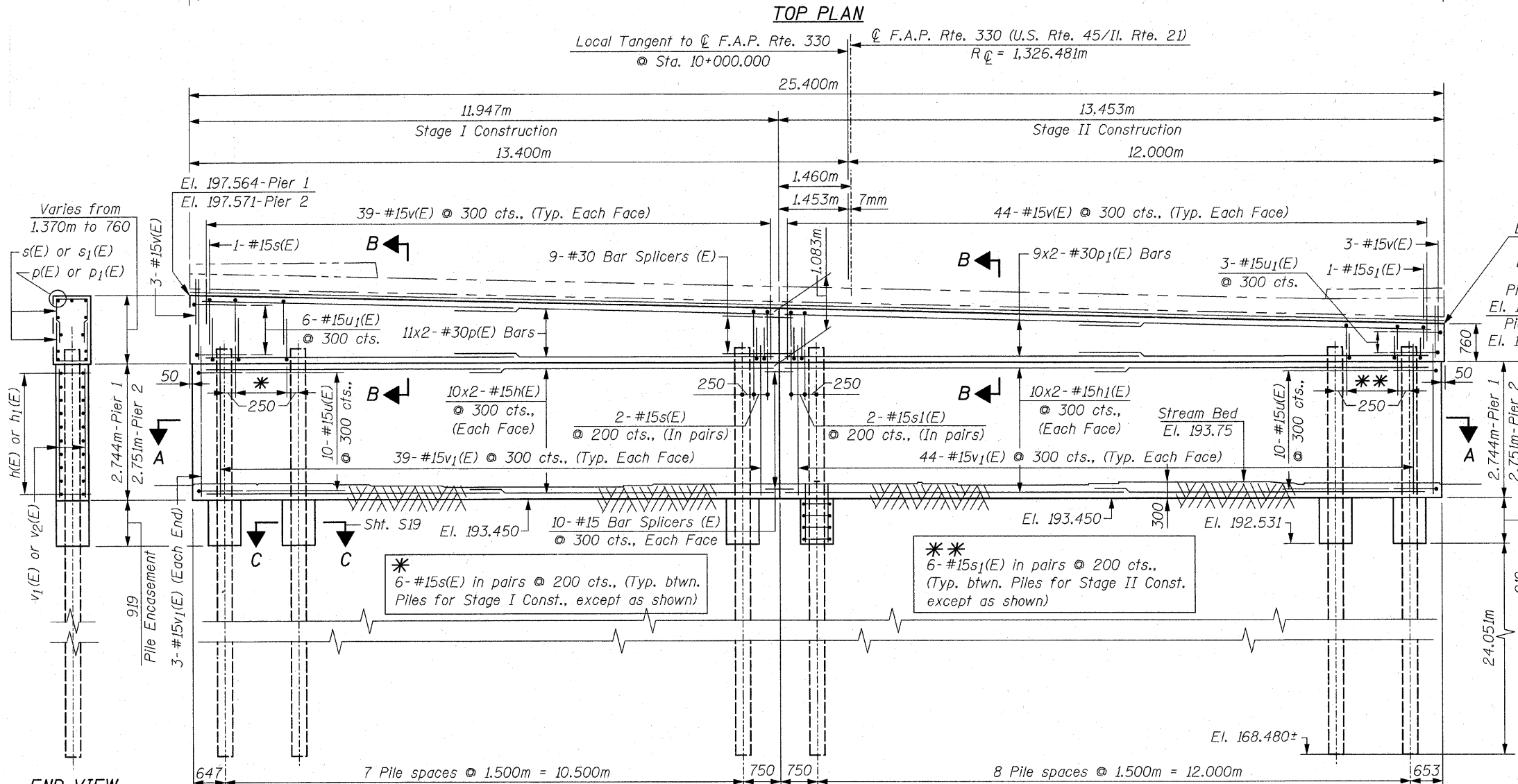
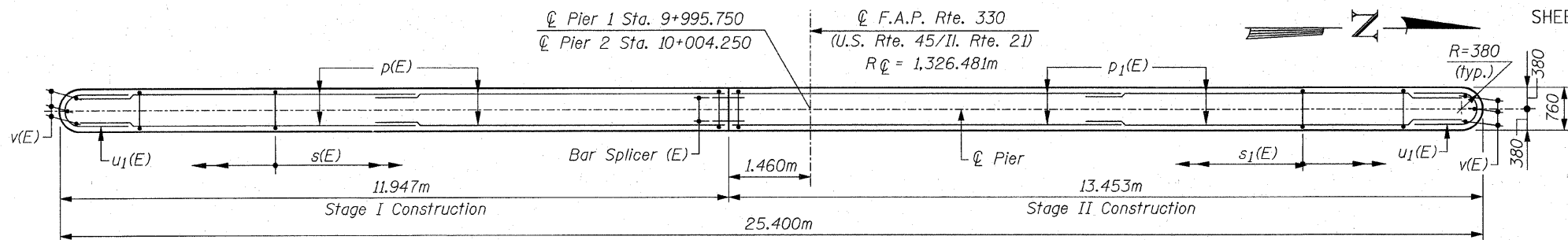


