

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC - 01 - 90	1991	2	109

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	07/01/86
B-13	Prestressed Concrete Piles	07/01/86

D-01 ●	Chain Link Fence With Toprail	r03/06/87
D-02 ●	Chain Link Fence Without Toprail	07/01/86
D-03 ●	Wire Fence With Metal Posts	07/01/86
D-04 ●	Typical Details of Curbs and/or Gutters	07/01/86
D-05	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09 ●	Field Office	07/01/86
D-10 ●	Field Office	07/01/86
D-11 ●	Project Site Laboratory	07/01/86
D-12 ●	Project Site Laboratory	07/01/86
D-13 ●	Field Office & Project Site Laboratory	07/01/86

H-01 ●	Type A, B, C and D Catch Basin	07/01/86
H-02 ●	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03 ●	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04 ●	Typical Reinforcing Details for Catch Basins	07/01/86
H-05 ●	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07 ●	Type F Storm Drain Manhole	07/01/86
H-08 ●	Catch Basin and Manhole Casting	07/01/86
H-09 ●	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11 ●	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13 ●	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14 ●	61214B Steel Frame and Grates	07/01/86
H-15 ●	61614B Steel Frame and Grates	07/01/86
H-16 ●	Concrete and Cement Rubble Masonry Structures	07/01/86
H-17	Inlet Structures	07/01/86
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	07/01/86
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.M.P. Drain	07/01/86
H-22	C.M.P. Coupling Details Standard Joint	07/01/86
H-23	Hat Shaped Coupling Band	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-01 ●	Miscellaneous Sign Details	07/01/86
TE-02 ●	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03 ●	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04 ●	Regulatory Signs	r09/01/87
TE-05 ●	Warning Signs	07/01/86
TE-06 ●	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08 ●	Construction Signs	r09/01/87
TE-09 ●	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11 ●	Bike Route Sign and Supplementary Plates	07/01/86
TE-12 ●	State Route Marker and Auxiliary Markers	07/01/86
TE-13 ●	Interstate Route Marker	07/01/86
TE-14 ●	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15 ●	Route Marker Assemblies	07/01/86
TE-16 ●	Miscellaneous Reflector Markers	07/01/86
TE-17	Type II Object Markers	07/01/86
TE-18	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23 ●	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26 ●	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27 ●	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28 ●	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30 ●	Raised Pavement Markers and Striping	r11/03/89
TE-31 ●	Miscellaneous Pavement Markings	r11/03/89
TE-32 ●	Miscellaneous Pavement Markings	r11/03/89
TE-33 ●	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36 ●	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38 ●	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39 ●	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40 ●	Loop Detectors	r11/03/89
TE-41 ●	Pullboxes	07/01/86
TE-42 ●	Type III Traffic Signal Standard	07/01/86
TE-43 ●	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50 ●	Metal Guardrail	r03/06/87
TE-51 ●	Metal Guardrail	r09/01/87
TE-52 ●	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54 ●	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55 ●	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58 ●	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59 ●	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60 ●	Anchor Block Details	07/01/86
TE-61 ●	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62 ●	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64 ●	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66	Barricades	07/01/86
TE-67	Delineation & Pavement Markings at Bridges	07/01/86
TE-68 ●	Wheelchair Ramps	r11/03/89
TE-69 ●	Wheelchair Ramps	r11/03/89

DATE

SURVEY PLOTTED BY

ORIGINAL PLAN

DESIGNED BY

NOTE BOOK

CHECKED BY

NOTE:  
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO.  
(D-07 ● )

11/03/89

REVISED STANDARD PLANS TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69.

09/01/87

ADDED TE-57A TO STANDARD PLANS  
REVISED STANDARD PLANS TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69.

03/06/87

REVISED STANDARD PLANS D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

INTERSTATE ROUTE H-1  
PAIWA STREET INTERCHANGE  
PROJECT NO. HIC-01-90

Date: AUG., 1991

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN

DESIGNED BY

NOTED BY

NO.

SURVEY PLOTTED BY

DATE

DESIGNED BY

NOTED BY

NO.

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 KAOI STREET PRIOR TO COMMENCEMENT OF WORK WITHIN STATE HIGHWAY RIGHT-OF-WAY.
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 CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SPECIFICATION FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, OF THE STATE HIGHWAYS DIVISION.
3.

