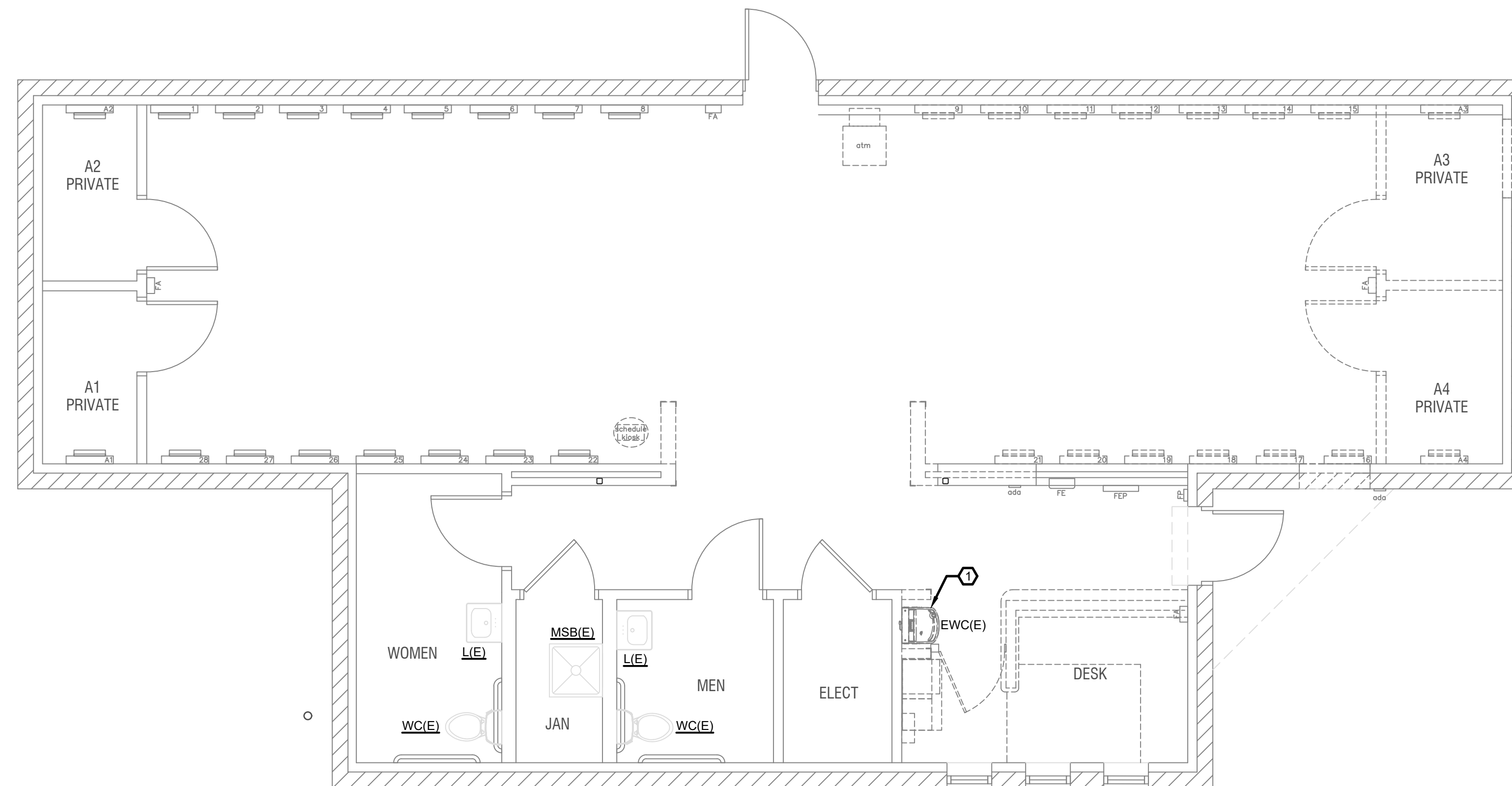


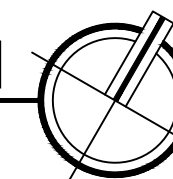


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**WATER PIPING & WASTE/VENT DEMOLITION PLAN**

