

BENCH MARK: BM 430  
 STA. 963+79.43, 209.6268' LT., EL. 794.827  
 HEADWALL

EXISTING STRUCTURE: NO. 089-1023  
 IL 73 SECTION 106A CONSTRUCTED 1933  
 DOUBLE 7'-0" X 7'-0" X 54'-0" CONCRETE BOX CULVERT.

NO SALVAGE.

PROPOSED IMPROVEMENTS:  
 EXISTING STRUCTURE TO BE REMOVED AND REPLACED  
 IN STAGES WITH A 4 CELL - 7'-0" X 4'-0" CAST-IN-PLACE  
 CONCRETE BOX CULVERT MAINTAINING ONE LANE OF  
 TRAFFIC.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 01 13 SHEETS
F.A.S. 1087	106T-1	STEPHENSON	78	32	
FED. ROAD DIST. NO. 2	ILLINOIS	FED. AID PROJECT			

Contract # 64C84

STATION 966+60  
 BUILT 200. BY  
 STATE OF ILLINOIS  
 IL 73 SECT. 106T-1  
 LOADING HS20  
 STR. NO. 089-1109

NAME PLATE

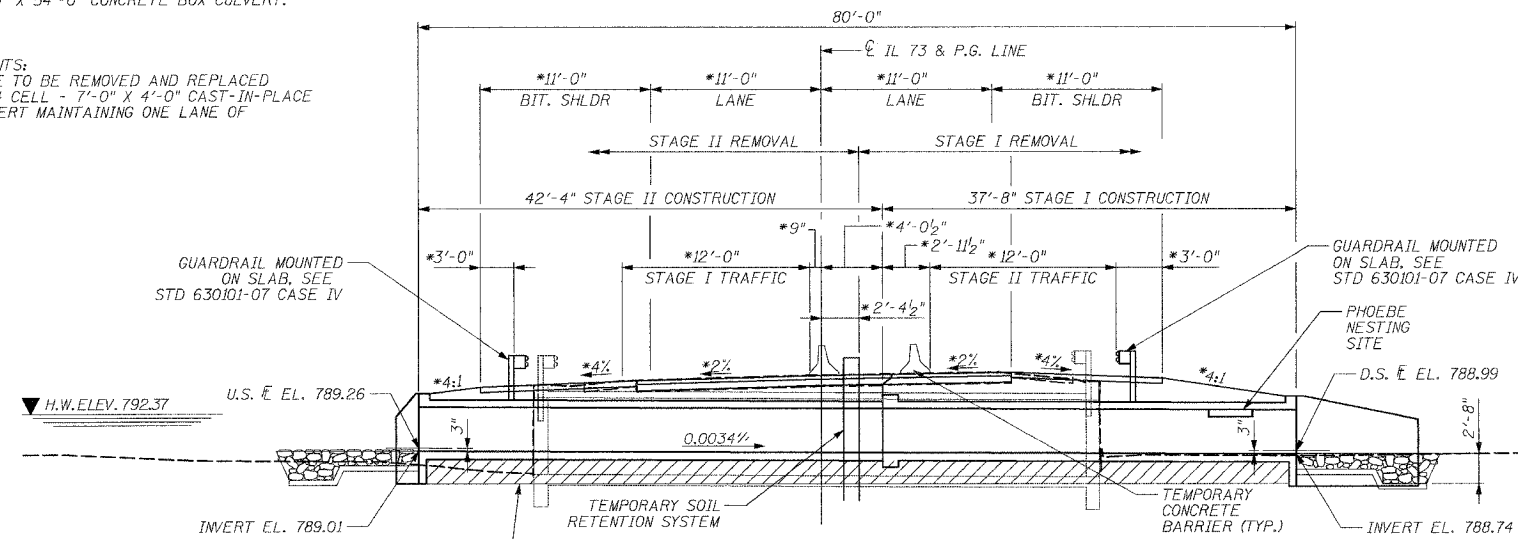
NOTE: SEE STANDARD DRAWING 515001  
 FOR NAME PLATE DETAILS.

