

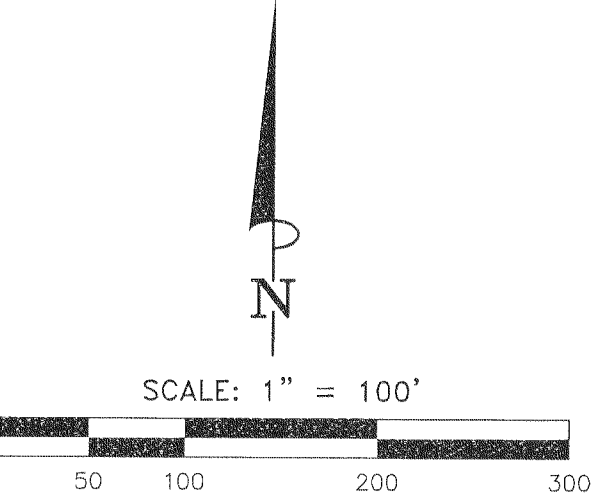
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# APPENDIX 'E'

## PRELIMINARY DRAINAGE STUDY FOR: PINE LAKE OUTLET DRAIN #1689

ALTERNATIVE 1  
PROPOSED LAKE OUTLET STORM SEWER

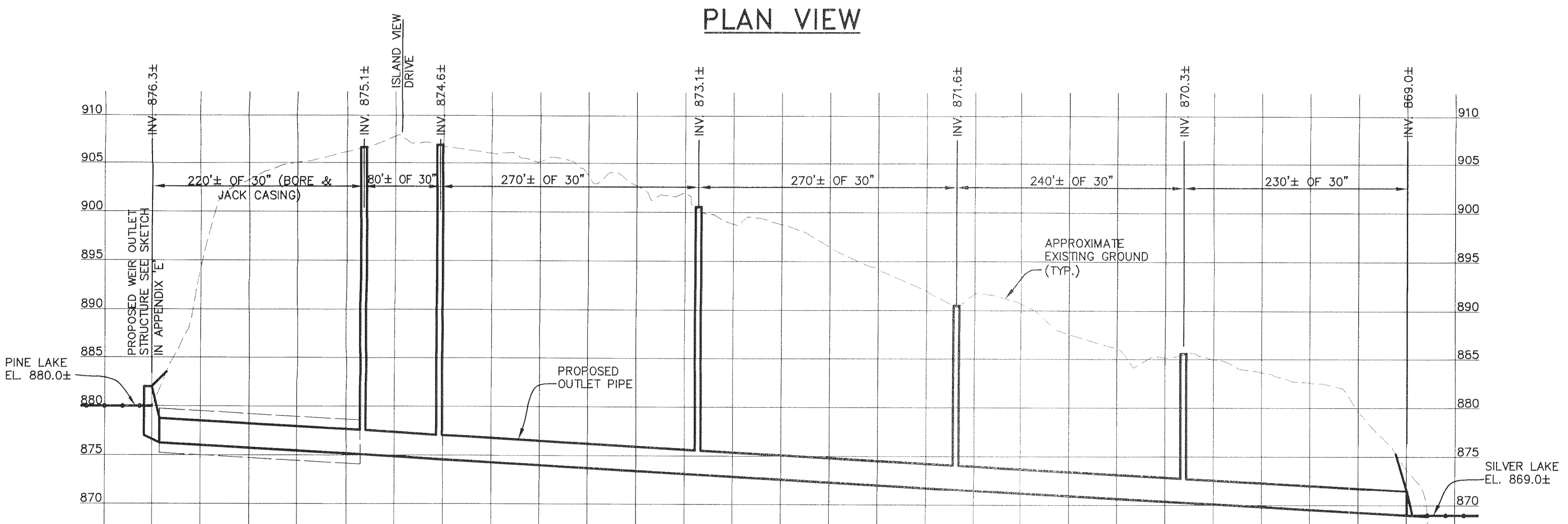
PREPARED FOR:  
GENESEE COUNTY DRAIN COMMISSIONER  
SURFACE WATER MANAGEMENT DIVISION  
G-4608 BEECHER ROAD, FLINT, MICHIGAN 48532



LEGEND	
	EXISTING SANITARY MANHOLE
	EXISTING PUMP STATION MANHOLE
	EXISTING SANITARY SEWER
	EXISTING FORCEMAIN
	EXISTING STORM MANHOLE
	EXISTING STORM CATCH BASIN
	EXISTING CULVERT/PIPE END
	EXISTING CULVERT/PIPE
	EXISTING STORM SEWER
	EXISTING WATERMAIN
	EXISTING UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND GAS
	EXISTING CONTOUR
	PROPOSED STORM MANHOLE
	PROPOSED STORM CATCH BASIN
	PROPOSED END SECTION
	PROPOSED STORM SEWER
	PROPOSED DRAINAGE DIRECTION
	PROPOSED EASEMENT
	PROPOSED RIPRAP
	PROPOSED BORE AND JACK CASING



PLAN VIEW



PROFILE VIEW

SCALE: H- 1"=100'  
V- 1"=10'

REVISED: SEPTEMBER 10, 2010  
DATE: AUGUST 24, 2010