FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	39	57

MECHANICAL GENERAL REQUIREMENTS:

- In General, Plans and Diagrams Are Schematic Only And Should Not Be Scaled.
- Contractor to visit site and Verify All Clearances Before Fabrication Of Ductwork And Provide Additional Offset And/Or Changes In Duct sizes To Meet Field Conditions And Coordinate With Electrical And Plumbing Subcontractors Before Any Construction Work.
- Contractor Shall Notify The Engineer, Architect Or His Authorized Representative O Any Damage To The Existing Installation Before Proceeding With The Work.
- The General Contractor Is Responsible For All Trades Installation Schedules. Field Work Such As Ductwork And Plumbing Shall Be Installed Prior To Any Trade Work That Can Be Easily Relocated Or Offset Such As Electrical Conduits, Small Water Lines, Etc.
- Unless Otherwise Noted, Install Ductwork As High As Possible, Tight To Bottom Of Structure. Coordinate Duct elevation With Water Piping, Sanitary Drains And Major Electrical Conduits.
- Contractor Shall Provide AllSupplementary Steel Required To Suspend Mechanical Equipment And Materials.
- Ductwork, Diffusers, Registers, Grilles, And Other Items f The Air Handling System, Shall Not Be Supported By The Ceiling Suspension System.
- Location Of The Wall Mounted thermostats Shall Be coordinated With Other Trades For A Neat appearance. Final Location Of The Thermostat And Sensors Shall Be Subject To The Approval Of The Engineer Or His Representative In The Field. Thermostat Shall Be Mounted To Comply With ADAAG 205.1 And 309 With A Maximum Height of 48-Inches To The top Of the Thermostat.
- Coordinate Air Device Locations With Lighting fixtures, Speakers And Fire Sprinkler Head (Where Applicable).
- Provide A Trap In All Condensate Piping Located At The Fan Coil Unit. Condensate Piping To Be Sch 40 CPVC. Insulate All Condensate Lines Above finish Grade With $\frac{1}{2}$" Thick Armaflex Insulation.
- Regardless Of HVAC Schedules, The Mechanical Contractor To Verify Voltage With Electrical Before Ordering Equipment.
- Duct Dimensions Shown On Drawings Are Clear Inside Dimensions. Internal Insulation (Where Used) Has Not Been Accounted For.
- Flexible And Rigid Round Duct Take-offs For Diffusers Shall Be The Same size As diffuser Neck. Maximum Flexible Duct Length Shall Be 7'-0" And Minimum 3'-0". Insulate Rigid Round Ducts With 1-1/2" Foil faced Fiberglass Duct Wrap. Duct Wrap To Have An Installed Minimum Thermal Resistance (R) Value Of 6.0.
- All Exhaust And Outside Air Duckwork Shall Be Galvanized Sheetmetal Construction In Accordance With Latest SMACNA Standards. All Joints Shall Be Securely Taped with 3" wide Glass Fabric Tape With Foster 30/35 Mastic Or Equal.
- Provide All Hvac Equipment With Manufacturer's Recommended Service Area clearances.
- Fan Coil Units Outside air Intake Shall maintain A Minimum Of 12'-0" From Any Wall Exhaust Fans, Caps, Sanitary Vent Thru roof Piping, Etc.
- It shall Be the Responsibility Of This Contractor To Install The Heating, Ventilation and Air Conditioning System So As To Insure Quiet Operation. No Vibration Or Sound Shall Be Transmitted To The Building, Structure Or Occupied Areas. The Decision Of The Engineer As to The quietness Of The System And Equipment Shall Be Final. It shall Be This Contractor's Responsibility To Correct Or Place Any Noisy System Or Equipment As Required.
- All Automatic Temperature Control System Work, Modification And Inspection Shall Be Accomplished By This Contractor. All Damaged, Defective, Missing Or Inappropriate Devices Shall Be Repaired or Replaced As Required. The Contractor Shall Provide A Complete And Operational Control System.
- Seal All Penetrations Through Walls, Ceilings, Floors, Etc., So That They Are Air, Water And Fire Tight.
- Furnish And Install Access Panels For All Concealed Equipment, Fire Campers, Piping Valves, Cleanouts, Etc. Access Panels Shall Be Of Sufficient Size To Provide Adequate Working Clearance An Access Per Code.

MECHANICAL GENERAL REQUIRMENTS: CONTINUED

- Disinfect Water Lines Per UPC Section 609.9. Water Lines Shall Be Disinfected With Chlorine Before Acceptance Of Work. Flush System With Clean Potable Water. System Shall Be Filled With A Water-chlorine Solution Containing Not Less than 50 Ppm of Chlorine. Allow for 24-Hour Contact Period. After Contact Period, Flush System With Clean Potable Water Until The Chlorine Residual In The System Does Not Exceed The Chlorine Residual In The Flushing Water.

FIRE SAFETY NOTES:

- Structures Undergoing Construction, Alteration Or Demolition Operations Including Those In Underground Locations Shall Comply With NFPA 214, Standard For Safeguarding Construction, Alteration, And Demolition Operations And This chapter Per 2006 NFPA 1.
- Where The Building Is Protected By fire Protection System, Such Systems Shall Be Maintained Operational At All times During Alteration Per 2006 NFPA 1, Section 16.4.4.1.
- Where alteration requires Modification Of A portion Of The Fire Protection System, The remainder Of The System Shall Be Kept In Service And The Fire Department Shall Be Notified Per 2006 NFPA 1, Section 16.4.4.2.
- When It Is Necessary To shut Down The System, The AHJ Shall Have The Authority To Require Alternate Measures Of Protection Until The System Is Returned To Service.
- As Necessary During Emergencies, Maintenance, Drills, Prescribed Testing, Alterations, Or Renovations, Portable Or fixed Fire Extinguishing Systems Or Devices Or Any Fire-Warning System Shall Be Permitted To Be made Inoperative Or Inaccessible, A Fire Watch shall Be Required As Specified In 2006 NFPA 1, Sections 13.3.4.3.5.2 (3), 13.7.1.4.4, 16.5.4, 20.2.3.6, 34.6.3.3, 41.2.2.5,. 41.2.2.6, 41.2.4, 41.3.4, 41.4.1, 34.5.4.3, and 25.1.8, At No cost To The AHJ Per 2006 NFPA 1 As Amended.
- The Installation, Maintenance, Selection and distribution Of Portable Fire Extinguishers Shall Be In Accordance To NFPA 10, Standard For Portable Fire Extinguishers, And 2006 NFPA 1, Section 13.6.

