

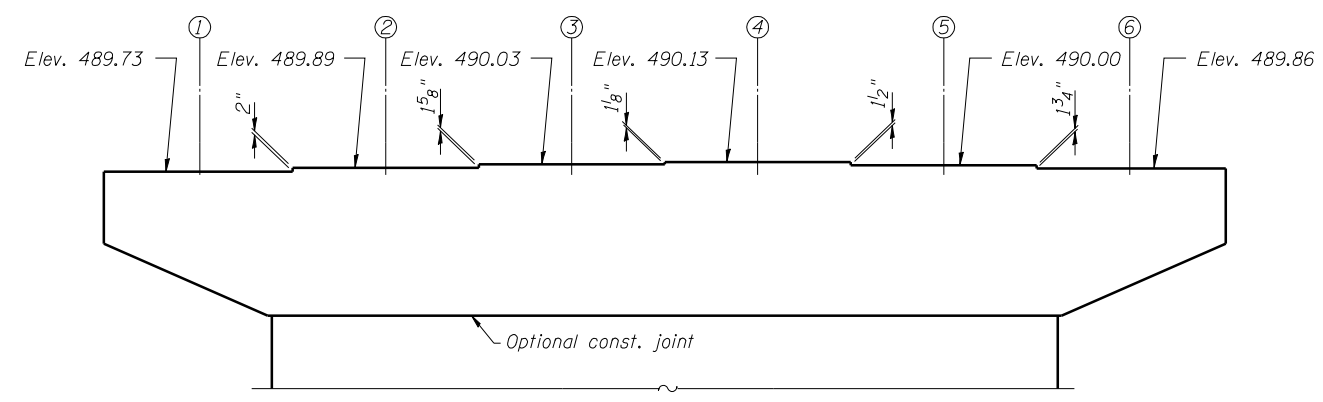
PIER 4

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁₀ (E)	32	#5	26'-9"	—
h ₁₁ (E)	92	#6	30'-6"	—
h ₁₂ (E)	40	#5	11'-3"	—
h ₁₃ (E)	40	#5	11'-2"	—
h ₁₄ (E)	20	#5	30'-0"	—
h ₁₅ (E)	7	#5	7'-5"	—
n ₆ (E)	66	#11	18'-6"	—
n ₇ (E)	66	#10	12'-7"	—
p ₃ (E)	7	#9	49'-5"	—
p ₄ (E)	12	#10	20'-6"	—
p ₅ (E)	10	#7	9'-9"	—
p ₆ (E)	2	#7	33'-2"	—
s ₃ (E)	4	#5	14'-7"	□
s ₄ (E)	4	#5	15'-0"	□
s ₅ (E)	4	#5	15'-5"	□
s ₆ (E)	4	#5	15'-10"	□
s ₇ (E)	4	#5	16'-3"	□
s ₈ (E)	4	#5	16'-9"	□
s ₉ (E)	4	#5	17'-2"	□
s ₁₀ (E)	4	#5	17'-7"	□
s ₁₁ (E)	96	#5	13'-0"	□
s ₁₂ (E)	70	#5	14'-2"	□
s ₁₃ (E)	11	#5	7'-6"	□
s ₁₄ (E)	574	#4	5'-3"	□
t ₃ (E)	136	#10	22'-10"	—
u ₄ (E)	92	#6	11'-2"	—
u ₅ (E)	10	#6	11'-10"	—
u ₆ (E)	32	#5	7'-11"	—
v ₁₀ (E)	66	#10	24'-1"	—
w ₁ (E)	19	#8	49'-4"	—
w ₂ (E)	56	#10	19'-10"	—
w ₃ (E)	21	#10	50'-4"	—

