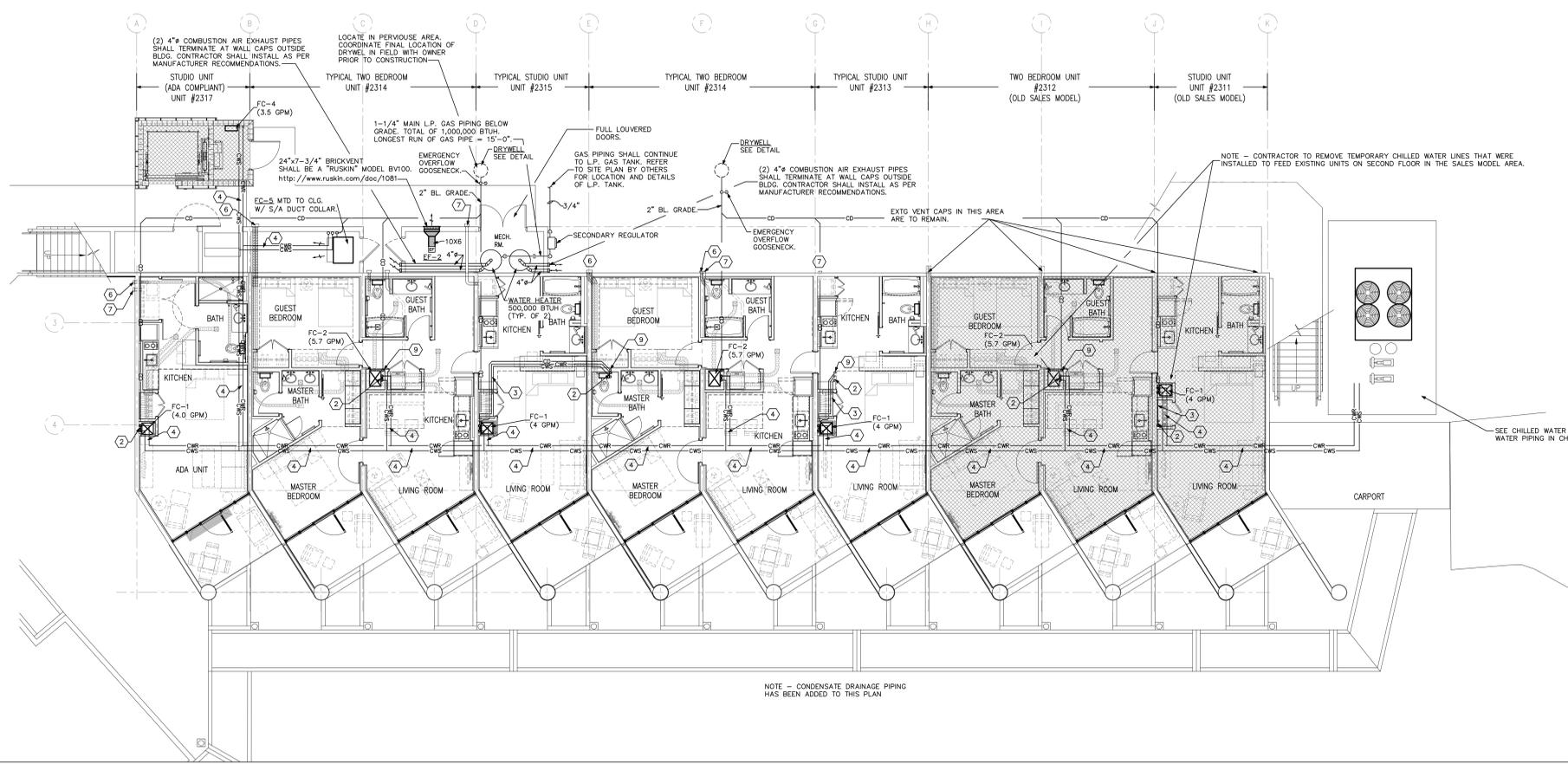


- PLAN KEY NOTES
- NOTE THAT EXHAUST DUCTS FROM BATH EXHAUST FANS ARE ROUTE DIFFERENTLY FROM THE TYPICAL LAYOUT. THEY HAVE BEEN OFFSET AT GO AROUND THE CHILLED WATER PIPING AND AVOID A CROSSOVER.
 - CHILLED WATER SUPPLY AND RETURN PIPING TO OFFSET UP TO AHU ABOVE. SEE RISER DIAGRAM FOR SPECIFIC PIPE SIZING.
 - OFFSET CHILLED WATER SUPPLY AND RETURN PIPING CEILING SPACE OF CLOSET. HOLD TIGHT TO CEILING ABOVE AND CAREFULLY COORDINATE. ADDITIONAL DROP NEEDED IN CLOSET WITH FRAMING CONTRACTOR TO INSURE DUCTWORK IS NOT RESTRICTED.
 - NEW PIRE-INSULATED PVC PIPING BELOW FLOOR. SEE ISOMETRIC DRAWING FOR PIPE SIZES AND ISOLATION VALVES. ALL PVC JACKETS ARE TO BE SEALED WATER TIGHT. CHILLED WATER PIPING SHALL BE INSULATED WITH POLYURETHANE FOAM PIRE-INSULATED "ROVANCO" PIPE SYSTEM INSULATION. * http://www.rovanco.com/pdf/PVC_Pipe_SpecSheet.pdf
 - OFFSET CHILLED WATER AND CONDENSATE DRAIN LINES IN CEILING SPACE. THIS LAYOUT HAS BEEN PREPARED TO AVOID CROSSOVERS BETWEEN CHILLED WATER, COND. DRAIN LINES AND DUCTWORK. CONTRACTOR TO CAREFULLY COORDINATE WITH OTHER TRADES IN FIELD.
 - POLYPROPYLENE VENT CAP WITH BACKDRAFT DAMPER.
 - POLYPROPYLENE DRYER VENT CAP WITH BACKDRAFT DAMPER.
 - CONDENSATE DRAIN FROM ABOVE. OFFSET IN CLG. SPACE AND TURN DOWN TO FLOOR BELOW. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.
 - CONDENSATE DRAIN DN. TO FL. BL. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.

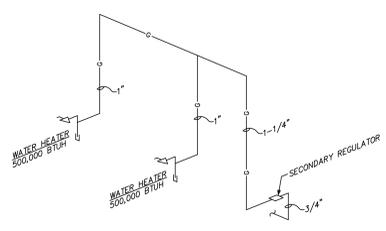
NOTE - CONDENSATE DRAINAGE PIPING HAS BEEN ADDED TO THIS PLAN

2 SECOND FLOOR PLAN - MECHANICAL
1/8" = 1'-0" BUILDING 23



- PLAN KEY NOTES
- NOTE THAT EXHAUST DUCTS FROM BATH EXHAUST FANS ARE ROUTE DIFFERENTLY FROM THE TYPICAL LAYOUT. THEY HAVE BEEN OFFSET AT GO AROUND THE CHILLED WATER PIPING AND AVOID A CROSSOVER.
 - CHILLED WATER SUPPLY AND RETURN PIPING TO OFFSET UP TO AHU ABOVE. SEE RISER DIAGRAM FOR SPECIFIC PIPE SIZING.
 - OFFSET CHILLED WATER SUPPLY AND RETURN AND CONDENSATE PIPING CEILING SPACE OF CLOSET. HOLD TIGHT TO CEILING ABOVE AND CAREFULLY COORDINATE. ADDITIONAL DROP NEEDED IN CLOSET WITH FRAMING CONTRACTOR TO INSURE DUCTWORK IS NOT RESTRICTED.
 - NEW PIRE-INSULATED PVC PIPING BELOW FLOOR. SEE ISOMETRIC DRAWING FOR PIPE SIZES AND ISOLATION VALVES. ALL PVC JACKETS ARE TO BE SEALED WATER TIGHT. CHILLED WATER PIPING SHALL BE INSULATED WITH POLYURETHANE FOAM PIRE-INSULATED "ROVANCO" PIPE SYSTEM INSULATION. * http://www.rovanco.com/pdf/PVC_Pipe_SpecSheet.pdf
 - OFFSET CHILLED WATER LINES IN CEILING SPACE. THIS LAYOUT HAS BEEN PREPARED TO AVOID CROSSOVERS BETWEEN CHILLED WATER LINES AND DUCTWORK. CONTRACTOR TO CAREFULLY COORDINATE WITH OTHER TRADES IN FIELD.
 - POLYPROPYLENE VENT CAP WITH BACKDRAFT DAMPER.
 - POLYPROPYLENE DRYER VENT CAP WITH BACKDRAFT DAMPER.
 - CONDENSATE DRAIN FROM ABOVE. OFFSET IN CLG. SPACE AND TURN DOWN TO FLOOR BELOW. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.
 - CONDENSATE DRAIN FROM ABOVE. OFFSET BELOW FLOOR AS INDICATED. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.

NOTE:
ALL L.P. GAS PIPING IS SIZED BASED ON GAS PIPING WITH AN INLET PRESSURE OF 11.0 W.C. AND A 1.50 SPECIFIC GRAVITY. GAS PIPING IS SIZED AS PER UNDULATED PROPANE PIPE BETWEEN REGULATOR AND APPLIANCE - 2012 NFPA 54 TABLE 6.3(A).

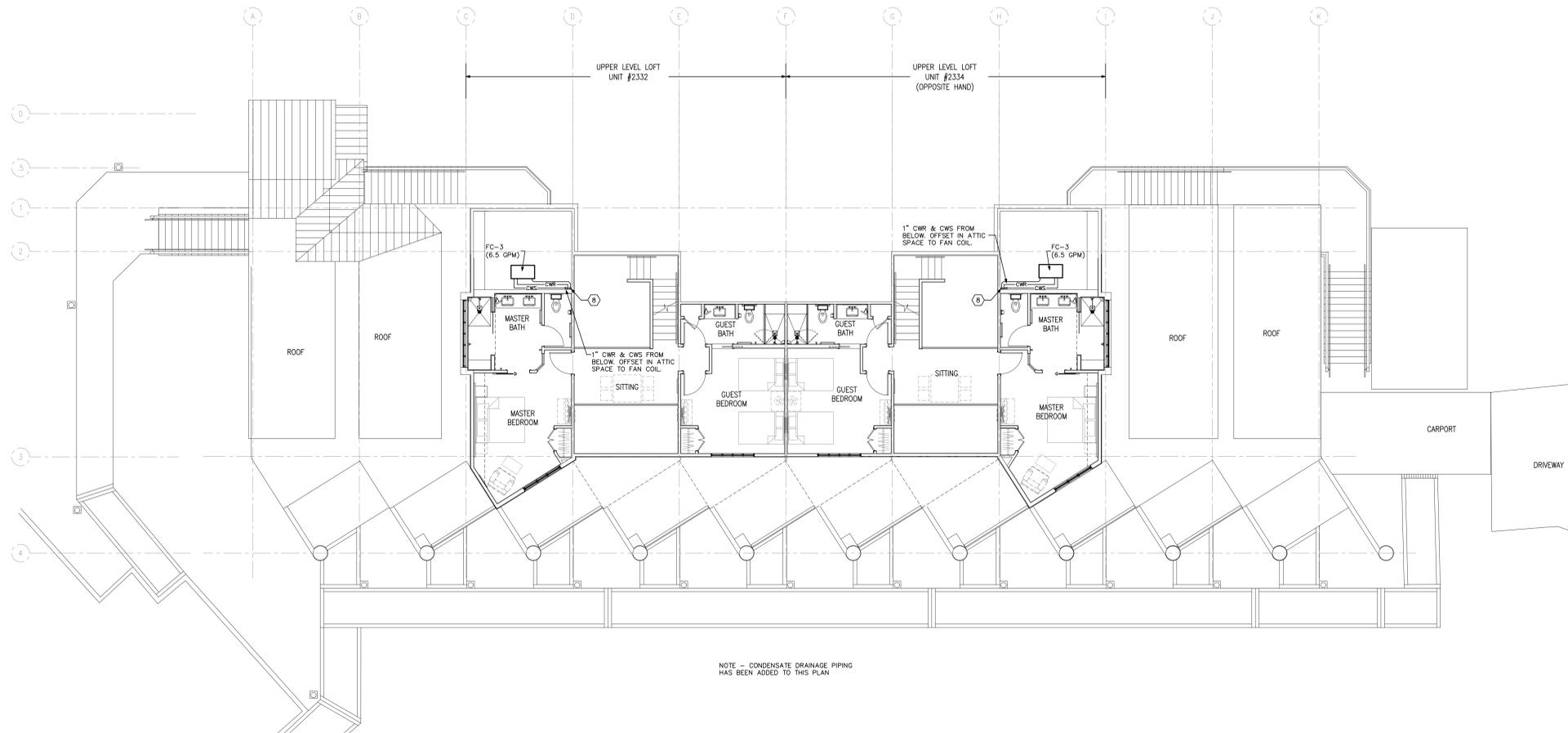


- 3 GAS ISOMETRIC
NO SCALE
- GENERAL GAS PIPING NOTES
- GAS PIPING AND FITTINGS SHALL BE SEAMLESS BLACK STEEL WITH MALLEABLE IRON FITTINGS. DIELECTRIC COUPLINGS OR UNIONS SHALL BE UTILIZED WHEN PIPING OF DISSIMILAR METAL IS CONNECTED. GAS PIPING OUTSIDE THE BUILDING SHALL BE PAINTED WITH BLACK "RUSTOLEUM" PAINT.
 - GAS PIPING SYSTEM SHALL BE INSTALLED TO THE REQUIREMENTS OF THE AGA PAMPHLET "INSTALLATION OF GAS APPLIANCES AND GAS PIPING" AND THE NFPA STANDARD #54. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES WITH THE LOCAL GAS COMPANY FOR THE INSTALLATION OF THE GAS METER, GAS SERVICE, AND ITS ACCESSORIES NECESSARY FOR A COMPLETE SYSTEM.
 - GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN NFPA #54, AND ANY OTHER TESTS REQUIRED BY THE LOCAL BUILDING DEPARTMENT AND/OR THE LOCAL GAS UTILITY COMPANY.
 - THE INSTALLING SUBCONTRACTOR SHALL BE LICENSED BY THE STATE FOR THE INSTALLATION OF GAS PIPING.
 - RUNOUT PIPING FROM THE MAIN PIPING TO APPLIANCES, SHALL BE WITH AN INVERTED TRAP CONNECTION AT THE MAIN.
 - A 1/2" DIRT LEG, AND A GAS COCK, SHALL BE PROVIDED AT ALL GAS APPLIANCES.
 - ALL EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS. THE MARKERS SHALL BE AT INTERVALS NOT EXCEEDING 2'

NOTE - CONDENSATE DRAINAGE PIPING HAS BEEN ADDED TO THIS PLAN

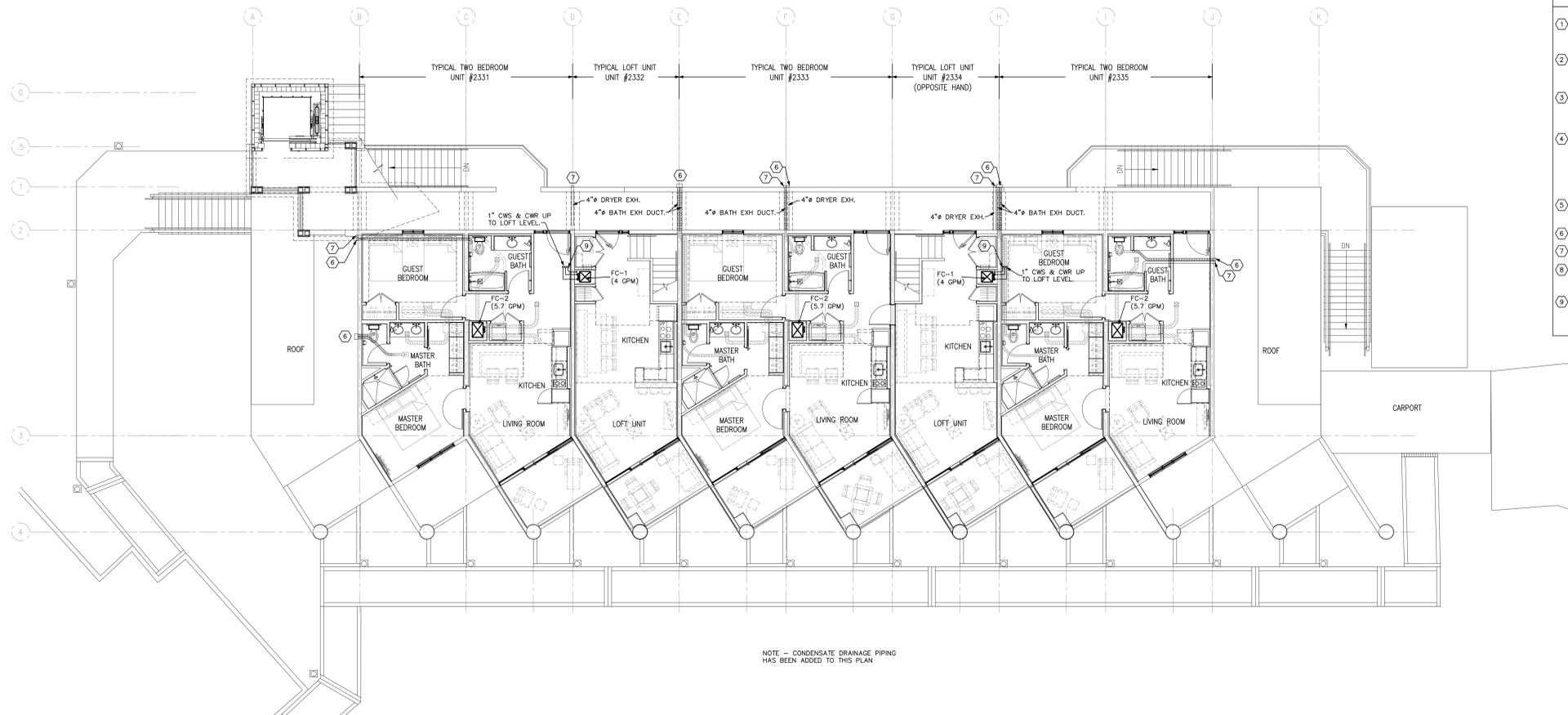
1 FIRST FLOOR PLAN - MECHANICAL
1/8" = 1'-0" BUILDING 23

