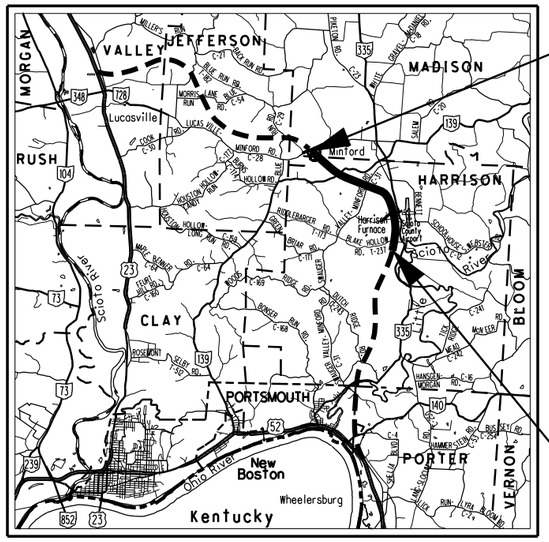


END PROJECT
STA. 536+15.00
SLM = 10.15

BEGIN PROJECT
STA. 353+00.00
SLM = 6.69

LOCATION MAP

LATITUDE: N 38°50'25" LONGITUDE: W 82°50'50"

SCALE IN MILES
0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION SR823 (TR234 INTERCHANGE TO US 23 INTERCHANGE)

CURRENT ADT (2010)	19,800
DESIGN YEAR ADT (2030)	26,000
DESIGN HOURLY VOLUME (2030)	2600
DIRECTIONAL DISTRIBUTION	55%
T_D	7%
TRUCKS (24 HOUR B&C)	14%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL PRINCIPAL ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:

HDR

HDR ENGINEERING, INC.
9987 CARVER RD, SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

SCI-823-6.81
PART 4

MADISON & HARRISON TOWNSHIPS
SCIOTO COUNTY

PART 1 - EARTHWORK
PART 2 - SR 335 & BRIDGE NO. SCI-TR234-0122
PART 3 - BRIDGE NO. SCI-823-0837 L & R
PART 4 - BRIDGE NO. SCI-823-0917 L & R
PART 5 - PAVEMENT

INDEX OF SHEETS

ENGINEERS SEAL:
STRUCTURE SCI-823-0917
(HDR ENGINEERING, INC.)
SIGNED:
DATE:

ENGINEERS SEAL:
ROADWAY PLANS
(HDR ENGINEERING, INC.)
SIGNED:
DATE:

NOTE:
ITEMS THAT WILL BE PERFORMED UNDER SEPARATE PART WILL BE DENOTED BY THE ABBREVIATION "NIP" THROUGHOUT THE PLAN SET.

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS
SEE PART 1	SPECIAL PROVISIONS

PROJECT DESCRIPTION (PART 4)

CONSTRUCTION OF SR823 BRIDGE OVER SR139 (PORTSMOUTH-MINFORD ROAD).

PROJECT EARTH DISTURBED AREAS

SEE PART 1

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEET NO. 2 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. G990 (624)
PID NO. 19415
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
SCI-823-6.81
1
44

USER: CWohlbri PLOT DATE: 9/15/2011 7:29:56 AM REVISION DATE: 9/15/2011
FILE:...\HDR.C\0800000000045878 /19415gt001.dgn MODEL: Sheet

BENCHMARKS:

BM #1	RAILROAD SPIKE SET IN NORTH SIDE OF OAK TREE STA. 349+97, 190' RT., ELEV.=657.72 N = 302441.6358, E = 1868042.3000	BM #5	TOP OF CONCRETE MONUMENT WITH "X" STA. 365+16, 392' RT., ELEV.=643.18 N = 303912.6720, E = 1868182.1910	BM "A"	RAILROAD SPIKE SET IN WOOD POST ABOUT 170' WEST OF CENTERLINE STATION 10+23.46 (TR 234) AND 37' NORTH OF EXISTING CENTERLINE, ELEV.=719.57 N = 304731.6782, E = 1865592.4912
BM #2	RAILROAD SPIKE SET IN NORTH SIDE OF OAK TREE STA. 352+73, 330' RT., ELEV.=641.10 N = 302610.4334, E = 1868184.7478	BM #6	RAILROAD SPIKE SET IN WEST SIDE OF OAK TREE STA. 371+16, 488' RT., ELEV.=653.97 N = 304553.4892, E = 1868169.0902	BM "B"	CHISELED SQUARE ON EAST END OF RETAINING WALL STA. 371+76, 662' RT. ELEV.=609.96 N = 304654.2464, E = 1868325.0882
BM #3	TOP OF CONCRETE MILE MARKER POST No. 8 STA. 356+22, 389' RT., ELEV.=632.90 N = 302975.9477, E = 1868247.3226	BM #7	RAILROAD SPIKE SET IN WOOD FENCE POST STA. 381+08, 557' RT. ELEV.=646.20 N = 305547.9483, E = 1868000.8797		
BM #4	RAILROAD SPIKE SET IN SOUTHWEST CORNER OF RETAINING WALL STA. 363+83, 460' RT., ELEV.=622.55 N = 303781.7810, E = 1868266.1064	BM #8	RAILROAD SPIKE SET IN WOOD FENCE POST STA. 386+68, 558' RT.ELEV.=659.05 N = 306093.6216, E = 1867868.9028		

NOTE:
SR823, TR234 RAMPS, TR234, SR335, AND CR540 IMPROVEMENTS WILL BE PERFORMED IN OTHER PART (NIP).

G990 (624)
BEGIN PROJECT
PHASE - 1
STA 353+00.00
SLM = 6.69

PHASE-3
PID 77366
SCI-823-0.00
BY OTHERS

BRIDGE NO.
SCI-823-0727 L•R
NOT IN CONTRACT

BRIDGE NO.
SCI-TR234-0122
NOT IN PART

MATCH LINE STA. 390+00 SR 823

LEGEND:

× = REMOVAL

PAVEMENT TO BE CONSTRUCTED IN OTHER PART

PAVEMENT TO BE CONSTRUCTED BY OTHERS, NOT IN CONTRACT

NOTES:

1. FOR HORIZONTAL CURVE DATA SEE HORIZONTAL CURVE DATA SHEET.
2. ALL COORDINATES SHOWN ARE ON GROUND VALUES, SEE HORIZONTAL CURVE DATA SHEET FOR SCALE FACTOR.

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED BEE
CHECKED JBM

SCHEMATIC PLAN - SR823
STA. 335+00.00 TO STA. 390+00.00

SCI-823-6.81

2
44

USER: CWahlbr PLOT DATE: 9/15/2011 7:30:15 AM REVISION DATE: 9/15/2011
FILE:...\MHDR.CvB0000000045878 /1845gb001.dgn MODEL: Sheet

BENCHMARKS:

BM #9	CHISELED SQUARE ON CONCRETE WATER TROTH STA. 392+48, 553' RT., ELEV.=669.13 N = 306655.1529, E = 1867726.2407	BM #13	RAILROAD SPIKE SET IN OAK TREE STA. 423+34, 200' LT., ELEV.=850.08 N = 308836.5034, E = 1865481.0299
BM #10	RAILROAD SPIKE SET IN WOOD FENCE POST STA. 399+99, 557' RT., ELEV.=676.77 N = 307406.4002, E = 1867542.8188	BM #14	RAILROAD SPIKE SET IN OAK TREE STA. 433+21, 126' LT., ELEV.=808.34 N = 309250.9930, E = 1864611.5782
BM #11	RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA. 408+62, 227' LT., ELEV.=728.38 N = 307911.6558, E = 1866461.5041	BM "C"	RAILROAD SPIKE SET IN WOOD POST STA. 442+75, 489' RT., ELEV.=633.18 N = 310148.0120, E = 1863915.9426
BM #12	RAILROAD SPIKE SET IN FENCE POST STA. 418+99, 217' RT., ELEV.=715.20 N = 308756.3812, E = 1866320.5736	BM "D"	RAILROAD SPIKE SET IN GATE POST STA. 441+57, 994' LT., ELEV.=651.84 N = 308709.8811, E = 1863535.6918

NOTE:
SR823, TR234 RAMPS, AND SR335 IMPROVEMENTS WILL BE PERFORMED IN OTHER PART (NIP).

MATCH LINE STA. 390+00 SR 823

TR234 RAMP D

N 3°41'40" W

SR823

N 13°43'56" W

TR234 RAMP A

N 14° 48' 17" W 20

PC Sta. 19+17.32

PT Sta. 23+18.82

N 13° 05' 50" W

CSXT RAILROAD

TS STA. 396+95.61

PC STA. 397+52.87

SC STA. 400+95.61

CURVE # TR234 RAMP D-1

CURVE # TR234 RAMP A-1

PRC STA. 399+49.75

CURVE # TR234 RAMP A-2

PT STA. 403+00.00 END RAMP A

PT STA. 409+50.00 END RAMP D

72" TYPE A

48" TYPE A

BM #9

BM #10

BM #11

BM #12

BM #13

BM #14

BM "C"

BM "D"

CURVE # 6

SEC. 9
SEC. 4

SWAUGER VALLEY-MINFORD ROAD

HARRISON FURNACE CREEK

ST STA. 425+40.95

CS STA. 425+40.95

ST STA. 429+40.95

AIRPORT BEACON ACCESS ROAD (NIP)

MATCH LINE STA. 445+00 SR 823

N 70°38'20" W

BRIDGE NO. SCI-823-0837 L&R NOT IN PART

LEGEND:

X = REMOVAL

PAVEMENT TO BE CONSTRUCTED IN OTHER PART

PAVEMENT TO BE CONSTRUCTED BY OTHERS, NOT IN CONTRACT

NOTES:

1. FOR HORIZONTAL CURVE DATA SEE HORIZONTAL CURVE DATA SHEET.
2. ALL COORDINATES SHOWN ARE ON GROUND VALUES, SEE HORIZONTAL CURVE DATA SHEET FOR SCALE FACTOR.

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED BEE
CHECKED JBM

SCHEMATIC PLAN - SR823
STA. 390+00.00 TO STA. 445+00.00

SCI-823-6.81

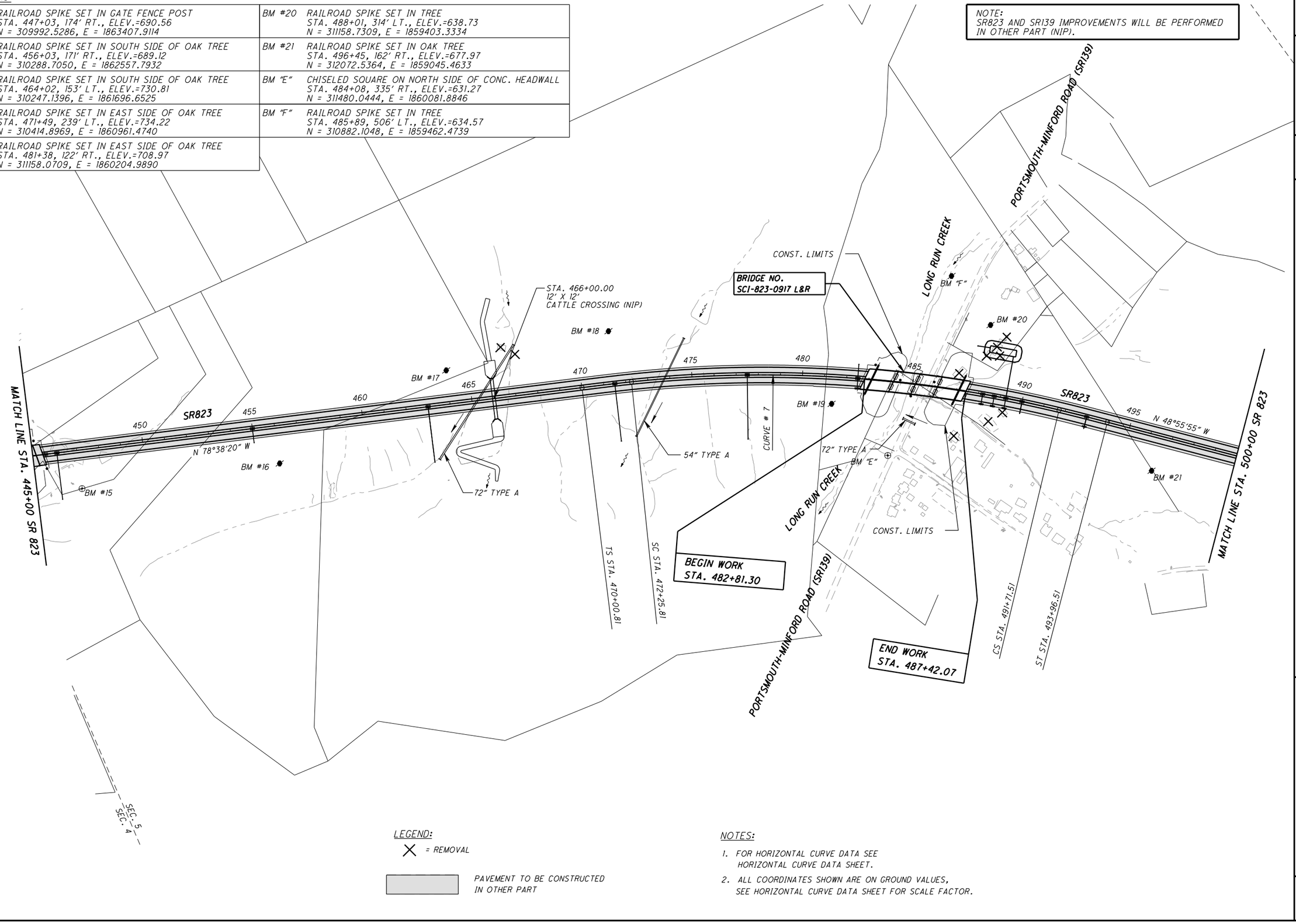
3
44

USER: CWahlbr1 PLOT DATE: 9/15/2011 7:13:13 AM REVISION DATE: 9/15/2011
FILE:...\MHDR.CU0000000000045878 /1845gb002.dgn MODEL: Sheet

BENCHMARKS:

BM #15	RAILROAD SPIKE SET IN GATE FENCE POST STA. 447+03, 174' RT., ELEV.=690.56 N = 309992.5286, E = 1863407.9114	BM #20	RAILROAD SPIKE SET IN TREE STA. 488+01, 314' LT., ELEV.=638.73 N = 311158.7309, E = 1859403.3334
BM #16	RAILROAD SPIKE SET IN SOUTH SIDE OF OAK TREE STA. 456+03, 171' RT., ELEV.=689.12 N = 310288.7050, E = 1862557.7932	BM #21	RAILROAD SPIKE SET IN OAK TREE STA. 496+45, 162' RT., ELEV.=677.97 N = 312072.5364, E = 1859045.4633
BM #17	RAILROAD SPIKE SET IN SOUTH SIDE OF OAK TREE STA. 464+02, 153' LT., ELEV.=730.81 N = 310247.1396, E = 1861696.6525	BM "E"	CHISELED SQUARE ON NORTH SIDE OF CONC. HEADWALL STA. 484+08, 335' RT., ELEV.=631.27 N = 311480.0444, E = 1860081.8846
BM #18	RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA. 471+49, 239' LT., ELEV.=734.22 N = 310414.8969, E = 1860961.4740	BM "F"	RAILROAD SPIKE SET IN TREE STA. 485+89, 506' LT., ELEV.=634.57 N = 310882.1048, E = 1859462.4739
BM #19	RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA. 481+38, 122' RT., ELEV.=708.97 N = 311158.0709, E = 1860204.9890		

NOTE:
SR823 AND SR139 IMPROVEMENTS WILL BE PERFORMED IN OTHER PART (NIP).



LEGEND:

X = REMOVAL

PAVEMENT TO BE CONSTRUCTED IN OTHER PART

NOTES:

1. FOR HORIZONTAL CURVE DATA SEE HORIZONTAL CURVE DATA SHEET.
2. ALL COORDINATES SHOWN ARE ON GROUND VALUES, SEE HORIZONTAL CURVE DATA SHEET FOR SCALE FACTOR.

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED BEE
CHECKED JMB

SCHEMATIC PLAN - SR823
STA. 445+00.00 TO STA. 500+00.00

SCI-823-6.81

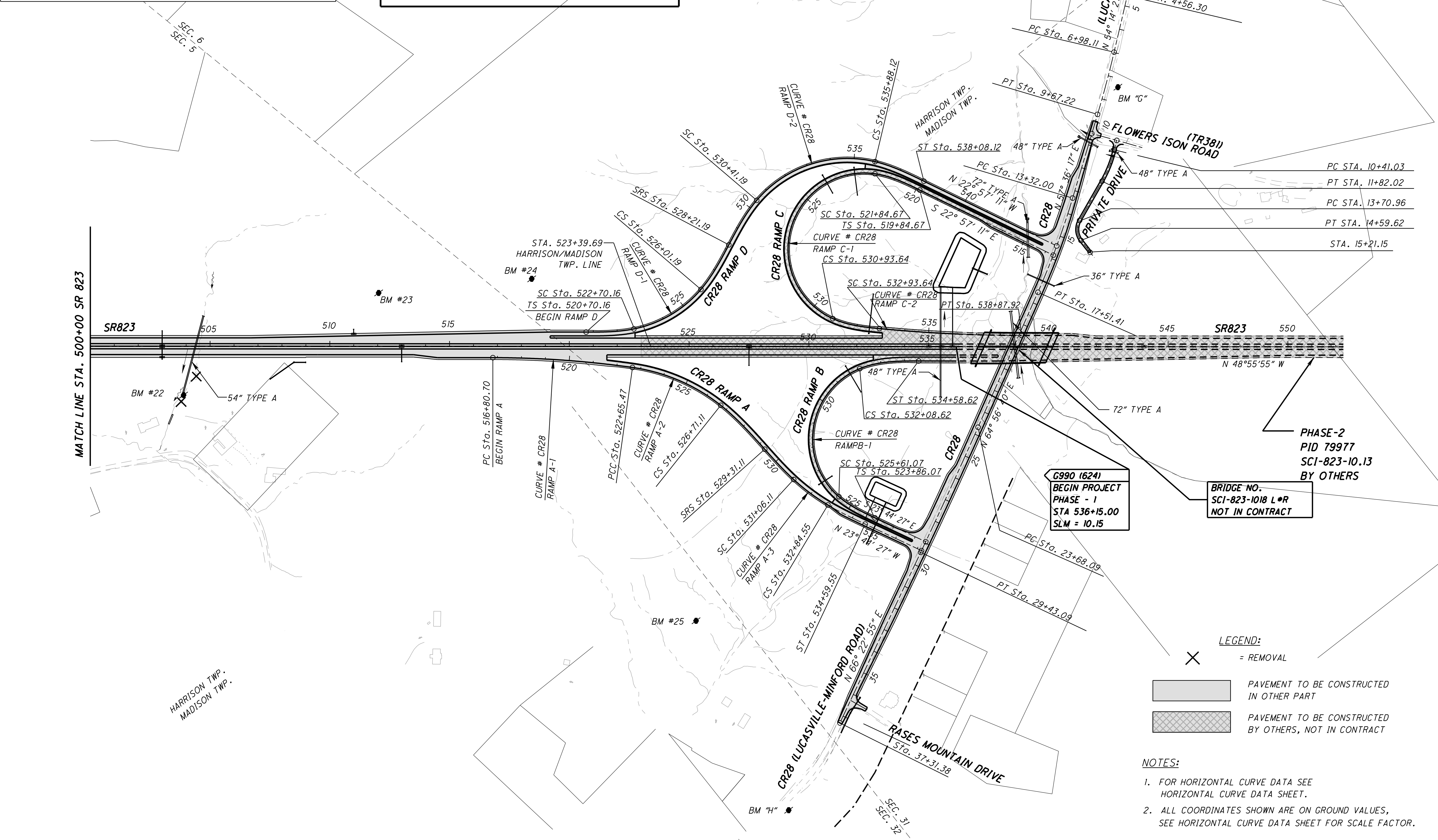
4
44

USER: cmahlbri PLOT DATE: 9/15/2011 7:31:21 AM REVISION DATE: 9/15/2011
FILES: ...&MOR_CU&BND000000045878 /9415gb003.dgn MODEL: Sheet

BENCHMARKS:

BM #22	RAILROAD SPIKE SET IN TREE STA. 503+90, 204' RT., ELEV.=694.21 N = 312593.4456, E = 1858511.6346	BM "G"	RAILROAD SPIKE SET IN CEDAR TREE STA. 8+35 (CR 28), 51' LT., ELEV.=720.41 N = 314184.6930, E = 1854725.0774
BM #23	RAILROAD SPIKE SET IN OAK TREE STA. 512+04, 223' LT., ELEV.=883.26 N = 312806.2273, E = 1857617.2352	BM "H"	RAILROAD SPIKE SET IN TELEPHONE POLE ABOUT 365' EAST OF CENTERLINE STATION 37+89.24 (CR 28) AND ABOUT 22' SOUTH OF EXISTING CENTERLINE, ELEV.=722.33 N = 315559.9414, E = 1857744.7665
BM #24	RAILROAD SPIKE SET IN OAK TREE STA. 518+43, 282' LT., ELEV.=890.77 N = 313181.5447, E = 1857096.6910		
BM #25	RAILROAD SPIKE SET IN NORTH SIDE OF OAK TREE STA. 525+29, 1146' RT., ELEV.=721.05 N.= 1857516.9650, E.= 314709.3198		

NOTE:
SR823, CR28 RAMPS, AND CR28 IMPROVEMENTS WILL BE PERFORMED IN OTHER PART (NIP).



SR823
CR28 RAMP A
CR28 RAMP B
CR28 RAMP C
CR28 RAMP D
CR28 (LUCASVILLE-MINFORD ROAD)
FLOWERS ISON ROAD (TR381)
PRIVATE DRIVE
RASES MOUNTAIN DRIVE
MATCH LINE STA. 500+00 SR 823
HARRISON TWP.
MADISON TWP.
SEC. 6
SEC. 5
SEC. 31
SEC. 32
BM #22
BM #23
BM #24
BM #25
BM "G"
BM "H"
54" TYPE A
48" TYPE A
72" TYPE A
36" TYPE A
STA. 523+39.69 HARRISON/MADISON TWP. LINE
SC Sta. 522+70.16
TS Sta. 520+70.16
BEGIN RAMP D
PC Sta. 516+80.70 BEGIN RAMP A
STA. 4+56.30
PC Sta. 6+98.11
PT Sta. 9+67.22
PC Sta. 13+32.00
PT Sta. 17+51.41
PC Sta. 23+68.09
PT Sta. 29+43.09
Sta. 37+31.38
PC STA. 10+41.03
PT STA. 11+82.02
PC STA. 13+70.96
PT STA. 14+59.62
STA. 15+21.15
N 48°55'55" W
G990 (624)
BEGIN PROJECT
PHASE - 1
STA 536+15.00
SLM = 10.15
BRIDGE NO.
SCI-823-1018 L&R
NOT IN CONTRACT
PHASE-2
PID 79977
SCI-823-10.13
BY OTHERS

LEGEND:

X = REMOVAL

PAVEMENT TO BE CONSTRUCTED IN OTHER PART

PAVEMENT TO BE CONSTRUCTED BY OTHERS, NOT IN CONTRACT

NOTES:

1. FOR HORIZONTAL CURVE DATA SEE HORIZONTAL CURVE DATA SHEET.
2. ALL COORDINATES SHOWN ARE ON GROUND VALUES, SEE HORIZONTAL CURVE DATA SHEET FOR SCALE FACTOR.

HORIZONTAL SCALE IN FEET: 0 100 200 400

CALCULATED BEE CHECKED JBM

SCHEMATIC PLAN - SR823
STA. 500+00.00 TO STA. 555+00.00

SCI-823-6.81

HORIZONTAL CURVE DATA

ALIGNMENT	CURVE NO.	P.I. STATION	P.I. COORDINATES NORTH	P.I. COORDINATES EAST	P.I. C_{CI} STATION	P.I. C_{CI} COORDINATES NORTH	P.I. C_{CI} COORDINATES EAST	Δ	Δ OR Δ_{CI}	D_C	R OR R_{CI}	L_S OR L_{SI}	θ_S OR θ_{SI}	LT OR LT_1	ST OR ST_1	L_{S2}	θ_{S2}	LT_2	ST_2
SR823	CURVE #5	346+07.50	301,733.59	1,868,360.11	345+94.11	301,738.66	1,868,323.63	43°17'19.64" LT.	41°58'34.64" LT.	0°45'00.0"	7,639.44	175.00	0°39'22.5" LT.	116.67	58.33				
	CURVE #6	414+49.27	308,662.80	1,866,666.83	413+98.35	308,586.28	1,866,582.40	56°54'23.97" LT.	48°54'23.97" LT.	2°00'00.0"	2,864.79	400.00	4°00'00.0" LT.	266.73	133.40				
	CURVE #7	482+11.90	310,991.61	1,860,039.47	482+08.12	311,009.88	1,860,050.11	21°42'25.19" RT.	19°27'25.19" RT.	1°00'00.0"	5,729.58	225.00	1°07'30.0" RT.	150.00	75.00				
TR234	CURVE #1	14+27.25	304,800.62	1,866,158.43	13+86.05	304,805.97	1,866,114.13	40°05'33.00" LT.	30°11'32.71" LT.	6°00'00.0"	954.93	105.00	3°09'00.0" LT.	70.01	35.01	225.00	6°45'00.0" LT.	150.11	75.10
	CURVE #2	23+26.93	305,555.66	1,866,700.17	22+85.59	305,501.54	1,866,701.70	40°36'30.00" RT.	24°06'29.71" RT.	6°00'00.0"	954.93	225.00	6°45'00.0" RT.	150.11	75.10	325.00	9°45'00.0" RT.	216.99	108.63
TR234 RAMP A	CURVE #1	393+64.93	306,688.48	1,867,307.20				5°51'12.19" RT.		0°30'00.0"	11,459.16								
	CURVE #2	401+24.89	307,398.76	1,867,034.05				1°55'15.62" LT.		0°32'54.5"	10,446.37								
TR234 RAMP B	CURVE #1	371+73.52	304,518.99	1,867,747.48				8°05'30.33" RT.		1°00'00.0"	5,729.58								
TR234 RAMP C	CURVE #1	371+63.61	304,491.54	1,867,629.38	371+61.67	304,486.97	1,867,615.78	17°51'23.79" LT.	12°51'23.79" LT.	2°30'00.0"	2,291.83	200.00	2°30'00.0" LT.	133.35	66.68				
TR234 RAMP D	CURVE #1	403+66.60	307,578.02	1,866,914.20				31°07'31.70" LT.		2°36'00.0"	2,203.68								
CR28	CURVE #1	8+32.71	314,142.43	1,854,750.25				3°21'50.00" RT.		1°15'00.0"	4,583.66								
	CURVE #2	15+41.99	314,522.48	1,855,349.22				7°20'23.00" RT.		1°45'00.0"	3,274.04								
	CURVE #3	26+55.61	314,994.33	1,856,358.56				1°26'15.00" RT.		0°15'00.0"	22,918.31								
CR28 RAMP A	CURVE #1	519+73.56	313,515.69	1,857,214.36				7°59'30.83" RT.		1°22'00.0"	4,192.37								
	CURVE #2	525+50.54	313,952.26	1,856,835.67	524+73.20	313,893.83	1,856,886.35	40°10'22.38" RT.	30°25'22.38" RT.	7°30'00.0"	763.94	260.00	9°45'00.0" RT.	173.60	86.91				
	CURVE #3	531+98.00	314,623.96	1,856,826.67	531+95.64	314,620.79	1,856,812.06	22°58'25.78" LT.	11°35'55.78" LT.	6°30'00.0"	881.47	175.00	5°41'15.0" LT.	116.73	58.39				
CR28 RAMP B	CURVE #1	539+25.53	313,466.00	1,857,291.18	530+76.04	314,199.80	1,856,798.30	154°48'32.57" RT.	116°33'32.57" RT.	18°00'00.0"	318.31	175.00	15°45'00.0" RT.	117.13	58.76	250.00	22°30'00.0" RT.	168.03	84.58
CR28 RAMP C	CURVE #1	536+72.75	315,519.84	1,854,973.00	543+95.56	312,121.40	1,857,176.81	200°31'52.00" LT.	163°36'52.00" LT.	18°00'00.0"	318.31	200.00	18°00'00.0" LT.	134.03	67.30	200.00	18°55'00.0" LT.	130.91	70.63
	CURVE #2	535+91.00	314,507.12	1,855,933.51				5°26'51.27" LT.		0°55'00.0"	6,250.45								
CR28 RAMP D	CURVE #1	524+73.49	313,763.45	1,856,767.16	524+42.04	313,704.10	1,856,762.80	62°13'05.95" LT.	38°04'05.95" LT.	11°30'00.0"	498.22	200.00	11°30'00.0" LT.	133.62	66.92	220.00	12°39'00.0" LT.	147.04	73.68
	CURVE #2	534+17.71	313,399.52	1,855,826.45	533+45.89	313,505.77	1,855,871.44	88°11'49.21" RT.	62°53'49.21" RT.	11°30'00.0"	498.22	220.00	12°39'00.0" RT.	147.04	73.68				
PRIVATE DRIVE	CURVE #1	11+12.00	314,414.05	1,854,965.84				16°12'51.00" RT.		11°30'00.0"	498.22								
	CURVE #2	14+21.26	314,516.03	1,855,258.81				67°35'50.00" LT.		76°15'00.0"	75.14								
SR335	CURVE #1	2+56.17	305,186.24	1,868,348.28				30°12'19.08" RT.		9°30'00.0"	603.11								
	CURVE #2	7+26.05	305,657.37	1,868,270.81				4°25'31.60" LT.		2°30'00.0"	2,291.83								
	CURVE #3	21+48.08	307,035.53	1,867,920.17				1°42'27.09" RT.		0°30'00.0"	11,459.16								

HORIZONTAL CURVE DATA

ALIGNMENT	CURVE NO.	T_C OR T_{CI}	T, T_1 * OR T_S	L OR L_C OR L_{CI}	E OR E_S	T.S. STATION	T.S. COORDINATES NORTH	T.S. COORDINATES EAST	S.C./P.C. STATION	S.C./P.C. COORDINATES NORTH	S.C./P.C. COORDINATES EAST	C.S./P.T. STATION	C.S./P.T. COORDINATES NORTH	C.S./P.T. COORDINATES EAST	S.T. STATION	S.T. COORDINATES NORTH	S.T. COORDINATES EAST	SUPER ELEVATION e (FT/FT)
SR823	CURVE #5	2,930.69	3,119.08	5,596.84	579.69	314+88.42	299,020.40	1,866,821.52	316+63.42	299,172.96	1,866,907.26	372+60.26	304,593.37	1,867,660.58	374+35.26	304,763.52	1,867,619.69	0.028
	CURVE #6	1,302.74	1,753.66	2,445.33	396.24	396+95.61	306,959.26	1,867,083.12	400+95.61	307,345.43	1,866,979.17	425+40.95	309,102.85	1,865,386.45	429+40.95	309,244.18	1,856,012.34	0.065
	CURVE #7	982.31	1,211.09	1,945.70	104.73	470+00.81	310,590.11	1,861,182.07	472+25.81	310,666.09	1,860,970.29	491+71.51	311,640.55	1,859,296.99	493+96.51	311,787.25	1,859,126.40	0.036
TR234	CURVE #1	257.59	403.79	503.21	63.02	10+23.46	304,701.24	1,865,767.06	11+28.46	304,728.94	1,865,868.32	16+31.67	304,996.16	1,866,287.86	18+56.67	305,173.57	1,866,426.02	0.08
	CURVE #2	203.92	470.26	401.80	66.90	18+56.67	305,173.57	1,866,426.02	20+81.67	305,350.98	1,866,564.17	24+83.47	305,582.80	1,866,888.73	28+08.47	305,677.60	1,867,199.16	0.08
TR234 RAMP A	CURVE #1		585.85	1,170.68	14.97				387+79.08	306,165.97	1,867,572.15	399+49.75	307,235.29	1,867,096.91				NC
	CURVE #2		175.14	350.24	1.47				399+49.75	307,235.29	1,867,096.91	403+00.00	307,560.03	1,866,965.74				RC
TR234 RAMP B	CURVE #1		405.26	809.18	14.31				367+68.26	304,117.79	1,867,804.75	375+77.44	304,924.25	1,867,747.25				0.029
TR234 RAMP C	CURVE #1	258.22	460.16	514.26	28.85	367+03.45	304,037.88	1,867,706.48	369+03.45	304,234.53	1,867,670.11	374+17.72	304,720.99	1,867,506.65	376+17.72	304,899.70	1,867,416.90	0.061
TR234 RAMP D	CURVE #1		613.73	1,197.13	83.87				397+52.87	306,965.56	1,866,953.74	409+50.00	308,081.86	1,866,563.76				0.065
CR28	CURVE #1		134.59	269.11	1.98				6+98.11	314,063.78	1,854,641.03	9+67.22	314,214.54	1,854,863.90				
	CURVE #2		209.99	419.41	6.73				13+32.00	314,409.97	1,855,171.90	17+51.41	314,611.41	1,855,539.45				0.04
	CURVE #3		287.52	575.00	1.80				23+68.09	314,872.57	1,856,098.10	29+43.09	315,109.52	1,856,621.99				NC
CR28 RAMP A	CURVE #1		292.86	584.77	10.22				516+80.70	313,323.29	1,857,435.16	522+65.47	313,736.92	1,857,022.46				0.038
	CURVE #2	207.72	285.07	405.64	51.45				522+65.47	313,736.92	1,857,022.46	526+71.11	314,098.06	1,856,848.43	529+31.11	314,357.09	1,856,830.25	0.08
	CURVE #3	89.53	266.89	178.44	19.49	529+31.11	314,357.09	1,856,830.25	531+06.11	314,531.82	1,856,822.12	532+84.55	314,705.91	1,856,784.31	534+59.55	314,868.27	1,856,719.22	0.063
CR28 RAMP B	CURVE #1	514.98	1,539.46	647.55	1,169.21	523+86.07	314,875.18	1,856,671.39	525+61.07	314,709.78	1,856,726.71	532+08.62	314,363.79	1,856,310.14	534+58.62	314,501.11	1,856,103.28	0.08
CR28 RAMP C	CURVE #1	2,210.89	1,688.08	908.97	1,302.71	519+84.67	313,965.41	1,855,631.32	521+84.67	313,791.17	1,855,727.70	530+93.64	314,132.14	1,856,257.59	532+93.64	314,291.36	1,856,138.14	0.08
	CURVE #2		297.36	594.28	7.07				532+93.64	314,291.36	1,856,138.14	538+87.92	314,702.47	1,855,709.32				0.027
CR28 RAMP D	CURVE #1	171.89	403.33	331.03	88.00	520+70.16	313,498.48	1,857,071.24	522+70.16	313,619.28	1,856,912.30	526+01.19	313,678.70	1,856,592.80	528+21.19	313,614.75	1,856,382.80	0.079
	CURVE #2	304.70	596.52	546.93	201.17	528+21.19	313,614.75	1,856,382.80	530+41.19	313,550.80	1,856,172.79	535+88.12	313,753.51	1,855,694.06	538+08.12	313,948.81	1,855,593.82	0.079
PRIVATE DRIVE	CURVE #1		70.97	140.99	5.03				10+41.03	314,372.93	1,854,907.99	11+82.02	314,437.38	1,855,032.86				NC
	CURVE #2		50.30	88.65	15.28				13+70.96	314,499.50	1,855,211.30	14+59.62	314,566.26	1,855,261.62				NC
SR335	CURVE #1		162.76	317.95	20.83				0+93.40	305,060.73	1,868,451.90	4+11.35	305,346.85	1,868,321.87				0.080
	CURVE #2		88.55	177.02	1.71				6+37.50	305,569.99	1,868,285.17	8+14.51	305,743.38	1,868,249.74				0.053
	CURVE #3		170.77	341.51	1.27				19+77.32	306,870.43	1,867,963.81	23+18.82	307,201.85	1,867,881.48				NC

NOTES:

THE GROUND COORDINATE VALUES SHOWN HEREIN ARE CONVERTED FROM THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. THESE GROUND COORDINATES WERE ESTABLISHED BY DIVIDING THE GRID COORDINATE BY A COMBINED SCALE FACTOR OF 0.99996061457.

