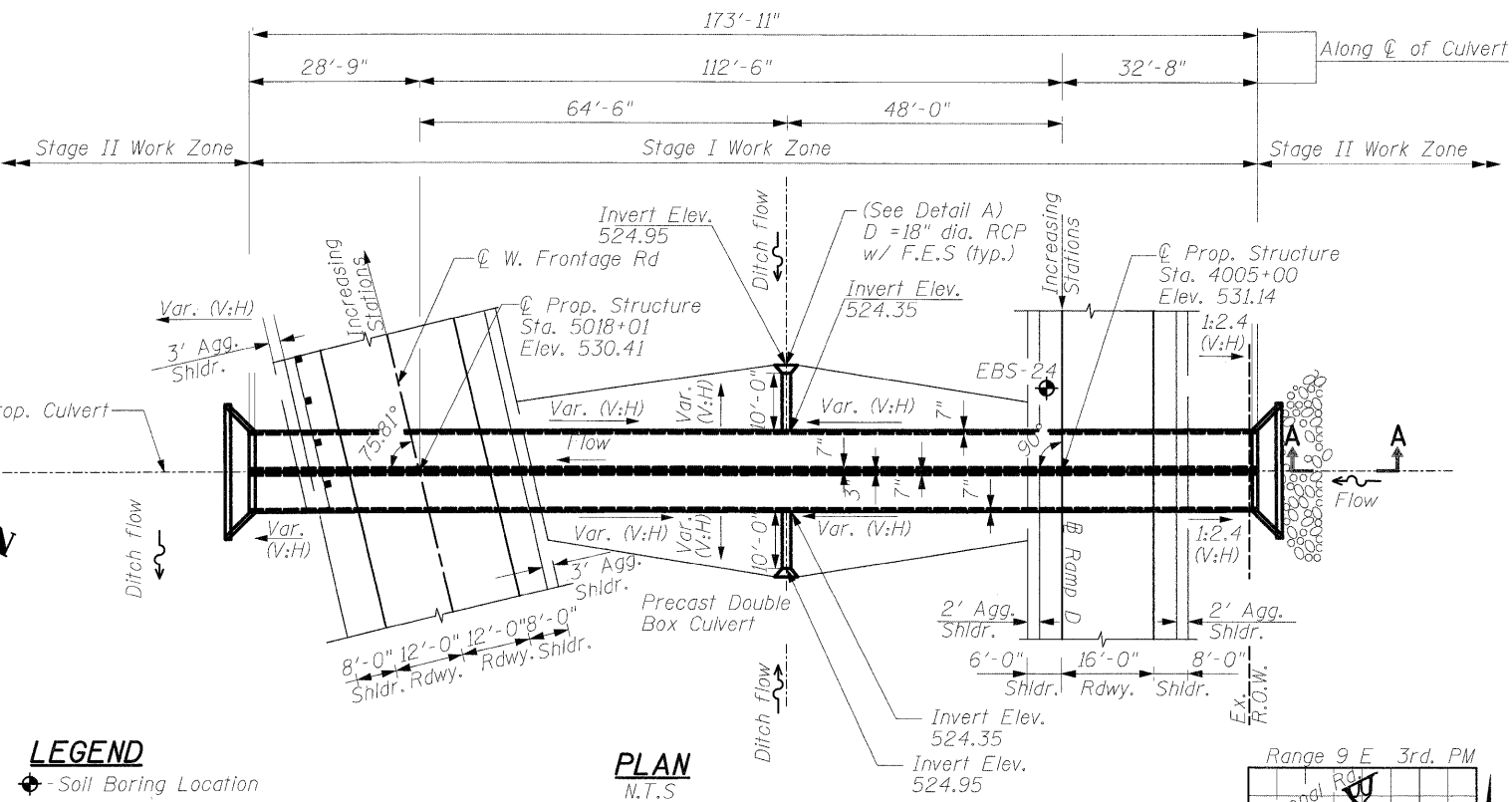
