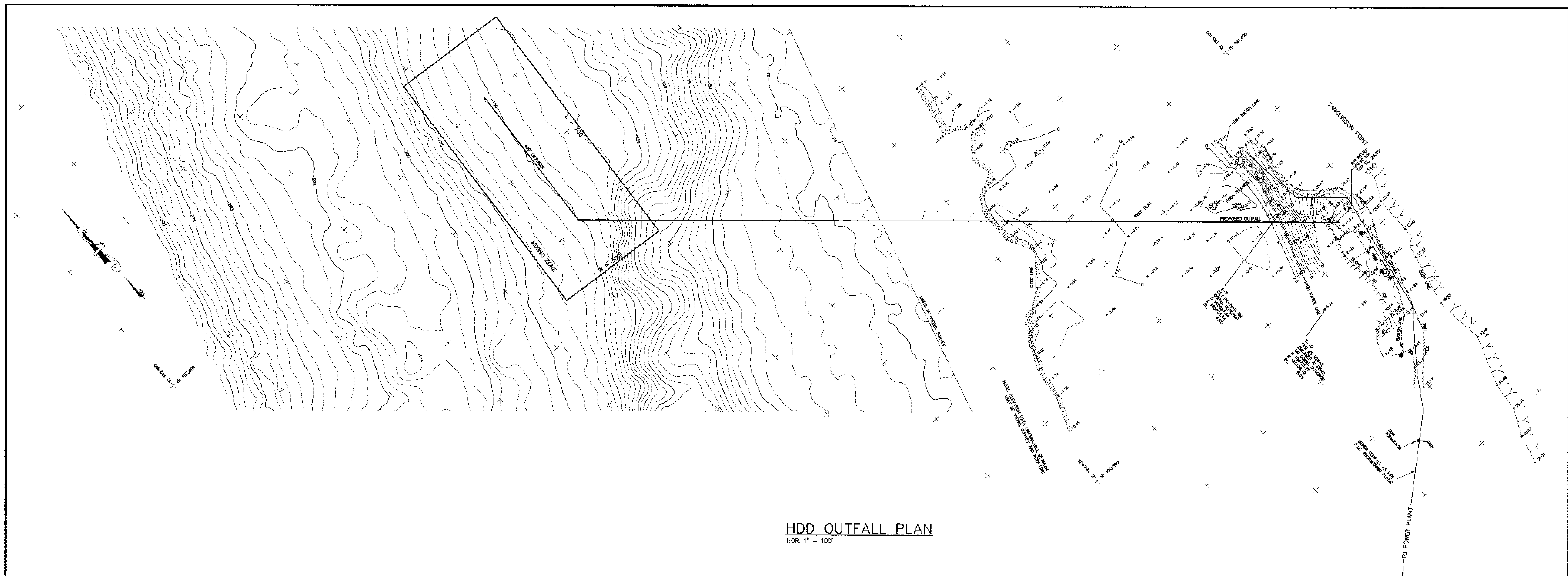
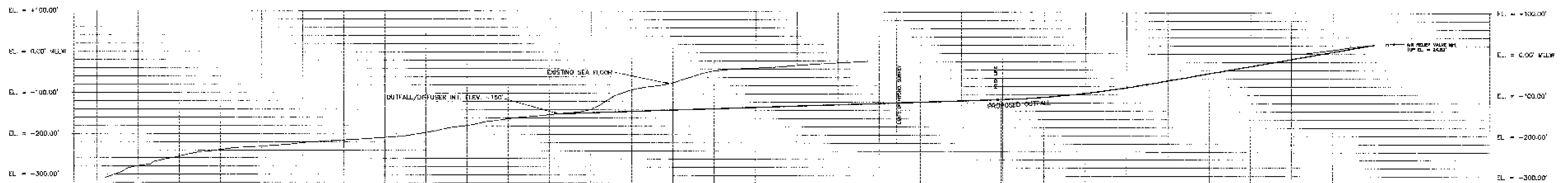


