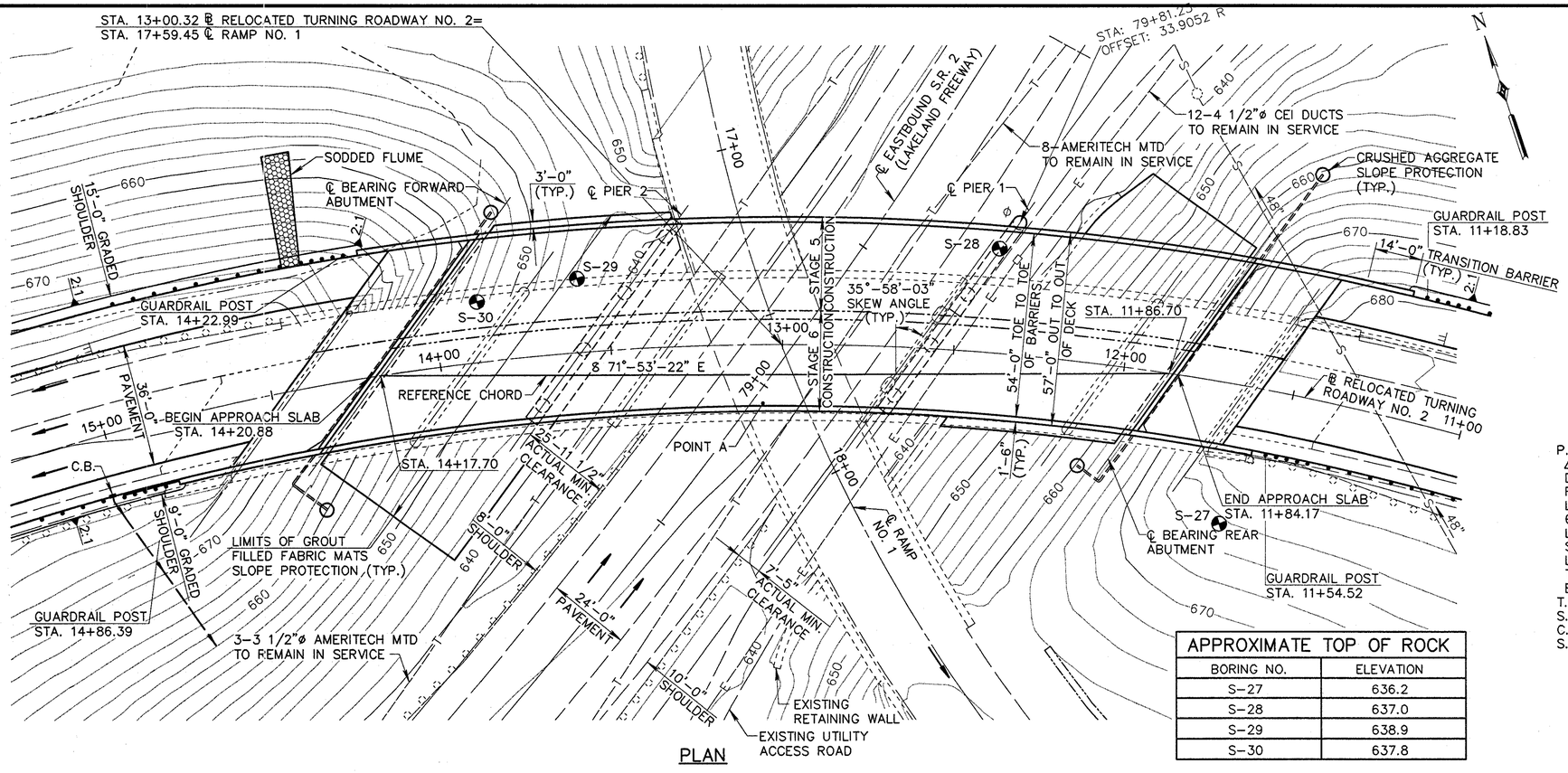


PLAN

APPROXIMATE TOP OF ROCK	
BORING NO.	ELEVATION
S-27	636.2
S-28	637.0
S-29	638.9
S-30	637.8

TEMPORARY BENCH MARK

IRON PIN SET
STA. 11+91.08, 146.07' RT., ℄ TURNING RDWY NO. 2
ELEV. 638.64

TRAFFIC DATA (I-90)

2003 – A.D.T. 35,560
A.D.T.T. 2,300
2023 – A.D.T. 44,730
A.D.T.T. 2,890

EARTHWORK

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

CURVE DATA

℄ LAKELAND FREEWAY E.B.

