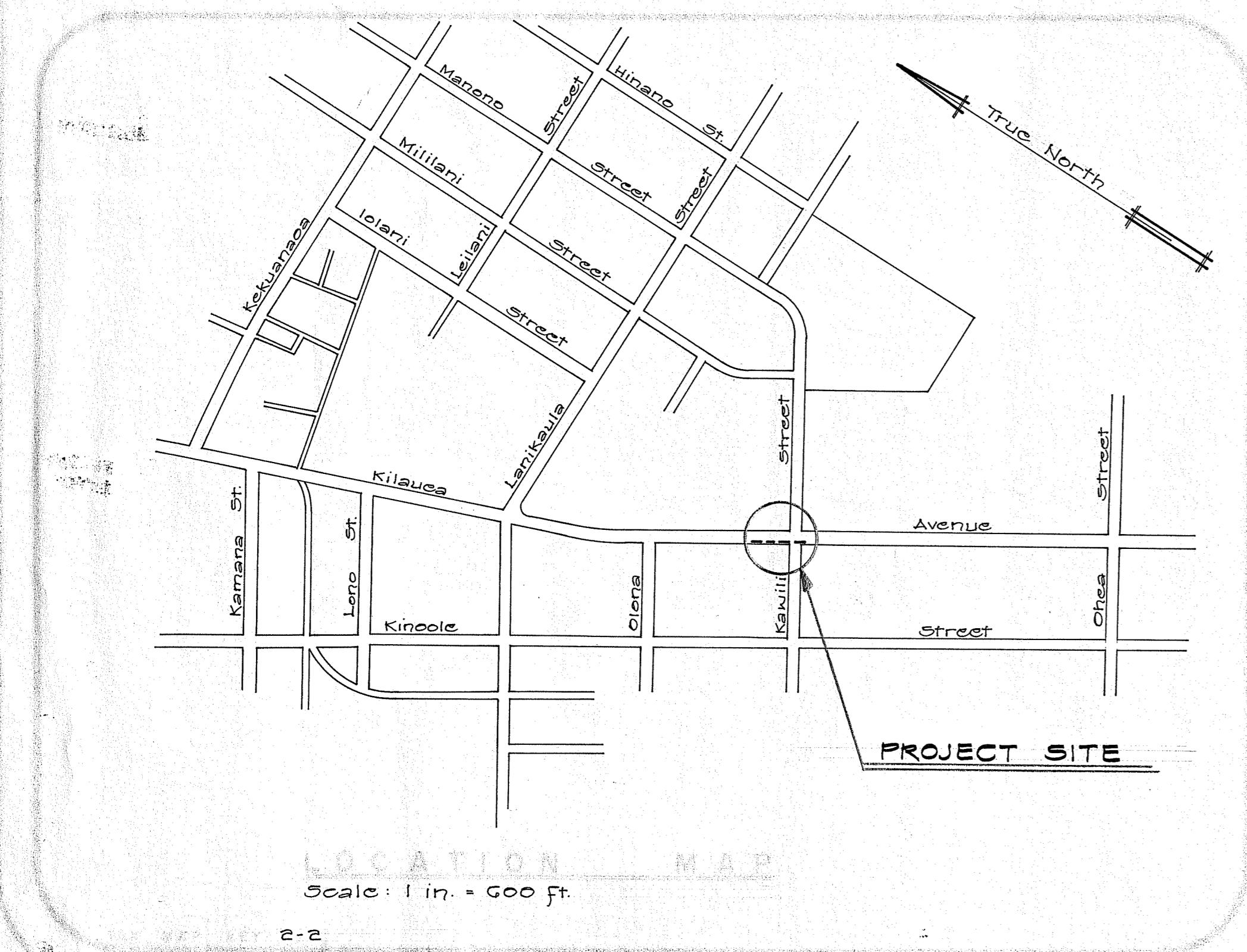


KAWILI - KILAUEA STREET DRAINAGE IMPROVEMENT

JOB NO. P-2346

WAIAKEA, SOUTH HILO, HAWAII

department of public works, county of hawaii
BUREAU OF PLANS AND SURVEYS
hilo, hawaii