M10.01



2 LOFT FLOOR PLAN - MECHANICAL

1/8" = 1'-0" BUILDING 23

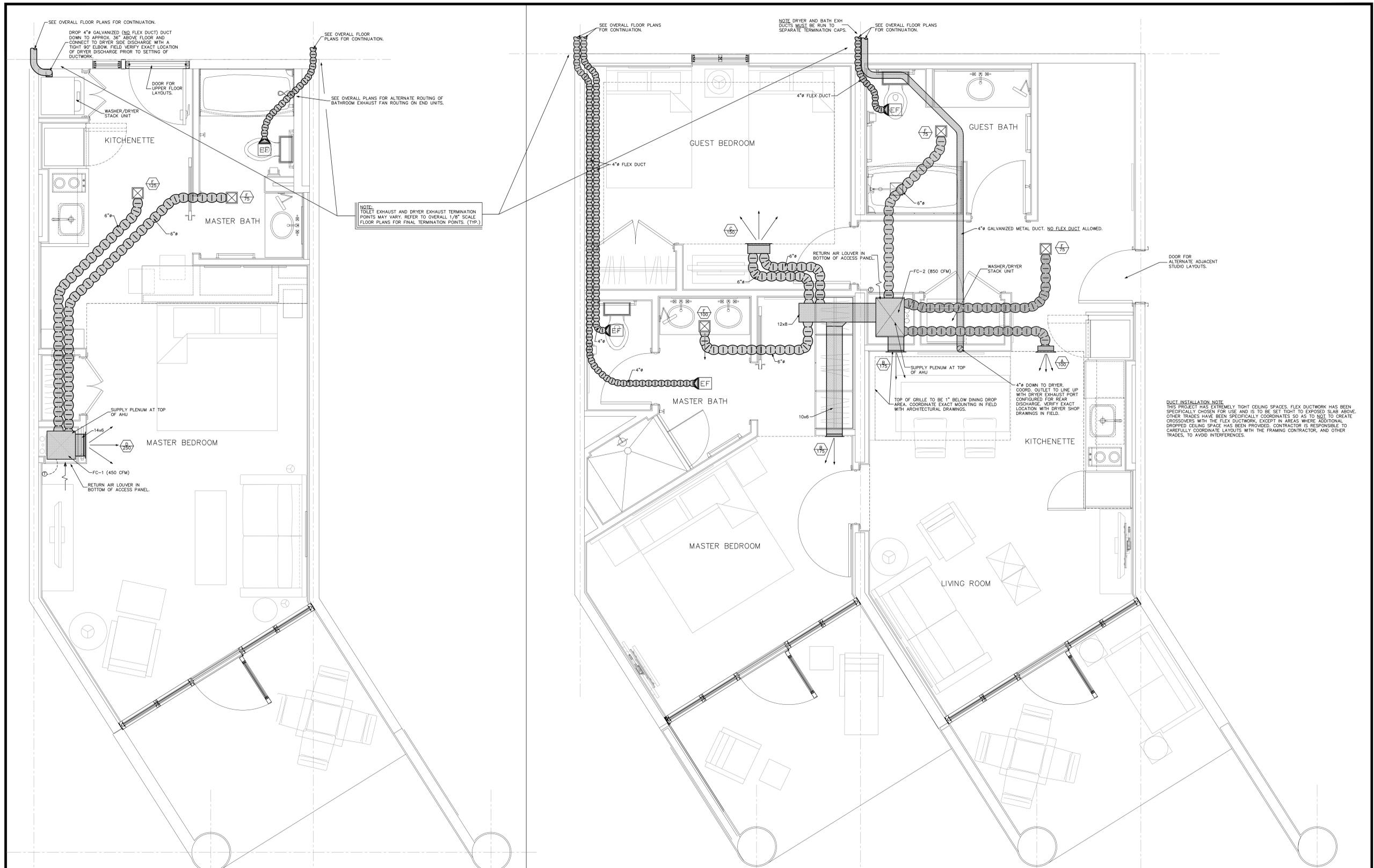


- PLAN KEY NOTES
- 1 NOTE THAT EXHAUST DUCTS FROM BATH EXHAUST FANS ARE ROUTE DIFFERENTLY FROM THE TYPICAL LAYOUT. THEY HAVE BEEN OFFSET AT 90 AROUND THE CHILLED WATER PIPING AND AVOID A CROSSOVER.
 - 2 CHILLED WATER SUPPLY AND RETURN PIPING TO OFFSET UP TO ANJ ABOVE. SEE RISER DIAGRAM FOR SPECIFIC PIPE SIZING.
 - 3 OFFSET CHILLED WATER SUPPLY AND RETURN PIPING CEILING SPACE OF CLOSET. HOLD TIGHT TO CEILING ABOVE AND CAREFULLY COORDINATE ADDITIONAL DROP NEEDED IN CLOSET WITH FRAMING CONTRACTOR TO INSURE DUCTWORK IS NOT RESTRICTED.
 - 4 NEW PRE-INSULATED PVC PIPING BELOW FLOOR. SEE ISOMETRIC DRAWING FOR PIPE SIZES AND ISOLATION VALVES. ALL PVC JACKETS ARE TO BE SEALED WATER TIGHT. CHILLED WATER PIPING SHALL BE INSULATED WITH POLYURETHANE FOAM PRE-INSULATED "ROVANCE" PIPE SYSTEM INSULATION. * http://www.rovance.com/pdf/PVC_Pipe_SpecSheet.pdf
 - 5 OFFSET CHILLED WATER LINES IN CEILING SPACE. THIS LAYOUT HAS BEEN PREPARED TO AVOID CROSSOVERS BETWEEN CHILLED WATER LINES AND DUCTWORK. CONTRACTOR TO CAREFULLY COORDINATE WITH OTHER TRADES IN FIELD.
 - 6 POLYPROPYLENE VENT CAP WITH BACKDRAFT DAMPER.
 - 7 POLYPROPYLENE DRYER VENT CAP WITH BACKDRAFT DAMPER.
 - 8 CONDENSATE DRAIN SHALL OFFSET IN ATTIC SPACE AND TURN DOWN TO FLOOR BELOW. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.
 - 9 CONDENSATE DRAIN FROM ABOVE. OFFSET IN CLG. SPACE AND TURN DOWN TO FLOOR BELOW. REFER TO CHILLED WATER AND CONDENSATE ISOMETRIC ON SHEET M10.06 FOR ALL PIPE SIZING.

1 THIRD FLOOR PLAN - MECHANICAL

1/8" = 1'-0" BUILDING 23

M10.02



NOTE: TOILET EXHAUST AND DRYER EXHAUST TERMINATION POINTS MAY VARY. REFER TO OVERALL 1/8" SCALE FLOOR PLANS FOR FINAL TERMINATION POINTS. (TYP.)

DUCT INSTALLATION NOTE
 THIS PROJECT HAS EXTREMELY TIGHT CEILING SPACES. FLEX DUCTWORK HAS BEEN SPECIFICALLY CHOSEN FOR USE AND IS TO BE SET TIGHT TO EXPOSED SLAB ABOVE. OTHER TRADES HAVE BEEN SPECIFICALLY COORDINATED SO AS TO NOT TO CREATE CROSSOVERS WITH THE FLEX DUCTWORK, EXCEPT IN AREAS WHERE ADDITIONAL DROPPED CEILING SPACE HAS BEEN PROVIDED. CONTRACTOR IS RESPONSIBLE TO CAREFULLY COORDINATE LAYOUTS WITH THE FRAMING CONTRACTOR, AND OTHER TRADES, TO AVOID INTERFERENCES.

SUPPLY DIFFUSER SCHEDULE				
DESIGNATES LABEL FOR DIFFUSER TYPE	ALL DIFFUSERS ARE TO BE PROVIDED WITH			
DESIGNATES CFM QUANTITY FOR DIFFUSER	DROPPED BLADE DAMPERS UNLESS OTHERWISE SPECIFIED ON PLANS.			
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
A	TITUS 300RL	10x4	0 - 150	SIDEWALL REGISTER W/ VCD.
B	TITUS 300RL	10x6	155 - 200	SIDEWALL REGISTER W/ VCD.
C	TITUS 300RL	14x4	155 - 200	SIDEWALL REGISTER W/ VCD.
D	TITUS 300RL	14x6	205 - 300	SIDEWALL REGISTER W/ VCD.
E	TITUS 300RL	16x6	305 - 450	SIDEWALL REGISTER W/ VCD.
F	TITUS 250-AA	6x6	0 - 125	CEILING REGISTER *
G	TITUS 250-AA	12x10	205 - 300	CEILING REGISTER *
H	TITUS 250-AA	14x10	305 - 400	CEILING REGISTER *

NOTE:
 * - ALL REGISTERS SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1 & VCD.

M10.03

CHILLER SCHEDULE														
LABEL	TYPE OF UNIT	MANUFACTURER & MODEL NO.	CAPACITY	EWT	LWT	DESIGN GPM	MIN. GPM	MAX. GPM	PRESSURE DROP	CEAT	MCA	MCCP	VOLTAGE	NOTES
CHILLER 1	SCROLL	TRANE CG4M040A2**2AKD2A1B1A1C1XA1CA2XXXXXXA3A1DA-L-X	40 TONS	55°F	45°F	106	57	136	35'	95°F	197A	225A	208V/3ø	1 THRU 4

NOTES:
 1) PROVIDE (1) YEAR WARRANTY ON ALL PARTS AND LABOR AND (5) YEAR WARRANTY ON COMPRESSOR.
 2) PROVIDE ALL NECESSARY CONTACTORS, RELAYS, MOTOR STARTERS, ETC. FOR A COMPLETE OPERATING SYSTEM.
 3) CONTRACTOR SHALL INSTALL ALL AIR CONDITIONING EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES, AND SHALL BE INSTALLED TO WITHSTAND HURRICANE FORCE WINDS.

EWT - ENTERING WATER TEMPERATURE
 LWT - LEAVING WATER TEMPERATURE
 GPM - GALLONS PER MINUTE
 CEAT - CONDENSER ENTERING AIR TEMPERATURE
 MCA - MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
 MCCP - MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS

FAN COIL SCHEDULE														
LABEL	TYPE OF UNIT	MANUFACTURER & MODEL NO.	CFM	SPEED	MOTOR H.P.	E.S.P.	TOTAL CAPACITY	SENSIBLE CAPACITY	G.P.M.	PRESSURE DROP	EAT DB	EAT WB	VOLTAGE	NOTES
FC-1	VERTICAL STACK FAN COIL UNIT (RIGHT HAND CONFIGURATION)	WILLIAMS ER-006-B-1-40-R	450	MED.	1/6	.10"	20,070	16,060	4.0	2.1 FT./H2O	75° F	62.5° F	115V/1ø	1 THRU 3
FC-2	VERTICAL STACK FAN COIL UNIT (LEFT HAND CONFIGURATION)	WILLIAMS ER-010-B-1-40-L	850	MED.	1/4	.10"	28,370	22,900	5.7	6.6 FT./H2O	75° F	62.5° F	115V/1ø	1 THRU 3
FC-3	HORIZONTAL FAN COIL UNIT	WILLIAMS HL-010-R	1,000	MED.	1/4	.10"	28,300	23,910	5.8	3.5 FT./H2O	75° F	62.5° F	115V/1ø	1 THRU 4
FC-4	HORIZONTAL FAN COIL UNIT	WILLIAMS LH-R-003-3R2C	263	MED.	1/4	.10"	5,337	5,337	1.07	2.1 FT./H2O	75° F	62.5° F	115V/1ø	1 THRU 3, 5
FC-5	HORIZONTAL FAN COIL UNIT	WILLIAMS LH-4-003	300	MED.	1/4	.10"	9,829	9,829	2.4	3.0 FT./H2O	75° F	62.5° F	115V/1ø	1 THRU 3, 5

NOTES:
 1) CHILLED WATER BASED ON 45° F ENTERING WATER TEMPERATURE.
 2) FAN COIL UNIT PROVIDED WITH 2-WAY VALVE PACKAGE.
 3) REFER TO ELECTRICAL PLANS FOR CONTROLS.
 4) UNIT IS ENCLOSED FOR CONCEALED INSTALLATION AND SHALL BE CONSTRUCTED OF GALVANIZED STEEL WITH REMOVABLE PANELS FOR ACCESS TO INTERNAL COMPONENTS.
 5) UNITS HAVE 1/2" FIBERGLASS TUF-SKIN II INSULATION.
 6) HORIZONTAL UNIT WITH RETURN AIR PLENUM WITH INTEGRAL FILTER

FAN SCHEDULE										
LABEL	TYPE OF UNIT - AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF-1	CABINET FAN - REFER TO PLANS	PENN ZEPHYR 26	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1ø	1
EF-2	CABINET FAN - REFER TO PLANS	PENN ZEPHYR 281	300	.125"	CEILING MOUNTED	124 WATTS	OPEN DRIP PROOF	1115	115V/1ø	1

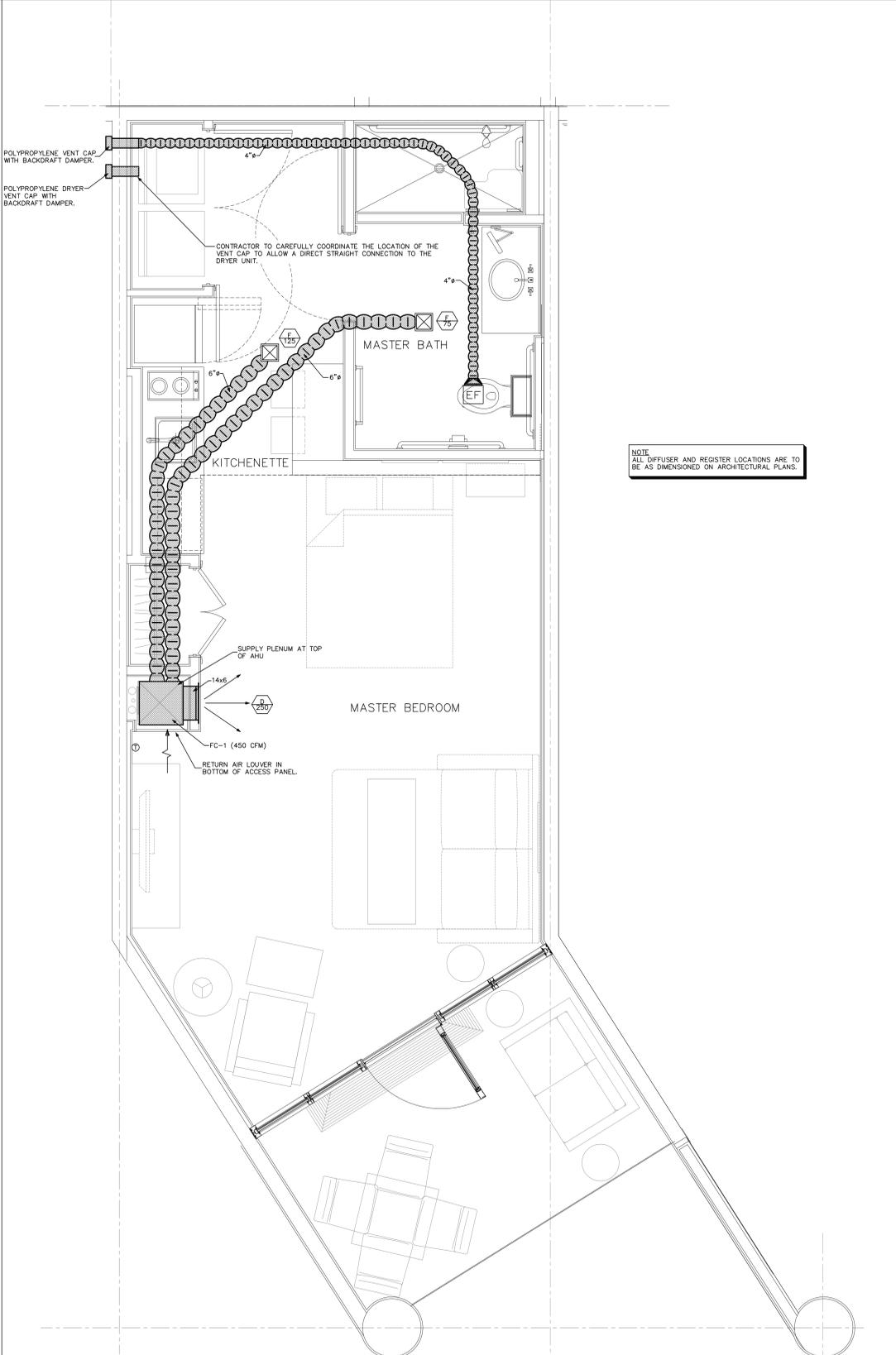
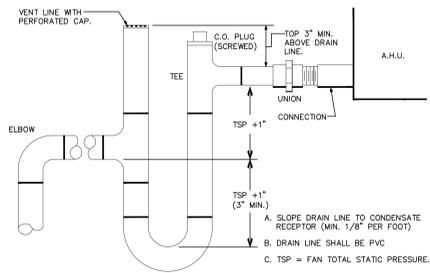
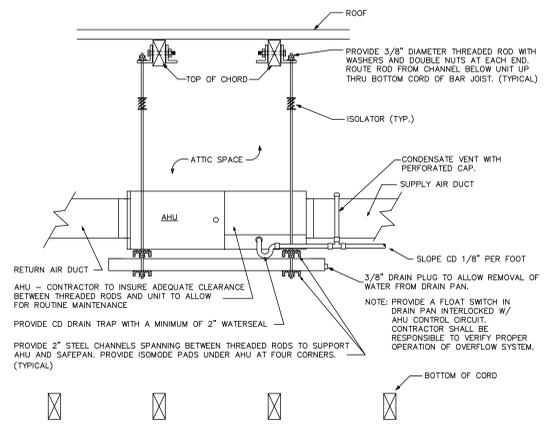
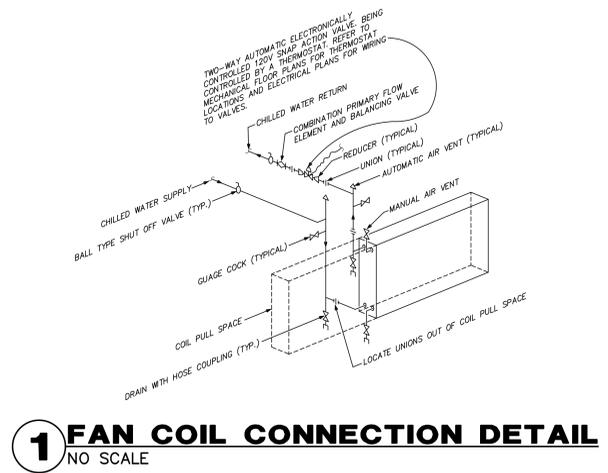
NOTES: 1.) REFER TO ELECTRICAL PLANS FOR CONTROL.

