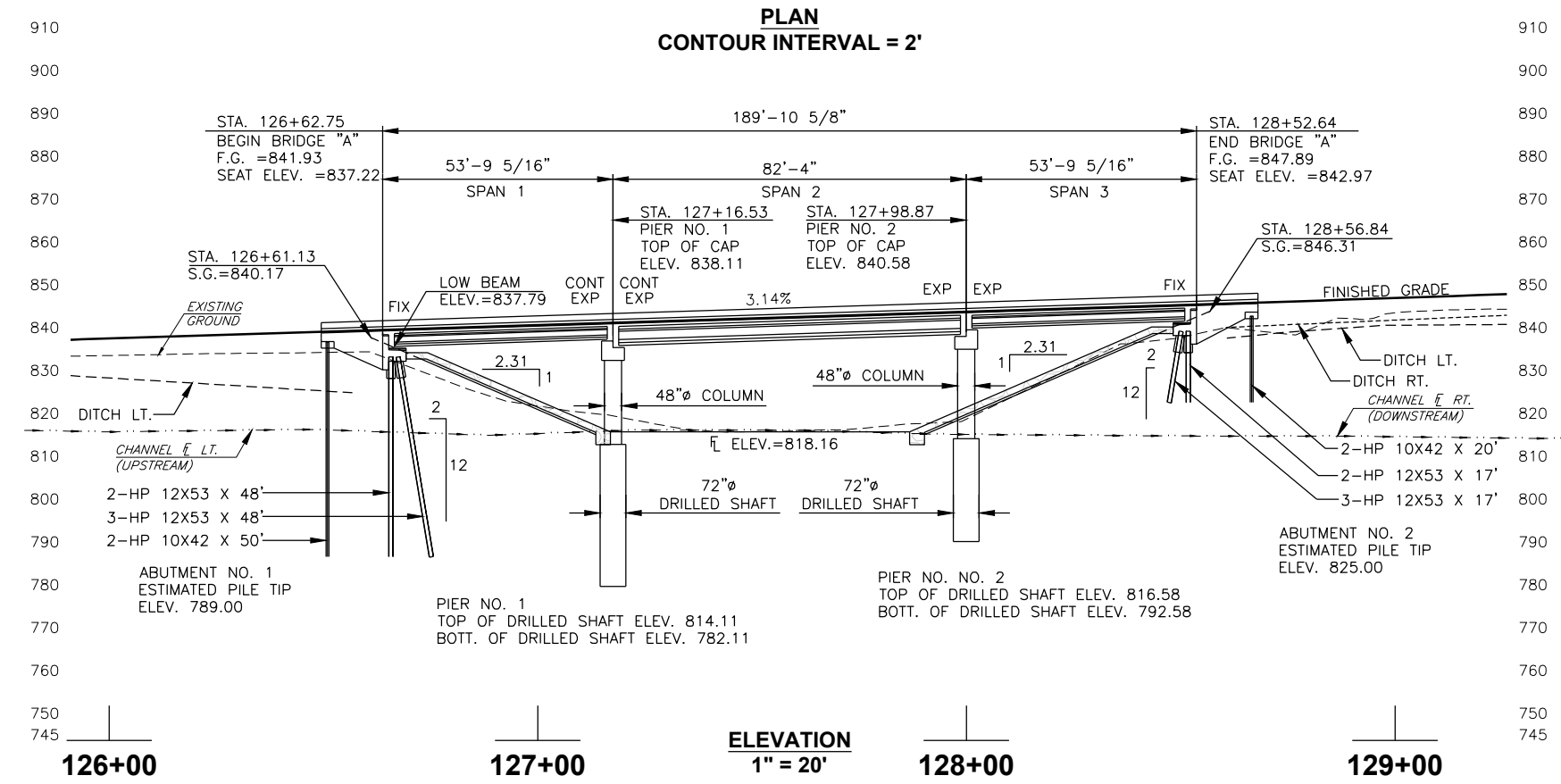


**PLAN**  
CONTOUR INTERVAL = 2'



**ELEVATION**  
1" = 20'

APPROX. LIMITS OF RIPRAP: 74 FEET LEFT, 63 FEET RIGHT.  
CARRY RIPRAP TO SECOND GUARD RAIL POST AT EACH WING WALL  
UNLESS OTHERWISE SHOWN.

HYDRAULIC DATA			
TOTAL DRAINAGE AREA = 81.16 SQ. MI.			
CONTROLLED DRAINAGE AREA = 20.71 SQ. MI.			
EFFECTIVE DRAINAGE AREA = 60.45 SQ. MI.			
Q2 = 2,330 CFS	Q25 = 10,800 CFS		
V2 = 2.73 FPS	V25 = 6.95 FPS		
CHW = 828.45 FT	CHW = 836.69 FT		
Q5 = 4,730 CFS	Q50 = 14,000 CFS		
V5 = 4.18 FPS	V50 = 8.25 FPS		
CHW = 831.22 FT	CHW = 836.71 FT		
Q10 = 7,020 CFS	Q100 = 17,100 CFS		
V10 = 5.34 FPS	V100 = 9.58 FPS		
CHW = 833.43 FT	CHW = 837.54 FT		
Qot = Q16			

LOAD AND RESISTANCE FACTOR DESIGN DATA	
CONCRETE CLASS AA	f'c = 4 KSI
CONCRETE CLASS A	f'c = 3 KSI
REINF. STEEL	fy = 60 KSI
STRUCTURAL STEEL	
M270 (GRADE 50W)	Fy = 50 KSI
LFD OPERATING RATING: HS 29.0	
LOADING: HL-93	
20 P.S.F. FUTURE WEARING SURFACE.	
5 P.S.F. STAY-IN-PLACE FORMS	
DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH 2010 INTERIMS, EXCEPT AS MODIFIED BY CURRENT ODOT BRIDGE DIVISION DESIGN POLICIES. ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.	

