Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 21 of 24.

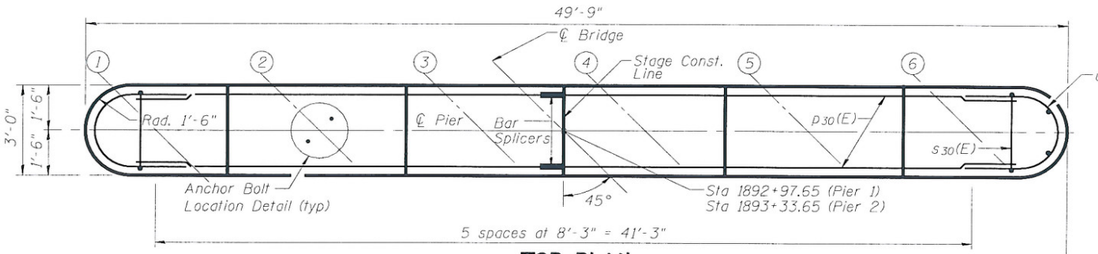
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 PILE DATA

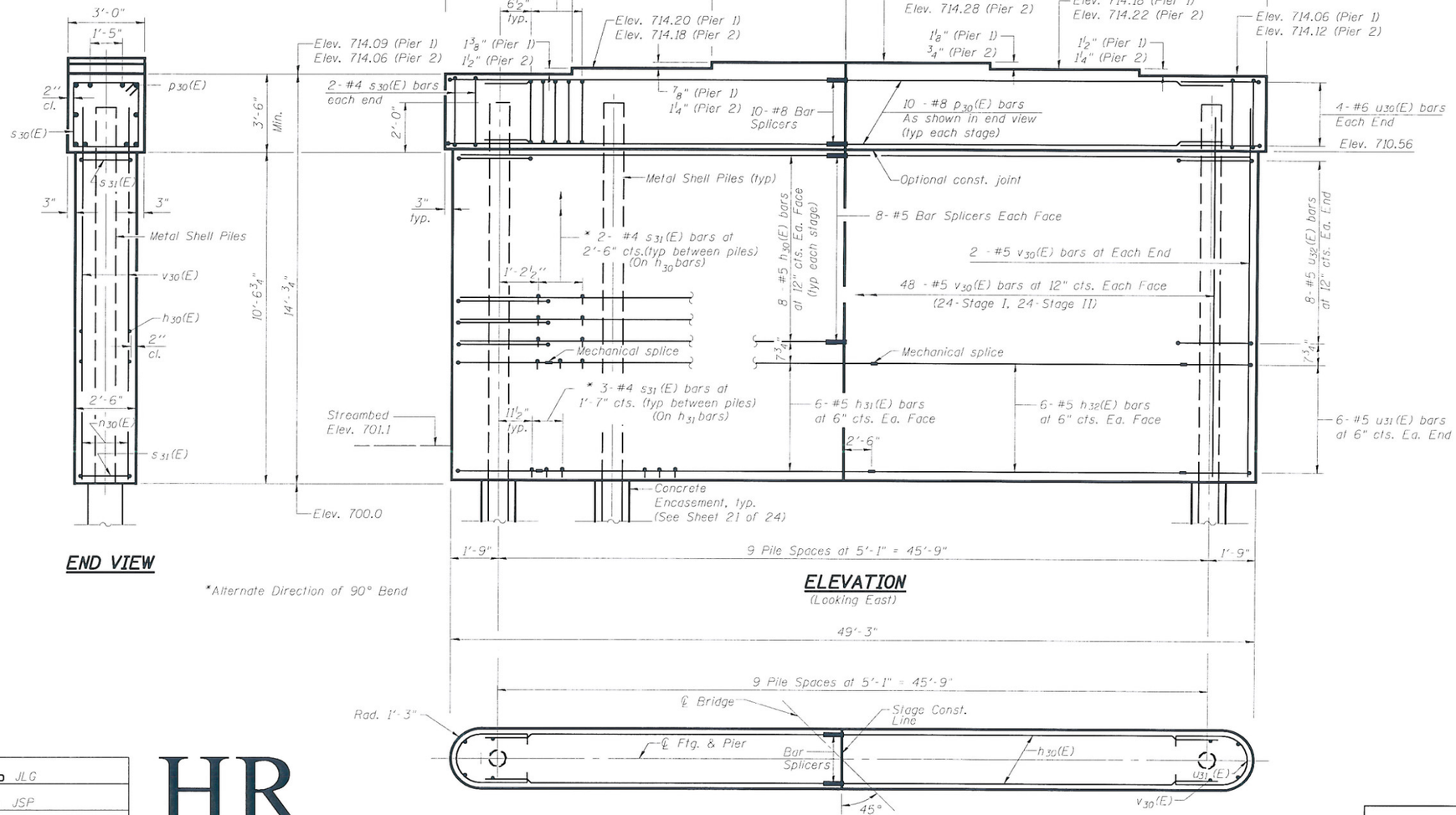
Type: 14" x 0.312"
Nominal Required Bearing: 509 kips
Factored Resistance Available: 250 kips
Est. Length: 24'
No. Production Piles: 9
No. Test Piles: 1