PUMP SCHEDULE										
LABEL	TYPE OF UNIT	MANUFACTURER & MODEL NO.	GPM	TOTAL DYNAMIC HEAD	MOTOR H.P.	RPM	VOLTAGE	NOTES		
PUMP #1 & 2	VARIABLE-SPEED END SUCTION	TACO F11509C	106	76	5.0	1760	208V/3ø	1 THRU 5		

NOTES:
 1) PROVIDE INERTIA BASE FOR VIBRATION ISOLATION.
 2) EACH PUMP DESIGNED FOR 100% CAPACITY. ONE PUMP IS A STANDBY.
 3) PROVIDE ALL NECESSARY CONTACTORS, RELAYS AND MOTOR STARTERS, ETC., FOR A COMPLETE OPERATING SYSTEM.
 4) MOTOR SHALL BE INVERTER DUTY RATED.
 5) COUPLINGS SHALL BE CAPABLE OF VARIABLE SPEED OPERATION.

GENERAL MECHANICAL NOTES

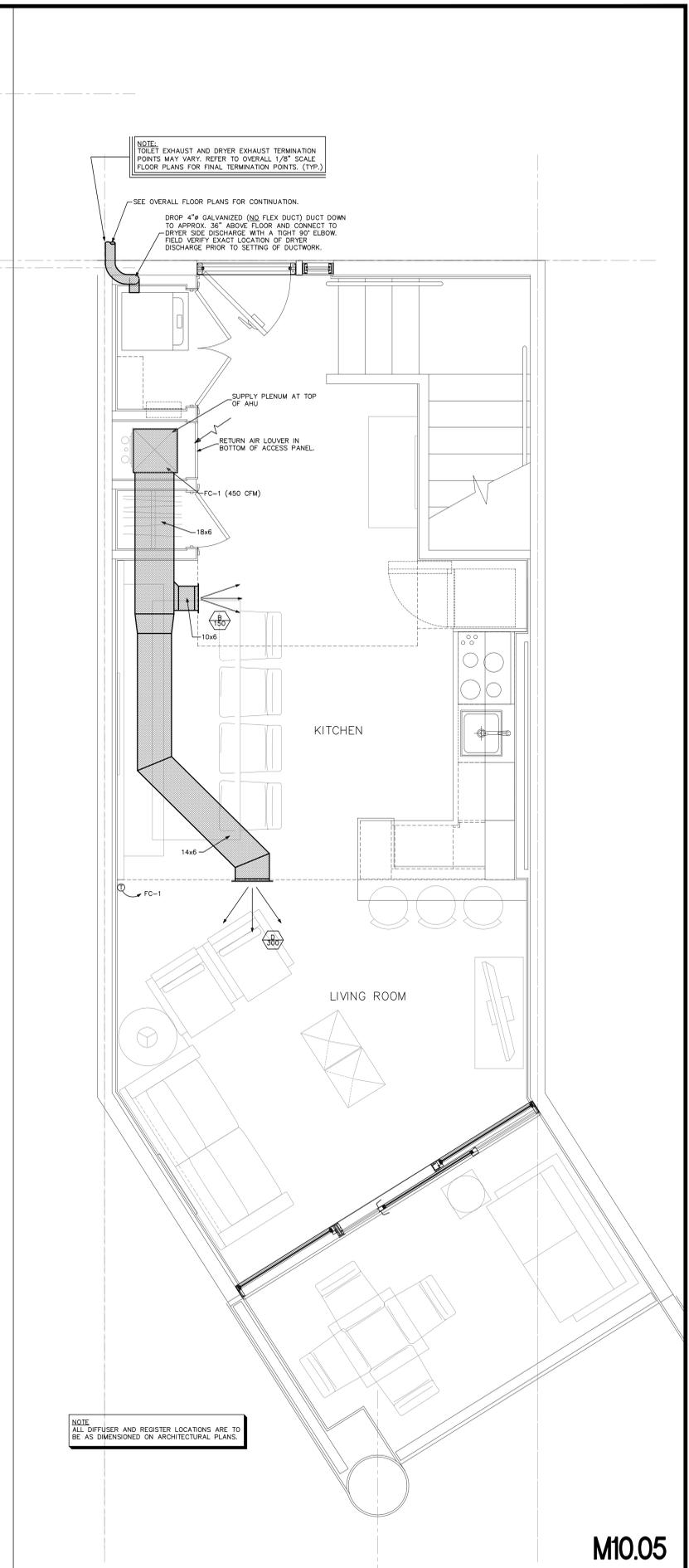
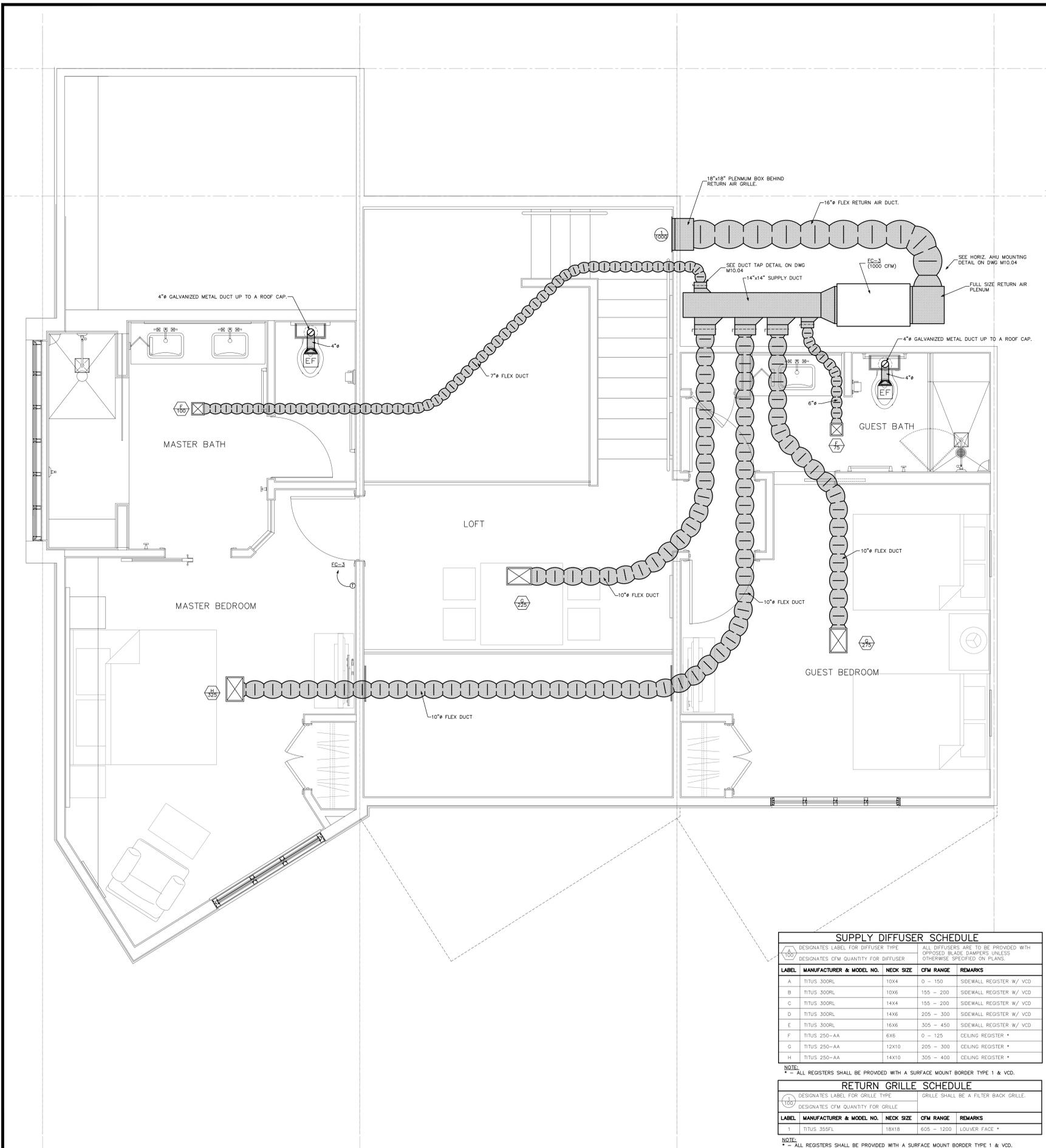
- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS: SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-91. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED AS PER SCHEDULE STANDARDS.
- THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES TO INSURE AN ORDERLY PROGRESS OF THIS WORK.
- THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE SET OF "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT. CONTRACTOR SHALL ALSO LEAVE FOR ONE AT LEAST ONE SET OF THE MANUFACTURER'S INSTALLATION AND OPERATIONS MANUALS FOR ALL EQUIPMENT PROVIDED ON THE PROJECT.
- ALL PROVIDED MATERIALS SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.
- CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT. IT IS STRONGLY PREFERRED THAT THE SUBMITTALS BE MADE IN THE FORM OF AN ELECTRONIC SUBMITTAL IN A PDF TYPE FORMAT.
- ALL AIR CONDITIONING DUCTWORK SHALL BE OF STANDARD DUTY FOIL REINFORCED FIBERGLASS BOARD WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER OF ALL DUCTWORK. SUPPLY DUCTWORK SHALL HAVE A MIN. OF R-6 INSULATION VALUE AND RETURN AIR DUCTWORK SHALL HAVE A MIN. OF R-4.2 INSULATION VALUE. ALL FLEX DUCT SHALL BE "THERMOFLEX" OR APPROVED EQUAL AND SHALL HAVE EQUIVALENT INSULATION.
- DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
- ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE TITUS, METALINE, AIRGUIDE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
- THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE THERMOSTAT. * MOUNT THERMOSTAT AT 4'-6" AFF.
- ALL CHILLED WATER LINES UNDERGROUND AND INSTALLED OUTSIDE THE BUILDING SHALL BE PRE-INSULATED PVC PIPE. PIPE SHALL HAVE CLOSED CELL POLYURETHANE INSULATION AND A PVC EXTERIOR JACKET TO PROTECT THE INSULATION. PROVIDE MANUFACTURER'S PRE-INSULATED FITTINGS FOR ALL T'S AND OTHER FITTINGS. ALL EXTERIOR JACKET JOINTS ARE TO BE SEALED WATER TIGHT.
- ALL CHILLED WATER LINES ABOVE THE SLAB INSIDE THE BUILDING SHALL BE PVC SCHEDULE 40 PIPE WITH A 1" ARMAREX (OR EQUAL) INSULATION. ALL INSULATION IS TO BE INSTALLED TO THE MANUFACTURER'S PUBLISHED REQUIREMENTS. ALL JOINTS IN THE INSULATION ARE TO BE GULDED AND TIGHTLY SEALED.
- ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS AND TAPS WHEN SHOWN ON THE PLANS.
- PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
- HVAC CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, CHILLED WATER FLOW, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES, AND EXHAUST GRILLES, AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLES AND EVAPORATORS.
- THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER BEFORE INSTALLATION.
- ALL INSULATION PROVIDED ON THIS PROJECT SHALL HAVE FIRE/SMOKE RATING LESS THAN 20/50.
- MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND WIND LOADING FORCES AS REQUIRED BY LOCAL CODES. REFER TO STRUCTURAL PLANS BY OTHERS FOR STRUCTURAL DETAILS.
- PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC. FOR A COMPLETE OPERATING SYSTEM.
- NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.



SUPPLY DIFFUSER SCHEDULE				
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
A	TITUS 300RL	10x4	0 - 150	SIDEWALL REGISTER W/ VCD
B	TITUS 300RL	10x6	155 - 200	SIDEWALL REGISTER W/ VCD
C	TITUS 300RL	14x4	155 - 200	SIDEWALL REGISTER W/ VCD
D	TITUS 300RL	14x6	205 - 300	SIDEWALL REGISTER W/ VCD
E	TITUS 300RL	16x6	305 - 450	SIDEWALL REGISTER W/ VCD
F	TITUS 250-AA	6x6	0 - 125	CEILING REGISTER *
G	TITUS 250-AA	12x10	205 - 300	CEILING REGISTER *
H	TITUS 250-AA	14x10	305 - 400	CEILING REGISTER *

NOTE:
 * - ALL REGISTERS SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1 & VCD.

M10.04



SUPPLY DIFFUSER SCHEDULE

DESIGNATES LABEL FOR DIFFUSER TYPE. ALL DIFFUSERS ARE TO BE PROVIDED WITH OPPOSED BLADE DAMPERS UNLESS OTHERWISE SPECIFIED ON PLANS.

DESIGNATES CFM QUANTITY FOR DIFFUSER.

LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
A	TITUS 300RL	10x4	0 - 150	SIDEWALL REGISTER W/ VCD
B	TITUS 300RL	10x6	155 - 200	SIDEWALL REGISTER W/ VCD
C	TITUS 300RL	14x4	155 - 200	SIDEWALL REGISTER W/ VCD
D	TITUS 300RL	14x6	205 - 300	SIDEWALL REGISTER W/ VCD
E	TITUS 300RL	16x6	305 - 450	SIDEWALL REGISTER W/ VCD
F	TITUS 250-AA	6x6	0 - 125	CEILING REGISTER *
G	TITUS 250-AA	12x10	205 - 300	CEILING REGISTER *
H	TITUS 250-AA	14x10	305 - 400	CEILING REGISTER *

NOTE: * - ALL REGISTERS SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1 & VCD.

RETURN GRILLE SCHEDULE

DESIGNATES LABEL FOR GRILLE TYPE. GRILLE SHALL BE A FILTER BACK GRILLE.

DESIGNATES CFM QUANTITY FOR GRILLE.

