

BENCH MARK: TBM 403
 STA. 317+30.56, 25.89' LT., EL. 913.497
 CUT SQUARE ON HEADWALL ON NW
 QUAD IL 72 & GOLD MINE ROAD, EAST
 OF CULVERT.

EXISTING STRUCTURE:
 SINGLE 10'-0" x 5'-0" x 36'-0"
 CONCRETE BOX CULVERT WITH
 10'-0" x 7'-0" WEIR @ INLET END.

NO SALVAGE.

PROPOSED IMPROVEMENTS:
 EXISTING STRUCTURE TO BE REMOVED AND REPLACED
 WITH A DOUBLE 6'-0" x 4'-0" PRECAST CONCRETE BOX
 CULVERT WITH PRECAST CONCRETE BOX CULVERT
 END SECTIONS.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STATION 313+79.80
 BUILT 200. BY
 STATE OF ILLINOIS
 IL. 72 SECT. 114T-1
 LOADING HS20
 STR. NO. 008-1092

NAME PLATE

NOTE: SEE STANDARD DRAWING 515001
 FOR NAME PLATE DETAILS.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 545	114T-1	CARROLL	118	33
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT	

Contract # 64C31

SHEET NO. 01
 05 SHEETS

DESIGN SPECIFICATIONS

AASHTO 2002 SPECIFICATIONS

LOADING HS20-44

ALLOW 50#/.SQ. FT. FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

FIELD UNITS

$f_c = 3,500$ PSI
 $f_y = 60,000$ PSI (REINFORCEMENT)

PRECAST UNITS

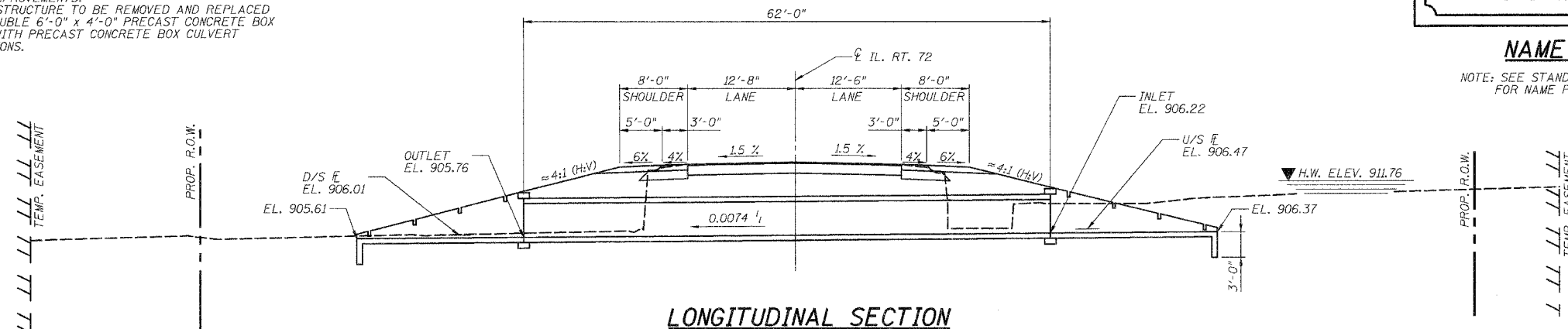
$f_c = 5,000$ PSI
 $f_y = 60,000$ PSI (REINFORCEMENT)

