

1992-02-08-0A-~~FEA~~- Wailupe Reconstructed
Trunk Sewer

ENVIRONMENTAL ASSESSMENT

FOR

WAILUPE RECONSTRUCTED TRUNK SEWER

WAILUPE, HONOLULU, OAHU, HAWAII

TAX MAP KEY: 3-05-22, 23 & 58

(NEGATIVE DECLARATION)

This document is prepared pursuant to Chapter 343, H.R.S.

PROPOSING AGENCY: Department of Public Works
Division of Wastewater Management
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

RESPONSIBLE OFFICIAL: C. Richard Street 1/2/92
SAM CALLEJO Date
Director and Chief Engineer

Prepared By:

Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

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I. STATEMENT OF OBJECTIVE

The objective of the proposed action is to repair and reconstruct the existing Wailupe Trunk Sewer Line and its manholes to restore the structural integrity and capacities for conveying the sewage flows from the designated tributary areas to another location for treatment and disposal. The work is part of the comprehensive wastewater management plan by the City and County of Honolulu for providing adequate and functional sewers to serve the people.

II. AGENCIES AND PERSONS CONSULTED DURING THE ASSESSMENT PROCESS

FEDERAL

Corps of Engineers

STATE OF HAWAII

Department of Land & Natural Resources
Department of Transportation, Highways Division

CITY AND COUNTY OF HONOLULU

Department of Transportation Services
Department of Parks and Recreation
Board of Water Supply
Department of Land Utilization

OTHERS

Kahala Hilton Hotel (Mr. Barry Braithwaite)
Waialae Country Club (Mr. Alan Lum)
The Kahala Beach Apartments (Mr. Robert Walden)
All residents living along the alignment of the trunk sewer line and impacted by this work (See Appendix A).

III. DESCRIPTION OF PROPOSED ACTION

A. GENERAL INFORMATION

APPLICANT: Department of Public Works
Division of Wastewater Management
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

RECORDED FEE OWNER(S): (N/A)
(Sewer lines and manholes belong to the City & County of Honolulu and are located in a 10 foot wide sewer easement over and across private properties. The easement is in favor of the City & County of Honolulu)

AGENT: Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

TAX MAP KEY: 3-05-22, 23 & 58

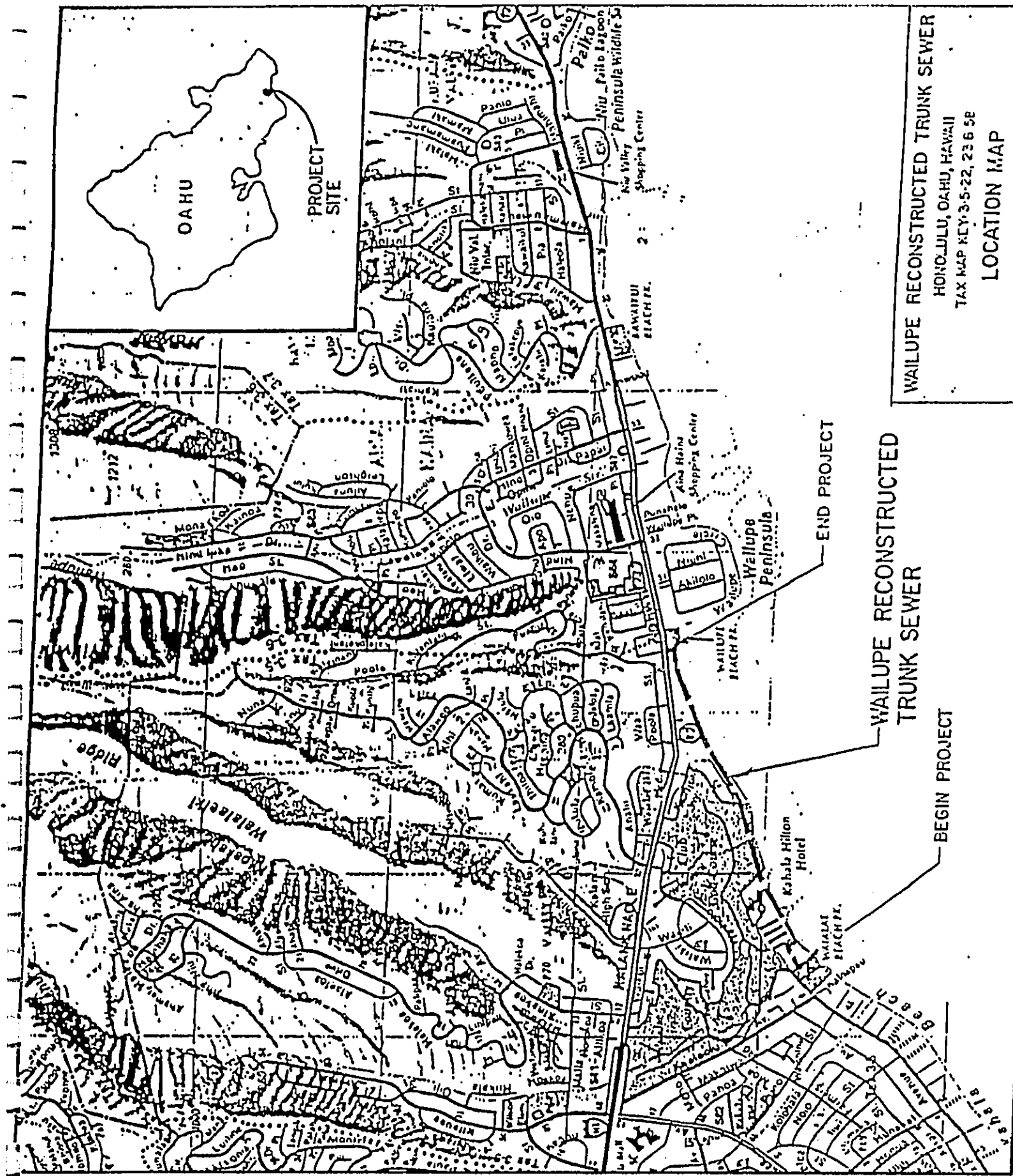
LOT AREA: (N/A - Project is not for the development of land but for the repair and reconstruction of the existing 36 years old Wailupe Trunk Sewer Line and its manholes)

The existing Wailupe Trunk Sewer Line was built about 36 years ago in 1955. It consists of approximately 2,000 feet of 30-inch and 4,400 feet of 36-inch diameter reinforced concrete pipes, sewer manholes, and the appurtenant side main and lateral connections. The trunk sewer line begins at the existing sewer manhole at the Kahala Wastewater Pump Station and travels across the grounds of the Kahala Beach Apartments, Kahala Hilton Hotel and Waialae Golf Course towards the shoreline, then along the oceanside of the residential lots along the coastline and onto the shoreline turning north at the last home and continuing on and ending at the existing sewer manhole on the makai side of Kalaniana'ole Highway. Map 1 of Land Court Consolidation 87 and City's Parcel Maps show the entire length of the sewer trunk alignment to be contained within an existing 10 feet wide sewer easement in favor of the City and County of Honolulu. The Project's location and its surrounding areas are shown on the next page as Figure 1.

B. EXISTING CONDITIONS

The sewer trunk line's physical condition has deteriorated considerably since 1955 and is now in various stages of disrepair as evidenced by the tapes from a video camera inspection of its interior taken in late 1988 and early 1989. Medium to heavy deterioration from hydrogen sulfide attacks on the interior concrete surfaces of the pipes were found throughout the alignment with signs of the heavier deterioration being at the crown of the pipes. At some locations, pipe reinforcing patterns have become noticeable indicating the severity of erosion of the inside walls over the years. Leaking joints allowing ground water to enter into the sewer system were also found at various locations. Some settlement as well as ground water infiltration at certain manholes were also found during the field inspection.

The Preliminary Engineering Report for this trunk line recommends repairs be made as soon as possible to avert potential collapses in the future. A collapse occurring along any particular section of this trunk line will certainly affect a major area of east Honolulu because the line serves all the homes, schools, businesses, parks, and other facilities from Kalani High School at the furthest west side of the tributary area to, and including, Niu Valley at the east limit. The south and north boundaries for this tributary area are the shoreline and the upper reaches of valleys and mountains respectively. Also located in the area are the Waialae Country Club and Golf Course complex, the Kahala Beach Apartments, and the Kahala Hilton Hotel facilities and grounds.



WAILUPE RECONSTRUCTED TRUNK SEWER
 HONOLULU, OAHU, HAWAII
 TAX MAP KEY 3-5-22, 23 6 58
 LOCATION MAP

NOT TO SCALE
 FIGURE 1

The trunk line was last cleaned in 1988. The work then was contracted out to a private contractor by the City. While it has been more than three years since this last cleaning, and in considering the present structural condition of the existing line, the next cleaning work should be deferred and performed just prior to, but together with, the trunk line repair and reconstruction work.

There are no alternate sewer line routes that could be made available for diverting the flows currently being conveyed by this sewer trunk line and for properly handling the sewage from the tributary area should a collapse occur anywhere along the trunk line's alignment.

The trunk line lies inside the designated Special Management Area and will need a Special Management Area use permit prior to commencing with any of the work. See Figure 2, next page. Additionally, various other agency approvals will also be needed and will be obtained at the time the construction plans are routed for agency reviews.

C. TECHNICAL CHARACTERISTICS

The work to repair and reconstruct the trunk line can be categorized into line cleaning, line reconstruction, manhole reconstruction, and the reconnecting of existing sewer side mains and laterals. The reconstruction work will use the cured in place pipe process. It is a process that accomplishes the work from the insides of the pipes rather than from the outside and thereby eliminates the need for massive trench excavations, shoring, dewatering, pipe replacement, trench backfilling, disturbance of existing ground features and the removal of plants along the entire length of the alignment.

The reconstruction work will access the sewer trunk line at various designated manholes. The work is tentatively planned to start after the Hawaiian Open in February 1992 and end sometime in late August or September 1992.

The full length of the alignment will be sectioned off into three sections for the work. Each section will be isolated prior to the cleaning by having the flows intercepted and pumped to a temporary bypass line. Two upstream manholes for each of the three sections will be involved in the bypass operation. The first manhole will accommodate the primary bypass pump while the second manhole, upstream of the first, will be used for the backup bypass pump. Once the bypass pumps and lines are in place and operational, the cleaning for that particular section of line will commence. The line will then be inspected for major damaged areas and those found will be repaired prior to starting the cured-in-place pipe (CIPP) process. Each manhole will be checked for damages and repaired as needed using the Strong process.

The temporary bypass sewerline alignment is shown in Appendix B. It begins at Kalaniana'ole Highway and will travel along the existing sewer easement from sewer manholes 28 to 13 for the first section.

The bypass continues along the sewer easement from sewer manholes 16 to 8 for the second section. The bypass line alignment for the third section will turn and travel along the out-of-bounds area through the Waialae Golf Course and along the existing road outside of the Waialae Country Club rather than along the beach area. The bypass for the third section diverts inland to accommodate the beach users from the Kahala Hilton Hotel and the Kahala Beach Apartments. The bypass sewer line will be 12 inch diameter hard piping laid on the ground surface except at existing driveways where it will be buried to accommodate pedestrian and vehicular traffic. The bypass line will be closely monitored by the Contractor for leaks. Water tightness of the bypass line will be maintained.

In addition to the hard piping bypass lines, there will also be side tributary bypasses using pumps and 6 inch diameter flexible hoses. These are located as follows,

Section 1	Sewer manhole across from SMH 21
Section 2	Sewer manholes 14 and 15
Section 3	(not yet determined)

The width for the existing sewer easement is only 10 feet wide. This width may have been adequate over the years for servicing and maintaining the existing trunk line. It is, however, insufficient for work space for the repair and reconstruction work for the system. Temporary work easements will be needed to accommodate the work activities. The temporary work easements will be limited as much as possible to those specific locations designated for access and for inversion sites for the work. Appendix B shows the proposed work phasing along with those locations needed for accesses and for inversion sites.

The temporary work easements at the inversion sites will be about 30 feet square, more or less, pending actual field conditions at the particular sewer manhole location. Manholes 3, 4, 8, 8A, 12, 15, and 20 are the planned inversion sites. The properties located immediately next to these manholes will be affected by these temporary work easements. Accesses will also be needed to get vehicles, equipment, material, and the work force to and from the manholes. They will be along the private road (Keahia Way), over and across open lots (Parcels 3-05-22:08 and 3-05-58:08), over and across the upper limits of the beach area, over and across the service road and golf paths along the rough in the Waialae Golf Course, and over and across a portion of the Waialae Country Club parking lot. Accesses will also be needed over and across the Kahala Beach Apartment property and the Kahala Hilton Hotel grounds. It will be necessary to gain access to the existing sewer manhole in the Hala Restaurant to clean and install flow through plugs to control flows during the work.

The work activities will be coordinated closely on an ongoing basis with the affected homeowners and the management and staff for the Waialae Country Club and Golf Course, the Kahala Beach Apartments, and the Kahala Hilton Hotel. The Contractor for this

project will also be expected to continue and maintain the coordination efforts as needed during the work period.

D. ECONOMIC AND SOCIAL CHARACTERISTICS

The proposed project cost is estimated to be about \$5,000,000 dollars.

The construction time should be between 6 to 8 months, notwithstanding inclement weather and other unexpected conditions beyond the Project's control.

There will be no realignment of the existing sewer trunk line and hence no new permanent sewer easements are anticipated. The temporary work easements to be created will not be over and across every parcel of land but limited and contained only to and near to those areas designated to be access points for the work.

A set of the reduced preliminary plans showing the proposed work and the alignment of the trunk line is attached as Appendix C. Being preliminary plans, the work on the drawings is presently ongoing.

E. AFFECTED ENVIRONMENT

The project is not expected to cause any major disturbances to natural features in the area nor will it result in considerable trenching work or other kinds of work that would substantially disturb the environmentally sensitive lifeforms and areas. The entire project site is along the Waialae coastline as well as over and across the Waialae Country Club and Golf Course grounds, the Kahala Beach Apartments, and Kahala Hilton Hotel properties. The Contractor will be required to replace and restore all work areas back to their original conditions after he completes the work. Drainage and surface runoff patterns will not be disturbed nor changed by the work and will continue to remain the same both prior to, during, and after the project's completion.

No historic, cultural, and/or archaeological resources are expected to be disturbed by this by this project.

The nature of the work will not permanently affect any coastal views from any vantage point. However, there will be a temporary impact on the coastal views since the bypass pumps, lines, and the work force attending to them will be using the upper limits of the beach areas to move around. Also, being that the entire alignment for the trunk line is along the coastline, the work activity, the inversion sites, and the bypass pumps and lines will be visibly noticeable during the project term.

IV. PROJECT IMPACTS

A. SHORT TERM OR CONSTRUCTION RELATED IMPACTS

There will be several other short term construction related impacts resulting from the work for this Project. The impacts, while an inconvenience, will be both temporary and localized. The impacts involve: the use of a portion of Wailupe Beach Park for storage activities and an inversion site; the temporary closing off of the rightmost traffic lane of Kalaniana'ole Highway; the noise created from the cleaning of the sewer trunk line; the movement of solids from the sewer trunk line during cleaning to the park for temporary storage; the odors generated by the solids removed from the lines by the cleaning process; the noise from the equipment used for the wetting out, inversion, and curing processes for the insituform placement; the temporary inconvenience to normal service for the homes, businesses, and activities connected to the sections of sewer lines placed out of service (bypassed); and the around the clock work once the insituform process is started. Additional short term impacts will be the presence of a work force and their activities along the length of the shoreline for the placement and removal of the bypass equipment and pipes.

1. **Use of Wailupe Beach Park** - Current planning for the Project is based on using the western half of Wailupe Beach Park for a construction storage area as well as an inversion site. The Park's existing parking lot and boat launch area will not be affected and will remain available for use by the public. The Park plays a significant role in that it provides the only major open space and access in the immediate vicinity that can be readily used by the Contractor for his field office, work plant, storage yard for materials and equipment, and an inversion site. The existing sewer line alignment turns almost right angles at the shoreline next to the park. Access to the sewer manhole at this location for cleaning and reconstruction work, as well as for access to other sections of the trunk line along the shoreline can be readily achieved through the park. Accessing the trunk line at this manhole for work in the upstream direction will also eliminate the need to close off the rightmost traffic lane in Kalaniana'ole Highway during peak and night hours. The storage and work areas in the park will be fenced off for public safety and security reasons during the construction period. Appendix D shows the park area anticipated for use by the Project. The Contractor will restore the areas in the park used by this project to the original conditions upon completion of the work.
2. **Closing off of the rightmost traffic lane in Kalaniana'ole Highway** - The rightmost traffic lane in Kalaniana'ole Highway must be temporarily closed to prepare the first section of the trunk line for bypassing and cleaning. However, it is expected that most of this preparation work can be performed during normal daylight working hours and the use of the closed traffic lane will be restored at least by 3:30pm daily for the heavy afternoon traffic flows.

A second existing sewer main crosses Kalaniana'ole Highway and connects to the trunk line to be repaired and reconstructed. In order to bypass the first section of the trunk line for the proposed work, it is necessary that the flows in this second sewer main be intercepted on the mauka side of the highway and diverted to the bypass line. The Contractor plans to accomplish this by installing pumps and a temporary bypass line along the mauka shoulder of the highway but well away from the nearest traffic lane. The bypass line will extend towards Koko Head to the existing stream crossing, over the edge of the concrete channel wall to the its bottom (which usually has light drainage flows in it depending upon the time of year), along the side of the channel bottom, under the highway, then back up the channel wall and along the makai shoulder of the highway to connect to the bypass line for the first section of the trunk line. At the connection point, there will be another bypass connection intercepting the upstream flows in the trunk line itself.

The existing sewer manhole in the highway to be used for bypassing upstream flows in the trunk line will be modified during the normal working hours and the work is planned to be completed by 3:30pm on any workday.

3. **Noise** - Although CIPP reconstruction minimizes the amount of environmental and local disruption in comparison to dig and replace methods, noise, lights, equipment and personnel movement, and related activities will still occur during the project. Noise will be generated throughout the entire work period. It will be from the pumps for the bypass operations, the vacuum units for cleaning the trunk line, the hydraulic power plants and inversion equipment for the wetting out, inversion, and curing of the new lining, and other miscellaneous vehicles and equipment for moving materials and personnel.

All the cleaning work can take place during normal daylight working hours and, therefore, the noise from this activity can be suspended at the end of the normal work day which is 3:30pm.

The Contractor is expected to keep noise levels well within that permitted by Title II of the Department of Health's Administrative Rules, Chapters 42 and 43 during the wetting out, inversion, and curing periods. However, in the event some noise should exceed the permitted levels, and the Contractor cannot reasonably reduce the levels, he must obtain the necessary noise permits prior to starting work. Compliance with noise levels and obtaining permits for this activity is vital since the work for this activity includes around the clock work for each of the three sections that may last 3 consecutive weeks per section due to the resin materials. The normal 8 hour work day cannot be adhered to once the work

involving resin materials commences. When the wetting out process begins, the work activity cannot stop until the curing process has been fully completed. The noise during the curing period however, should not be loud and bothersome. Most noise sources will be from either engines or generators. The Contractor might possibly be able to reduce noise levels by using electrical motors rather than mechanical engines. However, this is possible only if the needed power drops can be made available at the designated locations by the Hawaiian Electric Company. The designated power drop locations would be in the vicinity of sewer manholes 15, 27, and 28 for Phase One, the same sewer manhole 15 for Phase Two, and sewer manhole 4 for Phase 3.

Inversion locations have been chosen to allow for both upstream and downstream inversions. In this manner, the inversion equipment will only have to be erected and dismantled around eight times throughout the Project.

4. **Odors** - Odors may be noticeable at times when the existing manholes are first opened and when the trunk line is being cleaned. The Contractor will use Eliminaol, a deodorant, to neutralize the odors encountered. About 400 tons of solids is expected to be removed from the trunk line during the cleaning process. The material removed will be mostly silt, sand, gravel, corroded pipe, rocks, etc. with some sewage solids mixed in. It will be temporarily stockpiled at the park in a watertight dump pit for removal to a disposal site elsewhere. Deodorant will also be used at the stockpile site as needed to counteract odors that may emanate from the material. The stockpiled material will be removed by the Contractor in an expedient manner and on a timely basis. The material will not be permitted to remain at the stockpile site for lengthy periods.
5. **Temporary Bypass Sewer Lines** - The Project requires the use of temporary bypass sewer lines to divert sewage flows while the trunk line is being cleaned, repaired, relined, and checked. Except for the third section, all the bypass alignment will be within the existing sewer easement. The bypass alignment for the third section will deviate from the easement alignment and travel over and across the Waialae Golf Course and other private property. Rights of entries and approvals will be needed from all affected owners along the trunk line's alignment for the placement and removal of the bypass pumps, pipelines, and equipment regardless of whether or not the bypass lines will be laid in or out of the existing sewer easement. Vehicles, pumps, pipes and personnel activity will also need access to beach areas. The Contractor is expected to keep disturbances to existing plants and foliage to a minimum when placing and removing the temporary bypass lines and equipment. All disturbed and or damaged areas will be restored to their original condition by the Contractor after the bypass lines, pumps and equipment have been removed.

6. **Temporary shutdown of sewer services** - There will be a temporary but not complete shutdown of sewer services for the section of trunk line bypassed. The temporary reduction in service will begin once the bypass for that particular section of line becomes operational and the cleaning work begins. No upstream flows in the trunk line and sewage from the side mains will be permitted to enter the trunk line after it has been cleaned and prepped for the repair and reconstruction work. Full service for the line will be restored only after the relining work for the particular section has cured properly, the manholes for that same section repaired and relined, the side mains and laterals reconnected, and the finished work inspected and approved.

The temporary inconvenience caused to sewer services will affect two groups. The first group includes the individual homeowners directly connected to the trunk line along the alignment while the second group includes the businesses and resort activities such as the Waialae Country Club and Golf Course, the Kahala Beach Apartments, and the Kahala Hilton Hotel. The CIPP process will not require relocating any of the affected residents while the work is being performed. While some inconvenience will be experienced during the work, the affected homeowners will still be allowed limited use of their plumbing during the reconstruction work. The inconvenience to the residents will be minimized, and no home will be prohibited from using the sewer system. The residents though, will be asked to minimize their water usage during the installation of the CIPP. The inversion process enables the new lining to push forward any sewage that may enter the trunk line from the laterals after the cleaning work. There will be enough water collected in front of the new lining tube as it is forced into the trunk line during the inversion process to help push any sewage in front of it out of its way as it unfolds.

The work will take about 4 to 8 weeks for each of the three sections to complete. This length of time requires all the flows from the connecting side mains to be bypassed entirely since the side mains must remain in continuous service during the reconstruction work. On the other hand, the individual houses will still be allowed use of their laterals and will not be affected by the reconstruction work. It will not be necessary to temporarily relocate the affected homeowners during the reconstruction work. However, as for the Country Club, the Apartments, and the Hotel, the flows will be bypassed entirely to minimize inconvenience to their operations.

B. LONG TERM IMPACTS

The long term impact is the existing Wailupe Trunk Sewer Line will be restored to a structurally sound condition resulting in a functional system with adequate capacities to serve the people in the tributary area for many more years.

V. ALTERNATIVES CONSIDERED

A. NO ACTION

No Action was not considered since the existing trunk line is an important and critical link in the sewer system that serves a large tributary area in East Honolulu. The line was built in 1955, over 35 years ago. It has deteriorated with the passage of time and its present condition is poor. Repairs are needed to extend its service life. There are no other sewer trunk lines in the area that can be depended upon and made available for replacing this trunk line should it experience any problems or collapses.

B. RECONSTRUCTION BY CIPP METHOD

Repair and reconstruction work using the cured in place pipeline technology as per ASTM F-1216 for the existing trunk line is the best alternative insofar as minimum disturbance to the environment and surrounding properties is concerned. This alternative is also the most cost effective of the three alternative choices.

C. RECONSTRUCTION USING STANDARD METHODS

Reconstruction work using standard methods for the existing trunk line will require major excavation work; the removal and reconstruction of existing walls, fences, and walks; the removal and replacement of existing trees, plants, and shrubbery; the tearing up and replanting for a portion of the Waialae Golf Course; the digging up and repaving for a portion of an existing parking lot; trench shoring for all excavations; dewatering (with the potential of subsidence to surrounding homes and swimming pools); and pipe laying. The work will also be in cramped and crowded spaces because all the homes and swimming pools in the surrounding areas are already built. There are also many areas where there will not be enough space to permit reconstruction using the standard methods.

The time needed to reconstruct the trunk line using standard construction methods will be considerable. The alignment could possibly be maintained but the lack of adequate work space will severely impact on the heavy equipment movement and the Contractor being able to get the work done. Also, this alternative is definitely not cost effective.

VI. PROPOSED MITIGATION MEASURES

A. This section describes the mitigating measures that would pertain to the short term impacts associated with the construction work for this project. No negative long term impacts are expected from the project and, therefore, no mitigating measures for long term impacts are discussed.

1. Noise - An increase in noise level will be experienced during the construction work, especially by those homes near the access points for the repair and reconstruction work. The

noise sources will be the various pieces of equipment needed for the work activities which would include heavy vehicles for cleaning and removal of debris from the sewer line, importation and placement of materials, and other power equipment.

To mitigate adverse impacts resulting from the work activities, the contractor will be responsible for properly maintaining all construction equipment to keep noise levels at a minimum during the construction operations. If noise levels are expected to exceed the allowable levels called for under Title II of the Administrative Rules, Department of Health, Chapter 43, the contractor will be required to obtain the necessary noise permits prior to commencing with any of the work. In addition, any heavy vehicle required for the construction work must also comply fully with Title II of the Administrative Rules, Department of Health, Chapter 42, Vehicular Noise Control for Hawaii.

The Contractor shall use electrically powered equipment in lieu of mechanical engines and or motors whenever possible - especially for the around the clock work and during the curing periods. The electrically driven motors and equipment will help to reduce noise levels considerably.

Otherwise, the Contractor will use sound screens when necessary to minimize the noise from the hydraulic power plants, vacuum cleaning units, and inversion equipment. Noise levels in the range of 60 to 80 decibels will be produced at a distance of 50 feet.

2. **Air Quality** - Ambient air quality is expected to be temporarily impacted by dust generated from the construction work. In keeping with the State Health Department's regulations, and the applicable City and County of Honolulu's ordinances, the contractor will be required to take measures to minimize airborne pollutants.

Emissions generated by the various construction equipment can also affect the ambient air quality. However, with the proper equipment and maintenance by the contractor, the adverse impacts caused by emissions from equipment can be controlled and minimized.

The Contractor will erect temporary dust screens when necessary along the alignment to further minimize dust problems to the neighboring homes, apartments, and resort activities.

3. **Water Quality** - The repair and reconstruction work should not adversely affect the water quality of the surrounding area. There will be no major grading work nor any major construction work that would lead to adverse impacts upon the water quality for the area. The stockpiling of the material

removed from the trunk line during the cleaning process will be at the park site in a watertight detention basin. Therefore, no mitigating measures for water quality need be discussed.