* THE BACK TANGENT LENGTH HAS BEEN GIVEN FOR UNEQUAL TANGENTS

CALCULATED LBD CHECKED JMB

HORIZONTAL CURVE DATA

SCI-823-6.81

LEGEND

(1) (2) NOT USED

(3) ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (NIP)

(4) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GALLONS/SQ YD) (NIP)

(5) ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) (NIP)

(6) ITEM 407 - TACK COAT (0.075 GALLONS/SQ YD) (NIP)

(7) ITEM 302 - 5" ASPHALT CONCRETE BASE, PG64-22 (NIP)

(7A) ITEM 302 - 6" ASPHALT CONCRETE BASE, PG64-22 (NIP)

(7B) ITEM 302 - 8" ASPHALT CONCRETE BASE, PG64-22 (NIP)

(8) ITEM 408 - PRIME COAT (0.4 GALLONS/SQ YD) (NIP)

(9) ITEM 304 - 6" AGGREGATE BASE

(10) ITEM 304 - 8" AGGREGATE BASE (NIP)

(11) ITEM 204 - SUBGRADE COMPACTION & PROOF ROLLING (NIP)

(11A) ITEM 204 - SUBGRADE COMPACTION

(12) ITEM 422 - CHIP SEAL (NIP)

(13) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

(14) ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 (NIP)

(15) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 (NIP)

(16) ITEM 605 - 6" ROCK CUT UNDERDRAINS, 707.31 (NIP)

(17) ITEM 605 - AGGREGATE DRAINS (NIP)

(18) ITEM 606 - GUARDRAIL, TYPE 5 (NIP)

(19) ITEM 609 - CURB, TYPE 4-C (NIP)

(20) ITEM 609 - 6" CONCRETE MEDIAN (NIP)

(21) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 (WITH 2-4" RACEWAY) (NIP)

(22) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 (WITH 2-4" RACEWAY) (NIP)

(23) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D (NIP)

(23A) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN (NIP)

(24) ITEM 659 - SEEDING AND MULCHING (NIP)

(25) ITEM SPECIAL - NOISE BARRIER

(26) NOT USED

(27) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (NIP)

(28) ITEM 605 - 6" UNCLASSIFIED UNDERDRAIN WITH FABRIC WRAP (NIP)

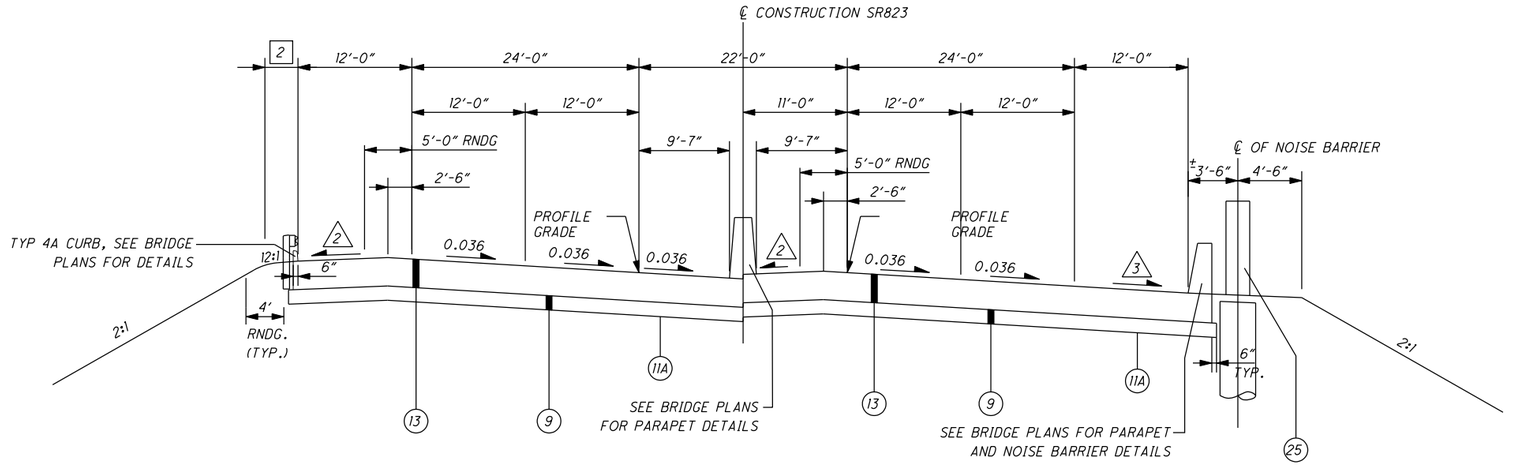
(29) ITEM 605 - 6" DEEP PIPE UNDERDRAIN WITH FABRIC WRAP (NIP)

(30) NOT USED

(31) ITEM 204 - GRANULAR MATERIAL, TYPE C (NIP)

NOTE:
ALL GUARDRAIL WORK WILL BE PERFORMED IN OTHER PART.

NOTE:
PERFORM ALL CURB AND BARRIER WORK SHOWN WITHIN LIMITS OF THE BRIDGE AND APPROACH SLABS. SEE BRIDGE PLANS.



APPROACH SLAB SECTION - SR823 OVER PORTSMOUTH-MINFORD ROAD

STA. 482+81.30 TO STA. 483+11.30 = 30.00 LF

SCI-823-0917 BRIDGE LIMITS

STA. 487+12.07 TO STA. 487+42.07 = 30.00 LF

△2 VARIES FROM 0.034 (NO ROUNDING) TO 0.04 (ROUNDING) △3 VARIES FROM 0.04 TO 0.036 □2 VARIES FROM 3'-0" TO 3'-6"

△2 VARIES FROM 0.04 (ROUNDING) TO 0.034 (NO ROUNDING) △3 VARIES FROM 0.036 TO 0.04 □2 VARIES FROM 3'-6" TO 8'-0"

APPROACH SLAB CONSTRUCTION QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNITS
204	SUBGRADE COMPACTION	647	SQ YD
304	AGGREGATE BASE	108	CU YD

QUANTITIES CARRIED TO SHEET 10

CALCULATED LBD CHECKED JMB

TYPICAL SECTIONS - SR823 APPROACH SLABS

SCI-823-6.81

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ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES OPERATING WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

COLUMBIA GAS OF OHIO
TIFFANY WOODYARD
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
(740) 772-9131

AMERICAN ELECTRIC POWER
PAUL PAXTON
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
(614) 883-6831

MINFORD TELEPHONE COMPANY
PAULA MCGRAW
PO BOX 181
MINFORD, OHIO 45653
(740) 820-2151

SPRINT COMMUNICATIONS, INC.
JOE THOMAS
11370 ENTERPRISE PARK DRIVE
SHARONVILLE, OHIO 45241
(513) 459-5761

TIME WARNER CABLE
TERRY ALLEN
3760 INTERCHANGE DRIVE
COLUMBUS, OHIO 43204-4131
(614) 255-6349

SCIOTO COUNTY SANITARY ENGINEERING
DARREN LEBRUN
602 SEVENTH STREET
PORTSMOUTH, OHIO 45662
(740) 355-8249

SCIOTO COUNTY REGIONAL WATER AUTHORITY
JONATHAN KING
PO BOX 310
LUCASVILLE, OHIO 45648
(740) 259-2301

PIKE NATURAL GAS COMPANY
ROBERT SEELING JR.
PO BOX 249
HILLSBORO, OHIO 45133
(937) 393-1901

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAD83 HORIZONTAL DATUM AND NAVD83 VERTICAL DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED IN THE PLANS.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9:00 P.M. AND 6:00 A.M. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COOPERATION BETWEEN CONTRACTORS

AT ANY TIME, THE DEPARTMENT MAY CONTRACT FOR OTHER WORK ON OR NEAR THE PROJECT.

SEPARATE CONTRACTORS WORKING WITHIN THE LIMITS OF THE PROJECT SHALL CONDUCT THEIR WORK WITHOUT INTERFERING WITH OR HINDERING THE PROGRESS OR COMPLETION OF WORK BEING PERFORMED BY OTHER CONTRACTORS AND SHALL COOPERATE WITH EACH OTHER AS DIRECTED BY THE ENGINEER.

STREAM CHANNEL EXCAVATION

STREAM CHANNEL EXCAVATION WITHIN "WATERS OF THE US" IS SUBJECT TO US ARMY CORPS OF ENGINEERS (USACE) REGULATORY JURISDICTION AND WILL REQUIRE AUTHORIZATION BY THE USACE VIA THE WATERWAY PERMITTING PROCESS (404/401). IN ACCORDANCE WITH THE APPLICABLE WATERWAY PERMITS (404/401) STREAM CHANNEL EXCAVATION CAN NOT EXCEED THE QUANTITIES AND/OR SURFACE AREA THAT HAS BEEN PERMITTED. THE WATERWAY PERMITS ARE ATTACHED TO THE CONSTRUCTION PLANS AS SPECIAL PROVISIONS AND WILL BE AVAILABLE IN THE PROJECT CONSTRUCTION OFFICE.

TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

PLACEMENT OR REMOVAL OF TEMPORARY OR PERMANENT FILL MATERIALS SHALL NOT OCCUR BELOW THE ORDINARY HIGH WATER MARK BETWEEN APRIL 15 AND JUNE 30.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATIONS SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM "ODOT DISTRICT 9."

EROSION CONTROL

ITEMS 601, 660, AND 670 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660 OR 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET REQUIREMENT OF 108.04.

SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL DISTURBED BY THE CONSTRUCTION OF THE BRIDGES AND APPROACH SLABS WHICH ARE OUTSIDE THE LIMITS OF ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION AND ITEM 670 SLOPE EROSION PROTECTION AS SHOWN ON SCD DM-4.1.

ITEM 616 - WATER

THE FOLLOWING ESTIMATED QUANTITY OF WATER HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO COMPLY WITH THE 404/401 WATERWAY PERMIT FOR USE AS ADDITIONAL DUST CONTROL WHEN WORKING WITHIN 100 FEET OF THESE PRESERVED WATERWAYS. THE STREAM IDENTIFICATION NUMBER AND APPROXIMATE LOCATION ARE LISTED IN TABLE BELOW. FOR A DETAILED LOCATION SEE THE WATERWAY PERMIT, AVAILABLE IN THE PROJECT CONSTRUCTION OFFICE.

STREAM #	APPROXIMATE LOCATION STATION
STREAM 18	484+50
STREAM 19	SR 823 RT 485+50 TO 490+50

616, WATER 31 M GAL

UTILITY LEGEND

ABBREVIATIONS:

— — — — — UNK UNKNOWN FUNCTION UTILITY PIPE

– – – – – – – – (DATUR) DEPICTED ACCORDING TO UTILITY RECORDS, NO ELECTRONIC INFORMATION WAS OBTAINED.

NAP NO ASSOCIATED PIPING FOUND FROM STRUCTURE TO ANY OTHER UTILITY OR STRUCTURE.

(FO) FIBER OPTIC

(AATFI) ABANDONED ACCORDING TO FIELD INSPECTION

(AATUR) ABANDONED ACCORDING TO UTILITY RECORDS

(DATFI) DEPICTED ACCORDING TO FIELD INSPECTION, NO ELECTRONIC INFORMATION WAS OBTAINED.

(QL-C) DEPICTED ACCORDING TO RECORD INFORMATION AND EXISTING ASSOCIATED UTILITY STRUCTURES. NO ELECTRONIC INFORMATION WAS OBTAINED.

(QL-D) DEPICTED ACCORDING TO RECORD INFORMATION. NO ELECTRONIC INFORMATION WAS OBTAINED. UTILITY END POINT

EOI END OF ELECTRONIC DESIGNATING INFORMATION

EORI END OF RECORD INFORMATION

JOURNAL ENTRY: TR234 RAMP D RENAMED SR335C

SUBSEQUENT TO THE COMPLETED PLANS, TR234 RAMP D (STA. 402+09.94 TO STA. 384+20.66) AND TR234 BETWEEN TR234 RAMP D AND SR335 (STA. 26+43.58 TO STA. 38+44.54) WAS JOURNALIZED AND SHALL NOW BE REFERRED TO AS SR335C.

CALCULATED LBD CHECKED JMB

GENERAL NOTES

SCI-823-6.81

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ITEM 614 MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT THE LOCATIONS SHOWN IN THIS MAINTENANCE OF TRAFFIC PLAN.

INCLUDE IN THE LUMP SUM FOR MAINTAINING TRAFFIC THE COST OF REPAIRING AND/OR REPLACING PAVEMENT AT EQUIPMENT CROSSINGS ON PUBLIC ROADS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 1 M GAL

TEMPORARY ROAD CLOSURE

THE CONTRACTOR SHALL USE FLAGGER OPERATIONS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES TYPICAL APPLICATION TA-13 TO SET BEAMS ALONG SR139. A TEMPORARY ROAD CLOSURE OF FIFTEEN (15) MINUTES EVERY THIRTY (30) MINUTES SHALL BE PERMITTED TO SET THE BEAMS. NO LANE RESTRICTIONS ON SR139 SHALL BE PERMITTED WHILE CR28 IS DETOURED.

CALCULATED LBD
CHECKED JMB

MAINTENANCE OF TRAFFIC GENERAL NOTES

SCI-823-6.81

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			7	8	9	17	18												
																		ROADWAY	
			647											204	10000	647	SQ YD	SUBGRADE COMPACTION	
																		EROSION CONTROL	
						1402	1793							601	20000	3195	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	
						253	314							601	32204	567	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	
				31	1									616	10000	32	M GAL	WATER	
						2351	1935							670	00500	4286	SQ YD	SLOPE EROSION PROTECTION	
																		PAVEMENT	
			108											304	20000	108	CU YD	AGGREGATE BASE	
																		NOISE BARRIER	
						5578								SPECIAL	60610210	5578	SQ FT	NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT	16
																		STRUCTURES (20' AND OVER)	
						LUMP	LUMP							503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	22
						72	79							503	22200	151	CU YD	UNCLASSIFIED EXCAVATION INCLUDING ROCK AND/OR SHALE	
						LUMP	LUMP							505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION	
						1520	1520							507	00200	3040	FT	STEEL PILES HP12X53, FURNISHED	
						1360	1360							507	00250	2720	FT	STEEL PILES HP12X53, DRIVEN	
						1360	1360							507	92200	2720	FT	PREBORED HOLES	
						32	32							507	93301	64	EACH	STEEL POINTS, OR SHOES, AS PER PLAN	16
						439829	439337							509	10000	879166	POUND	EPOXY COATED REINFORCING STEEL	
						2596	2668							512	10100	5264	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
						20	20							515	15041	40	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3,	28
																		TYPE 4 MOD. (66"), AS PER PLAN	
						48	48							515	20000	96	EACH	INTERMEDIATE DIAPHRAGMS	
						17	17							516	13600	34	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
						42	2405							516	13900	2447	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	
						103	103							516	14021	206	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	20
						30	30							516	44200	60	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	
																		22" X 11" X 3.5" LAMINATED ELASTOMERIC PAD WITH 26" X 12" X 2" LOAD PLATE	
						10	10							516	44200	20	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	
																		22" X 11" X 4.125" LAMINATED ELASTOMERIC PAD WITH 23" X 12" X 2" LOAD PLATE	
						117	121							518	21200	238	CU YD	POROUS BACKFILL WITH FILTER FABRIC	
						128	128							518	40000	256	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
						24	30							518	40012	54	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	
						772	772							898	10201	1544	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN	26
						323	323							898	10709	646	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=17"), AS PER PLAN	38
						70	64							898	11000	134	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	
						78	78							898	11001	156	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	36
						667	672							898	20100	1339	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER ABOVE FOOTING)	
						63	64							898	20150	127	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	
						239	239							898	20300	478	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (FOOTING)	

CALCULATED LBD
CHECKED JMB

GENERAL SUMMARY

SCI-823-6.81

USER: Cwahlbri PLOT DATE: 5/28/2013 4:33:23 PM REVISION DATE: 5/28/2013
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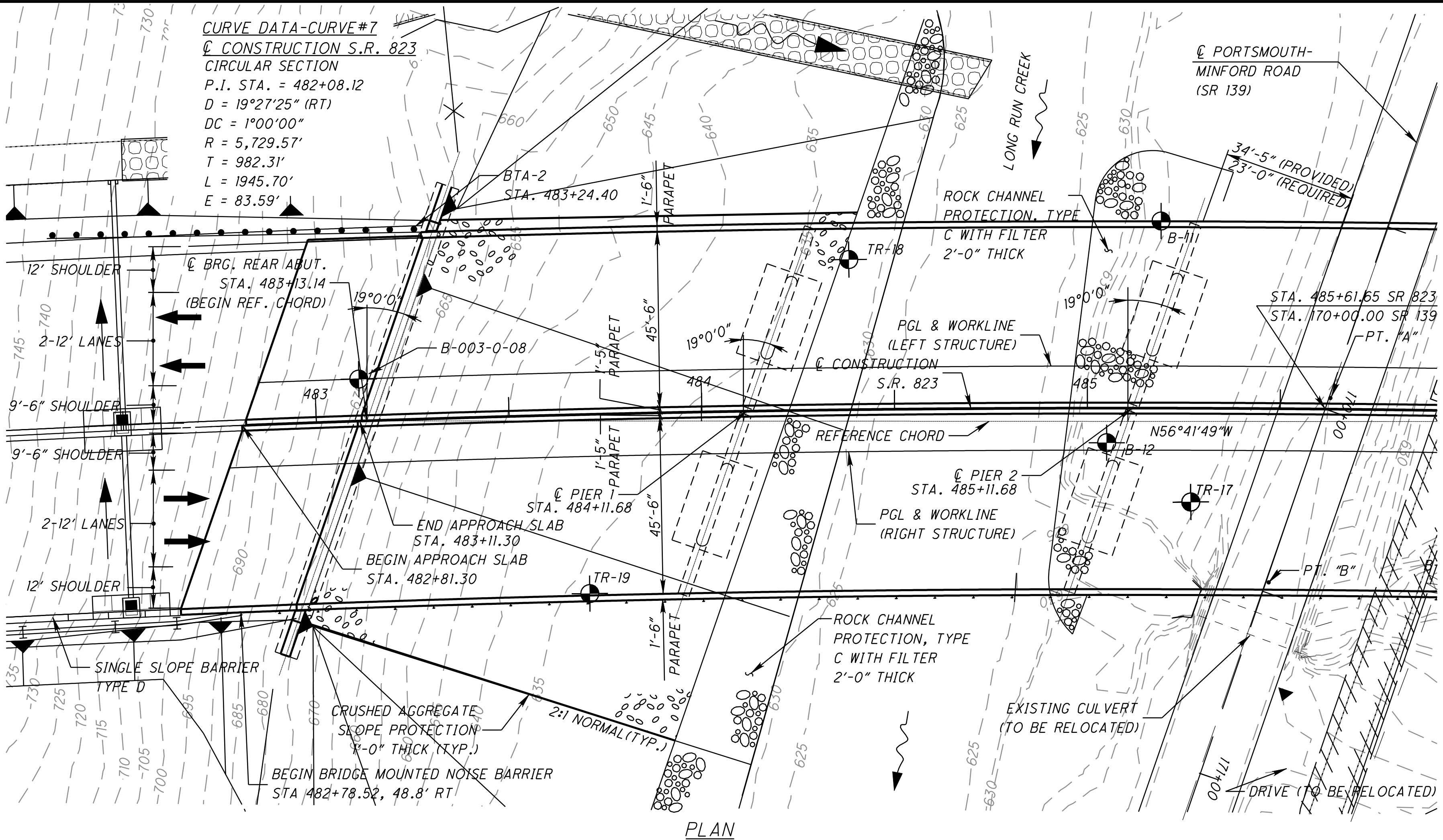
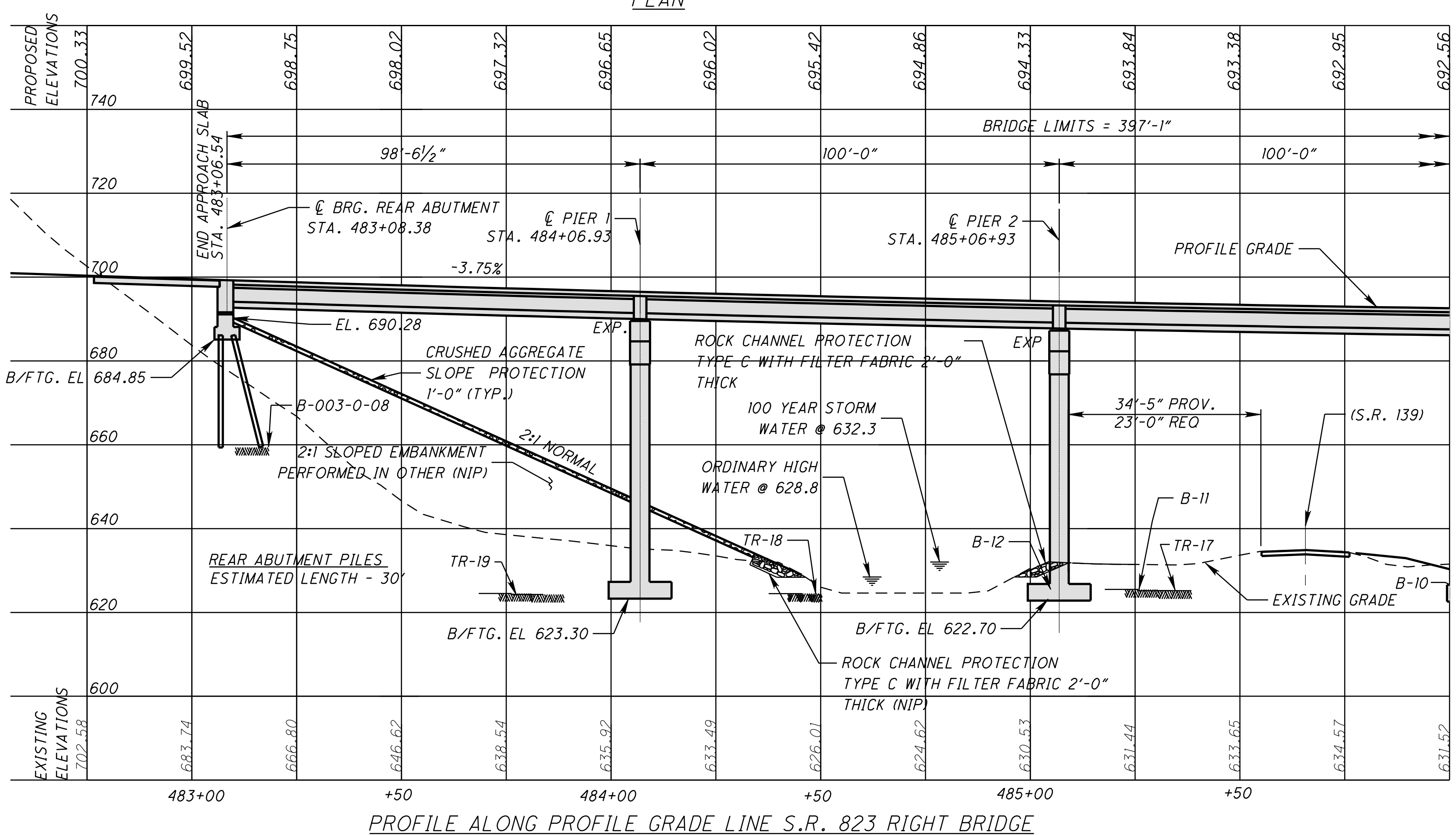


PLAN

TABLE OF VERTICAL CLEARANCES		
LOCATION	"A"	"B"
PROPOSED	51.38'	50.47'
PREFERRED	17.0'	17.0'

BORING INFORMATION	
No.	APPROX. T/ROCK ELEV.
TR-15	624.3
TR-16	624.9
TR-17	625.4
TR-18	624.5
TR-19	624.3
B-10	623.6
B-11	625.7
B-12	625.5
B-003-0-08	659.4



PROFILE ALONG PROFILE GRADE LINE S.R. 823 RIGHT BRIDGE

BENCHMARK 19	BENCHMARK 20
RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA 481+38, 122' RT, ELEV.=708.97 N=311158.0709, E=1860204.9890	RAILROAD SPIKE SET IN TREE STA. 488+01, 314' LT., ELEV=638.73 N=311158.7309, E=1859403.3334

TRAFFIC DATA
(SR 823)
CURRENT YEAR ADT (2010) = 19,800
DESIGN YEAR ADT (2030) = 26,000
CURRENT YEAR ADTT (2010) = 2,772
DESIGN YEAR ADTT (2030) = 3,640

HYDRAULIC DATA	
DRAINAGE AREA = 13.424 sq.mi. = 8591 acres	
Q_{50} = 2230 cfs	Q_{100} = 2572 cfs
V_{50} = 6.0 fps	V_{100} = 6.2 fps
EL $_{50}$ = 631.8	EL $_{100}$ = 632.3
OHWM:=628.8	
AREA BELOW OHWM: 0.146 ACRES	
TEMP. FILL BELOW OHWM: 914 CY	

NOTES:

1. ALL SHEETS WITH PLAN DIMENSIONS ARE SHOWN HORIZONTAL.
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
3. THE PROPOSED PROFILE GRADE IS WITHIN BRIDGE LIMITS. SEE ROADWAY PLANS FOR PAVEMENT ELEVATIONS BEYOND BRIDGE LIMITS.

FOR THIS PROJECT, PERMITS FOR SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN "WATERS OF THE UNITED STATES" AS SHOWN BELOW. IF EITHER OF THE LIMITS PROVIDED ARE EXCEEDED, THEN A 404/401 PERMIT MODIFICATIONWILL BE REQUIRED. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.09 FOR THE APPLICATION REQUIREMENTS.

PLAN AREA OF TEMPORARY FILL MATERIAL = 0.146 ACRES [M2]
TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 914 YD3 [M3]

PROPOSED STRUCTURE

TYPE: 4 SPAN CONTINUOS 66" MODIFIED AASHTO TYPE 4 PRESTRESSED CONCRETE I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS, AND T-TYPE PIERS.

SPANS: 98'- 6½", 100'-0", 100'-0", 98'-6½" (MEASURED ALONG ℄ CONSTRUCTION)

ROADWAY: 45'-6" TOE TO TOE OF PARAPETS.

LOADING: HS-25 AND ALTERNATE MILITARY LOADING, FWS = 60 PSF.

SKEW: 19°00'00" (LF) WITH RESPECT TO REF. CHORD.

SUPER ELEVATION: 0.036 FT/FT.

ALIGNMENT: 1°00'00" CURVE TO THE RIGHT.

WEARING SURFACE: MONOLITHIC CONCRETE.

APPROACH SLABS: AS-1-81, 30'-0" LONG (MODIFIED).

LATITUDE: 38° 51' 30" N

LONGITUDE: 82° 52' 00" W

LEGEND

BTA-1 = BRIDGE TERMINAL ASSEMBLY TYPE 1
BTA-2 = BRIDGE TERMINAL ASSEMBLY TYPE 2
⌖ = BORING LOCATION

DESIGN AGENCY: HDR ENGINEERING, INC. 9987 CARVER ROAD SUITE 200 CINCINNATI, OHIO 45242 513-984-7500

DESIGNED DMP/JSW | DRAWN MAB | REVIEWED JMY | DATE 06/24/11 | CHECKED CHN | REVISED | STRUCTURE FILE NUMBER 7306482

SCIOTO COUNTY
STA. 482+81.30
STA. 487+42.07

SITE PLAN - RIGHT BRIDGE 1/2

BRIDGE NO. SCI-823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

1/32

USER: sdeornel PLOT DATE: 6/23/2011 11:25:48 AM REVISION DATE: 6/23/2011
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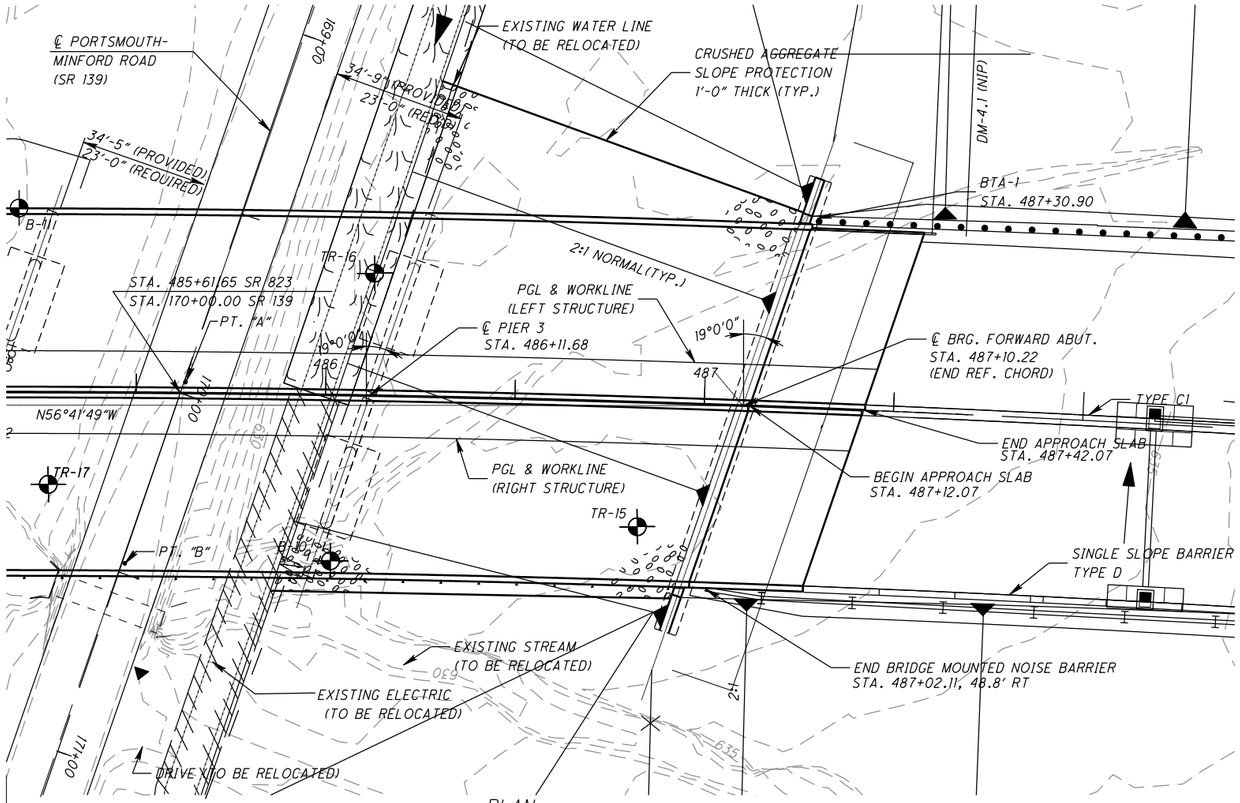

1500' VERT. CURVE DATA
℄ CONSTRUCTION S.R. 823
P.V.I. STA. = 489+40
P.V.I. EL. = 675.19
G_1 = -3.75%
G_2 = +4.50%

BENCHMARK 19	BENCHMARK 20
RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA 481+38, 122' RT, ELEV.=708.97 N=311158.0709, E=1860204.9890	RAILROAD SPIKE SET IN TREE STA. 488+01, 314' LT., ELEV=638.73 N=311158.7309, E=1859403.3334

TRAFFIC DATA
(SR 823)
CURRENT YEAR ADT (2010) = 19,800
DESIGN YEAR ADT (2030) = 26,000
CURRENT YEAR ADTT (2010) = 2,772
DESIGN YEAR ADTT (2030) = 3,640

HYDRAULIC DATA	
DRAINAGE AREA = 13.424 sq.mi. = 8591 acres	
Q_{50} = 2230 cfs	Q_{100} = 2572 cfs
V_{50} = 6.0 fps	V_{100} = 6.2 fps
EL $_{50}$= 631.8	EL $_{100}$= 632.3
OHWM:=628.8	
AREA BELOW OHWM: 0.146 ACRES	
TEMP. FILL BELOW OHWM: 914 CY	

NOTES:

1. ALL SHEETS WITH PLAN DIMENSIONS ARE SHOWN HORIZONTAL.
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
3. THE PROPOSED PROFILE GRADE IS WITHIN BRIDGE LIMITS. SEE ROADWAY PLANS FOR PAVEMENT ELEVATIONS BEYOND BRIDGE LIMITS.

FOR THIS PROJECT, PERMITS FOR SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN "WATERS OF THE UNITED STATES" AS SHOWN BELOW. IF EITHER OF THE LIMITS PROVIDED ARE EXCEEDED, THEN A 404/401 PERMIT MODIFICATIONWILL BE REQUIRED. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.09 FOR THE APPLICATION REQUIREMENTS.

PLAN AREA OF TEMPORARY FILL MATERIAL = 0.146 ACRES [M2]
TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 914 YD3 [M3]

TABLE OF VERTICAL CLEARANCES		
LOCATION	"A"	"B"
PROPOSED	51.38'	50.47'
PREFERRED	17.0'	17.0'

BORING INFORMATION	
No.	APPROX. T/ROCK ELEV.
TR-15	624.3
TR-16	624.9
TR-17	625.4
TR-18	624.5
TR-19	624.3
B-10	623.6
B-11	625.7
B-12	625.5
B-003-0-08	659.4

PROPOSED STRUCTURE
TYPE: 4 SPAN CONTINUOS 66" MODIFIED AASHTO TYPE 4 PRESTRESSED CONCRETE I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS, AND T-TYPE PIERS.
SPANS: 98'-6½", 100'-0", 100'-0", 98'-6½" (MEASURED ALONG ℄ CONSTRUCTION)
ROADWAY: 45'-6" TOE TO TOE OF PARAPETS.
LOADING: HS-25 AND ALTERNATE MILITARY LOADING, FWS = 60 PSF.
SKEW: 19°00'00" (LF) WITH RESPECT TO REF. CHORD.
SUPER ELEVATION: 0.036 FT/FT.
ALIGNMENT: 1°00'00" CURVE TO THE RIGHT.
WEARING SURFACE: MONOLITHIC CONCRETE.
APPROACH SLABS: AS-1-81, 30'-0" LONG (MODIFIED).
LATITUDE: 38° 51' 30" N
LONGITUDE: 82° 52' 00" W

LEGEND

BTA-1 = BRIDGE TERMINAL ASSEMBLY TYPE 1
BTA-2 = BRIDGE TERMINAL ASSEMBLY TYPE 2
= BORING LOCATION

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED DMP/JSW | DRAWN MAB | REVIEWED JMY | DATE 06/24/11
CHECKED CHN | REVISED | STRUCTURE FILE NUMBER 7306482

SCIOTO COUNTY
STA. 482+81.30
STA. 487+42.07

SITE PLAN - RIGHT BRIDGE 2/2
BRIDGE NO. SCI-823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

2 / 32
12 / 44

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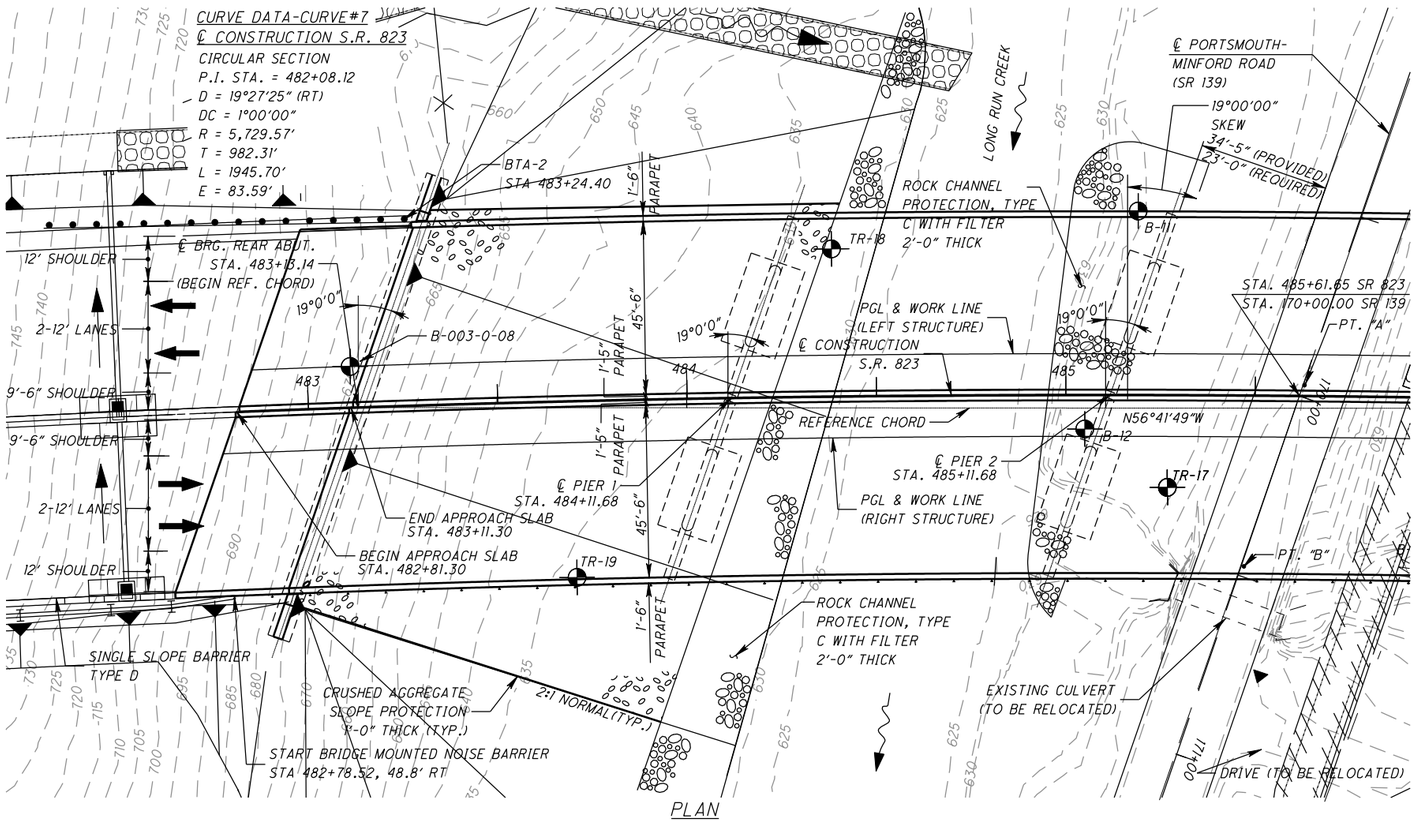

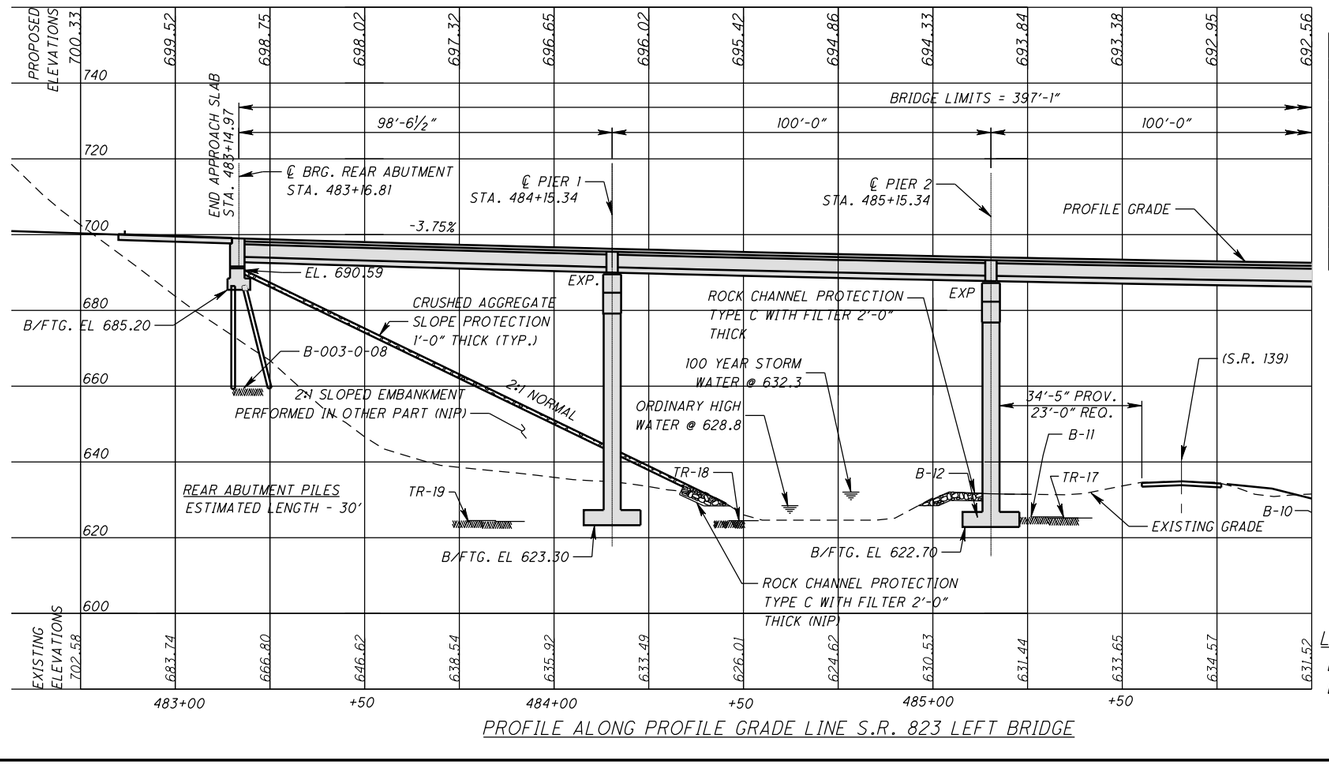

PROFILE ALONG PROFILE GRADE LINE S.R. 823 LEFT BRIDGE

FIRST GUARDRAIL POST OFF BRIDGE LOCATIONS		
LOCATION	STATION	OFFSET
REAR ABUT.	483+24.87	47.00 LT.
FWD. ABUT.	487+30.40	47.00 LT.

