



YAVAPAI HILLS LIFT STATION

5101 CACTUS PL
 PRESCOTT, ARIZONA 86301
 FEBRUARY 2024

CIP NO. 2105-004
 VOLUME 1 OF 4
 FOR CONSTRUCTION

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UTILITY INFORMATION		
COMPANY	CONTACT	TELEPHONE
ARIZONA PUBLIC SERVICE CO. 6672 CORSAIR AVENUE PRESCOTT, ARIZONA 86301	MONIQUE HOLLIDAY	(928) 445-6612
CENTURY LINK 1445 MASONRY WAY PRESCOTT, ARIZONA 86301	DELL HOWARD	(520) 838-3050
UNISOURCE ENERGY SERVICES 6405 WILKINSON DRIVE PRESCOTT, ARIZONA 86301	MALI ROSS	(928) 771-7227
SPARKLIGHT 3201 TOWER ROAD PRESCOTT, ARIZONA 86305	DOUG HAMILTON	(928) 713-8382
CITY OF PRESCOTT WATER & SEWER P.O. BOX 2059 PRESCOTT, ARIZONA 86301	STEVE OLFERS	928-777-1130

NOTES:

YESD APPROVAL TO CONSTRUCT AND CITY OF PRESCOTT PERMIT REQUIRED PRIOR TO CONSTRUCTION

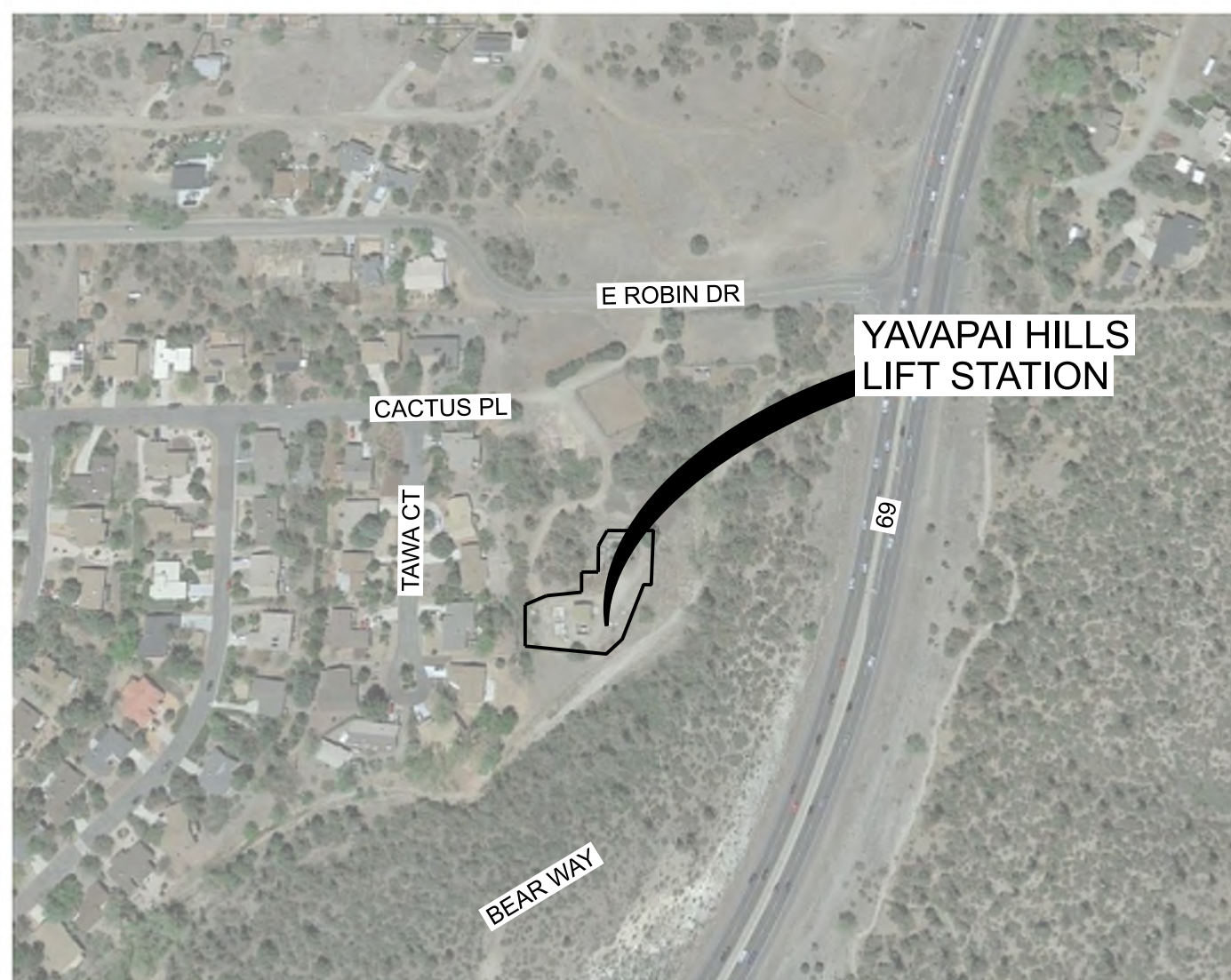
CONTRACTOR IS TO USE EXTREME CAUTION WHEN WORKING NEAR HIGH VOLTAGE OVERHEAD POWER LINES AND HIGH PRESSURE GAS MAINS.

CONTRACTOR TO LOCATE AND DELINEATE TEMPORARY CONSTRUCTION EASEMENTS.

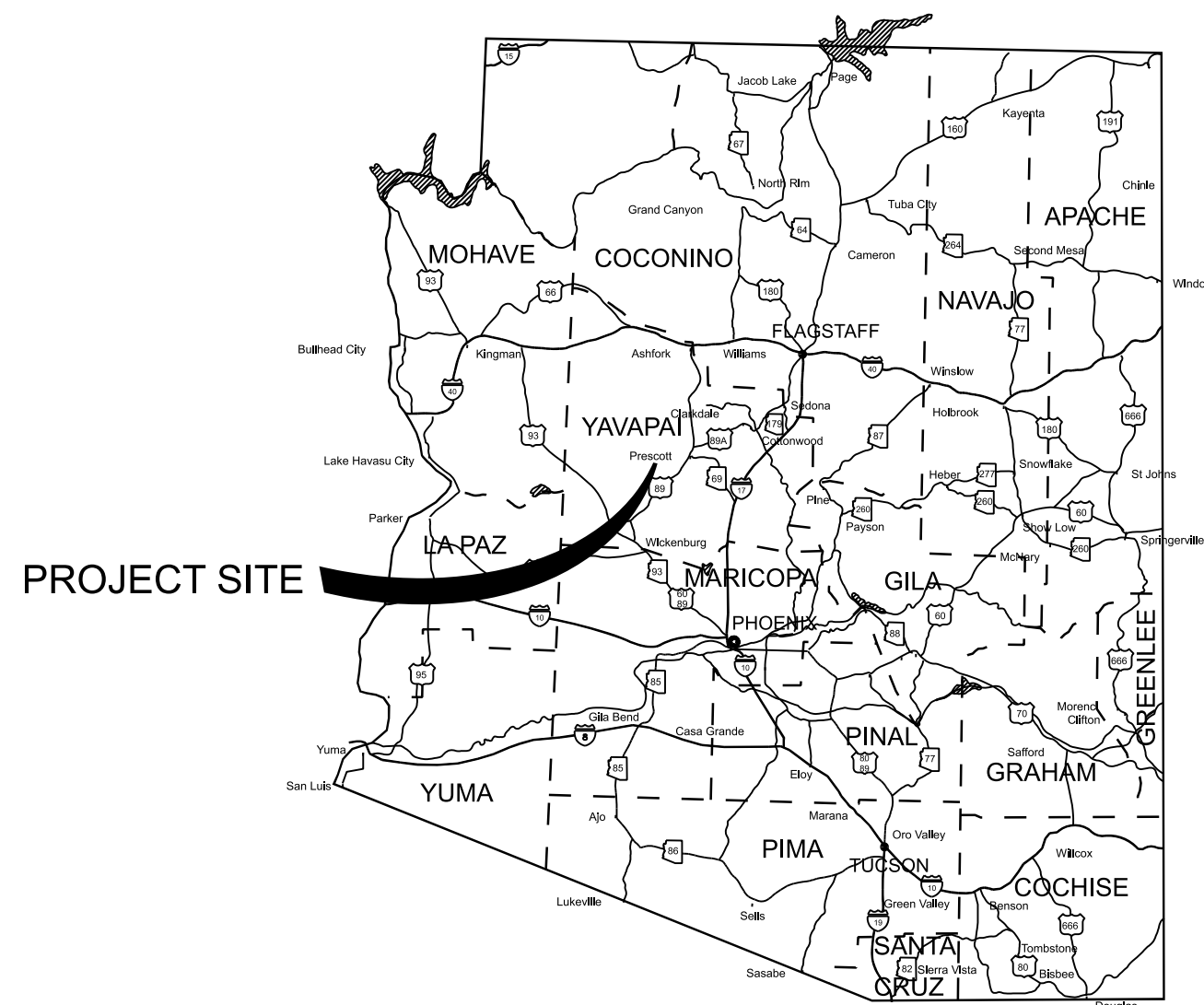
NO ACTIVITY SHALL OCCUR OUTSIDE OF TEMPORARY CONSTRUCTION EASEMENTS.

ALL EASEMENTS CALLED OUT IN THESE CONSTRUCTION DRAWINGS SHALL BE DEDICATED BY A RECORDED LEGAL DESCRIPTION UNLESS OTHERWISE NOTED AS "EXISTING" WITH BOOK & PAGE LOCATION OF RECORDING.

PROJECT IS FUNDED VIA WIFA. PROVIDE WIFA COMPLIANT SIGN, DAVIS-BACON WAGES PER LATEST WAGE DETERMINATION, AMERICAN IRON AND STEEL AND ALL OTHER APPLICABLE WIFA REQUIREMENTS.



VICINITY MAP
NTS



LOCATION MAP
NTS

REFER TO THE FOLLOWING QUAD CITY STANDARD DETAIL FOR PROJECT NOTES WHICH ARE AVAILABLE FROM THE CITY OF PRESCOTT WEBSITE:
[HTTP://WWW.PRESCOTT-AZ.GOV/](http://www.prescott-az.gov/)
 101P GENERAL NOTES
 103P WATER PLAN GENERAL NOTES
 104P WASTEWATER PLAN GENERAL NOTES
 105P-1 GRADING AND DRAINAGE NOTES
 105P-2 EROSION AND SEDIMENTATION CONTROL NOTES
 106P-1 SIGNING AND STRIPING NOTES
 106P-2 TRAFFIC SIGNAL NOTES

CITY BENCHMARKS
 COP BENCHMARK DESIGNATION "NGS M-27", IN PRESCOTT, YAVAPAI COUNTY, AT MAIN WASTEWATER TREATMENT PLANT ON SUNDG RANCH ROAD, BRASS CAP AT THE NORTHERLY MOST CORNER OF WEST AERATION BED NAVD 88: 5208.842

MAYOR
PHIL GOODE

SUBMITTED BY

REVIEWED BY

CITY COUNCIL
 ERIC MOORE BRANDON MONTOYA CONNIE CANTELME CATHEY RUSING LOIS FRUHWORTH TED GAMBONI

JOHN H. MATTA
PRINCIPAL
2/22/2024
DATE
30012
AZ REGISTRATION NUMBER

CITY ENGINEER
DATE

ROB D. BRYANT
PROJECT MANAGER
2/22/2024
DATE
42726
AZ REGISTRATION NUMBER

UTILITY MANAGER
DATE

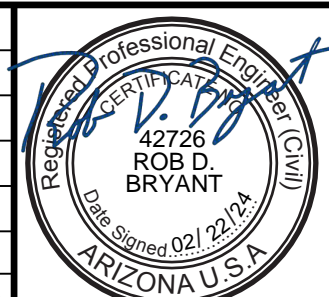
RECORD DRAWING CERTIFICATION
 I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS PROJECT HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND REFERENCED STANDARDS, EXCEPT AS SHOWN HEREON; THAT THESE RECORD DRAWINGS REFLECT THE POSITION OF CONSTRUCTED IMPROVEMENTS BASED ON FIELD MEASUREMENTS; AND THAT THE MATERIALS USED IN CONSTRUCTION ARE AS SHOWN BASED ON FIELD OBSERVATION AND TEST RESULTS.