Sheet number	Description
1	TITLE SHEET
2	PLAN & DETAILS
3	DETAILS

INDEX

MANAGER, DEPARTMENT OF WATER SUPPLY, COUNTY OF HAWAII

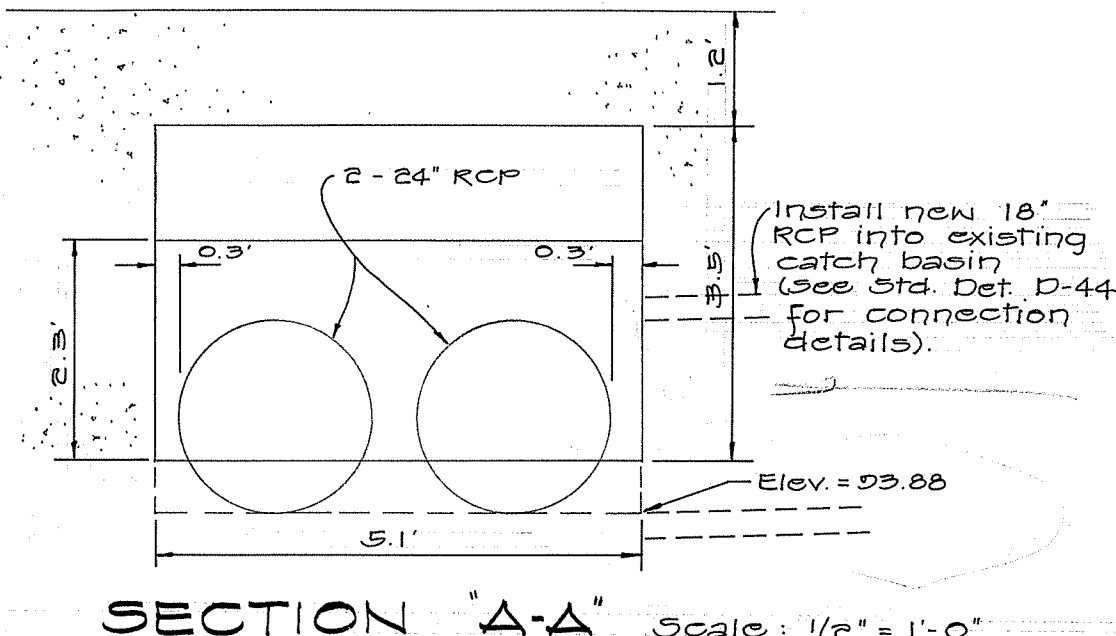
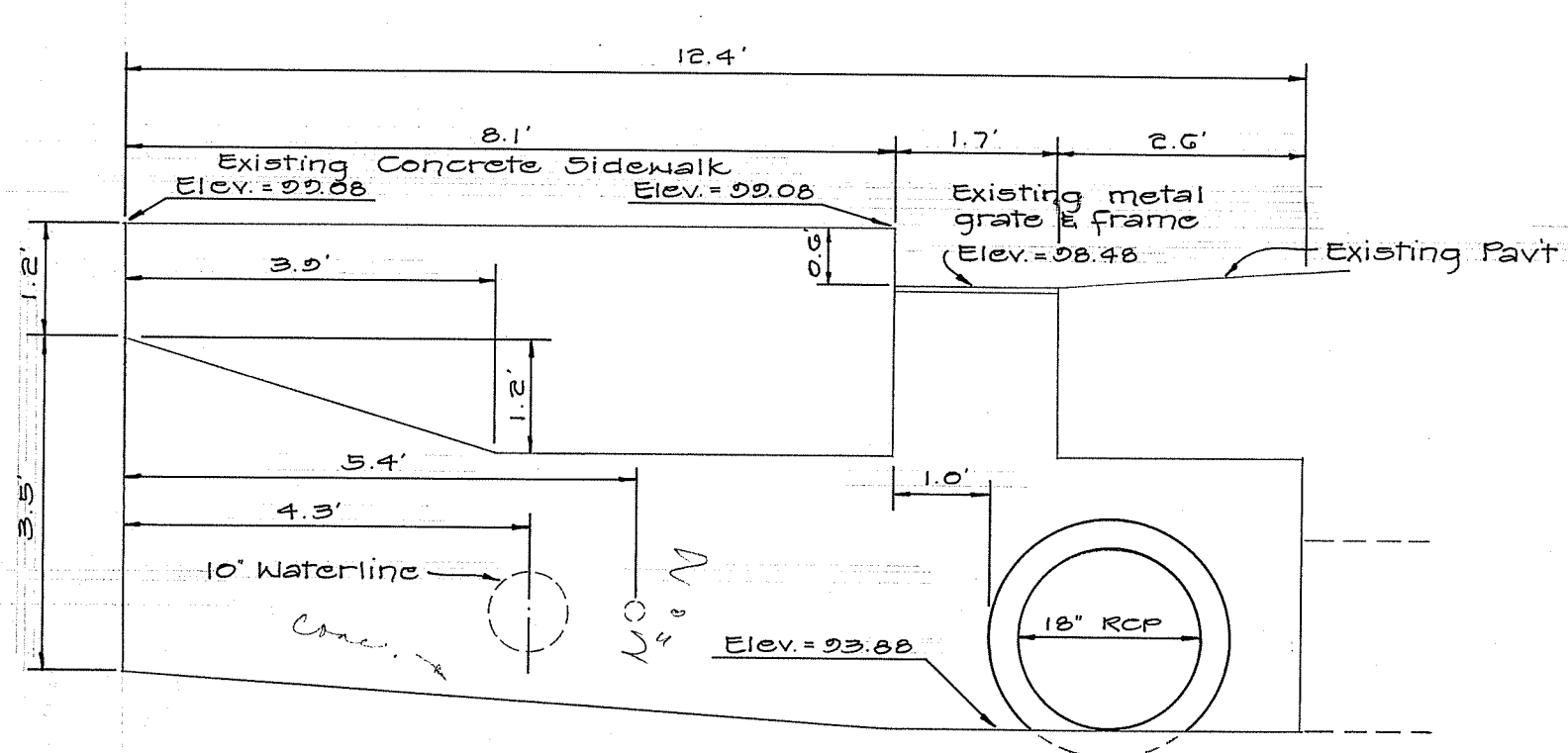
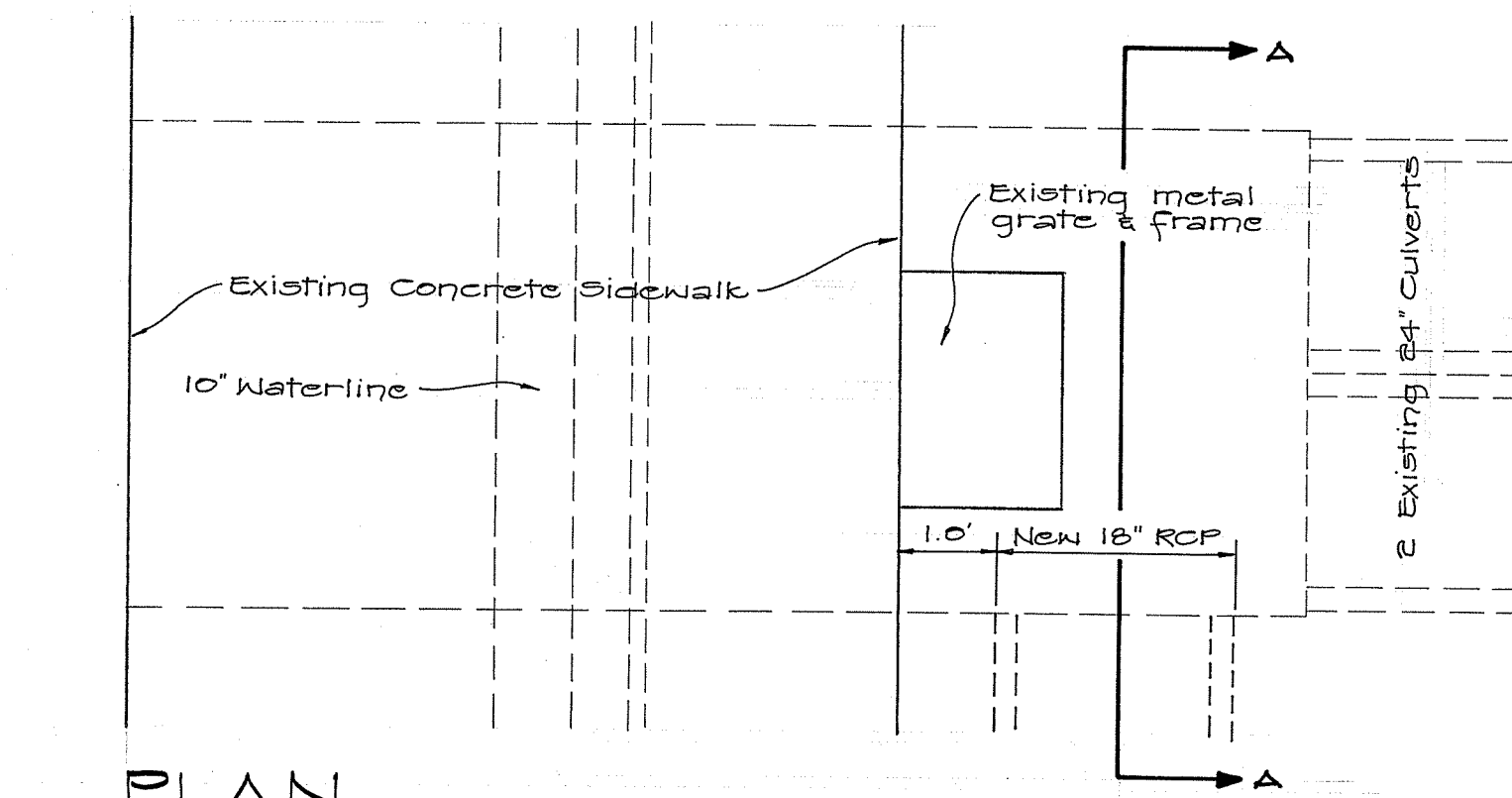
