

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAS 1732	*	MACOUPIN	22	4
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

*01-00081-00-BR

SHEET NO. 1
17 SHEETS

Bench Mark: BM#1-5/8" Rebar; 16.6' left at Sta. 157+09; Elev. 565.87.

Existing Structure: The existing structure, known as Hoover Bridge, was built in 1938 as part of SA Route 10, Section 10B-2. The existing 5-span structure, SN 059-3031, consists of 5-W30x116 noncomposite wide flange beams supporting a 7" slab with spill-through abutments and pile bent piers. The existing structure is 39'-1 1/2" back to back of abutments and 25'-4" out to out of deck with a 34° right forward skew. The proposed 5-span structure, SN 059-3331, consists of 6-42" Precast Prestressed Concrete I-Beams supporting a 7 1/2" slab with integral abutments and pile bent piers. The proposed structure is 412'-10 3/4" back to back of abutments and 36'-0" out to out of deck with a 30° right forward skew. The structure is to be replaced using road closure.

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.
DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

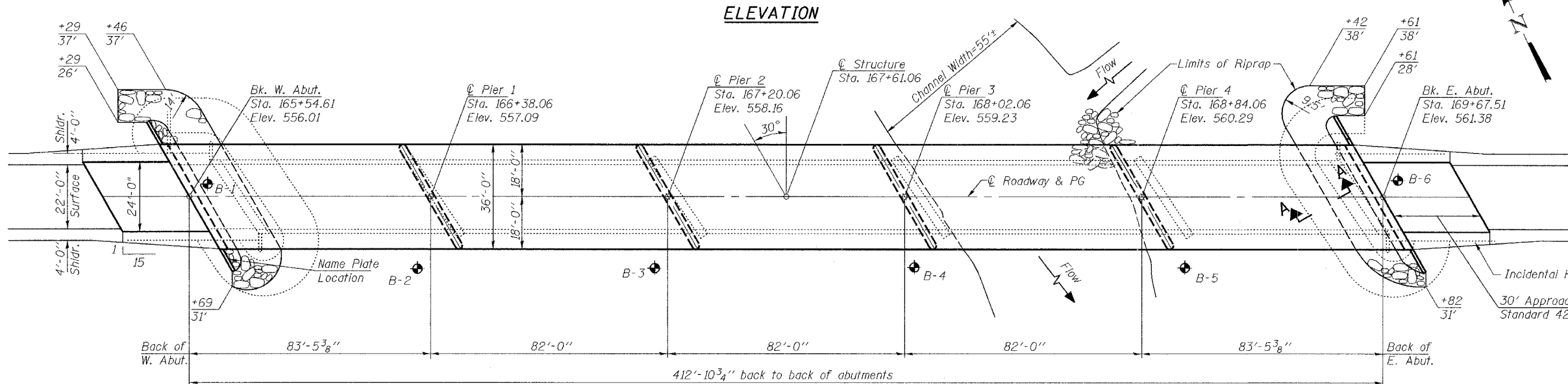
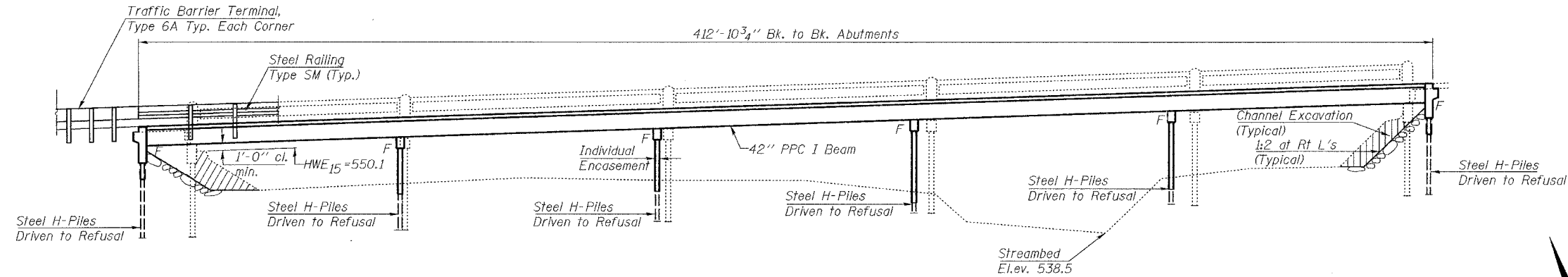
PRECAST PRESTRESSED UNITS
f_c = 6,000 psi
f_{ti} = 5,000 psi
f_{st} = 270,000 psi (1/2" φ low lax. strands)
f_{sl} = 204,960 psi (1/2" φ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 5.8%g
Site Coefficient (S) = 1.0

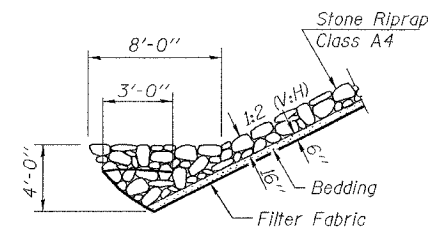
INDEX OF SHEETS

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OTTER CREEK
BUILT 20__ BY
MACOUPIN COUNTY
SECTION 01-00081-00-BR
FAS RTE. 1732 STA. 167+61.06
FA PROJ. BRS-1732(104)
S.N. 059-3331 LOADING HS 20

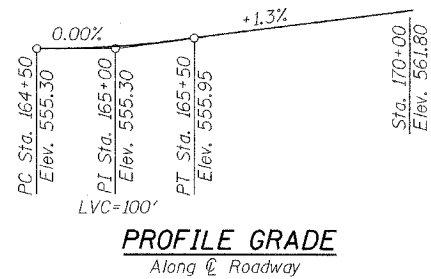
NAME PLATE
See Std. 515001



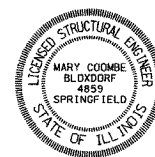
WATERWAY INFORMATION

Drainage Area=61.17 Sq. Mi. Low Grade Elev.=555.0 @ Sta. 162+50 Max. Rec. H.W.E.

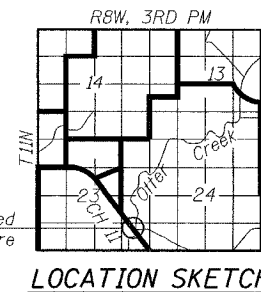
Flood Yr.	Freq.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	7,270	1,331	1,511	550.09	0.93	0.67	551.02	550.76	
Base	100	11,636	1,664	1,888	551.21	1.30	0.91	552.51	552.12	
Max. Calc.	500	15,225	1,886	2,119	551.96	1.67	1.28	553.63	553.24	



I certify to the best of my knowledge, information and belief, this bridge design is structurally adequate for the Design Loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO Standard Specifications for Highway Bridges.



Mary Coombe Bloxdorf
Proposed Structure
ILLINOIS STRUCTURAL NO. 4859
EXPIRES: 11/30/06
DATE: 9-20-06



Construction Permits:
The requirements of the IDNR - Office of Water Resources have been fulfilled in accordance with statewide permit No. 2.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE GENERAL PLAN & ELEVATION	
PROJECT FAS ROUTE 1732 (COUNTY ROUTE 11) SECTION 01-00081-00-BR MACOUPIN COUNTY STATION 167+61.06 STRUCTURE NUMBER 059-3331	PROJECT NO. 04081 SCALE DATE 07/07/06 DRAWN BY TFG CHECKED BY GSB/ML/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	
1	OF 17 SHTS