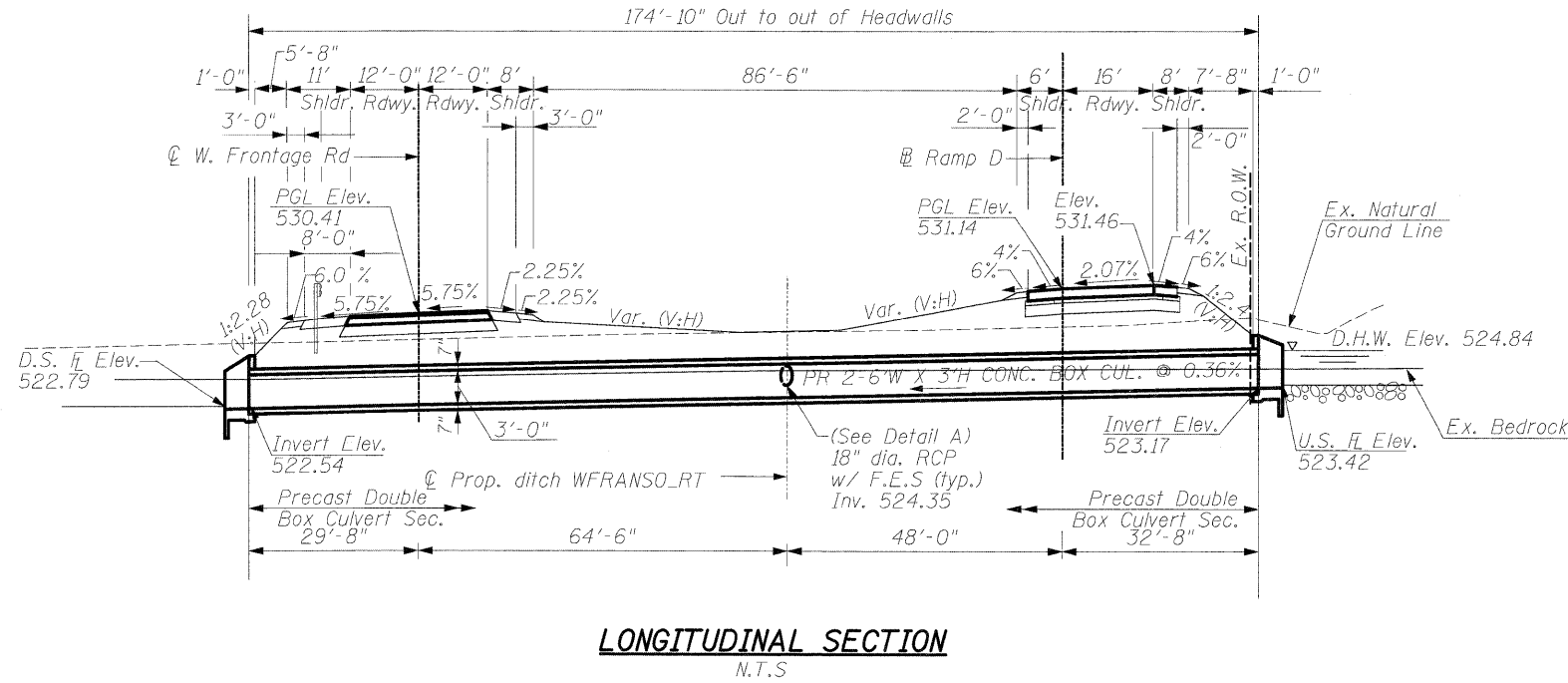


