

PLUMBING SPECIFICATIONS

- 0.00 GENERAL PROVISIONS
- 0.01 DEFINITIONS: THE TERMS LISTED BELOW ARE DEFINED AS FOLLOWS WHEN USED IN MECHANICAL AND PLUMBING WORK.
 - 1. WORK: LABOR AND MATERIALS OF THE CONTRACTOR AND/OR SUBCONTRACTOR.
 - 2. FURNISH: OBTAIN, COORDINATE, SUBMIT THE NECESSARY DRAWINGS, DELIVER TO THE JOBSITE IN NEW CONDITION AND GUARANTEE.
 - 3. INSTALL: RECEIVE AT THE JOB SITE, UNLOAD, STORE, SET IN PLACE, CONNECT, PLACE IN OPERATION AND GUARANTEE.
 - 4. PROVIDE: FURNISH AND INSTALL.
 - 5. CONNECT: BRING SERVICE TO THE EQUIPMENT AND MAKE FINAL ATTACHMENTS INCLUDING NECESSARY PIPE FITTINGS, DUCTWORK, TRANSITIONS, ETC.
 - 6. CONCEALED: HIDDEN FROM SIGHT IN CHASES, FURRED SPACES, SHAFTS, ABOVE CEILING, EMBEDDED IN CONSTRUCTION, IN CRAWL SPACES OR BURIED.
 - 7. EXPOSED: NOT INSTALLED UNDERGROUND NOR CONCEALED AS DEFINED ABOVE.
- 0.02 PERFORMANCE: MECHANICAL CONTRACTOR SHALL PERFORM ALL WORK SPECIFIED, INDICATED AND REQUIRED UNLESS OTHERWISE NOTED, INCLUDING FINAL CONNECTIONS, IN A WORKMANLIKE MANNER USING WORKERS SKILLED AND EXPERIENCED IN THE TRADE.
- 0.03 SITE EXAMINATION: EXAMINE SITE BEFORE BIDDING. CLAIM NO EXTRAS RESULTING FROM LACK OF KNOWLEDGE OF SITE CONDITIONS, IF SITE CONDITIONS REQUIRE MODIFICATION OF THE SYSTEMS INDICATED IN THESE DOCUMENTS, SO ADVISE ENGINEER, AND IF ACCEPTED BY ENGINEER, INCLUDE COST OF SUCH MODIFICATIONS IN BID.
- 0.04 JOBSITE CONDITIONS: ACCEPT SOLE AND COMPLETE RESPONSIBILITY FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.
- 0.05 FULL FUNCTION: PROVIDE ALL MINOR ITEMS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
- 0.06 ADMINISTRATION: PROVIDE EVIDENCE OF LICENSING, BONDING, AND INSURANCE, AND PERFORM OTHER ADMINISTRATIVE FUNCTIONS, AS REQUIRED.
- 0.07 PERMITS: PROCURE AND PAY FOR ALL REQUIRED PERMITS AND SERVICE CHARGES.
- 0.08 COORDINATION: CONFORM TO GENERAL CONSTRUCTION CONTRACT DOCUMENTS EXCEPT AS MODIFIED HEREIN. REFER ALSO TO ARCHITECTURAL STRUCTURAL AND ELECTRICAL CONTRACT DOCUMENTS, COORDINATE ALL WORK WITH OTHER TRADES.
- 0.09 CUTTING AND PATCHING: CUT AND PATCH AS REQUIRED. CUT OR WELD STRUCTURAL MEMBERS ONLY WITH APPROVAL OF STRUCTURAL ENGINEER. PATCHING SUBJECT TO APPROVAL BY ARCHITECT.
- 0.10 EXISTING FLOORS: TRENCH OR CORE BORE EXISTING FLOORS PER LANDLORD REQUIREMENTS.
- 0.11 ROOF PENETRATIONS: COORDINATE WITH LANDLORD.
- 0.12 EQUIPMENT SUBSTITUTIONS: REIMBURSE ELECTRICAL CONTRACTOR, AT NO CHARGE TO TENANT, FOR HIS COSTS INCURRED DUE TO SUBSTITUTION OF MECHANICAL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS DIFFERING FROM THOSE INDICATED.
- 0.13 ADJUSTMENTS: MAKE MINOR ADJUSTMENTS TO WORK WHERE REQUESTED BY TENANT, WHEN SUCH ADJUSTMENTS ARE NECESSARY TO PROPER OPERATION AND WITHIN THE INTENT OF THE CONTRACT.
- 0.14 REFERENCE STANDARDS: COMPLY WITH APPLICABLE STANDARDS OF NFPA, ANSI, UL, ASHRAE, AND SMACNA, EXCEPT AS SUPERSEDED BY LOCAL AUTHORITY. CONFORM WITH CONTRACT DOCUMENTS WHERE THEY EXCEED CODE MINIMUM REQUIREMENTS.
- 0.15 LOCAL REQUIREMENTS: COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES, LANDLORD, SERVING UTILITIES, AND THE LOCAL AUTHORITY HAVING JURISDICTION. SECURE APPROVAL OF INSTALLATION BY LANDLORD, LOCAL AUTHORITY, AND OTHERS AS REQUIRED.
- 0.16 MATERIALS AND EQUIPMENT: PROVIDE NEW, UNLISTED, COMMERCIAL GRADE MATERIALS, DEVICES, EQUIPMENT, AND FIXTURES, SUITABLE FOR ENVIRONMENT. REUSE EXISTING ONLY WHEN COMPLIANT WITH THE CONTRACT DOCUMENTS, IN GOOD CONDITION, AND APPROVED BY THE ENGINEER.
- 0.17 SHOP DRAWINGS: BEFORE ORDERING EQUIPMENT AND MATERIALS, SUBMIT NOT LESS THAN FIVE CERTIFIED COPIES OF ALL SHOP AND EQUIPMENT DRAWINGS FOR ENGINEER'S REVIEW, WHO WILL RETAIN TWO COPIES. ONLY FURNISH SYSTEMS AND EQUIPMENT IN COMPLIANCE WITH ACCEPTED SHOP DRAWINGS.
- 0.18 INSTALLATION: INSTALL ALL MATERIALS, EQUIPMENT AND SYSTEMS IN FULL ACCORD WITH MANUFACTURERS' INSTRUCTIONS.
- 0.19 LAYOUT: INSTALL ALL PIPING AND DUCTWORK TO PRESENT A NEAT AND ORDERLY APPEARANCE. RUN ALL LINES PARALLEL WITH BUILDING CONSTRUCTION, MAINTAIN HEADROOM AND EQUIPMENT CLEARANCE, AND GRADIENT WHERE REQUIRED. ALLOW FOR EXPANSION AND CONTRACTION.
- 0.20 ACCESS DOORS: PROVIDE ACCESS DOORS OR PANELS FOR ALL VALVES, CLEANOUTS, DAMPERS, CONTROLS, DEVICES, AND OTHER ITEMS REQUIRING INSPECTION OR MAINTENANCE. ACCESS PANELS SERVING HVAC COMPONENTS SHALL BE 12-INCHES BY 12-INCHES MINIMUM OR LARGER TO PROVIDE SUFFICIENT WORKING CLEARANCE FOR COMPONENT BEING ACCESSED.
- 0.21 COMMISSIONING: THOROUGHLY TEST AND DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS AND EQUIPMENT FURNISHED OR INSTALLED UNDER THIS CONTRACT.
- 0.22 O & M MANUALS: FOUR COPIES OF OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER OR OPERATOR. THE MANUAL SHALL INCLUDE BASIC DATA RELATING TO THE OPERATION AND MAINTENANCE OF HVAC SYSTEMS AND EQUIPMENT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED, WHERE APPLICABLE. HVAC CONTROLS INFORMATION SUCH AS DIAGRAMS, SCHEMATICS, CONTROL SEQUENCE DESCRIPTIONS, AND MAINTENANCE AND CALIBRATION INFORMATION SHALL BE INCLUDED.
- 0.23 WARRANTY: UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE, EXCEPT WARRANT AIR CONDITIONING COMPRESSORS FOR FIVE YEARS AND GAS-FIRED HEAT EXCHANGERS FOR TEN YEARS. DURING WARRANTY PERIOD, REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT OR WORKMANSHIP WITHOUT COST TO TENANT.
- 0.24 EQUIPMENT IDENTIFICATION: IDENTIFY ALL APPLICABLE ROOFTOP EQUIPMENT WITH TENANT'S NAME AND SPACE NUMBER, USING 2" PAINTED CHARACTERS OR STAMPED METAL TAG.
- 0.25 DRAWINGS ARE DIAGRAMMATIC: VERIFY ALL DIMENSIONS AND LENGTHS, AND ADJUST EQUIPMENT, PIPE AND DUCT LOCATIONS TO AVOID CONFLICTS WITH OTHER CONSTRUCTION AND TRADES.

- 0.26 DOCUMENT PRIORITY: DRAWING INDICATIONS AND NOTATIONS SUPERSEDE THESE SPECIFICATIONS.
- 0.27 RATINGS: REFER TO DRAWINGS AND SCHEDULES FOR ADDITIONAL RATINGS AND REQUIREMENTS.
- 0.28 PROJECT REQUIREMENTS: REFER TO DRAWINGS FOR PARTICULAR PROJECT REQUIREMENTS, AS NOT ALL ITEMS INCLUDED IN THESE SPECIFICATIONS MAY BE REQUIRED FOR THIS PROJECT.
- 0.29 DOCUMENT ERRORS: NOTIFY THE ENGINEER OF ERRORS, DISCREPANCIES OR OMISSIONS BEFORE CONSTRUCTION OR FABRICATION OF AFFECTED WORK, OR, FAILING OF SUCH NOTICE, BE RESPONSIBLE FOR CORRECTING SAME WITHOUT COST TO THE OWNER, ARCHITECT OR ENGINEER.
- 1.00 PIPE AND FITTINGS
- 1.10 PIPE HANGERS AND SUPPORTS: PROPERLY SUPPORT ALL PIPING FROM JOISTS (TOP CHORD) OR OTHER STRUCTURAL MEMBERS. FOR PIPES UP TO 4" O.D., USE GRINNELL FIG. 260 CLEVIS HANGERS WITH 3/8" ROD, OR FIG. 195 BRACKETS.
- 1.20 INSULATION SHIELDS: PROVIDE 18 GAUGE X 12" LONG GALVANIZED INSULATION SHIELDS AT SUPPORT POINTS FOR INSULATED PIPES.
- 1.30 PIPE SUPPORT SPACING: SUPPORT PIPE NOT LESS THAN 6 FT. ON CENTER FOR COPPER PIPE UP TO 2" O.D., OR NOT LESS THAN 10 FT. ON CENTER FOR STEEL PIPE UP TO 4" O.D.
- 1.40 COPPER CONTACT: PROVIDE COPPER PLATED HANGERS AND SUPPORTS WHERE IN CONTACT WITH COPPER PIPE.
- 1.50 PIPE SLEEVES: SLEEVE ALL HORIZONTAL PIPING WHICH PENETRATES WALLS WITH STANDARD WEIGHT STEEL PIPE OF 1" GREATER DIAMETER THAN PIPE OR INSULATION O.D. CUT SLEEVE FLUSH WITH WALL FINISH BOTH SIDES.
- 1.60 SEALANT: SEAL PIPE SLEEVES WITH ROPE AND EXPAND NON-SHRINK SEALANT. FIRE/SMOKE SEAL PENETRATIONS OF RATED CONSTRUCTION TO MAINTAIN RATING.
- 1.70 WALL PLATES: FIT UNCOVERED PIPE PASSING THROUGH WALLS WITH WALL PLATES, CRANE NO. 10 OR EQUAL.
- 2.00 THERMAL AND ACOUSTIC INSULATION
- 2.10 VIBRATION ISOLATION: PROVIDE EFFECTIVE VIBRATION ISOLATION DEVICES, AND FLEXIBLE CONNECTIONS, FOR ALL MOVING MACHINERY. PROVIDE DEVICES IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE ASHRAE HANDBOOK, HVAC APPLICATIONS (LATEST EDITION), CHAPTER "NOISE AND VIBRATION CONTROL".
- 2.20 NOISE TRANSMISSION: INSTALL PIPING FREE FROM CONTACT WITH STRUCTURE OR EQUIPMENT TO PREVENT NOISE TRANSMISSION.
- 2.30 INSULATION REQUIREMENTS: INSULATE SYSTEMS AS SPECIFIED ONLY AFTER THEY HAVE BEEN TESTED AND INSPECTED. CLEAN ALL SURFACES THOROUGHLY OF MOISTURE, FOREIGN MATERIAL, GREASE, AND RUST. INSTALL INSULATION CONTINUOUS THROUGH PENETRATIONS.
- 2.31 INSULATION HAZARDS: USE ONLY INSULATION ADHESIVES, SEALERS, AND COATINGS WITH FIRE HAZARD RATING NOT TO EXCEED 25/50/50 FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED, IN ACCORDANCE WITH UL 723 AND ASTM E84.
- 2.32 INSULATED PLUMBING SYSTEMS: INSULATE HOT- AND COLD-WATER PIPING, AND HORIZONTAL WASTE PIPING IN CEILING SPACE, WITH 1-IN. THICK CLOSED CELL, SELF-SEALING FLEXIBLE TUBING, ARMAFLEX 2000 OR EQUAL.
- 4.00 PLUMBING
- 4.10 DOMESTIC (POTABLE) WATER SUPPLY PIPING: ABOVE GROUND: TYPE L HARD TEMPER COPPER TUBE PER ASTM B88, WITH WROUGHT COPPER FITTINGS PER USASI B1.6.18. BELOW GROUND: TYPE K SOFT TEMPER COPPER TUBE. USE ONLY 95/5 LEAD-FREE SOLDER IN POTABLE WATER PIPING. PROVIDE DIELECTRIC UNIONS AT EVERY JUNCTION OF TWO DISSIMILAR METAL PIPE MATERIALS.
- 4.20 DRAIN, WASTE AND VENT PIPING: ABOVE GRADE: NO-HUB CAST IRON SANITARY SYSTEM PER CISPI 301-691 WITH CAST IRON DRAINAGE FITTINGS. BELOW GRADE: NO-HUB CAST IRON SANITARY SYSTEM PER CISPI 301-691 OR SERVICE WEIGHT CAST IRON HUB AND SPOUT WITH NEOPRENE GASKET, PER CISPI HSN-681.
- 4.30 NATURAL GAS PIPING UNDERGROUND WITHIN 5 FEET OF BUILDING: SCHEDULE 40 SEAMLESS BLACK STEEL ASTM A53 OR A120 WITH OUTSIDE PROTECTIVE PLASTIC COATING OF POLYETHYLENE. PVC OR EQUAL OF A 10 MIL OR GREATER THICKNESS. FITTINGS SHALL BE ASTM A234, FORGED STEEL WELDING TYPE, WITH AWWA C108 POLYETHYLENE JACKET OR DOUBLE LAYER, HALF-LAPPED 10 MIL POLYETHYLENE TAPE. JOINTS SHALL BE WELDED AND FIELD-WRAPPED WITH AN APPROVED PROTECTIVE PLASTIC COATING EQUAL TO TAPECOAT CT10, OR 3M #50 TAPE.
- 4.40 VALVES: FURNISH AND INSTALL VALVES WHERE INDICATED ON PLAN AND AS NECESSARY FOR PROPER SYSTEM OPERATION AND COMPONENT ISOLATION. PROVIDE VALVES RATED FOR 125 PSI OR GREATER WORKING PRESSURE IN WATER PIPING.
 - CHECK VALVE UP TO 3" CRANE NO. 37, OR EQUAL
 - GLOBE VALVE UP TO 3" CRANE NO. 1, 177F, OR EQUAL
 - GATE VALVE UP TO 3" CRANE NO. 428, 1334, OR EQUAL
 - BALL VALVE UP TO 3" APOLLO SERIES 70-100, 70-200, OR EQUAL
- TEMP. & PRESS. RELIEF VALVE WAITS 10L MODEL M7, OR EQUAL, 3/4" X 3/4" F
- 4.70 PLUMBING FIXTURES AND EQUIPMENT: FURNISH AND INSTALL COMPLETE WITH FITTINGS AND ACCESSORIES AS REQUIRED, SEE PLANS FOR DESCRIPTION.
- 4.95 CLEANING AND TESTING: CLEAN, DISINFECT, AND TEST ALL PLUMBING AND PIPING SYSTEMS, PER CODE REQUIREMENT.

APPLICABLE CODES & STANDARDS

- 2019 CALIFORNIA BUILDING CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA MECHANICAL CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA PLUMBING CODE WITH STATEWIDE AMENDMENTS
- ICC/ANSI A117.1-09, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, WITH STATEWIDE AMENDMENTS.
- 2019 CALIFORNIA ENERGY CONSERVATION CODE
- 2019 CALIFORNIA GREEN BUILDING STANDARDS
- NFPA 90A
- UNDERWRITERS LABORATORIES (OR ETL)

HANGERS AND SUPPORTS

MATERIALS	TYPE OF JOINTS	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	SHIELDED COUPLING	EVERY OTHER JOINT, UNLESS OVER 4 FEET THEN SUPPORT EACH JOINT	BASE AND EACH FLOOR, NOT TO EXCEED 15 FEET
COPPER & COPPER ALLOYS	SWEATED CONN. WITH LEAD-FREE SOLDER	1 1/2 INCHES AND SMALLER, 6 FEET; 2 INCHES AND LARGER, 10 FEET	EACH FLOOR, NOT TO EXCEED 10 FEET ³
STEEL PIPE FOR GAS	THREADED OR WELDED	1/2 INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1 1/4 INCHES & LARGER, 10 FEET	1/2 INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1 1/4 INCHES EVERY FLOOR LEVEL
SCHEDULE 40 PVC & ABS DWV	SOLVENT CEMENTED	ALL SIZES, 4 FEET; ALLOW FOR EXPANSION EVERY 30 FEET ³	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; PROVIDE FOR EXPANSION EVERY 30 FEET

- NOTES:
1. CAST IRON HUBLESS SUPPORT ADJACENT TO JOINT, NOT TO EXCEED 18 INCHES.
 2. BRACE NOT TO EXCEED 40 FOOT INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
 3. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
 4. HANGERS SHALL NOT BE PLACED ON THE COUPLING.
 5. VERTICAL WATER LINES SHALL BE PERMITTED TO BE SUPPORTED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRINCIPLES WITH REGARD TO EXPANSION AND CONTRACTION, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION.

A.D.A. COMPLIANCE NOTES

1. INSULATE EXPOSED HOT WATER AND WASTE PIPING WITH NEATLY PRE-FORMED INSULATION COVERS BY MCGUIRE "PROWRAP", OR EQUAL.
2. FIXTURE MOUNTING HEIGHTS FOR THE PHYSICALLY DISABLED SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT AND OTHER AUTHORITIES HAVING JURISDICTION.