BENCHMARK 19	BENCHMARK 20
RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA. 481+38, 122' RT ELEV.=708.97 N=311158.0709, E=1860204.9890	RAILROAD SPIKE SET IN OF TREE STA. 488+01, 162' LT ELEV.=638.73 N=311158.7309, E=1859403.3334

TRAFFIC DATA
(SR 823)
CURRENT YEAR ADT (2010) = 19,800
DESIGN YEAR ADT (2030) = 26,000
CURRENT YEAR ADTT (2010) = 2,772
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HYDRAULIC DATA	
DRAINAGE AREA = 13.424 sq.mi. = 8591 acres	
Q_{50} = 2230 cfs	Q_{100} = 2572 cfs
V_{50} = 6.0 fps	V_{100} = 6.2 fps
EL 50= 631.8	EL 100 = 632.3
OHWM:=628.8	
AREA BELOW OHWM: 0.146 ACRES	
TEMP. FILL BELOW OHWM: 914 CY	

TABLE OF VERTICAL CLEARANCES		
LOCATION	"A"	"B"
PROPOSED	51.38'	50.47'
PREFERRED	17.0'	17.0'

BORING INFORMATION	
No.	APPROX. T/ROCK ELEV.
TR-15	624.3
TR-16	624.9
TR-17	625.4
TR-18	624.5
TR-19	624.3
B-10	623.6
B-11	625.7
B-12	625.5
B-003-0-08	659.4

LEGEND

BTA-1 = BRIDGE TERMINAL ASSEMBLY TYPE 1

BTA-2 = BRIDGE TERMINAL ASSEMBLY TYPE 2

⌖ = BORING LOCATION

NOTES:

1. ALL SHEETS WITH PLAN DIMENSIONS ARE SHOWN HORIZONTAL.
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
3. THE PROPOSED PROFILE GRADE IS WITHIN BRIDGE LIMITS. SEE ROADWAY PLANS FOR PAVEMENT ELEVATIONS BEYOND BRIDGE LIMITS.

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PLAN AREA OF TEMPORARY FILL MATERIAL = 0.146 ACRES [M2]
TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 914 YD3 [M3]

PROPOSED STRUCTURE
TYPE: 4 SPAN CONTINUOS 66" MODIFIED AASHTO TYPE 4 PRESTRESSED CONCRETE I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS, AND T-TYPE PIERS.
SPANS: 98'-6½", 100'-0", 100'-0", 98'-6½" (MEASURED ALONG ℄ CONSTRUCTION)
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LOADING: HS-25 AND ALTERNATE MILITARY LOADING, FWS = 60 PSF.
SKEW: 19°00'00" (LF) WITH RESPECT TO REF. CHORD.
SUPER ELEVATION: 0.036 FT/FT.
ALIGNMENT: 1°00'00" CURVE TO THE RIGHT.
WEARING SURFACE: MONOLITHIC CONCRETE.
APPROACH SLABS: AS-1-81, 30'-0" LONG (MODIFIED)
LATITUDE: 38° 51' 30" N
LONGITUDE: 82° 52' 00" W

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	MAB	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DMP		7306482	

SCIOTO COUNTY
STA. 482+81.30
STA. 487+42.07

SITE PLAN - LEFT BRIDGE 1/2
BRIDGE NO. SCI-823-0917-L
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

3 / 32

13 / 44

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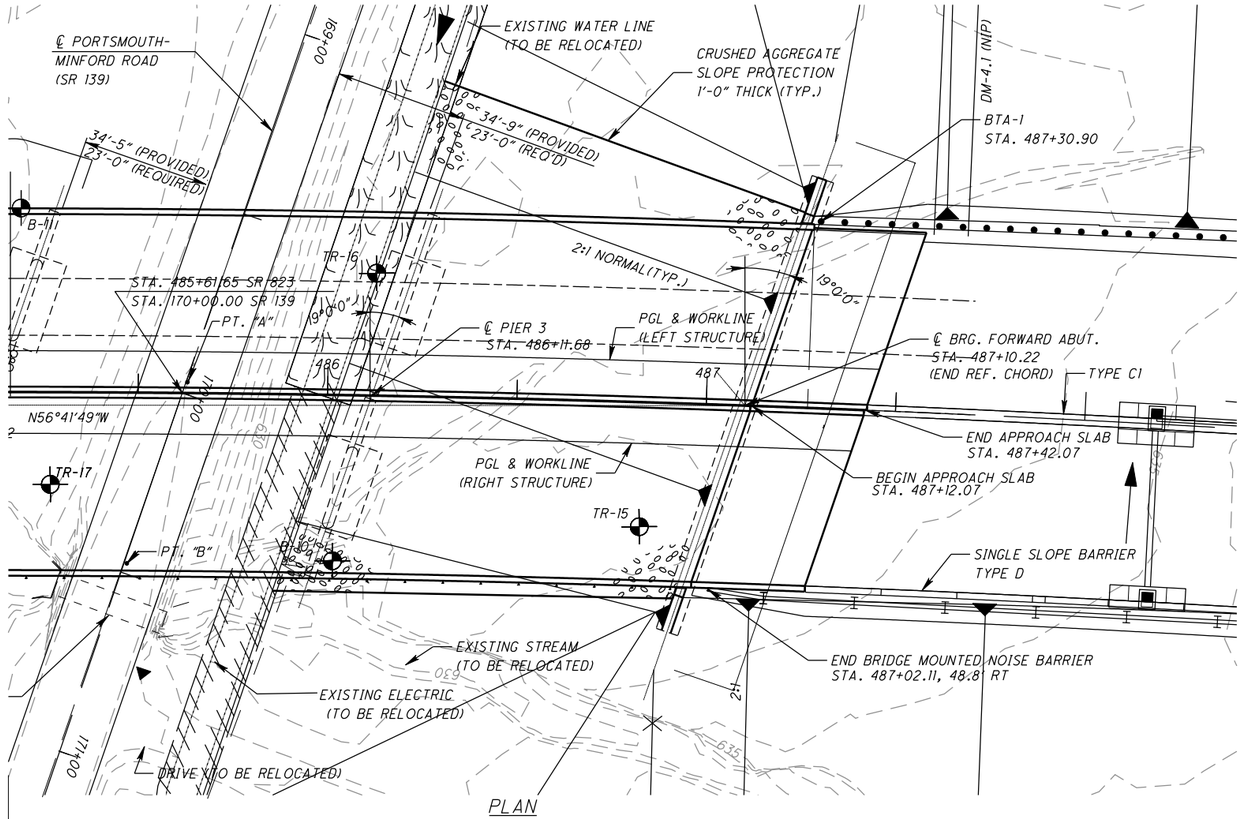

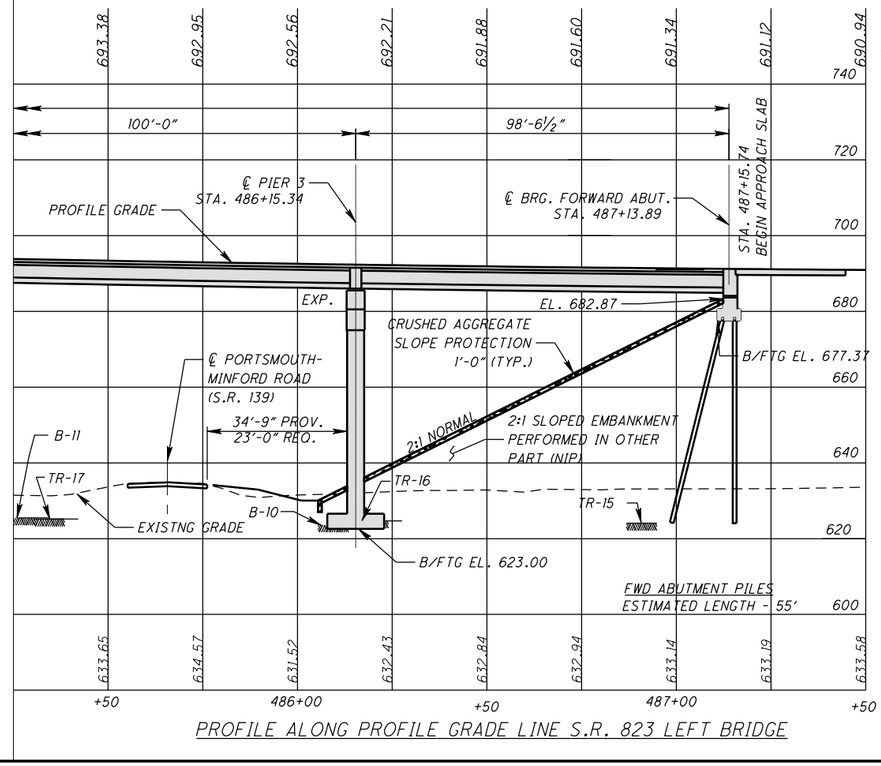

PROFILE ALONG PROFILE GRADE LINE S.R. 823 LEFT BRIDGE

1500' VERT. CURVE DATA
℄ CONSTRUCTION S.R. 823
P.V.I. STA. = 489+40
P.V.I. EL. = 675.19
G_1 = -3.75%
G_2 = +4.50%

FIRST GUARDRAIL POST OFF BRIDGE LOCATIONS		
LOCATION	STATION	OFFSET
REAR ABUT.	483+24.87	47.00 LT.
FWD. ABUT.	487+30.40	47.00 LT.

BENCHMARK 19	BENCHMARK 20
RAILROAD SPIKE SET IN EAST SIDE OF OAK TREE STA 481+38, 122' RT, ELEV.=708.97 N=311158.0709, E=1860204.9890	RAILROAD SPIKE SET IN TREE STA. 488+01, 314' LT., ELEV=638.73 N=311158.7309, E=1859403.3334

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(SR 823)
CURRENT YEAR ADT (2010) = 19,800
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V_{50} = 6.0 fps	V_{100} = 6.2 fps
EL 50= 631.8	EL 100= 632.3
OHWM:=628.8	
AREA BELOW OHWM: 0.146 ACRES	
TEMP. FILL BELOW OHWM: 914 CY	

TABLE OF VERTICAL CLEARANCES		
LOCATION	"A"	"B"
PROPOSED	51.38'	50.47'
PREFERRED	17.0'	17.0'

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TR-17	625.4
TR-18	624.5
TR-19	624.3
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B-12	625.5
B-003-0-08	659.4

NOTES:

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PLAN AREA OF TEMPORARY FILL MATERIAL = 0.146 ACRES [M2]
TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 914 YD3 [M3]

PROPOSED STRUCTURE
TYPE: 4 SPAN CONTINUOS 66" MODIFIED AASHTO TYPE 4 PRESTRESSED CONCRETE I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS, AND T-TYPE PIERS.
SPANS: 98'-6½", 100'-0", 100'-0", 98'-6½" (MEASURED ALONG ℄ CONSTRUCTION)
ROADWAY: 45'-6" TOE TO TOE OF PARAPETS.
LOADING: HS-25 AND ALTERNATE MILITARY LOADING, FWS = 60 PSF.
SKEW: 19°00'00" (LF) WITH RESPECT TO REF. CHORD.
SUPER ELEVATION: 0.036 FT/FT.
ALIGNMENT: 1°00'00" CURVE TO THE RIGHT.
WEARING SURFACE: MONOLITHIC CONCRETE.
APPROACH SLABS: AS-1-81, 30'-0" LONG (MODIFIED).
LATITUDE: 38° 51' 30" N
LONGITUDE: 82° 52' 00" W

LEGEND

BTA-1 = BRIDGE TERMINAL ASSEMBLY TYPE 1
BTA-2 = BRIDGE TERMINAL ASSEMBLY TYPE 2
⊕ = BORING LOCATION

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DATE 06/24/11
REVIEWED JMY
STRUCTURE FILE NUMBER 7306482
DRAWN MAB
REVISED
DESIGNED DMP/JSW
CHECKED DMP

SCIOTO COUNTY
STA. 482+81.30
STA. 487+42.07

SITE PLAN - LEFT BRIDGE 2/2
BRIDGE NO. SCI-823-0917-L
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

4 / 32
14 / 44

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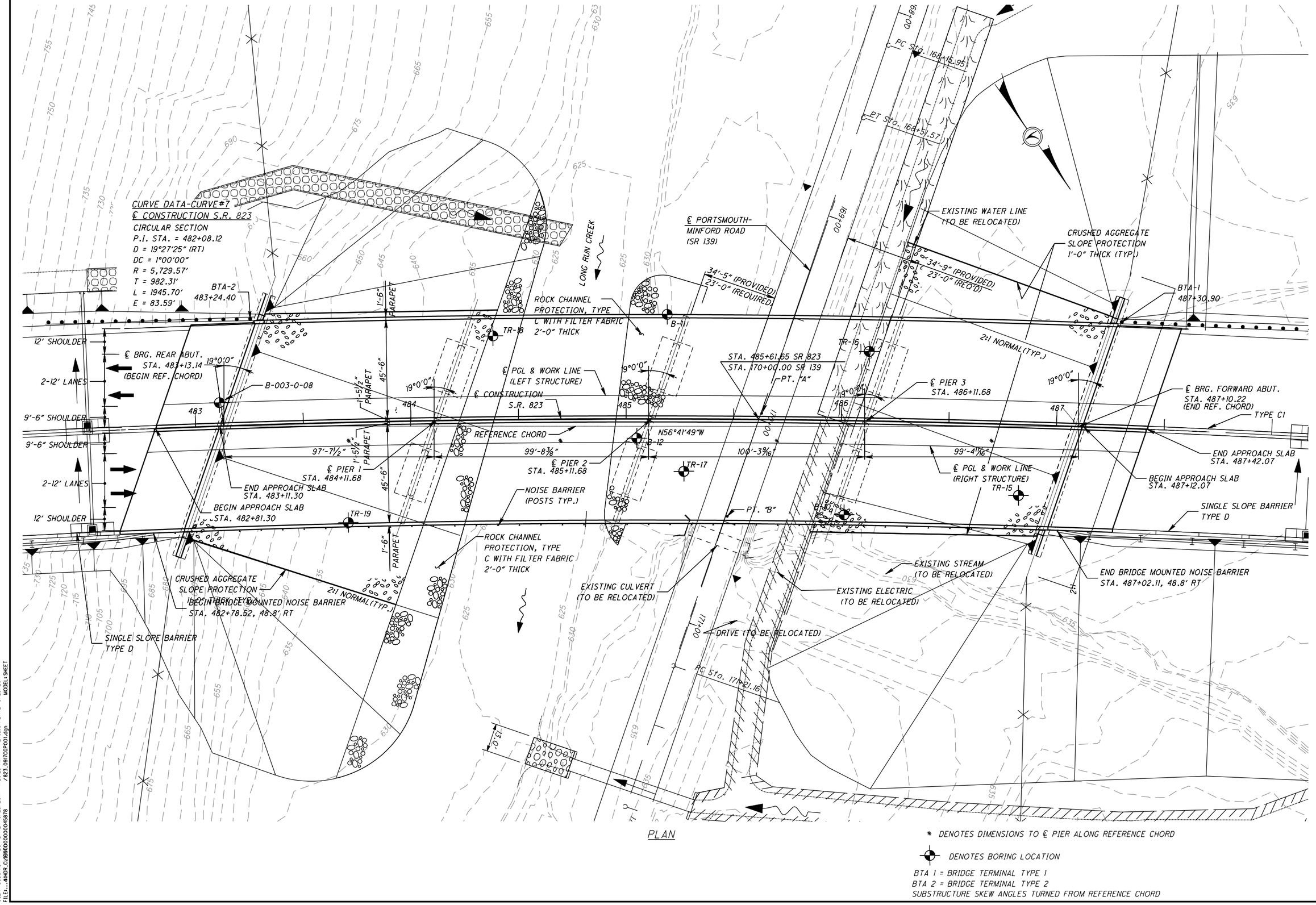

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DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DMP		7306482	

SCIOTO COUNTY
STA. 482+81.30
STA. 487+42.07

GENERAL PLAN
BRIDGE NO. SCI-823-0917 L/R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

5 / 32

15
44

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

A-1-69 REVISED 07-19-02
AS-1-81 REVISED 07-19-02
NBS-1-09 REVISED 07-17-09
PSID-1-99 REVISED 07-18-08
SBR-1-99 REVISED 07-19-02
SICD-1-96 REVISED 07-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

832 DATED 05-05-09
898 DATED 07-17-09

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS25 AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING - SURFACE (FWS) OF 60 LBS/FT².

DESIGN DATA

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50,000 PSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50,000 PSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7000 PSI
COMPRESSIVE STRENGTH (RELEASE) - 5000 PSI

PRESTRESSING STRAND:
AREA = 0.167 IN²
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2-1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

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 FT 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.

CONSTRUCTION CONSTRAINTS

FILL THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS WITH TYPE B GRANULAR MATERIAL, 703.16.C. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, FILL THE VOID BEHIND EACH ABUTMENT UP TO THE BEAM SEAT ELEVATION AND FROM THE BEAM SEAT UP ON A 1:1 SLOPE TO THE SUBGRADE ELEVATION PRIOR TO CONSTRUCTING THE BACKWALL AND SETTING THE BEAMS ON THE ABUTMENT. REFER TO EXCAVATION DIAGRAM ON SHEET 12/29.

AT PIER 1 (ONLY):

ALL INCIDENTAL WORK ASSOCIATED WITH EXCAVATING FOR AND CONSTRUCTING THE FOOTING FOR PIER 1 (ONLY) SHALL BE INCLUDED WITH ITEM 898 QC/OA CONCRETE, CLASS QCS1, SUBSTRUCTURE (FOOTING) FOR PAYMENT. THE INCIDENTAL WORK (AS DIRECTED BY THE ENGINEER) INCLUDES, BUT IS NOT LIMITED TO; EMBANKMENT PERFORMED BY OTHERS UNDER SEPARATE PART AND ROCK CHANNEL PROTECTION TYPE B WITH FILTER FABRIC PERFORMED BY OTHERS UNDER SEPARATE PART.

ITEM 203 EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 482+00 TO 488+00, BY OTHERS (NIP).

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES TO A MINIMUM RESISTANCE OF 20 BLOWS PER INCH OR BY CONTACTING HARD BEDROCK AND THE PILE RECEIVING AT LEAST 20 BLOWS. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL. INSTEAD OF DRIVING TO REFUSAL, THE CONTRACTOR MAY PERFORM DYNAMIC LOAD TESTING ACCORDING TO C&MS 523 TO ESTABLISH A DRIVING CRITERIA FOR EACH PILE TYPE AND CAPACITY. ESTABLISH THE DRIVING CRITERIA TO ACHIEVE

THE ULTIMATE BEARING VALUE GIVEN BELOW FOR THE PILES. PAYMENT FOR DYNAMIC LOAD TESTING PERFORMED

AT THE CONTRACTOR'S OPTION IS INCLUDED IN THE UNIT PRICE PAY ITEM FOR PILES DRIVEN.

THE ULTIMATE BEARING VALUE IS 138 TONS PER PILE FOR THE ABUTMENT PILES.

FORWARD ABUTMENT PILES:
32 PILES 60 FEET LONG, ORDER LENGTH
REAR ABUTMENT PILES:
32 PILES 35 FEET LONG, ORDER LENGTH

UTILITY LINES

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTLITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 507, STEEL POINTS, AS PER PLAN

USE STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. FURNISH STEEL POINTS FROM THE FOLLOWING MANUFACTURERS/SUPPLIERS: ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD., CLIFTON, NEW JERSEY 07014, PHONE: (973)773-8400, (800)526-9047, FAX: (973)773-8442; INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015, PHONE: (704)821- 8200, (888)423-8721, FAX: (704)821- 8201; DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417, PHONE: (201)337-5748, FAX: (201)337- 9022; VERSA STEEL INC., 1618 N.E. FIRST AVE., PORTLAND, OREGON 97232, PHONE: (503)287-9822, (800)678-0814, FAX: (503)287-7483; VERSABITE PILING ACCESSORIES, 1704 TOWER INDUSTRIAL DR., MONROE, NORTH CAROLINA 28110, PHONE: (800)280- 9950, (704)225-1566, FAX: (704)225-1567; OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27/A27M 65/35 [450/240] CLASS 2 HEAT TREATED OR AASHTO M103/M103M 65/35 [450/240] HEAT TREATED. WELD THE PILE POINTS TO THE PILE IN ACCORDANCE WITH AWS D1.5 OR THE MANUFACTURER'S WRITTEN WELDING PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED. SUBMIT A NOTARIZED COPY OF THE MILL TEST REPORT TO THE ENGINEER.

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
262 RUTHERFORD BLVD.
CLIFTON, NEW JERSEY 07014

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

FOUNDATION BEARING PRESSURE

PIER 1 & 3 FOOTINGS: MAXIMUM SERVICE LOAD = 6.93 TSF
MAXIMUM FACTORED LOAD = 9.42 TSF

PIER 2 FOOTINGS: MAXIMUM SERVICE LOAD = 6.78 TSF
MAXIMUM FACTORED LOAD = 9.18 TSF

THE ALLOWABLE BEARING PRESSURE IS 35 TONS PER SQUARE FOOT.

FOOTINGS

SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

ITEM 898 - QC/OA 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/OA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, 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/OA 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.

CONCRETE PARAPETS:

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAWCUT 1¼" DEEP CONTROL JOINTS INTO THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. PLACE SAWCUTS AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH. SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ½ INCH OF THE INSIDE AND OUTSIDE FACE UNSEALED TO ALLOW WATER TO ESCAPE.

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 ¼" 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	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 HR, 212 °F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40 DEG. 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.

DECK PLACEMENT DESIGN ASSUMPTIONS

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBLITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.25 KIPS FOR A TOTAL MACHINE LOAD OF 10.0 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

ITEM 606, NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT

THE CONTRACTOR SHALL REFER TO STANDARD DRAWING NBS-1- 09 (SHEETS 1, 2, AND 3) FOR GENERAL NOTES APPLICABLE TO THE STRUCTURE MOUNTED NOISE BARRIER. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE NOISE BARRIER CONNECTION TO THE STRAIGHT FACE DEFLECTOR PARAPET AS SHOWN ON THE TRANSVERSE SECTION SHEET 16/29. THE CONTRACTOR SHALL SUBMIT THE DESIGN OF THE NOISE BARRIER CONNECTION AND SHOP DRAWINGS FOR THE STRUCTURE MOUNTED NOISE BARRIER INCLUDING THE CONNECTION TO THE STRAIGHT FACE DEFLECTOR PARAPET. BOTH THE SHOP DRAWINGS AND THE DESIGN OF THE CONNECTION TO THE STRAIGHT FACE DEFLECTOR PARAPET SHALL BE PREPARED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. THE COST FOR THE STRUCTURE MOUNTED NOISE BARRIER SHOP DRAWINGS AND CONNECTION DESIGN TO THE STRAIGHT FACE DEFLECTOR PARAPET SHALL BE INCLUDED IN THE COST OF ITEM 606, NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT FOR PAYMENT. NOISE BARRIER PLACED ON BRIDGES SHALL NOT WEIGH MORE THAN 225 LBS/FT.

USER: sdearnal PLOT DATE: 6/23/2011 11:26:31 AM REVISION DATE: 6/23/2011 MODEL: SHEET
FILES: ...&HOR_CLG&MOD000000045878 /823_0917GN001.dgn

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DAT		7306482	

GENERAL NOTES
BRIDGE NO. SCI-823-0917 L/R
S.R. 823-OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81
PID No. 19415

CALCULATED BY: EJM DATE: 10/08/10
CHECKED BY: STW/DAT DATE: 4/25/13

ESTIMATED QUANTITIES

	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	REF.
	503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP				12 / 32
	503	22200	72	CU YD	UNCLASSIFIED EXCAVATION INCLUDING ROCK AND/OR SHALE		72			
	505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
	507	00200	1520	FT	STEEL PILES HP12X53, FURNISHED	1520				6 / 32
	507	00250	1360	FT	STEEL PILES HP12X53, DRIVEN	1360				1-2 / 32
	507	92200	1360	FT	PREBORED HOLES	1360				
	507	93301	32	EACH	STEEL POINTS OR SHOES, AS PER PLAN	32				6 / 32
	509	10000	439829	LB	EPOXY COATED REINFORCING STEEL	16405	164658	201050	57716	
	512	10100	2596	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	119	1117	1360		
	515	15041	20	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MODIFIED (66"), AS PER PLAN			20		18-19/32
	515	20000	48	EACH	INTERMEDIATE DIAPHRAGMS			48		24 / 32
	516	13600	17	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	17				26 / 32
	516	13900	42	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	42				10-11/32
	516	14021	103	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	103				10-11/32
	516	44200	30	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 22"x12"x3.27" LAMINATED ELASTOMERIC PAD WITH 26"x13"x2" LOAD PLATE		30			25 / 32
	516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 22"x12"x3.72" LAMINATED ELASTOMERIC PAD WITH 23"x16"x2" LOAD PLATE	10				25 / 32
	518	21200	117	CU YD	POROUS BACKFILL WITH FILTER FABRIC	117				12 / 32
	518	40000	128	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	128				
	518	40012	24	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	24				
***	601	20000	1402	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	1402				
***	601	32204	83	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER		83			
	606	10210	5578	SQ FT	NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT			5578		6 / 32
***	670	00500	2351	SQ YD	SLOPE EROSION PROTECTION	2351				
	898	10201	772	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (DECK), AS PER PLAN			772		16 / 32
	898	10709	323	SQ YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (APPROACH SLAB),(T=17"), AS PER PLAN			323		28 / 32
	898	11000	70	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (PARAPET)			70		
	898	11001	78	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (PARAPET), AS PER PLAN			78		26-27/32
	898	20100	667	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (PIER ABOVE FOOTING)		667			
	898	20150	63	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (ABUTMENT)	63				
	898	20300	239	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (FOOTING)	86	153			

*** COST INCLUDED WITH EROSION CONTROL BID ITEM
TOTALS CARRIED TO GENERAL SUMMARY

ESTIMATED QUANTITIES
STRUCTURE SCI-823-0917R

DESIGN AGENCY
HDR
HDR ENGINEERING, INC.
3987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7000

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	EJM	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DAT		7306482	

ESTIMATED QUANTITIES - RIGHT BRIDGE
BRIDGE NO. SCI-823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

USER: CWahlbri PLOT DATE: 5/28/2013 4:35:12 PM REVISION DATE: 5/28/2013
FILE: .../0000000000045878 /823.0917REQ001.dgn MODEL: SHEET

CALCULATED BY: EJM DATE: 10/08/10
CHECKED BY: STW/DAT DATE: 4/25/13

ESTIMATED QUANTITIES

	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	REF.
	503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP				12 / 32
	503	22200	79	CU YD	UNCLASSIFIED EXCAVATION INCLUDING ROCK AND/OR SHALE		79			
	505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
	507	00200	1520	FT	STEEL PILES HP12X53, FURNISHED	1520				6 / 32
	507	00250	1360	FT	STEEL PILES HP12X53, DRIVEN	1360				3-4 / 32
	507	92200	1360	FT	PREBORED HOLES	1360				
	507	93301	32	EACH	STEEL POINTS OR SHOES, AS PER PLAN	32				6 / 32
	509	10000	439337	LB	EPOXY COATED REINFORCING STEEL	16405	165700	201050	56182	
	512	10100	2668	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	119	1276	1273		
	515	15041	20	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MODIFIED (66"), AS PER PLAN			20		18-19/32
	515	20000	48	EACH	INTERMEDIATE DIAPHRAGMS			48		
	516	13600	17	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	17				26 / 32
	516	13900	2405	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	163		2242		10-11/32
	516	14021	103	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	103				10-11/32
	516	44200	30	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 22"x12"x3.27" LAMINATED ELASTOMERIC PAD WITH 26"x13"x2" LOAD PLATE		30			
	516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 22"x12"x3.72" LAMINATED ELASTOMERIC PAD WITH 23"x16"x2" LOAD PLATE	10				
	518	21200	121	CU YD	POROUS BACKFILL WITH FILTER FABRIC	121				
	518	40000	128	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	128				
	518	40012	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	30				
***	601	20000	1793	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	1793				
***	601	32204	144	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER		144			
***	670	00500	1935	SQ YD	SLOPE EROSION PROTECTION	1935				
	898	10201	772	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (DECK), AS PER PLAN			772		16 / 32
	898	10709	323	SQ YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (APPROACH SLAB),(T=17"), AS PER PLAN			323		28 / 32
	898	11000	64	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (PARAPET)			64		
	898	11001	78	CU YD	QC/QA CONCRETE, CLASS QCS2, SUPERSTRUCTURE (PARAPET), AS PER PLAN			78		26-27/32
	898	20100	672	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (PIER ABOVE FOOTING)		672			
	898	20150	64	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (ABUTMENT)	64				
	898	20300	239	CU YD	QC/QA CONCRETE, CLASS QCS1, SUBSTRUCTURE (FOOTING)	86	153			

*** COST INCLUDED WITH EROSION CONTROL BID ITEM
TOTALS CARRIED TO GENERAL SUMMARY

ESTIMATED QUANTITIES
STRUCTURE SCI-823-0917L

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-1500

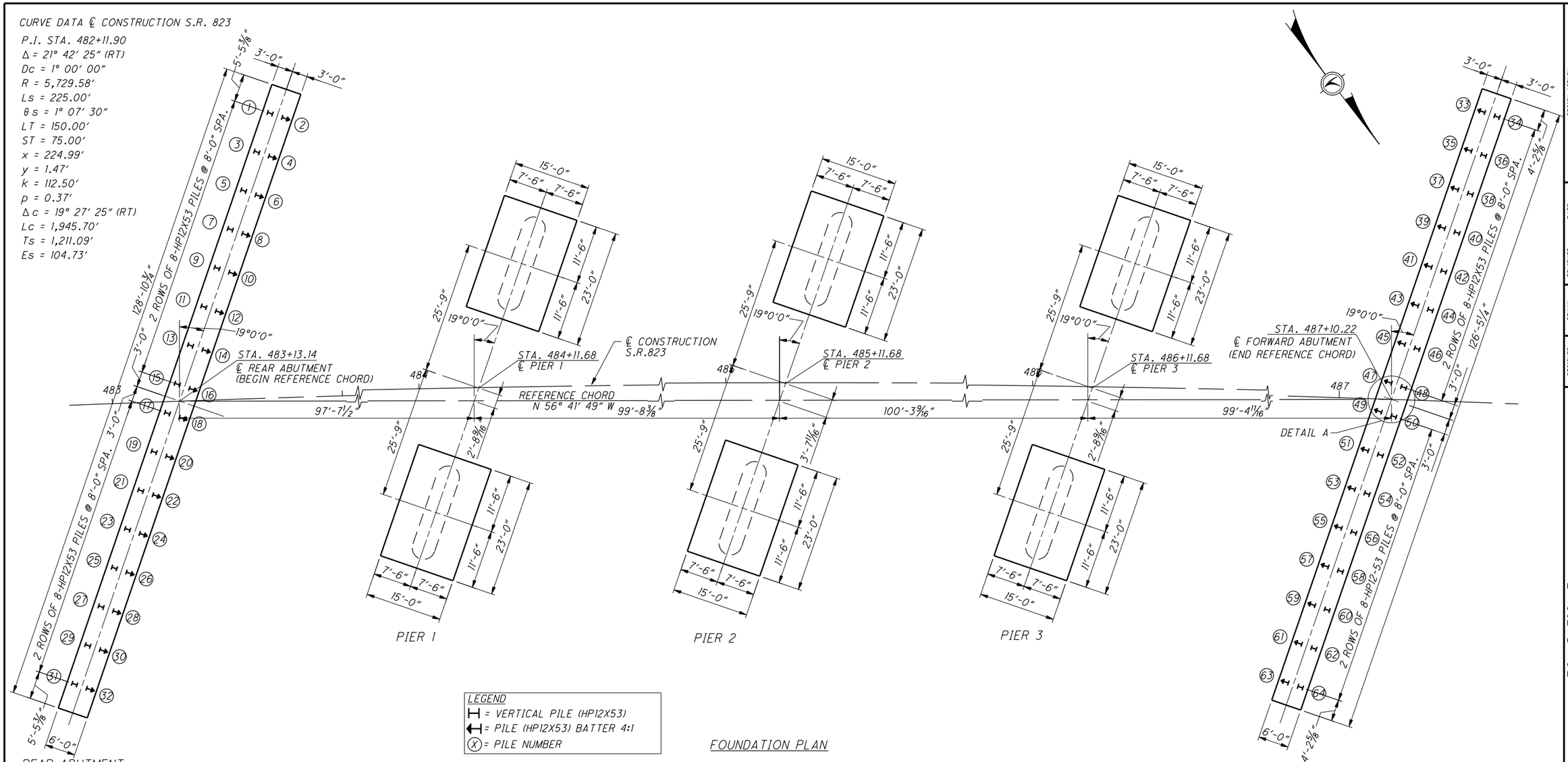
REVIEWED JMY DATE 06/24/11
STRUCTURE FILE NUMBER 7306482
DRAWN EJM REVISED
DESIGNED EJM/JSW CHECKED DAT

ESTIMATED QUANTITIES - LEFT BRIDGE
BRIGE NO. SCI-823-0917-L
S.R.823 OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81
PID No. 19415

CURVE DATA ℄ CONSTRUCTION S.R. 823

P.I. STA. 482+11.90
Δ = 21° 42′ 25″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
Ls = 225.00′
θs = 1° 07′ 30″
LT = 150.00′
ST = 75.00′
x = 224.99′
y = 1.47′
k = 112.50′
p = 0.37′
Δc = 19° 27′ 25″ (RT)
Lc = 1,945.70′
Ts = 1,211.09′
Es = 104.73′



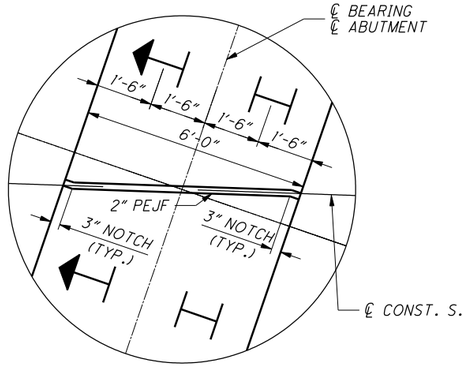
LEGEND
H = VERTICAL PILE (HP12X53)
H = PILE (HP12X53) BATTER 4:1
(X) = PILE NUMBER

FOUNDATION PLAN

NOTE:
1. OFFSET DISTANCES ARE LOCATED FROM THE ℄ CONSTRUCTION.