4. **Erosion Control -** Sedimentation and erosion potential for the project is minimal if any. There is no need for specific erosion control measures to be developed as there are no major earthwork excavations or trenching involved with the work. The Contractor however, will still be expected to keep the construction areas clean, and contain all the activities only to the work areas.
5. **Traffic -** During construction, trucks, heavy equipment, and other construction related vehicles will use the existing roads to access, import, place, and haul away material. Local traffic flow along the construction route may occasionally encounter some inconveniences but, should be minimal. The contractor shall keep such inconveniences to a minimum. The Contractor shall also be responsible for providing the necessary traffic controls and precautions to maintain traffic safety on the roads bordering, near to, as well as at the construction site.
6. **Flora and Fauna -** There are no known rare or endangered species of flora or fauna in or around the proposed project site. The plants encountered are basically coconut trees, naupaka, and small shrubs commonly found along the coastal areas of the island. Being that most of the work will be contained to the designated access and temporary work sites, and within the existing sewer easement, and only the temporary bypass pipeline will be along the surface of the alignment, the project does not anticipate any permanent tree or plant removal or damage. Any plants moved to another location by the Contractor to create work space will be moved back to its original location and the area restored to its original condition by the Contractor after the work has been finished.
7. **Economic -** The short term impact from the construction work include the provision of jobs to local construction personnel. Local suppliers, and retail businesses will also benefit through a multiplier effect from the increased construction activity.
8. **Public Health and Safety -** The necessary measures to assure public health and safety shall be provided by the contractor through all phases of the work. The construction areas shall be properly secured through the adequate use of signs, barricades, fencing, and other devices as required by both the State and City regulations during all non-working hours.

VII. DETERMINATION

The assessment shows that there will be no significant effect on the environment by the work for this project and that the preparation of an

Environmental Impact Statement is not required. A negative declaration for the project is recommended.

VIII. FINDINGS AND REASONS SUPPORTING THE DETERMINATION

1. The project is basically a repair and reconstruction type of project requiring immediate action.
2. No rare or endangered species of flora and fauna was found in the project area.
3. No known natural, historic, or archaeological sites were found or are known to be affected by the project.
4. Except for the temporary construction impacts, the proposed project will have no significant long term adverse effects on the environment.
5. The major benefit from the work for this project is a structurally sound sewer trunk line with adequate capacities for continued service to the public in the tributary area for many more years. Potential breakage and collapses to the trunk line that can lead to major inconveniences and unsanitary conditions will no longer be a threat to the trunk line's performance.

APPENDIX A

List of Lot Owners
along the
Wailupe Sewer Trunk Line Alignment

LISTING OF PROPERTIES AFFECTED BY THE WAILUPE RECONSTRUCTION PROJECT

tax key	Owner/Occupant	Site Address	Mailing Address	Zip
1-03-05-23 02	The Kahala Beach (Condo Master)	4999 Kahala Ave	4999 Kahala Ave	Hawaii 96816
1-03-05-23 03	Waialae Country Club	4957 Kahala Ave	4997 Kahala Ave	Hawaii 96816
1-03-05-23 38	Waialae Country Club	4997 Kahala Ave	4997 Kahala Ave	Hawaii 96816
1-03-05-23 39	W K H Corp	5000 Kahala Ave	5000 Kahala Ave	Hawaii 96816
1-03-05-58 11	Ruth J Wade	1001 Kaimoku Place	1001 Kaimoku Place	Hawaii 96821
1-03-05-58 10	Herbert K H Lee / Irene S H Y	1005 Kaimoku Place	1005 Kaimoku Place	Hawaii 96821
1-03-05-58 09	Makiko Ishihara (c/o Carl Tanga)	1015 Kaimoku Place	7284 Nuulolo Street	Hawaii 96825
1-03-05-58 08	KH Properties Incorporated	1025 Kaimoku Place	334 Seaside Avenue 100	Hawaii 96815
1-03-05-58 07	Louise P Baldwin	1035 Kaimoku Place	1035 Kaimoku Place	Hawaii 96821
1-03-05-58 06	Richard K Sunada	1045 Kaimoku Place	1221 Kapiolani Blvd 512	Hawaii 96814
1-03-05-58 05	Louis S H Wu / Linda N	1055 Kaimoku Place	1055 Kaimoku Place	Hawaii 96821
1-03-05-58 04	Robert W Pulley / Doris S	1065 Kaimoku Place	1065 Kaimoku Place	Hawaii 96821
1-03-05-58 03	Bruce R Holecek / Jeri Lee		1103 Kaimoku Place	Hawaii 96821
1-03-05-58 02	Daniel Ranzman	1105 Kaimoku Pl	1105 Kaimoku Pl	Hawaii 96821
1-03-05-58 01	Atelier USA, Inc	4895 Kalaniana'ole Hwy	2142 Kalakaua Ave, 2F	Hawaii 96815
1-03-05-22 23	Wailupe Beach Park	5045 Kalaniana'ole Hwy	State of Hawaii	Hawaii 96813
1-03-05-22 22	Keahia Way (private roadway)			
1-03-05-22 21	Carole A Beall		4821 Kaimoku Way	Hawaii 96821
1-03-05-22 20	James K Ahloy		45-119 Puaae Place	Hawaii 96744
1-03-05-22 19	Verlie A Rowley	4901/D Kalaniana'ole Hwy	P O Box 114	NM 87056
1-03-05-22 18	Howard E Klemmer	4909 Kalaniana'ole Hwy		Hawaii 96821
1-03-05-22 17	Frederick W Klemmer			Hawaii 96821
1-03-05-22 16	William W H Lee / Susan S J	4921 Kalaniana'ole Hwy		Hawaii 96821
1-03-05-22 15	Howard K Hoddick / Elizabeth A	4929 Kalaniana'ole Hwy		Hawaii 96821
1-03-05-22 14	Margaret W Gregory	4935 Kalaniana'ole Hwy		Hawaii 96821
1-03-05-22 13	Eiji Inao / Sueko (c/o Arthur Higashide)	4945 Kalaniana'ole Hwy	1369 Kaeleku Street	Hawaii 96825
1-03-05-22 12	James R Langworthy / Christine	4947 Kalaniana'ole Hwy	4947 Kalaniana'ole Hwy	Hawaii 96821
1-03-05-22 11	Stephen G Holaday	4959 Kalaniana'ole Hwy	4959 Kalaniana'ole Hwy	Hawaii 96821
1-03-05-22 10	Lloyd E Short / Ruth C		4967 Kalaniana'ole Hwy	Hawaii 96821
1-03-05-22 9	Sakakura America INC (c/o Mary Watanabe)	4973 Kalaniana'ole Hwy	810 Stanford Street 3	California 90403
1-03-05-22 8	Peat Marwick Main & Co (c/o Carl Sullivan)	4981 Kalaniana'ole Hwy	725 So. Figueroa Street	California 90017
1-03-05-22 7	Taney K Takahashi / Mae T	4989 Kalaniana'ole Hwy	4989 Kalaniana'ole Hwy	Hawaii 96821
1-03-05-22 6	Henry A Goldman / Shirley A	4995 Kalaniana'ole Hwy	18680 Kenya Street	California 91326
1-03-05-22 5	Manuel L Valin / Myrna S	5005 Kalaniana'ole Hwy	5005 Kalaniana'ole Hwy	Hawaii 96821
1-03-05-22 4	Merlin A Petersen	5017 Kalaniana'ole Hwy	P O Box 10114	Hawaii 96816
1-03-05-22 3	Heng-Yi Tu (c/o Fong Properties)	5019 Kalaniana'ole Hwy	1314 S King Street 1250	Hawaii 96814
1-03-05-22 2	Yoshitada Takahashi (c/o Toshiyuki Hiranaga)		2373 Kalakaua Ave	Hawaii 96815
1-03-05-22 1	Frederick L J Nakama / Joyce H	5039 Kalaniana'ole Hwy	1829 Halekoa Drive	Hawaii 96821

APPENDIX B

**Proposed Work Phasing
and**

Access Point and Temporary Work Easement Locations

PHASE ONE



SE ONE

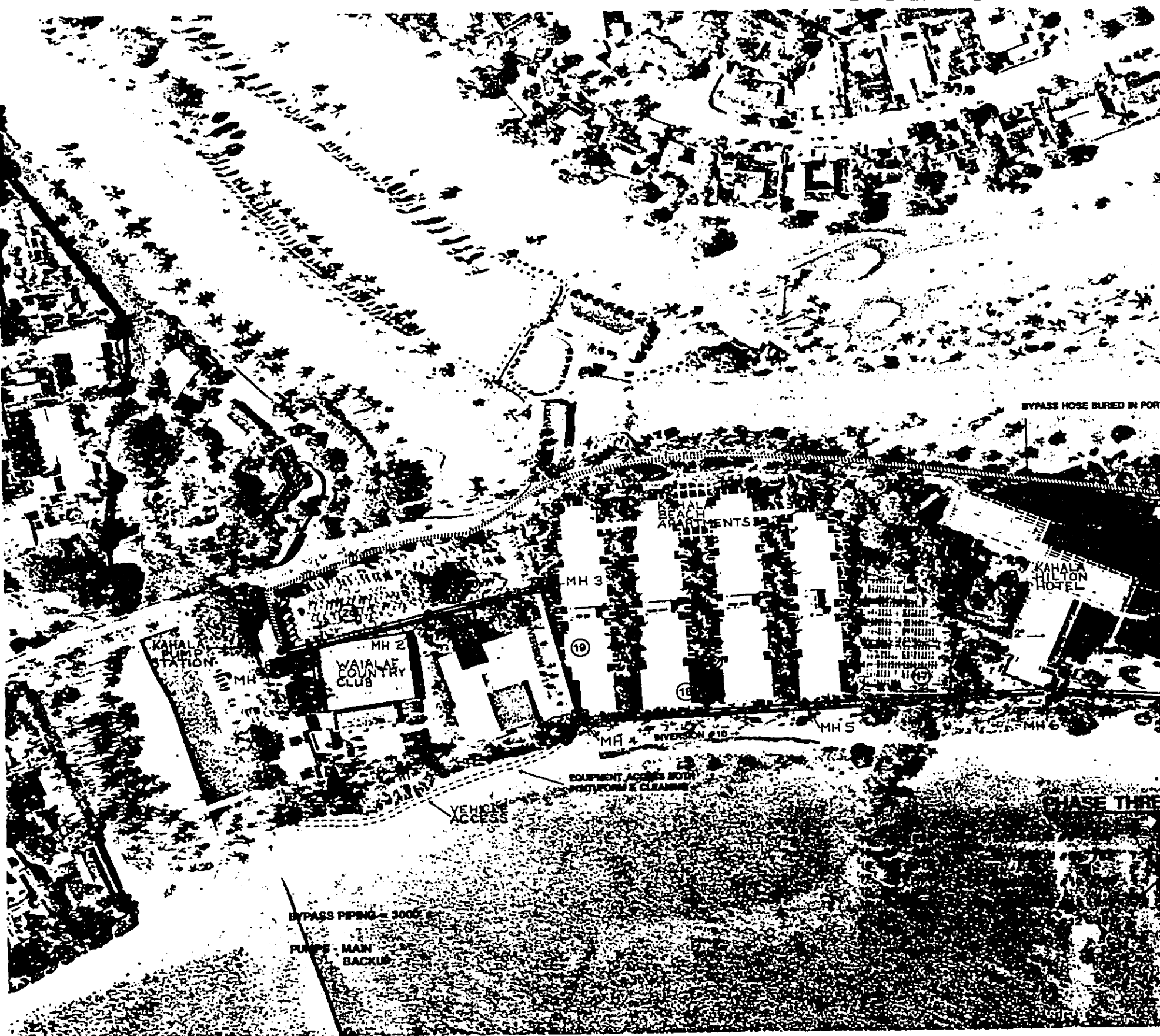


FRONT

TWO



PHASE THRE



TEMPORARY ACCESS & WORK EASEMENT NEEDS

Access Req'd for vehicles	Inversion Site @ SMH	Property Affected	Nature of Work to be Performed
to SMH 20	20	Wailupe Beach Park/Beach Area	cleaning & inversion
to SMH 18		TMK: 1-03-05-22:08	cleaning
to SMH 15	15	Keahia Way/Beach Area	cleaning & inversion
to SMH 12	12	TMK: 1-03-05-58:08	cleaning & inversion
to SMH 8A	8A	Waialae Golf Course/Beach Area	cleaning & inversion
to SMH 8	8	Waialae Golf Course/Beach Area	cleaning & inversion
to SMH 6		Kahala Hilton Hotel premises	install flow thru plugs
to SMH 4	4	Kahala Beach Apts/Beach Area behind Waialae Country Club	cleaning & inversion
to SMH 3	3	Waialae Country Club parking lot	cleaning & inversion

- NOTES:**
1. Temporary work easements, approximately 30ft square required at the inversion sites. Final configuration to be set @ design.
 2. Access easements are required to get vehicles, equipment, men & materials from the public roadways to & from the inversion sites. Existing roads & golf paths can be used.
 3. SMH 6 is in the Hala Restaurant at the Kahala Hilton Hotel. Access is required to install flow through plugs in the side mains to control flows during the work.

APPENDIX C

Preliminary Construction Plans

DIVISION OF WASTEWATER M
 DEPARTMENT OF PUBLIC
 CITY AND COUNTY OF HO

JOB NO. W13-91

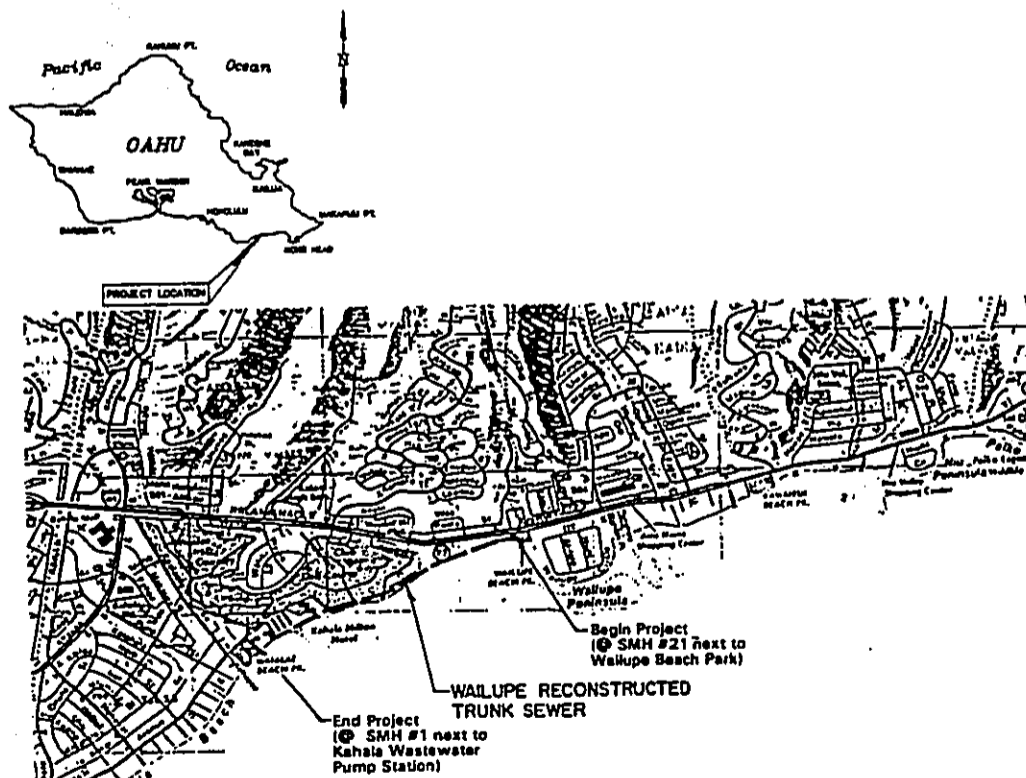
*WAILUPE RECON.
 TRUNK SE*

HONOLULU, OAHU, HA
 TAX MAP KEY: 3-5-22, 23

PLANS PREPARED BY:
 STANLEY YIM & ASSOCIATES,
 2850 Paa Street, Suite 200
 Honolulu, Hawaii. 96819

LOCATION MAP

SHEET INDEX



JOB NO. 88001

No Scale

SHEET NO.

DESCRIPTION

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL PLAN
3-5	PHASING WORK & ACCESS POI
6	CONSTRUCTION N PLAN
7	Sta 0+00 to
8	Sta 6+50 to 1
9	Sta 12+10 to 1
10	Sta 18+30 to 2
11	Sta 24+40 to 2
12	Sta 29+40 to 3
13	Sta 34+20 to 3
14	Sta 39+40 to 4
15	Sta 45+00 to 4
16	Sta 49+80 to 5
17	Sta 55+90 to 6
18	Sta 61+10 to 6
19	ACCESS & WORK AR (GOLF COURSE, HOTEL
20	TRAFFIC CONTROL P

SEWER MANAGEMENT
 DEPARTMENT OF PUBLIC WORKS
 CITY OF HONOLULU
 PROJECT NO. W13-91

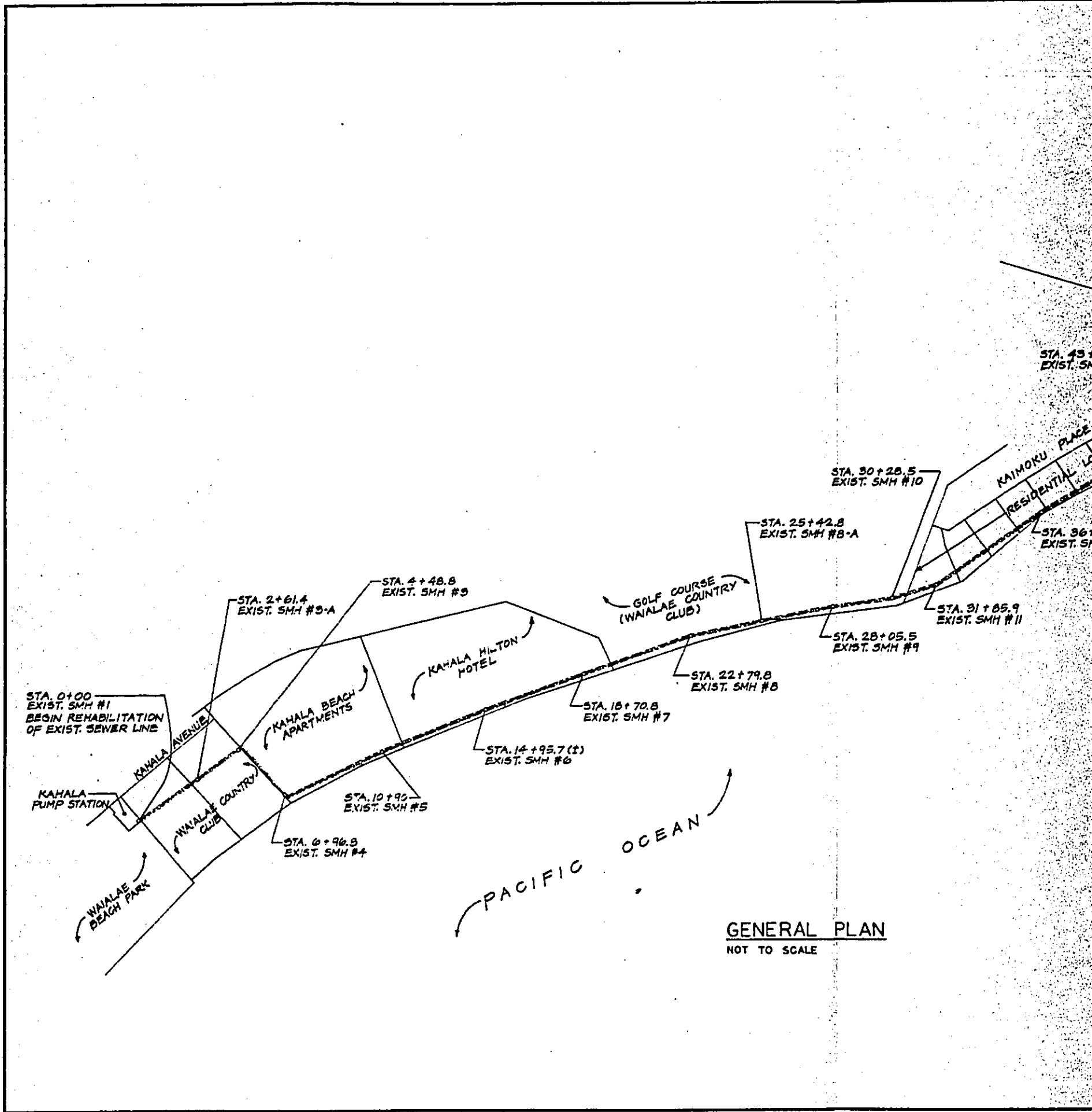
CONSTRUCTED SEWER

OAHU, HAWAII
 LOTS 3-5-22, 23 & 58

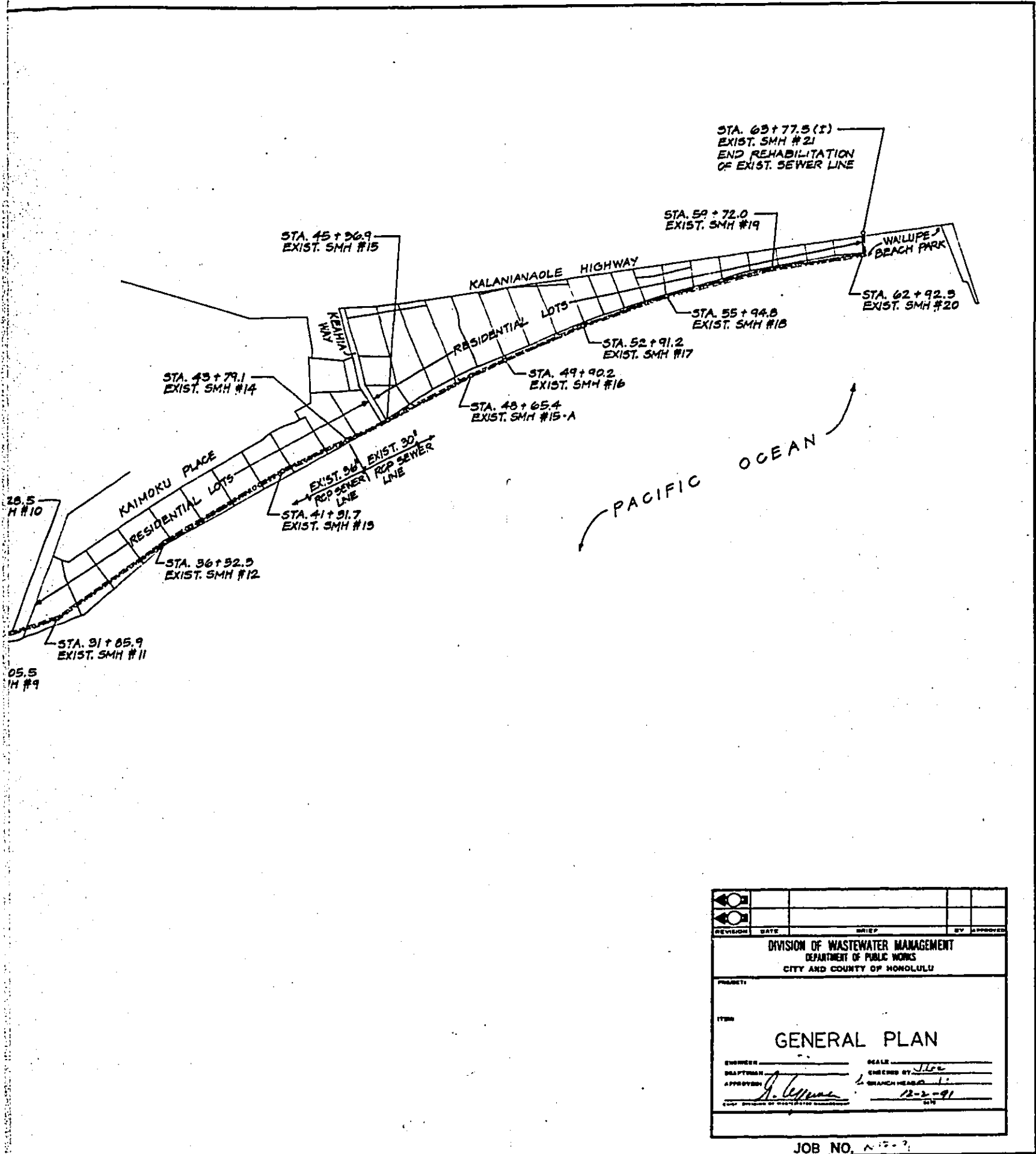
PREPARED BY:
 [FIRM] & ASSOCIATES, INC.
 [ADDRESS] Street, Suite 200
 Hawaii. 96819

INDEX	APPROVED	
<p>DESCRIPTION</p> <p>TITLE SHEET GENERAL PLAN PHASING WORK & ACCESS POINTS CONSTRUCTION NOTES PLAN</p> <p>Sta 0+00 to 6+50 Sta 6+50 to 12+10 Sta 12+10 to 18+30 Sta 18+30 to 24+40 Sta 24+40 to 29+40 Sta 29+40 to 34+20 Sta 34+20 to 39+40 Sta 39+40 to 45+00 Sta 45+00 to 49+80 Sta 49+80 to 55+90 Sta 55+90 to 61+10 Sta 61+10 to 63+77.50</p> <p>ACCESS & WORK AREAS (GOLF COURSE, HOTEL & KAHALA BEACH APTS.) TRAFFIC CONTROL PLAN</p>	<p><u>C. Michael Street</u> DIRECTOR AND CHIEF ENGINEER, DEPARTMENT OF PUBLIC WORKS</p> <hr/> <p><u>[Signature]</u> CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION DEPARTMENT OF HEALTH, STATE OF HAWAII</p> <hr/> <p>CHIEF, HIGHWAYS DIVISION State Department of Transportation (Approval granted for work within State right-of-way only. Id No. _____, letter of approval No. HWY-CM _____ dated _____.)</p>	<p><u>12/2/91</u> DATE</p> <hr/> <p><u>11/22/91</u> DATE</p> <hr/> <p>DATE</p>

