

MECHANICAL SYMBOLS AND ABBREVIATIONS

[SOME SYMBOLS MAY NOT BE USED ON THIS PROJECT]

GENERAL DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
	ROUND DUCT SECTION
	12" DIA. ROUND DUCT
	SUPPLY SECTION, POSITIVE PRESS.
	EXH., RET., O.A., DUCT SECTION NEGATIVE PRES.
	DUCTWORK, FIRST NO. IS VISIBLE DIM.
	FLEXIBLE CONNECTION (DUCT)
	FLEXIBLE DUCT
	BRANCH DUCT WITH VOLUME DAMPER
	SIDEWALL REGISTER
	VANED ELBOW (PROVIDE ALL SQUARE ELBOWS W/VANES EVEN IF SYMBOL IS MISSING).
	DAMPER, TYPE INDICATED (OBD, PBD, FD, BD)
	WALL LOUVER
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
	LINEAR SUPPLY AIR DEVICE
	LINEAR AIR RETURN DEVICE

DRAWING SYMBOLS

SYMBOL	DESCRIPTION
	EQUIPMENT MARK NUMBER - 5-TON, CU-1
	KEYED NOTE 2
	TYPE 'A' AIR DEVICE, 150 CFM W/ 60 NECK. WHEN NOT INDICATED ON DRAWING REFER TO SCHEDULE

HEATING PIPING SYMBOLS

SYMBOL	DESCRIPTION
	HIGH PRESSURE STEAM CONDENSATE
	LOW PRESSURE STEAM CONDENSATE
	STEAM SUPPLY (PRESS. AS NOTED)
	PUMPED CONDENSATE DRAIN
	HOT WATER RETURN
	HOT WATER SUPPLY
	BOILER FEED WATER
	THERMOSTATIC PUMP
	FLOAT & THERMOSTATIC TRAP

AIR CONDITIONING

SYMBOL	DESCRIPTION
	CHILLED/HEATING WATER RETURN
	CHILLED/HEATING WATER SUPPLY
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	REFRIGERANT DISCHARGE
	MAKE-UP WATER
	CONDENSATE DRAIN
	PUMPED CONDENSATE DRAIN

CONTROLS

SYMBOL	DESCRIPTION
	THERMOSTAT SERVING ZONE X
	TEMPERATURE SENSOR SERVING ZONE X
	MISC. CONTROL SERVING ZONE X REFER TO KEYED NOTES FOR MORE INFORMATION

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
ABV	ABOVE	MAX	MAXIMUM
AC	ABOVE CEILING	MD	MANUAL DAMPER
A/C	AIR CONDITIONED	MECH	MECHANICAL
ACCH	AIR COOLED CHILLER	MIN	MINIMUM
AD	ACCESS DOOR	MS	MOTOR STARTER
AF	AIR FOIL	NA	NOT APPLICABLE
AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED
AFMS	AIR FLOW MEASURING STATION	NIC	NOT IN CONTRACT
AHU	AIR HANDLING UNIT	NO	NORMALLY OPEN
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION INC.	NTS	NOT TO SCALE
AP	ACCESS PANEL	OA	OUTSIDE AIR
APPROX	APPROXIMATE	OAH	OUTSIDE AIR INTAKE HOOD
ARCH	ARCHITECTURAL	OBD	OPPOSED BLADE DAMPER
ARI	AIR CONDITIONING REFRIGERATION INSTITUTE	OC	ON CENTER
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE	PBD	PARALLEL BLADE DAMPER
AS	AIR SEPARATOR	PCHP	PRIMARY CHILLED WATER PUMP
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERING	PRESS	PRESSURE REDUCING VALVE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	PSIG	POUNDS PER SQUARE INCH (GAUGE)
AV	AUTOMATIC AIR VENT ASSEMBLY	PHL	PRESSURE HIGH LIMIT
B	BOILER	R-22	REFRIGERANT (TYPE AS NOTED)
BD	BACKDRAFT DAMPER	RA	RETURN AIR
BHP	BRAKE HORSEPOWER	RE	REFER TO: DETAIL 4, SHEET M7.01
BI	BACKWARD INCLINED BUILDING	RET	RETURN
BLDG	BUILDING	RG	RETURN GRILLE
BOD	BOTTOM OF DUCT	RH	RELATIVE HUMIDITY
BOP	BOTTOM OF PIPE	RHD	RELIEF HOOD
BSMT	BASMENT	RPM	RPM
BTU	BRITISH THERMAL UNIT	RTU	ROOF TOP UNIT
CDP	CONDENSATE DRAIN PUMP	SA	SUPPLY AIR
CFM	CUBIC FEET PER MINUTE	SCH	SCHEDULE
CHP	CHILLED WATER PUMP	SCHP	SECONDARY CHILLED WATER PUMP
CLG	CEILING	SD	SMOKE DAMPER
CMP	CONDENSER WATER PUMP	SEC	SECOND
CO	CLEANOUT	SF	SUPPLY FAN
COND	CONDENSATE CONNECTION	STD	STANDARD
CONN	CONTINUATION	STL	STEEL
CONT	CONTROLLABLE PITCH	SW	SWITCH
CP	COOLING TOWER	TEMP	TEMPERATURE
CT	CONDENSING UNIT	THL	TEMPERATURE HIGH LIMIT
CU	COLD WATER	TLL	TEMPERATURE LOW LIMIT
CW	CENTER LINE	TSTAT	THERMOSTAT
ε	TEMPERATURE	TU	TERMINAL UNIT
D	DRAIN	TVV	THERMOSTATIC EXPANSION VALVE
DB	DRY BULB	TYP	TYPICAL
DCP	DATA COLLECTION PANEL	UF	UNDER FLOOR
DC	DOOR GRILLE	UH	UNIT HEATER
DIFF	DIFFUSER	UL	UNDERWRITER'S LABORATORIES
DN	DOWN	V-12	CONTROL VALVE NUMBER
DWG	DRAWING	VAV	VARIABLE AIR VOLUME
DX	DIRECT EXPANSION	VB	VALVE BOX
EA	EACH	VD	VOLUME DAMPER
EAT	ENTERING AIR TEMPERATURE	VEL	VELOCITY
EDH	ELECTRIC DUCT HEATER	VENT	VENTILATE
EG	EXHAUST GRILLE	VF	VENTILATION FAN
EF	EXHAUST FAN	VFD	VARIABLE FREQUENCY DRIVE
ELEC	ELECTRICAL	VOL	VOLUME
ELEV	ELEVATION	VOLT	VOLTAGE
ENT	ENTERING	W	WIDE, WIDTH
EQUIP	EQUIPMENT	W/	WITH
ER	EXHAUST REGISTER	W/O	WITHOUT
ESP	EXTERNAL STATIC PRESSURE	WB	WET BULB
ET	EXPANSION/COMPRESSION TANK		
EWT	ENTERING WATER TEMPERATURE		
EXH	EXHAUST		
EXIST	EXISTING		
F	DEGREES FAHRENHEIT		
FC	FAN COIL		
FD	FIRE DAMPER		
FLEX	FLEXIBLE		
FLG	FLANGE		
FLR	FLOOR		
FM	FACTORY MUTUAL		
FO	FLAT OVAL DUCT		
FPM	FEET PER MINUTE		
FT	FEET, FOOT		
FS	FLOW SWITCH		
FSD	FIRE SMOKE DAMPER		
GAL	GALLON		
GALV	GALVANIZED		
GPM	GALLONS PER MINUTE		
HB	HOSE BIBB		
HP	HORSE POWER		
HR	HOUR		
H	HIGH, HEIGHT		
HVAC	HEATING/VENTILATING/AIR CONDITIONING		
HWP	HOT WATER PUMP		
HZ	HERTZ		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION (FLOW LINE)		
IH	INTAKE HOOD		
IN	INCHES		
INSUL	INSULATION		
IN WG	INCHES OF WATER		
KW	KILOWATT(S)		
L	LONG, LENGTH		
LAT	LEAVING AIR TEMPERATURE		
LVR	LOUVER		

MECHANICAL GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND STANDARDS. CRAFTSMANSHIP AND MATERIAL SHALL BE OF THE HIGHEST QUALITY.
- THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS FULLY PRIOR TO THE SUBMITTAL PHASE OF THE PROJECT. CONFLICTS WITHIN AND BETWEEN THE CONTRACT DOCUMENTS SHALL BE NOTED IN WRITING TO THE ENGINEER PRIOR TO SUBMITTING DATA SHEETS FOR REVIEW.
- NOTE: FOR THE PURPOSE OF CLEARNESS 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 ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE COMPLETE INFORMATION TO, AND COOPERATE WITH, THE OTHER CONTRACTORS AND TRADES AS REQUIRED FOR THE COMPLETION AND COORDINATION OF THE COMPLETE PROJECT. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE PRIME CONTRACTOR, ENGINEER AND, AS NECESSARY, THE OWNER.
- THE GENERAL CONTRACTOR SHALL MAINTAIN, ON A DAILY BASIS AT THE PROJECT SITE, A COMPLETE SET OF RECORD DRAWINGS REFLECTING THE PRECISE LOCATION OF CONCEALED PIPING, VALVES, PIPE RE-ROUTES, AND ALL CHANGES OR DEVIATIONS IN THE MECHANICAL WORK FROM THAT SHOWN ON THE CONTRACT DRAWINGS.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADMINISTERING ALL WARRANTIES ON EQUIPMENT WHICH THEY FURNISH AND INSTALL.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY TO REPLACE ALL FAULTY MATERIALS AND/OR LABOR, AT NO COST TO TENANT, FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. WARRANTIES SHALL BEGIN ON THE DATE OF SUBSTANTIAL COMPLETION.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES FOR ALL REQUIRED OPENINGS AND PENETRATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS AND ROOF SHALL BE CONSTRUCTED INTO THE STRUCTURE WITH THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
- ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED THROUGH CURBS OR PIPE SEALS A MINIMUM OF 1/2" 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 AS REQUIRED FOR POWER.
- ROOF CURBS FOR EXHAUST FANS SHALL BE PER DETAILS SECTION, AND FURNISHED WITH THE FAN BASE, HOOD, AND FAN PACKAGE. THE GENERAL CONTRACTOR SHALL FLASH ROOF CURBS AND SHIM DEAD LEVEL. COORDINATE EXACT SIZE AND LOCATION OF ROOF OPENINGS WITH THE STRUCTURAL FRAMING. CUTTING OF STRUCTURAL MEMBERS IS NOT PERMITTED.
- ROOF CURBS FOR ROOF TOP UNITS SHALL BE FACTORY FABRICATED OF GALVANIZED STEEL CONSTRUCTION, AND FURNISHED WITH THE HVAC EQUIPMENT PACKAGE. VERIFY REQUIREMENTS FOR THE ROOF CURBS WITH THE EQUIPMENT SUPPLIER. THE GENERAL CONTRACTOR SHALL FIELD ASSEMBLE THE ROOF CURBS, FLASH AND SHIM DEAD LEVEL. COORDINATE EXACT SIZE AND LOCATION OF ROOF OPENINGS WITH THE STRUCTURAL FRAMING. CUTTING OF STRUCTURAL MEMBERS IS NOT PERMITTED.
- ALL OUTDOOR AIR INTAKES BY MECHANICAL EQUIPMENT SHALL HAVE A MINIMUM 10'-0" HORIZONTAL CLEARANCE FROM THE DISCHARGE OF ANY EXHAUST FAN, COMBUSTION EXHAUST OR PLUMBING VENT.
- GUARDS SHALL BE PROVIDED WHERE APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE AND ROOF HATCH OPENING ARE LOCATED WITHIN 10' OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR, ROOF OR GRADE BELOW.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION AND FINISH OF ALL SUPPLY AND RETURN AIR DEVICES WITH THE ARCHITECT. ALL INTERIOR FACES OF DUCTWORK BEHIND RETURN AIR GRILLES SHALL BE PAINTED FLAT BLACK FOR LINE OF SIGHT.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCT AND DIFFUSER LOCATIONS WITH LIGHT FIXTURES AS WELL AS SPRINKLER PIPING AND HEADS (WHERE INCLUDED IN THE PROJECT) FOR A COMPLETE INSTALLATION. WHERE THE ALTERATION OF DUCT SIZES ARE NECESSARY, MAINTAIN CROSS-SECTIONAL AREAS.
- SUPPLY, RETURN AND RESTROOM EXHAUST DUCT CONSTRUCTION SHALL BE GALVANIZED STEEL. ANY REQUIRED GAUGES, SWAY BRACING AND SUSPENSION SHALL CONFORM TO SMACNA STANDARDS. SEAL ALL SEAMS AND JOINTS AIR AND WATERTIGHT. FLEXIBLE ALUMINUM DUCTWORK OR FIBERGLASS DUCTBOARD CAN BE ALLOWED WITH ENGINEER'S PRIOR APPROVAL.
- ALL RECTANGULAR, ROUND, AND FLEXIBLE DUCTWORK SHALL BE SIZED WITH CLEAR INSIDE DIMENSIONS AS SHOWN ON THESE DRAWINGS, AND SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MOST RECENTLY PUBLISHED SMACNA STANDARDS. ALL JOINTS, SEAMS, AND CONNECTIONS MUST BE SECURELY FASTENED & SEALED.
- ALL HVAC SUPPLY AND RETURN CONCEALED DUCTWORK TO BE EXTERNALLY WRAPPED AND SEALED WITH MINIMUM R-5.0, 2" INSULATION WITH VAPOR BARRIER PER APPLICABLE MECHANICAL CODES, WITH LOCAL JURISDICTION CODE AMENDMENTS. INSULATION SHALL HAVE MAXIMUM RATINGS OF 25 FLAME SPREAD, 50 SMOKE DEVELOPED.
- AIR DEVICE SIZES SHOWN ON SCHEDULES ARE NECK SIZES.
- BOTTOM OF DUCT ELEVATION INDICATED ON THE DRAWING INDICATES THE APPROXIMATE HEIGHT ABOVE FINISHED FLOOR LEVEL TO THE UNDERSIDE OF THE DUCT. THIS INFORMATION IS PROVIDED AS AN AID TO COORDINATION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE.
- KEEP DUCTWORK AND PIPING INTERIOR CLEAN AND FREE OF DEBRIS THROUGHOUT THE PROJECT. CAP ALL PIPING AND DUCTWORK EXPOSED TO THE ELEMENTS.
- DO NOT COVER ANY MECHANICAL OR PLUMBING WORK IN WALLS, ABOVE CEILINGS, ETC. PRIOR TO REQUESTING OBSERVATION BY THE ENGINEER. ALL WORK COVERED WITHOUT OBSERVATION BY THE ENGINEER SHALL BE UNCOVERED FOR OBSERVATION.
- PROVIDE VIBRATION ISOLATION DEVICES AND FLEXIBLE DUCT/PIPING CONNECTIONS TO ALL MOVING MACHINERY NOT INTERNALLY ISOLATED.
- ALL MEDIUM PRESSURE DUCTWORK SHALL BE TESTED IN ACCORDANCE WITH SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL. 10% OF LOW PRESSURE DUCT SYSTEM SHALL BE TESTED. IF LEAKAGE TEST RESULTS EXCEED THE MAX. ALLOWABLE RATE, THE ENTIRE DUCT SYSTEMS SHALL BE TESTED AND DUCT LEAKAGE SHALL BE CORRECTED UNTIL SATISFACTORY RATES ARE OBTAINED.
- ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
- MECHANICAL CONTRACTOR SHALL PROVIDE FIRE DAMPERS AT ANY LOCATION WHERE DUCTWORK PASSES THROUGH A FIRE RATED WALL ASSEMBLY IN ACCORDANCE WITH I.C.
- PER APPLICABLE MECHANICAL CODES, WITH LOCAL JURISDICTION CODE AMENDMENTS WHEN REQUIRED, EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2000 CUBIC FEET PER MINUTE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF. AUTOMATIC SHUTOFF SHALL BE ACCOMPLISHED BY INTERRUPTING THE POWER SOURCE OF THE AIR MOVING EQUIPMENT DEVICES WHICH WILL DETECT PRODUCTS OF COMBUSTION OTHER THAN HEAT, AND WHICH COMPLY WITH THE IBC, SHALL BE LABELED BY AN APPROVED AGENCY FOR AIR DUCT INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH DEVICES SHALL BE COMPATIBLE WITH THE OPERATING VELOCITIES, PRESSURES, TEMPERATURES AND HUMIDITIES OF THE SYSTEM WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING. SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS.
- ROOF TOP UNITS SHALL BE SET TO RUN IN "FAN CONTINUOUS" MODE DURING OCCUPIED HOURS. DURING NIGHT SET-BACK HOURS, THE ROOF TOP UNITS SHALL RUN IN "FAN AUTO" MODE.
- UNLESS NOTED OTHERWISE, ALL CAPACITIES INDICATED ARE AT SITE CONDITIONS. ALL EQUIPMENT SHALL BE ADJUSTED, MODIFIED AND ORDERED TO ACCOMMODATE SITE CONDITIONS.
- INSTALL EQUIPMENT TO AVOID SOUND OR NOISE TRANSMISSION TO OCCUPIED SPACES.
- CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS LISTED ON THE DRAWINGS AND SPECIFICATIONS INCLUDING THOSE LISTED UNDER THE ENERGY COMPLIANCE REPORT. ALL EQUIPMENT INSTALLED SHALL BE PROVIDED WITH THE MANUFACTURER'S RECOMMENDED MAINTENANCE AND OPERATING CLEARANCES.
- MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL 4" HIGH BLACK OVER WHITE LAMINATE NAMEPLATE WITH 2" LETTERS VISIBLE ADJACENT TO DISCONNECT SWITCH FOR ALL MECHANICAL EQUIPMENT.
- ALL CONDUITS, DISCONNECT SWITCHES AND FINAL CONNECTIONS FOR LINE VOLTAGE WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE CONDUIT, WIRING AND FINAL CONNECTIONS BY MECHANICAL CONTRACTOR.
- MAINTAIN MINIMUM CLEARANCES IN FRONT OF ALL CONTROL AND ELECTRIC PANELS ON EQUIPMENT SUCH AS FANS, AIR TERMINAL UNITS, ETC. IN ACCORDANCE WITH THE FOLLOWING: 120 V = 36", 208 V = 42", 480 V = 48". CLEARANCE MAY BE MEASURED THROUGH REMOVABLE CEILING GRID OR ACCESS PANEL, WHERE FACTORY MOUNTED PANELS DO NOT ALLOW ADEQUATE CLEARANCE. RELOCATE AND REMOUNT AS REQUIRED. ALL FACTORY WARRANTIES SHALL BE MAINTAINED.
- REFRIGERANT LINES & DUCTS IN FINISH ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASES OR INSTALLED ABOVE SUSPENDED CEILING UNLESS NOTED OTHERWISE.
- CONTRACTOR TO PROVIDE ALL REQUIRED CONDENSATE LINES FOR ALL EQUIPMENT, REFER TO PLUMBING PLANS.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE AIR FILTERS AT THE ROOF TOP UNITS WITH AS PER MANUFACTURER RECOMMENDATIONS AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO AIR BALANCE.
- TEST, ADJUST AND BALANCE ALL AIR AND WATER SYSTEMS AFTER INSTALLATION IS COMPLETE. SUBMIT REPORTS TO ENGINEER FOR REVIEW AND APPROVAL.
- TURN OVER ALL EQUIPMENT AND MATERIAL OWNING, OPERATING AND MAINTENANCE (OM) MANUALS TO OWNER AFTER INSTALLATION IS COMPLETE.
- CONTRACTOR SHALL HAVE A THIRD PARTY CERTIFIED TEST AND BALANCE REPORT PERFORMED AT COMPLETION OF PROJECT. THIRD PARTY TAB CONTRACTOR TO BE SELECTED BY OWNER. ANY DIFFERENCES ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- MECHANICAL CONTRACTOR SHALL BE ON SITE AND PRESENT AT THE DATE OF PROJECT TURNOVER.