P.I. = STA. 79+32.15
Δ = 4°16'25.96" RT.
Dc = 0°30'00.00"
R = 11459.160'
T = 427.590'
L = 854.770'
E = 7.980'
P.C. = STA. 75+04.570
P.T. = STA. 83+59.340

CURVE DATA

℄ RAMP NO. 1

P.I. = STA. 18+92.919
Δ = 106° 48'32.21" LT.
Dc = 12°00'00.00"
R = 477.465'
Ls = 300.00'
θs = 18°00'00.00"
LT = 200.462'
ST = 100.420'
Lc = 590.075'
Ts = 799.833'
Es = 332.202'
T.S. = STA. 10+89.859
S.C. = STA. 13+89.859
C.S. = STA. 19+73.934
S.T. = STA. 22+79.934

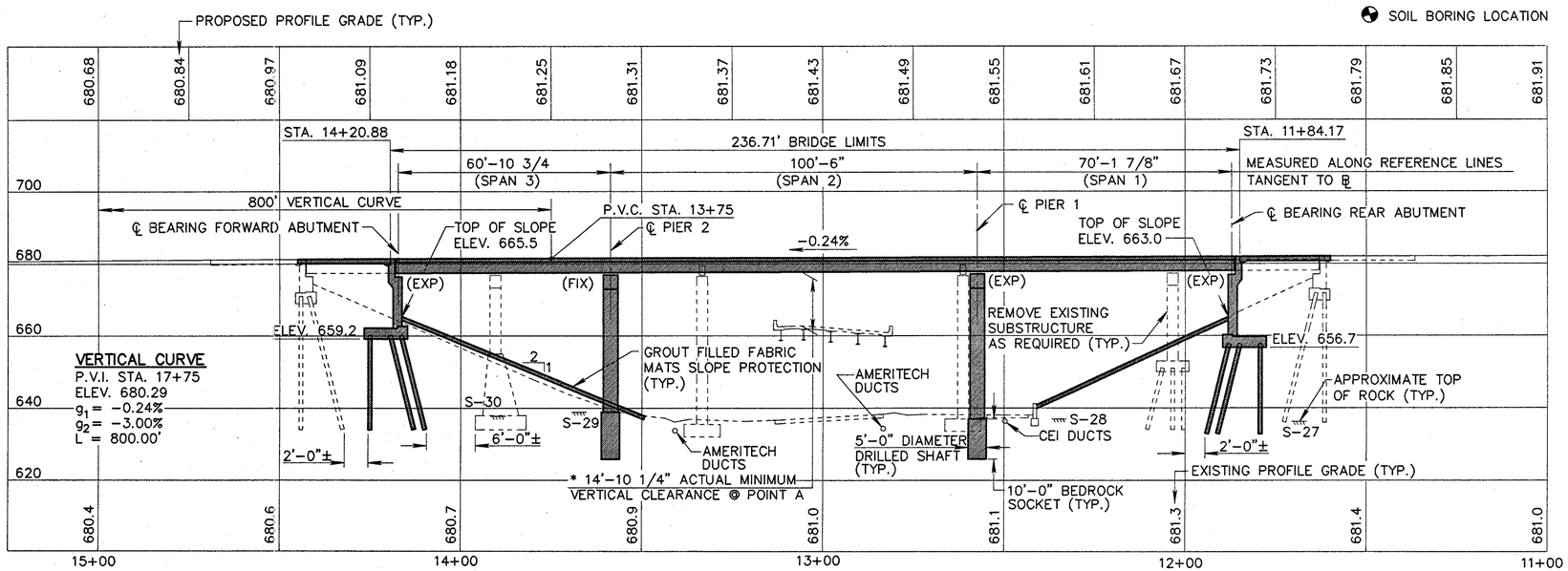
CURVE DATA

℄ RELOCATED TURNING ROADWAY NO. 2

CURVE NO. 35

P.I. = STA. 17+34.49
Δ = 63°32'04.45"LT.
Dc = 7°38'01.00"
R = 750.57'
Ls = 470.00'
θs = 17°56'20.35"
LT = 314.96'
ST = 158.14'
Lc = 832.30'
Ts = 1133.89'
Es = 428.93'
T.S. = STA. 6+00.60
S.C. = STA. 10+70.60
C.S. = STA. 19+02.90
S.T. = STA. 23+72.90