ALL LANES SHALL BE OPENED TO TRAFFIC DURING THE MORNING PEAK HOURS FROM 6:00 A.M. TO 8:30 A.M. AND DURING THE AFTERNOON PEAK HOURS FROM 3:00 P.M. TO 6:00 P.M., AND DURING OFF-WORK HOURS. ONLY ONE LANE OF H-1 FREEWAY SHALL BE CLOSED AT ANY OTHER TIME.
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 "ADMINISTRATIVE RULES OF HAWAII GOVERNING THE USE OF TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI-TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS." 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 MAJOR HIGHWAYS~~  
4" ASPHALT CONCRETE, 8" ASPHALTIC CONCRETE BASE AND 12" AGGREGATE SUBBASE (SEE TYPICAL SECTION, SHEET 4).
6.

NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN HIGHWAY RIGHT-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, AS FOLLOWS:  
A. SUBBASE: COMPACTION TEST AS DIRECTED BY STATE INSPECTOR.  
B. BASE COURSE: COMPACTION TEST AS DIRECTED BY STATE INSPECTOR.  
C. ONE COMPACTION TEST FOR EACH 200 LINEAL FEET OF TRENCH.  
  
A COPY OF THE TEST RESULTS SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.
8.

PRIOR TO COMMENCING TRENCH EXCAVATION WORK, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE NEW CENTERLINE OF 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.

NO TRENCH SHALL BE OPENED MORE THAN 200 FEET IN ADVANCE OF THE INSTALLED AND TESTED PIPE AND/OR DUCTLINE.
11.

LONGITUDINAL DRAINAGE ALONG THE HIGHWAY SHALL BE MAINTAINED.
12.

PAVEMENT STRIPING SHALL BE DONE BY CONTRACTOR.
13.

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 SUBMIT HIS CONSTRUCTION PLANS FOR DIVISION'S REVIEW AND APPROVAL.
14.

ALL REGULATORY, GUIDE AND CONSTRUCTION SIGNS AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.

GRADING NOTES

1.

ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 23, GRADING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 19978, AS AMENDED  
AND SOIL REPORT BY PSC ASSOC., INC., "GEOTECHNICAL ENGINEERING INVESTIGATION, H-1/PAIWA STREET INTERCHANGE, WAIKELE DEVELOPMENT, WAIPIHU, OAHU, HAWAII", DATED DECEMBER 21, 1987 AND SUPPLEMENTAL "SUBSURFACE INVESTIGATION REPORT, H-1/PAIWA INTERCHANGE, WAIKELE DEVELOPMENT, WAIPIHU, OAHU, HAWAII", SUBMITTED OCTOBER 29, 1990.
2.

THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE CHIEF ENGINEER SHALL BE PAYABLE BY THE CONTRACTOR.
3.

THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
4.

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 LOCATIONS AND DEPTHS 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 LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
5.

ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA, WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED, SHALL BE PLANTED.
6.

FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
7.

THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
8.

NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE CHIEF ENGINEER.
9.

THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
10.

TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN PLACE AND ESTABLISHED.
11.

ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL, OF TITLE 11, ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH.
12.

TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR A GRADING PERMIT.
13.

FOR BENCH MARK, SEE SHEET 7.

EARTHWORK QUANTITIES

(FOR PERMIT PURPOSES ONLY)

EXCAVATION : 73,300 C.Y.  
EMBANKMENT : 26,800 C.Y.  
AREA TO BE GRADED : 17.7 ACS.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC-01-90	1991	3	109

NOTES FOR CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

1.

THE CONTRACTOR SHALL PERFORM ALL APPLICABLE CONSTRUCTION WORK IN ACCORDANCE WITH THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1984, AS AMENDED, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1986, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, AND THE REVISED ORDINANCES OF HONOLULU, 1978, AS AMENDED.
2.

UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH ORDINANCE NOS. 2875 AND 3357 (UNDERGROUND UTILITIES).
3.

CONSTRUCTION ACTIVITIES WILL NOT BE PERMITTED ON CITY STREETS DURING WEEKENDS AND HOLIDAYS WITHOUT PRIOR APPROVAL FROM THE CHIEF ENGINEER, CITY AND COUNTY OF HONOLULU.
4.

LOCATION OF UNDERGROUND UTILITIES AND PIPES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE EXISTING UTILITIES THAT MUST BE REMOVED OR OTHERWISE DISTURBED TO ACCOMPLISH THE WORK CALLED FOR ON THE PLANS SHALL BE RECONSTRUCTED OR RESTORED TO THE ORIGINAL CONDITION AT THE CONTRACTOR'S OWN EXPENSE.
5.