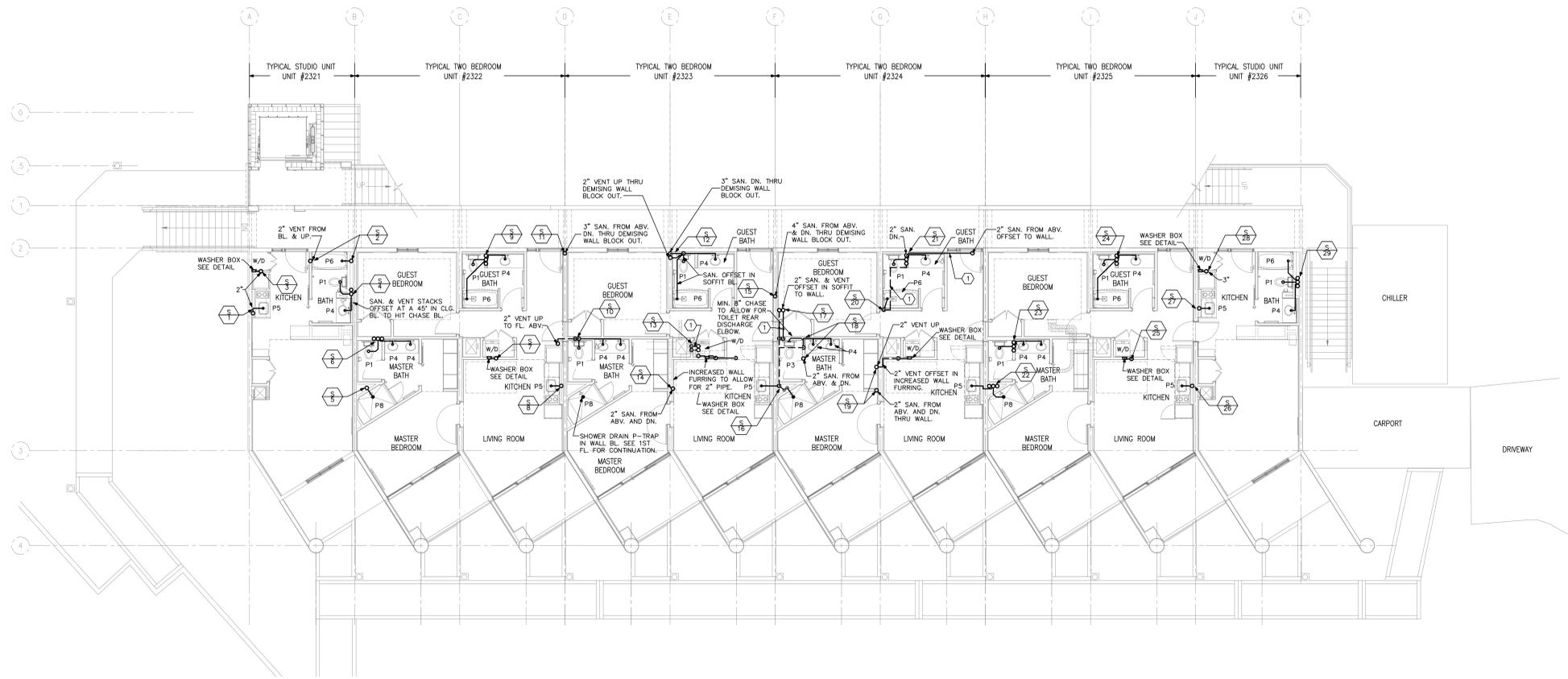
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 355FL	18x18	605 - 1200	LOUVER FACE *

NOTE: * - ALL REGISTERS SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1 & VCD.

NOTE: TOILET EXHAUST AND DRYER EXHAUST TERMINATION POINTS MAY VARY. REFER TO OVERALL 1/8" SCALE FLOOR PLANS FOR FINAL TERMINATION POINTS. (TYP.)

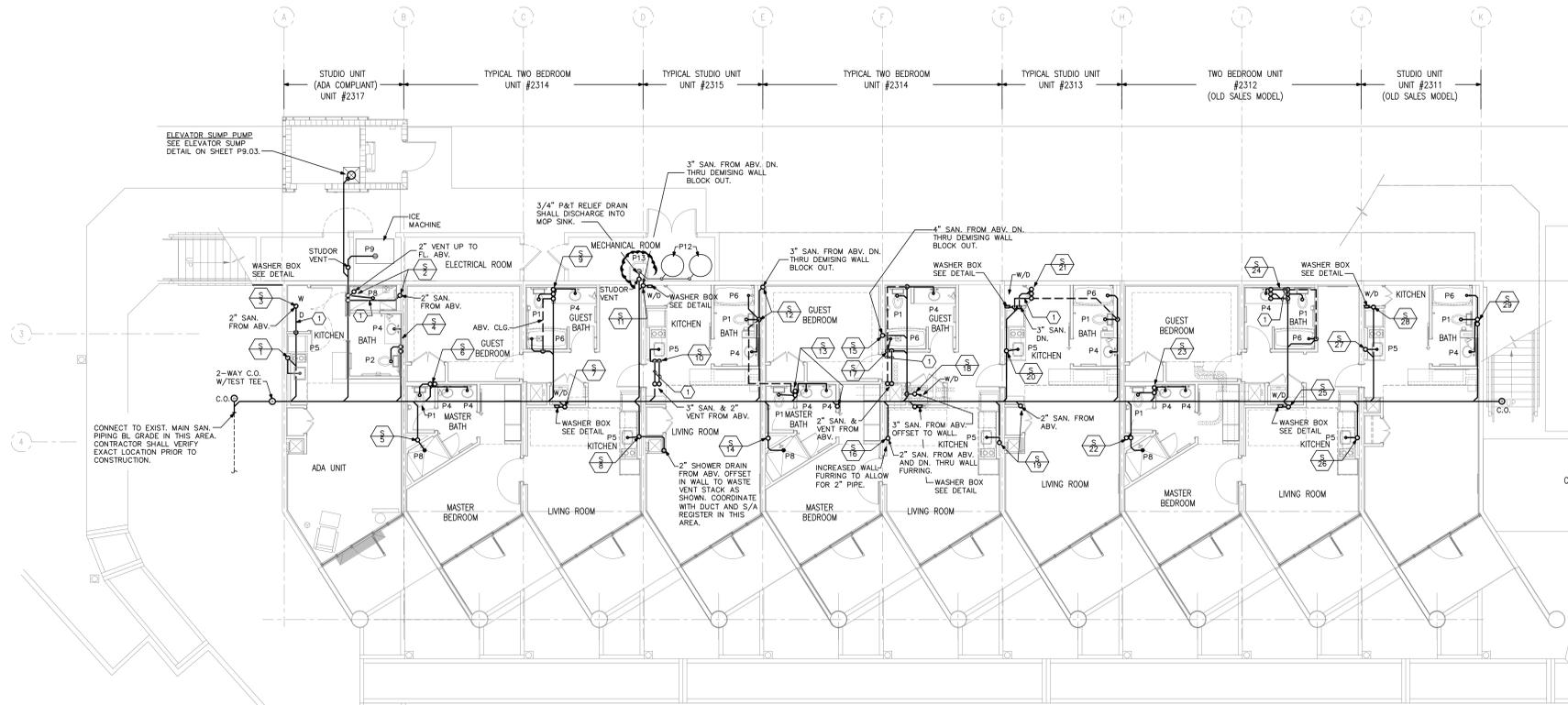
SEE OVERALL FLOOR PLANS FOR CONTINUATION.
DROP 4" GALVANIZED (NO FLEX DUCT) DUCT DOWN TO APPROX. 36" ABOVE FLOOR AND CONNECT TO DRYER SIDE DISCHARGE WITH A RIGHT 90° ELBOW. FIELD VERIFY EXACT LOCATION OF DRYER DISCHARGE PRIOR TO SETTING OF DUCTWORK.

NOTE: ALL DIFFUSER AND REGISTER LOCATIONS ARE TO BE AS DIMENSIONED ON ARCHITECTURAL PLANS.



2 SECOND FLOOR PLAN – PLUMBING (SANITARY)

1/8" = 1'-0" BUILDING 23



- SPECIFIC PLUMBING NOTES**
- ① SANITARY PIPING SHALL ROUTE IN DROPPED CEILING SPACE. COORDINATE WITH DUCTWORK IN THIS AREA. HOLD TIGHT TO UNDERSIDE OF FLOOR STRUCTURE ABOVE WHILE MAINTAINING A MINIMUM 1/8" PER FOOT SLOPE.
 - ② 1-1/2" SHOWER DRAIN SHALL ROUTE BL. SHOWER AND ABV. FL. SLAB TO TRAP BEHIND WALL TO AVOID LIVING SPACE ROOM BL. SHOWER TRAP MAXIMUM 30" FROM CENTER LINE OF SHOWER DRAIN.
 - ③ FLOOR MOUNTED REAR DISCHARGE TOILET IN THIS AREA TO AVOID SANITARY PIPING IN MECHANICAL ROOM BELOW.

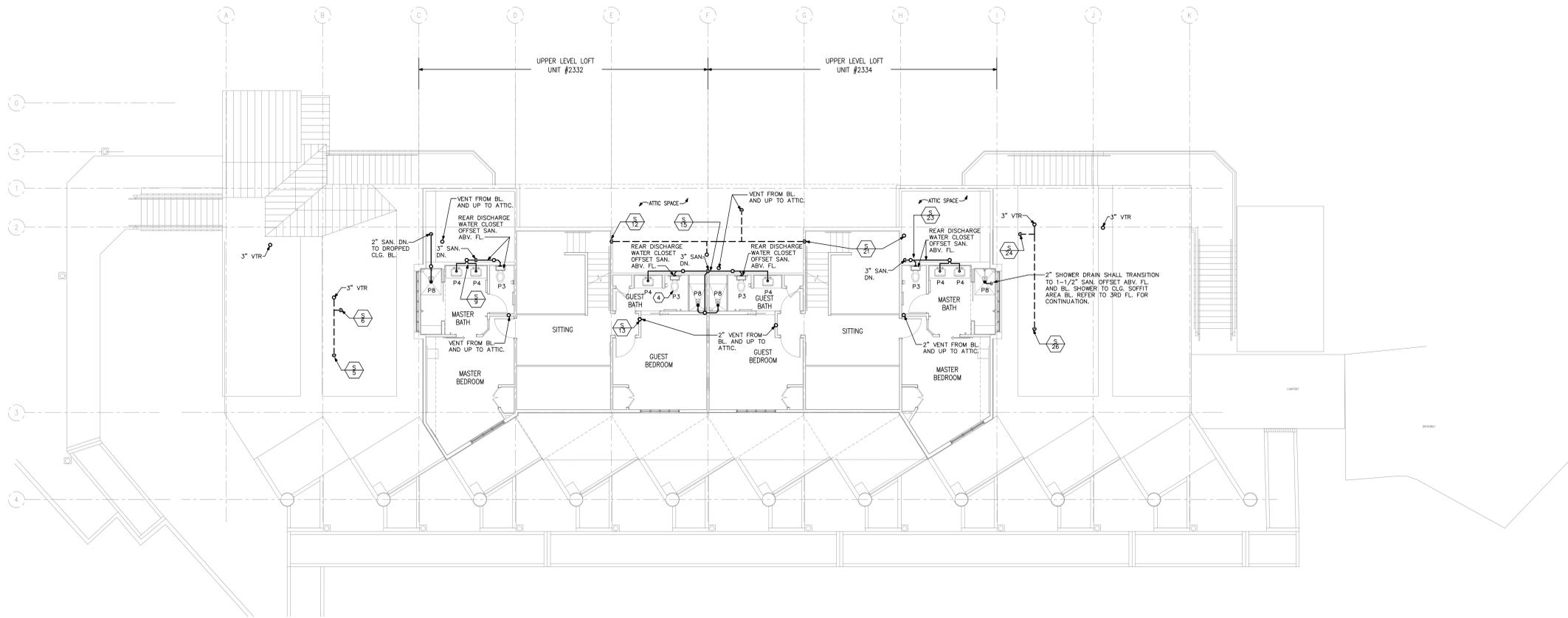
LEGEND

	SANITARY RISER. REFER TO SHEET P9.04
	SANITARY PIPING
	VENT PIPING

P9.01

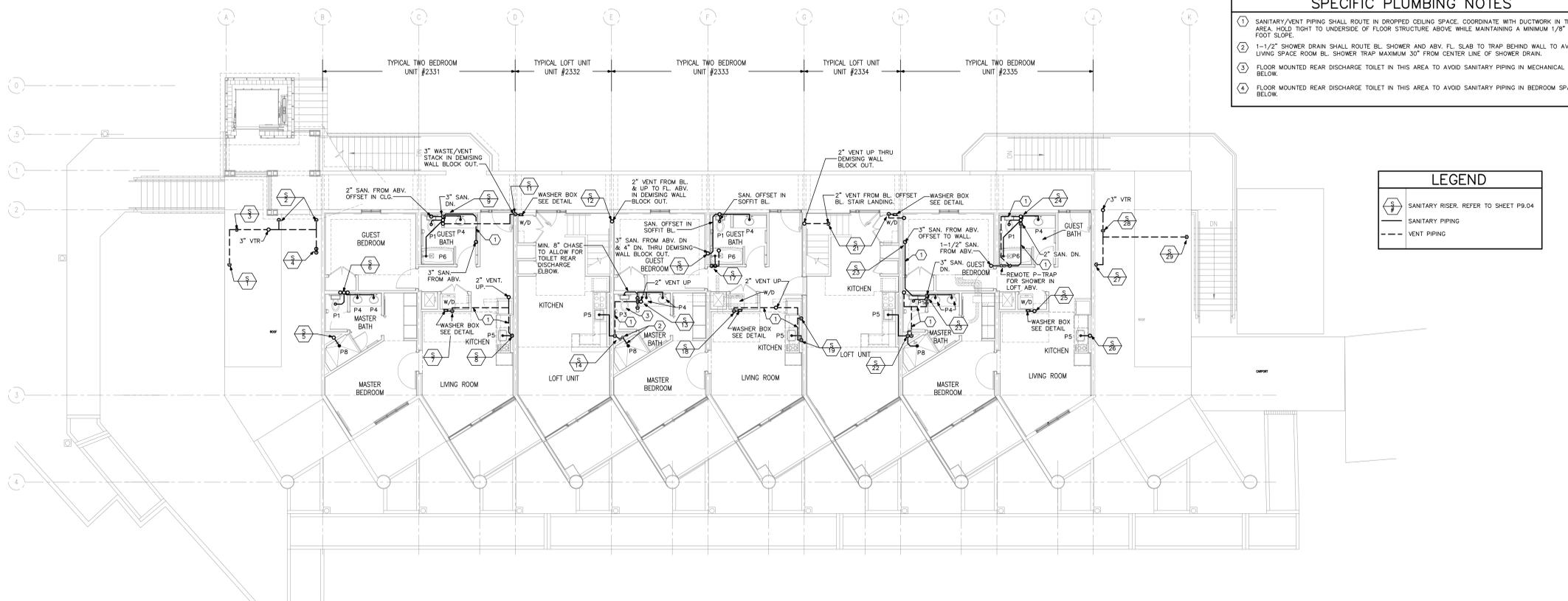
1 FIRST FLOOR PLAN – PLUMBING (SANITARY)

1/8" = 1'-0" BUILDING 23



2 LOFT FLOOR PLAN – PLUMBING (SANITARY)

1/8" = 1'-0" BUILDING 23



- SPECIFIC PLUMBING NOTES**
- 1 SANITARY/VENT PIPING SHALL ROUTE IN DROPPED CEILING SPACE. COORDINATE WITH DUCTWORK IN THIS AREA. HOLD TIGHT TO UNDERSIDE OF FLOOR STRUCTURE ABOVE WHILE MAINTAINING A MINIMUM 1/8" PER FOOT SLOPE.
 - 2 1-1/2" SHOWER DRAIN SHALL ROUTE BL. SHOWER AND ABV. FL. SLAB TO TRAP BEHIND WALL TO AVOID LIVING SPACE ROOM BL. SHOWER TRAP MAXIMUM 30" FROM CENTER LINE OF SHOWER DRAIN.
 - 3 FLOOR MOUNTED REAR DISCHARGE TOILET IN THIS AREA TO AVOID SANITARY PIPING IN MECHANICAL ROOM BELOW.
 - 4 FLOOR MOUNTED REAR DISCHARGE TOILET IN THIS AREA TO AVOID SANITARY PIPING IN BEDROOM SPACE BELOW.