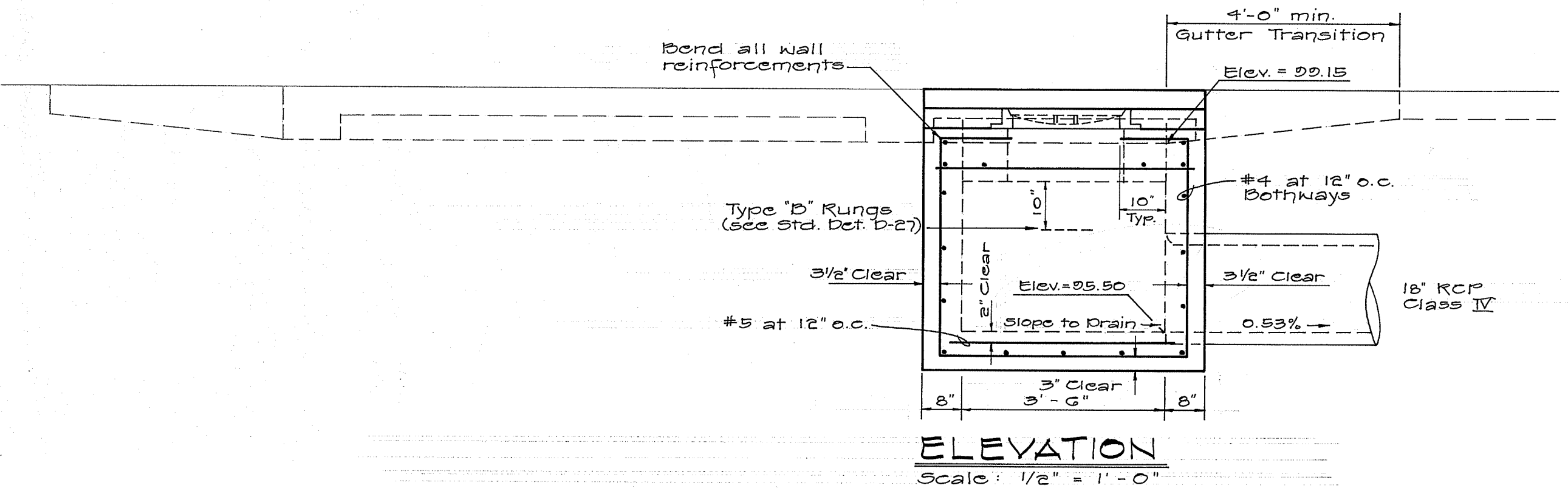
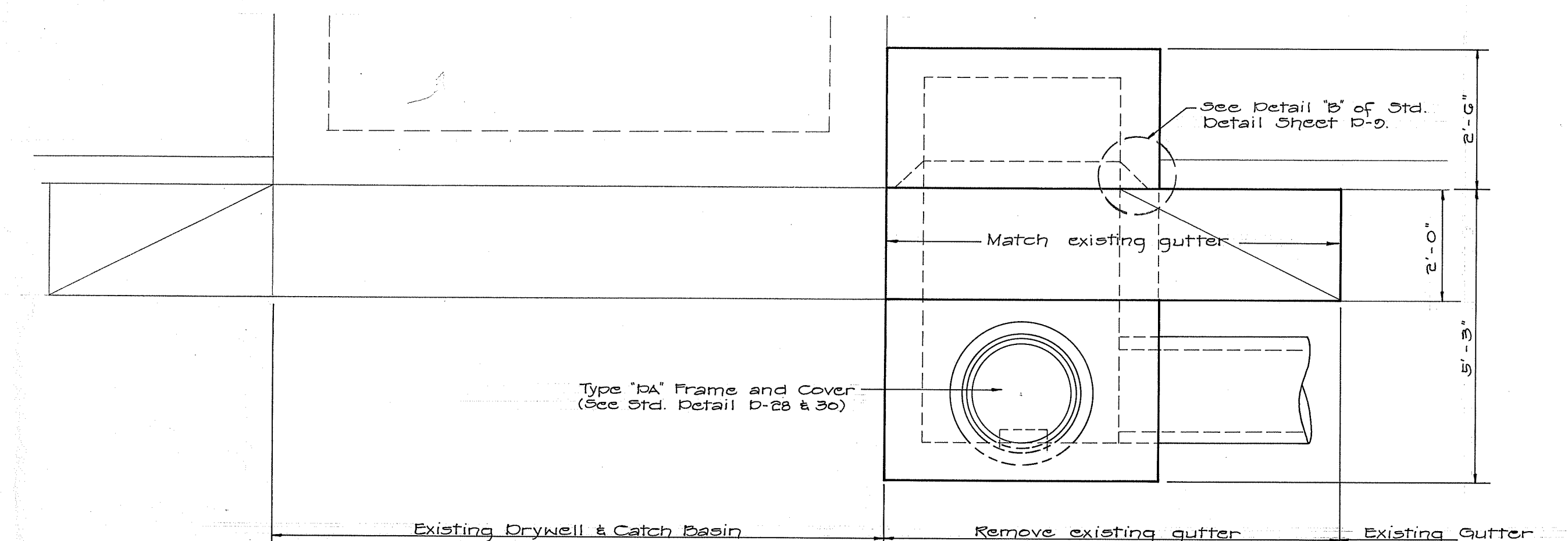
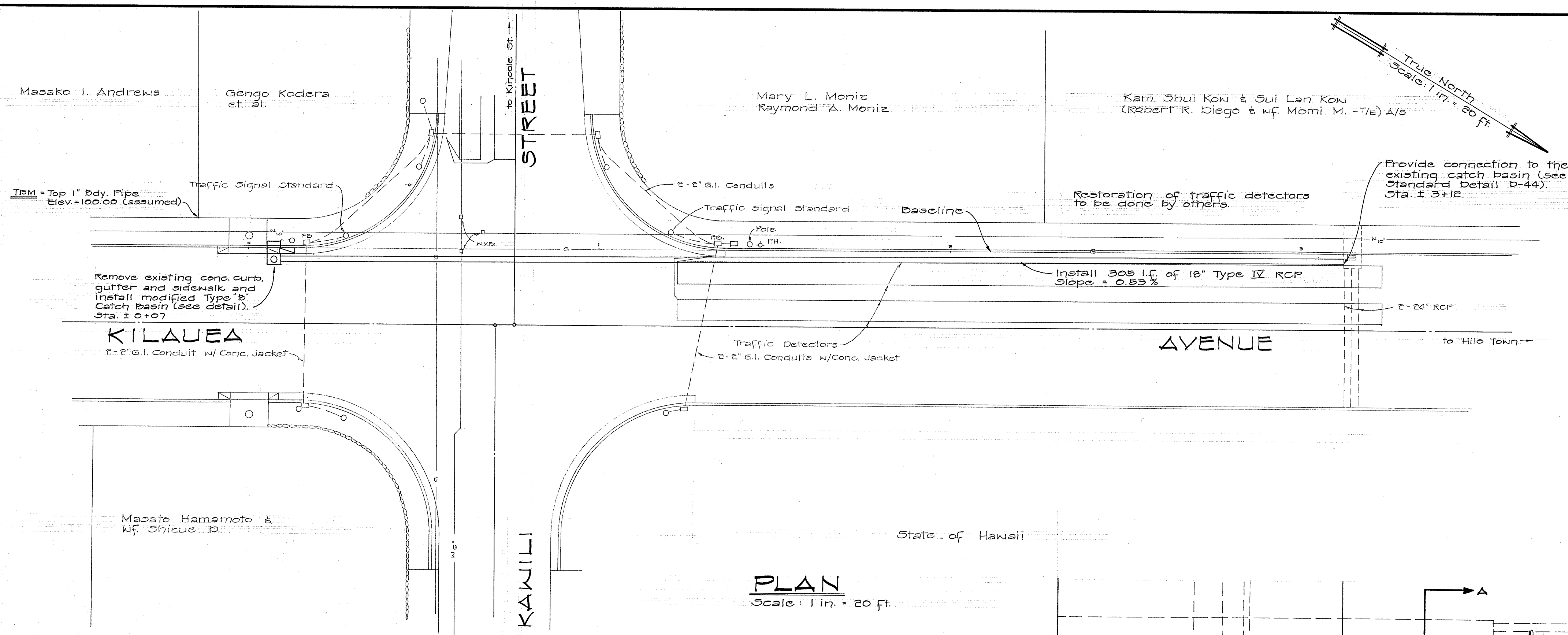
DATE

