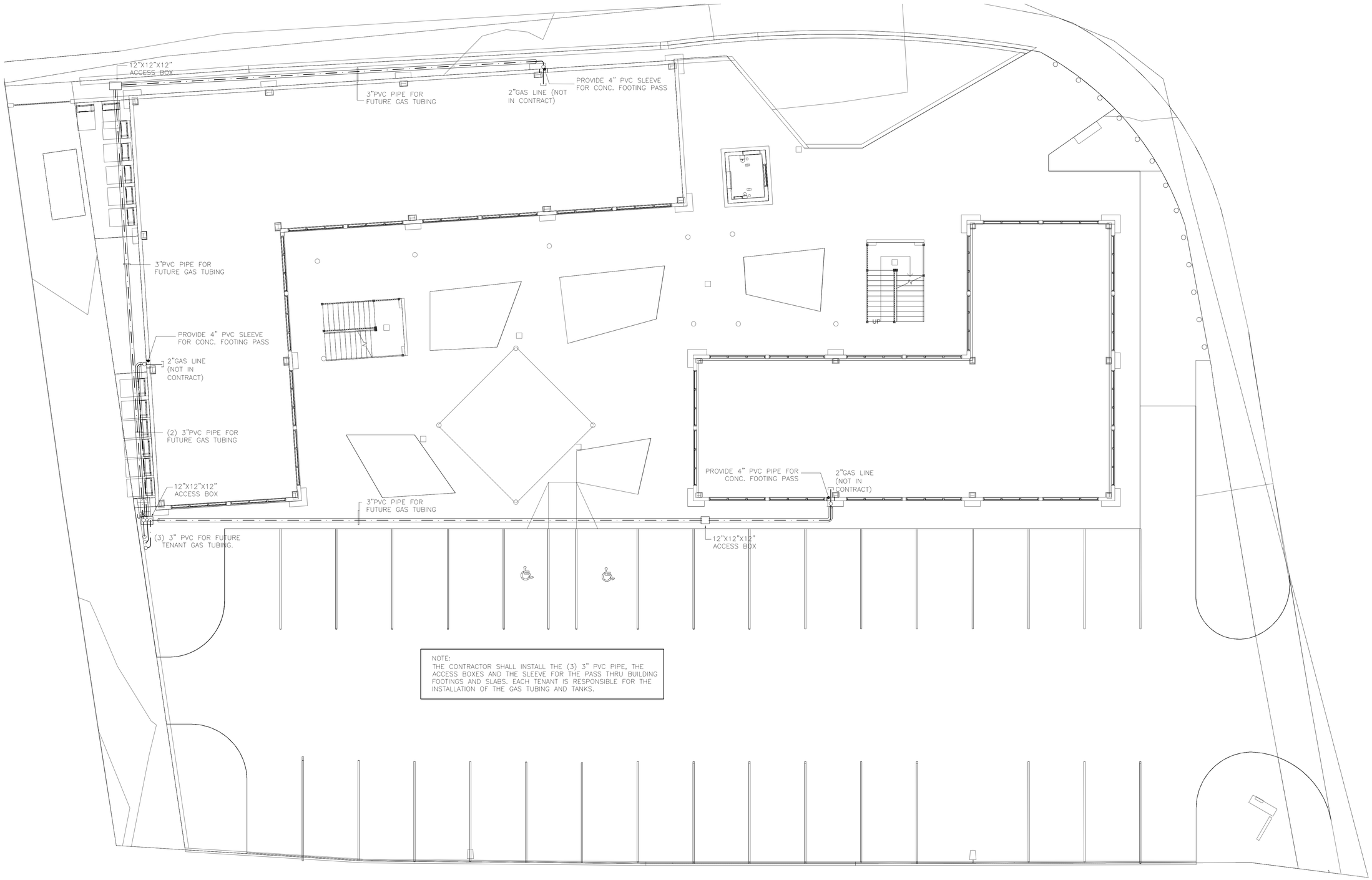

NOTE:
THE CONTRACTOR SHALL INSTALL THE (3) 3" PVC PIPE, THE ACCESS BOXES AND THE SLEEVE FOR THE PASS THRU BUILDING FOOTINGS AND SLABS. EACH TENANT IS RESPONSIBLE FOR THE INSTALLATION OF THE GAS TUBING AND TANKS.

LPG GROUND FLOOR PLAN

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

NOTE:
THE PROPOSED UNDERGROUND FLEXIBLE GAS TUBING, FITTING AND ACCESSORIES SHALL BE EQUAL TO GASTITE PE-24, POLYETHYLENE SDR-11 TUBING. THIS MATERIAL SHALL COMPLY WITH NFPA, ASTM - D2513 (CATEGORY 1), ASME D-B31.8 - 1995, US DOT PART 192.283, ISO 4437 AND LISTED BY CSA AND IAPMO/UPC. CONTRACTOR SHALL INSTALL THIS TUBING FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND USING QUALIFIED INSTALLERS.

THE GAS TUBING SHALL RUNNING INSIDE OF A 3" PVC-SCH, 40 PIPE.

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PROJECT No: 1734 ISSUED 00/00/00

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Estate Taarnebrg
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St. Thomas, U.S. Virgin Islands

REVISIONS

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VIHFA - MIXED USE DEVELOPMENT
GAS GROUND FLOOR PLAN

M-1.01

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VIHFA - MIXED USE DEVELOPMENT
AIR CONDITIONING FLOOR PLAN

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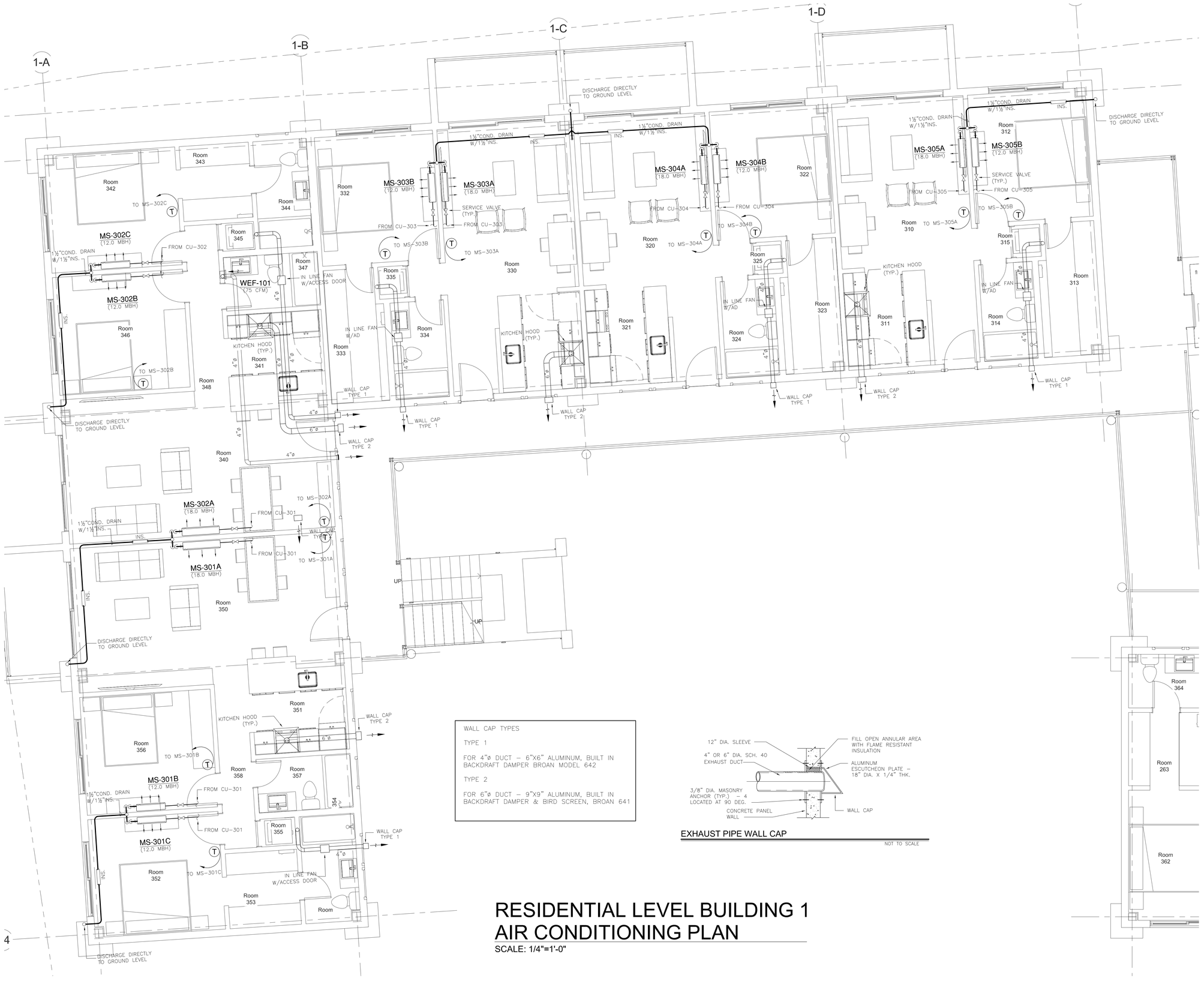

WALL CAP TYPES

TYPE 1

FOR 4"ø DUCT – 6"X6" ALUMINUM, BUILT IN BACKDRAFT DAMPER BROAN MODEL 642

TYPE 2

FOR 6"ø DUCT – 9"X9" ALUMINUM, BUILT IN BACKDRAFT DAMPER & BIRD SCREEN, BROAN 641

EXHAUST PIPE WALL CAP

NOT TO SCALE

RESIDENTIAL LEVEL BUILDING 1 AIR CONDITIONING PLAN

SCALE: 1/4"=1'-0"

4

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VIHFA - MIXED USE DEVELOPMENT
RESIDENTIAL LEVEL BUILDING 1
AIR CONDITIONING FLOOR PLAN

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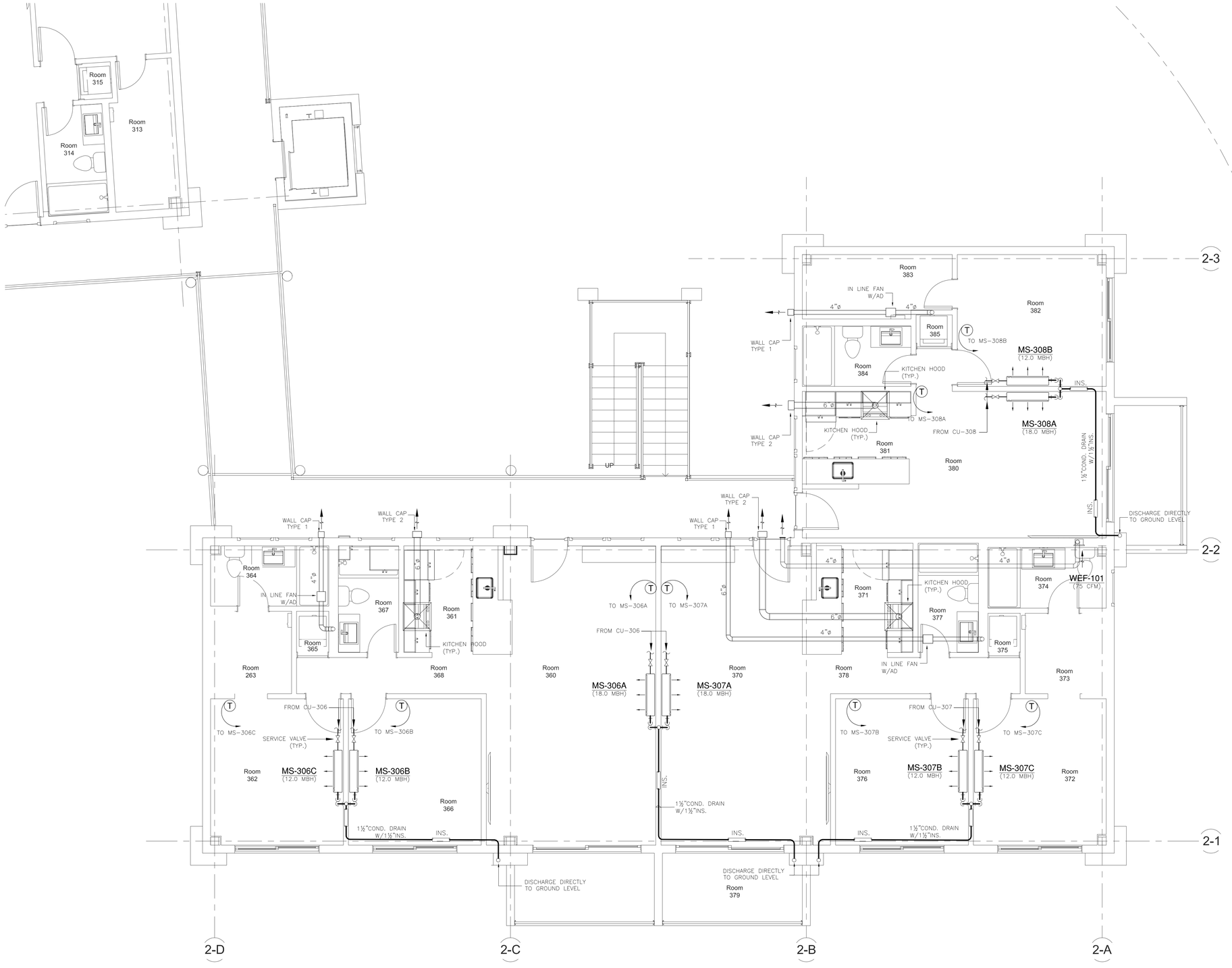

