BENCH MARK: BM 408
STA. 142+21.13, 32.12' RT., EL.. 915.984
TOP OF ROW MARKER WEST OF CULVERT
AND NORTH OF IL 72.

EXISTING STRUCTURE:
DOUBLE 6'-0" X 5'-0" X 36'-0" CONCRETE BOX CULVERT.

NO SALVAGE.

PROPOSED IMPROVEMENTS:
EXISTING STRUCTURE TO BE REMOVED AND REPLACED WITH A 2 CELL - 8'-0" X 4'-0" PRECAST CONCRETE BOX CULVERT WITH PRECAST CONCRETE BOX CULVERT END SECTIONS.

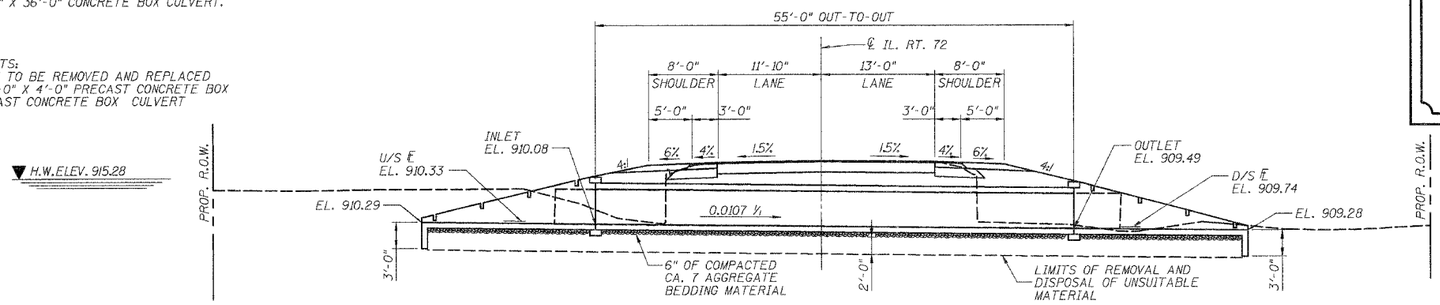
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION 145+06.61
BUILT 200_ BY
STATE OF ILLINOIS
IL 72 SECT. 114T-1
LOADING HS20
STR. NO. 071-1152

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 545	114T-1	OGLE	118	63
FED. ROAD DIST. NO. 2		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 01
05 SHEETS

Contract # 64C31



LONGITUDINAL SECTION

NAME PLATE

NOTE: SEE STANDARD DRAWING 515001 FOR NAME PLATE DETAILS.

DESIGN SPECIFICATIONS

AASHTO 2002 SPECIFICATIONS

LOADING HS20-44

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

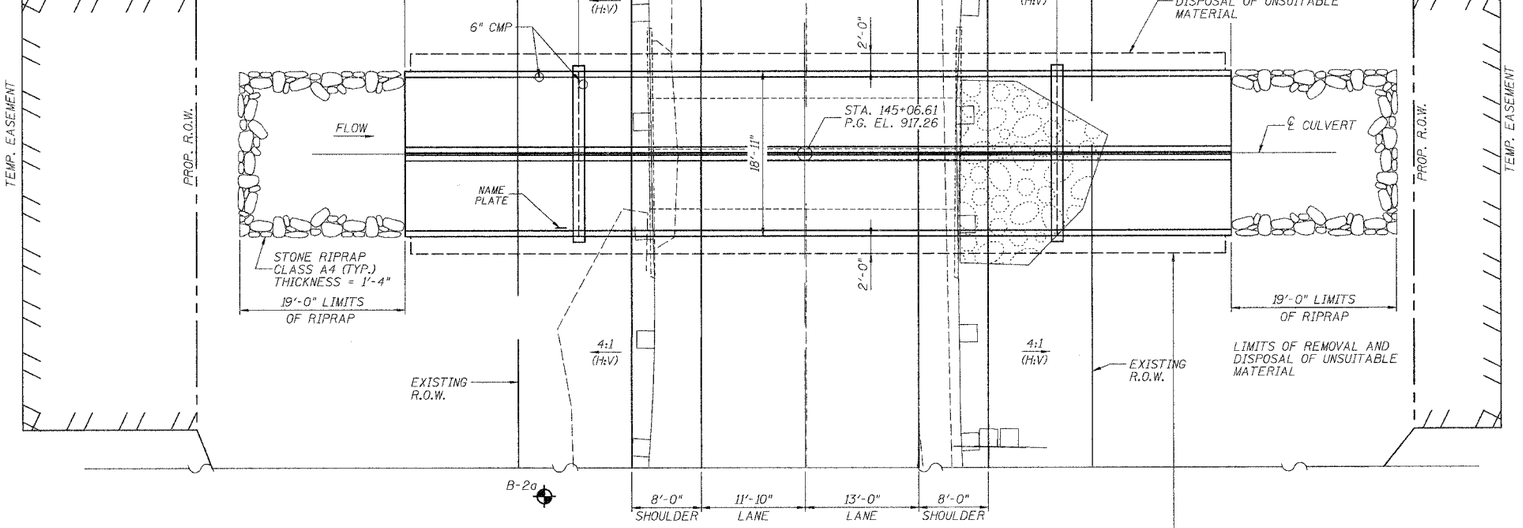
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 PSI
fy = 60,000 PSI (REINFORCEMENT)