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING, CONSTRUCTION BRANCH, SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6.

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 LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHENEVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.

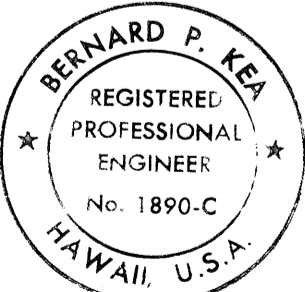
APPROVED: DATE

C. Michael Street  
for DIRECTOR AND CHIEF ENGINEER, DPW

9/9/91

M. Fukagawa  
CHIEF, DIVISION OF ENGINEERING, DPW  
(FOR GRADING & CONSTRUCTION WITHIN CITY R/W ONLY)

9/9/91



THIS WORK WAS PREPARED BY  
UNDER MY SUPERVISION  
Signature

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

INTERSTATE ROUTE H-1  
PAIWA STREET INTERCHANGE  
PROJECT NO. HIC-01-90

DATE: AUG., 1991

SHEET No. 1 OF 2 SHEETS

## TRAFFIC NOTES

1. A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION SERVICES BEFORE WORK ON ANY PORTION OF A PUBLIC STREET OR HIGHWAY MAY BEGIN.
2. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS AND OTHER PROTECTIVE FACILITIES, WHICH SHALL CONFORM WITH THE "HAWAII ADMINISTRATION RULES GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION AND THE CURRENT U.S. FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI-TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS."
3. WORK ON ANY CITY STREET AREA MAY BE PERFORMED ONLY BETWEEN THE HOURS OF 8:30 A.M. TO 3:30 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
4. THE CONTRACTOR SHALL REFERENCE, TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION SERVICES, ALL EXISTING TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF TRANSPORTATION SERVICES AT 523-4029 ONE (1) WEEK PRIOR TO ANY WORK TO BE DONE ON SIGNS, POSTS AND PAVEMENT MARKINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING STREET LIGHTING AND TRAFFIC SIGNAL FACILITIES AND DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR.
6. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN STREET RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
7. THE CONTRACTOR SHALL NOTIFY MTL, JOHN CHONG (848-4538) OR KENNETH HONG (848-4537), TWO WEEKS PRIOR TO CONSTRUCTION, INFORMING HIM OF THE LOCATION, SCOPE OF WORK, PROPOSED CLOSURE OF ANY TRAFFIC LANES AND THE NEED TO RELOCATE ANY BUS STOP.
8. DEDICATION OF PAIWA STREET EXTENSION TO THE CITY WILL ONLY BE ACCEPTED UPON COMPLETION TO CITY REQUIREMENTS AND ACCESS IS NEEDED FOR PUBLIC USE, OTHERWISE, THESE ROADS WILL BE PRIVATE.
9. DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE TWO LANES FOR THROUGH TRAFFIC. ON STREETS TOO NARROW TO MAKE THIS PRACTICABLE, THE CONTRACTOR MAY WORK ON ONE-HALF OF THE ROADWAY, KEEPING THE OTHER HALF OPEN TO TRAFFIC AND ALTERNATING THE FLOW OF TRAFFIC.
10. DURING NON-WORKING HOURS, ALL TRENCHES SHALL BE COVERED WITH A SAFE NON-SKID BRIDGING MATERIAL AND ALL LANES SHALL BE OPENED TO TRAFFIC.
11. AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION SERVICES, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
12. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIAN SHALL BE PROVIDED.
13. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.