RESIDENTIAL LEVEL BUILDING 2
AIR CONDITIONING PLAN

SCALE: 1/4"=1'-0"

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VIHFA - MIXED USE DEVELOPMENT
RESIDENTIAL LEVEL BLDG-2
AIR CONDITIONING PLAN

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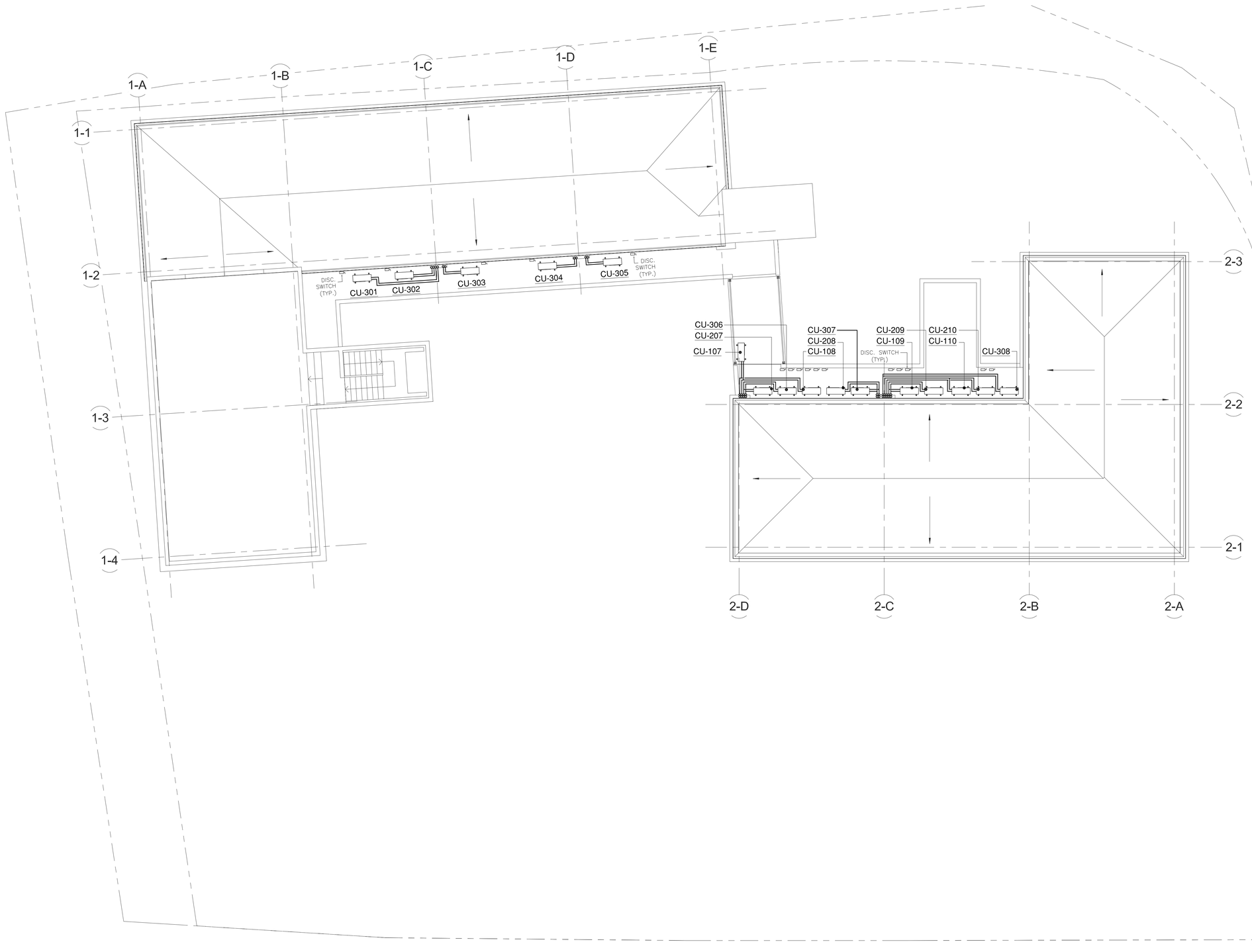

ROOF PLAN
SCALE: 1/8"=1'-0"

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VIHFA - MIXED USE DEVELOPMENT
ROOF PLAN

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AIR CONDITIONING AND VENTILATION SPECIFICATIONS

1. SCOPE

THE WORK UNDER THIS SECTION INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR PROVIDING, INSTALLING AND PUTTING INTO OPERATION THE VENTILATION AND AIR CONDITIONING SYSTEM AS SHOWN ON DRAWINGS AND SPECIFIED HEREIN.

2. GENERAL

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE ACCOMPLISHED BY EXPERIENCED PERSONNEL IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE ASHRAE AND THOSE OF THE MANUFACTURER OF THE EQUIPMENT AND MATERIALS INVOLVED. THERE SHALL BE STRICT ADHERENCE TO THE CODE REQUIREMENTS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER AND THE PREMISES SHALL BE LEFT CLEAN AND FREE FROM DEBRIS.

3. GENERAL CONDITIONS

THE GENERAL CONDITIONS OF THE ARCHITECT ARE HEREBY MADE PART OF THESE SPECIFICATIONS AND THE CONTRACTOR SHALL ASSUME ALL OBLIGATION CONTAINED THEREIN WHICH ARE APPLICABLE TO HIS WORK. IN THESE SPECIFICATIONS THE WORD "CONTRACTOR" SHALL MEAN THE AIR CONDITIONING AND VENTILATION CONTRACTOR.

4. PERMITS AND FEES

THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS OR LICENSES TO CARRY OUT THIS WORK, AND HE SHALL PAY ALL LAWFUL FEES, TAXES, ETC., IN CONNECTION WITH THE WORK. HE SHALL ARRANGE FOR ALL TESTS AND INSPECTIONS ON ANY OR ALL PARTS OF THE WORK REQUIRED BY THE AUTHORITIES AND ORGANIZATIONS HAVING JURISDICTION, AND HE SHALL PAY ALL CHARGES FOR SAME.

5. CODES, LAWS AND REGULATIONS

WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL BE IN FULL ACCORDANCE WITH THE CODES, LAWS AND REGULATIONS AND ANY OTHER STANDARD PERTINENT TO SUCH WORK. IN CASE OF ANY CONFLICT WHEREIN THE METHODS OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE CODES, LAWS AND REGULATIONS, THE CODES OR LAWS SHALL GOVERN. ANY ITEMS REQUIRED BY THE CODES OR LAWS, BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS SHALL BE FURNISHED WITHOUT EXTRA CHARGE AS IF SHOWN OR SPECIFIED. THE WORDS "CODES, LAWS AND REGULATIONS" AS USED HEREIN SHALL MEAN ALL LOCAL AND FEDERAL CODES, LAWS, ORDINANCES, STANDARDS, RULES, OR REGULATIONS OF ANY NATURE WHICH ARE IN ANY WAY PERTINENT TO, OR REGULATORY OVER THE WORK COVERED BY THIS SECTION OF THE SPECIFICATIONS.

6. EXAMINATION OF EXISTING CONDITIONS

A. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT THE SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK SO AS TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK.

B. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCES THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

7. APPROVALS

A. THE MATERIALS, WORKMANSHIP, DESIGN AND ARRANGEMENT OF ALL WORK INSTALLED UNDER THIS CONTRACT SHALL BE SUBJECTED TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

B. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO EXTRA CHARGE TO THE OWNER, IF IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

8. SHOP DRAWNGS

A. AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS, AND PRIOR TO THE DELIVERY OF ANY MATERIAL TO THE SITE, AND SUFFICIENTLY IN ADVANCE OF REQUIREMENT, TO ALLOW THE OWNER'S REPRESENTATIVE AMPLE TIME FOR CHECKING, SUBMIT FOR APPROVAL (ON PDF FORMAT) OF DETAILED, DIMENSIONED SHOP OR ERECTION DRAWINGS OR CUTS, SHOWING CONSTRUCTION, SIZE ARRANGEMENT, OPERATING CLERANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIALS AND EQUIPMENT TO BE FURNISHED. NO WORK SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF SHOP DRAWINGS OR DATA.

B. SAMPLES, DRAWINGS, SPECIFICATIONS CATALOG, ETC., SUBMITTED FOR APPROVAL SHALL BE PROPERLY LABELED INDICATING SPECIFIC SERVICE OF WHICH MATERIAL OR EQUIPMENT IS TO BE USED. SECTION AND ARTICLE NUMBER OF SPECIFICATION GOVERNING, CONTRACTOR'S NAME AND NAME OF JOB.

C. CATALOG, PAMPHLETS OR OTHER DOCUMENTS SUBMITTED TO DESCRIBE ITEMS ON WHICH APPROVAL IS BEING REQUESTED, SHALL BE SPECIFIC AND IDENTIFICATION IN CATALOG, ETC., OF THOSE SUBMITTED SHALL BE CLEARLY MADE IN INK, DATA OF GENERAL NATURE WILL NOT BE ALLOWED.

D. FAILURE BY THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN AMPLE TIME FOR CHECKING SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT TIME AND NO CLAIM FOR EXTENSION OF SUCH DEFAULT WILL BE ALLOWED.

E. SHOP DRAWINGS FOR DUCTWORK CONSTRUCTION SHOULD BE MADE IN AT LEAST 1/4"=1'-0" SCALE WITH SECTION AND DETAILS IN 3/8"=1'-0" SCALE AND THESE DRAWINGS SHOULD BE SUBMITTED FOR APPROVAL BEFORE THE FABRICATION AND THE INSTALLATION. ANY DUCTWORK INSTALLED WITHOUT APPROVAL SHALL BE MADE ON THE AIR CONDITIONING CONTRACTOR'S BEHALF.

9. DISCREPANCIES

A. WHERE ANY DISCREPANCIES EXIST BETWEEN THE DRAWNGS AND THE SPECIFICATIONS OR WITHIN THE SPECIFICATIONS OR ON THE DRAWNGS, THEY SHALL BE REFERRED TO THE OWNER'S REPRESENTATIVE, FOR DECISION AS TO THE INTENTION, AND IN EACH CASE HIS DECISION SHALL BE FINAL.

B. THE CONTRACTOR SHALL VERIFY ALL MEASUREMNTS AT THE BUILDING. NO EXTRA CHARGES WILL BE GRANTED BECAUSE OF DIFFERENCES BETWEEN ACTUAL JOB DIMENSIONS AND MEASUREMENTS INDICATED ON THE DRAWNGS. ANY DIFFERENCES WHICH MAY BE ENCOUNTERED SHALL BE SUBMITTED WITH THE WORK.

10. TESTS

A. THE CONTRACTOR SHALL CONDUCT SUCH TESTS AND ADJUSTMENTS OF EQUIPMENT AS SPECIFIED OR NECESSARY TO VERIFY THE PERFORMANCE REQUIREMNTS AND DEMONSTRATE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE THAT THE EQUIPMENT IS MECHANICALLY SOUND, THAT THE SYSTEM DELIVERS RATED OUTPUT WITHOUT OBJECTIONABLE NOISE DISTRESS OR VIBRATION AND THAT THE AUTOMATIC TEMPERATURE CONTROLS ARE FUNCTIONING PROPERLY.

B. ALL TESTS SHALL BE MADE AT A TIME ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND IN HIS PRESENCE AND AS REQUIRED BY THE GOVERMENT REGULATIONS. THE CONTRACTOR SHALL SUBMIT DATA TAKEN DURING SUCH TESTS TO THE OWNER'S REPRESENTATIVE.

C. EQUIPMENT, INSTRUMENTS AND SERVICES REQUIRED TO PERFORM TESTING SHALL BE FURNISHED BY THE CONTRACTOR AND HE SHALL PAY ALL PROFESSIONAL ENGINEERING FEES INVOLVED IN REQUIRED TESTING OF EQUIPMENT.

11. GUARANTEE

A. THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED WILL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED.

B. PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL FURNISH THE OWNER A WRITTEN GUARANTEE THAT HE WILL MAKE GOOD AT HIS OWN EXPENSE ALL DEFECTS IN MATERIALS, WORKMANSHIP OR PERFORMANCE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE, IN DEFAULT THEREOF, THE OWNER'S REPRESENTATIVE MAY HAVE SUCH WORK DONE AND CHARGE COST TO THE CONTRACTOR.

