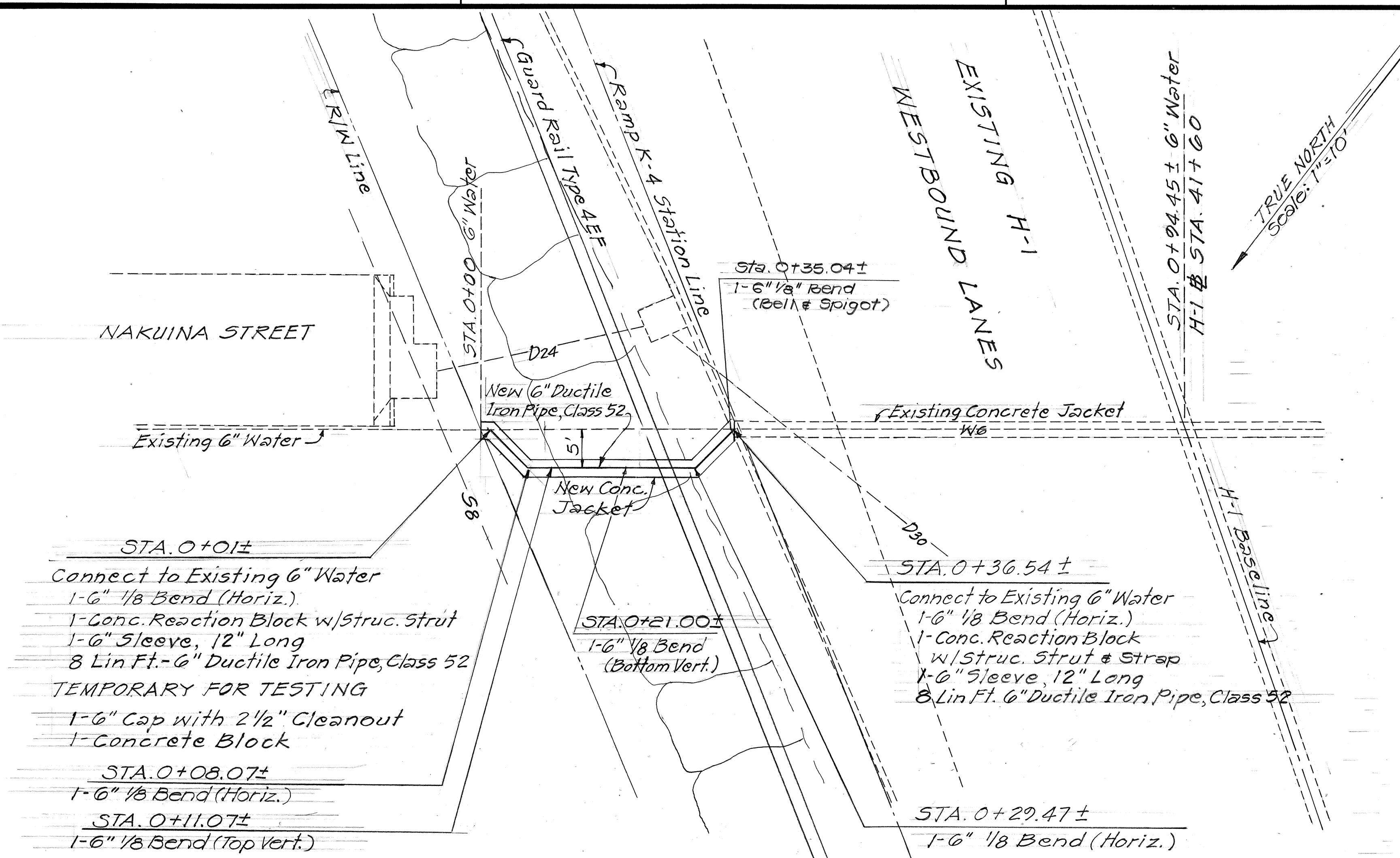


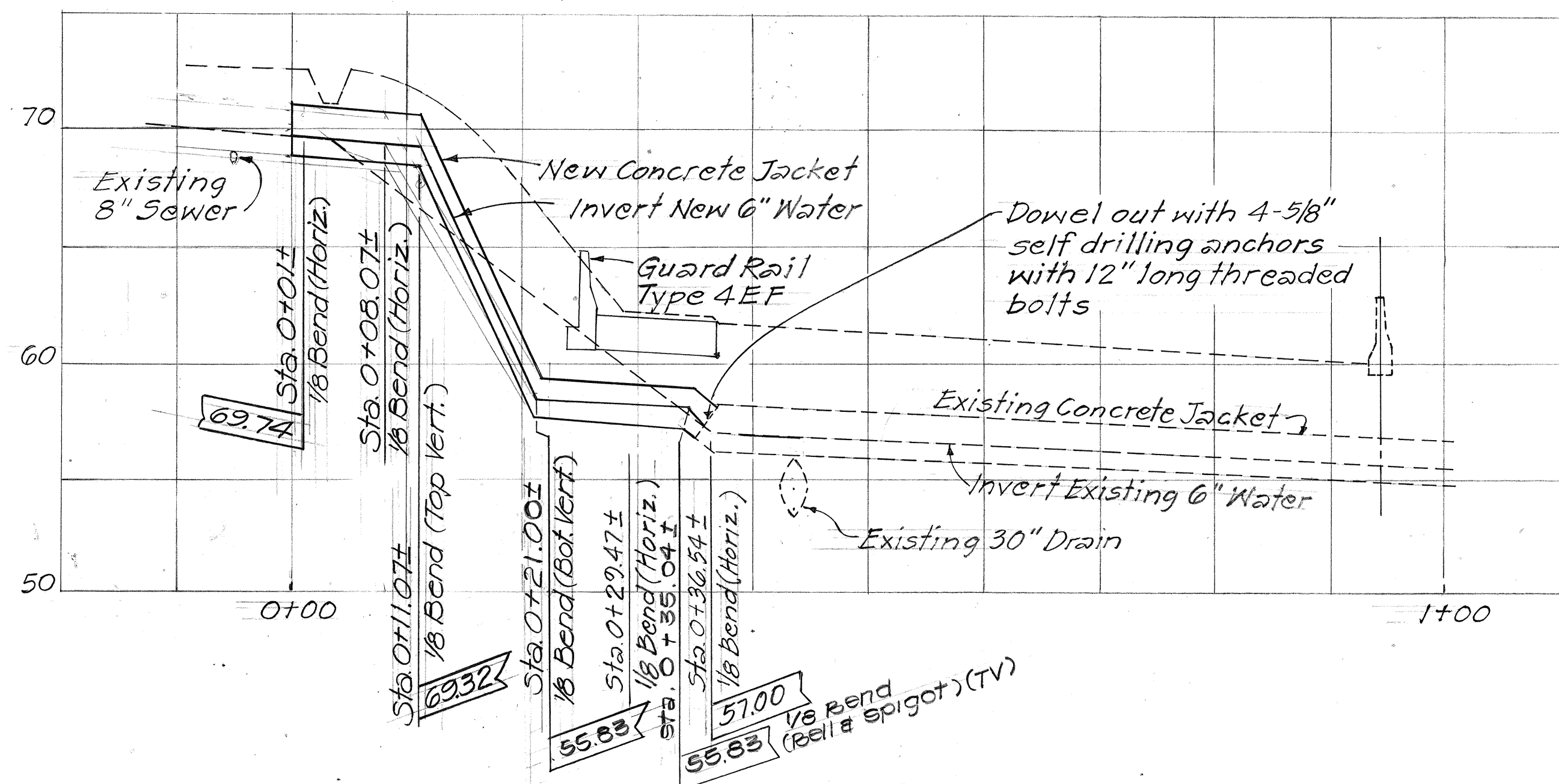
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H1-1(187)	1984	78	197

