

GENERAL NOTES

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| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | NH-092-1(26) | 2002 | 3 | 30 |

1. The scope of work for this project includes Modernizing Traffic Signal Systems, installing a CCTV Camera with Fiber Optic Cables, and Interconnect Cable System with appurtenances at two existing signalized intersections; widening pavement; constructing channelizing islands and curb ramp improvements; and installing pavement markings and signing.
2. The Contractor is reminded of the requirements of Subsection 108.01-Subletting of Contract, which requires him to perform work amounting to more than 50 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
3. The Contractor's attention is directed to the following sections of the Special Provisions:
Subsection 107.13 - Public Convenience and Safety
Subsection 107.21 - Contractor's Responsibility for Utility Property and Services
Section 645 - Traffic Control Devices
4. The topographic survey map was provided by the State of Hawaii D.O.T.: Data Folder 837; Calculation Folder 571; and Field Books 405, 405a, and 405b. Benchmarks used were based on the following controls: azimuths and elevations referenced to State Monument "SS-2-3K Reset" within Ala Moana Beach Park across from the entrance to Ala Moana Shopping Center, elevation = 4.63, Brass Disk. See Sheet 20. Layout of existing curb ramps and curb islands at the Ala Moana Shopping Center Diamond Head Exit are based on as-built record drawings for the Ala Moana Center-Phase V-A Expansion, Bus Transit Center-Phase II.
5. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public vehicles and pedestrian traffic.
6. Locations of existing underground structures and utilities such as pipelines, conduits, cables, manholes, monuments, and structures shown on the Plans are approximate only. It is not the intent of these Plans to show the exact location of all underground utilities and structures. It is the responsibility of the Contractor to verify the locations of all existing utilities with the respective owners. Existing utilities damaged by the Contractor shall be repaired by the Contractor at his own expense.
7. A minimum of 36 inches clear width and 96 inches headroom clearance height shall be provided along walkways.
8. Smooth riding connections shall be constructed at all limits of paving, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.
9. The Contractor shall provide for access to and from all existing side streets at all times.
10. All construction work shall be done in accordance with these plans, all applicable sections of the Standard Specifications for Road, Bridge and Public Works Construction, dated 1994 as amended, of the State Highways Division, Dept. of Transportation and the project's Special Provisions, unless otherwise specified.

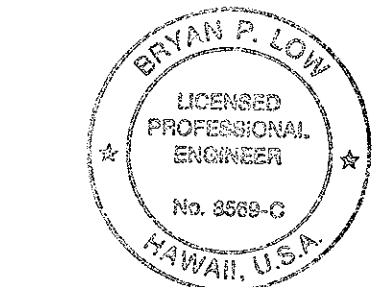
11. The Contractor shall provide, install and maintain all necessary signs, lights, flares, temporary concrete guardrails, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such 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 U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Controls for Highway Construction and Maintenance Operations," dated 1988 and all revisions.
12. 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 connections to verify their locations and depths prior to excavation for the new lines.
13. 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 Contractor shall be at his expense.
14. The Contractor, at his own expense, shall keep the project area and surrounding area from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.
15. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way, except at locations designated in writing and approved by the District Engineer.
16. The Contractor shall provide an adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic.
17. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or ductline.
18. The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under overhead lines.
19. The overhead and underground lines and facilities shall be protected at all times by the Contractor during construction. Costs for any damage repairs to lines and facilities shall be borne by the Contractor.
20. All saw cutting work shall be considered incidental to other items of work in the Proposal.
21. The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the Engineer.
22. Driveways shall be kept open unless the owners of the properties using these right-of-ways are otherwise provided for satisfactorily.

23. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided. All pedestrian access shall be in compliance with ADAAG and HDOT Policies.
24. The Contractor shall take extra care of not disturbing the existing street monuments. The Contractor shall be responsible for any repair to the monuments if damaged during the Contractor's operations.
25. Existing drainage system shall be functional at all times.
26. The Contractor shall notify Oahu Transit Services, Inc., Ed Sniffen (848-4571) or Lowell Tom (843-4578), two (2) weeks prior to construction informing them of location, scope of work, proposal closure of any streets or lanes and the need to relocate any bus stops.
27. Pavement markings disturbed by the Contractor's operation shall be restriped and/or installed at his own expense.
28. Curb ramps not constructed according to the plans shall be reconstructed by the contractor at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 linear ft. (±0.2%). Remedial meaasures willl not be accepted.
29. Maximum curb ramp slopes shall govern over ramp dimensions shon on the plans. If ramp slopes exceed the maximum indicated, ramp dimensions shall be adjusted to satisfy the maximum slope and minimum landing area requirements at no cost to the State.
30. Transitions from ramps to walks, gutters, street approaches, and sidewalk transitions shall be flush and free of abrupt changes greater than 1/4 inch.
31. The Contractor shall not access any work via Ala Moana Beach Park. All Contractor personnel, equipment and vehicles shall use Ala Moana Boulevard for access.

EROSION CONTROL NOTES

1. The Contractor shall submit a Site-specific Best Management Practice Plan (BMPs) to the Engineer at least 14 days prior to the start of construction. The Contractor shall not begin construction until the BMPs are accepted by the Engineer. The cost of the BMP submittals shall not be paid for separately, but shall be considered incidental to the various contract items.
2. The Contractor shall install, inspect and maintain all erosion control BMP's during the duration of the project.
3. The contractor shall remove all temporary erosion control measures after completing the installation of permanent erosion control measures as directed by the engineer prior to final acceptance of the work.

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THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1125 12TH AVENUE
HONOLULU, HAWAII 96816

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| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION |
| GENERAL NOTES |
| Ala Moana Boulevard Traffic Signal Modernization Federal Aid Project No. NH-092-1(26) |
| Date: February, 2002 |
| SHEET No. 1 OF 2 SHEETS |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-092-1(26) | 2002 | 4 | 30 |

WATER NOTES

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 1994, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", VOLUME 1, dated 1985, the "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, dated 1985, and the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, dated 1991, 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, drainage, etc., and other features or improvements shall not be the responsibility of the Board of Water Supply.
3. 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 of encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
4. Re-approval shall be required if this project is not under construction within a period of two years.
5. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
6. For ductlines crossing existing or new waterlines:
 - a. At the electrical/signal ductline water crossings, adjust all electrical/signal ductline elevations to maintain 6" vertical clear separation from all water lines (12" clear for all electrical/signal ductline structures larger than 16") at no cost to the Board of Water Supply.
 - b. Maintain 3'-0" minimum horizontal clear separation between water line systems and nearest electrical/signal ductlines paralleling the water system at no cost to the Board of Water Supply.
 - c. Maintain 3'-0" minimum horizontal clear separation between street light/traffic signal, standards (including any modular units) and the nearest water system. Contractor shall field verify for any conflicts at each street light/traffic signal standard location. Where conflicts occur, the Contractor shall coordinate with the Engineer to revise the street light/traffic signal standard to provide the required clearances at no cost to the BWS.
7. The Contractor shall notify BWS Maintenance Unit-Engineering, Construction Section (527-5205 or 527-5206), one week prior to commencing work on the water system.
8. The Contractor shall verify all existing service lateral locations on the plans prior to commencing with any of the work and shall not assume that where no services are shown none exist.
9. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.

10. The Contractor and ("utility owner") shall notify BWS Construction Section (527-5205 or 527-5206) sixty (60) days prior to construction at or near areas in conflict with the BWS project (Job 01-010 Ala Moana Shopping Center: 8"x2" FM Meter Installations and 12-inch Water Mains on the Coral Level) to avoid delays in construction. BWS shall not be liable for any delays due to Contractor's failure to coordinate the construction schedule for this utility project. (Tentative construction schedule for BWSproject: January 2002, 270 contract days)