C. THE CONTRACTOR SHALL ALSO FURNISH THE OWNER A WRITTEN CERTIFICATE THAT HE WILL FURNISH FREE INSPECTION, ADJUSTMENT AND REPAIR SERVICE FOR A PERIOD OF 90 DAYS FROM DATE OF ACCEPTANCE.

12. CUTTING AND PATCHING

A. THE CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL SLEEVES AND INSERTS REQUIRED BEFORE THE FLOORS AND WALLS ARE BUILT AND SHALL BE RESPONSIBLE FOR THE COST OF PATCHING REQUIRED FOR PIPES OR DUCTS WHERE SLEEVES AND INSERTS ARE NOT INSTALLED, OR WHERE INCORRECTLY LOCATED. THE CONTRACTOR SHALL DO ALL DRILLING REQUIRED FOR THE INSTALLATION OF HANGERS SLEEVES, PIPES AND DUCTS.

B. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ANY NECESSARY HOLES IN THE ROOF, FLOORS AND WALLS FOR PASSING OF PIPE AND DUCTWORK. THIS CUTTING SHALL BE MADE WITH EXTREME CAUTION SO AS TO REDUCE DAMAGE TO A MINIMUM. ALL HOLES SHALL BE SUITABLY PATCHED AFTER INSTALLATION OF EQUIPMENT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ANY PERFORATION IN THE ROOF SHALL BE WEATHER PROOFED AND WATER TIGHT.

C. ALL HOLES OUT THROUGH CONCRETE SLABS OR ARCHES SHALL BE PUNCHED OR DRILLED FROM THE UNDERSIDE. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE AND ALL SUCH CUTTING SHALL BE DONE IN A MANNER DIRECTED BY HIM.

13. CLEANING

ALL DIRT, RUBBISH, GREASE, OR STAIN DUE TO THE OPERATION OF THE CONTRACTOR SHALL BE REMOVED FROM ALL FLOORS, WALLS, FIXTURES, EQUIPMENT, ETC., BY HIM AND THE PREMISES LEFT IN PERFECT CONDITION AS FAR AS HIS WORK IS CONCERNED. UNLESS OTHERWISE SPECIFIED, ALL MECHANICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL SET AND CONNECTED, READY FOR OPERATION, AND SUCH EQUIPMENT SHALL BE CLEANED, LEAVING THE BUILDING READY FOR OCCUPANCY. ANY EQUIPMENT THAT CANNOT BE RESTORED TO ITS ORIGINAL APPEARANCE BY CLEANING, SHALL BE PAINTED AT THE EXPENSE OF THE CONTRACTOR.

14. ELECTRICAL WIRING AND MOTORS

A. CONTROL WIRING AND CONDUIT SHALL BE INCLUDED AS A PART OF THIS CONTRACT EXCEPT THAT WHICH IS PART OF THE INTERNAL WIRING OF THE MOTOR CONTROL CENTERS.

B. THE ELECTRICAL CONTRACTOR SHALL TERMINATE HIS WORK AT THE POINT INDICATED IN THE PLANS AND SHALL SUPPLY AND INSTALL ONLY THOSE ITEMS INDICATED ON THE ELECTRICAL DRAWINGS. THE AIR CONDITIONING CONTRACTOR SHALL SUPPLY AND INSTALL THOSE PARTS OF THE ELECTRICAL WIRING INDICATED IN THE AIR CONDITIONING PLANS AND SPECIFICATIONS.

C. THE AIR CONDITIONING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION OF ALL MECHANICAL EQUIPMENT TO THE POWER SOURCE SUPPLIED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL BRING POWER WIRING ORIGINATING AT THE DISCONNECT SWITCHES OR JUNCTION BOXES SHOWN ON THE ELECTRICAL DRAWNGS AND RUNNING TO THE EQUIPMENT.

D. THE AIR CONDITONING CONTRACTOR CAN REQUEST FROM THE ELECTRICAL CONTRACTOR THE CONNECTION OF THE EQUIPMENT AND CONTROL WIRING AND CONDUIT AND SHALL SUPERVISE THEM. THE START UP OF ANY MECHANICAL EQUIPMENT SHALL BE RESPONSABILITY OF THE AIR CONDITIONING CONTRACTOR AND SHALL ALWAYS BE DONE BY HIM.

REFRIGERANT PIPING INSTALLATION NOTES

1. ALL PIPING SHALL BE TYPE ACR, COPPER HARD DRAWN ASTM B 280. USE SILVER TO SOLDERING JOINTS AND FLOW OF DRY NITROGEN THROUGH THE PIPING SYSTEM TO PREVENT FORMATION OF COPPER OXIDE. ALL ELBOWS SHALL BE LONG RADIUS TYPE.
2. FOR UNDERGROUND INSTALLATION, THE REFRIGERANT LINES SHALL RUNS INSIDE OF A PVC PIPE WITH THE PROPER DIAMETER. SEALED BOTH ENDS TO PREVENT THE WATER AND RODENTS INCOMING.
3. UNIT MANUFACTURER WILL SUPPLY THERMOSTATIC EXPANSION VALVE AND THE LIQUID LINE SOLENOID VALVE FOR FIELD INSTALLATION.
4. AIR CONDITIONING CONTRACTOR SHALL SUPPLY AND INSTALL THE SIGHTGLASS / MOISTURE INDICATORS AND FILTER DRYERS OF LINE WITH SOLDERED CONNECTIONS.
5. PROVIDE REFRIGERANT TRAP AT THE BOTTOM OF EACH RISER.
6. SUCTION REFRIGERANT LINE SHALL BE INSULATED WITH 3/4" CLOSED CELL FLEXIBLE FOAM INSULATION, EQUAL TO K-FLEX OR ARMAFLEX. FOR OUTDOOR LINES, SHALL BE COVERED WITH 16 GAUGE ALUMINUM JACKET.
7. ALL REF. LINES SHALL RUNS OVER UNI-STRUST ELEMENTS (EVERY 4'-0") TO AVOID ANY CONTACT BETWEEN LINES AND ROOF.
8. PROVIDE PVC PIPE TO ENCLOSE THE REF. LINES WHEN PASS THRU A WALL TO AVOID DIRECT CONTACT.
9. THE REFRIGERATION LINES INSTALLATION SHALL COMPLY WITH ALL FEDERAL AND STATE REGULATIONS.
10. ALL OUTDOOR CONTROL WIRING SHALL BE RUN IN A PVC PIPE.
11. FOR VRF SYSTEMS, THE CONTRACTOR SHALL FOLLOW AND COMPLY WITH ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SHALL BE DONE BY CERTIFIED INSTALLERS. PROVIDE THE SYSTEM'S PERFORMANCE ANALYSISS PRIOR TO ORDER THE EQUIPMENT AND THE SUPPLIER EQUIPMENT START-UP REPORT AT THE END OF THE PROJECT. BOTH DOCUMENTS DONE BY EQUIPMENT SUPPLIER.
12. FOR VRF SYSTEMS, PROVIDE SHUT-OFF VALVES TO EACH EVAPORATOR UNIT.

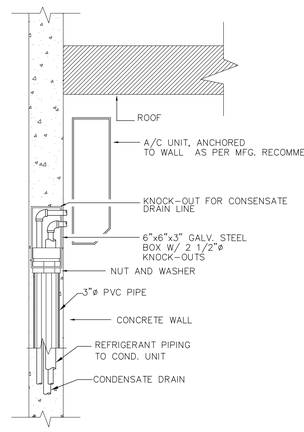
NOTE ON OUTSIDE EQUIPMENT ANCHORING.

ALL EQUIPMENT MOUNTED ON THE ROOF OR EXPOSED TO THE EXTERIOR SHALL BE WIND BRACED AGAINST OVERTURNING FROM WINDS OF 145 MPH AND AS PER THE INTERNATIONAL BUILDING CODE AND THE INTERNATIONAL MECHANICAL CODE.

VRF EQUIPMENT SCHEDULE

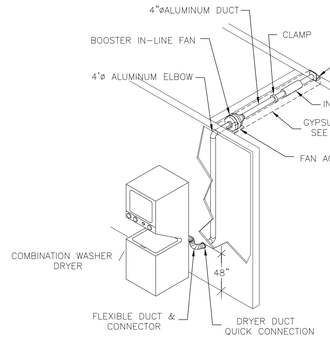
TAG	SERVICE	CAPACITY	V-PH-C	POWER	MFG	MODEL	TYPE	UNIT NO.	LOCATION	CAPACITY	KW	MCA/MCCB	V-PH-CY	M.F.G.	MODEL
MS-301A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-301	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-301B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-301C	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-302A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-302	HALL ROOF	3.5		29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-302B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-302C	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-303A	LIVING ROOM	24.0 MBH	208/230 1-60	60 W	SAMSUNG	AM024KNQDCH/A2	HIGHWALL	CU-303	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-303B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-304A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-304	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-304B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-305A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-305	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-305B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-306A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-306	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-306B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-306C	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-307A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-307	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-307B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012KNQDCH/A2	HIGHWALL								
MS-308A	LIVING ROOM	18.0 MBH	208/230 1-60	55 W	SAMSUNG	AM018KNQDCH/A2	HIGHWALL	CU-308	HALL ROOF	3.5	–	29.0 / 50.0	1/208-230/60	SAMSUNG	AM048MXMDCH/AA
MS-308B	BEDROOM	12.0 MBH	208/230 1-60	42 W	SAMSUNG	AM012HNQDCH/AA	HIGHWALL								

NOTES:
1. PROVIDE A ROOM CONTROLLER FOR EACH INDOOR UNIT AND A CENTRALIZED CONTROLLER TO MONITORING AND SCHEDULING THE INDOOR AND OUTDOOR UNITS.



REFRIGERANT LINE SLEEVE DETAIL

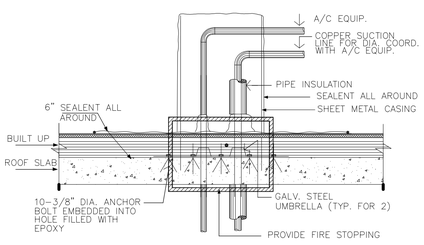
NOT TO SCALE



DRYER EXHAUST DUCT INSTALLATION DETAIL

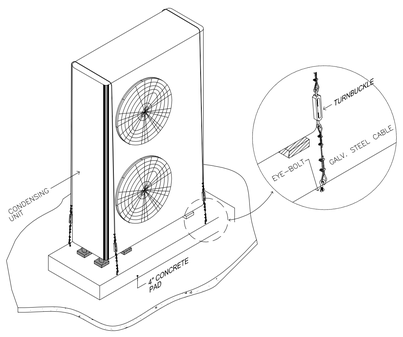
NOT TO SCALE

EXHAUST DUCT EQUIPMENT SCHEDULE		
DESCRIPTION	MFG.	MODEL
4"ø ALUMINUM DUCT	DEFLECT-O	DP604
4"ø ALUMINUM ELBOW	DEFLECT-O	DE904
EXHAUST WALL CAP.	SEIHO	SFZ-C
INSULATION	DEFLECT-O	ID0425
BACKDRAFT DAMPER	DEFLECT-O	BD04
FLEXIBLE DUCT	DEFLECT-O	F0405B
CLAMP	DEFLECT-O	MC4
BOOSTER FAN (83W,115-1-60) INTERLOCKED TO DRYER	FANTECH	DB10



SUCTION + LIQUID COPPER LINE THRU ROOF PENETRATION

NOT TO SCALE



CONDENSING UNIT ANCHORING DETAIL

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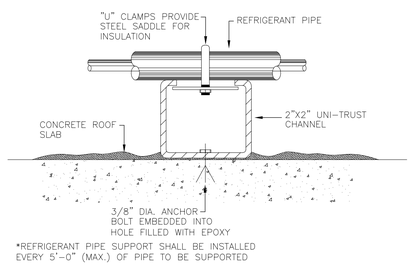
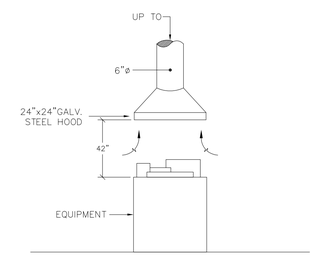


*REFRIGERANT PIPE SUPPORT SHALL BE INSTALLED EVERY 5'-0" (MAX.) OF PIPE TO BE SUPPORTED

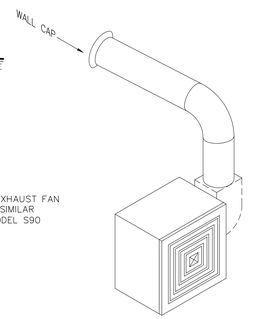
REFRIGERANTS PIPES SUPPORT

NOT TO SCALE



EXHAUST HOOD DETAILS

NOT TO SCALE



WEF-1 WALL EXHAUST FAN
EQUAL OR SIMILAR
TO BROAN MODEL S90

WALL VENTILATOR INSTALLATION DETAIL

NOT TO SCALE

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Estate Taarnebrg
Kings Quarter
St. Thomas, U.S. Virgin Islands