LEGEND

	SANITARY RISER. REFER TO SHEET PB.04
	SANITARY PIPING
	VENT PIPING

1 THIRD FLOOR PLAN – PLUMBING (SANITARY)

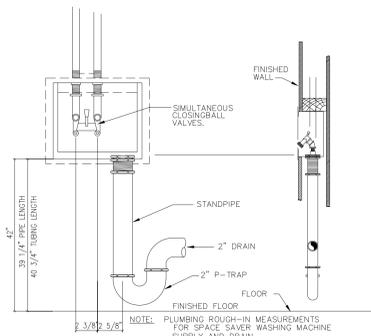
1/8" = 1'-0" BUILDING 23

GENERAL PLUMBING NOTES

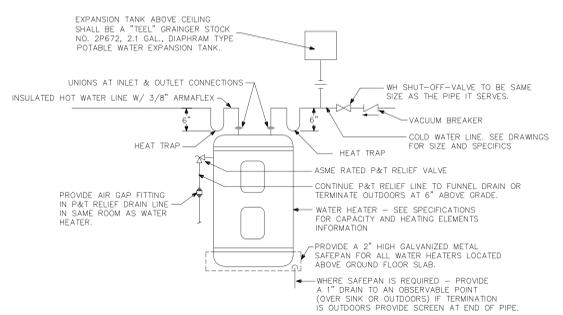
- DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, EQUIPMENT, ETC. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND ACCEPTABLE WORKING INSTALLATION. CONTRACTOR IS RESPONSIBLE TO INSTALL ALL FIXTURES AND EQUIPMENT IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THIS REQUIREMENT IS TO SUPERSEDE ANY DETAILS OR INFORMATION CONTAINED ON THESE DRAWINGS.
- ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL STATE, AND ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION.
- THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. ALL EXECUTION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
- ALL MATERIAL SHALL BE NEW.
- ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- THE PLUMBING CONTRACTOR SHALL SECURE AND PAY ALL PERMIT FEES, INSPECTIONS, AND TESTS.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- VERIFY LOCATION, SIZE AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- ALL FIXTURES SHALL BE PROVIDED WITH READILY ACCESSIBLE STOPS.
- ALL BELOW FLOOR SLAB WATER PIPING SHALL BE FLEXIBLE TEMPERITE PEX (CROSS-LINKED POLYETHYLENE) INSTALLED AS PER MANUFACTURERS' RECOMMENDATIONS FOUND HERE: WWW.LIBRIZOL.COM. ALL ABOVE SLAB WATER PIPING SHALL BE "FLOWGUARD GOLD CPVC" INSTALLED AS PER MANUFACTURERS' RECOMMENDATIONS FOUND HERE: WWW.FLOWGUARDGOLD.COM. ALL WATER PIPING AS SPECIFIED OR APPROVED EQUAL. ALL WATER PIPING LARGER THAN 1" SHALL BE CPVC.
- SOIL, WASTES AND VENT PIPING SHALL BE PVC #40 DMV. WASTE AND VENT PIPING ABOVE SLAB SHALL BE PVC. IF APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION, OTHERWISE CAST IRON. PVC SHALL NOT BE INSTALLED IN A/C RETURN AIR PLENUM OR PENETRATE FIRE RATED WALLS OR FLOORS.
- AIR CONDITIONING CONDENSATE DRAIN PIPING SHALL BE PVC #40 OR COPPER DRAIN WASTE AND BENT PIPE AND FITTINGS. INSULATE ALL CONDENSATE PIPING EXCEPT EXTERIOR PIPING. INSTALL ALL CONDENSATE PIPING FOR AIR CONDITIONING UNITS AS REQUIRED PER LOCAL CODES.
- FURNISH AND INSTALL APPROVED WATER HAMMER ARRESTORS AT EACH GROUP OF FIXTURES. INSTALLATION OF WATER HAMMER ARRESTORS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE AND INSTALL AN APPROVED WATER HAMMER ARRESTOR AT EACH FIXTURE OR DEVICE THAT HAS A SOLENOID WATER CONTROL VALVE.
- PROVIDE CHROME PLATED COMBINATION COVERED PLATE AND CLEANOUT PLUG FOR ALL WALL CLEANOUTS, JOSAM 58890.
- INSULATE LINES AS FOLLOWS:
 - 1" THICK ARMAFLEX PERFORMED INSULATION ON BOTH C.W. & H.W. WHEN PIPING IS LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE.
 - 1/2" THICK ARMAFLEX PERFORMED INSULATION SHALL BE PROVIDED ON HW PIPING & H.W. REIRC. PIPING, ONLY WHEN THERE IS A H.W. RECIRCULATING PIPING SYSTEM.
 - CONDENSATE PIPING: 1/2" THICK ARMAFLEX PERFORMED OR APPROVED EQUAL.
- STORM DRAIN PIPING SHALL BE SCHED. 40 PVC.

PLUMBING FIXTURE SCHEDULE

- P-1 (WATER CLOSET)**
SHALL BE A "KOHLER" WELLWORTH K-3531 WHITE. FLUSH TANK TOILET.
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1054184_4.pdf
- P-2 (H.C. WATER CLOSET)**
SHALL BE A "KOHLER" WELLWORTH K-3493 WHITE. FLUSH TANK TOILET.
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1044957_4.pdf
- P-3 (WATER CLOSET - FLOOR MOUNT, REAR DISCHARGE)**
SHALL BE A "KOHLER" WELLWORTH K-3554 WHITE. FLUSH TANK TOILET. FLOOR MOUNT REAR DISCHARGE WATER CLOSET.
Spec Sheet: http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1050803_4.pdf
- P-4 (NON-HANDICAPPED AND HANDICAPPED LAVATORY)**
SHALL BE A "KOHLER" CAXTON K-2210-0 WHITE. FAUCET SHALL BE A "KOHLER" K-454-44-CP. W/MEMBERS STAINLESS STEEL LEVER HANDLES. NOTE - THE P-TRAP ON THESE FIXTURES IS TO BE EXPOSED AND MUST BE CHROME.
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1050408_4.pdf
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1104547_4.pdf
- P-5 (SINGLE BOWL STAINLESS STEEL SINK)**
SHALL BE A "KOHLER" MODEL K-3182R, 14-1/4"X18-1/2" SINGLE BOWL, SEAMLESS DE-DRAIN CONSTRUCTION OF TYPE 304, 18-8 STAINLESS STEEL UNDER MOUNT KITCHEN SINK. FAUCET SHALL BE A "KOHLER" MODEL K-10415-CP.
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/1016734_4.pdf
- P-6 (BATH TUB)**
TUB SHALL BE A "KOHLER" VILLAGER K-715-0 WHITE. SHOWER HEAD SHALL BE A "KOHLER" HEAVENLY SHOWER MODEL 45203-MA-CP. TUB SPOUT: "KOHLER" CORALAIS K-10136-CP. TUB TROM: KOHLER MEMORS STAINLESS STEEL K-17463-4V-CP. PRESSURE-BALANCING VALVE: KOHLER MODEL K-304-KS. TUB DRAIN: "KOHLER" SWFTLO K-11660-CP.
http://www.us.kohler.com/webassets/kpna/catalog/pdf/en/105009_4.pdf
- P-7 (SHOWER HEAD/WAND)**
SHOWER HEAD SHALL BE A "KOHLER" HEAVENLY SHOWER MODEL 45207-MA-CP. PRESSURE-BALANCING VALVE: KOHLER MODEL K-304-KS. SHOWER STALL - COORDINATE SHOWER STALL CONSTRUCTION WITH ARCHITECT/OWNER PRIOR TO BID.
- P-8 (2" SHOWER DRAIN)**
SHALL BE A JOSAM 30002-WT SERIES COATED CAST IRON FLOOR DRAIN. TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, W/LOC INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEPPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.
- P-9 (3" FLOOR DRAIN W/TRAP SEAL)**
SHALL BE A JOSAM 30003-WT SERIES COATED CAST IRON FLOOR DRAIN. TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, W/LOC INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEPPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.
- FLOOR DRAIN TRAP SEAL**
SHALL BE A "SURE SEAL" MODEL SS3000 PREASSEMBLED INLINE FLOOR DRAIN TRAP SEALER. 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, PROPRIETARY NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS. FLOOR RATING ASSE - 1072 AF-CM.
- P-10 (HANDICAPPED SHOWER MIXING VALVE)**
SHOWER SHALL INCLUDE A "SPEAKMAN" MODEL SM-5040. SENTINELPRO SHOWER SYSTEM INCLUDES SENTINELPRO CONCEALED ANTI-SCALD THERMOSTATIC/PRESSURE BALANCING SHOWER VALVE & COMBINATION. CHROME PLATED BRASS WALL PLATE. CHROME PLATED METAL LEVER HANDLE. ADJUSTABLE TEMPERATURE LIMIT STOP (TLS). FACTORY SET @ 110 F°. BRASS BODY WITH INTEGRAL SPRING CHECK STOPS. DUAL ELEMENT THERMOSTATIC/PRESSURE BALANCING CARTRIDGE. FOUR PORT VALVE WITH 3/8" FEMALE COPPER SWEAT INLETS AND SHOWER OUTLET. 3/8" NPT FEMALE TUB OUTLET. FURNISHED WITH 3/8" PIPE PLUG. CHROME PLATED BRASS SUPPLY ELL WITH WALL FLANGE. 69" SQUARE LOCK STAINLESS STEEL HOSE WITH RUBBER LINER. SWIVEL CONNECTOR. IN-LINE VACUUM BREAKER. 30" CHROME PLATED BRASS SLIDE BAR WITH MOUNTING SCREWS. V5-100-AP HANDSHOWER WITH FLOW CONTROL DEVICE REDUCES FLOW TO 2.5 GPM.
<http://www.speakmoncompany.com/products/6e10a/SM-5040>
SHOWER STALL - COORDINATE SHOWER STALL CONSTRUCTION WITH ARCHITECT/OWNER PRIOR TO BID.
- P-11 (HOT WATER RECIRCULATING PUMP)**
SHALL BE A "BELL & GOSSETT" MODEL #601S. GRANGER STOCK #2VRWB. INLINE CIRCULATOR PUMP. 1/4 HP. 1 PHASE. VOLTAGE 115/230. 2.8/1.4 AMPS. INLET/OUTLET 1 IN. FLANGED. HOUSING MATERIAL CAST IRON. MAX. TEMP. 225 F. MAX. WORKING PRESSURE 175 PSI. SHUT-OFF 19 FT. 150 RPM. IMPELLER MATERIAL BRONZE. AUTO THERMAL PROTECTION, MECHANICAL SEAL. BUNA/CARBON-CERAMIC. WARRANTY LENGTH 3 YEARS.
* <http://www.granger.com/Granger/BELL-GOSSETT-Pump-2VRWB>
- P-12 (GAS WATER HEATER)**
SHALL BE AN "AQUAFLEX" CONQUEST MODEL 50L130A-COML. 500,000 BTUH. INPUT TO PRODUCE 1,334 GALLONS PER HOUR OF HOT WATER AT 45F RISE. 130 GALLON STORAGE TANK. ELECTRICAL LOAD OF 120/1/6. 11 AMPS. 1" GAS PIPE CONNECTION.
* <http://pvi.com/pdf/20files/8294.pdf>
- P-13 (FLOOR MOUNTED MOP RECEPTOR)**
SHALL BE A FLORESTONE #MR-2424 24X24X10" MOLDED MOP BASIN WITH 3" OUTLET. PROVIDE WITH MR-371 FAUCET WITH WALL BRACE, PAIL HOOK AND APPROVED VACUUM BREAKER. MR-370 HOSE & HOSE BRACKET. MR-372 MOP HANGER. MR-373 BUMPER GUARDS AND MR-377 STAINLESS STEEL WALL GUARD.
* http://www.florestone.com/mop_sinks/model_50-70.html
* http://www.florestone.com/mop_sinks/mop_accessories.html
- NOTES:**
1.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
2.) CONTRACTOR SHALL COORDINATE LEFT OR RIGHT HAND FLUSH HANDLES FOR WATER CLOSETS WITH CORRESPONDING MODEL # AND COORDINATE WITH MANUFACTURER PRIOR TO ORDERING FIXTURE.



2 WASHER CONN. BOX DETAIL
NO SCALE

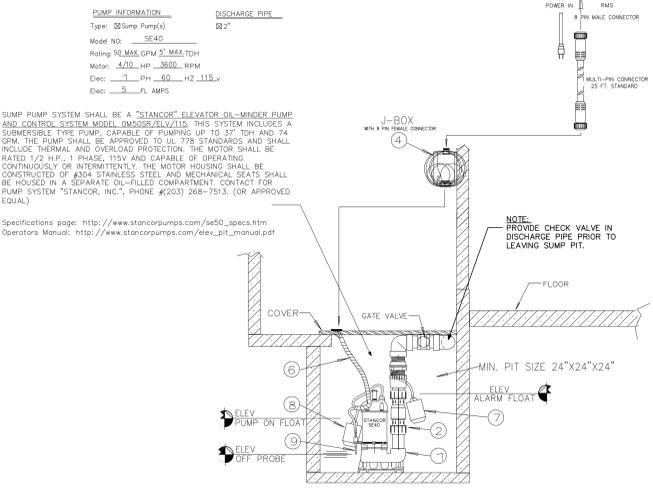


3 WATER HEATER DETAIL
NO SCALE

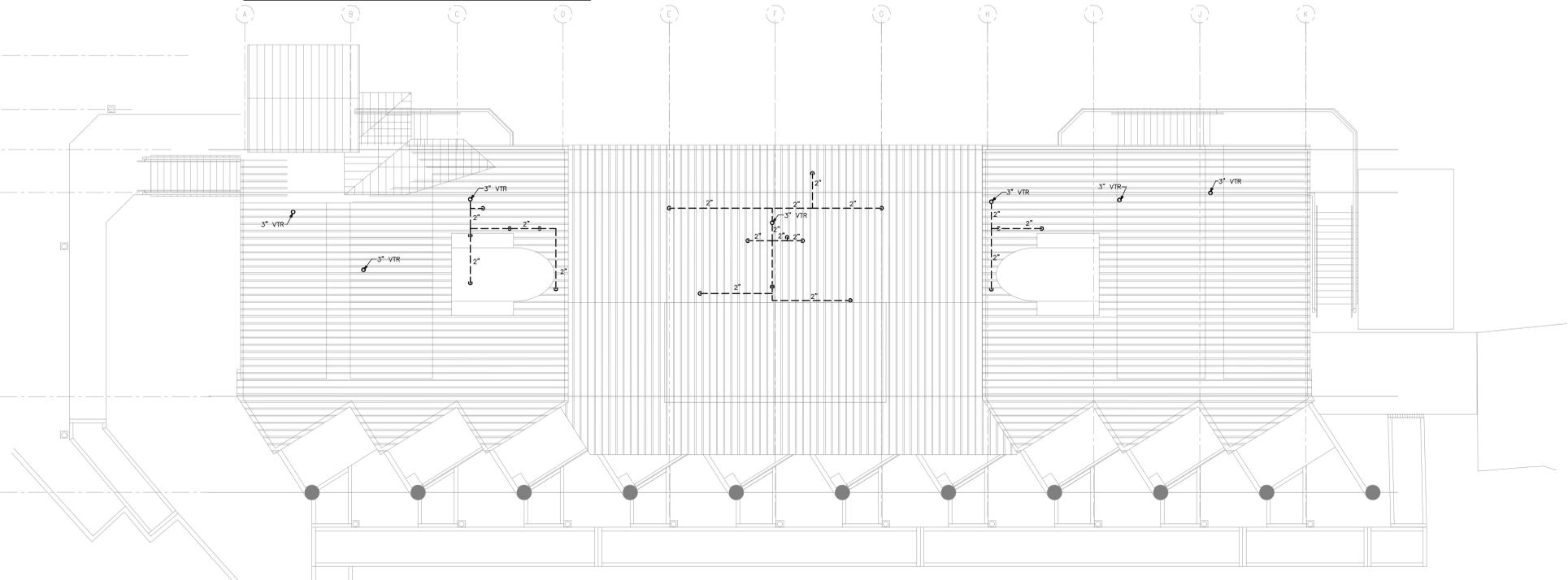
- NOTES**
- STANCOR MODEL SE-40 SUBMERSIBLE EFFLUENT PUMP 3/4HP, 115 VOLT, 3600 RPM, 2" DISCHARGE CONNECTION
 - STANCOR CHECK VALVE
 - STANCOR OIL MINDER 115V, 1# CONTROL SYSTEM WITH OPTIONAL ALARM IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES NOT RUN DUE TO OIL IN PIT OR HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACT FOR A REMOTE ALARM LOCATION. ALARM BELL AS REQUIRED WITH MULTIPRO CONNECTOR & CORB IN LENGTHS AS REQUIRED. 25 FT. IS STANDARD. OPTIONAL 25 FT. INCREMENTS AVAILABLE.
 - INLET BOX MUST BE PROVIDED WITH MULTIPRO CONNECTOR AND CORB IN LENGTHS AS REQUIRED. 25 FT. IS STANDARD. OPTIONAL 25 FT. INCREMENTS AVAILABLE.
 - N/A
 - OIL MINDER CABLE, POWER CABLE, PROBE CABLE, HIGH LIQUID ALARM CABLE & PUMP ON FLOAT CABLE.
 - HIGH LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT TO PUMP DISCHARGE PIPING
 - PUMP ON FLOAT
 - OIL-MINDER PROBE
- ITEMS 1,2,3,4,6,7,8 & 9 PROVIDED BY STANCOR AS A STANDARD PACKAGE

