Bench Mark: Chiseled square on the S.W. wingwall on the W.B. Structure over the Embarras River. Elevation = 548.30.

Existing Structure: S.N. 018-0049 (Westbound) and 018-0050 (Eastbound) built in 1969 as F.A.I. Rt. 70 Section 18-47B at Station 158+31.00. The superstructure consists of two continuous steel beam units four spans each with a reinforced concrete deck slab. All substructure units are supported on steel H-piling with the exception of piers 3, 4, and 5 which are founded on rock. The substructure consists of open abutments with concrete slopewalls, and solid wall piers. The structure length measures 670'-0" bk-to-bk of abutments and 36'-0" out-to-out of deck with no skew. Spans 1, 4, 5, & 8 are 72'-8" and spans 2, 3, 6, and 7 are 93'-2".

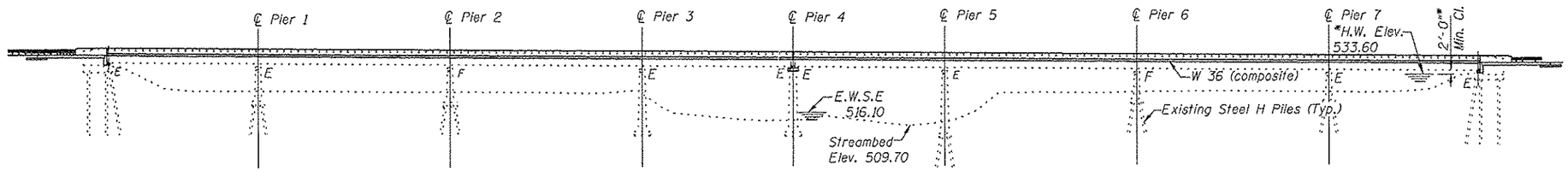
Traffic to be maintained using staged detours.

No Salvage

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
	536.84	520.48	519.66	505.30	504.84	503.98	520.16	519.30	530.94

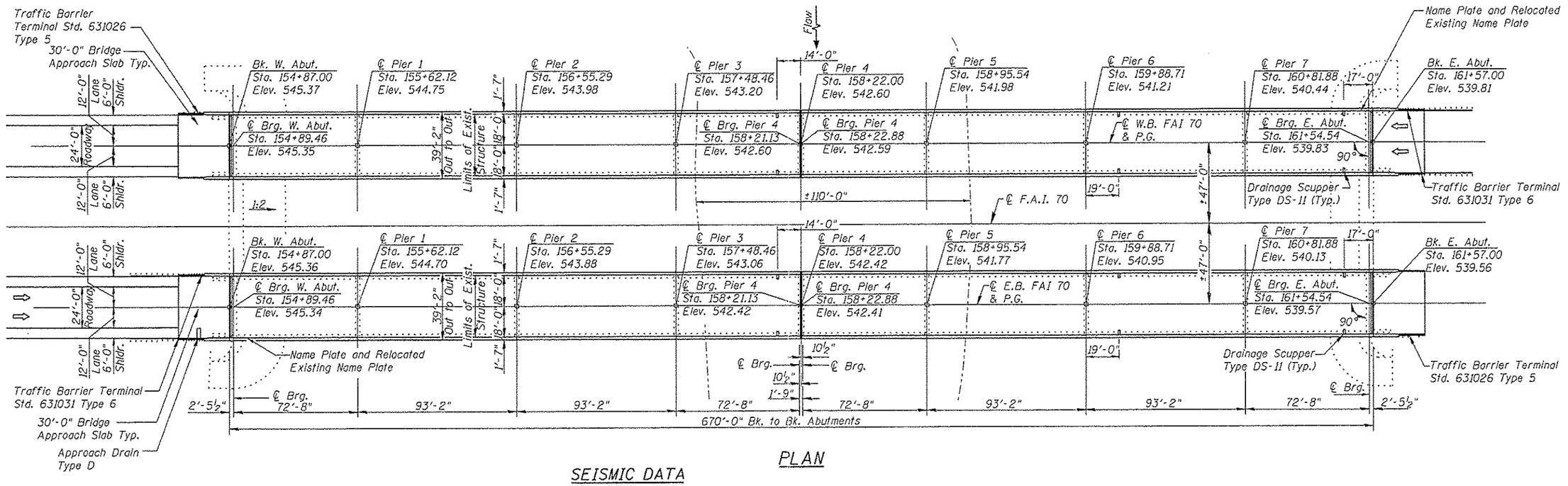
Scour Elevations provided are the bottom of abutment and pier elevations from the existing bridge plans.



ELEVATION

*High Water Elevation from existing bridge plans.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures



PLAN

SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock acceleration coefficient (A) = 0.067
Site Coefficient (S) = 1.0

LOADING HS20-44 & ALT.

Allow 25#/sq. ft. for future wearing surface.

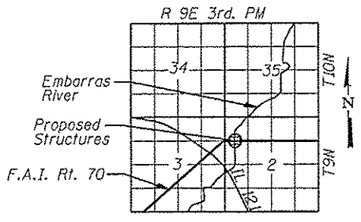
DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications
Guide Specifications for Fatigue Evaluation of Existing Steel Bridges 1990

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)

FIELD UNITS (EXIST. CONSTRUCTION)
fy = 36,000 psi (Structural Steel)
f'c = 3,500 psi (Substructure)
fy = 40,000 psi (Reinforcement)



LOCATION SKETCH

PETER B. BAYLES 081-006042 LICENSED STRUCTURAL ENGINEER ILLINOIS

Peter B. Bayles, P.E., S.E.
Structural Engineer License No. 081-006042
Expiration Date: 11/30/2012

GENERAL PLAN
F.A.I. 70
OVER EMBARRAS RIVER
SEC. (18-47B, 18-47HB)BR
CUMBERLAND COUNTY
STATION 158+31.00
STRUCTURE NO. 018-0049 & 0050

BLANK, WESSELINK, COOK & ASSOCIATES DECATUR, ILLINOIS ENGINEERS - CONSULTANTS DESIGN FIRM NO. 184000894

FILE NAME =	USER NAME =	DESIGNED PBB	REVISED -
		CHECKED MCB	REVISED -
	PLOT SCALE =	DRAWN MLO	REVISED -
	PLOT DATE =	CHECKED MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 018-0049(W.B.) & 0050(E.B.)
SHEET NO. 1 OF 42 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(18-47-VBIK (18-47B, 18-47HB)BR	CUMBERLAND	147	93
		CONTRACT NO. 74466		
	ILLINOIS FED. AID PROJECT			