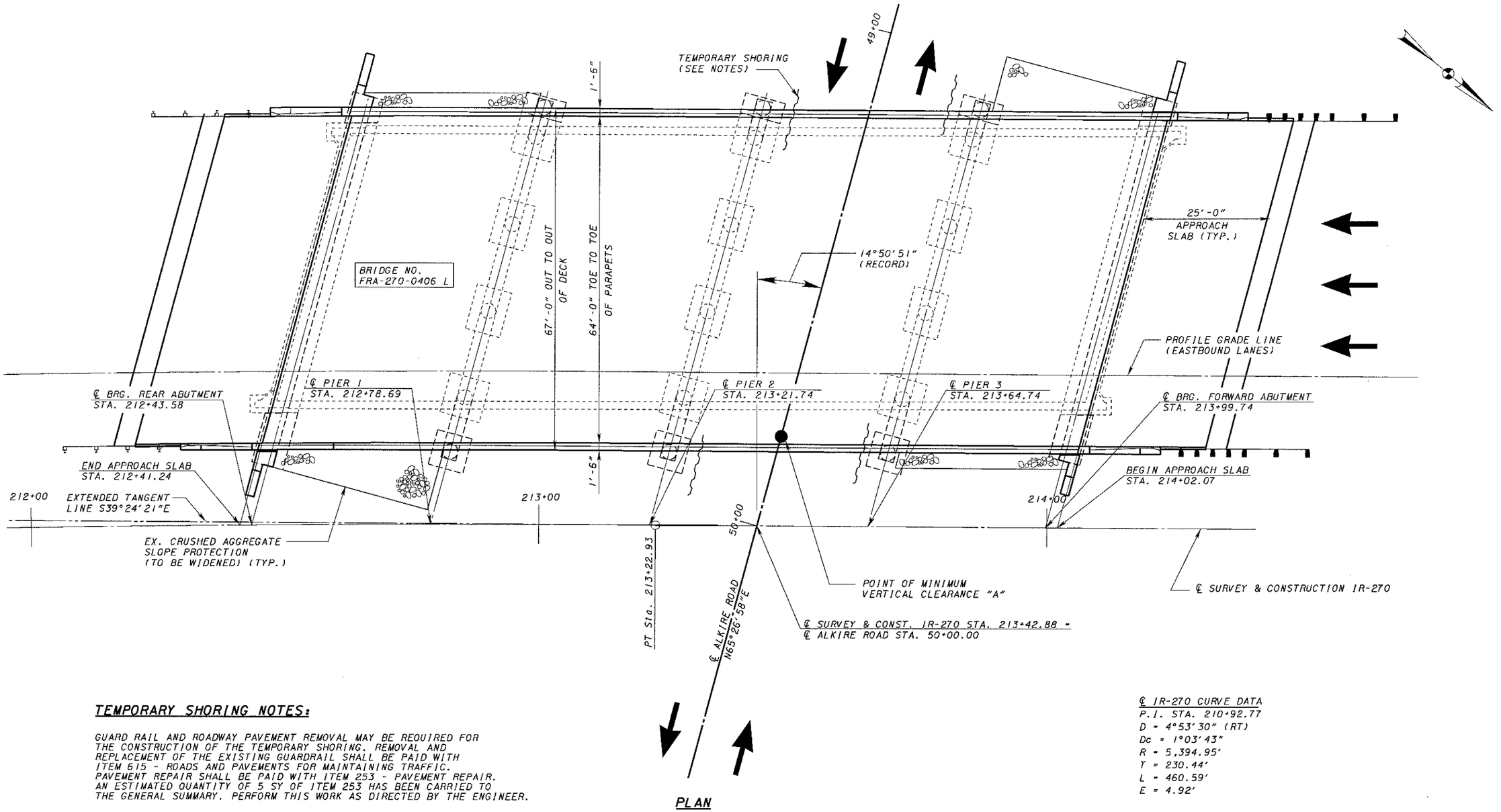
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

1 / 23

1868
2107

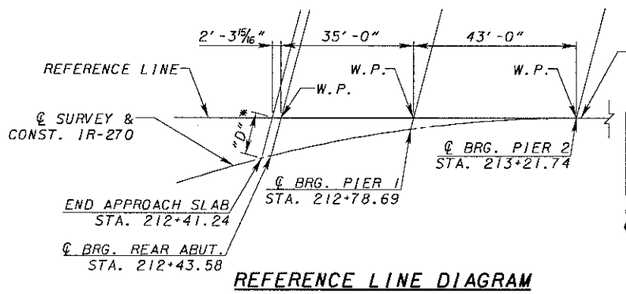
DATE: 8/30/2000 FILE: """



PLAN

TEMPORARY SHORING NOTES:

GUARD RAIL AND ROADWAY PAVEMENT REMOVAL MAY BE REQUIRED FOR THE CONSTRUCTION OF THE TEMPORARY SHORING. REMOVAL AND REPLACEMENT OF THE EXISTING GUARDRAIL SHALL BE PAID WITH ITEM 615 - ROADS AND PAVEMENTS FOR MAINTAINING TRAFFIC. PAVEMENT REPAIR SHALL BE PAID WITH ITEM 253 - PAVEMENT REPAIR. AN ESTIMATED QUANTITY OF 5 SY OF ITEM 253 HAS BEEN CARRIED TO THE GENERAL SUMMARY. PERFORM THIS WORK AS DIRECTED BY THE ENGINEER.



LOCATION	DIM. "D"*
END APPROACH SLAB	7 11/16"
℄ BRG. REAR ABUT.	7 1/4"
℄ BRG. PIER 1	2 1/4"
℄ BRG. PIER 2	0"

* MEASURE ALONG ℄ BRG. ABUTMENT, ℄ PIERS AND EDGE OF APPROACH SLAB

REFERENCE LINE DIAGRAM

℄ IR-270 CURVE DATA

P.I. STA. 210+92.77
D = 4°53'30" (RT)
Dc = 1°03'43"
R = 5,394.95'
T = 230.44'
L = 460.59'
E = 4.92'

NOTES:

1. FOR STRUCTURE GENERAL NOTES SEE SHEETS 3/23 AND 4/23.
2. FOR BRIDGE SITE PLAN SEE SHEET 1/23.

DESIGN AGENCY: TranSystems, 400 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25126 96	

STRUCTURE GENERAL PLAN
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

2 / 23

1869
2107

DATE: 6/21/2011 FILE: """

STRUCTURE GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-81	DATED (REVISED)	7-19-02
CS-1-03	DATED (REVISED)	4-18-03
HL-30.31	DATED (REVISED)	4-17-09
SBR-1-99	DATED (REVISED)	7-19-02
SICD-1-96	DATED (REVISED)	7-19-02

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

898	DATED	7-17-09

DESIGN SPECIFICATIONS

THE STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

EXISTING SUBSTRUCTURE: HS20-44
MODIFIED SUPERSTRUCTURE: HS25 AND THE ALTERNATE MILITARY LOADING WITH FUTURE WEARING SURFACE (FWS) OF 60 PSF.

DESIGN DATA

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996,
GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
SPIRAL REINFORCEMENT MAY BE PLAIN BARS,
ASTM A82 OR A615

DECK PROTECTION METHODS

- EPOXY COATED REINFORCING STEEL
- 2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PROPOSED WORK

THE WORK TO BE DONE UNDER THIS CONTRACT IS AS SHOWN ON THE CONSTRUCTION PLANS AND, IN GENERAL, INCLUDES THE FOLLOWING:

1. REMOVAL OF EXISTING CONCRETE SLAB SUPERSTRUCTURE.
2. PATCH EXISTING SUBSTRUCTURE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
3. WIDEN SUBSTRUCTURE UNITS TO ACCOMMODATE PROPOSED SLAB.
4. CONSTRUCT NEW CONCRETE SLAB SUPERSTRUCTURE WITH 42" SINGLE SLOPE DEFLECTOR PARAPETS.
5. SEAL SUBSTRUCTURE AND SUPERSTRUCTURE UNITS TO THE LIMITS SHOWN IN THE PLANS WITH EPOXY-URETHANE SEALER.
6. REPLACE APPROACH SLABS AND PROVIDE TYPE A PRESURE RELIEF JOINTS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF CONCRETE DECK, SLABS INCLUDING EXTERIOR PARAPETS, AND PORTIONS OF PIERS AND ABUTMENTS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR. ALL COSTS ASSOCIATED WITH THIS TRAFFIC PROTECTION WILL BE INCLUDED WITH ITEM 202 FOR PAYMENT.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

MAINTENANCE OF TRAFFIC

TRAFFIC WILL BE MAINTAINED ON ALKIRE ROAD AT ALL TIMES EXCEPT AS PERMITTED FOR FALSEWORK AND DECK REMOVAL WITH A MINIMUM TEMPORARY VERTICAL CLEARANCE OF 14'-6". FOR MAINTENANCE OF TRAFFIC NOTES AND DETAILS REFER TO THE ROADWAY PLANS.

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 FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURAL PLANS

PLANS MY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6, 400 E. WILLIAM STREET, DELAWARE, OHIO 43015, 740-833-8000.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 68 TONS PER PILE FOR THE ABUTMENT PILES AND 62 TONS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES:
6 PILES 55 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER 1 PILES:
6 PILES 40 FEET LONG, ORDER LENGTH

PIER 2 PILES:
6 PILES 40 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER 3 PILES:
6 PILES 40 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
6 PILES 45 FEET LONG, ORDER LENGTH

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

BATTERED PILES

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = \frac{1 - UG}{\sqrt{(1 + G^2)}}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS; AND 0.2 FOR DROP HAMMERS.

G = RATE OF BATTER (1/3, 1/4, ETC.)

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN

THIS STRUCURE IS SUBJECT TO TESTING FOR ASBESTOS. THE CONTRACTOR SHALL USE A STATE CERTIFIED ASBESTOS INSPECTOR TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS. THE SAMPLES WILL BE PROVIDED TO THE CONTRACTOR FOR TESTING. THE COST TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS, TO DELIVER THE SAMPLES TO A TEST LAB, AND TO TEST THE SAMPLES FOR ASBESTOS WILL BE INCLUDED IN THIS PAY ITEM. THE CONTRACTOR SHALL COMPLETE THE "OHIO ENVIRONMENTAL PROTECTION AGENCY NOTIFICATION OF DEMOLITION AND RENOVATION" AFTER THE TESTING IS COMPLETE AND SEND THE FORM TO THE OHIO EPA 10 DAYS PRIOR TO DEMOLITION OR RENOVATION ACTIVITIES.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY THE CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

DESIGN AGENCY
TranSystems
105 SOURCE ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25/2696	

STRUCTURE GENERAL NOTES
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

1870
2107

DATE: 8/30/2000 FILE: ****

STRUCTURE GENERAL NOTES

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

REINFORCING STEEL FOR DOWELS SHALL BE INSTALLED USING EPOXY GROUT PER ITEM 510.

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

SEAL SUPERSTRUCTURE AND SUBSTRUCTURE CONCRETE IN THE LIMITS SHOWN ON PLANS WITH EPOXY-URETHANE SEALER. THE SECOND SEALING COAT SHALL BE FEDERAL COLOR NO. 5958-17778 (LIGHT NEUTRAL)

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1 1/4 " x #10 GAGE (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES ±, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES ±, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094" ± 0.01
BREAKING STRENGTH, GRAB, LBS., MINIMUM (LONG. X TRANS.)	D751	700 x 700
ADHESIVE STRIP 1" WIDE X 2" LONG, LBS. MINIMUM	D751	9
BURST STRENGTH PSI, MINIMUM	D751	1400
HEAT AGING, 70 HOURS, 212°F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS 1 HOUR, -40°F, BEND AROUND 1/4" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 601 - SLOPE PROTECTION, MISC.: REPAIR OF EXISTING CRUSHED AGGREGATE SLOPE PROTECTION

THIS WORK APPLIES TO ALL EXISTING AREAS DEEMED BY THE ENGINEER TO BE IN NEED OF REPAIR.

WHERE POSSIBLE, THE EXISTING CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE RE-GRADED TO MATCH THE SLOPE OF THE EXISTING GROUND LINE, AND TO PROVIDE A MINIMUM 12" THICKNESS IN ALL AREAS. IF ADDITIONAL MATERIAL IS NEEDED TO MEET THESE REQUIREMENTS, IT SHALL CONFORM TO CMS 601.06.

THE DEPARTMENT WILL MEASURE THE REPAIR AREA BY THE NUMBER OF SQUARE YARDS ACCEPTED IN PLACE.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, PARAPETS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN

THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN

THE TWO 4" Ø CONDUITS LOCATED IN THE MEDIAN DEFLECTOR PARAPET OF THIS BRIDGE SHALL BE INCLUDED FOR PAYMENT WITH THIS ITEM.

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ABBREVIATIONS

BRG.	= BEARING
C.B.	= CATCH BASIN
C.I.P.R.C.	= CAST-IN-PLACE REINFORCED CONCRETE
CL.	= CLEAR COVER
COL	= COLUMN
CONST.	= CONSTRUCTION
DIA.	= DIAMETER
DIM.	= DIMENSION
E.F.	= EACH FACE
EL/ELEV	= ELEVATION
EXIST.	= EXISTING
F.F.	= FAR FACE
FT	= FEET/FOOT
HMWM	= HIGH MOLECULAR WEIGHT METHACRYLATE
INC	= INCREMENT
INT	= INTERIOR
I.R.	= INTERSTATE ROUTE
LOC.	= LOCATION
MAX.	= MAXIMUM
MIN.	= MINIMUM
NCPP	= NON-PERFORATED CORRUGATED PLASTIC PIPE
N.F.	= NEAR FACE
P.C.P.P.	= PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F.	= PREFORMED EXPANSION JOINT FILLER
PT.	= POINT
PVI	= POINT OF VERTICAL INTERSECTION
REF	= REFERENCE
SQ FT	= SQUARE FEET
SQ YD	= SQUARE YARD
STA.	= STATION
STR	= STRAIGHT
TYP.	= TYPICAL
UNO	= UNLESS NOTED OTHERWISE

DESIGN AGENCY: TranSystems, 465 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229
DESIGNED MYC | DRAWN DJS | CHECKED RAP | REVIEWED RER | DATE 4/5/10 | REVISED
STRUCTURE FILE NUMBER 25126696

STRUCTURE GENERAL NOTES
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

1871 | 2107

DATE: 5/13/2010 FILE: ****

MADE BY: MYC DATE: 9/07/07
CHECKED BY: RAP DATE: 9/12/07

ESTIMATED QUANTITIES

ITEM	EXTEN-SION	LEFT STRUC-TURE TOTAL	UNIT	DESCRIPTION	STRUCTURE 0406L					REFERENCE SHEET NUMBER
					REAR ABUTMENT	FORWARD ABUTMENT	PIERS	SUPER-STRUCTURE	GENERAL	
202	11001	LUMP		STRUCTURE REMOVED, AS PER PLAN					LUMP	3
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LUMP	3,6,9
202	22900	200	SQ YD	APPROACH SLAB REMOVED	100	100				
202	23500	919	SQ YD	WEARING COURSE REMOVED					919	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING					LUMP	
503	21100	117	CU YD	UNCLASSIFIED EXCAVATION	58	59				
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					LUMP	
507	00500	1170	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	300	240	630			
507	00550	1320	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	330	270	720			
509	10000	200058	POUND	EPOXY COATED REINFORCING STEEL	2635	2460	32038	162925		
509	20001	200	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN					200	3
510	10001	312	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	138	138	36			4
511	41000	101	CU YD	CLASS C CONCRETE, PIER ABOVE FOOTINGS			101			
511	44100	40	CU YD	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	21	19				
511	46500	50	CU YD	CLASS C CONCRETE, FOOTING	12	11	27			
512	10100	993	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	23	20	558	392		4
512	10300	72	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN				72		16
516	13900	34	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	19	15				
516	14021	146	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	73	73				4
516	43100	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE)	1	1				11
518	21200	62	CU YD	POROUS BACKFILL WITH FILTER FABRIC	35	27				
518	40000	178	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	90	88				
518	40011	24	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	12	12				9,10
519	11101	23	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11	6	6			4
523	20000	1	EACH	DYNAMIC LOAD TESTING					1	
601	20000	56	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	26	30				
601	21100	107	SQ YD	SLOPE PROTECTION, MISC.: REPAIR OF EXISTING CRUSHED AGGREGATE SLOPE PROTECTION	54	53				4
898	10221	746	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN				746		4,11
898	10705	372	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN				372		4
898	11001	51	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN				51		4