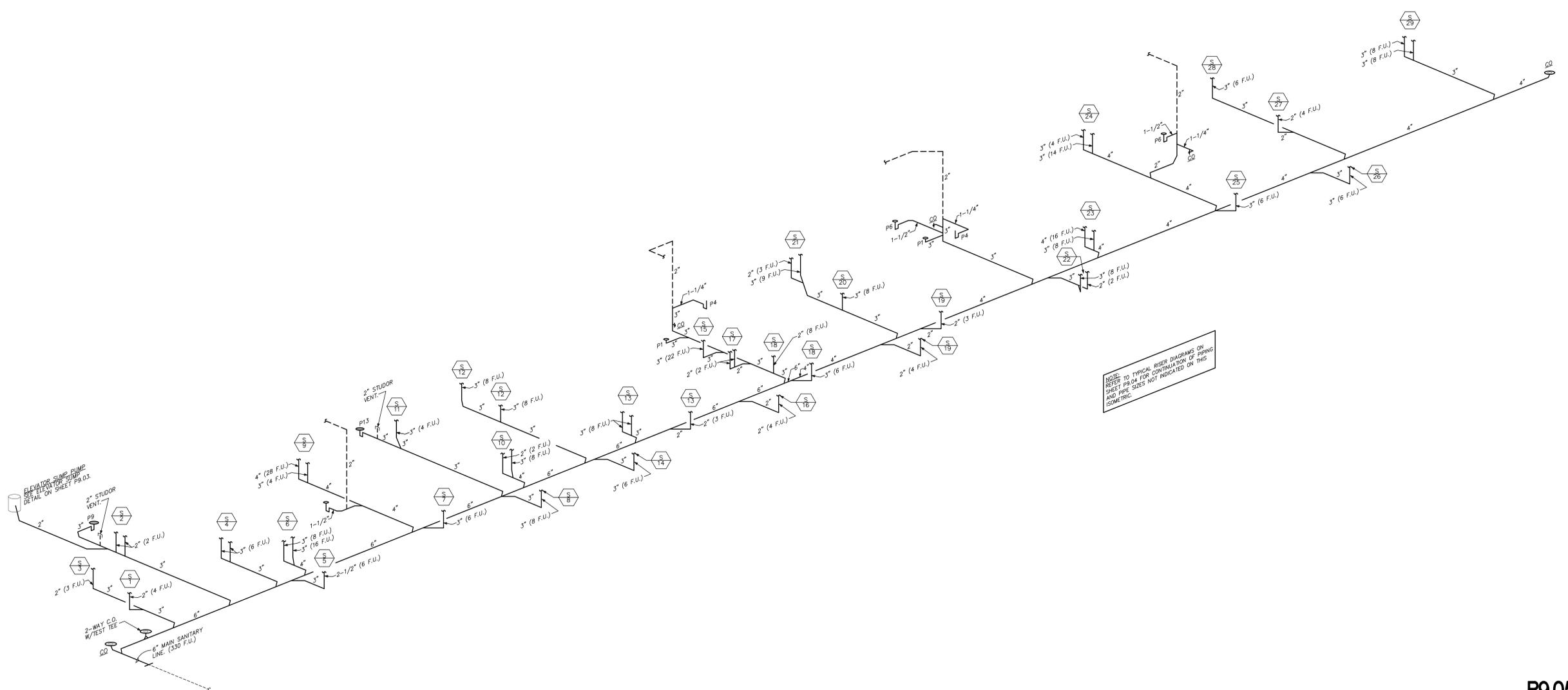
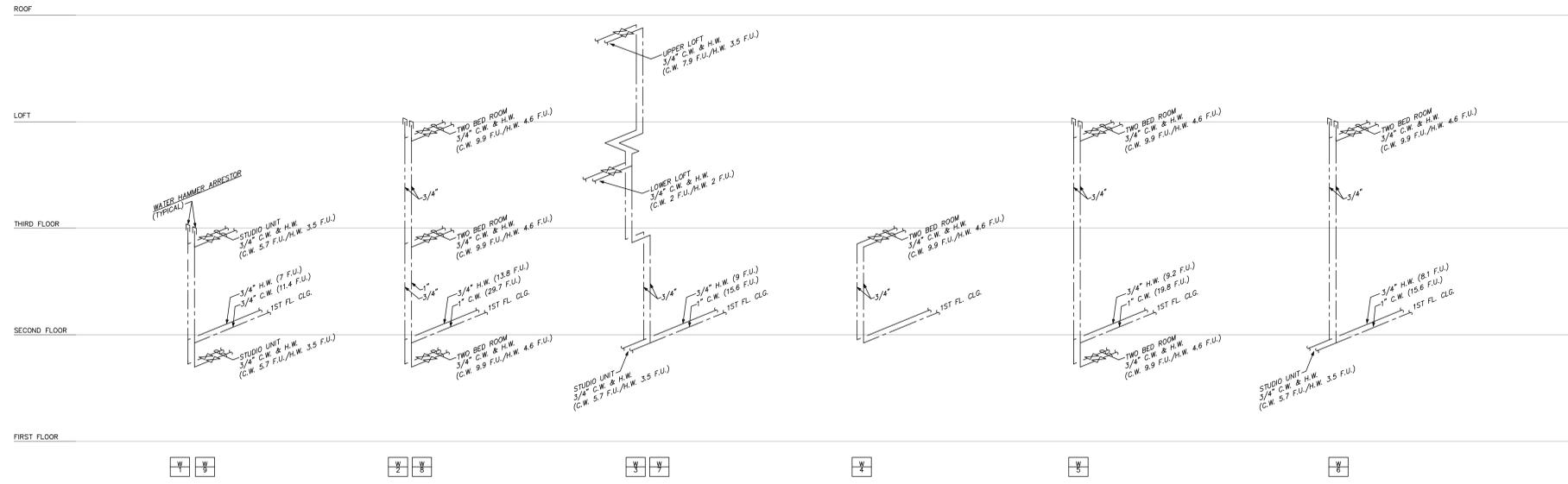
SUMP PUMP BY STANCOR							
MODEL	H.P.	VOLTAGE	RATED FLA	DISCH. SIZE	MAX. HEAD FT.	MAX. FLOW GPM	WEIGHT LBS.
SE40	3/4	115	5	2"	5'	50	30.8

STANCOR STANDARD ELEVATOR OIL-MINDER SYSTEM



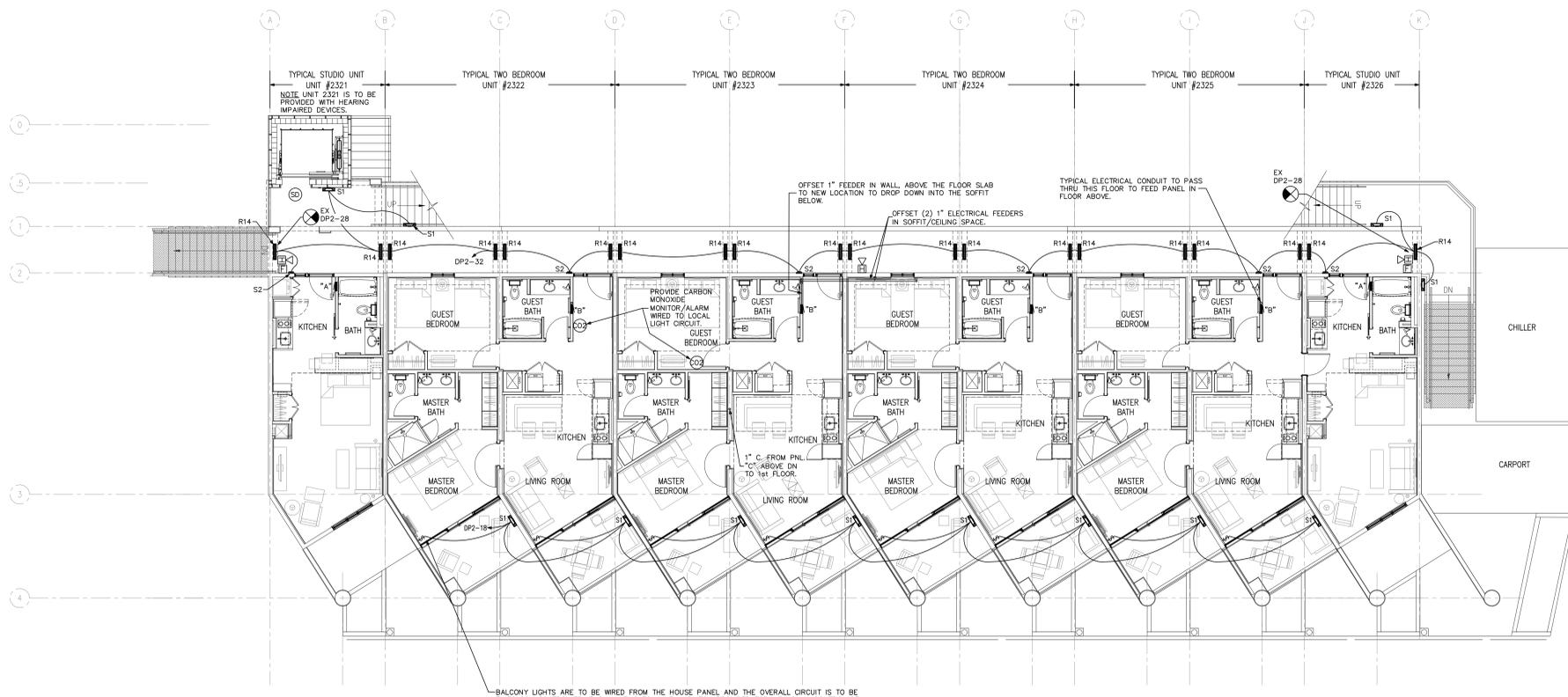
4 ELEVATOR SUMP PUMP DETAIL
NO SCALE





NOTE: TO TYPICAL RISER DIAGRAMS ON SHEET P9.04 FOR CONTINUATION OF PIPING AND PIPE SIZES NOT INDICATED ON THIS ISOMETRIC.

1	OVERALL BUILDING BELOW FLOOR SANITARY ISOMETRIC AND WATER RISERS
NO SCALE	BUILDING 23



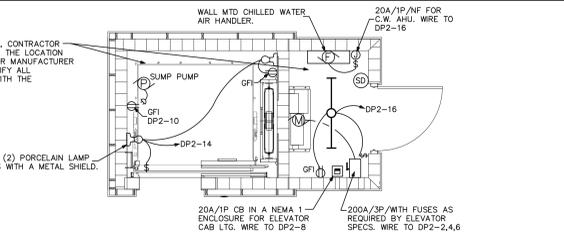
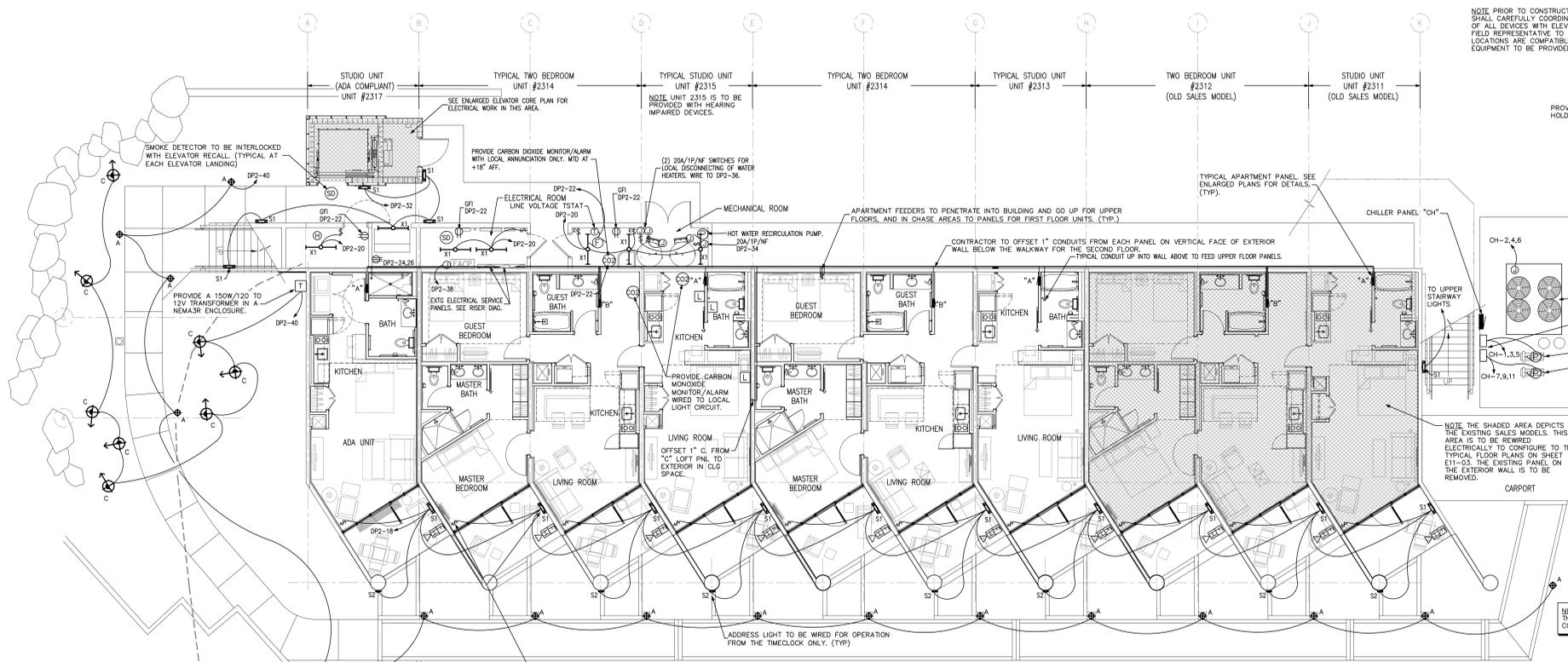
ELECTRICAL SYMBOLS LEGEND	
SYMBOLS	DESCRIPTION
⊕	DUPLEX RECEPTACLE, MTD. #18" AFF.
⊕	240 VOLT RECEPTACLE (WT. AS REQ.)
⊕	QUADRUPLUX RECEPTACLE, MTD. #18"
⊕	COUNTERTOP HT. RECEPTACLE #42"
⊕	SINGLE POLE SWITCH, MTD. #43"
⊕	THREE-WAY SWITCH, MTD. #43"
⊕	MANUAL STARTER SWITCH
⊕	DIMMER SWITCH, MTD. #43"
⊕	SMITH W/ ILLUM WHEN ON MTD. #43"
⊕	THREE-WAY SWITCH W/ OCCU SENSOR MTD. #43"
⊕	SWITCH W/ OCCU SENSOR MTD. #43"
⊕	JUNCTION BOX, FLUSH IF POSSIBLE
⊕	TELEPHONE / DATA OUTLET #18"
⊕	INTERNET OUTLET WITH RED. 3/4" C. W/ PULLSTRING TO ELECTRICAL ROOM
⊕	DISCONNECT SWITCH W/ STARTER
⊕	FLR. MTD. FLUSH DUPLEX RECEPTACLE
⊕	FLR. MTD. FLUSH QUAD. RECEPTACLE
⊕	FLR. MTD. FLUSH PHONE/DATA OUTLET
⊕	FLR. MTD. FLUSH COMPUTER OUTLET
⊕	AREA SMOKE DETECTOR
⊕	HEAT DETECTOR
⊕	DUCT SMOKE DETECTOR
⊕	FIRE ALARM MAN. PULL STATION #43"
⊕	HORN WITH STROBE LIGHT, MTD. #80"
⊕	STROBE LIGHT ONLY, MTD. #80"
⊕	STROBE DEVICE IS CANDLELITE RATING
⊕	TRANSFORMER - SIZE AS NOTED
⊕	PANEL - SIZE AS NOTED
⊕	MOMENTARY CONTACT PUSH BUTTON
⊕	F-FAN; M-MOTOR; P-PUMP
⊕	SPECIAL OUTLET - AS REQUIRED
⊕	DKT. HOMERUN (B INDICATES PANEL)
⊕	'2' DESIGNATES CIRCUIT NUMBER
⊕	EXT. SINK, ONE SIDED, OR TWO SIDED
⊕	EMERGENCY LIGHTING
⊕	RECESSED MOUNTED LIGHTING FIXTURE
⊕	B. DESIGNATES FIXTURE TYPE
⊕	OVERHEAD OCCUPANCY SENSOR
⊕	HIGHBAY HID LIGHTING FIXTURE
⊕	B. DESIGNATES FIXTURE TYPE
⊕	FLUORESCENT LIGHTING FIXTURE
⊕	B. DESIGNATES FIXTURE TYPE
⊕	FLUORESCENT STRIP LIGHTING FIXTURE
⊕	B. DESIGNATES FIXTURE TYPE
⊕	ISOLATED GROUND
⊕	WEATHER-PROOF
⊕	BELOW COUNTER
⊕	TIME CLOCK - 24 HOUR
⊕	GROUND FAULT INTERRUPTER
⊕	ABOVE FINISHED FLOOR
⊕	ELECTRIC WATER COOLER
⊕	ABOVE SHOW WINDOW
⊕	BELOW SHOW WINDOW
⊕	FIRE ALARM CONTROL PANEL
⊕	FIRE ALARM ANNUNCIATOR PANEL

BALCONY LIGHTS ARE TO BE WIRED FROM THE HOUSE PANEL AND THE OVERALL CIRCUIT IS TO BE TIMECLOCK CONTROLLED. EACH UNIT IS TO HAVE A SWITCH PROVIDED FOR INDIVIDUAL CONTROL OF LIGHT, WHEN THE TIMECLOCK HAS THE CIRCUIT ENERGIZED.

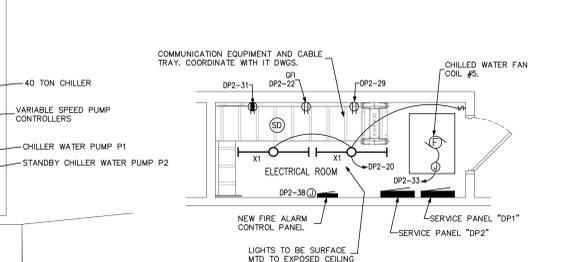
2 SECOND FLOOR PLAN - ELECTRICAL

1/8" = 1'-0"

BUILDING 23



ELEVATOR CORE PLAN SCALE: 1/4"=1'-0"



ELECTRICAL ROOM PLAN SCALE: 1/4"=1'-0"

SITE LANDSCAPING LIGHTING FIXTURE SCHEDULE						
LABEL	TYPE OF FIXTURE	FINISH	LENS TYPE	VOLTAGE	LAMP	MANUFACTURER & MODEL NO.
A	LIGHT BOLLARD	BRONZE	CLEAR	120	14.8W LED	AAL SPB-12LED-WH-082 W/ INEGRAL 120V DRIVER
B	POLE TOP LIGHT	BRONZE	CLEAR	120	60 LED 73 W	KIM BNSS/60L3K/DB/CDL 10' POLE MOUNTED W/ INEGRAL 120V DRIVER
C	LED SPOT LIGHT	BRONZE	CLEAR	12V	LED 10W	VISIONS3 FL15-BN-C4L-K1-119-L1-0-0 PROVIDE REMOTE 12V/NEMA3R TRANSFORMER

REPORTED ROUTING OF THE 3" CONDUIT WITH FEEDERS FOR BUILDING 23. CONTRACTOR TO FIELD LOCATE EXISTING CONDUIT AND PROTECT IT AGAINST DAMAGE DURING CONSTRUCTION.