MECHANICAL LEGEND AND SYMBOLS:

Abv	Above	H	Height
Ap	Access Panel	Hp	Horsepower
Bel	Below	H, Hw	Hot Water
Btuh	British Thermal Units Per Hour	Insul	Insulation
Cd	Ceiling Diffuser	Obvd	Opposed Blade Volume Damper
Cfm	Cubic Feet Per Minute	Poc	Point Of Connection
Clg	Ceiling	Qty	Quantity
Co	Cleanout	Rr	Return Register
Conc	Concrete	Sht	Sheet
Conn	Connection	Sp	Static Pressure
Cont	Continuation	Sst	Stainless Steel
Cotg	Cleanout to Grade	Typ	Typical
Cw	Cold water	Vt	Vent
Cv	Check Valve	W	Waste
Det	Detail	Wco	Wall Cleanout
Dn	Down	W/	With
Dr, D.	Drain	— · · —	Hot Water Piping
Dwg, Drwg	Drawings	— · —	Cold Water Piping
Ea	Each	— — —	Vent Piping
Ef	Exhaust Fan		Ceiling Diffuser
Er	Exhaust Register		Return Register
Exh	Exhaust		Obvd
Ex,Exist	Existing		Firedamper
F	Fahrenheit		Comboination fire/ Smoke Damper
Fco	Floor Cleanout		
Fd	Floor Drain		
Fdb	Fahrenheit Dry Bulb		
Fe	Fire Extinguisher	(T)	Tjhermostat Mount 48" From Top Of Thermostat To Finish Floor
Ffl	Finish Floor		
Fin	Finish		
Flr	Floor		
Fs	Floor Sink	(E)	Existing
Ft	Feet	(N)	New
Fu	Fixture Unit	(R)	Relocated
Gal	Gallon		

CITY AND COUNTY OF HONOLULU
REVISED ORDINANCE CHAPTER 32,
HONOLULU COUNTY CODE 1990. AS AMENDED

To the best of my knowledge, this project's design substantially conforms to the Energy Code for:

____ Building Component Systems
____ Electrical Component Systems
__X__ Mechanical Component Systems

Signature: _____ Date: 04-28-14
Name: Arnaldo E. Prepose
Title: President
License No: 4764-M

ARNALDO E. PREPOSE
LICENSED PROFESSIONAL ENGINEER
No. 4764-M
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MECHANICAL NOTES
MECHANICAL LEGEND

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

SHEET No. M1.1 OF 57 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

EQUIPMENT SCHEDULE

Inverter Air Conditioning System

Fan Coil Unit: Horizontal Ceiling Concealed

Factory Assembled Ceiling Concealed Horizontal Ducted Unit, Direct Expansion Type With Anti-Corrosion Cooling Coil Of Copper Coils and Aluminum Fins, Corrosion Protected Casing with Finish, Microprocessor Control With Self Diagnosing and 24-Hour Timer, Mounting Brackets, Built-in Condensate, Anti-Microbial Filter, Auto Restart, Motor, 3-Speed Centrifugal Fans, and Wired Standard Thermostat. See Specifications For Additional Requirements.

Fan Coil UNit: Wall Mounted

Factory Assembled Unit, Wall Mounted Direct Expansion Type With Anti-Corrosion Cooling Coil Of Copper Coils and Aluminum Fins, Corrosion Protected Casing with Finish, Microprocessor Control With Self-Diagnosing and 24-Hour Timer, Mounting Brackets, Built-in Condensate Pump, Anti-Microbial Filter, Auto Restart Air Sweep and Louver Control, 5-Speed Centrifugal Fans, and Wired Standard Thermostat. See Specifications For Additional Requirements.

Condensing Units:

Air Cooled Condensing Unit Complete With Variable Speed DC Inverter Scroll Compressors, Galvanized Steel With Powder Coated Cabinet, Direct Driven Propeller Horizontal Discharge Condenser Fan, PVC Coated Wire Guard, Copper Tube With Aluminum Fins Condenser Coil, Puron R410A Refrigerant, Internal Overloads, TXV Valve, And Support Feet With Isolation Pads. See Specifications For Additional Requirements. Provide Corrosion Protection For Condenser Coil. Protect Finned Tubes With Blygold Poual Coating, Cabinet Surfaces For Air Condtioning Unit Shall Be Coated With Ameron PSX 700. Replace All Hardware With Stainless Steel Hardware.

Note: Fan Coil Units Power From Respective Condensing Units; Disconnects Required At Fan Coil Unit.

Fcu No.	Tbtuh	Sbtuh	Sa Cfm	Oa Cfm	Ent Air Fdb	Ent Air Fwb	Amb Air F	System Units Fla	System Units Watts	System Units MOCP	Volt/Ph/Cyc	Fcu/Cu Model or Approved Equal	Remarks
1	17,100	—	650	—	80	67	95	7.5	1650	20	208-230/1/60	Panasonic CS-S18NKU-1 Panasonic CU-S18NKU-1	New, 26.0/115.0 Lbs, 17.5 Seer
2	11,900	—	425	—	80	67	95	5.1	1000	15	208-230/1/60	Panasonic CS-S12NKUW-1 Panasonic CU-S12NKUW-1	New, 20.0/82.0 Lbs, 17.5 Seer
3	18,000	—	425	—	80	67	95	9.0	—	20	208-230/1/60	Fujitsu ASU18CL Fujitsu AOU18CL	(E), 20.0/88.0 Lbs, 19.0 SEER
4a	12,000	—	330	—	80	67	95	0.19	22	—	208-230/1/60	Fujitsu ASU12RLF	(E), 21.0 Lbs
4b	12,000	—	330	—	80	67	95	0.19	22	—	208-230/1/60	Fujitsu ASU12RLF	(E), 21.0 Lbs
5	24,000		650	—	80	67	95	10.4	—	20	208-230/1/60	Fujitsu ASU24CL Fujitsu AOU24CL1	(E), 31.0/88.0 Lbs, 17.5 Seer
6	24,000	—	650	—	80	67	95	11.9	2840	25	208-230/1/60	Panasonic CS-S24NKUA Panasonic CU-S24NKUA	New, 26.0/132.0 Lbs, 17.5 Seer
7	24,000		650	—	80	67	95	10.4	—	20	208-230/1/60	Fujitsu ASU24CL Fujitsu AOU24CL1	(E), 31.0/88.0 Lbs, 17.5 Seer
8	9,000		330	—	80	67	95	6.2	—	15	208-230/1/60	Mitsubishi MSYGE09NA Mitsubishi MUYGE09NA	(E), 22.0/66.0 Lbs, 21.0 Seer
9	12,000	—	330	—	80	67	95	—	—	—	208-230/1/60	Fujitsu ASU12CL Fujitsu AOU12CL	Existing, 21.0 Lbs
10	17,100	—	650	—	80	67	95	7.5	1650	20	208-230/1/60	Panasonic CS-S18NKU-1 Panasonic CU-S18NKU-1	New, 26.0/115.0 Lbs, 17.5 Seer
11	33,000	—	700	—	80	67	95	17.3	—	30	208-230/1/60	Fujitsu ASU36CLX1 Fujitsu AOU36CLX1	(E), 31.0/150 Lbs, 15.5 Seer
12	33,000	— (△3)	700	—	80	67	95	17.3	—	30	208-230/1/60	Fujitsu ASU36CLX1 Fujitsu AOU36CLX1	(E), 31.0/150 Lbs, 15.5 Seer
13	33,000	—	700	—	80	67	95	17.3	—	30	208-230/1/60	Fujitsu ASU36CLX1 Fujitsu AOU36CLX1	(E), 31.0/150 Lbs, 15.5 Seer
14	34,000	—	630	—	80	67	95	21.9	4000	45	208-230/1/60	Panasonic CS-KS36NKU Panasonic CU-KS36NKU	New, 32.0/183.0 Lbs, 16.0 Seer
15	34,000	—	630	—	80	67	95	21.9	4000	45	208-230/1/60	Panasonic CS-KS36NKU Panasonic CU-KS36NKU	New, 32.0/183.0 Lbs, 16.0 Seer
16a	12,000	—	280	—	80	67	95	0.17	35	—	208-230/1/60	Panasonic CS-MKS12NKU	New, 19.8 Lbs
16b	12,000	—	280	—	80	67	95	0.17	35	—	208-230/1/60	Panasonic CS-MKS12NKU	New, 19.8 Lbs
16c	12,000	—	280	—	80	67	95	0.17	35	—	208-230/1/60	Panasonic CS-MKS12NKU	New, 19.8 Lbs
OA-A1	24,000	—	670	—	80	67	95	15.0	2600	Fcu-15 Cu-30	208-230/1/60	Panasonic S-26PF1U6 Panasonic U-26PF1U6	New, 71.0/128.0 Lbs, 14.0 Seer
OA-A1	24,000	—	670	—	80	67	95	15.0	2600	Fcu-15 Cu-30	208-230/1/60	Panasonic S-26PF1U6 Panasonic U-26PF1U6	New, 71.0/128.0 Lbs, 14.0 Seer
OA-A1	24,000	—	670	—	80	67	95	15.0	2600	Fcu-15 Cu-30	208-230/1/60	Panasonic S-26PF1U6 Panasonic U-26PF1U6	New, 71.0/128.0 Lbs, 14.0 Seer