11-04-21



21-183

PLUMBING SYMBOLS AND ABBREVIATIONS

[SOME SYMBOLS MAY NOT BE USED ON THIS PROJECT]

GENERAL PIPING SYMBOLS

SYMBOL	DESCRIPTION
	90 DEGREE ELBOW
	FLANGE CONNECTION
	CAP
	BLIND FLANGE
	PLUMBING FIXTURE & DESIGNATION SEE FIXTURE CONNECTION SCHEDULE
	PLAN/DETAIL NUMBER SHEET NUMBER
	PIPE DROP
	PIPE RISE
	TEE FITTING - SIDE BRANCH CONNECTION
	TEE FITTING - BOTTOM BRANCH CONNECTION
	TEE FITTING - TOP BRANCH CONNECTION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	BALL JOINT
	EXPANSION JOINT
	FLEXIBLE CONNECTION (PIPE)
	FLOW DIRECTION
	PIPE ANCHOR
	NEW CONNECTION TO EXISTING
	FIRE HYDRANT
	GAS PRESSURE REGULATOR
	GAS METER
	WATER METER
	THERMOMETER

GENERAL PIPING SYMBOLS - VALVES

SYMBOL	DESCRIPTION
	VALVE IN BOX
	BALL VALVE
	CHECK VALVE
	GATE VALVE
	PRESSURE & TEMP. RELIEF VALVE
	PETE'S PLUG (TYPICAL)
	REDUCED PRESSURE BACK FLOW PREVENTER (RPBP)
	PRESSURE REDUCING VALVE

SANITARY SEWER/WASTE/VENT

SYMBOL	DESCRIPTION
	CLEANOUT
	FLOOR DRAIN & P-TRAP (RISER)
	FLOOR DRAIN, ROOF DRAIN, OR AREA DRAIN (SIZE & TYPE NOTED)
	HUB DRAIN & P-TRAP
	2-WAY COUNTERSUNK CLEANOUT PLUGS MOUNT IN CONCRETE PAD FLUSH WITH FINISHED GRADE
	SANITARY COMBINATION FITTING
	VENT PIPE (PLUMBING)
	INDIRECT DRAIN
	CONDENSATE DRAIN
	FLOOR CLEANOUT
	ROOF DRAINAGE
	SECONDARY ROOF DRAINAGE
	NEW PIPING (WASTE, WATER, ETC)
	PIPING TO BE REMOVED
	EXISTING PIPING (WASTE, WATER, ETC)(LIGHT LINES)
	EXISTING WATER PIPE
	EXISTING SANITARY SEWER PIPE
	EXISTING VENT PIPE
	NEW VENT PIPE

DOMESTIC WATER SUPPLY

SYMBOL	DESCRIPTION
	PIPING TO BE REMOVED
	NEW COLD WATER PIPE
	NEW HOT WATER (120°)
	NEW HOT WATER RETURN (120°)
	NEW FIRE PIPE
	HOT WATER @ 140°
	SHOCK ABSORBER SEE PLUMBING FIXTURE CONNECTION SCHEDULE

UTILITIES

WATER / SEWER CONTACT: _____

NATURAL GAS CONTACT: _____

CONTRACTOR IS RESPONSIBLE TO OBTAIN AND VERIFY WITH ARCHITECT AND CITY FOR LATEST PLANS

PLUMBING ABBREVIATIONS

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
ABV	ABOVE	ID	INSIDE DIMENSION
AC	ABOVE CEILING	IE	INVERT ELEVATION (FLOW LINE)
AD	ACCESS DOOR	IN	INCHES
AFF	ABOVE FINISHED FLOOR	INSUL	INSULATION
AP	ACCESS PANEL	IN WG	INCHES OF WATER
APPROX	APPROXIMATE	KW	KILOWATT(S)
ARCH	ARCHITECTURAL	L	LONG, LENGTH
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	L-#	LAVATORY - REF. PLUMB. FIXT. SCHEDULE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	LB	POUND
AV	ACID VENT	MAX	MAXIMUM
AW	ACID WASTE	MECH	MECHANICAL
BHP	BRAKE HORSEPOWER	MIN	MINIMUM
BLDG	BUILDING	MS	MOTOR STARTER
BOP	BOTTOM OF PIPE	MTD	MOUNTED
BSMT	BASEMENT	NA	NOT APPLICABLE
BTU	BRITISH THERMAL UNIT	NIC	NOT IN CONTRACT
BW-#	BACKWATER VALVE	NTS	NOT TO SCALE
CA	COMPRESSED AIR	OC	ON CENTER
CC	CENTER TO CENTER	OH	OVERHEAD
CAP.	CAPACITY	PCT	PERCENT
CD	CONDENSATE	PLBG	PLUMBING
CDP	CONDENSATE DRAIN PUMP	PRESS	PRESSURE
CI	CAST IRON	PRV	PRESSURE REDUCING VALVE
CLG	CEILING	PSIG	POUNDS PER SQUARE INCH (GAUGE)
CO	CLEANOUT	PVC	POLYVINYL CHLORIDE
CONN	CONNECTION	PW-#	PRESSURE WASHER - REF. PLUMB. FIXT. SCHED.
CONT	CONTINUATION	RD	ROOF DRAIN
CW	COLD WATER	REF: 4/P-500	REFER TO DETAIL 4, SHEET P-500
CL	CENTER LINE	REQ'D	REQUIRED
D	DRAIN	RPBP-#	REDUCED PRESSURE BACKFLOW PREVENTER
DCO	DOUBLE CLEANOUT	S-#	SINK - REF. PLUMB. FIXT. SCHEDULE
DIA	DIAMETER	SCHED.	SCHEDULE
DN.	DOWN	SD	STORM DRAIN
DN-#	DOWNSPOUT NOZZLE	SEC	SECOND
DWG	DRAWING	SH-#	SHOWER HEAD - REF. PLUMB. FIXT. SCHED.
EA	EACH	SPEC	SPECIFICATION
EQ	EQUAL	SP	SUMP PUMP
EQUIP	EQUIPMENT	SRD	SECONDARY ROOF DRAIN
EXIST	EXISTING	SS	SERVICE SINK/MOP SINK
3" ED-1	3" FLOOR DRAIN TYPE 1	STD	STANDARD
F	DEGREES FAHRENHEIT	STL	STEEL
FCO	FLOOR CLEANOUT	SW	SWITCH
FF	FINISHED FLOOR	TEMP	TEMPERATURE
FG	FINISHED GRADE	TP-#	TRAP PRIMER - REF. PLUMB. FIXT. SCHED.
FLG	FLANGE	TYP	TYPICAL
FLR	FLOOR	U-#	URINAL - REF. PLUMB. FIXT. SCHED.
FM	FACTORY MUTUAL	UF	UNDER FLOOR
FPM	FEET PER MINUTE	UG	UNDER GROUND
FT	FEET, FOOT	UL	UNDERWRITERS LABORATORIES
FS	FLOOR SINK	UTIL	UTILITY
GA	GAUGE	VB	VALVE BOX
GAL	GALLON	VCP	VITRIFIED CLAY PIPE
GALV	GALVANIZED	VEL	VELOCITY
GCO	GROUND CLEANOUT	VOL	VOLUME
GPH	GALLONS PER HOUR	VOLT	VOLTAGE
GPM	GALLONS PER MINUTE	VTR	VENT THRU ROOF
GW	GREASE WASTE	W	WIDE, WIDTH
GV	GREASE VENT	WB-#	WASHER BOX - REF. PLUMB. FIXT. SCHED.
H	HIGH, HEIGHT	WD-#	WATER DEVICE - REF. PLUMB. FIXT. SCHED.
HB-#	HOSE BIBB - REF. PLUMB. FIXT. SCHED.	W/	WITH
HP	HORSEPOWER	W/O	WITHOUT
HR	HOUR	WC-#	WATER CLOSET - REF. PLUMB. FIXT. SCHED.
HTR	HEATER	WCO	WALL CLEANOUT
HWRP	HOT WATER RECIRCULATING PUMP	WD-#	WATERING DEVICE - REF. PLUMB. FIXT. SCHEDULE
HZ	HERTZ	WH-#	WATER HEATER - REF. PLUMB. FIXT. SCHED.
		WS-#	WATER SOFTENER - REF. SPECIFICATIONS
		WTD-#	WIDE TRENCH DRAIN - REF. PLUMB. FIXT. SCHED.
		WTR	WATER

NATURAL GAS

SYMBOL	DESCRIPTION
	PIPING TO BE REMOVED
	EXISTING MED PRESS GAS PIPE
	EXISTING LOW PRESS GAS PIPE
	GAS (MEDIUM PRESSURE)
	GAS (LOW PRESSURE PRESSURE)
	PLUG VALVE

