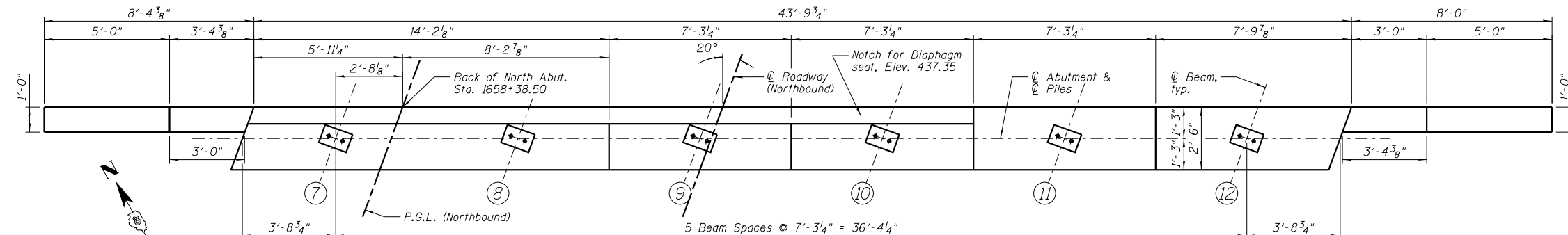
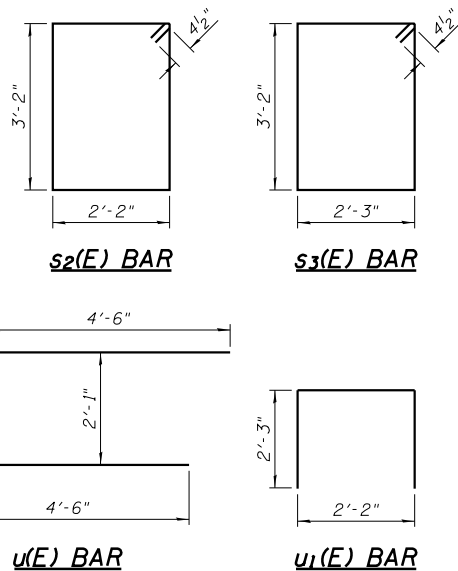


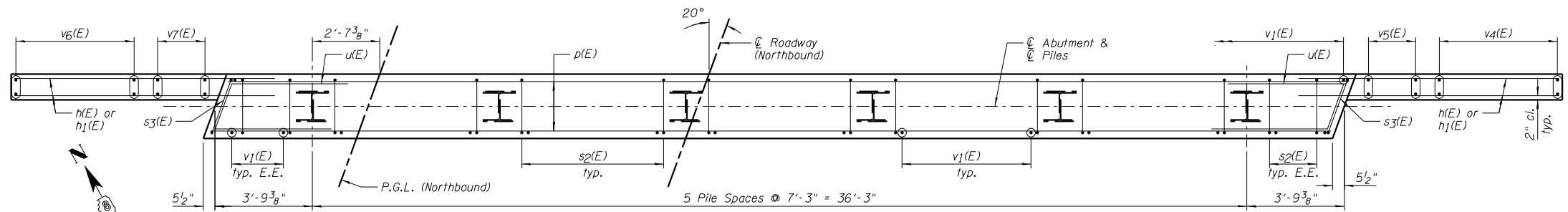
**NORTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n(E)	20	#5	10'-2"	—
h1(E)	20	#5	10'-8"	—
p(E)	10	#7	43'-6"	—
p2(E)	3	#7	28'-4"	—
s2(E)	41	#4	11'-5"	□
s3(E)	2	#4	11'-7"	□
u(E)	8	#6	11'-3"	┘
u1(E)	32	#4	6'-8"	□
v1(E)	78	#5	4'-4"	—
v4(E)	6	#5	10'-10"	—
v5(E)	6	#5	6'-4"	—
v6(E)	6	#5	11'-8"	—
v7(E)	6	#5	6'-8"	—