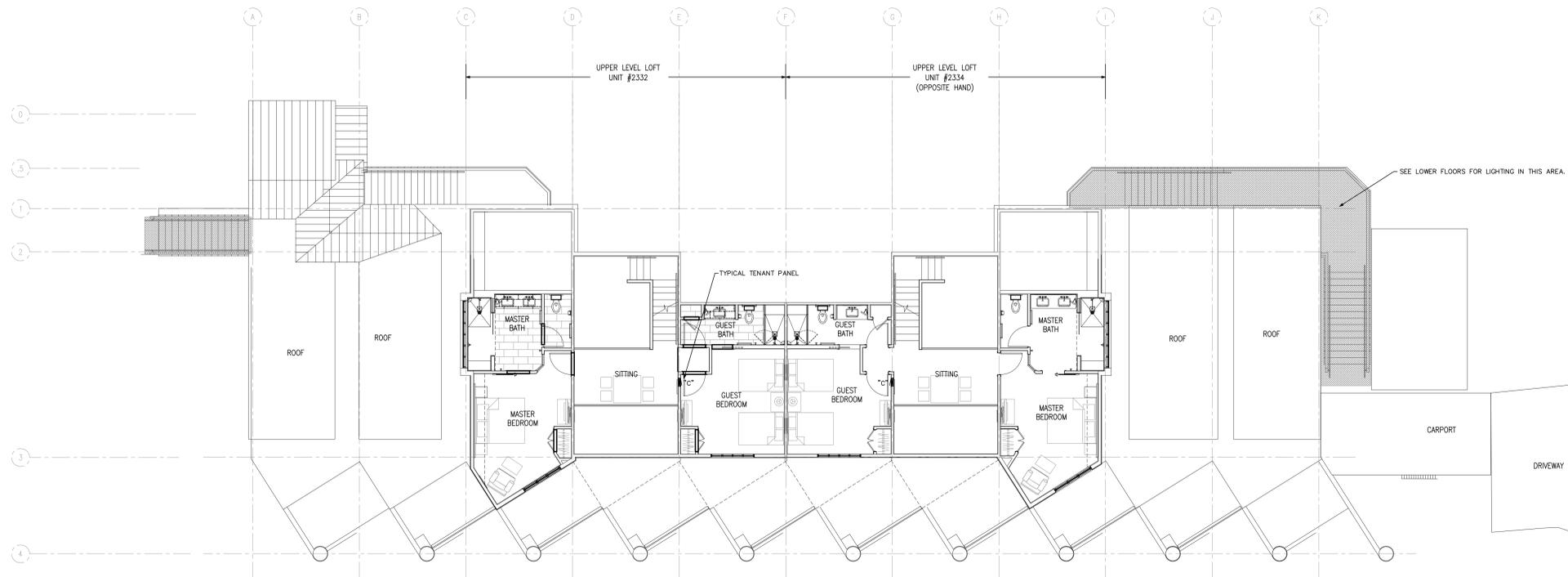
NOTE - THE EXISTING INTERNET DISTRIBUTION SYSTEM IN THIS BUILDING IS TO BE REPLACED WITH NEW EQUIPMENT. COORDINATE WORK SCOPE AND REQUIREMENTS WITH OWNER.

1 FIRST FLOOR PLAN - ELECTRICAL

1/8" = 1'-0"

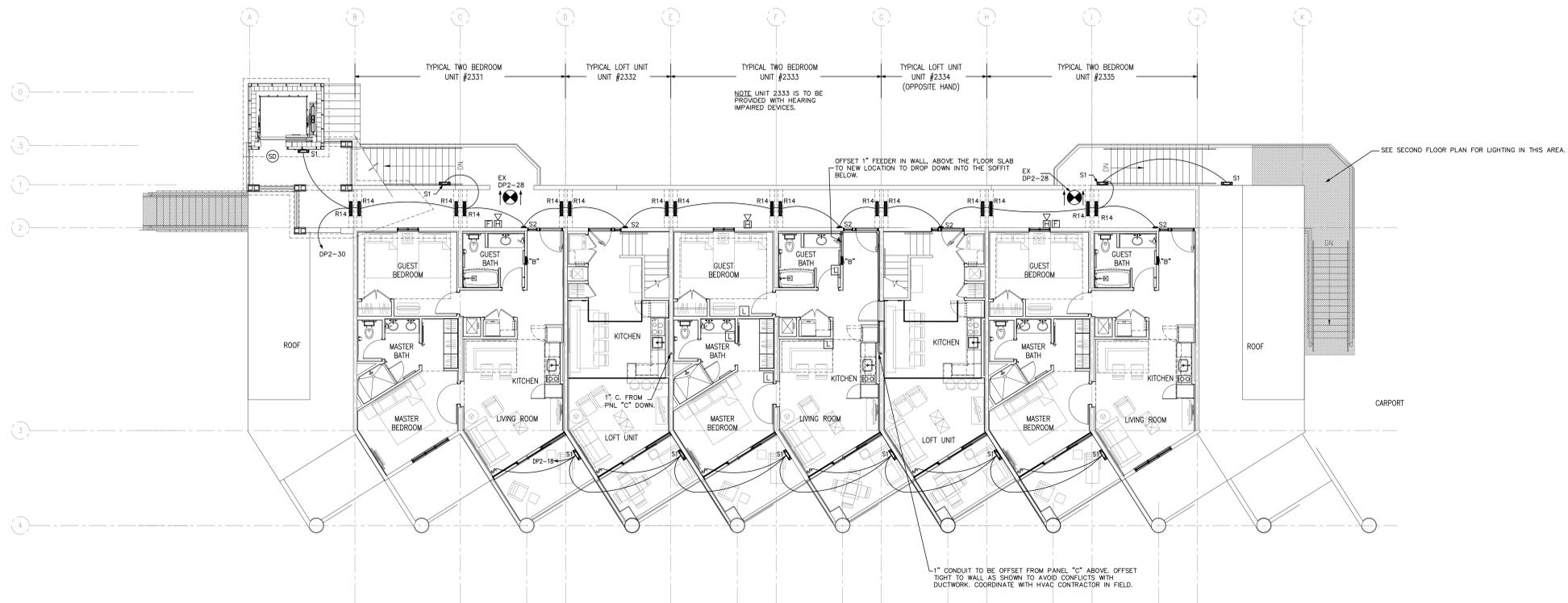
BUILDING 23

E11.01



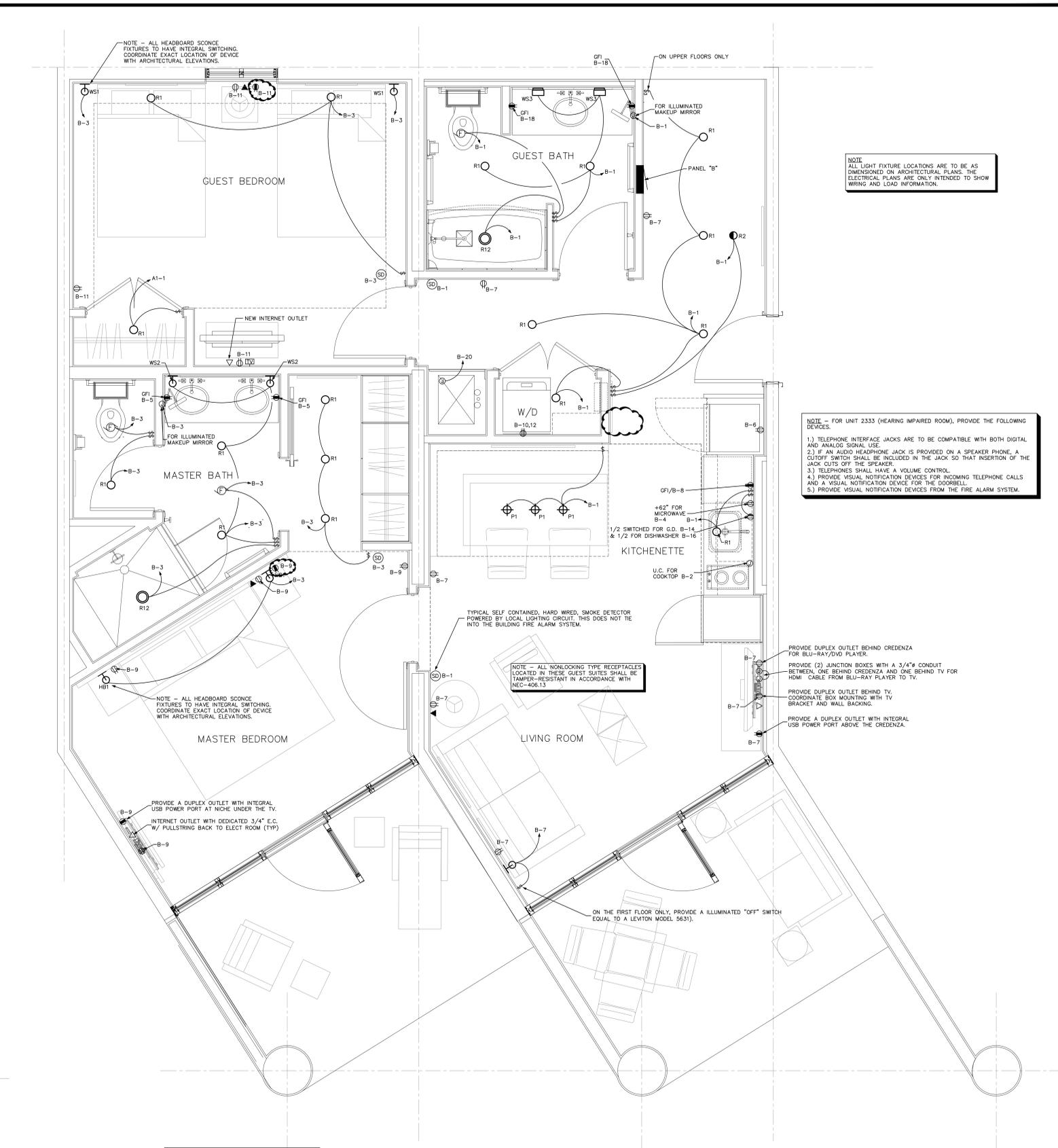
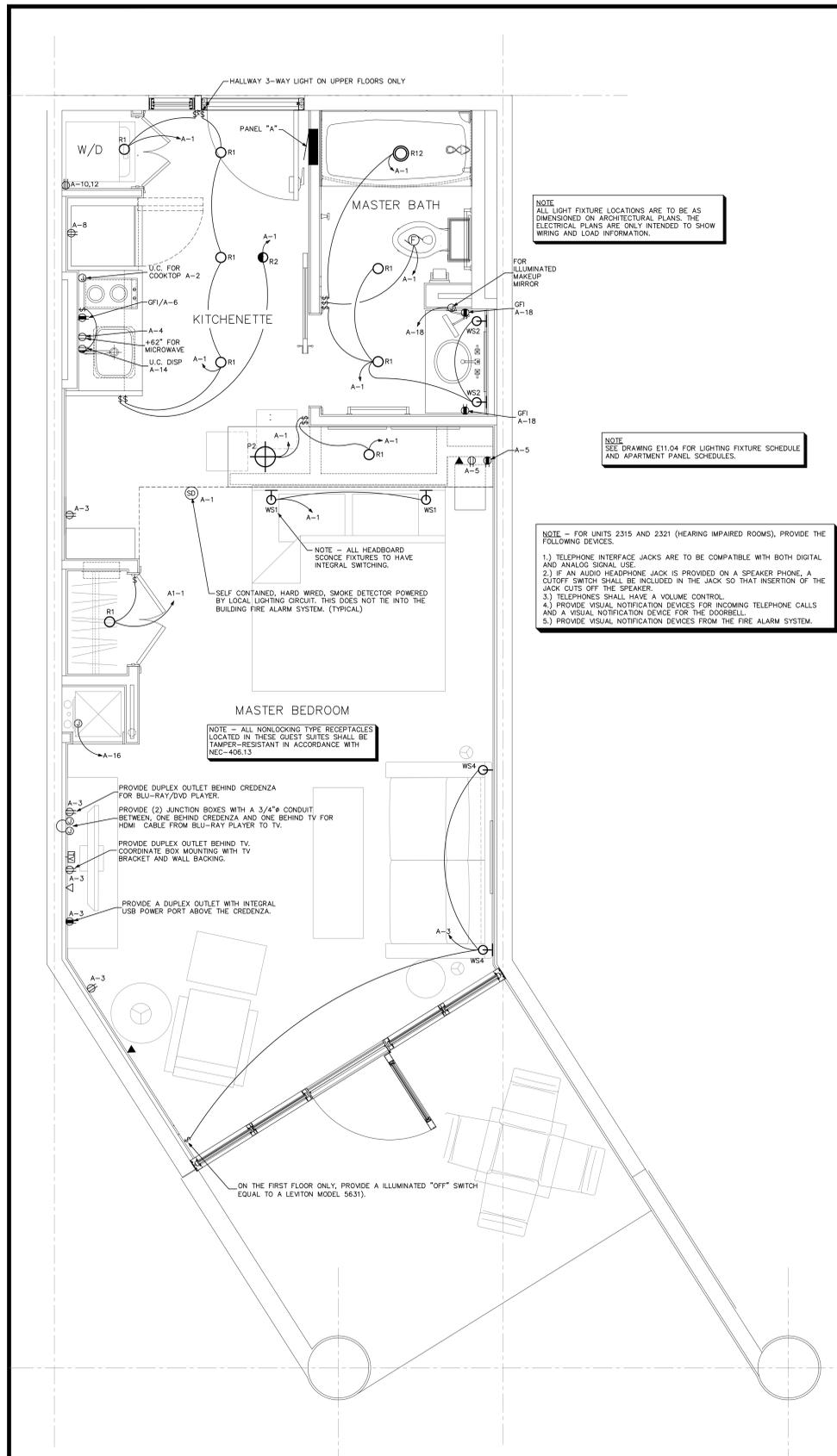
2 LOFT FLOOR PLAN – ELECTRICAL

1/8" = 1'-0" BUILDING 23



1 THIRD FLOOR PLAN – ELECTRICAL

1/8" = 1'-0" BUILDING 23



NOTE
ALL LIGHT FIXTURE LOCATIONS ARE TO BE AS DIMENSIONED ON ARCHITECTURAL PLANS. THE ELECTRICAL PLANS ARE ONLY INTENDED TO SHOW WIRING AND LOAD INFORMATION.

NOTE
SEE DRAWING E11.04 FOR LIGHTING FIXTURE SCHEDULE AND APARTMENT PANEL SCHEDULES.

NOTE - FOR UNITS 2315 AND 2321 (HEARING IMPAIRED ROOMS), PROVIDE THE FOLLOWING DEVICES:
1.) TELEPHONE INTERFACE JACKS ARE TO BE COMPATIBLE WITH BOTH DIGITAL AND ANALOG SIGNAL USE.
2.) IF AN AUDIO HEADPHONE JACK IS PROVIDED ON A SPEAKER PHONE, A CUTOFF SWITCH SHALL BE INCLUDED IN THE JACK SO THAT INSERTION OF THE JACK CUTS OFF THE SPEAKER.
3.) TELEPHONES SHALL HAVE A VOLUME CONTROL.
4.) PROVIDE VISUAL NOTIFICATION DEVICES FOR INCOMING TELEPHONE CALLS AND A VISUAL NOTIFICATION DEVICE FOR THE DOORBELL.
5.) PROVIDE VISUAL NOTIFICATION DEVICES FROM THE FIRE ALARM SYSTEM.

NOTE
ALL LIGHT FIXTURE LOCATIONS ARE TO BE AS DIMENSIONED ON ARCHITECTURAL PLANS. THE ELECTRICAL PLANS ARE ONLY INTENDED TO SHOW WIRING AND LOAD INFORMATION.