APPROVED

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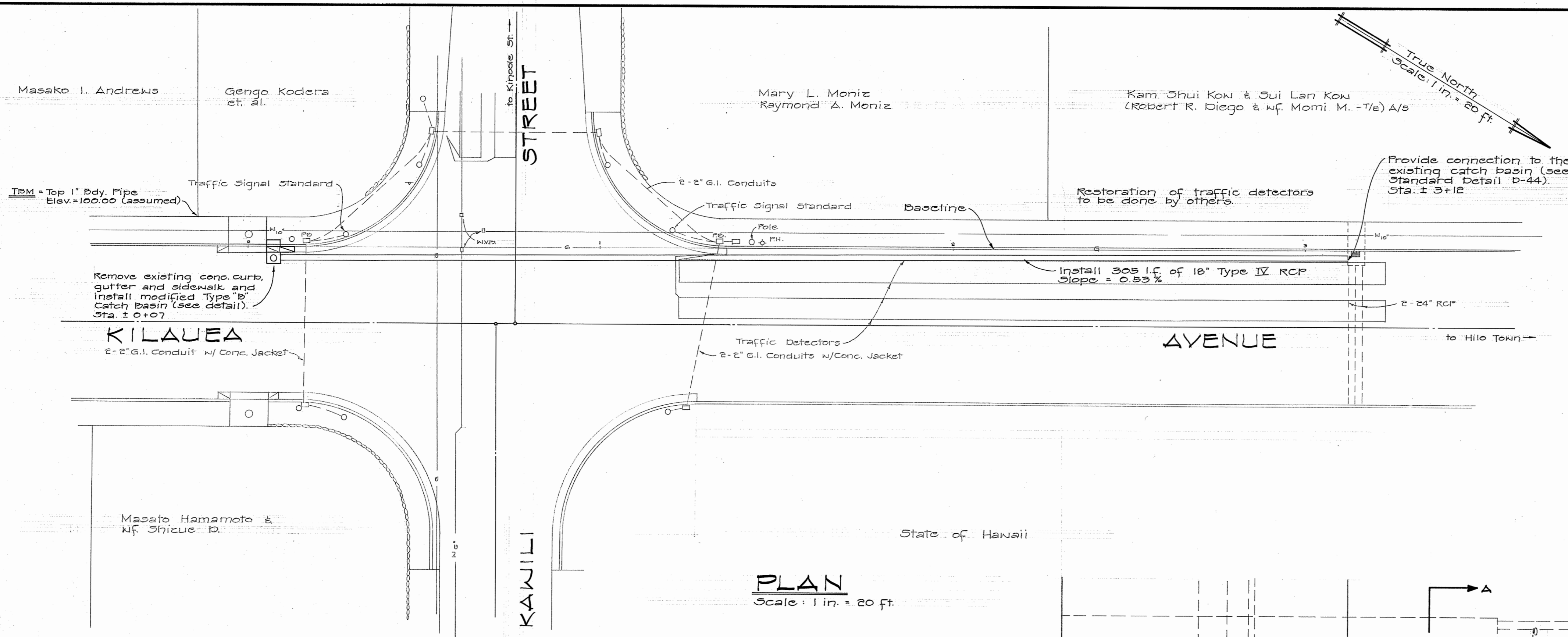
- CONST**
- All work of Public Works dated August 11, 2007.
 - The Engineer shall be responsible for determining the location of any or all utility lines to be installed.
 - The Contractor shall be responsible for determining the location of any or all utility lines to be installed.
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- NOTES**
- The Contractor shall be responsible for determining the location of any or all utility lines to be installed.
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- GRADING**
- All grading work shall be done in accordance with the standards of the State Department of Public Works.
 - The Contractor shall be responsible for determining the location of any or all utility lines to be installed.
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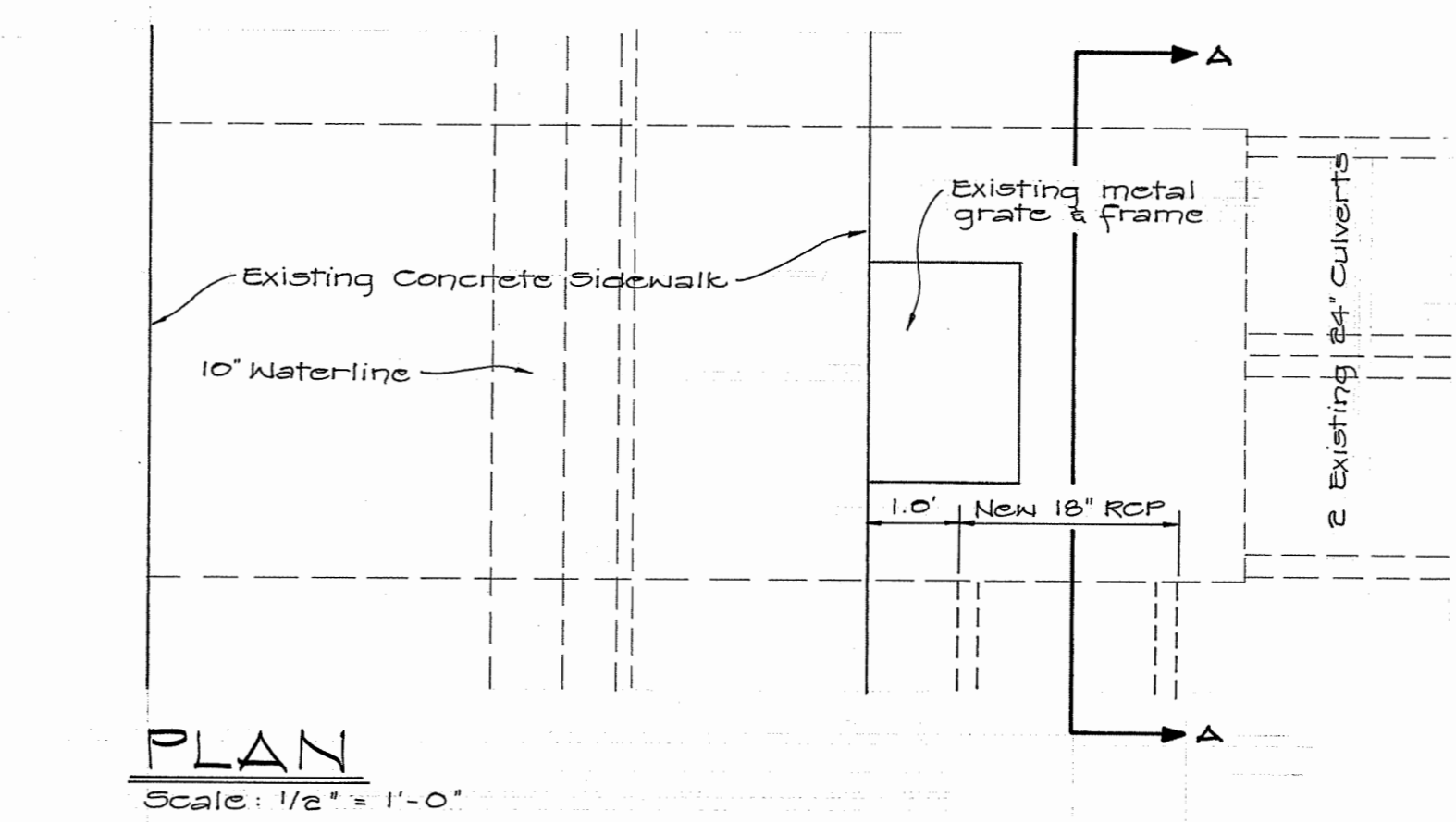
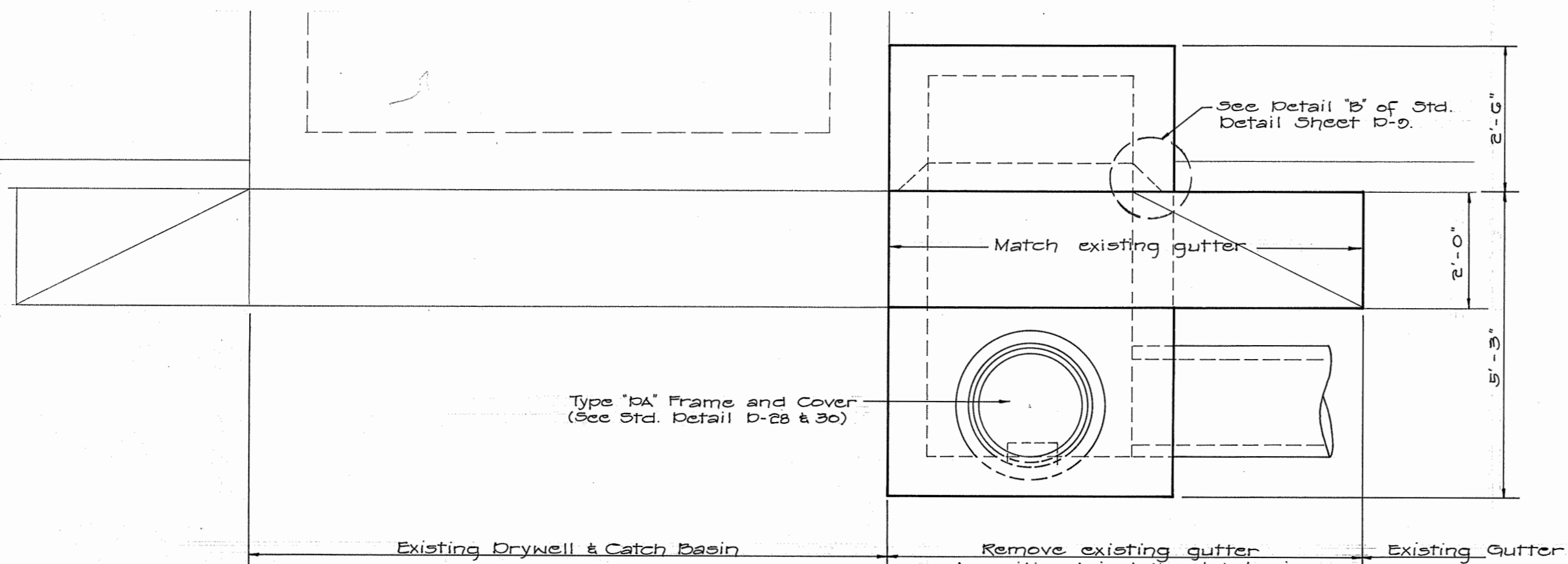
2" max. slope