WAILUPE RECONSTRUCTED TRUNK SEWER



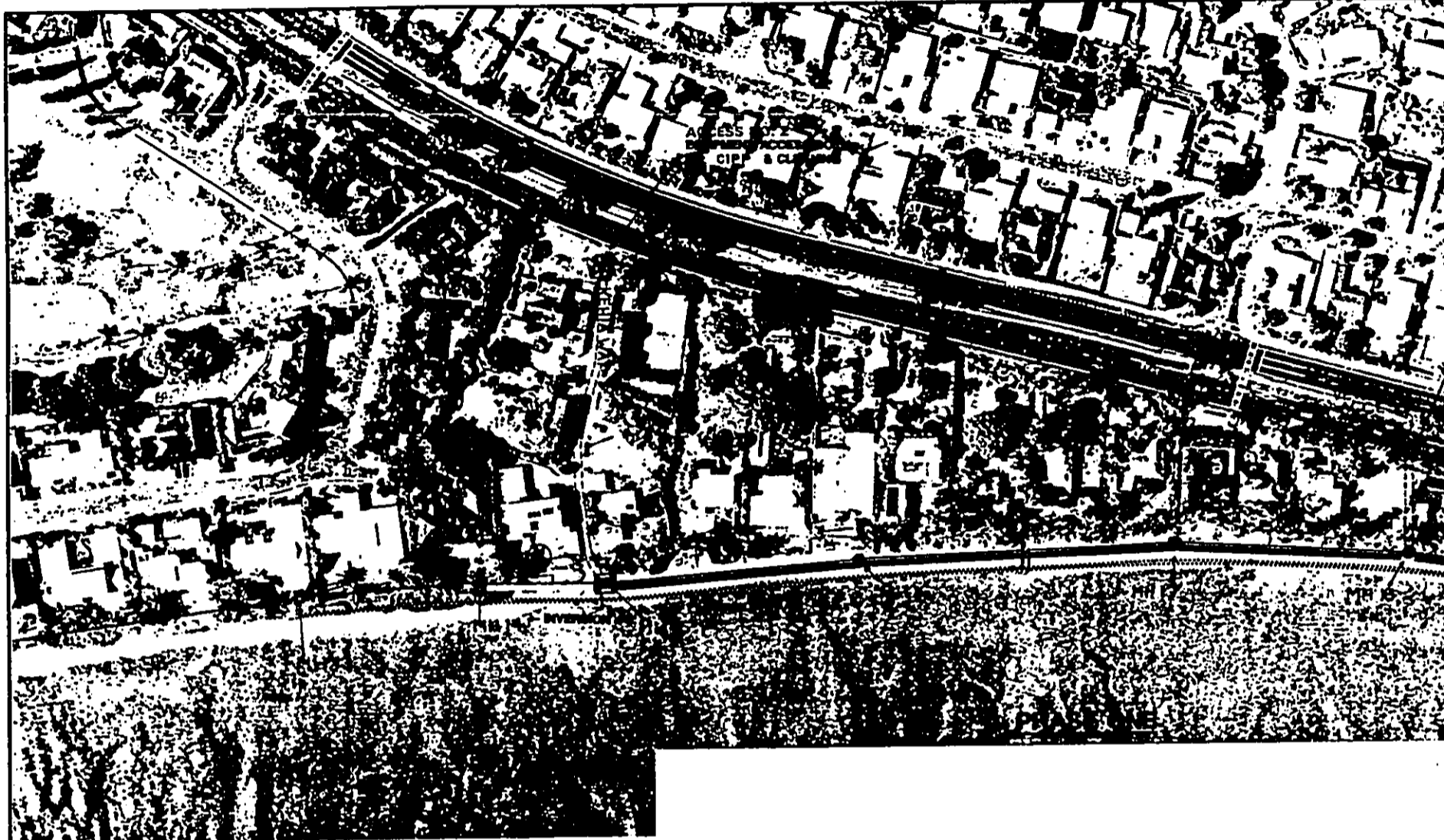
GENERAL PLAN
NOT TO SCALE



REVISION	DATE	DESCRIPTION	BY	APPROVED
DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU				
PROJECT:				
ITEM:				
GENERAL PLAN				
ENGINEER	SCALE	DESIGNED BY		
DRAFTSMAN		CHECKED BY		
APPROVED		BRANCH HEAD		
		12-2-91		

JOB NO. A-12-7

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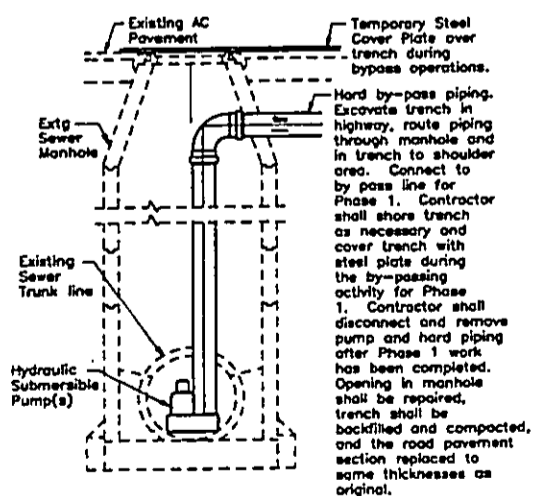
PHASE 1 WORK INFORMATION

Work for this Phase shall commence at the upstream end of the project and commence in the downstream direction

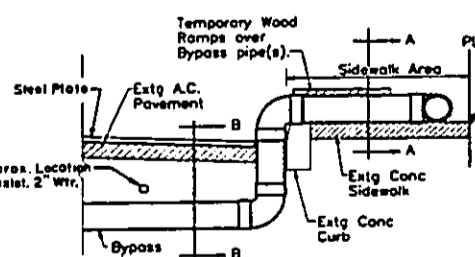
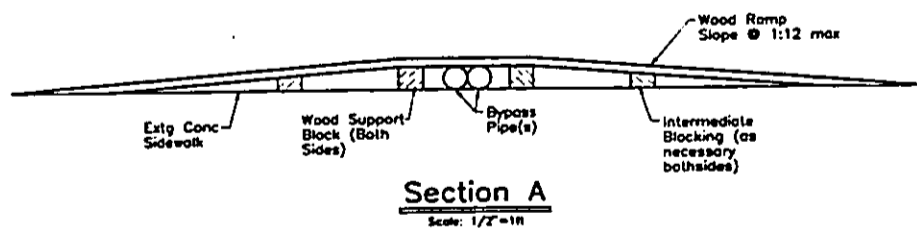
Work Phase	Fm SMH	To SMH	Inversion Access	Inversion #	Inversion Direction	Length (ft)
1a	21	18	A (SMH 20)	1	20 to 21 (up)	85.2
				2	20 to 19 (dn)	320.3
1b	18	14	B (SMH 15)	3	15 to 15A (up)	328.5
				3	15A to 16 (up)	124.8
				3	16 to 17 (up)	301.0
				3	17 to 18 (up)	303.6
				4	15 to 14 (dn)	157.8
Total = 1998.4						

Line Bypass	Backup Pump at	Reference Drawing Sht
Pump at Pump To		
SMH "A" SMH "27" bypass line	SMH "B" SMH "28"	18 18

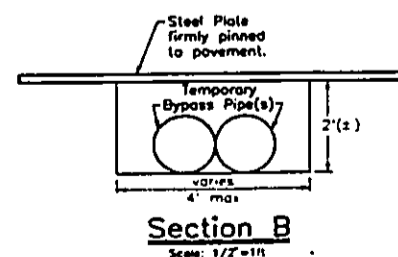
Access No.	Access To	Property Affected (TMC)	Property Status	Access Purpose
#1	SMH 20	Walupe Pk	beach park	clean/inversion
#2	SMH 18 SMH 15	vacant lot Kealia Way	vacant lot pvt road	cleaning clean/inversion



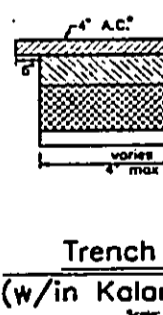
BYPASS DETAIL @ SMH #27 & #28
Scale: 1/2"=1ft

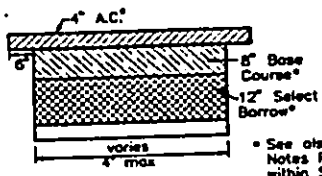
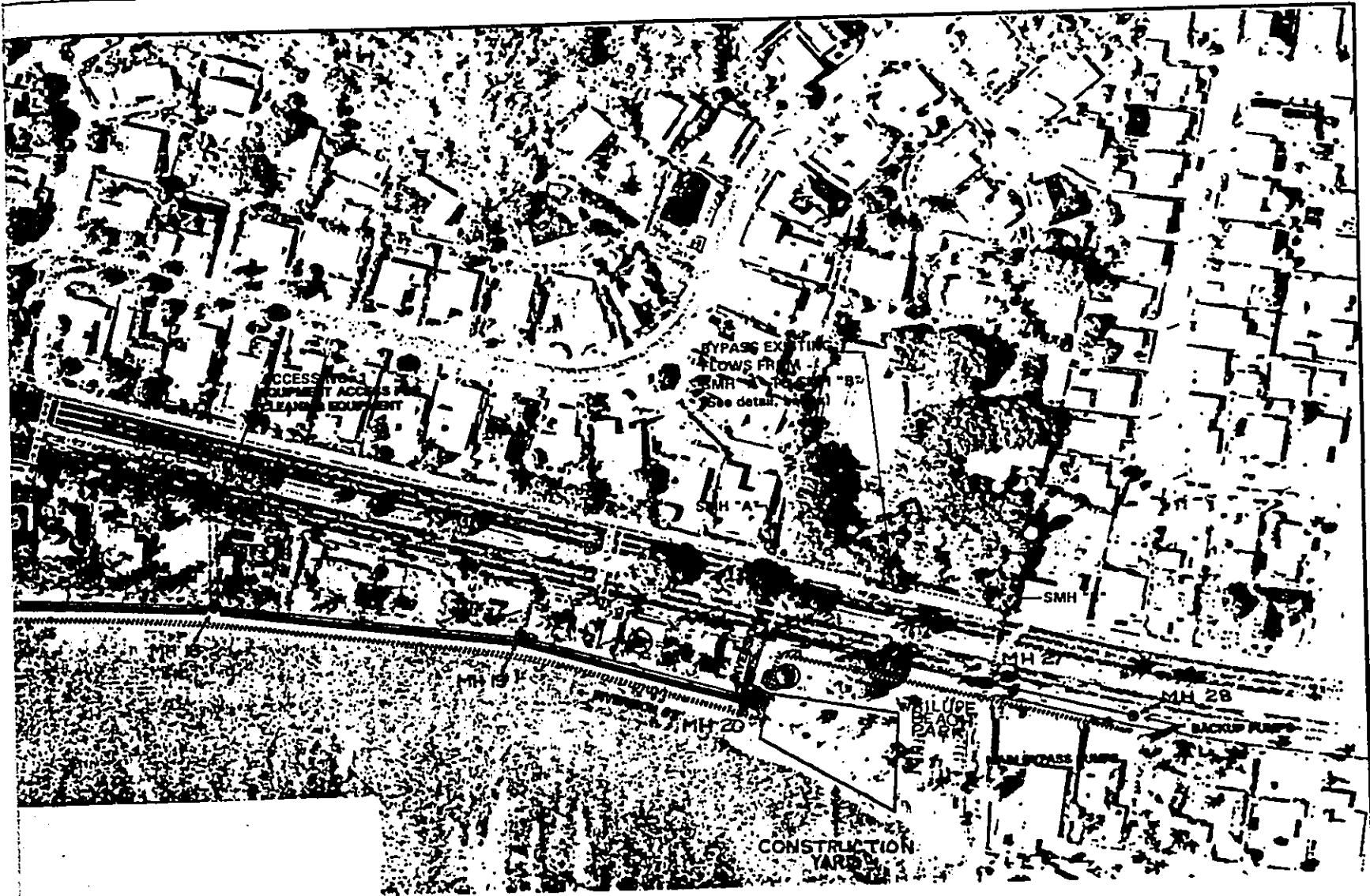


Bypass Detail @ Sidewalk
Scale: 1/2"=1ft



Section B
Scale: 1/2"=1ft



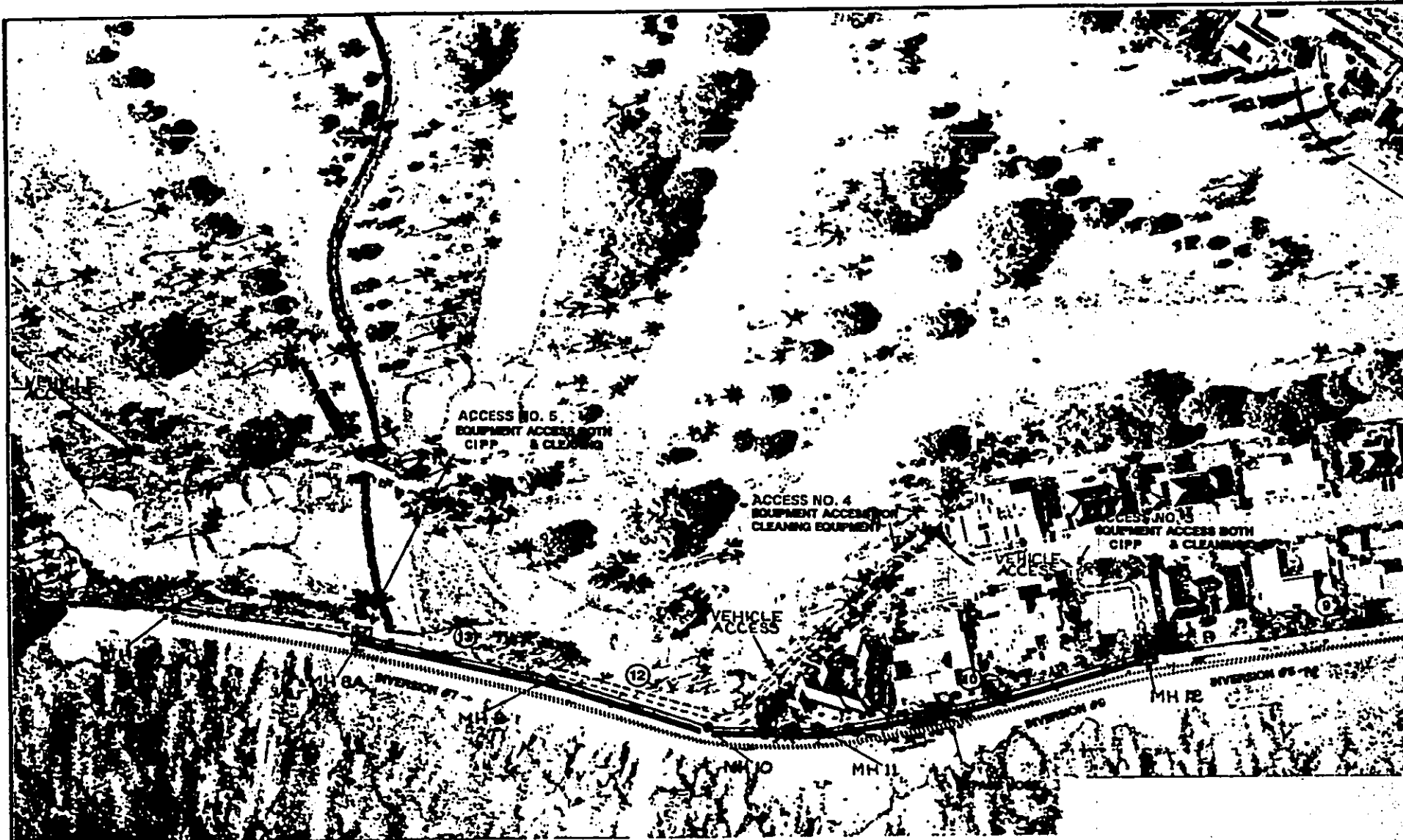


• See also, Note 5b, Notes For Construction within State Right of Way, Sheet 6.

Trench Repaving
 (w/in Kalanianaʻole Hwy)
 Scale: 1/2"=1ft

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
WAILUPE RECONSTRUCTED TRUNK SEWER PHASE 1 WORK and ACCESS POINTS	
Drawn by: <i>H. Uyama</i> Date: <i>12-2-91</i>	As noted Checked by: <i>J. Lee</i> Date: <i>12-2-91</i>

JOB NO. W13-91



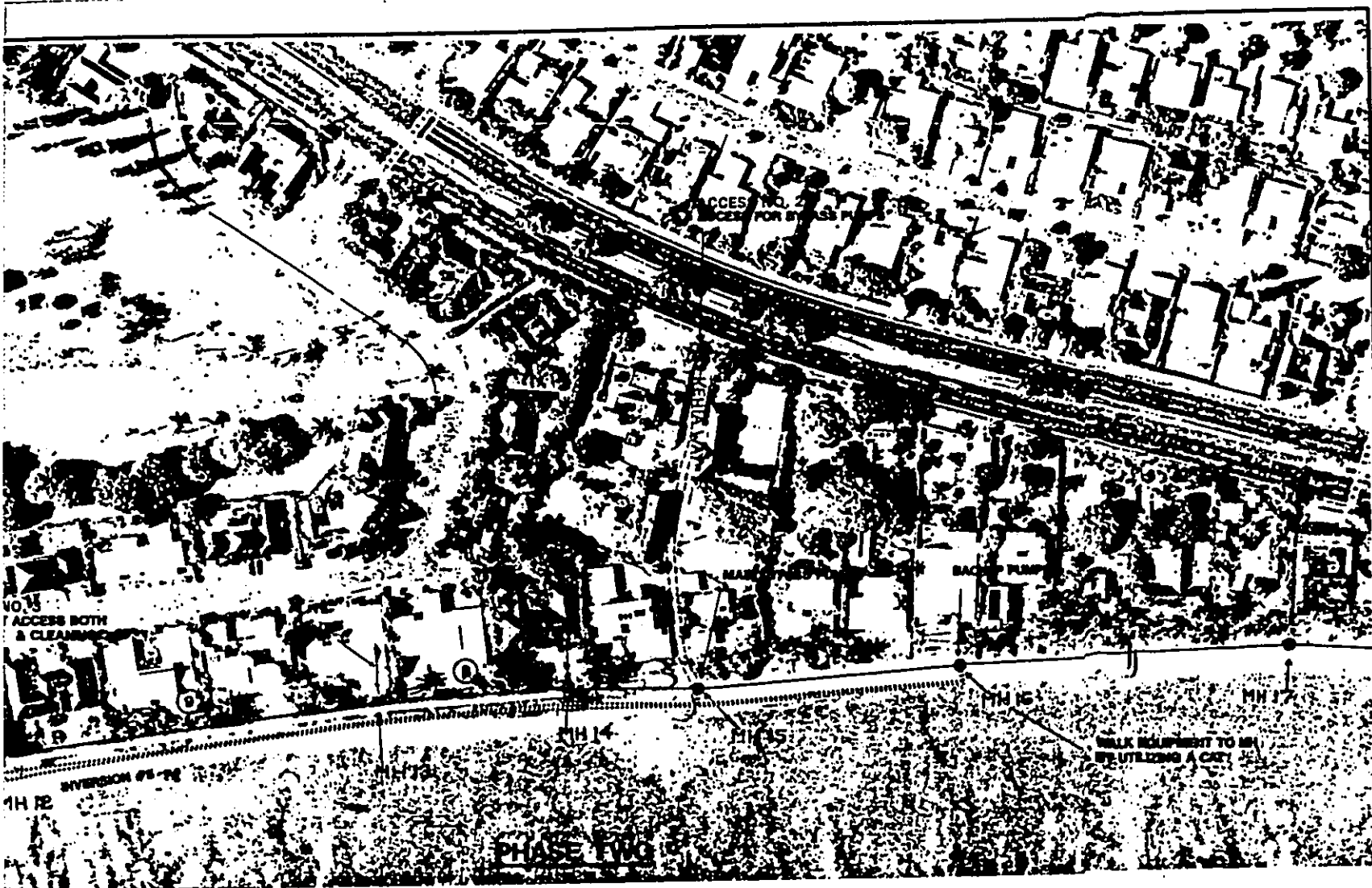
PHASE 2 WORK INFORMATION

Work for this Phase shall commence at the upstream end of the project and commence in the downstream direction.

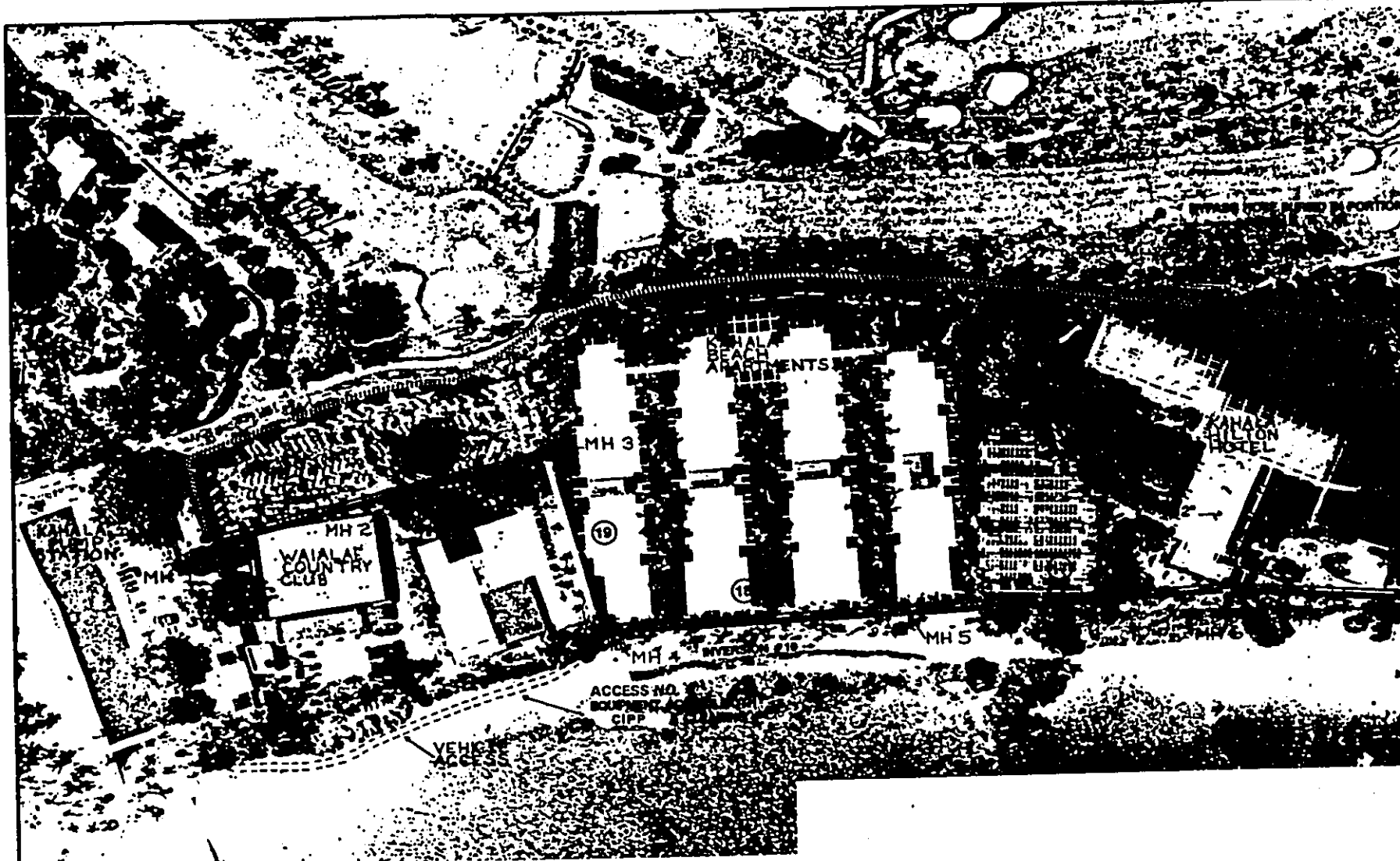
Work Phase	Fm SMH	To SMH	Inversion Access	Inversion #	Inversion Direction	Length (ft)
2a	14	10	C (SMH 12)	5	12 to 13(up)	479.4
				6	13 to 14(up)	247.4
				6	12 to 11(dn)	488.4
2b	10	8	D (SMH 8A)	7	8A to 9(up)	282.7
				7	9 to 10(up)	223.0
Total =						1636.3

Line Bypass		Backup Pump at	Reference Drawing Sht
Pump at	Pump To		
SMH 18	bypass line	SMH 16	15, 16

Access No.	Access To	Property Affected (TASC)	Property Status	Access Purpose
#2a	SMH 15 & 16	Keane Way beach area	prt road beach	bypass pump/pl
#3	SMH 12	3-05-58:08	beach	clean/inversion
#4	SMH 9 & 10	3-05-23:01	vacant lot	cleaning
#5	SMH 8 & 8A	3-05-23:01	golf course	clean/inversion



DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
WAIUPE RECONSTRUCTED TRUNK SEWER PHASE 2 WORK and ACCESS POINTS	
DATE: _____ DRAWN BY: <i>H. Lyman</i> CHECKED BY: _____	AS NOTED: _____ SCALE: _____ DATE: 12-2-91
JOB NO. W13-91	



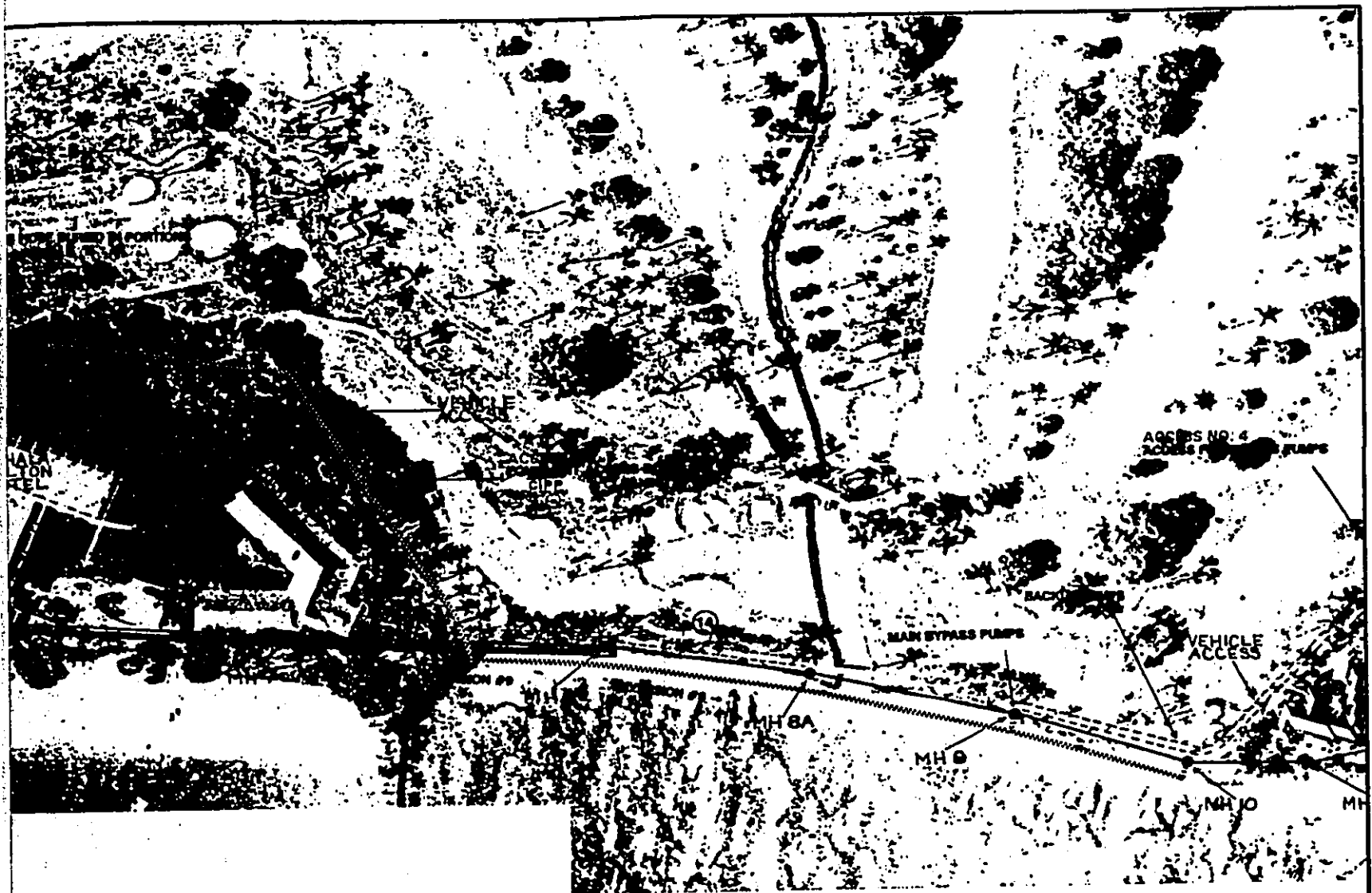
PHASE 3 WORK INFORMATION

Work for this Phase shall commence at the upstream end of the project and commence in the downstream direction