HP 12 X 53 PILES	
LOCATION	ESTIMATED LENGTH
REAR ABUTMENT	31 FEET
FORWARD ABUTMENT	34 FEET



SECTION ON BASELINE RELOCATED TURNING ROADWAY NO. 2

* 17'-0" PREFERRED AND 14'-9 5/8" EXISTING MINIMUM VERTICAL CLEARANCE AT POINT A. ACTUAL MINIMUM VERTICAL CLEARANCE AT POINT A OCCURS AT THE INTERSECTION OF THE CROWN LINE OF RAMP NO. 1 AND THE SOUTH EDGE OF THE SOUTH EXTERIOR GIRDER.

EXISTING STRUCTURE

TYPE:	CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE
SPANS:	40'-58'-72.38'-58'-52' C/C BEARINGS MEASURED ALONG TANGENTS
ROADWAY:	42'-0" TOE TO TOE OF BARRIERS
LOADING:	CF=2000 (57) (ADEQUATE FOR AASHTO ALTERNATE LOADING)
SKEW:	35°-56'-27"± LEFT FORWARD TO TANGENT
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	AS-1-54 (25' LONG)
ALIGNMENT:	7°-30' CURVE LEFT
SUPERELEVATION:	0.083 FT. PER FT.
DATE BUILT	1961
STRUCTURE FILE NO.	1809156

PROPOSED STRUCTURE

TYPE:	CONTINUOUS COMPOSITE WELDED STEEL CURVED GIRDER, A572, SHOP PAINTED, WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS:	70'-1 7/8", 100'-6", 60'-10 3/4" C/C BEARINGS (MEASURED ALONG REFERENCE CHORDS OF (TANGENTS TO) ℄ RELOCATED TURNING ROADWAY NO. 2)
ROADWAY:	54'-0" TOE TO TOE OF BARRIERS
LOADING:	HS25, CASE I AND THE ALTERNATE MILITARY LOADING
SKEW:	35°-58'-03" LEFT FORWARD TO REFERENCE CHORD
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	AS-1-81 (25'-0")
ALIGNMENT:	7°-28'-26" CURVE LEFT
SUPERELEVATION:	0.083 FT. PER FT.
LATITUDE:	41°-35'-48" N
LONGITUDE:	81°-29'-17" E