PILE LOCATION TABLE

PILE #	STATION	OFFSET	T/PILE EL.	PILE #	STATION	OFFSET	T/PILE EL.	PILE #	STATION	OFFSET	T/PILE EL.	PILE #	STATION	OFFSET	T/PILE EL.
1	483+32.63	55.67 LT	686.20	19	483+7.80	9.74 RT	685.85	37	487+21.33	41.56 LT	678.37	55	487+00.82	25.36 RT	677.56
2	483+35.41	54.61 LT	686.20	20	483+10.61	10.81 RT	685.85	38	487+24.18	40.69 LT	678.37	56	487+03.70	26.25 RT	677.56
3	483+29.83	48.19 LT	686.20	21	483+04.92	17.20 RT	685.85	39	487+19.01	33.91 LT	678.37	57	486+98.45	33.01 RT	677.56
4	483+32.61	47.13 LT	686.20	22	483+07.73	18.27 RT	685.85	40	487+21.87	33.03 LT	678.37	58	487+01.33	33.89 RT	677.56
5	483+27.01	40.71 LT	686.20	23	483+02.04	24.67 RT	685.85	41	487+16.69	26.25 LT	678.37	59	486+96.07	40.65 RT	677.56
6	483+29.79	39.65 LT	686.20	24	483+04.86	25.75 RT	685.85	42	487+19.55	25.38 LT	678.37	60	486+98.96	41.54 RT	677.56
7	483+24.18	33.24 LT	686.20	25	482+99.15	32.13 RT	685.85	43	487+14.36	18.60 LT	678.37	61	486+93.52	48.29 RT	677.56
8	483+26.97	32.17 LT	686.20	26	483+01.97	33.21 RT	685.85	44	487+17.22	17.73 LT	678.37	62	486+96.58	49.18 RT	677.56
9	483+21.35	25.76 LT	686.20	27	482+96.26	39.60 RT	685.85	45	487+12.02	10.95 LT	678.37	63	486+91.28	55.93 RT	677.56
10	483+24.14	24.69 LT	686.20	28	482+99.07	40.68 RT	685.85	46	487+14.88	10.07 LT	678.37	64	486+94.18	56.82 RT	677.56
11	483+18.51	18.29 LT	686.20	29	482+93.35	47.06 RT	685.85	47	487+09.67	3.31 LT	678.37				
12	483+21.31	17.22 LT	686.20	30	482+96.17	48.14 RT	685.85	48	487+12.53	2.43 LT	678.37				
13	483+15.67	10.84 LT	686.20	31	482+90.44	54.52 RT	685.85	49	487+07.90	2.43 RT	677.56				
14	483+18.46	9.74 LT	686.20	32	482+93.26	55.61 RT	685.85	50	487+10.77	3.31 RT	677.56				
15	483+12.81	3.34 LT	685.85	33	487+25.95	56.86 LT	678.37	51	487+05.55	10.08 RT	677.56				
16	483+15.61	2.27 LT	685.85	34	487+28.79	55.99 LT	678.37	52	487+08.42	10.96 RT	677.56				
17	483+10.67	2.27 RT	685.85	35	487+23.64	49.21 LT	678.37	53	487+03.19	17.71 RT	677.56				
18	483+13.47	3.34 RT	685.85	36	487+26.49	48.33 LT	678.37	54	487+06.06	18.60 RT	677.56				



DETAIL A

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	MAB	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DMP		7306482	

FOUNDATION PLAN
BRIDGE NO. SCI-823-0917L/R
S.R. 823 OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81
PID No. 19415

9 / 32

19 / 44

USER: sdearnel PLOT DATE: 6/23/2011 11:26:54 AM REVISION DATE: 6/23/2011
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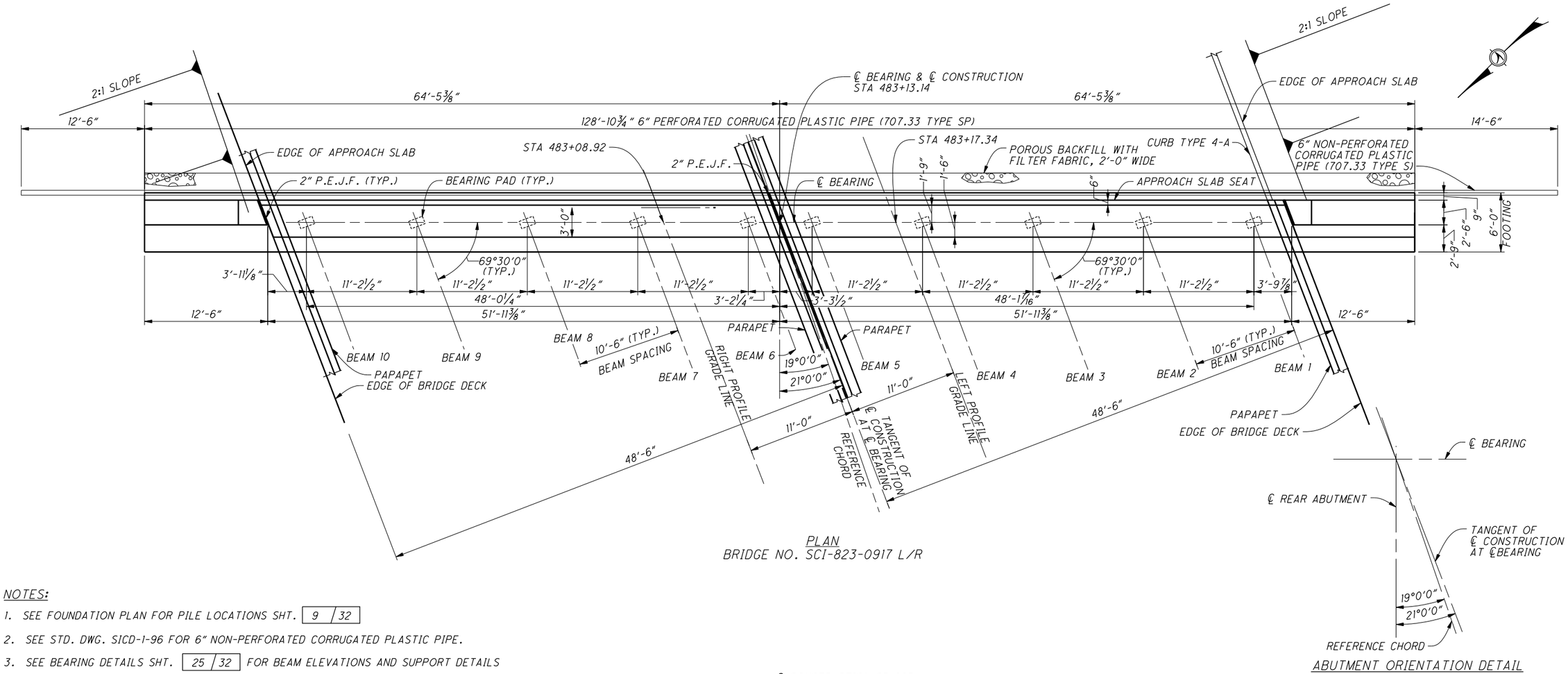
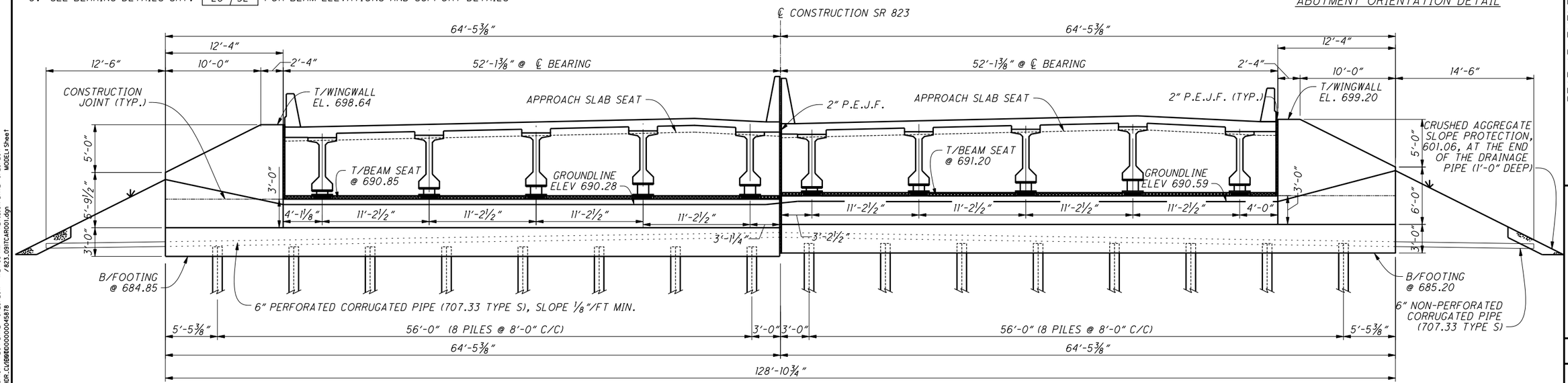


PLAN
BRIDGE NO. SCI-823-0917 L/R

NOTES:

1. SEE FOUNDATION PLAN FOR PILE LOCATIONS SHT. 9 / 32
2. SEE STD. DWG. SICD-1-96 FOR 6" NON-PERFORATED CORRUGATED PLASTIC PIPE.
3. SEE BEARING DETAILS SHT. 25 / 32 FOR BEAM ELEVATIONS AND SUPPORT DETAILS

ABUTMENT ORIENTATION DETAIL



REAR ABUTMENT ELEVATION
BRIDGE NO. SCI-823-0917 L/R

USER: sdeornel PLOT DATE: 6/23/2011 11:27:03 AM REVISION DATE: 6/23/2011
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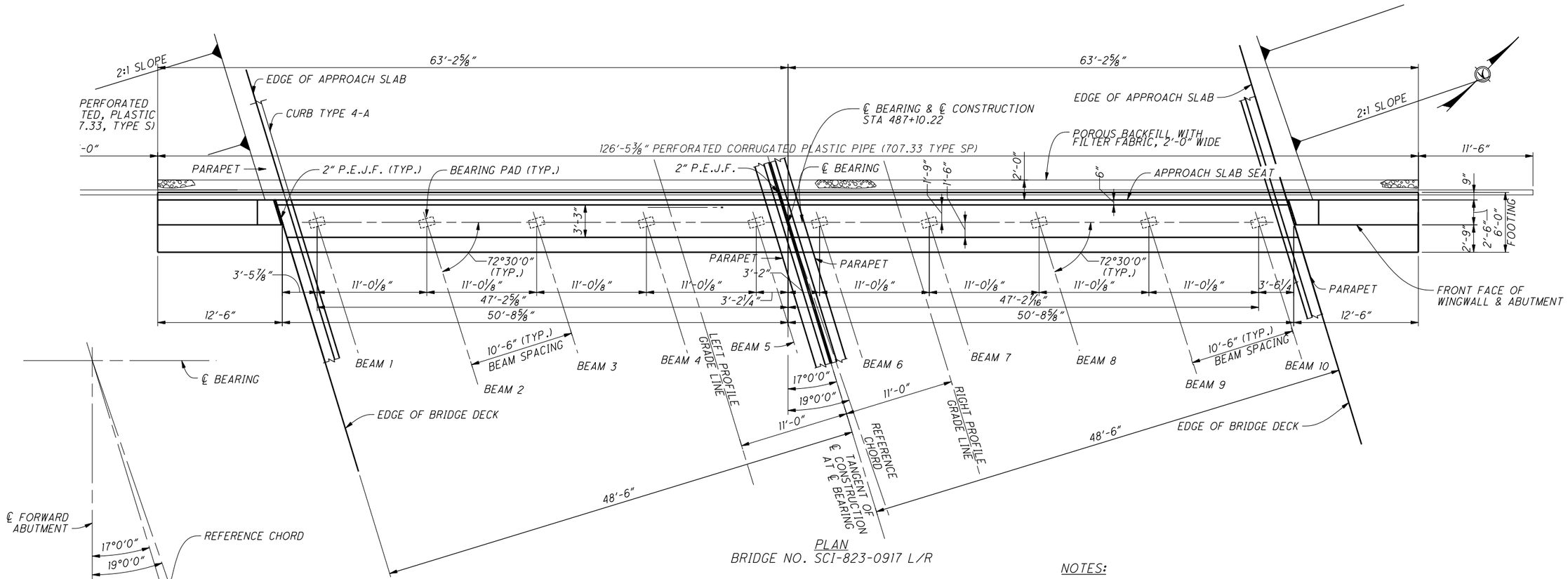
DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DMP		7306482	

REAR ABUTMENT (L/R) PLAN AND ELEVATION
BRIDGE NO. SCI-823-0917 L/R
OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-0917
PID No. 19415

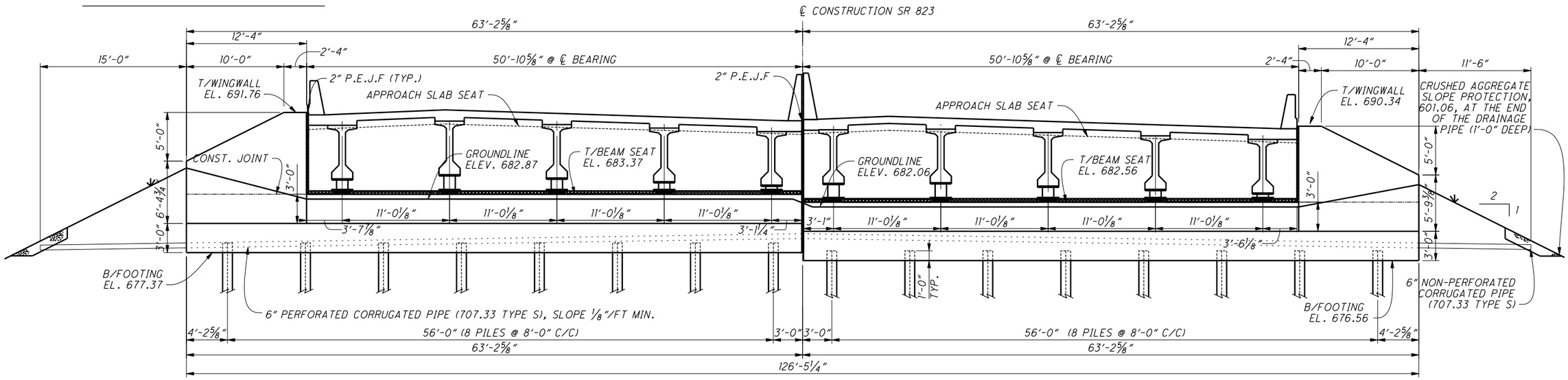


PLAN
BRIDGE NO. SCI-823-0917 L/R

ABUTMENT ORIENTATION DETAIL

NOTES:

1. SEE FOUNDATION PLAN FOR PILE LOCATIONS SHT. 9 / 32
2. SEE STD. DWG. SICD-1-96 FOR 6 IN NON-PERFORATED CORRUGATED PLASTIC PIPE.
3. SEE BEARING DETAILS SHT. 25 / 32 FOR BEAM ELEVATIONS AND SUPPORT DETAILS



FORWARD ABUTMENT ELEVATION
BRIDGE NO. SCI-823-0917

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP / JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DMP		7306482	

FORWARD ABUTMENT (L/R) PLAN AND ELEVATION
BRIDGE NO. SCI-823-0917 L/R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-0917
PID No. 19415

11 / 32

21
44

USER: sdeorne PLOT DATE: 9/16/2011 11:20:36 AM REVISION DATE: 9/16/2011
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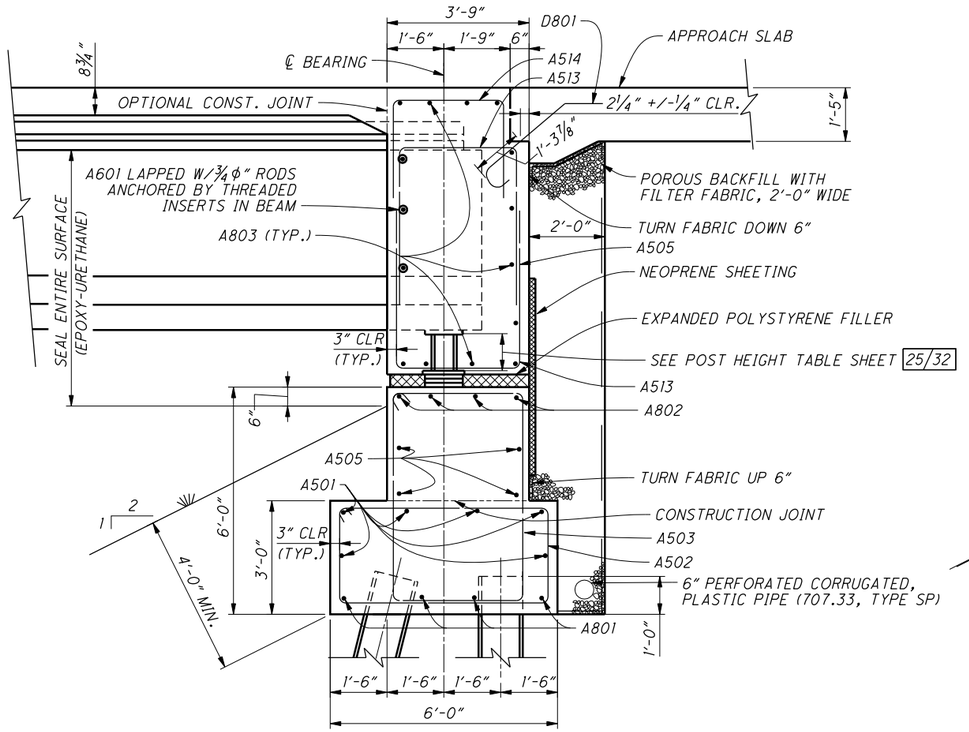
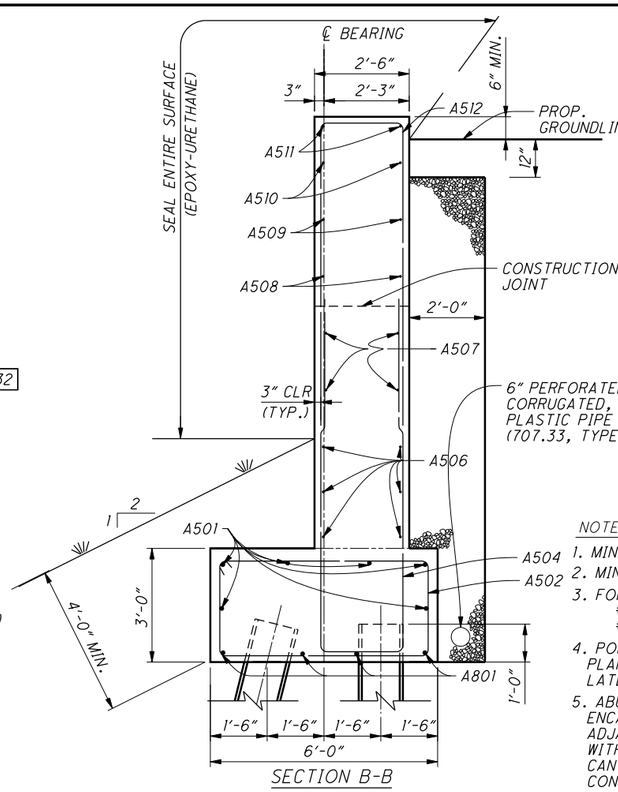
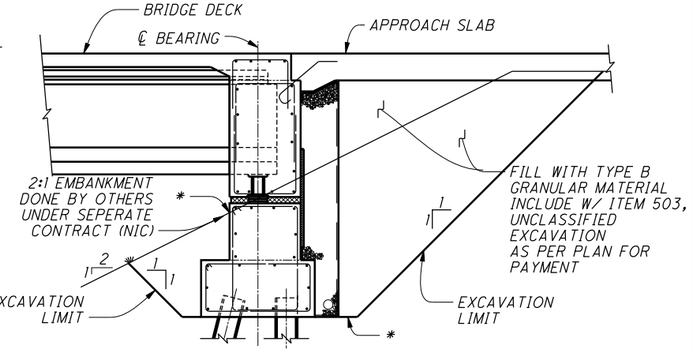


SECTION A-A



SECTION B-B

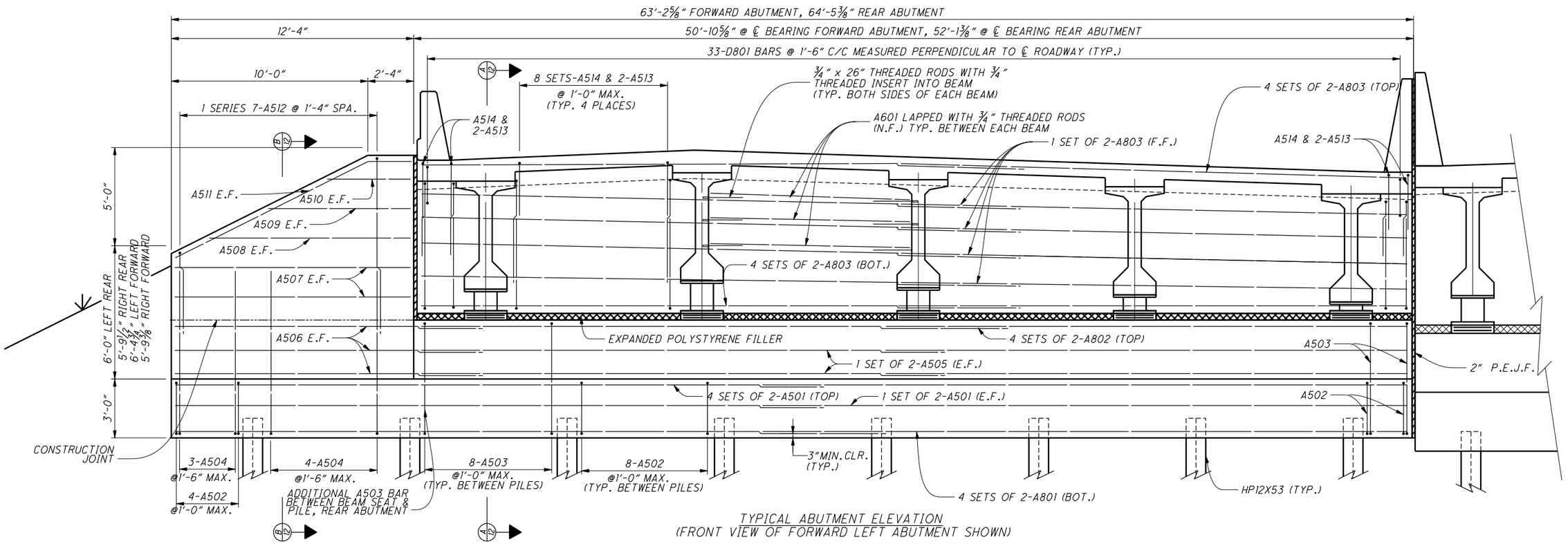


* FOR ELEVATIONS REFER TO BRIDGE SITE PLAN SHEETS 1/32, 2/32, 3/32, & 4/32.

EXCAVATION DIAGRAM

NOTES:

1. MIN. LAP LENGTH #5 BAR = 2'-5"
2. MIN. LAP LENGTH #8 BAR = 4'-11"
3. FORWARD ABUTMENT LONGITUDINAL BAR LAP LENGTHS:
   #5 BARS = 3'-7¾"
   #8 BARS = 6'-1¾"
4. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
5. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE THE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET.



TYPICAL ABUTMENT ELEVATION
(FRONT VIEW OF FORWARD LEFT ABUTMENT SHOWN)

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

ABUTMENT DETAILS
BRIDGE NO. SCI-823-0917 L/R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-0917
PID No. 19415

12 / 32

22 / 44

USER: sdearnel PLOT DATE: 6/23/2011 1h27m19 AM REVISION DATE: 6/23/2011
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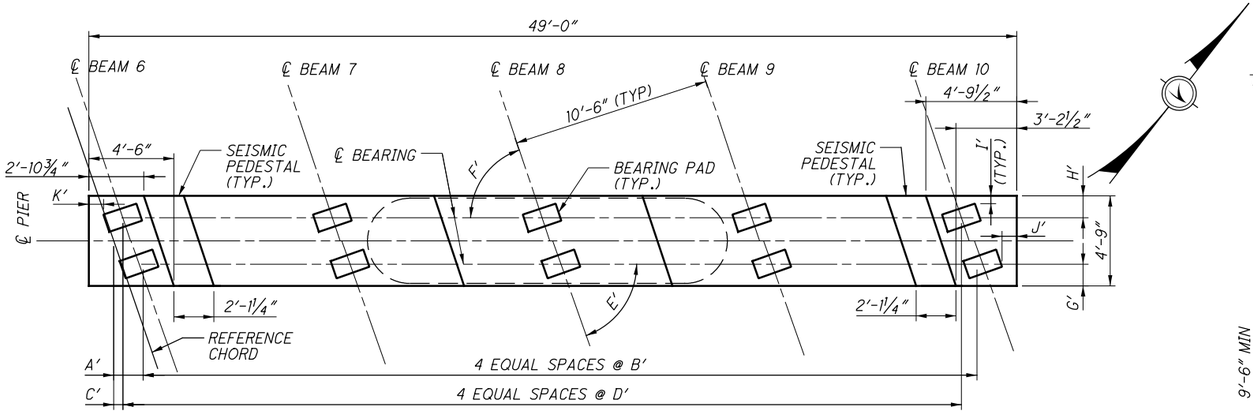
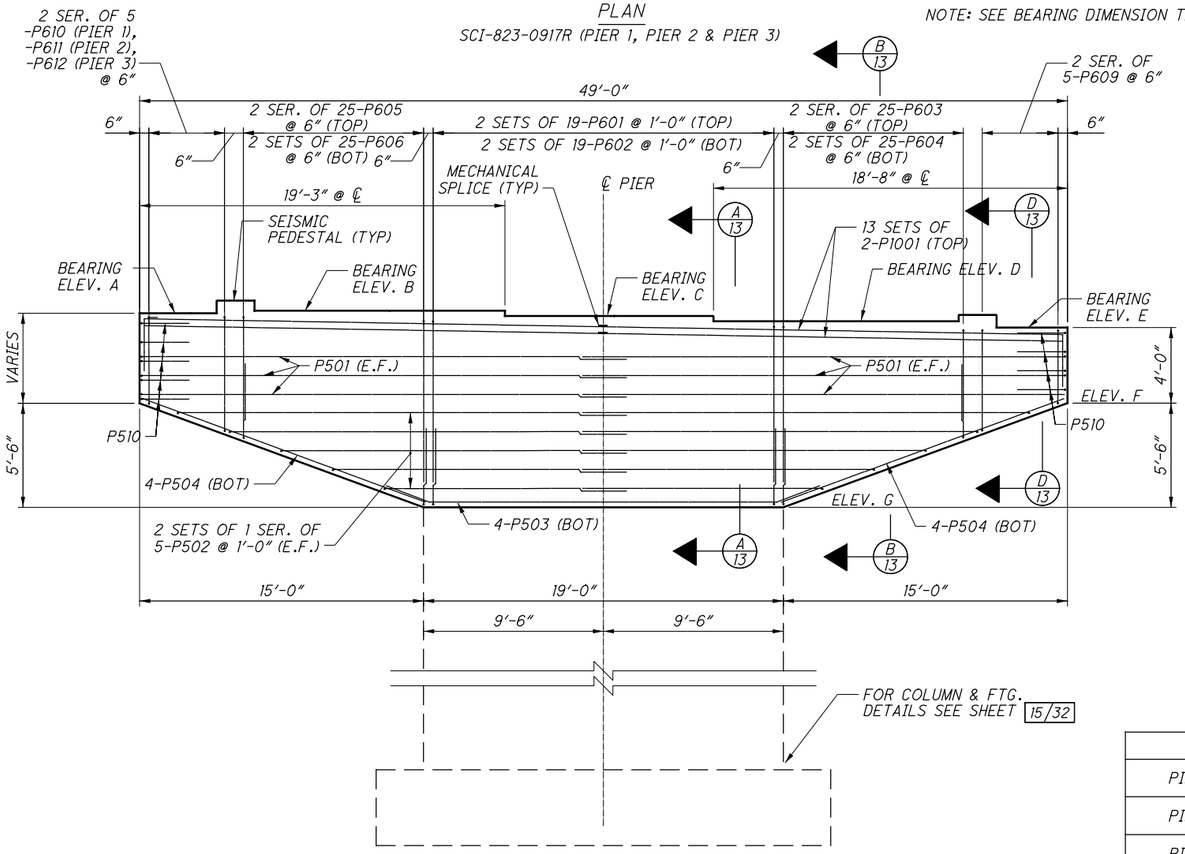


PLAN

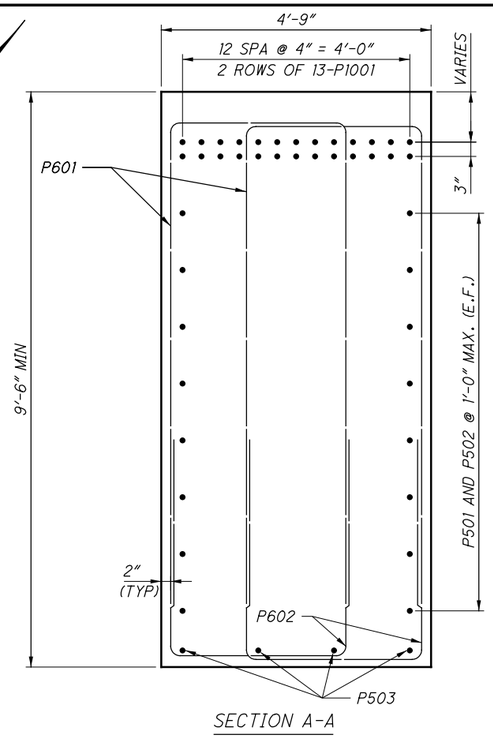
SCI-823-0917R (PIER 1, PIER 2 & PIER 3)

NOTE: SEE BEARING DIMENSION TABLE

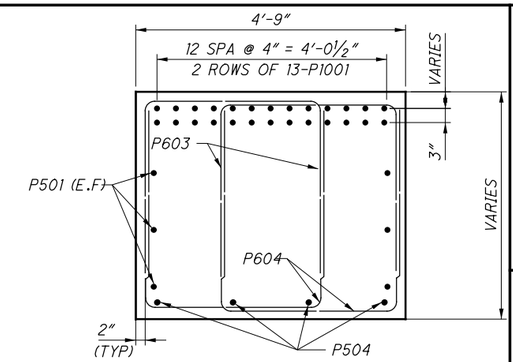


CAP ELEVATIONS

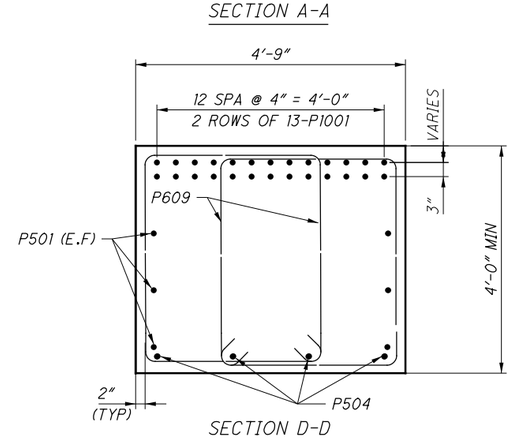
SCI-823-0917R (PIER 1, PIER 2 & PIER 3)



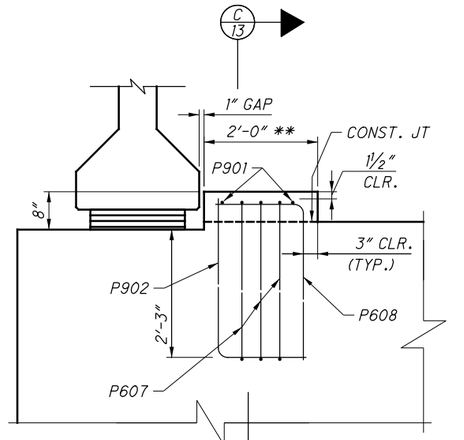
SECTION A-A



SECTION B-B

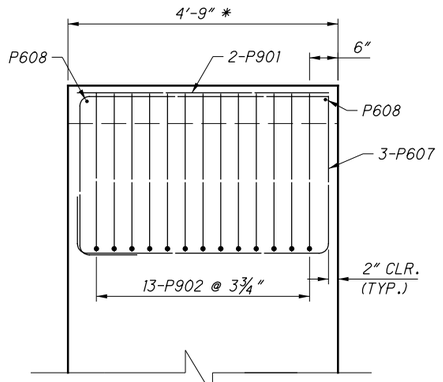


SECTION D-D



SEISMIC PEDESTAL DETAIL

(TYPICAL AT ALL PIERS)



SECTION C-C

* MEASURED PERENDICULAR TO THE CENTERLINE OF BEARING
** MEASURED PARALLEL TO THE CENTERLINE OF BEARING

RIGHT BRIDGE PIER CAP ELEVATIONS TABLE

PIER #	ELEVATIONS (FT)						
	A	B	C	D	E	F	G
PIER 1	689.15	689.29	689.01	688.73	688.44	684.44	678.94
PIER 2	686.89	687.00	686.70	686.40	686.08	682.08	676.58
PIER 3	685.18	685.27	684.94	684.62	684.28	680.28	674.78

PIER BEARING DIMENSIONS

PIER #	DIMENSIONS (FT)*										
	A'	B'	C'	D'	E'	F'	G'	H'	I'	J'	K'
PIER 1	-0 11/16"	11'-2½"	11 9/16"	11'-1 5/8"	69.50°	70.50°	1'-2"	1'-1 7/8"	4 13/16"	9 1/16"	9 5/16"
PIER 2	-11 11/16"	11'-1 5/8"	0"	11'-0 7/8"	70.50°	71.50°	1'-1 7/8"	1'-1 13/16"	4 7/8"	9 5/16"	1'-1"
PIER 3	-0½"	11'-0 7/8"	10½"	11'-0 1/8"	71.50°	72.50°	1'-1 13/16"	1'-1 11/16"	4 15/16"	9 3/16"	1'-4½"

* NEGATIVE (-) DIMENSIONS INDICATE ℄ BEARING IS TO THE LEFT OF THE REFERENCE CHORD

NOTES:

1. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING IN TOP OF PIER 2 BEAM SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF DOWEL BARS.
2. SEALING OF BEAM SEATS: DO NOT APPLY SEALER TO CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.
3. SEISMIC PEDESTAL: PLACE 1" P.E.J.F. MATERIAL BETWEEN SEISMIC PEDESTAL AND BOTH THE PRECAST BEAM AND DIAPHRAGM CONCRETE. PAYMENT FOR SAID P.E.J.F. TO BE INCLUDED WITH ITEMS LISTED IN ITEM 516.08.
4. MIN LAP LENGTH:
   #5 = 2'-5"
   #6 = 2'-11"

USER: Chahlbri PLOT DATE: 5/28/2013 4:36:55 PM REVISION DATE: 5/28/2013
FILES.../000000000045878 /823_0917RPIER1.dgn MODEL: SHEET

