

P:\0771\les\070100\Work\0-rdr\9\Brdge Plans\SN034-0022_SN034-2525\SN034-0022_GENERAL PLAN & LONGITUDINAL SECTION.dgn 10/1/2010 11:01:29 AM

Bench Mark: TA-1 Set Chiseled "□" SE corner bridge SN 034-0022 NAVD 88 Elev. 524.13

Existing Structure: S.N. 034-0022 was built in 1938 as S.B.I. Rte. 96, Section 120B-WPH at Sta. 658+68 over Riley Creek. The existing structure is a single span concrete slab superstructure bridge, 24'-0" back to back abutments, 0° skew, 43'-0" out to out of deck with closed abutments on spread footings keyed into rock. The existing structure shall be removed and replaced. Traffic to be maintained utilizing stage construction.

No Salvage.

INDEX OF SHEETS

1. General Plan & Longitudinal Section
2. West Cast-In-Place End Section
3. East Cast-In-Place End Section
4. General Data
5. Boring Logs

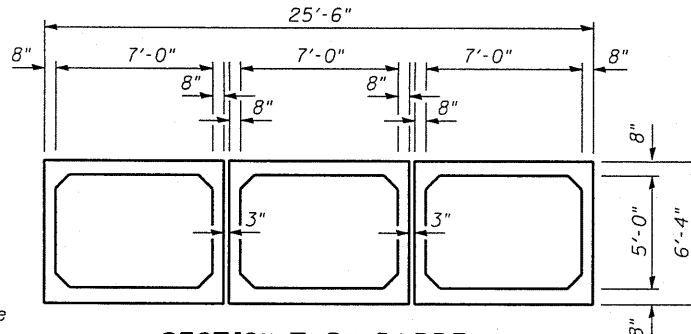
Notes:

Removal and replacement of weak soil with Rockfill-Foundation may be required beneath the culvert. The Engineer will determine the required depth following excavation to plan grade.

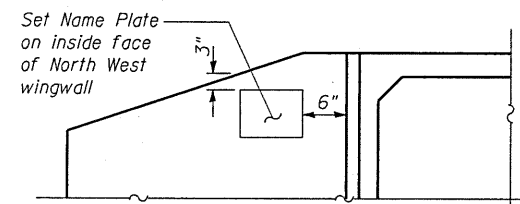
Cost of Temporary Timber Blocking included with Temporary Soil Retention System.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

The existing North Abutment shall be removed to 1.0 feet below the top of the proposed culvert. Cost included with Removal of Existing Structures No. 1.



SECTION THRU BARREL



NAME PLATE LOCATION

STATION 658+80.00
BUILT 201_ BY
STATE OF ILLINOIS
FAP RT. 510 SEC. 120 (B-4, B-5)
LOADING HS20-44
STR. NO. 034-2525

NAME PLATE
See Std. 515001

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

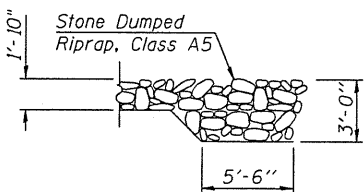
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

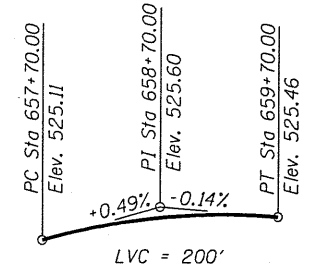
$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (Welded Wire Fabric)

TOTAL BILL OF MATERIAL

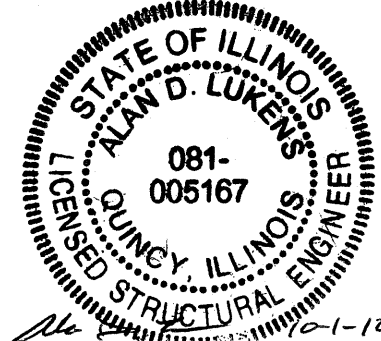
ITEM	UNIT	TOTAL
Removal of Existing Structures No. 1	Each	1
Name Plates	Each	1
Precast Concrete Box Culvert 7'x5' (M273)	Foot	209.0
Box Culvert End Section, Culvert No. 1	Each	2
Reinforcement Bars	Pound	1,320
Stone Dumped Riprap, Class A5	Sq. Yd.	124
Temporary Soil Retention System	Sq. Ft.	195
Structure Excavation	Cu. Yd.	698
Rock Fill Foundation	Ton	265
Granular Culvert Backfill	Cu. Yd.	181
Dewatering Structure No. 1	Each	1