DESIGN AGENCY
EUTHEMACS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

REVIEWED RAB
DATE 12-01
STRUCTURE FILE NUMBER 1809156
DRAWN RSY
REVISED
DESIGNED RSY
CHECKED GFH

CUYAHOGA
STA. 11+84.17 TO STA. 14+20.88

SITE PLAN
BRIDGE NO. CUY-90-2956L
TURNING ROADWAY NO. 2 OVER RAMP NO. 1

CUY/LAK-90-29.92/0.00

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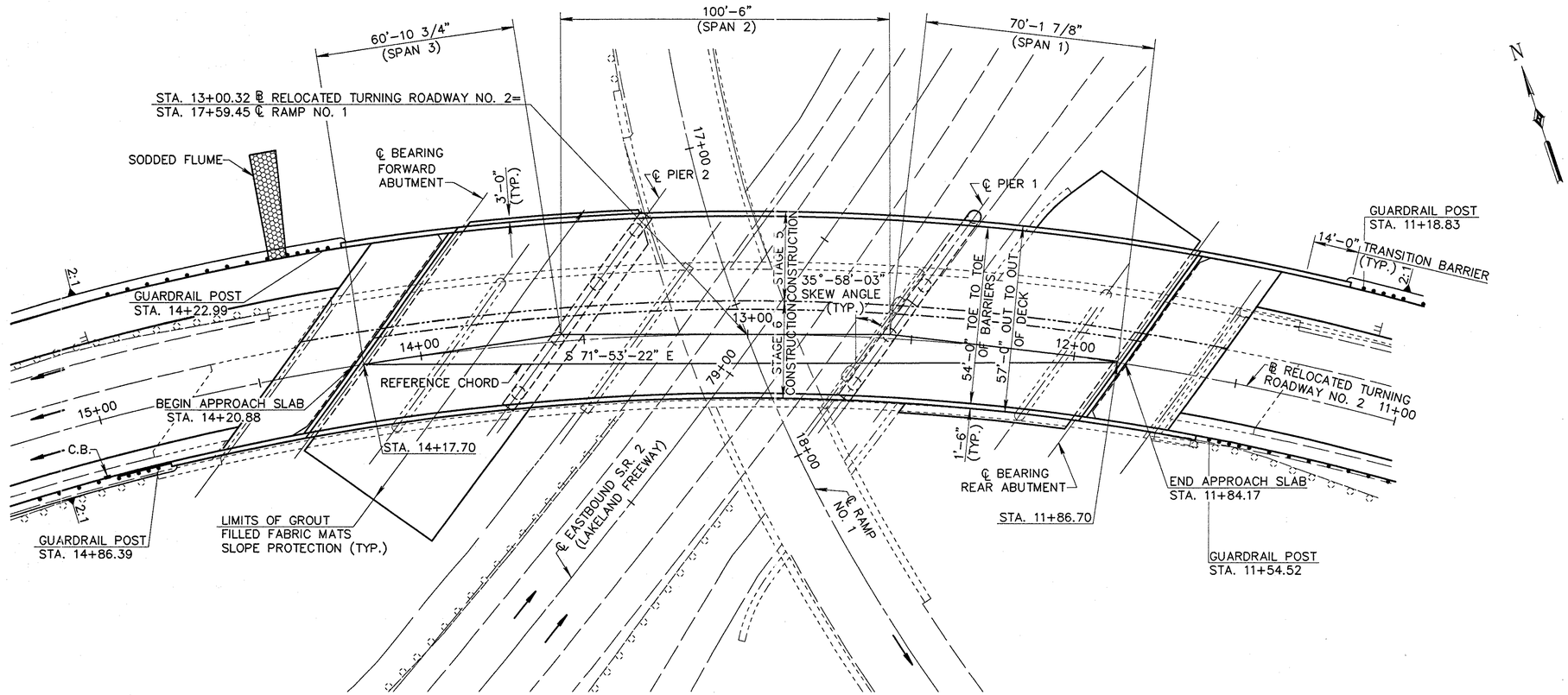
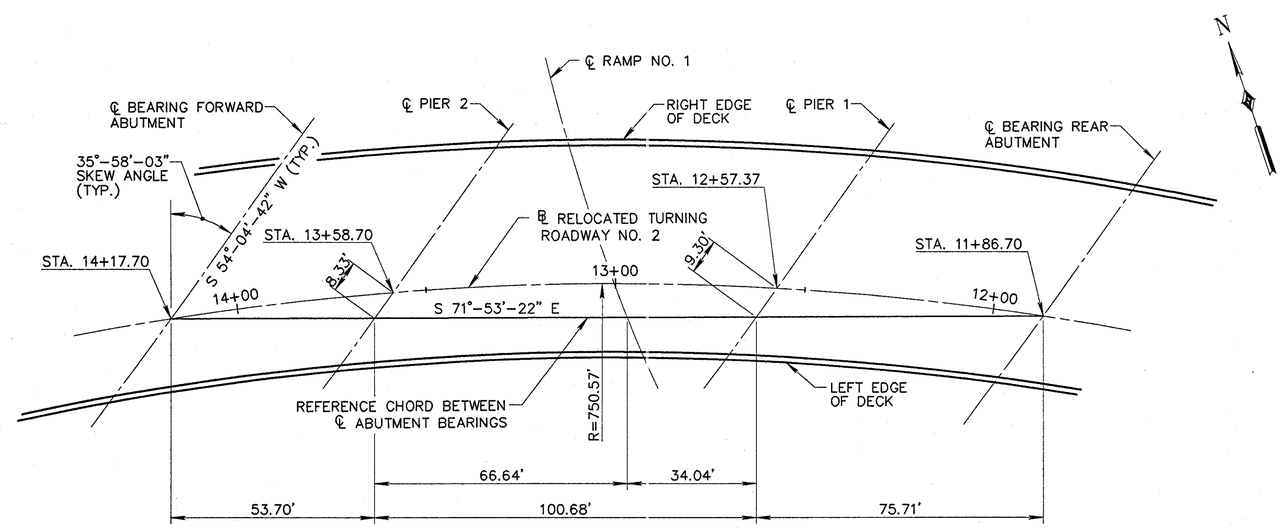


GENERAL PLAN



GEOMETRIC LAYOUT DIAGRAM

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
GFH	GFH	RAB	12-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RSY		1809156	

GENERAL PLAN AND GEOMETIC LAYOUT
BRIDGE NO. CUY-90-2956 L
TURNING ROADWAY NO. 2 OVER RAMP NO. 1

CUY/LAK-90-29.92/0.00

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CALC. BY: YRY DATE: 12-14-01