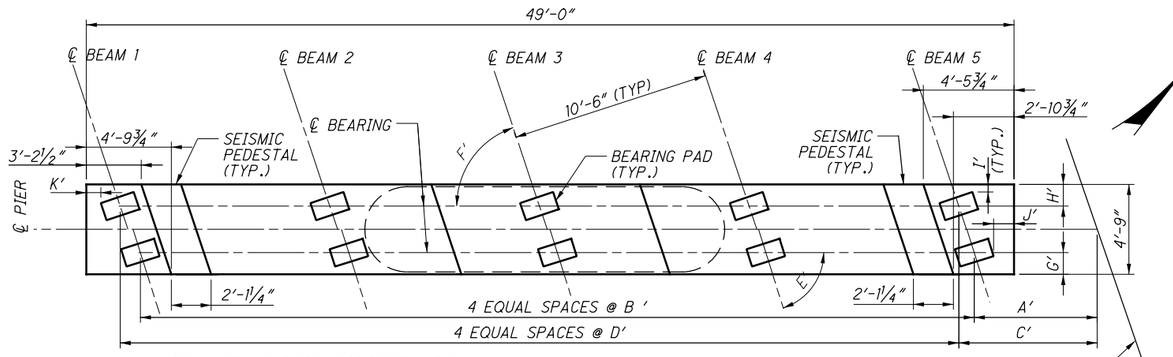
DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED DMP/JSW | DRAWN JSW | CHECKED CHN | REVIEWED JMY | DATE 06/24/11 | REVISED | STRUCTURE FILE NUMBER 7306482

PIER CAP DETAILS - RIGHT BRIDGE

BRIDGE NO. SCI-823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

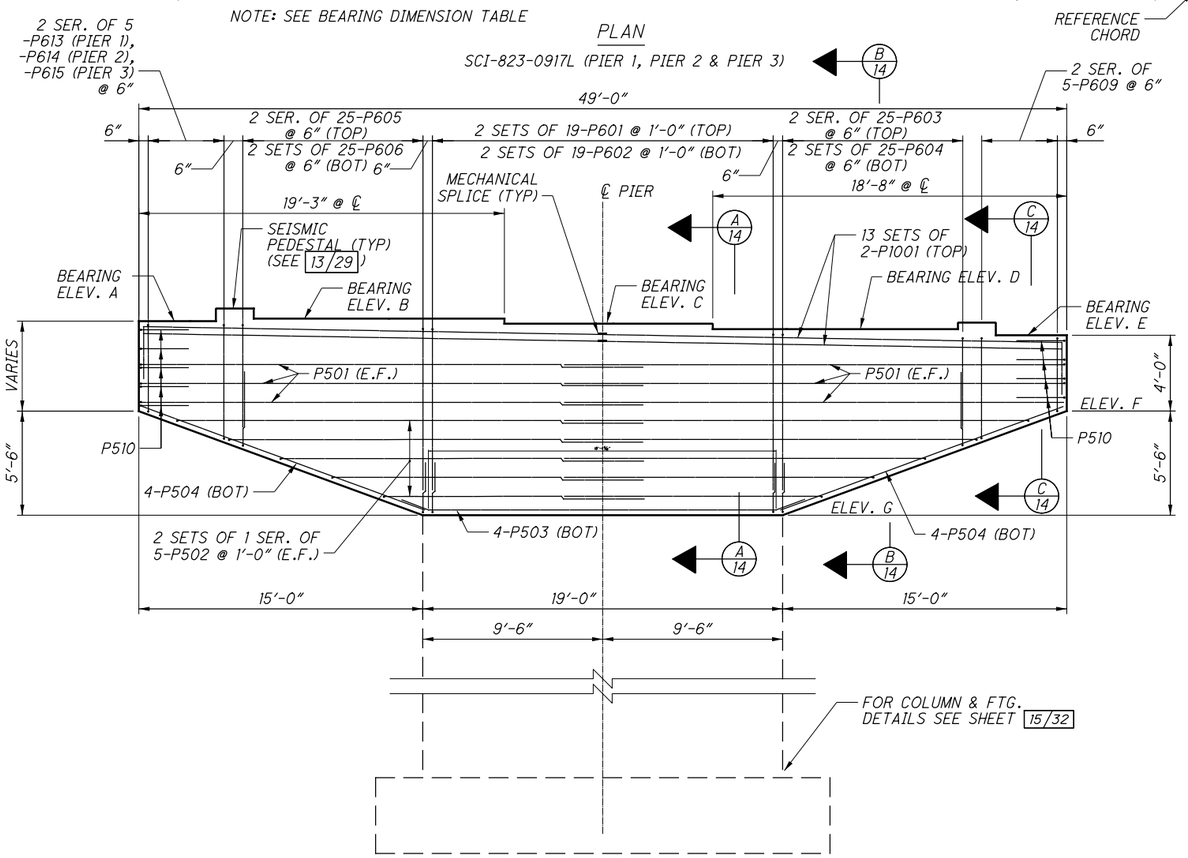
SCI-823-6.81
PID No. 19415



NOTE: SEE BEARING DIMENSION TABLE

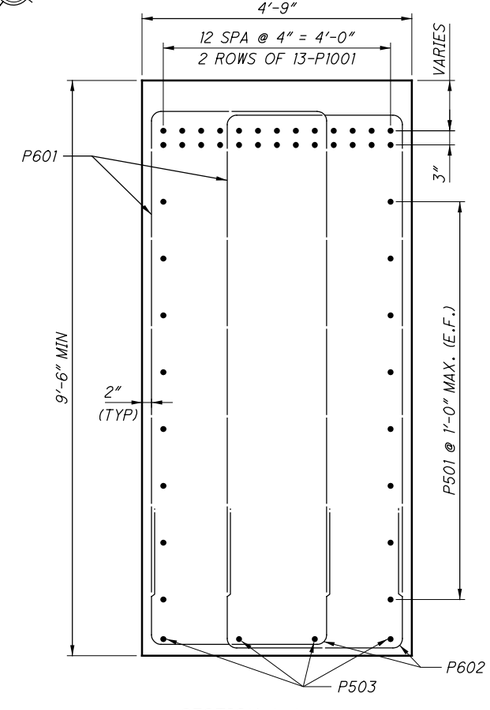
PLAN

SCI-823-0917L (PIER 1, PIER 2 & PIER 3)

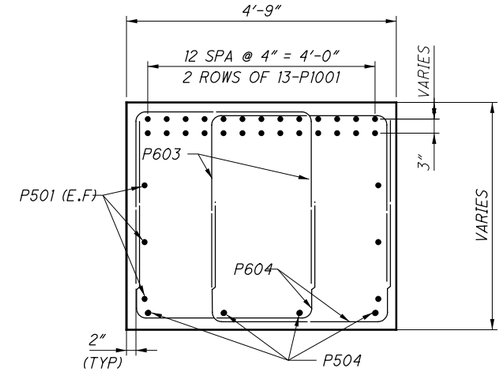


CAP ELEVATIONS

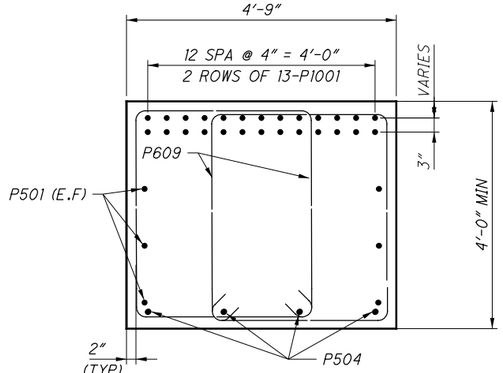
SCI-823-0917L (PIER 1, PIER 2 & PIER 3)



SECTION A-A



SECTION B-B



SECTION C-C

LEFT BRIDGE PIER CAP ELEVATIONS TABLE							
PIER #	ELEVATIONS (FT)						
	A	B	C	D	E	F	G
PIER 1	689.31	689.79	689.50	689.22	688.92	684.92	679.42
PIER 2	687.17	687.62	687.31	687.00	686.68	682.68	677.18
PIER 3	685.56	685.99	685.66	685.33	684.98	680.98	675.48

PIER BEARING DIMENSIONS											
PIER #	DIMENSIONS (FT)										
	A′	B′	C′	D′	E′	F′	G′	H′	I′	J′	K′
PIER 1	5′-6⅛″	11′-2½″	6′-5⅞″	11′-1⅝″	69.50°	70.50°	1′-2″	1′-1⅞″	4 13/16″	5⅜″	9⅛″
PIER 2	6′-5¼″	11′-1⅝″	7′-4⅜″	11′-0⅞″	70.50°	71.50°	1′-1⅞″	1′-1 13/16″	4⅞″	9 5/16″	9 3/16″
PIER 3	5′-6¼″	11′-0⅞″	6′-4¾″	11′-0⅛″	71.50°	72.50°	1′-1 13/16″	1′-1 11/16″	4 5/16″	1′-1″	9¼″

NOTES:

1. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING IN TOP OF PIER 2 BEAM SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF DOWEL BARS.
2. SEALING OF BEAM SEATS: DO NOT APPLY SEALER TO CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OFTHE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.
3. SEISMIC PEDESTAL: PLACE 1″ P.E.J.F. MATERIAL BETWEEN SEISMIC PEDESTAL AND BOTH THE PRECAST BEAM AND DIAPHRAGM CONCRETE. PAYMENT FOR SAID P.E.J.F. TO BE INCLUDED WITH ITEMS LISTED IN ITEM 516.08.
4. SEISMIC PEDESTAL: FOR SEISMIC PEDESTAL DETAILS SEE SHEET 13/32 .
5. MIN LAP LENGTHS
   #5 = 2′-5″
   #6 = 2′-11″

USER: CWahlbri PLOT DATE: 5/28/2013 4:41:08 PM REVISION DATE: 5/28/2013
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DESIGN AGENCY
HDR ENGINEERING, INC.
3987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED DMP/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11 | STRUCTURE FILE NUMBER 7306482 | CHECKED DMP | REVISED

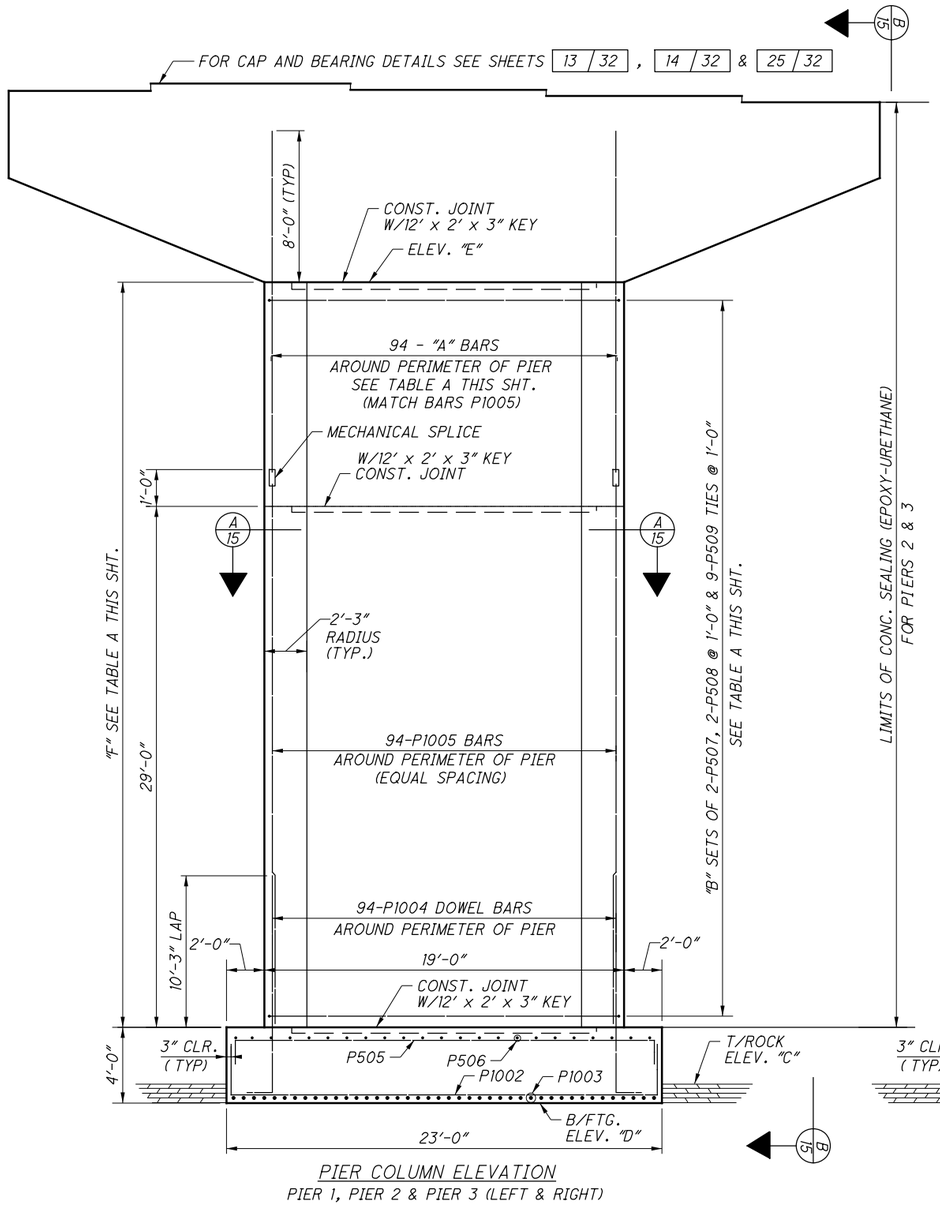
PIER CAP DETAILS - LEFT BRIDGE

BRIDGE NO. SCI-823-0917-L

S.R. 823 OVER PORTMOUTH-MINFORD ROAD (S.R. 139)

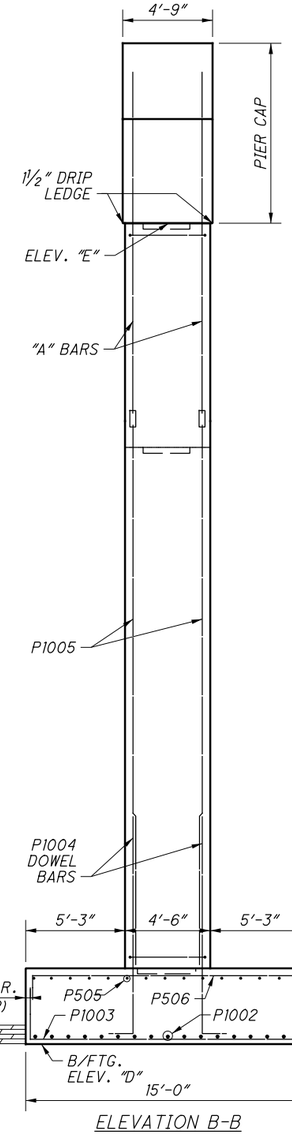
SCI-823-6.81

PID No. 19415

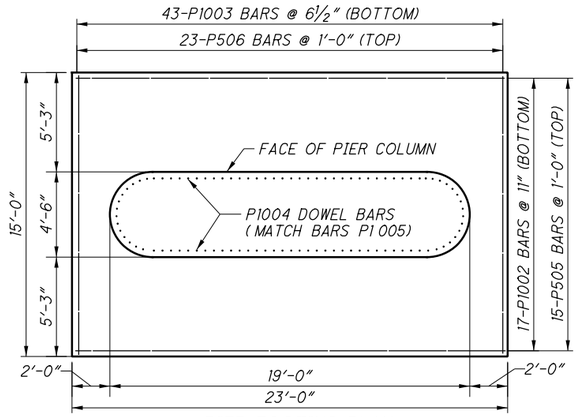


PIER COLUMN ELEVATION

PIER 1, PIER 2 & PIER 3 (LEFT & RIGHT)

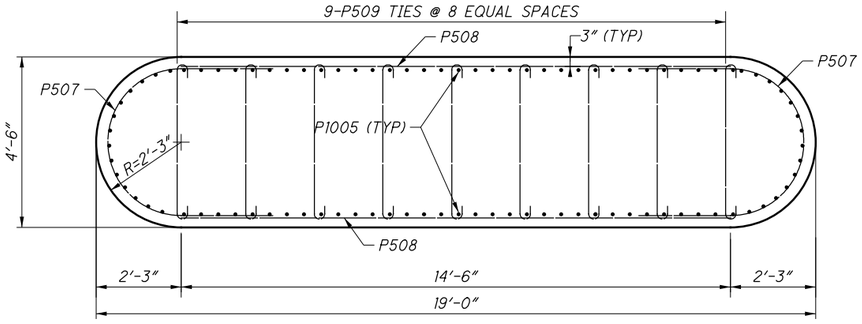


ELEVATION B-B



PIER FOOTING PLAN

FOR PIER FOUNDATION LOCATIONS SEE FOUNDATION PLAN SHT. 9 / 29



SECTION A-A

TABLE A

RIGHT BRIDGE PIERS

	A	B	C	D	E	F
PIER 1	P1006	52	624.4'	623.30'	678.94'	51'-7 1/16"
PIER 2	P1007	51	625.5'	622.70'	676.58'	49'-10 9/16"
PIER 3	P1008	49	624.9'	623.00'	674.78'	47'-9 3/8"

LEFT BRIDGE PIERS

	A	B	C	D	E	F
PIER 1	P1009	53	624.5'	623.30'	679.42'	52'-1 1/16"
PIER 2	P1010	52	625.7'	622.70'	677.18'	50'-5 3/4"
PIER 3	P1011	50	624.9'	623.00'	675.48'	48'-5 3/4"

USER: Cwahlbri PLOT DATE: 5/28/2013 4:44:00 PM REVISION DATE: 5/28/2013
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DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	DMP	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

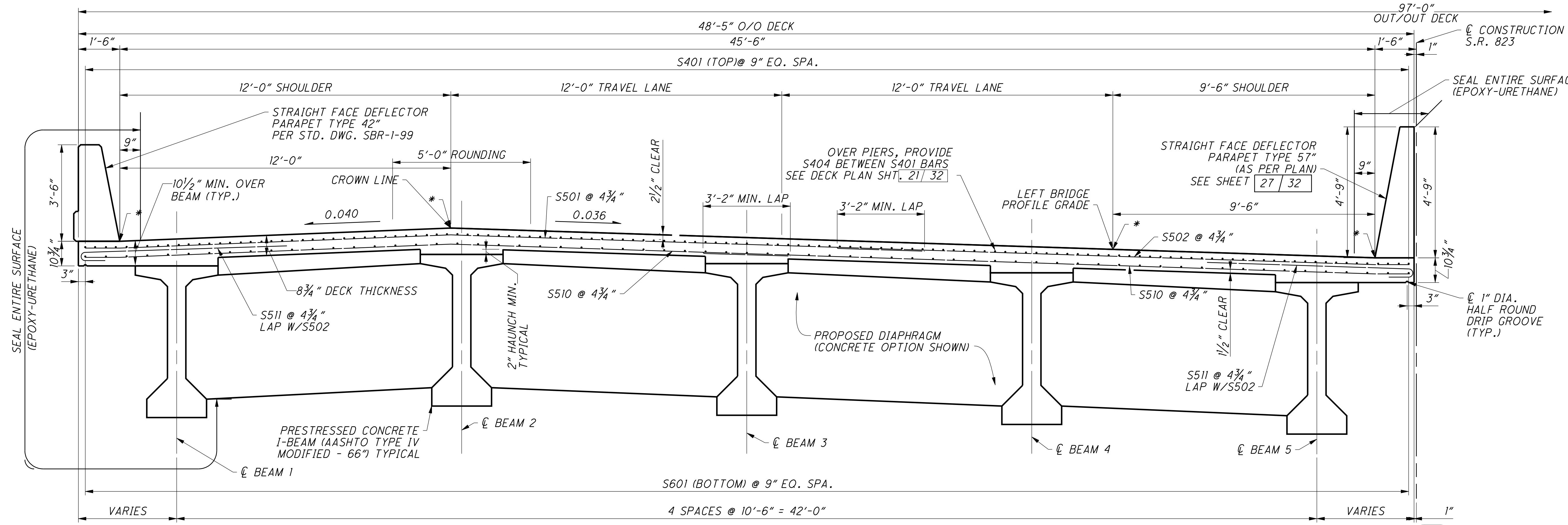
PIER COLUMN & FOOTING DETAILS

BRIDGE NO. SCI-823-0917-L/R

S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81

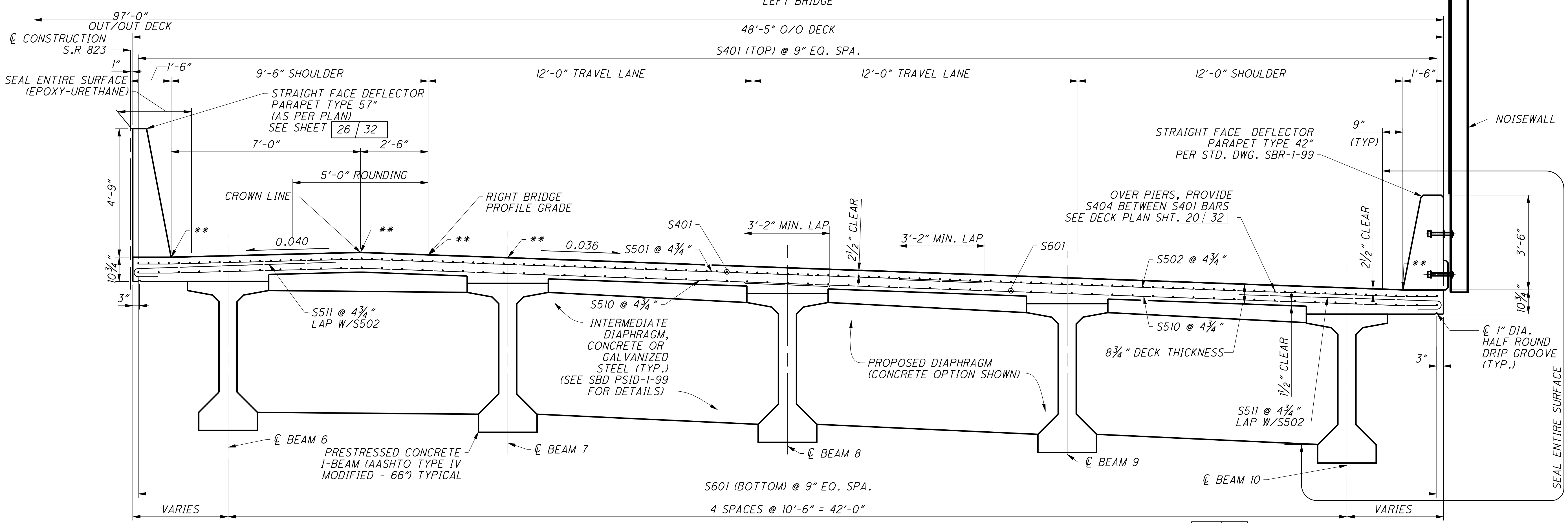
PID No. 19415



TYPICAL TRANSVERSE SECTION

LEFT BRIDGE

* SEE SCREED TABLE ELEVATION SHT. 23 | 32



TYPICAL TRANSVERSE SECTION

RIGHT BRIDGE

** SEE SCREED TABLE ELEVATION SHT. 22 | 32

DESIGN AGENCY: HDR ENGINEERING, INC. 9987 CARVER ROAD SUITE 200 CINCINNATI, OHIO 45242 513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

TRANSVERSE SECTIONS

BRIDGE NO. 823-0917 L/R

OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81

PID No. 19415

USER: sdeornel PLOT DATE: 6/23/2011 11:27:49 AM REVISION DATE: 6/23/2011 MODEL: SHEET

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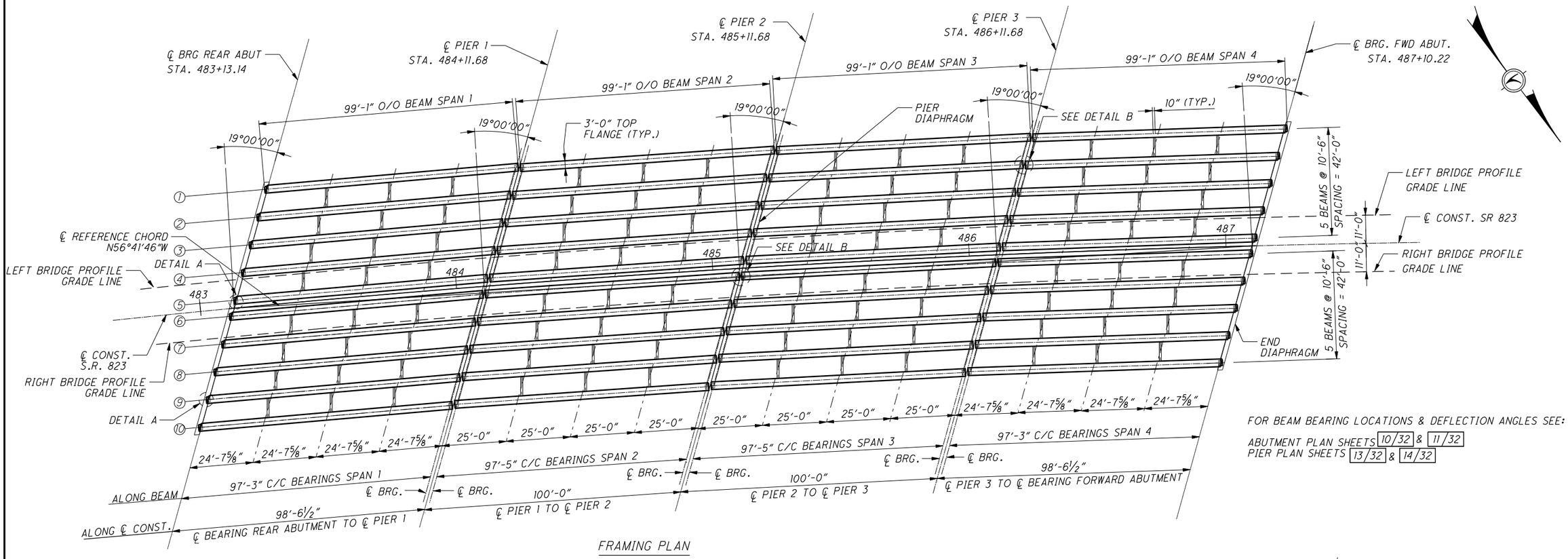
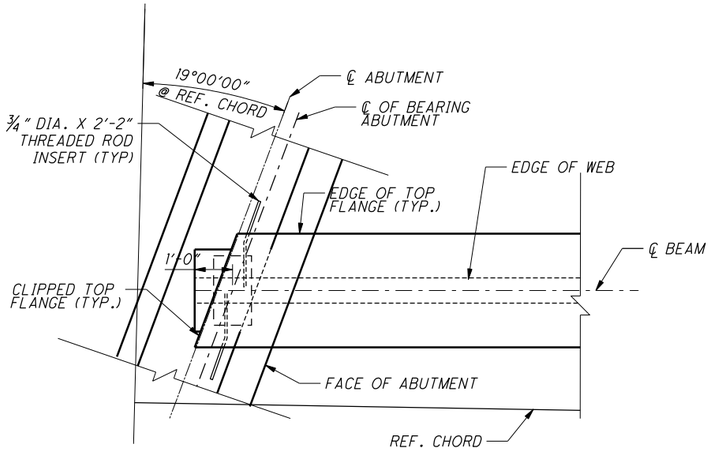
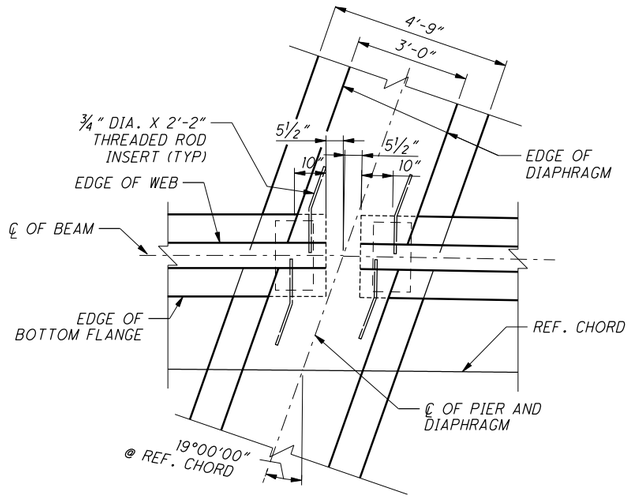


FOR BEAM BEARING LOCATIONS & DEFLECTION ANGLES SEE:
ABUTMENT PLAN SHEETS 10/32 & 11/32
PIER PLAN SHEETS 13/32 & 14/32

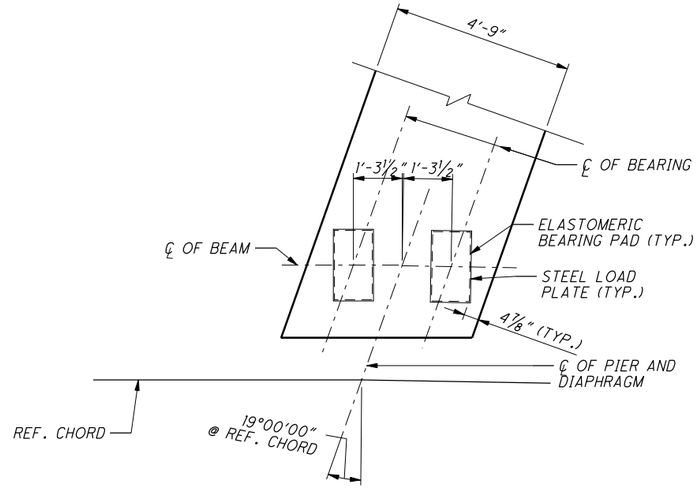
FRAMING PLAN



DETAIL A
(TYPICAL AT ABUTMENTS CENTERS)



DETAIL B
(TYPICAL AT PIERS)



BEARING ORIENTATION AT PIERS

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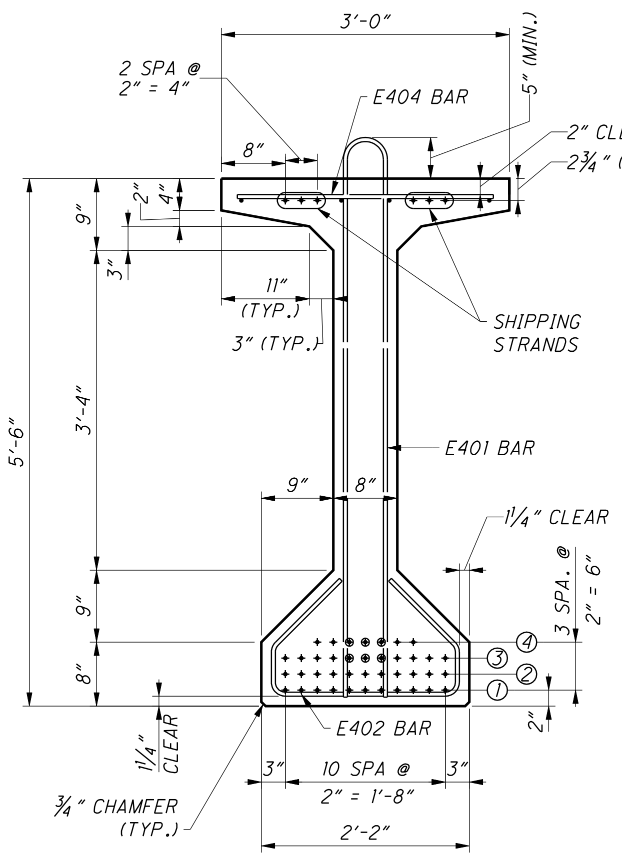
DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

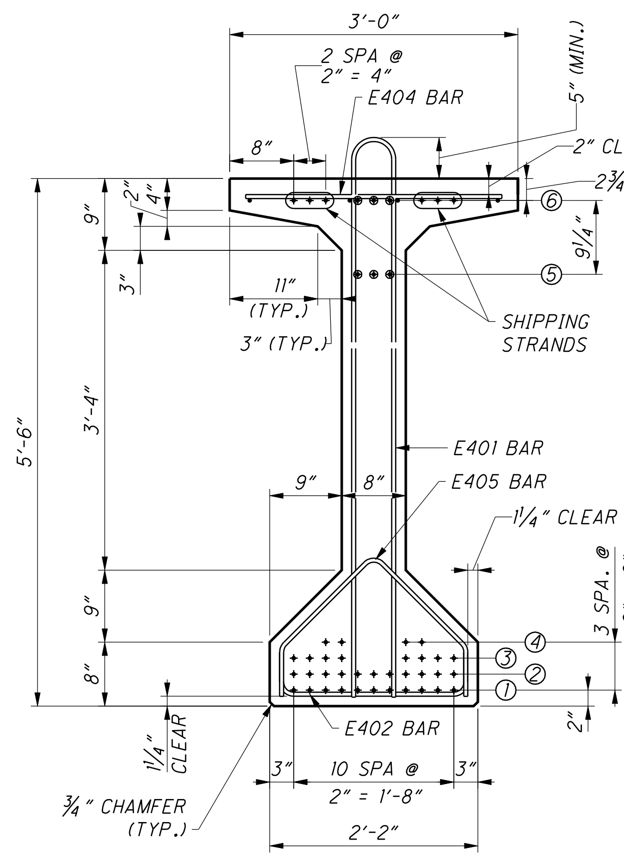
DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	DMP	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

FRAMING PLAN
BRIDGE NO. SCI-823-0917 L/R
S.R. 823 OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81
PID No. 19415



TYPICAL MIDSPAN SECTION



TYPICAL END SECTION

LEGEND

+ STRAIGHT STRAND

⊕ DRAPED STRAND

SPANS 1 AND 4 - MODIFIED AASHTO TYPE 4 (66") BEAM

(40 TOTAL STRANDS, 6 DRAPED)

NOTES:

ABBREVATIONS:
- NF = NEAR FACE
- FF = FAR FACE
- SPA = SPACES

PRESTRESSED CONCRETE I-BEAM DETAILS:

SEE STANDARD DRAWING PSID-1-99 (7-18-08)

ALL BEAMS SHALL BE IN ACCORDANCE WITH STD. DWG. PSID-1-99 UNLESS NOTED OTHERWISE.

THREADED INSERTS:

MAY BE MOVED SLIGHTLY WHERE NECESSARY TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.

PROVIDE INSERTS ON BOTH FACES OF INTERIOR BEAMS AND ON INSIDE FACE OF FASCIA BEAMS.

THREADED INSERTS SHOWN FOR INTERMEDIATE DIAPHRAGMS ARE FOR CAST-IN-PLACE CONCRETE DIAPHRAGMS. THE CONTRACTOR MAY CHOOSE GALVANIZED STEEL INTERMEDIATE DIAPHRAGMS INSTEAD, PER SBD PSID-1-99, AND PROVIDE SLEEVED HOLES INSTEAD OF THREADED INSERTS.

INITIAL PRESTRESSING TENSION LOAD:

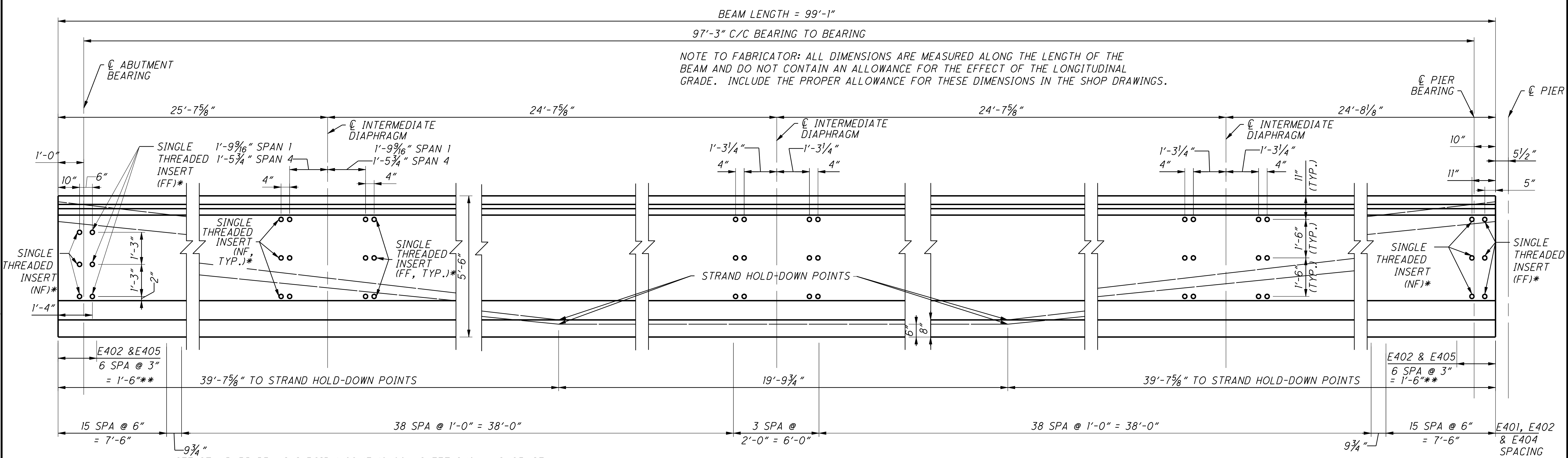
FOR LOW-RELAXATION STRAND SHALL BE 33,818 LB/STRAND.