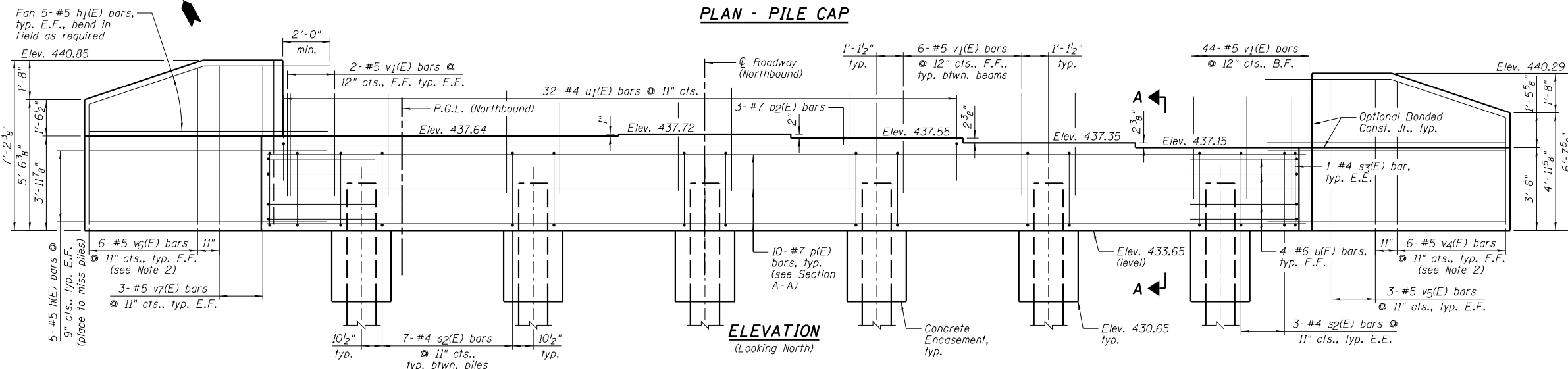
Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	63
Structure Excavation	Cu. Yd.	82
Concrete Structures	Cu. Yd.	19.3
Concrete Encasement	Cu. Yd.	3.3
Reinforcement Bars, Epoxy Coated	Pound	2,680
Furnishing Steel Piles HPI4x117	Foot	495
Driving Piles	Foot	495
Test Pile Steel HPI4x117	Each	1
Geocomposite Wall Drain	Sq. Yd.	35
Pipe Underdrains for Structures 4"	Foot	98



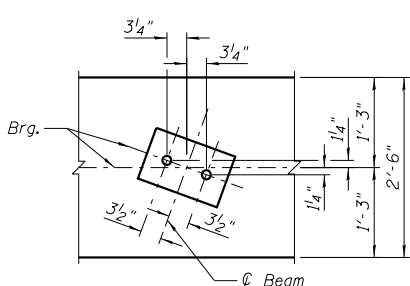
TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



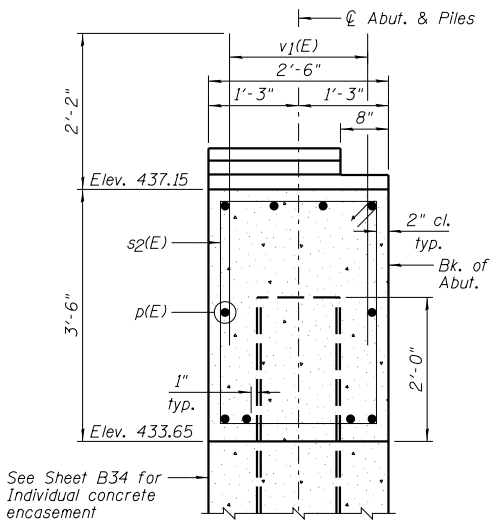
PLAN - PILE CAP



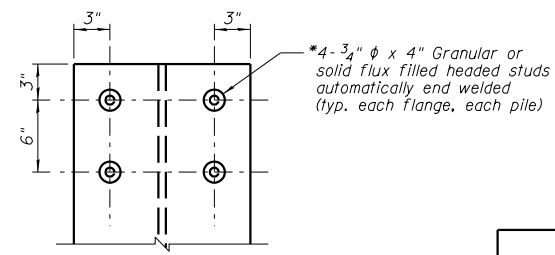
**ELEVATION
(Looking North)**



**TYPICAL ANCHOR BOLT
PLACEMENT DETAIL**



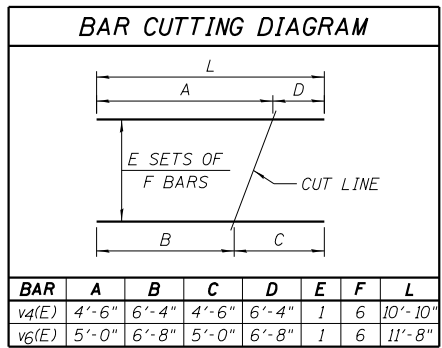
SECTION A-A



SEISMIC PILE DETAIL
*Typical each flange, each pile.
Cost included with Furnishing Piles.

PILE DATA:

Pile Type and Size	Steel - HPI4x117
Nominal Required Bearing	386 kips
Factored Resistance Available	212 kips
Estimated Pile Length	99 Feet
Number of Production Piles	5
Number of Test Piles	1



NOTES:

- 1.) Pour steps monolithically with cap.
- 2.) Order v4(E) and v6(E) bars full length. Cut according to Bar Cutting Diagram. Use remainder of bars in opposite face of wingwall.
- 3.) Bend or cut h(E) bars to miss piles.
- 4.) E.E. denotes Each End, F.F. denotes Front Face, B.F. denotes Back Face and E.F. denotes Each Face.