Work Phase	Fm SMH	To SMH	Inversion Access	Inversion #	Inversion Direction	Length (ft)
3a	8A	6	E (SMH 8)	8	8 to 8A(up)	263.0
				9	8 to 7(dn)	409.0
				9	7 to 6(dn)	375.1
3b	6	4	F (SMH 4)	10	4 to 5(up)	393.2
				10	5 to 6(up)	405.7
3c	4	1	G (SMH 3)	11	3 to 4(up)	248.0
				12	3 to 3A(dn)	187.4
				12	3A to 1(dn)	261.4
Total =						2642.8

Line Bypass	Backup Pump at	Reference Drawing Sht
Pump at SMH 9	Pump To bypass line	SMH 10
		11, 12

Access No.	Access To	Property Affected (TMS)	Property Status	Access Purpose
#4	SMH 9 & 10	3-05-23:01	golf course	backup pumps)
#5	SMH 8 & 8A	3-05-23:01	golf course	clean/inversion & bypass line
#6	SMH 4	Waiale Pt & beach area	beach park beach	clean/inversion



DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU				
WAILUPE RECONSTRUCTED TRUNK SEWER PHASE 3 WORK and ACCESS POINTS				
DATE	BY	CHKD BY	NO. NOTED	
12-2-91	J. Lee			
<i>J. Lee</i>		<i>12-2-91</i>		

JOB NO. W13-91

CONSTRUCTION NOTES:

1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, AND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPTS OF PUBLIC WORKS, CITY & COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.
2. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING UTILITY LINES AT THE PROPOSED CONNECTION POINTS TO VERIFY THE LOCATIONS AND DEPTHS PRIOR TO EXCAVATING FOR THE NEW LINES.
3. THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO STARTING CONSTRUCTION. ANY DISCREPANCIES FOUND SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
4. UNLESS INDICATED OTHERWISE, ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION AND ANY DAMAGE TO THEM SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL THEIR UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL COORDINATE ALL OF THIS WORK.
6. DURING NON-WORKING HOURS, THE TRENCHES WITHIN THE ROADS AND INTERSECTING STREETS SHALL BE COVERED WITH NON-SKID STEEL PLATES AND ALL LANES MAINTAINED OPEN FOR TRAFFIC.
7. WHEN THE TRENCH EXCAVATION IS NEXT TO, CLOSE TO, OR BENEATH EXISTING STRUCTURES AND/OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT, AND FOR PROPERLY SUPPORTING THE EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS AND/OR UNDERPINNING TO FULLY PROTECT THEM FROM BEING DAMAGED BY THE WORK.
8. BACKFILL MATERIAL BENEATH EXISTING STRUCTURES OR FACILITIES SHALL BE SANDY AND GRANULAR MATERIAL, COMPLETELY PLACED AS SOON AS THE PIPE IS LAD AND TESTED. THE BACKFILL MATERIAL SHALL BE COMPACTED WITH PROPER TOOLS UNTIL 90% TO 95% OF ITS MAXIMUM DENSITY.
9. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION, ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION WORK. SUCH IMPROVEMENTS INCLUDE PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS OTHERWISE PROVIDED FOR IN THE PROPOSAL. DEMOLITION AND RESTORATION OF EXISTING ITEMS SHALL BE INCIDENTAL TO THE WORK BEING PERFORMED.
10. THE CONTRACTOR SHALL PROVIDE ACCESS TO AND FROM ALL DRIVEWAYS AND PUBLIC STREETS AT ALL TIMES.
11. NO STOCKPILING OF MATERIAL WILL BE PERMITTED ON ANY ROADWAY.
12. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH THE DEPARTMENT OF HEALTH'S ADMINISTRATIVE RULES REGARDING NOISE CONTROL FOR OAHU.
13. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING CONSTRUCTION BRANCH, SEVEN (7) DAYS PRIOR TO STARTING CONSTRUCTION.

PUBLIC HEALTH, SAFETY AND CONVENIENCE NOTES:

1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
2. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY MAY REQUIRE SUPPLEMENTARY MEASURES AS NECESSARY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND REMOVAL OF ALL SILT AND DEBRIS GENERATED BY HIS WORK AND DEPOSITED AND ACCUMULATED WITHIN DOWNSTREAM WATERWAYS, DITCHES AND DRAIN PIPES AND ON PUBLIC AND PRIVATE ROADWAYS. THE CONTRACTOR AGREES TO REIMBURSE THE CITY AND COUNTY OF HONOLULU FOR ALL COSTS EXPENDED BY THE CITY IN PERFORMANCE OF THE ABOVE WORK IF REQUIRED FOR PUBLIC HEALTH AND SAFETY OR MADE NECESSARY BY NON-PERFORMANCE BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE, AND SAFETY OF THE PUBLIC. THE CONTRACTOR SHALL APPLY FOR A CONSTRUCTION PERMIT WITH A NOISE POLLUTION CONTROL PLAN.

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT OF WAY:

1. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM THE STATE'S HIGHWAY DISTRICT ENGINEER AT 727 KAKOH STREET PRIOR TO COMMENCEMENT OF WORK WITHIN KALAMANAOLE HIGHWAY.
2. CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN STATE RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", DATED 1978, AND THE "SPECIFICATION FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS", DATED APRIL 1, 1974, OF THE STATE HIGHWAYS DIVISION.
3. KALAMANAOLE HIGHWAY LANE CLOSURE WILL ONLY BE PERMITTED DURING THE HOURS OF 8:00AM TO 3:00PM, AND SHOULD BE COORDINATED WITH THE ONGOING WIDENING PROJECT (CONTACT RON HORUUCHI OR MICHAEL PREBULA AT HAWAIIAN DREDGING AND CONSTRUCTION AT 377-1106). ALL LANES MUST BE OPEN DURING THE PEAK HOURS OF 5:30AM TO 9:00AM AND 3:00PM TO 6:30PM.
4. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "RULES AND REGULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE HIGHWAY SAFETY COORDINATOR, AND THE US FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI - TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS, DATED 1978". IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE INCORPORATED INTO THE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE DIVISION PRIOR TO THE ISSUANCE OF THE PERMIT.
5. THE MINIMUM PAVEMENT STRUCTURE SHALL CONSIST OF:
 - A. COMMERCIAL DRIVEWAYS, SIDEROADS, AND UTILITY INSTALLATIONS ON MINOR HIGHWAYS
2-1/2" ASPHALT CONCRETE, 8" AGGREGATE BASE COURSE, AND 12" AGGREGATE SUBBASE, OR 2-1/2" ASPHALT CONCRETE AND 8" ASPHALT TREATED BASE COURSE OR ASPHALT CONCRETE OR MATCH EXISTING PAVEMENT STRUCTURE, WHICHEVER IS GREATER.
 - B. CHANNELIZED INTERSECTIONS AND UTILITY INSTALLATIONS ON MAJOR HIGHWAYS
4" ASPHALT CONCRETE, 8" AGGREGATE BASE COURSE, AND 12" AGGREGATE SUBBASE, OR 4" ASPHALT CONCRETE AND 8" ASPHALT TREATED BASE COURSE OR ASPHALT CONCRETE, OR MATCH EXISTING PAVEMENT STRUCTURE, WHICHEVER IS GREATER.
6. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN HIGHWAY RIGHTS OF WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DISTRICT ENGINEER.
7. COMPACTION TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS DATED APRIL 1, 1974 AS FOLLOWS:
 - A. SUBBASE: 1 COMPACTION TEST PER TRENCH
 - B. BASE COURSE: 1 COMPACTION TEST PER TRENCH
8. PRIOR TO COMMENCING TRENCH EXCAVATION WORK, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE NEW CENTERLINE OF THE UTILITY TRENCH AND THAT SUCH INFORMATION SHALL BE USED IN THE VERIFICATION OF RESTORING THE ROADWAY TO ITS ORIGINAL CONDITION. A COPY OF THE PROFILE SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.
9. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE, SAFE, NON-SKID BRIDGING MATERIAL OVER THE TRENCH, INCLUDING SHORING, WHEN TRENCHING IN PAVEMENT AREAS TO HANDLE ALL TYPES OF VEHICULAR TRAFFIC.
10. LONGITUDINAL DRAINAGE ALONG THE HIGHWAY SHALL BE MAINTAINED.
11. PAVEMENT STRIPING SHALL BE DONE BY THE CONTRACTOR.
12. APPROVAL OF PERMIT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF ONE YEAR THEREOF FROM THE DATE OF NOTIFICATION OF APPROVAL TO THE APPLICANT. IN THE EVENT CONSTRUCTION DOES NOT COMMENCE WITHIN THIS ONE YEAR PERIOD, THE APPLICANT WILL BE REQUIRED TO RESUBMIT THE CONSTRUCTION PLANS FOR THE DIVISION'S REVIEW AND REAPPROVAL.
13. ALL REGULATORY, GUIDE, AND CONSTRUCTION SIGNS, AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.

1. For a product and/or process commercially acceptable of successful work with Documentation of the success City upon their request and/or process.
2. No new product and/or three years of successful
3. No new product and/or the submission of test data resistance of the product following criteria:
 - A. Materials tested shall Test samples shall and/or returning of applicable ASTM standards
 - B. All test data, whether validated by an independent procedures.
4. The in-place product shall the existing pipe's capacity ground flow test that is flow characteristics.
5. The Vendor must submit for product manufacture inspection, testing of pipe the taking off of and test previous installations meet the City's current standards.
6. The Vendor shall submit major components used for product manufacture be given to those products.
7. The Vendor shall submit for the testing, and/or test product for this project.
8. Pipeline rehabilitation product for structural strength of Walkups Trunk Sewer wall.
9. No cured-in-place pipe p
 - A. vacuum resin impregnated
 - B. the finished pipe wall coating (i.e. no internal
10. The Vendor shall provide reconstruction of the sewer itemized listing of the total locations of all invasions.
11. To control and limit the C rehabilitation products with new product technologies following parameters for commercially acceptable:
 - A. If the new product in commercial experience or products for sewer States, the maximum be installed in the C will not exceed 3% of manufacturer's new
 - B. Footage in Item 11A proposed product, phone numbers of the acceptance data by
 - C. The limitations discuss 11B will be dropped County's system, and and County.
 - D. The Vendor must be under the supervision appropriate City office City and County. This will be used to avoid public disruption, and standards and require
 - E. The Vendor's Contract where the work is to
12. The Vendor shall submit the event new accesses to connection), or should on

MINIMUM PRODUCT REQUIREMENTS

1. For a product and/or process to qualify for use on this project, it must be a commercially acceptable product and/or process having a minimum of 25,000 feet of successful waste water collection system installations in the United States. Documentation of the successful installations must be made available to the City upon their request to assure the commercial viability of the product and/or process.
2. No new product and/or process will be allowed for use on this project until three years of successful service of that product and/or process can be shown.
3. No new product and/or process will be bid or allowed to be installed without the submital of test data supporting the long term strength and corrosion resistance of the product and/or process. These tests shall be based on the following criteria:
 - A. Materials tested shall be similar to those proposed for the installation. Test samples shall be prepared so as to simulate the trauma of installation and/or reforming of the product. Testing shall be in accordance with applicable ASTM standards.
 - B. All test data, whether theoretically extrapolated or actual must be validated by an independent third party qualified in testing these procedures.
4. The in-place product shall provide a full flow pipe capacity equal to 100% of the existing pipe's capacity. The Vendor shall provide a minimum of one in-ground flow test that is verified by an independent third party measuring the flow characteristics.
5. The Vendor must submit engineering design guide and quality control procedures for product manufacture and for product installation, including detailed inspection, testing of physical properties, retention of production samples and the taking off of and testing of field samples. Test results from five previous installations must be submitted to the City and the results shall meet the City's current standards and requirements.
6. The Vendor must submit a certification as to the country of manufacture of all major components used to produce the final installed product. Preference shall be given to those products with U.S. suppliers.
7. The Vendor shall submit to the City evidence of installer training, evidence of the testing, and/or certification of those personnel trained to install the product for this project by the manufacturer of the product.
8. Pipeline rehabilitation products that require bonding to the existing pipe wall for structural strength will not be acceptable since the condition of the Waialupe Trunk Sewer wall varies considerably throughout the project.
9. No cured-in-place pipe products will be accepted unless:
 - A. vacuum resin impregnation techniques are used
 - B. the finished pipe wall is homogeneous throughout except for the exterior coating (i.e. no intermediate impermeable layers).
10. The Vendor shall provide detailed installation procedures for the reconstruction of the sewer trunk line. The procedures shall include an itemized listing of the tasks along with a detailed plan outlining the locations of all inversions.
11. To control and limit the City's exposure to unproven pipe reconstruction or rehabilitation products while permitting the establishment and growth of such new product technologies where warranted, the City has established the following parameters for products not deemed by the City and County to be commercially acceptable in accordance with Items 1-10 above.
 - A. If the new product manufacturer does not have a minimum of five years of commercial experience in manufacturing the proposed rehabilitation product or products for essentially trenchless pipe reconstruction in the United States, the maximum of that manufacturer's new product footage that will be installed in the City and County's system during any 12 month period will not exceed 3% (at the time of bid) of the total footage of that manufacturer's new product installed and accepted in U.S. sewer systems.
 - B. Footage in Item 11A (above) will be documented by the Manufacturer of the proposed product. Documentation will include name, address and reference phone numbers of the users, length and diameter of the product and official acceptance data by the user.
 - C. The limitations discussed in Item 11A and the documentation requirements in 11B will be dropped after 3 years of successful service in the City and County's system, and as the product is deemed to be successful by the City and County.
 - D. The Vendor must be willing to install a minimum test length of 300+ feet under the supervision of a City and County inspector for review by the appropriate City officials. This test section is to be designated by the City and County. The test will be at no charge to the City and County and will be used to evaluate the installation, trauma, structural properties, public disruption, and compatibility with the City and County's current standards and requirements.
 - E. The Vendor's Contractor must have a Contractor's license for the state where the work is to be done.
12. The Vendor shall submit detailed procedures for repairing its own product in the event new accesses to the pipe are required (e.g. a new lateral connection), or should an unforeseen pipe failure occur.

CLEANING SPECIFICATIONS

GENERAL REQUIREMENTS

The term "clean" as used in these specifications shall be defined as the removal of sufficient materials to render the sewer line to 95% of its original capacity, or to allow passage of the necessary inspection, and reconstruction materials, whichever is greater.

The term "manhole section" as used in these specifications shall mean the length of pipe connecting two manholes.

The work covered by this section shall consist of furnishing all labor, equipment, materials, plant and supervision to perform all work necessary to clean the designated sanitary sewer lines.

All work will be performed by experienced and prequalified personnel utilizing equipment and materials which meet the requirements hereinafter specified.

SAFETY AND EXPERIENCE

The Contractor shall have a documented, in place safety program which meets or exceeds all State/Fed-OSHA regulations, with emphasis on hazard-free problems in confined space entry.

Additionally, the Contractor shall have a minimum of 5 years documented experience in cleaning and demonstrates the ability to evaluate problems in sanitary/storm sewer systems based upon prior documented project experiences.

EQUIPMENT

All designated sewer manhole sections shall be cleaned using vacuum removal cleaning equipment or high-velocity sewer cleaning equipment as specified and the selection of equipment used shall be based on the condition of the lines at the time the work commences. The equipment and the methods selected for cleaning shall be capable of removing all dirt, grease, rocks and other deleterious materials from the sewer lines and manholes.

All sewer cleaning equipment shall be used to insure that all sand, grease and other fine materials have been removed. Satisfactory precautions shall be taken to protect the sewer lines from damage that might be inflicted by the improper use of cleaning equipment. The Contractor will not be responsible for pre-existing conditions of the pipe.

When additional quantities of water from nearby fire hydrants is necessary to avoid delay in normal working procedure, the water shall be conserved and not used unnecessarily. No fire hydrant shall be obstructed. All sludge, dirt, rocks, sand, grease and other solids or semi-solid materials resulting from all types of cleaning operations shall be trapped and removed at the downstream manhole of the section being cleaned. Passing materials from manhole section to manhole section, which could cause line stoppage, accumulations of sand in wet wells or damage to pumping equipment, shall not be permitted. All solids or semi-solids resulting from the cleaning operation shall be removed from the site and disposed of at a site provided by the owner.

A. Vacuum Removal Cleaning Equipment

This equipment shall be truck mounted for ease of operation, and designed to utilize air movement for cleaning/vacuuming of materials in the sewer pipe. The equipment shall be capable of removal of materials a distance of 500 ft. from the operating manhole. The equipment utilized will have the capability of moving a minimum of 8500 cfm.

B. High-velocity Hydrocleaning Equipment:

All high velocity sewer cleaning equipment shall be truck mounted for ease of operation. The equipment shall have a minimum of 500 feet of one inch ID high pressure hose with a selection of four or more cleaning nozzles.

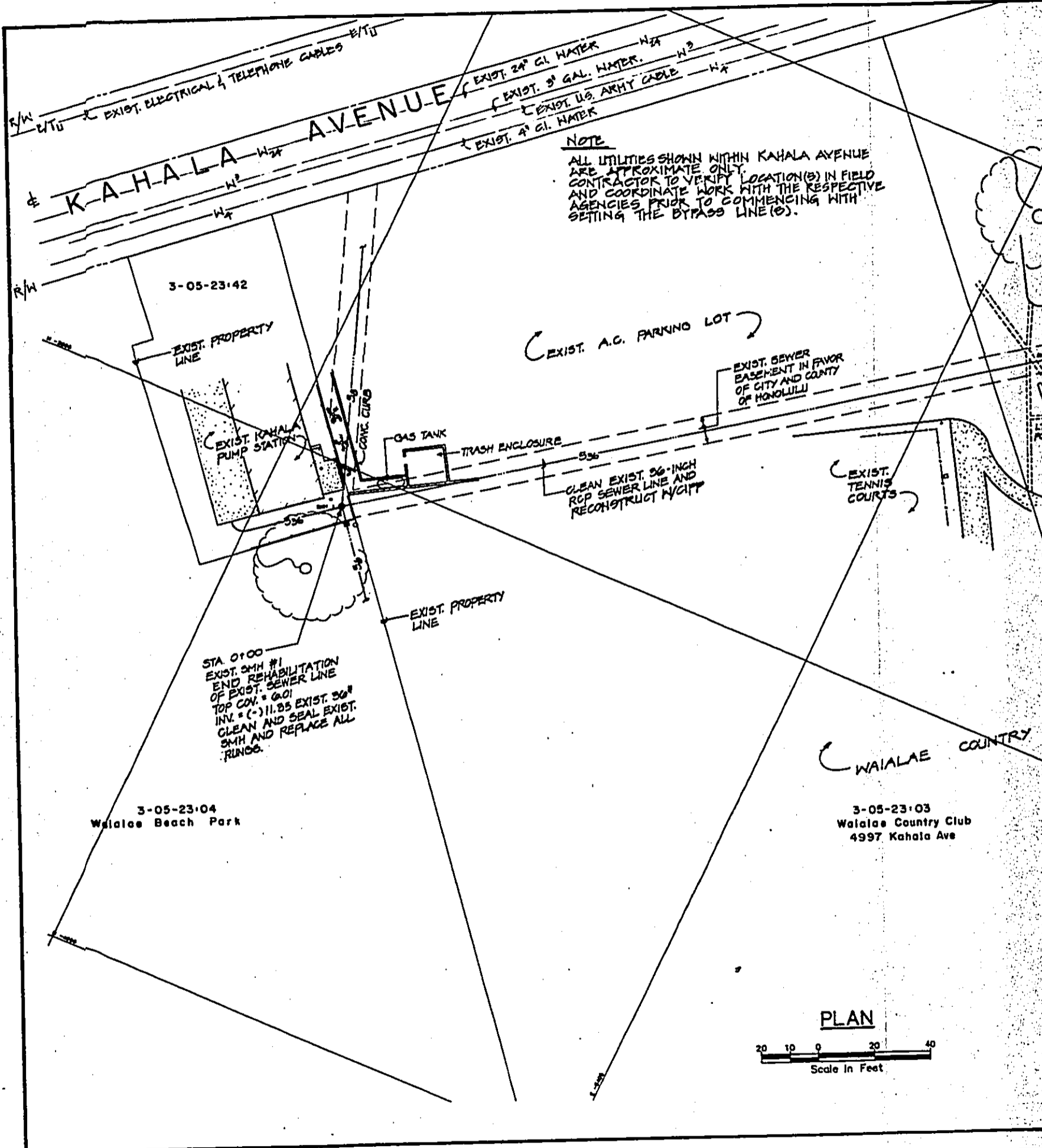
The equipment shall have a minimum capacity of 60 gallons per minute and a working pressure of 1,200 pounds per square inch. The nozzles shall be capable of producing a scouring action from 150 to 450 in all size lines designated to be cleaned. The equipment shall also include a high velocity gun for washing and scouring manhole walls and floors.

The equipment shall carry its own 1,200 gallon water tanks, capable of holding corrosive or caustic cleaning or sanitizing chemicals, auxiliary engines, pumps and a hydraulically driven hose reel.

All controls shall be located so that the equipment can be operated above ground at minimal interference to existing traffic and/or danger to the operator.

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAILUPE RECONSTRUCTED TRUNK SEWER CONSTRUCTION NOTES			
SY	As Noted		
IT	AS NOTED		
[Signature]		12-7-91	

JOB NO. W13-91



R/W
 E/TU
 EXIST. ELECTRICAL & TELEPHONE CABLES E/TU

EXIST. 24" CI. WATER W₂₄
 EXIST. 8" GAL. WATER W₈
 EXIST. U.S. ARMY CABLE W₂
 EXIST. 4" CI. WATER W₄

KAHALA AVENUE

NOTE
 ALL UTILITIES SHOWN WITHIN KAHALA AVENUE ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY LOCATION(S) IN FIELD AND COORDINATE WORK WITH THE RESPECTIVE AGENCIES PRIOR TO COMMENCING WITH SETTING THE BYPASS LINE(S).

3-05-23-42

EXIST. PROPERTY LINE

EXIST. KAHALA PUMP STATION

GAS TANK

TRASH ENCLOSURE

EXIST. A.C. PARKING LOT

EXIST. SEWER EASEMENT IN FAVOR OF CITY AND COUNTY OF HONOLULU

CLEAN EXIST. 36-INCH RCP SEWER LINE AND RECONSTRUCT W/CIFF

EXIST. TENNIS COURTS

EXIST. PROPERTY LINE

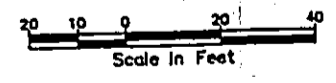
STA. 0+00
 EXIST. SMH #1
 END REHABILITATION OF EXIST. SEWER LINE
 TOP COV. = 0.01
 INV. = (-) 11.85 EXIST. 36"
 CLEAN AND SEAL EXIST. SMH AND REPLACE ALL RINGS.