REGISTERED PROFESSIONAL ENGINEER (CIVIL) DATE

THIS CERTIFICATION DOES NOT WARRANT MATERIALS, WORKMANSHIP, METHODS OF CONSTRUCTION, OR OTHER ITEMS AFFECTING THE WARRANTY OF THIS PROJECT, TO THE CITY OF PRESCOTT. USERS OF THIS INFORMATION ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ACTUAL CONDITIONS.



VERIFY SCALE	NO	DATE	REVISION	BY	APVD
BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"					
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY					



DESIGN
R. BRYANT
DRAWN
D. LEWCHANIN / M. PRICE
CHECKED
R. BRYANT
APPROVED
R. BRYANT



WATERWORKS ENGINEERS



YAVAPAI HILLS LIFT STATION

GENERAL
COVER SHEET

DATE
FEBRUARY 2024
PROJECT NO. 21-064
DRAWING NO. G-001
SHEET NO. 1

GENERAL ABBREVIATIONS

@	AT	E	EAST	L	LEFT, ANGLE, LENGTH	RT	RIGHT
AB	ANCHOR BOLT, AGGREGATE BASE	EA	EACH	LAB	LABORATORY	RV	ROOF VENT
AC	ASPHALTIC CONCRETE, ASBESTOS CEMENT	EC	END CURVE	LATL	LATERAL	R/W	RIGHT-OF-WAY
ACI	AMERICAN CONCRETE INSTITUTE	ECC	ECCENTRIC	LB	POUNDS		
ACU	AIR CONDITIONING UNIT	EF	EACH FACE	LB/CU FT	POUNDS PER CUBIC FOOT		
ADD	ADDITIONAL	EG	EXISTING GRADE	LF	LINEAR FEET	S	I-BEAM, SOUTH, SLOPE
ADH AB	ADHESIVE ANCHOR BOLT	EL	ELEVATION	LG	LONG	S =	SLOPE EQUALS
ADJ	ADJACENT, ADJUSTABLE	ELC	ELECTRIC LOAD CENTER	LONG	LONGITUDINAL	SAT	SUSPENDED ACOUSTIC TILE
AE	ANALYZER ELEMENT	ELEC	ELECTRIC, ELECTRICAL	LP	LOW POINT	SCFH	STANDARD CUBIC FEET PER HOUR
AFF	ABOVE FINISH FLOOR	EM	EMISSION MEASUREMENT	LR	LONG RADIUS	SCFM	STANDARD CUBIC FEET PER MINUTE
AFG	ABOVE FINISH GRADE	EMR	EMERGENCY			SCFH	STANDARD CUBIC FEET PER HOUR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	ENGR	ENGINEER			SD	SCHEDULE
AIT	ANALYZER INDICATOR/TRANSMITTER	EP	EDGE OF PAVEMENT	MAX	MAXIMUM	SE	STORM DRAIN
AL, ALUM	ALUMINUM	EQL SP	EQUALLY SPACED	MCC	MOTOR CONTROL CENTER	SEC	SOUTHEAST
ALTN	ALTERNATE	EQPT	EQUIPMENT	MCJ	MASONRY CONTROL JOINT	SECT	SECONDARY SECTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	ESC	EROSION SEDIMENT CONTROL	MECH	MECHANICAL	SH	SHEET
APPROX	APPROXIMATE	ESA	ENVIRONMENTALLY SENSITIVE AREA	MFR	MANUFACTURER	SIM	SIMILAR
APVD	APPROVED	EVC	END OF VERTICAL CURVE	MGD	MILLION GALLONS PER DAY	SLP	SLOPE
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	EW	EACH WAY	MH	MANHOLE	SLP	SLOPE
ARCH, A	ARCHITECTURAL	EWEF	EACH WAY, EACH FACE	MIN	MINIMUM, MINUTE	SOLN	SOLUTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EXC	EXCAVATE	MISC	MISCELLANEOUS	SOW	SLIP ON WELD
AUTO	AUTOMATIC	EXP	EXPOSED, EXPANSION	NJ	MECHANICAL JOINT	SP	SPACE OR SPACES
AUX	AUXILIARY	EXP JT	EXPANSION JOINT	MPH	MILES PER HOUR	SPEC	SPECIFICATIONS
AVE	AVENUE	EXST	EXISTING	MSNRY	MASONRY	SPLY	SUPPLY
AWG	AMERICAN WIRE GAGE	FB	FLAT BAR	MSP	MILL STEEL PIPE, MANUAL OF STANDARD PRACTICE	SQ	SQUARE
AWWA	AMERICAN WATER WORKS ASSOCIATION	FBE	FUSION BOND EPOXY	MTL	MATERIAL	SQ FT	SQUARE FOOT
		FCO	FLOOR CLEAN OUT			SQ IN	SQUARE INCH
		FD	FLOOR DRAIN	N	NORTH	SS	SANITARY SEWER
B	BORING	FDA	FLOOR DRAIN W/ INTEGRAL TRAP	NC	NORMALLY CLOSED	SSMH	SANITARY SEWER MANHOLE
BC	BEGIN CURVE, BOTTOM OF CURVE	FDN	FOUNDATION	NE	NORTHEAST	STA	STATION
BLDG	BUILDING	FEXT	FIRE EXTINGUISHER	NC	NORMALLY CLOSED	STD	STANDARD
BLK	BLACK	FF	FINISH FLOOR	NE	NORTHEAST	STIF	STIFFENER
BLM	BUREAU OF LAND MANAGEMENT	FG	FINISH GRADE, FUEL GAS	NIC	NOT IN CONTACT	STL	STEEL
BM	BENCH MARK, BEAM	FHY	FIRE HYDRANT	NO	NUMBER, NUMBERING	STR	STRAIGHT
BOC	BACK OF CURB	FL	FLOOR, FLOW LINE	NPT	NATIONAL PIPE THREAD	STRL	STRUCTURAL
BOG	BACK OF GUTTER	FLG	FLANGE	NTS	NOT TO SCALE	SUBFL	SUBFLOOR
BOO	BOTTOM OF OPENING	FLH	FLAT HEAD	OC	ON CENTER	SUP	SUPPLY
BOT	BOTTOM	FLL	FLOW LINE	OD	OUTSIDE DIAMETER	SUSP	SUSPEND
BRG	BRG	FLL	FLOW LINE	OF	OUTSIDE FACE	SW	SOUTHWEST
BVC	BEGINNING OF VERTICAL CURVE	FM	FORCE MAIN	OG	ORIGINAL GROUND	SYMM	SYMMETRICAL
		FNSH	FINISH	OHE	OVERHEAD ELECTRIC		
		FOC	FACE OF CONCRETE	OMRF	ORDINARY MOMENT RESISTING	T	TANGENT, TELEPHONE LINE, TOP
C to C, CC	CENTER TO CENTER	FRP	FIBERGLASS REINFORCED PLASTIC	O TO	FRAME	T&B	TOP AND BOTTOM
C	CHANNEL (BEAM)	FS	FINISHED SURFACE	O	OUT TO OUT	T&G	TONGUE AND GROOVE
CATH	CATHODIC PROTECTION	FT	FOOT OR FEET	OPNG	OPENING	T, T	THICKNESS
CATV	CABLE TELEVISION	FWD	FORWARD	OPP	OPPOSITE	TBG	TUBING
CB	CATCH BASIN	'F	DEGREE FAHRENHEIT	OVF	OVERFLOW	TCE	TEMPORARY CONST EASEMENT
CCS	CENTRAL CONTROL SYSTEM			OZ	OUNCE	TDH	TOTAL DYNAMIC HEAD
CE	CONDENSATE	GAL	GALLON			TECH	TECHNICAL
CF	CUBIC FEET	GALV	GALVANIZED	PENT	PENETRATION	TEL	TELEPHONE
CFM	CUBIC FEET PER MINUTE	GB	GRADE BREAK	PI	POINT OF INTERSECTION	TEMP	TEMPORARY, TEMPERATURE
CFS	CUBIC FEET PER SECOND	GCO	GRADE CLEAN OUT	PJF	PREMOLDED JOINT FILLER	TF	TOP FACE
CHE	CHEMICAL TUBING	GD	GENERAL DRAINAGE	PL	PLATE, PROPERTY LINE	THD	THREAD
CHEM	CHEMICAL	GL	GLASS	PLYWD	PLYWOOD	THK	THICK
CJ	CONSTRUCTION JOINT, CONTRACTION JOINT	GPD	GALLONS PER DAY	POB	POINT OF BEGINNING	TNK	TANK
CL	CENTERLINE	GPH	GALLONS PER HOUR	POC	POINT OF CONNECTION	TOC	TOP OF CURB, TOP OF CONCRETE
CLG	CEILING	GPM	GALLONS PER MINUTE	POE	POINT OF ENDING, PLAIN ONE END	TOW	TOP OF WALL
CLR	CLEAR, CLEARANCE	GRTG	GRATING	PP, P&P	PLAN AND PROFILE, POWER POLE	TOF	TOP OF FOOTING
CLSM	CONTROLLED LOW STRENGTH MATERIAL	GVL	GRAVEL	PPM	PARTS PER MILLION	TP	TURNING POINT, TEST PIT
CMU	CONCRETE MASONRY UNIT	GW	GROUND WATER	PRC	POINT OF REVERSE CURVE	TRANS	TRANSITION
CO	CLEANOUT			PRCST	PRECAST	TRANSV	TRANSVERSE
COL	COLUMN	HD	HUB DRAIN	PREFAB	PREFABRICATED	TST	TOP OF STEEL
COM	COMMUNICATION	HDR	HEADER	PRESS	PRESSURE	TT	THRUST TIE
COMB	COMBINED	HDW	HARDWARE	PRI	PRIMARY	TWS	TRACER WIRE STATION
CONC	CONCRETE	HGL	HYDRAULIC GRADE LINE	PROP	PROPERTY	TYP	TYPICAL
CONN	CONNECTION	HGT	HEIGHT	PS	PUMP STATION	UBC	UNIFORM BUILDING CODE
CONT	CONTINUOUS, CONTINUATION	HM	HOLLOW METAL	PSF	POUNDS PER SQUARE FOOT	UD	UNDERDRAIN
COORD	COORDINATE	HORIZ	HORIZONTAL	PSI	POUNDS PER SQUARE INCH	UG	UNDERGROUND
COP	COPPER	HP	HORSEPOWER	PSIG	POUNDS PER SQUARE INCH, GAUGE	UH	UNIT HEATER
CPLG	COUPLING	HPT	HIGH POINT	PT	POINT OF TANGENCY	UNK	UNKNOWN
CPVC	CPVC	HR	HANDRAIL	P.U.E.	PUBLIC UTILITY EASEMENT	UNO	UNLESS NOTED OTHERWISE
CTRD, CTD	CENTERED	HSS	HOLLOW STRUCTURE STEEL	PVC	POINT OF VERTICAL CURVE		
CTR	CENTER	HWL	HIGH WATER LEVEL	PVCGS	POLYVINYL CHLORIDE PLASTIC-GRAVITY SEWER TYPE	V	VOLT
CU	COPPER	HYD	HYDRANT	PVCW	POLYVINYL CHLORIDE PLASTIC-WATER DISTRIBUTION SERVICE TYPE	VC	VERTICAL CURVE
CU FT	CUBIC FOOT	I & C	INSTRUMENTATION & CONTROL	PVI	POINT OF VERTICAL INTERSECTION	VERT	VERTICAL
CU IN	CUBIC INCH	ID	INSIDE DIAMETER	PVT	POINT OF VERTICAL TANGENCY, PRIVATE	VPI	VERTICAL POINT OF INTERSECTION
CU YD	CUBIC YARD	IF	INSIDE FACE			VPS	VENEER PLASTER SYSTEM
CULV	CULVERT	ID	INSIDE DIAMETER	R, RAD	RADIUS	VTR	VENT THRU ROOF
'C	CELSIUS	IN	INCH	RC	REINFORCED CONCRETE	W/	WITH
		INSTM	INSTRUMENTATION	RD	ROAD, ROOF DRAIN	W	WIDE FLANGE (BEAM), WEST, WATER
d	PENNY	INSUL	INSULATE, INSULATION	REF	REFER, REFERENCE	WC	WATER CLOSET
DBA	DEFORMED BAR ANCHOR	INV	INVERT	REINF	REINFORCED, REINFORCING, REINFORCE	WD	WOOD
DBL	DOUBLE	IR	IRON ROD	REQD	REQUIRED	WH	WATER HEATER
DET	DETAIL			RLS	RUBBER LINED STEEL	WM	WATER METER
DF	DOUGLAS FIR/LARCH	JT	JOINT	RM	ROOM	WR	WATER RESISTANT
DI	DROP INLET	KIP	THOUSAND POUNDS	RO	ROUGH OPENING	WS	WATER SURFACE, WATER STOP
DIA	DIAMETER	KW	KILOWATT	RP	RADIUS POINT	W SH ST	WEATHERING SHEET STEEL
DIAG	DIAGONAL			R/R	REMOVE AND REPLACE	WSE	WATER SURFACE ELEVATION
DIM	DIMENSION			RST	REINFORCING STEEL	WT	WATER TIGHT
DIR	DIRECTION					WTR	WATER
DIST	DISTANCE					WW	WASTEWATER
DN	DOWN					WWF	WELDED WIRE FABRIC
do	DITTO						
DPT	DIFFERENTIAL PRESSURE TRANSMITTER						
DR	DRAIN						
DWG	DRAWING						
						XFMR	TRANSFORMER
						Y	YARD