check on all thickness

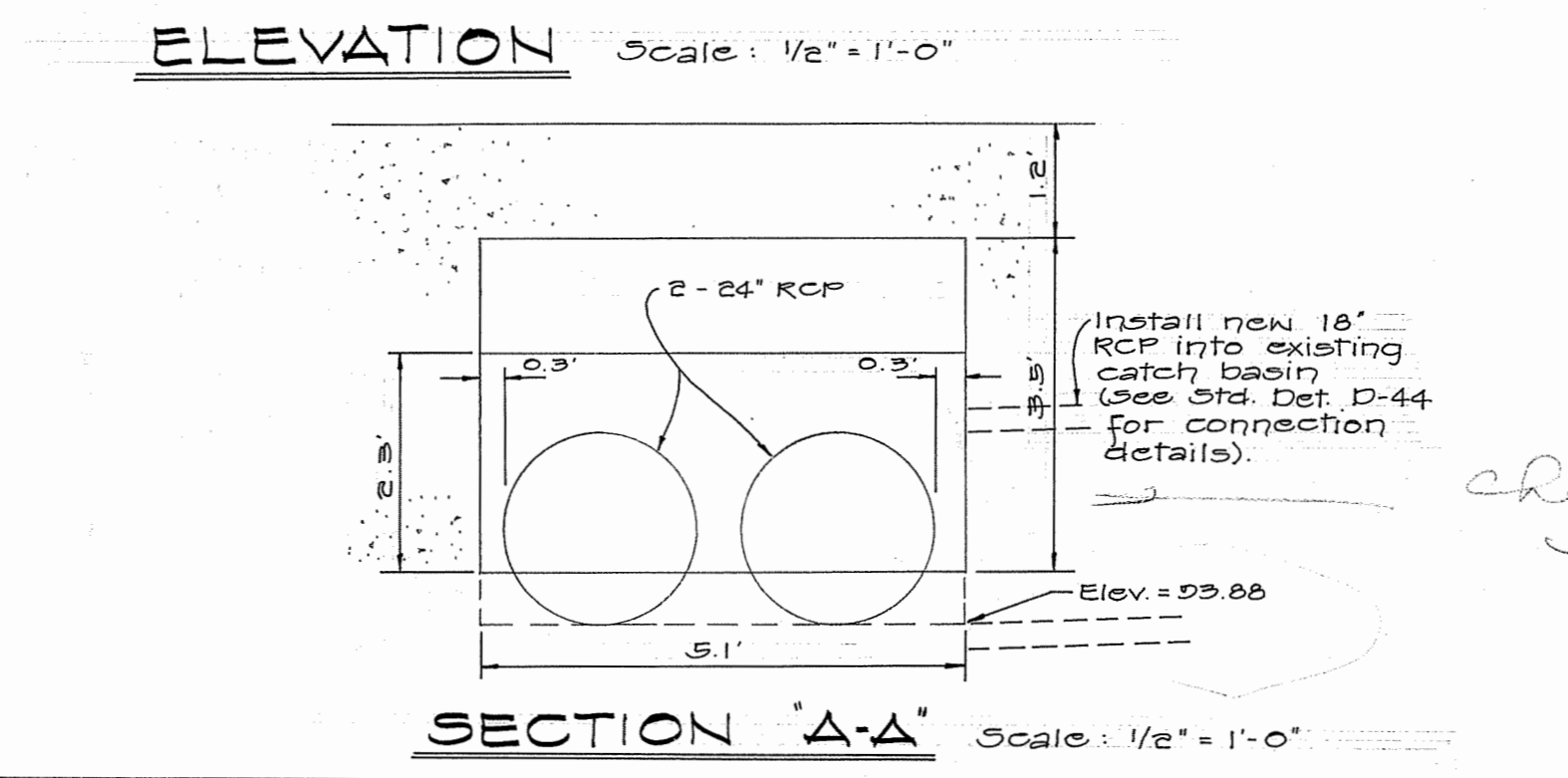
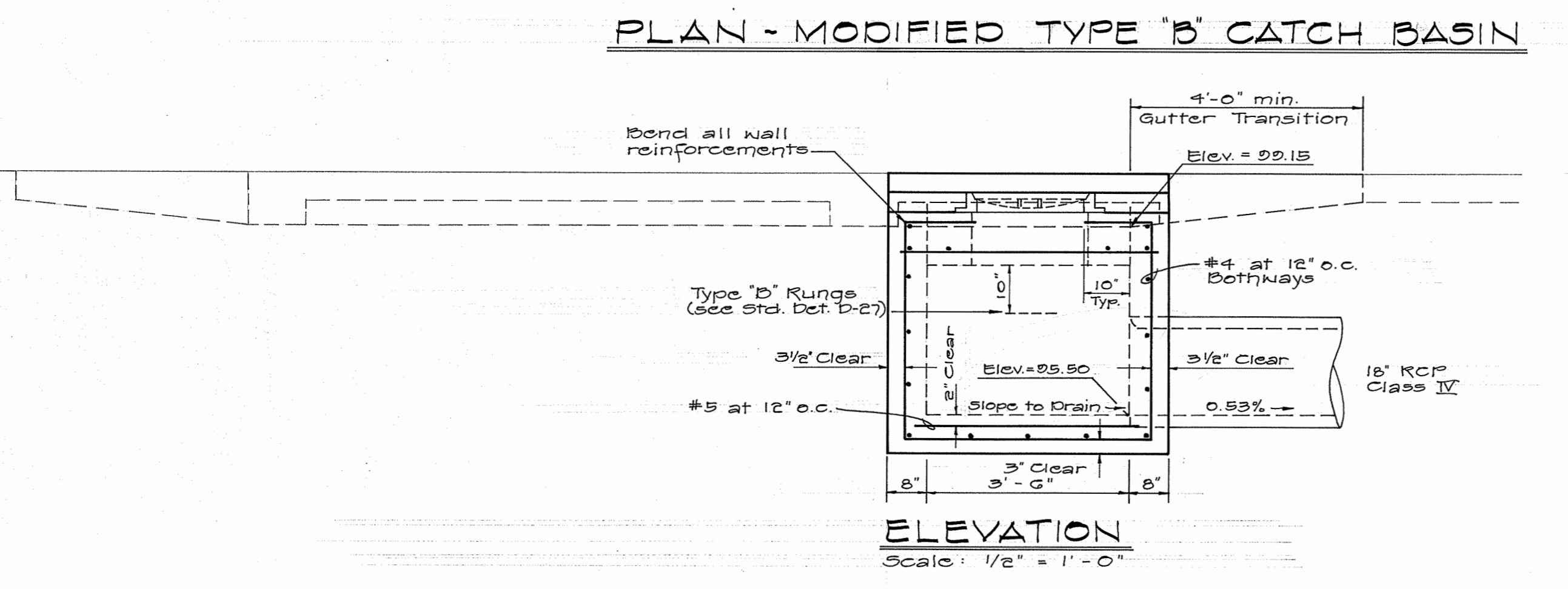
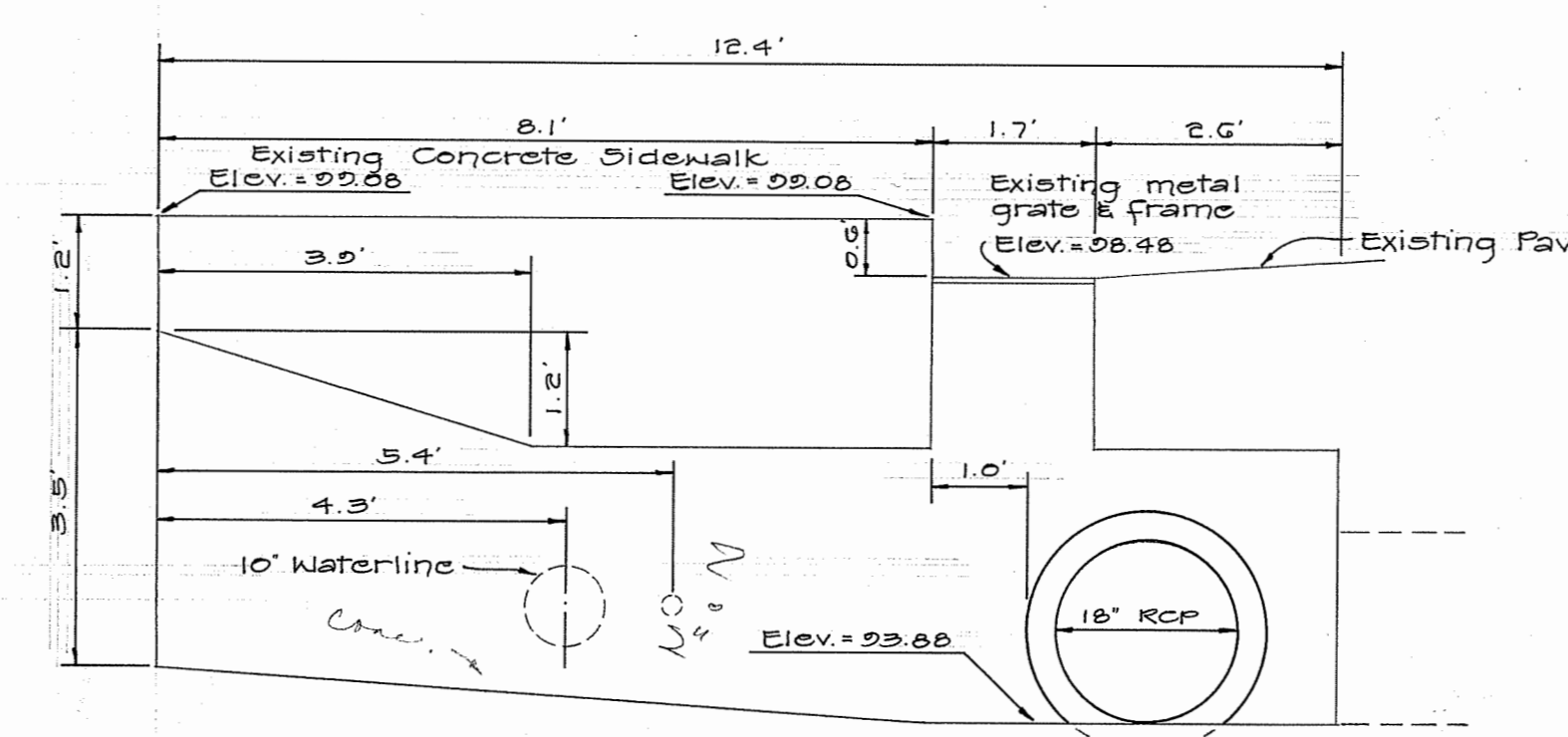