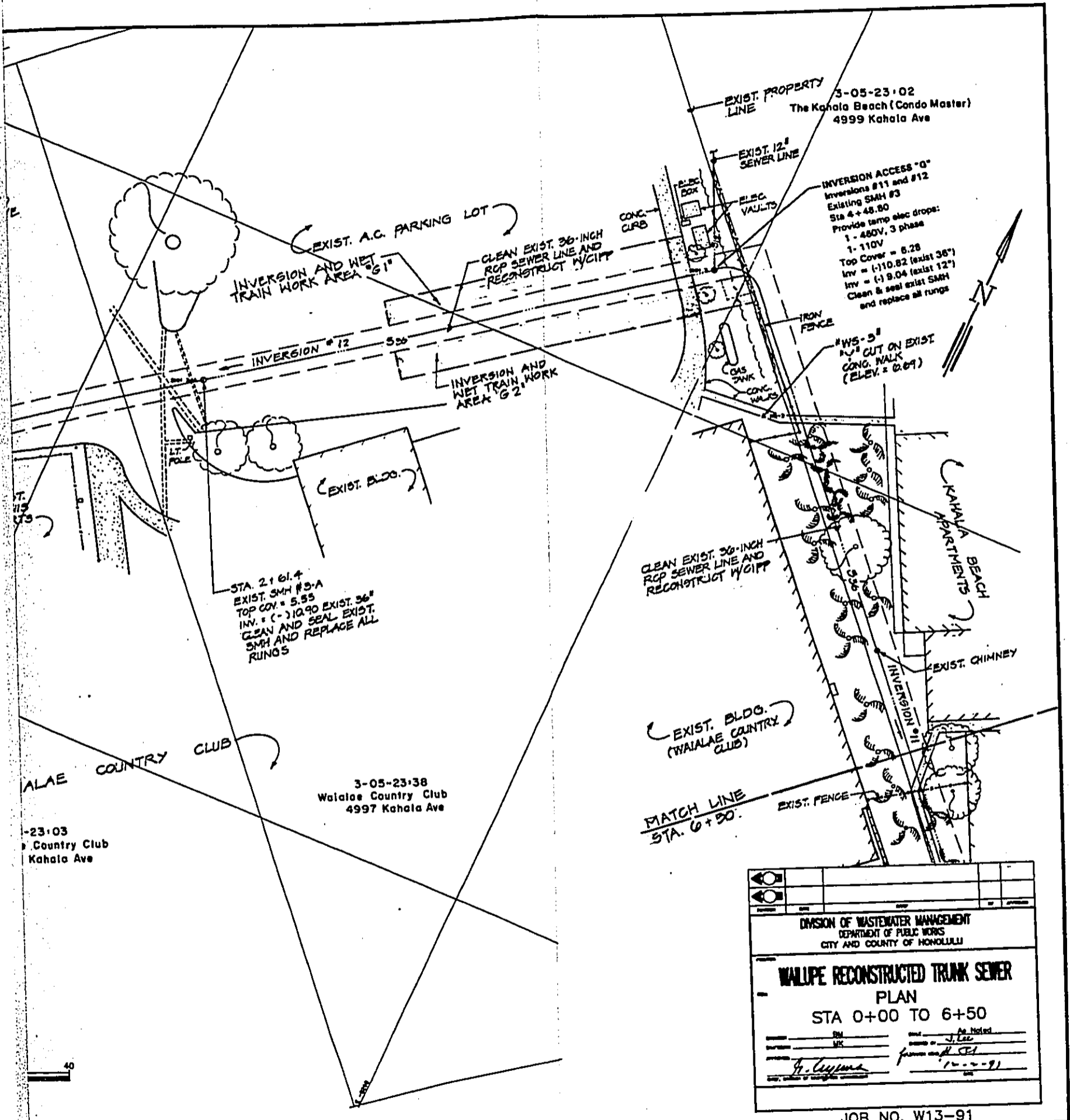
3-05-23-04
 Waialae Beach Park

WAIALAE COUNTRY

3-05-23-03
 Waialae Country Club
 4997 Kahala Ave

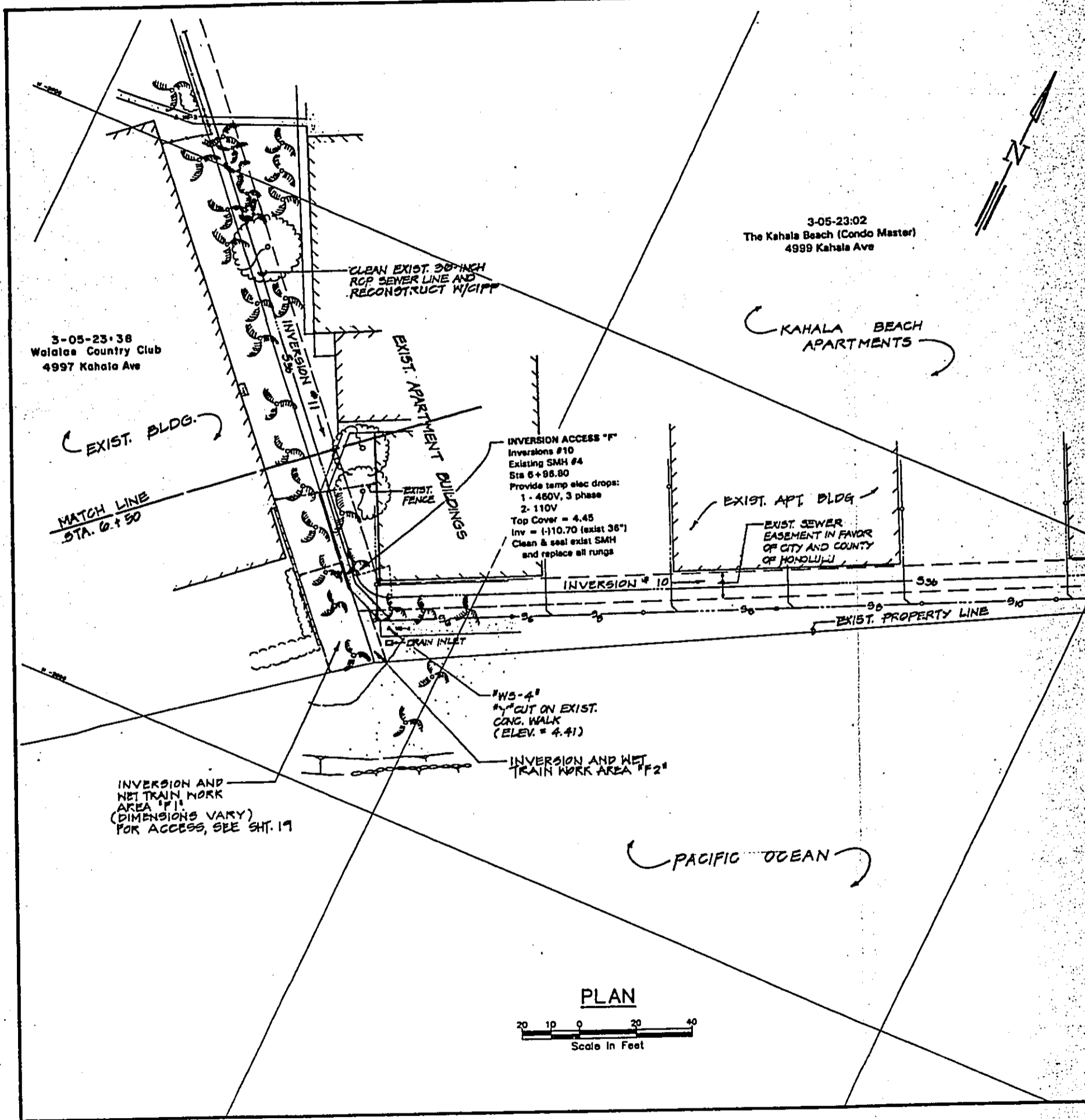
PLAN





DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
WALUPE RECONSTRUCTED TRUNK SEWER PLAN	
STA 0+00 TO 6+50	
DESIGNED BY <i>J. L. ...</i>	CHECKED BY <i>J. ...</i>
DRAWN BY <i>J. ...</i>	DATE 11-22-91

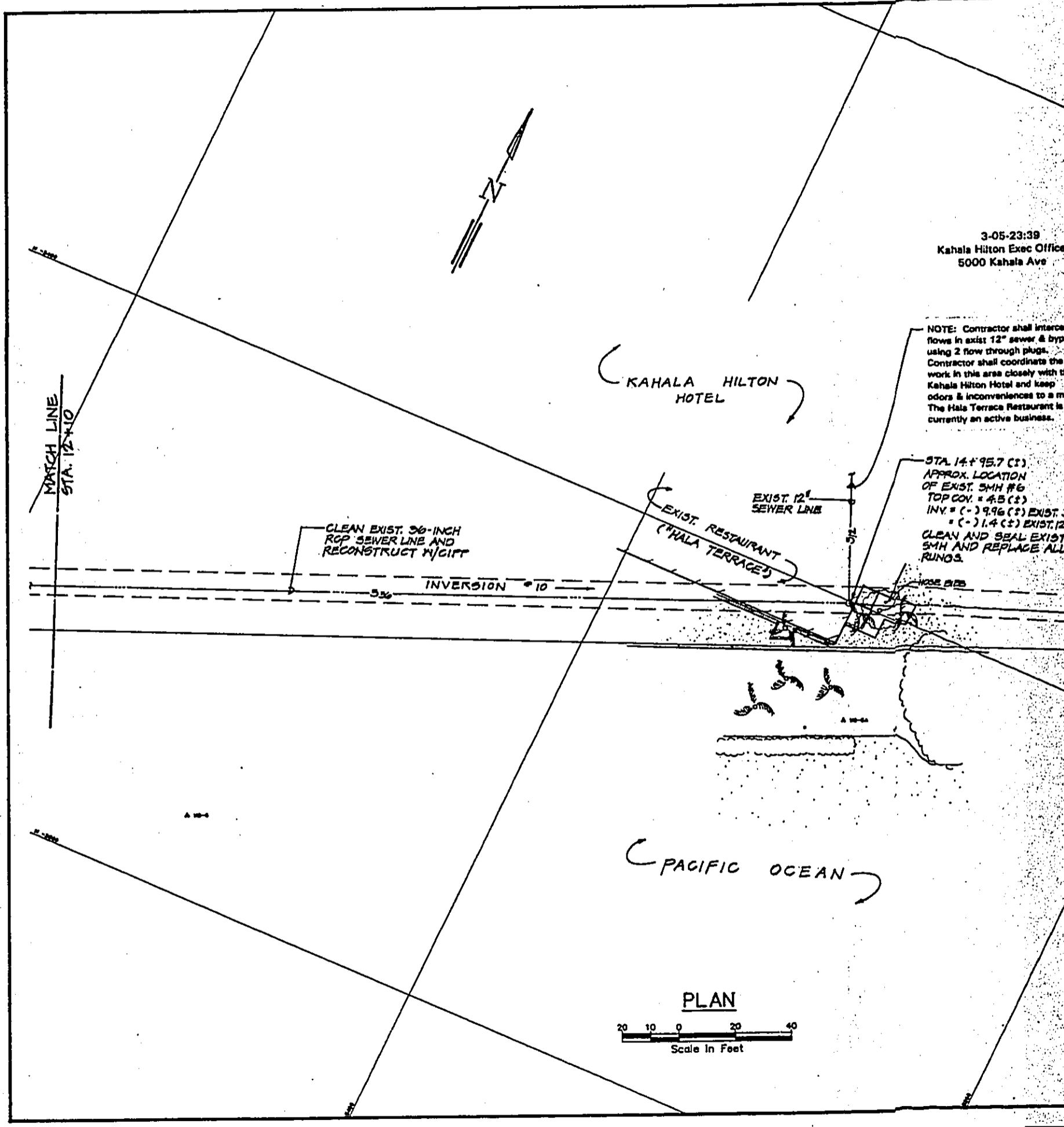
JOB NO. W13-91



3-05-23:39
Kahala Hilton Exec Office
5000 Kahala Ave

NOTE: Contractor shall interconnect flows in exist 12" sewer & bypass using 2 flow through plugs. Contractor shall coordinate the work in this area closely with the Kahala Hilton Hotel and keep odors & inconveniences to a minimum. The Hale Terrace Restaurant is currently an active business.

STA. 14+95.7 (±)
APPROX. LOCATION
OF EXIST. SMH #6
TOP COV. = 4.5 (±)
INV. = (-) 9.96 (±) EXIST. 3"
= (-) 1.4 (±) EXIST. 12"
CLEAN AND SEAL EXIST.
SMH AND REPLACE ALL
RINGS.



MATCH LINE
STA. 12+10

CLEAN EXIST. 36-INCH
RCP SEWER LINE AND
RECONSTRUCT W/GIRT

INVERSION = 10

EXIST. 12"
SEWER LINE

EXIST. RESTAURANT
(KAHALA TERRACE)

PACIFIC OCEAN

PLAN

20 10 0 20 40
Scale In Feet

3-05-23:39
 Kahala Hilton Exec Office
 5000 Kahala Ave

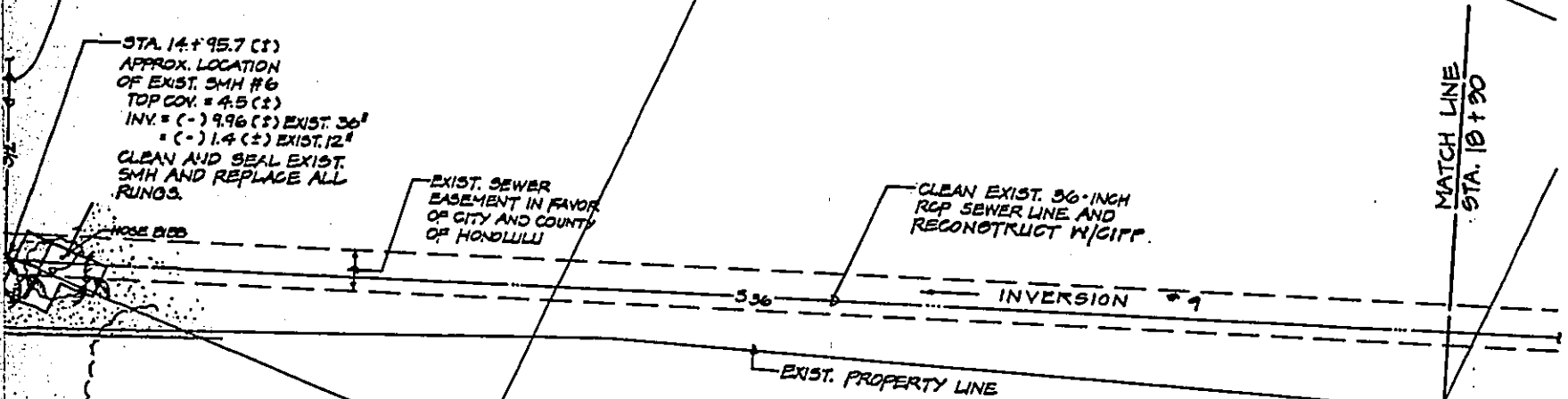
NOTE: Contractor shall intercept flows in exist 12" sewer & bypass using 2 flow through plugs. Contractor shall coordinate the work in this area closely with the Kahala Hilton Hotel and keep odors & inconveniences to a min. The Hale Terrace Restaurant is currently an active business.

STA. 14+95.7 (±)
 APPROX. LOCATION
 OF EXIST. SMH #6
 TOP COV. = 4.5 (±)
 INV. = (-) 9.96 (±) EXIST. 36"
 = (-) 1.4 (±) EXIST. 12"
 CLEAN AND SEAL EXIST.
 SMH AND REPLACE ALL
 RUNGS.

EXIST. SEWER
 EASEMENT IN FAVOR
 OF CITY AND COUNTY
 OF HONOLULU

CLEAN EXIST. 36-INCH
 RCP SEWER LINE AND
 RECONSTRUCT W/CIPP.

MATCH LINE
 STA. 18+30



DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
WAIUPE RECONSTRUCTED TRUNK SEWER PLAN	
STA 12+10 TO 18+30	
DESIGNED BY <i>H. Williams</i>	CHECKED BY <i>J. Lee</i>
DRAWN BY <i>H. Williams</i>	DATE 12-2-91

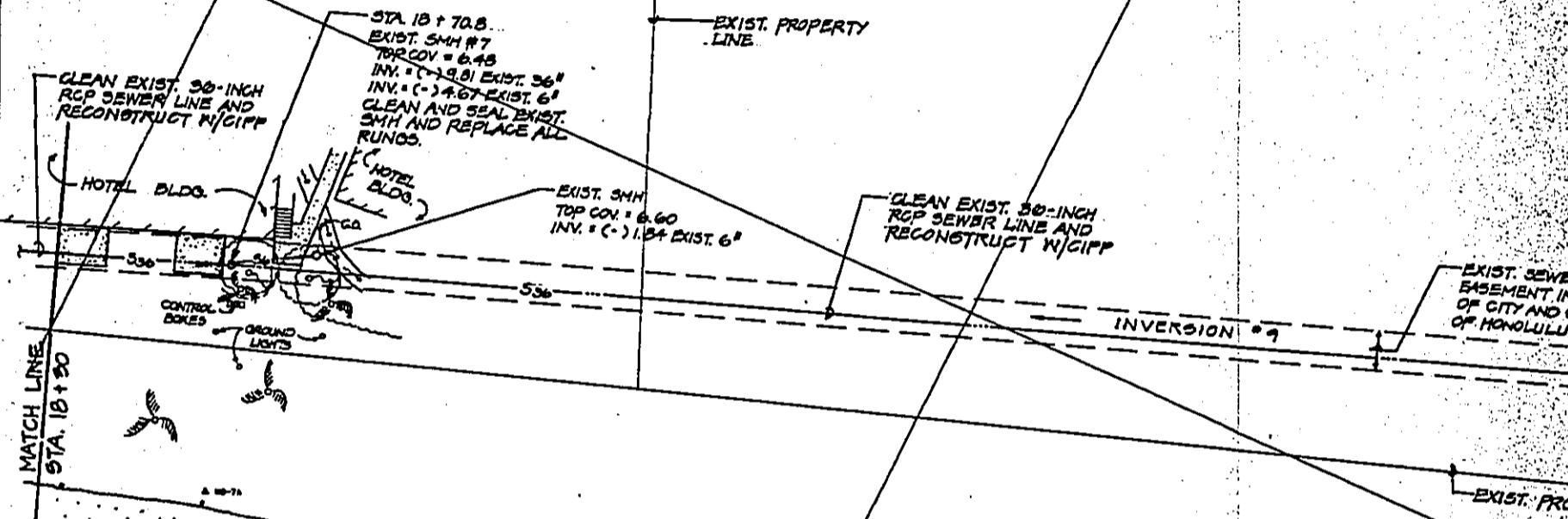
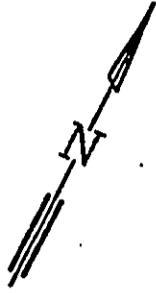
JOB NO. W13-91



3-05-23-39
Kahala Hilton Exec. Office
5000 Kahala Ave

KAHALA HILTON
HOTEL

WAIALAE COUNTRY
(GOLF COURSE)



PLAN



Scale In Feet

WAIALAE COUNTRY CLUB
(GOLF COURSE)

3-05-23-01
Wai'ala'e Country Club
(Golf Course)

EXIST. SEWER
EASEMENT IN FAVOR
OF CITY AND COUNTY
OF HONOLULU

HTCO BOX
HECO VAULT

INVERSION AND WET
TRAIN WORK AREA "E"
FOR ACCESS.
SEE SMT. 19.


CLEAN EXIST. 36-INCH
RCP SEWER LINE AND
RECONSTRUCT W/CIFF

MATCH LINE
STA. 24+40

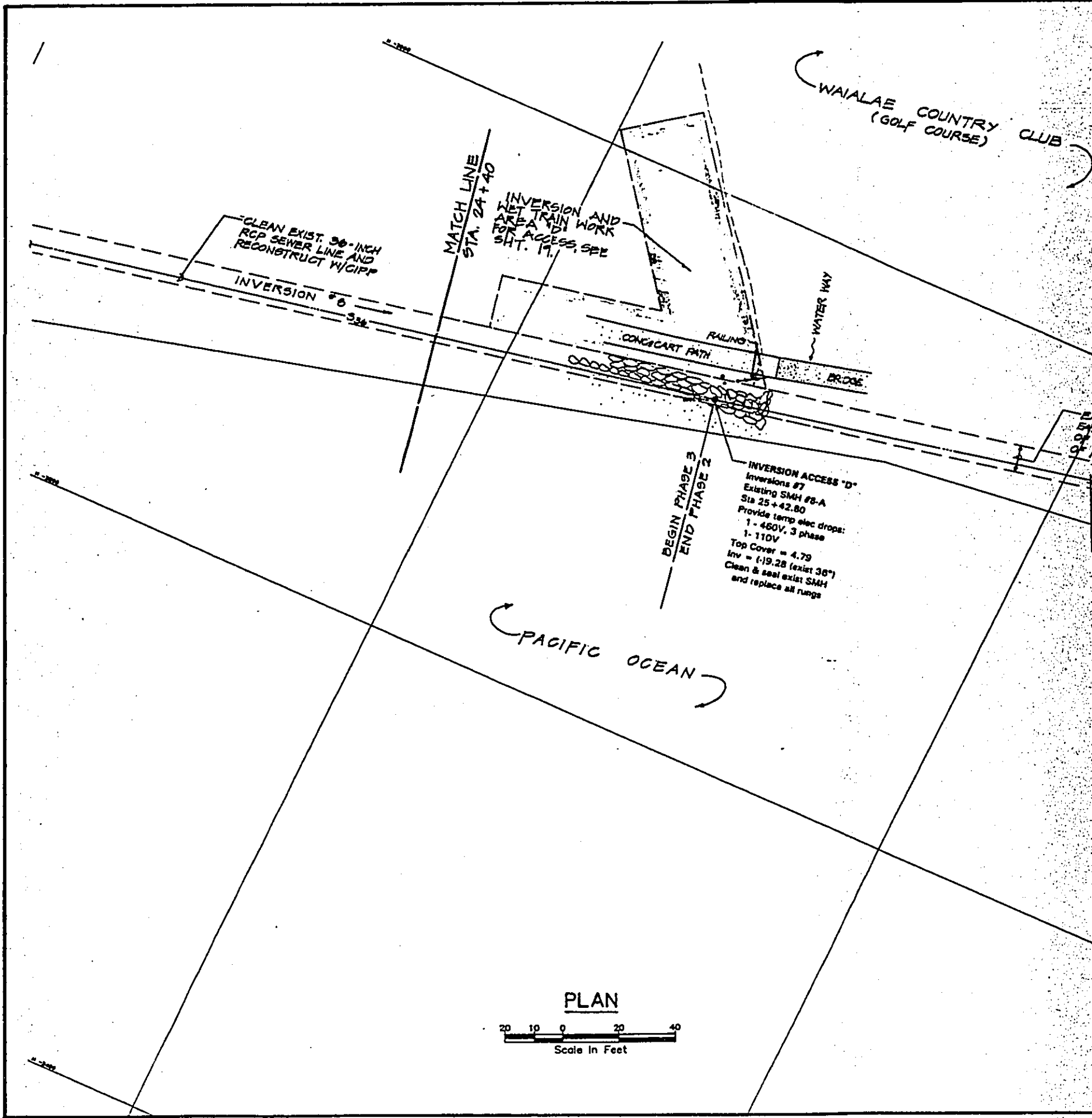
INVERSION #8

EXIST. PROPERTY LINE

INVERSION ACCESS "E"
Inversions #8 and #9
Existing SMH #8
Sta 22+79.80
Provide temp elec drops:
1 - 480V, 3 phase
1 - 110V
Top Cover = 4.79
Inv = (-)19.55 (exist 36")
Clean & seal exist SMH
and replace all rungs

			
DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAIUPE RECONSTRUCTED TRUNK SEWER PLAN STA 18+30 TO 24+40			
_____ Title	_____ Date	_____ As Noted	_____ Date
<i>A. L. ...</i>		<i>12-2-91</i>	

JOB NO. W13-91

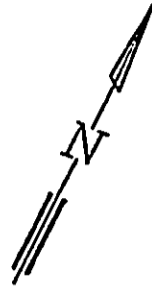


PLAN



LAE COUNTRY CLUB
(GOLF COURSE)

3-05-23-01
Waialae Country Club
(Golf Course)



EXIST. SEWER
EASEMENT IN FAVOR
OF CITY AND COUNTY
OF HONOLULU

INVERSION # 7
5%

CLEAN EXIST. 36-INCH
RCP SEWER LINE AND
RECONSTRUCT W/CIPP



ACCESS AND WORK
AREA #2
SEE SHT. 17

TEMPORARY ACCESS
FOR CLEANING EQUIP.
Width varies, 18ft minimum
final alignment in the field
with Waialae Country Club

CLEAN EXIST. 36-INCH
RCP SEWER LINE AND
RECONSTRUCT W/CIPP
5%

PLACE BYPASS PUMPS
(FOR PHASE 3)
Existing SMH #9
Sta 28+05.50
Provide temp elec drop:
1 - 460V, 3 phase
Top Cover = 4.27
Inv = (-)9.05 (exist 36")
Clean & seal exist SMH
and replace all rungs
Bypass pump(s) shall be placed
& operational only after Phase
2 work has been completed

MATCH LINE
STA. 29+40

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU					
WAILUPE RECONSTRUCTED TRUNK SEWER PLAN STA 24+40 TO 29+40					
DESIGNED BY		CHECKED BY		DATE	
DRAWN BY		APPROVED BY			

JOB NO. W13-91

3-05-23-01
Waialae Country Club
(Golf Course)

WAIALAE COUNTRY CLUB
(GOLF COURSE)

3-05-58-11
Ruth J Wade
1001 Kaimoku Place

MATCH LINE
STA. 29 + 40

ACCESS AND WORK
AREA 15' SEE SHT. 19.

CLEAN EXIST. 36" INCH
RCP SEWER LINE AND
RECONSTRUCT W/CIPP.

