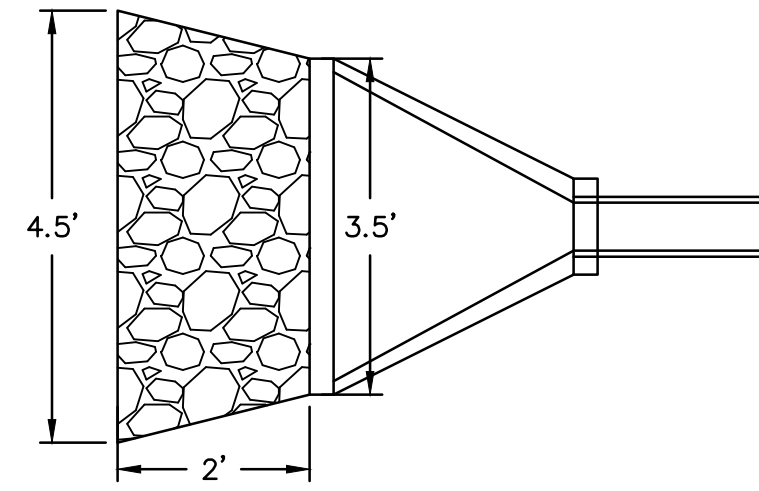


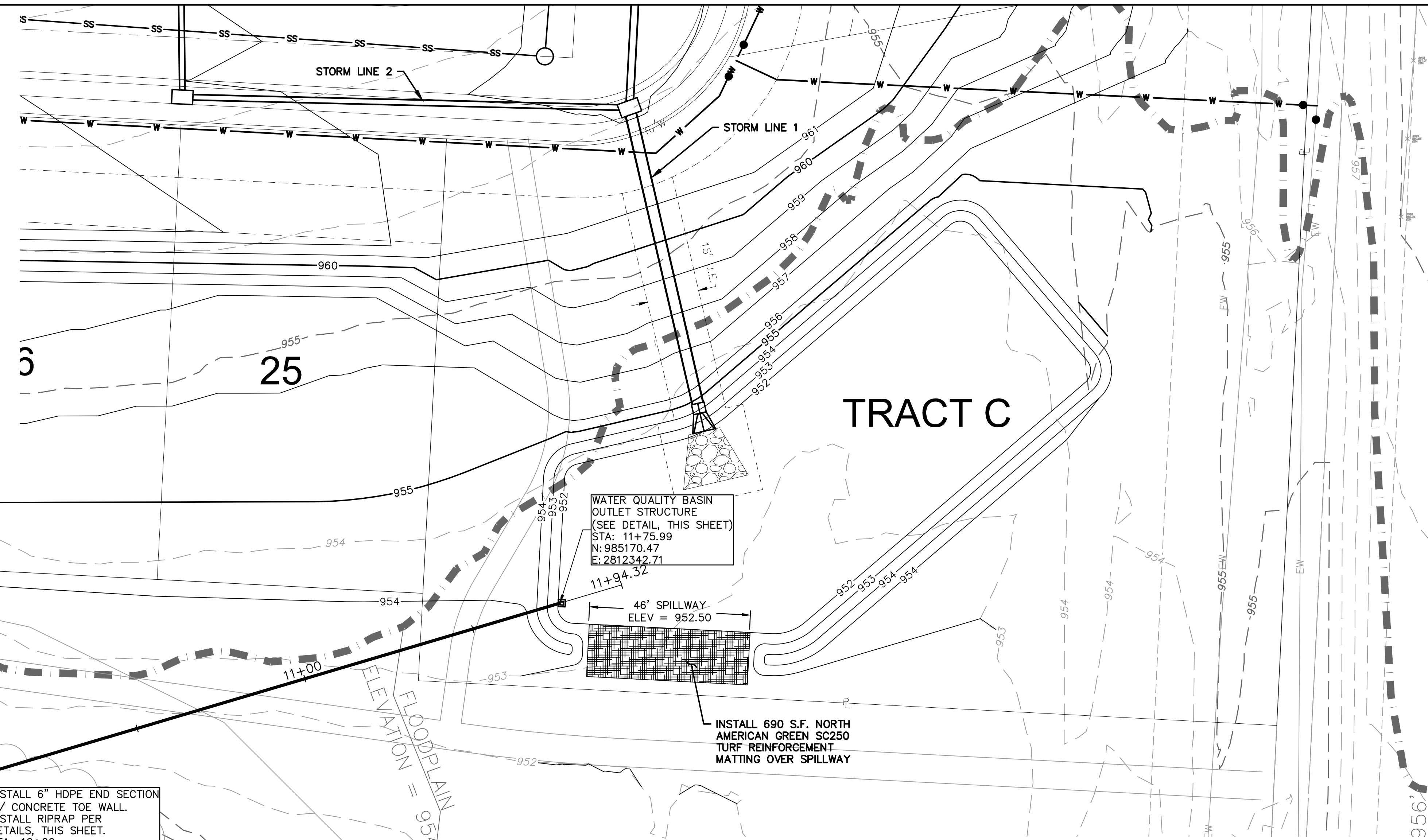
DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Storm Plans\NC_DBP01_0194061.dwg
 DATE: Jun 29, 2020 6:00pm
 XREFS: C:\PTBLK_0194061_34x22 C:\XBASE_0194061 C:\PBNDY_0194061 C:\PBASE_0194061 USER: rneiser

Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
WQv Outlet	0.93	0.5	1	5	2	1.46	0.5

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18



Scale: 1"=2'
 02 RIPRAP OUTLET PROTECTION



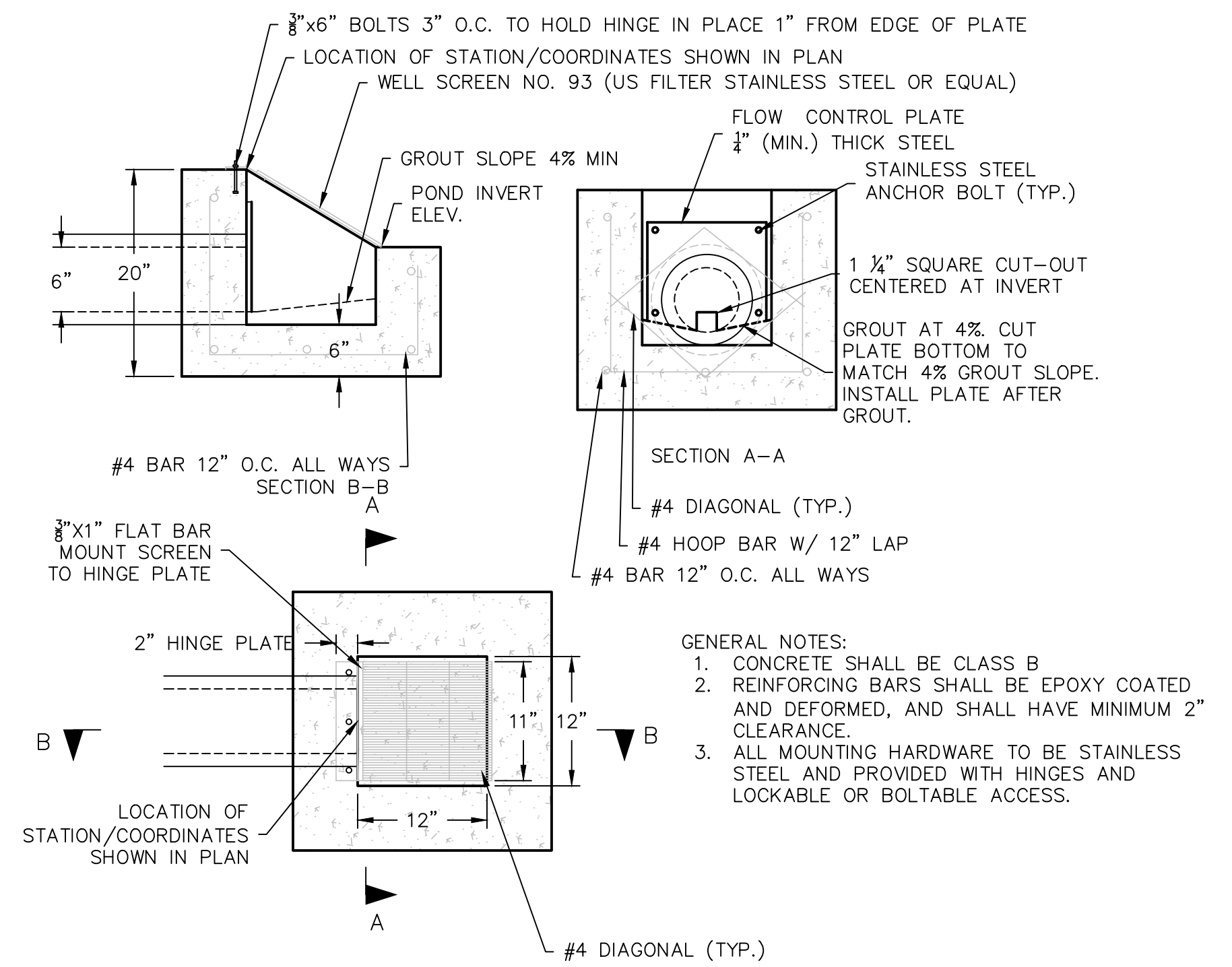
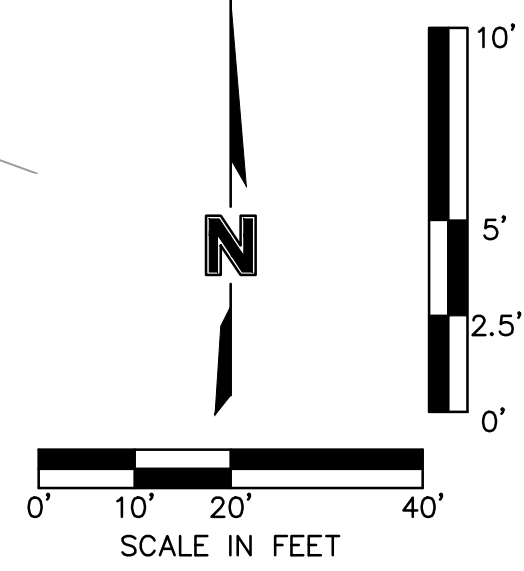
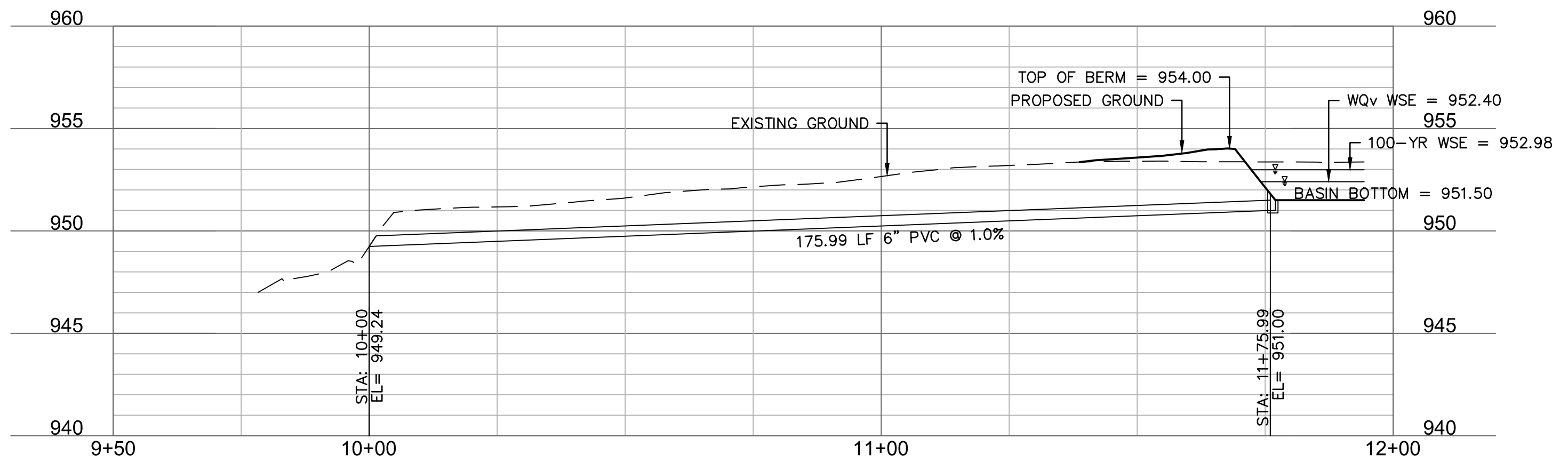
WATER QUALITY BASIN
 OUTLET STRUCTURE
 (SEE DETAIL, THIS SHEET)
 STA: 11+75.99
 N: 985170.47
 E: 2812342.71

46' SPILLWAY
 ELEV = 952.50

INSTALL 690 S.F. NORTH
 AMERICAN GREEN SC250
 TURF REINFORCEMENT
 MATTING OVER SPILLWAY

INSTALL 6" HDPE END SECTION
 W/ CONCRETE TOE WALL.
 INSTALL RIPRAP PER
 DETAILS, THIS SHEET.
 STA: 10+00
 N: 985120.47
 E: 2812173.97

WATER QUALITY OUTLET (9+50 - 12+00)



Scale: 1"=1'
 01 WATER QUALITY BASIN OUTLET STRUCTURE

olsson
 Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 FAX 816.361.1888
 www.olsson.com

STATE OF MISSOURI
 JULIE ELAINE
 SELLERS
 PE-2017000367
 6/30/20
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS
2	06/25/2020	REVISED PER CITY COMMENTS

WATER QUALITY BASIN PLAN
 STREET AND STORM SEWER PLANS
 HOOK FARMS
 FIRST FLAT
 2020
 LEE'S SUMMIT, MO

drawn by: CGW
 checked by: JES
 approved by: NDH
 QA/QC by: JES
 project no.: 019-4061
 drawing no.:
 date: 04/20/2020