#### STATE OF ILLINOIS DOUBLE PRECAST- **№** PROPOSED STRUCTURE **DEPARTMENT OF TRANSPORTATION** CONCRETE BOX PROPOSED T-TYPE CULVERT 7'x3' WINGWALL (TYP.) -DUPAGE STATION 267+59 (PROJECT) RIVER BUILT 200 BY STATE OF ILLINOIS F.A.P. ROUTE 349 SEC. 15 T-LOADING HS20 STR. NO. 099-0508 NAME PLATE PROPOSED See Std. 515001 STRUCTURE DOWNSTREAM END ELEVATION 10" TH. CLASS D, COMPOST FURNISH -AND PLACE 4" © US RT. 30 TYPE IV - 88 SQ, YD. LOCATION SKETCH 23'-0" COARSE AGGREGATE BACKFILL (SPECIAL) 2% 2%\_ ALL BACKFILL MATERIAL -INVERT SHALL BE COARSE AGGR. *INVERT* FI. = 658.47BACKFILL (SPEC.) FINAL EL. = 658.32 6" OF CA 7 SUBGRADE -0" (TYP.) WATER DIVERSION SYSTEM, AS PER LIMITS OF REMOVAL AND DISPOSAL LIMITS OF EARTH-OF UNSUITABLE MATERIAL SECTION 540. EXCAVATION -6" OF CA 7 (SEE NOTE 3) LIMITS OF STRUCTURE COARSE AGGREGATE EXCAVATION BACKFILL (SPECIAL) \*\* SLOPE AS PER 20'-11" LONGITUDINAL SECTION GEOTECH REPORT AT & CULVERT, LOOKING NORTH LIMITS OF REMOVAL AND -DISPOSAL OF UNSUITABLE SECTION THROUGH MATERIAL END STA. 267+83 *PRECAST BARREL* EL. = 663.73 STOP RIPRAP AT R.O.W. LINE IF NEEDED -STONE RIPRAĖ. CLASS A4 (TYP.) BEDDING -FILTER FARRIC SECTION THRU RIPRAP WATER DIVERSION SYSTEM, AS PER SECTION 540. (SEE NOTE 3) -0.04% 0.13% 12'-6" 12'-6" CULVERT 26'-3" PAVEMENT STA. 267+59 BEGIN STA. 267+35 EL. = 663.69 46'-0" END TO END EL. = 663.70 (TYP.) PLAN PROFILE GRADE (ALONG @ ROADWAY)

# INDEX OF STRUCTURAL SHEETS

SHT. NO. **DESCRIPTION** 

*1*5 GENERAL PLAN, ELEVATION AND INDEX

16 HEADWALL DETAILS

17 WINGWALL DETALS

#### GENERAL NOTES

- 1. EXISTING STRUCTURE: NOT SALVAGEABLE. THE NEW STRUCTURE NUMBER IS 099-0508.
- 2. THE PROPOSED PRECAST CONCRETE BOX CULVERT SHALL BE DESIGNED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OF AASHTO M273, COST IS INCLUDED IN PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.
- 3. FLOW OF THE CREEK UNDER US ROUTE 30 IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY PLACE A TEMPORARY STREAM DIVERSION AT THE UPSTREAM END OF THE BOX CULVERT/ WINGWALLS AND TEMPORARILY PUMPING OR OTHERWISE CONVEYING THE STREAM FLOW THROUGH THE WORK ZONE. THE DESIGN AND CONSTRUCTION OF THE TEMPORARY DIVERSION SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THE COST SHALL BE INCLUDED IN CONCRETE BOX CULVERTS ITEM, THE TEMPORARY STREAM DIVERSION PLAN TO BE USED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.
- 4. ALL CONSTRUCTION JOINTS SHALL BE BONDED.
- 5. THE INFORMATION SHOWN IN THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE EXISTENCE, TYPE, SIZE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS MAY BE NECESSARY TO AVOID CONFLICT WITH CONSTRUCTION OPERATIONS AND/OR DAMAGE TO THE UTILITY.
- 6. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX
- 7. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL TREES WITHIN AND ADJACENT TO THE WORK ZONE FOR THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 6'x6'.
- 8. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.
- 9. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- 10. THE CONTRACTOR SHALL SUBMIT A PLAN AND SCHEDULE OF CONSTRUCTION ACTIVITIES TO THE ENGINEER FOR APPROVAL BEFORE STARTING ANY WORK FOR THIS PROJECT.
- 11. AS-BUILT/ACTUAL DETAILS OF EXISTING BOX CULVERT AND WINGWALLS ARE NOT AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY ACTUAL EXISTING STRUCTURE TO BE REMOVED.
- 12. THE COST 6" OF CA 7 UNDER CULVERT SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.

## DESIGN LOADING

HS20-44 AND ALTERNATE MILITARY LOADING AND ALLOWANCE FOR 50 P.S.F. FUTURE WEARING SURFACE

## **DESIGN SPECIFICATIONS**

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002

#### DESIGN STRESSES

FIELD UNITS f'c = 3,500 psi 60,000 psi

PRECAST UNITS f'c = 5,000 psi fy = 65,000 psi (WWF) fy = 60,000 psi (REINFORCEMENT) (REINFORCEMENT)

#### SEISMIC DATA

Seismic Performance Zone (SPZ) = 1 Horizontal Bedrock Acceleration Coefficient (A) = 3.5%q Site Coefficient (S) = 1.0

	DESIGNED	-	WHE		
	DRAWN	-	ST	REVISED	
CONSULTING ENGINEERS 1560 WALL ST. SUITE 222	CHECKED	-	WHE	REVISED	
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100	DATE	-	01/21/2009	REVISED	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	GENERAL PLAN, ELEVATION	ON AND	INDEX
	US ROUTE	30	
SCALE: 1/8" = 1'-0"	SHEET NO. 15 OF 20 SHEETS	STA. 267-	+35 TO STA. 267+83

	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	349	15 T-1	WILL	20	15	
_		D-91-215-09	CONTRACT NO. 60F69			
	FED. RO	DAD DIST. NO   ILLINOIS FED. A	ID PROJECT			