GENERAL WATER NOTES

- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 1976, as amended, of the Hawaii Highways Division, Department of Transportation.
- The BWS Standard Details, Figures 1 to 62 inclusive, bound in the "Water System Standards" of the BWS, dated March 1977, as amended, are applicable to this Project.
- The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the Water System.
- The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and shall pay for all damages to existing utilities.
- Any adjustments to the existing water system required during construction to meet requirements of BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.
- Unless otherwise specified, connections to existing water mains and chlorination of new water mains shall be done by the Contractor, with the BWS Inspector coordinating the work. For details, contact BWS Planning and Engineering Division, Engineering Branch, Construction Section.
- All cast iron (gray or ductile) pipes, fittings, and valves shall be enclosed in plastic material in accordance with AWWA Specifications C105-72 "Polyethylene Encasement for Gray and Ductile Cast Iron Piping for Water and other Liquids."
- Prior to excavating for new drain, sewer and other utility lines, the Contractor shall verify in the field the location of existing water mains and appurtenances. Where the installation of new drain, sewer or other utility lines are to cross over or under existing water mains, the Contractor shall expose the existing water mains prior to trenching. Excavation around water mains shall be done by hand.
- In the event that water mains other than Ductile Iron is to be used, the plans shall be resubmitted for approval.
- Reapproval shall be required if this project is not under construction within a period of one year. (See Rules and Regulations of the Board of Water Supply)
- Contractor shall furnish and install additional fittings if necessary to meet field conditions.
- The Contractor shall notify the Board of Water Supply Field Operation Division for toning services to locate the water mains in the following locations prior to commencing any work.
 - Sta. 17+35± 24-inch Water Main
 - Sta. 37+00± 36-inch Water Main
 - Sta. 41+60± 6-inch Water Main
 The Contractor shall not operate any heavy equipment over these pipes when the cover over these pipes are less than three feet. During excavation and subgrade work and during laying and compaction of the Base Materials every precaution shall be taken to prevent any heavy equipment from being operated over these pipes.
- Anchors installed on existing concrete jacket will not be measured for payment but shall be considered incidental to Class B Concrete for Water System.



PLAN-NEW 6" WATER
 # STA. 41+60 ±
 SCALE: 1" = 10'



PROFILE-NEW 6" WATER
 # STA. 41+60 ±
 SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

APPROVED: _____ DATE: 7-12-83
 CHIEF, PLANNING & ENGINEERING, BWS

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
WATER UTILITY PLAN
 INTERSTATE ROUTE H-1 IMPROVEMENTS
 MIDDLE STREET TO KALIHI INTERCHANGE
 WESTBOUND LANES
 E.A.I. PROJ. NO. 1-H1(187)
 SCALE: As Shown
 SHEET No. 1 OF 1 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NO.	

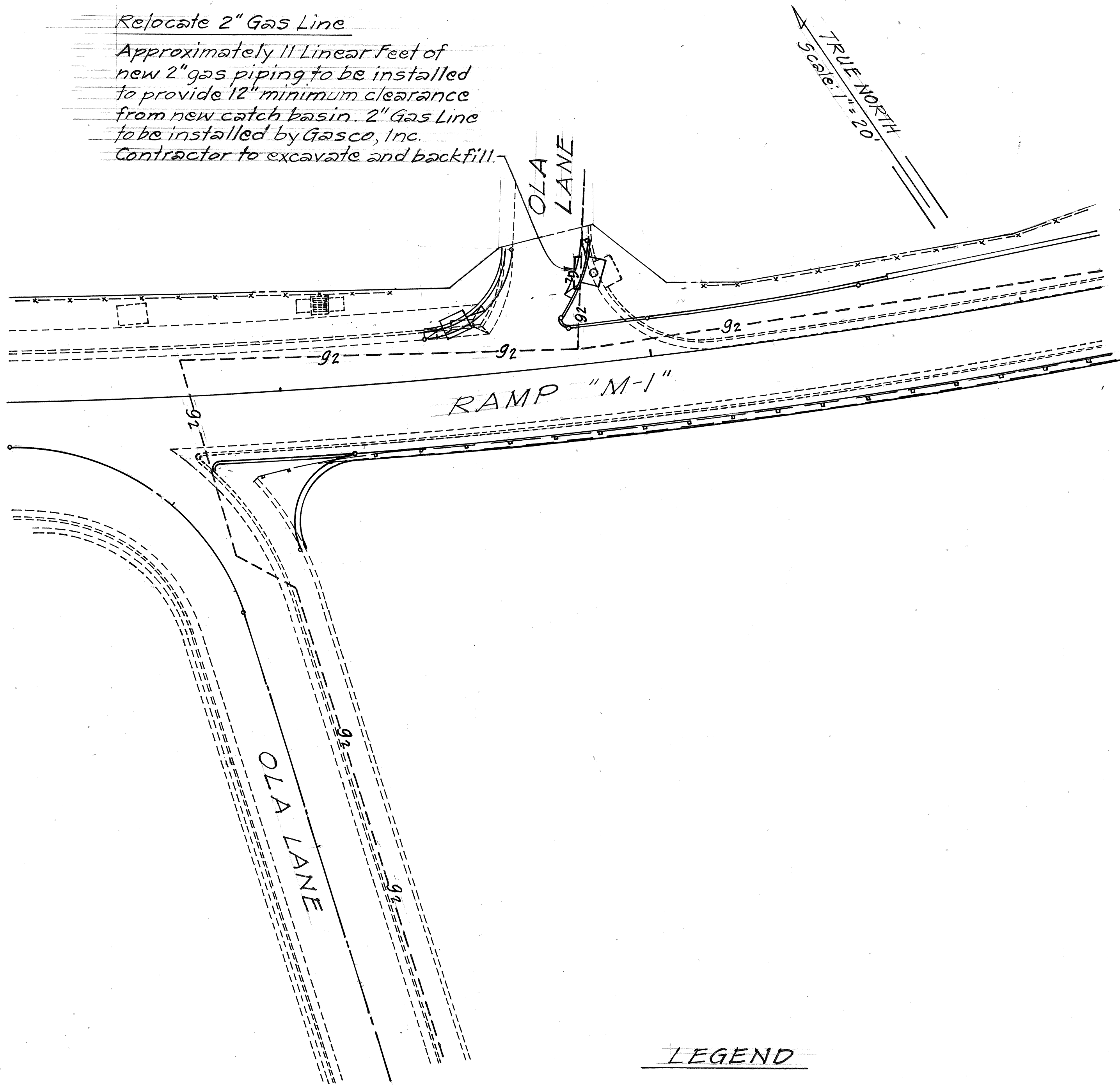
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1 (187)	1984	19	197