PLUMBING FIXTURE NOTES

1. ALL FIXTURES, EQUIPMENT, PIPING, FITTINGS AND MATERIALS SHALL BE LISTED.
2. ALL PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN THE APPLICABLE CODES & STANDARDS LISTED ON THIS SHEET.
3. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 110° F.
4. WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEEDS 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER.

REGULATORY NOTES

- FIRE RESISTIVE BUILDING MATERIALS
- A. INSULATION MATERIALS INSTALLED IN BUILDINGS OF ANY TYPE OF CONSTRUCTION, SHALL HAVE A FLAME-SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 IN ACCORDANCE WITH APPLICABLE CODES LISTED ON THIS SHEET OR ON THE PROJECT COVER SHEET.
 - B. INSULATION, INSULATION JACKET, ADHESIVES, TAPES, ETC. SHALL BE APPLIED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

PLUMBING NOTES

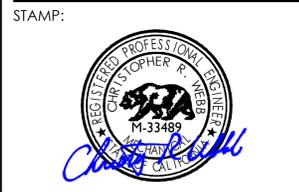
1. ALL NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS NOTED IN THESE DRAWINGS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IN THE ABSENCE OF A GENERAL CONTRACTOR ASSOCIATED WITH THE PROJECT, SAID NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS SHALL BECOME THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
2. ALL EQUIPMENT, DEVICES AND PIPING SHOWN ON THESE DRAWINGS IS NEW UNLESS SPECIFICALLY CALLED OUT AS EXISTING (E) TO REMAIN.
3. FOR THE PURPOSE OF CLARITY AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.
4. CONTRACTOR SHALL COORDINATE WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS WITH ALL OTHER DISCIPLINES AND TRADES PRIOR TO SUBMITTAL OF BID AND INSTALLATION OF SYSTEM.
5. THE PLUMBING CONTRACTOR SHALL GUARANTEE MATERIALS & LABOR (INCLUDING THE COMPLETE PLUMBING SYSTEM) FOR A PERIOD OF ONE YEAR FROM WRITTEN ACCEPTANCE BY THE OWNER. DEFECTS IN MATERIALS AND / OR LABOR FOUND WITHIN THE GUARANTEE PERIOD SHALL BE REMEDIED OR REPAIRED BY THIS CONTRACTOR IN A TIMELY FASHION, AND AT NO COST TO THE OWNER.
6. PLUMBING FIXTURE LOCATIONS (WATER CLOSETS, LAVATORIES ETC.) ARE DIAGRAMMATIC. REFER TO ARCHITECTURAL DRAWINGS FOR ADA COMPLIANT FIXTURES, EXACT LOCATIONS, MOUNTING HEIGHTS & COLORS.
7. DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
8. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTAL OF BID AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. SUBMITTAL OF BID WILL BE TAKEN AS CONFIRMATION THAT THE CONTRACTOR HAS VISITED THE SITE.
9. PIPING SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. THE INSTALLATION SHALL MEET ALL CONSTRUCTION CONDITIONS AND ALLOW FOR THE INSTALLATION OF OTHER TRADES.
10. WATER HAMMER ARRESTORS AND TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS TO BE INSTALLED AS PER THE LISTED PLUMBING CODE AND THE LATEST EDITION OF THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE 1010) SIZING AND INSTALLATION REQUIREMENTS.
11. VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL. LABEL ACCESS PANELS WITH NAME OF DEVICE CONCEALED IN WALL OR ABOVE CEILING.
12. SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE STATE ENERGY CODE AND 2018 IECC REQUIREMENTS AND LABELED AS SUCH.
13. ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED THROUGH CURBS OR PIPE SEALS A MINIMUM OF 12" ABOVE THE ROOF. THE PIPE CURBS AND SEALS SHALL BE INSTALLED BY THE ROOFING CONTRACTOR. ENSURE THAT AMPLE BOOT OPENINGS ARE PROVIDED TO ACCOMMODATE ANY ELECTRICAL CONDUIT PENETRATIONS REQUIRED FOR POWER.
14. REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL WASTE, VENT & WATER CONNECTION SIZES AT EACH PLUMBING FIXTURE.
15. CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. COORDINATE CLEAN-OUT LOCATIONS WITH EQUIPMENT, MILLWORK, ETC., PRIOR TO INSTALLATION.
16. PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10'-0" FROM OR 3'-0" ABOVE ANY MECHANICAL EQUIPMENT OUTSIDE AIR INTAKE.
17. VALVES, UNIONS, ETC. SHALL BE SAME SIZE AS CONNECTED SUPPLY LINE UNLESS OTHERWISE NOTED ON DRAWINGS.
18. UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
19. UNDERGROUND METALLIC PIPE AND FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS, AS APPLICABLE.
20. NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE, MASONRY WALLS, OR CONCRETE FOOTINGS.
21. COORDINATE REQUIREMENTS FOR POINTS OF CONNECTION AND OTHER TRADES PRIOR TO START OF WORK.
22. VERIFY EXACT LOCATIONS, DEPTH AND SIZE OF ALL PIPING TO WHICH CONNECTIONS ARE REQUIRED, COORDINATE CONNECTIONS WITH SITE CONDITIONS AND SITE UTILITY CONTRACTOR/ REPRESENTATIVE.
23. HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATIONS AND NOT LESS THAN 6" ABOVE THE FLOOR TO PROVIDE CLEARANCE FOR CLEANING AND PROPER SUPPORT.
24. CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL UTILIZE MACHINE SAW CUTTING EQUIPMENT. HOLES FOR PIPES IN CONCRETE WALLS OR FLOORS SHALL UTILIZE CORE DRILLING EQUIPMENT. COORDINATE WITH ARCHITECTURAL DETAILS FOR FLOOR CUTTING AND PATCHING.
25. PROVIDE ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
26. PIPING LAYOUT IS SCHEMATIC ONLY. EXACT ROUTING AND INSTALLATION OF PIPES TO BE COORDINATED WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER CONTRACTORS.
27. NO PLUMBING PIPING SHALL BE INSTALLED ABOVE ELECTRICAL SWITCH GEAR, EQUIPMENT, OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUTE PIPING FOR ACTUAL INSTALLATION OF ELECTRIC EQUIPMENT.
28. WHENEVER FOUNDATION WALLS, EXTERIOR WALLS, ROOFS, ETC. ARE PENETRATED FOR THE INSTALLATION OF PLUMBING SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT. PROVIDE FIREPROOFING, AS REQUIRED PER WALL CONSTRUCTION TYPE.
29. PLUMBING CONTRACTOR SHALL BE ON SITE AND PRESENT AT THE DATE OF TURNOVER.
30. EXTERIOR EXPOSED WATER PIPING SHALL BE INSULATED AND PVC JACKETED. SEAL JACKET PER MANUFACTURERS REQUIREMENTS.
31. ALL ATTEMPTS WERE MADE DURING THE DESIGN PERIOD TO GATHER DATA REGARDING DOMESTIC WATER PRESSURE AT THE SITE. HOWEVER, SYSTEM PRESSURE MUST STILL BE VERIFIED ON-SITE AS EARLY AS POSSIBLE TO DETERMINE IF BOOSTER PUMPS ARE REQUIRED.

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	GW	GRAY WATER SEWER
	SS	SANITARY SEWER
	SS	(EXPOSED) SANITARY SEWER
	V	SANITARY VENT ABOVE GROUND
	UV	SANITARY VENT BELOW GROUND
	GV	GREASE VENT BELOW GRADE
	CW	DOMESTIC COLD WATER
	HW	DOMESTIC HOT WATER
	HWR	DOMESTIC HOT WATER RETURN
	G	LOW PRESSURE GAS
	MPG	MEDIUM PRESSURE GAS
	HPG	HIGH PRESSURE GAS
	CD	CONDENSATE DRAIN
	SD	STORM DRAIN
	OD	OVERFLOW STORM DRAIN
	CA	COMPRESSED AIR
	VTR	VENT THRU ROOF
	AAV	AIR ADMITTANCE VALVE
	PRV	PRESSURE REDUCING VALVE
	SOV	SHUT-OFF VALVE
	BV	BALL VALVE
	CV	CHECK VALVE
	U	UNION
	WHA	WATER HAMMER ARRESTER WITH ACCESS PANEL
	TP	TRAP PRIMER WITH ACCESS PANEL
		PIPE UP
		PIPE DOWN
		ELBOW UP
		ELBOW DOWN
	FCO OR GCO	FLOOR OR GRADE CLEAN OUT
	SCO	2-WAY SERVICE CLEAN OUT
	WCO	WALL CLEAN OUT
	HB	HOSE BIBB
		CAPPED PIPE
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT
	B.F.F.	BELOW FINISHED FLOOR
	B.F.G.	BELOW FINISHED GRADE
	FD-X	FLOOR DRAIN
	FS-X	FLOOR SINK, GRATE PER PLAN
	AP	ACCESS PANEL
	FFE	FINISHED FLOOR ELEVATION
	IE	INVERT ELEVATION
	FU	FIXTURE UNIT
	VBF	VENT BELOW FLOOR
	TMV	THERMOSTATIC MIXING VALVE
	GPF	GALLONS PER FLUSH
	S.F.	SQUARE FEET
	U.O.N.	UNLESS OTHERWISE NOTED



NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997



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CLIENT:
JAIME PARTNERS OF CALIFORNIA, INC.
1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:
2853 WEST BLVD
LOS ANGELES, CA 90016

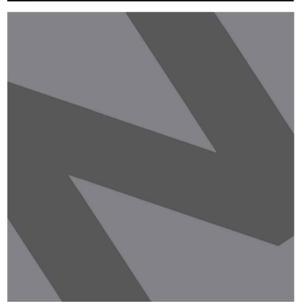
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#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

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SHEET TITLE:

PLUMBING GENERAL INFORMATION

SHEET NO:
P001



NATIONAL
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30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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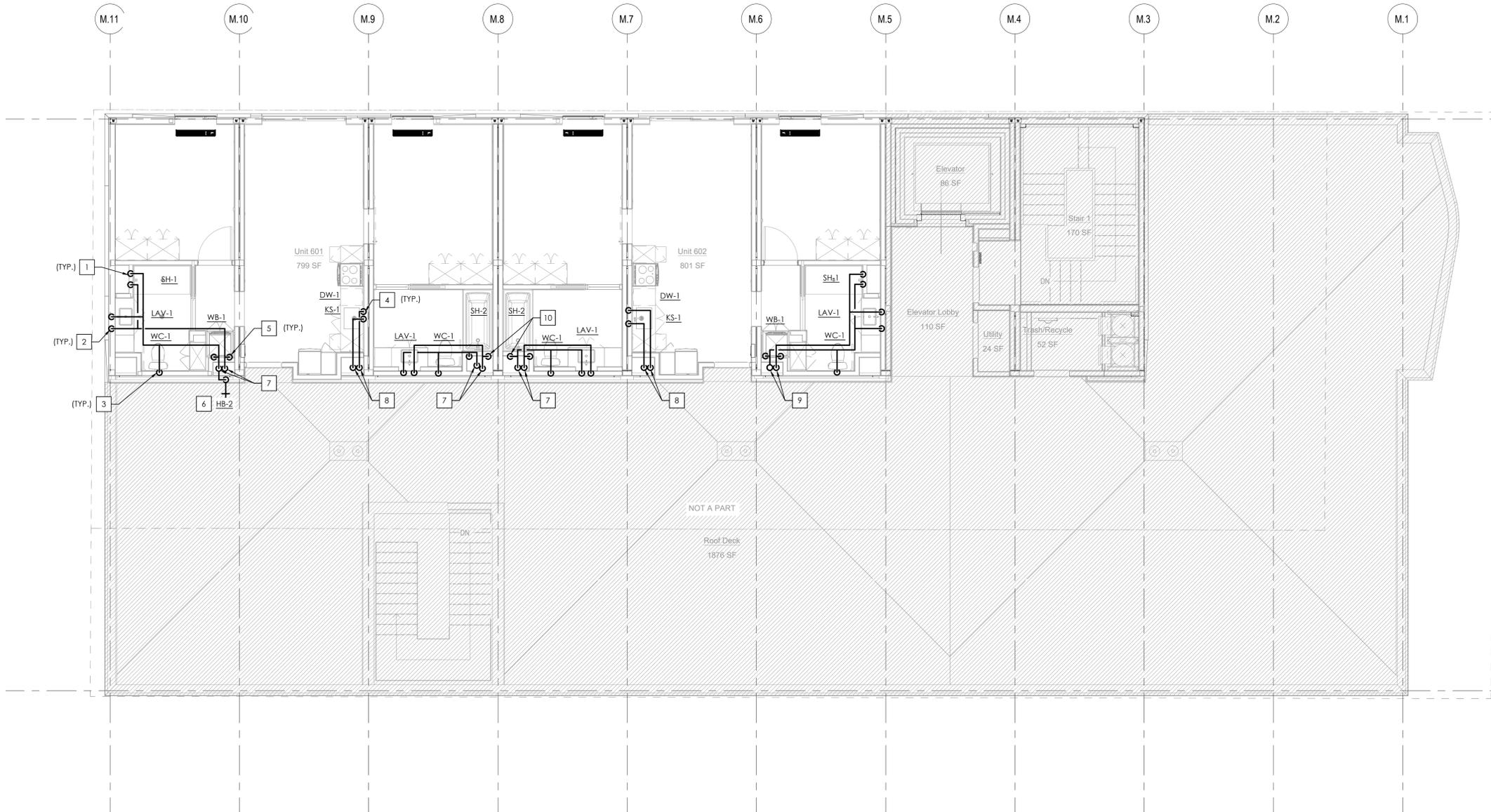
CLIENT:

**JAIME PARTNERS
OF CALIFORNIA, INC.**

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016



LEVEL 6 DOMESTIC WATER PLAN

SCALE
3/16" = 1'-0"

1

PLAN NOTES

- A. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- B. REFER TO SHEET P501 FOR DETAILS.
- C. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- D. REFER TO SHEET P201 THRU P203 FOR ENLARGED PLANS OF ALL OTHER UNITS.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P301 THROUGH P303.
- F. PROVIDE ISOLATION SOV IN AN ACCESSIBLE LOCATION INSIDE PLUMBING CHASE. FOR BOTH HW & CW SUPPLY BRANCHES SERVING EACH UNIT.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. 1" H&CW DOWN TO SHOWER.
- 2. 3/4" H&CW DOWN TO LAVATORY.
- 3. 1" CW DOWN TO WATER CLOSET.
- 4. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 5. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 6. 3/4" CW SUPPLY DOWN TO HB-2.
- 7. 1-1/4" H&CW RISER DOWN.
- 8. 1" H&CW RISER DOWN.
- 9. 1-1/4" HW & 1-1/2" CW RISER DOWN. PROVIDE 3/4" CW UP TO SERVE HB-2 ON ROOF LEVEL.
- 10. 1" H&CW DOWN TO SHOWER W/ BATHTUB.

C-JAIME-001		
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

Plot Date: 3/1/2024 4:14:44 PM

SHEET TITLE:
**LEVEL 6
DOMESTIC WATER
PLAN**

SHEET NO:

P106



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1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

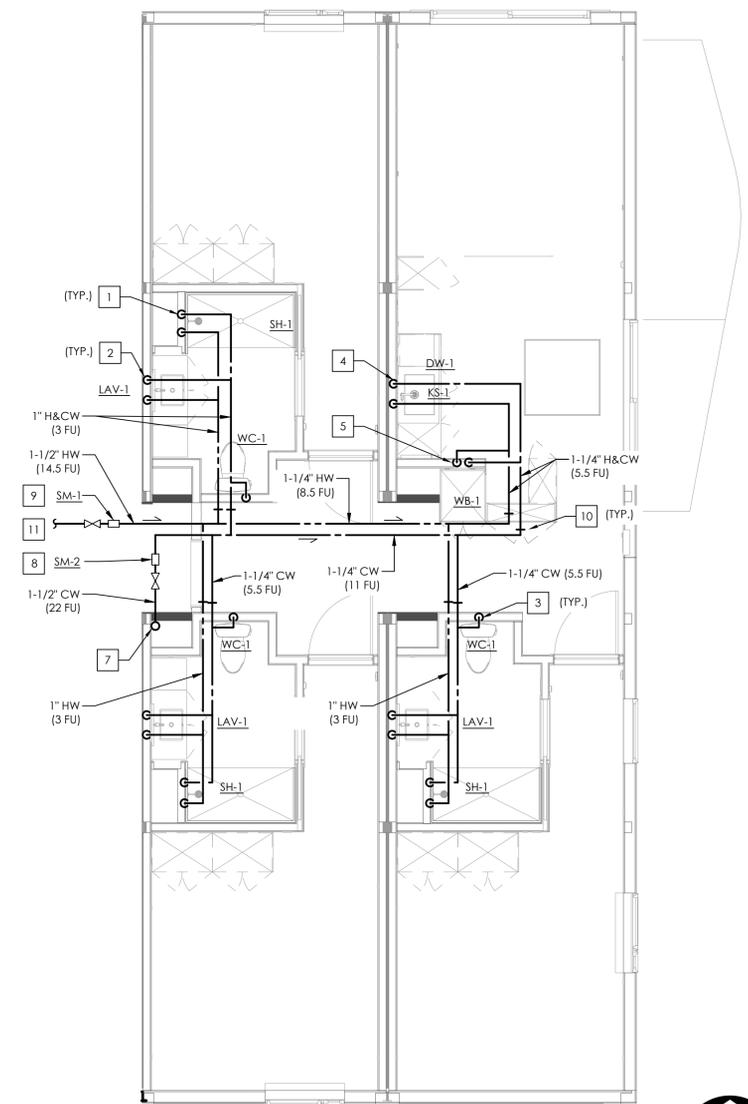
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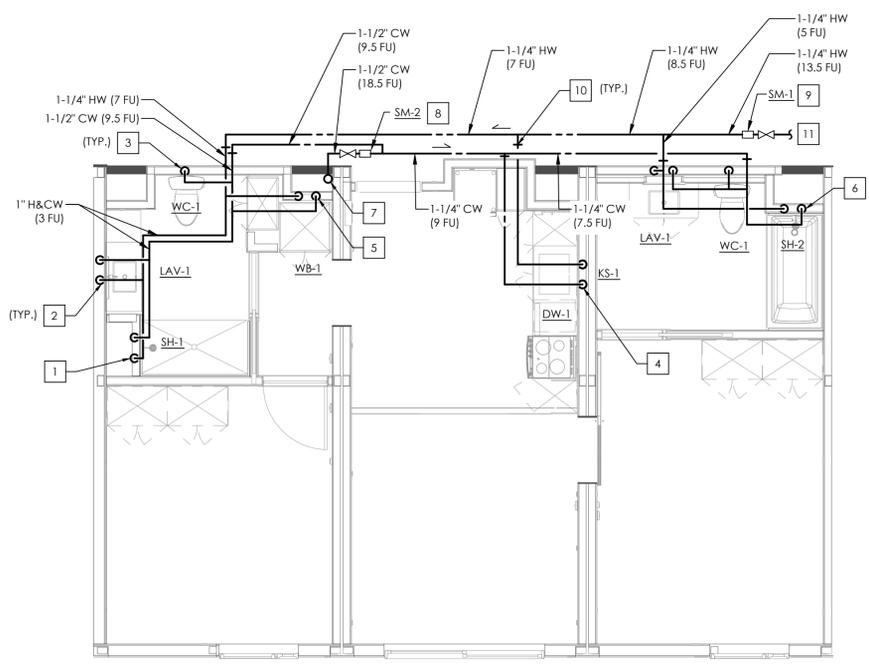
**ENLARGED UNIT
PLANS - WATER PLAN**