ESTIMATED QUANTITIES – CUY-90-2956L

CHK'D. BY: KJW DATE: 3-18-02

	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT-MENTS	PIERS	SUPER-STRUCTURE	GENERAL	AS PER PLAN SHEET NUMBERS
	202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	GN 1
	503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP	8/27
	503	21100	853	CU. YD.	UNCLASSIFIED EXCAVATION	828	25			
*	503	21102	19	CU. YD.	UNCLASSIFIED EXCAVATION, INCLUDING SHALE		19			
	505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
	507	00200	2315	LIN. FT.	STEEL PILES HP12X53, FURNISHED	2315				
	507	00250	1960	LIN. FT.	STEEL PILES HP12X53, DRIVEN	1960				
	507	50500	36	EACH	STEEL PILE SPLICES	36				
	512	33000	32	SQ.YD.	TYPE 2 WATERPROOFING	32				
	516	11210	140	LIN.FT.	STRUCTURAL EXPANSION JOINT, INCLUDING ELASTOMERIC STRIP SEAL	140				
	516	13200	111	SQ.FT.	1/2" PREFORMED EXPANSION JOINT FILLER	111				
	516	13600	235	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER	235				
	516	45001	32	EACH	STEEL POT BEARING, AS PER PLAN (SEE PROPOSAL NOTE)	16	16			
	518	21200	302	CU. YD.	POROUS BACKFILL WITH FILTER FABRIC	302				
	518	40000	124	LIN. FT.	6" PERFORATED CORRUGATED PLASTIC PIPE	124				
	518	40010	94	LIN. FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	94				
	524	94914	17	LIN. FT.	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK		17			
	524	94918	80	LIN. FT.	DRILLED SHAFTS, 60" DIAMETER, INTO BEDROCK		80			
*	524	94918	22	LIN. FT.	DRILLED SHAFTS, 60" DIAMETER, INTO BEDROCK		22			
	601	20000	6	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION	6				
	601	21100	1077	SQ. YD.	SLOPE PROTECTION, MISC: GROUT FILLED FABRIC MATS	1077				
	SPECIAL	81580000	LUMP		SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL				LUMP	
	844	48000	347	CU. YD.	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK)			347		
	844	48020	60	CU. YD.	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET)			60		
	844	48040	908	CU. YD.	HIGH PERFORMANCE CONCRETE SUBSTRUCTURE	684	224			
*	844	48040	17	CU. YD.	HIGH PERFORMANCE CONCRETE SUBSTRUCTURE		17			
	863	10100	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL FIVE (5) FABRICATION				LUMP	
	863	20000	5589	EACH	WELDED STUD SHEAR CONNECTORS			5589		
	864	10100	1870	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	654	614	602		
*	864	10100	10	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		10			

* 100% FUNDED BY C.E.I.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
YRY	YRY	RAB	12-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KJW		1809156	

