

Bench Mark: Cut "□" on top of northeast wingwall of Humbert Road Bridge over Black Creek. Elev. 478.33

Existing Structure: S.N. 060-3023 was built as Sec. 121 MFT in 1953 and widened in 1973. The existing structure is a single span wide flange with a 7 1/2" non-composite deck at the northbound lanes and a 7" non-composite deck at the southbound lanes. The original structure is on a 0° skew with a structure length of 43'-2" bk. to bk. of abutments. The 1973 widening was constructed with a 30° skew at the abutments resulting in a widened structure length of ±50'-8" bk. to bk. abut. The structure is 63'-10" out to out of deck. Traffic to be maintained using concrete barriers and traffic control devices.

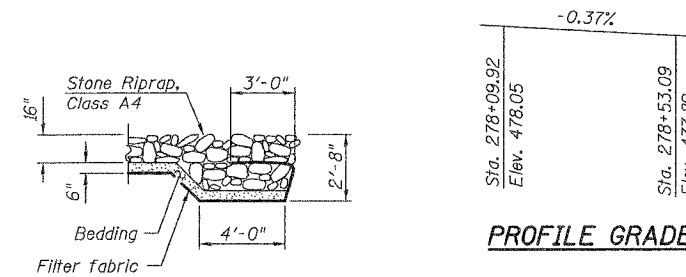
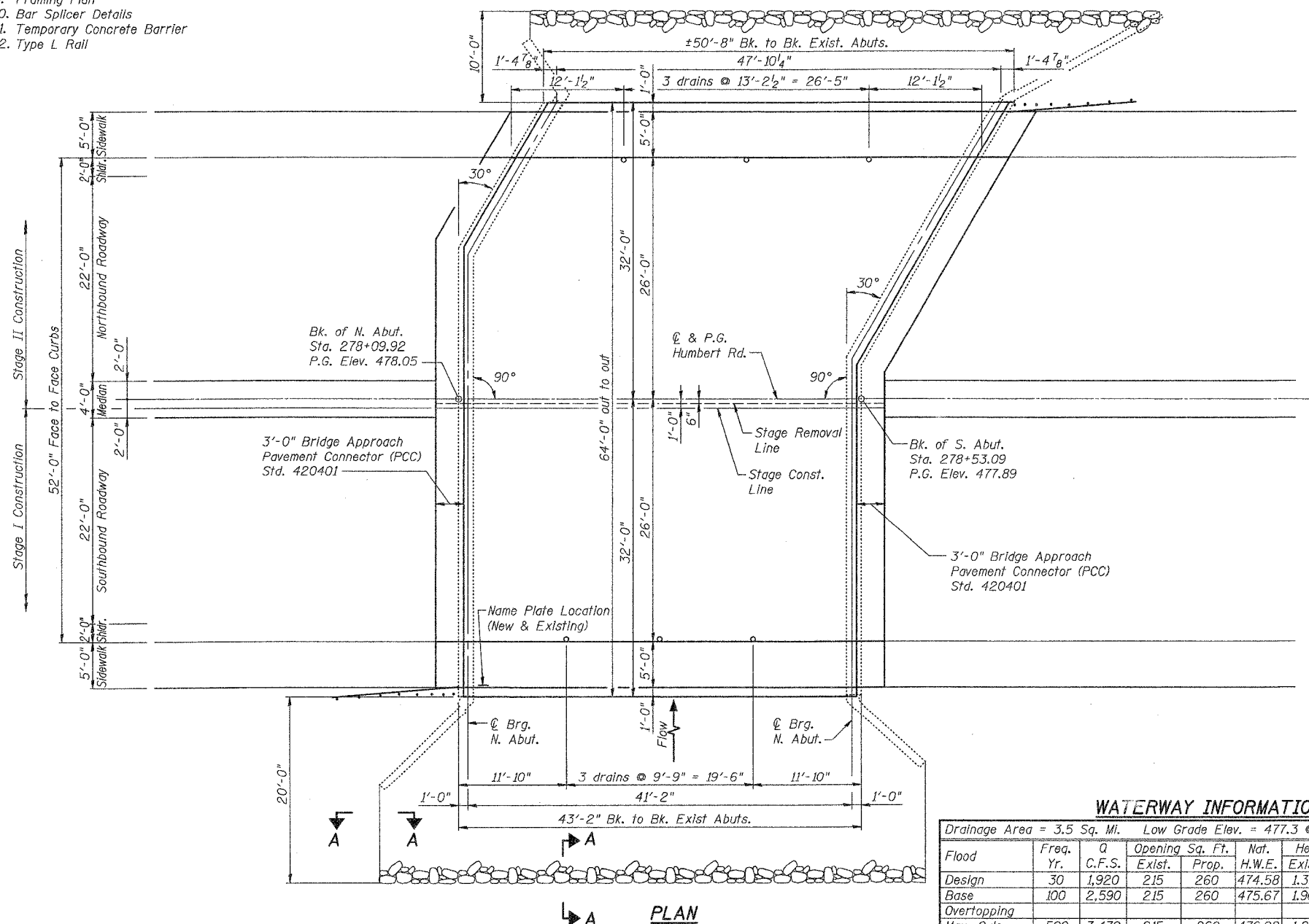
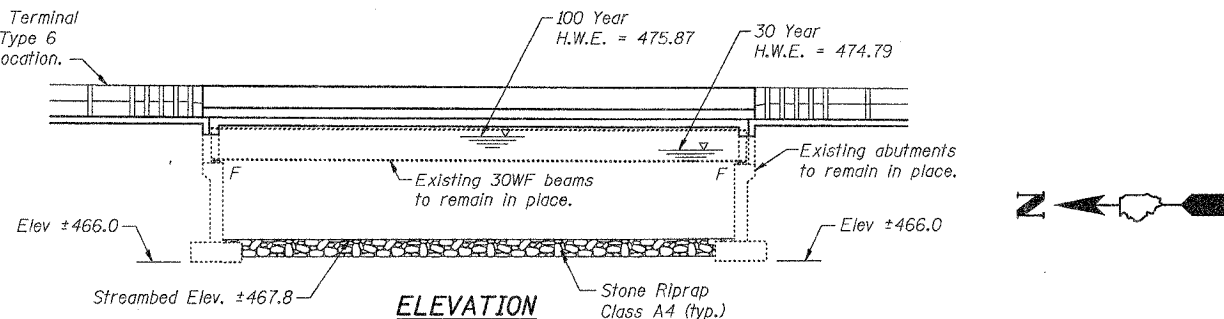
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAU 8996	05-00221-00-BR	MADISON	20	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract No. 97281