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

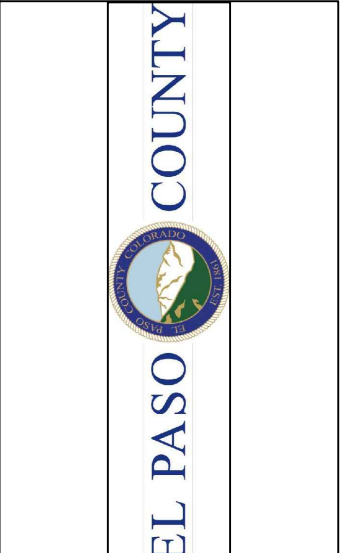


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**GENERAL NOTES:**

EXISTING LAYOUT AND ROUTING HAVE BEEN COMPLETED TO THE BEST OF THE ENGINEER'S ABILITY. SHOULD EXISTING CONDITIONS DIFFER FROM LAYOUT SHOWN, CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ENGINEER TO ADDRESS ANY DISCREPANCIES.

FIELD VERIFY EXACT LOCATION OF EXISTING WATER PIPE PRIOR TO COMMENCING WORK. PRESUMED LOCATION OF EXISTING WATERLINE. ACTUAL CONDITIONS UNKNOWN AND NOT OBSERVABLE.

**DEMOLITION KEY NOTES:**

- ① REMOVE EXISTING DRINKING FOUNTAIN AND CAP EXISTING 1/2" COLD WATER, AND EXISTING 2" WASTE, TO BE CONNECTED TO NEW DRINKING FOUNTAIN.