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VIHFA - MIXED USE DEVELOPMENT AIR CONDITIONING NOTES, SCHADULES AND DETAILS

MAC-2.01

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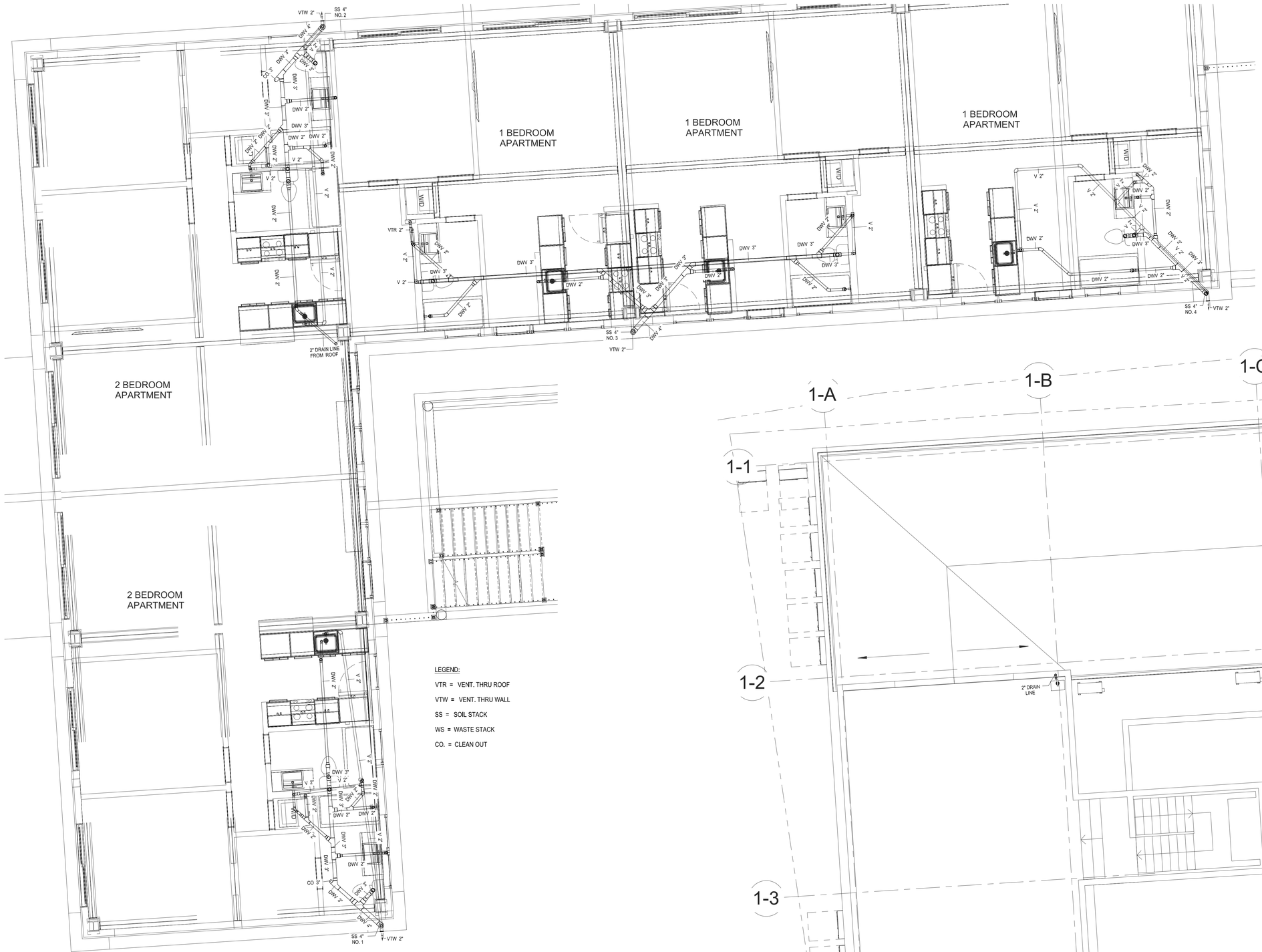

LEGEND:

VTR = VENT. THRU ROOF

VTW = VENT. THRU WALL

SS = SOIL STACK

WS = WASTE STACK

CO. = CLEAN OUT

SANITARY SUPPLY SYSTEM RESIDENTIAL LEVEL BLDG-1 PLAN

SCALE: 1/4"=1'-0"

SANITARY PARTIAL ROOF PLAN

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

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VIHFA - MIXED USE DEVELOPMENT
SANITARY SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG. 1 PLAN

MP-1.01

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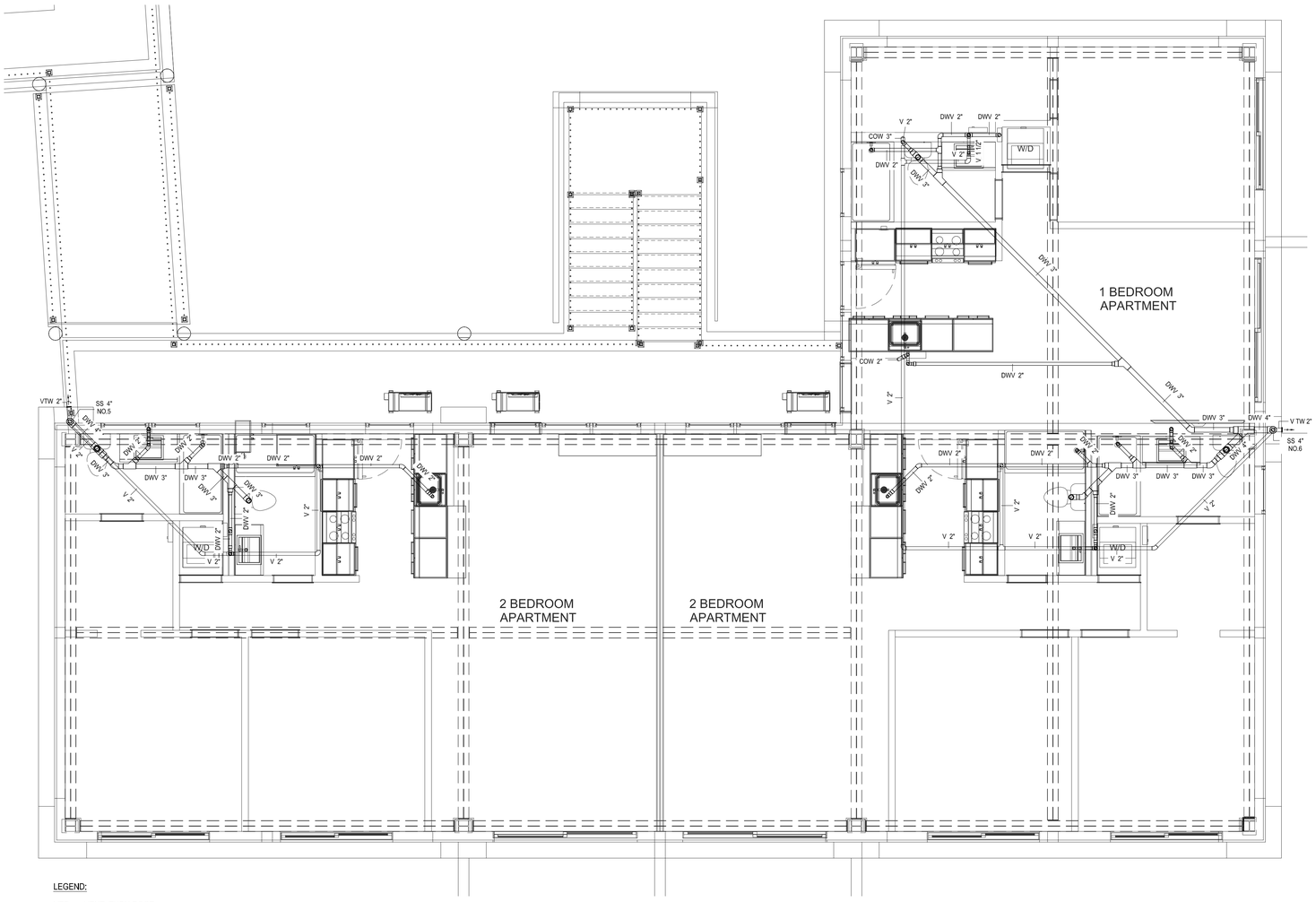

LEGEND:

VTR = VENT. THRU ROOF

VTW = VENT. THRU WALL

SS = SOIL STACK

WS = WASTE STACK

CO. = CLEAN OUT

SANITARY SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG -2 PLAN

SCALE: 1/4"=1'-0"

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VIHFA - MIXED USE DEVELOPMENT
SANITARY SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG-2 PLAN

MP-1.02

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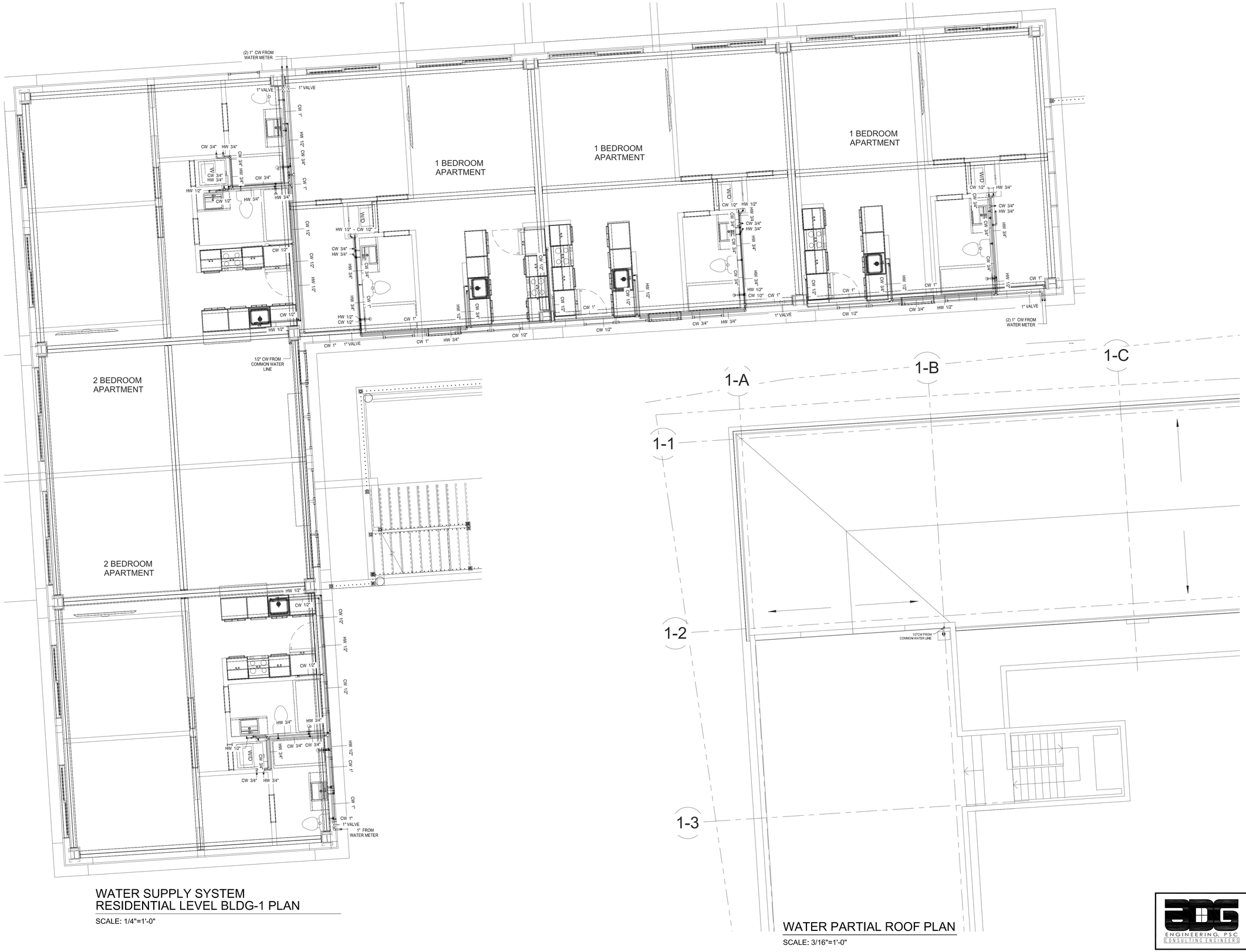

WATER SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG-1 PLAN

SCALE: 1/4"=1'-0"

WATER PARTIAL ROOF PLAN

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

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VIHFA - MIXED USE DEVELOPMENT
WATER SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG.-1 PLAN