US EPA ARCHIVE DOCUMENT

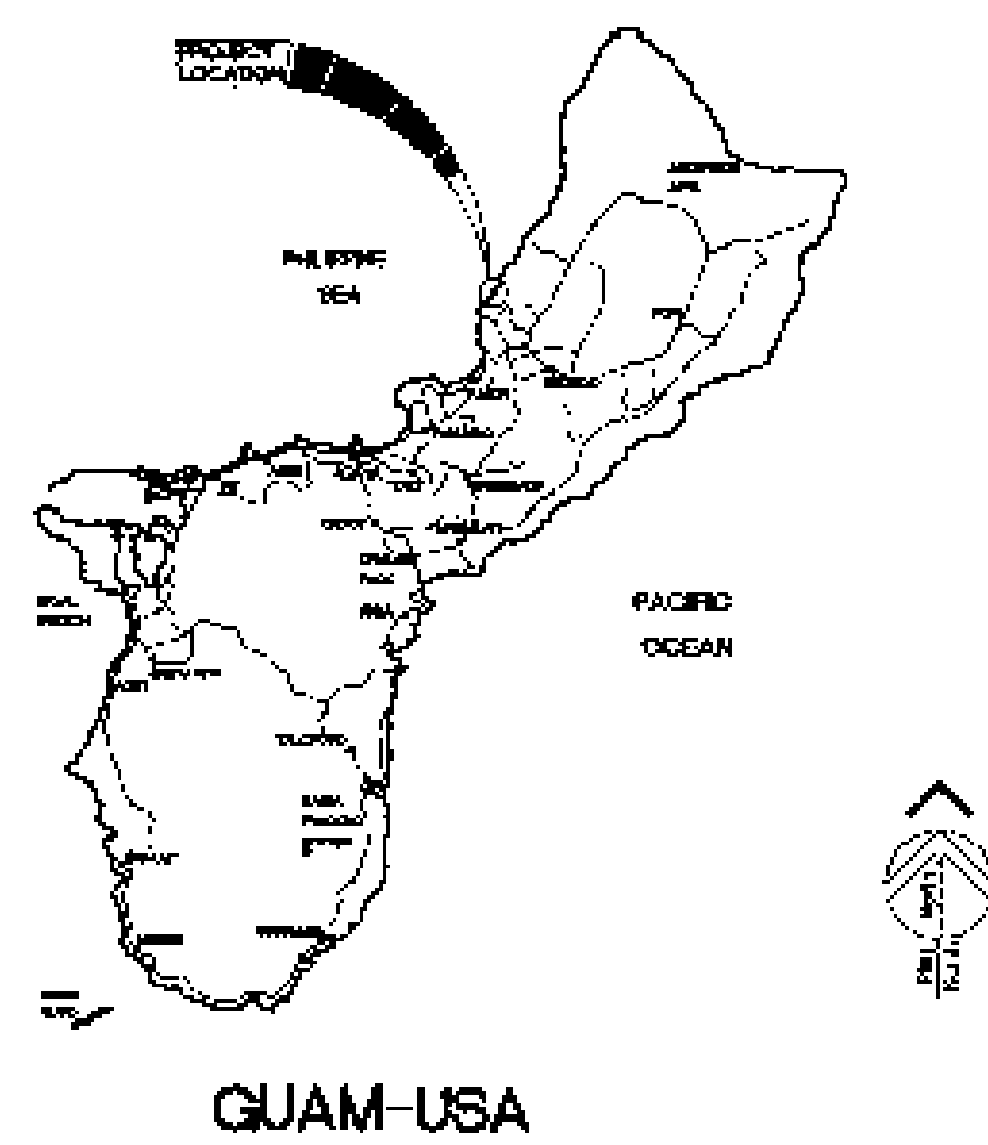


**HDD OUTFALL PLAN**  
HOR. 1" = 100'



**HDD OUTFALL PROFILE**  
HOR. 1" = 100'  
VER. 1" = 100'

**LOCATION MAP**



**SURVEYOR'S NOTES**

1. SURVEY WAS BASED ON THE FOLLOWING GGN-85 POINTS CONVERTED TO GDM-83 VALUES:  
GGN 442 N 189414.81 E 186216.48 ELEV. 25.80 (MLLW)  
GGN 444 N 198952.23 E 180688.15 ELEV. 186.68 (MLLW)  
GGN 446 N 183311.88 E 188286.17 ELEV. 295.93 (MLLW)
2. CONTOURS ARE BASED ON MEAN LOWER LOW WATER (MLLW)
3. CONTOUR INTERVAL IS 1' INSIDE REEF LINE AND 5' OUTWARDS
4. SURVEY DATA RECORDED IN FIELDBOOK G99-01

**BATHYMETRY NOTES**

1. DEPTHS ARE PROVIDED IN FEET - DATUM IS MEAN LOWER LOW WATER (MLLW)
2. HORIZONTAL DATA ARE PROVIDED IN PLANE COORDINATES USING THE FOLLOWING GEODETIC PARAMETERS:  
SPHEROID : CLARK 1866  
DATUM : GUAM 1963  
PROJECTION : AZIMUTHAL EQUIDISTANT
3. BATHYMETRY DATA OBTAINED ON NOVEMBER 11, 1998 USING A KNAJDSEN 3208/P ECHOSOUNDER WITH 200 KHZ TRANSDUCER
4. SURFACE POSITIONING OBTAINED USING ASHTECH DNS-12 DGPS

REVISION	DATE	BY	DESCRIPTION	APPROVED
PROJECT No. <b>GUAM WATERWORKS AUTHORITY GOVERNMENT OF GUAM</b>				
CONTRACT No. <b>TUMON INFRASTRUCTURE AND BEAUTIFICATION</b>				
DESIGNED BY: <b>NORTHERN DISTRICT OUTFALL EXTENSION</b>				
DRAWN BY: <b>HORIZONTAL DIRECTIONAL DRILLING</b>				
CHECKED BY: <b>PLAN AND PROFILE</b>				
SURV. BY:			RECOMMENDED BY:	
PROJECT ENGINEER			CHIEF OF ENGINEERING	
SECTION MANAGER			DATE	
SCALE: AS NOTED			DRAWN NO.	
ASSOCIATES, INC.			DRAWING NUMBER	
EDUARDO L. NODA			SHEET	
EDUCATIONAL SERVICES & ASSOCIATES, INC.			DATE	
1000 W. WILSON BLVD., SUITE 200			DATE	
AGANA, GUAM			DATE	