BEAM WEIGHT:

BEAM WEIGHT = 93,730 LBS (FOR ALL BEAMS)

SCI-823-0917 L/R SPANS 1 & 4 (BEAMS 1-10)

LOCATION	NUMBER OF STRANDS PER ROW: ROW NUMBER ①	②	③	④	⑤	⑥	TOTAL STRANDS	CONCRETE STRENGTHS f'ci	f'c	E401 BARS REQ'D	E402 BARS REQ'D	E404 BARS REQ'D	E405 BARS REQ'D
END	11	11	8	4	3	3	40	5000	7000	112	118	112	12
MID-SPAN	11	11	11	7	0	0							



NOTE TO FABRICATOR: ALL DIMENSIONS ARE MEASURED ALONG THE LENGTH OF THE BEAM AND DO NOT CONTAIN AN ALLOWANCE FOR THE EFFECT OF THE LONGITUDINAL GRADE. INCLUDE THE PROPER ALLOWANCE FOR THESE DIMENSIONS IN THE SHOP DRAWINGS.

** SEE STANDARD DRAWING PSID-1-99 (7-18-08), SHEET 2/8, ANCHORAGE REINFORCEMENT DETAIL, FOR LAYOUT OF REINFORCING STEEL IN THIS PART OF THE BEAM

SPANS 1 AND 4 - BEAM ELEVATION

* OMIT THREADED INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS AT PIERS & ABUTMENTS

DESIGN AGENCY: HDR ENGINEERING, INC. 9987 CARVER ROAD SUITE 200 CINCINNATI, OHIO 45242 513-984-7500
DESIGNED DMP/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11 | CHECKED CHN | REVISED | STRUCTURE FILE NUMBER 7306482

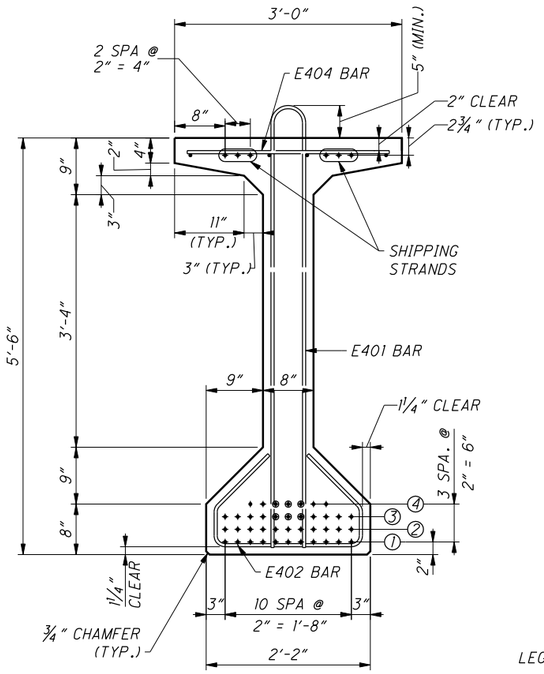
66" PRESTRESSED CONCRETE I-BEAM DETAILS - SPANS 1 & 4

BRIDGE NO. SCI-823-0917-L/R

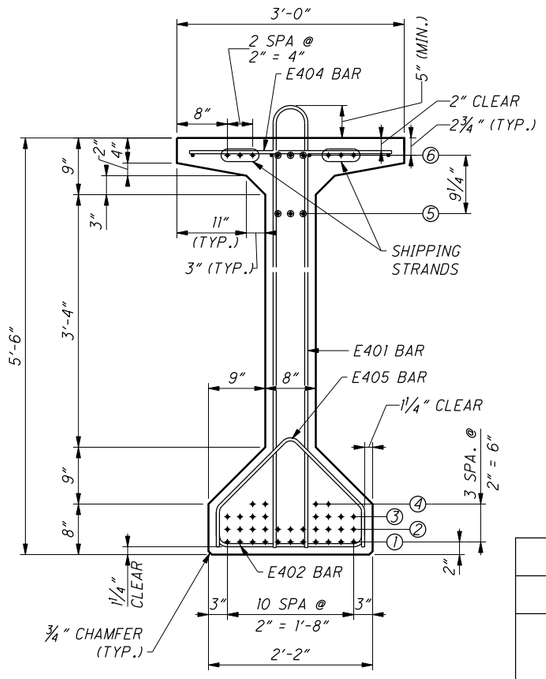
OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81

PID No. 19415



TYPICAL MIDSPAN SECTION



TYPICAL END SECTION

LEGEND

✦ STRAIGHT STRAND

● DRAPED STRAND

SPANS 2 AND 3 - MODIFIED AASHTO TYPE 4 (66") BEAM

(40 TOTAL STRANDS, 6 DRAPED)

NOTES:

ABBREVATIONS:
NF = NEAR FACE
FF = FAR FACE
SPA = SPACES

PRESTRESSED CONCRETE I-BEAM DETAILS:
SEE STANDARD DRAWING PSID-1-99 (7-18-08)

ALL BEAMS SHALL BE IN ACOORDANCE WITH STD. DWG. PSID-1-99 UNLESS NOTED OTHERWISE.

THREADED INSERTS:

MAY BE MOVED SLIGHTLY WHERE NECESSARY TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.

PROVIDE INSERTS ON BOTH FACES OF INTERIOR BEAMS AND ON INSIDE FACE OF FASCIA BEAMS.

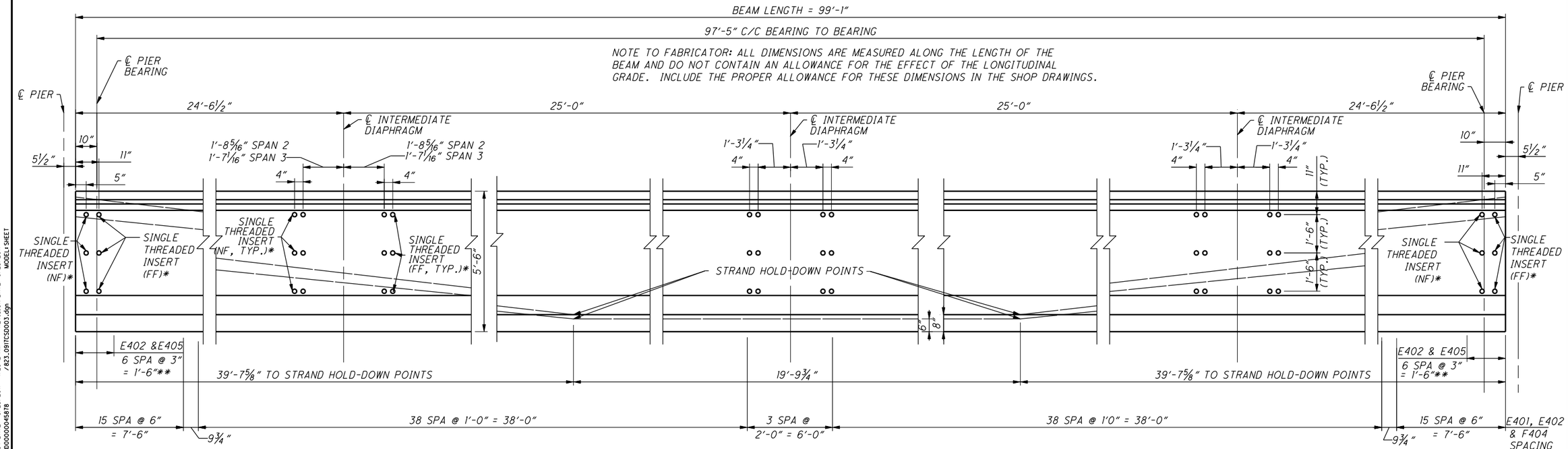
THREADED INSERTS SHOWN FOR INTERMEDIATE DIAPHRAGMS ARE FOR CAST-IN-PLACE CONCRETE DIAPHRAGMS. THE CONTRACTOR MAY CHOOSE GALVANIZED STEEL INTERMEDIATE DIAPHRAGMS INSTEAD, PER SBD PSID-1-99, AND PROVIDE SLEEVED HOLES INSTEAD OF THREADED INSERTS.

INITIAL PRESTRESSING TENSION LOAD:
FOR LOW-RELAXATION STRAND SHALL BE 33,818 LB/STRAND.

BEAM WEIGHT:
BEAM WEIGHT = 93,730 LBS (FOR ALL BEAMS)

SCI-823-0917 L/R SPANS 2 & 3 (BEAMS 1-10)

LOCATION	NUMBER OF STRANDS PER ROW: ROW NUMBER ①	②	③	④	⑤	⑥	TOTAL STRANDS	CONCRETE STRENGTHS f'ci	f'c	E401 BARS REQ'D	E402 BARS REQ'D	E404 BARS REQ'D	E405 BARS REQ'D
END	11	11	8	4	3	3	40	5000	7000	112	118	112	12
MID-SPAN	11	11	11	7	0	0							



** SEE STANDARD DRAWING PSID-1-99 (7-18-03), SHEET 2/8, ANCHORAGE REINFORCEMENT DETAIL, FOR LAYOUT OF RESTEEL IN THIS PART OF THE BEAM

SPANS 2 AND 3 - BEAM ELEVATION

* OMIT THREADED INSERTS ON EXTERIOR FACE OF EXTERIOR BEAMS AT PIERS

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED DMP/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11
CHECKED CHN | REVISED | STRUCTURE FILE NUMBER 7306482

66" PRESTRESSED CONCRETE I-BEAM DETAILS - SPANS 2 & 3

BRIDGE NO. SCI-823-0917-L/R
OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

19 / 32

29 / 44

USER: sdearnel PLOT DATE: 6/23/2011 11:28:12 AM REVISION DATE: 6/23/2011 MODEL: SHEET
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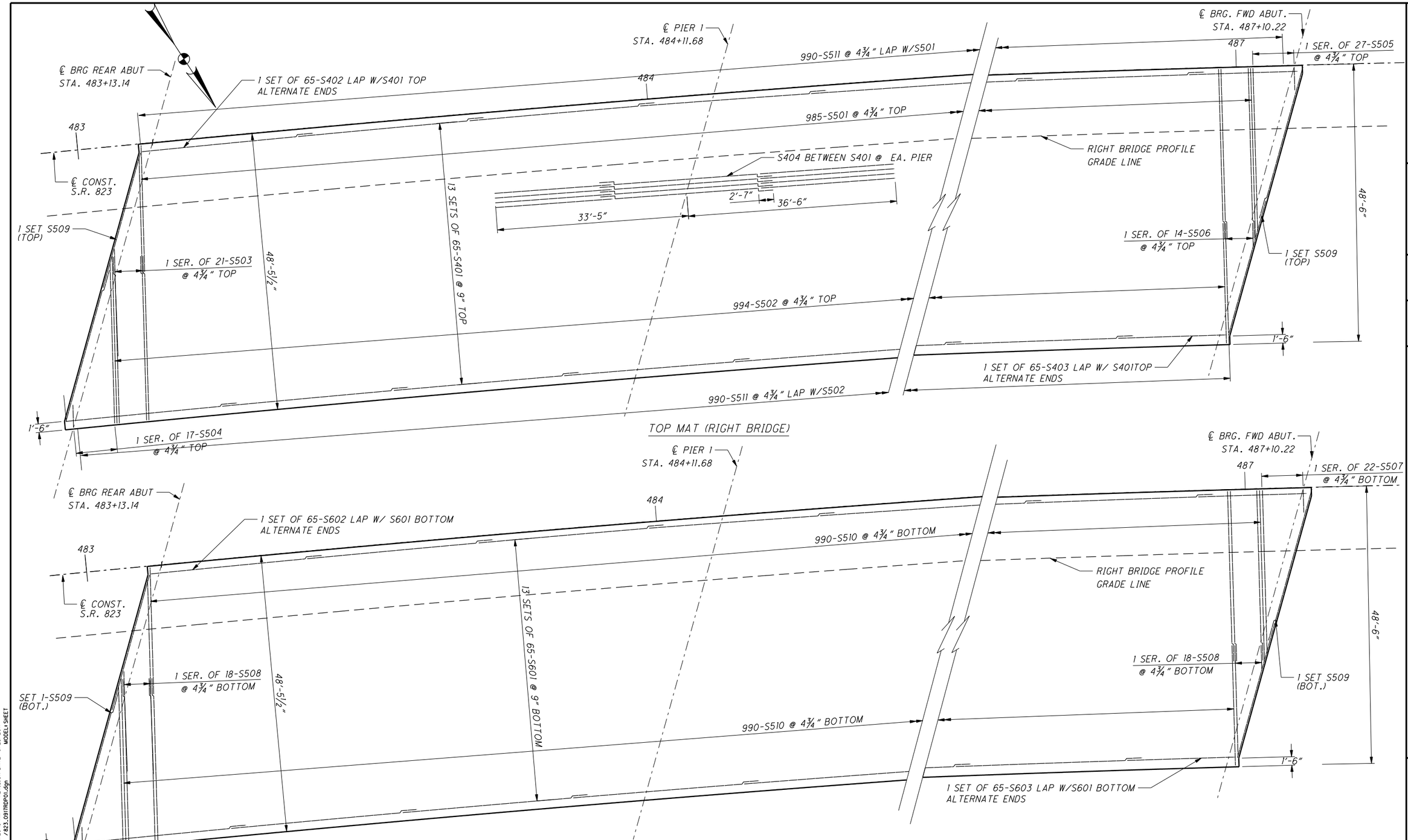


NOTES:

1. FOR PARAPET DETAILS, SEE SHEET 26/32 .
2. FOR TYPICAL SECTION, SEE SHEET 16/32.
3. FOR SCREED ELEVATIONS, SEE SHEETS 22/32.

MINIMUM LAP LENGTHS
#4 BARS - 2'-7"
#5 BARS - 3'-2"
#6 BARS - 3'-10"

USER: sdearnel PLOT DATE: 6/23/2011 11:28:19 AM REVISION DATE: 6/23/2011
FILE...\MHDR.CIB\000000045878 /823.09\TRDP01.dgn MODEL: SHEET

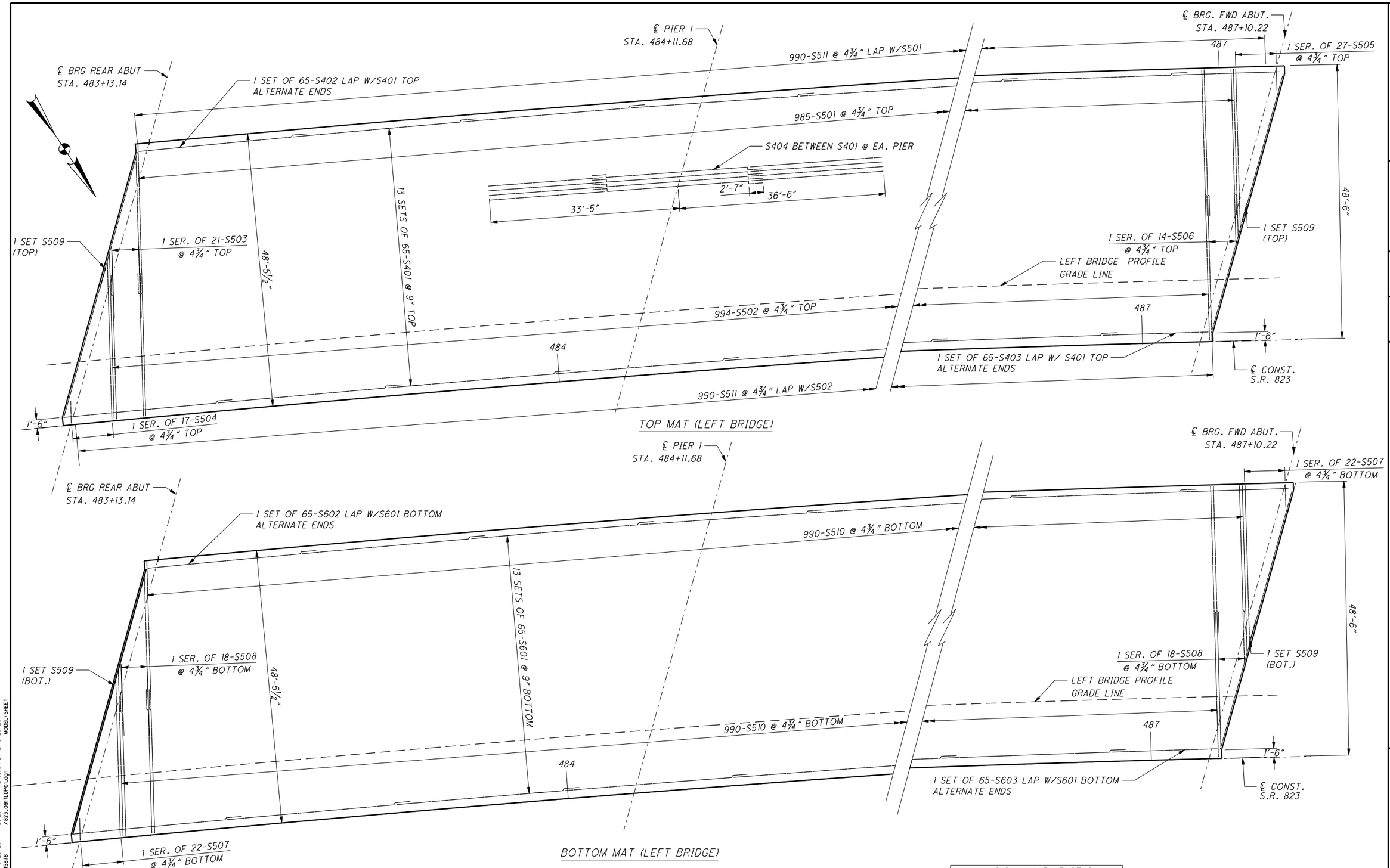
DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

DECK PLAN - RIGHT BRIDGE

BRIDGE NO. SCI-823-0917-R
S.R.823 OVER PORTMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415



MINIMUM LAP LENGTHS
#4 BARS - 2'-7"
#5 BARS - 3'-2"
#6 BARS - 3'-10"

NOTES:

1. FOR PARAPET DETAILS, SEE SHEET 27/32.
2. FOR TYPICAL SECTION, SEE SHEET 16/32 .
3. FOR SCREED ELEVATIONS, SEE SHEETS 23/32.

USER: sdaornel PLOT DATE: 6/23/2011 11:28:25 AM REVISION DATE: 6/23/2011 MODEL: SHEET
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DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

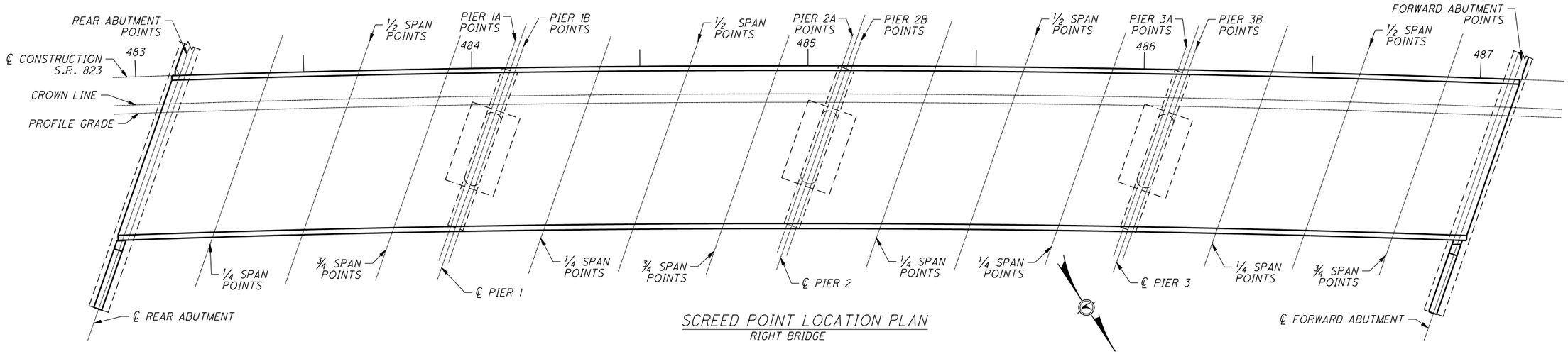
DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

DECK PLAN - LEFT BRIDGE
BRIDGE NO. SCI-823-0917-L
S.R.823 OVER PORTMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

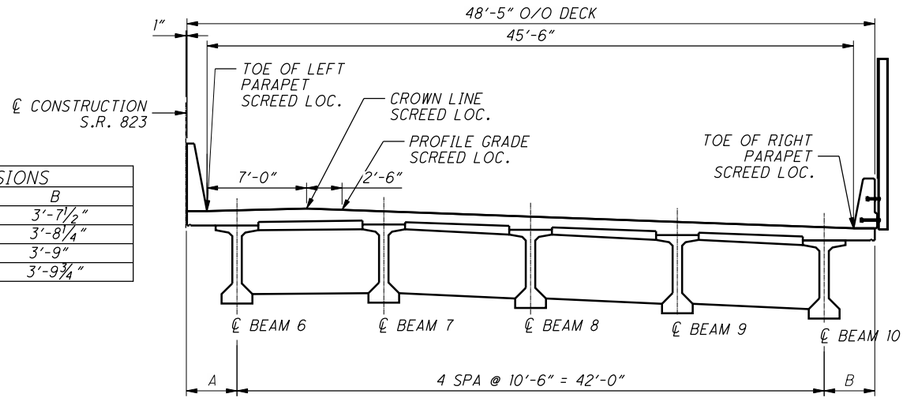
RIGHT BRIDGE SCREED TABLE

SPAN POINT		C/L BEARING REAR ABUTMENT	1/4	1/2	3/4	PIER - 1A	PIER - 1B	1/4	1/2	3/4	PIER - 2A	PIER - 2B	1/4	1/2	3/4	PIER - 3A	PIER - 3B	1/4	1/2	3/4	FORWARD ABUTMENT
LEFT TOE OF BARRIER	STATION	483+12.57	483+37.21	483+61.85	483+86.50	484+09.68	484+12.41	484+36.15	484+61.15	484+86.16	485+09.90	485+12.44	485+36.17	485+61.18	485+86.19	486+09.93	486+12.47	486+35.84	486+60.48	486+85.13	487+09.77
	TOP OF HAUNCH EL.	698.21	697.47	696.76	696.09	695.49	695.42	694.83	694.25	693.70	693.21	693.16	692.71	692.27	691.86	691.50	691.46	691.14	690.84	690.57	690.33
	TOP OF SLAB EL.	698.94	698.20	697.49	696.82	696.22	696.15	695.56	694.98	694.43	693.94	693.89	693.44	692.99	692.58	692.23	692.19	691.87	691.57	691.30	691.06
	DEFLECTION	0.000	0.173	0.230	0.173	0.000	0.000	0.178	0.237	0.178	0.000	0.000	0.173	0.230	0.173	0.000	0.000	0.178	0.237	0.178	0.000
	SCREED EL.	698.94	698.37	697.72	696.99	696.22	696.15	695.74	695.22	694.61	693.94	693.89	693.61	693.22	692.76	692.23	692.19	692.05	691.81	691.48	691.06
CROWN LINE	STATION	483+09.88	483+34.56	483+59.24	483+83.91	484+07.13	484+09.86	484+33.63	484+58.67	484+83.72	485+07.49	485+10.03	485+33.80	485+58.84	485+83.88	486+07.65	486+10.19	486+33.60	486+58.28	486+82.95	487+07.63
	TOP OF HAUNCH EL.	698.58	697.83	697.12	696.44	695.83	695.76	695.17	694.59	694.03	693.54	693.49	693.03	692.59	692.17	691.81	691.77	691.45	691.15	690.87	690.63
	TOP OF SLAB EL.	699.30	698.56	697.85	697.17	696.56	696.49	695.90	695.31	694.76	694.27	694.22	693.76	693.31	692.90	692.54	692.50	692.18	691.87	691.60	691.36
	DEFLECTION	0.000	0.173	0.230	0.172	0.000	0.000	0.183	0.244	0.183	0.000	0.000	0.175	0.233	0.175	0.000	0.000	0.183	0.244	0.183	0.000
	SCREED EL.	699.30	698.73	698.08	697.34	696.56	696.49	696.08	695.56	694.95	694.27	694.22	693.94	693.55	693.08	692.54	692.50	692.36	692.12	691.78	691.36
PROFILE GRADE	STATION	483+08.92	483+33.61	483+58.30	483+82.99	484+06.22	484+08.95	484+32.73	484+57.79	484+82.84	485+06.63	485+09.17	485+32.95	485+58.00	485+83.06	486+06.84	486+09.38	486+32.80	486+57.49	486+82.17	487+06.86
	TOP OF HAUNCH EL.	698.52	697.77	697.05	696.37	695.76	695.69	695.10	694.52	693.96	693.47	693.42	692.96	692.51	692.09	691.73	691.70	691.37	691.07	690.79	690.55
	TOP OF SLAB EL.	699.24	698.50	697.78	697.10	696.49	696.42	695.83	695.25	694.69	694.20	694.15	693.69	693.24	692.82	692.46	692.43	692.10	691.79	691.52	691.28
	DEFLECTION	0.000	0.173	0.230	0.172	0.000	0.000	0.185	0.247	0.185	0.000	0.000	0.176	0.235	0.176	0.000	0.000	0.185	0.247	0.185	0.000
	SCREED EL.	699.24	698.67	698.01	697.27	696.49	696.42	696.02	695.49	694.88	694.20	694.15	693.87	693.47	693.00	692.46	692.43	692.29	692.04	691.71	691.28
RIGHT TOE OF BARRIER	STATION	482+94.99	483+19.86	483+44.73	483+69.60	483+93.01	483+95.73	484+19.70	484+44.93	484+70.16	484+94.12	484+96.67	485+20.63	485+45.86	485+71.09	485+95.04	485+97.59	486+21.18	486+46.04	486+70.90	486+95.76
	TOP OF HAUNCH EL.	697.66	696.88	696.15	695.44	694.81	694.74	694.13	693.52	692.94	692.43	692.38	691.90	691.43	690.99	690.61	690.57	690.23	689.91	689.62	689.36
	TOP OF SLAB EL.	698.39	697.61	696.88	696.17	695.54	695.47	694.86	694.25	693.67	693.16	693.11	692.63	692.16	691.72	691.34	691.30	690.96	690.64	690.35	690.09
	DEFLECTION	0.000	0.184	0.245	0.184	0.000	0.000	0.173	0.230	0.173	0.000	0.000	0.184	0.245	0.184	0.000	0.000	0.188	0.251	0.188	0.000
	SCREED EL.	698.39	697.80	697.12	696.35	695.54	695.47	695.03	694.48	693.84	693.16	693.11	692.81	692.40	691.91	691.34	691.30	691.15	690.89	690.53	690.09



SCREED POINT LOCATION PLAN
RIGHT BRIDGE

MAXIMUM OVERHANG DIMENSIONS		
LOCATION	A	B
SPAN 1	3'-1 3/16"	3'-7 1/2"
SPAN 2	3'-0 11/16"	3'-8 1/4"
SPAN 3	2'-11 1/2"	3'-9"
SPAN 4	2'-11"	3'-9 3/4"



SCREED LOCATIONS
RIGHT BRIDGE

NOTES:
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. SEE SHEET 24 OF 32 FOR DECK SLAB THICKNESS DIAGRAM AND ADDITIONAL NOTES.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

CAMBER
CALCULATED CAMBER AT THE TIME OF RELEASE IS 1.416 INCHES.
CALCULATED CAMBER AT THE TIME OF ERECTION IS 2.499 INCHES.
CALCULATED LONG-TERM CAMBER IS 3.517 INCHES.

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED DMP/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11 | STRUCTURE FILE NUMBER 7306482 | CHECKED CHN | REVISED

RIGHT BRIDGE SCREED DETAILS 1/2
BRIDGE NO. 823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD RD. (S.R.139)

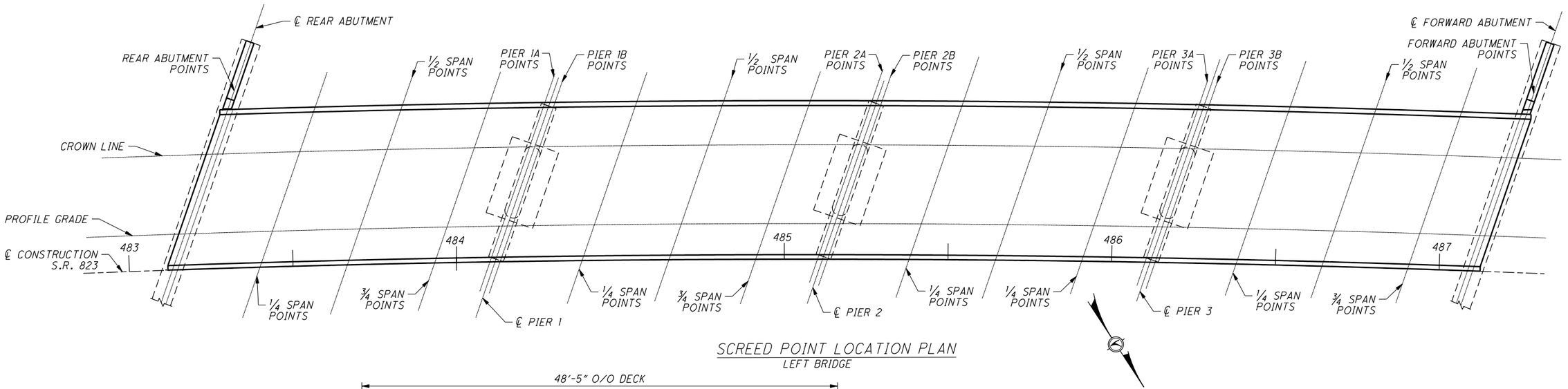
SCI-823-6.81
PID No. 19415

22/32
32/44

USER: sdaenel PLOT DATE: 9/6/2011 11:51:12 AM REVISION DATE: 9/16/2011 MODEL: SHEET
FILE:...AHDR.Cu0000000000045878 /823_09TRSD001.dgn

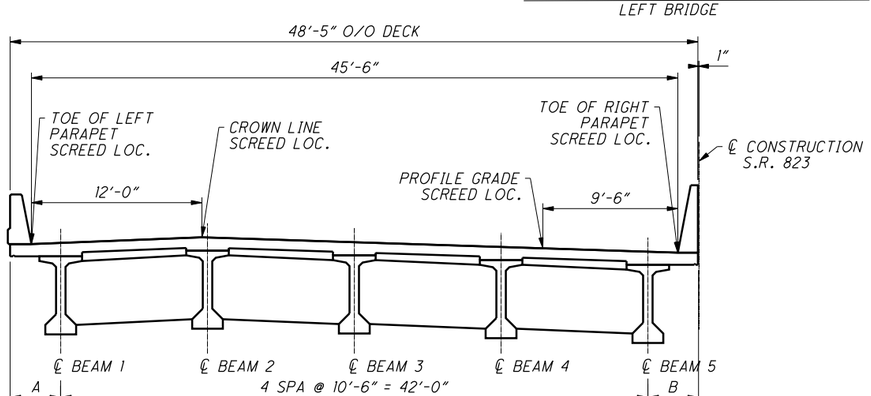
LEFT BRIDGE SCREED TABLE

SPAN POINT		C/L BEARING REAR ABUTMENT	1/4	1/2	3/4	PIER - 1A	PIER - 1B	1/4	1/2	3/4	PIER - 2A	PIER - 2B	1/4	1/2	3/4	PIER - 3A	PIER - 3B	1/4	1/2	3/4	FORWARD ABUTMENT
LEFT TOE OF BARRIER	STATION	483+30.97	483+55.38	483+79.79	484+04.20	484+27.33	484+29.88	484+53.38	484+78.15	485+02.92	485+26.42	485+28.96	485+52.46	485+77.24	486+02.01	486+25.52	486+28.06	486+51.20	486+75.62	487+00.03	487+24.45
	TOP OF HAUNCH EL.	698.23	697.52	696.84	696.20	695.62	695.56	695.00	694.45	693.93	693.47	693.42	692.99	692.57	692.19	691.85	691.82	691.52	691.24	691.00	690.78
	TOP OF SLAB EL.	698.96	698.25	697.57	696.93	696.35	696.29	695.73	695.18	694.66	694.20	694.15	693.72	693.30	692.92	692.58	692.55	692.25	691.97	691.73	691.51
	DEFLECTION	0.000	0.184	0.245	0.184	0.000	0.000	0.184	0.245	0.184	0.000	0.000	0.184	0.245	0.184	0.000	0.000	0.178	0.237	0.178	0.000
	SCREED EL.	698.96	698.43	697.82	697.11	696.35	696.29	695.91	695.42	694.84	694.20	694.15	693.90	693.55	693.10	692.58	692.55	692.43	692.21	691.90	691.51
CROWN LINE	STATION	483+26.45	483+50.92	483+75.38	483+99.85	484+23.04	484+25.58	484+49.14	484+73.97	484+98.80	485+22.36	485+24.90	485+48.46	485+73.29	485+98.12	486+21.68	486+24.23	486+47.43	486+71.90	486+96.37	487+20.84
	TOP OF HAUNCH EL.	698.85	698.13	697.44	696.79	696.21	696.14	695.58	695.02	694.49	694.02	693.98	693.54	693.12	692.73	692.39	692.35	692.05	691.76	691.51	691.29
	TOP OF SLAB EL.	699.57	698.86	698.17	697.52	696.93	696.87	696.31	695.75	695.22	694.75	694.71	694.27	693.85	693.45	693.12	693.08	692.78	692.49	692.24	692.02
	DEFLECTION	0.000	0.188	0.251	0.188	0.000	0.000	0.188	0.251	0.188	0.000	0.000	0.173	0.230	0.173	0.000	0.000	0.188	0.251	0.188	0.000
	SCREED EL.	699.57	699.05	698.42	697.71	696.93	696.87	696.50	696.00	695.41	694.75	694.71	694.44	694.08	693.63	693.12	693.08	692.97	692.75	692.43	692.02
E.B. PROFILE GRADE LINE	STATION	483+17.34	483+41.92	483+66.51	483+91.09	484+14.40	484+16.94	484+40.62	484+65.56	484+90.51	485+14.18	485+16.73	485+40.40	485+65.35	485+90.29	486+13.97	486+16.51	486+39.83	486+64.41	486+88.99	487+13.58
	TOP OF HAUNCH EL.	698.26	697.52	696.82	696.16	695.56	695.49	694.91	694.34	693.80	693.32	693.27	692.82	692.38	691.98	691.63	691.60	691.28	690.98	690.72	690.49
	TOP OF SLAB EL.	698.99	698.25	697.55	696.89	696.29	696.22	695.64	695.07	694.53	694.05	694.00	693.55	693.11	692.71	692.36	692.32	692.01	691.71	691.45	691.22
	DEFLECTION	0.000	0.184	0.245	0.184	0.000	0.000	0.186	0.248	0.186	0.000	0.000	0.184	0.245	0.184	0.000	0.000	0.186	0.248	0.186	0.000
	SCREED EL.	698.99	698.44	697.80	697.07	696.29	696.22	695.83	695.32	694.72	694.05	694.00	693.74	693.36	692.89	692.36	692.32	692.20	691.96	691.64	691.22
RIGHT TOE OF BARRIER	STATION	483+13.71	483+38.34	483+62.97	483+87.60	484+10.77	484+13.50	484+37.22	484+62.21	484+87.21	485+10.93	485+13.47	485+37.19	485+62.18	485+87.18	486+10.90	486+13.44	486+36.80	486+61.43	486+86.06	487+10.68
	TOP OF HAUNCH EL.	698.03	697.29	696.58	695.91	695.31	695.24	694.65	694.07	693.53	693.04	692.99	692.54	692.10	691.69	691.33	691.30	690.98	690.68	690.41	690.17
	TOP OF SLAB EL.	698.75	698.02	697.31	696.64	696.04	695.97	695.38	694.80	694.26	693.77	693.72	693.27	692.83	692.42	692.06	692.03	691.71	691.41	691.14	690.90
	DEFLECTION	0.000	0.184	0.245	0.184	0.000	0.000	0.178	0.237	0.178	0.000	0.000	0.184	0.245	0.184	0.000	0.000	0.178	0.237	0.178	0.000
	SCREED EL.	698.75	698.20	697.55	696.82	696.04	695.97	695.56	695.04	694.43	693.77	693.72	693.45	693.07	692.60	692.06	692.03	691.89	691.64	691.32	690.90



SCREED POINT LOCATION PLAN
LEFT BRIDGE

MAXIMUM OVERHANG DIMENSIONS		
LOCATION	A	B
SPAN 1	3'-7 3/8"	3'-0 3/8"
SPAN 2	3'-7"	3'-1 1/4"
SPAN 3	3'-6"	3'-2"
SPAN 4	3'-5 3/16"	3'-2 5/16"



SCREED LOCATIONS
LEFT BRIDGE
FOR A AND B SEE OVERHANG DIMENSION TABLE

NOTES:
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. SEE SHEET 24 OF 32 FOR DECK SLAB THICKNESS DIAGRAM AND ADDITIONAL NOTES.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

CAMBER
CALCULATED CAMBER AT THE TIME OF RELEASE IS 1.416 INCHES.
CALCULATED CAMBER AT THE TIME OF ERECTION IS 2.499 INCHES.
CALCULATED LONG-TERM CAMBER IS 3.517 INCHES.