PLUMBING GENERAL NOTES

- NOTE: 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 ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.
- THE PLUMBING SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
- PLUMBING QUALITY, WEIGHTS OF MATERIALS AND ALTERNATE METHODS OF CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PLUMBING CODES, WITH LOCAL JURISDICTION CODE AMENDMENTS.
- CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS WITH ALL DISCIPLINES AND TRADES PRIOR TO SUBMITTAL OF BID AND INSTALLATION OF SYSTEMS.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO VERIFY ALL EXISTING CONDITIONS, INCLUDE IN BID THE RELOCATION OF ALL EXISTING UTILITIES THAT WILL OBSTRUCT NEW CONSTRUCTION, INCLUDE IN BID ALL DEVELOPMENT FEES, DEPOSITS, MEASURING DEVICE FEES, AND ALL OTHER FEES RELATED TO THE ESTABLISHMENT OF UTILITY SERVICES FOR THE NEW STRUCTURE.
- CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND SHALL PAY FOR ALL FEES, CHARGES, PENALTIES AND MATERIALS.
- THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND LABOR (INCLUDING THE COMPLETE PLUMBING SYSTEM) FOR A PERIOD OF ONE YEAR FROM WRITTEN ACCEPTANCE BY THE TENANT. ANY DEFECTS IN MATERIALS AND OR LABOR FOUND WITHIN THE GUARANTEE PERIOD SHALL BE REMEDIATED OR REPAIRED BY THIS CONTRACTOR IN A TIMELY FASHION, AT NO COST TO THE TENANT.
- CONTRACTOR TO FIELD VERIFY INVERT ELEVATION OF EXISTING GREASE WASTE AND SANITARY SEWER BEFORE COMMENCING ANY WORK.
- ALL PLUMBING FIXTURE LOCATIONS (WATER CLOSETS, LAVATORIES ETC.) ARE DIAGRAMMATIC. CONTRACTOR SHALL REFER TO FOOD SERVICE AND ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT AND MOUNTING HEIGHTS.
- ANY DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTAL OF BID AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. SUBMITTAL OF BID WILL VERIFY THAT THE CONTRACTOR HAS VISITED THE SITE.
- 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.
- SUPPORT PIPING WITH CLEVIS OR SPLIT RING TYPE PIPE HANGERS WITH 3/8" ALL THREAD ROD AND BEAM CLAMPS. "PLUMBERS TAPE AND WIRE" NOT PERMITTED.
- TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS AND WATER HAMMER ARRESTORS TO BE INSTALLED AS PER APPLICABLE PLUMBING CODES, WITH LOCAL JURISDICTION CODE AMENDMENTS AND THE LATEST EDITION OF THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE 1010) SIZING AND INSTALLATION REQUIREMENTS.
- ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
- ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE APPLICABLE PLUMBING CODES, WITH LOCAL JURISDICTION CODE AMENDMENT REQUIREMENTS AND LABELED AS SUCH.
- ALL 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 ALL BOOT OPENINGS ARE PROVIDED TO ACCOMMODATE ANY ELECTRICAL CONDUIT PENETRATIONS REQUIRED FOR POWER.
- CONTRACTOR SHALL PROVIDE: FAUCETS, TRAPS, STOPS, BALL VALVES, BACKFLOW DEVICES FOR KITCHEN EQUIP, GASCOCKS, WATER HAMMER ARRESTORS, CLEANOUT COVERS AND INDIRECT WASTE TO AN APPROVED RECEPTOR AND ALL NECESSARY TRIM FOR A COMPLETELY CONNECTED PLUMBING SYSTEM (SEE SCHEDULES).
- ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS WITH EQUIPMENT, MILLWORK, ETC., PRIOR TO INSTALLATION.
- ALL 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.
- ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS CONNECTED SUPPLY LINE UNLESS OTHERWISE NOTED ON DRAWINGS.
- UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SWEW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
- PIPING SHALL BE INSTALLED COMPLETE WITH DIELECTRIC UNIONS BETWEEN CONNECTIONS OF NON-FERROUS MATERIALS.
- PROVIDE DIELECTRIC INSULATION FOR COPPER PIPE ANYWHERE IT CONTACTS DISSIMILAR METAL. THIS INCLUDES THE WATER HEATER CONNECTIONS.
- PROVIDE ACCESSIBLE WATER SUPPLY STOP VALVES AT EACH PLUMBING FIXTURE.
- PROVIDE A LINE SIZED PRESSURE REDUCING VALVE AT THE BUILDING SERVICE CONNECTION SHOULD THE SUPPLY PRESSURE EXCEED 80 PSI.
- ALL UNDERGROUND METALLIC PIPE AND FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.
- NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE, MASONRY WALLS, OR CONCRETE FOOTINGS.
- THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO START OF WORK.
- VERIFY EXACT LOCATIONS, DEPTH AND SIZE OF ALL PIPING TO WHICH CONNECTIONS ARE REQUIRED. COORDINATE ALL CONNECTIONS WITH SITE CONDITIONS AND SITE UTILITY CONTRACTOR/REPRESENTATIVE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL WORK RELATED TO PLUMBING UTILITIES INCLUDING: TRENCHING, BACKFILL, SUPPORTS, CLEAN-OUT PADS, SERVICE VALVES AND BOXES, SERVICE LINES, TESTING, CLEANING, AND STERILIZING.
- ALL 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.
- ALL CUTTING OF EXISTING FLOORING, WALLS 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.
- THE PLUMBING CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
- PIPING LAYOUT IS SCHEMATIC ONLY. EXACT ROUTING AND INSTALLATION OF PIPES TO BE COORDINATED WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER CONTRACTORS. NO WATER OR DRAIN LINES ARE PERMITTED TO BE INSTALLED OVER OR UNDER ELECTRICAL PANELS.
- NO LIQUID TRANSMISSION PLUMBING PIPING SHALL BE INSTALLED ABOVE ELECTRICAL SWITCH GEAR, EQUIPMENT, OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUTE PIPING FOR ACTUAL INSTALLATION OF ELECTRICAL EQUIPMENT.
- 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.
- ANY EXPOSED PIPING IN GUEST OR PUBLIC AREAS SHALL BE PAINTED TO MATCH THE WALL COLOR. ANY EXPOSED GAS PIPING IN KITCHENS SHALL BE PAINTED WHITE.
- DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND TRADE NAMES), MATERIALS, SIZES, LOCATIONS AND HOOD-UP POINTS. AS-BUILTS SHALL BE GIVEN TO OWNER'S CONSTRUCTION MANAGER AT COMPLETION OF JOB.
- UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKINGS AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED BY LAW.
- PLUMBING CONTRACTOR SHALL BE ON SITE AND PRESENT AT THE DATE OF THE PROJECT TURNOVER.
- PLUMBING CONTRACTOR SHALL PROVIDE MANUFACTURER'S OPERATION LITERATURE FOR ALL INSTALLED EQUIPMENT AND FIXTURES AT THE DATE OF PROJECT TURNOVER.
- ALL PLUMBING FIXTURES SHALL MEET AND BE INSTALLED AT DIMENSIONS REQUIRED BY ACCESSIBILITY STANDARDS FOR HANDICAPPED PERSONS.
- ANY PLASTIC PIPING (PVC PIPE) LOCATED IN A RETURN CEILING SPACE (OPEN CEILING) OR PLENUM SHALL BE ENCLOSED IN GFB OR WEARED WITH 3M FIREMASTER BLANKET OR LEJIO STANDARD COVER.
- ALL UNDERGROUND WATER PIPING SHALL BE SOFT COPPER PIPING. THERE SHALL NOT BE ANY UNDERGROUND JOINT FITTINGS.
- ALL DENTAL SPECIALTY PIPING SHALL BE COPPER PIPING.
- DENTAL SPECIALTY PIPING SHALL BE INSTALLED BY A CERTIFIED MED GAS INSTALLER WITH 5 YEARS EXPERIENCE.
- ALL PIPING IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASES OR INSTALLED ABOVE SUSPENDED CEILING UNLESS NOTED OTHERWISE.
- ALL FLOOR BRANCHES OFF PIPE RISERS SHALL BE PROVIDED W/ SHUT OFF VALVES AND CAPPED DRAIN CONNECTION.
- INSULATED PREWORK SHALL BE INSTALLED SO THAT FULL THICKNESS INSULATION CAN BE APPLIED TO EACH PIPE.
- ALL PIPING INSTALLED ON THE ROOF MUST BE SUPPORTED, WITH PIPE SUPPORTS EVERY 10'-0". PIPE SUPPORT TO BE DURA-BLOCK. CONTRACTOR TO PROVIDED SIZE AND ACCESSORIES REQUIRED.



11-04-21



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Alamogordo Park Restrooms

Balloon Fiesta Park
Lavelle Rd.
Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
Alamogordo, New Mexico

REVISION	DATE
△ ADDENDUM 1	11-03-21

GENERAL NOTES

- A. WHERE CONTRACTOR IS REQUIRED TO CONNECT TO THE EXISTING MANHOLES, THE MANHOLES SHALL BE HANDLED TO AVOID DAMAGE. ANY DAMAGE TO THE EXISTING MANHOLES RESULTING FROM THE CONTRACTOR'S ACTIVITIES SHALL BE CORRECTED TO THE SATISFACTION OF THE CITY, AT THE CONTRACTOR'S EXPENSE.
- B. EACH MANHOLE PENETRATION SHALL BE SAWCUT ALONG PRE-MARKED LINES TO FORM A UNIFORM OPENING. THE EXISTING MANHOLE INVERT SHALL BE REMOVED AS REQUIRED TO BUILD THE NEW SEWER LINE THROUGH THE MANHOLE AT THE ALIGNMENT AND GRADE CALLED FOR IN THE CONTRACT DOCUMENTS
- C. PRIOR TO GROUTING THE OPENINGS AND MANHOLE INVERT, THE WALLS AND FLOOR OF THE MANHOLE SHALL BE CLEANED AND FREE OF ALL FOREIGN MATTER OR OTHER CONDITION THAT WOULD AFFECT THE BONDING OF THE NEW GROUT. ADDITIONALLY, A RUBBER MANHOLE GASKET SHALL BE INSTALLED AROUND THE NEW SEWER LINE WHERE IT WILL BE IN CONTACT WITH THE NEW GROUT. ALL VOID SHALL BE FILLED AND THE INVERT SHALL BE GROUTED TO FORM A SMOOTH SLOPING SURFACE TOWARD THE OPENING IN THE NEW PIPE
- D. EXISTING SANITARY SEWER MANHOLES DESIGNATED FOR REMOVAL SHALL BE DEMOLISHED AND DISPOSED OF AT AN APPROPRIATE SITE. THE RESULT EXCAVATION SHALL BE PROPERLY REFILLED WITH COMPACTED BACKFILL.



PLUMBING SITE PLAN 1

BALLOON PARK NTS MP200

KEYED NOTES

- POINT OF CONNECTION — PLUMBING CONTRACTOR TO CONNECT NEW WASTE LINE TO EXISTING SEWER MANHOLE 2077. FIELD VERIFY EXACT INVERT AND LOCATION OF EXISTING SEWER MAIN LINE PRIOR TO COMMENCING ROUGH IN WORK. CONNECTION TO THE EXISTING 27" CLAY PIPE IS APPROXIMATELY 11' DEEP.
- REMOVE 6" PVC WATER LINE UNDER NEW BUILDING AND REROUTE 6" PVC WATER LINE AROUND NEW BUILDING.
- CLEANOUTS SHALL CONSIST OF CAST-IRON FRAME AND COVER AND BOOT. AFTER INSTALLATION OF THE BOOT, A SQUARE CONCRETE BLOCK 24" X 24" BY 6" THICK SHALL BE PLACED LEVEL WITH THE TOP OF THE BOOT, REINFORCED WITH #3 BARS ON 10" CENTER EACH WAY AND 3000 PSI CONCRETE. CLEANOUTS SHOULD BE PLACED ON ALL SANITARY SEWER LINES WHERE THEY LEAVE PUBLIC RIGHT OF WAY OR EASEMENT. THE TRACING WIRE ON SANITARY SEWER SERVICE LINES SHALL BE TERMINATED ABOVE GROUND AT THIS CLEANOUT.



11-04-21

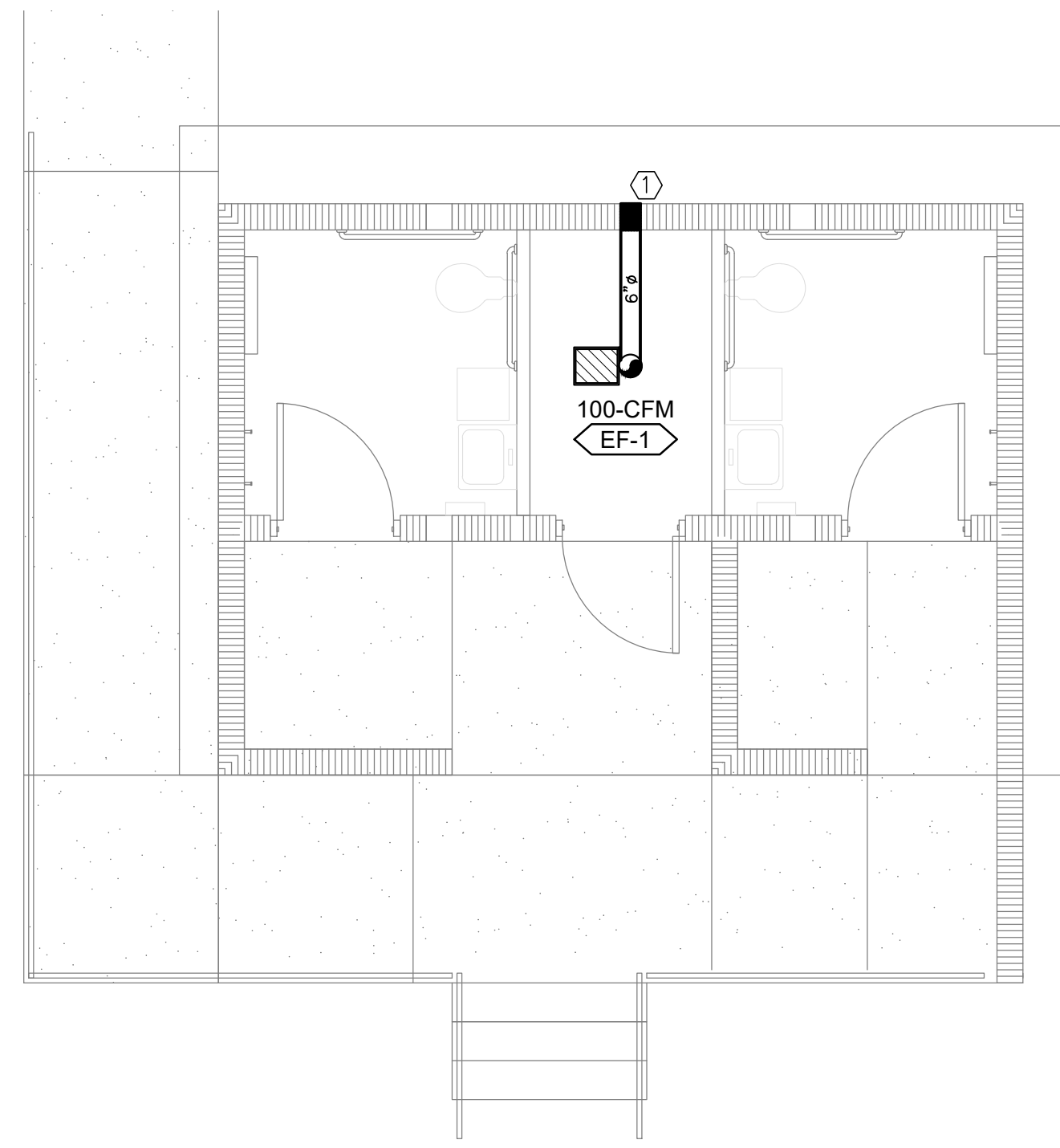
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Project no: 21.16
Date: April 2021
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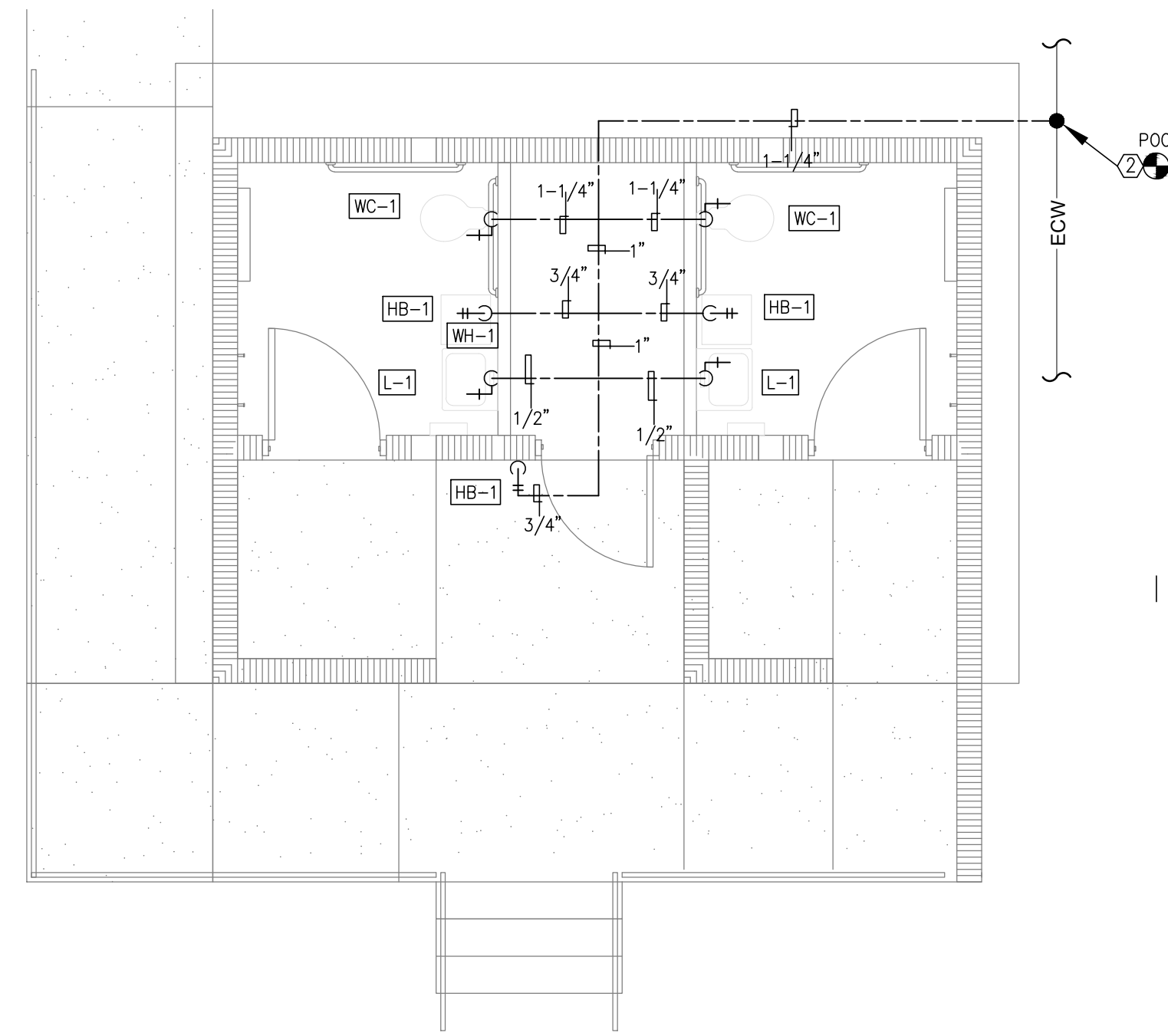
SITE
PLAN
MP200R1