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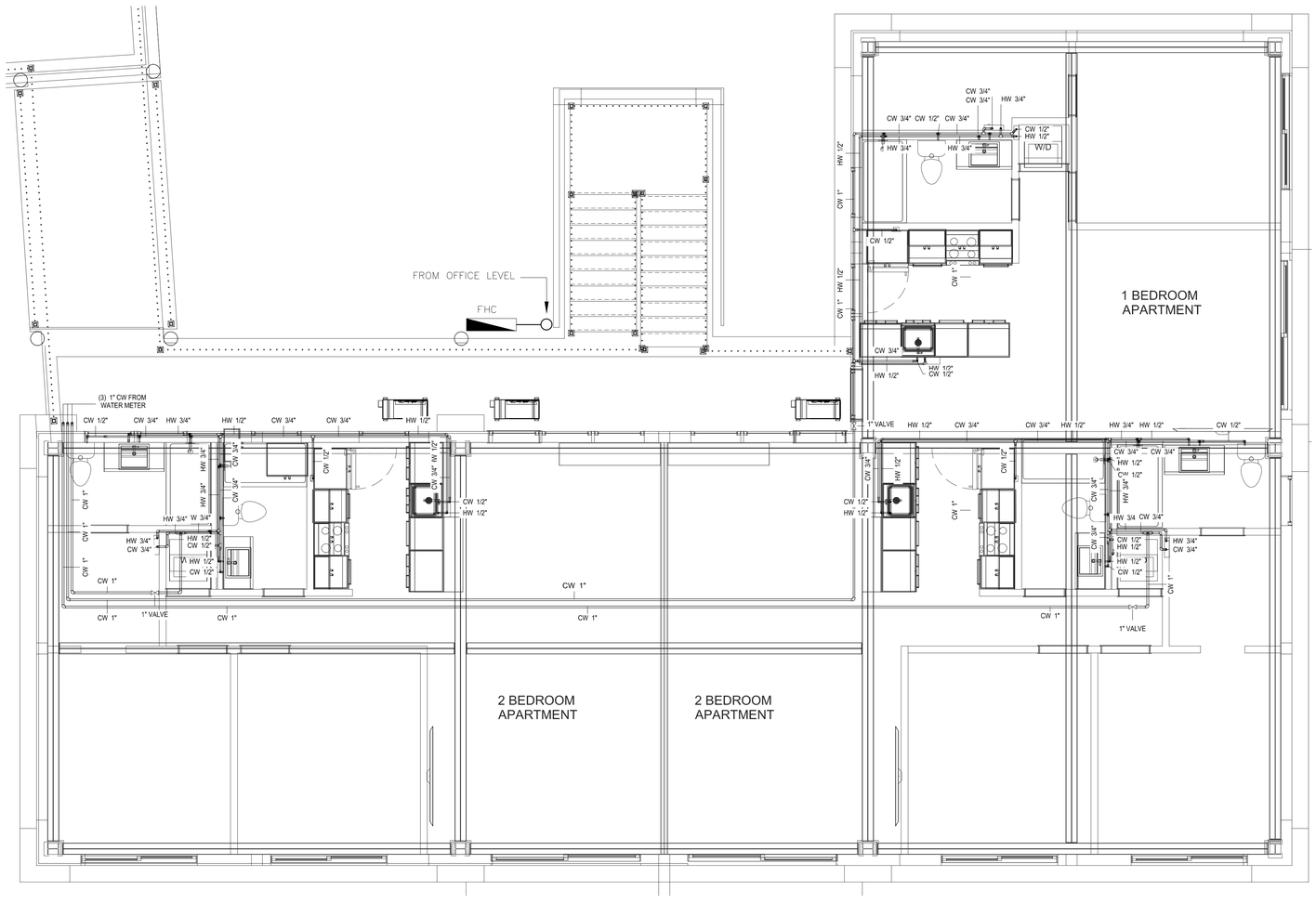

WATER SUPPLY AND SANITARY SYSTEM
RESIDENTIAL LEVEL BLDG-2 PLAN

SCALE: 1/4"=1'-0"

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VIHFA - MIXED USE DEVELOPMENT
WATER SUPPLY SYSTEM
RESIDENTIAL LEVEL BLDG -2 PLAN

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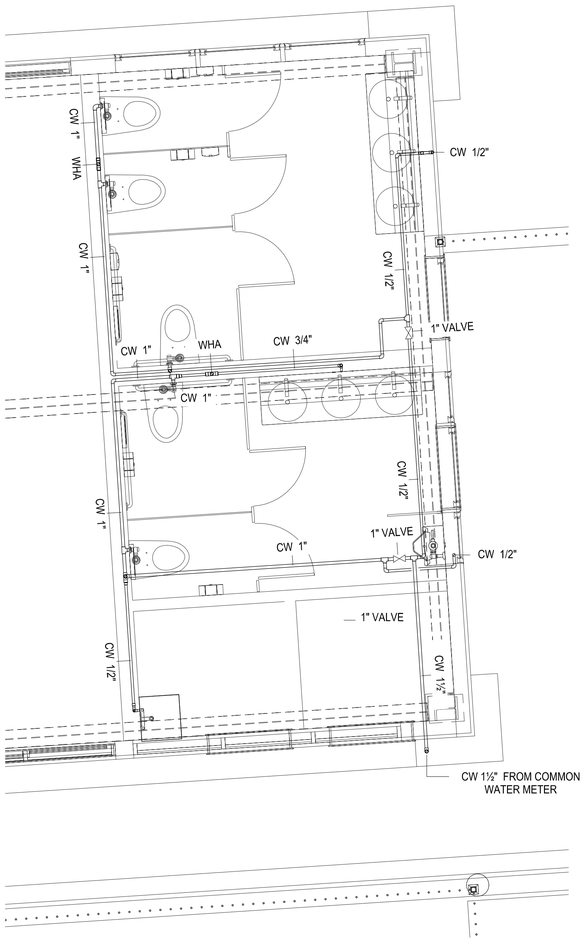

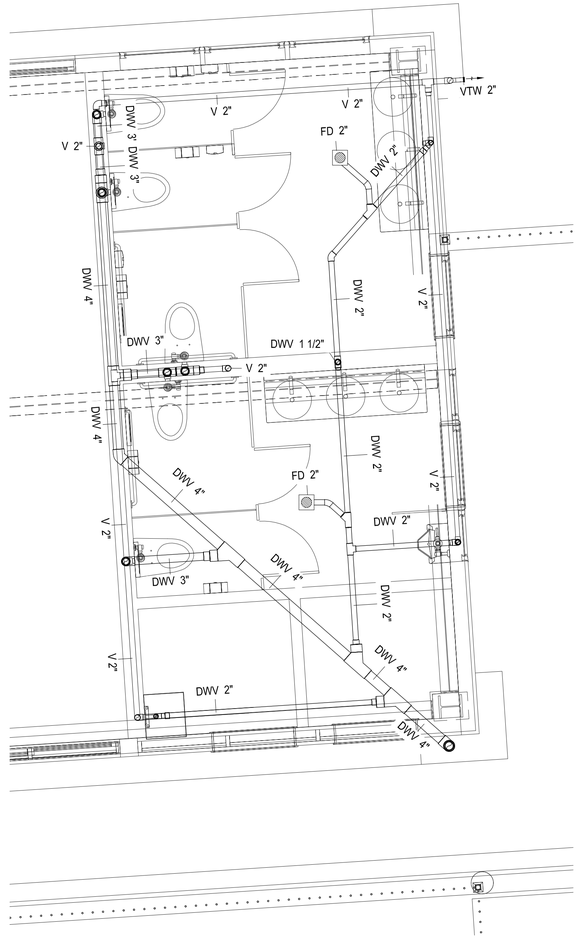

WATER SUPPLY AND SANITARY SYSTEM OFFICE LEVEL PLAN

SCALE: 3/8"=1'-0"

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VIHFA - MIXED USE DEVELOPMENT
WATER SUPPLY AND SANITARY SYSTEM
OFFICE LEVEL PLAN

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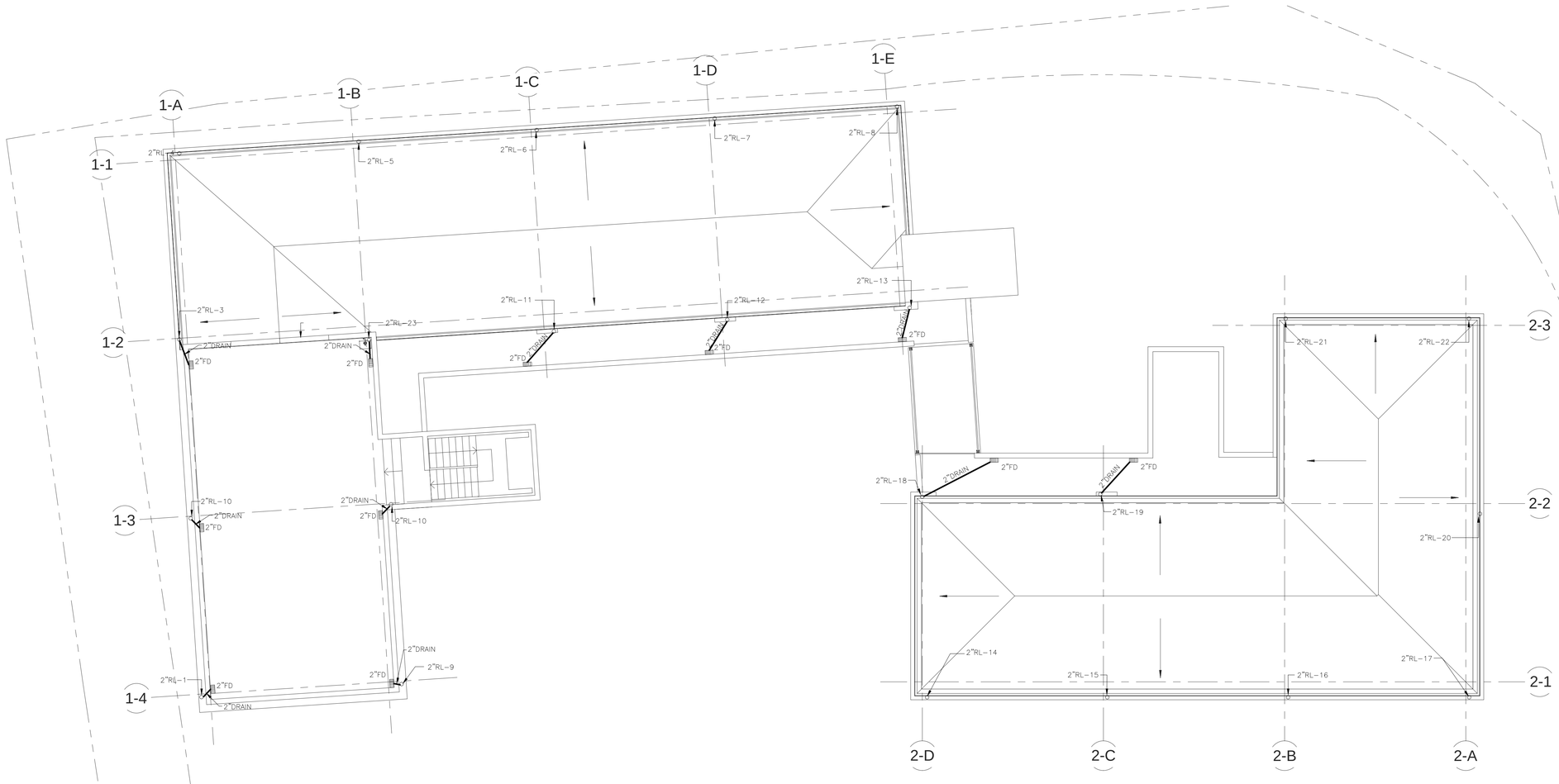

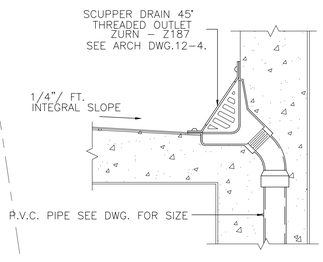

DETAIL OF ROOF DRAIN NO.1

NOT TO SCALE

ROOF PLAN

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

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VIHFA - MIXED USE DEVELOPMENT
ROOF PLAN