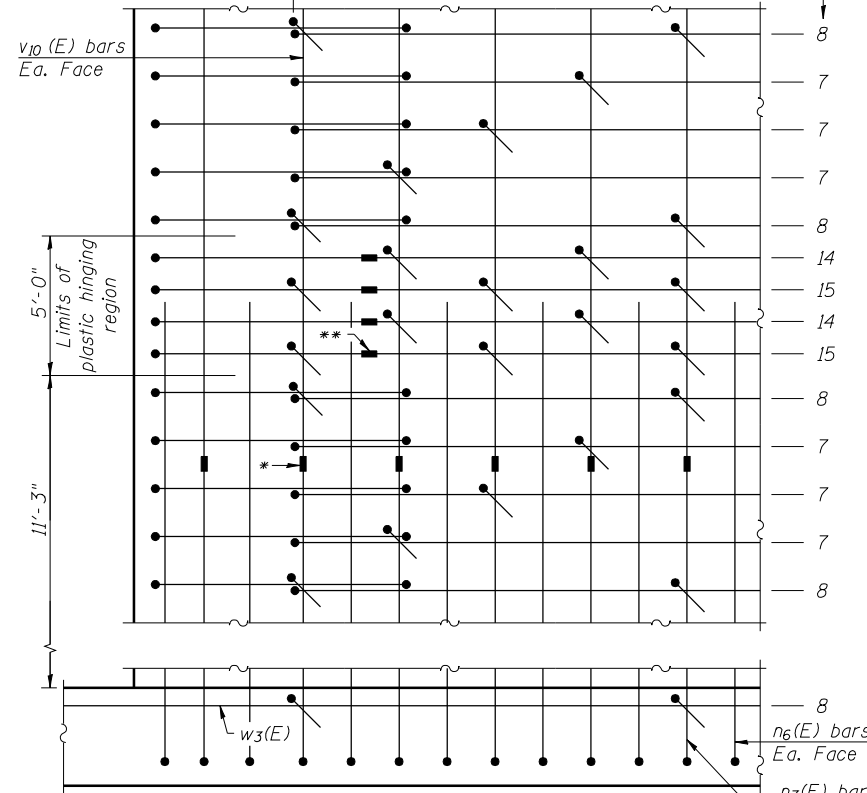
Cofferdam Excavation	Cu. Yd.	1180
Cofferdam (Type 2) (Location - 2)	Each	1
Seal Coat Concrete	Cu. Yd.	141.6
Concrete Structures	Cu. Yd.	332.2
Reinforcement Bars, Epoxy Coated	Pound	58350
Furnishing Steel Piles HP14x89	Foot	2112
Driving Piles	Foot	2112

For cofferdam details, see sheet 105 of 113.