HECO NOTES

1. The location of HECO's overhead and underground facilities shown on the Plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
2. The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH).
3. The Contractor shall obtain an excavation permit from HECO's Technical Division (543-5654) located at 820 Ward Avenue, 4th Floor, two weeks prior to starting construction.
4. For verification of underground lines or for assistance in supporting and protecting these lines, the Contractor shall call HECO's Underground Division at 543-7871 a minimum of 72 hours in advance.
5. When trench excavation is adjacent to or beneath our existing structures or facilities, the Contractor is responsible for:
 - (1) Sheeting and bracing the excavation to prevent slides, cave-ins, and settlements;
 - (2) Protecting existing structures or facilities with beams, struts, or underpinnings.
6. For pole bracing instructions, the Contractor shall call the HECO District Superintendent at (Koolau/261-6084, Waiau/543-4223, Ward/543-7745) a minimum of 72 hours in advance.
7. Any work required to relocate HECO facilities shall be done by HECO and the Contractor shall be responsible for all coordination, and for possible costs if applicable.
8. Should it become necessary to temporarily relocate any of HECO facilities to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations, these temporary relocations will be done by HECO or by the Contractor under HECO's supervision with all costs borne by the Contractor.
9. Any damage to HECO's facilities will be reported immediately to HECO's Trouble Dispatcher at 548-7961.
10. All HECO overhead and underground facilities shall be protected at all times by the Contractor during construction. Costs for damages to HECO facilities shall be borne by the Contractor. This repair work shall be done by HECO or by the Contractor under HECO's supervision.
11. Any unforeseen conflict that would result in the redesign or relocation (either temporary or permanent) of HECO's electrical facilities may be cause for lengthy delays. To avoid such delays, the Contractor must notify HECO of the conflict a minimum of 30 days prior to the start of construction.

12. The Contractor shall indemnify, defend and hold harmless HECO from and against all losses, damages, claims, and actions including but not limited to reasonable attorney's fees and costs based upon or arising out of damage to property or injuries to persons, or other tortious acts caused or contributed to by the Contractor or anyone acting under its direction or control or on its behalf, provided Contractor's indemnity shall not be applicable to any liability based upon the sole negligence of HECO.

SEWER NOTES

1. All sewer construction shall be performed in accordance with the City's "Standard Specifications for Public Works Construction" dated September 1986, the Department of Public Works, "Standard Details for Public Works Construction" dated September 1984, current City practices and Revised Ordinances of Honolulu, 1990, as amended, and the Design Standards of the Department of Wastewater Management, Volume 1, July 1993.
2. The Contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
3. The Contractor shall be responsible for any sewage spills caused during construction. The Contractor shall notify the state department of health and utilize appropriate sampling and analyzing procedures. The Contractor shall be responsible for all public notification and press releases.
4. The Contractor shall notify the Inspection Section, Wastewater Branch, DDC, at 527-5842 or 523-4345, to arrange for inspection services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of work. The Contractor shall pay for all inspection costs.
5. The underground pipes, cables or ductlines known to exist by the Engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the Wastewater Inspector and exercise proper care in excavating the area. The Contractor shall be responsible and shall pay for all damaged utilities.

TRAFFIC SIGNALS AND TECHNOLOGY DIVISION NOTES

1. The Contractor shall notify the Traffic Signals and Technology Division, Department of Transportation Services, three (3) working days prior to commencing work on the traffic signal system (Phone: 523-4589).
2. The Traffic Signal System shall be kept operational during construction. Any relocation required shall be approved by the Traffic Signals and Technology Division, Department of Transportation Services, and paid for by the Contractor.
3. The Contractor shall be responsible for any damages to the existing Traffic Signal Facilities, including but not limited to the Traffic Signal Fiber Optic Cable System, and Interconnect System. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the Traffic Signals and Technology Division.

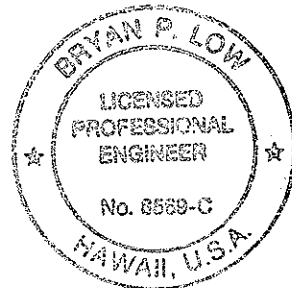
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APPROVED:

[Signature] 3/11/02
to Director, D.P.P. Dept. of Planning and Permitting. Date
(For Effect on City Sewer Only)

[Signature] 2/22/02
to Leader, Maintenance Unit, BWS_{da} Date

[Signature] 2/15/02
Chief, Wastewater Branch, DPP Date



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
[Signature]
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1400 12TH AVENUE
Honolulu, Hawaii 96816

