SECTION 623 – TRAFFIC SIGNAL SYSTEM

Make the following amendment to said Section:

(I) Amend **Section 623.04 - Measurement** by replacing lines 578 to 579 to read:

"**623.04 Measurement.** The Engineer will not measure software for controller, interconnect, or electrical risers for payment.

(A) The Engineer will measure the controller assembly, foundation for traffic signal controller, traffic signal standard, foundation for traffic signal standard, pedestrian or traffic signal assembly, retroreflective backplate on existing traffic signal assembly, pedestrian pushbutton, pullbox, loop detector sensing unit, emergency vehicle preemption optical receiver, service and metering equipment assembly, reinforced concrete jacket over drain line, and advance warning beacon assembly per each in accordance with the contract documents.

(B) The Engineer will measure camera cable, traffic signal interconnect subduct, traffic signal ductline, secondary electrical ductline and conductors per linear foot in accordance with the contract documents.

(C) The Engineer will measure Hawaiian Electric Company service connection fees and transformer installation on a force account basis according to Subsection 109.06 – Force Account Provisions and Compensation."

(II) Amend **Section 623.05 – Payment** by replacing lines 581 to 594 to read:

"**623.05 Payment.** The Engineer will pay for the controller assembly at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and mounting the controller cabinet; furnishing, assembling, wiring, software, and housing the controller and auxiliary equipment; painting the controller cabinet; testing; providing turn-on service; submitting warranty; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the traffic signal standard at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the traffic signal standard; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipment, tools, labor, materials; and other incidentals necessary to complete the work.

The Engineer will pay for the foundation for controller cabinet and traffic signal standard at the contract unit price per each complete in place. The price includes full compensation for excavating and backfilling; forming; furnishing and

placing the reinforcing steel; mixing, placing, and curing the concrete; furnishing and setting the anchor bolts; restoring the pavement; and furnishing equipment, tools, materials and other incidentals necessary to complete the work.

The Engineer will pay for the pedestrian and traffic signal assembly at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; assembling the signal heads; wiring; bonding and grounding; painting the signal head mounting; testing; providing turn-on service; submitting warranty; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the install retroreflective backplate on existing traffic signal assembly at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; assembling to the signal heads; submitting warranty; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the pedestrian pushbutton with instruction sign at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the pedestrian pushbutton with the instruction sign; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipment, tools, labor, materials; and other incidentals necessary to complete the work.

The Engineer will pay for the pullbox at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the pullbox at the designated locations; saw cutting; excavating and backfilling; restoration of concrete sidewalks, asphalt concrete pavement and landscaping; coating the frames and covers; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the loop detector sensing unit at the contract unit price per each complete in place. The price includes full compensation for saw cutting; cleaning and blowing the saw cut areas; furnishing and inserting the loop cable; splicing in the pullbox; filling the saw cut groove with epoxy sealer or hot applied rubberized sealant; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will not pay for the interconnect or electrical risers. The work includes furnishing and installing the riser; and furnishing equipment, tools, labor, materials, and other incidentals necessary to complete the work. The Engineer will consider the cost for risers as included in the contract price for the various contract items.

The Engineer will pay for the emergency vehicle preemption (EVP) optical receiver at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the EVP; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipment, tools, labor, materials; and other incidentals necessary to complete the work.

The Engineer will pay for the camera cable at the contract unit price per linear foot complete in place. The price includes full compensation for furnishing and installing the preemption detector cable from the detector to the cabinet; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the traffic signal ductlines at the contract unit price per linear foot complete in place. The price includes full compensation for saw cutting; trenching; excavating and backfilling, including asphalt concrete pavement, hot mix asphalt base course, aggregate base course and aggregate subbase course for trench repair; concrete curb and/or gutter and concrete sidewalk repair; furnishing and placing the reinforcing steel for concrete encasement; mixing, placing, and curing the concrete for encasement; furnishing, installing, bonding, and grounding the conduits and interconnect subducts; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work. The price does not include P.C.C. pavement restoration. The Engineer will measure and pay for P.C.C. pavement restoration according to Section 411 – Portland Cement Concrete Pavement.

The Engineer will pay for the reinforced concrete jacket over drain line at the contract unit price per each complete in place. The price includes full compensation for saw cutting; trenching; furnishing and placing the reinforcing steel, mixing, placing, and curing the concrete; excavating and backfilling, including asphalt concrete pavement, hot mix asphalt base course, aggregate base course and aggregate subbase course for trench repair; furnishing and installing Rapid Repair PG100 or approved equal; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the traffic signal interconnect subduct at the contract unit price per linear foot complete in place. The price includes full compensation for furnishing and installing; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the traffic signal cables at the contract unit price per linear foot complete in place. The price includes full compensation for furnishing, installing, splicing, and taping the cable; furnishing and installing interconnect fabric subducts; making the connections; providing turn-on service; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the service and metering equipment assembly at the contract unit price per each complete in place. The price includes full compensation for furnishing and installing the meter/main safety socket box, pullbox, support structure, ground rod, conduit, conductors; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for Hawaiian Electric Company service connection fees and transformer installation on a force account basis according to Subsection 109.06 – Force Account Provisions and Compensation. An estimate amount for the force account is allocated in the proposal schedule under Hawaiian Electric Company Service Connection Fees and Transformer Installation Fees. The actual amount to be paid will be the sum shown on the accepted force account records whether this sum be more or less than the estimated amount allocated in the proposal schedule.

The Engineer will pay for the accepted advance warning beacon assembly at the contract unit price per each complete in place. The price includes full compensation for furnishing and installing the advance warning beacon from the beacon to the meter, and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the secondary electrical ductline at the contract price per linear foot complete in place. The price includes full compensation for saw cutting, excavating and backfilling; furnishing, installing, grounding, terminating conductors; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will consider full compensation for additional materials and labor not shown in the contract that are necessary to complete the installation of the various systems incidental to the various contract items. The Engineer will not allow additional compensation.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Controller Assembly with Software	Each
Type _____ Traffic Signal Standard _____	Each
Foundation for _____	Each
_____ Signal Assembly _____	Each

Install Retroreflective Backplate on Existing Traffic Signal Assembly	Each
Pedestrian Pushbutton with Instruction Sign	Each
_____ Type _____ Pullbox	Each
Loop Detector Sensing Unit (6 Ft. x 6 Ft.) _____ Loops	Each
EVP Optical Receiver with _____	Each
Traffic Signal Ductline _____	Lin. Ft.
EVP Cable	Lin. Ft.
No. _____, _____ Cable	Lin. Ft.
Hawaiian Electric Company service connection fees	Force Account
Reinforced Concrete Jacket Over Drain Line	Each”

END OF SECTION 623