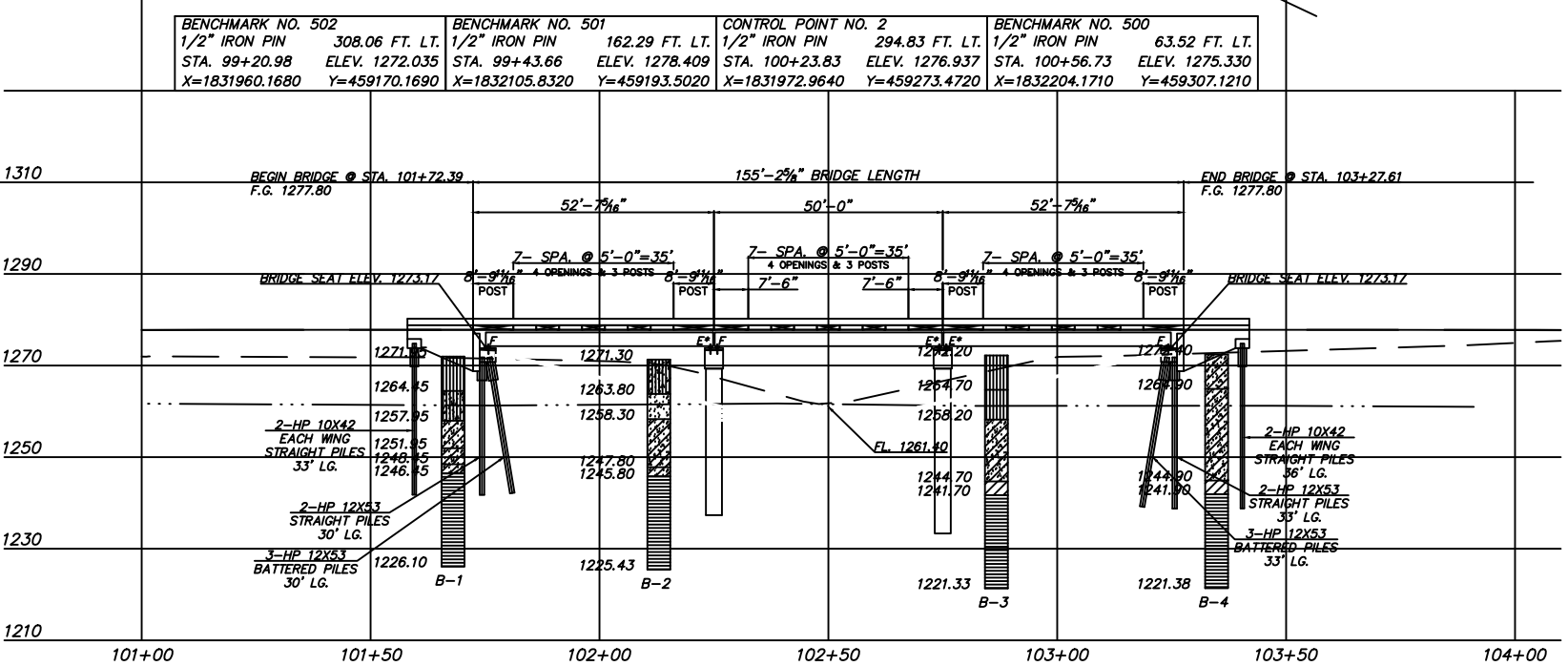
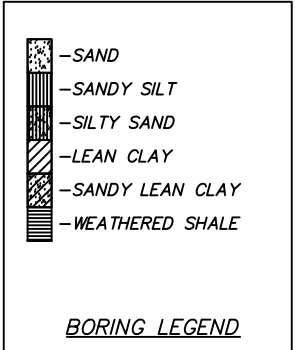


SECTION 27, T21N, R12W  
SECTION 26, T21N, R12W  
SECTION 26, T21N, R11W  
PLAN  
SCALE: 1"=20'



