Bench Mark: Standard tablet "3 REI 1944", Elev. 537.51

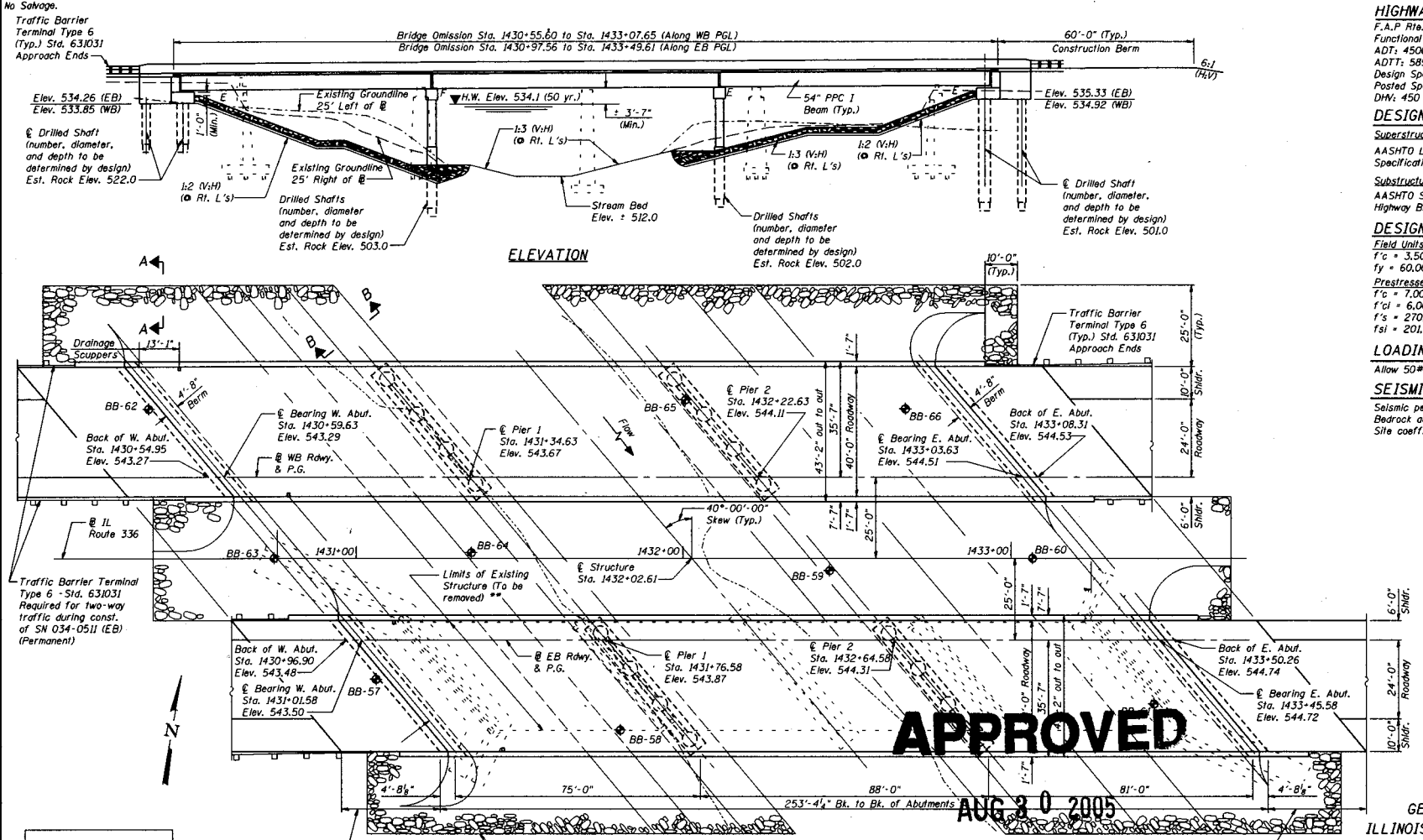
Existing Structure: S.N. 034-0005, originally built in 1924 as SBI Rte 9, Sec 24. In 1974, the superstructure and parts of the substructure were replaced and one new pier was constructed as SBI Rte. 9, Sec 24BR. The existing structure is a four span (55'-51'-51'-55') precast deck-beam bridge with a 33'-0" out to out deck. The existing structure is to be removed and replaced as S.N. 034-0511. Traffic will be diverted to the proposed West Bound IL 336 S.N. 034-0512 during construction.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	34-6, 55-1	HANCOCK		2

SHEET NO. 1
2 SHEETS



** Existing Pier 1 will be removed completely. All other substructure units will be removed to a minimum of 1' below final grade.

HIGHWAY CLASSIFICATION

F.A.P Rte. 315 - IL Rte. 336
Functional Class: Principal Arterial
ADT: 4500 (2028)
ADTT: 585 (2028)
Design Speed: 70 mph
Posted Speed: 65 mph
DHV: 450 (2028)

DESIGN SPECIFICATIONS

Superstructure

AASHTO LRFD Bridge Design Specifications, US, 3rd Edition, 2004

Substructure

AASHTO Standard Specifications for Highway Bridges Seventeenth Edition, 2002

DESIGN STRESSES

Field Units
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

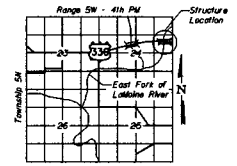
Prestressed Girders
f'c = 7,000 psi
f'ci = 6,000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
fsi = 201,960 psi (1/2" ϕ low lax. strands)

LOADING HL-93

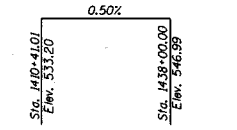
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic performance category (S.P.C.) = A
Bedrock acceleration coefficient (A) = 0.04g
Site coefficient (S) = 1.0