SHEET NO.:

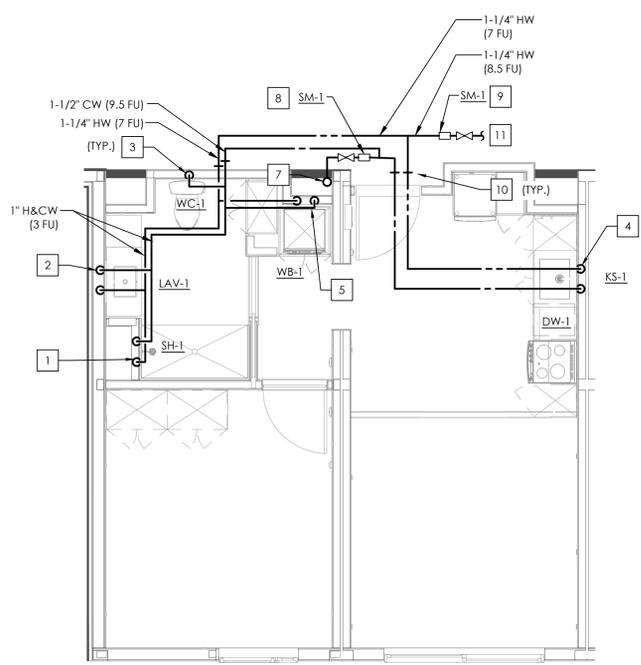
P201



UNIT: 203,303,403,503 (EXACT PIPE LAYOUT MAY VARY)



TYPICAL TO UNITS: 204,302,305,402,404,505 (EXACT PIPE LAYOUT MAY VARY)



TYPICAL TO UNITS: 202,205,304,405,504 (EXACT PIPE LAYOUT MAY VARY)



PLAN NOTES

- A. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- B. REFER TO SHEET P501 FOR DETAILS.
- C. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- D. REFER TO SHEET P104 FOR CONTINUATIONS BELOW AND TO SHEET P106 FOR CONTINUATIONS ABOVE.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P301 THROUGH P303.
- F. PROVIDE ISOLATION SOV IN AN ACCESSIBLE LOCATION INSIDE PLUMBING CHASE, FOR BOTH HW & CW SUPPLY BRANCHES SERVING EACH UNIT.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. 1" H&CW DOWN TO SHOWER.
- 2. 3/4" H&CW DOWN TO LAVATORY.
- 3. 1" CW DOWN TO WATER CLOSET.
- 4. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 5. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 6. 1" H&CW DOWN TO SHOWER W/ BATHTUB.
- 7. CW RISER TO SERVE UNITS ABOVE/BELOW.
- 8. WATER SUB-METER FOR CW SUPPLY SERVING THIS UNIT.
- 9. WATER SUB-METER FOR HW SUPPLY SERVING THIS UNIT.
- 10. LINE DENOTES TRANSITION FROM CPVC PIPING IN CORRIDOR TO PEX PIPING WITHIN MODULES. PEX PIPING IN MODULES APPROVED UNDER STATE INSPECTION. CPVC PIPING IN CORRIDOR AREAS OR WITHIN END UNITS BETWEEN MODULES TO BE APPROVED UNDER INSPECTION AT SITE DURING CONSTRUCTION.
- 11. HW SUPPLY FROM CENTRAL WATER HEATING SYSTEM. REFER TO STATE SUBMITTAL PLANS FOR CONTINUATION.

UNIT TYPE 1A ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

3

UNIT TYPE 2 ENLARGED WATER PLAN

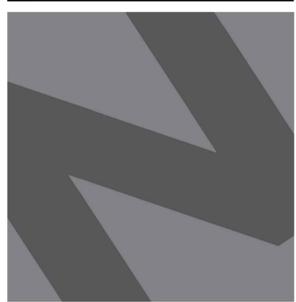
SCALE
1/4" = 1'-0"

2

UNIT TYPE 3 ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

1



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CLIENT:

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1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

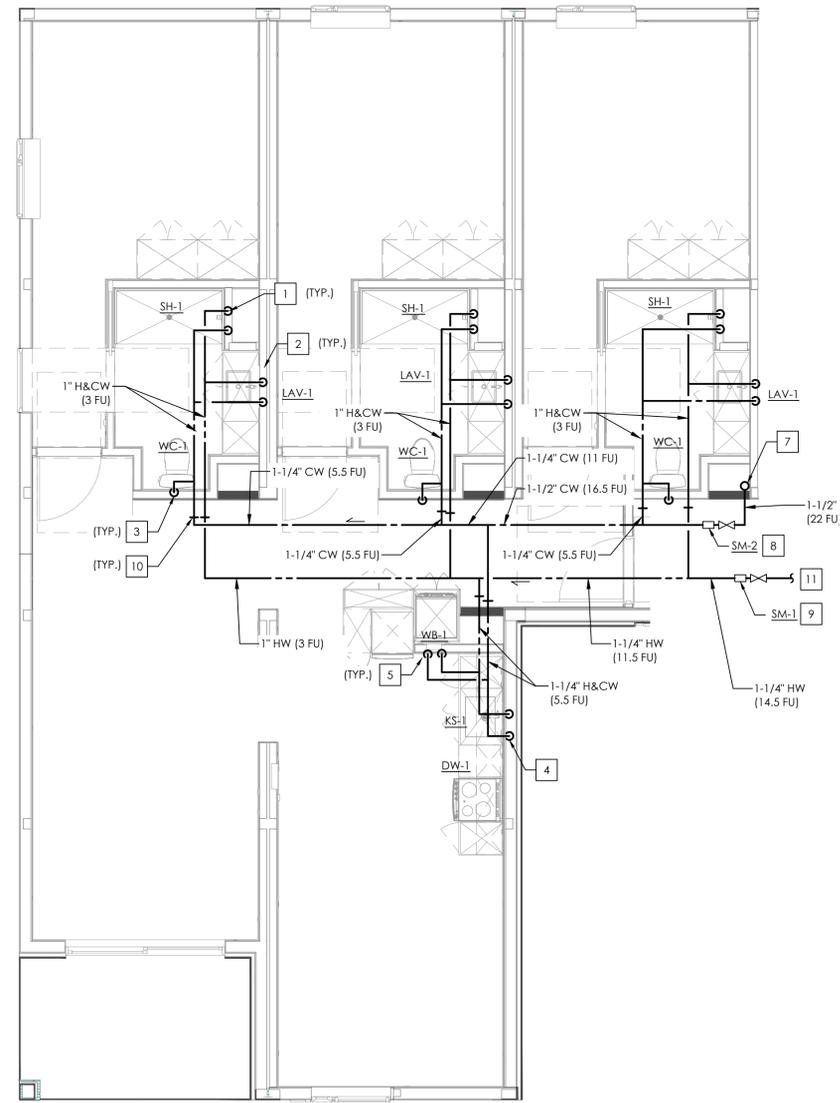
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SHEET TITLE:

**ENLARGED UNIT
PLANS - WATER PLAN**

SHEET NO.:

P202



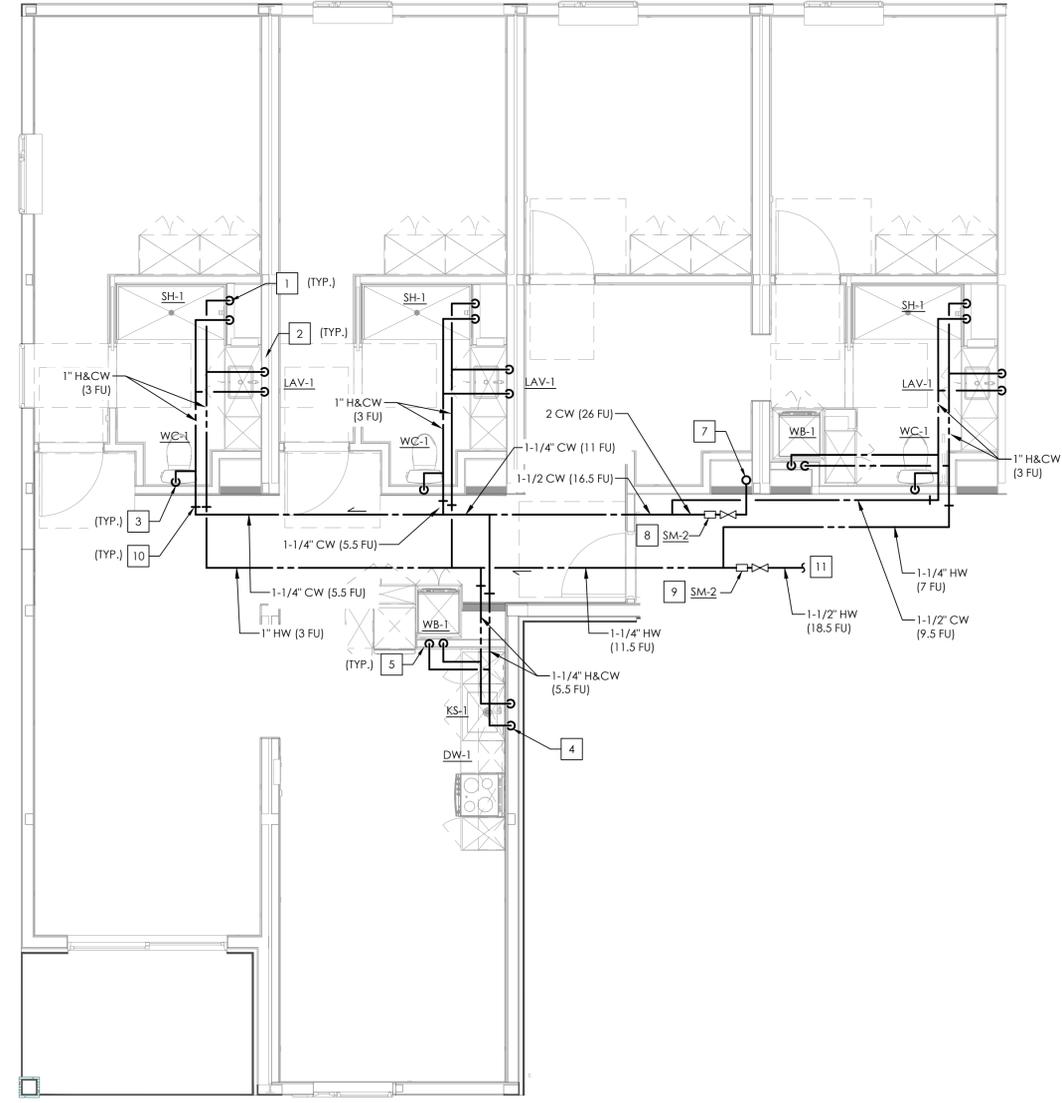
TYPICAL TO UNITS: 301,401 (EXACT PIPE LAYOUT MAY VARY)

UNIT TYPE 4 ENLARGED WATER PLAN

SCALE
1/4" - 1'-0"

2

UNIT: 201



UNIT TYPE 5 ENLARGED WATER PLAN

SCALE
1/4" - 1'-0"

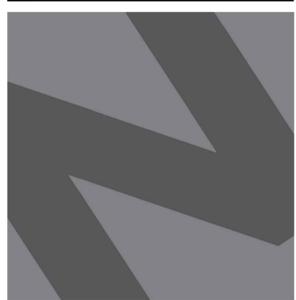
1

PLAN NOTES

- A. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- B. REFER TO SHEET P501 FOR DETAILS.
- C. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- D. REFER TO SHEET P104 FOR CONTINUATIONS BELOW AND TO SHEET P106 FOR CONTINUATIONS ABOVE.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P301 THROUGH P303.
- F. PROVIDE ISOLATION SOV IN AN ACCESSIBLE LOCATION INSIDE PLUMBING CHASE, FOR BOTH HW & CW SUPPLY BRANCHES SERVING EACH UNIT.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. 1" H&CW DOWN TO SHOWER.
- 2. 3/4" H&CW DOWN TO LAVATORY.
- 3. 1" CW DOWN TO WATER CLOSET.
- 4. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 5. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 6. 1" H&CW DOWN TO SHOWER W/ BATHTUB.
- 7. CW RISER TO SERVE UNITS ABOVE/BELOW.
- 8. WATER SUB-METER FOR CW SUPPLY SERVING THIS UNIT.
- 9. WATER SUB-METER FOR HW SUPPLY SERVING THIS UNIT.
- 10. LINE DENOTES TRANSITION FROM CPVC PIPING IN CORRIDOR TO PEX PIPING WITHIN MODULES. PEX PIPING IN MODULES APPROVED UNDER STATE INSPECTION. CPVC PIPING IN CORRIDOR AREAS OR WITHIN END UNITS BETWEEN MODULES TO BE APPROVED UNDER INSPECTION AT SITE DURING CONSTRUCTION.
- 11. HW SUPPLY FROM CENTRAL WATER HEATING SYSTEM. REFER TO STATE SUBMITTAL PLANS FOR CONTINUATION.



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CLIENT:

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OF CALIFORNIA, INC.**
1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

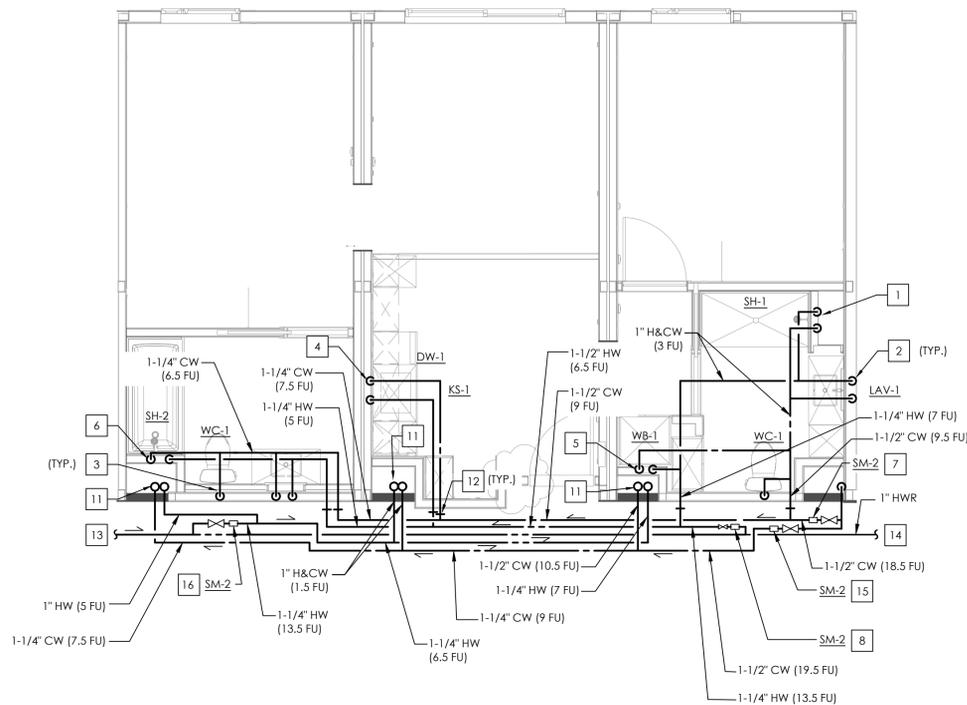
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SHEET TITLE:

**ENLARGED UNIT
PLANS - WATER PLAN**

SHEET NO.:

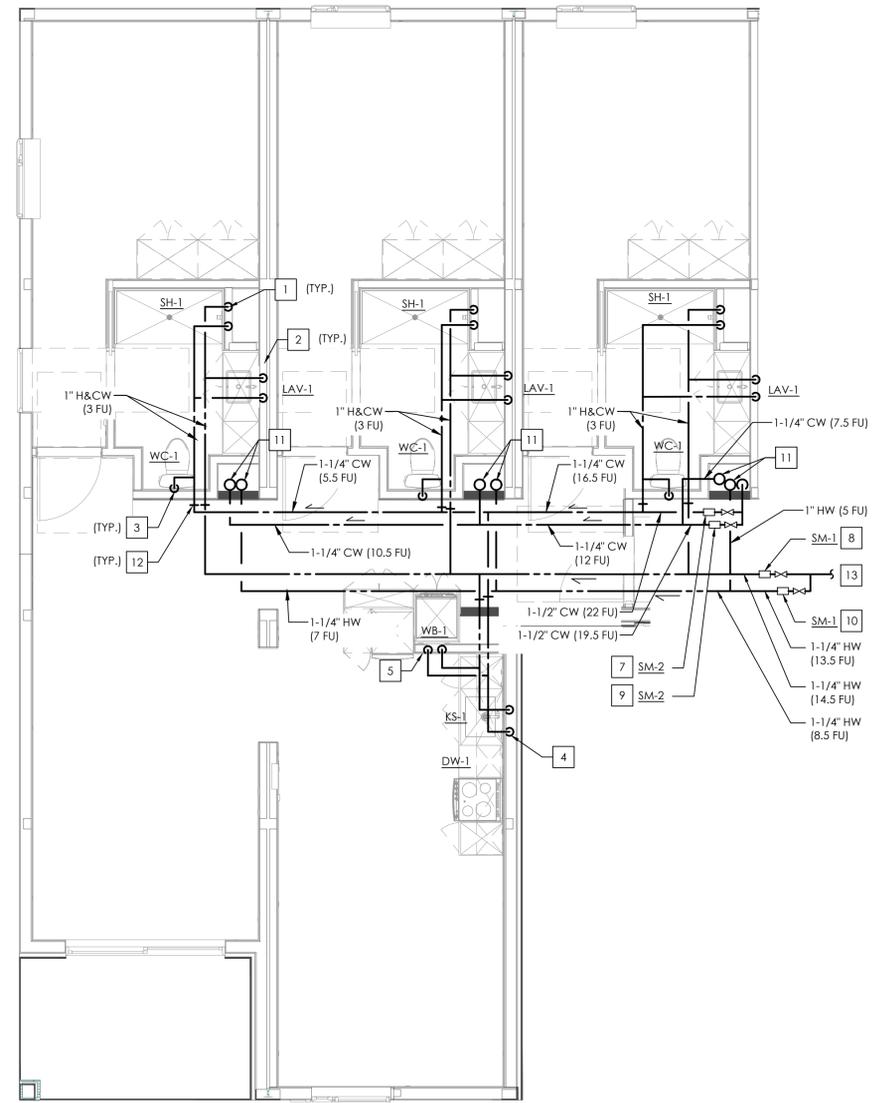
P203



UNIT 502 - ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

2



UNIT 501 - ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

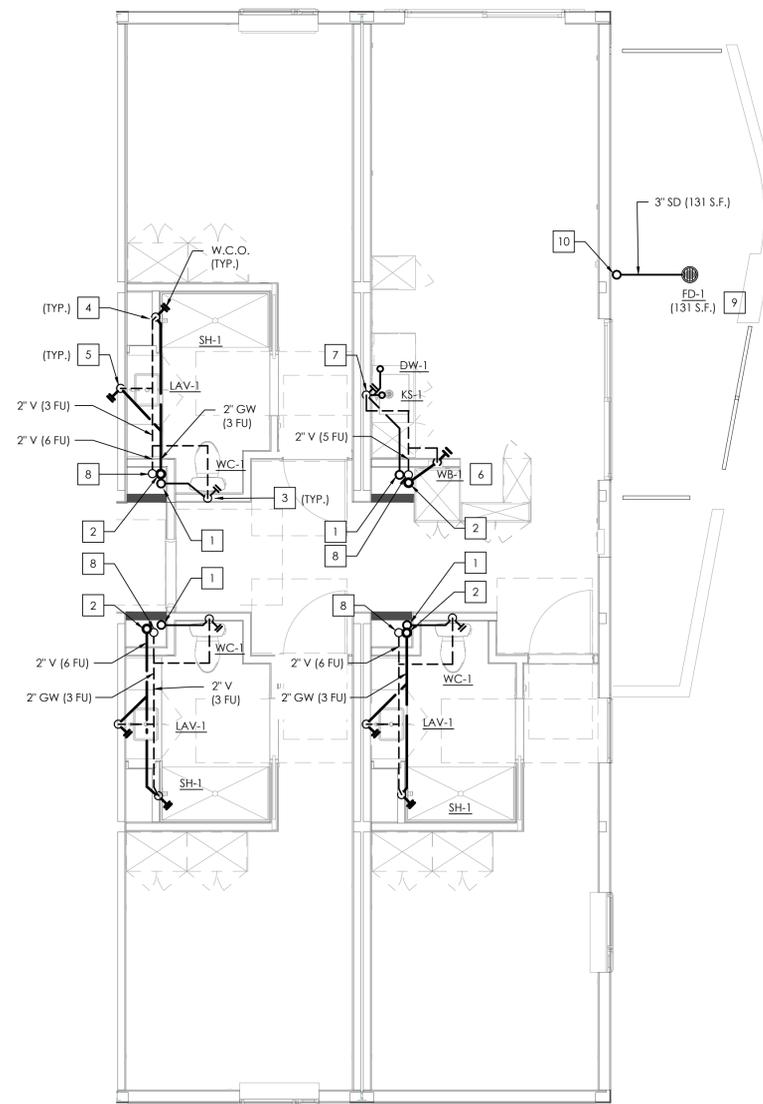
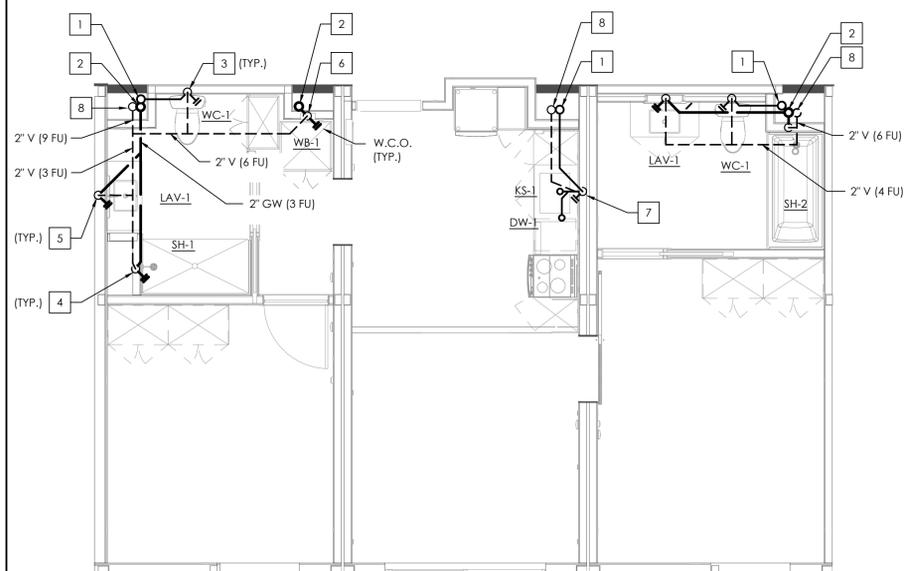
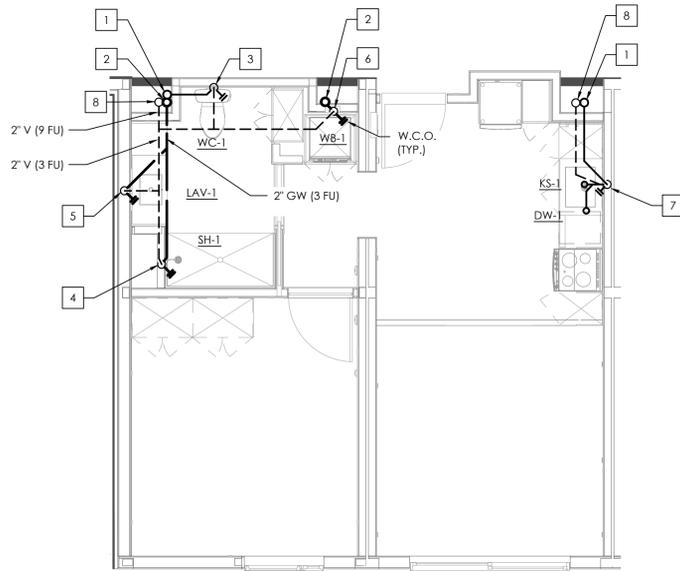
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PLAN NOTES

- A. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- B. REFER TO SHEET P501 FOR DETAILS.
- C. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- D. REFER TO SHEET P104 FOR CONTINUATIONS BELOW AND TO SHEET P106 FOR CONTINUATIONS ABOVE.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P301 THROUGH P303.
- F. PROVIDE ISOLATION SOV IN AN ACCESSIBLE LOCATION INSIDE PLUMBING CHASE, FOR BOTH HW & CW SUPPLY BRANCHES SERVING EACH UNIT.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. 1" H&CW DOWN TO SHOWER.
- 2. 3/4" H&CW DOWN TO LAVATORY.
- 3. 1" CW DOWN TO WATER CLOSET.
- 4. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 5. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 6. 1" H&CW DOWN TO SHOWER W/ BATHTUB.
- 7. WATER SUB-METER W/ SOV FOR CW SUPPLY SERVING THIS UNIT.
- 8. WATER SUB-METER W/ SOV FOR HW SUPPLY SERVING THIS UNIT.
- 9. WATER SUB-METER W/ SOV FOR CW SUPPLY SERVING UNIT #601.
- 10. WATER SUB-METER W/ SOV FOR HW SUPPLY SERVING UNIT #601.
- 11. H&CW RISER UP TO SERVE UNIT ABOVE.
- 12. LINE DENOTES TRANSITION FROM CPVC PIPING IN CORRIDOR TO PEX PIPING WITHIN MODULES. PEX PIPING IN MODULES APPROVED UNDER STATE INSPECTION. CPVC PIPING IN CORRIDOR AREAS OR WITHIN END UNITS BETWEEN MODULES TO BE APPROVED UNDER INSPECTION AT SITE DURING CONSTRUCTION.
- 13. HW SUPPLY FROM CENTRAL WATER HEATING SYSTEM. REFER TO STATE SUBMITTAL PLANS FOR CONTINUATION.
- 14. HWR PIPING TO CENTRAL WATER HEATING SYSTEM. REFER TO STATE SUBMITTAL PLANS FOR CONTINUATION.
- 15. WATER SUB-METER W/ SOV FOR CW SUPPLY SERVING UNIT #602.
- 16. WATER SUB-METER W/ SOV FOR HW SUPPLY SERVING UNIT #602.



TYPICAL TO UNITS: 202,205,304,405,504 (EXACT PIPE LAYOUT MAY VARY)

UNIT TYPE 1A ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

3

TYPICAL TO UNITS: 204,302,305,402,404,502,505,601,602 (EXACT PIPE LAYOUT MAY VARY)

UNIT TYPE 2 ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

2

UNIT: 203,303,403,503 (EXACT PIPE LAYOUT MAY VARY)

UNIT TYPE 3 ENLARGED WATER PLAN

SCALE
1/4" = 1'-0"

1

PLAN NOTES

- A. HORIZONTAL SANITARY SEWER PIPING TO MAINTAIN MIN. SLOPE OF 1/4" PER FT. AT ALL TIMES.
- B. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- C. REFER TO SHEET P501 FOR DETAILS.
- D. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P304 THROUGH P307.
- F. UNITS THAT HAVE SHOWERS W/ BATHTUBS MUST BE PROVIDED W/ ZURN Z1090 BACKWATER VALVES, OR ENGINEER-APPROVED EQUAL.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. ROUTE SS RISER DOWN TO LOWER LEVEL.
- 2. ROUTE GW RISER DOWN TO LOWER LEVEL.
- 3. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 4. 2" GW DOWN AND 2" V UP FROM SHOWER.
- 5. 2" GW DOWN AND 1-1/2" V UP FROM LAVATORY.
- 6. 2" GW DOWN AND 2" V UP FROM LAUNDRY WALL BOX. PROVIDE WITH ZURN Z1090 BACKWATER VALVE, OR ENGINEER-APPROVED EQUAL. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION.
- 7. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 8. ROUTE V RISER UP TO SERVE UPPER LEVELS.
- 9. 2" SD DOWN FROM FLOOR DRAIN.
- 10. ROUTE SD RISER DOWN TO LOWER LEVEL.



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1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

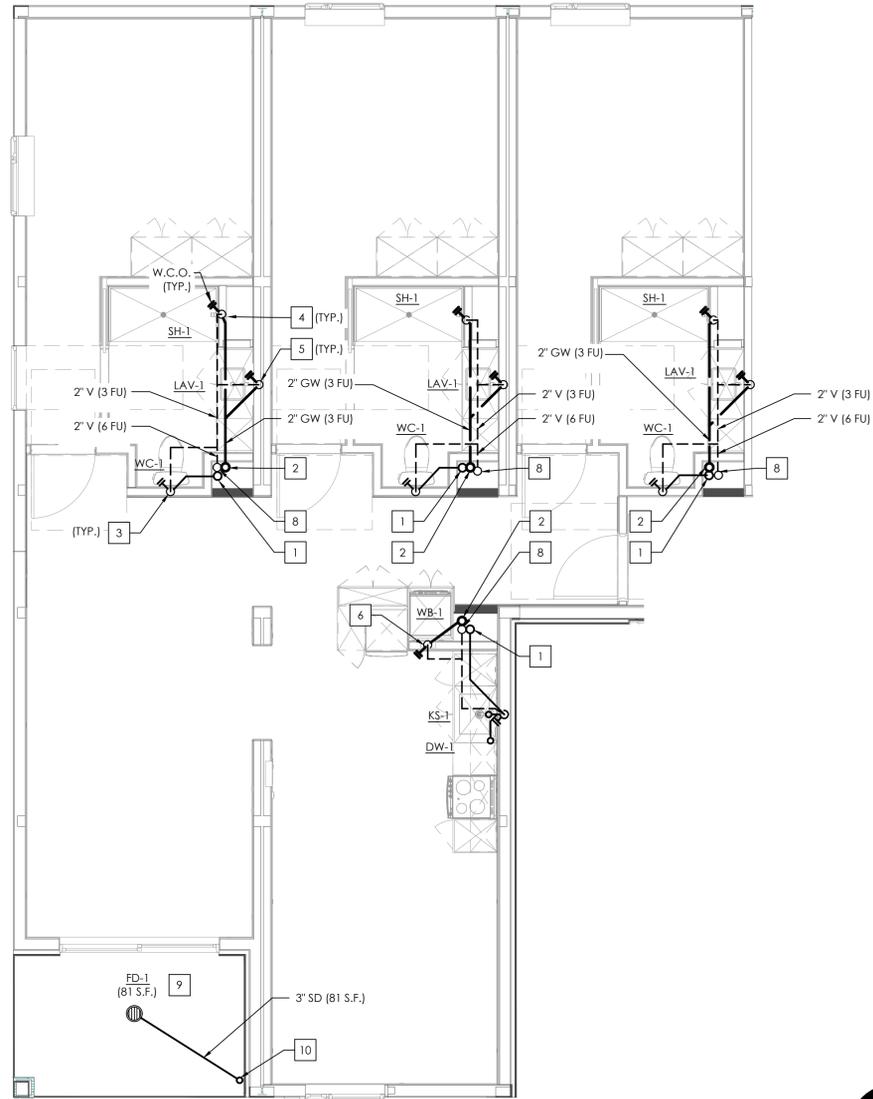
#	DESCRIPTION	DATE
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	UTILITY COORDINATION	04/08/22
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△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

Plot Date: 3/1/2024 4:14:37 PM

SHEET TITLE:
**ENLARGED UNIT
PLANS - WASTE AND
VENT PLAN**

SHEET NO:

P211

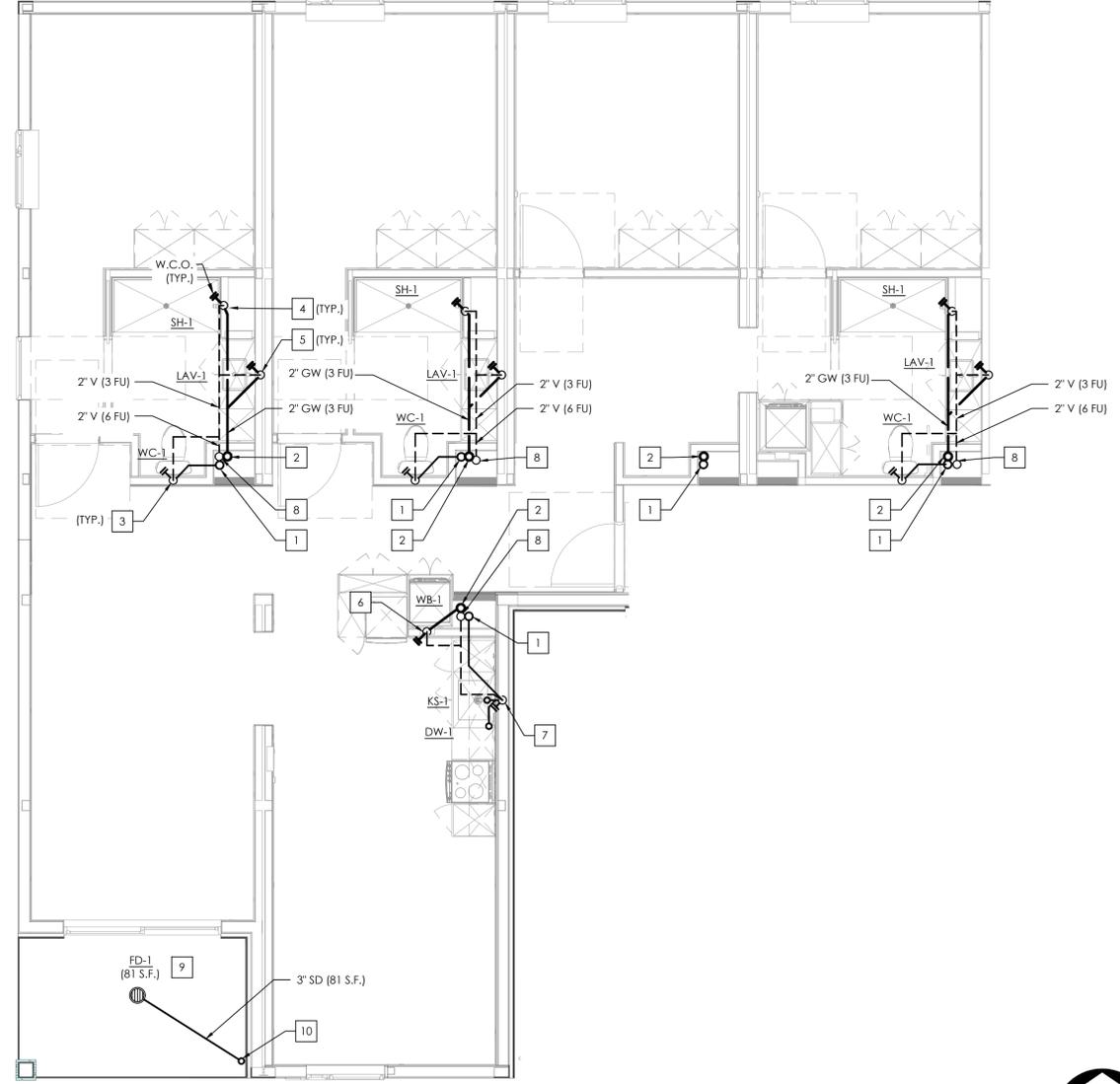


TYPICAL TO UNITS: 301,401,501 (EXACT PIPE LAYOUT MAY VARY)

UNIT TYPE 4 ENLARGED WATER PLAN

SCALE
1/4" - 1'-0"
2

UNIT: 201



UNIT TYPE 5 ENLARGED WATER PLAN

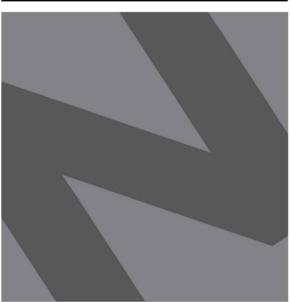
SCALE
1/4" - 1'-0"
1

PLAN NOTES

- A. HORIZONTAL SANITARY SEWER PIPING TO MAINTAIN MIN. SLOPE OF 1/4" PER FT. AT ALL TIMES.
- B. REFER TO SHEET P001 FOR GENERAL PLUMBING INFORMATION.
- C. REFER TO SHEET P501 FOR DETAILS.
- D. REFER TO SHEET P601 FOR SCHEDULES AND CALCULATIONS.
- E. REFER TO PLUMBING RISER DIAGRAMS ON SHEET P304 THROUGH P307.
- F. UNITS THAT HAVE SHOWERS W/ BATHTUBS MUST BE PROVIDED W/ ZURN Z1090 BACKWATER VALVES, OR ENGINEER-APPROVED EQUAL.