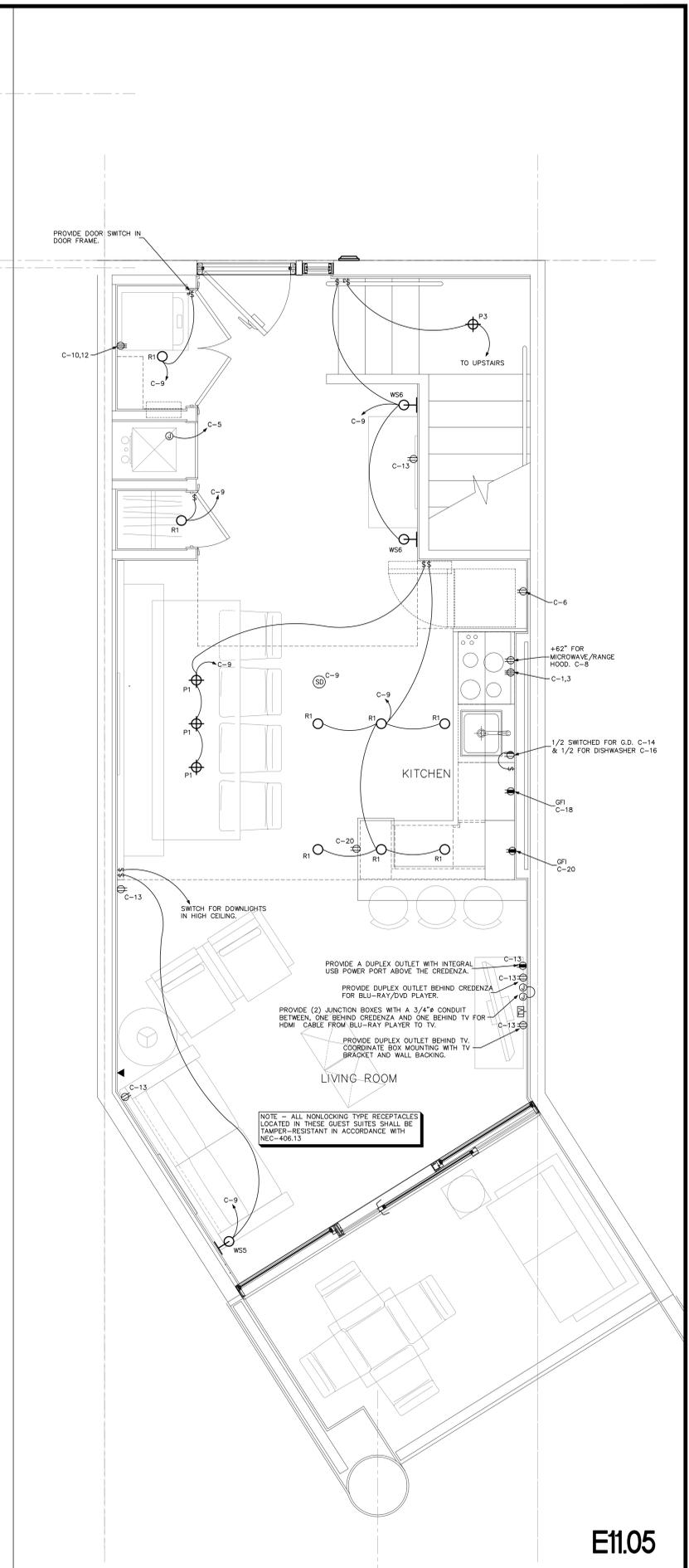
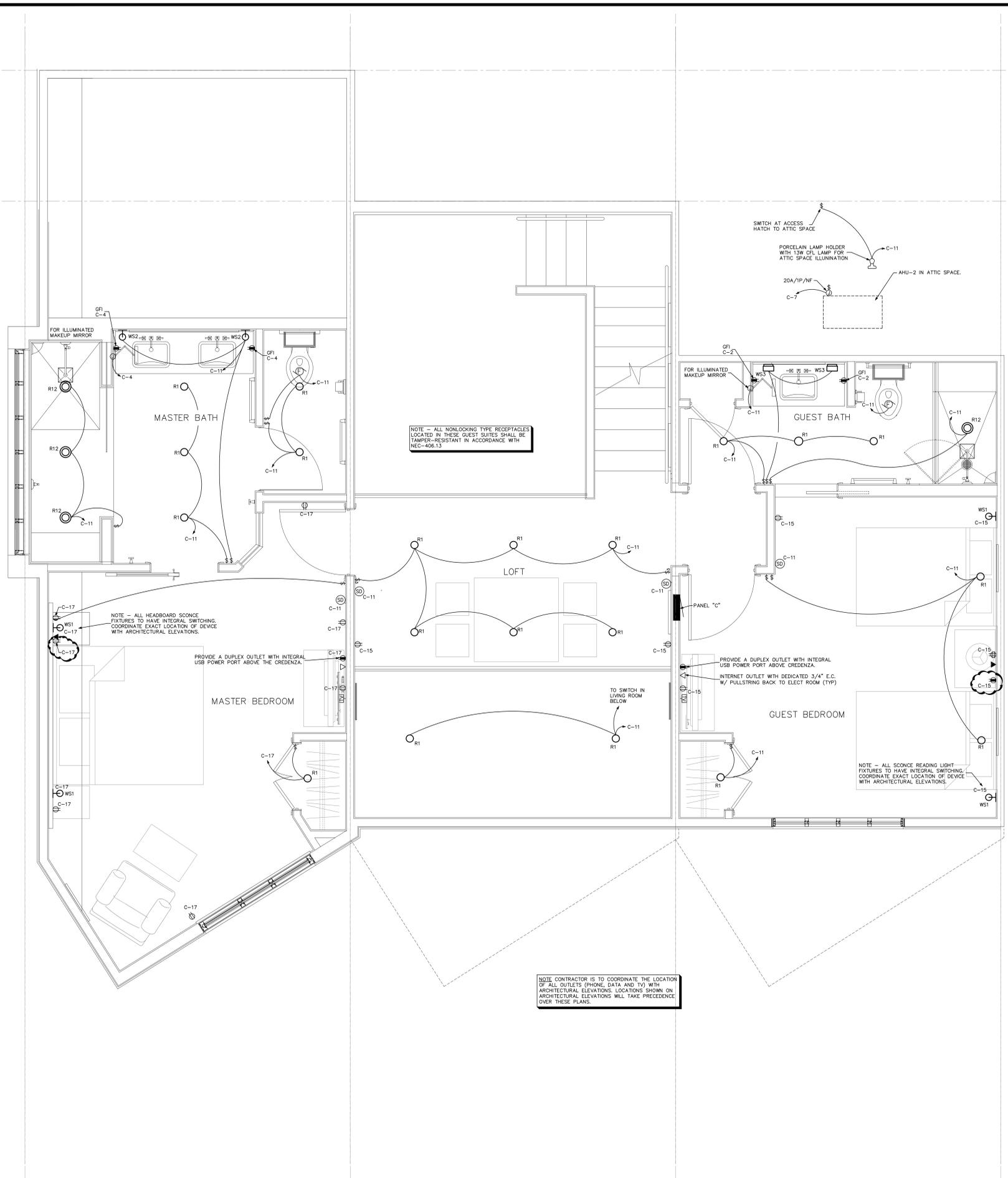
NOTE - FOR UNIT 2333 (HEARING IMPAIRED ROOM), PROVIDE THE FOLLOWING DEVICES:
1.) TELEPHONE INTERFACE JACKS ARE TO BE COMPATIBLE WITH BOTH DIGITAL AND ANALOG SIGNAL USE.
2.) IF AN AUDIO HEADPHONE JACK IS PROVIDED ON A SPEAKER PHONE, A CUTOFF SWITCH SHALL BE INCLUDED IN THE JACK SO THAT INSERTION OF THE JACK CUTS OFF THE SPEAKER.
3.) TELEPHONES SHALL HAVE A VOLUME CONTROL.
4.) PROVIDE VISUAL NOTIFICATION DEVICES FOR INCOMING TELEPHONE CALLS AND A VISUAL NOTIFICATION DEVICE FOR THE DOORBELL.
5.) PROVIDE VISUAL NOTIFICATION DEVICES FROM THE FIRE ALARM SYSTEM.

NOTE CONTRACTOR IS TO COORDINATE THE LOCATION OF ALL OUTLETS (PHONE, DATA AND TV) WITH ARCHITECTURAL ELEVATIONS. LOCATIONS SHOWN ON ARCHITECTURAL ELEVATIONS WILL TAKE PRECEDENCE OVER THESE PLANS.

E11.03

1 ENLARGED FLOOR PLAN (STUDIO UNIT) - ELECTRICAL
1/2" = 1'-0" BUILDING 21

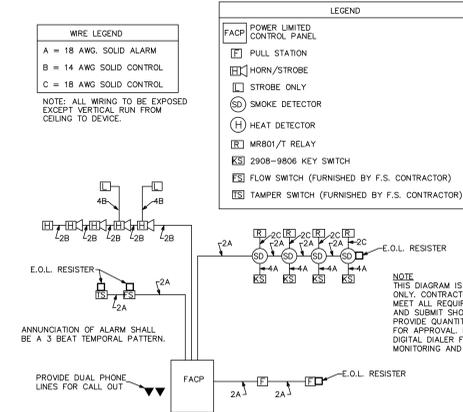
2 ENLARGED FLOOR PLAN (TWO BEDROOM UNIT) - ELECTRICAL
1/2" = 1'-0" BUILDING 21



E11.05

1	LOFT UPPER FLOOR PLAN - ELECTRICAL	2	LOFT LOWER FLOOR PLAN - ELECTRICAL
1/2" = 1'-0"	BUILDING 23		

FIRE ALARM SYSTEM MATRIX	BUILDING SYSTEM OUTPUTS										CENTRAL COMM									
	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE COMMON ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE COMMON SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE COMMON TROUBLE SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	ACTIVATE EXTERNAL HORN/STROBE	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	RETURN ELEVATOR TO 1ST FLOOR	SHUNT TRIP AFTER ELEV. REACHES APPROPRIATE FLOOR	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW CHANGE OF STATUS ON CENTRAL PANEL	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
MANUAL FIRE ALARM PULL BOXES	X	X																		
ELECTRIC ROOM SMOKE DETECTOR	X	X																		
FIRE ALARM A.C. POWER FAILURE				X	X															
FIRE ALARM SYSTEM LOW BATTERY				X	X															
OPEN CIRCUIT				X	X															
GROUND FAULT				X	X															
NOTIFICATION APPLIANCE CIRCUIT SHORT				X	X															
SPRINKLER WATER FLOW	X	X																		
SPRINKLER TAMPER				X	X															
ELEV. EQ. RMS. & 1ST FLOOR ELEV. LOBBY SMOKES	X	X																		
ELEV. SHAFT & UPPER FURS ELEV LOBBY SMOKES	X	X																		
ELEV. SHAFT, AND ELEV. EQ. RM. HEAT DETECTORS	X	X																		



2 FIRE ALARM RISER DIAGRAM

NO SCALE

PANEL SCHEDULE CH										THIS IS A NEW PANELBOARD									
225 AMP, 120/208 VOLT, THREE PHASE, FOUR WIRE, 250A, M.C.B., 10000 AMP MINIMUM A.I.C. BRACING, SURFACE MOUNTED, TYPE NEMA 1 ENCLASURE																			
BKR.	WIRE AND CONDUIT			LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE C	WIRE AND CONDUIT			BKR.							
	COND.	NEUTRAL	KEYS						COND.	NEUTRAL	COND.								
1				0 2004							2								
3	30/3	#12	---	0 19464							4								
5				0 2004							5								
7				0 19464							6								
9	30/3	#12	---	0 2004							8								
11				0 2004							10								
13				0 2004							12								
15				0 2004							14								
17				0 2004							16								
19				0 2004							18								
21				0 2004							20								
23				0 2004							22								
25				0 2004							24								
27				0 2004							26								
29				0 2004							28								
31				0 2004							30								

PANEL SCHEDULE BP2										THIS IS A NEW PANELBOARD									
200 AMP, 120/208 VOLT, THREE PHASE, FOUR WIRE, 200A, M.C.B., 22000 AMP MINIMUM A.I.C. BRACING, SURFACE MOUNTED, TYPE NEMA 1 ENCLASURE																			
BKR.	WIRE AND CONDUIT			LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE C	WIRE AND CONDUIT			BKR.							
	COND.	NEUTRAL	KEYS						COND.	NEUTRAL	COND.								
1	100/2	#2	---	5836	7482						2								
3				4250	4333						4								
5	100/2	#2	---	7743	6506						6								
7				5172	4333						8								
9	100/2	#2	---	5172	7420						10								
11				666	9993						12								
13	100/2	#2	---	5172	7420						14								
15				5172	9993						16								
17	100/2	#2	---	5172	7420						18								
19				5172	9993						20								
21	100/2	#2	---	5172	7420						22								
23				5172	9993						24								
25	100/2	#2	---	5172	7420						26								
27				5172	9993						28								
29	100/2	#2	---	5172	7420						30								
31				5172	9993						32								
33	20/1	#12	---	480	480						34								
35	20/1	#12	---	750	750						36								
37				666	666						38								
39				1080	1080						40								
41				100	100						42								

PANEL SCHEDULE SP1										THIS IS A NEW PANELBOARD									
200 AMP, 120/208 VOLT, THREE PHASE, FOUR WIRE, 200A, M.C.B., 22000 AMP MINIMUM A.I.C. BRACING, SURFACE MOUNTED, TYPE NEMA 1 ENCLASURE																			
BKR.	WIRE AND CONDUIT			LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE C	WIRE AND CONDUIT			BKR.							
	COND.	NEUTRAL	KEYS						COND.	NEUTRAL	COND.								
1	100/2	#4	---	3232	7482						2								
3				4250	4333						4								
5	100/2	#4	---	7743	6506						6								
7				5172	4333						8								
9	100/2	#4	---	5172	7420						10								
11				5172	9993						12								
13	100/2	#4	---	5172	7420						14								
15				5172	9993						16								
17	100/2	#4	---	5172	7420						18								
19				5172	9993						20								
21	100/2	#4	---	5172	7420						22								
23				5172	9993						24								
25	100/2	#4	---	5172	7420						26								
27				5172	9993						28								
29	100/2	#4	---	5172	7420						30								
31				5172	9993						32								
33	20/1	#12	---	480	480						34								
35	20/1	#12	---	750	750						36								
37				666	666						38								
39				1080	1080						40								
41				100	100						42								

NOTE: CONTRACTOR TO PROVIDE FEED THRU LUGS ON THIS PANEL PANEL FEED FROM TRANSFORMER TO BE CONNECTED TO THE FEED THRU LUGS AND THE 250A MCB TO BE USED TO FEED THE CHILLER (SHOWN AS CIRCUITS 2, 4, 6).

PANEL CH DIVERSIFICATION CALCULATIONS

HVAC LOAD AT 100%	58392
MOTOR LOADS AT 100%	1284
PLUS EOC OF THE LARGEST MOTOR	2318
TOTAL DIVERSIFIED PANEL LOAD	7296
LOAD AT 120/208V/3-PHASE/4-WIRE	295.44

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PANEL "BP2" DIVERSITY CALCULATIONS ACCORDING TO NEC-220-84

(1) UNITS TYPE "A" - 12,869 VA AT 12869 VA EACH

(5) UNITS TYPE "B" - 76,825 VA AT 15365 VA EACH

(1) UNITS TYPE "C" - 23,648 VA AT 23648 VA EACH

113,342 VA

7 UNITS FACTOR - 0.44

NEC220-84

UNITS DEMAND LOAD - 49,870 VA OR 136.5 AMPS AT 120/208V/3P/4W

NON APARTMENT LOADS - 26892 OR 74.7 AMPS AT 120/208V/3P/4W

TOTAL LOAD FOR PANEL "BP2" IS 213.2 AMPS.

PANEL "SP1" DIVERSITY CALCULATIONS ACCORDING TO NEC-220-84

(5) UNITS TYPE "A" - 64,345 VA AT 12869 VA EACH

(5) UNITS TYPE "B" - 76,825 VA AT 15365 VA EACH

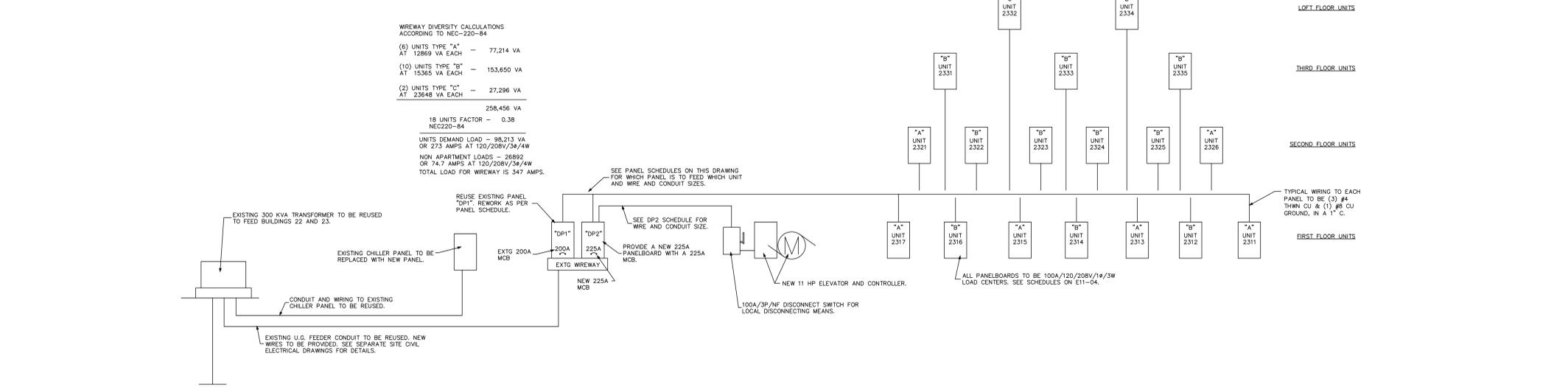
(1) UNITS TYPE "C" - 23,648 VA AT 23648 VA EACH

165,815 VA

11 UNITS FACTOR - 0.42

NEC220-84

UNITS DEMAND LOAD - 69,222 VA OR 192.3 AMPS AT 120/208V/3P/4W



1 ELECTRICAL SERVICE RISER DIAGRAM

NO SCALE