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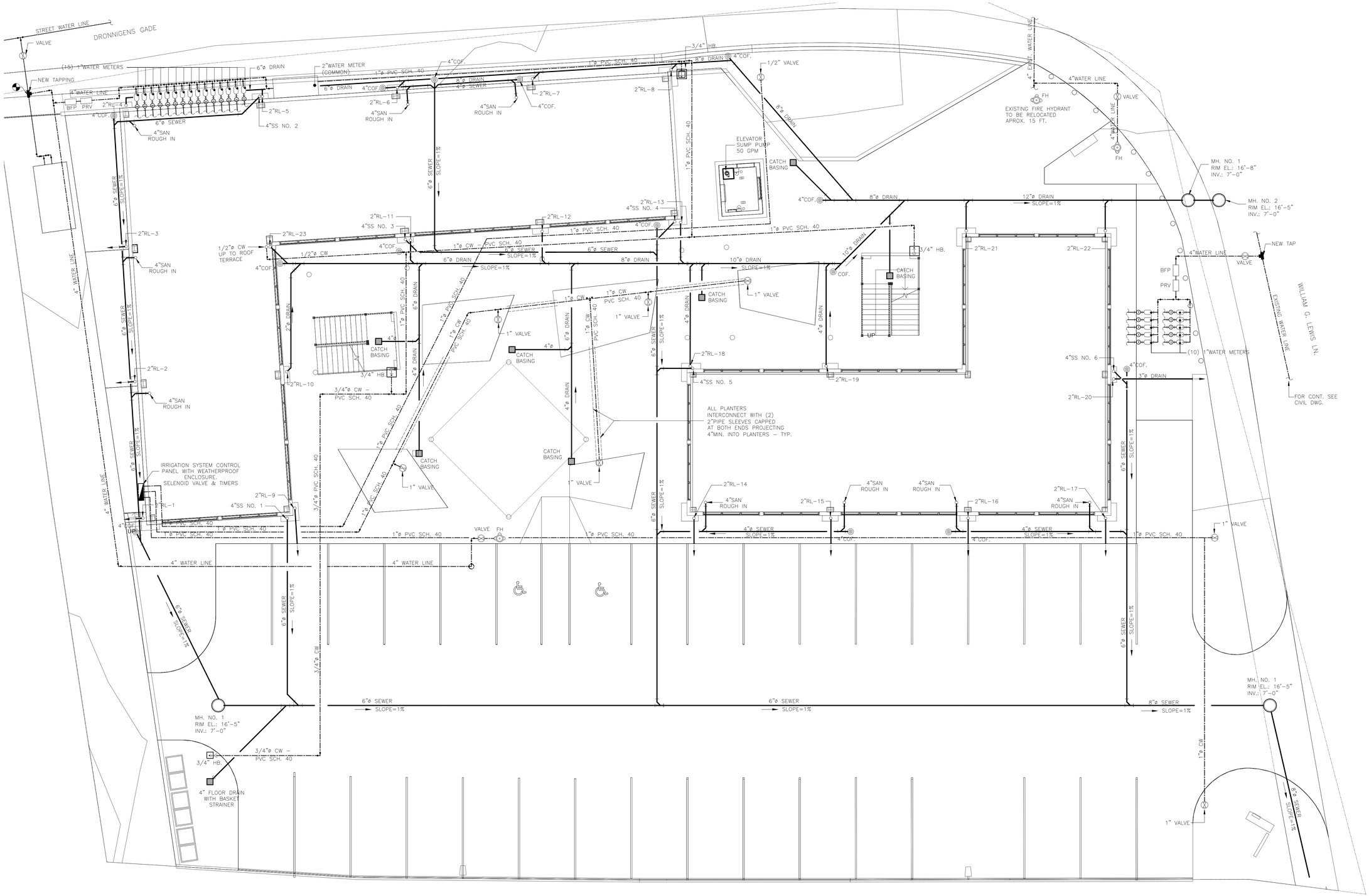

SITE PLAN DRAINAGE

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

PIPING MATERIAL SCHEDULE	
SERVICE	PIPE MATERIAL
CITY WATER — ABOVE GROUND	COPPER TYPE K — ASTM B88
SANITARY — ABOVE GROUND	PVC DWV SCH. 40 — ASTM D 2662
SANITARY SEWER — UNDER GROUND	PVC SDR 35 — ASTM D 3034
STORM WATER — ABOVE GROUND	PVC DWV SCH. 40 — ASTM D 2662
STORM WATER — UNDER GROUND	PVC SDR 35 — ASTM D 3034

LEGEND:

- WALL BOX HOSE BIBB EQUAL TO JR SMITH 5573
- IRRIGATION SOLENOID VALVE W/GREEN PLASTIC BOX
- SHUTOFF VALVE W/BOX

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REGISTERED ARCHITECT — CARLOS A. FERREYRA — 567A — U.S.V.I.

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VIHFA - MIXED USE DEVELOPMENT
SITE PLAN
OPTION A

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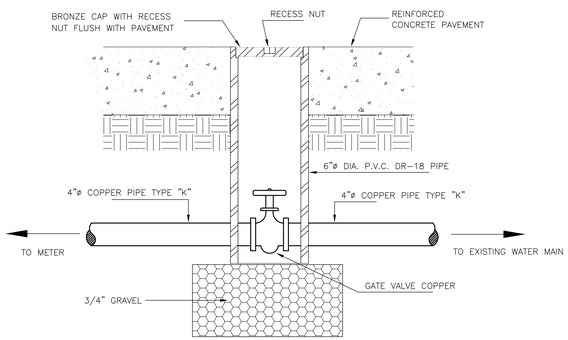
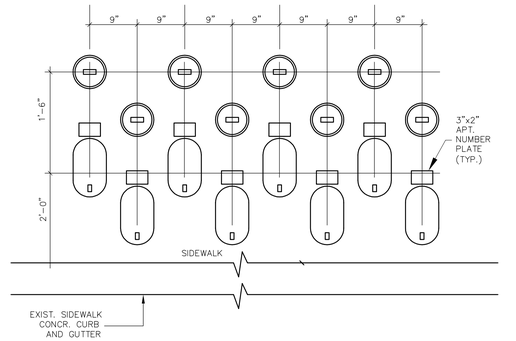


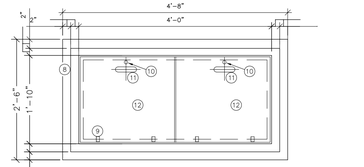
GATE VALVE DETAIL

NOT TO SCALE

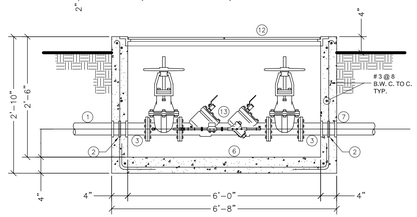


WATER METER AND GATE VALVE DISTRIBUTION DETAIL

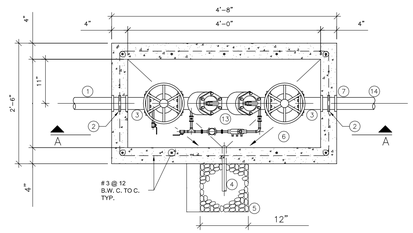
NOT TO SCALE



PLAN (CAST IRON COVER)



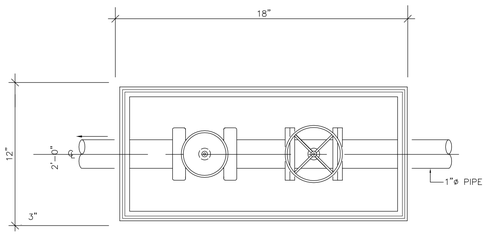
SECTION A-A



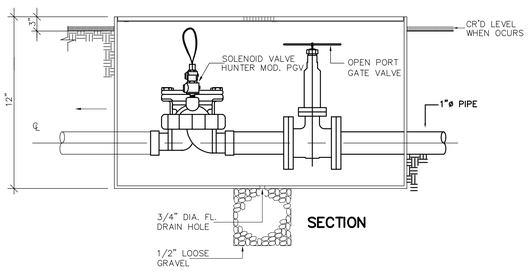
PLAN (BELOW COVER)

LEGEND:

1. 4 DIA.WATER PIPE FROM P.R.A.S.A.
2. 6" DIA. SOLID PIPE SLEEVE (SEALED) TYP. FOR TWO.
3. 4" DIA. NIPPLE COORDINATE LENGHT ON FIELD TYPICAL FOR TWO.
4. 2" DIA. x 14"L. GALV. STEEL DRAIN PIPE.
5. ONE CUBIC FEET STONE.
6. THREE FACES SLOPE 1/8" x 1'-0"L.
7. 4" DIA. PIPE TO WATER METERS
8. CAST IRON FRAME ALL AROUND.
9. INTEGRAL RAISING HINGE (TYPICAL FOR FOUR).
10. SPRING OR SNAP LOOK (COORDINATE WITH P.R.A.S.A.).
11. 2" W. x 6"L. HANDLE HOLE.
12. CAST IRON COVER.
13. 4" DIA. DOUBLE CHECK DETECTOR ASSEMBLY.
14. 2" DIA. STEEL PIPE TO SYSTEM.



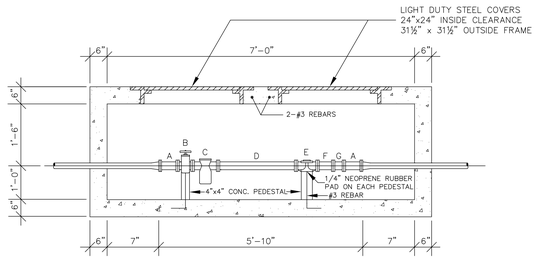
PLAN



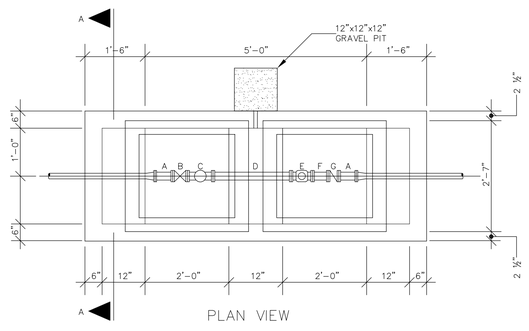
SECTION

PLASTIC VALVES BOX DETAIL

NOT TO SCALE



SECTIONAL VIEW



PLAN VIEW

4" BACKFLOW PREVENTER DETAIL

NOT TO SCALE

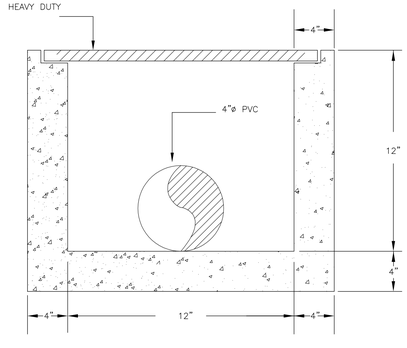
2" ø WATER METER SCHEDULE OF ITEMS		
	ITEM	LENGTH
A	MALE ADAPTER; FLARE & FL.	6 1/2"
B	GATE VALVE, NRS W/HANDLE; FL. & FL.	7"
C	BASKET STRAINER; FL. & FL.	8 1/8"
D	BRASS NIPPLE; FL. & FL.	20"
E	2" ø WATER METER; FL. & FL.	11 4/5"
F	BRASS NIPPLE; FL. & FL.	6"
G	CHECK VALVE; FL. & FL.	4"

STANDARD 2"Ø WATER METER DETAILS WITH DOUBLE STEEL COVERS

NOT TO SCALE

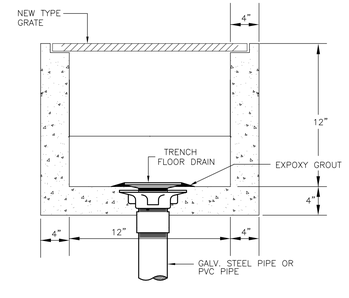
IRRIGATION GENERAL NOTES:

1. IRRIGATION DESIGN IS BASED ON A MINIMUM OF 15 GPM AND 30 PSI AT THE POINT OF CONNECTION, CONTRACTOR SHALL VERIFY ACTUAL GPM AND PSI AT WATER METER BEFORE START THE INSTALATION AND NOTYFY ANY VARIATIONS.
2. MAINLINE PIPE SHALL BE PVC SCH, 40 DIAMETER AS PER SHOWN ON DRAWINGS.
3. LATERAL LINES SHALL BE PVC-CLASS 200 OR SCH. 40, SIZES AS PER SHOWN ON DRAWINGS.
4. CONTRACTOR SHALL INSTALL THRUST BLOCKS WHERE MAINLINE CHANGES DIRECTIONS AND AT POINT OF CONNECTION TO SOLENOID VALVES.
5. ALL PIPE SHOWN ARE REPRESENTATIVE, USE APPROPRIATE DISCRETION FOR FINAL PIPE LAYOUT WITHIN PLANTINGS AREAS AND PROPERTY LIMITS.
6. CONTRACTOR SHALL VERIFY SPRAYHEAD LOCATION AND CONFIRM ADEQUATE COVERAGE,. SPRAYHEADS ALONG PAVED AREAS SHALL BE INSTALLED 2-3"FROM PAVING.
7. IF AND WHEN THE VALVE WIRES DO NOT RUN ALONG MAINLINE CONTRACTOR SHALL INSTALL THEM INSIDE PVC ELECTRICAL CONDUIT.
8. CONTRACTOR SHALL LOCATE BACKFLOW PEWVENTION DEVICE AS TO CONCEAL IT FROM CLEAR VIEW.
9. CONTRACTOR SHALL INSTALL PVC ISOLATION VALVES BEFORE EACH IRRIGATION ZONE.
10. ELECTRICAL WIRING SHALL BE DIRECT BURIAL 14 GAUGE OR BETTER.
11. AFTER IRRIGATION SYSTEM IS INSTALLED CONTRACTOR SHALL FURNISH AS-BUILT PLAN SHOWING ACTUAL LOCATION OF UNDERGROUND PIPING, SOLENOID VALVES AND ISOLATION VALVES WITH REFERENCE DIMENSIONS FOR EACH ITEM.
12. ALL PIPE DOWN SIZING SHALL BE INDICATED ON IRRIGATION PLAN.
13. ALL IRRIGATION ZONES (STATIONS) HAVE BENN DESIGNED BASED ON NO MORE THAN 38 GPM MAXIMUM COMSUPTION.
14. LOCATION OF AUTOMATIC CONTROLLER SHALL BE COORDINATED WITH THE OWNER BY THE GENERAL CONTRACTOR. OBTAIN APPROVAL OF CONTROLLER LOCATION FROM THE OWNER'S REPRESENTATIVE.