APPROVED  
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson  
 ENGINEER OF BRIDGES AND STRUCTURES

GENERAL NOTES

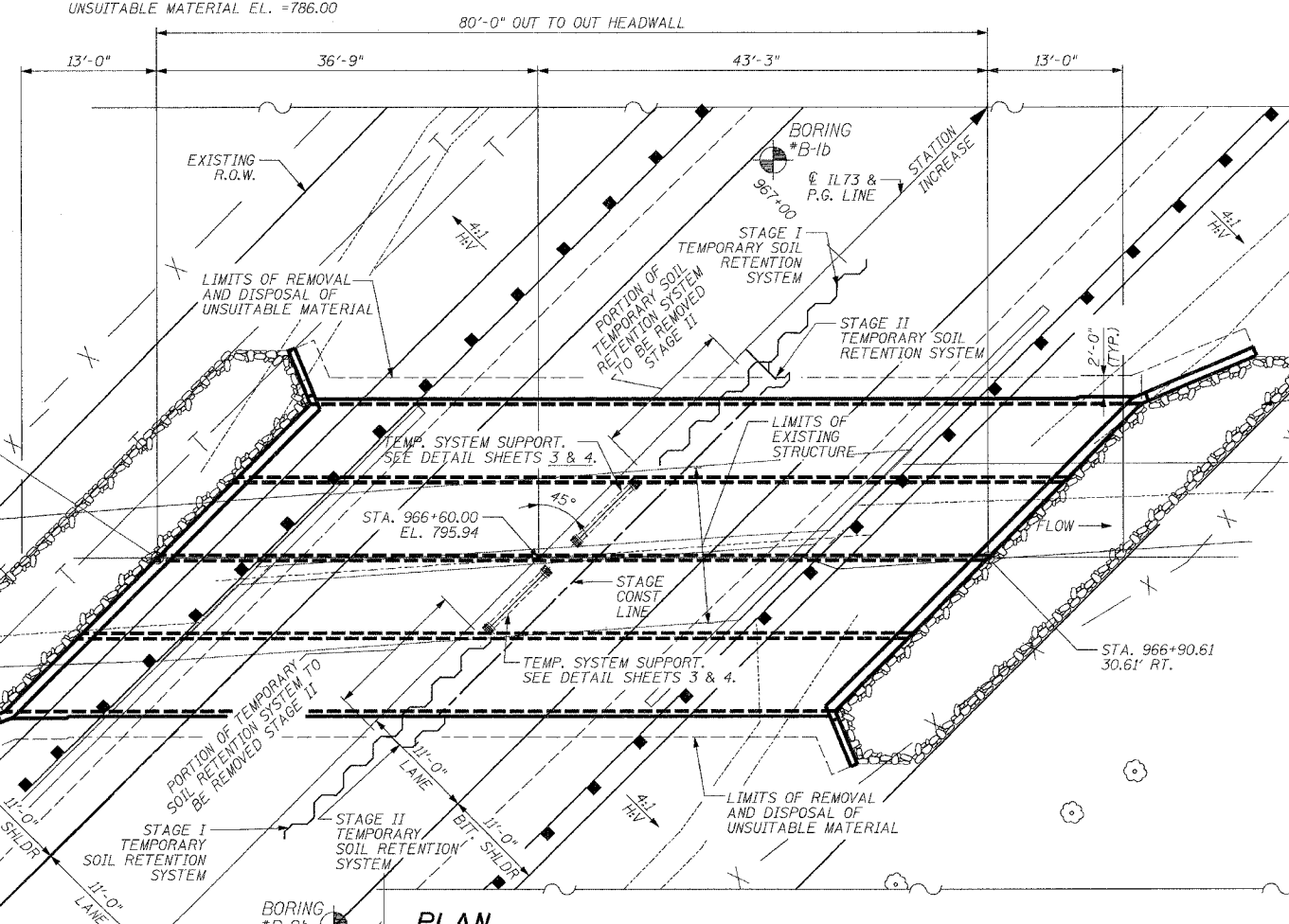
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GR 60 (IL MODIFIED), SEE SPECIAL PROVISION.
- EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER.
- CULVERT FLOWS MUST BE MAINTAINED THROUGHOUT THE PROJECT. NORMAL FLOW SHALL BE ALLOWED TO PASS AT THE RATE IT ENTERS THE JOBSITE. HIGH FLOWS SHALL BE ALLOWED TO PASS WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.
- THE CONTRACTOR SHALL CLEAN OUT CULVERT STREAM FLOW TO THE RIGHT OF WAY LINES. THE COST SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "CONCRETE BOX CULVERTS".
- STRUCTURE EXCAVATION AND GRADING AROUND ENDS OF CULVERT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "CONCRETE BOX CULVERTS".
- PLACEMENT AND COMPACTION OF THE BACKFILL FOR CULVERT SHALL CONFORM TO SECTION 502.10 OF THE STANDARD SPECIFICATIONS. THE MATERIAL SHALL CONFORM TO SECTION 1004.05 OF THE STANDARD SPECIFICATIONS FOR COARSE AGGREGATE FOR TRENCH BACKFILL, AND SHALL BE COMPACTED TO MINIMUM OF 95% OF THE STANDARD LABORATORY DENSITY. THE ENTIRE EXCAVATION, WITHIN 2 FEET OUTSIDE OF EACH SHOULDER, SHALL BE BACKFILLED WITH TRENCH BACKFILL MATERIAL TO THE BOTTOM OF THE PROPOSED SUBGRADE. THIS TRENCH BACKFILL MATERIAL WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE CLASS OF CONCRETE INVOLVED OR OTHER UNIT PRICE ITEM OF THE WORK FOR WHICH IT IS REQUIRED.
- PRECAST SUBSTITUTION IS NOT ALLOWED FOR THIS CULVERT.
- THE NEW NUMBER FOR THIS STRUCTURE WILL BE 089-1109.
- CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
- AT LEAST SIX FEET OR A MINIMUM OF ONE HALF THE WING LENGTH OF THE BARREL SHALL BE POURED MONOLITHICALLY WITH WINGWALLS.
- LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD AS DIRECTED BY THE ENGINEER.