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED DMP/JSW
DRAWN DMP
CHECKED CHN
REVIEWED JMY
DATE 06/24/11
REVISED
STRUCTURE FILE NUMBER 7306482

LEFT BRIDGE SCREED DETAILS 1/2
BRIDGE NO. 823-0917-L
S.R. 823 OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81
PID No. 19415

USER: sdearnel PLOT DATE: 9/16/2011 TIME: 8:20 AM REVISION DATE: 9/6/2011
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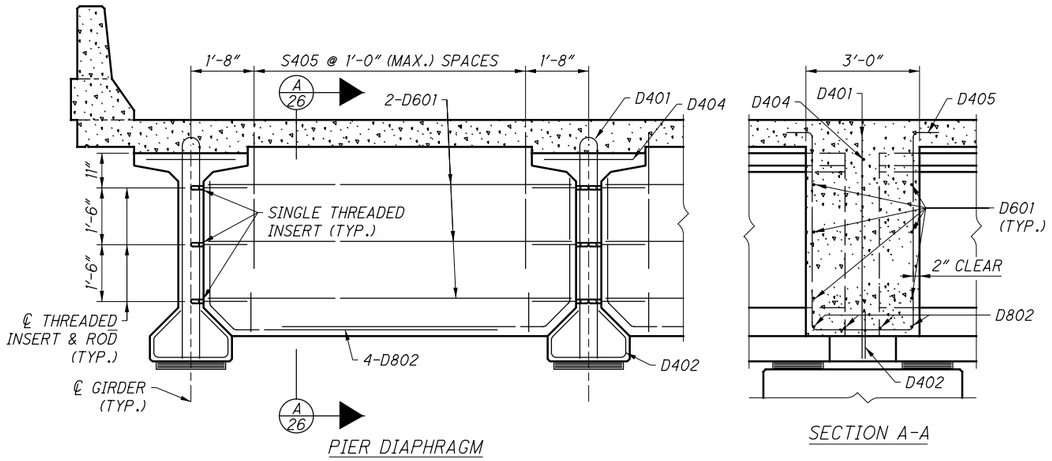


PIER DIAPHRAGM

SECTION A-A

INTERMEDIATE DIAPHRAGM

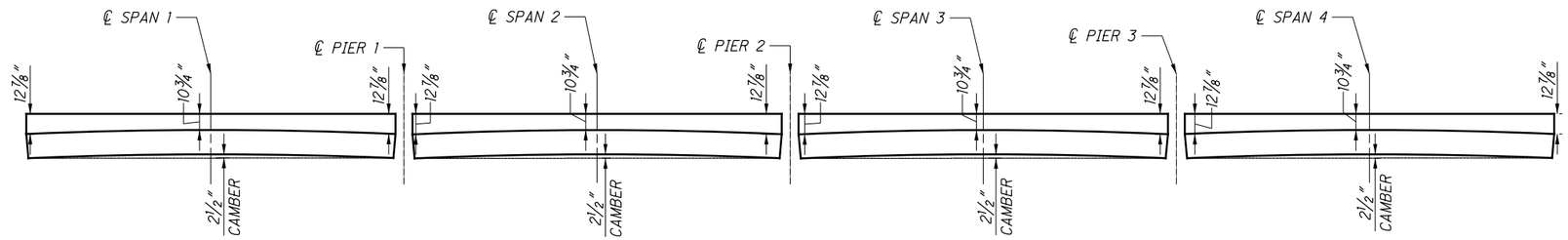
SEE STD DWG. PSID-1-99 FOR INTERMEDIATE DIAPHRAGM DETAILS.

DECK SLAB THICKNESS FOR CONCRETE QUANTITY

DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.

DESIGN SLAB THICKNESS = 8¾"
HAUNCH = TOPPING THICKNESS SHOWN MINUS THE DESIGN SLAB THICKNESS.

THE CAMBER SHOWN ON THIS DIAGRAM REPRESENTS THE NET DEFLECTION CAUSED BY THE PRESTRESSED FORCE AND THE WEIGHT OF THE BEAM.



DECK SLAB THICKNESS

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
DMP/JSW	DMP	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

PIER DIAPHRAGM DETAILS

BRIDGE NO. SCI-823-0917-L/R
OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

24 / 32

34
44

USER: CMehlbri PLOT DATE: 5/28/2013 4:37:26 PM REVISION DATE: 5/28/2013
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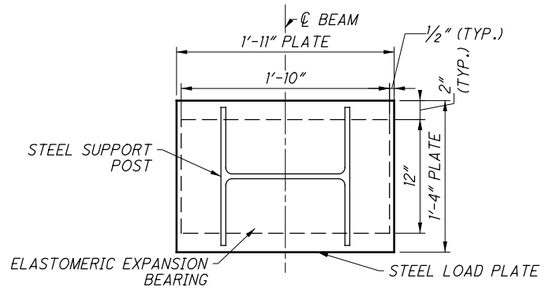
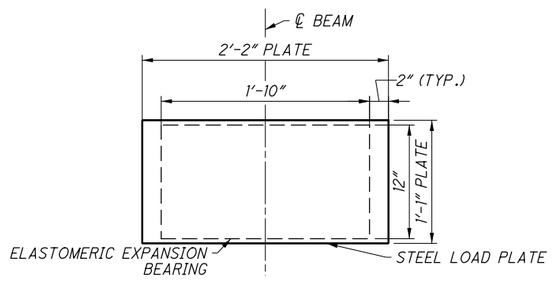
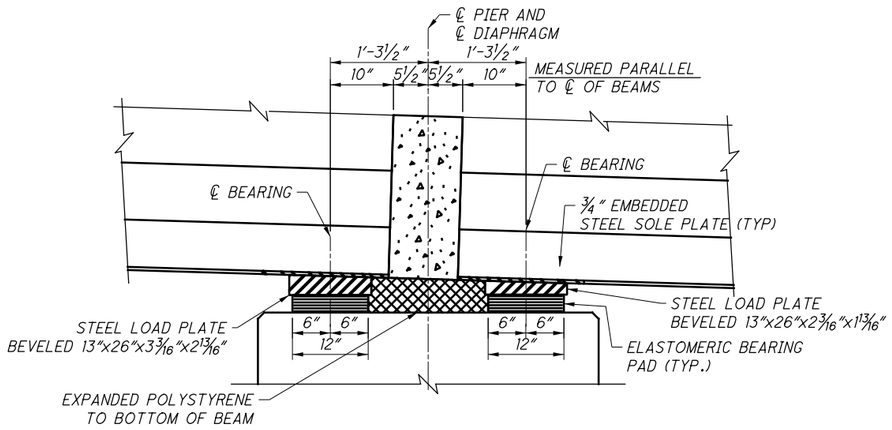


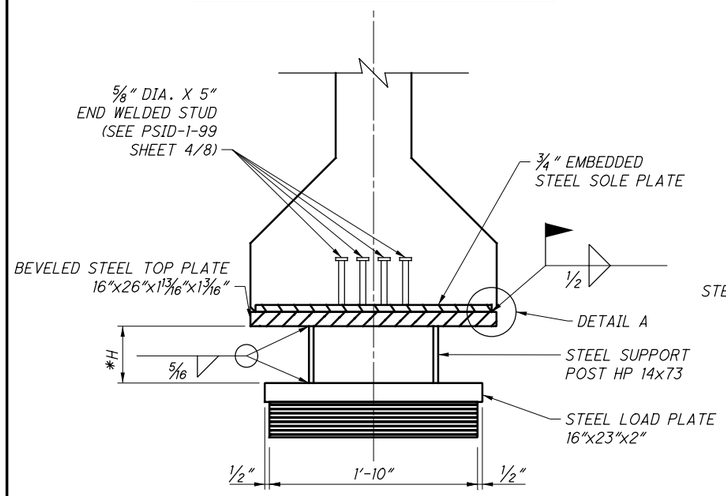
PLAN VIEW - ABUTMENT BEARING



PLAN VIEW - PIER BEARING

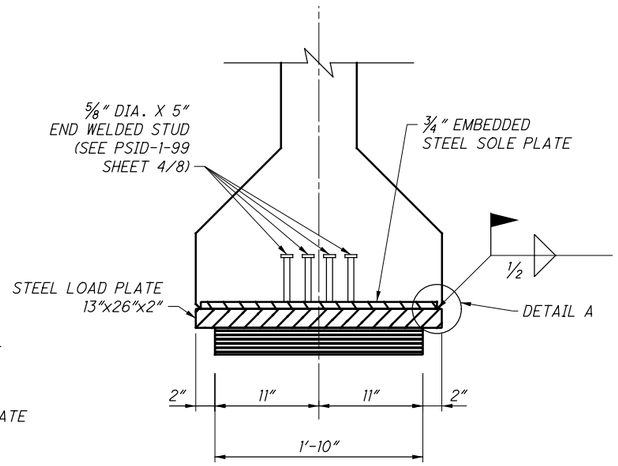


EXPANSION BEARING DETAIL - PIERS



END VIEW - ABUTMENT BEARING WITH LOAD PLATE

* SEE TABLE A: BEAM SUPPORT POST HEIGHT (HP14X73)

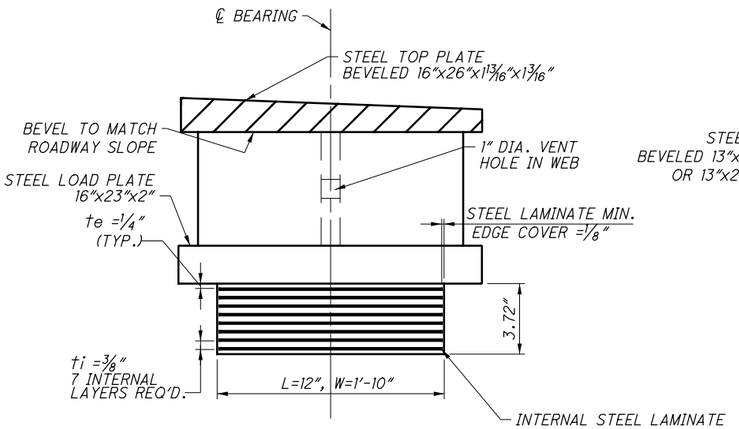


END VIEW - PIER BEARING

TABLE A: BEAM SUPPORT POST HEIGHT (HP14X73)									
BEAM	1	2	3	4	5	6	7	8	9	10
FORWARD ABUTMENT	11 5/8"	1'-4 3/4"	1'-0 9/16"	8 1/4"	4"	1'-3 13/16"	1'-4 5/8"	1'-0 1/16"	8 5/16"	4"
REAR ABUTMENT	7 1/16"	1'-1 3/8"	10 1/4"	7 1/4"	4"	11"	1'-0 9/16"	10"	7"	4"

NOTES:

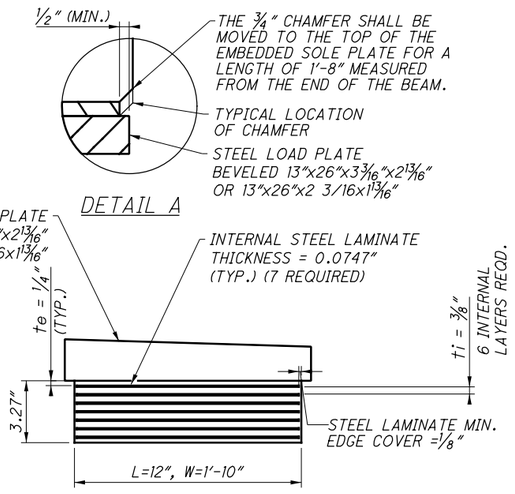
1. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES FAHRENHEIT AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
2. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. ALL STEEL PLATES IN CONTACT WITH AN ELASTOMERIC BEARING SHALL BE VULCANIZED (BONDED) TO THE BEARING.
3. ALL STRUCTURAL STEEL, INCLUDING PLATES AND WELDED HEADED STUDS SHALL MEET THE FABRICATION AND ERECTION REQUIREMENTS SPECIFIED IN 513 AND SHALL BE PAID FOR UNDER ITEM 515 PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS.
4. ALL STRUCTURAL STEEL SHALL BE ASTM A709, GR. 50, GALVANIZED ACCORDING TO 711.02.
5. ALL HEADED STUDS ARE 5/8" DIA. ASTM A108, AND SHALL BE GALVANIZED ACCORDING TO 711.02.
6. LOCATE HEADED STUDS IN THE I-BEAM TO AVOID PRESTRESSING STRANDS DETAILED SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONCRETE/PRESTRESSED BEAM MANUFACTURER FOR THE EMBEDMENT PLATE.
7. LONGITUDINAL STABILITY DURING CONSTRUCTION: GRAVITY LOADS MAY CAUSE THE BEAMS TO SHIFT LONGITUDINALLY ON ELASTOMERIC BEARINGS WHEN BEING SET DUE TO THE ROADWAY GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT BEAMS DO NOT DISPLACE LONGITUDINALLY PRIOR TO COMPLETION OF THE BEAM DIAPHRAGMS AND SEMI-INTEGRAL ABUTMENTS. TEMPORARY STOPS SHALL KEEP THE BEAMS IN PLACE AND MAY NOT BE REMOVED UNTIL THE DECK HAS BEEN PLACED AND THE SEMI-INTEGRAL ABUTMENT HAS BEEN BACKFILLED IN ACCORDANCE WITH ODOT PROCEDURES. STOPS OR ANY DEVICE USED TO MAINTAIN BEAM POSITION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO. THE TEMPORARY STOPS SHALL NOT DAMAGE OR ALTER THE BRIDGE STRUCTURE AND SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO OPENING THE BRIDGE. THE COST OF THIS WORK SHALL BE INCLUDED WITH ITEM 515 PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS FOR PAYMENT.



SIDE VIEW - ABUTMENT

LAMINATED ELASTOMERIC EXPANSION BEARING, 60 DUROMETER

SPANS 1 AND 4 - ABUTMENTS
DEAD LOAD REACTION = 163.1 KIPS
LIVE LOAD REACTION = 69.5 KIPS
MAXIMUM DESIGN LOAD = 232.6 KIPS



SIDE VIEW - PIER

LAMINATED ELASTOMERIC EXPANSION BEARING, 60 DUROMETER

SPANS 1 AND 4 - PIERS
DEAD LOAD REACTION = 173.0 KIPS
LIVE LOAD REACTION = 51.6 KIPS
MAXIMUM DESIGN LOAD = 224.6 KIPS

SPANS 2 AND 3 - PIERS
DEAD LOAD REACTION = 163.7 KIPS
LIVE LOAD REACTION = 51.6 KIPS
MAXIMUM DESIGN LOAD = 215.3 KIPS

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED DMP/JSW | DRAWN DMP | REVIEWED JMY | DATE 06/24/11
CHECKED CHN | REVISED | STRUCTURE FILE NUMBER 7306482

BEARING DETAILS
BRIDGE NO. SCI-823-0917
OVER PORTSMOUTH-MINFORD ROAD

SCI-823-6.81
PID No. 19415

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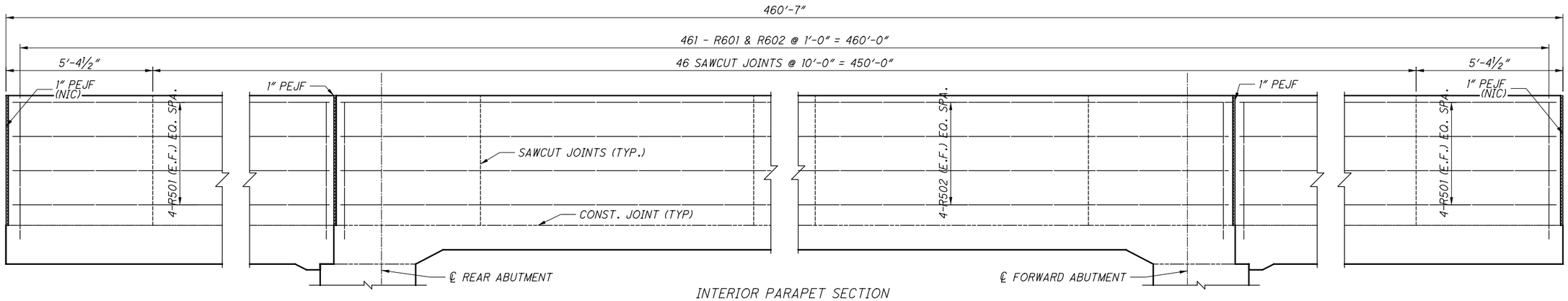
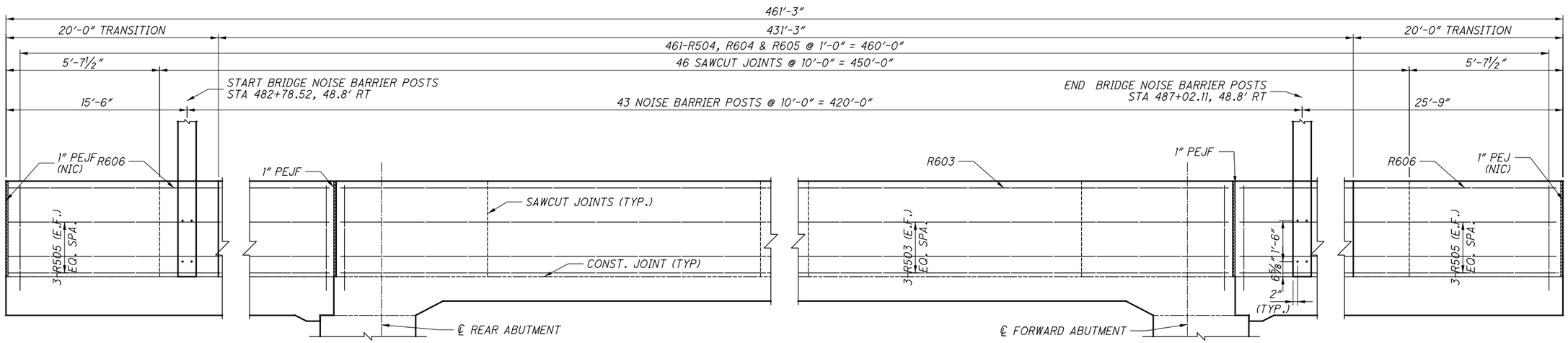
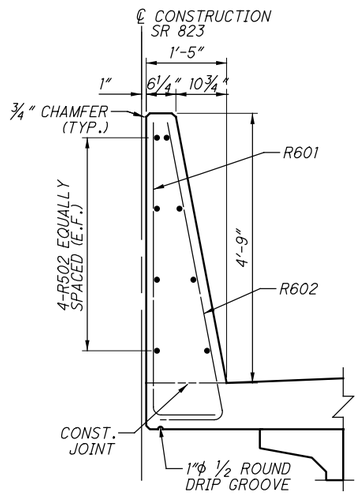


INTERIOR PARAPET SECTION
SCI-823-0917-L/R

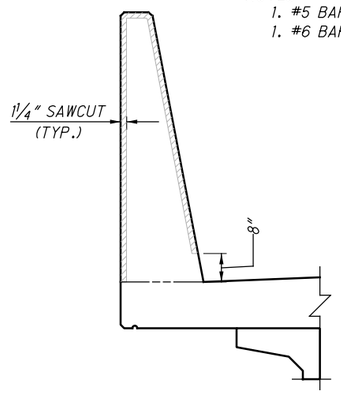




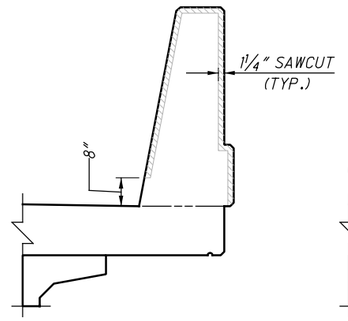
INTERIOR PARAPET SECTION
SCI-823-0917 R

EXTERIOR PARAPET SECTION RIGHT BRIDGE
SCI-823-0917-R

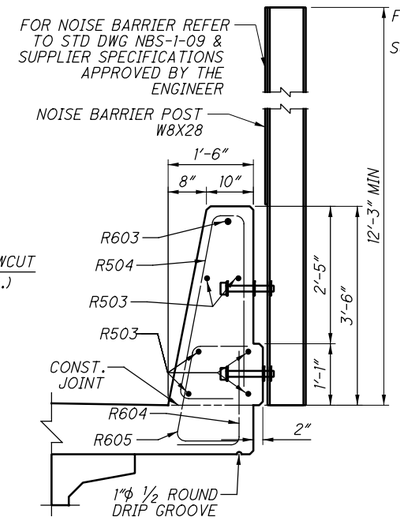
NOTES:
1. #5 BARS MIN. LAP = 2'-5"
1. #6 BARS MIN. LAP = 2'-11"



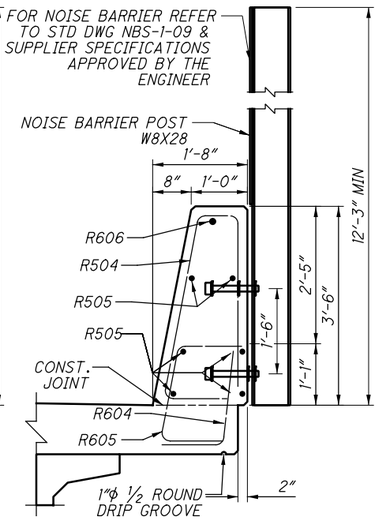
INTERIOR PARAPET SECTION
SCI-823-0917 R



EXTERIOR PARAPET SECTION
SCI-823-0917 R



EXTERIOR PARAPET SECTION
SCI-823-0917 R



EXTERIOR PARAPET SECTION
AT TRANSITION
SCI-823-0917 R

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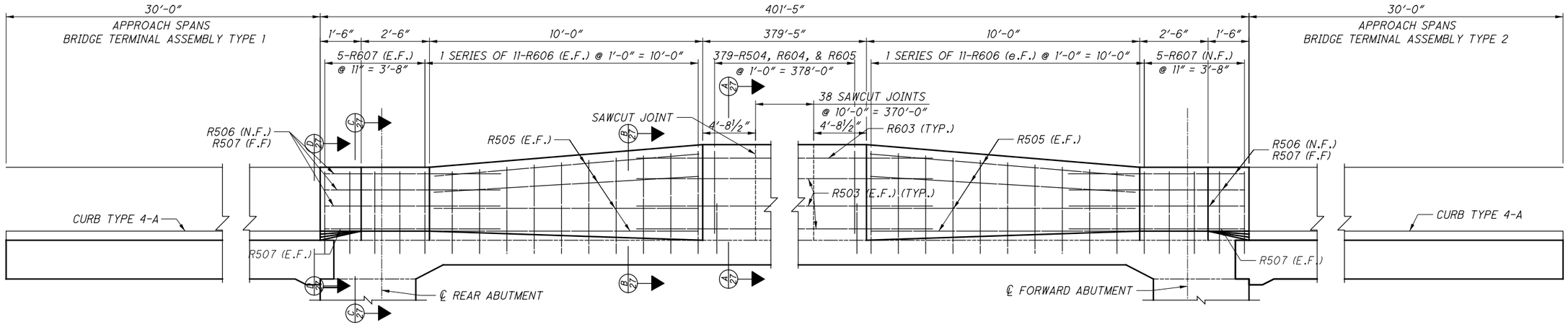
DESIGN AGENCY
HDR ENGINEERING, INC.
8987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

PARAPET DETAILS - RIGHT BRIDGE

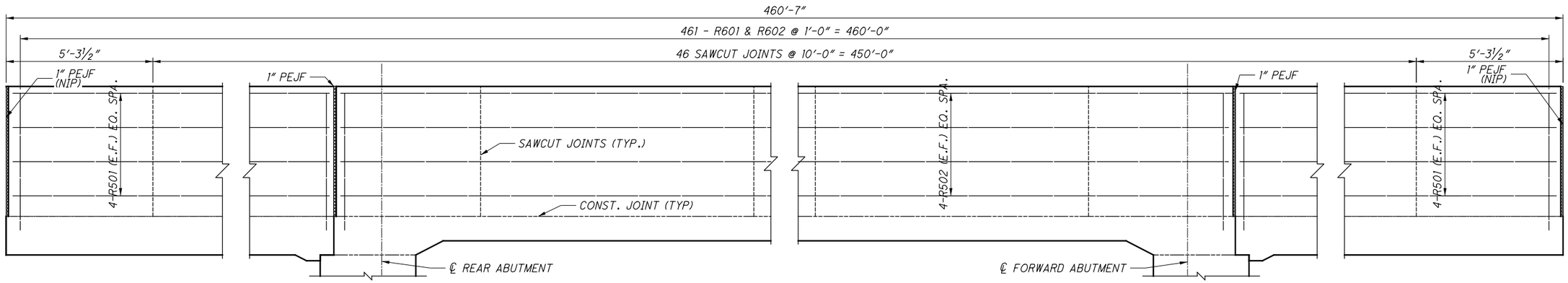
BRIDGE NO. SCI-823-0917-R
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415



EXTERIOR PARAPET SECTION LEFT BRIDGE

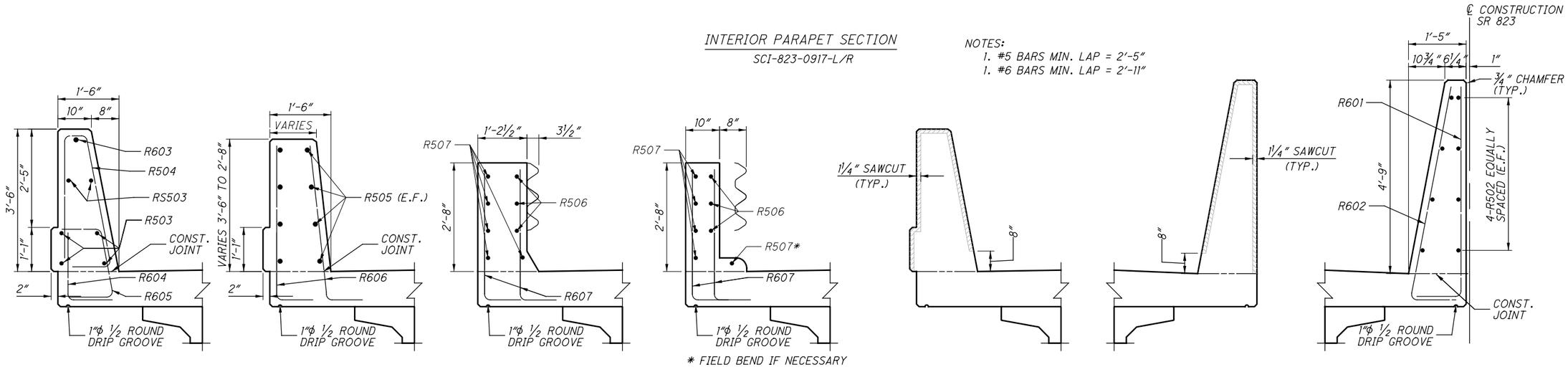
SCI-823-0917-L



INTERIOR PARAPET SECTION

SCI-823-0917-L/R

NOTES:
1. #5 BARS MIN. LAP = 2'-5"
1. #6 BARS MIN. LAP = 2'-11"



EXTERIOR PARAPET SECTION
SECTION A-A
SCI-823-0917 L

EXTERIOR PARAPET SECTION
SECTION B-B
SCI-823-0917 L

EXTERIOR PARAPET SECTION
SECTION C-C
SCI-823-0917 L

EXTERIOR PARAPET SECTION
SECTION D-D
SCI-823-0917 L

EXTERIOR PARAPET SECTION
SCI-823-0917 L

INTERIOR PARAPET SECTION
SCI-823-0917 L

INTERIOR PARAPET SECTION
SCI-823-0917 L

USER: CWahlbri PLOT DATE: 5/28/2013 4:47:42 PM REVISION DATE: 5/28/2013
FILE.../0000000000045878 /823_091TLSD003.dgn MODEL: SHEET

DESIGN AGENCY
HDR ENGINEERING, INC.
8987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513 984-7500

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CHN		7306482	

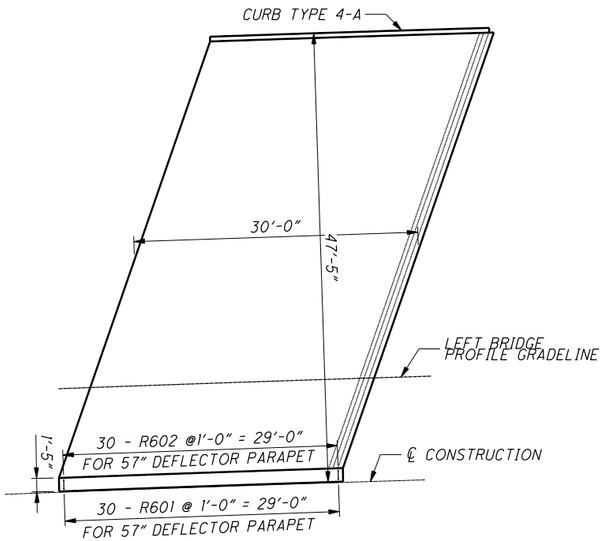
PARAPET DETAILS - LEFT BRIDGE

BRIDGE NO. SCI-823-0917-L

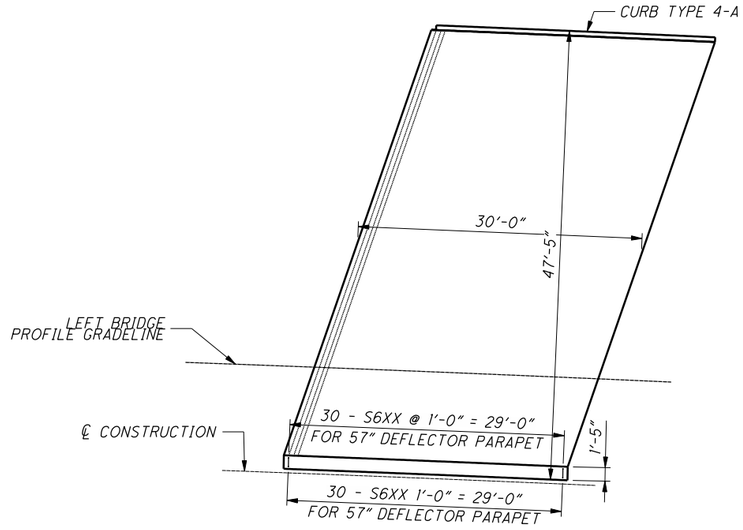
S.R. 823 OVER PORTSMOUTH-MINFORD RD. (S.R. 139)

SCI-823-6.81

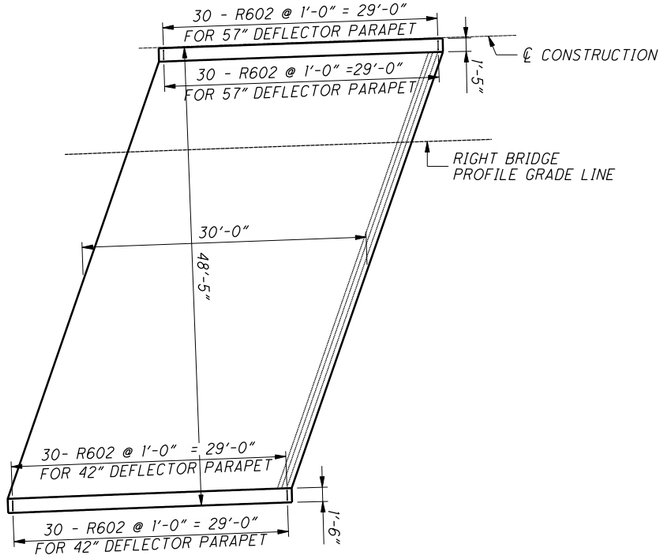
PID No. 19415



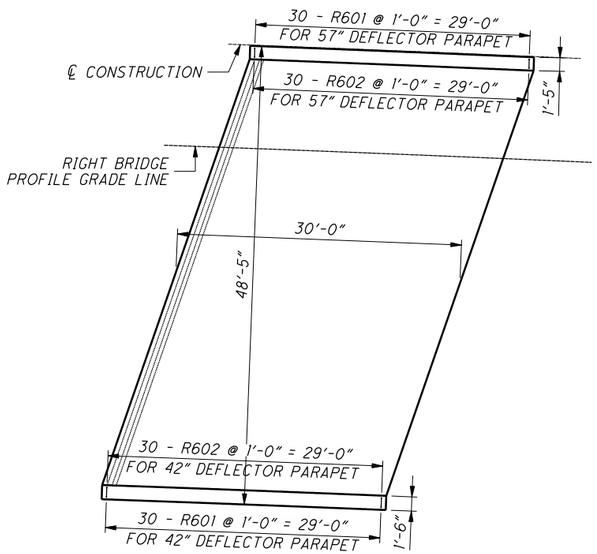
FORWARD APPROACH SLAB - LEFT BRIDGE



REAR APPROACH SLAB - LEFT BRIDGE



FORWARD APROACH SLAB - RIGHT BRIDGE



REAR APROACH SLAB - RIGHT BRIDGE

NOTES:

1. SEE STD. DWG. AS-1-81 FOR APPROACH SLAB REINFORCING AND STANDARD DETAILS.

2. FOR PARAPET DETAILS SEE SHEETS 26/32 & 27/32 .

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED	DRAWN	REVIEWED	DATE
EJM/JSW	JSW	JMY	06/24/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DAT		7306482	

APPROACH SLAB DETAILS
BRIDGE NO. SCI-823-0917
S.R. 823 OVER PORTSMOUTH-MINFORD ROAD (S.R. 139)

SCI-823-6.81
PID No. 19415

28/32

38/44

USER: sdaornel PLOT DATE: 6/23/2011 1:29:24 AM REVISION DATE: 6/23/2011
FILE:...4HDR.Cu0000000000045878 /823_09ITCMD001.dgn MODEL: SHEET

MARK	NUMBER				LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	PIER 3	TOTAL				A	B	C	D	E	R	INC
PIERS														
P501	12	12	12	36	25'- 6"	957	STR							
P502	4 SR OF 5	4 SR OF 5	4 SR OF 5	12 SR OF 5	12'- 7" TO 23'- 6"	1129	STR							2'-8 3/4"
P503	4	4	4	12	23'-1"	289	20	10 1/2"	2'-3 "	18'-4 1/4"	2'-3 "	10 1/2"		
P504	8	8	8	24	15'- 10"	396	STR							
P505	15	15	15	45	24'- 7"	1154	2	1'-3"	22'-4"	1'-3"				
P506	23	23	23	69	16'-7"	1193	2	1'-3"	14'-4"	1'-3"				
P507	104	102	98	304	11'- 1"	3514	24	3'-10 1/2"	2'-6"				1'-11 1/4"	
P508	104	102	98	304	14'- 6"	4598	STR							
P509	468	459	441	1368	5'- 2"	7372	17	4'-0"						
P510	9	9	9	27	8'-7"	242	2	2'-5"	4'-0"	2'-5"				
P601	38	38	38	114	19'-8"	3367	2	8'-5 1/2"	3'-1"	8'-5 1/2"				
P602	38	38	38	114	10'-1"	1727	2	3'-8"	3'-1"	3'-8"				
P603	2 SR OF 25	2 SR OF 25	2 SR OF 25	6 SR OF 25	10'- 3" TO 19'-1"	3304	2	3'-9" TO 8'-2"	3'-1"	3'-9" TO 8'-2"				0'-4 1/2"
P604	50	50	50	150	11'-3"	2535	2	4'-3"	3'-1"	4'-3"				
P605	2 SR OF 25	2 SR OF 25	2 SR OF 25	6 SR OF 25	11'-5" TO 20'-1"	3548	2	4'-4" TO 8'-8"	3'-1"	4'-4" TO 8'-8"				0'-4 1/4"
P606	50	50	50	150	11'-3"	2535	2	4'-3"	3'-1"	4'-3"				
P607	6	6	6	18	14'-10"	401	3	4'-5"	2'-9"					
P608	4	4	4	12	4'- 1"	74	1	1'-6"	2'-9"					
P609	2 SR OF 5	2 SR OF 5	2 SR OF 5	6 SR OF 5	14'-4" TO 15'-10"	680	3	3'-10" TO 4'-7"	3'-1"					0'-4 1/2"
P610	2 SR OF 5			2 SR OF 5	15'-10" TO 17'-3"	248	3	4'-6 3/4" TO 5'-3 1/2"	3'-1"					0'-4 1/4"
P611		2 SR OF 5		2 SR OF 5	16'-0" TO 17'-6"	252	3	4'-8" TO 5'-4 3/4"	3'-1"					0'-4 1/2"
P612			2 SR OF 5	2 SR OF 5	16'-2" TO 17'-8"	254	3	4'-9" TO 5'-6"	3'-1"					0'-4 1/2"
P901	4	4	4	12	4'- 5"	180	STR							
P902	26	26	26	78	4'- 0"	1061	1	1'-6"	2'-9"					
P1001	52	52	52	156	27'- 4"	18348	1	3'-4"	24'-4"					
P1002	15	15	15	45	27'- 8"	6072	2	2'-11"	22'-6"	2'-11"				
P1003	43	43	43	129	19'- 8"	10917	2	2'-11"	14'-6"	2'-11"				
P1004	94	94	94	282	15'- 3"	18505	1	1'-6"	14'-1"					
P1005	94	94	94	282	29'- 9"	36100	STR							
P1006	94			94	29'- 8"	12000	STR							
P1007		94		94	27'- 11"	11292	STR							
P1008			94	94	25'- 9"	10415	STR							
					SUB-TOTAL	164658								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
DECK											
S401	845	29'- 7"	16699	STR							
S402	65	17'- 11"	778	STR							
S403	65	33'- 7"	1458	STR							
S404	576	25'- 1"	9651	STR							
S501	985	30'- 0"	30821	STR							
S502	994	21'- 1"	21858	STR							
S503	1 SR OF 21	4'- 7" TO 27'- 6"	351	STR							1'-1 3/4"
S504	1 SR OF 17	2'- 0" TO 20'- 1"	196	STR							1'-1 1/2"
S505	1 SR OF 27	2'- 0" TO 29'- 10"	448	STR							1'-1"
S506	1 SR OF 14	4'- 1" TO 18'- 7"	165	STR							1'-1 1/2"
S507	2 SR OF 22	2'- 0" TO 24'- 11"	618	STR							1'-1"
S508	2 SR OF 18	3'- 8" TO 23'- 1"	502	STR							1'-1 3/4"
S509	8	25'- 7"	213	STR							
S510	1980	25'- 7"	52833	STR							
S511	1980	7'- 8"	15833	16	7'-4"						
S601	845	30'- 10"	39133	STR							
S602	65	19'- 1"	1863	STR							
S603	65	34'- 10"	3401	STR							
SUB-TOTAL			196822								