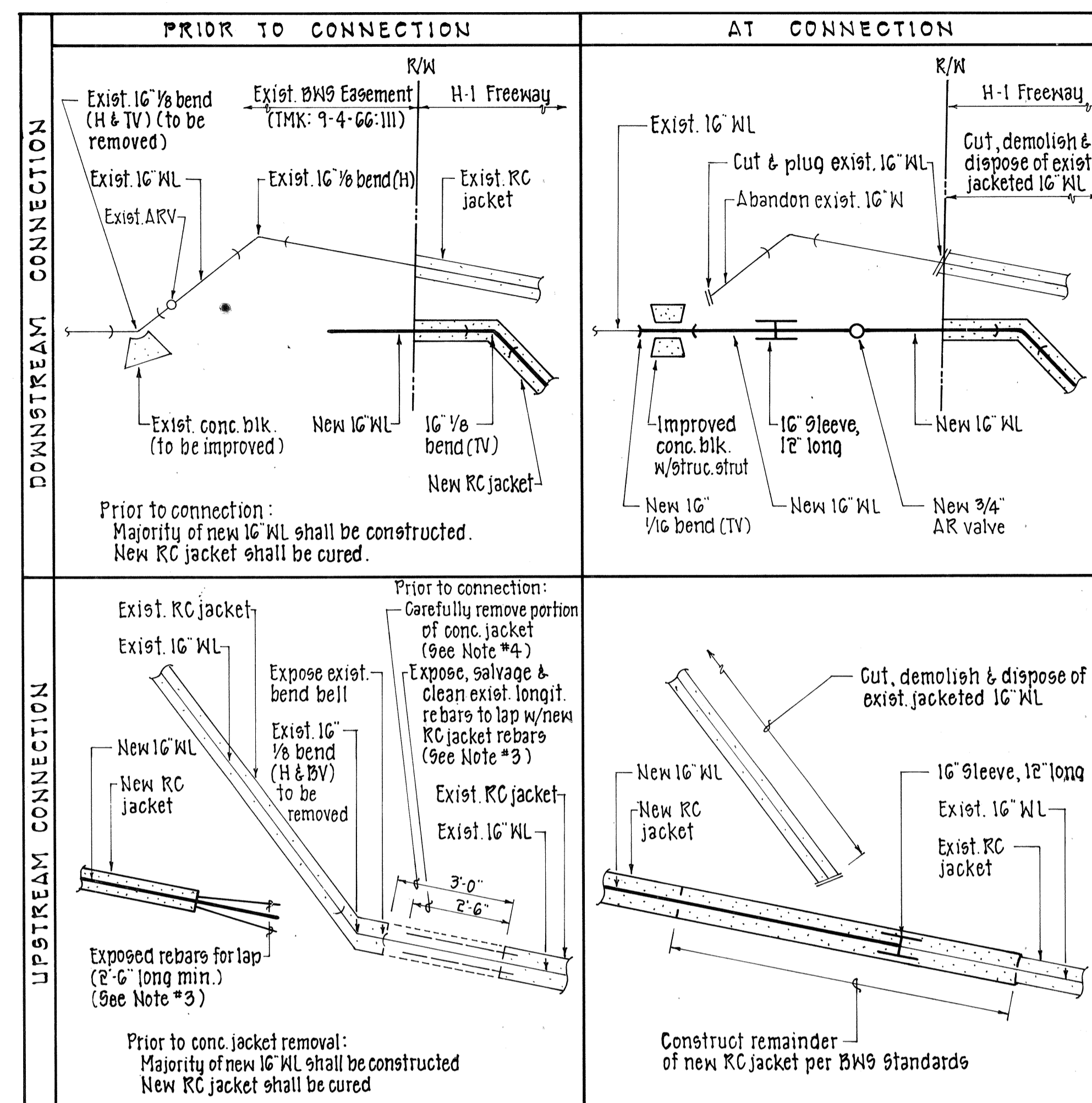
## SEWER NOTES

1. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS, DATED SEPT. 1986, AND THE LATEST DEPARTMENTS OF PUBLIC WORKS STANDARD DETAILS, SEPT. 1984, CURRENT CITY PRACTICES AND REVISED ORDINANCES OF HONOLULU, 1978, AS AMENDED.
2. IN THE EVENT THAT ANY CHANGE IN ALIGNMENT OR GRADE FOR THE PROPOSED SEWERS IS REQUIRED DUE TO UNFORESEEN CONFLICT WITH OTHER UTILITIES, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
3. LOCATION OF EXISTING SEWER MAINS AND APPURTENANCES SHOWN ON THE PLANS IS APPROXIMATE ONLY. THE EXACT LOCATION AND INVERTS SHALL BE VERIFIED IN THE FIELD.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SEWER SERVICE TO ALL AFFECTED AREAS DURING CONSTRUCTION.
5. ALL CONNECTIONS TO THE EXISTING SEWER LINES SHALL BE EXPOSED, INVERT VERIFIED AND CHECKED.
6. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION SECTION, DIVISION OF WASTEWATER MANAGEMENT, AT 523-4345 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT FOUR SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF SEWER WORK.
7. AT THE COMPLETION OF THIS PROJECT, PROVIDE MYLAR AS-BUILTS TO THE DIVISION OF WASTEWATER MANAGEMENT, DEPARTMENT OF PUBLIC WORKS.
8. CRUSHED ROCK CRADLE IS PERMITTED WHERE SOIL IS STABLE. IN AREAS OF UNSTABLE SOIL, THE MAKER OF THE PLANS AND CONSTRUCTION ENGINEER WILL DETERMINE THE PIPE SUPPORT REQUIRED.
9. THE HONOLULU WASTEWATER TREATMENT PLANT HAS TO BE EXPANDED BEFORE PROPOSED PROJECTS IN THIS AREA CAN BE SERVED. THE EXPANSION (25 TO 38 MGD) IS SCHEDULED FOR COMPLETION IN 1993. HOWEVER, EPA AND STATE DEPARTMENT OF HEALTH APPROVAL TO DISCHARGE FLOWS IN EXCESS OF 25 MGD INTO THE OCEAN IS REQUIRED. IF SECONDARY TREATMENT IS ALSO REQUIRED, THE COMPLETION DATE MAY BE DELAYED ONE OR TWO YEARS. A SEWER CONNECTION APPLICATION FORM SHOULD BE SUBMITTED TO CONFIRM WASTEWATER SYSTEM ADEQUACY OF THE EXPANDED PLANT TO SUPPORT PROJECTS IN THIS AREA.