PIER 2 PILE DATA

Type: 14" x 0.312"
Nominal Required Bearing: 420 kips
Factored Resistance Available: 183 kips
Est. Length: 24'
No. Production Piles: 9
No. Test Piles: 1



TOP PLAN



END VIEW

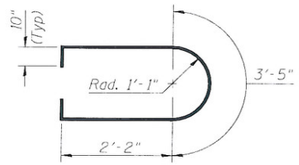
*Alternate Direction of 90° Bend

ELEVATION
(Looking East)

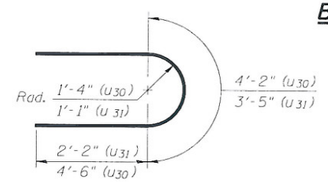
FOOTING PLAN

ANCHOR BOLT LOCATION DETAIL

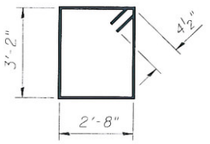
BARS $s_{31}(E)$



BARS $u_{32}(E)$



BARS $u_{30}(E)$ & $u_{31}(E)$



BAR $s_{30}(E)$

BILL OF MATERIAL
(Two Piers)

Bar	No.	Size	Length	Shape
$h_{30}(E)$	64	#5	23'-2"	—
$h_{31}(E)$	24	#5	23'-8"	—
$h_{32}(E)$	24	#5	18'-8"	—
$p_{30}(E)$	40	#8	23'-2"	—
$s_{30}(E)$	98	#4	12'-5"	⊓
$s_{31}(E)$	576	#4	3'-2"	⊓
$u_{30}(E)$	16	#6	13'-2"	⊔⊔
$u_{31}(E)$	24	#5	7'-9"	⊔⊔
$u_{32}(E)$	32	#5	9'-5"	⊔⊔
$v_{30}(E)$	200	#5	12'-6"	—

Structure Excavation	Cu. Yd.	26
Concrete Structures	Cu. Yd.	135.8
Concrete Encasement	Cu. Yd.	10.9
Reinforcement Bars, Epoxy Coated	Pound	10,560
Furnishing Metal Shell Piles 14" x 0.312"	Foot	432
Driving Piles	Foot	432
Test Pile Metal Shells	Each	2
Mechanical Splicers	Each	12
Pile Shoes	Each	18

Notes: Bill of Material is for two Piers.
Underwater Structure Protection to be provided at each Pier.

PIERS
STRUCTURE NO. 010-0283

DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	JLG

HR
HURST-ROSCHE ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER 184-000296

SHEET NO. 20	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24 SHEETS	709	(105BR)BR	CHAMPAIGN	55	32
	SN 010-0283		CONTRACT NO. 70427		
	FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

D-95-013-97

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