

BENCH MARK: BM 406
 STA. 117+19.06, 32.97' RT., EL. 905.316
 TOP OF ROW MARKER SOUTH OF IL 72
 WEST OF CULVERT & CONTROL POINT 6.

EXISTING STRUCTURE:
 DOUBLE 7'-0" X 4'-0" X 36'-0" CONCRETE BOX CULVERT.

NO SALVAGE.
 PROPOSED IMPROVEMENTS:
 EXISTING STRUCTURE TO BE REMOVED AND REPLACED
 WITH A 5 CELL - 6'-0" X 3'-0" PRECAST CONCRETE BOX
 CULVERT WITH PRECAST CONCRETE BOX CULVERT END
 SECTIONS.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STATION 121+43.48
 BUILT 200. BY
 STATE OF ILLINOIS
 IL 72 SECT. 114T-1
 LOADING HS20
 STR. NO. 071-1151

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 545	114T-1	OGLE	118	59
FED. ROAD DIST. NO. 2	ILLINOIS	FED. AID PROJECT		

Contract # 64C31

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)

NAME PLATE

NOTE: SEE STANDARD DRAWING 515001
 FOR NAME PLATE DETAILS.

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
BOX CULVERT END SECTIONS NO. 3	EACH	10
PRECAST CONCRETE BOX CULVERT 6' x 3'	FOOT	240
NAME PLATES	EACH	1
REMOVAL OF EXISTING STRUCTURE NO. 5	EACH	1
STONE RIPRAP, CLASS A4	SQ. YD.	110
FILTER FABRIC	SQ. YD.	110
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU. YD.	255
BREAKER-RUN CRUSHED STONE	TON	410

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'x3'".
- STRUCTURE EXCAVATION AND GRADING AROUND ENDS OF CULVERT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "PRECAST CONCRETE BOX CULVERT 6' x 3'".
- 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 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.
- ALL LABOR AND MATERIAL REQUIRED FOR THE CONSTRUCTION OF THE CONNECTION COLLAR SHALL BE INCLUDED IN THE BID ITEM "PRECAST CONCRETE BOX CULVERT 6' x 3'".
- STRUCTURE EXCAVATION AND GRADING AROUND ENDS OF CULVERT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "PRECAST CONCRETE BOX CULVERT 6'x3'".
- BOX CULVERT END SECTIONS ARE TO BE PRECAST. CONTRACTOR HAS THE OPTION OF USING CAST-IN-PLACE END SECTIONS, BUT THE DESIGN OF THE REINFORCEMENT IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE APPROVED BY THE 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 071-1151.
- THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M273 (DESIGN FILL HEIGHT < 2'-0")