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| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION |
| GENERAL NOTES |
| Ala Moana Boulevard Traffic Signal Modernization Federal-Aid Project No. NH-092-1(26) |
| Date: February, 2002 |
| SHEET No. 2 OF 2 SHEETS |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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DEPARTMENT OF PARKS AND RECREATION (DPR) NOTES:
(For work within areas under DPR jurisdiction)

1. All indicated items are new unless otherwise noted.
2. The extent of removal as indicated is approximate. The Contractor shall verify the extent of removal work to properly accommodate his method of constructing new work as required. Additional removal, patching, and restoration required to accommodate construction shall be considered incidental to the new work.
3. The Contractor shall protect all existing structures and other site improvements to remain. Any damages resulting directly or indirectly from the Contractor's operations shall be repaired and/or replaced to the satisfaction of the Officer-in-Charge at no additional cost to the City.
4. Locations of all existing utilities shown are approximate only. The Contractor shall exercise extreme caution in excavating near utilities. Any and all damage shall be immediately repaired and/or restored to its original condition by the Contractor at his cost. Utilities shall include but not be limited to electrical, telephone, sewer, water, and irrigation systems, etc.
5. The Contractor shall not store or park equipment, vehicles and/or materials under the existng trees or within the park. Driving vehicles over tree roots is not permitted.
6. No tracked vehicles or equipment allowed.
7. The existing irrigation system shall be repaired and/or relocated as shown and/or as noted on the plans and in accordance with the standard specifications for Irrigation and Water systems of the Department of Parks and Recreation, City and County of Honolulu.
8. The Contractor shall be required to field verify and operate the existing irrigation, water and electrical systems to become familiar with the respective systems not affected by this project but within the project limits prior to start of demolition and construction. The Contractor shall coordinate operation of the various systems with the Parks and Recreation District Manager. However, upon commencement of the project the Contractor shall be responsible to protect, maintain and repair the portion of the existing systems within the project limits for the duration of the contract.
9. Existing sprinkler heads and quick connect valves may be buried. The location of existing water and sprinkler line, heads, and valves as shown are approximate only. The Contractor shall locate, expose, and verify these existing facilities prior to commencing with work.
10. The Contractor shall perform the relocation work in such a manner so shutting down of the existing water and sprinkler lines are kept to a minimum and adjust sprinklers to assure proper coverage and operation.
11. The Contractor shall coordinate all sprinkler relocation work with the Parks Maintenance and Recreation Services District Manager. The Contractor shall maintain all areas affected by his operations, including those areas outside his construction area that may be affected.
12. The underground pipes, cables or ducts lines known to exist by the Engineer from his search of his records are indicated on the plans. The Contractor shall verify the locations and depths of the utilities and exercise proper care in excavating in the area. Wherever connection of new utilities to exsiting 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.
13. The Contractor shall visit the site and verify all existing dimensions, as built conditions, structures, site improvements, etc., prior to bidding.
14. Except for portions of the park grounds and facilities affected by this contract, the park facilities will be in use by the public. The Contractor shall include maintaining water for the facilities and irrigation of the fields and grounds to the satisfaction of the Officer-in-Charge and shall be considered incidental to the project. The Contractor shall provide full cooperation with the Department of Parks and Recreation to effectively maintain such use of the park facilities. Contact Parks Maintenance and Recreation Services District Manager Rosalind Young, phone no. 522-7071, two weeks prior to start of work.
15. The Contractor shall coordinate his operations with those of other Contractors who may be employed on adjacent or related projects of the City and avoid unnecessary delay or hindrance in the performance of their respective contracts.
16. For all depressions, low spots, uprooted areas and problem spots as determined by DPR's Officer-in-Charge, the Contractor shall restore all affected areas acceptable to DPR's Officer-in-Charge.
17. The Contractor shall restore all damage Caused by his operatons to original condition or better at his own expense. All restoration work shall be done in accordance with the Department of Parks and Recreation Standards and acceptable to DPR's Officer-in-Charge.
18. The Contractor shall repair and refinish slabs, curbs and walls to match adjacent surfaces where exposed or damaged due to removal work or the construction.
19. All plant materials will be inspected and approved by DPR prior to delivery and being planted at the job site.
20. All tree relocation and tree pruning (top and root) shall be done under the direct supervision of an arborist certified by the Urban Forestry Division, Department of Parks and Recreation. The contractor shall notify Mr. Stan Oka, Urban Forestry Adminstrator, phone no 971-7151, seven days prior to the start of work.
21. Maintenance of affected trees and grassing shall be for a minimum of 60 calendar days after establishment of landscaping.
22. All affected trees shall be guaranteed for one year. The Contractor shall replace with the same size and affected species if any trees fail to survive by the end of one year.
23. Construction of improvements shall be done in accordance with the Standard Specifications and Standard Details of the Department of Public Works (as they may be applicable), Standard Details of the Board of Water Supply, the Park's Standard Details of the Department of Parks and Recreation, and the project Specifications as they may be applicable.
24. The Contractor shall be responsible to plan and construct best management practices (BMP) as required by his operations to comply with all laws, standards, rules, and or policies of the City, State or Federal regulatory agencies. Upon acceptance of the project by the City, the Contractor shall be required to remove all best management practices and to restore the project site to its original conditions or better.