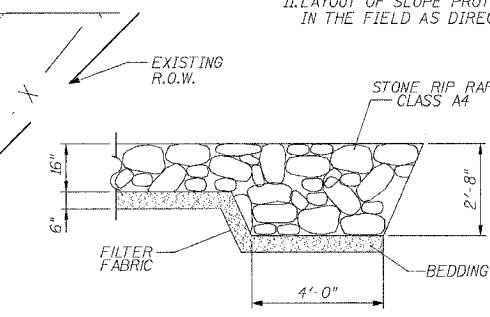
LONGITUDINAL SECTION

DESIGN SCOUR TABLE

DESIGN SCOUR ELEVATION (FT.)	UPSTREAM	DOWNSTREAM
	786.01	785.74



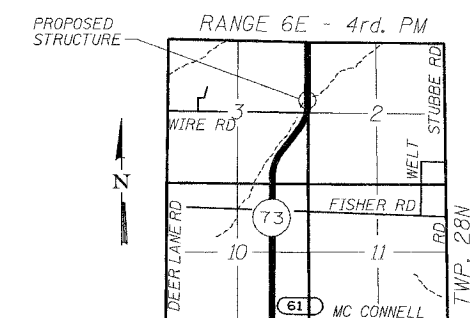
PLAN



RIP RAP FLANK DETAIL

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A4	SQ. YD.	110
FILTER FABRIC	SQ. YD.	110
GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ. YD.	310
REMOVAL OF EXISTING STRUCTURE NO. 1	EACH	1
REINFORCEMENT BARS	LB	77,487
NAME PLATES	EACH	1
TEMPORARY SOIL RETENTION SYSTEM	SQ. FT.	820
CONCRETE BOX CULVERTS	CU. YD.	189.2
BAR SPLICERS	EACH	153
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU. YD.	160
BREAKER RUN CRUSHED STONE	TON	365
TEMPORARY SUPPORT SYSTEM	EACH	1



LOCATION SKETCH

WATERWAY INFORMATION

DRAINAGE AREA (SQ. MI.) = 1.0		LOW GRADE ELEV. (FEET) EXIST = 795.88 @ STA. 967+60 PROPOSED = 795.88 @ STA. 967+60				MAX RECORDED H.W.E. =			
FLOOD	FREQUENCY YEAR	DISCHARGE (C.F.S.)	WATERWAY OPENING		NATURAL H.W.E.	CREATED HEAD		HEADWATER ELEVATION	
			EXISTING (SQ. FT.)	PROPOSED (SQ. FT.)		EXISTING (FEET)	PROPOSED (FEET)	EXISTING (FEET)	PROPOSED (FEET)
TEN-YEAR	10	352	70.7	74.5	791.92	-----	-----	791.92	791.92
DESIGN	50	726	77.0	87.1	792.37	2.00	1.90	794.37	794.27
BASE	100	959	77.3	87.6	792.39	3.61	3.23	796.00	795.62
EX OVT	97	935	77.1	87.4	792.38	3.50	-----	795.88	-----
PR OVT	113	997	77.6	88.2	792.41	-----	3.47	-----	795.88

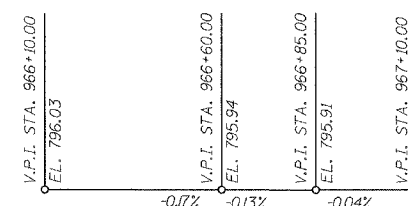
GENERAL PLAN

F.A.S. 1087 IL. RTE. 73 OVER  
 UNAMED TRIBUTARY TO PECATONICA RIVER  
 SECTION 106T-1  
 STEPHENSON COUNTY  
 STATION 966+60.00  
 STRUCTURE NO. 089-1109

DESIGNED -	WSP
CHECKED -	ASP
DRAWN -	BEM
CHECKED -	WSP



Wayne A. Triex  
 11-30-08



PROFILE GRADE