KEYED NOTES

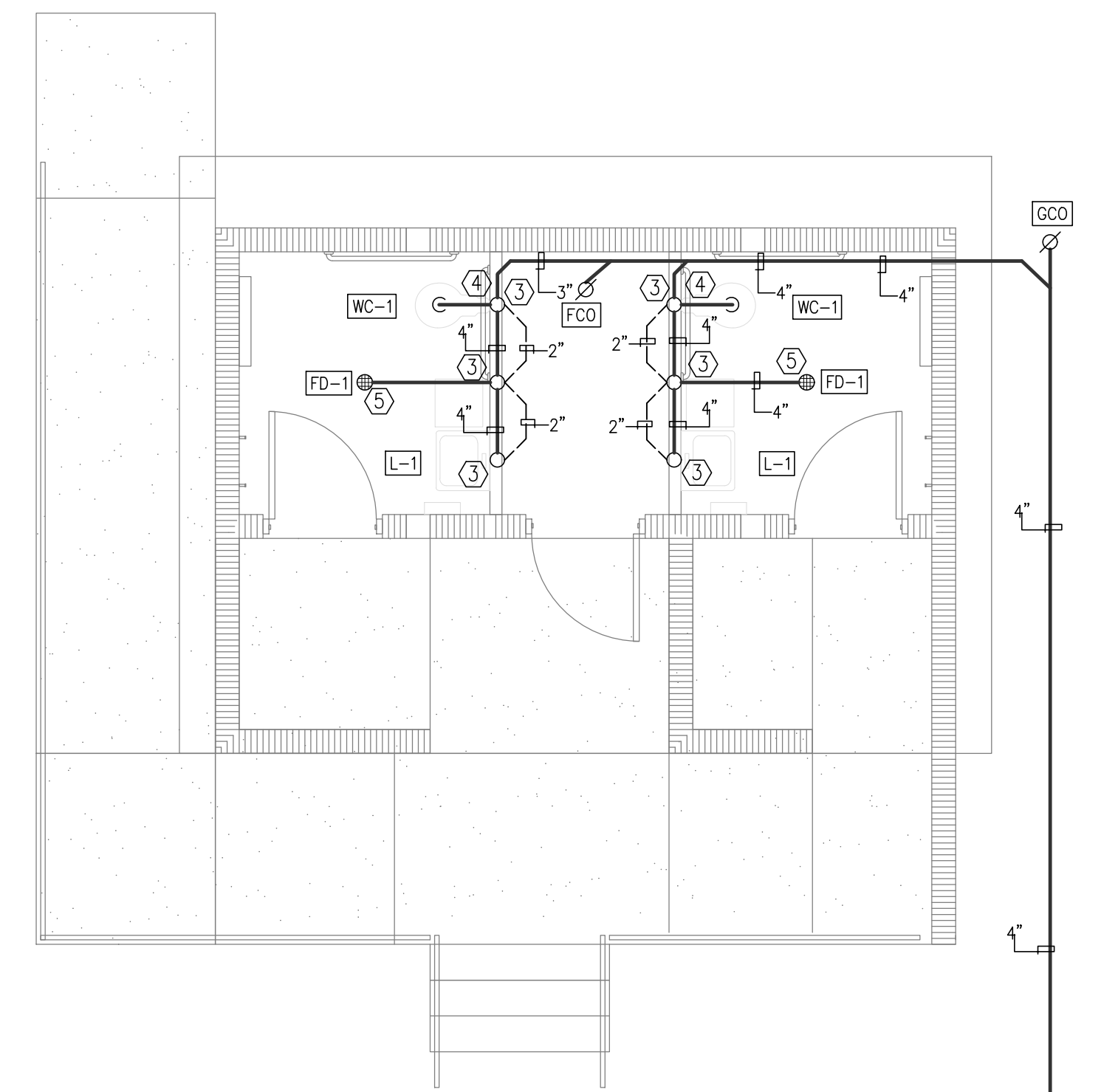
- 6"Ø ROUND DUCT THRU SIDE WALL FROM EXHAUST FAN.
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- PROVIDE FULL SIZE CLEANOUT.
- PROVIDE 2"Ø VENT THROUGH ROOF.
- PROVIDE FLOOR DRAIN/SINK TRAP SEALS.



MECHANICAL PLAN 1
BALLOON PARK 1/4" = 1'-0"
MP201
NORTH



DOMESTIC WATER PLAN 2
BALLOON PARK 1/4" = 1'-0"
MP201
NORTH



SEWER AND VENT PLAN 3
BALLOON PARK 1/4" = 1'-0"
MP201
NORTH

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER AND MODEL NUMBER OR APPROVED EQUAL	CFM	ESP	MOTOR				SONES	REMARKS
				HP	VOLTS	PHASE	# SPD'S		
EF-1	S&P PC110XP	100	0.125	27 W	120	1	1	0.9	PROVIDE WITH VIBRATION ISOLATORS, BACKDRAFT DAMPER, ALUMINUM PERFORATED GRILLE, AND ROOF CAP. UNIT CONTROLLED BY SWITCH.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER AND MODEL NUMBER OR APPROVED EQUAL	ROUGH-IN REQUIREMENTS				ACCESSORIES
			DRAIN	VENT	COLD	HOT	
WC-1	WATER CLOSET FLOOR MOUNTED BOTTOM OUTLET MANUAL FLUSHOMETER	METCRAFT 4680	3"	1-1/2"	1-1/2"	-	BOWL: ELONGATED, ADA COMPLIANT, STAINLESS STEEL, VANDEL RESISTANT. SEAT: HIGH POLISHED INEGRAL SEAT FLUSHOMETER: KOHLER MODEL K-76322-CP, MANUAL, 1.6 GPF, 1-1/2" TOP SPUD.
L-1	LAVATORY WALL MOUNTED STAINLESS STEEL MANUAL FAUCET	METCRAFT 5180	2"	1-1/4"	1/2"	1/2"	LAVATORY: ADA COMPLIANT, STAINLESS STEEL, RECTANGULAR BASIN, MULTI HOLE, INTEGRAL DRAIN, STAINLESS STEEL ELBOW WASTE, VANDAL RESISTANT. PROVIDE WITH K-8998 P-TRAP AND K-1998-SS-0 SHORUD AND MOUNTING BRACKET. FAUCET: KOHLER MODEL K-15240-4NDRA-CP, MANUAL, 0.5 GPM, VANDAL RESISTANT AERATOR.
HB-1	WALL HYDRANT WALL MOUNTED	ZURN Z1345	-	-	3/4"	-	HYDRANT: ZURN MODEL Z1345 EXPOSED NON-FREEZE ANTI-SIPHON BRASS WALL FAUCET, EXTERIOR CHROME FINISH, BRASS CASING, ALL BRONZE INTERIOR PARTS AND HAND OPERATION.
FD-1	FLOOR DRAIN	ZURN ZN415-B21	LINE SIZED	LINE SIZED	-	-	DRAIN: ZURN MODEL ZN415-B21 CAST IRON FLOOR DRAIN WITH NICKEL BRONZE TOP, PROVIDE WITH Z1072 TRAP GUARD.
GCO	GRADE CLEANOUT	ZURN Z-1402-HD	2" TO 4"	-	-	-	ZURN MODEL Z1402-HD TUF-TOP NON ADJUSTABLE FLOOR CLEANOUT WITH DURA-COATED CAST IRON BODY, WITH GAS AND WATERTIGHT ABS TAPERED THREADPLUG, AND ROUND SCORIATED CAST IRON HEAVY-DUTY SECURED COVER AND FRAME.
FCO	FLOOR CLEANOUT	ZURN ZN1400-B21	2" TO 4"	-	-	-	ZURN MODEL Z1400-B21 CLEANOUT, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, WITH GAS AND WATERTIGHT THREADED ABS TAPERED PLUG AND TOP ASSEMBLY. "TYPE B" LIGHT DUTY SCORIATED COVER.
WCO	WALL CLEANOUT	ZURN Z-1446	2" TO 4"	-	-	-	ZURN MODEL Z1446 CLEANOUT, DURA-COATED CAST IRON BODY, GAS AND WATERTIGHT ABS TAPERED PLUG, AND ROUND, SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW.

Alamogordo Park Restrooms

Balloon Fiesta Park
Lavelle Rd.
Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
Alamogordo, New Mexico

REVISION	DATE
ADDENDUM 1	11-03-21

Project no: 21.16
Date: April 2021
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BIDLOT-1 MECHANICAL AND PLUMBING PLAN

