

SYMBOLS AND ABBREVIATIONS - STRUCTURAL ITEMS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(19)	2006	15	58

≥ Greater Than or Equal to
≤ Less Than or Equal to
Number

Abut. Abutment
Abbr. Abbreviation
Add. Additional, Added
Alt. Alternate
AB Anchor Bolt
AC Asphaltic Concrete
Approx. Approximate
Az. Azimuth

Bk. Back
Bal. Balance
BC Bottoom of Curb
B Baseline
Bm. Beam
Brg., Brgs. Bearing, Bearings
BVC Beginning of Vertical Curve
Bet. Between
BF Both Faces, Back Face
BW Both Ways
BFE Bottom of Footing Elevation
Bot., Bott., B Bottom
Br. Bridge
Blf. Bolt

Cant. Cantilever
CIP Cast-in-Place
C Centerline
CG Center of Gravity
cgs Center to Gravity of Strands
cc Center to Center
Cl. Class
Clr. Clearance
Col. Column
Conc. Concrete
Conn. Connection
Const. Construction
CJ Construction Joint
Cntl. Jt. Control Joint
CLSM Controlled Low Strength Material

Cont. Continuous
CF Cubic Feet
CY, Cu. Yd. Cubic Yard

Det. Detail
Dia. Diameter
Diaph. Diaphragm
Dim. Dimension
Dist. Distance
DO Ditto
Dwls. Dowels
Dn. Down
Dbl. Double
DI Drain Inlet, Ductile Iron
Dwg., Dwgs. Drawing, Drawings
DS Drilled Shaft

EA, Ea., ea. Each
EF Each Face
EFH Each Face Horizontal
EFV Each Face Vertical
EW Each Way
EP Edge of Pavement
EPS Expanded Polystyrene
E East
Elec. Electrical
EMH Electrical Manhole
El., Elev. Elevation
Emb. Embankment
Embed. Embedded, Embedment
EVC End of Vertical Curve
Eq. Equal
Est. Estimated
Exc. Excavation
Excl. Excluding
Exist., Ex. Existing
Exp., (E) Expansion
EJ Expansion Joint
EJ Expansion Joint
Ext. Exterior

FF Far Face, Front Face
F'c Specified Strength of Concrete
F'ci Strength of Concrete at Time of Initial Prestress
Ft. Feet, Foot
Fig. Figure
Fin. Gr. Finish Grade
(F) Fixed
FB Flat Bar
Ftg. Footing
FA Force Account

Ga. Gage, Gauge
Galv. Galvanized
GFRP Glass Fiber Reinforced Polymer
Gr. Grade
Grd. Ground
GRP Grouted Rubble Pavement

Ht. Height
(H) Hinge
Horiz., H Horizontal
HS High strength
HECO Hawaiian Electric Company

IB Inbound
In. Inch
ID Inside Diameter
IF Inside Face
Int. Interior
Inv. Invert

Jt. Joint

K Kips
KF Kip Foot
KSF Kips Per Square Foot
KSI Kips Per Square Inch
KLF Kips Per Linear Foot

L Length
lb., lbs., LBS. Pound, Pounds
Ltg. Std. Lighting Standard
LF Linear Feet/Foot
Lin. Ft. Linear Feet/Foot
LS Lump Sum
Longit. Longitudinal

M Modified
MH Manhole
Max. Maximum
Mech. Mechanical
Min. Minimum
Misc. Miscellaneous
MPH Miles Per Hour

NF Near Face
N North
NIC Not in Contract
No. Number
NTS Not to Scale

O/S Offset
oc On Center
Opn'g Opening
OB Outbound
OD Outside Diameter

P(e) Effective Prestressing Force
PP Precast Plank
Perf. Perforated
PL Plate
PCC Portland Cement Concrete
PC Point of Curvature
PCF Pounds per Cubic Foot
PCF Pounds per Cubic Foot
PCI Pounds per Cubic Inch
PSI Pounds per Square Inch
PLF Pounds per Linear Foot
PI Point of Intersection of Tangents

PIVC Point of Intersection of Vertical Curve
PT Point of Tangency, Post Tensioned
Pt., Pts. Point, Points
PRC Point of Reverse Curvature
PVC Polyvinyl Chloride
Prestr. Prestressed
P/S Prestressed Strands
PB Pull Box

Q Flow Rate

Rad., R Radius
RF Rear Face
Rebar Reinforcing Bar
Ref. Reference
Reinf. Reinforced, Reinforcing, Reinforcement
Req'd. Required
Ret. Retaining
ROW Right of Way
Rdwy. Roadway

Sect. Section
SDMH Sewer Drain Manhole
Sht. Sheet
Sl. Slope
S South
Spc., Spg. Spaces, Spacing
Sprd. Spread
Spec. Specification
SF Square Feet
SY Square Yard
SS Stainless Steel

Std. Standard
Sta. Station
Stagg. Staggered
Stiff. Stiffener
Stirr. Stirrup
Str. Straight
Struct. Structure
SE Super Elevation
Symm. Symmetrical

Tan. Tangent
Temp. Temporary
Thk. Thick
T Top
T#B Top and Bottom
TC Top of Curb
TOD Top of Deck
TFE Top of Footing Elevation
Tot. Total
Transv. Transverse
TS Structural Tubing
Typ. Typical

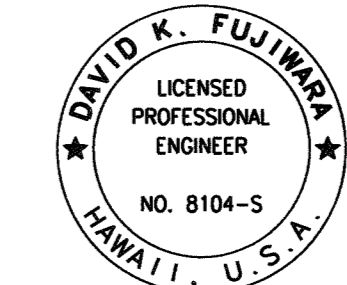
Undergrd. Underground
UNO Unless Noted Otherwise

Var. Varies
Vert., V Vertical
VC Vertical Curve

W/C Water/Cement Ratio
w/ With
W West
WWF Welded Wire Fabric
WW Wing Wall
WP Work Point, Working Point
WS Water Surface

Yr. Year

DATE	_____
DESIGNED BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature: David K. Fujimura
EXPIRATION DATE OF THE LICENSE: 4-30-08

9/30/09	3 As Built
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SYMBOLS AND ABBREVIATIONS-
STRUCTURAL ITEMS**

Fort Weaver Road Widening
Honouliuli Stream Pedestrian Bridge
Vicinity of Aawa Drive to Geiger Road
Federal Aid Project No. CMAQ-076-1(19)

Scale: None Date: Feb. 29, 2008

SHEET No. **HSQ.4** OF 33 SHEETS