DESIGN AGENCY: Trans Systems, 405 SCIENCE PARK ROAD, SUITE 400, COLUMBUS, OHIO 43228
DESIGNED MYC | DRAWN DJS | REVIEWED RER | DATE 4/5/10
CHECKED RAP | REVISED | STRUCTURE FILE NUMBER 2512696

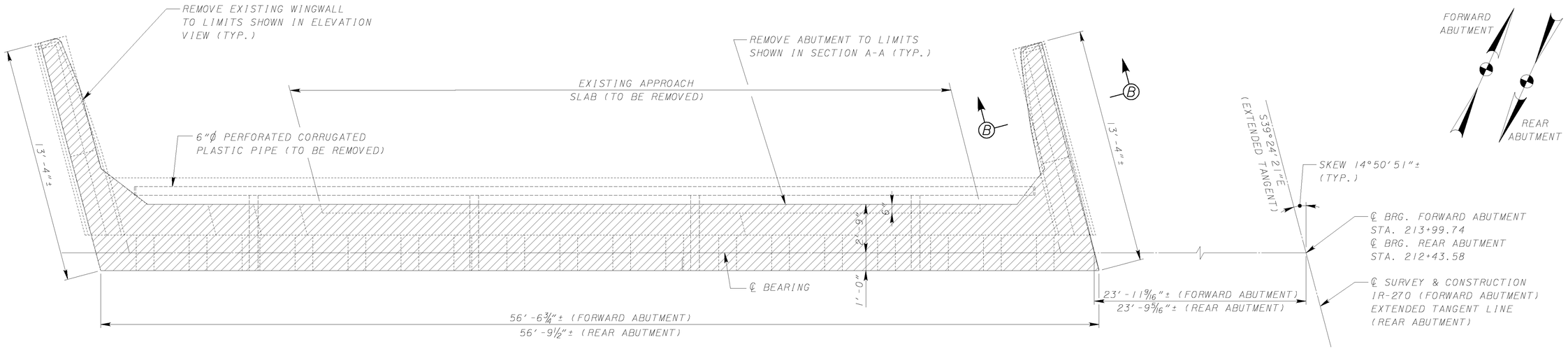
ESTIMATED QUANTITIES
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

5/23

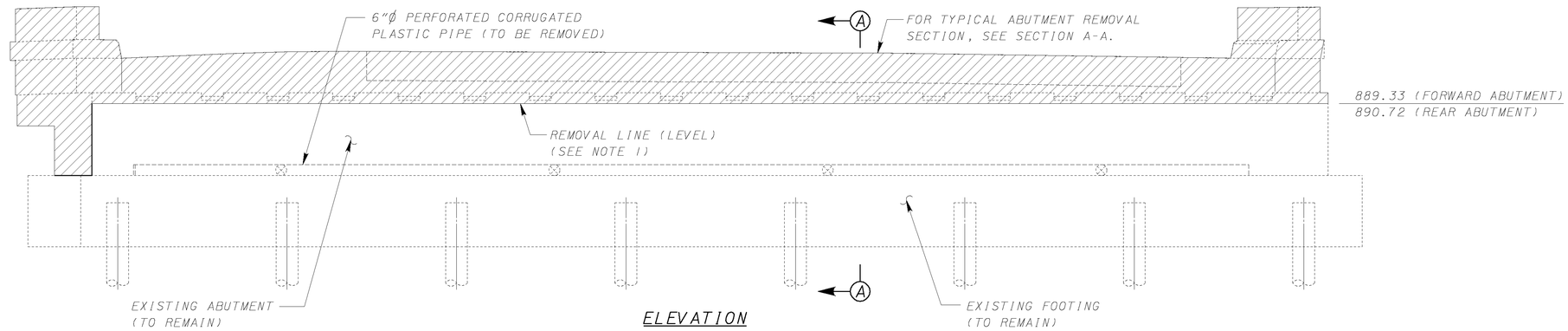
1872
2107

DATE: 6/14/2011 FILE: ....

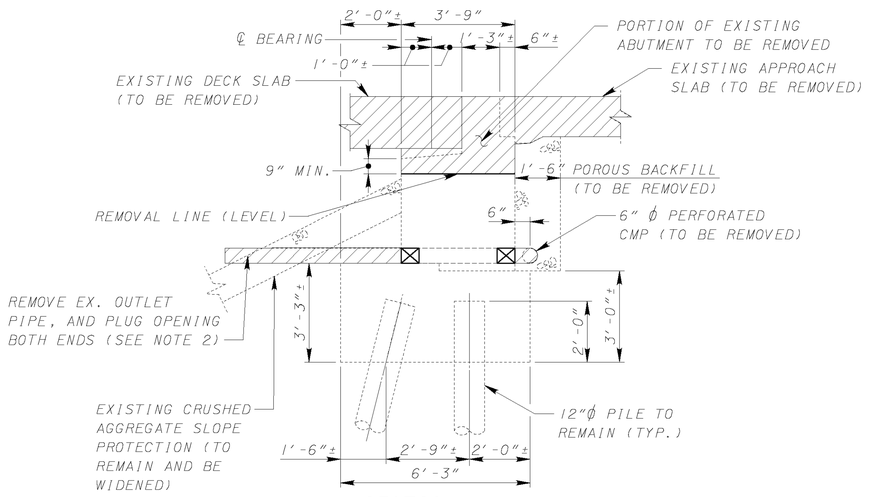


PLAN

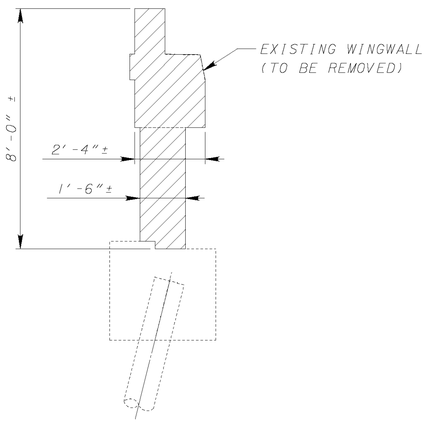
(FORWARD ABUTMENT SHOWN. REAR ABUTMENT SIMILAR BUT OPPOSITE HAND)



ELEVATION



SECTION A-A



SECTION B-B

LEGEND:

▨ - INDICATES AREA TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. PREPARE AND SCARIFY SURFACE AS PER "CUT LINE CONSTRUCTION JOINT PREPARATION", SEE STRUCTURE GENERAL NOTE SHEET 3/23 EXISTING REINFORCING STEEL TO BE CUT FLUSH WITH REMOVAL LIMIT.
2. PLUG ALL OUTLET PIPES AT BOTH ENDS USING CEMENT GROUT COMPOSED OF ONE PART OF HYDRAULIC CEMENT AND THREE PARTS OF SAND, BY VOLUME, AND WATER. MATERIALS AND LABOR FOR PLUGGING OUTLET PIPES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25I2696	

EXISTING ABUTMENT REMOVAL DETAILS

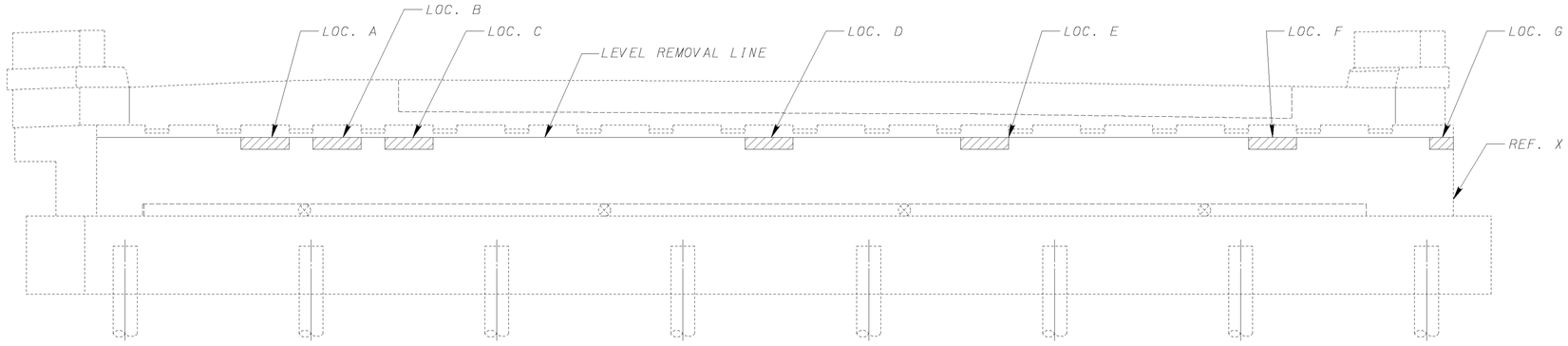
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

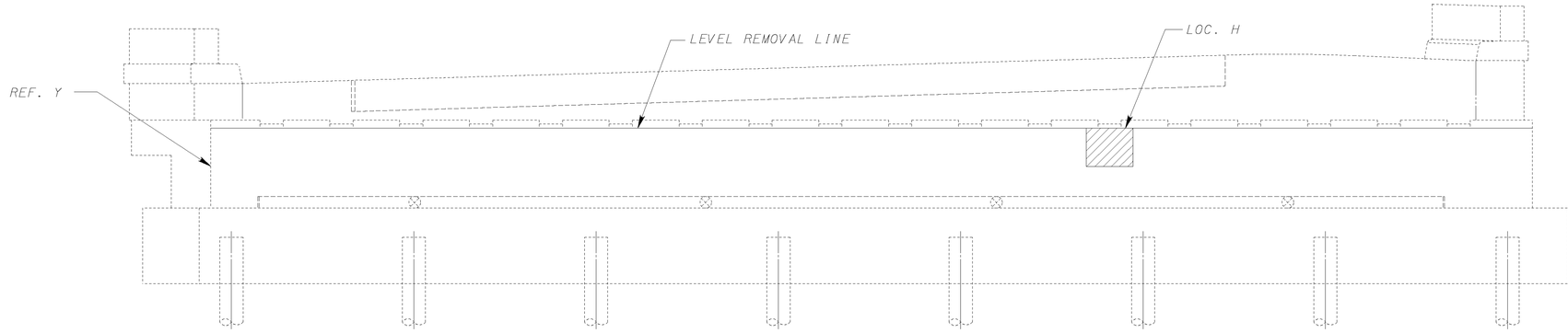
6 / 23

1873
2107

DATE: 5/13/2010 FILE: \\\\



FORWARD ABUTMENT ELEVATION



REAR ABUTMENT ELEVATION

FIELD INSPECTION SUMMARY FORWARD ABUTMENT		
LOCATION	PATCHING	OFFSET FROM REF. X
A	1 SQ. FT.±	48 FT.±
B	1 SQ. FT.±	45 FT.±
C	1 SQ. FT.±	42 FT.±
D	1 SQ. FT.±	28 FT.±
E	1 SQ. FT.±	20 FT.±
F	1 SQ. FT.±	10 FT.±
G	1 SQ. FT.±	1 FT.±
SUBTOTAL	7 SQ. FT.±	
TOTAL *	11 SQ. FT.±	

FIELD INSPECTION SUMMARY REAR ABUTMENT		
LOCATION	PATCHING	OFFSET FROM REF. Y
H	4 SQ. FT.±	36 FT.±
SUBTOTAL	4 SQ. FT.±	
TOTAL *	6 SQ. FT.±	

LEGEND:

- INDICATES AREA TO BE PATCHED PER SPECIFICATION ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

NOTES:

* 1. THE REPAIRS SHOWN, WHICH ARE INCREASED BY 50% OVER THE FIELD MEASUREMENTS, ARE APPROXIMATE. ADDITIONALLY, THE LOCATIONS OF THE REPAIRS ARE APPROXIMATE. FINAL DETERMINATION OF REPAIRS AND THEIR LOCATIONS SHALL BE MADE BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

2. FOR PORTIONS OF STRUCTURE REMOVED, SEE SHEET 6/23.

3. FOR EXISTING ABUTMENT REMOVAL DETAILS, SEE SHEET 6/23.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED MYC
DRAWN DJS
CHECKED RAP
REVISED
REVIEWED RER
DATE 4/5/10
STRUCTURE FILE NUMBER 25/2696

EXISTING ABUTMENT REPAIR DETAILS

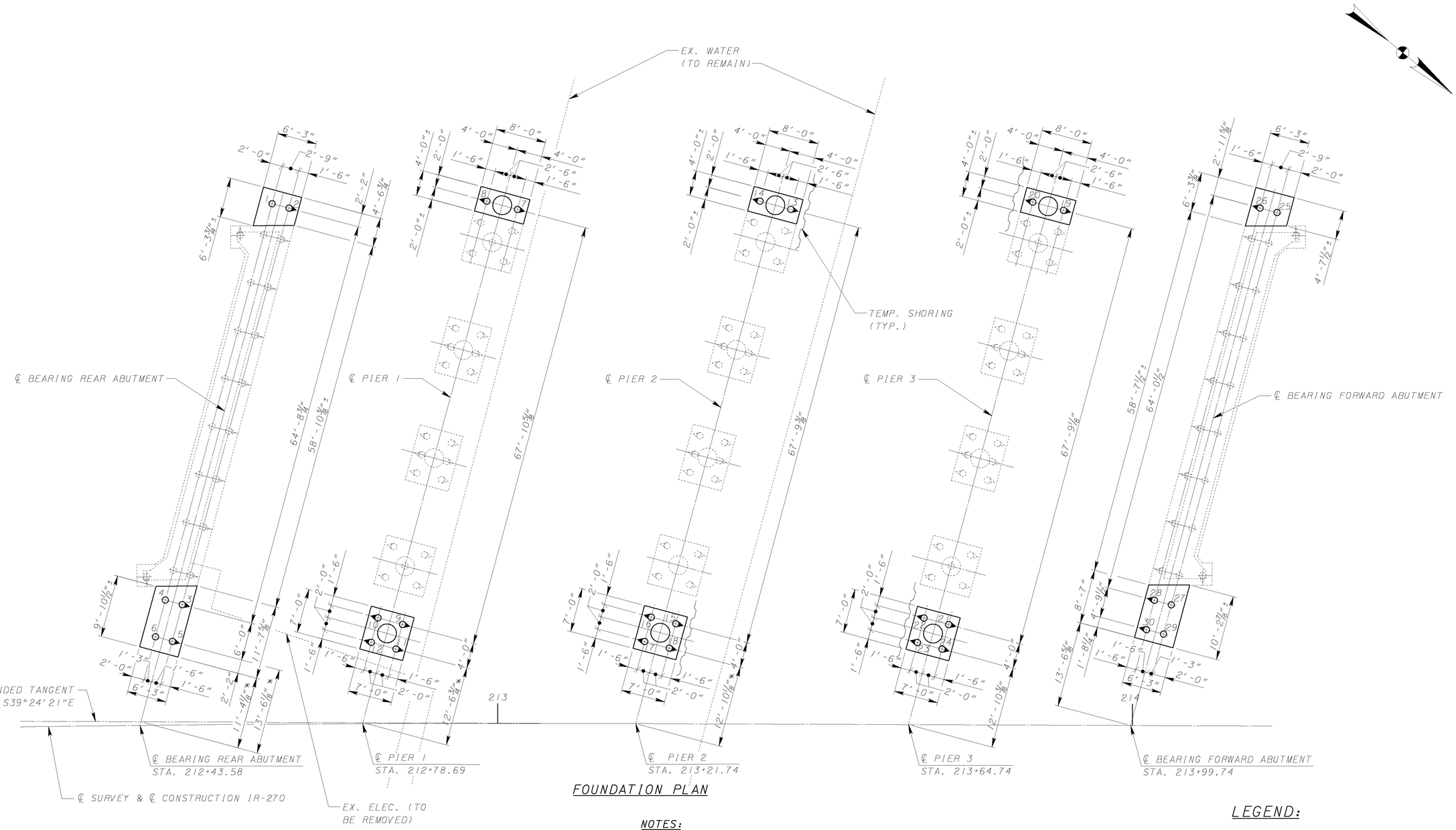
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

7/23

1874
2107

DATE: 5/13/2010 FILE: \\\\



FOUNDATION PLAN

NOTES:

1. ALL NEW PILES SHALL BE 12" ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.
2. ALL EXISTING PILES ARE 12" ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.
3. PILE LAYOUT DIMENSIONS ARE MEASURED ALONG THE BOTTOM OF THE FOOTING.
4. PILE CUTOFF ELEVATION EQUALS BOTTOM OF FOOTING ELEVATION PLUS 1'-0"
5. AT THE PIERS AND 2'-0" AT THE ABUTMENTS.
   FOR REFERENCE LINE DIAGRAM AND LOCATION OF WORK POINTS, SEE
   GENERAL PLAN SHEET 2/23 .