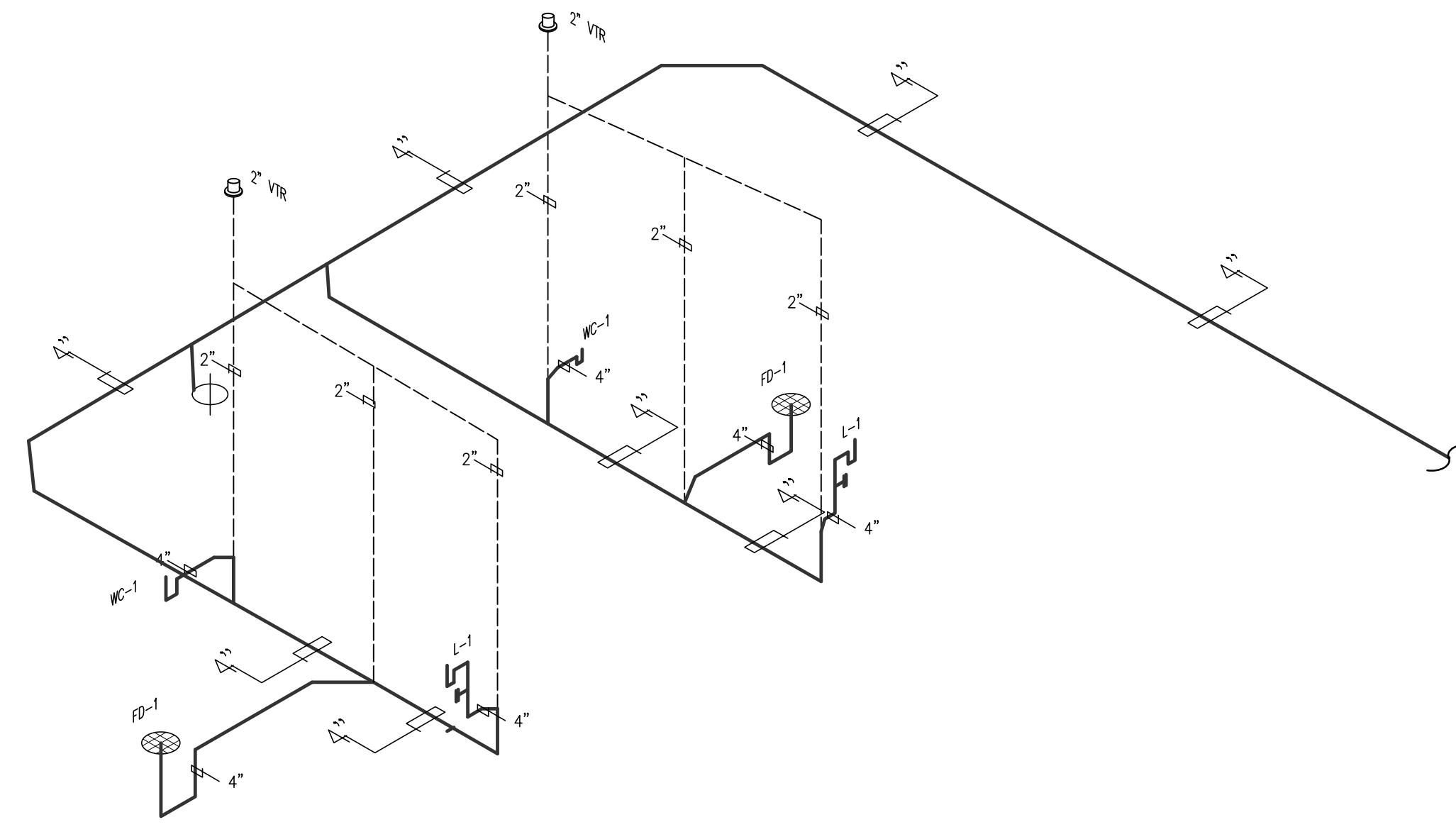
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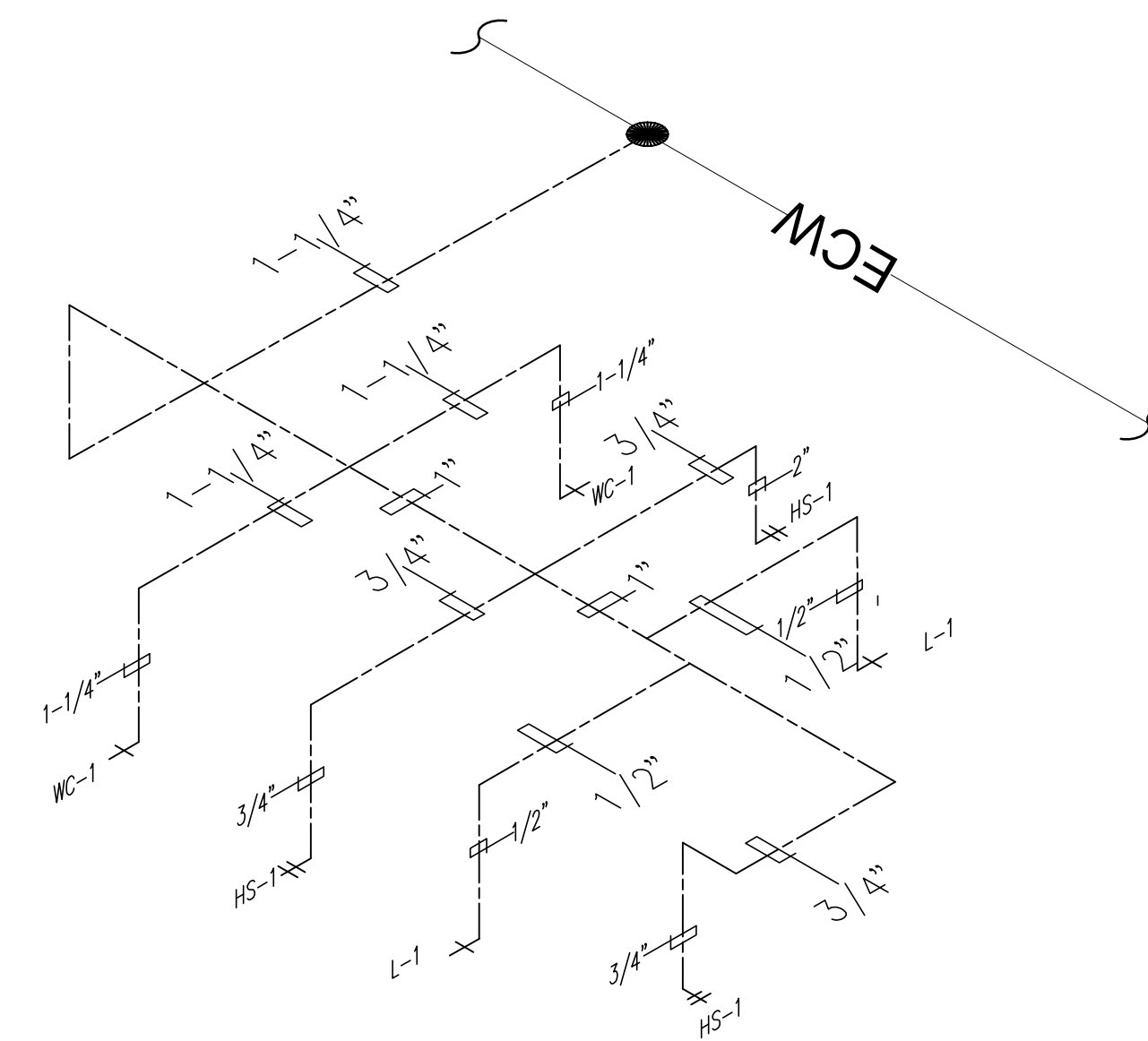
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 **SEWER AND VENT RISER PLAN** 2
BALLOON PARK NTS MP202



 **DOMESTIC WATER RISER PLAN** 1
BALLOON PARK NTS MP202

Alamogordo
Park Restrooms

Balloon Fiesta Park
Lavelle Rd.
Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
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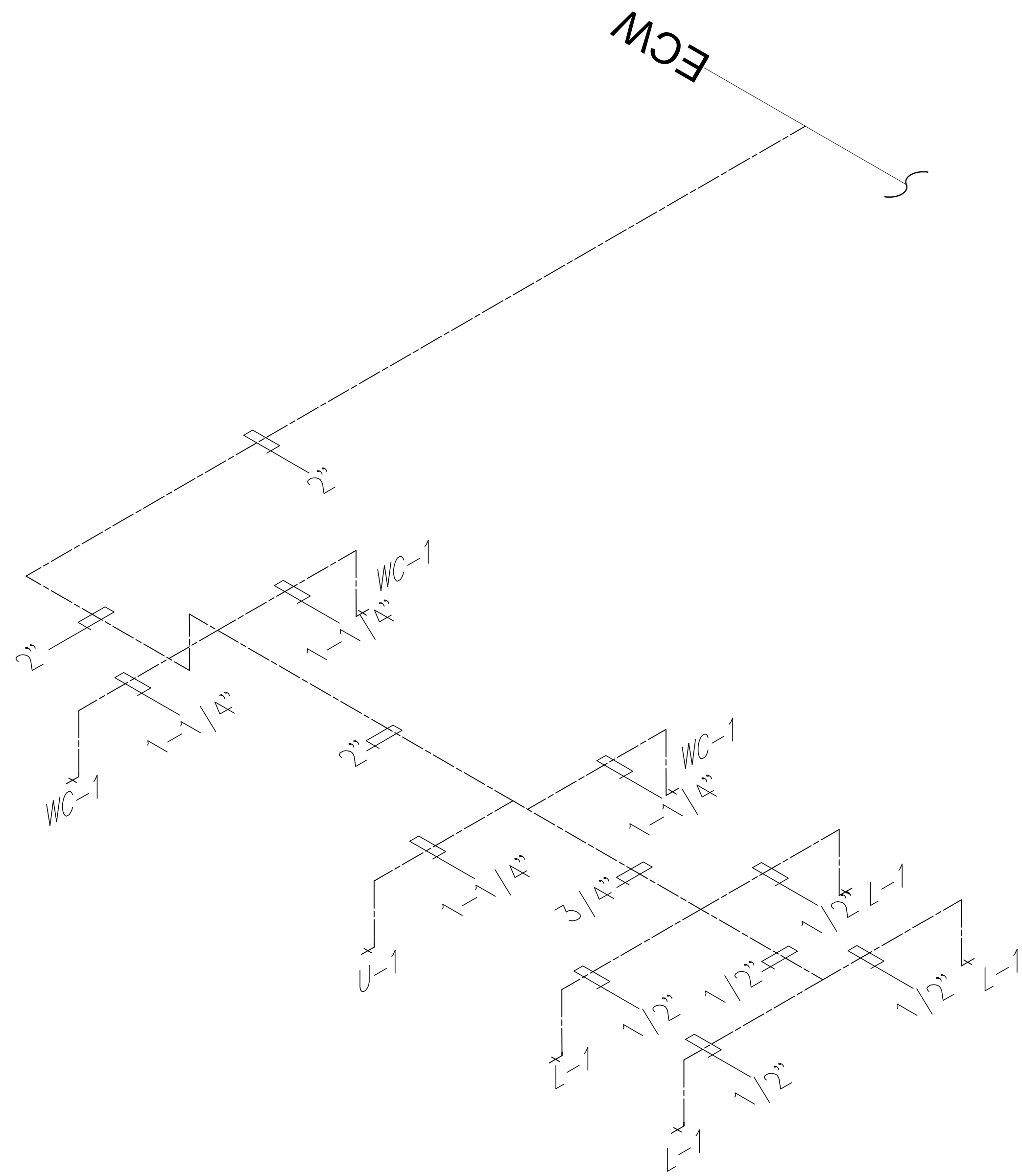
BIDLOT-1
ISOMETRIC
PLANS

MP202

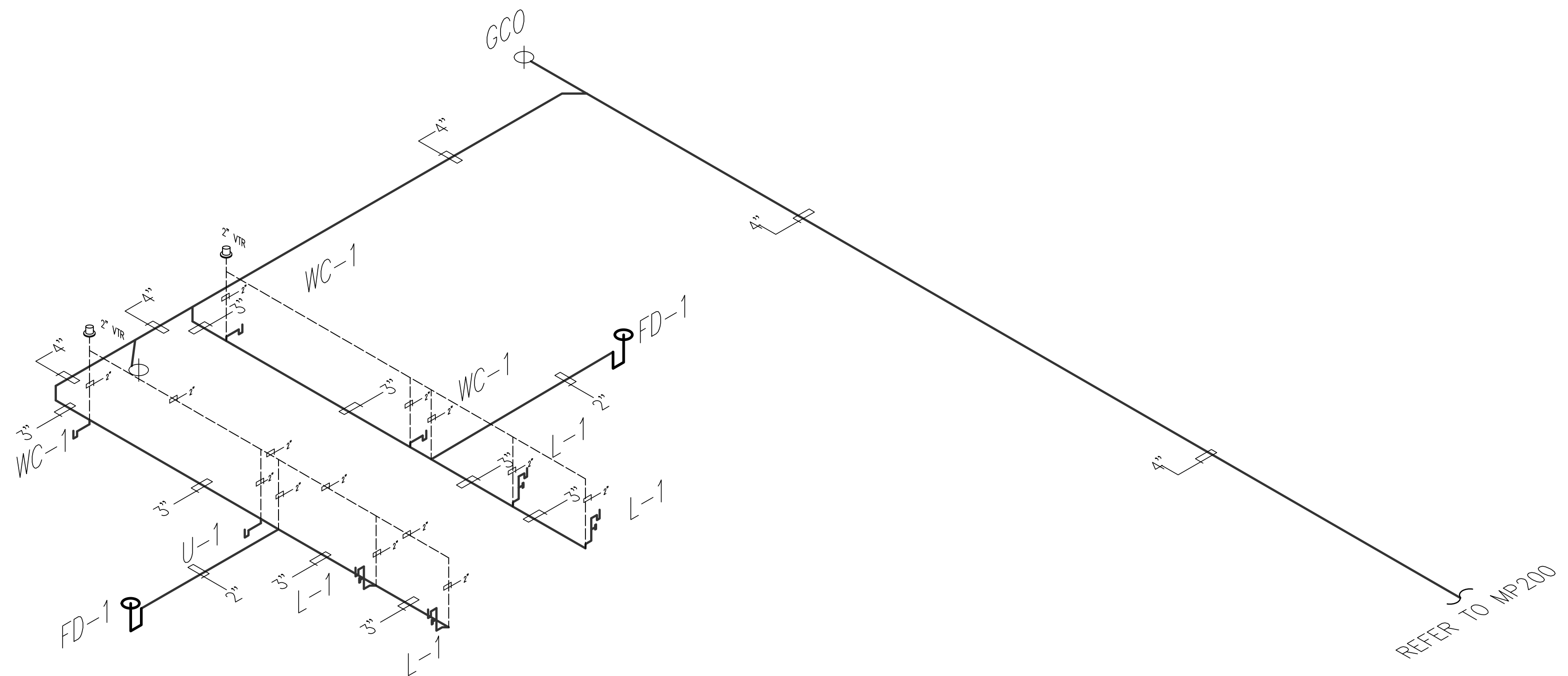


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 **ALTERNATE DOMESTIC WATER RISER PLAN** 1
BALLOON PARK - ALTERNATIVE NTS MP301



 **ALTERNATE SEWER AND VENT RISER PLAN** 2
BALLOON PARK - ALTERNATIVE NTS MP301

Alamogordo Park Restrooms

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Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
Alamogordo, New Mexico

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Project no: 21.16
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BIDLOT-2
ISOMETRICS
PLAN

MP301



11-04-21

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**Alamogordo
Park Restrooms**

Balloon Fiesta Park
Lavelle Rd.
Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
Alamogordo, New Mexico