- CONSTRUCTION NOTES:**
- All work shall be done in accordance with the County of Hawaii Department of Public Works Standard Details for Public Works Construction, dated August, 1976 and Standard Specifications for Public Works Construction, dated May, 1975.
 - The Engineer reserves the right to make changes to the drainage system as such changes are found to be necessary as the land is cleared and erosion control construction progresses.
 - Contractor shall notify the Engineer sufficiently in advance of opening any or utilizing existing borrow pits or on site borrow, so that a determination can be made as to the suitability of the borrow material to be incorporated into the road construction.
 - The Contractor shall conduct all tests as requested by the Engineer and be responsible for all expenses incurred in conducting these tests.
 - The Contractor shall verify the location of all existing utilities, whether shown on the plan or not, and shall be responsible for the repair or replacement of same in the event of damages due to his construction practices. The Contractor shall coordinate his work with the respective utility companies.

- NOTES FOR WORK WITHIN COUNTY ROADWAY:**
- The Contractor shall install all traffic control devices and observe all rules and regulations as called for in the Manual of Uniform Traffic Control Devices for Streets and Highways.
 - The Contractor shall submit a traffic control plan indicating the use of all proposed traffic control devices to the satisfaction of the Engineer prior to any construction.
 - The Contractor shall provide at least one (1) lane for traffic movement at all times. Two (2) lanes for traffic movement shall be provided between the hours of 4:30 p.m. to 8:00 a.m.
 - Any pavement outside the contract zone limits damaged as a result of construction operations shall be restored to its original, or better, condition. Such restoration shall be to the satisfaction of the Department of Public Works.
 - No material shall be stockpiled closer than six (6) feet from the existing edge of pavement.
 - No construction equipment shall be parked within the road right-of-way in such a manner that the equipment will obstruct the normal movement and sight distance of the driving motorist, except during actual working hours.
 - Except during actual working hours, all signs which do not pertain to the construction activity, such as 'Men Working' and 'Flagman Ahead' shall be covered or laid down. However, all signs necessary for the safety of the public shall be maintained.
 - The Contractor shall inform the Department of Public Works 48-hours before commencement of all construction operations. Non-informing of the above operations shall be cause for non-acceptance and disapproval of the project completion by the Department of Public Works.
 - Any pavement markings, structures and appurtenances damaged from the construction shall be repainted or reconstructed satisfactory to the Department of Public Works.



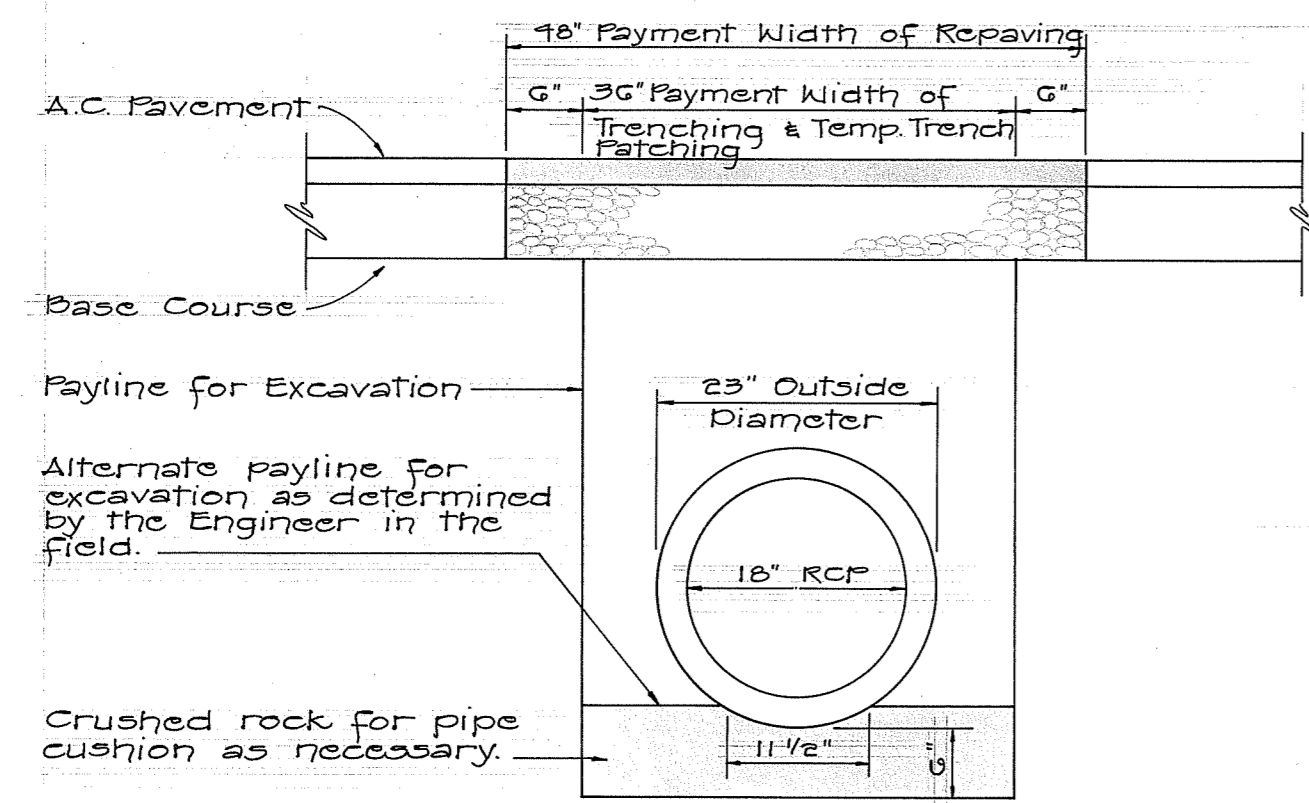
- GRADING NOTES:**
- All grading work shall conform to Ordinance 168 of the County of Hawaii and shall not commence until a grading permit is approved.
 - The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.
 - The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health.
 - All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in the Public Health Regulations, State Department of Health, on Water Pollution Control and Water Quality Standards, and to the Erosion and Sedimentation Control Standards and Guidelines of the Department of Public Works, County of Hawaii.
 - The County shall be informed of the location of the disposal site for the excess material from the project when the application for a grading permit is made. The disposal site must also fulfill the requirements of the grading ordinance.