GENERAL PLAN & ELEVATION

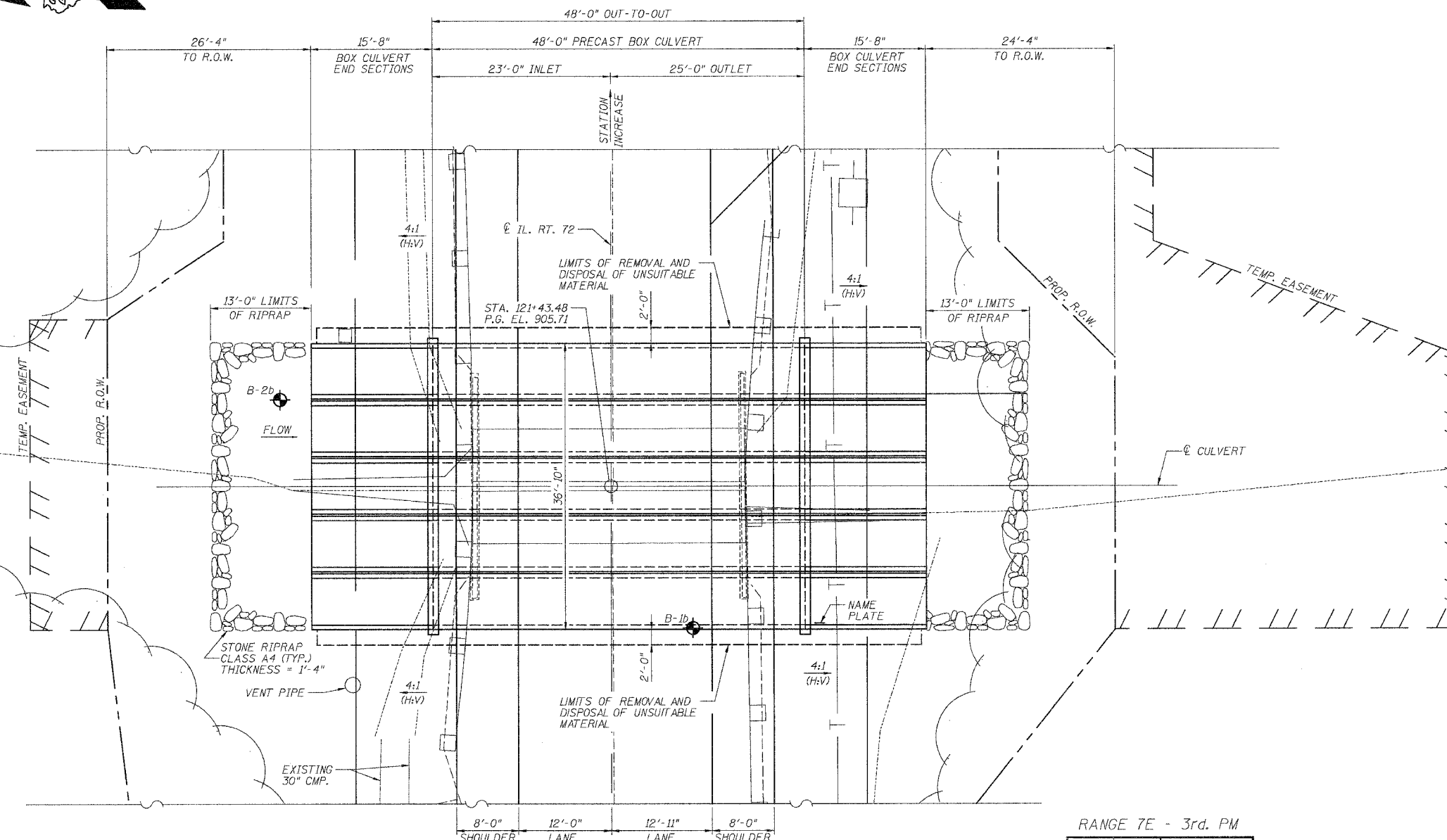
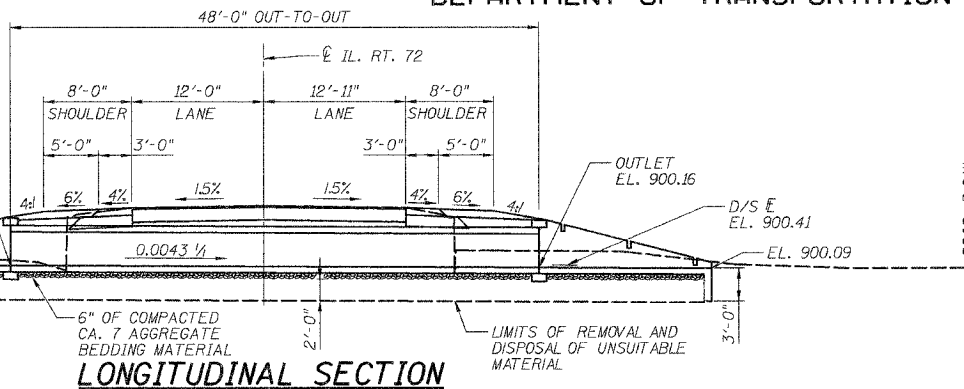
F.A.P. 545 (IL. RTE. 72)

SECTION 114T-1

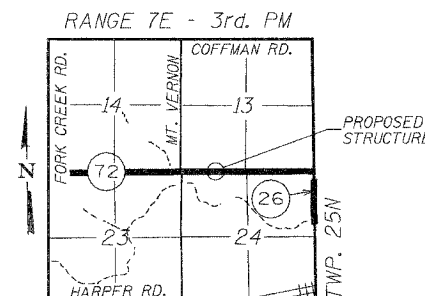
OGLE COUNTY

STATION 121+43.48

STRUCTURE NO. 071-1151



WATERWAY INFORMATION				
DRAINAGE AREA (ACRES) = 251.0		LOW GRADE ELEV. (FEET) EXIST = 904.76 @ STA. 109+94 PROPOSED = 904.76 @ STA. 109+94		
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	HEADWATER ELEVATION	
			EXISTING	PROPOSED
TEN-YEAR	10	170	902.42	902.44
DESIGN	50	351	904.08	903.63
BASE	100	465	904.92	904.25
EX OVT	78	416	904.76	
PR OVT	162	568		904.76



DESIGNED - ASP	200
CHECKED - WSP	EXAMINED
DRAWN - BEM	PASSED
CHECKED - ASP	