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. ROUTE SS RISER DOWN TO LOWER LEVEL.
- 2. ROUTE GW RISER DOWN TO LOWER LEVEL.
- 3. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 4. 2" SS DOWN AND 2" V UP FROM SHOWER.
- 5. 2" SS DOWN AND 1-1/2" V UP FROM LAVATORY.
- 6. 2" SS DOWN AND 2" V UP FROM LAUNDRY WALL BOX. PROVIDE WITH ZURN Z1090 BACKWATER VALVE, OR ENGINEER-APPROVED EQUAL. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION.
- 7. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 8. ROUTE V RISER UP TO SERVE UPPER LEVELS.
- 9. 2" SD DOWN FROM FLOOR DRAIN.
- 10. ROUTE SD RISER DOWN TO LOWER LEVEL.



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PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
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△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

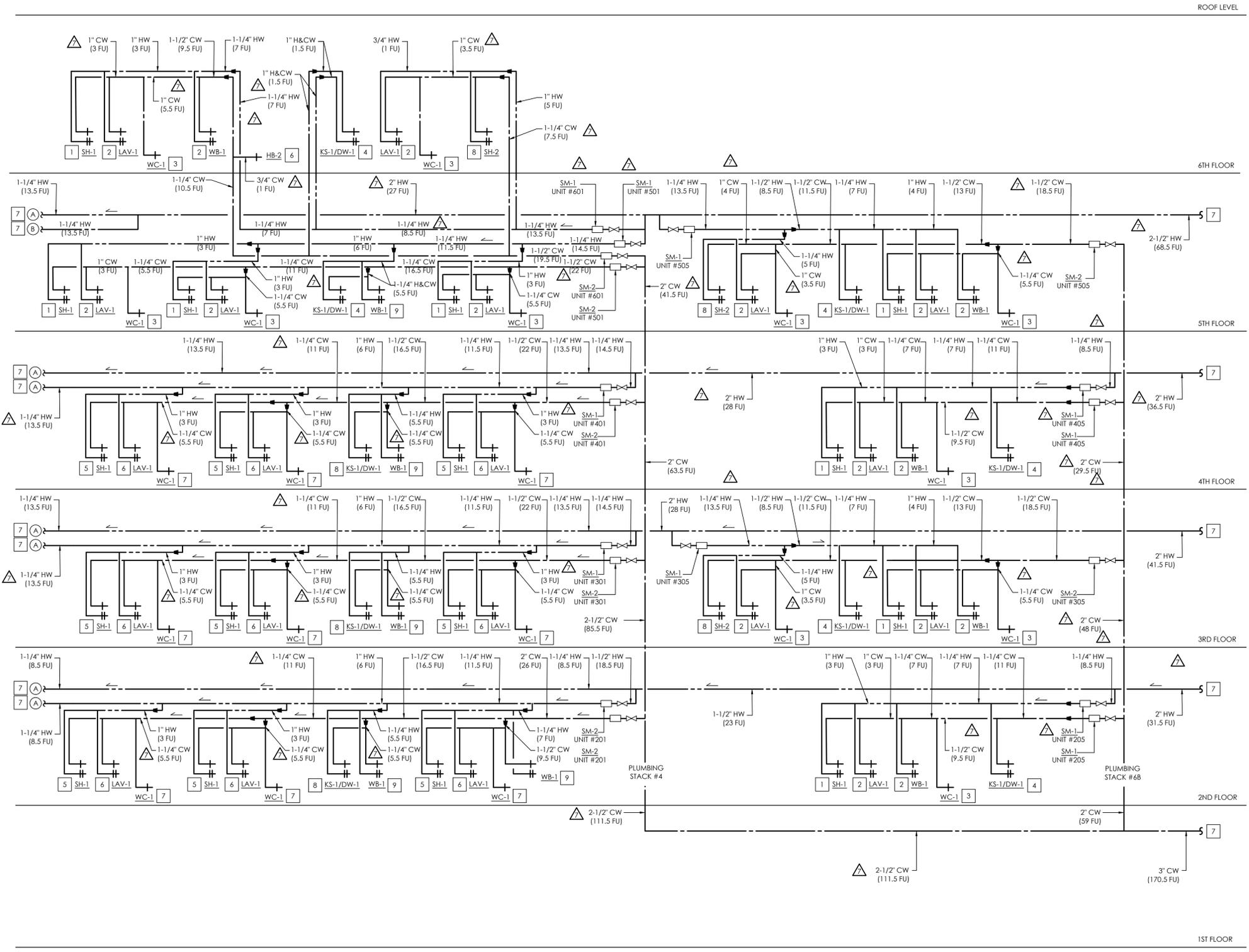
Plot Date: 3/1/2024 4:14:03 PM

SHEET TITLE:

**ENLARGED UNIT
PLANS - WATER PLAN**

SHEET NO.:

P212



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. 1" H&CW DOWN TO SHOWER.
- 2. 3/4" H&CW DOWN TO LAVATORY.
- 3. 1" CW DOWN TO WATER CLOSET.
- 4. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 5. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 6. 3/4" CW SUPPLY FOR HB-2.
- 7. REFER TO SHEET P302 FOR CONTINUATION OF PLUMBING.
- 8. 1" H&CW DOWN TO SHOWER W/ BATHTUB.



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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.
 1050 S. FLOWER STREET
 LOS ANGELES, CA 90015

PLAN NOTES

- A. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
- B. COORDINATE WITH UTILITY PROVIDER FOR ANY INSPECTIONS AND ADJUSTMENTS AS NEEDED.

PROJECT:

2853 WEST BLVD
 LOS ANGELES, CA 90016

C-JAIME-001		
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

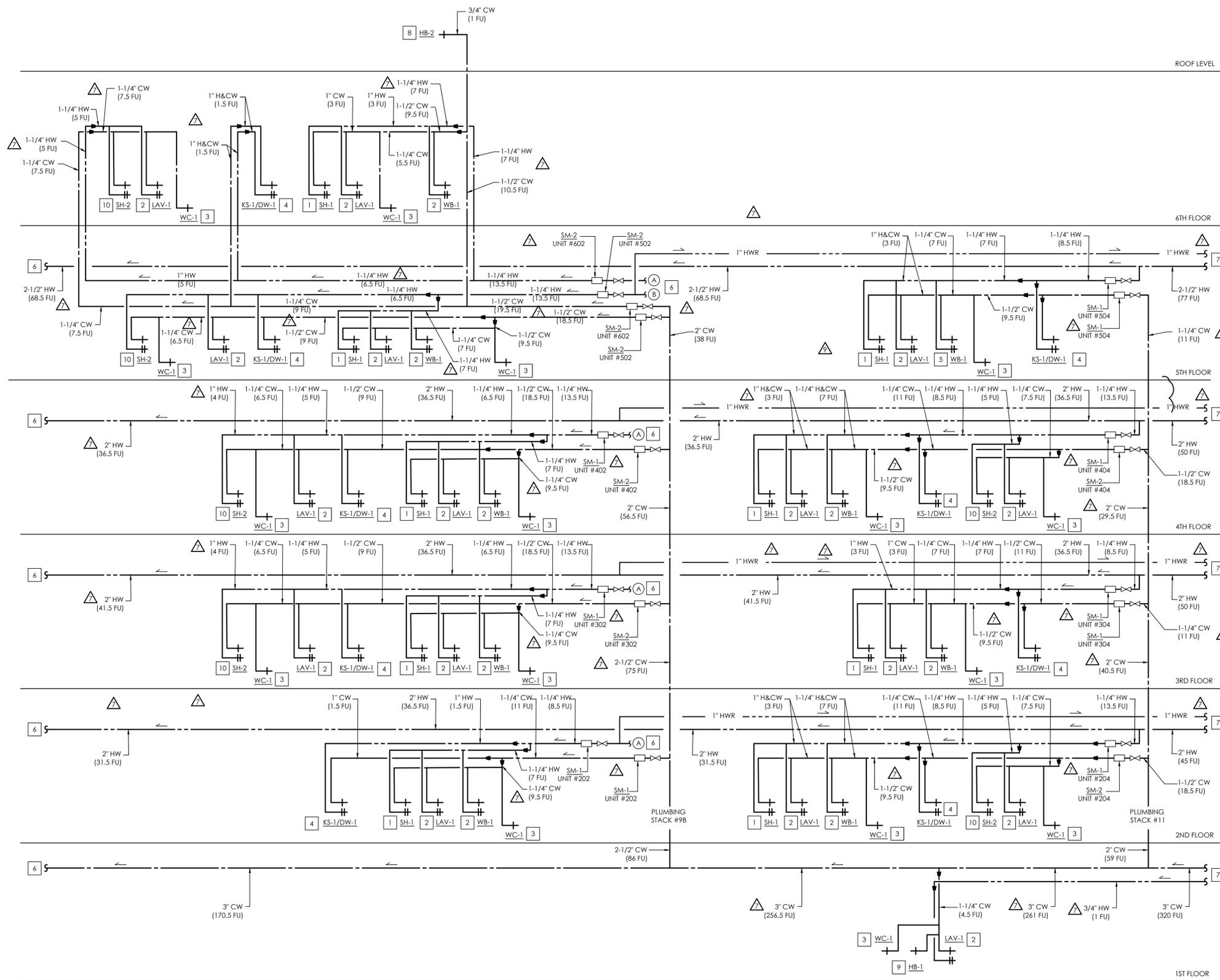
Plot Date: 3/11/2024 4:13:33 PM

SHEET TITLE:

RISER DIAGRAMS

SHEET NO:

P301



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1" H&CW DOWN TO SHOWER.
 - 3/4" H&CW DOWN TO LAVATORY.
 - 1" CW DOWN TO WATER CLOSET.
 - 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
 - 1" H&CW DOWN TO LAUNDRY WALL BOX.
 - REFER TO SHEET P301 FOR CONTINUATION OF PLUMBING.
 - REFER TO SHEET P303 FOR CONTINUATION OF PLUMBING.
 - 3/4" CW SUPPLY FOR HB-2.
 - 3/4" CW SUPPLY FOR HOSE BIBB (1 FU).
 - 1" H&CW DOWN TO SHOWER W/ BATHTUB.



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CLIENT:

**JAIME PARTNERS
OF CALIFORNIA, INC.**
1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PLAN NOTES

- REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
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2853 WEST BLVD
LOS ANGELES, CA 90016

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△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

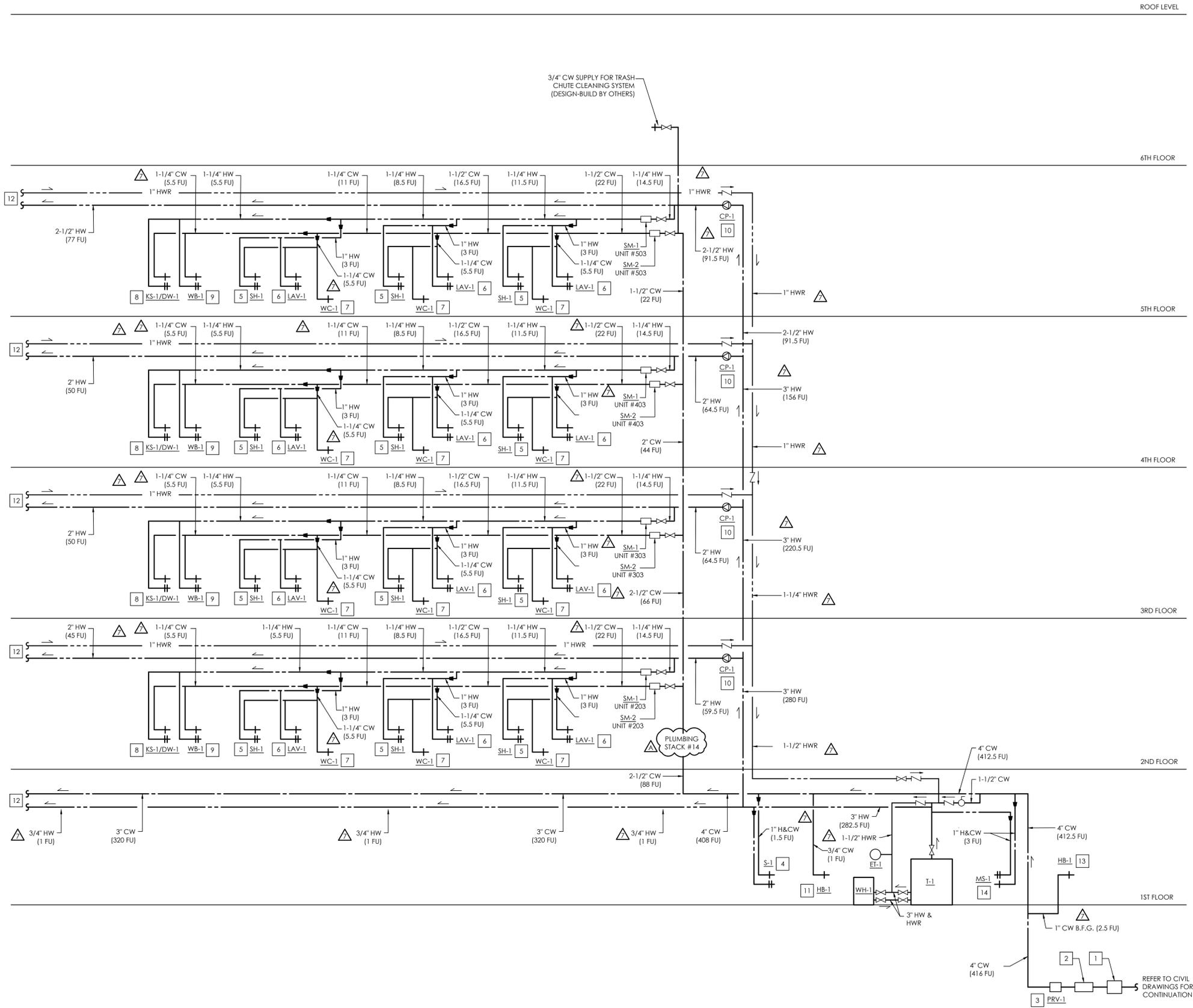
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SHEET TITLE:

RISER DIAGRAMS

SHEET NO.:

P302



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. 4" WATER METER. REFER TO CIVIL DRAWINGS FOR EXACT SIZE AND LOCATION.
- 2. 4" REDUCED PRESSURE BACKFLOW PREVENTER. REFER TO CIVIL DRAWINGS FOR EXACT SIZE AND LOCATION.
- 3. PRV-1 SET AT 75 PSI. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION.
- 4. 1" H&CW DOWN TO SERVE HAND SINK.
- 5. 1" H&CW DOWN TO SHOWER.
- 6. 3/4" H&CW DOWN TO LAVATORY.
- 7. 1" CW DOWN TO WATER CLOSET.
- 8. 1" H&CW DOWN TO SERVE KITCHEN SINK W/ DISHWASHER.
- 9. 1" H&CW DOWN TO LAUNDRY WALL BOX.
- 10. PROVIDE CIRCULATION PUMP ABOVE FIN CEILING W/ ACCESS PANEL FOR HWR SYSTEM.
- 11. 3/4" CW SUPPLY FOR HOSE BIBB (1 FU).
- 12. REFER TO SHEET P302 FOR CONTINUATION OF PLUMBING.
- 13. 1" CW SUPPLY FOR HOSE BIBB (2.5 FU FOR 1ST OCCURRENCE ONLY, 1 FU FOR EVERY ADDITIONAL)
- 14. 1" H&CW DOWN TO MOP SINK.
- 15. 1" H&CW DOWN TO SHOWER W/ BATHTUB.



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CLIENT:

**JAIME PARTNERS
OF CALIFORNIA, INC.**
1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016

PLAN NOTES

- A. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
- B. COORDINATE WITH UTILITY PROVIDER FOR ANY INSPECTIONS AND ADJUSTMENTS AS NEEDED.

C-JAIME-001

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△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

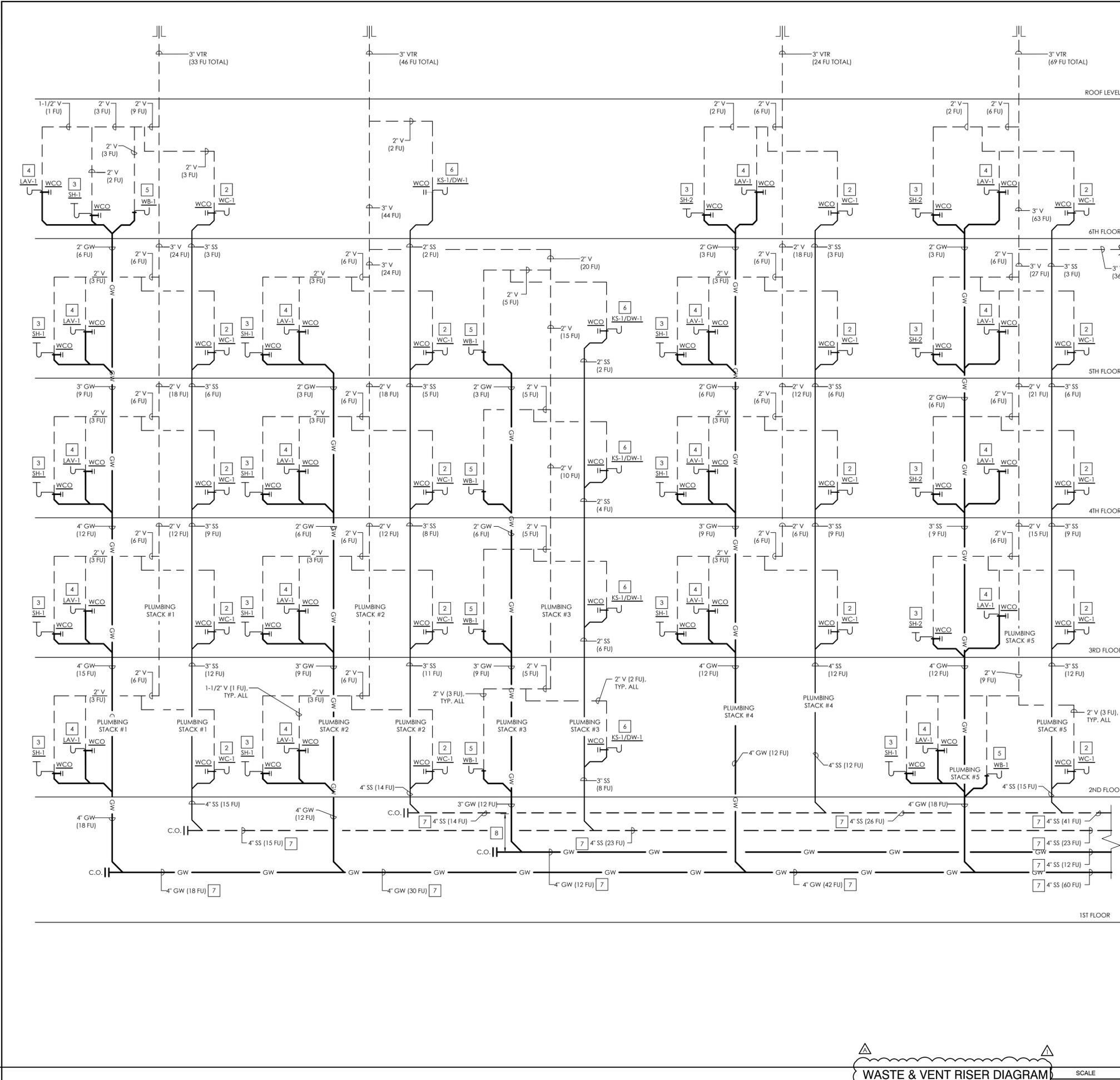
Plot Date: 3/1/2024 4:14:07 PM

SHEET TITLE:

RISER DIAGRAMS

SHEET NO:

P303



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. REFER TO SHEET P305 FOR CONTINUATION OF PLUMBING.
- 2. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 3. 2" SS DOWN AND 2" V UP FROM SHOWER.
- 4. 2" SS DOWN AND 1-1/2" V UP FROM LAVATORY.
- 5. 2" SS DOWN AND 2" V UP FROM LAUNDRY WALL BOX.
- 6. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 7. ALL EXPOSED SANITARY SEWER PIPING TO MAINTAIN MIN. HORIZONTAL SLOPE OF 1/8" PER FT.
- 8. LOCATE SUDS RELIEF VENT AT A POINT 8 FT. ABOVE THE LOWEST POINT OF DRAINAGE STACK PER CPC 711.1. VERIFY EXACT LOCATION IN FIELD.