Bench Mark: BM 11  
 (RR spike in 2nd power pole West of I-55 Southbound entrance ramp at N. side of Arsenal Rd., ±1' N of guardrail. Elev. = 549.615)  
 Existing Structures: None

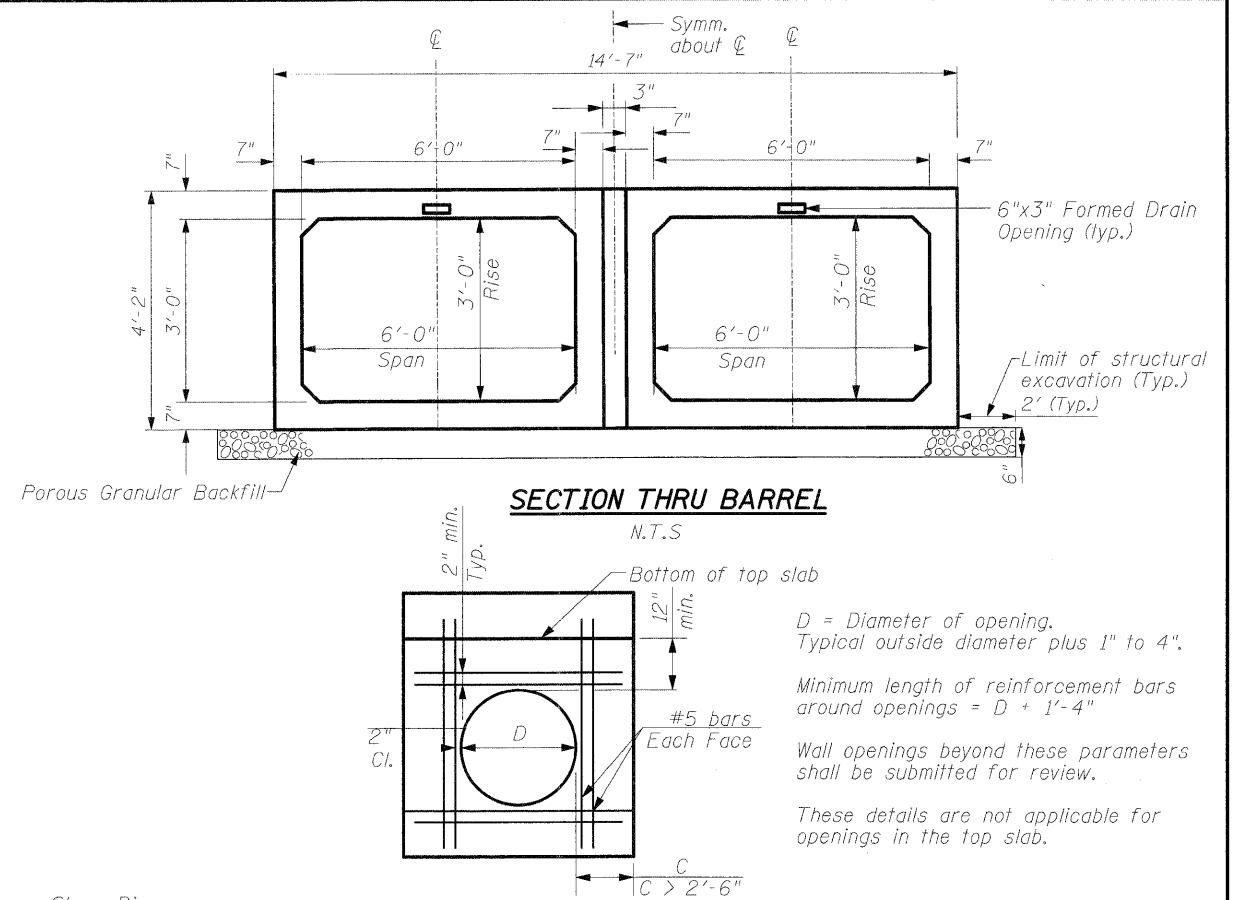
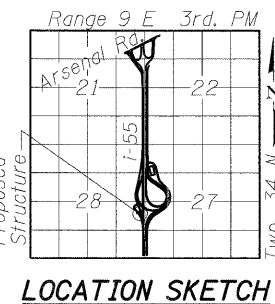
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