REVISION	DATE
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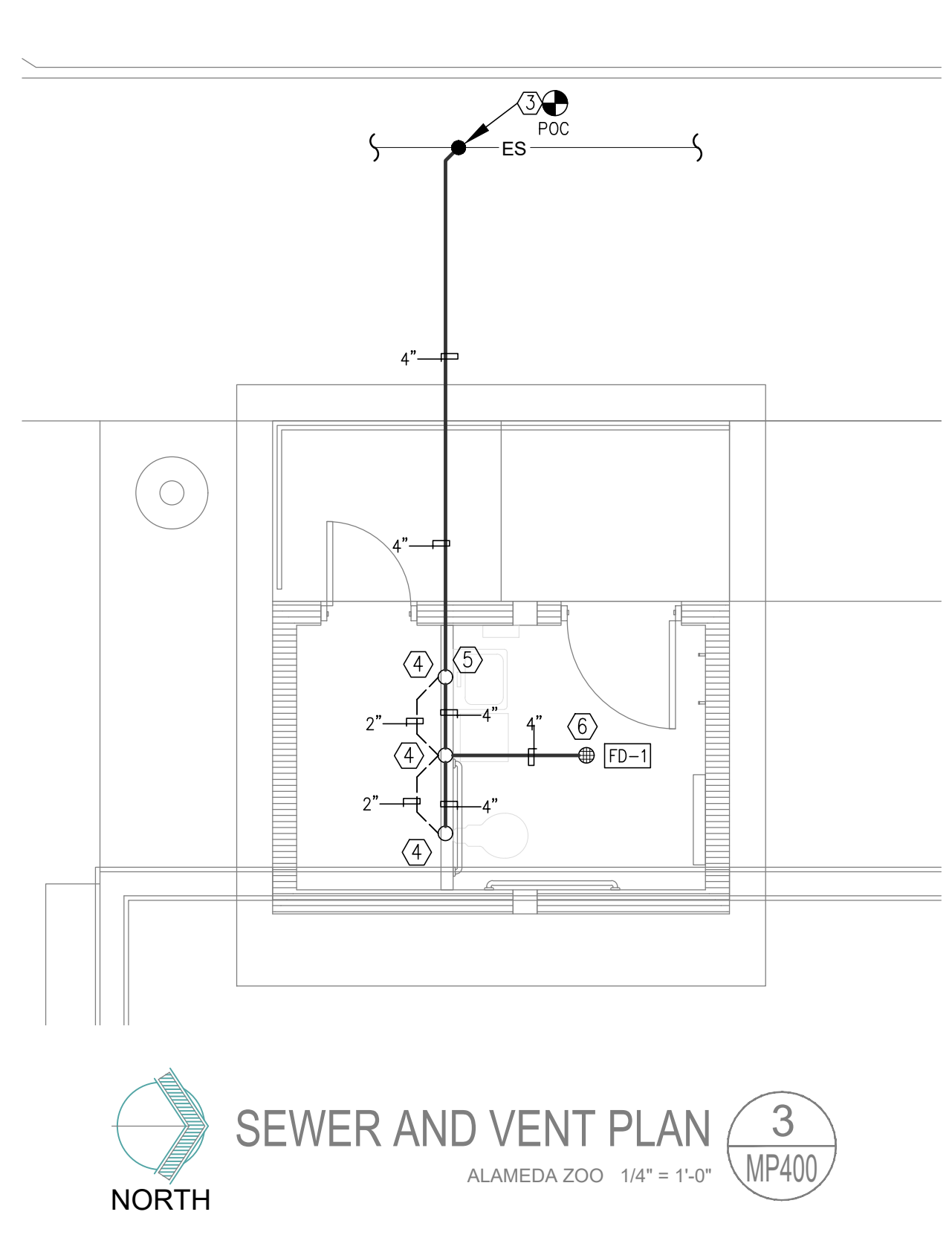
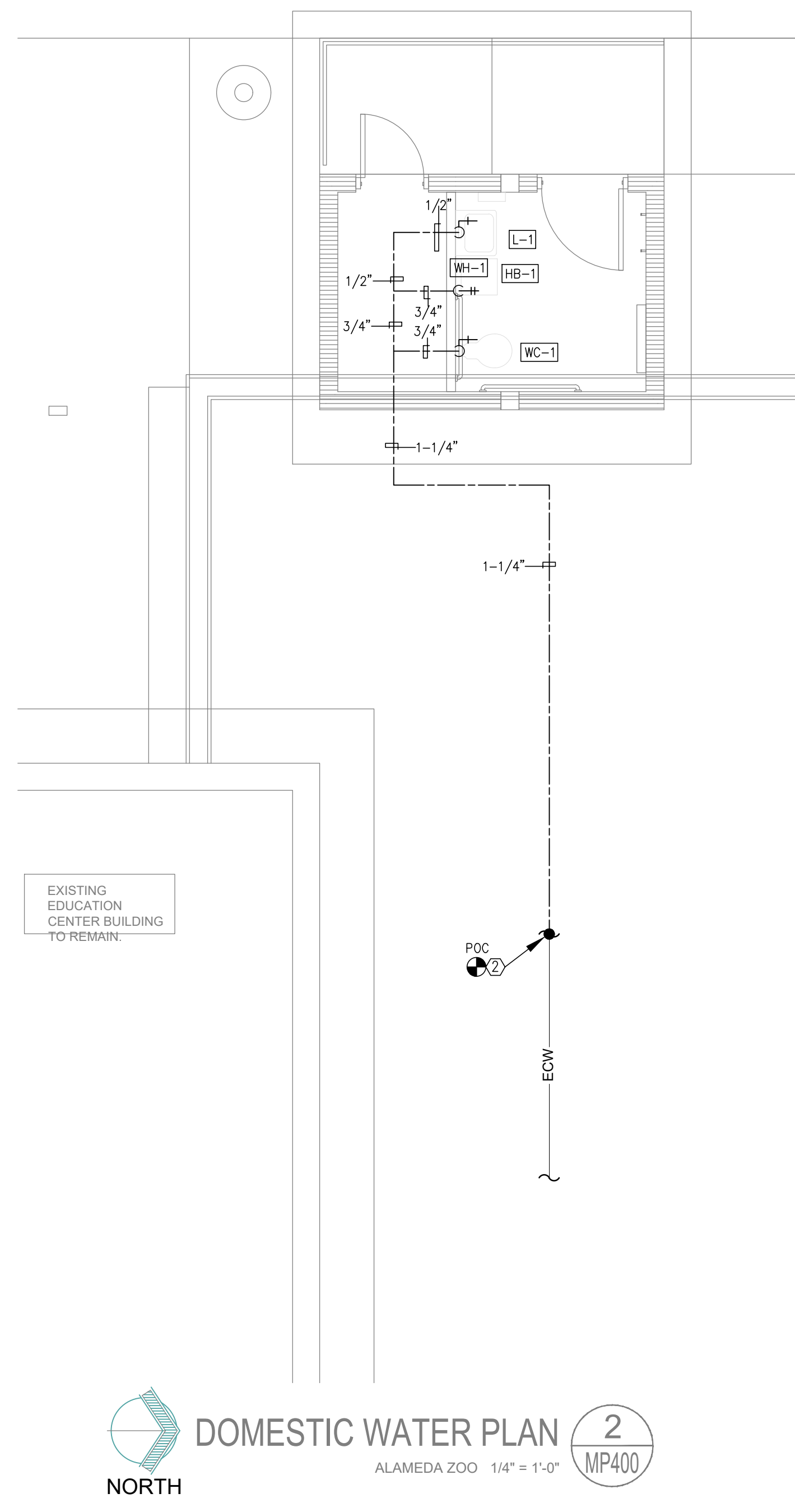
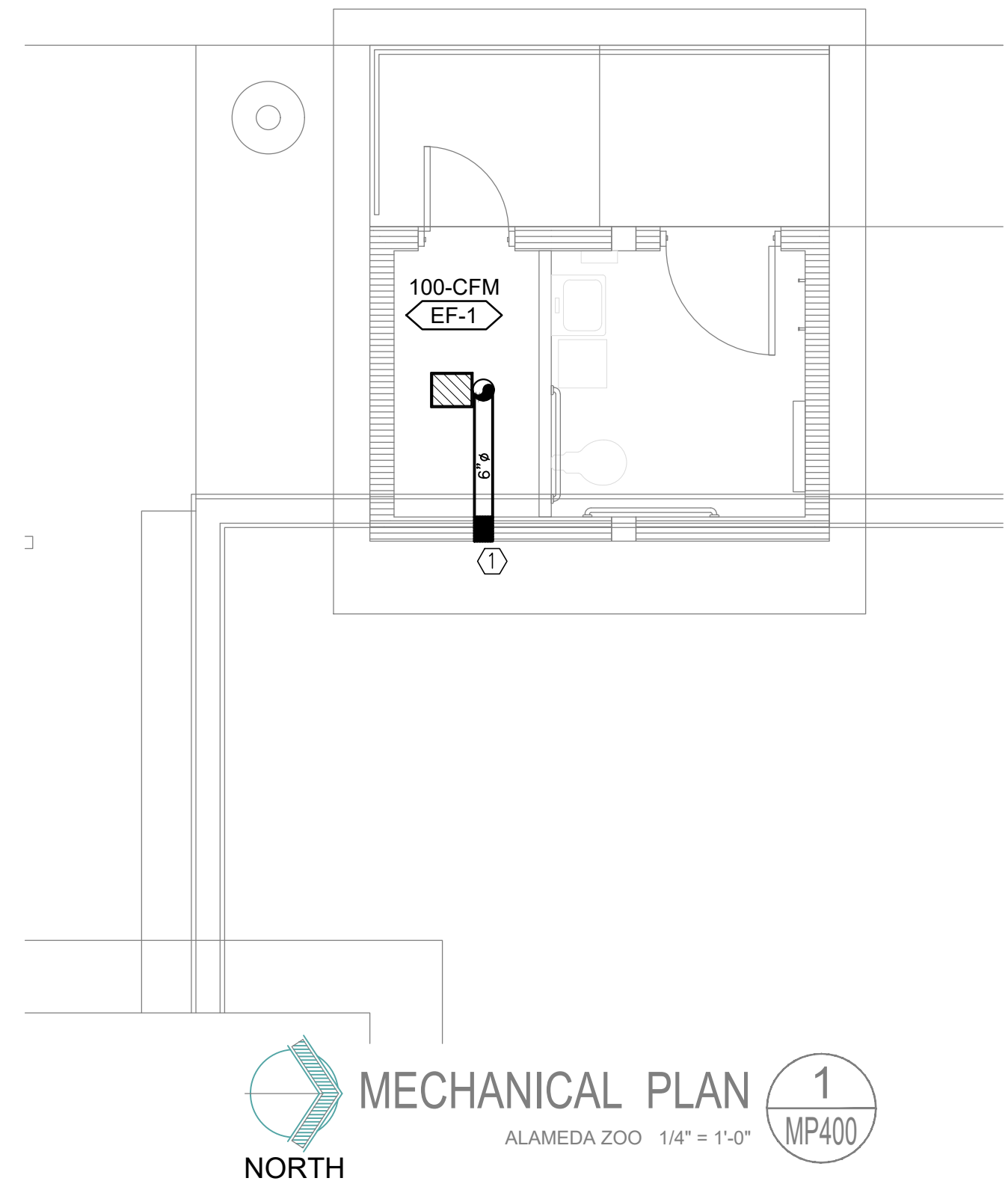
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**BIDLOT-3
MECHANICAL AND
PLUMBING PLAN**

MP400R1

KEYED NOTES

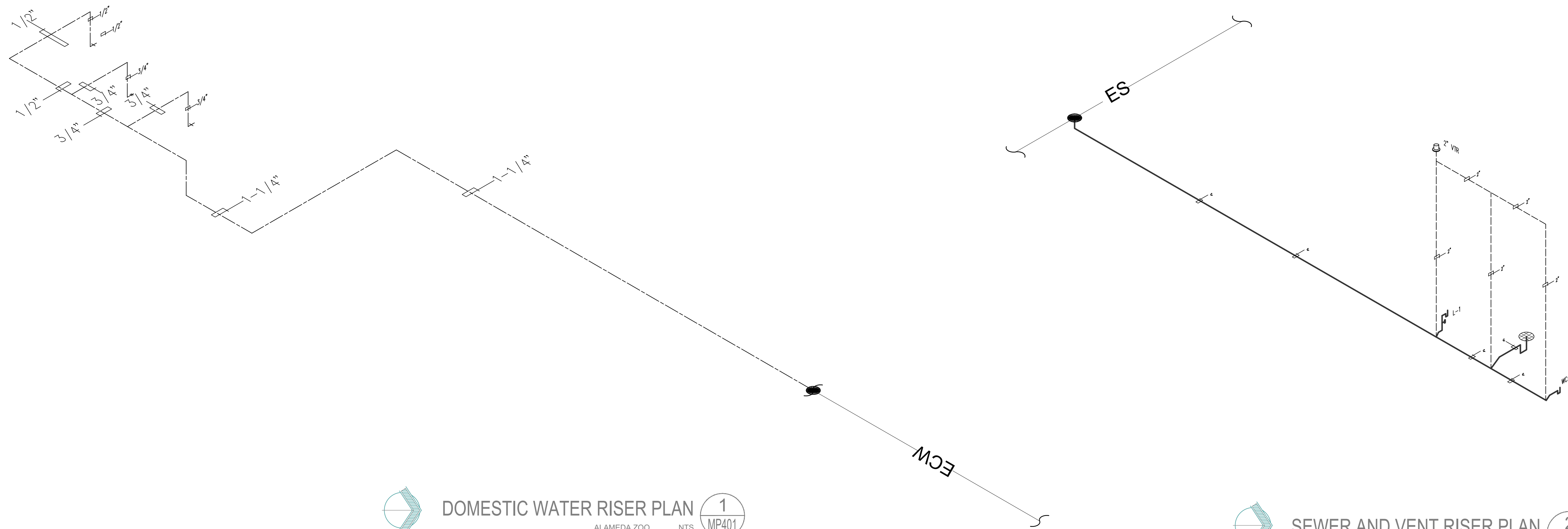
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- POINT OF CONNECTION – PLUMBING CONTRACTOR TO CONNECT NEW WASTE LINE TO EXISTING SEWER MAIN LINE. FIELD VERIFY EXACT INVERT AND LOCATION OF EXISTING SEWER MAIN LINE PRIOR TO COMMENCING ROUGH IN WORK.
- PROVIDE FULL SIZE CLEANOUT.
- PROVIDE 2"Ø VENT THROUGH ROOF.
- PROVIDE FLOOR DRAIN/SINK TRAP SEALS.



PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER AND MODEL NUMBER OR APPROVED EQUAL	ROUGH-IN REQUIREMENTS				ACCESSORIES
			DRAIN	VENT	COLD	HOT	
WC-1	WATER CLOSET FLOOR MOUNTED BOTTOM OUTLET MANUAL FLUSHOMETER	METCRAFT 4680	3"	1-1/2"	1-1/2"	-	BOWL: ELONGATED, ADA COMPLIANT, STAINLESS STEEL, VANDEL RESISTANT. SEAT: HIGH POLISHED INEGRAL SEAT FLUSHOMETER: KOHLER MODEL K-76322-CP, MANUAL, 1.6 GPF, 1-1/2" TOP SPUD.
L-1	LAVATORY WALL MOUNTED STAINLESS STEEL MANUAL FAUCET	METCRAFT 5180	2"	1-1/4"	1/2"	1/2"	LAVATORY: ADA COMPLIANT, STAINLESS STEEL, RECTANGULAR BASIN, MULTI HOLE, INTEGRAL DRAIN, STAINLESS STEEL ELBOW WASTE, VANDAL RESISTANT. PROVIDE WITH K-8998 P-TRAP AND K-1998-SS-0 SHORUD AND MOUNTING BRACKET. FAUCET: KOHLER MODEL K-15240-INDRA-CP, MANUAL, 0.5 GPM, VANDAL RESISTANT AERATOR.
HB-1	WALL HYDRANT WALL MOUNTED	ZURN Z1345	-	-	3/4"	-	WALL MOUNT ZURN MODEL Z-1345 EXPOSED NON-PRESSURE ANTI-SIPHON DRAINING WALL FAUCET, EXTERIOR CHROME FINISH, BRASS CASING, ALL BRONZE INTERIOR PARTS AND HAND OPERATION.
FD-1	FLOOR DRAIN	ZURN ZN415-BZ1	LINE SIZED	LINE SIZED	-	-	DRAIN: ZURN MODEL ZN415-BZ1 CAST IRON FLOOR DRAIN WITH NICKEL BRONZE TOP, PROVIDE WITH Z1072 TRAP GUARD.
WCO	WALL CLEANOUT	ZURN Z-1446	2" TO 4"	-	-	-	ZURN MODEL Z1446 CLEANOUT, DURA-COATED CAST IRON BODY, GAS AND WATERTIGHT ABS TAPERED PLUG, AND ROUND, SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW.