GARBAGE STATION DRAIN DETAIL

NOT TO SCALE



TRENCH DRAIN DETAIL

NOT TO SCALE

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REGISTERED ARCHITECT JOSE CARLOS A. FERREYRA 507A U.S. VIRGIN ISLANDS

PROJECT No: 1734 ISSUED 00/00/00

Parcels No. 26-A, 102, 103, 104
Estate Taarnebrg
Kings Quarter
St. Thomas, U.S. Virgin Islands

REVISIONS

#	Date

Sheet Issue : 7/06/18

VIHFA - MIXED USE DEVELOPMENT
SITE PLUMBING DETAILS

SMP-1.02

ENGINEERING, PSC
CONSULTING ENGINEERS
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The following items must be performed or provided at no cost to Otis Elevator Company ("OTIS") by the Owner or General Contractor or their agents in accordance with governing codes. The price and installation schedule of Otis is based on these jobsite conditions existing at the beginning and during installation of the elevator equipment. Failure to provide the items specified in this list will result in additional work performed by Otis beyond the scope of our contract causing installation delays. A change order will be submitted by Otis for materials and / or labor expended.

All work to be performed per the latest revision of the applicable national code and / or local code.

General Prep / Work

1. Provide any cutouts to accommodate elevator equipment (troughing, venting, and hall fixtures) along with patching and painting of walls, floors, or partitions together with finish painting of entrance doors and frames, if required.
2. Provide tractor trailer access to the building for unloading of material and an onsite storage area for elevator equipment as follows: dry and enclosed, provides roll-able access to the elevator hoistway at the ground level, located within 100 feet (30.5 meters) of the hoistway, and is larger than 25 x 20 feet (7620 mm X 6096 mm) per elevator. Any warranties provided by Otis for elevator equipment are null and void if equipment is stored in a manner other than a dry enclosed building structure.
3. Provide sufficient onsite refuse containers for the proper disposal of elevator packaging material. Should sufficient refuse containers not be provided, disposal of packaging material shall become the responsibility of the owner.

Hoistway and Pit Prep / Work

4. Prior to the start of installation, provide a dry, properly framed, enclosed and vented hoistway in accordance with all applicable codes.
5. Provide a clear plumb hoistway with variations from the size shown on the Otis layout not to exceed -0 inch / +1 inch (25 mm).
6. Install per Machine Room / Machine Space Prep / Work and Electrical Requirements.

   Provide a rough opening for and install a 3' X 7' standard fire rated interior door on one side of the hoistway, as shown on the Otis layout. The machine Space access door must not be on an outside wall.
   When determining the location of the machine space door,the dimension on the Otis layout is from the inside door edge of the jamb and not the door stop edge. Please be advised that this door location is very critical. Follow door manufacturing instructions for the different types of hoistway wall material and make the appropriate adjustments so that this door will be placed in the proper location.

   The door frame must be securely mounted to the wall to sustain a cantilevered / horizontal force exerted by the electrical disconnect(s), electrical conduit, and wiring up to an approximate 325 lb. load. Install per Machine Room / Machine Space Prep / Work and Electrical Requirements. The door hand and opening is dependent on configuration see the general contractor guide or talk to your Otis representative.
7. Furnish adequate rail bracket supports and bracket spacing as required by governing code from pit floor to top of hoistway. For steel or wood frame construction, adequate backing for a rail bracket to be installed not less than 10'-3" (3124 mm) or more than 11'-3" (3429 mm) from the top landing. Furnish separator beams where required. Rail bracket attachment supports must be exposed and flush with the clear hoistway line.

   If the floor to floor height exceeds the maximum bracket spacing allowed by the elevator code, Otis requires some form of steel support to properly attach our guide rail brackets. The maximum allowed bracket spacing is indicated in the rail force and bracket detail table on the Otis layout. Any rail bracket mounting surfaces that are not in line with the finished hoistway dimension (i.e. the clear hoistway line) may need to be extended to meet the required distance. Otis agrees to provide guidance on this matter at the appropriate time.

   If rail bracket embedded plates or inserts are provided by Otis, they shall be installed by others in accordance with Otis' documentation and instruction.

   If vertical tube steel is utilized as rail support, see the Otis layout for any specific requirements.

   When a Machine space is used, with a second floor controller / tank location, furnish adequate Tank Stand supports flush with the hoistway wall when the following hoistway construction material is used~ cmu block, steel frame, or wood. per Otis layout.

   The support can be any of the following~ header beams, steel tube, inserts, or embedded plates at locations specified as Note: When a support is provided, it should be able to withstand the force shown on Otis contract layout for seismic and non seismic condition.

   Concrete hoistways walls do not require supports for Tank stand.
8. Furnish a dry pit reinforced to sustain vertical forces on car rails and impact loads on cylinder head(s) and buffer(s). The pit must be dry and clean. The elevator pit must have a floor drain or sump pump to prevent the accumulation of water. Location to be coordinated with Otis to avoid all elevator components and access areas. In areas requiring Firefighter's Emergency Operation, a sump pump / drain shall be provided that shall have the capacity to remove a minimum of 11.4 m ^{3} / h (3,000 gal / h) per elevator (2.2.2.5, ASME A17.1-2007 / CSA B44-07). Otis recommends that the owner verify the system complies with all applicable laws and local codes.
9. Provide and install a fixed vertical iron ladder in each pit as required by governing code and located per Otis layouts, or as coordinated with Otis personnel. Ladder width and projection from wall per local code. If pit depth is greater than 9'-10" (3000 mm) [13'-9" (4191 mm) with no floor below bottom landing], a pit access door is required.
10. A.) Protection from Falls:
    As required by the Occupational Safety and Health Administration (OSHA) 1926.502 (B) (1-3), a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" (1067 mm) high, with mid-rail and kick board, and withstand 200 lbs. (90.7 kg) of vertical and horizontal pressure.

    B.) Protection from Falling Objects:
    As required by the Occupational Safety and Health Administration (OSHA) 1926.502(j), hoistway protection from falling debris and other trades materials by either:

    1.) Full entrance screening / mesh in front of all elevator entrances.

    2.) Secured / controlled access to all elevator lobbies (lock and key) with posted Notice "Only Elevator Personnel Beyond This Protection."

    Notes:
    - Items A.) and B.) can be integrated systems.
    - Hoistway barricades and screening shall be constructed, maintained, and removed by others.
11. The front entrance wall at the main landing, is not to be constructed until after all elevator equipment is installed in the hoistway (the entire front wall - CLEAR HOISTWAY WIDTH - must be open for installation). Remaining front entrance walls are not to be constructed until after door frames and sills are in place.

    The rough openings, per sizes shown on the Otis layout, are required. Prior to the completion and turnover of the elevator(s), all entrance walls must be installed and rough openings filled in complete to maintain fire rated hoistway requirements.
12. Provide adequate support at all fastening points of each entrance. Provide plumb vertical surfaces for entrances and sill supports, one above the other, and square with the hoistway. For 4'-0" (1219 mm) and 4'-6" (1372 mm) two speed door arrangements, an additional hoistway attachment point is required for an auxiliary support bracket under the sill assembly in the center of the clear door opening. Finish floor and grout, if required, between door frames to sill line. A horizontal support is to be provided 1 foot (305 mm) above the clear opening at the top landing to support the door frame assembly. If floor heights exceed 12'-0" (3658 mm), a horizontal support is to be provided 1 foot (305 mm) above the clear opening. If transoms are required, the support would be 1 foot (305 mm) above the transom height.
13. Provide and install a steel safety beam per elevator, from side wall to side wall at the top of the hoistway, capable of withstanding a maximum net live load of 5000 lb. (2268 kg). Otis requires 2" (51 mm) clear above the beam. Beam must be removed before car is placed in operation if it infringes on required clearance.
14. Glass used in hoistway construction must block 98% or more of incident full spectrum ultraviolet radiation for the full height of the hoistway.
15. If an emergency door in a blind hoistway is required, provide an outward swinging single section type door with door closer and a self closing barrier per ASME A17.1-2007, section 2.11.1.2. Contact your local Otis personnel for a detailed drawing (AAA26900D_FMI), showing Otis specific requirements.

Machine Room / Machine Space Prep / Work

16. When a machine room is used, provide a suitable dry machine room with access and ventilation in accordance with all applicable codes and regulations. The machine room is to be maintained at a temperature between 60°F (15.5°C) and 100°F (38°C). When a machine space is used, the machine space will be in the hoistway behind the metal door installed per Hoistway and Pit Prep / Work above with ventilation in accordance with all applicable codes and regulations. The machine space is to be maintained at a temperature between 32°F (0°C) and 104°F (40°C). Relative humidity not to exceed 95% non-condensing. Local codes may require tighter temperature ranges. The temperature and humidity range shall be permanently posted in the machine room / machine space. Please check with your local code authority for the exact requirements in your area.
17. Machine room and Machine space doors to meet code compliant fire resistive construction. When a machine room is used, provide a self closing (local building code dependent) and self locking door with a group 2 locking device. When a machine space is used, provide a standard 3' x 7' self closing (local building code dependent) and self locking metal door with a group 2 locking device in the hoistway per Otis layout. In addition, ensure that all air gaps around the machine room / machine space door are sealed (i.e. threshold, weather stripping, etc.). Self closing mechanism cannot protrude into the machine space at any time.
    The machine space door knob shall have a blank plate on the hoistway side of the door.
18. When a machine space is used, Otis will provide a metal shroud and metal shroud cover to be mounted on the hoistway side of the machine space door frame per Otis layout. The metal shroud will accommodate the mounting of the main electrical feeder system, fused disconnect switch or circuit breaker for car lighting, and the convenience outlet. Conduit knockouts through the metal shroud cover will be required as needed to access the disconnect switches or circuit breakers, and convenience outlet. See Electrical Requirements.

    [Note: Consult with the Otis Representative at your location concerning the metal shroud mentioned above for machine space applications.]
19. [Refers to elevators with remote machine rooms requiring buried piping and wire way] Provide trenching and backfilling as necessary to accommodate remote machine room conditions.

Fire Prevention Prep / Work

20. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes and rail bracket fastenings penetrate into the hoistway walls).
21. In the United States, provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.
    a. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing.
    b. For each group of elevators, provide a normally closed contact representing all smoke detectors located in lobbies, hoistways, or machine rooms / machine space, but not the smoke detector at the designated return landing (see above) or the smoke detectors as described in i. and ii. below:
    i. If a smoke detector is located in the hoistway at or below the lower of the two recall landings, it shall be wired to activate the same normally closed contact as the smoke detector located in the lobby at the lower of the two recall landings.
    ii. If machine rooms / machine space is located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing.
    c. Requirements for intermittently illuminating the fire hat visual signal in the car operating panel, either i. or ii. apply.
    i. For a single unit or for a group of elevators having one common machine room / machine space and one common hoistway, provide one additional normally closed contact representing the machine room / machine space and hoistway smoke detectors.
    ii. If the group contains more than one hoistway and hoistway smoke detectors are installed, or if the group has more than one machine room / machine space, provide one normally closed contact for each elevator. The contact is to represent the smoke detector in the machine room / machine space for that particular elevator, and any smoke detectors in the hoistway containing that particular elevator.
22. In Canada, provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated return landing.
    a. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing and, if provided, from the sensing device in the pit.
    b. For each group of elevators, provide a normally closed contact representing all smoke detectors located in elevator lobbies, but not the smoke detector at the designated return landing (see above) and, if provided, from the sensing device in the top of the hoistway.
    c. For each group of elevators, provide a normally closed contact representing the smoke detector in the elevator machine room / machine space(s).
    d. If the machine room / machine space is located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landings. When a machine room is used, for each group of elevators, provide in addition to the above, a normally closed contact representing the sensing devices in the machine room and, if provided, in the pit or at the top of the hoistway (for the Fire Hat in the Elevator).
23. In the United States, if sprinklers are installed in the hoistway or machine room / machine space(s), a means to automatically disconnect the mainline power supply to the affected elevator and any other power supplies used to move the elevator, upon or prior to the application of water is required (unless prohibited by local code). Smoke detectors shall not be used to activate sprinklers in hoistways or machine rooms / machine spaces or to disconnect the mainline power supply.
24. Provide a Class "ABC" fire extinguisher, minimum 10 lbs., in the machine room or in a location convenient to the machine space.