PLACE BACKUP PUMPS
(FOR PHASE 3)
Existing SMH #10
Sta 30+28.50
Provide temp electrical drop:
1 - 480V, 3 phase
Top cover = 4.29
Inv = (-)8.94 (exist 38")
Clean and seal existing SMH
and replace all rungs
(Place Backup bypass pumps)
only after Phase 2 work is
in place and complete)

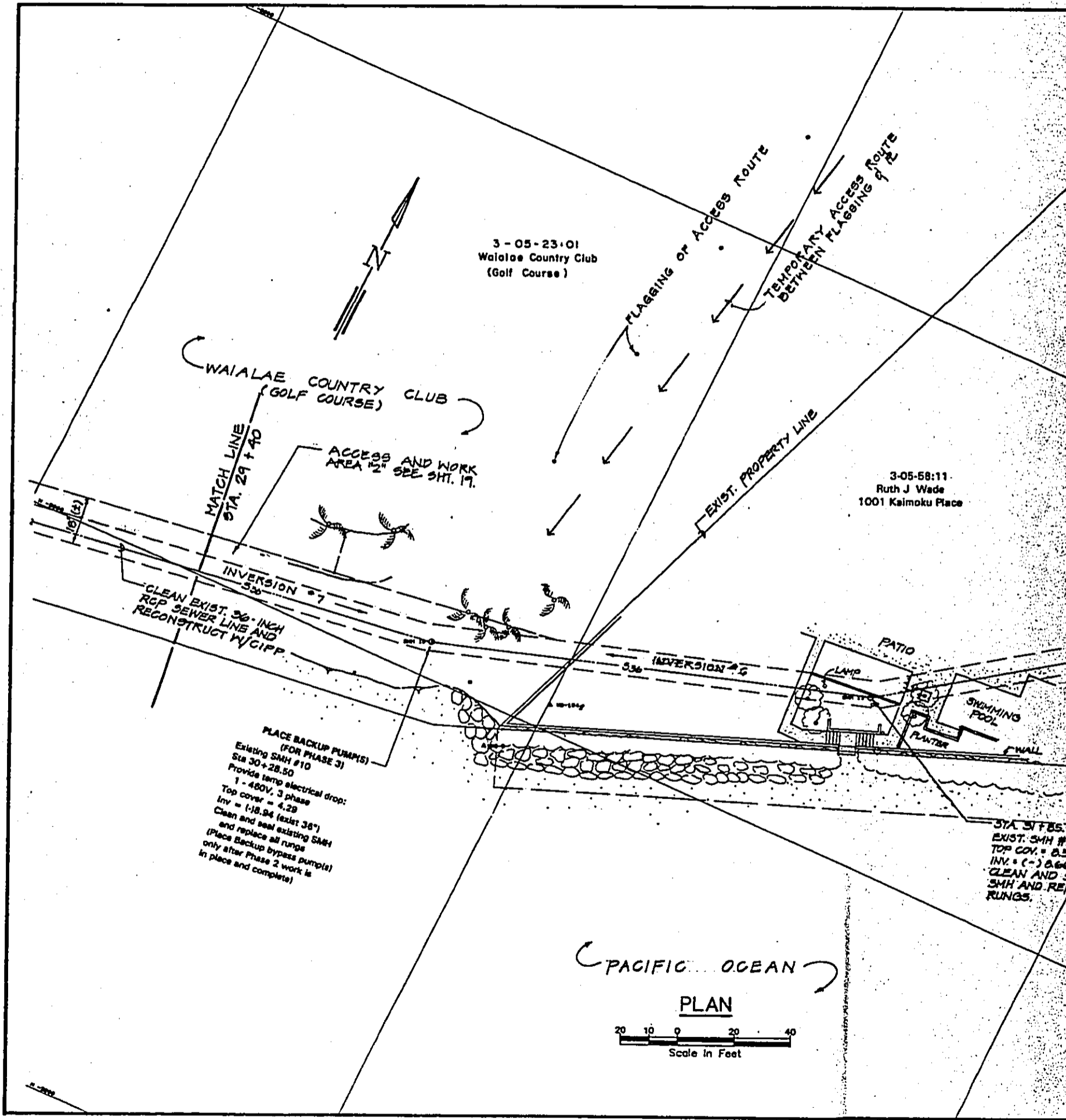
INVERSION #6
5.36

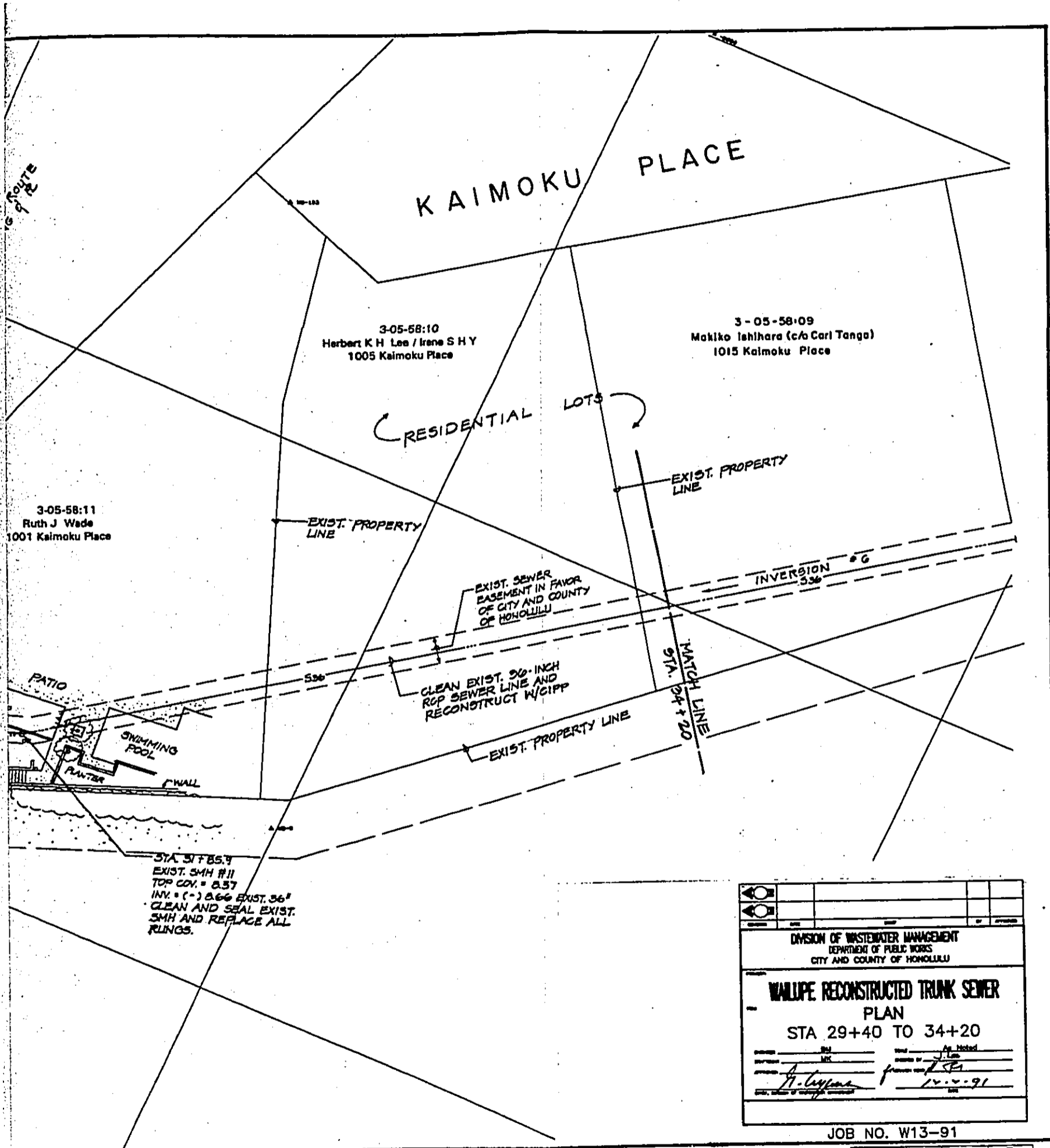
INVERSION #7
5.36

STA. 31 + 55.7
EXIST. SMH #11
TOP COV. = 0.5
INV. = (-) 8.66
CLEAN AND SEAL
SMH AND REPLACE
RUNGS.

Scale in Feet
20 10 0 20 40

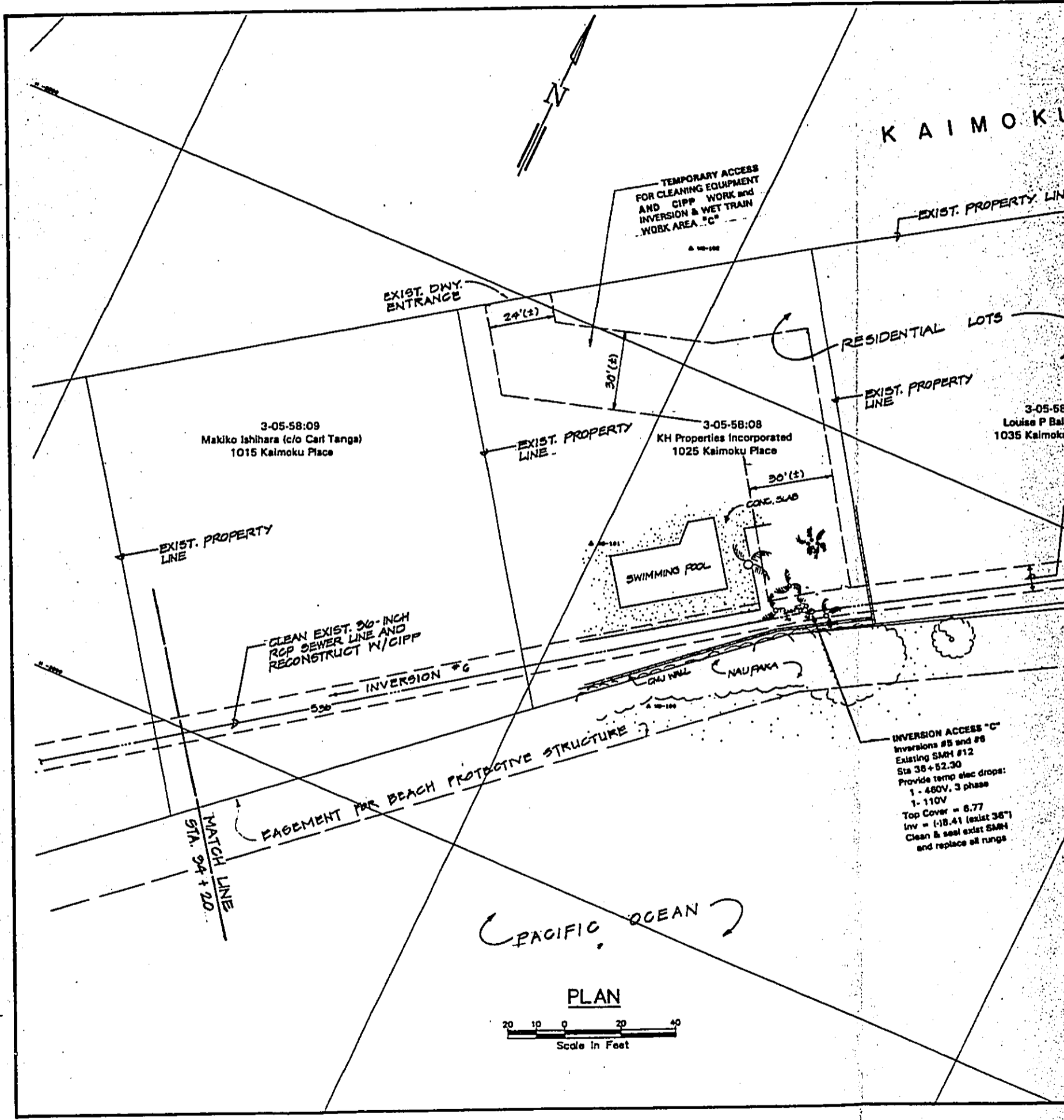
PACIFIC OCEAN
PLAN



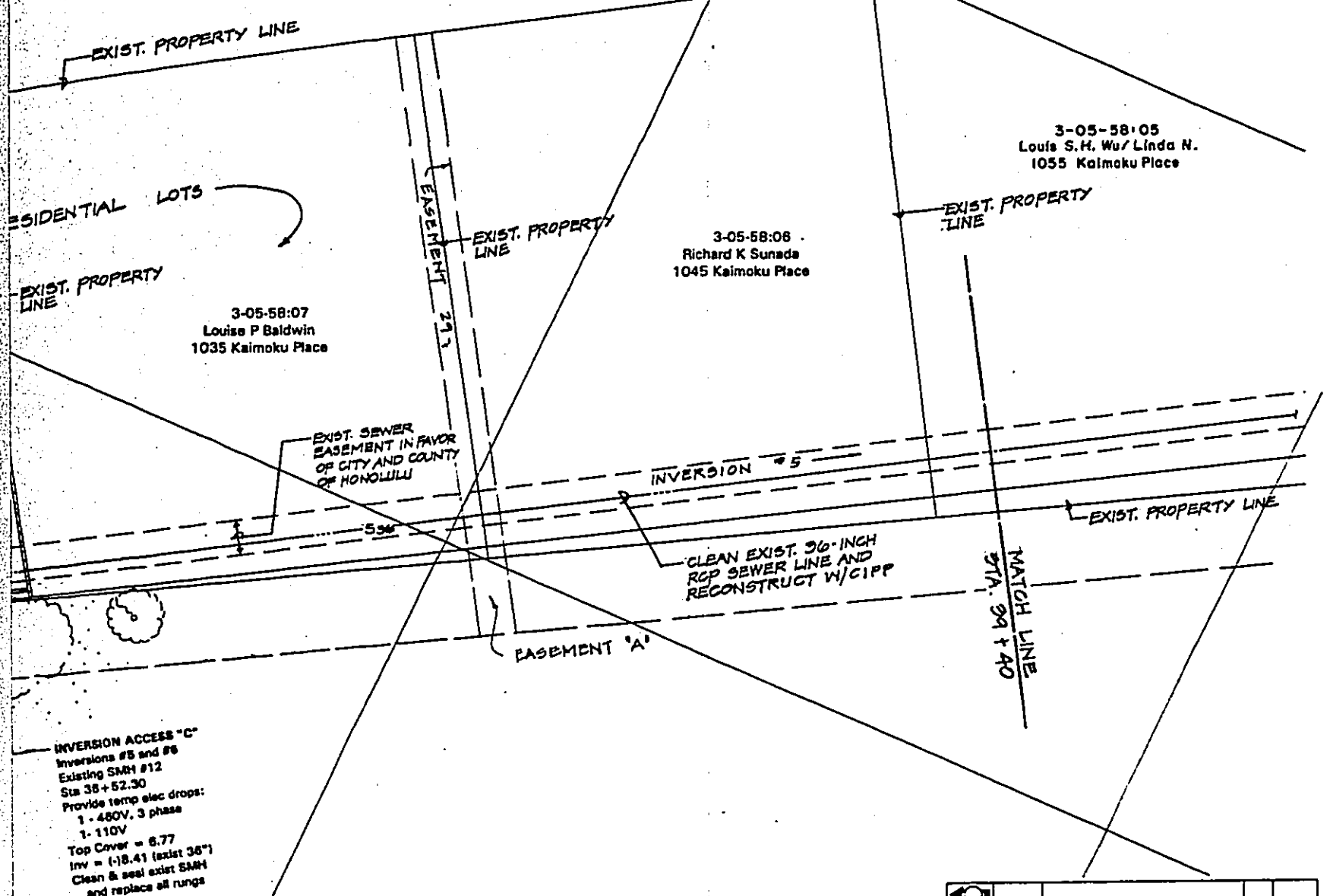


STA. 31+85.4
 EXIST. SMH #11
 TOP COV. = 0.57
 INV. = (-) 0.66 EXIST. 36"
 CLEAN AND SEAL EXIST.
 SMH AND REPLACE ALL
 RINGS.

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAIUPE RECONSTRUCTED TRUNK SEWER PLAN STA 29+40 TO 34+20			
DESIGNED BY CHECKED BY DATE	DRAWN BY DATE	APP. BY DATE	APP. BY DATE
[Signature]		[Signature]	
[Signature]		[Signature]	
JOB NO. W13-91			



KAIMOKU PLACE



3-05-58:07
Louise P Baldwin
1035 Kaimoku Place

3-05-58:08
Richard K Sunada
1045 Kaimoku Place

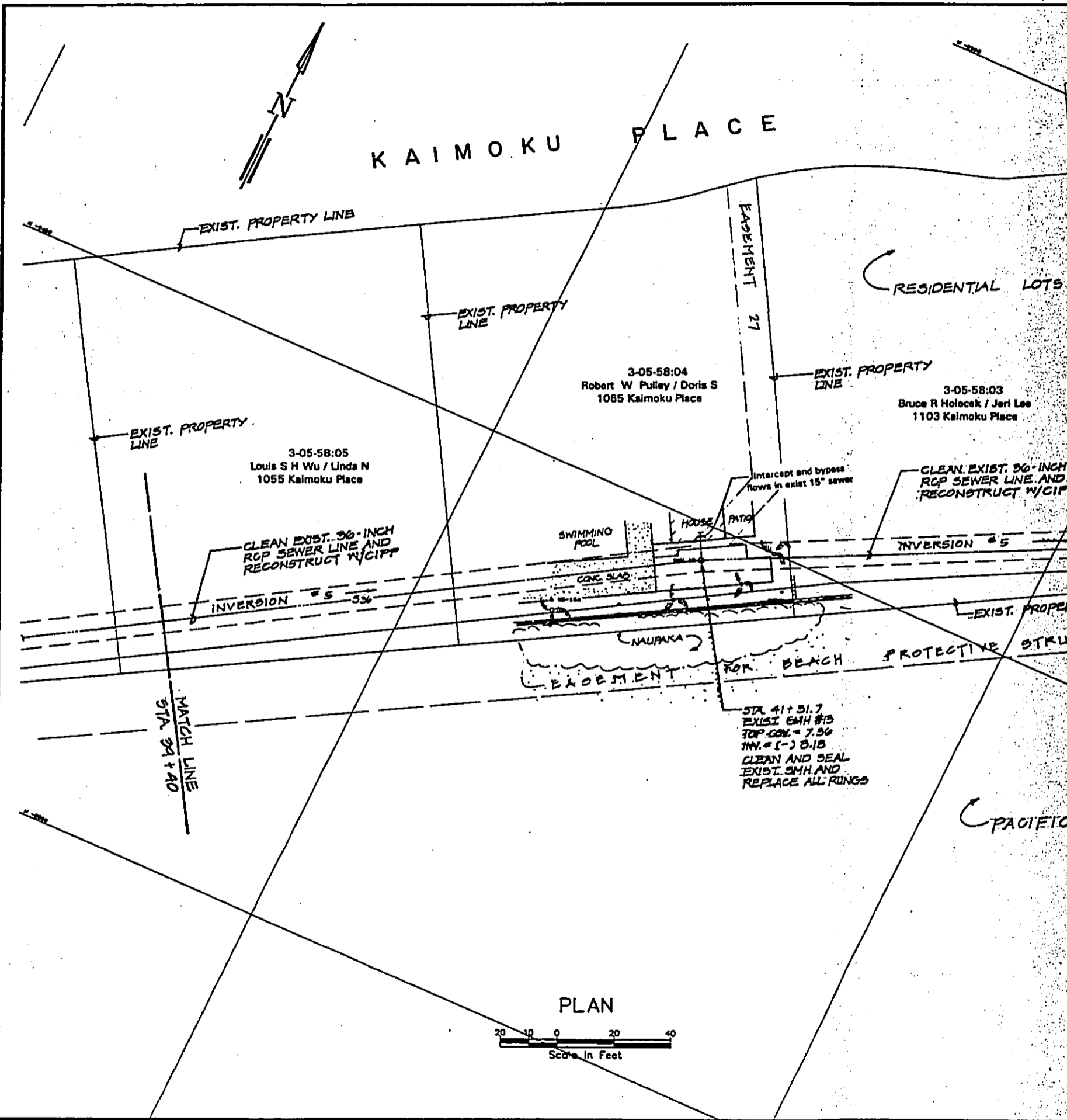
3-05-58:05
Louie S.H. Wu/Linda N.
1055 Kaimoku Place

INVERSION ACCESS "C"
Inversions #5 and #6
Existing SMH #12
Sta 38+52.30
Provide temp elec drops:
1 - 480V, 3 phase
1 - 110V
Top Cover = 6.77
Inv = (-18.41) (exist 36")
Clean & seal exist SMH
and replace all rungs

DATE	BY	CHECKED	DATE
DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAIUPE RECONSTRUCTED TRUNK SEWER PLAN			
STA 34+20 TO 39+40			
DESIGNED BY	DATE	SCALE	PROJECT NO.
<i>H. Luyman</i>	12.2.91		

JOB NO. W13-91

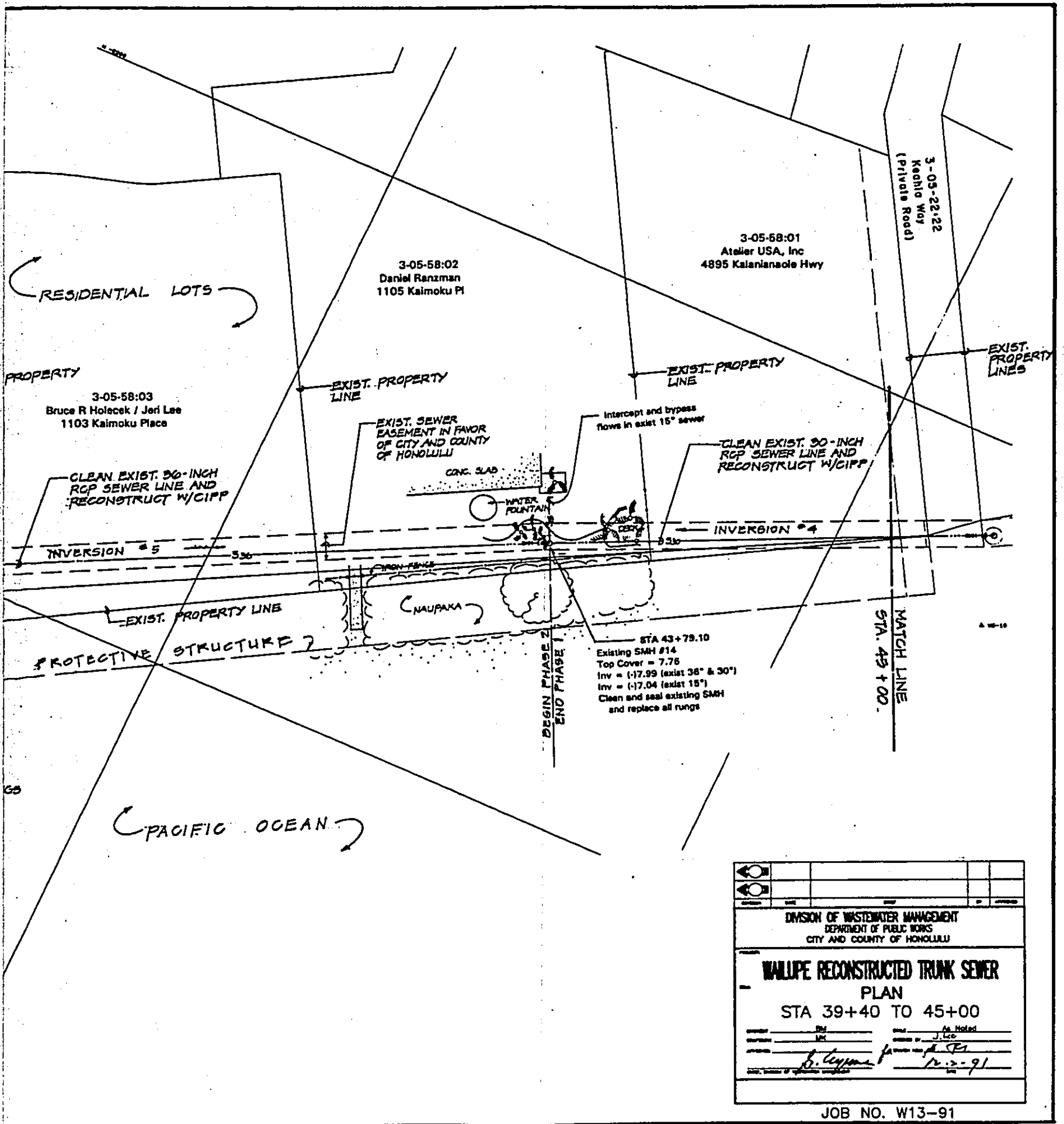
KAIMOKU PLACE



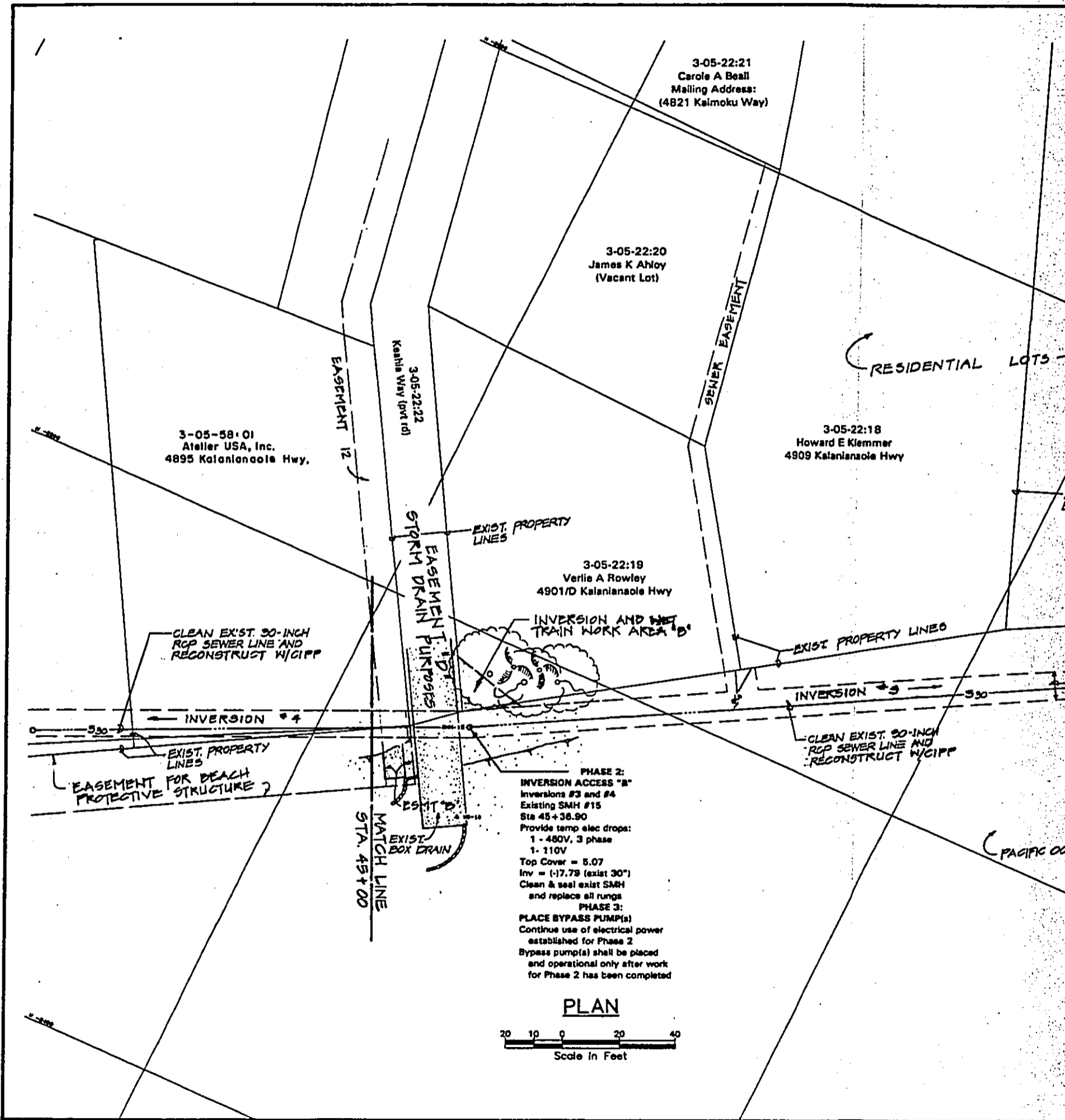
PLAN



PAOIFEO



DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAIUPE RECONSTRUCTED TRUNK SEWER PLAN			
STA 39+40 TO 45+00			
DESIGNED BY <i>J. L. Lee</i>	CHECKED BY <i>J. L. Lee</i>	DATE 12-2-91	SCALE AS SHOWN
JOB NO. W13-91			



3-05-22:21
Carole A Beall
Mailing Address:
(4821 Kaimoku Way)

3-05-22:20
James K Ahloy
(Vacant Lot)

3-05-22:18
Howard E Klemmer
4909 Kalaniana'ole Hwy

3-05-58:01
Ateller USA, Inc.
4895 Kalaniana'ole Hwy.

3-05-22:19
Verlie A Rowley
4901/D Kalaniana'ole Hwy

3-05-22:22
Kasha Way (DWT Rd)

RESIDENTIAL LOTS

EASEMENT 12

SEWER EASEMENT

EXIST. PROPERTY LINES

EXIST. PROPERTY LINES

EASEMENT FOR DEACH PROTECTIVE STRUCTURE

EXIST. BOX DRAIN
MATCH LINE
STA. 45+00

PHASE 2:
INVERSION ACCESS "B"
Inversions #3 and #4
Existing SMH #15
Sta 45+36.90
Provide temp elec drops:
1 - 480V, 3 phase
1 - 110V
Top Cover = 5.07
Inv = (-)7.79 (exist 30")
Clean & seal exist SMH
and replace all rungs

PHASE 3:
PLACE BYPASS PUMP(S)
Continue use of electrical power
established for Phase 2
Bypass pump(s) shall be placed
and operational only after work
for Phase 2 has been completed

CLEAN EXIST. 30-INCH RCP SEWER LINE AND RECONSTRUCT W/CIPP

CLEAN EXIST. 30-INCH RCP SEWER LINE AND RECONSTRUCT W/CIPP

INVERSION #4

INVERSION #3

PLAN



3-05-22:15
Howard K. Hoddick/Elizabeth A.
4929 Kalaniana'ole Hwy.