NORTH
DOMESTIC WATER RISER PLAN 1
ALAMEDA ZOO NTS MP401

NORTH
SEWER AND VENT RISER PLAN 2
ALAMEDA ZOO NTS MP401

**Alamogordo
Park Restrooms**

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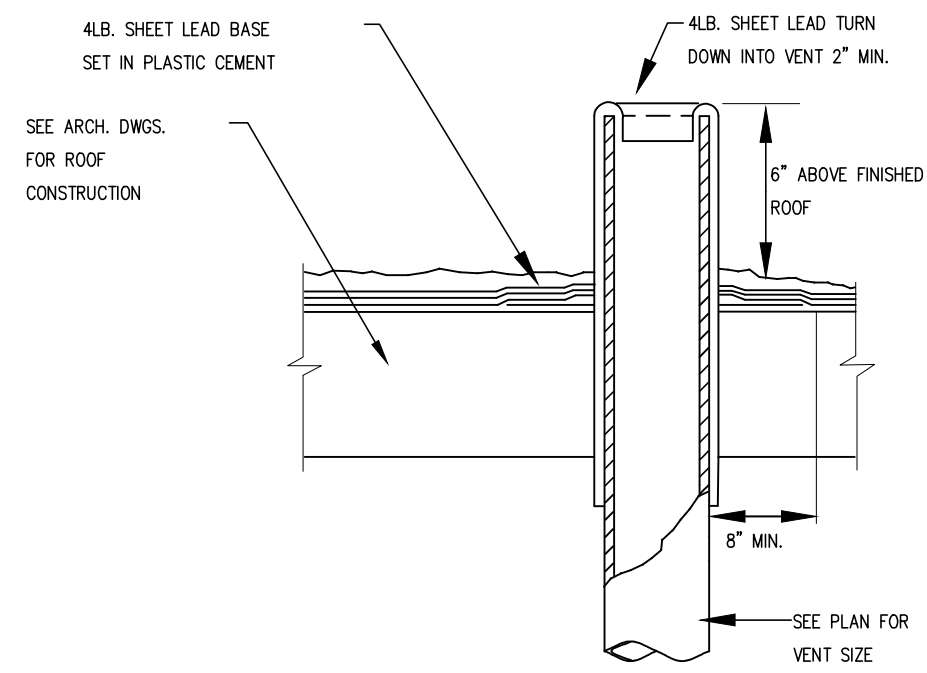
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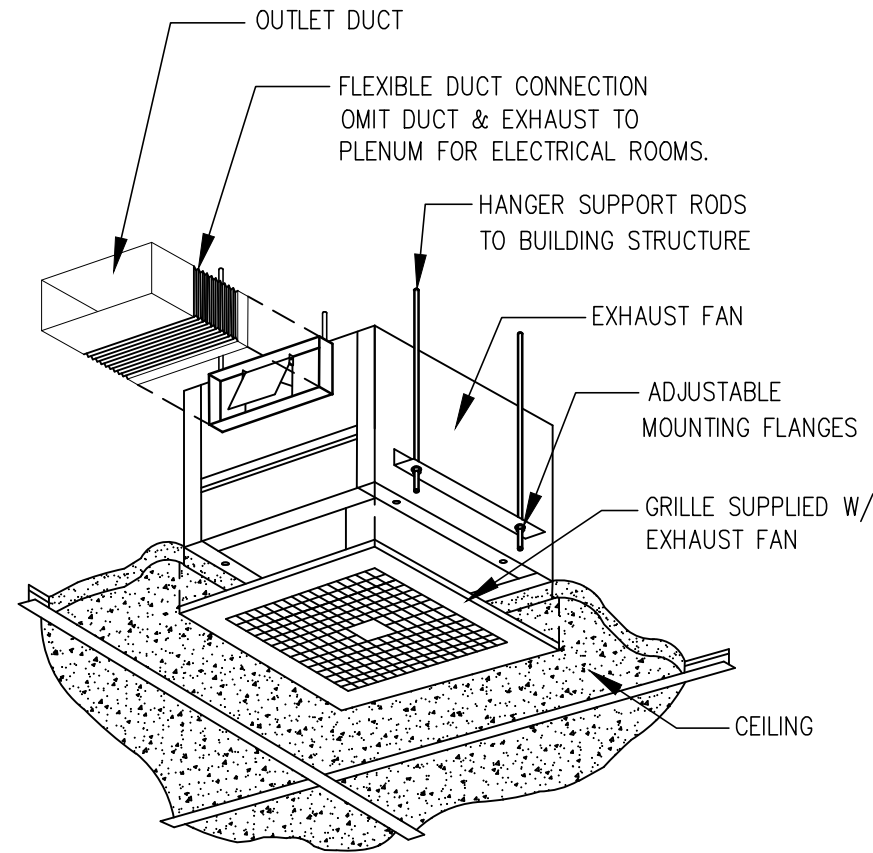
**BIDLOT-3
ISOMETRIC
PLANS**