NOTE:

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. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STR" IN THE "TYPE" COLUMN INDICATES STRAIGHT BARS.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED EJM/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11
CHECKED DAT | REVISED | STRUCTURE FILE NUMBER 7306482

REINFORCING STEEL LIST - RIGHT BRIDGE

BRIDGE NO. SCI-823-0917 R
S.R. 823 OVER PORTSMOUTH-MINFORD (S.R. 139)

SCI-823-0917
PID No. 19415

29/32

39/44

USER: CWahlbri PLOT DATE: 5/28/2013 5:39:10 PM REVISION DATE: 5/28/2013
FILE.../0000000000045878 /823_0917TRRL01.dgn MODEL:SHEET

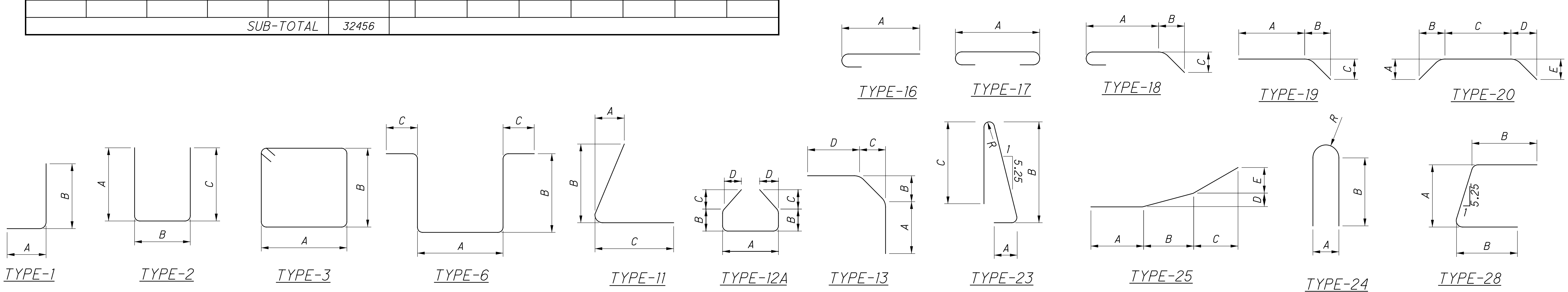
MARK	NUMBER FWD	NUMBER REAR	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENTS													
A501	12	12	24	32'- 11"	824	STR							
A502	62	62	124	16'- 4"	2112	3	5'-6"	2'-6"					
A503	50	50	100	17'- 9"	1851	3	3'-3"	5'-6"					
A504	7	7	14	18'- 3"	267	2	8'-2"	2'-2"	8'-2 1/4"				
A505	8	8	16	26'- 9"	446	STR							
A506	6	6	12	15'- 11"	199	STR							
A507	4	4	8	11'- 10"	99	STR							
A508	2	2	4	10'- 3"	43	STR							
A509	2	2	4	7'- 3"	30	STR							
A510	2	2	4	4'- 3"	18	STR							
A511	2	2	4	13'- 2"	55	19	2'-2 1/2"	9'-9 3/4"	4'-11"				
A512	1 SR OF 7	1 SR OF 7	2 SR OF 7	8'- 2" TO 17'- 9"	189	2	3'-1 1/2" TO 7'-11"	2'-2"	3'-1 1/2" TO 7'-11"				1'-7 1/4"
A513	72	72	144	12'- 0"	1802	2	4'-6"	3'-3"	4'-6"				
A514	36	36	72	8'- 0"	601	2	2'-8"	2'-11"	2'-8"				
A601	12	12	24	10'- 2"	366	STR							
A801	8	8	16	34'- 2"	1460	STR							
A802	8	8	16	31'- 1"	1327	STR							
A803	24	24	48	30'- 10"	3952	STR							
D801	33	33	66	4'- 4"	764	18	2'-4 1/2"	1'-0"	1'-0"				
				SUB-TOTAL	16405								

MARK	NUMBER FWD	NUMBER REAR	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
APPROACH SLABS													
AS501	130	130	260	27'- 0"	7320	STR							
AS502	32	32	64	29'- 6"	1966	STR							
AS1001	89	89	178	30'- 3"	23170	16	29'-6"						
				SUB-TOTAL	32456								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS											
R501	16	29'- 7"	494	STR							
R502	128	28'- 5"	3794	STR							
R503	96	29'- 0"	2904	STR							
R504	461	7'- 10"	3766	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
R505	12	29'- 8"	371	STR							
R601	461	6'- 2"	4270	1	1'-1"	5'-3"					
R602	461	6'- 4"	4385	11	1'-0"	5'-3"	1'-1"				
R603	18	29'- 8"	802	STR							
R604	461	2'-8"	1846	1	1'-1"	1'-9"					
R605	461	3'-8"	2539	28	1'-8"	1'-1"					
R606	2	29'- 8"	89	STR							
	SUB-TOTAL		25260								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER DIAPHRAGMS											
D401	15	12'- 3"	123	24	0'-5 1/2"	5'-10"				0'-2 1/4"	
D402	15	4'-10"	48	12A	1'-11 1/2"	0'-6 1/4"	0'-8 1/2"	0'-8 1/2"			
D403		NOT USED									
D404	15	15'- 10"	159	6	2'-8"	6'-0"	0'-8"				
D601	72	9'- 7"	1036	STR							
D802	96	11'- 2"	2862	13	3'-3 3/4"	0'-8"	0'-8"	6'-11 1/2"			
	SUB-TOTAL		4228								

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. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STR" IN THE "TYPE" COLUMN INDICATES STRAIGHT BARS.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. SEE SHEET 29/32 FOR BENDING DIAGRAMS.



DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED EJM/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11 | CHECKED DAT | REVISED | STRUCTURE FILE NUMBER 7306482

REINFORCING STEEL LIST - RIGHT BRIDGE

BRIDGE NO. SCI-823-0917 R
S.R. 823 OVER PORTSMOUTH-MINFORD (S.R. 139)

SCI-823-0917
PID No. 19415

MARK	NUMBER				LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	PIER 3	TOTAL				A	B	C	D	E	R	INC
PIERS														
P501	12	12	12	36	25'- 6"	957	STR							
P502	4 SR OF 5	4 SR OF 5	4 SR OF 5	12 SR OF 5	12'- 7" TO 23'- 6"	1129	STR							2'-8 3/4"
P503	4	4	4	12	24'- 9"	310	20	1'-0 1/4"	2'-9 3/4"	18'-9 3/4"	2'-9 3/4"	1'-0 1/4"		
P504	8	8	8	24	15'- 10"	396	STR							
P505	15	15	15	45	24'-7"	1154	2	1'-3"	22'-4"	1'-3"				
P506	23	23	23	69	16'- 7"	1193	2	1'-3"	14'-4"	1'-3"				
P507	106	104	100	310	11'- 1"	3584	24	3'-10 1/2"	2'-6"				1'-11 1/4"	
P508	106	104	100	310	14'- 6"	4688	STR							
P509	477	468	450	1395	5'- 2"	7517	17	4'-0"						
P510	9	9	9	27	8'-7"	242	2	2'-5"	4'-0"	2'-5"				
P601	38	38	38	114	19'- 8"	3367	2	8'-5 1/2"	3'-1"	8'-5 1/2"				
P602	38	38	38	114	10'- 1"	1727	2	3'-8"	3'-1"	3'-8"				
P603	2 SR OF 25	2 SR OF 25	2 SR OF 25	6 SR OF 25	10'- 3" TO 19'- 1"	3304	2	3'-9" TO 8'-2"	3'-1"	3'-9" TO 8'-2"				0'-4 1/2"
P604	50	50	50	150	11'-3"	2535	2	4'-3"	3'-1"	4'-3"				
P605	2 SR OF 25	2 SR OF 25	2 SR OF 25	6 SR OF 25	11'-7" TO 20'-3"	3586	2	4'-5" TO 8'-9"	3'-1"	4'-5" TO 8'-9"				0'-4 1/4"
P606	50	50	50	150	11'-3"	2535	2	4'-3"	3'-1"	4'-3"				
P607	6	6	6	18	14'- 10"	401	3	4'-5"	2'-9"					
P608	4	4	4	12	4'- 1"	74	1	1'-6"	2'-9"					
P609	2 SR OF 5	2 SR OF 5	2 SR OF 5	6 SR OF 5	14'-4" TO 15'-10"	680	3	3'-10" TO 4'-7"	3'-1"					0'-4 1/2"
P613	2 SR OF 5			2 SR OF 5	15'-2" TO 16'-7"	238	3	4'-3" TO 4'-11 1/2"	3'-1"					0'-4 1/4"
P614		2 SR OF 5		2 SR OF 5	15'-4" TO 16'-10"	242	3	4'-4" TO 5'-1"	3'-1"					0'-4 1/2"
P615			2 SR OF 5	2 SR OF 5	15'-6" TO 17'-0"	244	3	4'-5" TO 5'-2"	3'-1"					0'-4 1/2"
P901	4	4	4	12	4'- 5"	180	STR							
P902	26	26	26	78	4'- 0"	1061	1	1'-6"	2'-9"					
P1001	52	52	52	156	27'- 4"	18348	1	3'-4"	24'-4"					
P1002	17	17	17	51	27'- 8"	6072	2	2'-11"	22'-6"	2'-11"				
P1003	43	43	43	129	19'- 8"	10917	2	2'-11"	14'-6"	2'-11"				
P1004	94	94	94	282	15'- 3"	18505	1	1'-6"	14'-1"					
P1005	94	94	94	282	29'- 9"	36100	STR							
P1009	94			94	30'- 1"	12168	STR							
P1010		94		94	28'- 6"	11528	STR							
P1011			94	94	26'- 6"	10719	STR							
					SUB-TOTAL	165700								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
DECK											
S401	845	29'- 7"	16699	STR							
S402	65	17'- 11"	778	STR							
S403	65	33'- 7"	1458	STR							
S404	576	25'- 1"	9651	STR							
S501	985	30'- 0"	30821	STR							
S502	994	21'- 1"	21858	STR							
S503	1 SR OF 21	4'- 7" TO 27'- 6"	351	STR							1'-1 3/4"
S504	1 SR OF 17	2'- 0" TO 20'- 1"	196	STR							1'-1 1/2"
S505	1 SR OF 27	2'- 0" TO 29'- 10"	448	STR							1'-1"
S506	1 SR OF 14	4'- 1" TO 18'- 7"	165	STR							1'-1 1/2"
S507	2 SR OF 22	2'- 0" TO 24'- 11"	618	STR							1'-1"
S508	2 SR OF 18	3'- 8" TO 23'- 1"	502	STR							1'-1 3/4"
S509	8	25'- 7"	213	STR							
S510	1980	25'- 7"	52833	STR							
S511	1980	7'- 8"	15833	16	7'-4"						
S601	845	30'- 10"	39133	STR							
S602	65	19'- 1"	1863	STR							
S603	65	34'- 10"	3401	STR							
SUB-TOTAL			196822								

NOTE:

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. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STR" IN THE "TYPE" COLUMN INDICATES STRAIGHT BARS.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

USER: CWahlbr1 PLOT DATE: 5/28/2013 5:40:10 PM REVISION DATE: 5/28/2013
FILE...: /0000000000045878 /823_0917TLR101.dgn MODEL: SHEET

DESIGN AGENCY
HDR ENGINEERING, INC.
9987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED EJM/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11
CHECKED DAT | REVISED | STRUCTURE FILE NUMBER 7306482

REINFORCING STEEL LIST - LEFT BRIDGE

BRIDGE NO. SCI-823-0917
S.R. 823 OVER PORTSMOUTH-MINFORD (S.R. 139)

SCI-823-0917
PID No. 19415

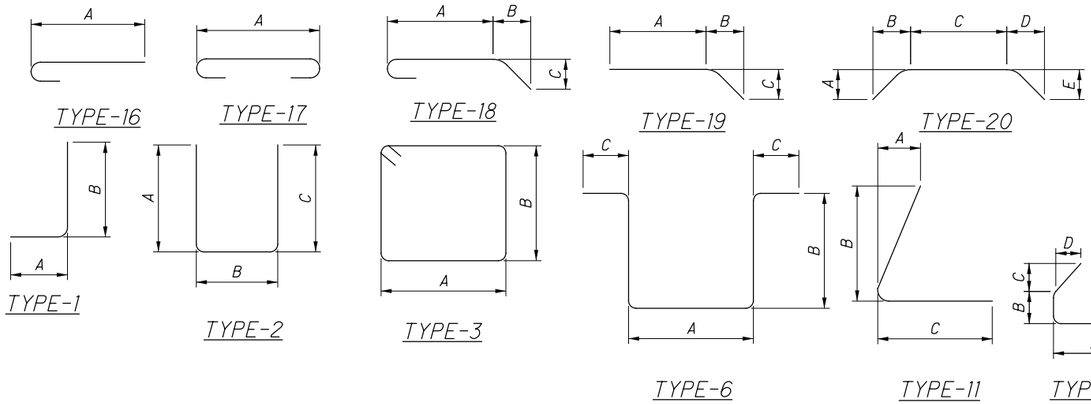
MARK	NUMBER FWD	NUMBER REAR	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENTS													
A501	12	12	24	32'- 11"	824	STR							
A502	62	62	124	16'- 4"	2112	3	5'-6"	2'-6"					
A503	50	50	100	17'- 9"	1851	3	3'-3"	5'-6"					
A504	7	7	14	18'- 3"	267	2	8'-2"	2'-2"	8'-2 1/4"				
A505	8	8	16	26'- 9"	446	STR							
A506	6	6	12	15'- 11"	199	STR							
A507	4	4	8	11'- 10"	99	STR							
A508	2	2	4	10'- 3"	43	STR							
A509	2	2	4	7'- 3"	30	STR							
A510	2	2	4	4'- 3"	18	STR							
A511	2	2	4	13'- 2"	55	19	2'-2 1/2"	9'-9 3/4"	4'-11"				
A512	1 SR OF 7	1 SR OF 7	2 SR OF 7	8'- 2" TO 17'- 9"	189	2	3'-1 1/2" TO 7'-11"	2'-2"	3'-1 1/2" TO 7'-11"				1'-7 1/4"
A513	72	72	144	12'- 0"	1802	2	4'-6"	3'-3"	4'-6"				
A514	36	36	72	8'- 0"	601	2	2'-8"	2'-11"	2'-8"				
A601	12	12	24	10'- 2"	366	STR							
A801	8	8	16	34'- 2"	1460	STR							
A802	8	8	16	31'- 1"	1327	STR							
A803	24	24	48	30'- 10"	3952	STR							
D801	33	33	66	4'- 4"	764	18	2'-4 1/2"	1'-0"	1'-0"				
SUB-TOTAL					16405								

MARK	NUMBER FWD	NUMBER REAR	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
APPROACH SLABS													
AS501	130	130	260	27'- 0"	7320	STR							
AS502	32	32	64	29'- 6"	1966	STR							
AS1001	89	89	178	30'- 3"	23170	16	29'-6"						
SUB-TOTAL					32456								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS											
R501	16	29'- 7"	494	STR							
R502	128	28'- 5"	3794	STR							
R503	90	29'- 0"	2722	STR							
R504	379	7'- 10"	3096	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
R505	16	10'- 0"	167	STR							
R506	8	5'- 5"	45	25	1'-8"	2'-5"	1'-5"	0'-1 1/2"	0'-5"		
R507	8	5'- 6"	46	STR							
R601	461	6'- 2"	4270	1	1'-1"	5'-3"					
R602	461	6'- 4"	4385	11	1'-0"	5'-3"	1'-1"				
R603	15	29'- 8"	668	STR							
R604	379	2'- 8"	1518	1	1'-1"	1'-9"					
R605	379	3'-8"	2087	28	1'-8"	1'-1"					
R606	4 SR OF 11	4'- 3" TO 5'- 0"	306	1	1'-1"	3'-4" TO 4'-1"					0'-1"
R607	20	4'- 3"	128	1	1'-1"	3'-4"					
SUB-TOTAL			23726								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER DIAPHRAGMS											
D401	15	12'- 3"	123	24	0'-5 1/2"	5'-10"				0'-2 1/4"	
D402	15	4'-10"	48	12A	1'-11 1/2"	0'-6 1/4"	0'-8 1/2"	0'-8 1/2"			
D403		NOT USED									
D404	15	15'- 10"	159	6	2'-8"	6'-0"	0'-8"				
D601	72	9'- 7"	1036	STR							
D802	96	11'- 2"	2862	13	3'-3 3/4"	0'-8"	0'-8"	6'-11 1/2"			
SUB-TOTAL			4228								

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. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STR" IN THE "TYPE" COLUMN INDICATES STRAIGHT BARS.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. SEE SHEET 25/32 FOR BENDING DIAGRAMS.



DESIGN AGENCY
HDR ENGINEERING, INC.
8987 CARVER ROAD SUITE 200
CINCINNATI, OHIO 45242
513-984-7500

DESIGNED EJM/JSW | DRAWN JSW | REVIEWED JMY | DATE 06/24/11
CHECKED DAT | REVISED | STRUCTURE FILE NUMBER 7306482

REINFORCING STEEL LIST - LEFT BRIDGE

BRIDGE NO. SCI-823-0917 L
S.R. 823 OVER PORTSMOUTH-MINFORD (S.R. 139)

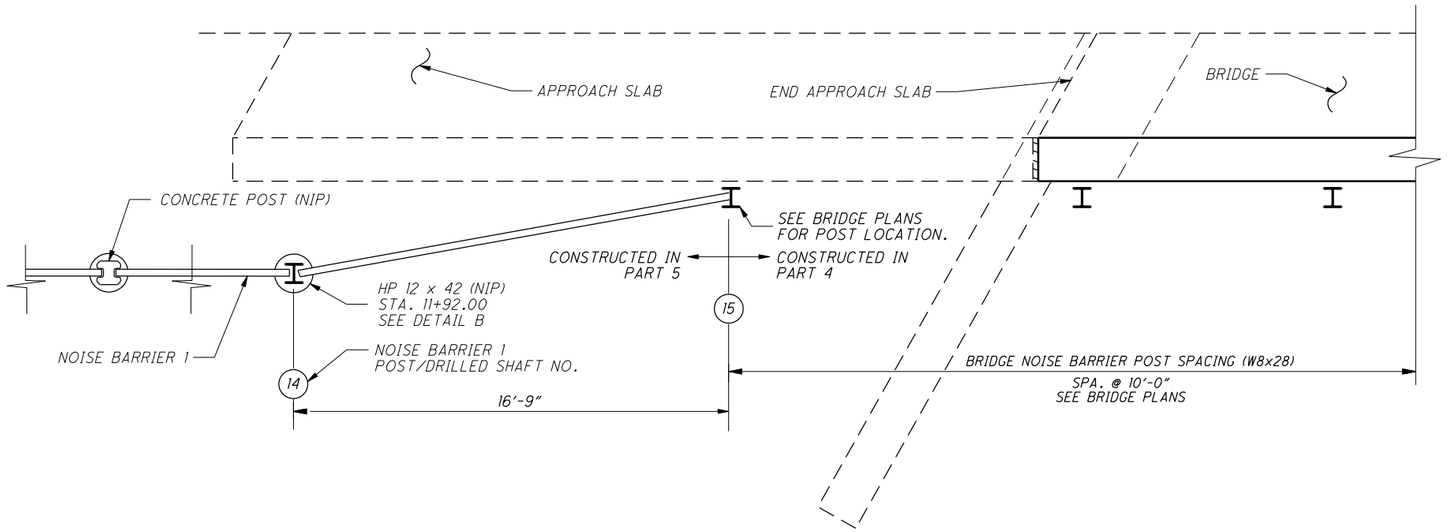
SCI-823-0917
PID No. 19415

32/32

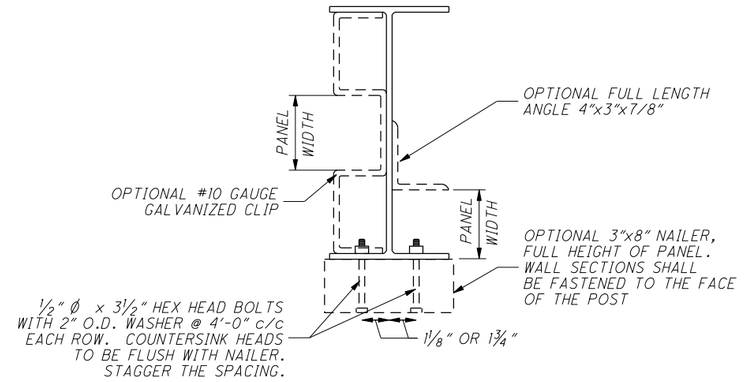
42
44

USER: cmahlbri PLOT DATE: 5/28/2013 5:37:30 PM REVISION DATE: 5/28/2013
FILE: .../ /0000000000045878 /823_0917LRL02.dgn MODEL: SHEET

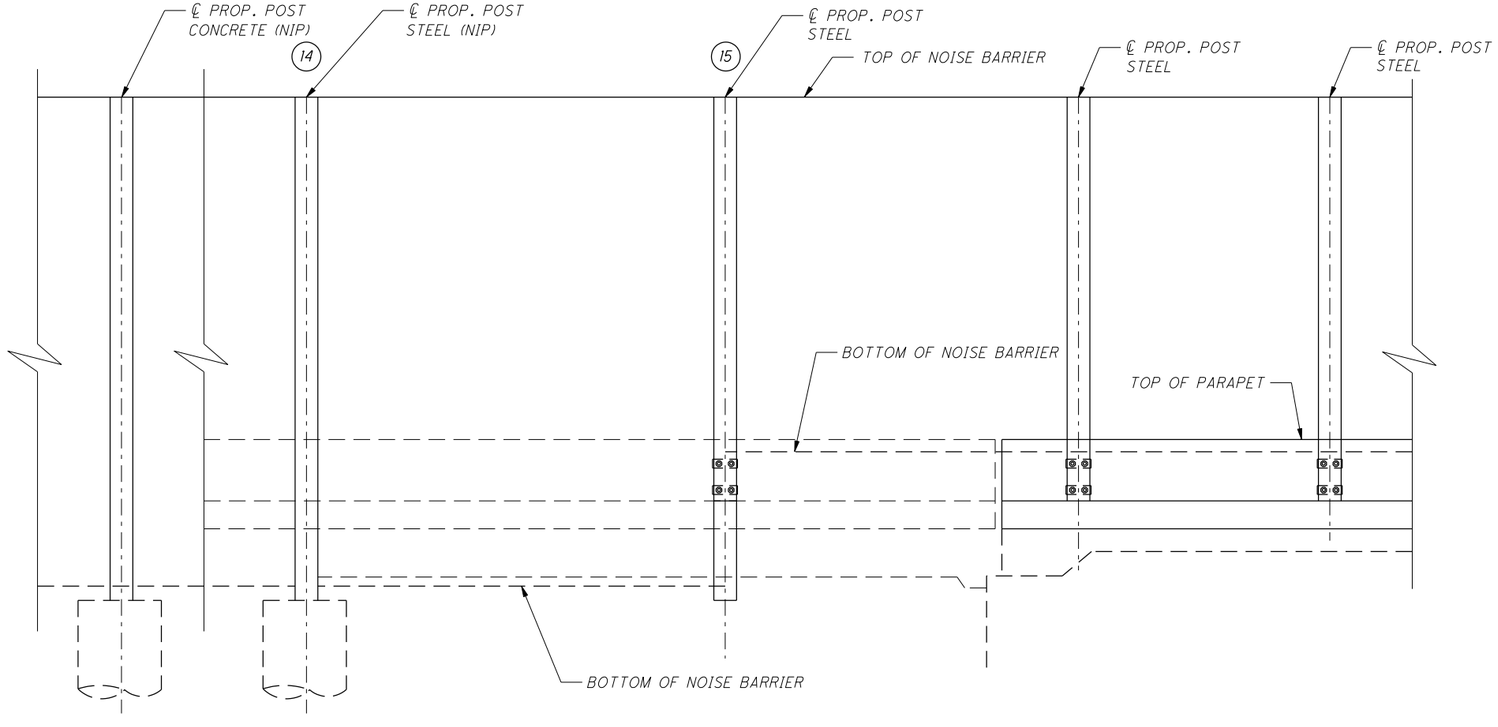
NOTE:
EXCLUDING NOISE BARRIER 1 POST NO. 15, NOISE BARRIER 1 WILL BE INSTALLED IN OTHER PART (NIP).



PLAN



DETAIL B
SHOWING CONNECTION OPTIONS FOR STEEL POST



ELEVATION

NOTE:
PANEL FABRICATOR SHALL FABRICATE SPECIAL PANELS TO BE PLACED BETWEEN POST 14 AND 15. THE LENGTH OF THESE PANELS SHALL BE MEASURED IN THE FIELD AND AS DIRECTED BY THE ENGINEER WITH ENOUGH OVERLAP TO COVER ADJACENT PANELS. SLOTTED HOLES SHALL BE PROVIDED OVER POST NO. 15 TO PROVIDE A FREE END FOR ANY MOVEMENTS CAUSED BY BRIDGE EXPANSION OR CONTRACTION. THESE HOLES SHALL BE 1" x 3" IN SIZE AND BOLTS SHALL BE 1/2" DIA. x 1 1/4" BUTTON HEAD WITH NUTS AND WASHER. ALL OTHER PANEL ATTACHMENTS SHALL USE STANDARD DETAILS. PAYMENTS FOR ALL ABOVE MATERIAL AND LABOR SHALL BE INCLUDED WITH ITEM SPECIAL - NOISE BARRIER.

NOISE BARRIER GENERAL NOTES

NOISE BARRIERS SHALL BE SOUND REFLECTIVE.

ALL NOISE BARRIER PANELS, POSTS, CLADDING, AND CAPS SHALL BE PAINTED TO MATCH FEDERAL COLOR NUMBER 16515 (GRAY).

NOISE BARRIER ON THE BRIDGE OVER PORTMOUTH-MINFORD ROAD SHALL BE A LIGHTWEIGHT NOISE BARRIER SYSTEM AS APPROVED BY THE OHIO DEPARTMENT OF TRANSPORTATION AND SHALL BE CONSTRUCTED ON TOP OF THE CONCRETE BRIDGE PARAPET. SEE BRIDGE PLANS FOR DETAILS.

HORIZONTAL SCALE IN FEET
0 10 20 40

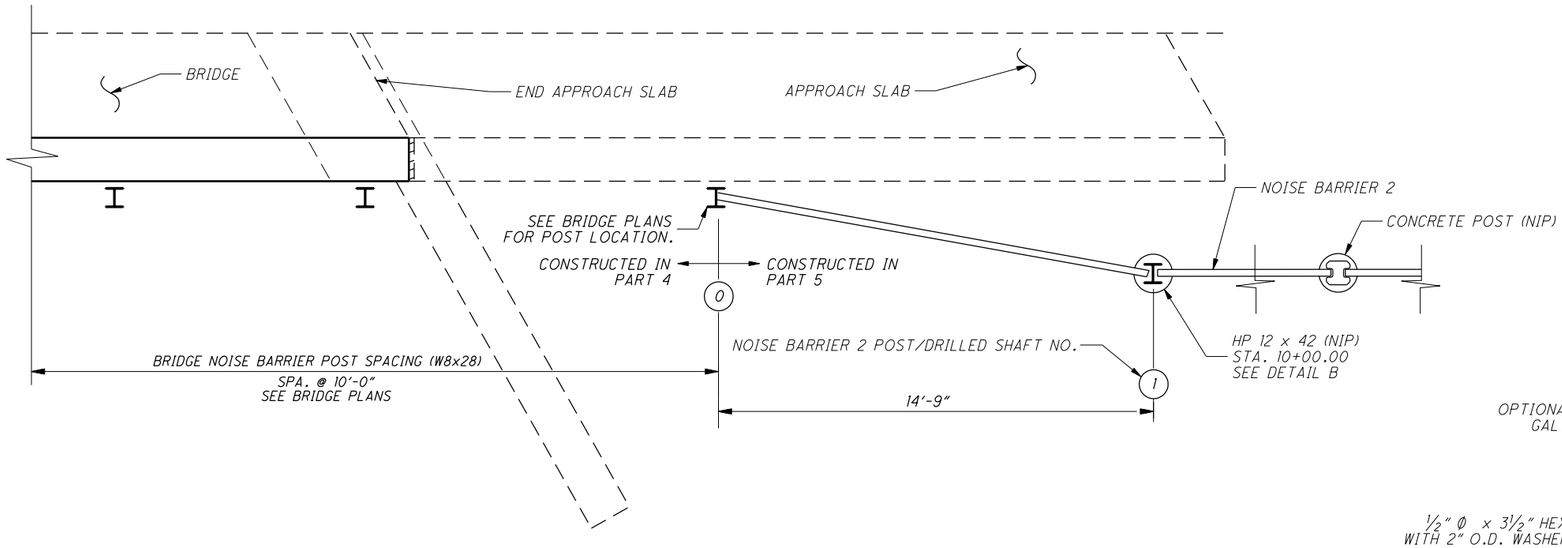
CALCULATED LBD
CHECKED JMB

NOISE BARRIER 1 DETAILS

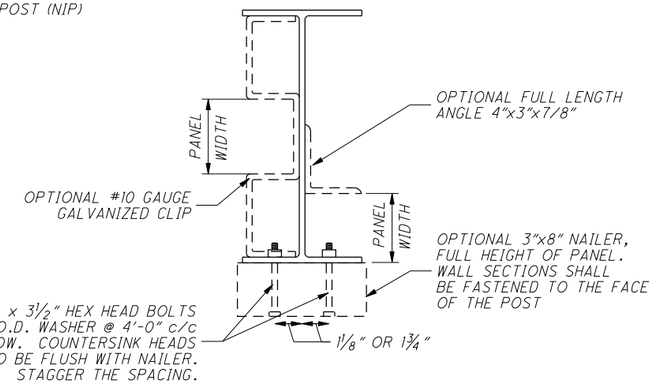
SCI-823-6.81

USER: Cmahbri PLOT DATE: 9/15/2011 7:32:31 AM REVISION DATE: 9/15/2011
FILES: ..\MNDR_CU\BRIDGE\000000045878 79415wd001.dgn MODEL: Sheet

NOTE:
EXCLUDING NOISE BARRIER 2 POST NO. 0, NOISE BARRIER 2 WILL BE INSTALLED IN OTHER PART (NIP).

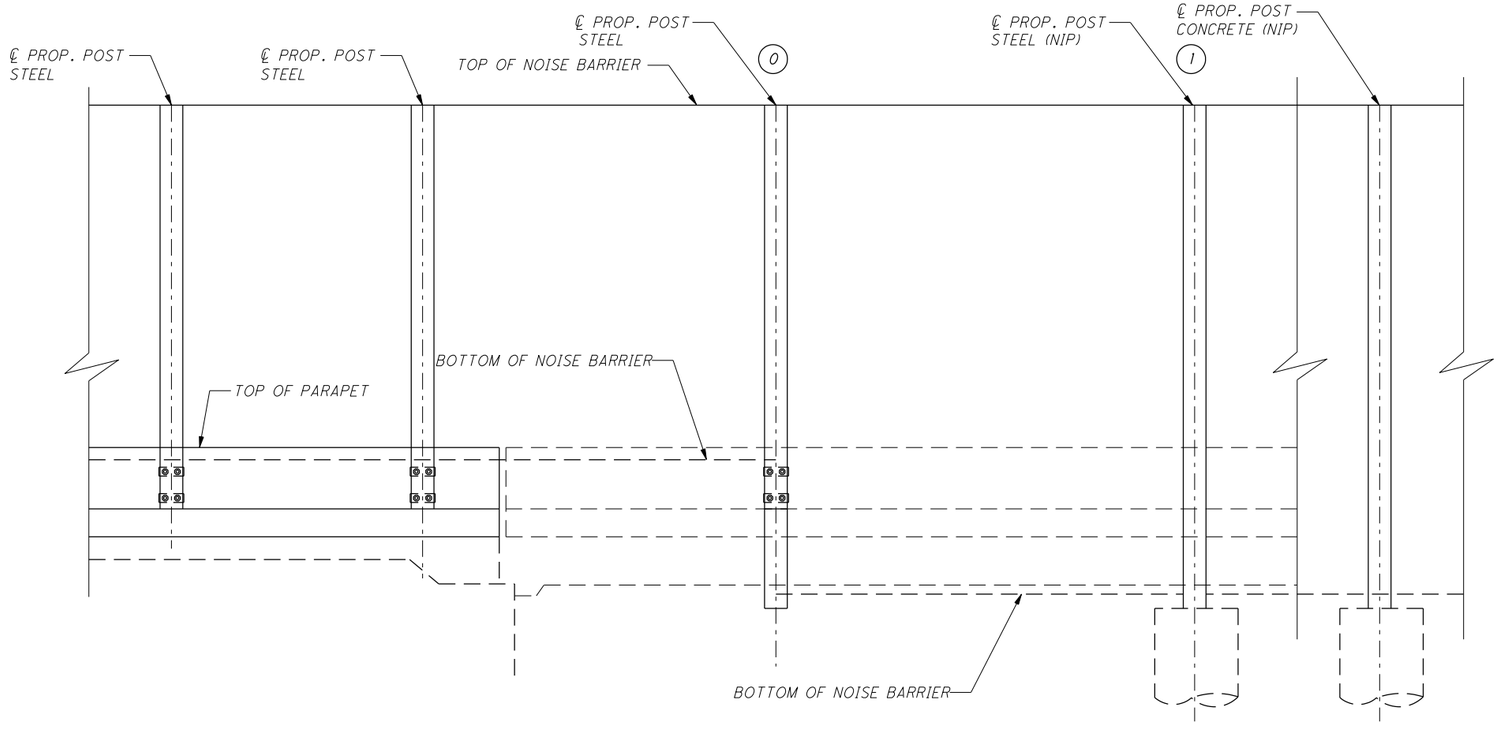


PLAN



DETAIL B

SHOWING CONNECTION OPTIONS FOR STEEL POST



ELEVATION

NOTE:
PANEL FABRICATOR SHALL FABRICATE SPECIAL PANELS TO BE PLACED BETWEEN POST 1 AND 0. THE LENGTH OF THESE PANELS SHALL BE MEASURED IN THE FIELD AND AS DIRECTED BY THE ENGINEER WITH ENOUGH OVERLAP TO COVER ADJACENT PANELS. SLOTTED HOLES SHALL BE PROVIDED OVER POST NO. 0 TO PROVIDE A FREE END FOR ANY MOVEMENTS CAUSED BY BRIDGE EXPANSION OR CONTRACTION. THESE HOLES SHALL BE 1" x 3" IN SIZE AND BOLTS SHALL BE ½" DIA. x 1¼" BUTTON HEAD WITH NUTS AND WASHER. ALL OTHER PANEL ATTACHMENTS SHALL USE STANDARD DETAILS. PAYMENTS FOR ALL ABOVE MATERIAL AND LABOR SHALL BE INCLUDED WITH ITEM SPECIAL - NOISE BARRIER.

NOISE BARRIER GENERAL NOTES

NOISE BARRIERS SHALL BE SOUND REFLECTIVE.

ALL NOISE BARRIER PANELS, POSTS, CLADDING, AND CAPS SHALL BE PAINTED TO MATCH FEDERAL COLOR NUMBER 16515 (GRAY).

NOISE BARRIER ON THE BRIDGE OVER PORTMOUTH-MINFORD ROAD SHALL BE A LIGHTWEIGHT NOISE BARRIER SYSTEM AS APPROVED BY THE OHIO DEPARTMENT OF TRANSPORTATION AND SHALL BE CONSTRUCTED ON TOP OF THE CONCRETE BRIDGE PARAPET. SEE BRIDGE PLANS FOR DETAILS.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LBD
CHECKED JMB

NOISE BARRIER 2 DETAILS

SCI-823-6.81

USER: CMahbri PLOT DATE: 9/15/2011 7:32:35 AM REVISION DATE: 9/15/2011
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