3-05-22:14
Margaret W Gregory
4935 Kalaniana'ole Hwy

3-05-22:13
Eiji Inao / Sueko
(c/o Arthur Higashide)
4945 Kalaniana'ole Hwy

3-05-22:12
James R Langworthy / Christine
4947 Kalaniana'ole Hwy

RESIDENTIAL LOTS

EASEMENT A
EASEMENT B

EXIST. PROPERTY LINE

EXIST. PROPERTY LINE

EXIST. PROPERTY LINE

MATCH LINE
STA. 49 + 80

EXIST. 15" SEWER LINE

EXIST. PROPERTY LINE

EXIST. SEWER EASEMENT IN FAVOR OF CITY AND COUNTY OF HONOLULU

INVERSION #3

INVERSION #3

CLEAN EXIST. 30-INCH RCP SEWER LINE AND RECONSTRUCT W/CIPP

PLACE BACKUP PUMPS (FOR PHASE 2)
Existing SMH #16
Sta 49+90.20
Provide temp electrical drop:
1 - 480V, 3 phase
Top cover = 5.61
Inv = (-)7.53 (exist 30")
Inv = (-)2.00 (exist 15")
Clean and seal existing SMH and replace all rungs
(Place Backup bypass pumps) only after Phase 1 work is in place and complete)

CLEAN EXIST. 30-INCH RCP SEWER LINE AND RECONSTRUCT W/CIPP

STA. 52 + 9
EXIST. SMH
TOP COV. = 4
INV. = (-) 7.1
= (-) 1.6
CLEAN AND RECONSTRUCT SMH AND RUNGS

PACIFIC

PLAN



KALANIANA'OLE
HIGHWAY

TEMPORARY ACCESS FOR
CLEANING EQUIPMENT
AND WORK AREA '1'

EXIST. DWY
ENTRANCE

3-05-22:09
Sakakura America Inc.
(c/o Mary Watanabe)
4973 Kalaniana'ole Hwy

EXIST.
PROPERTY
LINE

3-05-22:11
Stephen G Holaday
4959 Kalaniana'ole Hwy

EXIST. PROPERTY
LINE

3-05-22:08
Peat Marwick Main & Co.
(c/o Carl Sullivan)
4981 Kalaniana'ole Hwy
(Vacant Lot)

3-05-22:10
Lloyd E Short / Ruth C
4967 Kalaniana'ole Hwy

STA. 55+19 (+)
MAJOR LEAK IN EXIST.
SEWER LATERAL
CONTRACTOR SHALL
LOCATE, REPAIR AND SEAL
EXIST. LEAK.
WORK TO BE PERFORMED
ONLY AFTER 30" SEWER
HAS BEEN RECONSTRUCTED.

EXIST. PROPERTY
LINE

MATCH LINE
STA. 55+90

INVERSION
530

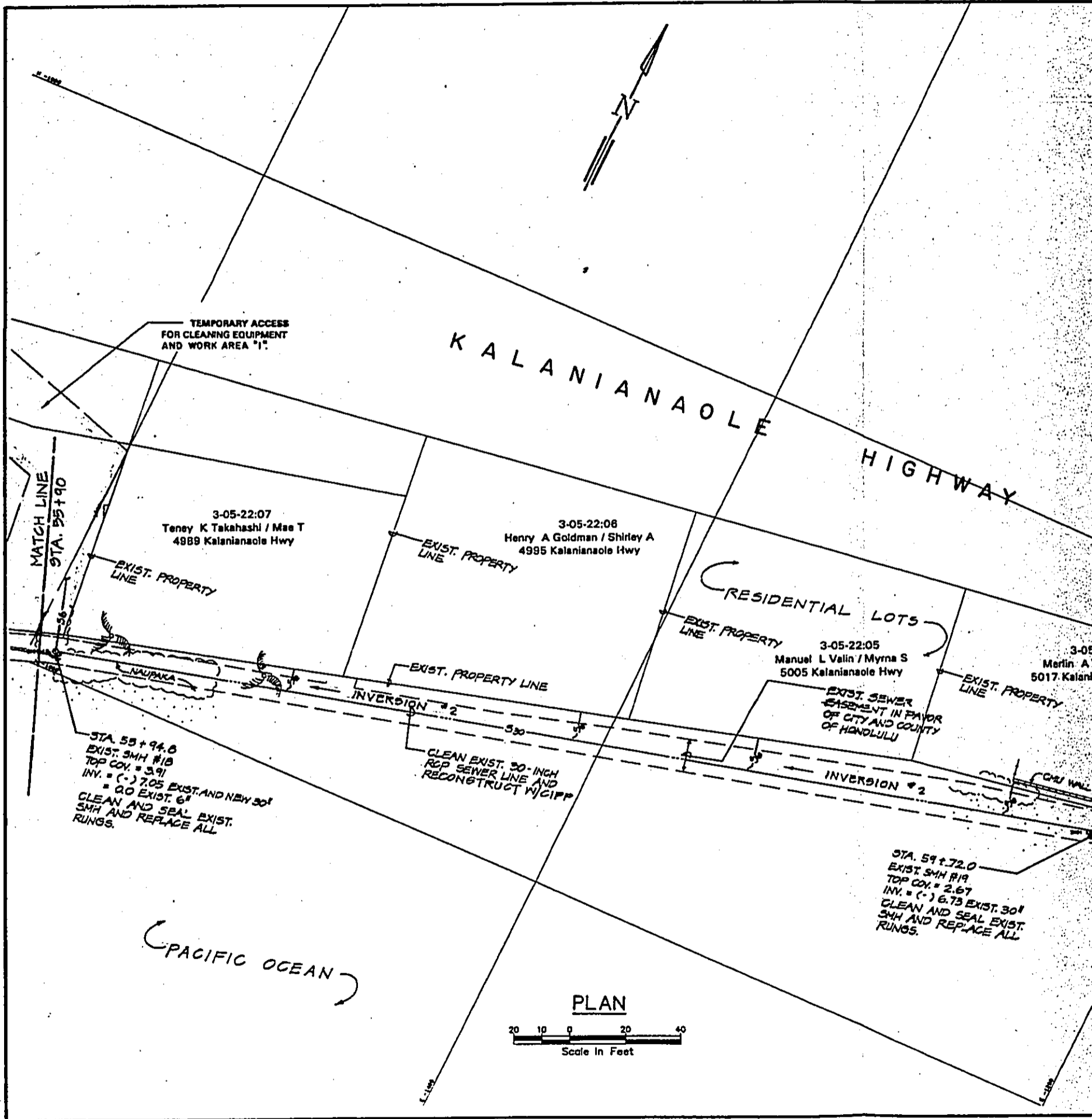
CLEAN EXIST. 30-INCH
RCP SEWER LINE AND
RECONSTRUCT WITH

STA. 52+91.2
EXIST. SMH #17
TOP COV. = 4.15
INV. = (-) 7.25 EXIST. 30"
= (-) 1.0 EXIST. 6"
CLEAN AND SEAL EXIST.
SMH AND REPLACE ALL
RINGS.

PACIFIC OCEAN

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAILUPE RECONSTRUCTED TRUNK SEWER PLAN			
STA 49+80 TO 55+90			
DATE	BY	DATE	BY
		As Noted	
		Checked by	J. Lee
		Drawn by	H. P.
		DATE	12-2-91

JOB NO. W13-91



TEMPORARY ACCESS
FOR CLEANING EQUIPMENT
AND WORK AREA "1".

KALANIANA'OLE
HIGHWAY

3-05-22:07
Toney K Takahashi / Mae T
4889 Kalaniana'ole Hwy

3-05-22:08
Henry A Goldman / Shirley A
4985 Kalaniana'ole Hwy

RESIDENTIAL LOTS

3-05-22:05
Manuel L Valin / Myrna S
5005 Kalaniana'ole Hwy

3-05-
Merlin A
5017 Kalaniana'ole Hwy

MATCH LINE
STA. 55+90

EXIST. PROPERTY
LINE

EXIST. PROPERTY
LINE

EXIST. PROPERTY
LINE

EXIST. PROPERTY
LINE

STA. 55+94.6
EXIST. SMH #10
TOP COV. = 5.91
INV. = (-) 7.05 EXIST. AND NEW 30"
= 0.00 EXIST. 6"
CLEAN AND SEAL EXIST.
SMH AND REPLACE ALL
RUNGS.

CLEAN EXIST. 30-INCH
RCP SEWER LINE AND
RECONSTRUCT W/ CIPP

EXIST. SEWER
EASEMENT IN FAVOR
OF CITY AND COUNTY
OF HONOLULU

INVERSION #2

STA. 59+72.0
EXIST. SMH #19
TOP COV. = 2.67
INV. = (-) 6.73 EXIST. 30"
CLEAN AND SEAL EXIST.
SMH AND REPLACE ALL
RUNGS.

PACIFIC OCEAN

PLAN



HIGHWAY

LOTS
05
Myma S
ie Hwy
SEWER
ENT IN FAVOR
LAND COUNTY
PLULU

3-05-22:04
Merlin A Petersen
5017 Kalaniana'ole Hwy

3-05-22:03
Heng-Yi Tu (c/o Fong Properties)
5019 Kalaniana'ole Hwy

STA. 59+72.0
EXIST. SMH #19
TOP COV. = 2.67
INV. = (-) 6.75 EXIST. 30"
CLEAN AND SEAL EXIST.
SMH AND REPLACE ALL
RUNGS.

CLEAN EXIST.
30-INCH RCP
SEWER LINE AND
RECONSTRUCT
W/CIPP

INVERSION #2

MATCH LINE
STA. 61+10

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAILUPE RECONSTRUCTED TRUNK SEWER PLAN			
STA 55+90 TO 61+10			
DATE	SCALE	BY	NOTED
<i>[Signature]</i>		<i>[Signature]</i>	
DATE: 12-2-91		BY: [Signature]	

JOB NO. W13-91

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NOTES

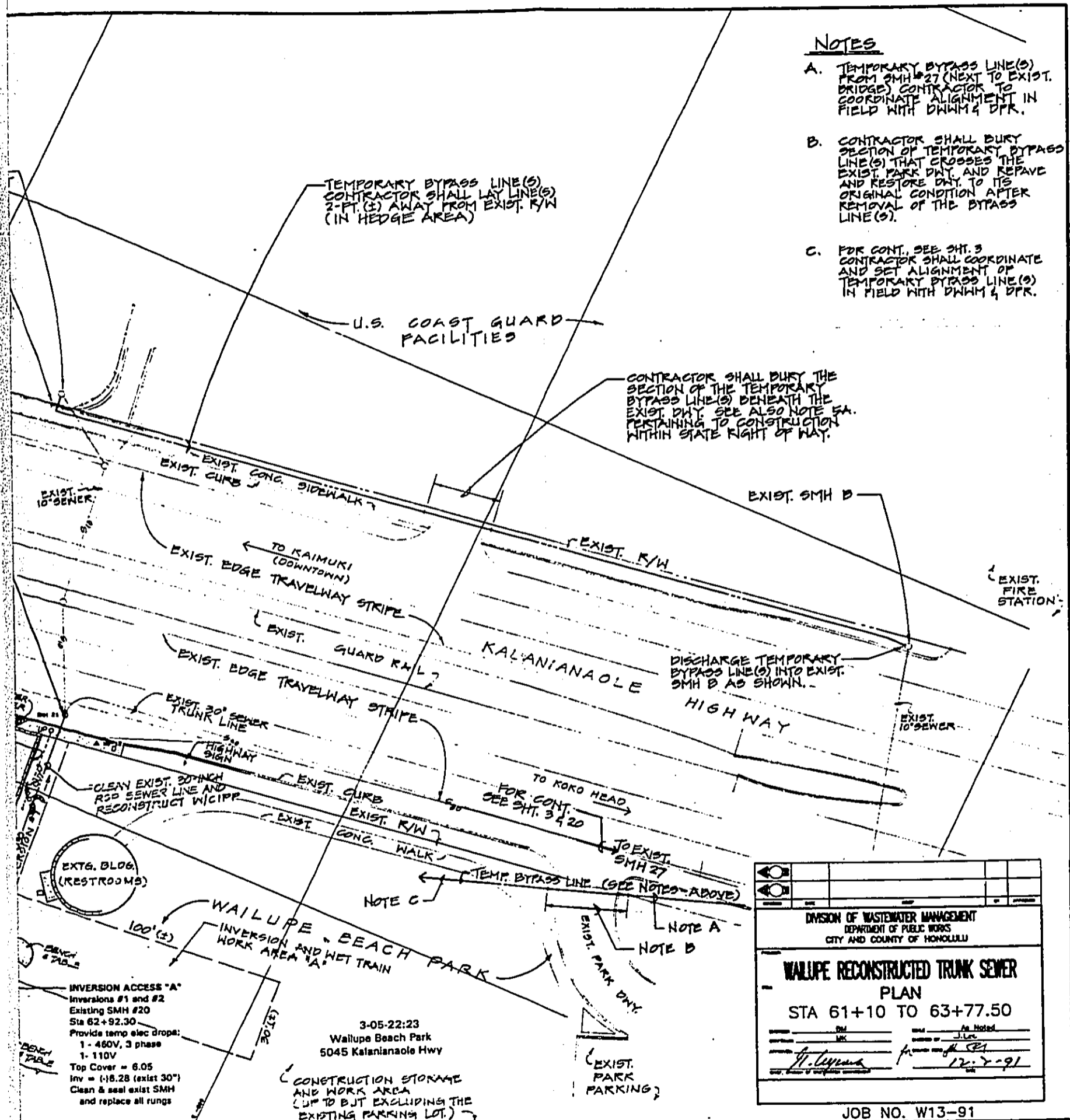
- A. TEMPORARY BYPASS LINE(S) FROM SMH #27 (NEXT TO EXIST. BRIDGE) CONTRACTOR TO COORDINATE ALIGNMENT IN FIELD WITH DWHM & DPR.
- B. CONTRACTOR SHALL BURY SECTION OF TEMPORARY BYPASS LINE(S) THAT CROSSES THE EXIST. PARK DWT. AND REPAVE AND RESTORE DWT. TO ITS ORIGINAL CONDITION AFTER REMOVAL OF THE BYPASS LINE(S).
- C. FOR CONT. SEE SHT. 3 CONTRACTOR SHALL COORDINATE AND SET ALIGNMENT OF TEMPORARY BYPASS LINE(S) IN FIELD WITH DWHM & DPR.

TEMPORARY BYPASS LINE(S) CONTRACTOR SHALL LAY LINE(S) 2-FT. (±) AWAY FROM EXIST. R/W (IN HEDGE AREA)

U.S. COAST GUARD FACILITIES

CONTRACTOR SHALL BURY THE SECTION OF THE TEMPORARY BYPASS LINE(S) BENEATH THE EXIST. DWT. SEE ALSO NOTE 5A. PERTAINING TO CONSTRUCTION WITHIN STATE RIGHT OF WAY.

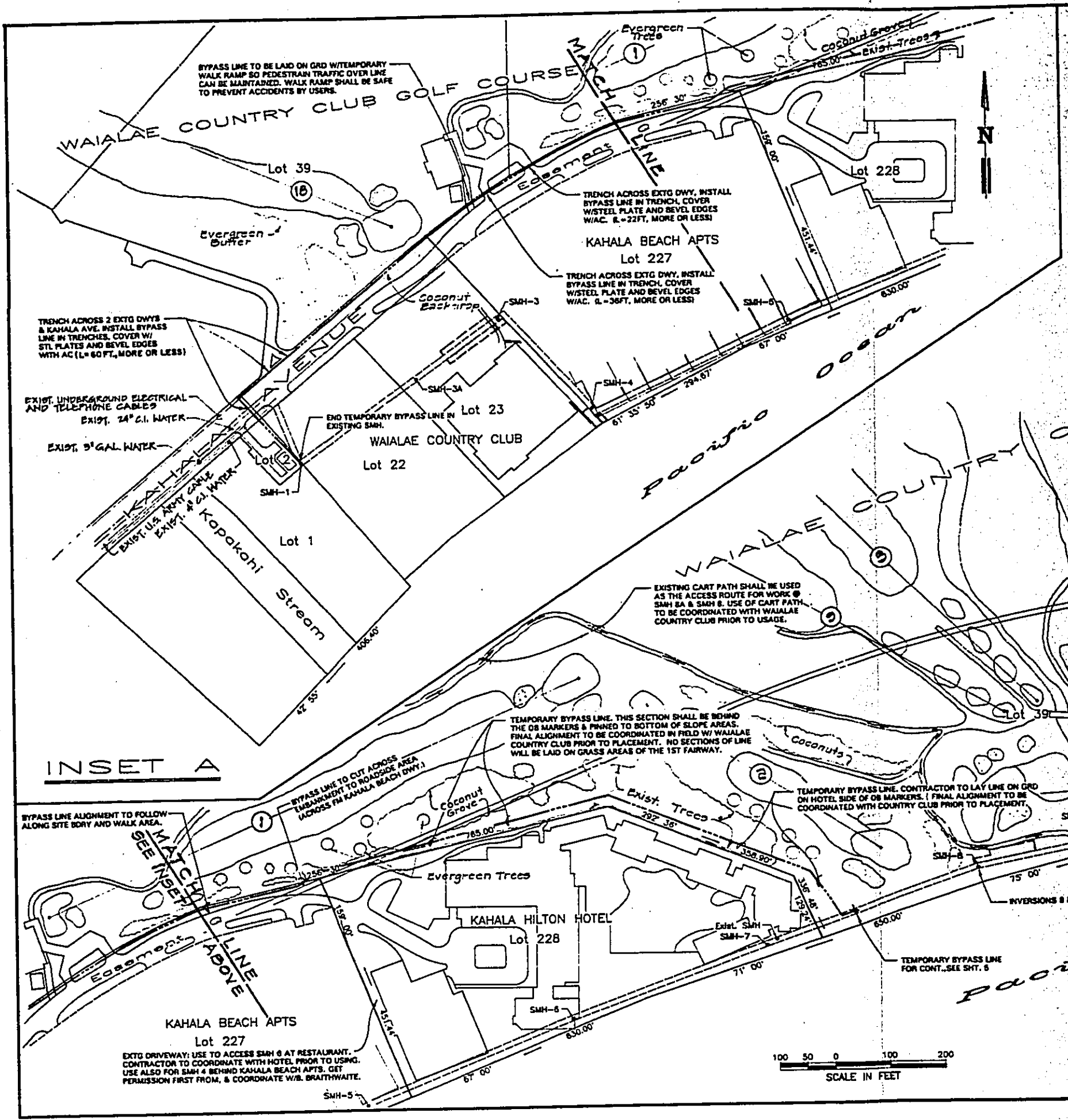
DISCHARGE TEMPORARY BYPASS LINE(S) INTO EXIST. SMH B AS SHOWN.



DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
WAILUPE RECONSTRUCTED TRUNK SEWER PLAN			
STA 61+10 TO 63+77.50			
DATE	BY	IN CHARGE	AS NOTED
12-7-91	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
JOB NO. W13-91			

INVERSION ACCESS "A"
Inversions #1 and #2
Existing SMH #20
Sta 62+92.30
Provide temp elec drops:
1 - 460V, 3 phase
1 - 110V
Top Cover = 6.05
Inv = (-)8.28 (exist 30")
Clean & seal exist SMH
and replace all rungs

3-05-22:23
Waitupe Beach Park
5045 Kalaniana'ole Hwy
CONSTRUCTION STORAGE
AND WORK AREA
(UP TO BUT EXCLUDING THE
EXISTING PARKING LOT.)



BYPASS LINE TO BE LAID ON GRD W/TEMPORARY WALK RAMP SO PEDESTRIAN TRAFFIC OVER LINE CAN BE MAINTAINED. WALK RAMP SHALL BE SAFE TO PREVENT ACCIDENTS BY USERS.

TRENCH ACROSS EXGT DWY, INSTALL BYPASS LINE IN TRENCH, COVER W/STEEL PLATE AND BEVEL EDGES W/AC. R. = 22FT, MORE OR LESS!

KAHALA BEACH APTS Lot 227

TRENCH ACROSS EXGT DWY, INSTALL BYPASS LINE IN TRENCH, COVER W/STEEL PLATE AND BEVEL EDGES W/AC. R. = 38FT, MORE OR LESS!

TRENCH ACROSS 2 EXGT DWYS & KAHALA AVE. INSTALL BYPASS LINE IN TRENCHES. COVER W/ STL PLATES AND BEVEL EDGES WITH AC (L=60FT, MORE OR LESS)

EXIST. UNDERGROUND ELECTRICAL AND TELEPHONE CABLES

EXIST. 24" C.I. WATER

EXIST. 8" GAL. WATER

END TEMPORARY BYPASS LINE IN EXISTING SMH.

EXIST. US ARMY CABLE

EXIST. 4" C.I. WATER

EXISTING CART PATH SHALL BE USED AS THE ACCESS ROUTE FOR WORK @ SMH 8A & SMH 8. USE OF CART PATH TO BE COORDINATED WITH WAIALAE COUNTRY CLUB PRIOR TO USAGE.

TEMPORARY BYPASS LINE. THIS SECTION SHALL BE BEHIND THE OS MARKERS & PINNED TO BOTTOM OF SLOPE AREAS. FINAL ALIGNMENT TO BE COORDINATED IN FIELD W/ WAIALAE COUNTRY CLUB PRIOR TO PLACEMENT. NO SECTIONS OF LINE WILL BE LAID ON GRASS AREAS OF THE 1ST FAIRWAY.

TEMPORARY BYPASS LINE. CONTRACTOR TO LAY LINE ON GRD ON HOTEL SIDE OF OS MARKERS. (FINAL ALIGNMENT TO BE COORDINATED WITH COUNTRY CLUB PRIOR TO PLACEMENT.

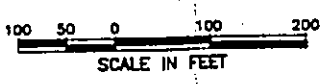
BYPASS LINE ALIGNMENT TO FOLLOW ALONG SITE BDRY AND WALK AREA.

BYPASS LINE TO CUT ACROSS EMBANKMENT TO ROADSIDE AREA (ACROSS FM KAHALA BEACH DWY.)

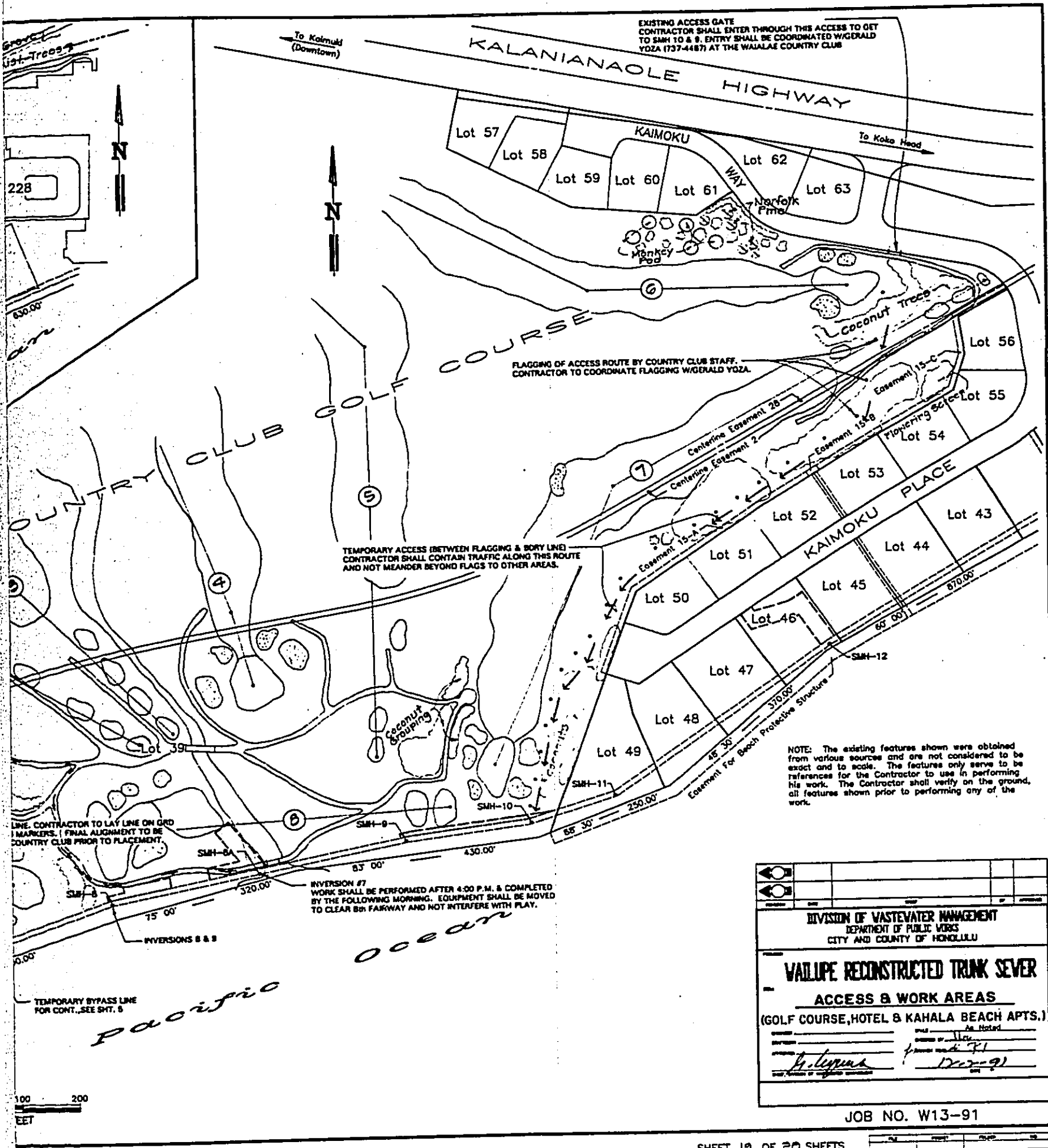
TEMPORARY BYPASS LINE FOR CONT. SEE SHT. 5

KAHALA BEACH APTS Lot 227

EXGT DRIVEWAY: USE TO ACCESS SMH 6 AT RESTAURANT. CONTRACTOR TO COORDINATE WITH HOTEL PRIOR TO USING. USE ALSO FOR SMH 4 BEHND KAHALA BEACH APTS. GET PERMISSION FIRST FROM, & COORDINATE W/B. BRAITHWAITE.



INSET A



EXISTING ACCESS GATE
 CONTRACTOR SHALL ENTER THROUGH THIS ACCESS TO GET
 TO SMH 10 & 9. ENTRY SHALL BE COORDINATED W/GERALD
 YDZA (737-4487) AT THE WAIALAE COUNTRY CLUB

FLAGGING OF ACCESS ROUTE BY COUNTRY CLUB STAFF.
 CONTRACTOR TO COORDINATE FLAGGING W/GERALD YDZA.