MP401

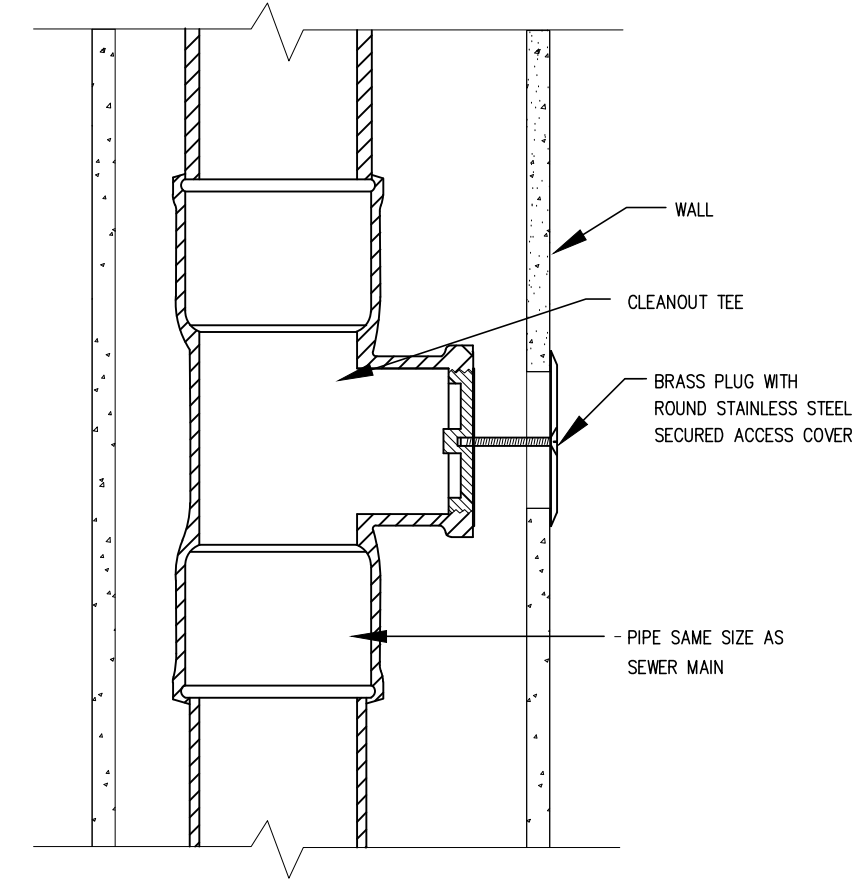




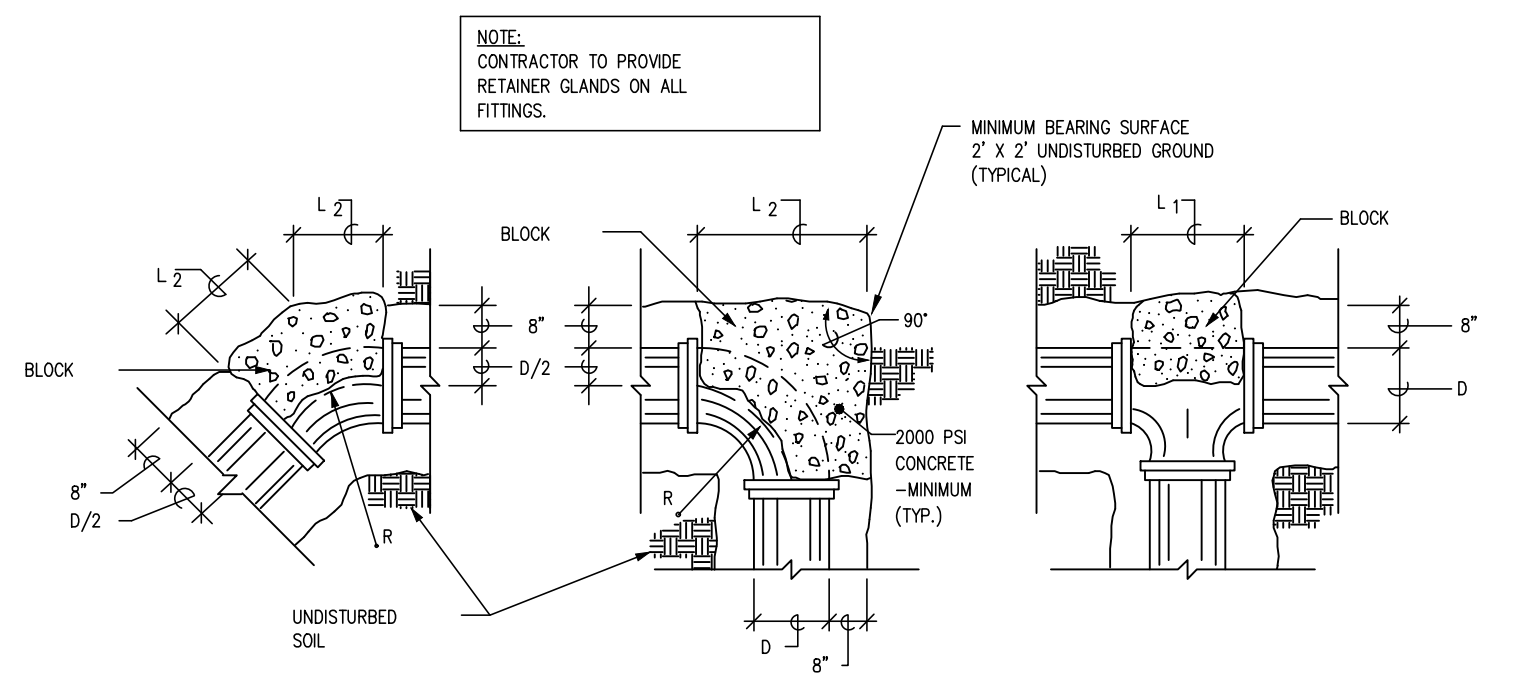
1 VENT THRU ROOF
MP500 NOT TO SCALE



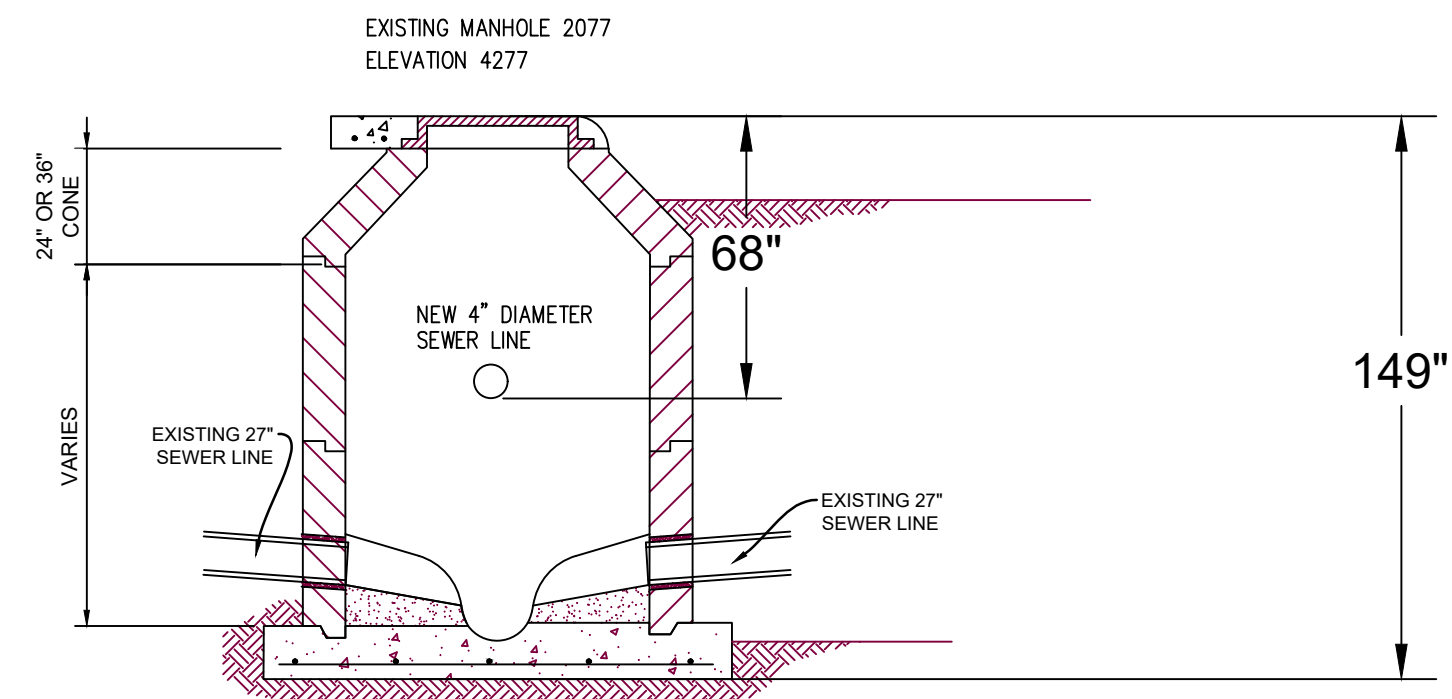
2 EXHAUST FAN DETAIL
MP500 NOT TO SCALE



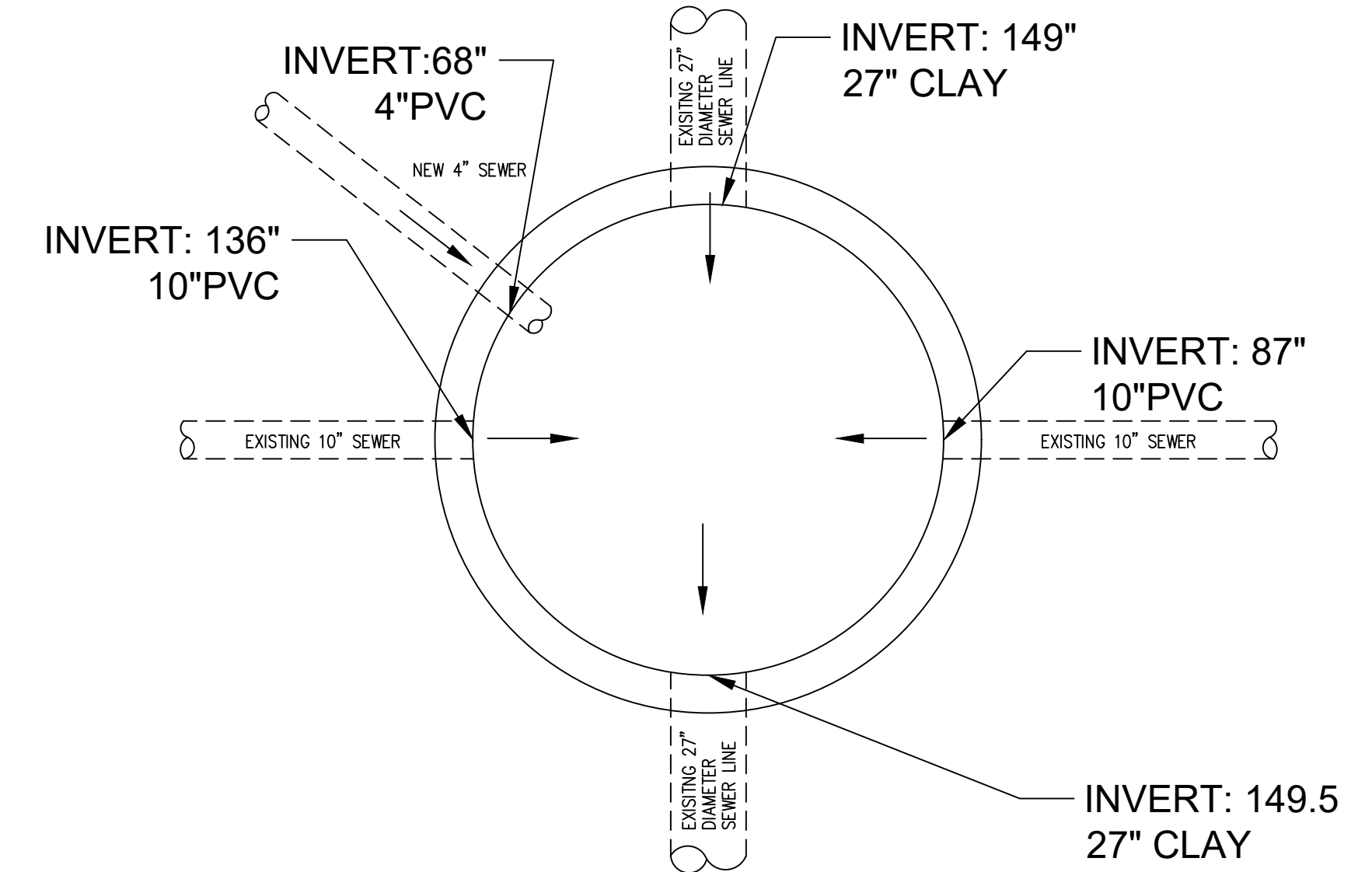
3 WALL CLEANOUT DETAIL
MP500 NOT TO SCALE



4 THRUST BLOCK DETAIL
MP500 NOT TO SCALE



5 EXISTING MANHOLE CONNECTION
MP500 NOT TO SCALE



6 EXISTING MANHOLE PLAN VIEW DETAIL
MP500 NOT TO SCALE

**Alamogordo
Park Restrooms**

Balloon Fiesta Park
Lavelle Rd.
Alamogordo, New Mexico

Alameda Park Zoo
1021 N. White Sands Blvd.
Alamogordo, New Mexico

REVISION DATE

Project no: 21.16
Date: April 2021
Sheet:

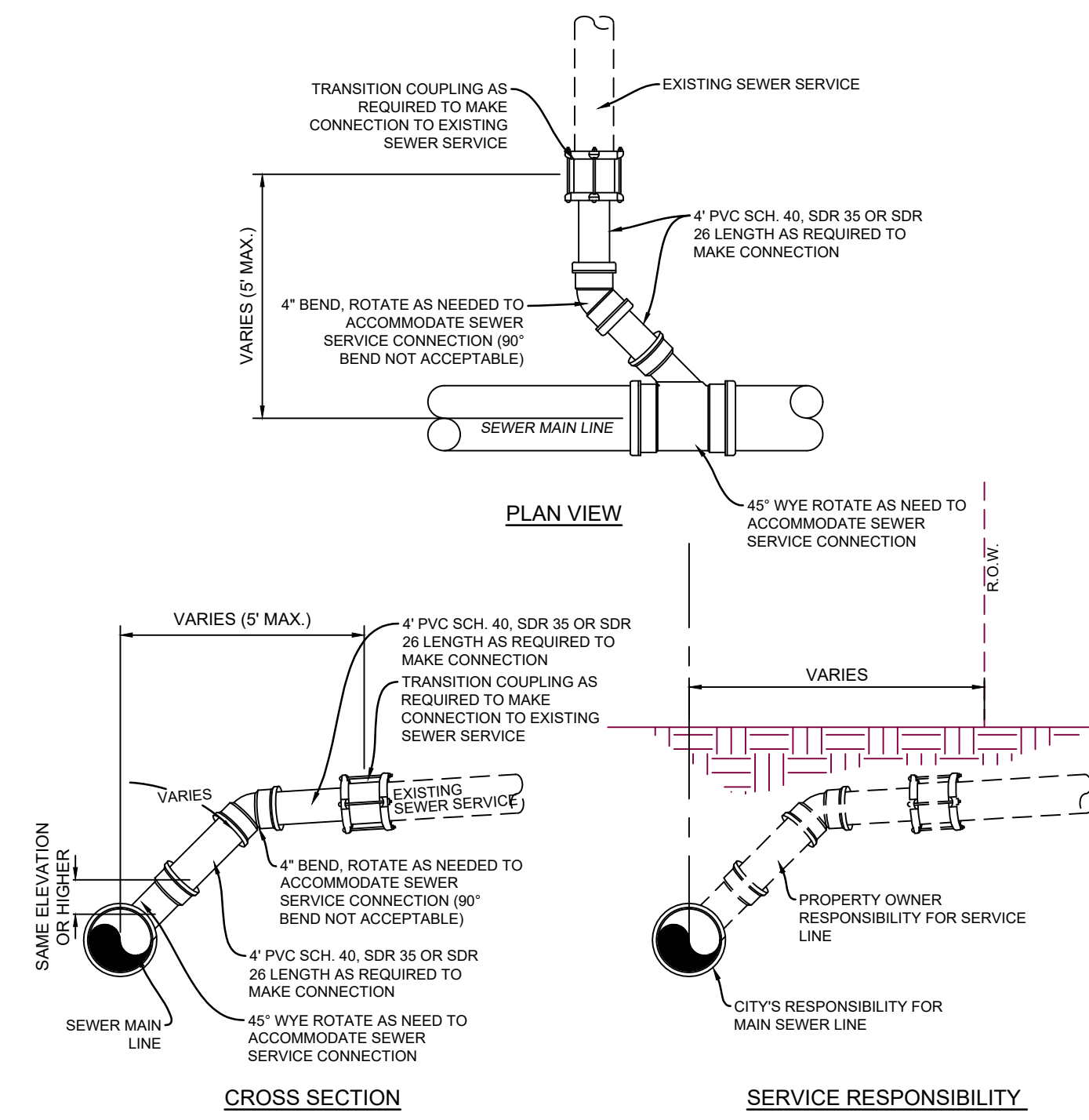
**MECHANICAL
AND PLUMBING
DETAILS**

MP500



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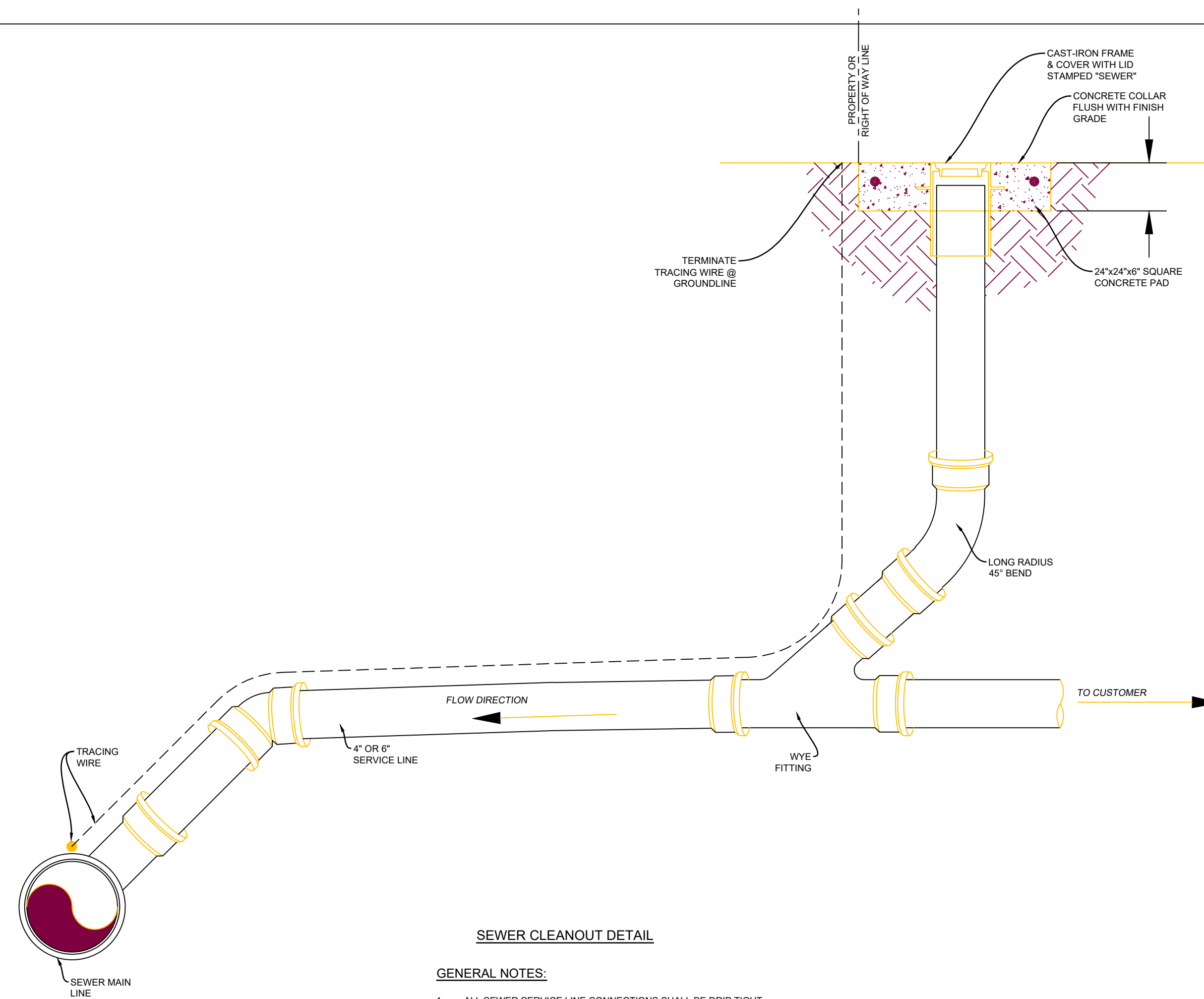


SEWER SERVICE LINE DETAIL

GENERAL NOTES:

1. ALL SEWER SERVICE LINE CONNECTIONS SHALL BE DRIP TIGHT.

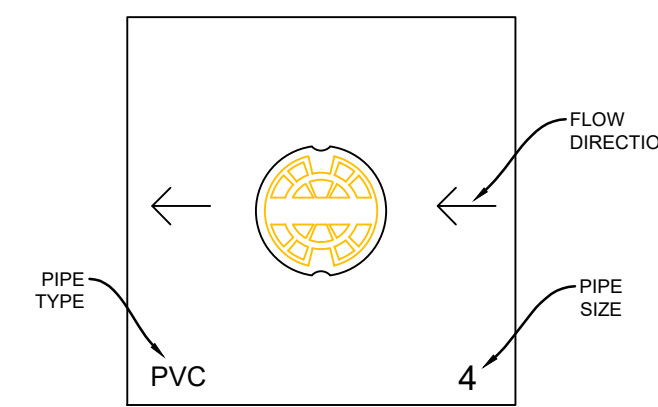
1 **SEWER SERVICE LINE DETAIL**
MP600 NOT TO SCALE



SEWER CLEANOUT DETAIL

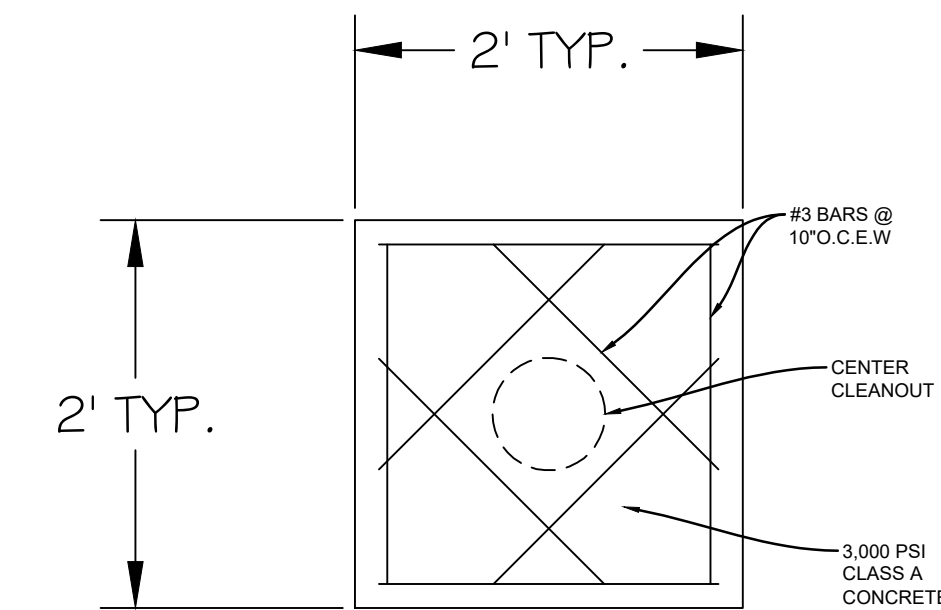
GENERAL NOTES:

1. ALL SEWER SERVICE LINE CONNECTIONS SHALL BE DRIP TIGHT.



GENERAL NOTES:

1. SCRIBE CONCRETE WITH LINE DIRECTIONAL ARROWS, PIPE SIZE AND PIPE TYPE.
2. TEXT SIZE SHALL BE 4-INCHES TALL AND SCORED 3/8" DEEP IN NEAT AND CONSISTENT MANNER, TYPICAL.



GENERAL NOTES:

1. SEWER CLEANOUT SHALL BE CENTERED IN CONCRETE COLLAR.
2. REBAR SHALL BE 1-1/2" CLEAR FROM CONCRETE EDGE TYPICAL.

1 **SEWER CLEANOUT DETAIL**
MP600 NOT TO SCALE

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**MECHANICAL
AND PLUMBING
DETAILS**

MP600



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