LEGEND:

- INDICATES EXISTING PILE
- INDICATES EXISTING BATTERED PILE
- INDICATES PROPOSED PILE
- INDICATES BATTERED PILE 1:4
- * DIMENSION IS MEASURED TO REFERENCE LINE

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

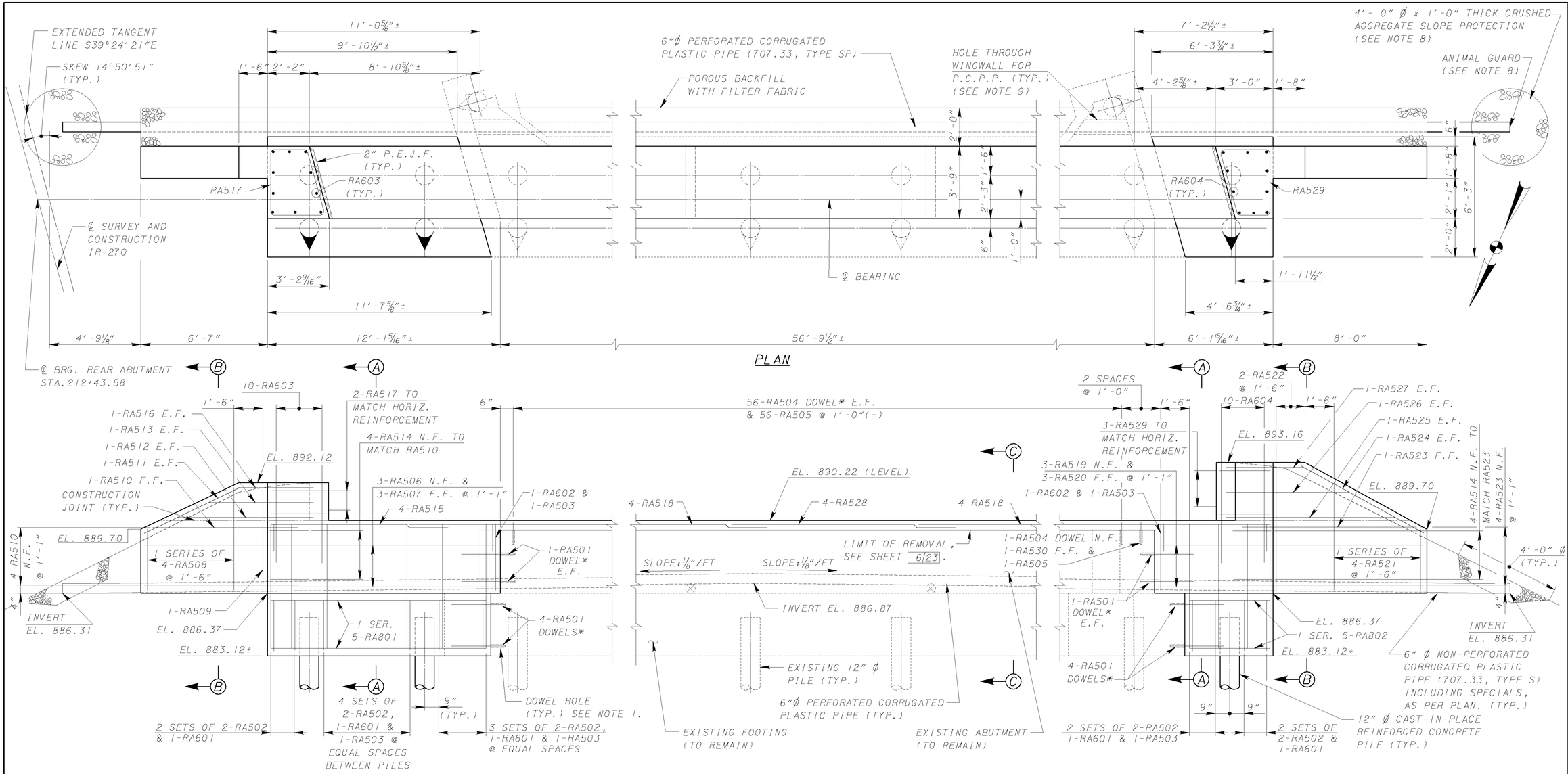
DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		2512696	

FOUNDATION PLAN
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

1875
2107

DATE: 5/13/2010 FILE: \\\\



NOTES:

1. FOR STRUCTURE GENERAL NOTES, SEE SHEETS 3/23 AND 4/23.
2. POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND FROM THE TOP OF THE FOOTING UP TO THE BOTTOM OF APPROACH SLAB, TO 1'-0" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
3. FOR SECTIONS A-A, B-B, C-C AND ADDITIONAL NOTES AND DETAILS, SEE SHEET 11/23.
4. FOR FOUNDATION PLAN SEE SHEET 8/23.
5. FOR REINFORCING STEEL LIST AND BAR BENDING DIAGRAMS SEE SHEET 20/23.
6. THE CONTRACTOR SHALL VERIFY ALL EXISTING STRUCTURE DIMENSIONS AND ELEVATIONS PRIOR THE BEGINNING OF WORK
7. FOR REINFORCING STEEL PREFIX SEE SHEET 11/23 NOTE 4.
8. INCLUDE 4'-0" DIAMETER CRUSHED AGGREGATE SLOPE PROTECTION AND ANIMAL GUARD WITH ITEM 518 - 6" NON-PERFORATED C.P.P., INCLUDING SPECIALS, AS PER PLAN FOR PAYMENT (TYP).
9. PAYMENT FOR CORING HOLES FOR 6" P.C.P.P. SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

LAP LENGTH TABLE	
BAR	REQUIRED LAP LENGTH
#5	2'-0"
#6	2'-4"

ELEVATION

* THE MINIMUM DOWEL EMBEDMENT LENGTH IS 9".
SEE SHEET 11/23 FOR THE DOWEL HOLE LAYOUT DETAIL.

LEGEND:

-INDICATES BATTERED PILE 1:4

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		2512696	

REAR ABUTMENT WIDENING DETAILS

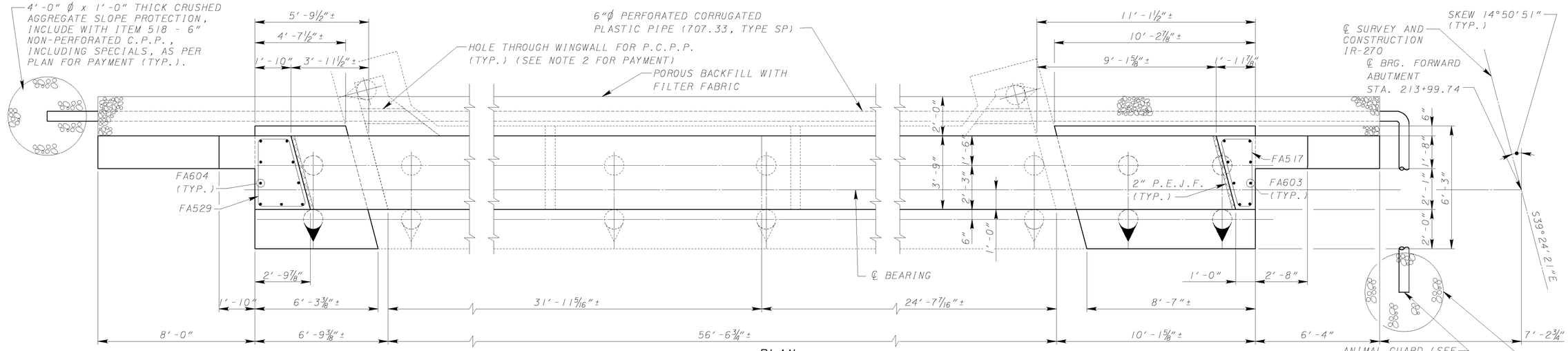
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

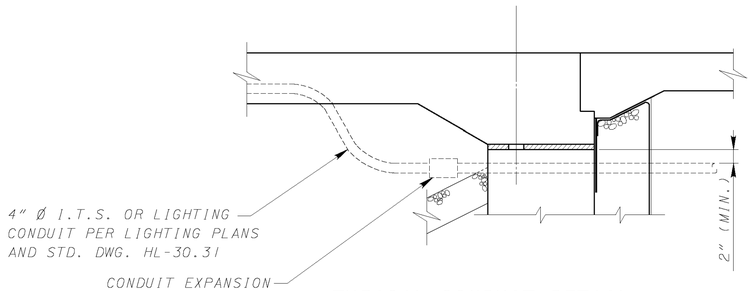
FRA-270-2.60
PID 76191

9/23

1876
2107

DATE: 5/13/2010 FILE: xxxx





TYPICAL CONDUIT DETAIL
(SEE NOTE 3)

* THE MINIMUM DOWEL EMBEDMENT LENGTH IS 9". SEE SHEET 11/23 FOR THE DOWEL HOLE LAYOUT DETAIL.

LEGEND:

-INDICATES BATTERED PILE 1:4

NOTES:

1. FOR SECTIONS A-A, B-B, C-C AND ADDITIONAL NOTES & DETAILS SEE SHEET 11/23.
2. FOR ADDITIONAL NOTES, SEE SHEET 9/23 AND 11/23.
3. TYPICAL CONDUIT DETAIL AT REAR AND FORWARD ABUTMENT. SEE STD. DWG. HL-30.31 AND LIGHTING PLANS FOR ADDITIONAL DETAILS AND PAYMENT.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400 COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		2512696	

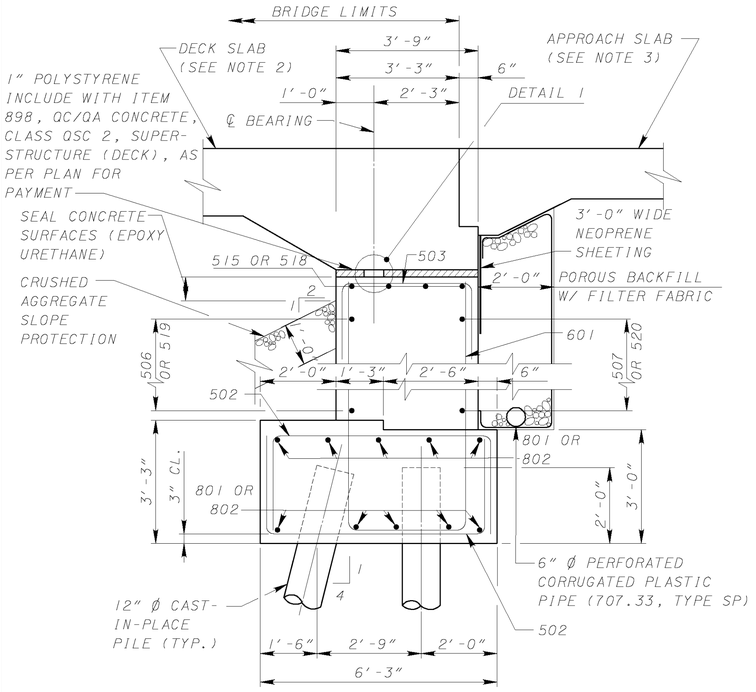
FORWARD ABUTMENT WIDENING DETAILS
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

10/23

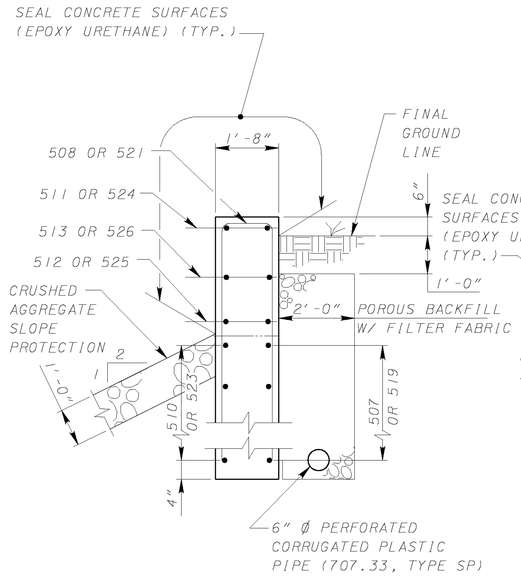
1877
2107

DATE: 5/13/2010 FILE: \\\\

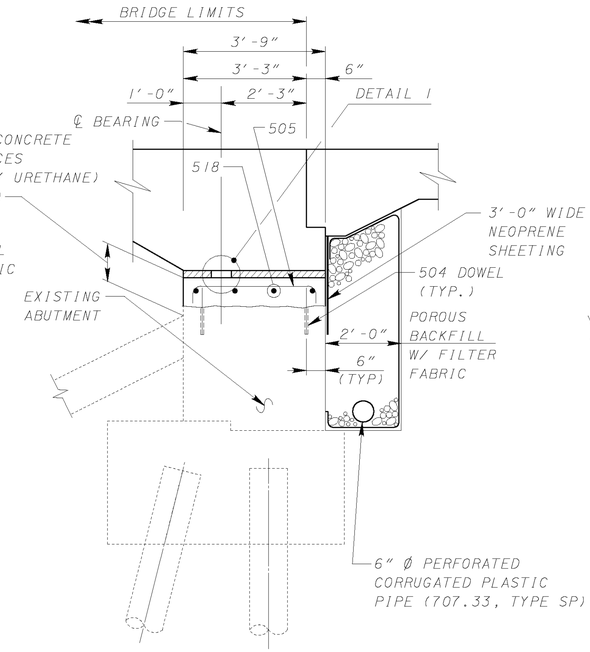


SECTION A-A

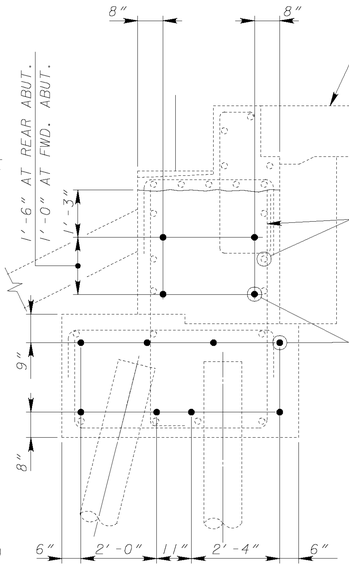
(I.T.S AND LIGHTING CONDUIT NOT SHOWN - SEE NOTE 6)