## WATER NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND CONSTRUCTION OF WATER SYSTEM FACILITIES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY AND COUNTY OF HONOLULU BOARD OF WATER SUPPLY'S "WATER SYSTEM STANDARDS," VOLUME 1, DATED 1985, AND THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION," VOLUME 2, DATED 1985, AND ALL SUBSEQUENT AMENDMENTS AND ADDITIONS.
2. ALL PLANS APPROVED BY THE BOARD OF WATER SUPPLY ARE BASED SOLELY ON THE ADEQUACY OF THE WATER SUPPLY. ALL OTHER FEATURES OF THE WATER SYSTEM, SUCH AS LINES, GRADES, FITTINGS, ETC., AND DRAINAGE AND OTHER FEATURES OF IMPROVEMENTS SHALL NOT BE THE RESPONSIBILITY OF THE BOARD OF WATER SUPPLY.
3. TEST PRESSURE SHALL BE ONE OF THE FOLLOWING:  
A: PREVAILING LINE PRESSURE, JOINTS LEFT EXPOSED FOR 24 HOURS TO CHECK FOR LEAKS PRIOR TO BACKFILL.  
B: 150 PSI.
4. THE CONTRACTOR SHALL NOTIFY THE BOARD OF WATER SUPPLY, PLANNING & ENGINEERING DIVISION, CONSTRUCTION SECTION, IN WRITING ONE WEEK PRIOR TO COMMENCING WORK ON THE WATER SYSTEM.
5. WATER COMMITMENT SHALL BE CANCELLED IF THE APPROVED CONSTRUCTION PLANS ARE ALLOWED TO LAPSE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL WATER LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE ESPECIALLY CAREFUL WHEN EXCAVATING BEHIND WATER LINE TEES AND BENDS WHEREVER THERE IS A POSSIBILITY OF WATER LINE MOVEMENT DUE TO REMOVAL OF THE SUPPORTING EARTH BEYOND THE EXISTING REACTION BLOCKS. THE CONTRACTOR SHALL TAKE WHATEVER MEASURE NECESSARY TO PROTECT THE WATER LINES, SUCH AS CONSTRUCTING SPECIAL REACTION BLOCKS (WITH BWS APPROVAL) AND/OR MODIFYING HIS CONSTRUCTION METHODS.
7. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE LATEST AVAILABLE DATA BUT IS NOT GUARANTEED AS TO THE ACCURACY OR THE ENCOUNTERING OF OTHER OBSTACLES DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGES TO EXISTING UTILITIES.
8. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE BOARD OF WATER SUPPLY, THE MANUFACTURER'S CERTIFICATION THAT ALL CAST IRON (GRAY OR DUCTILE) FITTINGS FOR THE PROJECT CONFORM IN ALL RESPECTS TO THE WATER SYSTEM STANDARDS, DATED 1985.
9. POLYGON SHAPE FOR MECHANICAL JOINT GLANDS AS DESCRIBED IN AWWA STANDARD C111 SHALL BE "STRAIGHT-SIDED" OR AN APPROVED EQUAL ON A JOB TO JOB BASIS.
10. REAPPROVAL SHALL BE REQUIRED IF THIS PROJECT IS NOT UNDER CONSTRUCTION WITHIN A PERIOD OF TWO YEARS.
11. THE CONTRACTOR SHALL CHLORINATE THE ENTIRE INSIDE SURFACE OF EACH PIPE AND FITTING WITH DISINFECTION SOLUTION ON 5 OUNCES OF SODIUM HYPOCHLORITE MIXED WITH 10 GALLONS OF WATER.
12. CONTRACTOR SHALL CUT AND PLUG ALL EXISTING UNUSED LATERALS AT THE MAIN WHETHER OR NOT SHOWN ON THE PLANS. THE DAMAGED AREA SHALL BE REPAIRED TO AN EQUAL OR BETTER CONDITION THAN THE IMMEDIATE AREA. ALL WORK SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.
13. THE INSTALLATION, CHLORINATION AND TESTING OF THE WATER MAIN AND FACILITIES AFTER THE METER SHALL NOT BE THE RESPONSIBILITY OF THE BOARD OF WATER SUPPLY.
14. ALL WATERLINE CONSTRUCTION REQUIRING SHUTDOWN SHALL BE SCHEDULED FOR NORMAL WORKING HOURS AND MAXIMUM DOWNTIME SHALL BE SIX (6) HOURS FOR THE 12" WATER MAIN, EIGHT (8) HOURS FOR THE 16" WATER MAIN AND TWENTY-FOUR (24) HOURS FOR THE 36" WATER MAIN.
15. FOR 16-IN. WATERLINE RELOCATION AT STATION 20+75 ± RAMP "B" 1/2 16":  
16-IN. WATERLINE CONSTRUCTION REQUIRING SHUTDOWN SHALL BE SCHEDULED FOR NORMAL WORKING HOURS AND MAXIMUM DOWNTIME SHALL BE TWELVE (12) HOURS (TO BE DONE CONCURRENTLY).