VERIFY SCALE					
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DESIGN	R. BRYANT
DRAWN	D. LEWCHANIN
CHECKED	R. BRYANT
APPROVED	R. BRYANT

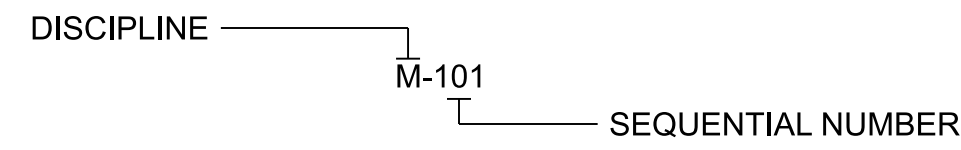


YAVAPAI HILLS
LIFT STATION

GENERAL	ABBREVIATIONS
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DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	G-002
SHEET NO.	2

DRAWING NUMBER



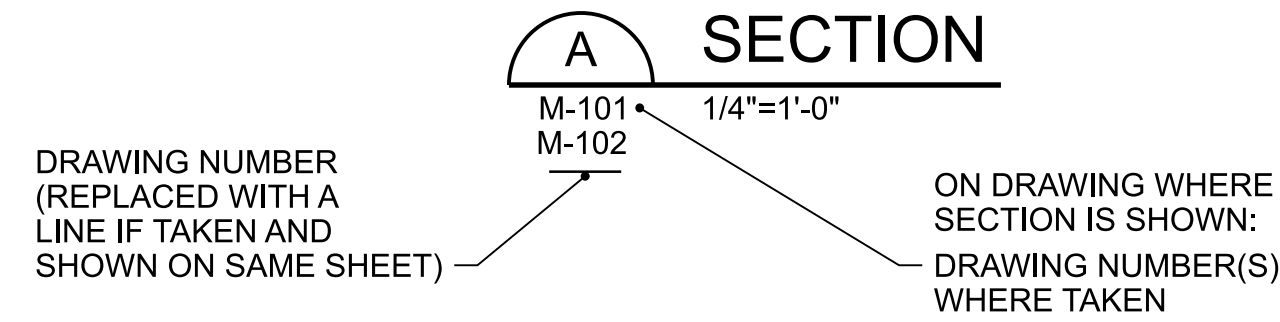
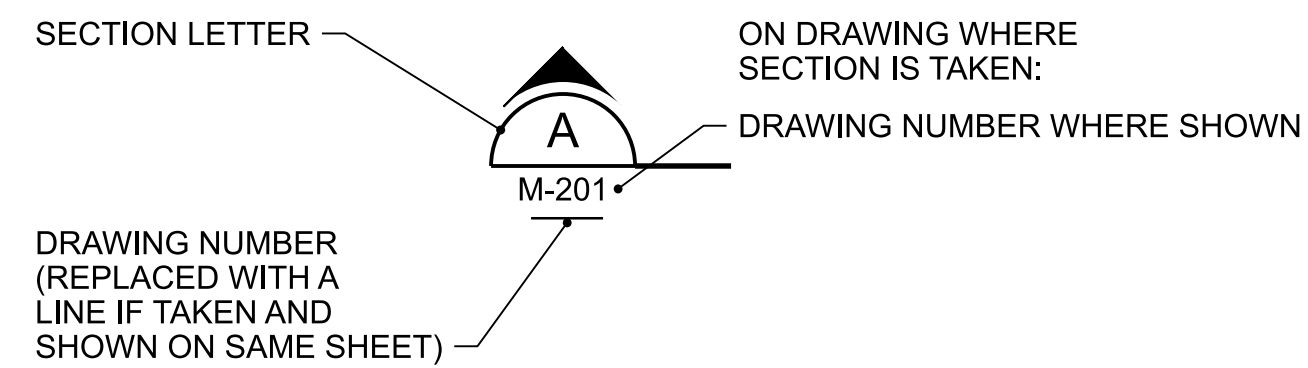
DISCIPLINE

LETTER	DISCIPLINE
G	GENERAL
D	DEMOLITION
C	CIVIL YARD
A	ARCHITECTURAL
S	STRUCTURAL
M	MECHANICAL
H	HEATING, VENTILATION AND COOLING
P	PLUMBING
E	ELECTRICAL
N	INSTRUMENTATION

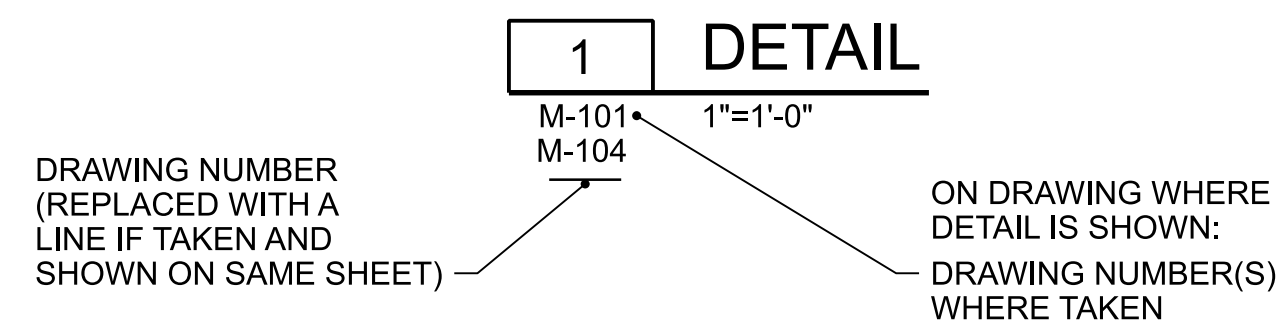
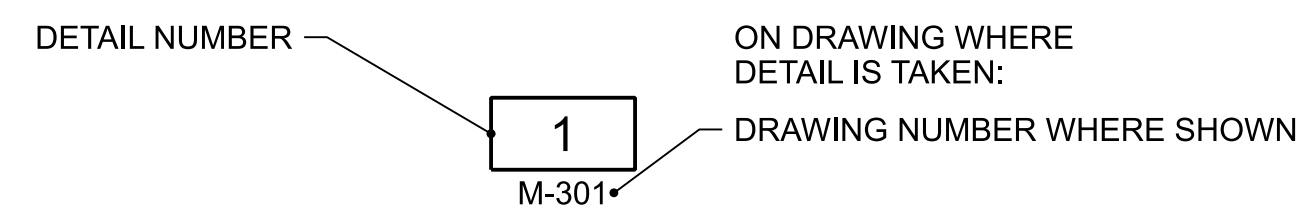
DRAWING SERIES

NUMBER SERIES	DRAWING TYPE
000	GENERAL
100	PLANS
200	SECTIONS
300	DETAILS
400	ELEVATIONS/ ISOMETRICS
500	SCHEMATICS
600	SCHEDULES
700	NOT USED
800	NOT USED
900	DEMOLITION

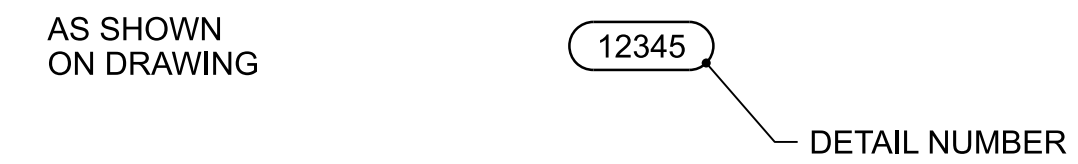
SECTION



DETAIL



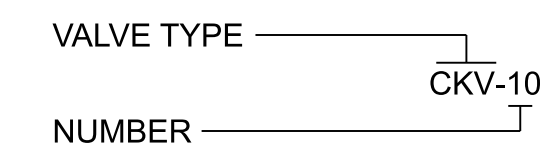
STANDARD DETAIL



NOTES:

- STANDARD DETAIL CALLOUTS ARE SHOWN TO INDICATE DETAIL REQUIRED AT SPECIFIC LOCATIONS. DETAILS ARE NOT CALLED OUT AT ALL LOCATIONS. WHERE A STANDARD DETAIL CALLOUT IS NOT SHOWN, THE CONTRACTOR SHALL USE THE STANDARD DETAIL MOST APPLICABLE AND CONSISTENT WITH OTHER WORK UNDER THIS CONTRACT.

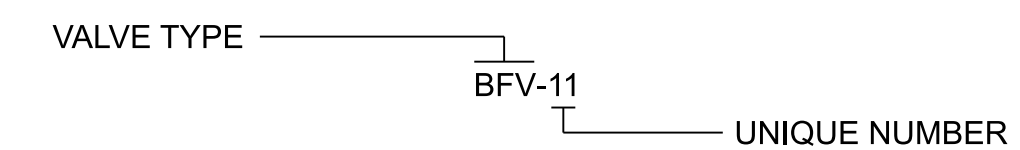
STANDARD VALVE AND OPERATOR



NOTES:

- SEE SPECIFICATION SECTION 15200.

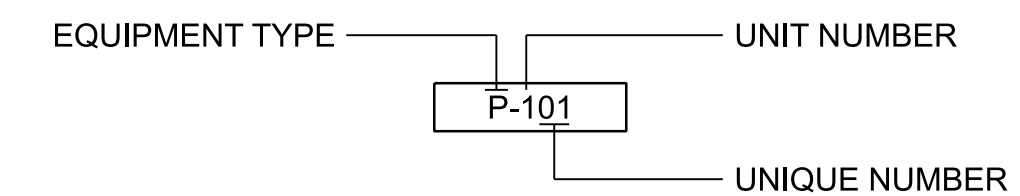
UNIQUE VALVE AND OPERATOR



NOTES:

- SEE SPECIFICATION SECTION 15200 FOR VALVE SCHEDULE.