SECTION B-B



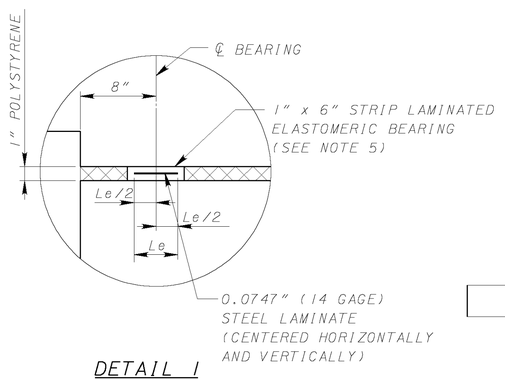
SECTION C-C



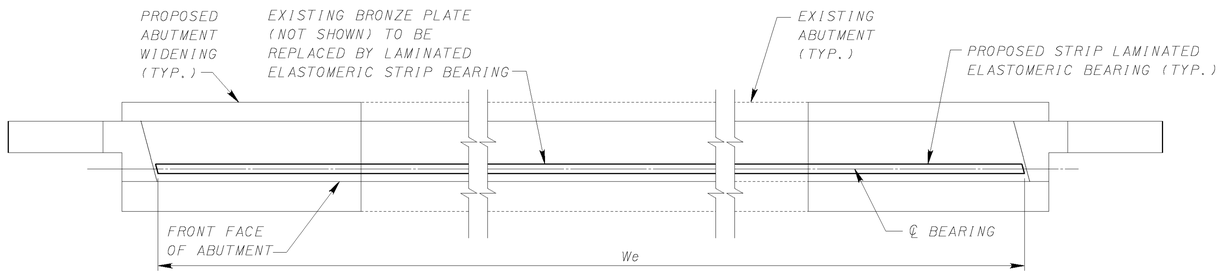
DOWEL HOLE LAYOUT DETAIL

ELASTOMERIC BEARING DATA

LOCATION	TYPE	NO. REQ'D	DL (KIP)	LL (KIP) W/O IMPACT	TOTAL LOAD (DL+LL)	Le (IN.)	We (FT.)	ti (IN.)	te (IN.)	NO. OF ti's	NO. OF te's	NO. INTER'L LAMINATES	Te (IN.)
REAR ABUT	EXP	1	555	320	875	6	69.56	0	0.46	0	2	1	1.00
FWD ABUT	EXP	1	555	320	875	6	69.32	0	0.46	0	2	1	1.00



DETAIL 1



LAMINATED ELASTOMERIC BEARING PLAN

(FORWARD SHOWN, REAR SIMILAR)

NOTES:

1. FOR DOWEL HOLE INSTALLATION NOTES, SEE SHEET 4/23.
2. FOR DECK SLAB DETAILS SEE SHEET 15/23 AND 16/23.
3. FOR APPROACH SLAB DETAILS SEE SHEET 19/23.
4. ALL REINFORCING BAR MARKS SHALL BE PREFIXED AS FOLLOWS:
   RA = REAR ABUTMENT
   FA = FORWARD ABUTMENT
5. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
6. SEE SHEET 10/23 FOR CONDUIT NOTES AND DETAIL.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

REVIEWED	DATE
RER	4/5/10
DRAWN	REVISED
DJS	
DESIGNED	CHECKED
MYC	RAP

STRUCTURE FILE NUMBER 25I2696

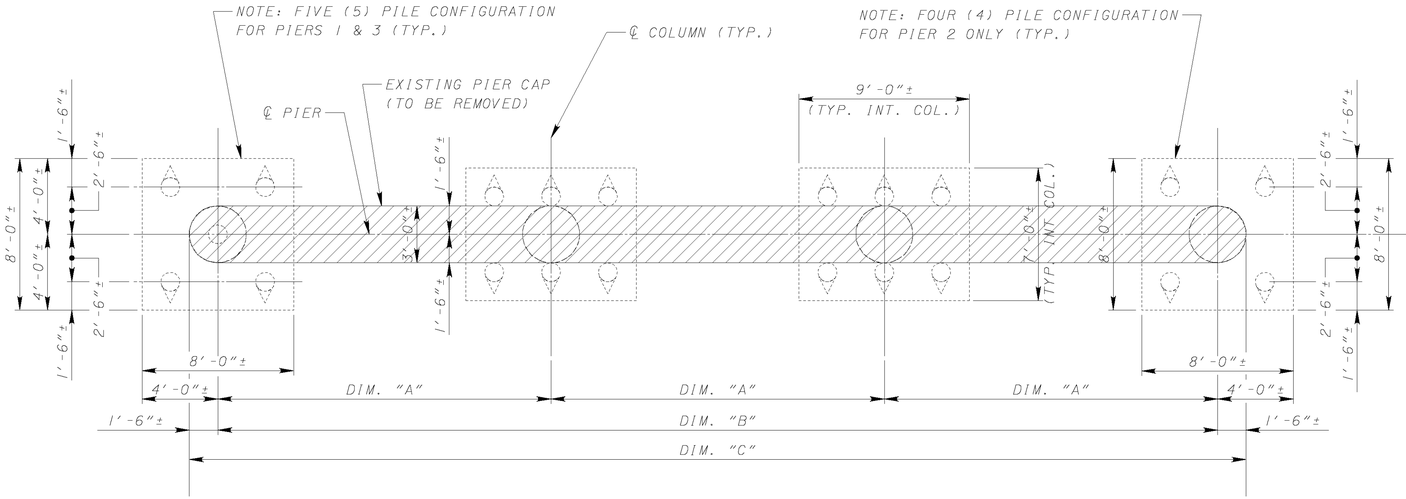
WIDENING ABUTMENT DETAILS
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

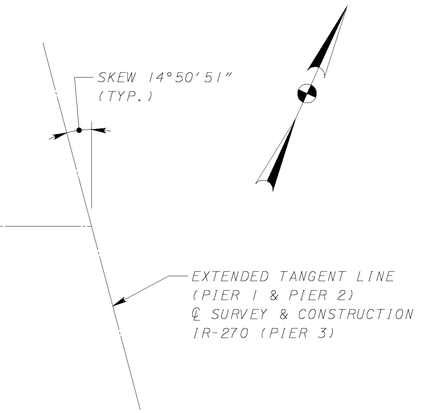
11/23

1878
2107

DATE: 5/13/2010 FILE: \\\\



PLAN

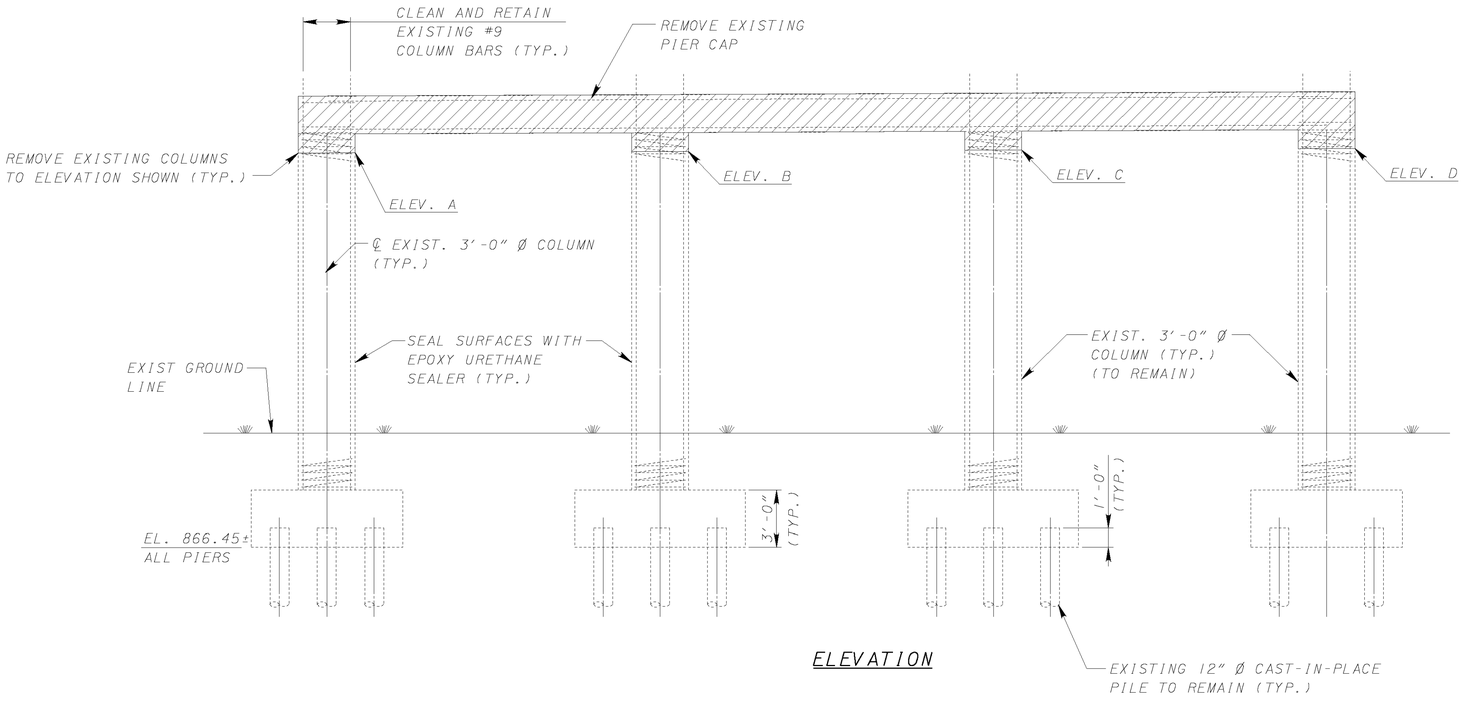


ELEVATION TABLE			
LOCATION	PIER 1	PIER 2	PIER 3
ELEV. A	887.23	887.13	887.01
ELEV. B	887.23	887.13	887.01
ELEV. C	887.23	887.13	887.01
ELEV. D	887.23	887.13	887.01

DIMENSION TABLE			
LOCATION	PIER 1	PIER 2	PIER 3
DIM. "A"	17'-7 9/16"±	17'-7 1/8"±	17'-7 1/16"±
DIM. "B"	52'-10 11/16"±	52'-9 7/8"±	52'-3 3/16"±
DIM. "C"	55'-10 11/16"±	55'-9 7/8"±	55'-3 3/16"±

LEGEND:

- INDICATES AREA TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



ELEVATION

NOTES:

1. PREPARE AND SCARIFY SURFACE AS PER "CUT LINE CONSTRUCTION JOINT PREPARATION", SEE STRUCTURAL GENERAL NOTE SHEET 3|23. EXISTING COLUMN REINFORCING STEEL TO REMAIN AS SHOWN ON SHEET 13|23.
2. IF THE BOND BETWEEN THE EXISTING CONCRETE AND AN EXISTING VERTICAL COLUMN REINFORCING BAR HAS BEEN DESTROYED, OR IF MORE THAN ONE-HALF OF THE PERIPHERY OF A BAR HAS BEEN EXPOSED, THE CONTRACTOR SHALL REMOVE THE ADJACENT CONCRETE TO A DEPTH THAT WILL PROVIDE A MINIMUM ONE INCH CLEARANCE AROUND THE BAR.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED MYC | DRAWN DJS | CHECKED RAP | REVIEWED RCR | DATE 4/5/10 | REVISED | STRUCTURE FILE NUMBER 25|2696

PIER REMOVAL DETAILS

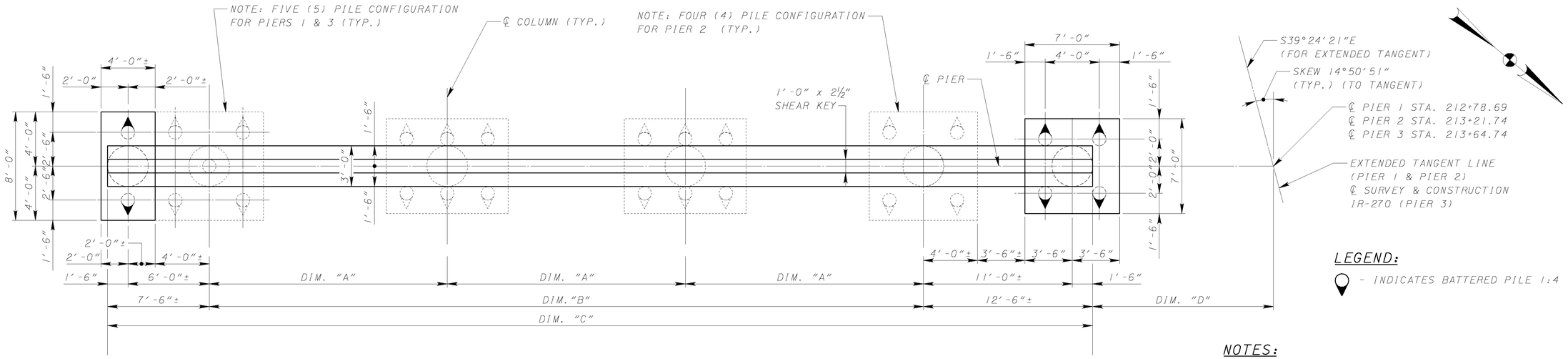
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