LOCATION SKETCH



PROFILE GRADE
Along ℄ Roadway

APPROVED
AUG 30 2005
AS A BASIS FOR PREPARATION OF DETAILED PLANS

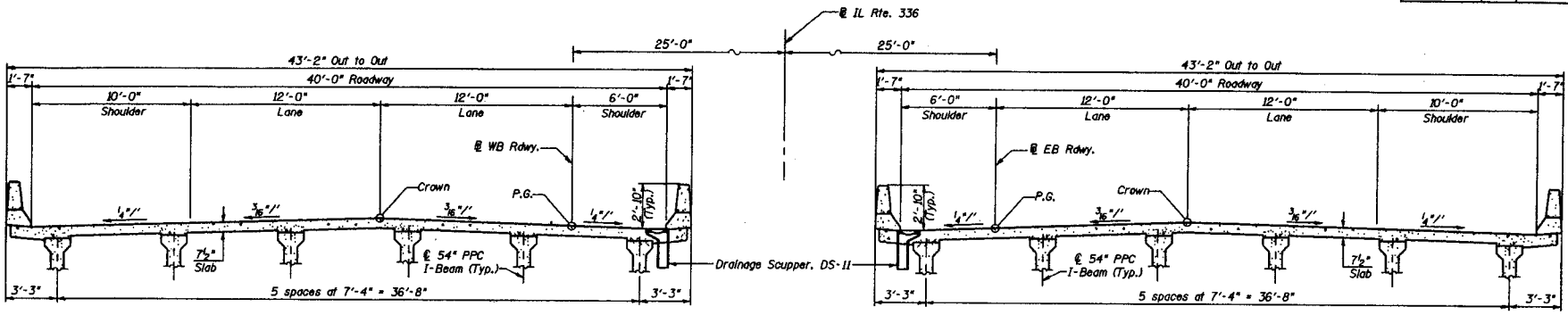
DESIGNED	SCC
CHECKED	MAB
DRAWN	SCC
CHECKED	MAB

GENERAL PLAN
ILLINOIS ROUTE 336 OVER
EAST FORK OF THE LAMOINE RIVER
F.A.P. ROUTE 315 - SECTION 34-6, 55-1
HANCOCK COUNTY; STA. 1432+02.61
STRUCTURE NO. 034-0511 (E.B.)
STRUCTURE NO. 034-0512 (W.B.)

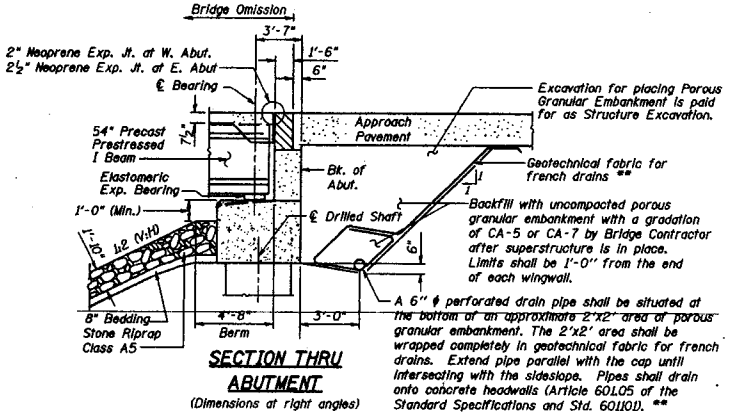
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 315	34-6, 55-1	HANCOCK		

SHEET NO. 2
2 SHEETS

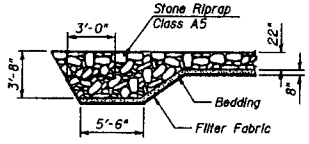


CROSS SECTION
(Looking East)

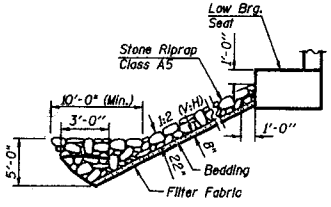


SECTION THRU ABUTMENT
(Dimensions at right angles)

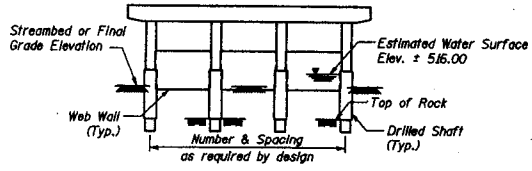
** Included in the cost of Porous Granular Embankment.



SECTION A-A



SECTION B-B



PIER SKETCH

WATERWAY INFORMATION

Drainage Area = 219.4 sq. mi. Low Grade Elev. 535.48 @ Sta. 1438+66.20

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	11,200	1582	2031	534.1	0.4	0.3	534.5	534.4
Base	100	12,800	1685	2146	534.8	0.5	0.4	535.3	535.2
Overtopping	160	13,500	1729	-	535.1	0.5	-	535.6	-
Max. Calc.	500	16,700	-	2354	536.3	-	1.3	-	537.6

DOWNDRAG FORCES

Westbound Structure		Eastbound Structure	
Location	Force (Ton)	Location	Force (Ton)
West Abutment	0	West Abutment	0
Pier 1	8	Pier 1	10
Pier 2	15	Pier 2	15
East Abutment	20	East Abutment	20

Downdrag forces shall be considered in the substructure design due to possible extensive settlement. A waiting period will not be considered.

DESIGNED	SCC
CHECKED	MAB
DRAWN	SCC
CHECKED	MAB

GENERAL PLAN
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EAST FORK OF THE LAMOINE RIVER
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