PLAN NOTES

- A. SANITARY PIPING SHALL BE SLOPED MINIMUM 2% (1/4" PER LINEAR FOOT) IN DIRECTION OF FLOW, AS NOTED ON SANITARY RISER DIAGRAM, UNO.
- B. MAINTAIN SUDS RELIEF REQUIREMENTS FOR ALL SUDS-PRODUCING FIXTURES PER CPC SECTION 711.0. PARALLEL VENT STACKS SHALL CONNECT TO THE DRAINAGE STACK AT A POINT 8 FT. ABOVE THE LOWEST POINT OF THE DRAINAGE STACK.
- C. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
- D. THE POINT OF CONNECTION BETWEEN THE GRAY WATER PIPING AND OTHER WASTE PIPING SHALL BE ACCESSIBLE (AS DEFINED BY LADBC 2.202) AND PROVIDED WITH SIGNAGE THAT IS SATISFACTORY TO THE DEPARTMENT.



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 1050 S. FLOWER STREET
 LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
 LOS ANGELES, CA 90016

C-JAIME-001		
#	DESCRIPTION	DATE
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△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
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△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

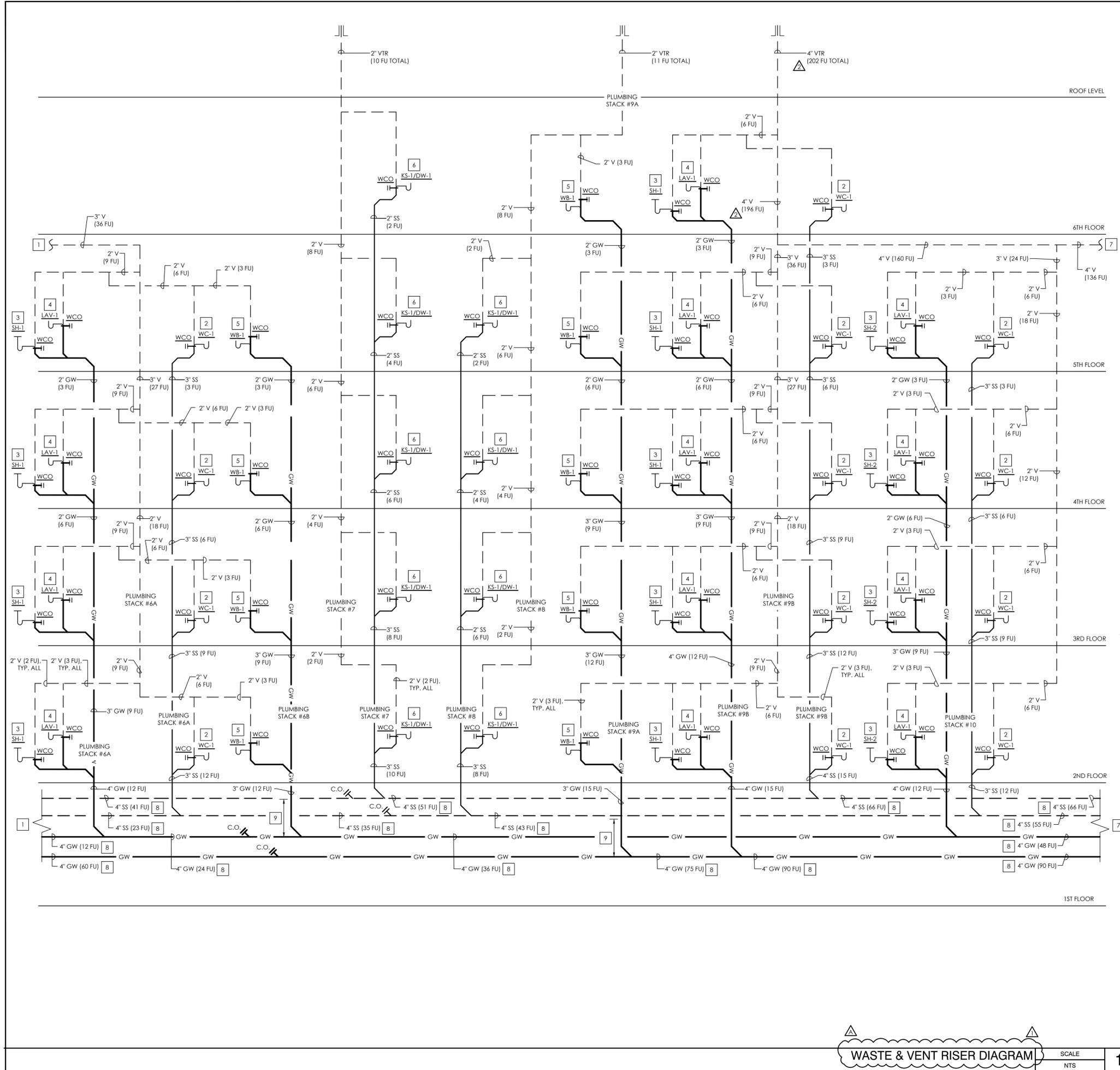
Plot Date: 3/1/2024 4:14:47 PM

SHEET TITLE:

RISER DIAGRAMS

SHEET NO.:

P304



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. REFER TO SHEET P304 FOR CONTINUATION OF PLUMBING.
- 2. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 3. 2" SS DOWN AND 2" V UP FROM SHOWER.
- 4. 2" SS DOWN AND 1-1/2" V UP FROM LAVATORY.
- 5. 2" SS DOWN AND 2" V UP FROM LAUNDRY WALL BOX.
- 6. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 7. REFER TO SHEET P306 FOR CONTINUATION OF PLUMBING.
- 8. ALL EXPOSED SANITARY SEWER PIPING TO MAINTAIN MIN. HORIZONTAL SLOPE OF 1/8" PER FT.
- 9. LOCATE SUDS RELIEF VENT AT A POINT 8 FT. ABOVE THE LOWEST POINT OF DRAINAGE STACK PER CPC 711.1. VERIFY EXACT LOCATION IN FIELD.



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CLIENT:

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 OF CALIFORNIA, INC.**
 1050 S. FLOWER STREET
 LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
 LOS ANGELES, CA 90016

PLAN NOTES

- A. SANITARY PIPING SHALL BE SLOPED MINIMUM 2% (1/4" PER LINEAR FOOT) IN DIRECTION OF FLOW, AS NOTED ON SANITARY RISER DIAGRAM, UNO.
- B. MAINTAIN SUDS RELIEF REQUIREMENTS FOR ALL SUDS-PRODUCING FIXTURES PER CPC SECTION 711.0. PARALLEL VENT STACKS SHALL CONNECT TO THE DRAINAGE STACK AT A POINT 8 FT. ABOVE THE LOWEST POINT OF THE DRAINAGE STACK.
- C. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
- D. THE POINT OF CONNECTION BETWEEN THE GRAY WATER PIPING AND OTHER WASTE PIPING SHALL BE ACCESSIBLE (AS DEFINED BY LADBC 2.202) AND PROVIDED WITH SIGNAGE THAT IS SATISFACTORY TO THE DEPARTMENT.

C-JAIME-001

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	1ST SUBMITTAL	10/04/21
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△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

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SHEET TITLE:

RISER DIAGRAMS

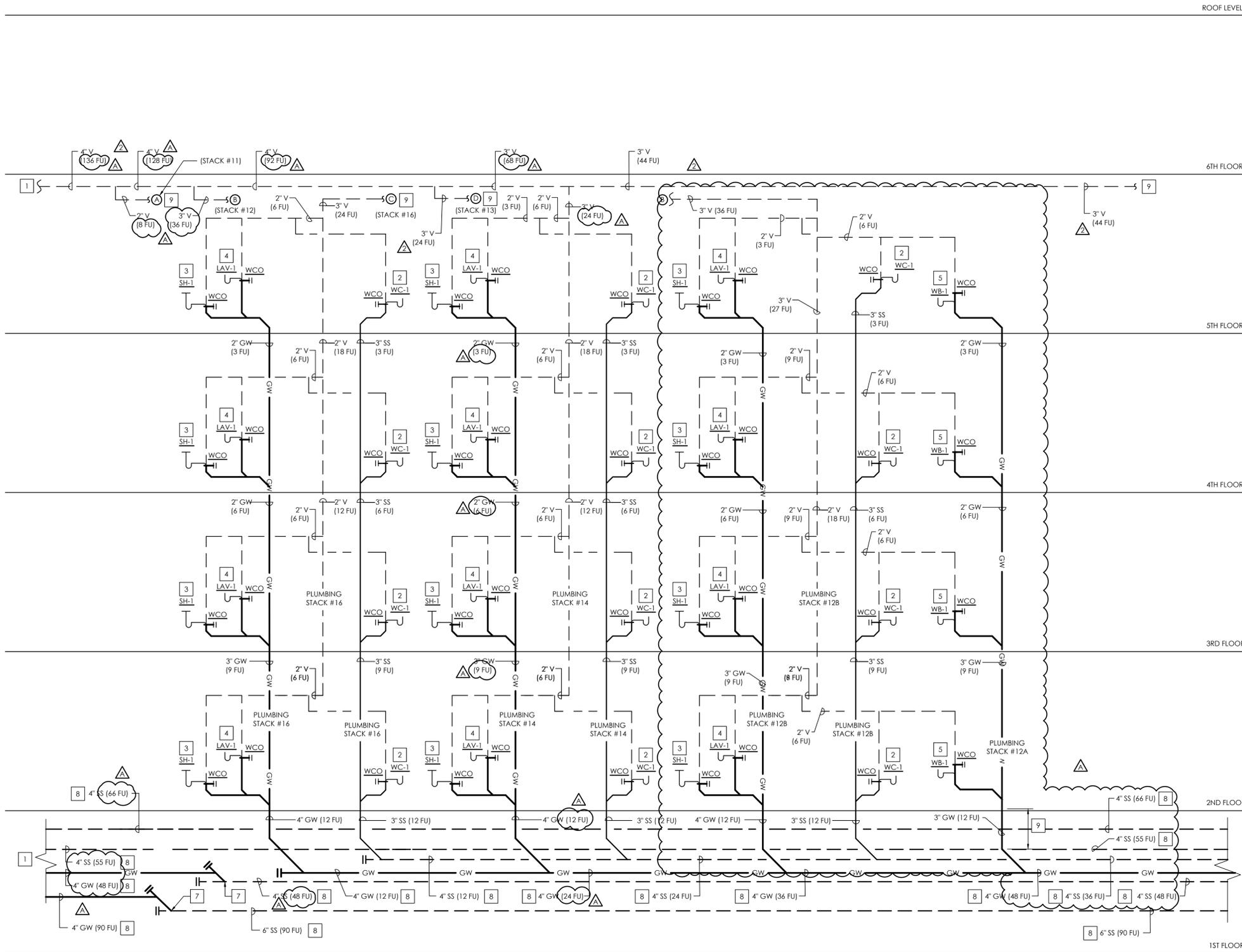
SHEET NO.:

P305

WASTE & VENT RISER DIAGRAM

SCALE
 NTS

1



KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. REFER TO SHEET P305 FOR CONTINUATION OF PLUMBING.
- 2. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 3. 2" SS DOWN AND 2" V UP FROM SHOWER.
- 4. 2" SS DOWN AND 1-1/2" V UP FROM LAVATORY.
- 5. 2" SS DOWN AND 2" V UP FROM LAUNDRY WALL BOX.
- 6. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 7. SEPARATE GRAY WATER PIPING CONNECTS TO BLACKWATER PIPING AT THIS LOCATION. ENSURE SUFFICIENT SPACE AT POC TO ALLOW FOR FUTURE DISCONNECTION OF GRAY WATER PIPING FROM BLACKWATER PIPING, CAPPING OF BLACKWATER PIPING AT POD, AND EXTENSION OF GRAY WATER PIPING TO POTENTIAL FUTURE GRAY WATER TREATMENT SYSTEM (DESIGN-BUILD BY OTHERS).
- 8. ALL EXPOSED SANITARY SEWER PIPING TO MAINTAIN MIN. HORIZONTAL SLOPE OF 1/8" PER FT.
- 9. REFER TO SHEET P307 FOR CONTINUATION OF PLUMBING.



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1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD
LOS ANGELES, CA 90016

PLAN NOTES

- A. SANITARY PIPING SHALL BE SLOPED MINIMUM 2% (1/4" PER LINEAR FOOT) IN DIRECTION OF FLOW, AS NOTED ON SANITARY RISER DIAGRAM, UNO.
- B. MAINTAIN SUDS RELIEF REQUIREMENTS FOR ALL SUDS-PRODUCING FIXTURES PER CPC SECTION 711.0. PARALLEL VENT STACKS SHALL CONNECT TO THE DRAINAGE STACK AT A POINT 8 FT. ABOVE THE LOWEST POINT OF THE DRAINAGE STACK.
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△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

Plot Date: 3/1/2024 4:14:16 PM

SHEET TITLE:

RISER DIAGRAMS

SHEET NO.:

P306

ROOF LEVEL

6TH FLOOR

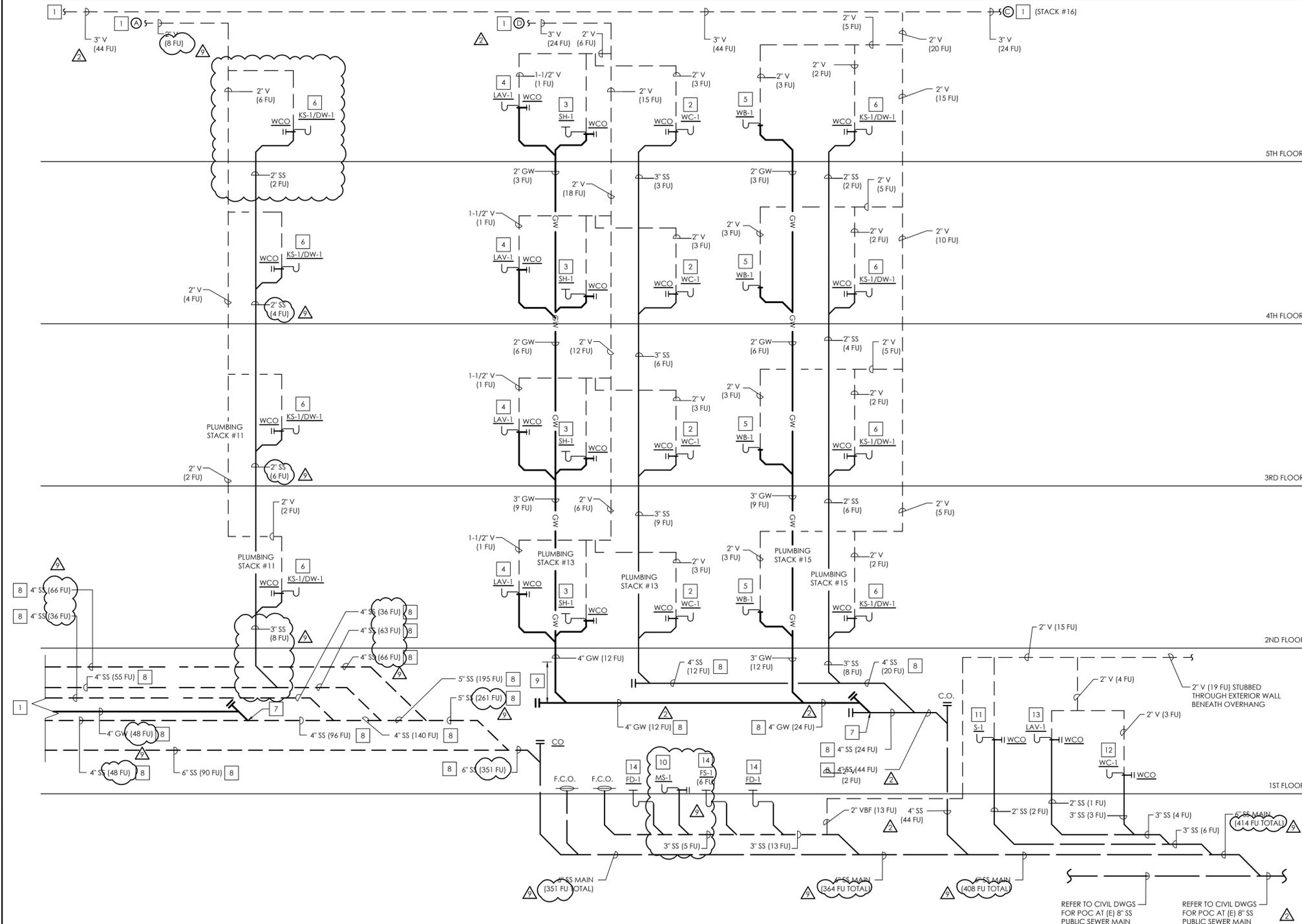
5TH FLOOR

4TH FLOOR

3RD FLOOR

2ND FLOOR

1ST FLOOR



WASTE & VENT RISER DIAGRAM

SCALE
NTS

1

KEY NOTES

- # NUMBERED NOTES AS SHOWN AT LEFT AND LISTED BELOW CAN BE FOUND ON PLANS
- 1. REFER TO SHEET P306 FOR CONTINUATION OF PLUMBING.
- 2. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 3. 2" SS DOWN AND 2" V UP FROM SHOWER.
- 4. 2" SS DOWN AND 1-1/2" V UP FROM LAVATORY.
- 5. 2" SS DOWN AND 2" V UP FROM LAUNDRY WALL BOX.
- 6. 2" SS DOWN AND 2" V UP FROM KITCHEN SINK W/ DISHWASHER.
- 7. SEPARATE GRAY WATER PIPING CONNECTS TO BLACKWATER PIPING AT THIS LOCATION. ENSURE SUFFICIENT SPACE AT POC TO ALLOW FOR FUTURE DISCONNECTION OF GRAY WATER PIPING FROM BLACKWATER PIPING, CAPPING OF BLACKWATER PIPING AT POD, AND EXTENSION OF GRAY WATER PIPING TO POTENTIAL FUTURE GRAY WATER TREATMENT SYSTEM (DESIGN-BUILD BY OTHERS).
- 8. ALL EXPOSED SANITARY SEWER PIPING TO MAINTAIN MIN. HORIZONTAL SLOPE OF 1/8" PER FT.
- 9. LOCATE SUDS RELIEF VENT AT A POINT 8 FT. ABOVE THE LOWEST POINT OF DRAINAGE STACK PER CPC 711.1. VERIFY EXACT LOCATION IN FIELD.
- 10. 3" SS DOWN FROM MOP SINK.
- 11. 2" SS DOWN AND 2" V UP FROM HAND SINK.
- 12. 3" SS DOWN AND 2" V UP FROM WATER CLOSET.
- 13. 2" SS DOWN AND 1-1/2" V UP LAVATORY.
- 14. 3" SS DOWN FROM FLOOR DRAIN/SINK.