25. The Contractor Shall obtain a Right-of-Entry to Parks Permit prior to construction.
26. Upon completion of all construction, the State shall submit a set of certified, reproducible As-built plans and specifications for the improvements completed to the Department of Design and Construction, Facilities Division, Parks Design for their files and records.

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APPROVED:

W.D. Baeum
Director, Dept. of Parks and Recreation
(For Work Within Park R/W)

10/1/02
Date



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

Ala Moana Boulevard
Traffic Signal Modernization
Federal-Aid Project No. NH-092-1(26)

Date: Aug. 14, 2002

SHEET No. 1 OF 1 SHEETS

C.O. 4A S-1

VERIZON HAWAII INC. NOTES

1. The location of Verizon Hawaii Inc. (HTCO) existing facilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity to Verizon Hawaii Inc. facilities. The Contractor shall verify their locations and shall be liable for any damages to Verizon Hawaii Inc. facilities. Any damages shall be reported immediately to Verizon Hawaii Inc. Repair Section at 611 (24 Hours) or to the Excavation Permit Section at 840-1444 (normal work day hours, Monday thru Friday, except holidays).
2. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative.
3. The Contractor shall obtain an excavation permit and toning request from Verizon Hawaii Inc. Excavation Permit Section located at 3239 Ualena Street, 3rd floor, two weeks prior to the start of construction. Hours of business are 7:00 a.m. to 10:30 a.m. and 11:30 a.m. to 3:00 p.m., Monday thru Friday, except holidays.
4. The Contractor shall take necessary precaution not to damage any existing cables or conduits. Any work involving Verizon Hawaii Inc. cables or conduits shall be done in the presence of a Verizon Hawaii Inc. inspector or designated representative.
5. When excavation is adjacent to or beneath Verizon Hawaii Inc. existing structures or facilities, the Contractor shall
- a. sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Verizon Hawaii Inc. structure or facilities.
- b. protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Verizon Hawaii Inc. structure or facilities.
6. The Contractor shall notify Verizon Hawaii Inc. inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Verizon Hawaii Inc. structure or facilities.

USA SIGNAL CORPS NOTE

1. Any damage to the USA Signal Corps Cables shall be immediately reported to the Joint Trunking System Manager at 438-8070 or 348-0755.

CURB RAMP NOTES

1. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
2. Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
3. Transitions from ramps to gutters and roadways shall be flush. If needed, a lip with a maximum vertical change in level of 1/4" is allowed.
4. Curb ramps and sidewalks shall be designed and constructed to eliminate ponding to the maximum extent feasible.
5. The pedestrian push button shall meet operational and reach requirements of the American with Disabilities Act Accessibility Guidelines (ADAAG):
- a) Forward Reach. The maximum height for forward reach shall be 48".
- b) Side Reach. The maximum height for side reach shall be 54".
- c) Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.