NOTE:  
SEE SHEET NO. 19-22  
FOR BORING INFORMATION  
\*USE SLOTTED ANCHOR PLATES,  
SEE STD.  
CB26-C-SK0.30-BRG-PC2-01E

ELEVATION  
SCALE: 1"=20'



B-1 PENETROMETER TEST		B-2 PENETROMETER TEST		B-3 PENETROMETER TEST		B-4 PENETROMETER TEST	
50/3.13"	50/3.5"	50/5.5"	50/3.25"	50/1.38"	50/1.38"	50/0.25"	50/0.75"
50/1.5"	50/1.0"	50/1.5"	50/0.5"	50/1.0"	50/0.25"	50/0.88"	50/0.38"
50/0.5"	50/0.25"	50/1.75"	50/1.38"	50/1.5"	50/0.5"	50/1.38"	50/0.75"
50/0.5"	50/0.25"	50/1.0"	50/0.63"	50/0.88"	50/0.38"	50/0.63"	50/0.25"
50/0.5"	50/0.25"	50/.88"	50/.38"	50/0.75"	50/0.5"	50/0.88"	50/0.63"
- 1245.50	- 1241.00	- 1244.80	- 1240.30	- 1241.20	- 1236.20	- 1241.40	- 1236.40
- 1236.10	- 1231.10	- 1235.30	- 1230.30	- 1231.20	- 1226.20	- 1231.40	- 1226.40
- 1226.10	- 1225.43	- 1225.43	- 1221.33	- 1221.33	- 1221.33	- 1221.33	- 1221.33

PAY QUANTITIES						
ITEM	DESCRIPTION	UNIT	ABUTMENT	SUPER STRUCTURE	PIER	QUANTITY
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	C.Y.	190.00		190.00
501(G)	6309	CLSM BACKFILL	C.Y.	86.00		86.00
503(A)	1311	PRESTRESSED CONCRETE BEAMS (TYPE II)	L.F.		447.00	447.00
504(B)	1305	SAW CUT GROOVING	S.Y.		371.00	371.00
504(C)	6250	SEALED EXPANSION JOINT	L.F.		66.12	66.12
504(D)	6239	CONCRETE RAIL (TR3)	L.F.	57.60	310.60	368.20
506(A)	1322	STRUCTURAL STEEL	LB.		960.00	960.00
507(A)	6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.		9.00	9.00
507(B)	6176	WEATHERING STEEL EXP. BEARING ASSEMBLY	EA.		9.00	9.00
509(A)	1326	CLASS AA CONCRETE	C.Y.		120.10	120.10
509(B)	1228	CLASS A CONCRETE	C.Y.	68.00		35.60
511(A)	1332	REINFORCING STEEL	C.Y.	9,780.00	36,140.00	5,200.00
514(A)	6010	PILES, FURNISHED (HP10X42)	L.F.		138.00	138.00
514(A)	6011	PILES, FURNISHED (HP12X53)	L.F.		315.00	315.00
514(B)	6292	PILES, DRIVEN (HP10X42)	L.F.		138.00	138.00
514(B)	6294	PILES, DRIVEN (HP12X53)	L.F.		315.00	315.00
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.		1.00	1.00
516(A)	6093	DRILLED SHAFTS 42" DIAMETER	L.F.			136.00
601(B)	1353	TYPE I-A PLAIN RIPRAP	TON	792.00		792.00
601(C)	1355	TYPE I-A FILTER BLANKET	TON	265.00		265.00
613(H)	0450	6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	60.00		60.00
613(I)	1096	6" NON-PERFORATED PIPE UNDERDRAIN ROUND	L.F.	30.00		30.00
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE	L. SUM	1.00		1.00
623(F)	5686	GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA.	4.00		4.00
623(F)	6029	GUARDRAIL ANCHOR UNIT (TYPE A)	EA.	4.00		4.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL	L. SUM	1.00		1.00