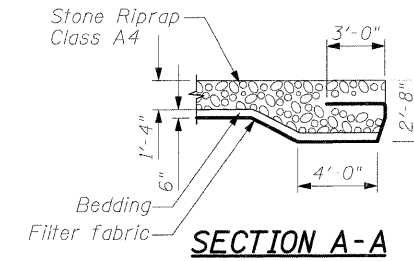
WATERWAY INFORMATION

Drainage Area = 0.052 sq. mi. Low Grade Elev. 529.30 @ Sta. 5018+01 W. Frontage Rd.

Flood	Freq. Yr.	Q C.F.S.	Opening Sq.Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	42	N/A	8.64	524.65	N/A	0.19	N/A	524.84
Base	100	51	N/A	9.85	524.87	N/A	0.20	N/A	525.07
Overtopping		229.5							



DETAIL A: ADDITIONAL WALL REINFOR. FOR PRECAST CONC. BOX CULV. WITH OPENING



CURVE DATA		CURVE DATA	
W. Frontage Rd.	P.I. Station 5015+80.03	Ramp D	P.I. Station 4008+27.72
Delta = 42° 50' 05.43" (LT)	Delta = 18° 36' 40.15" (RT)		
Degree = 5° 12' 31.35"	Degree = 6° 51' 42.37"		
Tangent = 431.4712'	Tangent = 136.8199'		
Length = 822.3699'	Length = 271.2296'		
Radius = 1,100.00'	Radius = 835.00'		
External = 81.5953'	External = 11.1352'		
Long Chord = 80.33517'	Long Chord = 270.0388'		
Mid. Ord. = 75.9607'	Mid. Ord. = 10.9886'		
P.C. Station 5011+48.56	P.C. Station 4006+90.90		
P.T. Station 5019+70.93	P.T. Station 4009+62.13		

DESIGN SPECIFICATIONS  
 AASHTO 2002

LOADING HS-20-44  
 Allow 50 lbs/sq. ft. for future wearing surface.

DESIGN STRESSES  
 FIELD UNITS

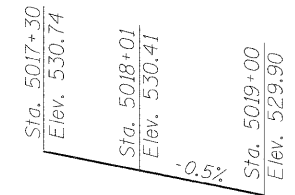
Cast-In-Place Units  
 $f'_c = 3,500$  psi (Concrete)  
 $f_y = 60,000$  psi (Reinforcement)

Precast Units  
 $f'_c = 5,000$  psi (Concrete)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

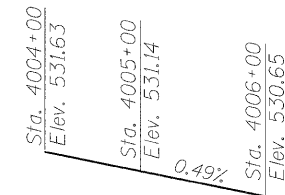
SEISMIC DATA

Seismic Performance Zone (SPC) = A  
 Bedrock Acceleration Coeff.(A) = 0.04g  
 Site Coefficient (S) = 1.0

PROFILE GRADE  
 (Along W. Frontage Rd.)



PROFILE GRADE  
 (Along Ramp D)



GENERAL PLAN & ELEVATION-RAMP D  
 OVER UNNAMED DITCH  
 F.A.I. ROUTE 55 - SEC. (99-1&2)AC-3  
 WILL COUNTY  
 STATION 4005+00  
 STRUCTURE NO. 099-0524

DESIGNED	VP
CHECKED	CL
DRAWN	VP
CHECKED	SP

**SINGH**  
 SINGH & ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 300 W. ADAMS ST.  
 CHICAGO, IL 60606  
 TEL: (312) 629-0240  
 FAX: (312) 629-8449

SHEET NO.  
 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(99-1&2)AC-3	WILL	524	339
Sta. 4005+00 (Ramp D)		CONTRACT NO. 60C31		
FED. RD. DIST. NO. 1 ILLINOIS FED. AID PROJECT				