EQUIPMENT SCHEDULE - CONTINUE

Condensing Units:

CU NO.	TBTUH	ENT AIR FDB	ENT AIR FWB	AMB AIR F	COMP RLA	COMP LRA	PWR SUP RLA	PWR SUP Watt	PWR SUP MOCP	VOLT/PH/CYC	CU MODEL OR APPROVED EQUAL	REMARKS
Cu-4	24,000	80	67	95	—	—	13.7	1760	25	208-230/1/60	Fujitsu AOU24RL	17.0 Seer, 124 LBS.
Cu-16	28,600	80	67	95	—	—	12.6	2600	20	208-230/1/60	Panasonic CU-4KS31NBU	17.6 Seer, 175 LBS.

Exhaust Fan:

Ceiling Fan Shall Be Direct Driven Centrigugal Type With Galvanized Steel Housing With Acoustic Insulation, Motor Vibration Isolators, Integral Wiring Box, Disconnect Receptacle, Convertible Discharge, Backdraft Damper, Mounting Bracket, Speed Controller, NonOverloading Open Drip Motor With Built-In Thermal Protection And Non-yellowing High Impact Styrene Molded Grille.

EF NO.	CFM	SP	RPM	Watts	VOLT/PH/CYC	WT., LBS	Remarks
1	150	0.25	1365	75	120-1-60	275	Loren Cook GC-320 Or Approved Equal

△3

6/5/14	△3 Revised Fcu Cfm & Delete Ef-2
DATE	REVISIONS

ARNALDO E. PREPOSE
LICENSED PROFESSIONAL ENGINEER
No. 4764-M
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EQUIPMENT SCHEDULE

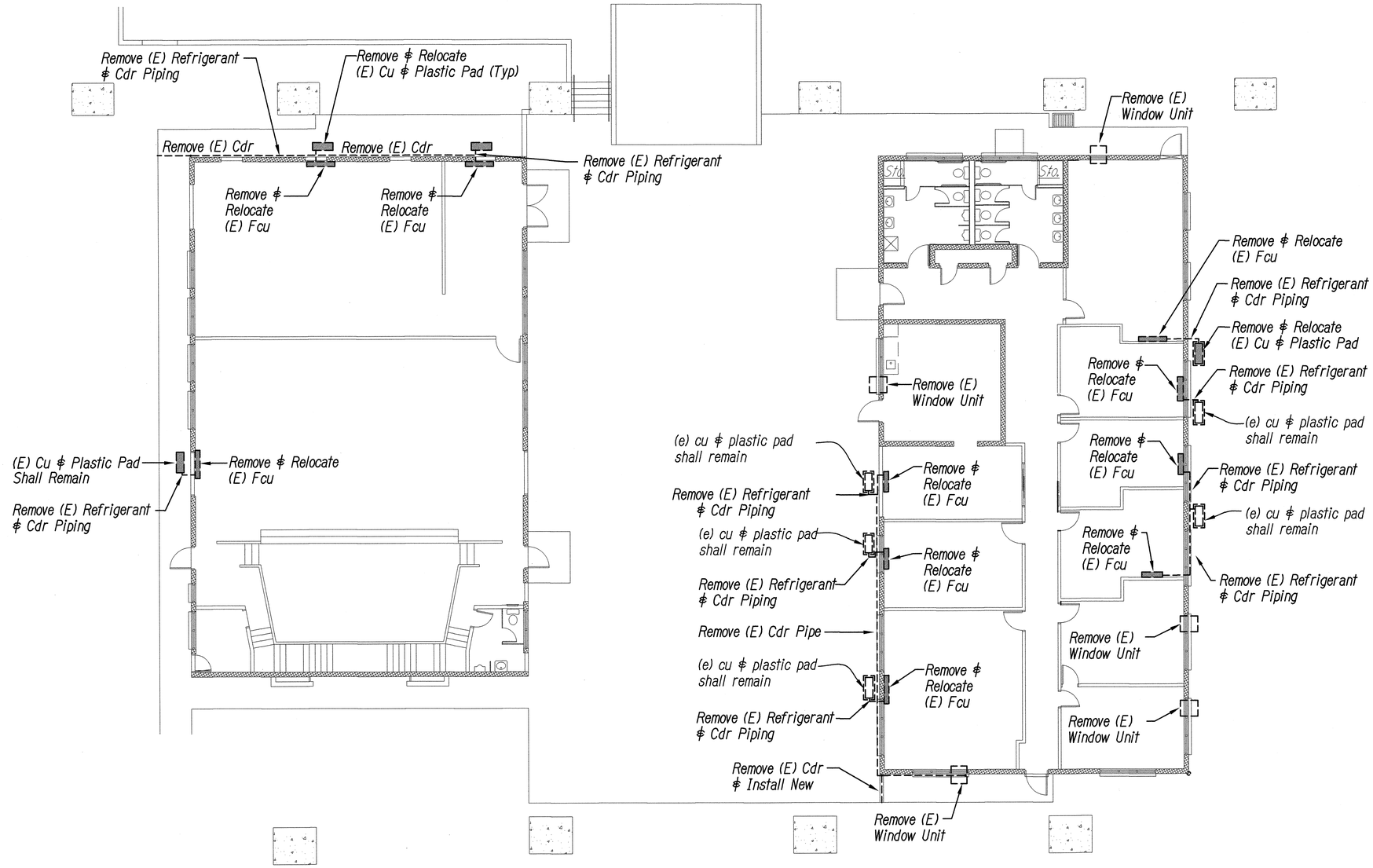
MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale: As Noted — Date: April 2014

SHEET No. M1.2 OF 57 SHEETS

ORIGINAL PLAN / NOTE BOOK / No. — SURVEY PLOTTED BY / DRAWN BY / TRACED BY / DESIGNED BY / QUANTITIES BY / CHECKED BY — DATE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	41	57



SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTE BOOK
No.