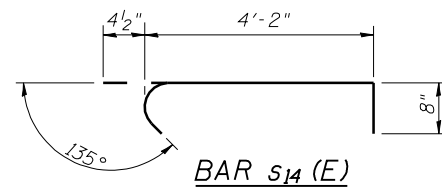
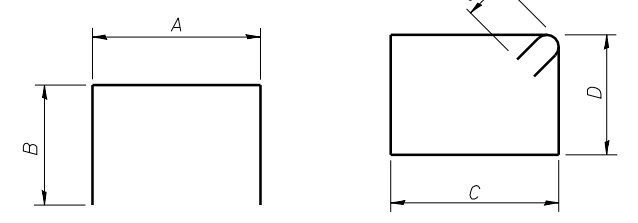
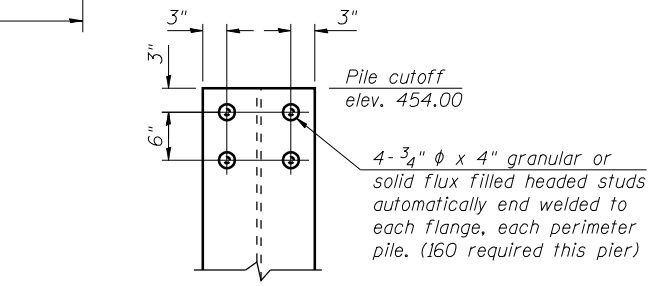
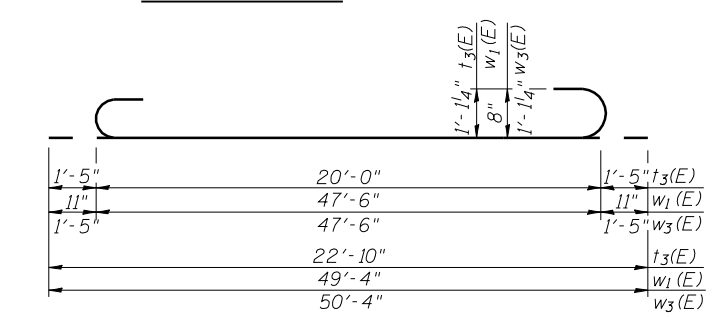
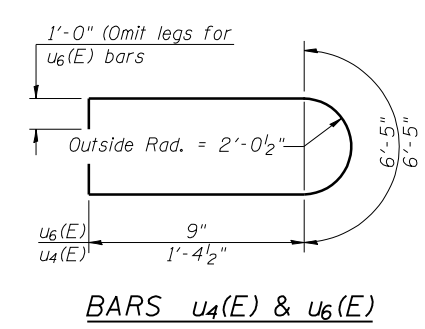
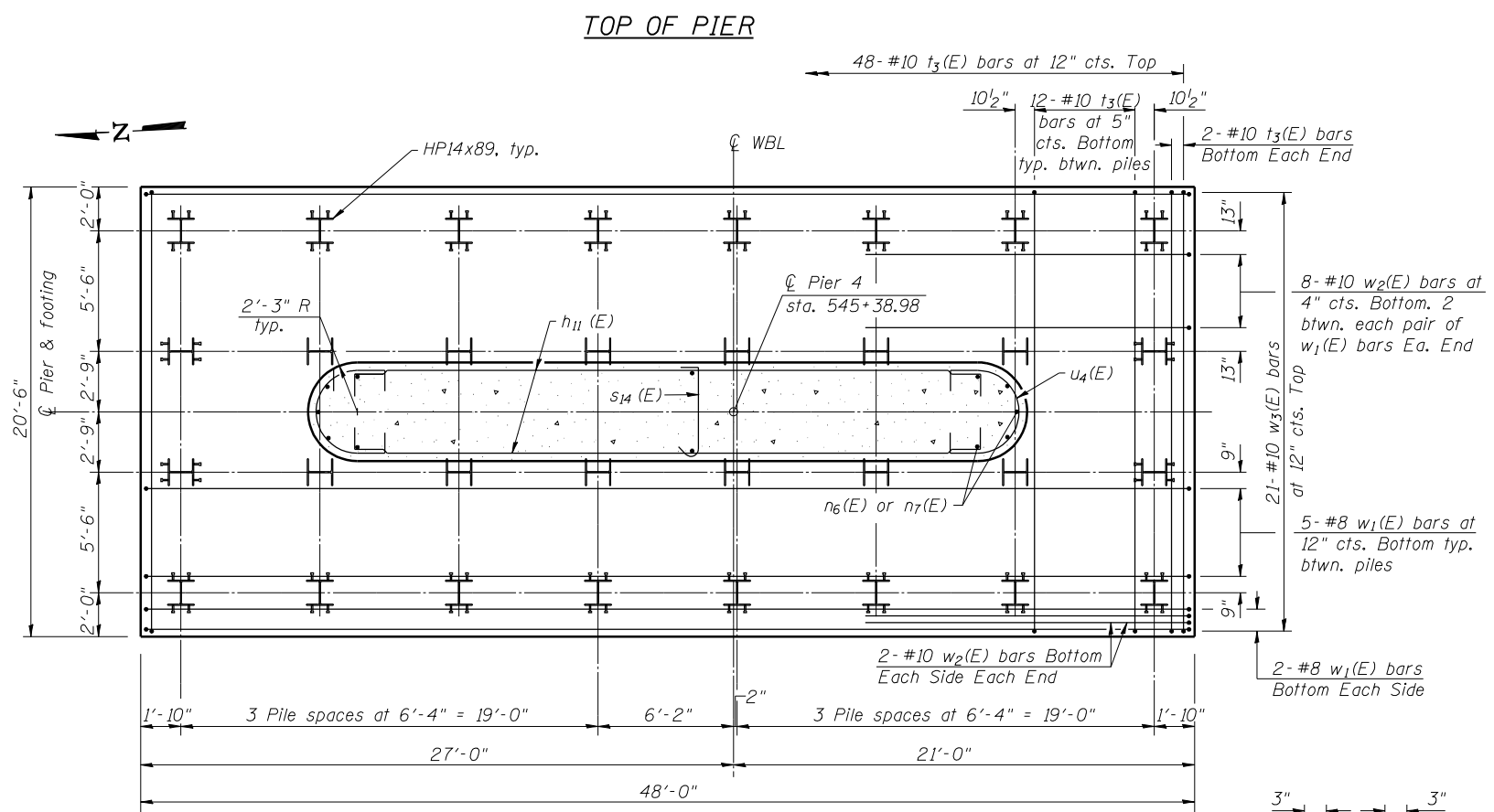