EQUIPMENT DESIGNATION



LINE TYPE APPEARANCE

	BLACK	NEW 'ON' DISCIPLINE
	LIGHT OR MEDIUM GRAY OR SCREENED	EXISTING 'ON' OR 'OFF' DISCIPLINE
	DARK GRAY	NEW 'OFF' DISCIPLINE

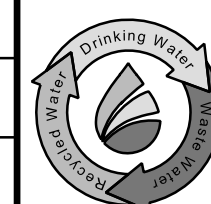
GENERAL SYMBOLOGY

	STRUCTURE OR EQUIPMENT TO BE REMOVED OR DEMOLISHED
	EQUIPMENT TO BE SALVAGED

VERIFY SCALE	NO	DATE	REVISION	BY	APVD
BAR IS ONE INCH ON ORIGINAL DRAWING					
0 1"					
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DESIGN	A. PRADHAN
DRAWN	D. LEWCHANIN
CHECKED	R. BRYANT
APPROVED	R. BRYANT



WATERWORKS
ENGINEERS

SCOTTSDALE, AZ

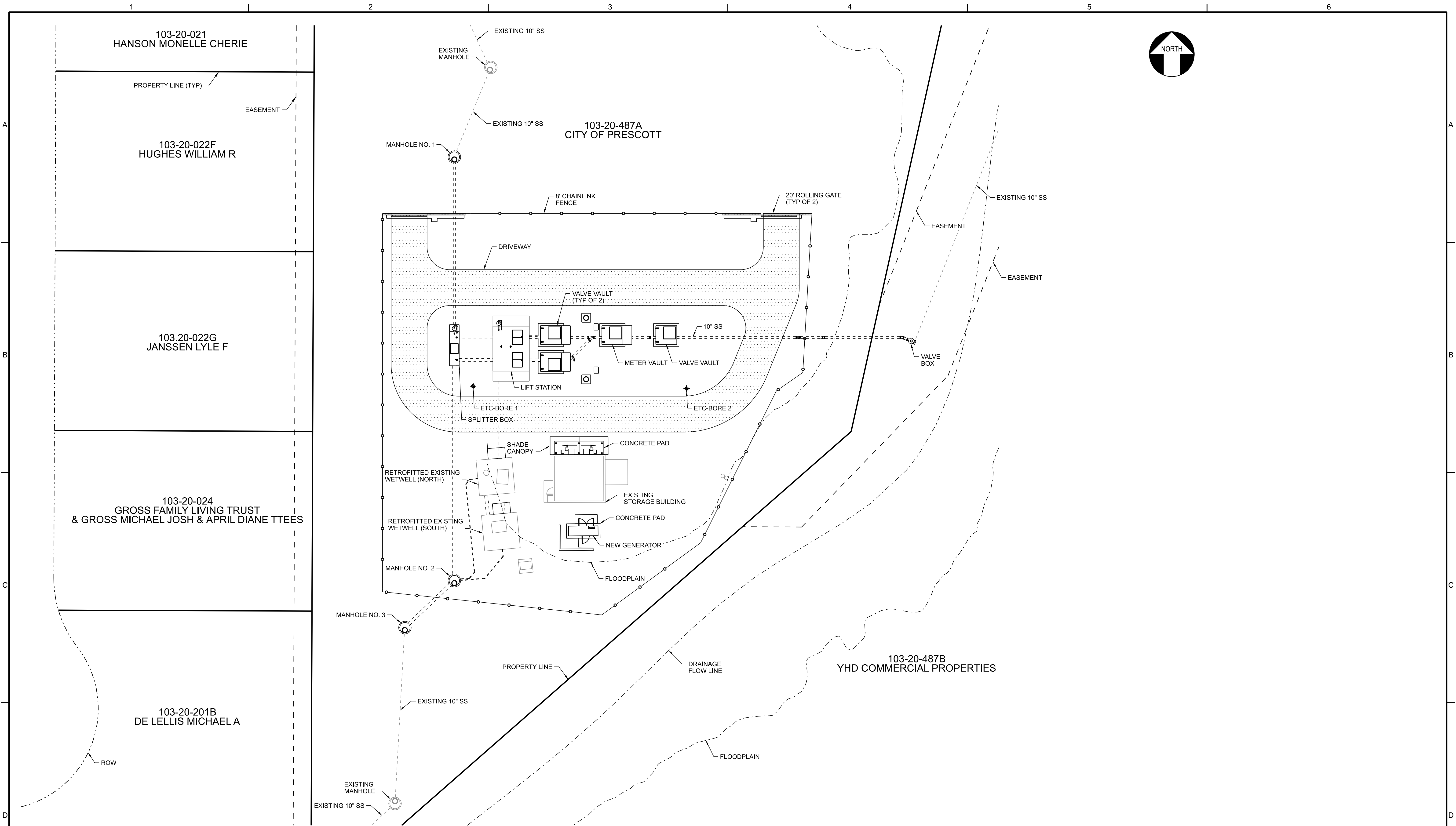


YAVAPAI HILLS
LIFT STATION

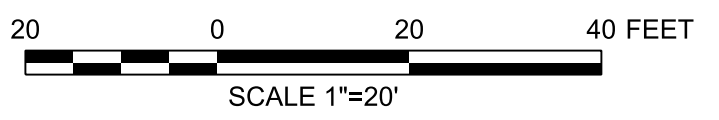
GENERAL

STANDARD DESIGNATIONS

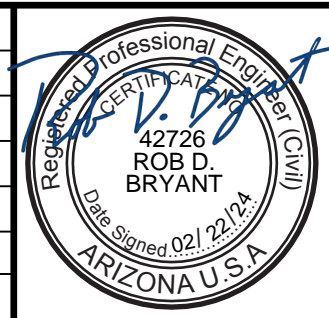
DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	G-003
SHEET NO.	3



PLAN
1" = 20'-0"



VERIFY SCALE				
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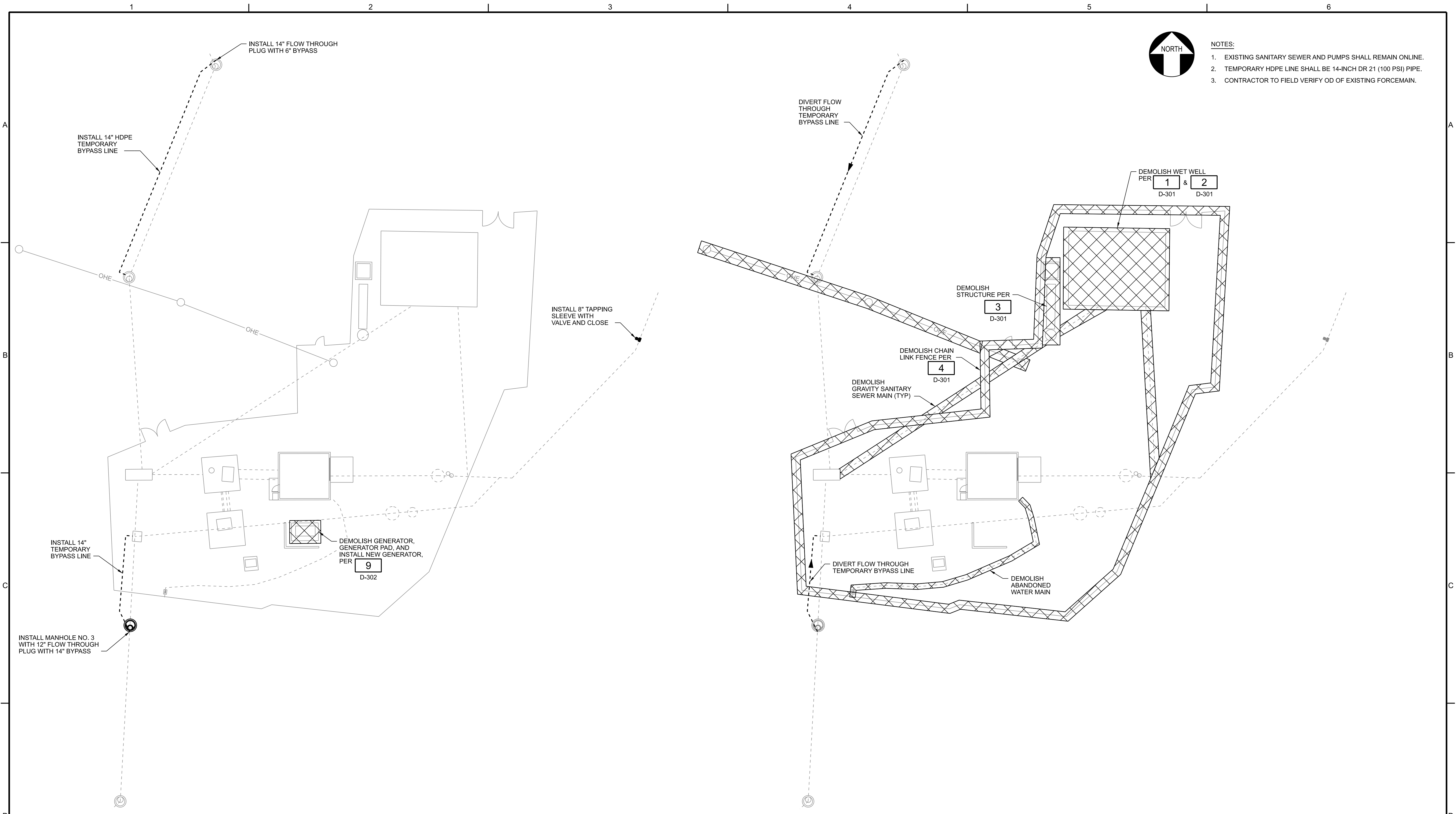
WATERWORKS ENGINEERS
SCOTTSDALE, AZ



YAVAPAI HILLS LIFT STATION

GENERAL
OVERALL SITE PLAN

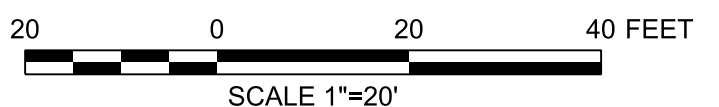
DATE	
PROJECT NO.	FEBRUARY 2024
DRAWING NO.	21-064
SHEET NO.	G-004
	4



- NOTES:**
- EXISTING SANITARY SEWER AND PUMPS SHALL REMAIN ONLINE.
 - TEMPORARY HDPE LINE SHALL BE 14-INCH DR 21 (100 PSI) PIPE.
 - CONTRACTOR TO FIELD VERIFY OD OF EXISTING FORCEMAIN.