AIR CONDITIONING REMOVAL PLAN - BUILDING A & B A1
SCALE: 1/8" = 1'-0" M2.1 | M2.1

NORTH

SCALE 4' 0 5' 10' 15' 20'
1/8" = 1'-0"

ARNALDO E. PREPOSE
LICENSED PROFESSIONAL ENGINEER
No. 4764-H
HAWAII, U.S.A.
EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

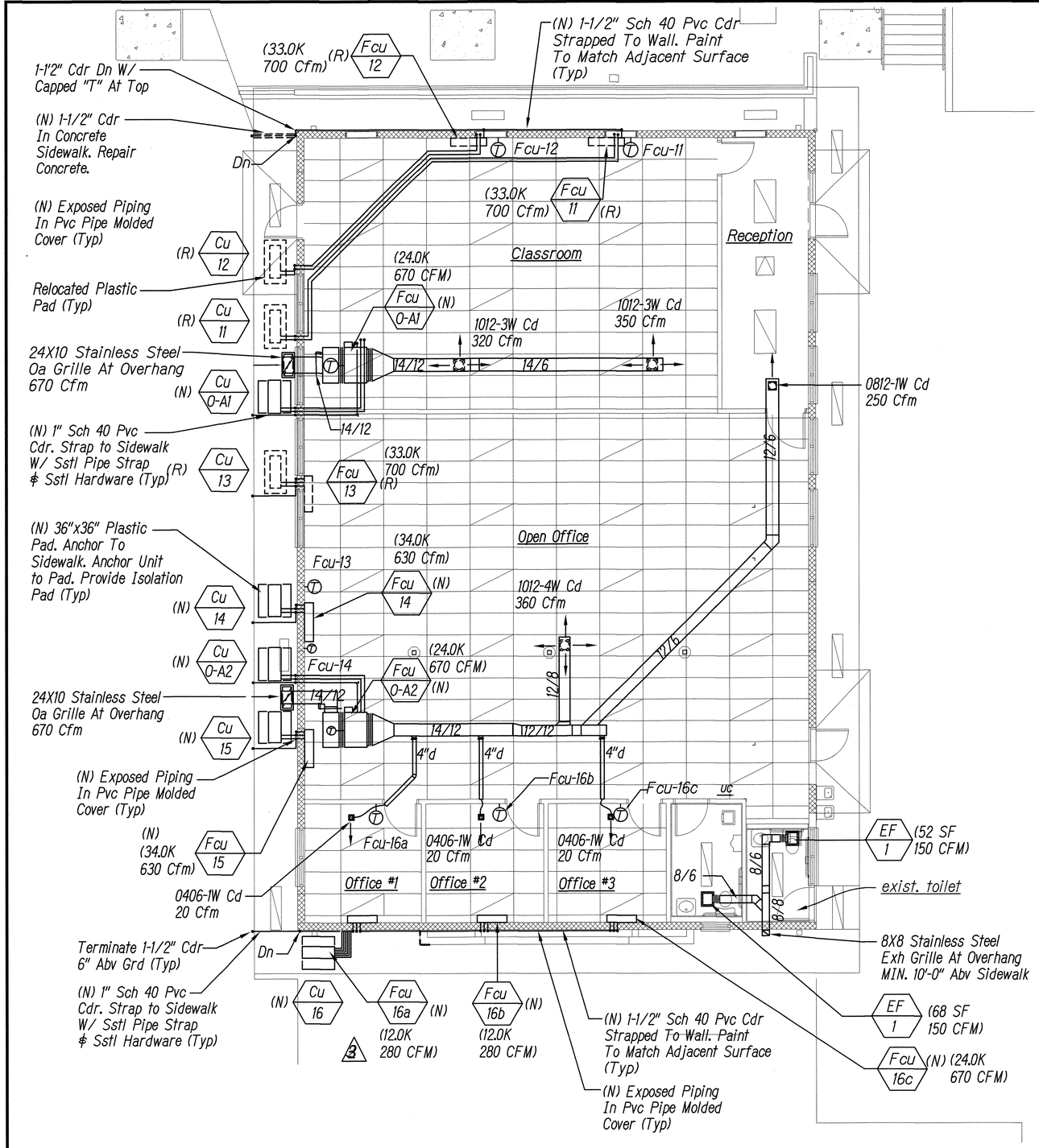
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUILDING A & B AIR CONDITIONING REMOVAL PLAN

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08
Scale:As Noted Date: April 2014

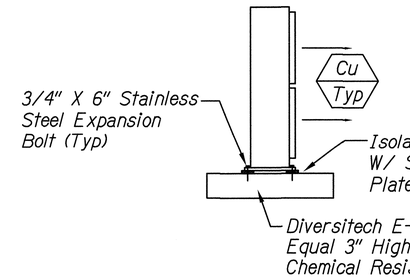
SHEET No. M2.1 OF 57 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	ADD.42	57



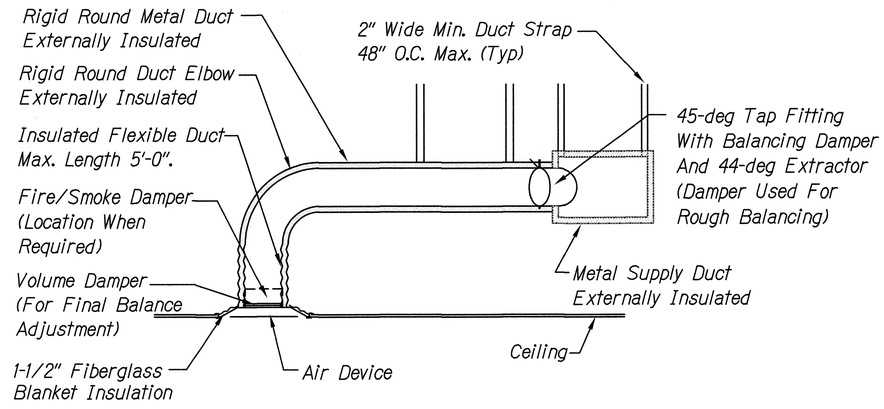
AIR CONDITIONING PLAN - BUILDING A

SCALE: 3/16" = 1'-0"



CONDENSING UNIT MOUNTING DETAIL

NO SCALE



AIR DEVICE DETAIL

NO SCALE

NOTES:

1. Existing Fcu Units And Piping Shall Be Removed And Re-installed after Wall In-Fill Work Is Completed. Re-Use Or Replace Existing Refrigerant Piping. Provide New Condensate Piping.
2. Provide PVC Molded Pipe Covers Over Both Exterior and Interior Exposed Piping. Paint To Match Adjacent Wall.
3. Provide Annual Maintenance Service On Existing Air Conditioning Units Which Shall Include:
   a. Oil & Lubricate
   b. Wash Down Evaporator And Condensing Coils
   c. Check And Add Refrigerant and Oil
   d. Provide New Thermostats, Wired or Remote Controllers For All Existing Air Conditioning Units

DATE	REVISIONS
6/5/14	3 Revised Restrooms For ADA Requirements Corrected Fcu Notes

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

ORIGINAL PLAN
NOTE BOOK
No.

SCALE 4' 0 4' 8' 12'
3/16" = 1'-0"