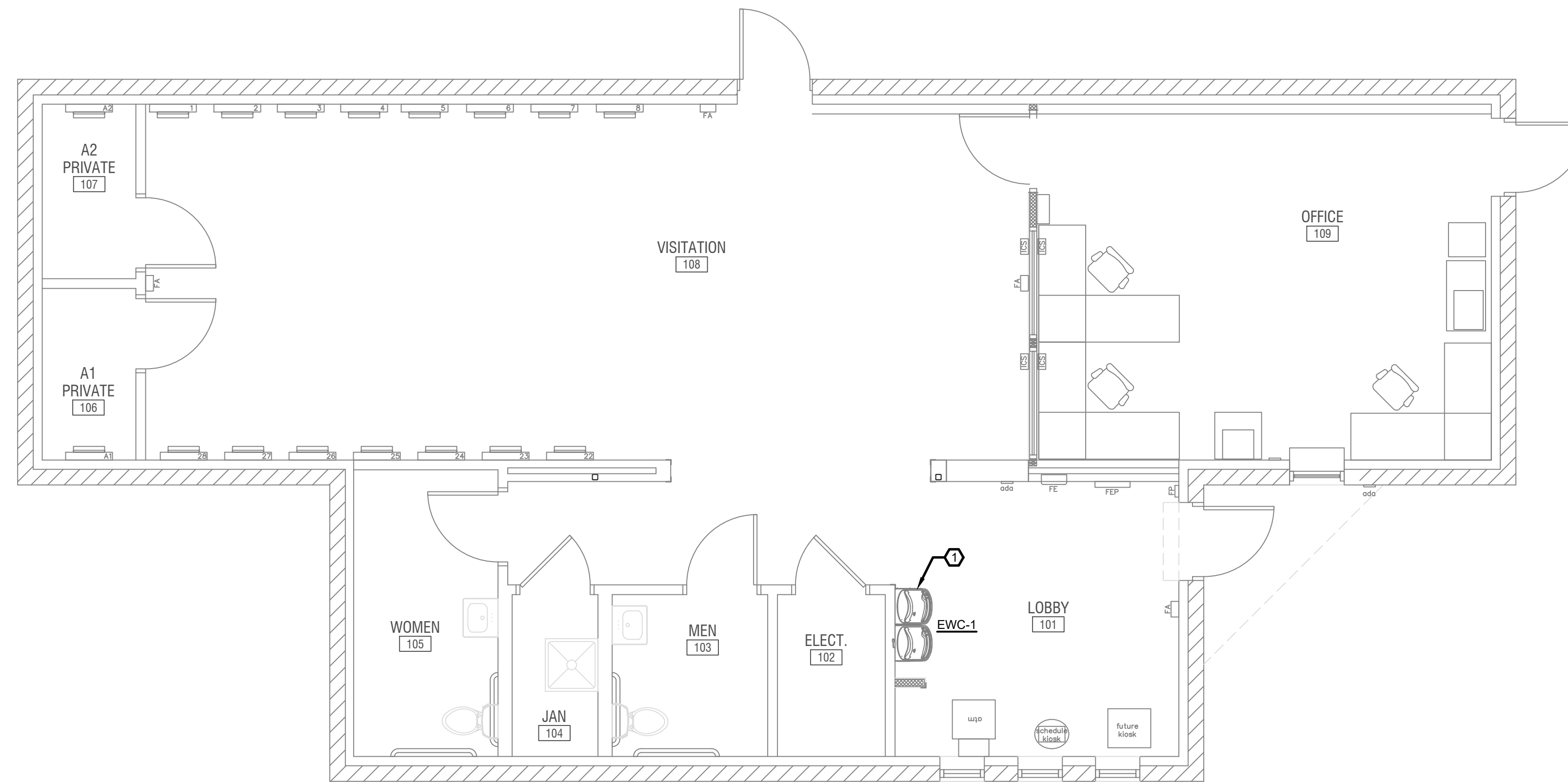
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 VIDEO VISITATION REMODEL  
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 COLORADO SPRINGS, CO**

**WATER PIPING &  
 WASTE/VENT  
 DEMOLITION PLAN**

DATE: 01/04/22  
 DRAWN BY: JLV  
 CHECKED BY: AIS  
 PROJECT NO: 5136-21-09  
 SHEET NO:

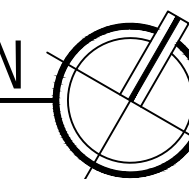
**PD-W-101**

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**WATER PIPING & WASTE/VENT NEW WORK PLAN**

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



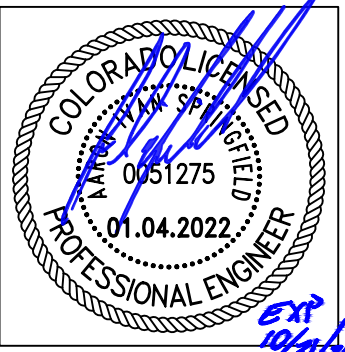
**GENERAL NOTES:**

ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ARE TO BE SEALED AND PROTECTED BY FIRE RESISTANT CAULKING.

**NEW WORK KEY NOTES:**

① CONNECT EWC-1 TO EXISTING 1/2" COLD WATER AND EXISTING 2" WASTE.

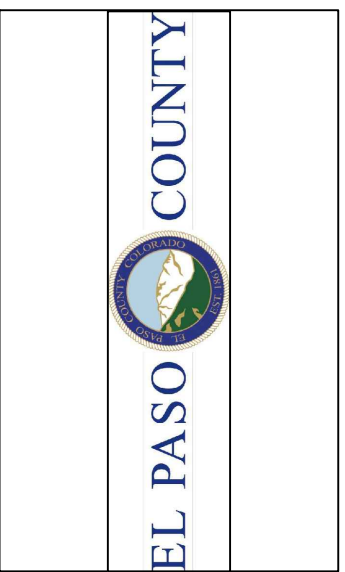
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**WATER PIPING &  
 WASTE/VENT  
 NEW WORK PLAN**