SECTION A-A



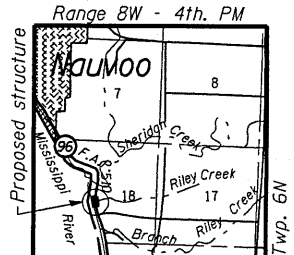
PROFILE GRADE
(along & roadway)



Alan D. Lukens
Licensed Structural Engineer
State of Illinois No. 081-005167
License Expires 11/30/12

GENERAL PLAN & LONGITUDINAL SECTION

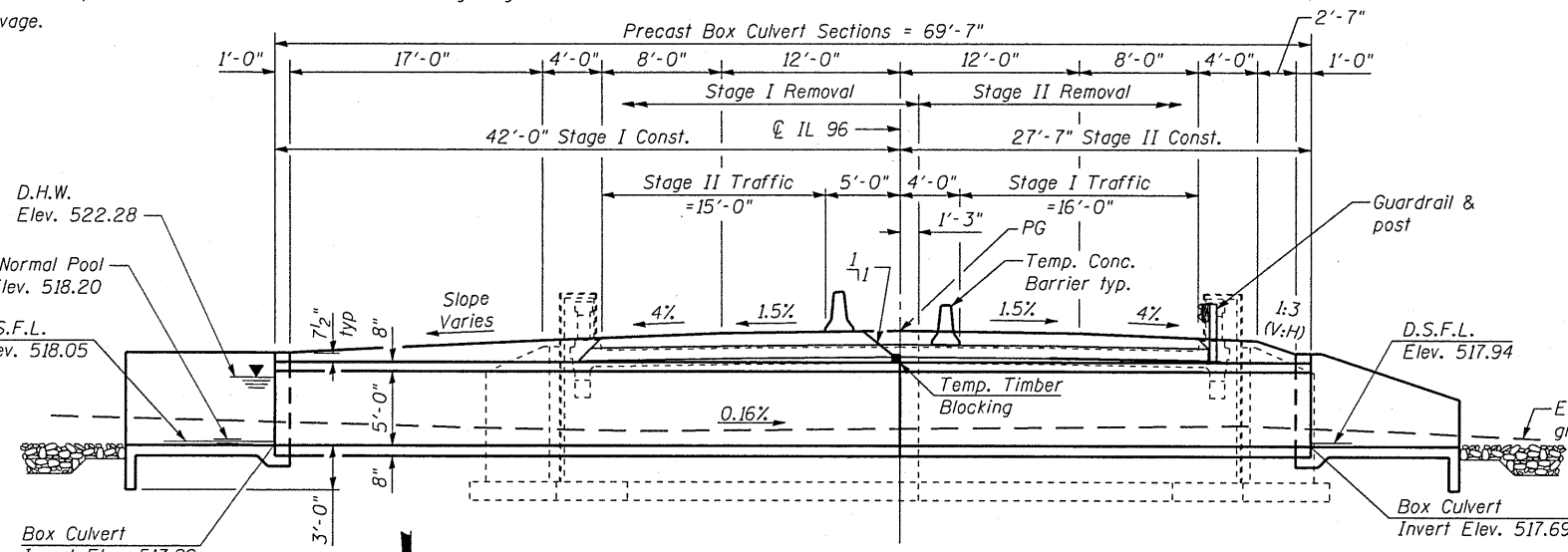
IL 96 OVER RILEY CREEK
FAP ROUTE 510 SECTION 120 (B-4, B-5)
HANCOCK COUNTY
STATION 658+80.00
S.N. 034-2525