ARNALDO E. FREPOSE LICENSED PROFESSIONAL ENGINEER No. 4764-H HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

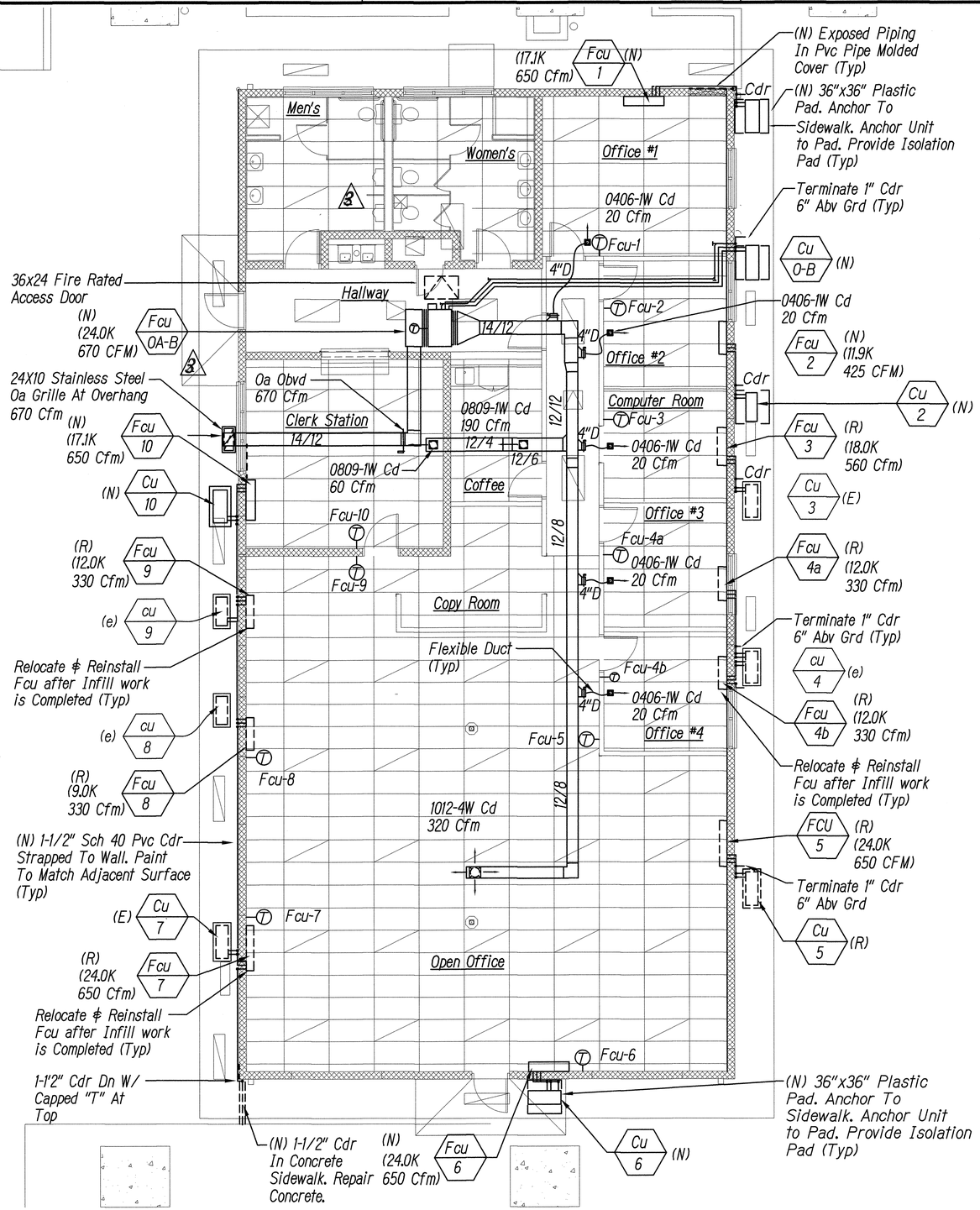
BUILDING A
AIR CONDITIONING PLAN

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

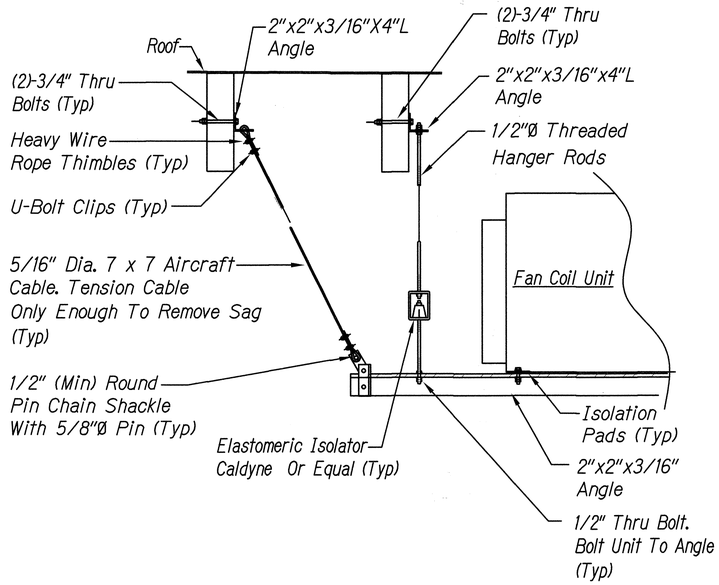
SHEET No. M2.2 OF 57 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	ADD.43	57



AIR CONDITIONING PLAN - BUILDING B

SCALE: 3/16" = 1'-0"



FAN COIL MOUNTING DETAIL

NO SCALE

NOTES:

1. Existing Fcu Units And Piping Shall Be Removed And Re-installed after Wall In-Fill Work Is Completed. Re-Use Or Replace Existing Refrigerant Piping. Provide New Condensate Piping.
2. Provide PVC Molded Pipe Covers Over Both Exterior and Interior Exposed Piping. Paint To Match Adjacent Wall.
3. Provide Annual Maintenance Service On Existing Air Conditioning Units Which Shall Include:
   a. Oil & Lubricate
   b. Wash Down Evaporator And Condensing Coils
   c. Check And Add Refrigerant and Oil
   d. Provide New Thermostats, Wired or Remote Controllers For All Existing Air Conditioning Units

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

NORTH

SCALE 4' 0 4' 8' 12'

3/16" = 1'-0"

ARNALDO E. PREPOSE LICENSED PROFESSIONAL ENGINEER No. 4764-H HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DATE	REVISIONS
6/5/14	3 Revised Restrooms For ADA Requirements Delete Ef-2 & Corrected Fcu Label