TEMPORARY ACCESS (BETWEEN FLAGGING & BURY LINE)
 CONTRACTOR SHALL CONTAIN TRAFFIC ALONG THIS ROUTE
 AND NOT MEANDER BEYOND FLAGS TO OTHER AREAS.

NOTE: The existing features shown were obtained
 from various sources and are not considered to be
 exact and to scale. The features only serve to be
 references for the Contractor to use in performing
 his work. The Contractor shall verify on the ground,
 all features shown prior to performing any of the
 work.

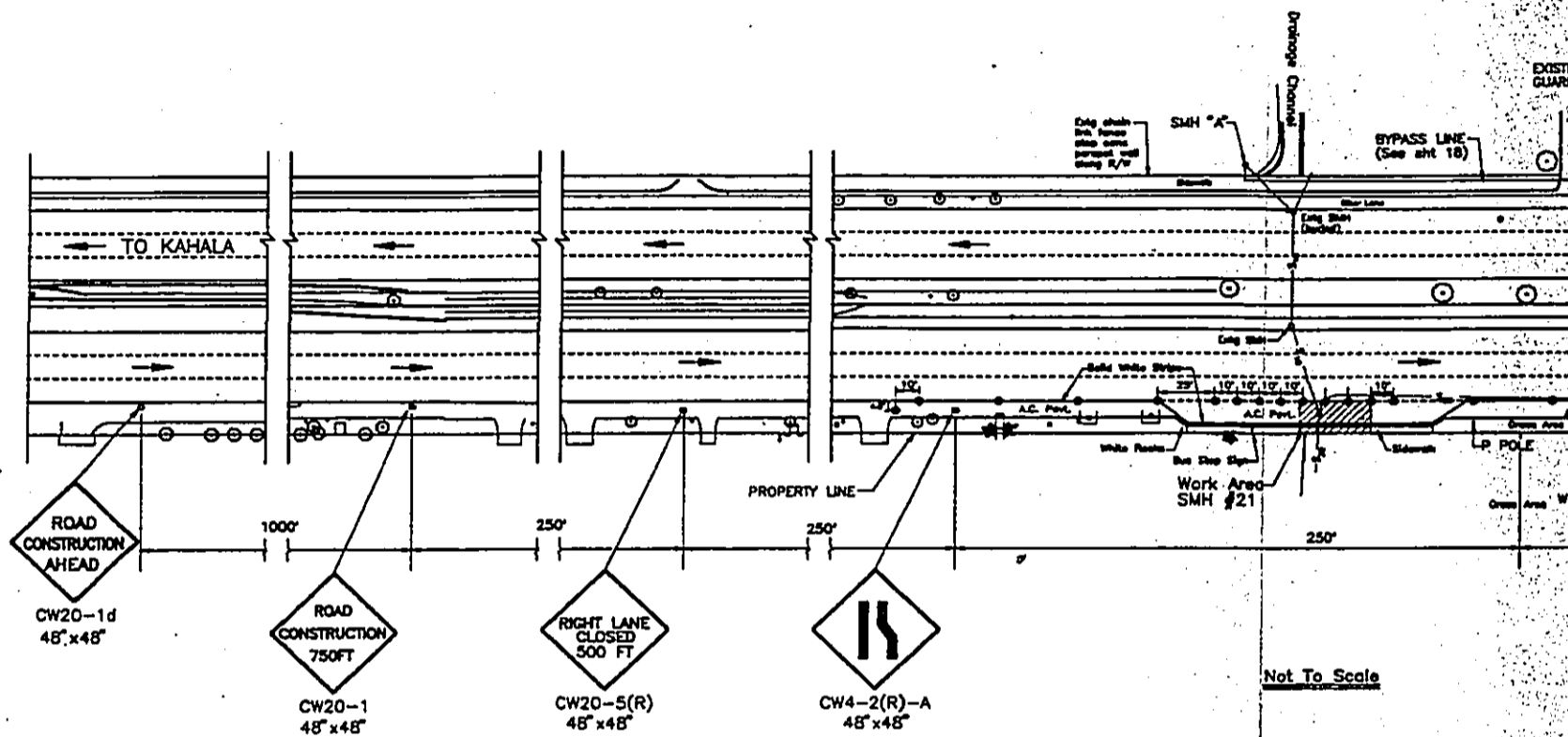
LINE. CONTRACTOR TO LAY LINE ON GRID
 MARKERS. (FINAL ALIGNMENT TO BE
 COUNTRY CLUB PRIOR TO PLACEMENT.

INVERSION #7
 WORK SHALL BE PERFORMED AFTER 4:00 P.M. & COMPLETED
 BY THE FOLLOWING MORNING. EQUIPMENT SHALL BE MOVED
 TO CLEAR 80' FAIRWAY AND NOT INTERFERE WITH PLAY.

TEMPORARY BYPASS LINE
 FOR CONT., SEE SHT. 5

DIVISION OF WASTEWATER MANAGEMENT DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
VAILUPE RECONSTRUCTED TRUNK SEWER ACCESS & WORK AREAS (GOLF COURSE, HOTEL & KAHALA BEACH APTS.)	
DATE: _____ DRAWN BY: <i>H. Lopez</i> CHECKED BY: _____	SCALE: As Noted PROJECT NO: <i>12-2-91</i> SHEET NO: _____

JOB NO. W13-91



GENERAL NOTES FOR TRAFFIC CONTROL PLAN:

1. THE PERMITTEE SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BRIDGES, STRUCTURES, ETC., TO FIT FIELD CONDITIONS.
2. CONES OR DELINEATORS SHALL BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
3. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICE FARTHEST FROM THE WORK AREA SHALL BE PLACED FIRST. THE OTHERS SHALL THEN BE PLACED PROGRESSIVELY TOWARD THE WORK AREA.
4. REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED. ALL SIGNS SHALL BE RESTORED UPON COMPLETION OF THE WORK.
5. FLAGGERS AND/OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
6. WHEN REQUIRED BY THE ISSUING OFFICE, THE PERMITTEE SHALL INSTALL A FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLANS.
7. ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
8. ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
9. THE BACKS OF ALL SIGNS USED FOR TRAFFIC CONTROL SHALL BE APPROPRIATELY COVERED TO PRECLUDE THE DISPLAY OF INAPPLICABLE SIGN MESSAGES (I.E., WHEN SIGNS HAVE MESSAGES ON BOTH FACES).
10. AT THE END OF EACH DAY'S WORK OR AS SOON AS THE WORK IS COMPLETED, THE PERMITTEE SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC. REMOVAL SHALL BE IN THE REVERSE ORDER OF INSTALLATION.
11. REPLACE PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS UPON COMPLETION OF EACH PHASE OF WORK.
12. CONTRACTOR SHALL PROVIDE ADEQUATE PEDESTRIAN ACCESS ACROSS ALL WORK AREAS AND ANY AREA AFFECTED BY CONSTRUCTION.
13. THE CONTRACTOR SHALL NOTIFY MTL JOHN CHONG (848-4538) OR KENNETH HONG (848-4538), TWO WEEKS PRIOR TO CONSTRUCTION INFORMING THEM OF LOCATION, SCOPE OF WORK, PROPOSED CLOSURE OF ANY STREET OR TRAFFIC LANES AND THE NEED TO RELOCATE ANY BUS STOP.

LEGEND:

- ◻ TRAFFIC CONTROL SIGN
- CONE OR DELINEATOR
- DIRECTION OF TRAFFIC
- Ⓜ FLASHING ARROW SIGNAL

APPENDIX D

**Proposed Park Area to be used for the Project's
Office, storage of materials and equipment,
stockpiling of debris from the cleaning operations,
and
inversion site**

APPENDIX E

**Comments and Responses
during
Consultation Phase**

APPENDIX E

COMMENTS AND RESPONSES DURING CONSULTATION PHASE

The following agencies, organizations, and individuals provided comments on the environmental impact assessment during the consultation period.

A single asterisk (*) indicates those which submitted written comments not requiring substantive responses. The comment letters are reproduced in this appendix.

A double asterisk (**) indicates those which submitted written comments requiring substantive responses. The comment and response letters are also reproduced in this appendix.

- State of Hawaii, Dept. of Transportation
- State of Hawaii, Dept. of Land and Natural Resources
- The Kahala Beach Apartments
- City & County of Honolulu, Board of Water Supply
- City & County of Honolulu, Dept. of Transportation Services
- City & County of Honolulu, Dept. of Parks and Recreation
- City & County of Honolulu, Dept. of Land Utilization
- U.S. Dept. of Defense, Dept. of the Army
- City & County of Honolulu, Dept. of Public Works

JOHN WAIHEE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
609 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

HWY-CM 2.9829
ID No. O-91-80

November 15, 1991

Mr. Stanley G. H. Yim
Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Yim:

Subject: Wailupe Reconstructed Trunk Sewer
TMK: 3-05-22, 23 & 58
Your Letter of September 25, 1991

We approve the enclosed plans, subject to the following conditions:

1. Kalaniana'ole Highway lane closure will only be permitted during the hours of 9:00 a.m. to 3:00 p.m., and should be coordinated with the ongoing widening project. (Contact Ron Horiuchi or Michael Prebula of Hawaiian Dredging and Construction at 377-1106.) All lanes must be open during the peak hours of 5:30 a.m. - 9:00 a.m. and 3:00 p.m. - 6:30 p.m. Revise the plans and all references to working hours in the Environmental Assessment accordingly;
2. Additional information should be provided for Phase 1a work (see annotated comments);
3. Traffic control should be revised;

RECEIVED

NOV 19 1991

STANLEY YIM & ASSOC. INC.

Mr. Stanley G. H. Yim
Page 2
November 15, 1991

HWY-CM 2.9829

4. See other comments notated on the plans; and
5. Submit two sets of the revised plans for our final review.

We have no other comments on the Environmental Assessment.

After you have satisfactorily addressed the above comments to the permits engineer, you may submit your tracing for my signature. Upon obtaining the required signatures, please submit three copies of the approved plans for our files.

The contractor may then apply for the permit from our Oahu district engineer at 727 Kakoi Street (Telephone No. 831-6712).

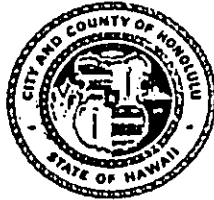
Very truly yours,

Stanley H. Harano
for T HARANO
Chief
Highways Division

Enclosure

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FASI
MAYOR

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-172

December 30, 1991

Mr. Rex Johnson, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. T. Harano, Chief
Highways Division

Dear Mr. Johnson:

Subject: Response to Draft Environmental Assessment
Comments for the Wailupe Reconstructed Trunk Sewer

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your November 15, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

The construction plans have been revised to incorporate the review comments and are presently being routed through your staff for appeal.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Very truly yours,

A handwritten signature in cursive script that reads "C. Michael Street".

SM SAM CALLEJO
Director and Chief Engineer

JOHN WAIHEE
GOVERNOR OF HAWAII

RECEIVED
DEPT OF PUBLIC WORKS
NOV 12 11 52 AM '91



NOV 12 1991

J. Paty

91-4518

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

TO
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

DEPUTIES

KEITH W. AHUE
MANABU TAGOMORI
Dan T. Kochi

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
PROGRAM
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

REF: OCEA: SKK

NOV 7 1991

FILE NO.: 92-223
DOC. NO.: 1957E

*CV DIA
WWM 1/17
EJC - ouj*

The Honorable Sam Callejo
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Callejo:

Subject: Draft Environmental Impact Statement for
Wailupe Reconstructed Trunk Sewer
Location: Wailupe, Oahu

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the materials you submitted and have the following comment.

Brief Description:

The City & County of Honolulu, Department of Public Works plans to repair and reconstruct an existing sewer line from the Kahala Wastewater Pump Station, along the coastline, ending at Wailupe Beach Park. The work will consist of line cleaning, line reconstruction, manhole reconstruction and reconnecting existing sewer mains and laterals. Although temporary work easements, about 30 feet square, will be necessary, there will be no realignment of the existing sewer trunk and no new permanent sewer easements are anticipated.

Mr. S. Callejo

-2-

File No.: 92-223

HISTORIC PRESERVATION DIVISION COMMENTS:

This project does not involve excavation of new sewer lines. Therefore, the Historic Preservation Division has determined that this project will have "no effect" on Historic sites.

However, there remains the possibility that historic sites, including human burials, will be unearthed in the course of routine construction activities. Should this be the case, work in the vicinity should stop and the State Historic Preservation be contacted at 587-0047.

DIVISION OF AQUATIC RESOURCES COMMENTS:

No significant impact to aquatic resource values is expected from the activities proposed. However, precautions should be taken to prevent debris, eroded soils, petroleum products and other potential contaminants from entering the aquatic environment.


OFFICE OF CONSERVATION AND ENVIRONMENTAL AFFAIRS COMMENTS:

Pursuant to Title 13, Chapter 2 of the Department's Administrative Rules, any new, greater or different use of state zoned Conservation District Land, either permanent or temporary in nature, requires a Conservation District Use Application (CDUA).

State Land Use should be advised to confirm the location of the Conservation District to ensure that any activities occurring on Conservation District land are covered by a Conservation District Use Application (CDUA).

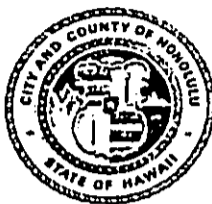
Thank you for your cooperation in this matter. Please feel free to call me or Sam Lemmo at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions or are in need of assistance.

Very truly yours,


William W. Paty

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

December 30, 1991

WEI 91-175

Mr. William W. Paty, Chairperson
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Attention: Mr. Sam Lemmo

Dear Mr. Paty:

Subject: Response to Draft Environmental Assessment
Comments for the Wailupe Reconstructed Trunk Sewer

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your November 7, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

The following responds to the contents of that letter:

1. Historic Preservation Division Comments: Project will have "no effect" because no excavation is involved. However, should there be a possibility that historic sites, including human burials be unearthed in the course of routine construction activities, the work in the vicinity will be stopped and the State Historic Preservation (587-0047) will be contacted. The Contractor for the project will be informed of this requirement with a copy of this letter to him at the preconstruction conference.
2. Division of Aquatic Resources Comments: No significant impact to aquatic resource values is expected from the activities proposed. However, the Contractor will be reminded again to take the necessary precautions to prevent debris, eroded soils, petroleum products and other potential contaminants from entering the aquatic environment.

Mr. William W. Paty

- 2 -

December 30, 1991

3. Office of Conservation and Environmental Affairs
Comments: While the letter mentions the need to obtain a CDUA permit prior to performing work, a followup meeting with DLNR staff (Sam Lemmo and Ed Henry) has changed this need. Since the project is not a new project, nor will it change the existing use of the area, and also because the project is a repair type of job, a CDUA permit is not needed. The Contractor presently does not plan to store materials on beach areas. The bypass pumps and standby bypass pumps, however, will be located along the alignment of the existing sewer line during the project. This equipment, however, will be within the existing sewer easement.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Very truly yours,

C. Michael Street

for SAM CALLEJO
Director and Chief Engineer

The Kahala Beach



4999 KAHALA AVENUE
HONOLULU, HAWAII 96816

October 23, 1991

Stanley G.H. Yim, PE
Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Yim:

Thank you for your letter dated October 17, 1991. I have reviewed the Draft Environmental Assessment you left with me and discussed it with some of the members of our Board of Directors.

Our primary concern is that we be connected to sewer service during the cleaning and reconstruction of that portion of the sewer trunk line serving the Kahala Beach. Section IV Project Impacts, paragraph A.6. of the DEA indicates that the Country Club, the Apartments, and the Hotel will be bypassed to minimize inconvenience to our operations. The period when the work is planned for the Kahala Beach area, July and August 1992, is one of the busiest periods for this condominium. It would be very difficult to convince residents who spend those months here to reduce water use sufficiently to comply with the restrictions you are placing on individual family residences.

We also hope the contractor will be able to use electric motors to help limit noise. One of the access points (MH3) for cleaning and inversion is located adjacent to one of our four buildings. Continuous noise around the clock for the period you indicate will certainly be hard for residents to endure.

Again, thank you for discussing this project with me and for your assistance with insuring service during this project.

Very truly yours,

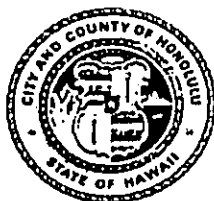
Selby Jacobs
General Manager

SJ:lkf

cc: Mr. Joel Lee

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-174

December 30, 1991

Mr. Selby Jacobs, General Manager
The Kahala Beach Apartments
4999 Kahala Avenue
Honolulu, Hawaii 96816

Dear Mr. Jacobs:

Subject: Response to Draft Environmental Assessment
Comments for the Wailupe Reconstructed Trunk Sewer

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 23, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

The project will attempt inasmuch as possible to accommodate the residents of the Kahala Beach Apartments. The Contractor will be informed of the situation and be asked to help where possible to minimize noise and maintain active sewer service during the work. As for the tentative project schedule, July and August remain the scheduled periods when the work in your area will be active. Due to the nature of the work, the schedule, unfortunately, cannot be interrupted or "split" to accommodate these two busy months once it commences in February.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Very truly yours,

C. Michael Street
for SAM CALLEJO
Director and Chief Engineer

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

91-4228
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DEPT OF PUBLIC WORKS

HONOLULU MUNICIPAL BUILDING
850 SOUTH KING STREET
HONOLULU, HAWAII 96813

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WMM

FRANK F. FASI
MAYOR

JOSEPH M. MAGALDI, JR.
DIRECTOR

AMAR SAPPAL
DEPUTY DIRECTOR

TE-5217
PL91.1.341

October 22, 1991

MEMORANDUM

TO: MIKE STREET, ACTING DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: JOSEPH M. MAGALDI, JR., DIRECTOR

SUBJECT: WAILUPE RECONSTRUCTED TRUNK SEWER
ENVIRONMENTAL ASSESSMENT
TMK: 3-5-22, 23 AND 58

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OCT 23 AM 8 11

This is in response to your memorandum dated October 7, 1991 requesting our comments on the subject environmental assessment.

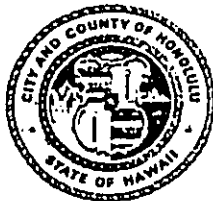
Based on our review, we have no objections to the proposed project at this time. However, construction plans for all work within the City's right-of-way should be submitted to our department for review. A traffic control plan showing temporary detours for pedestrians and vehicles should be included in these plans.

Should you have any questions, please contact Lance Watanabe of my staff at local 4199.

JOSEPH M. MAGALDI, JR.

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FASI
MAYOR

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-171

December 30, 1991

MEMORANDUM

TO: MR. JOSEPH M. MAGALDI, JR., DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES


FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
FOR THE WAILUPE RECONSTRUCTED TRUNK SEWER

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 22, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

All of the proposed work will be either in Kalaniana'ole Highway, Wailupe Beach Park, along the coastline from Wailupe to Kahala, over and across the Wai'alae Golf Course, Kahala Hilton Hotel, the Kahala Beach Apartments and the privately owned portion of Kahala Avenue. Insofar as we can determine, no City roads will be affected. We have, however, provided a Special Provision section in the Project's specifications regarding performing work in City streets. The work in the private section of Kahala Avenue will be referenced to this Special Provision section.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.


SAM CALLEJO
Director and Chief Engineer

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU DEPT OF PUBLIC WORKS
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843



OCT 23 2 15 PM '91

TO _____ October 22, 1991

*Dir. Dept. of Public Works
10/22/91*

91-4246
FRANK F. FASI, Mayor

WALTER O. WATSON, JR., Vice Chairman
JOHN W. ANDERSON, JR.
SAM CALLEJO
EDWARD Y. HIRATA
MAURICE H. YAMASATO
MELISSA Y.J. LUM
KAZU HAYASHIDA
Manager and Chief Engineer

Exc. orig.
for
10/24/91
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DEPT OF PUBLIC WORKS
HONOLULU, HI

TO: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER *KH*
BOARD OF WATER SUPPLY

SUBJECT: YOUR MEMORANDUM OCTOBER 7, 1991 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR WAILUPE RECONSTRUCTED TRUNK SEWER PROJECT, TMK: 3-5-22, 23, & 58, WAILUPE, OAHU

Thank you for the opportunity to review and comment on the proposed reconstructed truck sewer project. We have no objections to the proposed project.

The construction plans should be submitted for our review and approval. The plans should show all affected water facilities, including water meters with meter numbers.

Board of Water Supply approved reduced pressure principle backflow prevention assemblies should be installed immediately after all water meter connections used in the construction of the proposed project.

If you have any questions, please contact Bert Kuioka at 527-5235.

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-170

December 30, 1991

MEMORANDUM

TO: MR. *Kazu* KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
FOR THE WAILUPE RECONSTRUCTED TRUNK SEWER

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 22, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

The project does not anticipate affecting any of the water systems. However, the construction plans will be submitted to the Board of Water Supply for review and, if necessary, approvals. There will be a need for water during the cleaning phase of the work. The Contractor is expected to be making the necessary arrangements with the Board of Water Supply to coordinate his schedule and needs for water for the project. There will be a temporary bypass line that will be crossing Kahala Avenue to get to the existing sewer pump station. The crossing, however, is tentatively planned to be at ground surface. The details are presently being resolved and discussions and research have already commenced with your staff.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Sam
SAM CALLEJO
Director and Chief Engineer

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

91-4506

FRANK F. FASI
MAYOR



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WWM

WALTER M. OZAWA
DIRECTOR

ALVIN K.C. AU
DEPUTY DIRECTOR

October 18, 1991

TO: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAILUPE
RECONSTRUCTED TRUNK SEWER
TAX MAP KEY 3-05-22, 23 & 58

This project is expected to close the western half of Wailupe Beach Park during the period of February 1992 through September 1992. The site is the only suitable open space location for a construction storage area as well as for an inversion site.

The Department of Parks Recreation will allow establishment of this construction yard as long as a Park Entry Permit with plan is processed by the contractor prior to initiation of work.

If there are any questions, you may contact Mr. Darwin Hamamoto at extension 6317.

A handwritten signature in black ink, appearing to read "Walter M. Ozawa".

For WALTER M. OZAWA; Director

WMO:ei

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



FRANK F. FASI
MAYOR

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-168

December 30, 1991

MEMORANDUM

TO: MR. *Walter* WAITER OZAWA, DIRECTOR
DEPARTMENT OF PARKS AND RECREATION


FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
FOR THE WAILUPE RECONSTRUCTED TRUNK SEWER

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 18, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

The Contractor will be asked to obtain the Park Entry permit and furnish the necessary plan to the Department of Parks and Recreation prior to commencing with the work.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.


SAM CALLEJO
Director and Chief Engineer

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432



FRANK F. FASI
MAYOR

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

LU 10/91-8172 (DJK)

October 16, 1991

MEMORANDUM

TO: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: LORETTA K.C. CHEE, ACTING DIRECTOR


SUBJECT: SPECIAL MANAGEMENT AREA REVIEW

Tax Map Key : 3-5-22, 23 and 58
Type of Project : Wailupe Reconstructed Trunk Sewer

The proposed project on the referenced tax map key has been reviewed. We find that it is within the Special Management Area, but is not defined as "development" and is therefore, exempt (Exemption No. 4).

We understand that portions of the existing sewer line are within the 40-foot shoreline setback. The proposed line cleaning, line reconstruction, minor trenching, manhole reconstruction, the reconnection of existing sewer side mains and laterals are however, considered repairs and are exempt from obtaining a shoreline variance.

Should you have any questions, please contact the Environmental Affairs Branch at 523-4077.


LORETTA K.C. CHEE
Acting Director of Land Utilization

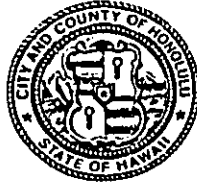
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cc: Stanley Yim and Associates

91-2435
etc
m

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER
C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-169

December 30, 1991

MEMORANDUM

Don
TO: MR. DONALD A. CLEGG, DIRECTOR
DEPARTMENT OF LAND UTILIZATION
FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS
SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
FOR THE WAILUPE RECONSTRUCTED TRUNK SEWER

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 16, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Sam
SAM CALLEJO
Director and Chief Engineer



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

4 OCT 1991

REPLY TO
ATTENTION OF

Operations Division

Mr. Stanley G.H. Yim, PE
Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Yim:

In response to your September 23, 1991 letter regarding the Wailupe Reconstructed Trunk Sewer Project, Wailupe, Oahu, Hawaii, we have reviewed the draft environmental assessment which describes the proposed work in detail. We note that the work does not involve excavation, the construction of any structures, nor the placement of any fill, either temporary or permanent, below the mean high water line.

Based on the information provided, a Department of the Army permit is not required for the work. Your request will be filed with the earlier request for cleaning of the trunk sewer, File No. NP87-50. Please refer to this number in any future correspondence. We appreciate the opportunity to review the plans. If there are any questions on this determination, please contact Ruby Mizue at 438-9258.

Sincerely,

Stanley T. Arakaki

Stanley T. Arakaki
Chief, Operations Division

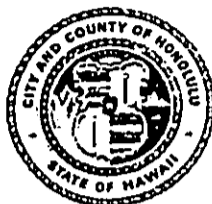
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OCT 07 1991

STANLEY YIM & ASSOC. INC.

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

WEI 91-173

December 30, 1991

Mr. Stanley T. Arakaki, Chief
Operations Division
Department of the Army
U.S. Army Engineer District Honolulu
Fort Shafter, Hawaii 96858-5440

Attention: Ms. Ruby Mizue

Dear Mr. Arakaki:

Subject: Response to Draft Environmental Assessment
Comments for the Wailupe Reconstructed Trunk Sewer

Thank you for participating in the Draft Environmental Assessment (DEA) review process. This is to acknowledge receipt of your October 4, 1991 letter commenting on the DEA for the Wailupe Reconstructed Trunk Sewer.

Your letter will be appended to the Final Environmental Assessment. If there are any questions, please contact Mr. Joel Lee at 523-4963.

Very truly yours,

C. Michael Street
SAM CALLEJO
Director and Chief Engineer

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
DIVISION OF WASTEWATER MANAGEMENT
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FAGI
MAYOR



SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

GEORGE M. UYEMA
CHIEF

August 5, 1991

WEI 91-103

Mr. Stanley Yim, PE
Stanley Yim and Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819

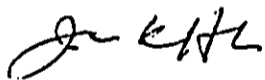
Dear Mr. Yim:

Subject: Draft Environmental Assessment
Wailupe Reconstructed Trunk Sewer Project

We have reviewed and approve the revised Draft Environmental Assessment. Enclosed is the signed cover sheet for the assessment. Please submit the ten (10) copies for our use and distribute the necessary copies to the agencies for comments.

If there are any questions, please call Joel Lee at 523-4963.

Very truly yours,


GEORGE M. UYEMA
Chief

Enclosure

RECEIVED
AUG 6 1991

STANLEY YIM & ASSOC. INC.