Electrical Requirements

25. All 125 volt, 15 or 20 ampere single phase receptacles installed in pits, machinery spaces, and elevator car tops shall be of ground fault circuit interrupter (GCFI) type. All 125 volt, 15 or 20 ampere single phase receptacles installed in machine rooms / machine spaces shall have GFCI protection. A dedicated single phase receptacle supplying a permanently installed pit sump pump shall not require GFCI protection. (NEC 620-85 or CEC Rule
26. Furnish a dedicated, balanced, 3 phase, 3 wire electrical feeder system with a separate solidly grounded equipment grounding conductor terminating in the machine room / machine space. Size of the feeders and grounding conductor to suit elevator power characteristics. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to the controller (NEC 620-51, 620-61(D), and 620-62 or CEC Rule 38-013(2)(a)) must be provided. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current as listed in the Otis Confirmation of Power Supply form.

    [Note: If the 3 phase power to the control system is simulated (not from the utility), by use of a phase converter system, the phase converter must have all three phases balanced. Digital phase converter is required.]

    Furnish a separate 120 volt, 15 ampere single phase branch circuit and SPST fused disconnect switch or circuit breaker capable of being locked in the open position to supply the car lights, receptacles, auxiliary lighting power source, and ventilation on each car in compliance with the National Electrical Code must be provided.

    When a machine room is used and where practical, disconnects shall be located adjacent to the door of the machine room enclosure. When a machine space is used, disconnects or circuit breakers shall be located behind the door of the machine space per Otis layout.

    Branch circuit wiring to each controller (NEC 620-53 or CEC Rule 38-053) must be provided.

    For machine room applications, a convenience outlet and a suitable light, of not less than 200 Lux (19FC) as measured at floor level must be provided in the machine room with a light switch located within 18" (456 mm) of lock jamb side of machine room door.

    For machine space applications a convenience outlet located inside the machine space door and a suitable light located outside the machine space door on the lock jamb side, of not less than 200 Lux (19FC) as measured at floor level must be provided per Otis layout. The machine space light circuit shall be a dedicated circuit separate from other lighting circuits. (NEC 620-23 or CEC Rule 38-023)

    A convenience outlet and light fixture of not less than 100 Lux (10FC) as measured at the pit floor level must be in the pit with a light switch located adjacent to the pit access door (NEC 620-24 or CEC Rule 38-024). The light bulb(s) shall be externally guarded to prevent contact and accidental breakage.

    [Note: Consult with the Otis Construction Superintendent at your location concerning the following paragraph.]

    To meet the date upon which the elevators are to be turned over, the permanent 3 phase feeder system and protective devices must be installed and power available prior to the start of elevator installation.
27. Provide 120 volt, 20 ampere power for light, tools, hoist, etc. to the hoistway during installation. Source must be within 75 feet (22.86 M) of the hoistway.
28. Provide one (1) dedicated outside telephone line per elevator car to the elevator machine room / machine space(s), and terminated at the controller designated by the Otis construction superintendent. Reference the A17.1 / CSA-B44 code and the Otis Confirmation of Power Supply for specific requirements.
29. [Optional for Elevators with an intra building Intercom] Provide a separate 120 volt, 15 ampere, single phase power supply with fused SPST disconnect switch or circuit breaker located as required for intercommunicating system power supply. Circuit to be arranged for feeding from the building emergency lighting supply if provided. Conduit and wiring for remotely located intercommunicating stations must be provided.
30. [Optional for Elevators with a Battery Powered Emergency Return Unit (ERU)] Provide the disconnecting means required by the National Electrical Code (NEC) or Canadian Electrical Code (CEC) with an auxiliary contact and wiring to the controller. The auxiliary contact is to be positively open when the main disconnecting means is open. The auxiliary contact shall cause the ERU power source to be disconnected from its load when the disconnecting means is in the open position. Size of main contacts to suit elevator power characteristics.

    [Additional ERU Requirement]

    In the United States, heat sensors used to automatically disconnect the mainline power supply prior to the application of water from sprinklers shall be provided with a normally closed contact with wiring from the sensing device to a controller designated by Otis. The normally closed contact shall be closed when the heat sensor is not activated and shall be open when the heat sensor is activated.
31. [Optional for Installations with Emergency (Standby) Power] Provide the emergency (standby) power unit and means for starting it, and deliver to the elevator via disconnect switches in the machine room / machine space, sufficient power to operate one or more elevators at a time at full rated speed and rated load.

    An automatic Power Transfer Switch is required for each power feeder to monitor both Normal and Emergency (Standby) Power conditions and to perform the transfer from one to the other. Switch to have two sets of normally closed dry contacts, one to be open when the switch is in the Emergency (Standby) Power position, the other to open upon initiation of power transfer and to close when transfer is complete. Switch to have an inhibit function which will delay transfer to Normal and / or Emergency (Standby) Power by an adjustable period of 0 - 300 seconds. Switch shall have a Phase Monitor feature, which prohibits the transfer of power between "live" sources unless the sources are in phase with each other. If a Shunt Trip device is provided, an additional Normally Closed contact is required from the Emergency (Standby) Power source.

    Emergency (standby) power system shall be connected to the 125 volt power circuit as noted in A.3 of the Confirmation of Power Supply for the branch circuit supplying the car lights, car top receptacle, auxiliary car lighting power source and car ventilation.

You agree to indemnify and save Otis harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.

HydroFit ®	2100 # 100 F.P.M.
CAR TYPE = PASSENGER	MACHINE LOCATION = MRL
SEISMIC = ZONE4	GLASS BACK CAR = Y
Otis — A United Technologies Company	
REVISION DATE: 12/12/2017	SHEET 1 OF 2
DWG. NO.: HYD 2110-MRL	
BUILDING	
LOCATION	
CONT. WITH	
OWNER	
ARCHT.	
CONTRACT NO.	

NOTE - DO NOT SCALE THIS DRAWING

REFER TO DWG'S. NO.

EXPRESS DRAW:

Access to the third Floor (Residential Level) on stairs and elevator shall be through a Key Fob (key tag electronic keyless entry)

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PROJECT No: 1734 ISSUED:00/00/00

Parcels No. 26-A, 102, 103, 104
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REVISIONS

#	Date

Sheet Issue Date: 06/18/18

VIHFA - MIXED USE DEVELOPMENT

ELEVATOR

MX-2.1

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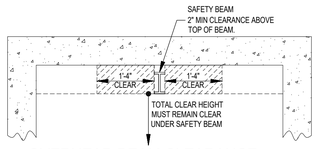
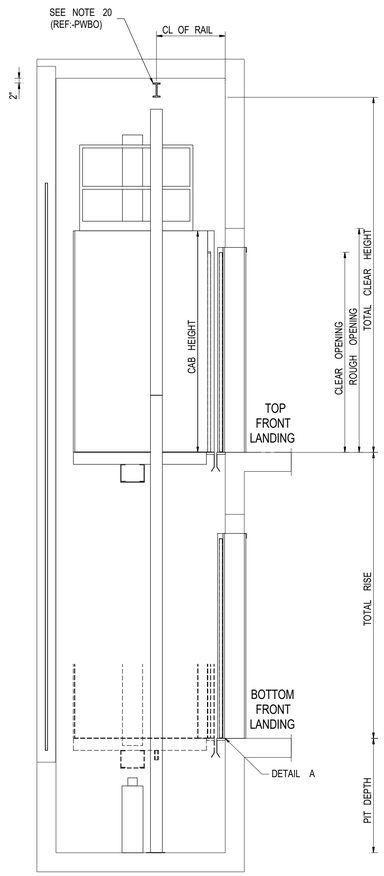


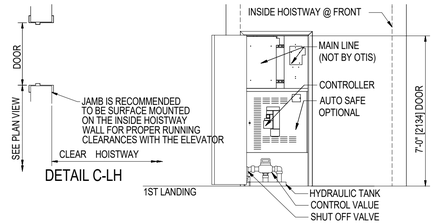
OVERHEAD BEAM CLEARANCE

SEE NOTE 13 ON PWBO SHEET



SECTIONAL ELEVATION

FOR MAX. SPACING BETWEEN INSERTS SEE RAIL FORCE DETAIL

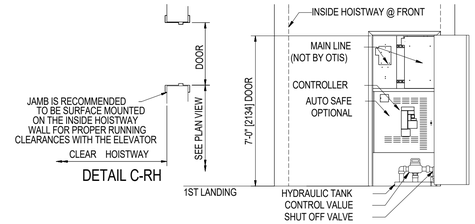


DETAIL C-LH

CONTROLLER / MAIN LINE / TANK IN PIT @ BOTTOM LANDING REQUIREMENTS

NOTE 18A
DOOR MUST BE LOCATED ON AN INTERIOR WALL OF THE BUILDING, IT CANNOT BE OPENED TO THE OUTSIDE OF A BUILDING.

NOTE 18B
CONTACT OTIS REPRESENTATIVE FOR MRL ACCESS DOOR LOCATION GUIDELINE DRAWINGS.

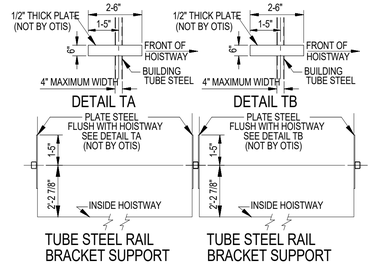


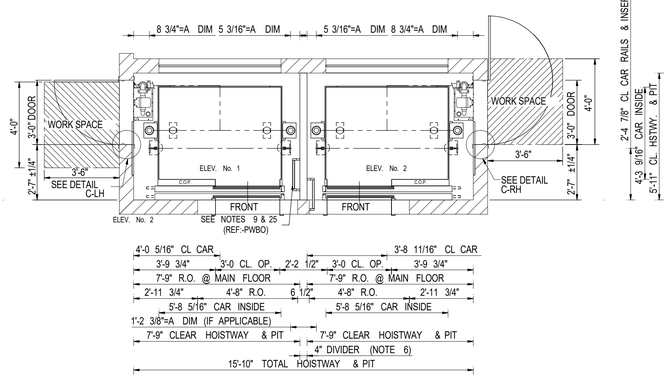
DETAIL C-RH

CONTROLLER / MAIN LINE / TANK IN PIT @ BOTTOM LANDING REQUIREMENTS

NOTE 18A
DOOR MUST BE LOCATED ON AN INTERIOR WALL OF THE BUILDING, IT CANNOT BE OPENED TO THE OUTSIDE OF A BUILDING.

NOTE 18B
CONTACT OTIS REPRESENTATIVE FOR MRL ACCESS DOOR LOCATION GUIDELINE DRAWINGS.





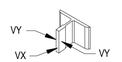
PLAN VIEW

DETAIL "A"
SILL SUPPORT

ADEQUATE SUPPORT AT ALL FASTENING POINTS OF ENTRANCE ASSEMBLY REQUIRED, MUST WITHSTAND A HORIZONTAL PULL-OUT FORCE OF 140 LBS. @ EA. FASTENING POINT (8 @ EA. ENTRANCE) INCLUDING SUPPORT FOR CENTER SILL SUPPORT BRACKET (NOT BY OTIS).

	1 STAGE CAB HEIGHT		2 STAGE CAB HEIGHT	
	7'-9"	9'-9"	7'-9"	9'-9"
MAX. "TOTAL RISE" WITH 4'-0" PIT	13'-5"		21'-6"	
MAX. "TOTAL RISE" WITH 5'-0" PIT	14'-5"		26'-9"	
MAX. "TOTAL RISE" WITH 6'-0" PIT	15'-5"		NA	
MIN. "TOTAL OVERHEAD"	12'-0"	14'-0"	12'-5"	14'-5"
MAX. "TOTAL OVERHEAD"	2'-0" GREATER THAN THE MINIMUM OVERHEAD			

STANDARD WORKING RANGES



RAIL FORCE DETAIL
*THIS FORCE INCLUDES IMPACT
SEE NOTES 8 & 9

CAR	VX	2606 lbs
	VY	1303 lbs
*EACH BUFFER IMPACT LOAD		10413
*EACH CYLINDER IMPACT LOAD		8698
CAR MAXIMUM BRACKET SPACING		14'-0"

HydroFit ® 2100 # 100 F.P.M.

CAR TYPE = PASSENGER
SEISMIC = ZONE4
MACHINE LOCATION = MRL
GLASS BACK CAR = Y

Otis
A United Technologies Company

REVISION DATE: 12/12/2017 | SHEET 2 OF 2

DWG. NO.: HYD 2110-MRL

BUILDING

LOCATION

CONT. WITH

OWNER

ARCHT.

CONTRACT NO.

EXPRESS DRAW:

NOTE - DO NOT SCALE THIS DRAWING

REFER TO DWG'S. NO.

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REGISTERED ARCHITECT CARLOS A FERREYRA SOTA U.S. VIRGIN ISLANDS

PROJECT No: 1734 ISSUED:00/00/00

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REVISIONS

#	Date

Sheet Issue Date: 06/18/18

VIHFA - MIXED USE DEVELOPMENT

ELEVATOR

MX-2.2

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