TOTAL BILL OF MATERIALS

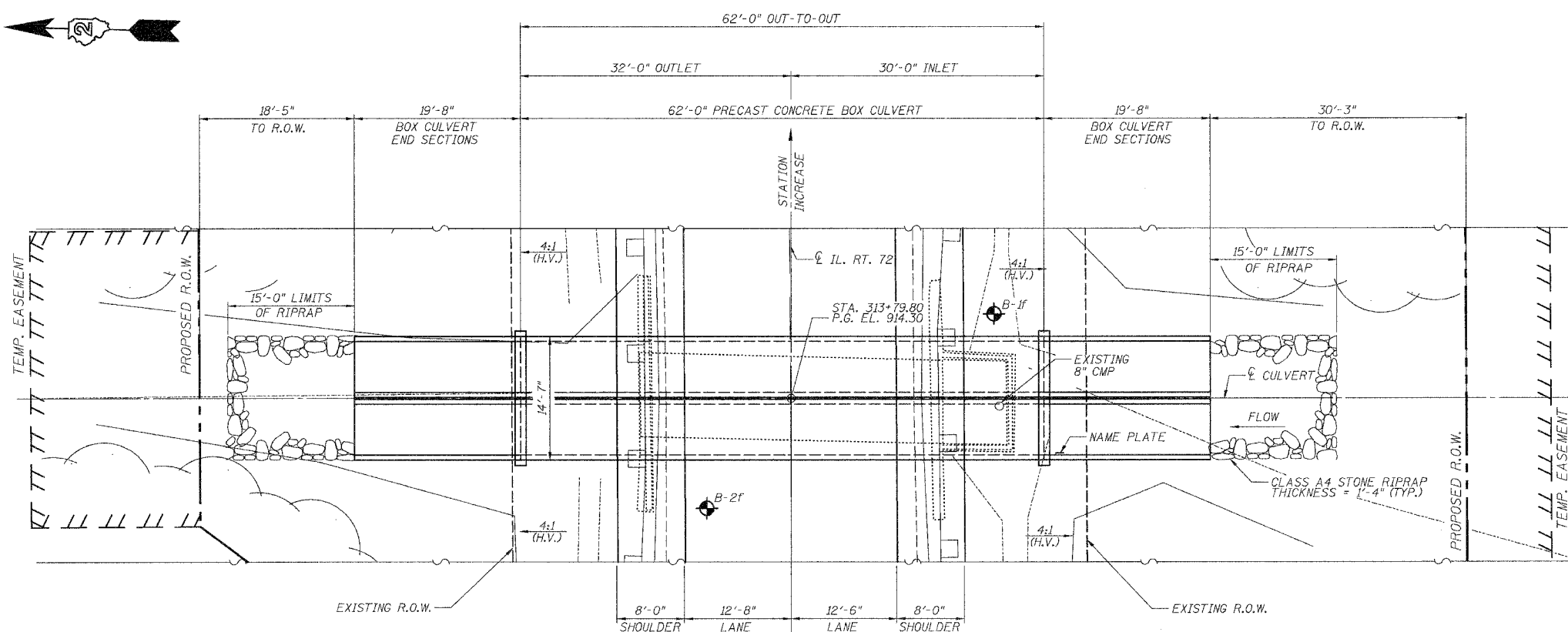
ITEM	UNIT	QUANTITY
BOX CULVERT END SECTIONS NO. 1	EACH	4
PRECAST CONCRETE BOX CULVERT 6' x 4'	FOOT	124
REMOVAL OF EXISTING STRUCTURE NO.2	EACH	1
STONE RIPRAP, CLASS A4	SQ. YD.	50
FILTER FABRIC	SQ. YD.	50
NAME PLATES	EACH	1

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 "PRECAST CONCRETE BOX CULVERT 6'x4'".
- STRUCTURE EXCAVATION AND GRADING AROUND ENDS OF CULVERT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "PRECAST CONCRETE BOX CULVERT 6'x4'".
- 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.
- ALL LABOR AND MATERIAL REQUIRED FOR THE CONSTRUCTION OF THE CONNECTION COLLAR SHALL BE INCLUDED IN THE BID ITEM "PRECAST CONCRETE BOX CULVERT 6'x4'".
- PRECAST CONCRETE BOX CULVERT SLAB & WALL THICKNESS TAKEN FROM AASHTO MATERIAL SPECIFICATIONS. IF FABRICATOR CHOOSES TO ALTER DIMENSIONS, IT MUST BE APPROVED BY THE ENGINEER AND THE CALCULATIONS SHALL BE PREPARED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
- BOX CULVERT END SECTIONS ARE TO BE PRECAST. CONTRACTOR HAS THE OPTION OF USING CAST-IN-PLACE END SECTIONS. FOR EITHER TYPE OF END SECTION, THE CONTRACTOR IS REQUIRED TO SUBMIT DESIGN CALCULATIONS TO BE APPROVED BY THE ENGINEER. THE DESIGN CALCULATIONS SHALL BE PREPARED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER. IF THE CONTRACTOR ELECTS TO USE CAST-IN-PLACE END SECTIONS, NO ADJUSTMENTS IN COSTS OF THE END SECTIONS WILL BE ALLOWED.
- THE NEW NUMBER FOR THIS STRUCTURE WILL BE 008-1092.
- THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M259 (DESIGN FILL HEIGHT = 3'-0")

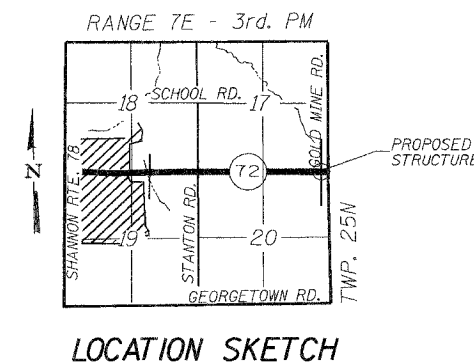


LONGITUDINAL SECTION



PLAN

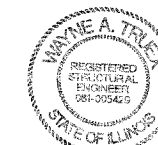
WATERWAY INFORMATION				
DRAINAGE AREA (ACRES) = 231.0		LOW GRADE ELEV. (FEET) EXIST = 913.94 @ STA. 315+31 PROPOSED = 913.94 @ STA. 315+31		
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	HEADWATER ELEVATION	
			EXISTING	PROPOSED
TEN-YEAR	10	158	910.04	909.64
DESIGN	50	326	912.41	911.76
BASE	100	432	913.63	913.19
EX OVT	115	447	913.94	---
PR OVT	135	477	---	913.94



LOCATION SKETCH

DESIGNED -	ASP
CHECKED -	WSP
DRAWN -	BGC
CHECKED -	ASP

EXAMINED	200
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES



Wayne A. Truel
 11-30-08

GENERAL PLAN & ELEVATION

F.A.P. 545 (IL. RTE. 72)

SECTION 114T-1

CARROLL COUNTY

STATION 313+79.80

STRUCTURE NO. 008-1092