LOADING DATA

ABUTMENT PILES (HP 12X53):  
FACTOR PILE REACTION = 67.6 TONS/PILE. ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. STEEL PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL UNTIL THE REQUIRED FACTOR PILE CAPACITY OF 67.6 TONS PER PILE IS OBTAINED.  
PIERS (42 INCH DIAMETER DRILLED SHAFTS):  
MAXIMUM DIRECT FACTORED REACTION = 270, 270 TONS/SHAFT  
NOMINAL UNIT BEARING RESISTANCE = 40, 62 TONS/S.F.  
BEARING RESISTANCE FACTOR = 0.5, 0.5  
BEARING CAPACITY = 192, 298 TONS/SHAFT  
NOMINAL UNIT FRICTION RESISTANCE = 6, 9 TONS/S.F.  
FRICTION RESISTANCE FACTOR = 0.5, 0.5  
FRICTION CAPACITY = 99, 148 TONS/SHAFT  
TOTAL CAPACITY = 291, 447 TONS/SHAFT

HYDRAULIC DATA

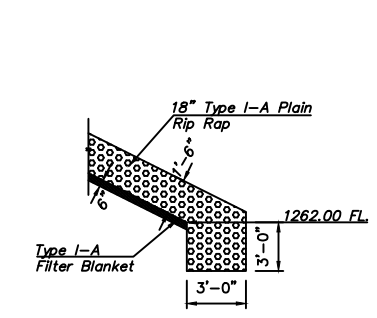
D.A. = 21.51 SQ. MI.  
SCS CONTROLLED D.A. = 0.00 SQ. MI.  
EFFECTIVE DRAINAGE AREA = 21.51 SQ. MI.  
Q25 = 5,560.00 C.F.S.  
V25 = 8.37 F.P.S.  
Q25 CALC. B.W. 1,273.59 FT.  
Q50 = 7,330.00 C.F.S.  
V50 = 9.28 F.P.S.  
Q50 = CALC. B.W. 1,274.85 FT.  
Q100 = 9,340.00 C.F.S.  
V100 = 10.83 F.P.S.  
Q100 = CALC. B.W. 1,276.26 FT.  
Q0.T. = 15,300.00 C.F.S.  
OVERTOPPING ELEV. (LOW) = 1,277.52 FT.  
VO.T. (BRIDGE) = 15.18 F.P.S.  
EXTREME HIGHWATER ON RECORD = N/A  
MAXIMUM SCOUR DEPTH = 27.85 FT.

DESIGN DATA

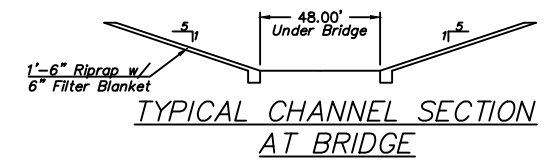
CONCRETE (CLASS A) F'C=3,000 PSI  
CONCRETE (CLASS AA) F'C=4,000 PSI  
REINFORCING STEEL (GR 60) F<sub>y</sub>=60,000 PSI  
STRUCTURAL STEEL (GR 50W) F<sub>y</sub>=50,000 PSI  
LOADING: HL-93 20 PSF FUTURE WEARING SURFACE  
5 PSF STAY-IN-PLACE FORMS  
DESIGN SPECIFICATIONS - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH 2010 INTERIMS, EXCEPT AS MODIFIED BY CURRENT ODOT BRIDGE DIVISION DESIGN POLICIES.  
ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.  
LFD OPERATING RATING: HS 29.0

CONTRACTOR NOTE:  
EXTEND RIP RAP TO THE  
SECOND GUARDRAIL POST.

NOTE:  
"TOEING-IN" APPLIES TO  
THE ENTIRE LENGTH OF  
THE BASE OF RIPRAP.



DETAIL OF TYPE I-A PLAIN RIPRAP



MAJOR COUNTY SAND CREEK  
GENERAL PLAN & ELEVATION  
CL STA. 102+50.00  
50'-50'-50' TYPE II PCB SPAN W/26'-0" CL. RDY.  
30 DEG. W/1'-1" TR3 CONC. RAILS  
J/P NO. 28348(04) SHEET NO. B001