12|23

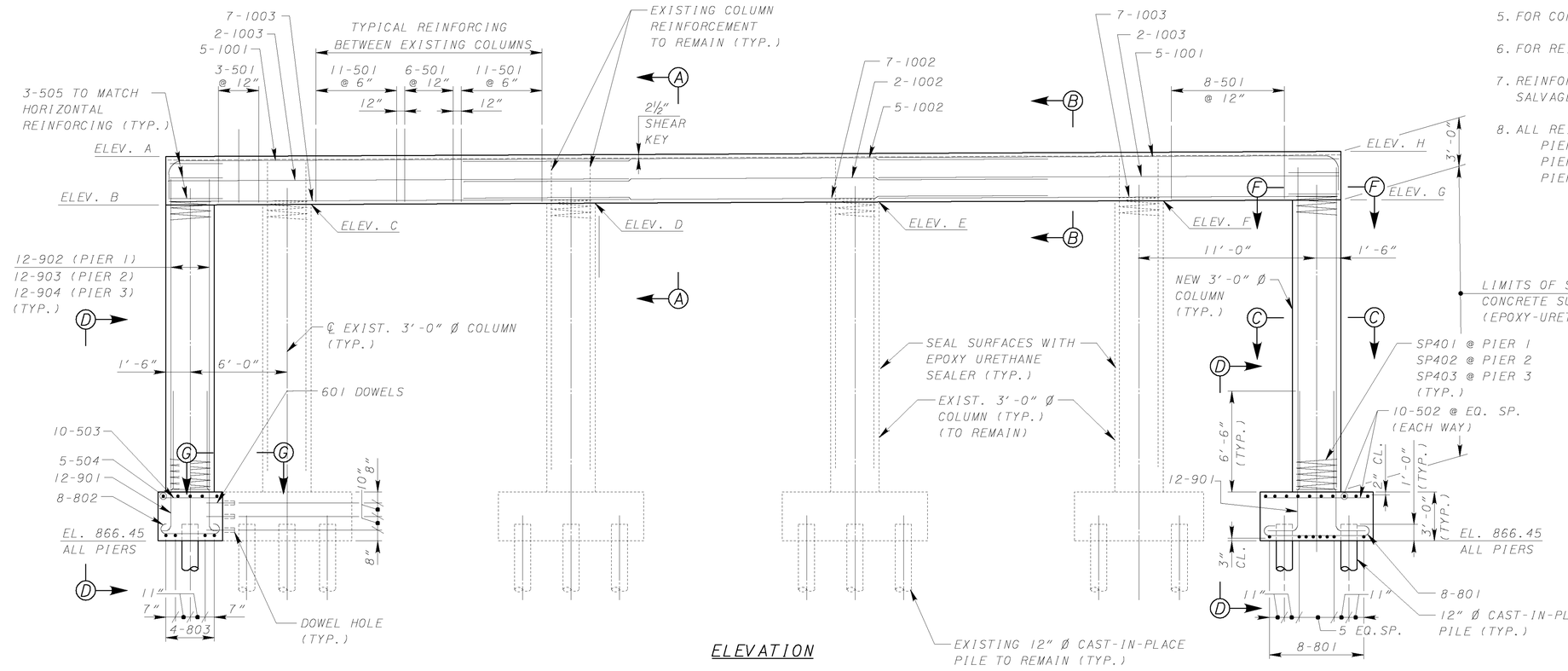
1879
2107

DATE: 5/13/2010 FILE: \\\\



PLAN

DIMENSION TABLE			
LOCATION	PIER 1	PIER 2	PIER 3
DIM. "A"	17'-7 9/16" ±	17'-7 1/8" ±	17'-7 1/16" ±
DIM. "B"	52'-10 11/16" ±	52'-9 3/8" ±	52'-9 3/16" ±
DIM. "C"	72'-10 5/16"	72'-9 3/8"	72'-9 1/8"
DIM. "D"	13'-0 3/4"	13'-4 1/8"	13'-4 3/8"



ELEVATION

PIER ELEVATION TABLE			
LOCATION	PIER 1	PIER 2	PIER 3
ELEV. A	890.23	890.13	890.01
ELEV. B	887.23	887.13	887.01
ELEV. C	887.23	887.13	887.01
ELEV. D	887.23	887.13	887.01
ELEV. E	887.23	887.13	887.01
ELEV. F	887.23	887.13	887.01
ELEV. G	887.23	887.13	887.01
ELEV. H	890.23	890.13	890.01

LAP LENGTH TABLE	
BAR	MIN. LAP LENGTH
#5	2'-0"
#9	6'-6"
#10	10'-3"

LEGEND:

- INDICATES BATTERED PILE 1:4

NOTES:

1. FOR EXISTING STRUCTURE VERIFICATION, SEE GENERAL NOTES SHEET 3/23.
2. FOR FOUNDATION PLAN, DETAILS AND NOTES, SEE SHEET 8/23.
3. FOR SECTIONS A-A, B-B, C-C, F-F AND G-G SEE SHEET 14/23.
4. FOR VIEW D-D SEE SHEET 14/23.
5. FOR CONCRETE REMOVAL NOTES SEE SHEET 3/23.
6. FOR REINFORCING STEEL LIST SEE SHEET 22/23.
7. REINFORCEMENT IN THE EXISTING COLUMN IS TO BE SALVAGED. SEE PIER ELEVATION SHEET 12/23.
8. ALL REINFORCING STEEL SHALL BE PREFIXED AS FOLLOWS:
   PIER 1 = PA
   PIER 2 = PB
   PIER 3 = PC

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 460, COLUMBUS, OHIO 43229
DRAWN DJS | DESIGNED MYC | CHECKED RAP | REVIEWED RCR | DATE 4/5/10 | REVISED | STRUCTURE FILE NUMBER 25112696

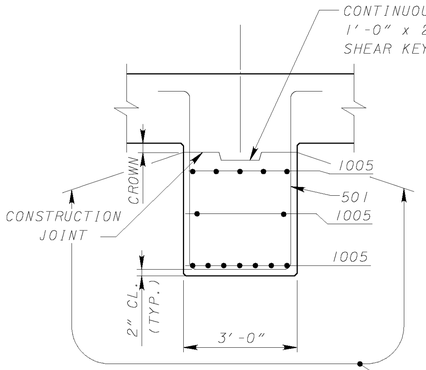
PIER 1, 2 & 3 WIDENING DETAILS
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

13/23

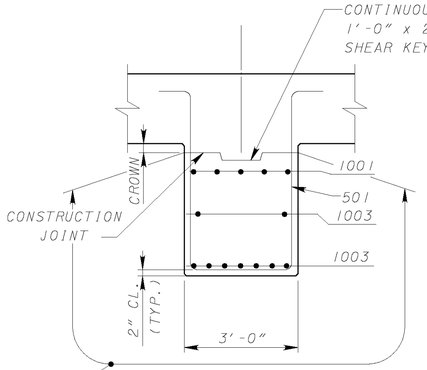
1880
2107

DATE: 5/13/2010 FILE: ""



SECTION A-A

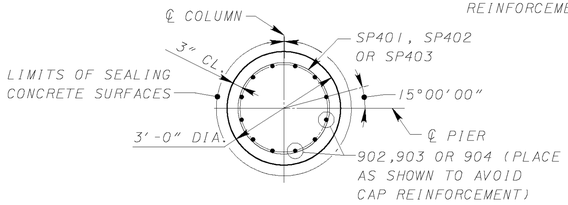
(DECK SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)



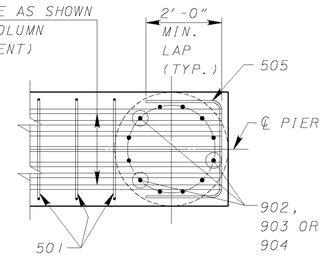
SECTION B-B

(DECK SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

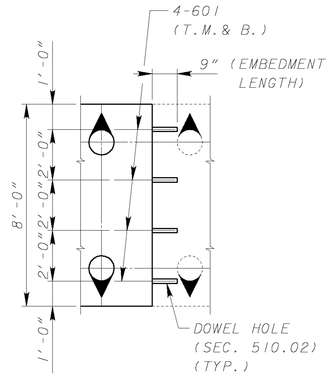
LIMITS OF SEALING CONCRETE SURFACES (EPOXY-URETHANE)



SECTION C-C

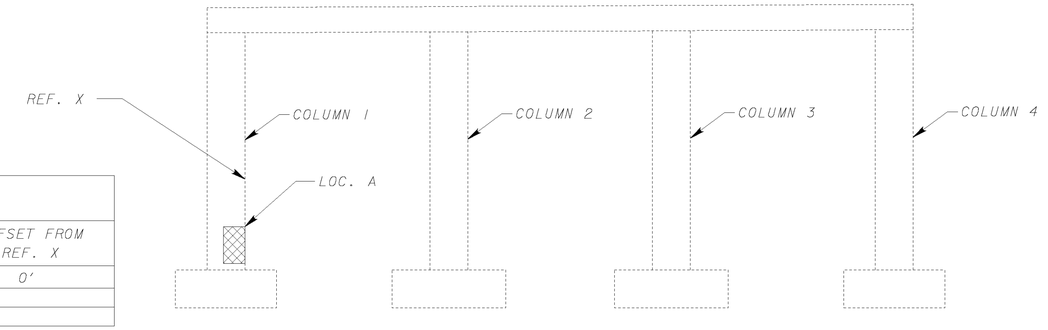


SECTION F-F

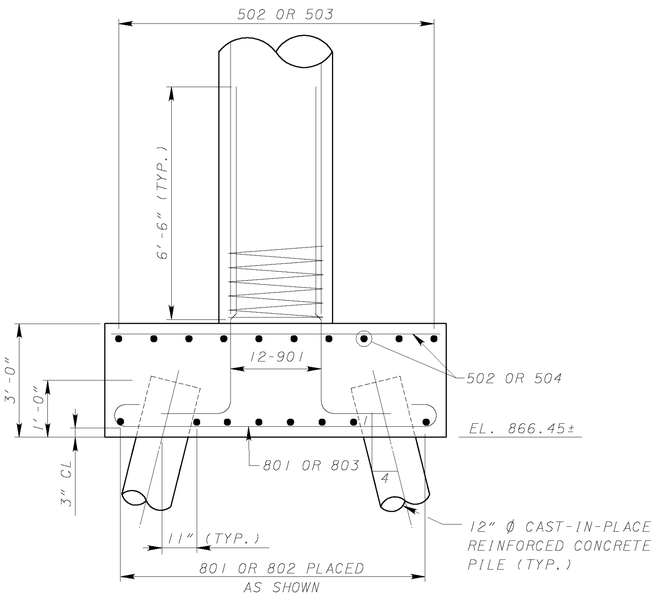


SECTION G-G

FIELD INSPECTION SUMMARY PIER 1		
LOCATION	PATCHING	OFFSET FROM REF. X
A	4 SQ. FT.±	0'
SUBTOTAL	4 SQ. FT.	
TOTAL	6 SQ. FT.*	



PIER 1 ELEVATION



VIEW D-D

LEGEND:

- INDICATES AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

NOTES:

* 1. THE REPAIRS SHOWN, WHICH ARE INCREASED BY 50% (MIN.) OVER THE FIELD MEASUREMENTS, ARE APPROXIMATE. ADDITIONALLY, THE LOCATIONS OF THE REPAIRS ARE APPROXIMATE. FINAL DETERMINATION OF REPAIRS AND THEIR LOCATIONS SHALL BE MADE BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

2. PIERS 2 AND 3 WERE FOUND TO BE FREE OF UNSOUND CONCRETE.

3. FOR PORTIONS OF STRUCTURE REMOVED, SEE SHEET 12/23.

4. FOR WIDENED PIER DETAILS SEE SHEET 13/23.

5. FOR ADDITIONAL NOTES SEE SHEET 13/23.

6. FOR ELEVATIONS SEE SHEET 13/23.

7. ALL REINFORCING IN THE PIERS SHALL BE PREFIXED AS FOLLOWS:
   PIER 1 = PA
   PIER 2 = PB
   PIER 3 = PC

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25126 96	

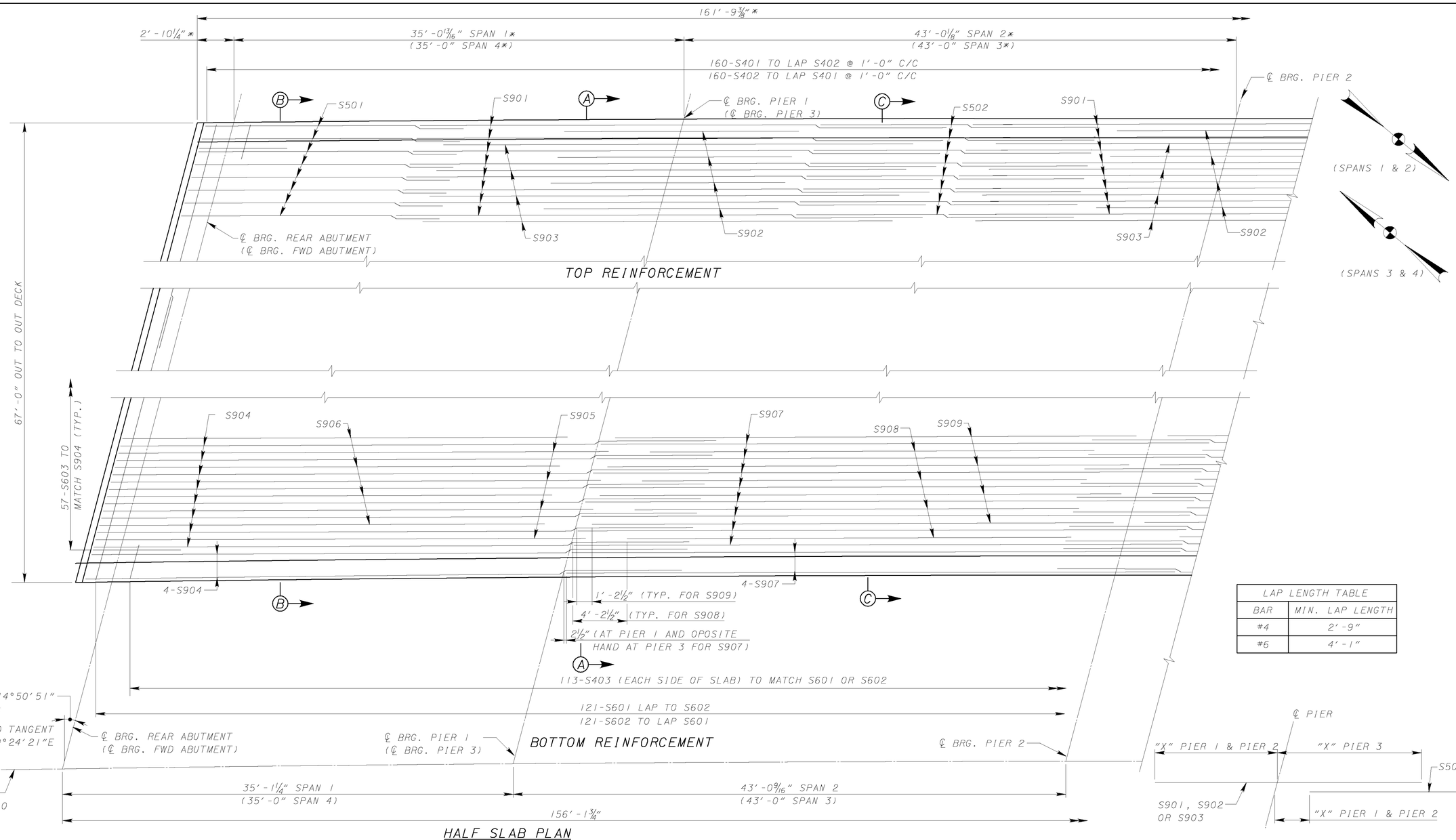
PIER WIDENING DETAILS
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

14/23

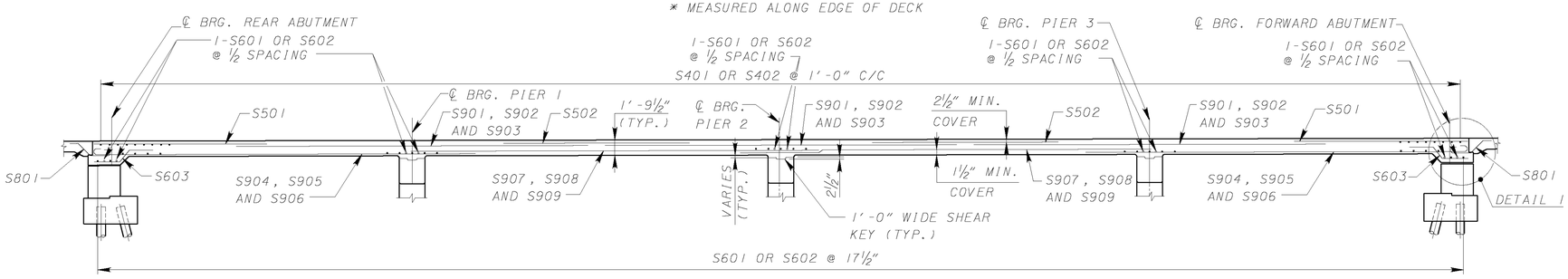
1881
2107

DATE: 5/3/2010 FILE:



HALF SLAB PLAN

* MEASURED ALONG EDGE OF DECK



FULL SLAB ELEVATION

LAP LENGTH TABLE	
BAR	MIN. LAP LENGTH
#4	2'-9"
#6	4'-1"

REINFORCEMENT PLACEMENT

BAR	DIMENSION "X"	INC.
S502	VARIES 9'-3" AT LEFT EDGE TO 14'-4" AT RIGHT EDGE	7/8" (+)
S901	VARIES 29'-6 7/8" AT LEFT EDGE TO 24'-5 7/8" AT RIGHT EDGE	7/8" (+)
S902	VARIES 15'-7" AT LEFT EDGE TO 10'-6" AT RIGHT EDGE	1 7/8" (-)
S903	VARIES 29'-6 7/8" AT LEFT EDGE TO 24'-5 7/8" AT RIGHT EDGE	1 7/8" (-)

NOTES:

1. FOR SECTIONS A-A, B-B, C-C, AND DETAIL 1 SEE SHEET 16/23.
2. FOR SEALING OF CONCRETE SURFACE SEE STRUCTURE GENERAL NOTES, SHEET 4/23.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DATE 4/5/10
REVIEWED RER
STRUCTURE FILE NUMBER 25/12696
DRAWN DJS
REVISED
DESIGNED MYC
CHECKED RAP

DECK PLAN AND ELEVATION

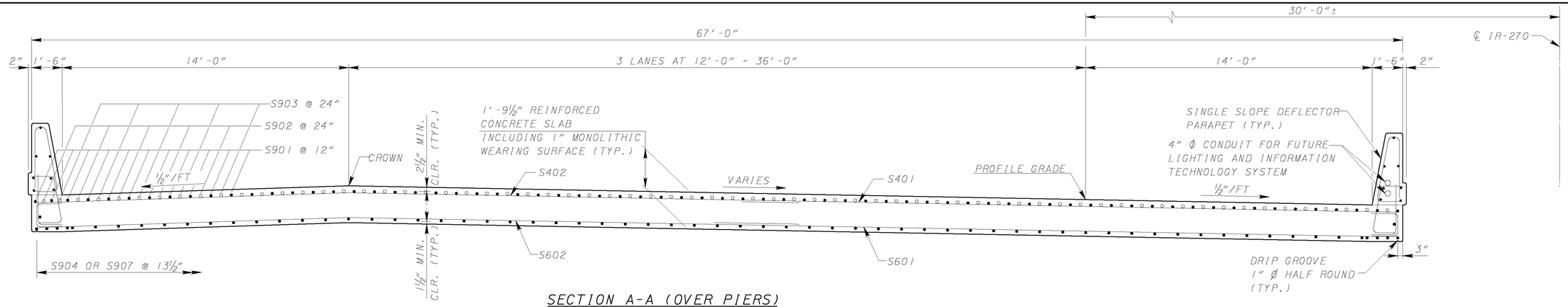
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

15/23

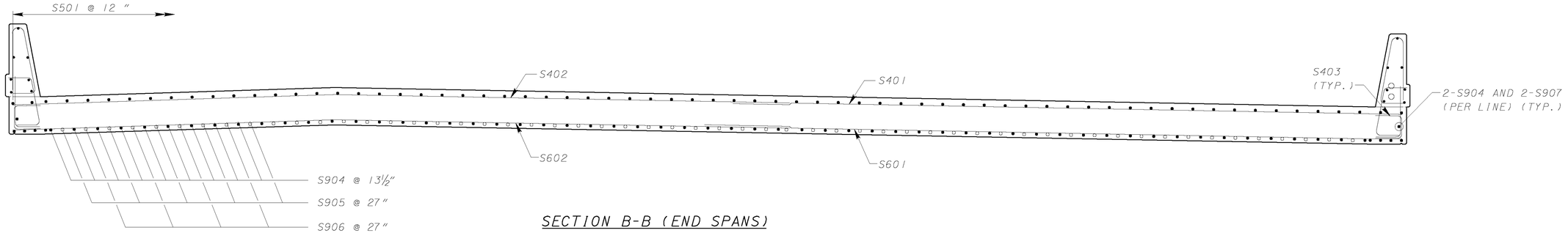
1882
2107

DATE: 5/3/2010 FILE: \\\\



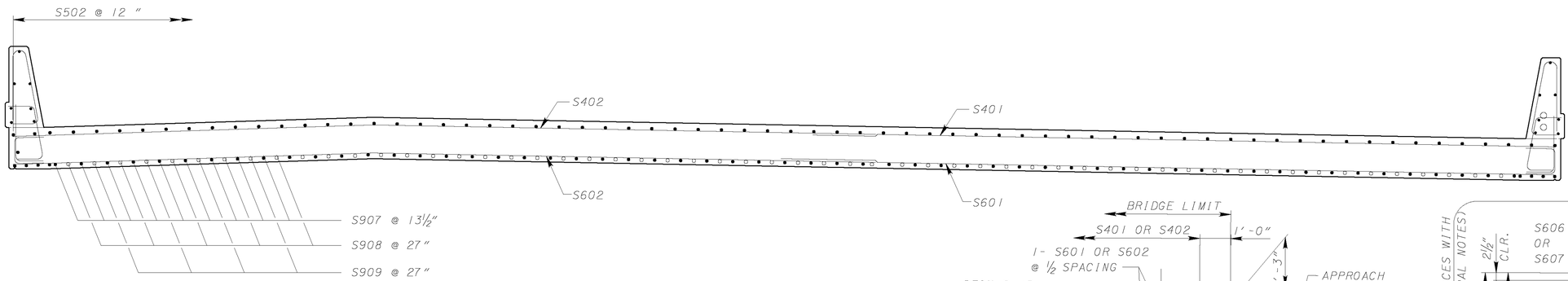
SECTION A-A (OVER PIERS)

LOOKING NORTH



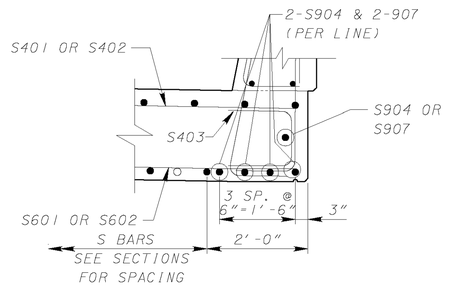
SECTION B-B (END SPANS)

LOOKING NORTH

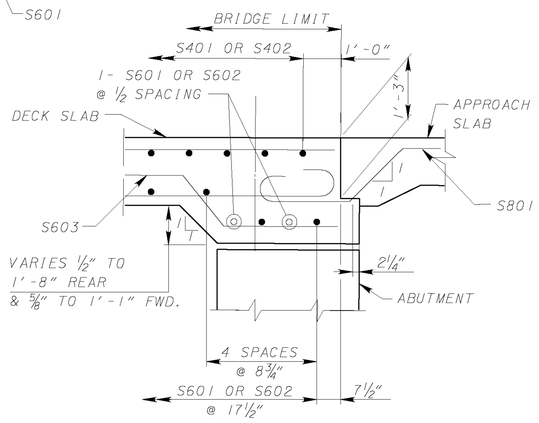


SECTION C-C (INTERIOR SPANS)

LOOKING NORTH

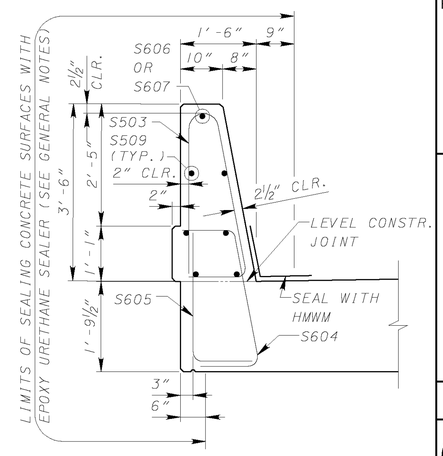


EDGE BEAM DETAIL



DETAIL 1

(FORWARD ABUTMENT SHOWN, REAR ABUTMENT SIMILAR)



DEFLECTOR PARAPET DETAIL

NOTES:

1. FOR LOCATION OF SECTIONS A-A, B-B, C-D, AND DETAIL 1, SEE SHEET 15/23.
2. FOR ADDITIONAL SLAB DETAILS, REFER TO ODOT STANDARD DRAWING CS-1-03.
3. SEE SHEET 10/23 FOR CONDUIT DETAIL AND NOTES.

DATE: 5/13/2010 FILE: \\\\\

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25/2696	

TRANSVERSE SECTION AND DETAILS

BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

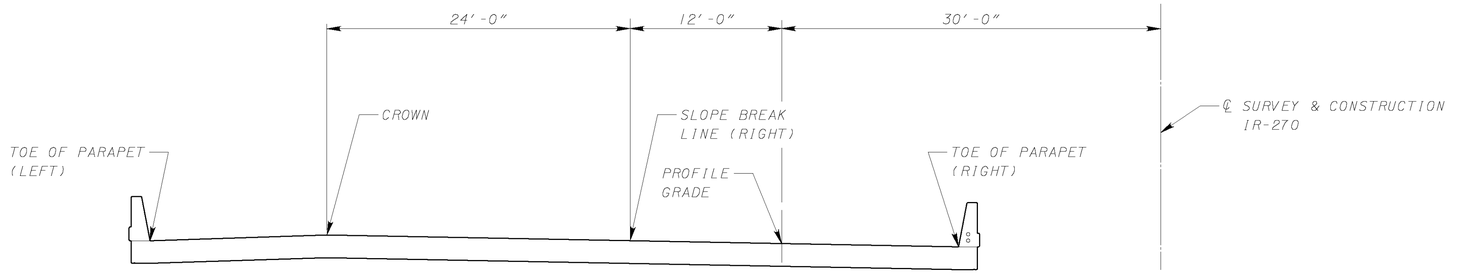
FRA-270-2.60
PID 76191

16/23

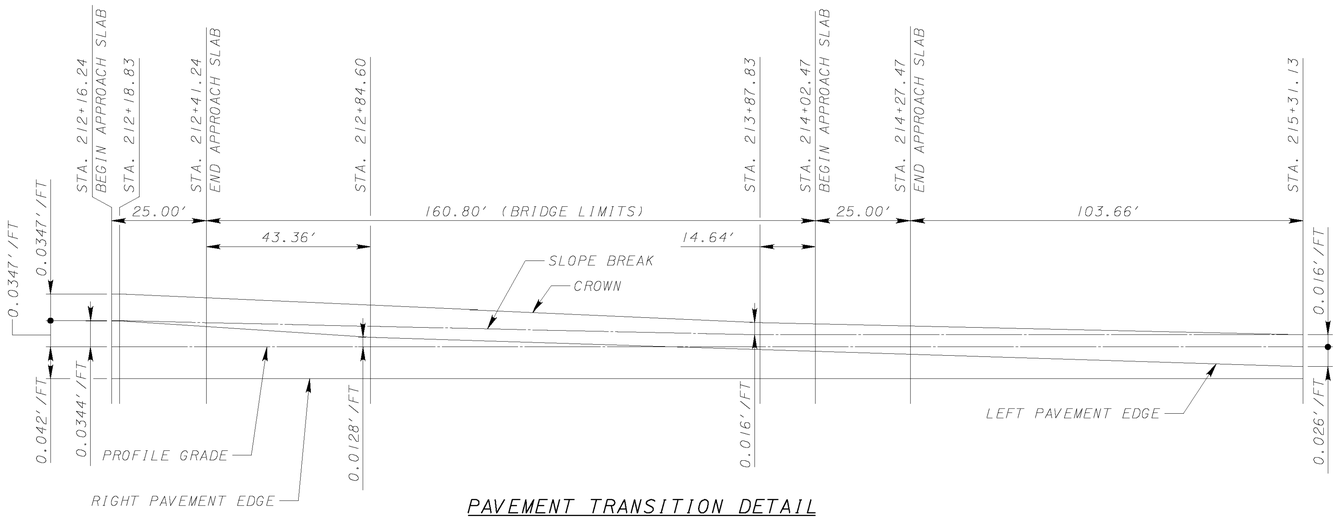
1883
2107

FINAL DECK SURFACE ELEVATIONS

LOCATION	TOE OF PARAPET (LEFT)		CROWN		SLOPE BREAK LINE (RIGHT)		PROFILE GRADE		TOE OF PARAPET (RIGHT)	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
BEGIN SPAN 1	212+63.45	893.18	212+60.08	893.76	212+53.00	893.06	212+49.64	892.69	212+45.73	892.14
1/4 PT. SPAN 1	212+72.65	893.13	212+69.19	893.71	212+62.35	893.03	212+58.94	892.68	212+55.06	892.13
1/2 PT. SPAN 1	212+81.86	893.08	212+78.31	893.66	212+71.71	893.01	212+68.24	892.67	212+64.40	892.11
3/4 PT. SPAN 1	212+91.06	893.02	212+87.42	893.60	212+81.06	892.98	212+77.54	892.65	212+73.73	892.10
℄ PIER 1	213+00.27	892.96	212+96.54	893.55	212+90.42	892.94	212+86.84	892.63	212+83.06	892.08
1/4 PT. SPAN 2	213+10.94	892.89	213+07.21	893.48	213+01.03	892.90	212+97.55	892.61	212+93.79	892.05
1/2 PT. SPAN 2	213+21.61	892.83	213+17.89	893.42	213+11.65	892.86	213+08.26	892.58	213+04.52	892.03
3/4 PT. SPAN 2	213+32.28	892.76	213+28.56	893.34	213+22.26	892.83	213+18.98	892.56	213+15.25	892.01
℄ PIER 2	213+42.95	892.69	213+39.23	893.27	213+32.87	892.79	213+29.69	892.53	213+25.98	891.98
1/4 PT. SPAN 3	213+53.70	892.62	213+49.98	893.20	213+43.62	892.74	213+40.44	892.50	213+36.73	891.95
1/2 PT. SPAN 3	213+64.45	892.54	213+60.73	893.13	213+54.37	892.70	213+51.19	892.47	213+47.48	891.92
3/4 PT. SPAN 3	213+75.20	892.47	213+71.48	893.06	213+65.12	892.66	213+61.94	892.44	213+58.23	891.89
℄ PIER 3	213+85.95	892.40	213+82.23	892.98	213+75.87	892.61	213+72.69	892.41	213+68.98	891.86
1/4 PT. SPAN 4	213+95.28	892.35	213+91.57	892.93	213+85.20	892.58	213+82.02	892.39	213+78.31	891.84
1/2 PT. SPAN 4	214+04.61	892.30	214+00.90	892.88	213+94.54	892.55	213+91.36	892.36	213+87.64	891.81
3/4 PT. SPAN 4	214+13.94	892.25	214+10.23	892.83	214+03.87	892.52	214+00.69	892.34	213+96.98	891.79
END SPAN 4	214+23.27	892.20	214+19.56	892.78	214+13.20	892.50	214+10.02	892.31	214+06.31	891.76