**INDEX OF SHEETS**

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12. Type L Rail

Traffic Barrier Terminal  
Std. 631031 - Type 6  
See Plan for Location.



**PROFILE GRADE**

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications - 17th ed.

**LOADING HS20-44**

No allowance for future wearing surface.

**DESIGN STRESSES**

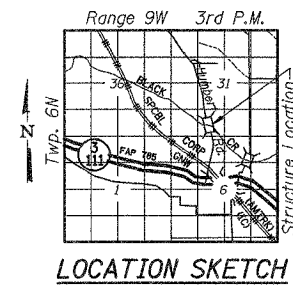
FIELD UNITS (Existing Construction)

- f<sub>c</sub> = 1,200 psi (deck slab)
- f<sub>c</sub> = 1,400 psi (curb)
- f<sub>s</sub> = 20,000 psi (reinf.)
- f<sub>s</sub> = 20,000 psi (struct. steel)
- n = 10

**DESIGN STRESSES**

FIELD UNITS (New Construction)

- f<sub>c</sub> = 3,500 psi
- f<sub>y</sub> = 60,000 psi (reinf.)
- f<sub>y</sub> = 36,000 psi (M270 Gr. 36) struct. steel



**LOCATION SKETCH**

"I certify that 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'."

**WATERWAY INFORMATION**

Drainage Area = 3.5 Sq. Mi. Low Grade Elev. = 477.3 @ S. Abut.

Flood	Freq. Yr.	Q C.F.S.	Opening	Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
			Exist.	Prop.		Exist.	Prop.
Design	30	1,920	215	260	474.58	1.35	0.21 475.93 474.79
Base	100	2,590	215	260	475.67	1.96	0.20 477.63 475.87
Overtopping							
Max. Calc.	500	3,470	215	260	476.92	1.29	0.44 478.21 477.36

Plans Prepared By:  
Oates Associates, Inc.

**GENERAL PLAN & ELEVATION**  
**HUMBERT ROAD OVER**  
**BLACK CREEK**  
**SECTION 05-00221-00-BR**  
**CITY OF ALTON**  
**STA. 278+31.50**  
**STRUCTURE NO. 060-3023**