PLAN - PHASE 1
1" = 20'-0"

PLAN - PHASE 2
1" = 20'-0"



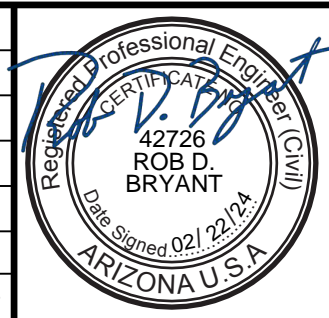
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO	DATE	REVISION	BY	APVD



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DRAWN
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APPROVED
R. BRYANT

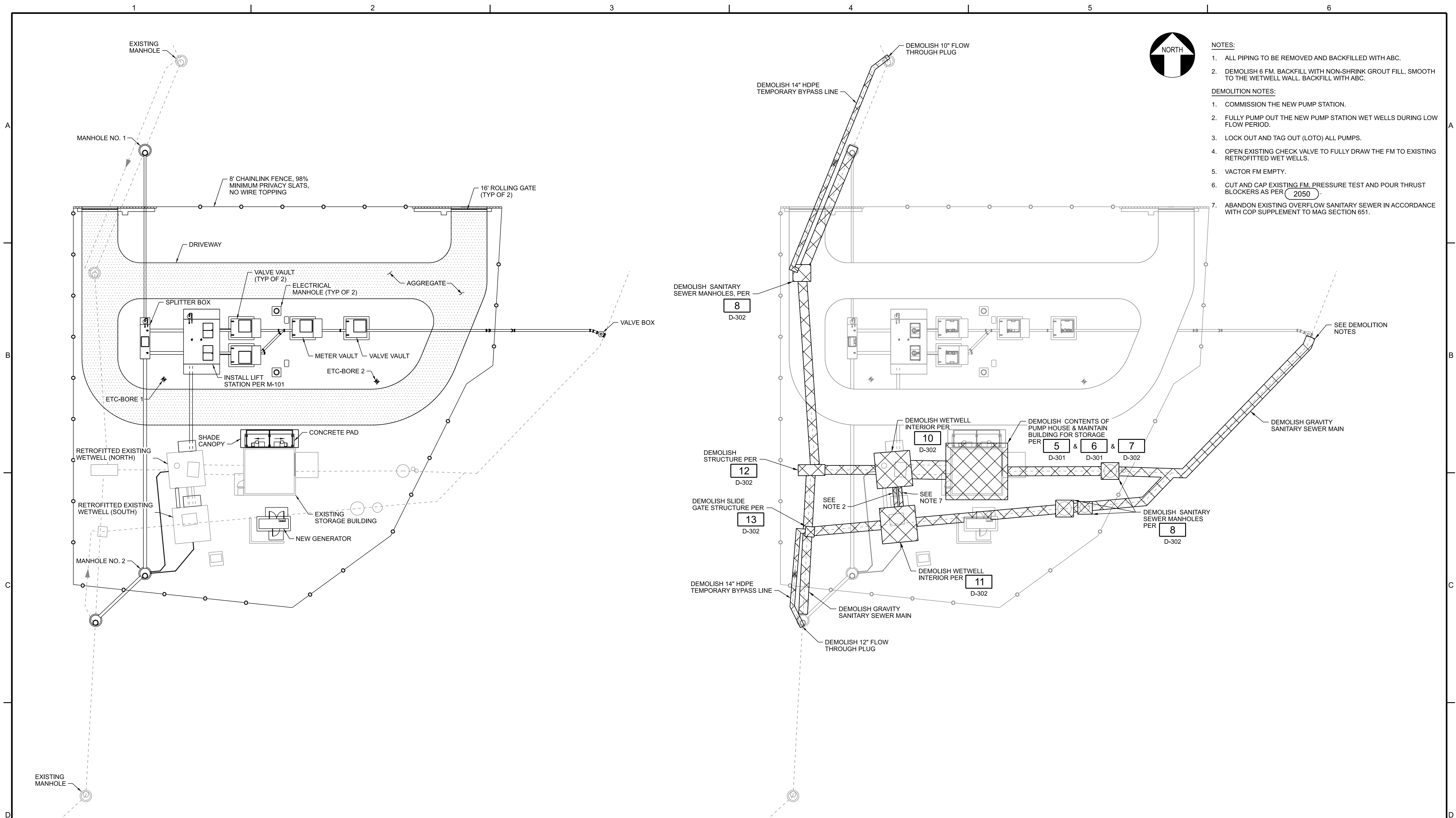


YAVAPAI HILLS LIFT STATION

GENERAL

TEMPORARY BYPASS LINE PHASING PLAN - PHASE 1 & 2

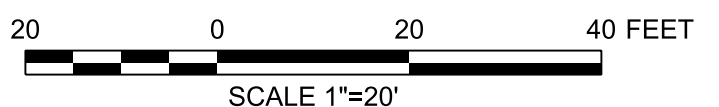
DATE
FEBRUARY 2024
PROJECT NO. 21-064
DRAWING NO. G-005
SHEET NO. 5



- NOTES:**
- ALL PIPING TO BE REMOVED AND BACKFILLED WITH ABC.
 - DEMOLISH 6 FM. BACKFILL WITH NON-SHRINK GROUT FILL, SMOOTH TO THE WETWELL WALL. BACKFILL WITH ABC.
- DEMOLITION NOTES:**
- COMMISSION THE NEW PUMP STATION.
 - FULLY PUMP OUT THE NEW PUMP STATION WET WELLS DURING LOW FLOW PERIOD.
 - LOCK OUT AND TAG OUT (LOTO) ALL PUMPS.
 - OPEN EXISTING CHECK VALVE TO FULLY DRAW THE FM TO EXISTING RETROFITTED WET WELLS.
 - VACTOR FM EMPTY.
 - CUT AND CAP EXISTING FM. PRESSURE TEST AND POUR THRUST BLOCKERS AS PER 2050.
 - ABANDON EXISTING OVERFLOW SANITARY SEWER IN ACCORDANCE WITH COP SUPPLEMENT TO MAG SECTION 651.

PLAN - PHASE 3
1" = 20'-0"

PLAN - PHASE 4
1" = 20'-0"



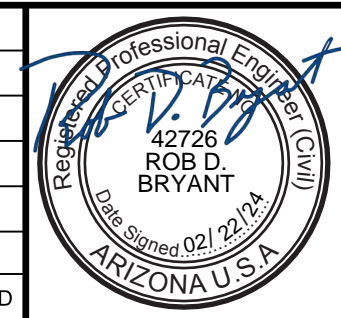
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO	DATE	REVISION	BY	APVD