LEGEND

- t— Existing Telephone Line
- tp Existing Telephone Pole
- tmh Existing Telephone Manhole
- tpb Existing Telephone Pullbox
- w—12— Existing Water Line w/ Size
- wmh Existing Water Manhole
- wv Existing Water Valve Box
- wm Existing Water Meter
- fh Existing Fire Hydrant
- mon. Existing Monument
- dmh Existing Storm Drain Manhole
- di Existing Drop Inlet
- cb Existing Catch Basin
- smh Existing Sewer Manhole
- sl6— Existing Sewer Line w/ Size
- x— Existing Chain Link Fence
- ␣ Existing Traffic Sign With 1 Post
- ☀sl Existing Highway Lighting Standard
- slb Existing Street Light Box
- ts Existing Traffic Signal Standard
- tsb Existing Traffic Pullbox
- ts— Existing Traffic Signal Ducts
- icpb 16 Existing Interconnect Pullbox & No.
- ebox or ebl Existing Electrical Box
- ir box Existing Irrigation Box
- util Existing Utility Box
- New Interconnect Pullbox & No.
- ICPB 10
- New Electrical Pullbox
- EPB 2

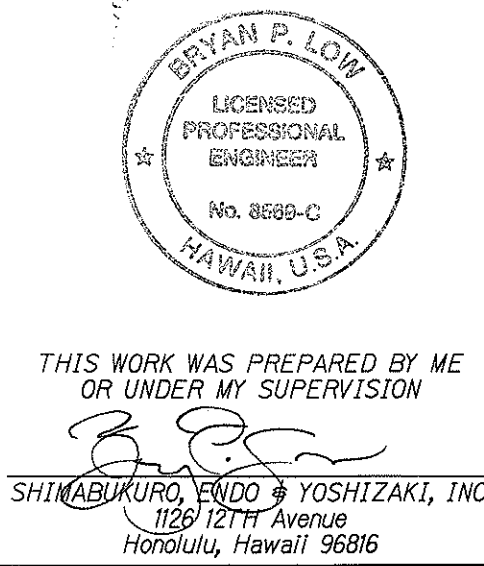
ABBREVIATIONS

- A.C. Asphalt Concrete
- BC Bottom of Curb
- Blvd. Boulevard
- ⊕ Base Line
- BW Bottom of Wall
- ⊕ Center Line
- CL Clear
- Conc. Concrete
- CRM Conc. Reinf. Masonry
- Dept. Department
- Det. Detail
- DOT Department of Transportation
- DTS Department of Transportation Services
- E.W. Each Way
- Exist. Existing
- Exist. grd. Existing grade
- Ft. Feet
- FG Finish Grade
- Galv. Galvanize
- HECO Hawaiian Electric Co.
- HTCO Hawaiian Telephone Co. (Verizon Hawaii Inc.)
- Hwy. Highway
- Inv. Invert
- L.F. Linear Feet
- Lt. Left
- Max. Maximum
- Min. Minimum
- Mon. Monument
- No. Number

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- O.C. On Center
- O.D. Outside Diameter
- O/S Offset
- Pav't Pavement
- PC Point of Curvature
- PCC Point of Compound Curve
- PPB Pedestrian Push Button
- PT Point of Tangency
- R Radius
- RCP Reinforced Concrete Pipe
- Req'd Required
- Rt. Right
- R/W Right-of-Way
- Shldr. Shoulder
- Sht. Sheet
- Sta. Station
- Std. Standard
- TC Top of Curb
- Thk. Thick
- TMK Tax Map Key
- TW Top of Wall
- Typ. Typical
- W.W.F. Welded Wire Fabric

13. Additional information is available from:
- a) American with Disabilities Act Accessibility Guidelines (ADAAG), September 1998, The Access Board.
- b) Accessible Rights-of-Way: A Design Guide, November 1999, The Access Board.
- c) Designing Sidewalks and Trails for Access, July 1999, FHWA.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NOTES, ABBREVIATIONS
AND LEGEND**

*Ala Moana Boulevard
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Federal-Aid Project No. NH-092-1(26)*

Date: February, 2002

SHEET No. 1 OF 1 SHEETS