TYPICAL CROSS SECTION



PAVEMENT TRANSITION DETAIL

NOTE:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

DATE: 5/13/2010 FILE: ****

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

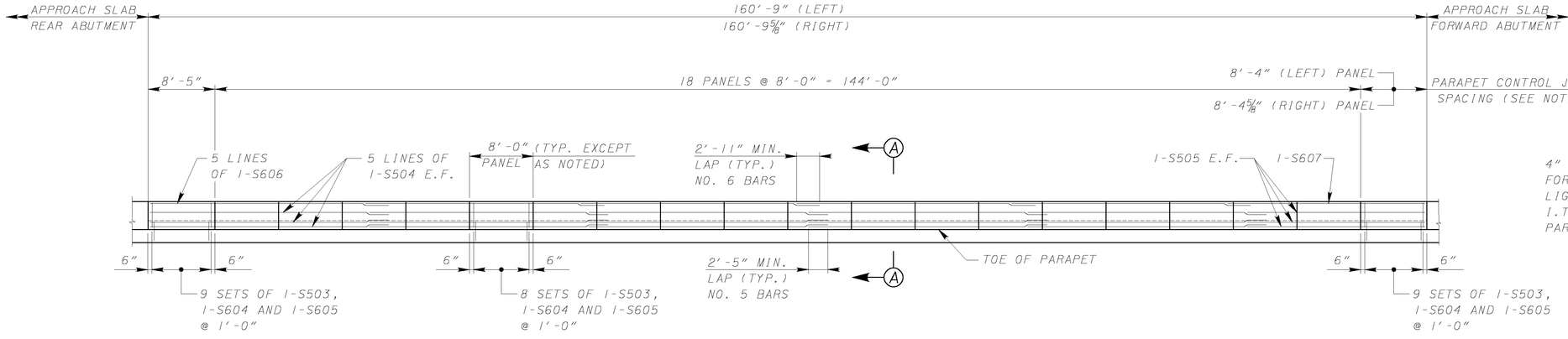
DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25126696	

PROPOSED DECK ELEVATIONS
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

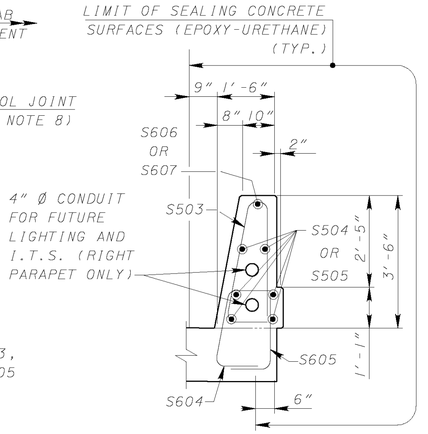
17/23

1884
2107

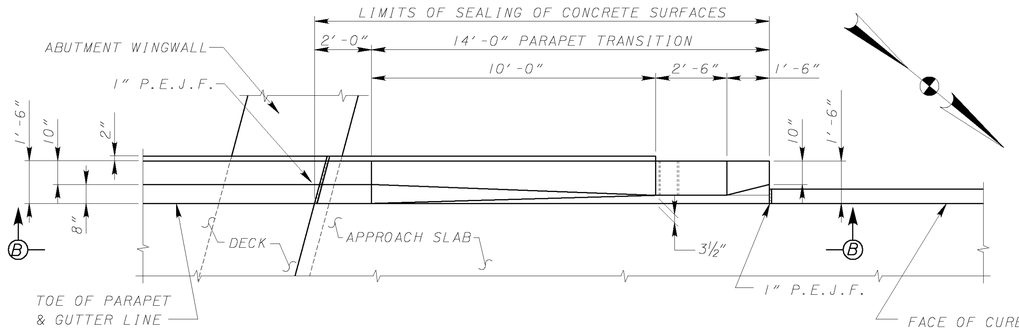


TYPICAL PARAPET ELEVATION

(LEFT PARAPET SHOWN. RIGHT PARAPET IS MIRROR IMAGE OF LEFT PARAPET)
ALL DIMENSIONS MEASURED ALONG TOE OF PARAPET



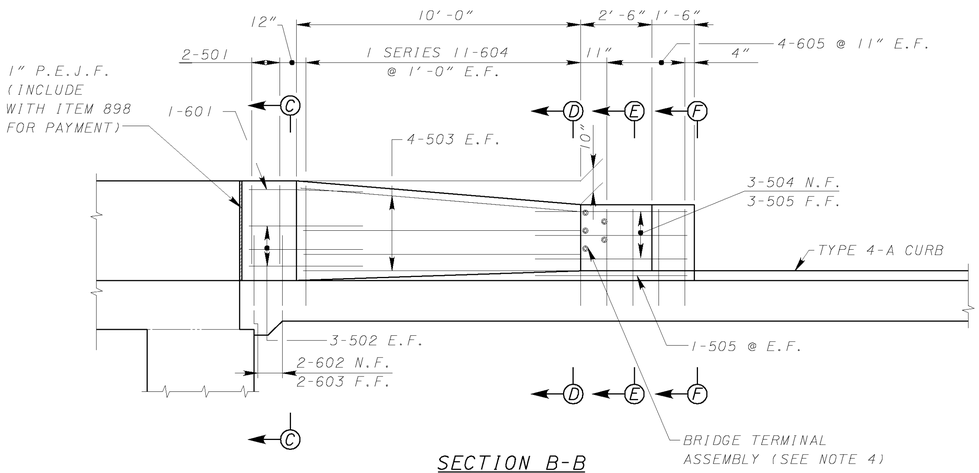
SECTION A-A



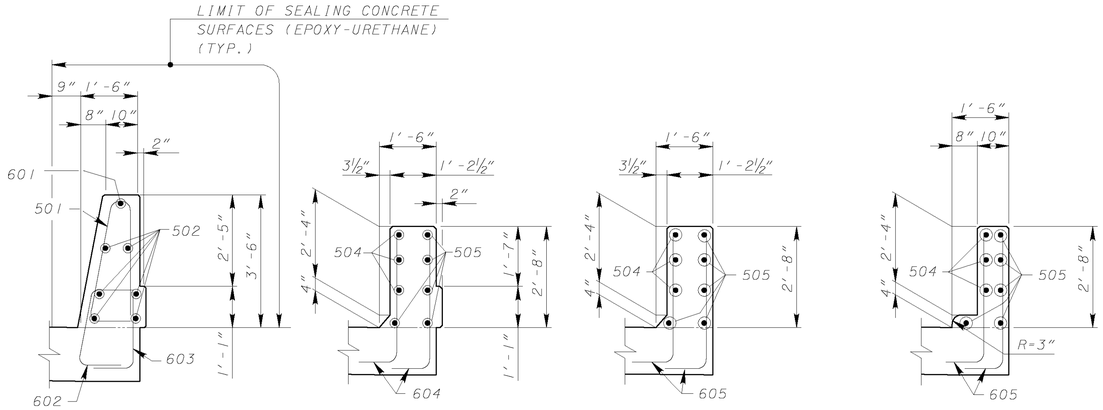
TYPICAL APPROACH SLAB PARAPET TRANSITION PLAN

NOTES:

1. FOR THE STRUCTURE GENERAL NOTES, SEE SHEETS 3/23 & 4/23.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. FOR APPROACH SLAB DETAILS SEE ODOT STANDARD DRAWING AS-1-81.
4. FOR BRIDGE TERMINAL ASSEMBLY TYPE 1 AND 2 ADDITIONAL NOTES AND DETAILS NOT SHOWN HERE, SEE ODOT STANDARD CONSTRUCTION DRAWING GR-3.1.
5. FOR TYPE 4-AS CURB, REFER TO ODOT STANDARD CONSTRUCTION DRAWING BP-5.1.
6. SEALING OF CONCRETE SURFACES SHALL BE INCLUDED WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
7. ABBREVIATIONS USED:
   - N.F. = NEAR FACE
   - E.F. = EACH FACE
   - F.F. = FAR FACE
   - P.E.J.F. = PREFORMED EXPANSION JOINT FILLER
8. FOR CONCRETE PARAPET CONTROL JOINT DETAIL SEE ODOT STANDARD DRAWING SBR-1-99.
9. THE BAR MARKS FOR THE APPROACH SLAB PARAPET REINFORCING SHALL BE PREFIXED LAS.
10. FOR APPROACH SLAB PLAN, SEE SHEET 19/23.



SECTION B-B



SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

APPROACH SLAB PARAPET TRANSITION DETAILS

DESIGN AGENCY: TranSystems, 465 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		251696	

PARAPET AND APPROACH SLAB DETAILS

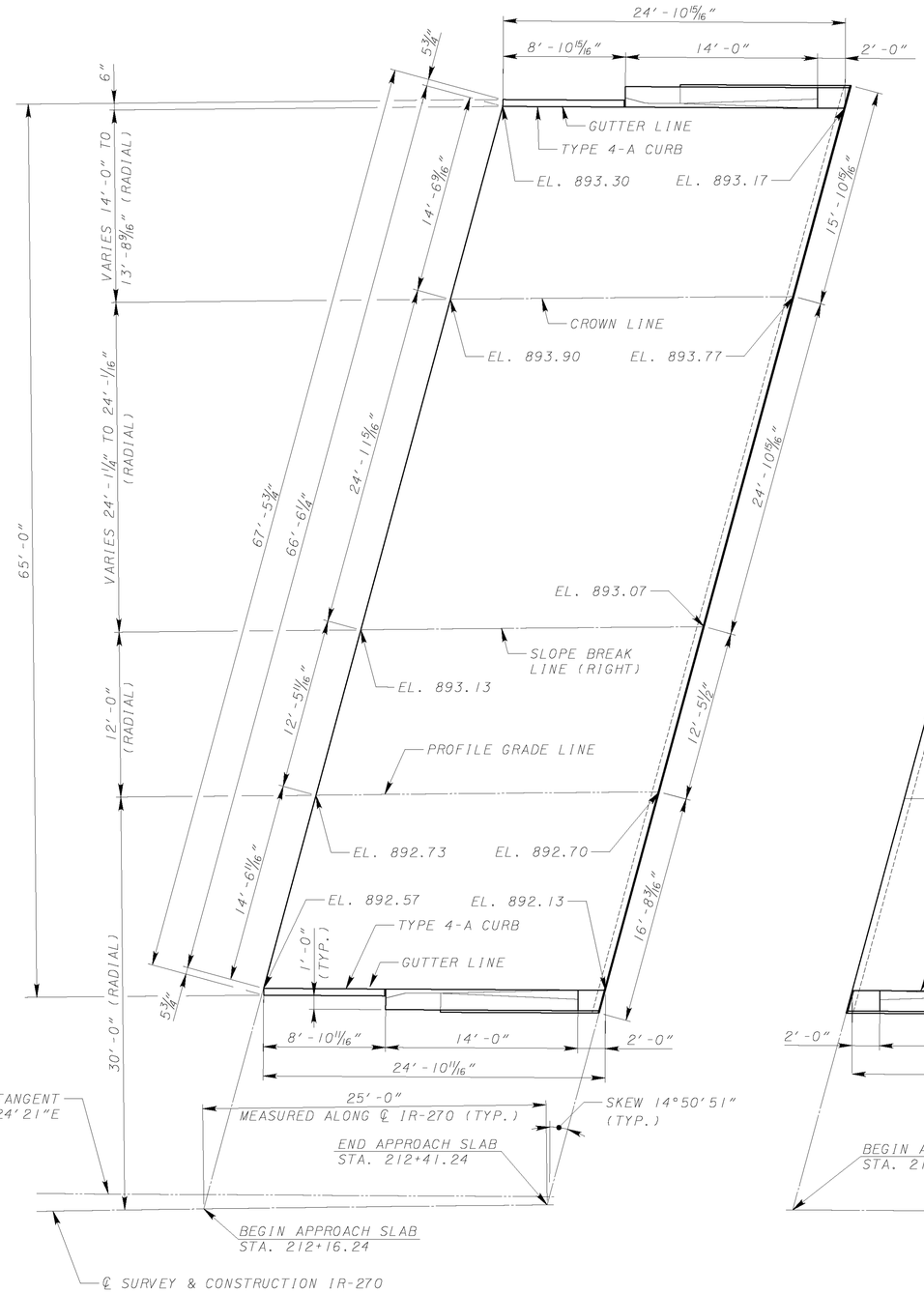
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

18/23

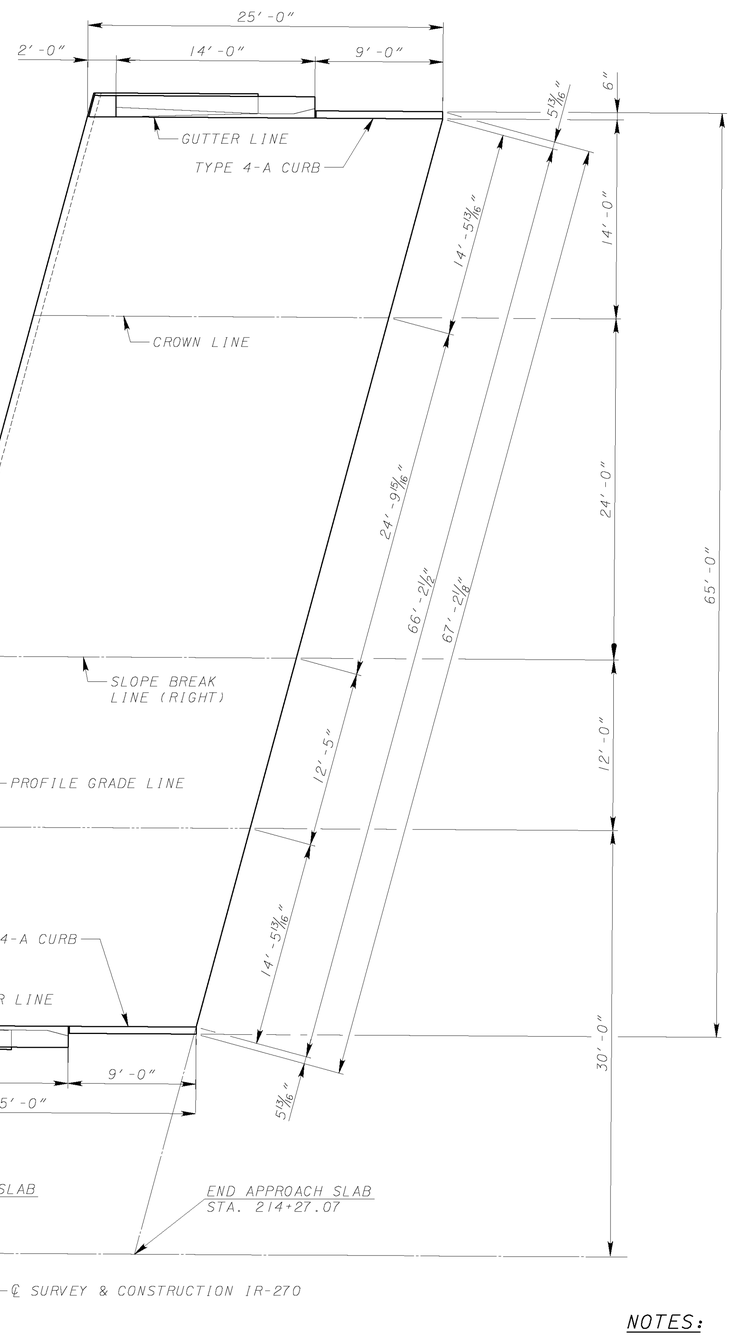
1885
2107

DATE: 5/13/2010 FILE: """



PLAN

REAR APPROACH SLAB



PLAN

FORWARD APPROACH SLAB

NOTES:

1. FOR STANDARD APPROACH SLAB DETAILS, SEE ODOT STANDARD DRAWING AS-1-81.
2. FOR CURB TYPE 4-A, REFER TO ODOT STANDARD DRAWING BP-5-1.
3. FOR PAYMENT OF APPROACH SLAB AND INCIDENTALS, SEE SHEET 4/23.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 460
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		2512696	