GAS NOTES

- The Gasco, Inc. gas pipe lines in the project area are plastic coated and cathodically protected. The Contractor shall be extremely careful when working near gas pipe lines.
- Prior written clearance must be obtained from Gasco, Inc. at least five (5) working days before starting excavation near these gas lines. Since gas line locations on field maps are approximate, the Contractor, after obtaining a written clearance, shall call Gasco, Inc., a minimum of 48 hours before starting excavation to arrange for field location of existing gas lines. The telephone number is 547-3575 during business hours, and 526-0066 after hours. The Contractor shall excavate and backfill around gas pipe lines in the presence of a Gasco, Inc. representative. All backfill within six inches of gas pipe line shall be select cushion material approved by Gasco, Inc.
- For relocation of any gas pipe line, the Contractor shall notify Gasco, Inc. five (5) working days before starting work. The Contractor shall provide the necessary excavation and backfill, arrange for traffic permits and restore sidewalk pavement or other facilities. Any relocation of gas facilities shall be done by Gasco, Inc.
- The Contractor shall notify Gasco, Inc. immediately after any damage has been caused to existing gas pipelines, their coatings or their cathodic protection devices. Repair work on this damage shall be done by Gasco, Inc. with payment for this work to be borne by the Contractor.
- Minimum vertical or horizontal clearance between gas pipe lines and other pipelines, conduits, or ductlines shall be 12 inches. Adequate support and protection for gas pipe lines exposed in the trench shall be provided. Such support and protection shall be approved by Gasco, Inc.
- The Contractor shall work in an expeditious manner in order to keep uncovered gas pipe lines exposed for as short a period of time as possible.
- Any excavation and backfill required for the relocation of the 2" gas pipe line at Ola Lane will not be measured and paid for but shall be considered incidental to the new catch basin.

Relocate 2" Gas Line

Approximately 11 Linear Feet of new 2" gas piping to be installed to provide 12" minimum clearance from new catch basin. 2" Gas Line to be installed by Gasco, Inc.
Contractor to excavate and backfill.



LEGEND

- G2-- Existing Gas Line
- G2— New Gas Line

PLAN VIEW - GAS

Scale: 1" = 20'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DRAWN BY	DESIGNED BY	
NOTED BY	QUANTITIES BY	
NO.	CHECKED BY	

APPROVED:

Cummins
GASCO, INC.

08/17/83
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
UTILITY - GASCO, INC.
INTERSTATE ROUTE HI IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
WESTBOUND LANES
F.A.I. PROJ. NO. I-HI-1 (187)
Scale: As Shown Date: August, 1983
SHEET NO. 1 OF 1 SHEETS