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

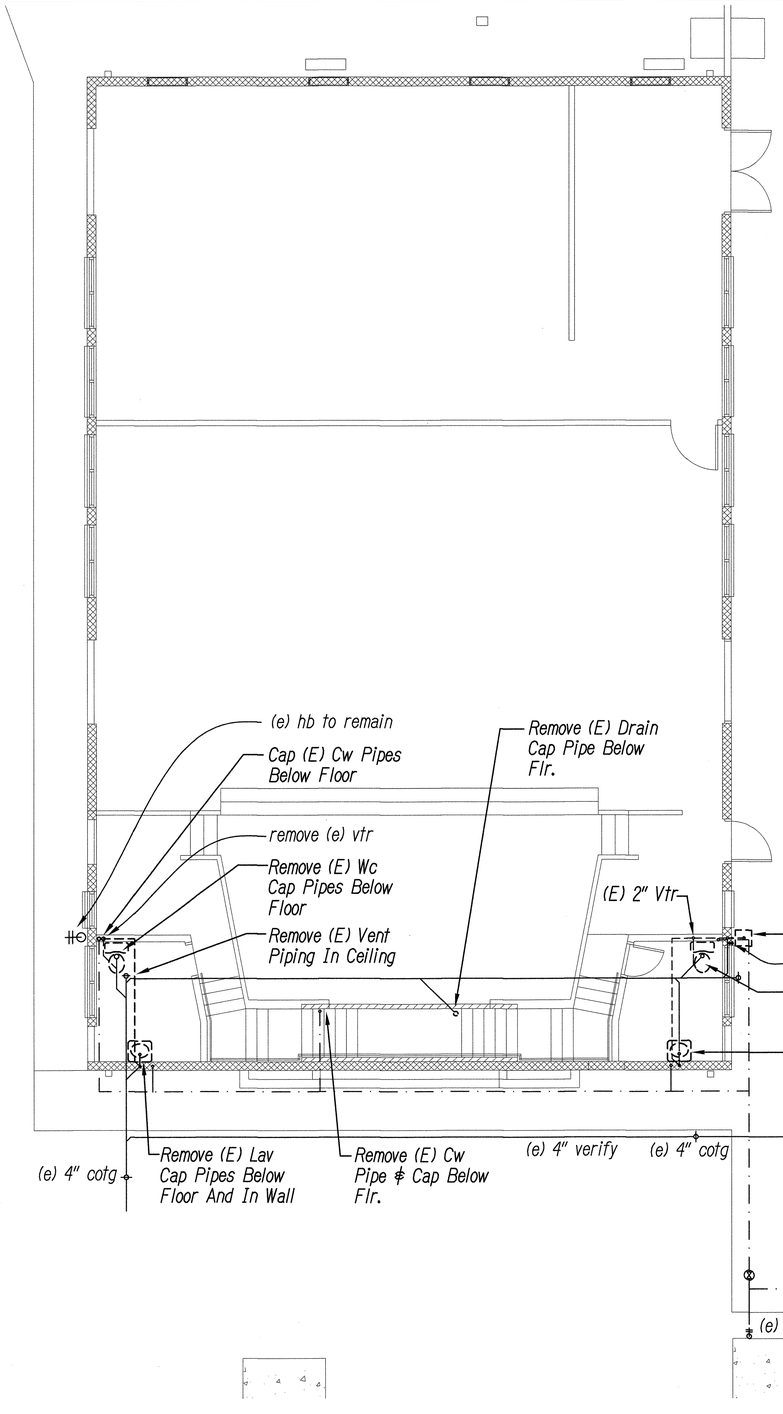
BUILDING B
AIR CONDITIONING PLAN

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

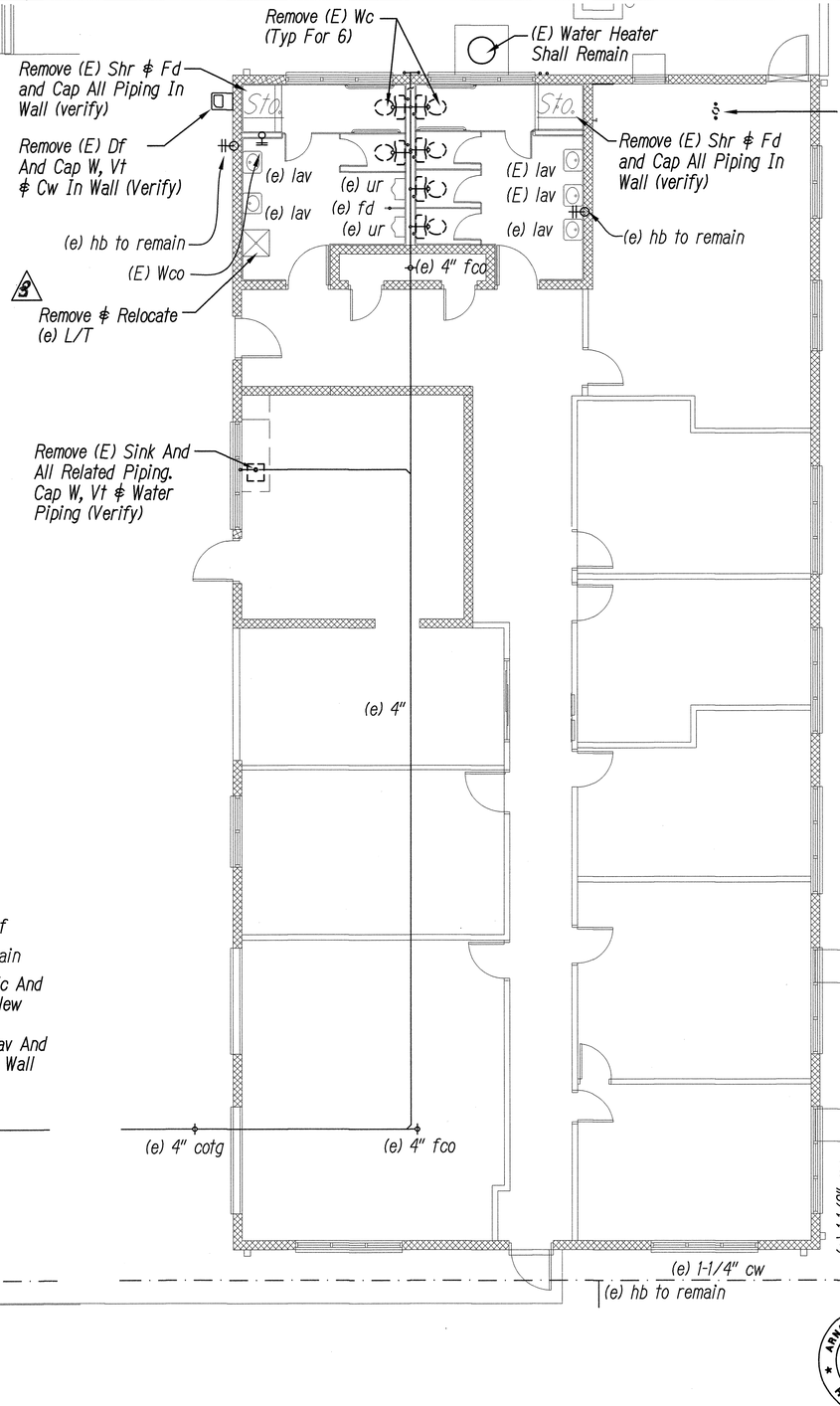
SHEET No. M2.3 OF 57 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	ADD.44	57



PLUMBING REMOVAL - BUILDING A

SCALE: 3/16" = 1'-0"



PLUMBING REMOVAL - BUILDING B

SCALE: 3/16" = 1'-0"

PLUMBING GENERAL NOTES:

1. Router All Existing Waste Piping And Check for Proper Waste Flow. Provide Camera Work To Video The Main 4" Waste Pipe. Contractor Shall Notify Engineer Of Any Bad Waste Piping.
2. Flush Out Existing Water Water Pipes And Hot Water Heater Of Sediments.
3. Replace All Urinal Flush Valves.
4. Replace All Water Closet Flushing Mechanisms In Tanks And Replace All Supply Valves and Risers.
5. Clean Existing Lavatory Aerators.
6. Clean And Polish All Existing Plumbing Fixtures, Faucets and Trims.

NORTH

SCALE 4' 0 4' 8' 12'

3/16" = 1'-0"

DATE	REVISIONS
6/5/14	3 Revised Restrooms For ADA Requirements

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUILDING A AND B
PLUMBING REMOVAL PLANS

MOTOR VEHICLE SAFETY OFFICE
RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

ARNALDO E. FREPOSE
LICENSED PROFESSIONAL ENGINEER
No. 4764-H
HAWAII, U.S.A.