APPROACH SLAB PLAN
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

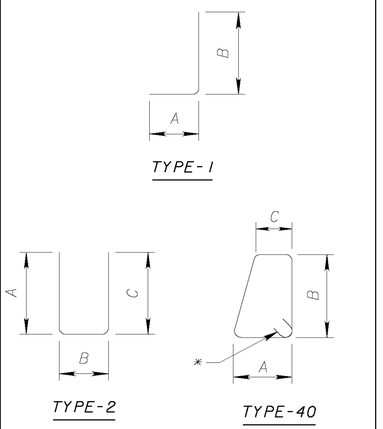
19/23

1886
2107

DATE: 5/13/2010 FILE: <<<<

BAR SCHEDULE											
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
REAR ABUTMENT - LEFT BRIDGE											
RA501	24	2'-9"	68	STR.							
RA502	26	10'-4"	280	2	2'-4"	5'-11"	2'-4"				
RA503	11	7'-2"	82	2	2'-0"	3'-5"	2'-0"				
RA504	113	1'-1"	128	STR.							
RA505	57	3'-10"	228	2	4"	3'-5"	4"				
RA506	3	11'-9"	37	STR.							
RA507	3	17'-3"	54	STR.							
	1	11'-5"			3'-0"		3'-0"				
RA508	SER OF	TO	39	2	TO	1'-4"	TO				1'-5"
	4	7'-1"			5'-2"		5'-2"				
RA509	1	11'-9"	47	2	5'-4"	1'-4"	5'-4"				
RA510	5	8'-0"	42	STR.							
RA511	2	5'-3"	11	STR.							
RA512	2	7'-0"	15	STR.							
RA513	2	5'-5"	11	STR.							
RA514	8	5'-2"	44	1	2'-0"	3'-5"					
RA515	4	8'-10"	37	STR.							
RA516	2	3'-11"	8	STR.							
RA517	2	11'-2"	23	40	1'-10"	3'-5"	2'-10"				
RA518	8	30'-0"	250	STR.							
RA519	3	5'-11"	19	STR.							
RA520	3	14'-9"	46	STR.							
	1	7'-3"			3'-1"		3'-1"				
RA521	SER OF	TO	40	2	TO	1'-4"	TO				1'-8"
	4	12'-1"			5'-6"		5'-6"				
RA522	2	13'-9"	29	2	6'-4"	1'-4"	6'-4"				
RA523	5	9'-5"	49	STR.							
RA524	2	7'-3"	15	STR.							
RA525	2	8'-9"	18	STR.							
RA526	2	6'-5"	13	STR.							
RA527	2	4'-0"	8	STR.							
RA528	4	11'-8"	49	STR.							
RA529	3	10'-8"	33	40	1'-7"	3'-5"	2'-8"				
RA601	13	16'-6"	322	2	6'-8"	3'-5"	6'-8"				
RA602	2	10'-4"	32	2	3'-7"	3'-5"	3'-7"				
RA603	10	4'-3"	64	STR.							
RA604	10	5'-4"	80	STR.							
	2	9'-7"									
RA801	SER OF	TO	278	STR.							0'-5"
	5	11'-3"									
	2	4'-3"									
RA802	SER OF	TO	136	STR.							0'-5"
	5	5'-11"									
TOTAL WEIGHT OF REINFORCING			2635								

BAR BENDING DIAGRAMS



* STANDARD BEND

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, RA601:
   RA: LOCATION OF THE BAR IN THE STRUCTURE (REAR ABUTMENT)
   6: BAR SIZE DESIGNATION NO. 6
   01: SEQUENCE NUMBER
2. BAR DIMENSIONS SHOWN ARE OUT-TO-OUT UNLESS OTHERWISE NOTED.
3. ALL REINFORCING STEEL IS TO BE EPOXY COATED. STRAIGHT BARS ARE INDICATED BY "STR".
4. SPRIAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE LENGTH OF THE SPIRAL ALONG THE AXIS OF THE SPIRAL. ONE AND ONE-HALF CLOSED-COIL TURNS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.
5. "R" INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DATE 4/5/10
REVIEWED RER
STRUCTURE FILE NUMBER 25126966
DRAWN DJS
REVISED
DESIGNED MYC
CHECKED RAP

REINFORCING STEEL LIST
BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

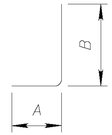
1887
2107

DATE: 5/13/2010 FILE: \\\\

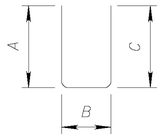
BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
FORWARD ABUTMENT - LEFT BRIDGE											
FA501	24	2'-9"	68	STR.							
FA502	26	10'-4"	280	2	2'-4"	5'-11"	2'-4"				
FA503	11	7'-2"	82	2	2'-0"	3'-5"	2'-0"				
FA504	113	1'-1"	127	STR.							
FA505	57	3'-10"	228	2	4"	3'-5"	4"				
FA506	2	9'-10"	21	STR.							
FA507	2	17'-1"	36	STR.							
	1	6'-9"			6'-9"		2'-10"				
FA508	SER OF	TO	29	2	TO	1'-4"	TO				1'-6"
	3	9'-9"			9'-9"		4'-4"				
FA509	2	4'-7"	21	2	4'-7"	1'-4"	4'-7"				
FA510	4	7'-9"	32	STR.							
FA511	2	4'-0"	8	STR.							
FA512	2	7'-4"	15	STR.							
FA513	2	5'-11"	12	STR.							
FA514	2	4'-3"	9	STR.							
FA515	7	8'-7"	60	STR.							
FA516	4	5'-2"	22	1	2'-0"	3'-5"					
FA517	3	9'-9"	31	40	1'-7"	3'-5"	8"				
FA518	8	30'-0"	250	STR.							
FA519	2	6'-5"	13	STR.							
FA520	2	12'-5"	28	STR.							
	1	5'-7"			2'-3"		2'-3"				
FA521	SER OF	TO	32	2	TO	1'-4"	TO				1'-6"
	4	9'-11"			4'-5"		4'-5"				
FA522	2	11'-1"	23	2	5'-0"	1'-4"	5'-0"				
FA523	4	9'-5"	39	STR.							
FA524	2	6'-10"	14	STR.							
FA525	2	7'-6"	16	STR.							
FA526	2	5'-4"	11	STR.							
FA527	2	3'-6"	7	STR.							
FA528	4	10'-5"	43	STR.							
FA529	3	11'-5"	38	40	2'-5"	3'-5"	1'-6"				
FA530	1	2'-11"	6	STR.							
FA601	13	15'-1"	294	2	6'-0"	3'-5"	6'-0"				
FA602	2	9'-0"	26	2	2'-11"	3'-5"	2'-11"				
FA603	8	4'-1"	98	STR.							
FA604	9	4'-7"	62	STR.							
	2	8'-3"									
FA801	SER OF	TO	243	STR.							0'-5"
	5	9'-11"									
	2	4'-3"									
FA802	SER OF	TO	136	STR.							1'-8"
	5	5'-11"									
TOTAL WEIGHT OF REINFORCING			2460								

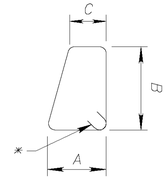
BAR BENDING DIAGRAMS



TYPE-1



TYPE-2



TYPE-40

* STANDARD BEND

NOTES:

1. FOR NOTES SEE SHEET 20/23 .

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MYC	DJS	RER	4/5/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAP		25/2696	

REINFORCING STEEL LIST

BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

1888
2107

DATE: 5/13/2010 FILE: \\\\

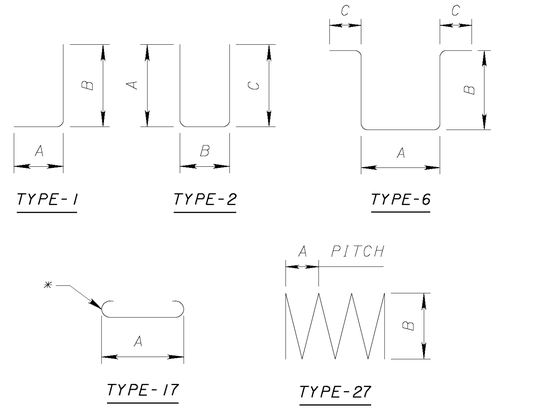
BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
PIER 1 - LEFT BRIDGE											
SP401	2	17'-9"	528	27	4½"	2'-6"					
PA501	95	12'-0"	1106	6	2'-8"	4'-1"	10"				
PA502	20	6'-8"	139	STR.							
PA503	10	3'-8"	38	STR.							
PA504	5	7'-8"	40	STR.							
PA505	6	6'-5"	40	2	2'-0"	2'-8"	2'-0"				
PA601	12	2'-9"	50	STR.							
PA801	16	8'-6"	363	17	6'-8"						
PA802	8	5'-6"	117	17	3'-8"						
PA803	4	9'-6"	101	17	7'-8"						
PA901	24	10'-4"	844	1	1'-7"	9'-1"					
PA902	24	20'-3"	1652	STR.							
PA1001	10	30'-0"	1290	1	1'-10"	28'-6"					
PA1002	14	36'-0"	2169	STR.							
PA1003	18	28'-6"	2208	STR.							
TOTAL WEIGHT OF REINFORCING			10685								
PIER 2 - LEFT BRIDGE											
SP402	2	17'-8"	526	27	4½"	2'-6"					
PB501	95	12'-0"	1106	6	2'-8"	4'-1"	10"				
PB502	20	6'-8"	139	STR.							
PB503	10	3'-8"	38	STR.							
PB504	5	7'-8"	40	STR.							
PB505	6	6'-5"	40	2	2'-0"	2'-8"	2'-0"				
PB601	12	2'-9"	50	STR.							
PB801	16	8'-6"	363	17	6'-8"						
PB802	8	5'-6"	117	17	3'-8"						
PB803	4	9'-6"	101	17	7'-8"						
PB901	24	10'-4"	844	1	1'-7"	9'-1"					
PB903	24	20'-2"	1646	STR.							
PB1001	10	30'-0"	1290	1	1'-10"	28'-6"					
PB1002	14	35'-11"	2164	STR.							
PB1003	18	28'-6"	2208	STR.							
TOTAL WEIGHT OF REINFORCING			10672								

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
PIER 3 - LEFT BRIDGE											
SP403	2	17'-7"	524	27	4½"	2'-6"					
PC501	95	12'-0"	1106	6	2'-8"	4'-1"	10"				
PC502	20	6'-8"	139	STR.							
PC503	10	3'-=8"	38	STR.							
PC504	5	7'-8"	40	STR.							
PC505	6	6'-5"	40	2	2'-0"	2'-8"	2'-0"				
PC601	12	2'-9"	50	STR.							
PC801	16	8'-6"	363	17	6'-8"						
PC802	8	5'-6"	117	17	3'-8"						
PC803	4	9'-6"	101	17	7'-8"						
PC901	24	10'-4"	844	1	1'-7"	9'-1"					
PC904	24	20'-3"	1652	STR.							
PC1001	10	30'-0"	1290	1	28'-6"	1'-10"					
PC1002	14	36'-0"	2169	STR.							
PC1003	18	28'-6"	2208	STR.							
TOTAL WEIGHT OF REINFORCING			10681								

BAR BENDING DIAGRAMS



* STANDARD BEND

NOTES:

1. FOR NOTES SEE SHEET 20/23 .

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DATE 4/5/10
REVIEWED RCR
STRUCTURE FILE NUMBER 251266
DRAWN DJS
REVISED
DESIGNED MYC
CHECKED RAP

REINFORCING STEEL LIST

BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

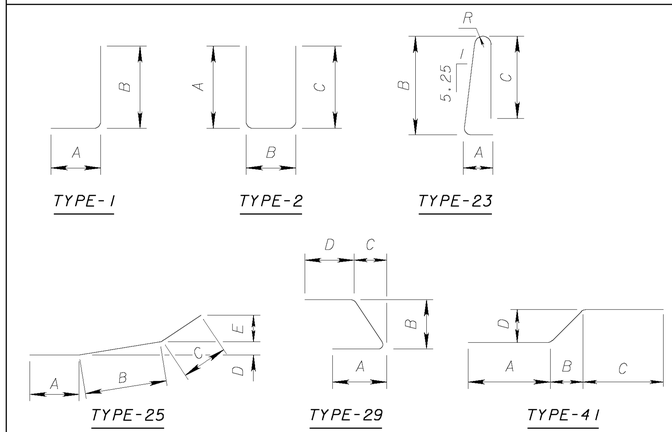
FRA-270-2.60
PID 76191

DATE: 5/13/2010 FILE: ****

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
SUPERSTRUCTURE - LEFT BRIDGE											
S401	160	33'-1"	3536	STR.							
S402	160	41'-4"	4418	STR.							
S403	226	6'-7"	994	2	2'-9"	1'-2"	2'-9"				
S501	136	21'-9"	3085	STR.							
S502	136	16'-7"	2352	STR.							
S503	324	7'-5"	2506	23	1'-1"	3'-2"	3'-0"			2 3/16"	
S504	60	30'-0"	1877	STR.							
S505	12	22'-6"	282	STR.							
S601	121	34'-4"	6240	STR.							
S602	121	38'-6"	6997	STR.							
S603	114	7'-3"	1241	41	3'-0"	1'-1"	2'-9"	1'-4"			
S604	324	4'-8"	2068	29	1'-1"	2'-5"	6"	1'-1"			
S605	324	3'-11"	1906	1	1'-1"	2'-5"					
S606	10	30'-0"	451	STR.							
S607	2	25'-0"	75	STR.							
S901	204	46'-1"	31963	STR.							
S902	102	23'-4"	8092	STR							
S903	99	41'-8"	14025	STR.							
S904	134	46'-3"	21072	STR.							
S905	56	38'-2"	7267	STR.							
S906	56	34'-8"	6601	STR.							
S907	134	47'-4"	21565	STR.							
S908	56	34'-7"	6585	STR.							
S909	56	40'-7"	7727	STR.							
TOTAL WEIGHT OF REINFORCING			162925								
APPROACH SLABS - LEFT BRIDGE (SEE NOTE 2)											
LAS501	8	7'-5"	62	23	1'-1"	3'-2"	3'-0"				
LAS502	24	4'-3"	106	STR.							
LAS503	32	10'-0"	334	STR.							
LAS504	12	5'-6"	68	25	1'-8"	2'-5"	1'-5"	2"	5"		
LAS505	20	5'-6"	114	STR.							
LAS601	15	4'-3"	26	STR.							
LAS602	8	4'-2"	46	29	1'-1"	2'-0"	5"	1'-1"			
LAS603	8	2'-11"	36	1	1'-1"	2'-0"					
	8	4'-3"				3'-4"					
LAS604	SER OF	TO	616	1	1'-1"						9/16"
	22	5'-3"				4'-2"					
LAS605	32	4'-5"	212	1	1'-1"	3'-6"					
LAS606	20	30'-0"	902	STR.							
LAS607	4	30'-10"	186	STR.							
TOTAL WEIGHT OF REINFORCING			2708								

BAR BENDING DIAGRAMS



NOTES:

1. FOR NOTES SEE SHEET 20/23.

2. FOR INFORMATION PURPOSES ONLY. APPROACH SLAB REINFORCING STEEL INCLUDED WITH ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DATE 4/5/10
REVIEWED RER
STRUCTURE FILE NUMBER 25126696
DRAWN DJS
REVISED
DESIGNED MYC
CHECKED RAP

REINFORCING STEEL LIST

BRIDGE NO. FRA-270-0406 L
IR-270 OVER ALKIRE ROAD

FRA-270-2.60
PID 76191

23/23

1890
2107

DATE: 5/13/2010 FILE: \\\\