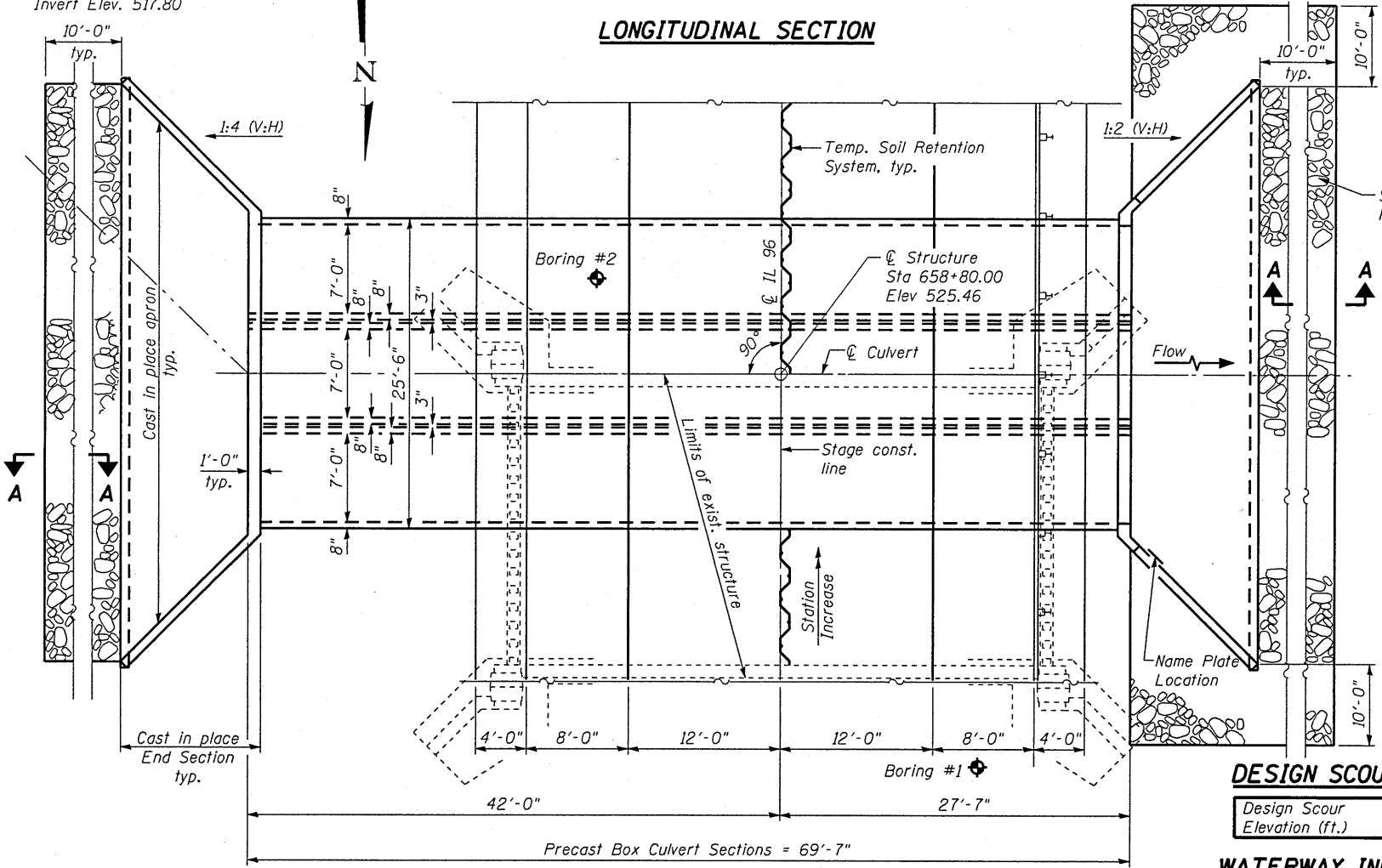
LOCATION SKETCH

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	510	120 (B-4, B-5)	HANCOCK	80	37
CONTRACT NO. 72A65					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

Klingner & Associates P.C.



LONGITUDINAL SECTION



PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	D.S. Toewall	U.S. Toewall
	514.7	514.8

WATERWAY INFORMATION

Drainage Area = 0.52 Sq. Mi. Ex. Low Grade Elev. 523.67 @ Sta. 658+39

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		*Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	161	29	102	521.74	522.28	3.26	0	525.00	520.27
Base	50	373	29	102	522.28	522.28	3.08	0	525.36	521.04
Overtopping	100	508	29	102	522.34	522.34	3.32	0	525.66	521.80
Max. Calc.	500									

*Upstream face of culvert

DESIGNED KTH
CHECKED ADL
DRAWN KTH
CHECKED ADL

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
105 North 21st Street, Quincy, IL 62422-3881
Ph. 618.223.3838 • Fax 618.223.3881
4588 Paris Grand Road, Normal, IL 62451
Ph. 618.223.8838 • Fax 618.223.8882
518 N. 4th Street, Suite 100, Burlington, IL 62018
Ph. 618.252.8838 • Fax 618.252.3945
111 North 8th Street, Quincy, IL 62422
Ph. 618.223.4902 • Fax 618.223.3778
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738