* Mechanical splice on vertical bars.
 ** Mechanical splice or shop welded splice per AWS D1.4 on horizontal bars.

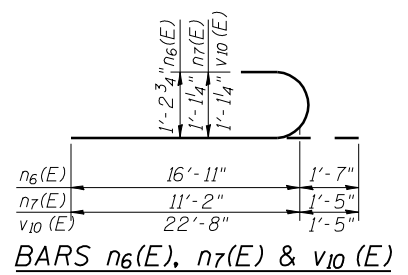
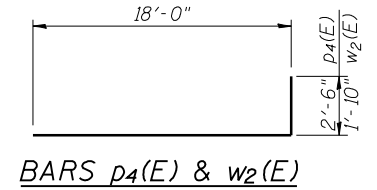
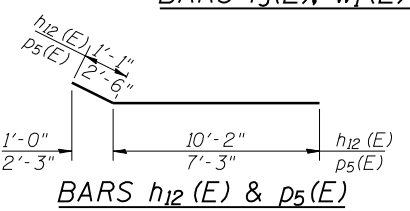
#4 s₁₄(E) bars at 4'-0" cts. max. outside limits of plastic hinging region and top of footing, 2'-0" max. inside limits of plastic hinging region. Stagger as shown full height of pier shaft.



Note:
 Not all lines of horizontal reinforcement bars are shown. Total number of s₁₄(E) bars in Bill of Materials is based on applying the pattern shown to the actual pier dimensions and horizontal reinforcement spacing.



PILE DATA
 Type: HP14x89
 Nominal Required Bearing: 705 kips
 Factored Resistance Available: 388 kips
 Est. Length: 66 feet
 No. Production Piles: 32
 No. Test Piles: 0



Bar	A & B DIMENSIONS		C & D DIMENSIONS	
	A	B	C	D
h ₁₁ (E)	28'-6"	1'-0"	s ₃ (E)	4'-0"
p ₃ (E)	46'-3"	1'-7"	s ₄ (E)	4'-0"
s ₁₁ (E)	4'-0"	4'-6"	s ₅ (E)	4'-0"
s ₁₂ (E)	5'-2"	4'-6"	s ₆ (E)	4'-0"
s ₁₃ (E)	5'-2"	1'-2"	s ₇ (E)	4'-0"
u ₅ (E)	5'-0"	3'-5"	s ₈ (E)	4'-0"
n ₆ (E)	16'-11"	1'-7"	s ₉ (E)	4'-0"
n ₇ (E)	11'-2"	1'-5"	s ₁₀ (E)	4'-0"
v ₁₀ (E)	22'-8"	1'-5"		



USER NAME = has	DESIGNED - RDP	08/13	REVISED -
ESCA PROJECT NO. 1070.09	CHECKED - MTD	08/13	REVISED -
	DRAWN - DWH	08/13	REVISED -
PLOT DATE = 1/28/2014	CHECKED - ELH	01/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4 - WB
STRUCTURE NO. 026-0106

SHEET NO. 92 OF 113 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(26-3B-1, 3B-1(3))BR	FAYETTE	277	172

CONTRACT NO. 74175
 ILLINOIS FED. AID PROJECT AID