PLAN NOTES

- A. SANITARY PIPING SHALL BE SLOPED MINIMUM 2% (1/4" PER LINEAR FOOT) IN DIRECTION OF FLOW, AS NOTED ON SANITARY RISER DIAGRAM, UNO.
- B. MAINTAIN SUDS RELIEF REQUIREMENTS FOR ALL SUDS-PRODUCING FIXTURES PER CPC SECTION 711.1. PARALLEL VENT STACKS SHALL CONNECT TO THE DRAINAGE STACK AT A POINT 8 FT. ABOVE THE LOWEST POINT OF THE DRAINAGE STACK.
- C. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION OF ALL PLUMBING FIXTURES / EQUIPMENT PRIOR TO START OF WORK.
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PROJECT:

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△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

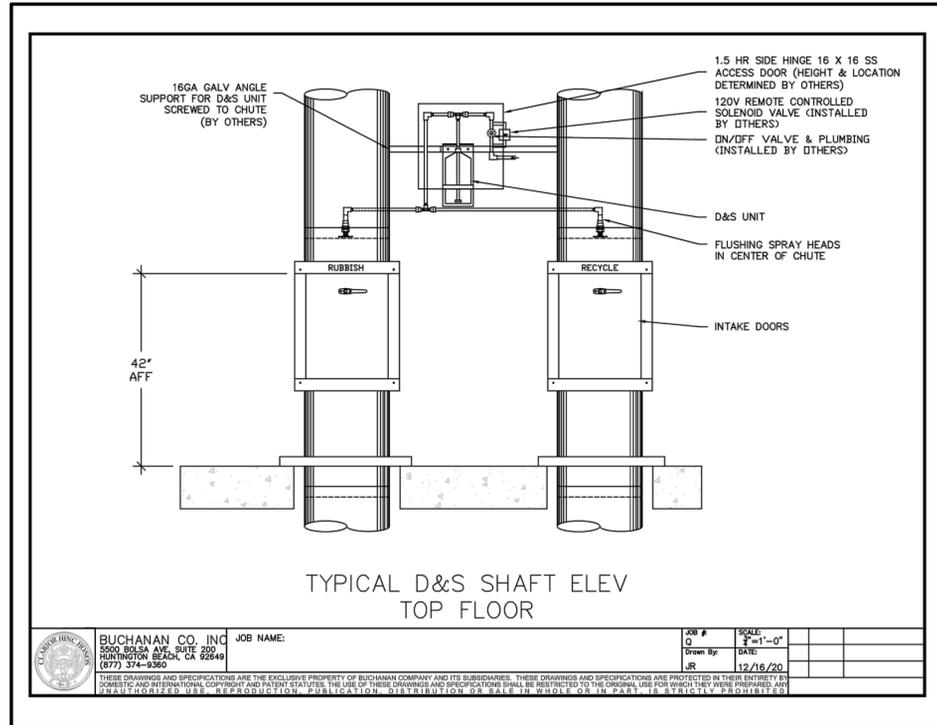
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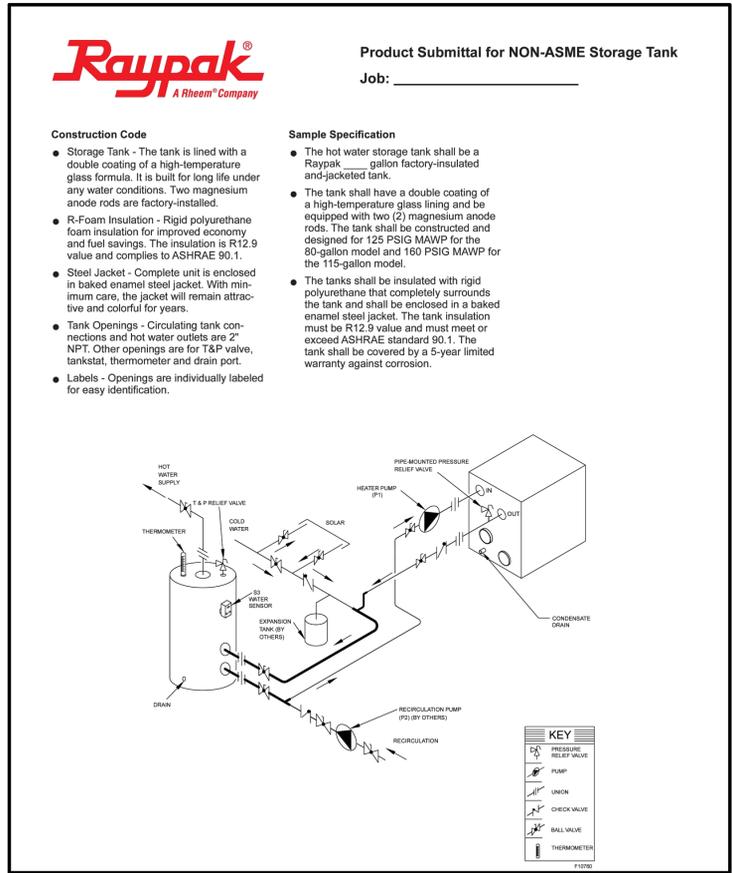
RISER DIAGRAMS

SHEET NO:

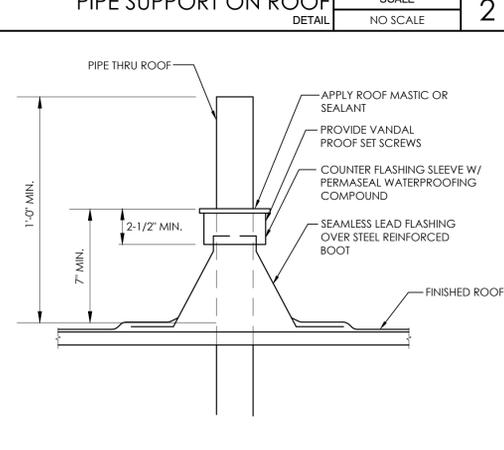
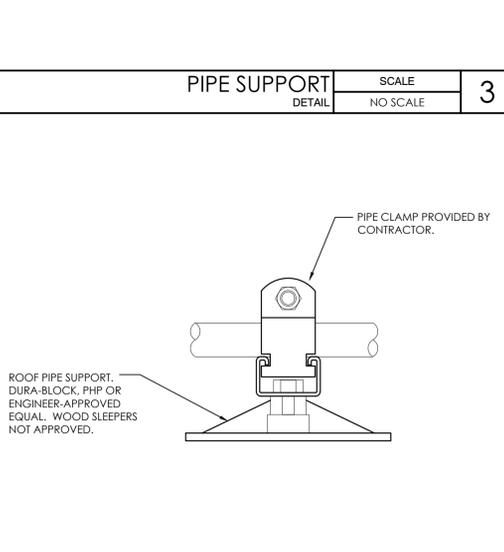
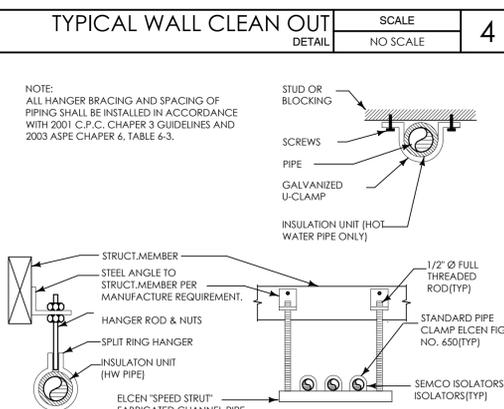
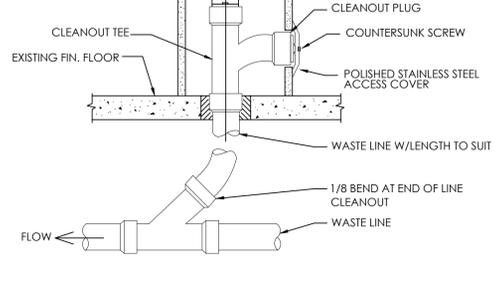
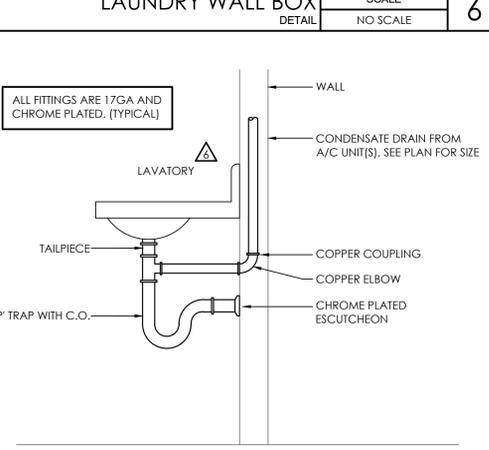
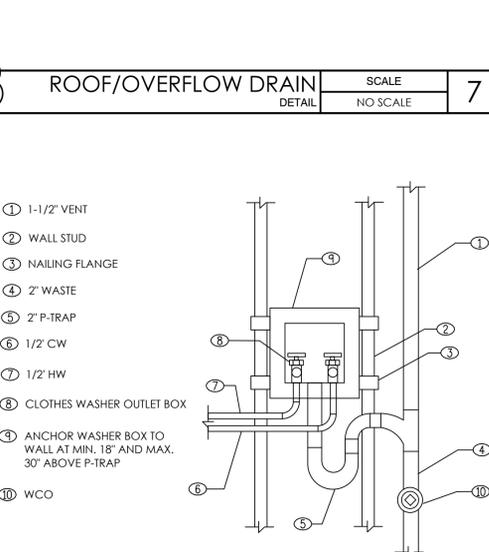
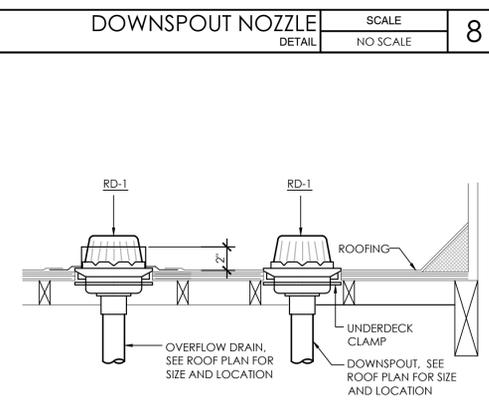
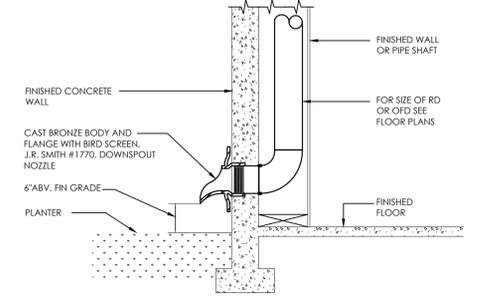
P307



TRASH CHUTE CLEANING SYSTEM SCALE NO SCALE 10



WATER HEATER PIPING DIAGRAM SCALE NO SCALE 9



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CLIENT:
JAIME PARTNERS OF CALIFORNIA, INC.
1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:
2853 WEST BLVD
LOS ANGELES, CA 90016

C-JAIME-001		
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△	PC RESUBMITTAL	05/18/22
△	PC RESUBMITTAL	10/28/22
△	HCD REVISION 1	12/16/22
△	PC RESUBMITTAL	02/02/23
△	HCD & PC RESUBMITTAL	06/06/23
△	HCD RESUBMITTAL	06/14/23
△	PC RESUBMITTAL	07/10/23
△	PC RESUBMITTAL	02/27/24

Plot Date: 3/1/2024 4:13:39 PM
SHEET TITLE:

DETAILS

SHEET NO:
P501

SERVICE	LOCATION	MATERIAL										REMARKS	
		COPPER TYPE "K"	COPPER TYPE "L"	COPPER TYPE "M"	CROSS-LINKED POLYETHYLENE (PEX A)	PVC	CPVC	BLACK STEEL SCH 40	CAST IRON SOIL PIPE & FITTINGS	SCHEDULE 40 ABS DWV	SCR II APPROVED POLYETHYLENE (PE) GAS PIPING		CORRUGATED STAINLESS STEEL (304SS) (CSST)
WATER	INSIDE				●	●							4, 5, 9, 10, 11, 13
	BELOW GRADE					●	●						4, 5, 13, SCHEDULE 80 PVC
SANITARY DRAINAGE	INSIDE					●	●	●	●	●			4, 5, 9, 13, SCHEDULE 40 PVC
	OUTSIDE ABOVE GRADE									●			3, 4, 5, 6
SANITARY VENT	INSIDE					●	●	●	●	●			4, 5, 13, SCHEDULE 40 PVC
	OUTSIDE ABOVE GRADE									●			4, 5, 13, SCHEDULE 40 PVC
STORM DRAINAGE	INSIDE					●	●	●	●	●			4, 5, 9, 13, SCHEDULE 40 PVC
	OUTSIDE ABOVE GRADE									●			4, 5, 13, SCHEDULE 40 PVC
CONDENSATE DRAINAGE	INSIDE					●	●	●	●	●			4, 5, 9, 13, SCHEDULE 40 PVC
	OUTSIDE ABOVE GRADE									●			4, 5, 13, SCHEDULE 40 PVC
COMPRESSED AIR	INSIDE	●											13
	OUTSIDE ABOVE GRADE	●											13
GAS	INSIDE											●	7
	OUTSIDE BELOW GRADE											●	7, 8

- ASTM 888, HARD DRAWING COPPER TUBING, FITTINGS ANSI/ASME B16.22, WROUGHT COPPER.
- ASTM B304 COPPER DRAINAGE TUBE (DWV), FITTINGS: ANSI/ASME B16.29 WROUGHT COPPER AND WROUGHT COPPER ALLOY SOLDER JOINT DRAINAGE FITTINGS (DWV).
- NO-HUB, SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS ASTM A74 AND IAPMO LISTED COUPLING, MUST BEAR THE COLLECTIVE TRADE MARK OF THE CAST IRON SOIL PIPE INSTITUTE AND NSF TRADE MARK.
- COORDINATE WITH LOCAL JURISDICTION.
- OWNER/CONTRACTOR CAN SUBSTITUTE CALLED OUT PIPING MATERIAL ONLY IF WRITTEN APPROVAL IS OBTAINED FROM PLAN EXAMINER AND FIELD INSPECTOR PRIOR TO STARTING CONSTRUCTION. ONCE APPROVED, INSTALLATION MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL METAL PIPES BURIED WITHIN CORROSIVE SOIL MUST BE WRAPPED IN "ML" BLACK TAPE THAT IS IAPMO APPROVED AND UL LISTED. CONTRACTOR MUST VERIFY WITH SOIL ENGINEER FOR LEVEL OF CORROSIVENESS BEFORE BID AND COMMENCEMENT OF WORK.
- PAINT 1 LAYER OF PRIMER AND 2 LAYERS SAFETY YELLOW RUSTOLEUM ON EXPOSED BLACK STEEL NATURAL GAS PIPING.
- POLYETHYLENE PIPE: SCR II APPROVED GAS PIPE WITH METALLIC PIPE MARKER - GASITE OR ENGINEER-APPROVED EQUAL. IF BLACK STEEL PIPING IS USED, PIPING MUST BE ASTM A53 OR A120 WITH OUTSIDE PROTECTIVE PLASTIC COATING OF POLYETHYLENE, PVC OR EQUAL OF 10 MIL OR GREATER THICKNESS. FITTINGS SHALL BE ASTM A234 FORGED STEEL WELDING TYPE WITH AWWA C105 POLYETHYLENE JACKET OR DOUBLE-LAYER, HALF-LAPPED 10 MIL POLYETHYLENE TAPE. JOINTS SHALL BE WELDED AND FIELD-WRAPPED WITH AN APPROVED PROTECTIVE PLASTIC COATING EQUAL TO TAPECOAT CT10, OR 3M #50 TAPE.
- PVC PIPING NOT PERMITTED IN RETURN PLENUM AREA ABOVE CEILING. CPVC, WHEN WRAPPED BY APPROPRIATE / APPROVED FIBERGLASS INSULATION, MAY BE USED IN PLENUM SPACE IN LIEU OF PVC. SUBMIT PIPING AND INSULATION SPECIFICATIONS TO ENGINEER OF RECORD FOR WRITTEN APPROVAL OF ALL CPVC PIPING TO BE INSTALLED IN RETURN AIR PLENUM SPACES.
- PVC IS ACCEPTABLE FOR BUILDING SUPPLY PIPING AND FOR COLD WATER APPLICATIONS BUT NOT FOR HOT WATER APPLICATIONS. CPVC IS ACCEPTABLE FOR BOTH HOT AND COLD WATER APPLICATIONS.
- CROSS-LINKED POLYETHYLENE (PEX A) TUBING MAY BE USED FOR DOMESTIC HOT AND COLD WATER, HOT WATER RECIRCULATION, HYDRONIC HEATING AND COOLING. APPROVED MANUFACTURERS INCLUDE UPONOR OR ENGINEER-APPROVED EQUAL. FOR ALL OTHER MANUFACTURERS, SUBMIT FULL MANUFACTURER'S SPECIFICATION SHEET, INSTALLATION INSTRUCTIONS AND COMPLETE LIST OF REQUIRED INSTALLATION HARDWARE TO ENGINEER FOR EVALUATION AND APPROVAL. PEX A TUBING OF TYPE PEX-AL-PEX, PEX TUBING USED FOR CONTINUOUSLY RECIRCULATING HOT WATER WHICH STAYS NOT CONTINUOUSLY AND PEX A TUBING BURIED IN SOIL SHALL ONLY BE ALLOWED AS NOTED IN TABLE 604.1 AS INDICATED IN THE NOTE IMMEDIATELY BELOW. PROVIDE BRASS OR POLY EXPANSION FITTINGS ONLY.
- ALL MATERIALS USED FOR DOMESTIC WATER PIPING FOR THIS PROJECT SHALL COMPLY WITH TABLE 604.1 OF THE CURRENT EDITION OF THE CPC. ALL MATERIALS USED FOR DOMESTIC WASTE AND VENT PIPING FOR THIS PROJECT SHALL COMPLY WITH TABLE 701.2. DEVIATIONS FROM THESE REFERENCES SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL FROM BOTH THE AUTHORITY HAVING JURISDICTION AND THE ENGINEER OF RECORD.
- ABS AND PVC INSTALLATIONS ARE LIMITED TO NOT MORE THAN TWO STORIES OF AREAS OF RESIDENTIAL ACCOMMODATION.