REVISION	DATE	BRIEF	MADE BY	APPROVED
DEPT. OF PUBLIC WORKS, COUNTY OF HAWAII BUREAU OF PLANS & SURVEYS HILO, HAWAII				
Kawili-Kilauea Street Drainage Improvement Job No. P-2346				
PLAN & DETAILS				
Waialae, South Hilo, Hawaii				
APPROVED		Date	Survey	V.T.
Bureau Head			Design	G.K.
			Drawn	K.C.
			Checked	T.T.
			Sheet	2
				of 3

3/4" marked
see plan lines

check name
H. K. K.

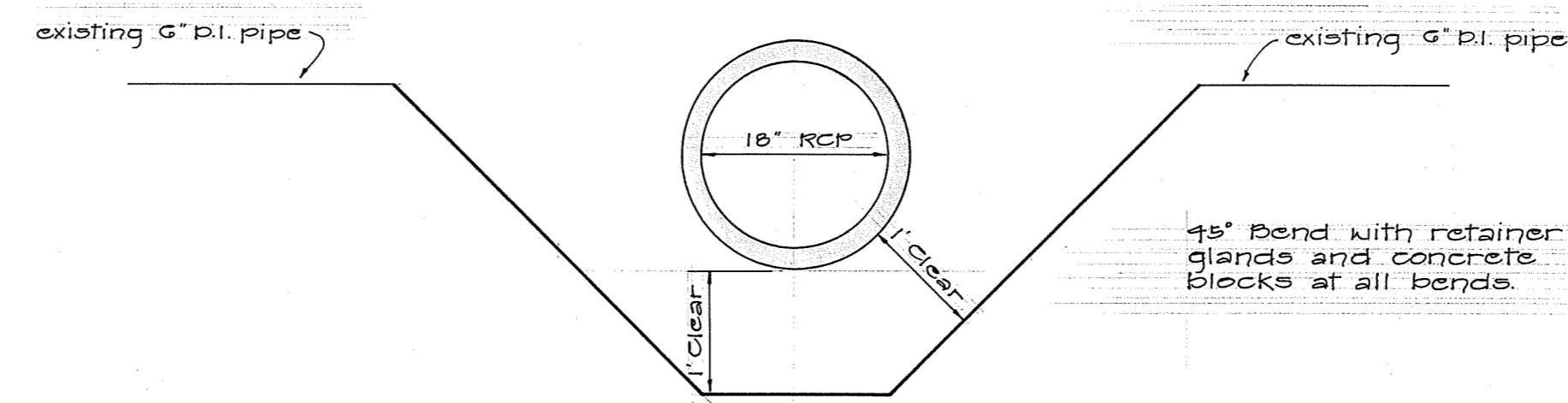


TRENCHING & REPAVING DETAIL

Scale: Not to Scale

NOTES:

1. Restore pavement to match existing pavement.
2. Minimum thickness of pavement:
A.C. Pavement = 2"
Base Course = 6"
3. Excavation for extra 6" width of repaving to be included with trench excavation.
4. Trench excavation & backfill shall be in conformance with Sec. 11 of the Std. Specs. for Public Works Construction, May 1973.



WATERLINE CROSSING

Scale: 3/4" = 1'-0"

WATERLINE NOTES:

1. All work shall be done in accordance with the County of Hawaii, Dept. of Water Supply Standards for Water System, dated March 1965, as amended.
2. The Contractor shall notify the Dept. of Water Supply one (1) week in advance of any water shut-off, including customer service shut-off, so that the department can properly coordinate the shut-off. Water shut-off shall not exceed a period of three (3) hours in any one day. The DWS Engineer reserves the right to require by-pass lines at the Contractor's cost.
3. Contractor shall coordinate work so as to create a minimum of disturbance to the water service.
4. Contractor shall notify DWS 72 hours prior to commencement of any pipeline work, including trenching.
5. Any work done by the Dept. of Water Supply's field crew shall be paid for by the Contractor.
6. Contractor shall work with the DWS maintenance crew to locate and mark the exact location of the pipeline before commencing with construction. Contractor shall be responsible for any damages to the existing pipeline caused during construction.
7. The location and depth of all underground utility pipes shown on the plans are approximate only. The Contractor shall make a personal investigation of the utilities concerned supplemented by actual digging in the field if necessary, to determine the actual location and depth of utilities with their branch and service lines, whether indicated on the plans or not. The Contractor shall be responsible for the support, protection, relocation and reconstruction of any utility pipes where necessary.
8. Contractor shall be responsible for the chlorination of the new pipeline and any by-pass lines before connection to existing pipeline is made. Chlorination Company must be authorized by the State Dept. of Health.
9. All hook-ups to existing waterlines shall be done by or under DWS supervision. Contractor shall provide all excavation, backfill, road repair, traffic control and equipment to lift materials. (DWS portion of work \$200)
10. All fittings (Class 250) and all gate valves (Class 200) shall be cast iron with mechanical joints unless specified otherwise.
11. All pipeline 4" or larger in diameter shall be ductile iron push-on joint Class 52, and all pipeline smaller than 4" in diameter shall be soft copper Type K, unless otherwise specified.

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DETAILS				
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APPROVED			Survey	V.T.
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				Of 3