DESIGN
R. BRYANT

DRAWN
D. LEWCHANIN

CHECKED
R. BRYANT

APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

GENERAL

TEMPORARY BYPASS LINE
PHASING PLAN - PHASE 3 & 4

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
G-006

SHEET NO.
6



1 **DETAIL**
D-101 NTS



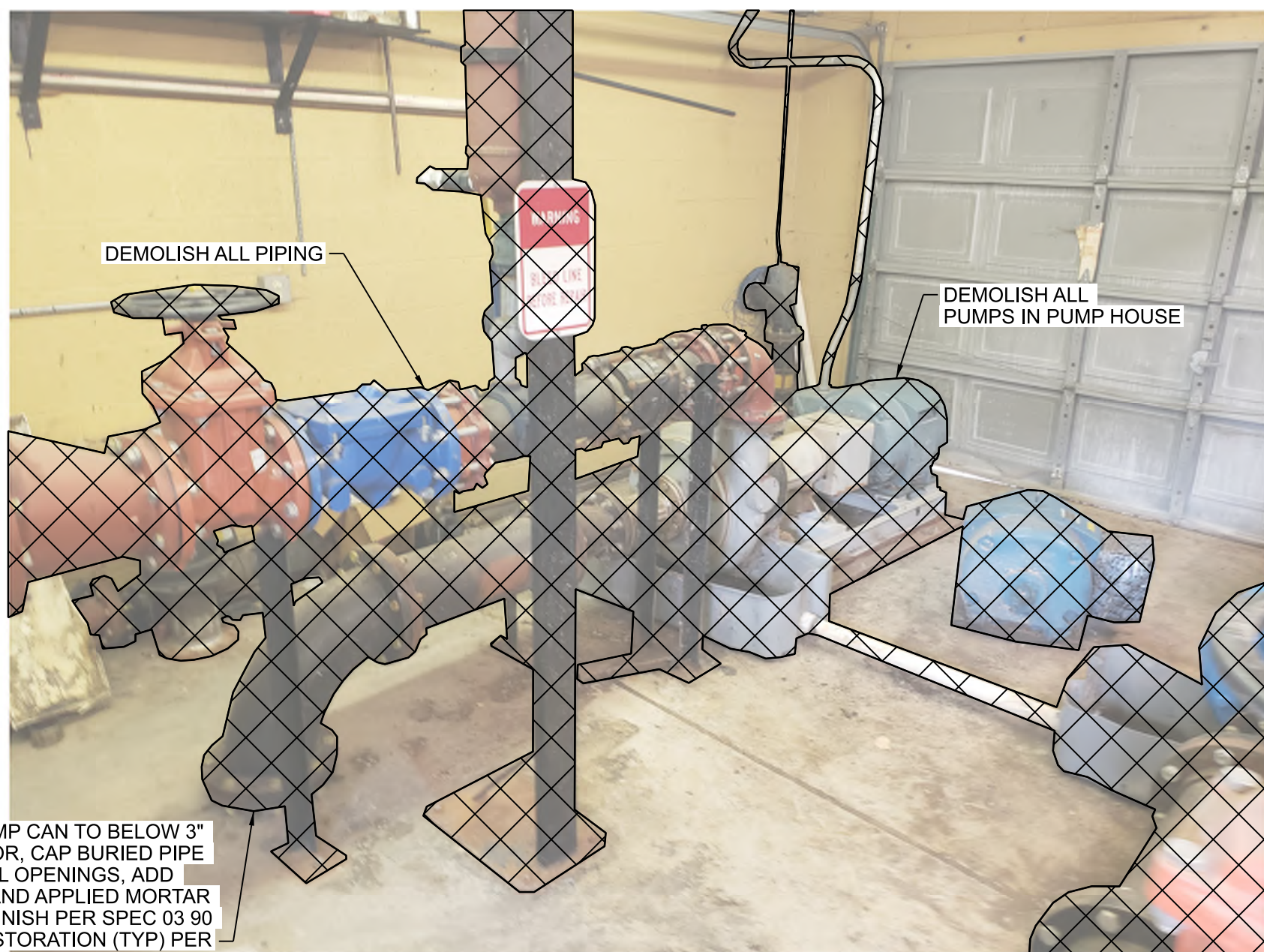
2 **DETAIL**
D-101 NTS



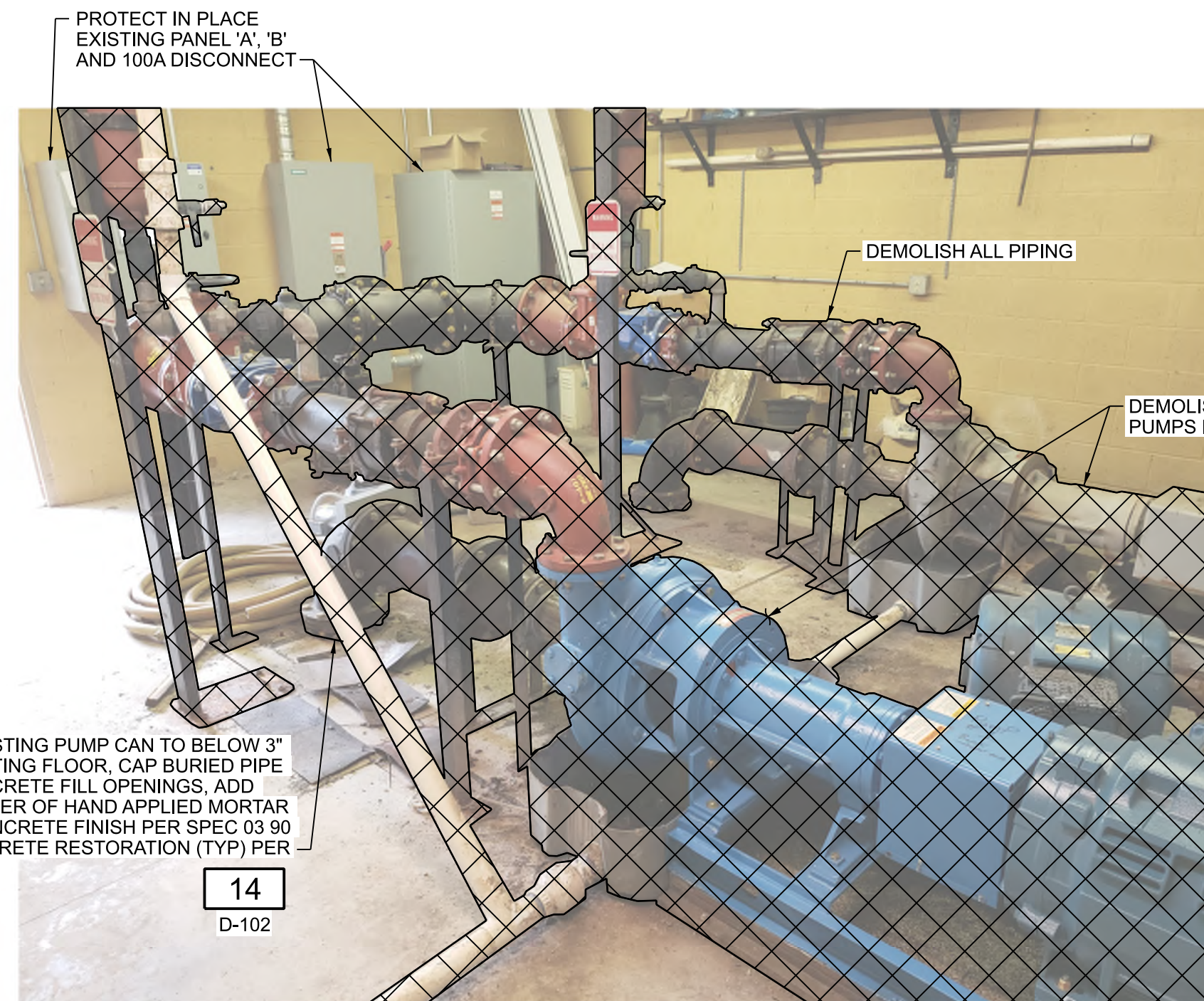
3 **DETAIL**
D-101 NTS



4 **DETAIL**
D-101 NTS

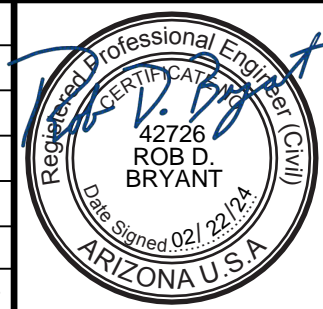


14 **5** **DETAIL**
D-102 D-101 NTS



14 **6** **DETAIL**
D-102 D-101 NTS

VERIFY SCALE			
BAR IS ONE INCH ON ORIGINAL DRAWING			
0 1"			
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			
NO.	DATE	REVISION	BY
			APVD



DESIGN
R. BRYANT
DRAWN
D. LEWCHANIN
CHECKED
R. BRYANT
APPROVED
R. BRYANT



WATERWORKS
ENGINEERS



YAVAPAI HILLS
LIFT STATION

DEMOLITION
DETAILS 1

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	D-301
SHEET NO.	7

- KEY NOTES:**
- 1 FILL PIPE PENETRATION WITH NON-SHRINK GROUT FILL, SMOOTH TO WETWELL SURFACE.
 - 2 BACKFILL WITH ABC, PER QUAD CITY STANDARD DETAIL 200Q-1, SIM.