DOMESTIC WATER PIPE SIZING CHART					
PIPE SIZE	PIPE MATERIAL	COLD WATER		HOT WATER	
		MAX GPM (FT)	MAX WSFU (FT)	MAX GPM	MAX WSFU
1/2"	PEX	0	0	0	0
3/4"	PEX	2	1	2	1
1"	PEX	4	4	4	4
1-1/4"	PEX	7	8	7	8
1-1/2"	PEX	11	15	11	15
3/4"	CPVC SCH. 80	2	1	2	1
1"	CPVC SCH. 80	5	6	5	6
1-1/4"	CPVC SCH. 80	11	15	11	15
1-1/2"	CPVC SCH. 80	17	24	17	24
2"	CPVC SCH. 80	35	66	35	66
2-1/2"	CPVC SCH. 80	55	151	55	151
3"	CPVC SCH. 80	100	380	100	380
4"	CPVC SCH. 80	180	809	180	809

PIPE SIZED BASED ON 1.3 PSI ALLOWABLE FRICTION LOSS/100 FT OF PIPE AND MAX 8 FPS (CW), 5 FPS (HW). UPONOR AQUAPEX PEX PIPE AND PLASTIC INSERT FITTINGS SIZED PER PIPE SIZING CHART APPROVED BY LARR-5482. 'SPEARS' CPVC SCH. 80 PIPE AND FITTINGS SIZED PER MANUFACTURER, APPROVED BY LARR-5700.

MARK	FIXTURE	ROUGH IN SIZE				DESCRIPTION / REMARKS
		S/W	V	CW	HW	
WC-1	WATER CLOSET (TANK - ADA)	3"	2"	1-1/4"	-	AMERICAN STANDARD "CADET" CHAIR-HEIGHT (ADA) ELONGATED TOILET 215AA104.020 (OR ENGINEER-APPROVED EQUAL), (1.28 GPF), FLOOR-MOUNTED, ELONGATED BOWL, FULLY-GLAZED TRAPWAY, WHITE VITREOUS CHINA, OLSONITE PLASTIC SEAT MODEL 95CT COMFORTCURVE, ELONGATED, OPEN FRONT, STAIN & CHEMICAL RESISTANT.
LAV-1	LAVATORY (ADA)	2"	2"	1/2"	1/2"	KOHLER "HONESTY" K-99760-4 (OR ENGINEER-APPROVED EQUAL), SINGLE-HANDLE BATHROOM SINK FAUCET INCLUDE METAL POP-UP DRAIN W/ 1-1/4" TAILPIECE, MAX FLOW RATE OF 1.2 GPM.
FD-1	FLOOR DRAIN	2"	1-1/2"	-	-	ZURN MODEL Z415-BZ-P 7"Ø NICKEL BRONZE GRATE, CAST IRON BODY, CONVERTIBLE MEMBRANE CLAMP, AND ADJUSTABLE COLLAR (TRAP PRIMER CONNECTION IF SHOWN ON THE PLAN).
FD-2	FLOOR DRAIN	3"	2"	-	-	ZURN MODEL Z415-BZ-P 8"Ø NICKEL BRONZE GRATE, CAST IRON BODY, CONVERTIBLE MEMBRANE CLAMP, AND ADJUSTABLE COLLAR (TRAP PRIMER CONNECTION IF SHOWN ON THE PLAN).
FS-1	FLOOR SINK	3"	2"	-	-	ZURN MODEL 1900-25 SANII-FLOOR RECEPTOR, 12x12x6 ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, CAST IRON BODY, SQUARE SLOTTED LIGHT DUTY GRATE. COORDINATE 1/2 GRATE CONFIGURATION.
S-1	SINK	2"	2"	1/2"	1/2"	KOHLER MODEL "VAULT" #K-3894, UNDERMOUNT SINGLE-BOWL KITCHEN SINK. KOHLER FAUCET #K-22972 PULL-DOWN SINGLE-HANDLE KITCHEN FAUCET.
MS-1	MOP SINK	3"	2"	3/4"	3/4"	ZURN MODEL #Z1996-24, MOP SERVICE BASIN (24"x24"), PVC DRAIN BODY, STAINLESS STEEL STRAINER AND 3" GASKETED OUTLET CONNECTION. ZURN FAUCET MODEL #Z1996-SF SERVICE SINK FAUCET, COMPLETE WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK, FOUR-ARM HOT AND COLD HANDLES AND 3/4" HOSE THREAD ON SPOUT.
SH-1	SHOWER (ADA)	3"	2"	1/2"	1/2"	KOHLER "PURIST" MODEL: K-22178-G (OR ENGINEER-APPROVED EQUAL), MULTIFUNCTION HANDSHOWER KIT, ADA COMPLIANT. INCLUDES 1.75 GPM MULTIFUNCTION HANDSHOWER, 60" METAL HOSE, 30" SLIDEBAR AND CONTEMPORARY SLIDEBAR TRIM.
SH-2	SHOWER (W/ BATHTUB)	3"	2"	1/2"	1/2"	SHOWER: KOHLER "PURIST" MODEL: K-22178-G (OR ENGINEER-APPROVED EQUAL), MULTIFUNCTION HANDSHOWER KIT, ADA COMPLIANT. INCLUDES 1.75 GPM MULTIFUNCTION HANDSHOWER, 60" METAL HOSE, 30" SLIDEBAR AND CONTEMPORARY SLIDEBAR TRIM. BATHTUB: KINGSTON BRASS MODEL: VTAP603622R, 60" ACRYLIC ALCOVE TUB.
WB-1	LAUNDRY WALL BOX	2"	2"	3/4"	3/4"	OATEY "QUADTRO" (OR ENGINEER-APPROVED EQUAL), 1/4 TURN CPVC CONNECTION WASHING MACHINE SUPPLY BOX, WITH WATER HAMMER. CLOTHES WASHER/DRYER: GE MODEL: GUD27EESN/GUD28GESN (OR ENGINEER-APPROVED EQUAL) STAINLESS STEEL WASHER AND DRYER.
KS-1	KITCHEN SINK	2"	2"	1/2"	1/2"	ELKAY MODEL: ELUHAD311855PD STAINLESS STEEL ROUND UNDER-MOUNT DOUBLE SINK ADA COMPLIANT, BOTTOM GRID LKWRBG16SS, DRAIN LK-19. FAUCET: CHICAGO FAUCET MODEL 50-E35-317XKABCP, 1.5 GPM FLOOR-MOUNTED, SINGLE HOLE HOT AND COLD MIXING SINK FAUCET, 5-1/4" RIGID SWING GOOSENECK SPOUT, 4" VANDAL PROOF WRIST BLADE HANDLE, 3/8" COMPRESSION FLEXIBLE STAINLESS STEEL SUPPLY HOSES.
DW-1	DISHWASHER	-	-	-	1/2"	GE MODEL: PDT1455GL/SSL (OR ENGINEER-APPROVED EQUAL) ADA COMPLIANT 18" DISHWASHER.
WHA	WATER HAMMER ARRESTER	-	-	LINE SIZED	LINE SIZED	PPP, INC. SERIES SC, FULLY MECHANICAL WATER HAMMER ARRESTER SIZED PER MANUFACTURER SPECIFICATIONS.
HB-1	HOSE BIBB	-	-	LINE SIZED	-	HYDRANT - EXTERIOR FREEZELESS: WOODFORD MODEL #865-C WALL HYDRANT WITH CHROME BOX DRAIN DIVERT AND KEY LOCK, INTEGRAL VACUUM BREAKER, 3/4" NPT CONNECTION, DO NOT INSTALL LOWER THAN 12" OR GREATER THAN 3'-0" ABOVE FINISH GRADE.
HB-2	HOSE BIBB	-	-	LINE SIZED	-	HYDRANT - EXTERIOR ROOFTOP FREEZELESS: WOODFORD MODEL #RHY2-MS ROOFTOP HYDRANT CAST IRON WITH 4-BOLTS MOUNTING DRAW TIGHT AT ROOF DECKING FLANGE, 50HP BACKFLOW PREVENTER, 3/4" NPT CONNECTION, INSTALL 32" ABOVE FINISH ROOF.
RD-X	ROOF DRAIN AND OVERFLOW DRAIN	LINE SIZED	-	-	-	ZURN MODEL Z165 8-3/8" DIAMETER ROOF DRAIN AND OVERFLOW DRAIN, DURA-COATED CAST IRON BODIES WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, DOUBLE TOP-SET DECK PLATE, AND LOW SILHOUETTE CAST IRON DOMES. TERMINATE MAIN DRAIN 12" ABV. GRADE & OVERFLOW DRAIN 18" ABOVE GRADE WITH ZURN #Z199 DOWNSPOUT.
BP-1	BACKFLOW PREVENTER	-	-	SEE PLAN	-	REDUCED PRESSURE PRINCIPLE ASSEMBLY BACKFLOW PREVENTER, ZURN #375AST, LEAD-FREE, FULL PORT NRS GATE VALVES: CONNECTION AS REQUIRED FOR DESIRED INSTALLATION. PROVIDE "Y" STRAINER UPSTREAM OF ASSEMBLY. INSPECTION BY CERTIFIED BACKFLOW REPRESENTATIVE/CITY AGENCIES, IAPMO/CSA/USC AND ASSE-1013 LISTED, SUITABLE FOR SIZES 2-1/2" TO 10". PROVIDE AIR-GAP FITTING WITH A MINIMUM GAP OF 2 X D WHERE D IS THE EFFECTIVE DIAMETER OF THE DISCHARGE DRAIN PIPE SERVING THE BACKFLOW PREVENTER. EXTEND DISCHARGE TO ADJACENT FLOOR SINK OR OTHER CODE-APPROVED RECEPTOR. UNIT TO BE INSTALLED HORIZONTALLY.
WCO FCO COTG CO	CLEAN-OUTS	-	-	-	-	WALL CLEAN OUT: "ZURN" MODEL Z1447 SQUARE, Z1446 ROUND. FLOOR CLEANOUT: "ZURN" MODEL Z1400-8Z MUST BE FLUSHED TO SURFACE. CLEAN OUT TO GRADE: "ZURN" MODEL Z1400 MUST BE FLUSHED TO SURFACE. T CLEAN OUT: "ZURN" MODEL Z1445.

MARK	DESCRIPTION	MAKE/MODEL	ELECTRICAL	DESCRIPTION/REMARKS
WH-1	CIRCULATING WATER HEATER	RHEEM RTR-F5633DVLN	120V/1/60	RHEEM COMMERCIAL TANKLESS SYSTEM - FREE STANDING. PROVIDE WITH FACTORY DIRECT VENT HEADER KITS, 24 TOTAL AMPS. MAX GAS INPUT OF 1,199 MBH TO HEAT 1,932 GPH AT A TEMPERATURE RISE OF 70°F. CONTRACTOR TO PROVIDE SEPARATE PUMP FOR CONNECTION TO HOT WATER STORAGE TANK (L-1). REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION.
CP-1	CIRCULATION PUMP	GRUNDOS UP15-10B5	115V/1/60	INLINE HOT WATER OPEN SYSTEM RECIRCULATING PUMP, 4.5 GPM (140°F) @ 6' HEAD, 1/25 HP, 115V/1PH, INTEGRAL ATTACHED TIMER FOR OPERATION CONTROLS AND ATTACHED POWER CORD. PUMP REQUIRES STANDARD MIN. 10A GFCI OUTLET TO PROVIDE POWER TO 25W MOTOR.
ET-1	THERMAL EXPANSION TANK	AMTROL ST-80V-C	-	THERM-X-TROL EXPANSION TANK W/ TANK VOLUME OF 53 GALLONS AND MAX. WORKING PRESSURE OF 150 PSIG.
PRV-1	PRESSURE REDUCING VALVE	ZURN WILKINS 500XL	-	PRESSURE REDUCING VALVE W/ INTEGRAL BY-PASS CHECK VALVE. ALL BRONZE BODY AND BELL RESIST CORROSION, LOW-LEAD LAW COMPLIANT (OR ENGINEER-APPROVED EQUAL).
SM-1	1" WATER SUB-METER	EKM METERING SPWM-100-NSF	-	1-1/4" COLD WATER FLOW METER WITH PULSE-OUTPUT COMMUNICATION FOR REMOTE READING. NO POWER SOURCE REQUIRED. CONNECT TO FACTORY EKM "OMNIMETER PULSE V.4" REMOTE READER AND EKM "PUSH 3" CLOUD-BASED CONTROL / MONITOR SYSTEM.
SM-2	1-1/2" WATER SUB-METER	EKM METERING SPWM-150-NSF	-	1-1/2" WATER FLOW METER WITH PULSE-OUTPUT COMMUNICATION FOR REMOTE READING. NO POWER SOURCE REQUIRED. CONNECT TO FACTORY EKM "OMNIMETER PULSE V.4" REMOTE READER AND EKM "PUSH 3" CLOUD-BASED CONTROL / MONITOR SYSTEM.

MARK	MFG./MODEL	CAPACITY (GALLONS)	TYPE/SIZE	WEIGHT (LBS.)	OPERATING WEIGHT (LBS.)	REMARKS
T-1	RAYPAK 115 GALLON	115	29"Ø x 60" VERTICAL	319	1,279	SEE BELOW

NOTES:
1. HEAVY-DUTY, ABOVE GRADE, COMMERCIAL STORAGE TANK
2. 2" NPT THREADED INLET AND OUTLET FITTING FOR HOT WATER SUPPLY FROM WH-1
3. 150 PSI ASME WORKING PRESSURE.

DOMESTIC WATER CALCULATION	
WATER INFO	MAXIMUM WATER PRESSURE: 122 PSI MINIMUM WATER PRESSURE: 109 PSI SETPONT OF BACKFLOW PREVENTER: 75 PSI EXPECTED DEMAND: 110 GPM
WATER LOSSES	LOSS THROUGH: 4" SITE WATER METER = 0.0 PSI LOSS THROUGH: 4" SITE BACKFLOW PREVENTER = 0.0 PSI FALL-OFF PRESSURE LOSS THROUGH: 3" PRV (SET AT 75 PSI) = 5.0 PSI STATIC HEAD LOSS: 60.0 FT / (2.31 FT/PSI) = 26.0 PSI DYNAMIC HEAD LOSS (WATER HEATER): 23.0 FT / (2.31 FT/PSI) = 10.0 PSI WATER SUB-METER (WORST CASE): 1" 27.5 FU TOTAL = 4.4 PSI RESIDUAL PRESSURE: 25 PSI AT FIXTURE = 25.0 PSI TOTAL: 70.3 PSI
PIPE LENGTH	TAP TO METER = 0 FT METER TO LAST FIXTURE = 210 FT VERTICAL RISE = 70 FT VALVES AND FITTING (25% OF TOTAL LENGTH) = 70 FT TOTAL: 350 FT
ALLOWABLE PRESSURE DROP PER 100 FT OF PIPE	PRESSURE AVAILABLE = 75 PSI - 70.3 PSI = 4.7 PSI ALLOWABLE PSI DROP/100 FT = 4.7 PSI X 100 FT / 350 = 1.3 PSI

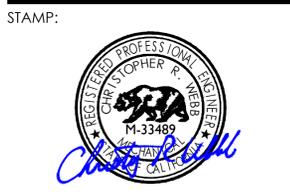
NOTE: SYSTEM SIZED W/ PRV SELECTION ENSURING MAX FALL OFF PRESSURE @ 5 PSI PER THE DESIGNATED FLOW. ANY PROPOSED SUBSTITUTE MUST ALSO MEET THIS REQUIREMENT.

FIXTURE UNIT CALCULATION				
DESCRIPTION	QTY	WASTE DFM	WASTE SUBTOTAL WSFU	WATER SUBTOTAL
WATER CLOSET (F)	48	2	144	2.5
STANDING SHOWER	28	2	76	2
SHOWER W/ BATHTUB	9	2	18	4
LAVATORY	48	1	48	1
MOP SINK	1	3	3	3
KITCHEN SINK W/ DISHWASHER	22	2	44	1.5
SINK	1	2	2	1.5
CLOTHES WASHER	23	3	69	4
HOSE BIBB - FIRST	1	-	-	2.5
HOSE BIBB - ADDITIONAL	4	-	-	1
FLOOR DRAIN (3)	2	2	4	-
FLOOR SINK (4)	1	2	2	-
TOTAL	414.0	DFU	TOTAL 414.0	WSFU

NOTES:
1. DRAINAGE FIXTURE UNITS (DFU) PER CPC TABLE 702.1. "PRIVATE"
2. WATER SUPPLY FIXTURE UNITS (WSFU) PER CPC TABLE A2.1
3. TOTAL ESTIMATED DEMAND LOAD PER CPC CHART A2.1, A2.1(1).



NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997



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SHEET TITLE: **CALCULATIONS & SCHEDULES**

SHEET NO: **P601**