PIER FOUNDATION LOADS				
LOCATION	DESIGN LOAD PER SHAFT	FRICTION* (TONS)	BEARING (TONS)	TOTAL (TONS)
PIER NO. 1	264.6	264.6	316.7	581.3
PIER NO. 2	286.7	286.7	277.1	563.8

PERMITTED FOUNDATION RESISTANCE:  
POINT BEARING: PIER 1-16 TONS/S.F., PIER 2-14 TONS/S.F.  
\*FRICTION: PIER 1-2.6 TONS/S.F., PIER 2-2.6 TONS/S.F.  
\*NEGLECT TOP 6 FEET OF SHALE FOR FRICTION.

ABUTMENT FOUNDATION DATA	
<b>ABUTMENTS: HP 12X53 PILING</b>	<b>ABUTMENTS NO. 1 &amp; 2</b>
FACTORED PILE REACTION	67.6 TON/PILE
SEE SHEET NO. AX01 FOR PILE DRIVING AND CAPACITY NOTES. ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE REQUIRED CAPACITY IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE REQUIRED CAPACITY IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.	

BRIDGE "A" PAY QUANTITIES						
50'-80'-50' X 26' CLEAR ROADWAY PCB SPAN SKEWED 30 DEGREES RIGHT FORWARD						
ITEM	DESCRIPTION	UNITS	ABUTMENTS	SUPSTR.	PIERS	TOTALS
501(B)	SUBSTRUCTURE EXCAVATION COMMON	CY	190.00			190.00
*501(G)	CLSM BACKFILL	CY	88.00			88.00
503(A)	PRESTRESSED CONCRETE BEAMS (TYPE II)	LF		298.00		298.00
503(A)	PRESTRESSED CONCRETE BEAMS (TYPE III)	LF		239.00		239.00
504(B)	SAW-CUT GROOVING	SY		455.90		455.90
504(C)	SEALED EXPANSION JOINT	LF		33.06		33.06
504(D)	CONCRETE RAIL (TR3)	LF	57.60	379.90		437.50
506(A)	STRUCTURAL STEEL	LB		1,220.00		1,220.00
507(A)	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA		6.00		6.00
507(B)	WEATHERING STEEL EXPANSION BEARING ASSEMBLY	EA		12.00		12.00
509(A)	CLASS AA CONCRETE	CY		146.70		146.70
509(B)	CLASS A CONCRETE	CY	68.00		102.80	170.80
511(A)	REINFORCING STEEL	LB	9,780.00	41,960.00	17,520.00	69,260.00
514(A)	PILES, FURNISHED (HP 10X42)	LF	140.00			140.00
514(A)	PILES, FURNISHED (HP 12X53)	LF	325.00			325.00
514(B)	PILES, DRIVEN (HP 10X42)	LF	140.00			140.00
514(B)	PILES, DRIVEN (HP 12X53)	LF	325.00			325.00
514(L)	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA	1.00			1.00
516(A)	DRILLED SHAFTS 72" DIAMETER	LF			112.00	112.00
516(C)	CROSSHOLE SONIC LOGGING	EA			1.00	1.00
601(B)	TYPE I-A PLAIN RIPRAP	TON	1,857.00			1,857.00
601(C)	TYPE I-A FILTER BLANKET	TON	523.00			523.00
613(H)	6" PERFORATED PIPE UNDERDRAIN ROUND	LF	60.00			60.00
613(I)	6" NON-PERF. PIPE UNDERDRAIN RND.	LF	60.00			60.00
623(F)	GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA	4.00			4.00
623(F)	GUARDRAIL ANCHOR UNIT (TYPE A)	EA	4.00			4.00
880(J)	CONSTRUCTION TRAFFIC CONTROL	LSUM	1.00			1.00

\*NOTE: CLSM TO BE USED IN PLACE OF GRANULAR BACKFILL. SEE DETAILS PROVIDED ON SHEETS B004 AND B010.

BRIDGE "A": CONST. 50' TYPE II - 80' TYPE III - 50' TYPE II  
P.C. BEAM CONVENTIONAL SPAN BRIDGE  
SK. 30' RT. FORWARD CL STATION 127+57.70.

EXISTING STRUCTURE: 8'x4'x24' RCB (REMOVE).

BM #205 STA. 123+65.09 AT 167.58' LT.  
SET RR SPIKE E FACE 36" DBL TRUNK  
ELEV. 837.69'

BM #206 STA. 128+49.17 AT 49.12' LT.  
SET RR SPIKE N FACE PP  
ELEV. 848.63'

WALNUT CREEK CARTER COUNTY

## GENERAL PLAN AND ELEVATION BRIDGE "A"

JOB PIECE NO. 28448(04) SHEET NO. B002