PRECAST UNITS

f'c = 5,000 PSI
fy = 60,000 PSI (REINFORCEMENT)



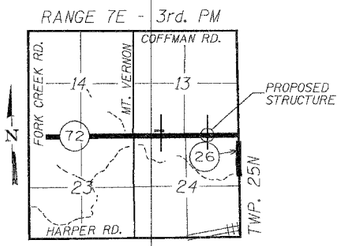
PLAN

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
BOX CULVERT END SECTIONS NO. 4	EACH	4
PRECAST CONCRETE BOX CULVERT 8' x 4'	FOOT	110
REMOVAL OF EXISTING STRUCTURE NO. 6	EACH	1
STONE RIPRAP, CLASS A4	SQ. YD.	80
FILTER FABRIC	SQ. YD.	80
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU. YD.	170
BREAKER-RUN CRUSHED STONE	TON	276
NAME PLATES	EACH	1

WATERWAY INFORMATION

DRAINAGE AREA (ACRES) = 296.0		LOW GRADE ELEV. (FEET) EXIST = 916.54 @ STA. 143+57 PROPOSED = 916.54 @ STA. 143+57		
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	HEADWATER ELEVATION	
			EXISTING	PROPOSED
TEN-YEAR	10	192	913.54	913.40
DESIGN	50	395	915.56	915.28
BASE	100	522	916.77	916.42
EX OVT	93	498	916.64	——
PR OVT	113	542	——	916.64



LOCATION SKETCH

GENERAL NOTES

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISION.
2. EXPOSED EDGES SHALL HAVE A $\frac{3}{4}$" CHAMFER.
3. 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 WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.
4. 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 8'x4' ".
5. STRUCTURE EXCAVATION AND GRADING AROUND ENDS OF CULVERT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "PRECAST CONCRETE BOX CULVERT 8'x4' ".
6. 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.
7. 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.
8. ALL LABOR AND MATERIAL REQUIRED FOR THE CONSTRUCTION OF THE CONNECTION COLLAR SHALL BE INCLUDED IN THE BID ITEM "PRECAST CONCRETE BOX CULVERT 8' X 4' ".
9. 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 CONTRACTORS 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.
10. THE NEW NUMBER FOR THIS STRUCTURE WILL BE 071-1151.
11. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M273 (DESIGN FILL HEIGHT< 2'-0")

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

\- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

WAYNE A. TRUEX
REGISTERED STRUCTURAL ENGINEER
081-005429
STATE OF ILLINOIS
11-30-08

GENERAL PLAN & ELEVATION
F.A.P. 545 (IL. RTE. 72)
SECTION 114T-1
OGLE COUNTY
STATION 145+06.61
STRUCTURE NO. 071-1152