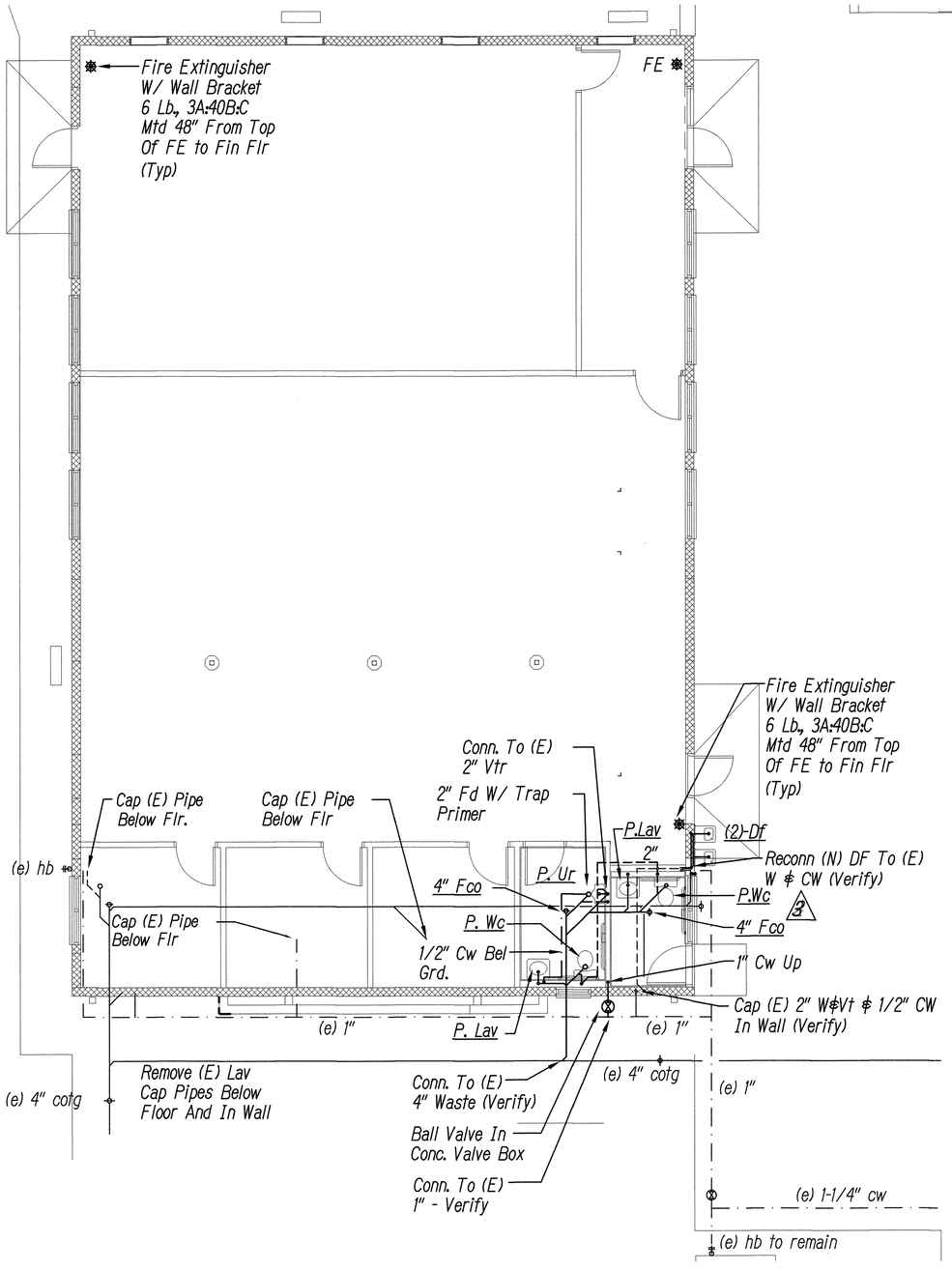
EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTE BOOK
No.

SHEET No. M3.1 OF 57 SHEETS

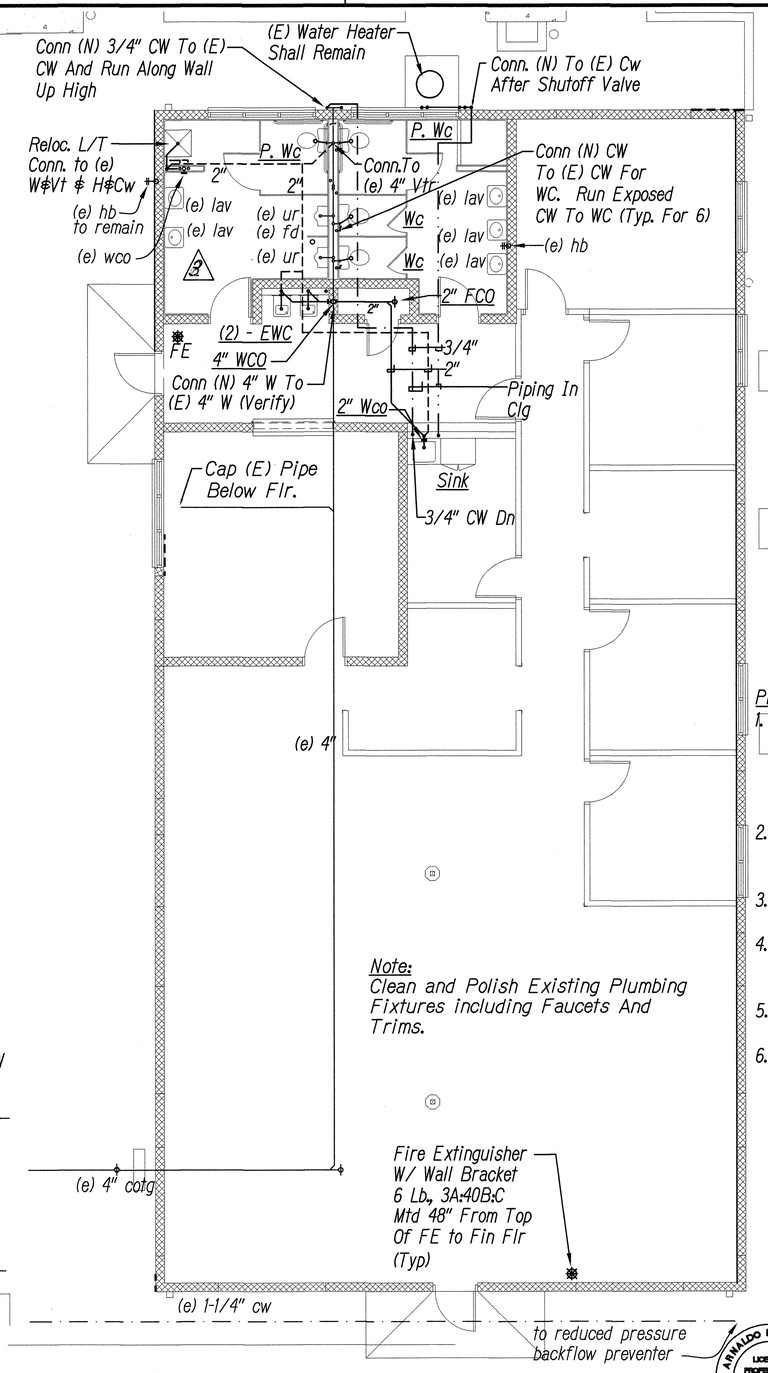
ADD.44

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	ADD.45	57



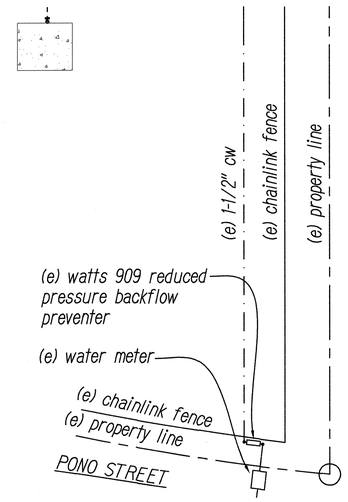
PLUMBING PLAN - BUILDING A

SCALE: 3/16" = 1'-0"



PLUMBING PLAN - BUILDING B

SCALE: 3/16" = 1'-0"



RPBP LOCATION

SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES:

1. Router All Existing Waste Piping And Check for Proper Waste Flow. Provide Camera Work To Video The Main 4" Waste Pipe. Contractor Shall Notify Engineer Of Any Bad Waste Piping.
2. Flush Out Existing Water Water Pipes And Hot Water Heater Of Sediments.
3. Replace All Urinal Flush Valves.
4. Replace All Water Closet Flushing Mechanisms In Tanks And Replace All Supply Valves and Risers.
5. Clean Existing Lavatory Aerators.
6. Clean And Polish All Existing Plumbing Fixtures, Faucets and Trims.