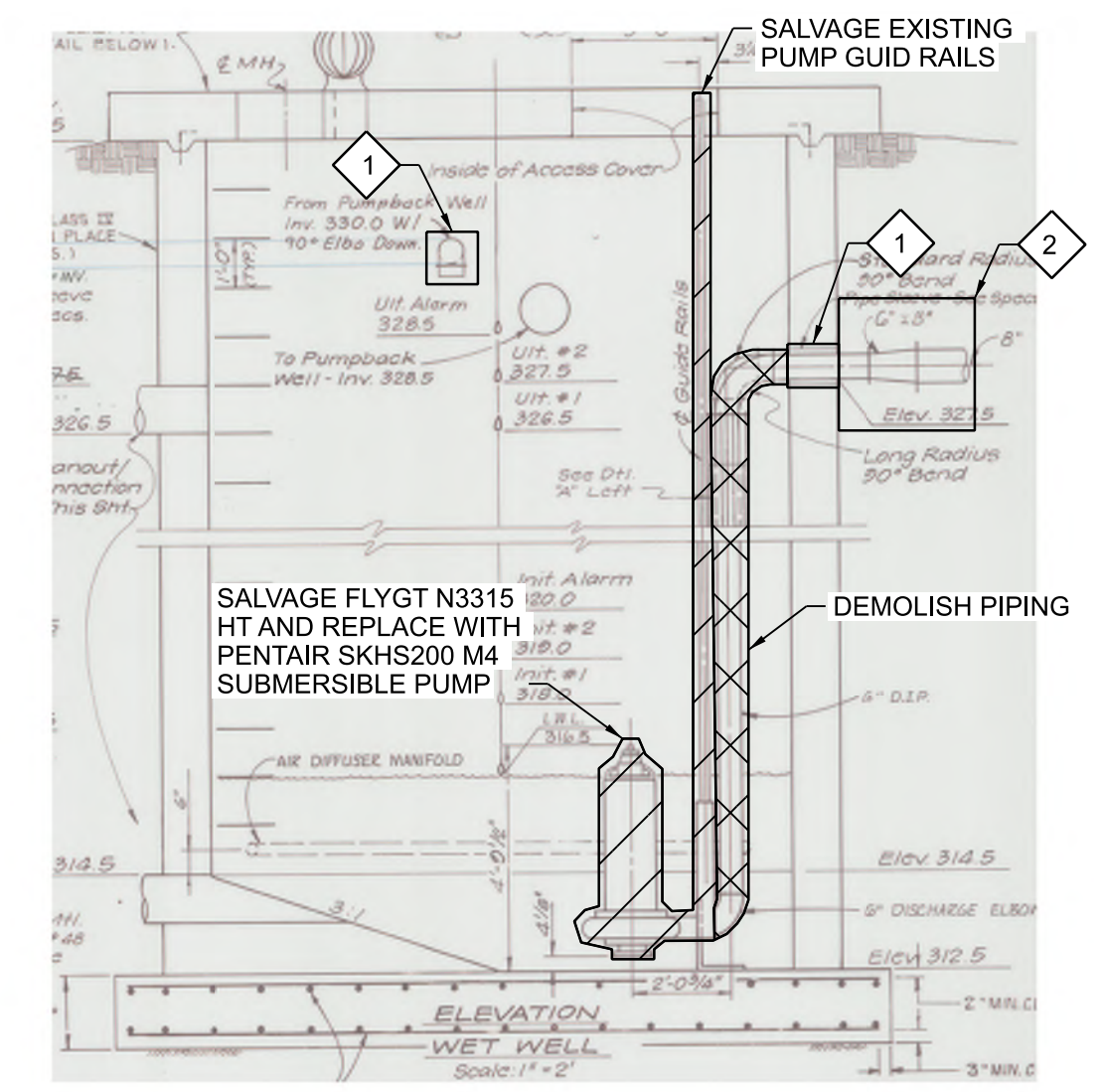
7 DETAIL
D-101 NTS



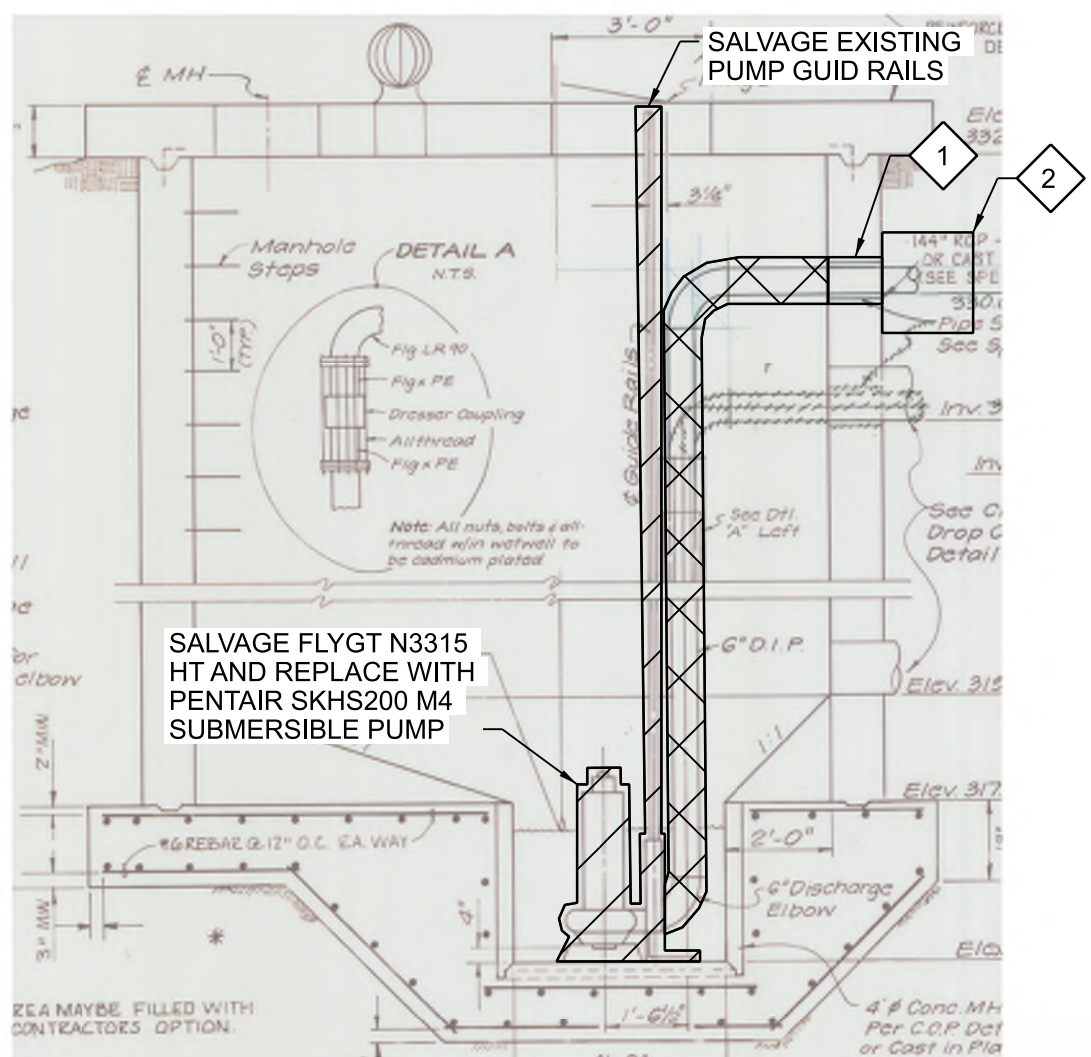
8 DETAIL
D-101 NTS



9 DETAIL
D-101 NTS



10 DETAIL
D-101 NTS



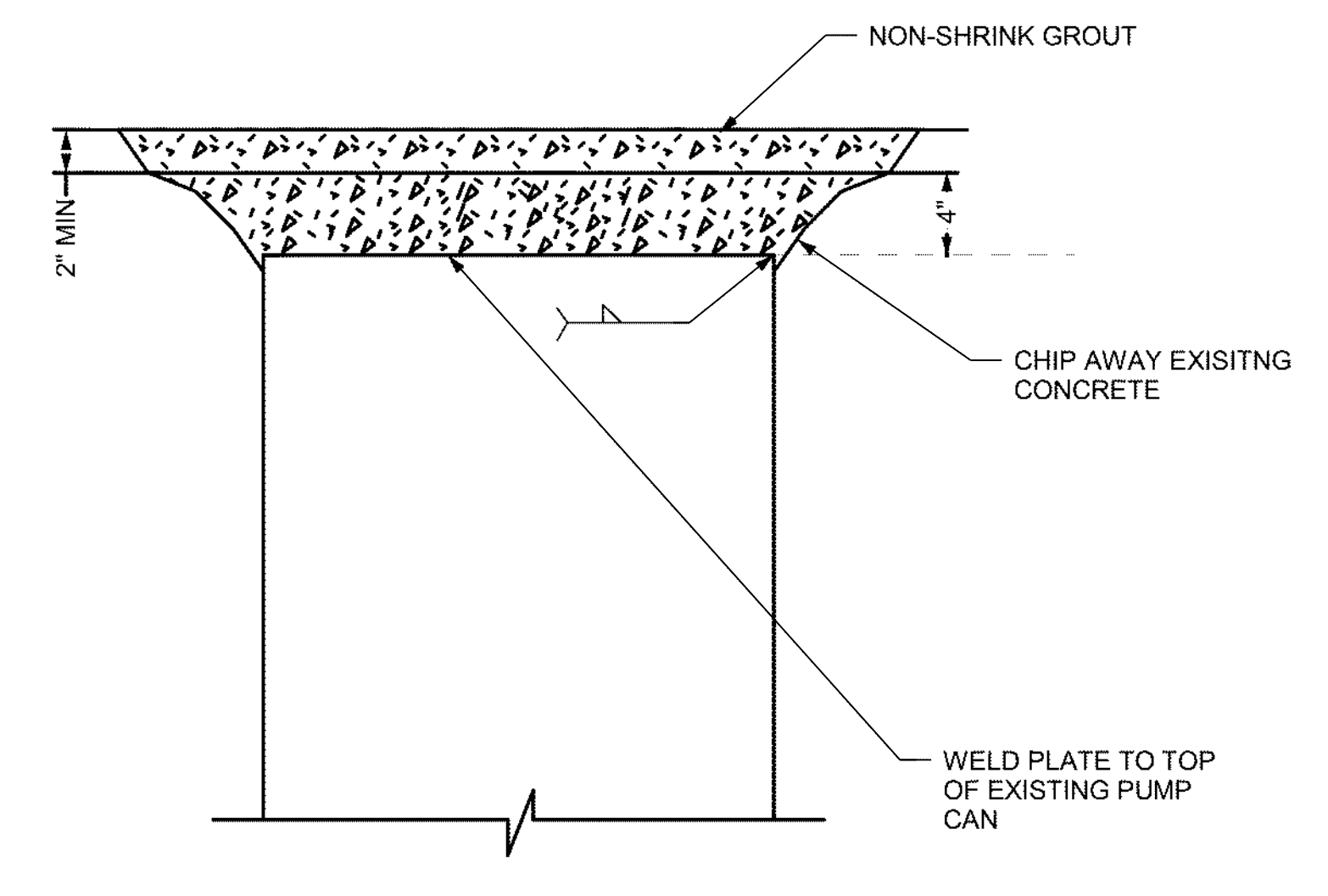
11 DETAIL
D-101 NTS



12 DETAIL
D-101 NTS



13 DETAIL
D-101 NTS



13 PUMP CAN DEMOLITION DETAIL
D-301 NTS

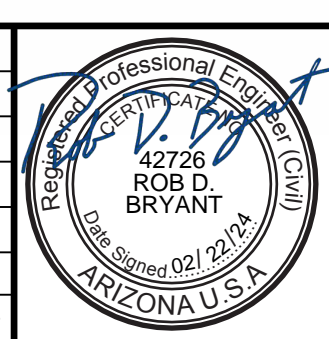
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO	DATE	REVISION	BY	APVD



DESIGN
R. BRYANT

DRAWN
D. LEWCHANIN

CHECKED
R. BRYANT

APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

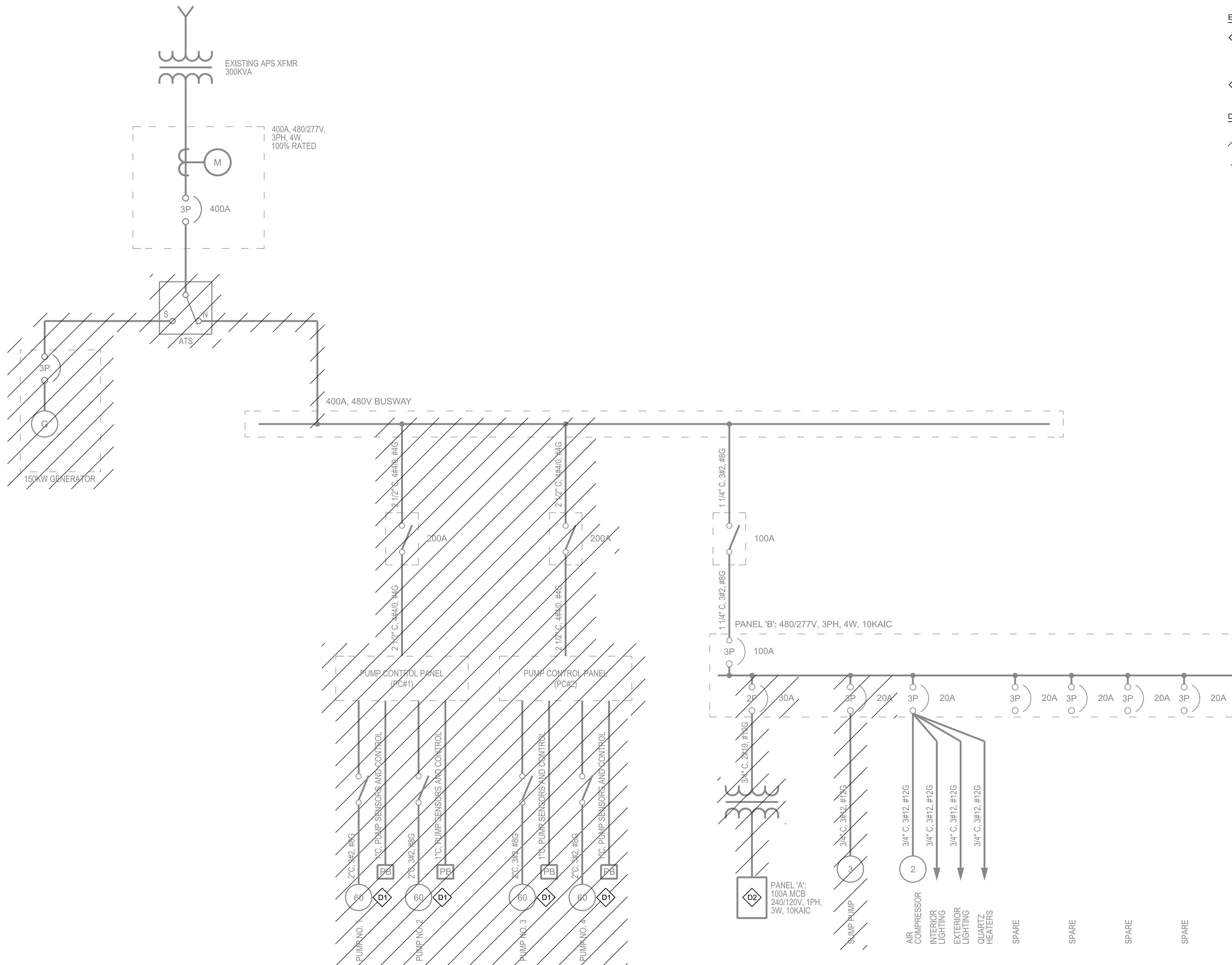
DEMOLITION
DETAILS 2

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
D-302

SHEET NO.
8



ELECTRICAL DEMOLITION KEY NOTES:

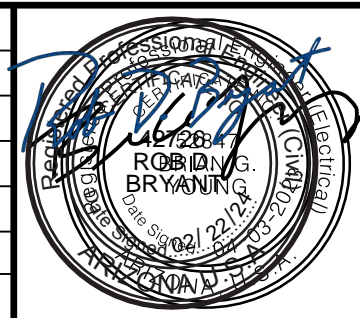
D1 CONTRACTOR SHALL FIELD IDENTIFY ALL PUMP SENSORS AND CONTROL DEVICES ASSOCIATED WITH THE EXISTING PUMPS. CONTRACTOR SHALL DEMOLISH THE EXISTING SENSORS, CONTROL DEVICES AND ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.

D2 PROTECT IN PLACE.

DEMOLITION LEGEND:

INDICATES DEVICES, EQUIPMENT, CONDUIT AND WIRE TO BE DEMOLISHED

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0" = 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	NO	DATE	REVISION	BY	APVD