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC-01-90	1991	4	109



## CONNECTION SCHEMATICS - WATERLINE "B"

NOT TO SCALE

## WL CONNECTION NOTES

1. THE MAJORITY OF THE NEW 16" WL SHALL BE CONSTRUCTED AND THE NEW RC JACKET (WHERE REQ'D) SHALL BE CURED PRIOR TO REMOVING THE REQ'D PORTION OF THE EXISTING CONC. JACKET AT THE UPSTREAM CONNECTION.
2. BOTH UPSTREAM AND DOWNSTREAM CONNECTIONS SHALL BE DONE CONCURRENTLY.
3. MINIMUM LAP FOR NEW/EXIST. AND NEW/NEW REINFORCING FOR THE REINFORCED CONCRETE JACKET AT THE UPSTREAM CONNECTION SHALL BE 2'-0".
4. EXTREME CARE SHALL BE EXERCISED BY THE CONTRACTOR DURING REMOVAL OF THE PORTION OF EXIST. REINFORCED CONCRETE JACKET AT THE UPSTREAM CONNECTION TO AVOID WEAKENING OR DISTURBING THE EXISTING 16" WATERLINE (SEE NOTE #6, "WATER NOTES", THIS SHEET).

APPROVED:

DATE

*John P. Ho* 6/4/91  
DIRECTOR, DEPARTMENT OF TRANSPORTATION SERVICES  
(FOR CONSTRUCTION WITHIN CITY R/W ONLY)

*J. L. L...* 3/27/91  
CHIEF, DIVISION OF WASTEWATER MANAGEMENT, DPW

*A. M...* 5/9/91  
CHIEF, PLANNING AND ENGINEERING, BWS

*Loetta Chen* 9-17-91  
DIRECTOR, DEPARTMENT OF LAND UTILIZATION

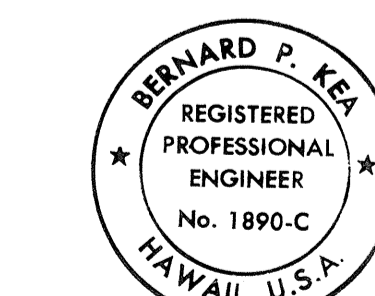
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## NOTES

INTERSTATE ROUTE H-1  
PAIWA STREET INTERCHANGE  
PROJECT NO. HIC-01-90

DATE: AUG., 1991

SHEET NO. 2 OF 2 SHEETS



THIS WORK WAS PREPARED BY  
ME UNDER MY SUPERVISION.  
*Bernard P. Kea*  
Signature

1-30-92	ADDED WATER NOTE & CONNECTION SCHEMATICS	C.P.I.	3/31/92
REVISION DATE	DESCRIPTION	MADE BY	APPROVED