NORTH

SCALE 1/8" = 1'-0": 4' 0 5' 10' 15' 20'

SCALE 3/16" = 1'-0": 4' 0 4' 8' 12'

DATE	REVISIONS
6/5/14	3 Revised Restrooms For ADA Requirements

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUILDING A AND B PLUMBING PLANS

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

ARNALDO E. FREIRE LICENSED PROFESSIONAL ENGINEER No. 4764-H HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTE BOOK
No.

SHEET No. M3.2 OF 57 SHEETS

ADD.45

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-08	2014	ADD.46	57

BWS FLOW REQUIREMENTS

98-339 Pono St.
Aiea, HI 96821
TMK: 9-8-026:064

Premise Number:
Meter Number: 1162310412

	F.U	GPM	GPD
A. Proposed Domestic Total	17.0	12.5	350
B. Irrigation*	N/A		
C. Other	N/A		
D. Total Proposed	17.0	12.5	350
E. Removed Fixtures	15.9	12.0	320
F. Net Change (D - E)	1.1	2.0	20
G. Existing To Remain	17.3	12.5	345
H. Grand Total (D + G)	34.3	22.5	695

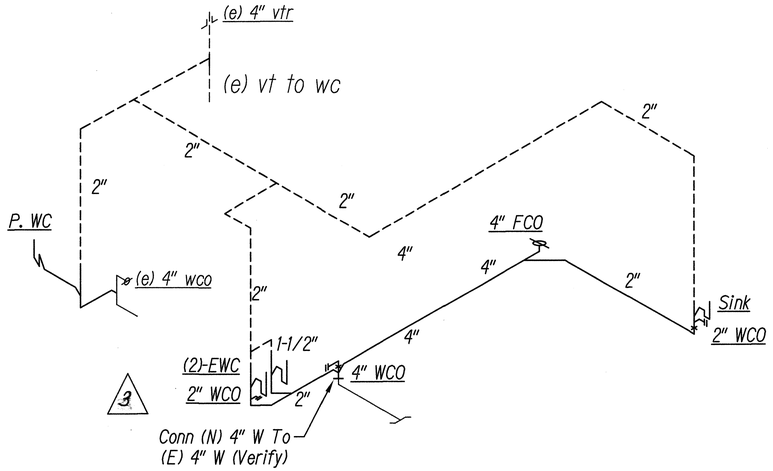
Notes:

1. There Is No Irrigation For ThisProject.
2. A/C Work Will Not Affect Water Demand.
3. There Is No Fire Sprinkler System In This Project.

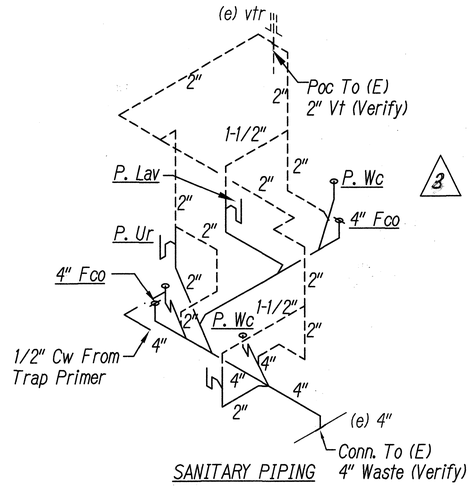
New Fixtures	QTY	F.U.	TOTAL F.U.
Water Closet	5	1.7	8.5
Lavatory	2	0.6	1.2
Urinal	1	1.7	1.7
Sink	1	1.6	1.6
Drinking Fountain	4	1.0	4.0
			17.0 FU, 12.5 GPM

Fixtures to be Removed	QTY	F.U.	TOTAL F.U.
Water Closet	5	1.7	8.5
Lavatory	1	0.6	0.6
Sink	1	1.6	1.6
Drinking Fountain	2	1.0	2.0
Shower	2	1.6	3.2
			15.9 FU, 12.0 GPM

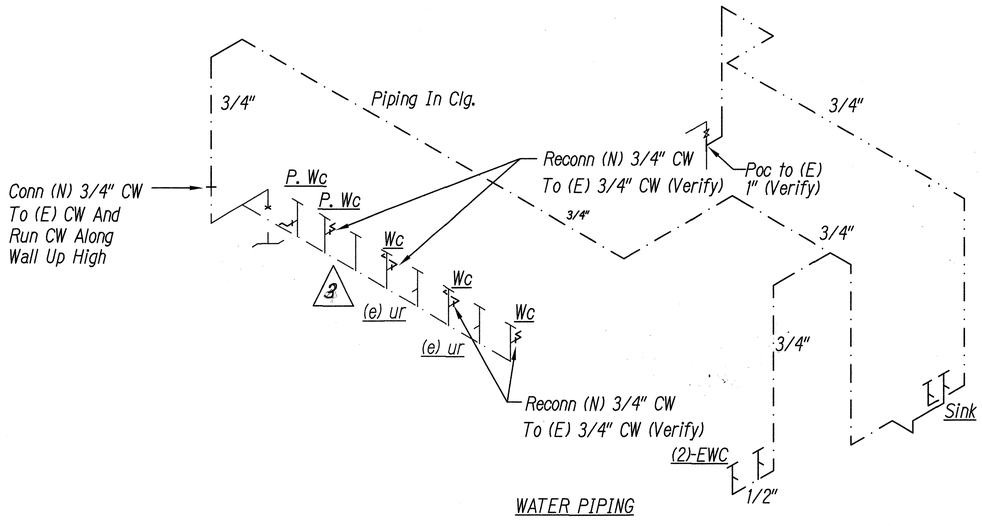
Fixtures to be Remain	QTY	F.U.	TOTAL F.U.
Water Closet	2	1.7	3.4
Lavatory	5	0.6	3.0
Urinal	2	1.7	3.4
Hose Bibb	1	2.5	2.5
Hose Bibb	5	1.0	5.0
			17.3 FU, 12.5 GPM



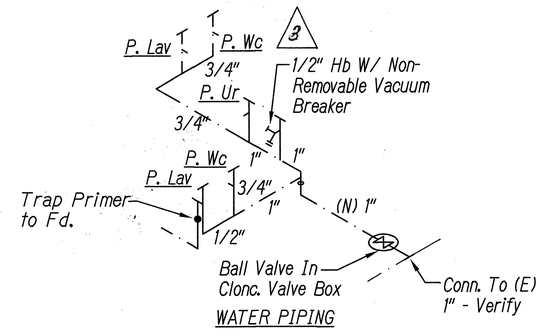
SANITARY PIPING



SANITARY PIPING



WATER PIPING



WATER PIPING

PLUMBING DIAGRAMS - BUILDING A — D2 / M3.3 | M3.3
NO SCALE

PLUMBING DIAGRAMS - BUILDING B — A2 / M3.3 | M3.3
NO SCALE

DATE	REVISIONS
6/5/14	3 Revised Restrooms For ADA Requirements

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUILDING A AND B PLUMBING DIAGRAMS

MOTOR VEHICLE SAFETY OFFICE RENOVATION
Project No. HWY-0-02-08

Scale:As Noted Date: April 2014

ARNALDO E. PREPOSE
LICENSED PROFESSIONAL ENGINEER
No. 4764-H
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

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DATE
ORIGINAL PLAN
NOTE BOOK
No.

SHEET No. M3.3 OF 57 SHEETS

ADD.46