DATE: 01/04/22  
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**P-W-101**

### WATER PIPE SIZE ANALYSIS

WATER SUPPLY FIXTURE UNITS (WSFU) - PER 2015 IPC TABLE 103.3(2)			
FIXTURE	QTY	WSFU	TOTAL
WATER CLOSET (FLUSH VALVE)	2	10.00	20.00
LAVATORY	2	2.00	4.00
SERVICE SINK / MOP SINK BASIN	1	3.00	3.00
DRINKING FOUNTAIN	1	0.25	0.25
TOTAL FIXTURE UNITS			27.25
FLOW RATE INFORMATION			
DOMESTIC FLOW RATE PER 2015 IPC TABLE E103.3(3) [GPM]			10.0
IRRIGATION FLOW RATE PER LANDSCAPING CONTRACTOR [GPM]			10.0
TOTAL SYSTEM FLOW RATE [GPM]			20.0
SERVICE PRESSURE			
MAXIMUM STATIC PRESSURE AVAILABLE AT THE DOMESTIC WATER ENTRY (PER 2015 IPC SECTION 604.8, DOWNSTREAM OF THE REQUIRED PRESSURE REGULATOR) [PSI]			80
SYSTEM LOSSES			
METER LOSS [PSI]			10.0
LOSS THROUGH RPZ BACKFLOW PREVENTER [PSIG]			12.0
STATIC HEAD LOSS DUE TO ELEVATION (VERTICAL LENGTH * 0.43 PSIG/FT) [PSI]		15	6.45
LOSS IN HORIZONTAL LENGTH OF PIPING (LONGEST DISTANCE) [FT] * (1.2) [FITTING FACTOR] [FT]		20	24.0
DISTRIBUTION PIPE LOSSES PER FIGURE E103.3(3) (LONGEST LENGTH OF PIPING) * (PRESSURE DROP / 100 FT) [PSI]		2	0.5
TOTAL PRESSURE LOSSES FOR THE PROPOSED SYSTEM [PSI]			28.93
MINIMUM PRESSURE REQUIRED FOR PROPER FIXTURE OPERATION (PER 2015 IPC TABLE 604.3) [PSI]			20
TOTAL SYSTEM PRESSURE REQUIREMENT FOR THE PROPOSED SYSTEM (LOSSES) + (FIXTURE REQUIREMENTS) [PSI]			48.93
NET POSITIVE SYSTEM PRESSURE AVAILABLE (MAXIMUM STATIC PRESSURE) - (SYSTEM PRESSURE REQUIREMENT) [PSI]			31.07
SUMMARY			
PER THE REQUIREMENTS OF 2015 IPC TABLE E201.1, WHEN 27.25 WSFU'S ARE APPLIED TO THE 20 LINEAR FOOT COLUMN IN THE TABLES, A 3/4" WATER METER IS REQUIRED WITH 1-1/4" DISTRIBUTION PIPING. IN ORDER TO ACCOMMODATE THE DEMAND ON THE DOMESTIC WATER SYSTEM IMPOSED BY THE FIXTURES IN THIS CONTRACT, THE EXISTING WATER METER AND DISTRIBUTION PIPING MAY BE RE-USED.			

### PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	WASTE	VENT	COLD	HOT
WC(E)	WATER CLOSET (ADA COMPLIANT) (EXISTING) KOHLER NO. K-4368	EXISTING	EXISTING	EXISTING	---
L(E)	LAVATORY (ADA COMPLIANT, WALL-MOUNT) (EXISTING) KOHLER NO. K-2005	EXISTING	EXISTING	EXISTING	EXISTING
EWC-1	ELECTRIC WATER COOLER (TWO-LEVEL, ADA COMPLIANT) EQUAL TO ELKAY MODEL #EZSTL8LC, TWO-LEVEL DRINKING FOUNTAIN (ADA COMPLIANT), LIGHT GRAY, INCLUDING ELECTRONIC BUBBLER PUSHBARS, FLEXI-GUARD BUBBLERS, 8 GPH CHILLING, AND 115V/1Ø, 5A FLA, RATED AT 370 WATTS. INSTALL WITH 20A MOCP AND GFCI PROTECTION. INCLUDE WALL PLATE ACCESSORY #1000004539.	2"	1-1/2"	1/2"	---
MSB(E)	MOP SINK (EXISTING) FIAT NO. MSB-2424	EXISTING	EXISTING	EXISTING	EXISTING

### PIPE INSULATION SCHEDULE

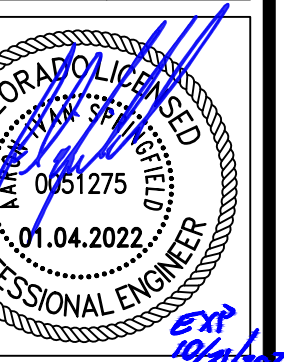
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPING SIZE			
	(BTU * IN.) / (H * FT² * °F)	MEAN RATING TEMP. °F	< 1"	1" TO < 1-1/2"	1-1/2" TO < 4"	4" TO < 8"
> 350	0.32 - 0.34	250	4.5"	5.0"	5.0"	5.0"
251 - 350	0.29 - 0.32	200	3.0"	4.0"	4.5"	4.5"
201 - 250	0.27 - 0.30	150	2.5"	2.5"	2.5"	3.0"
141 - 200	0.25 - 0.29	125	1.5"	1.5"	2.0"	2.0"
105 - 140	0.21 - 0.28	100	1.0"	1.0"	1.5"	1.5"
40 - 60	0.21 - 0.27	75	0.5"	0.5"	1.0"	1.0"
< 40	0.20 - 0.26	50	0.5"	1.0"	1.0"	1.0"

### PIPING MATERIALS SCHEDULE

ALL PIPE AND FITTINGS LISTED ARE ONLY TO BE USED WHERE PERMITTED BY CODE	
SANITARY WASTE & VENT (W & V)	SCHEDULE 10 CAST IRON WITH NO HUB OR BANDED CONNECTIONS AND FITTINGS ALTERNATE: SCHEDULE 40 PVC, WITH PRIMED AND GLUED CONNECTIONS AND FITTINGS
DOMESTIC COLD WATER (CW) DOMESTIC HOT WATER (HW) HOT WATER RECIRCULATION (HWC)	TYPE "L" COPPER PIPING, WITH SOLDERED OR BRAZED FITTINGS. SOFT COPPER UNDERSLAB WITH NO JOINTS. ALTERNATE: PEX TUBING WITH BANDED CONNECTIONS AND FITTINGS
DRAINAGE (ORDL & RDL)	SCHEDULE 40 PVC, PRIMED AND GLUED OR THREADED CONNECTIONS AND FITTINGS.

### REVISIONS

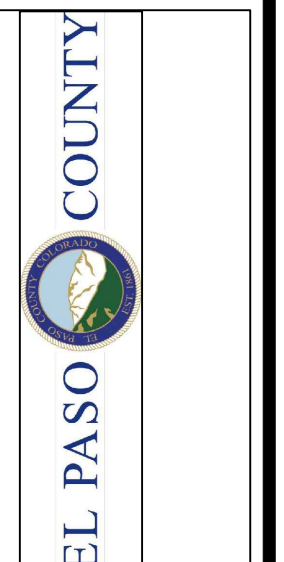
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SCHEDULES AND CALCULATIONS

DATE: 01/04/22

DRAWN BY: JLV

CHECKED BY: AIS

PROJECT NO: 5136-21-09

SHEET NO:

**P-601**