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	1Y-B-R-1	LAKE	121	63
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

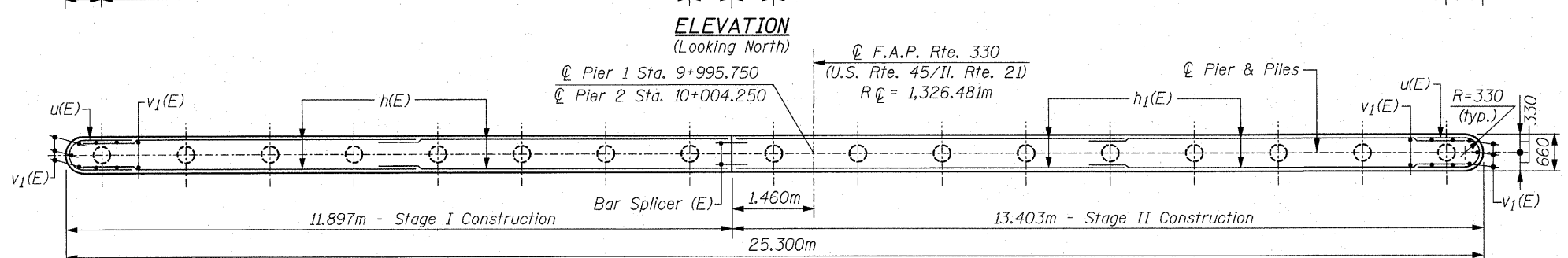
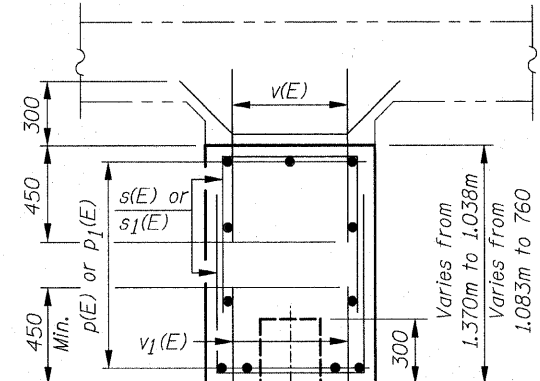
CONTRACT NO. 62032
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h(E)	40	#15	6.08	—
h ₁ (E)	40	#15	6.83	—
p(E)	22	#30	6.68	—
p ₁ (E)	18	#30	7.44	—
s(E)	90	#15	2.57	U
s ₁ (E)	102	#15	1.98	U
u(E)	20	#15	2.68	U
u ₁ (E)	9	#15	2.84	U
v(E)	172	#15	0.75	—
v ₁ (E)	172	#15	3.15	—

		Pier 1	Pier 2
Concrete Structures	Cu. m	66.0	66.2
Reinforcement Bars, Epoxy Coated	kg	4,210	4,210
Furnishing Metal Shell Piles, 305mmx4.55m	m	448	448
Driving Piles	m	448	448
Test Pile Metal Shell	Each	1	1
Structure Excavation	Cu. m	22.0	22.0
Concrete Encasement	Cu. m	7.0	7.0
Underwater Structure Excavation Protection-Location 1	Each	1	-
Underwater Structure Excavation Protection-Location 2	Each	-	1
Bar Splicers	Each	29	29



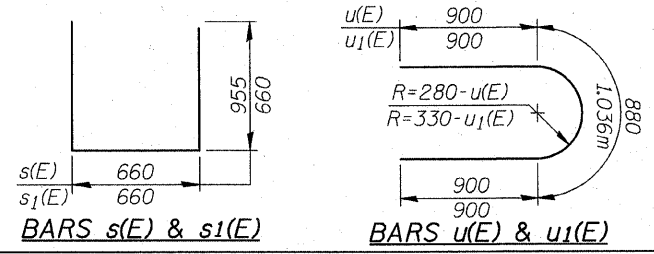
END VIEW



PILE DATA-EACH PIER
 Type & Size: Metal Shell - 305mm Dia.x4.55mm Walls
 Nominal Required Bearing: 1,684kN
 Allowable Resistance Available: 380kN
 Est. Length: 28,000m
 Number of Production Piles: 16
 Number of Test Piles: 1

NOTE:
 All dimensions are in millimeters (mm) except as noted

MIN. BAR LAP
 #15 Bars = 640
 #30 Bars = 1,850m



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PIERS 1 & 2
 U.S. RTE. 45 / IL. RTE. 21
 OVER
 APTAKISIC CREEK
 F.A.P. RTE. 330 SECTION: 1Y-B-R-1
 LAKE COUNTY STATION 10+000.000
 STRUCTURE NO. 049-0194
 SCALE: NONE DRAWN BY: D.L./F.M.
 DATE: OCTOBER 16, 2007 CHECKED BY: B.N.S.
CHRISTIAN-ROGE & ASSOC., INC.
 CHICAGO ILLINOIS