ESTIMATED QUANTITIES
BRIDGE NO. CUY-90-2956 L
TURNING ROADWAY NO. 2 OVER RAMP NO. 1

CUY/LAK-90-29.92/0.00

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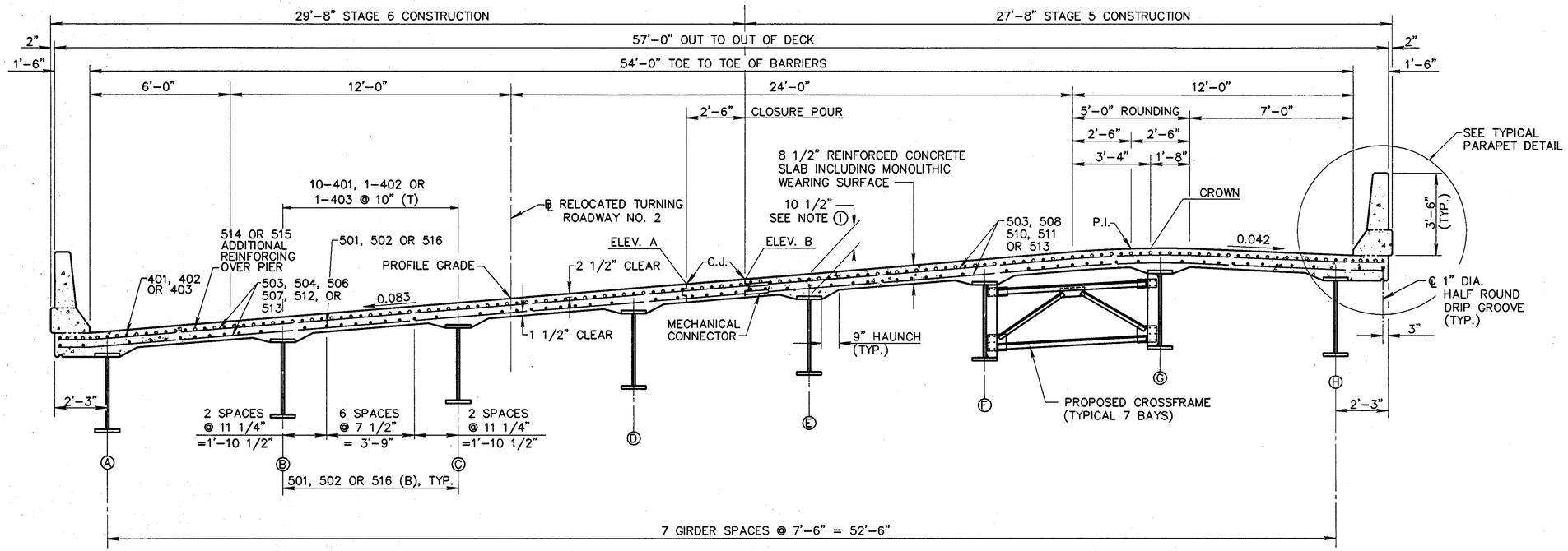
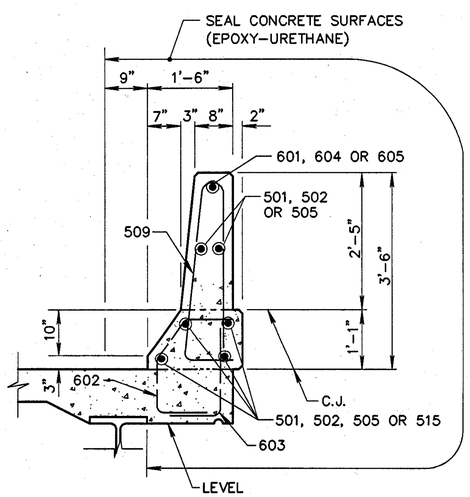
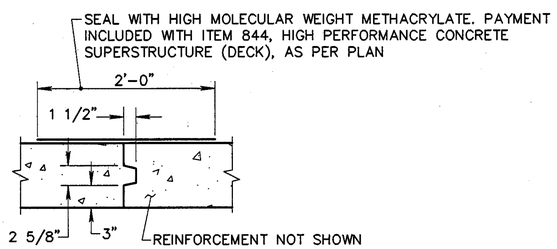


TRANSVERSE SECTION



TYPICAL PARAPET DETAIL



LONGITUDINAL CONSTRUCTION JOINT DETAIL

NOTES:

1. DECK SLAB DEPTH FOR CONCRETE QUANTITY:

   THE DIMENSION SHOWN FROM TOP OF THE CONCRETE DECK TO THE TOP OF THE FLANGE, MINUS THE DESIGN HAUNCH THICKNESS OF 2 INCHES HAS BEEN USED FOR COMPUTING THE DECK CONCRETE QUANTITIES. CONCRETE REQUIRED TO FILL THE HAUNCHES, INCLUDING ADDITIONAL OR LESS MATERIAL REQUIRED DUE TO CONSTRUCTION TOLERANCES, SHALL BE CONSIDERED AS INCIDENTAL AND WILL NOT BE INCLUDED IN THE QUANTITY CALCULATIONS FOR PAYMENT.

2. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 1'-0".

3. ALL REINFORCING STEEL BAR MARKS SHALL BE PREFIXED "S" (SUPERSTRUCTURE).

4. FOR REINFORCEMENT SCHEDULE SEE SHEET 27/27 .

5. FOR ADDITIONAL REINFORCING OVER PIERS SEE SHEET 24/27 .

6. THE FOLLOWING ABBREVIATIONS ARE USED:
   T = TOP TYP. = TYPICAL
   B = BOTTOM C.J. = CONSTRUCTION JOINT

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
YRY	YRY	RAB	12-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KJW		1809156	

TRANSVERSE SECTION
BRIDGE NO. CUY-90-2956L
TURNING ROADWAY NO. 2 OVER RAMP NO. 1

CUY/LAK-90-29.92/0.00

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