DESIGN
T. ADAMS

DRAWN
D. LEWCHANIN

CHECKED
B. YOUNG

APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

DEMOLITION

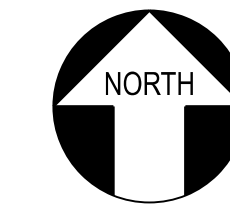
ELECTRICAL ONE LINE DIAGRAM

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
ED-001

SHEET NO.
9

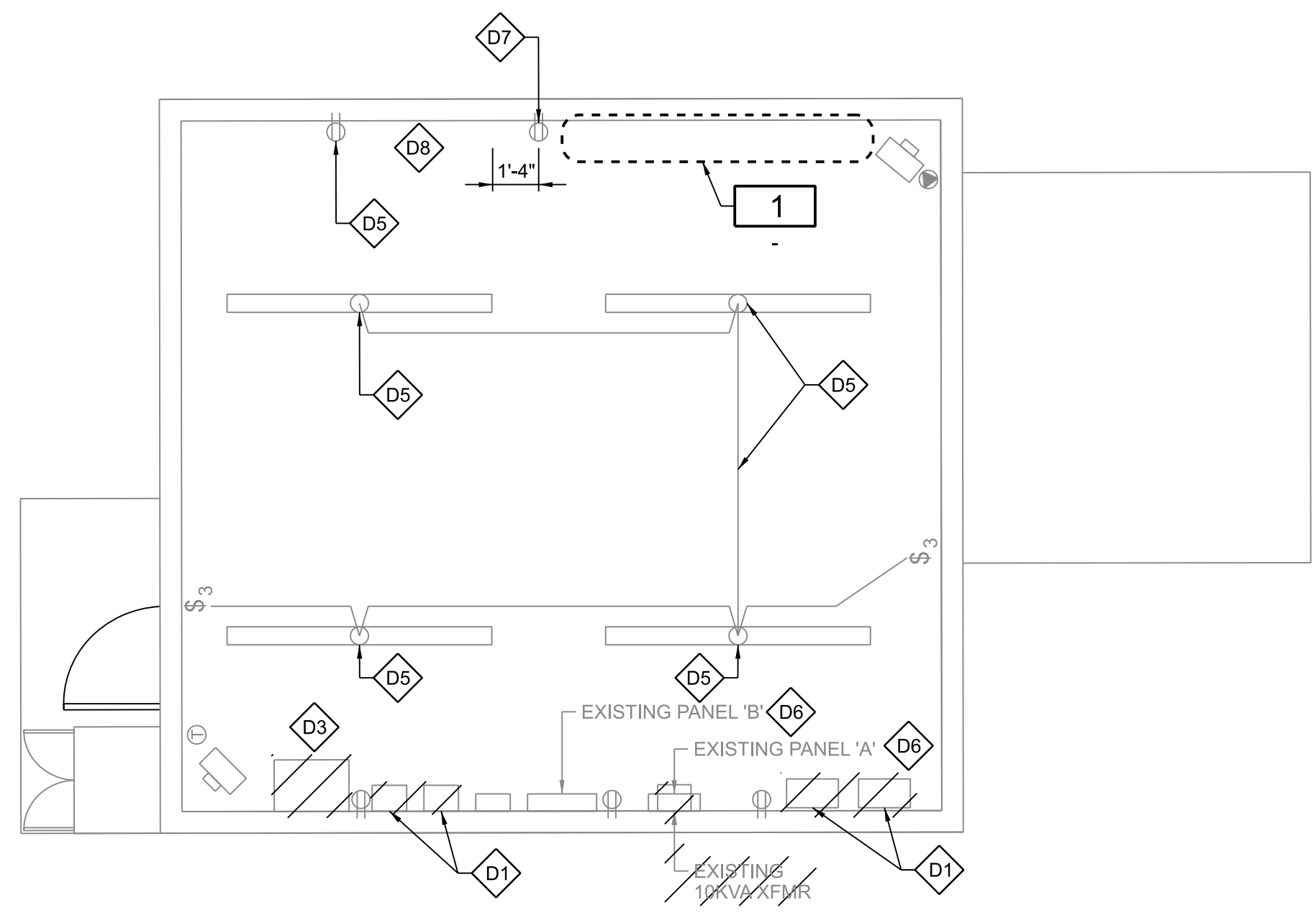
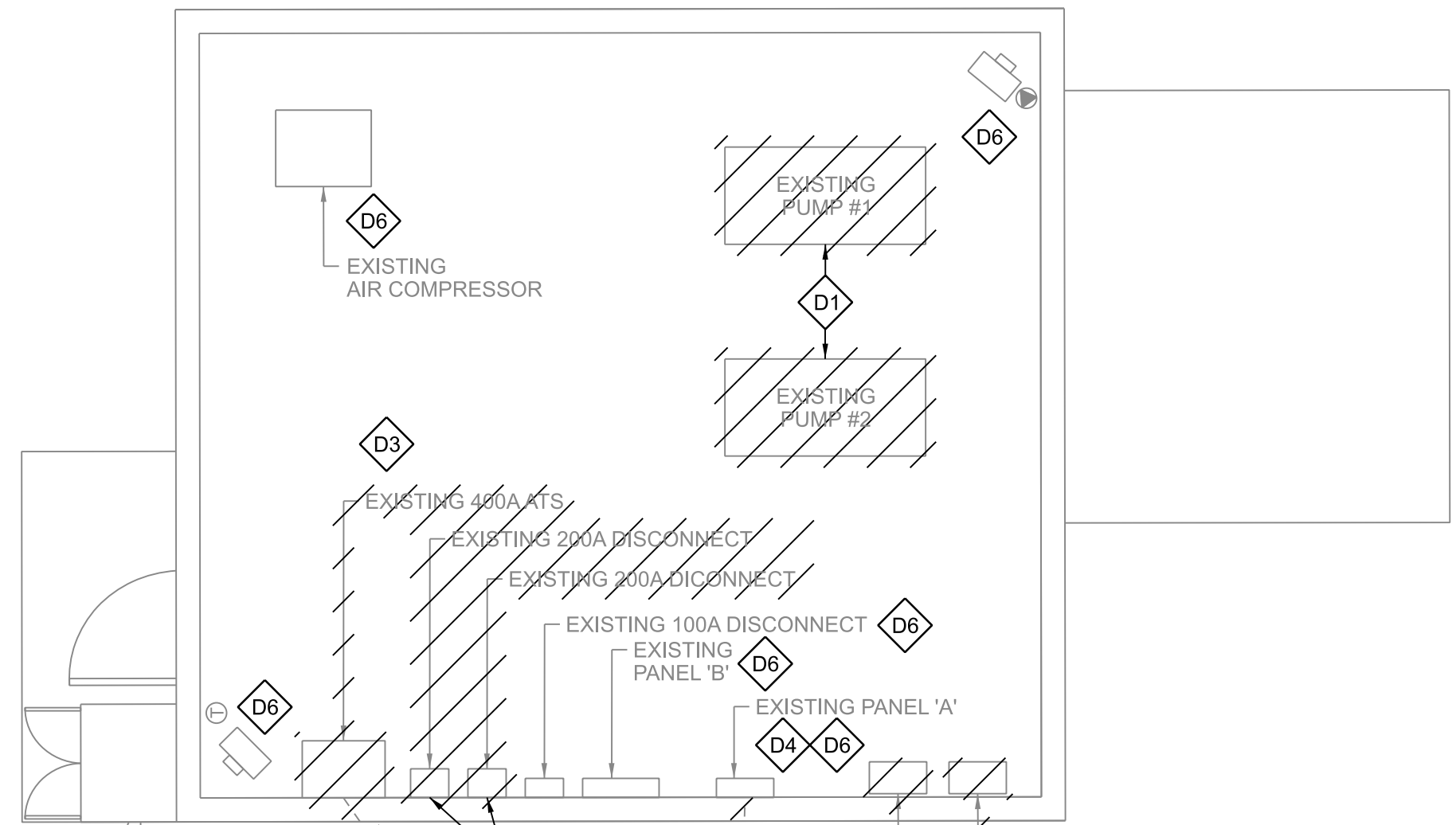
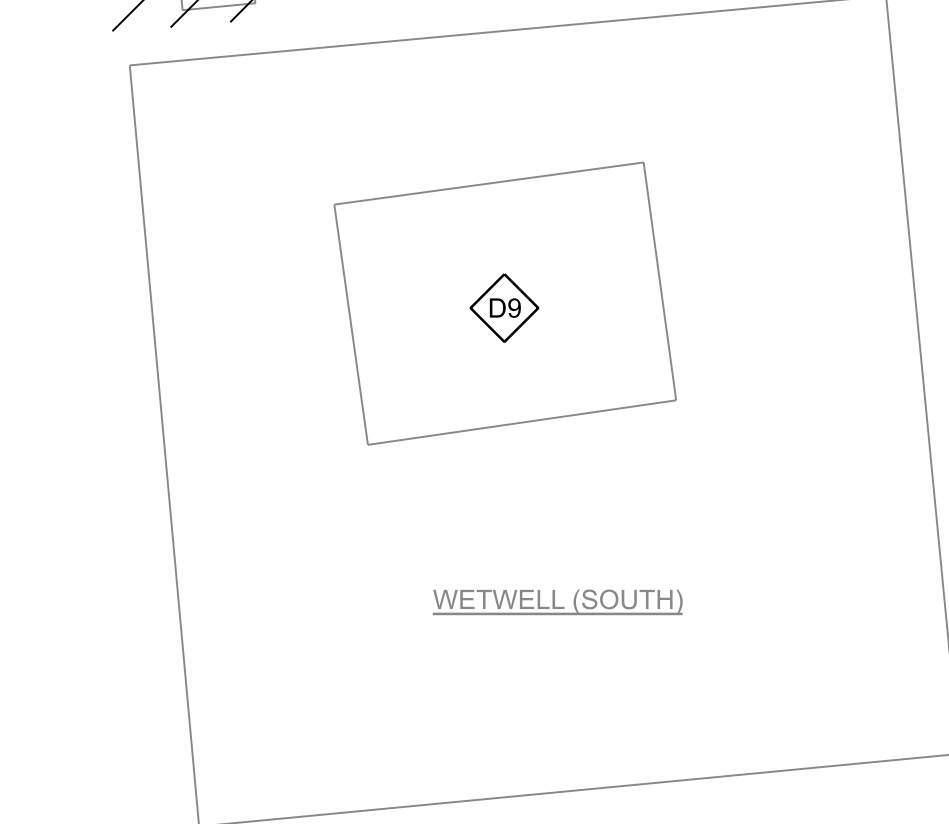
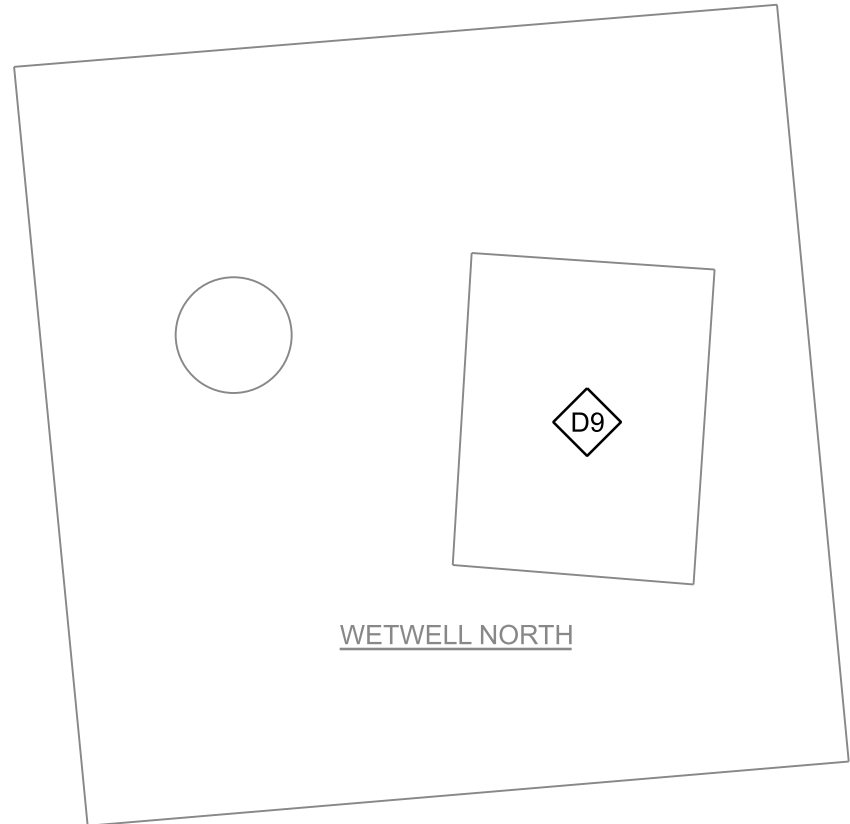


ELECTRICAL DEMOLITION KEY NOTES:

- D1** CONTRACTOR SHALL FIELD IDENTIFY ALL PUMP SENSORS AND CONTROL DEVICES ASSOCIATED WITH THE EXISTING PUMPS. CONTRACTOR SHALL DEMOLISH THE EXISTING SENSORS, CONTROL DEVICES AND ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.
- D2** SEE DEMOLITION REQUIREMENTS OF EXISTING GENERATOR AND PAD ON DRAWINGS D-101 AND D-302 PRIOR TO BEGINNING NEW CONSTRUCTION.
- D3** SEE DEMOLITION REQUIREMENTS OF EXISTING ATS ON DRAWINGS D-302 PRIOR TO BEGINNING NEW CONSTRUCTION. DEMOLISH EXISTING CONDUIT AND WIRE BETWEEN ATS AND EXISTING GENERATOR PRIOR TO NEW CONSTRUCTION.
- D4** DEMOLISH EXISTING CONDUIT AND WIRE BETWEEN EXISTING PANEL 'A', CKT# 1,3 AND EXISTING GENERATOR ACCESSORY PANEL PRIOR TO NEW CONSTRUCTION. PROTECT EXISTING 30A, 2-POLE BREAKER IN PLACE.
- D5** PROTECT IN PLACE EXISTING LIGHTS AND RECEPTACLES.
- D6** PROTECT IN PLACE EXISTING PANEL 'B' AND 'A'.
- D7** RELOCATE EXISTING RECEPTACLE 1'-4" WEST IN PREPARATION FOR NEW WORK. PROVIDE NEW WIRE AND CONDUIT TO MATCH EXISTING AS REQUIRED.
- D8** DEMOLISH EXISTING CONDUIT/PIPE STORAGE RACK LOCATED ON NORTH WALL IN PREPARATION FOR NEW WORK. FOR ADDITIONAL CLARIFICATION SEE **1**.
- D9** DEMOLISH EXISTING SUMP PUMP, PUMP CABLE, LEVEL SWITCHES, DISCONNECT AND ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.

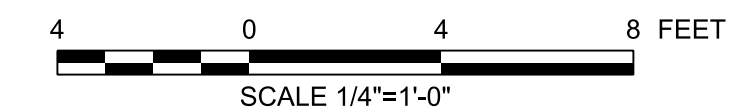
DEMOLITION LEGEND:

INDICATES DEVICES, EQUIPMENT, CONDUIT AND WIRE TO BE DEMOLISHED

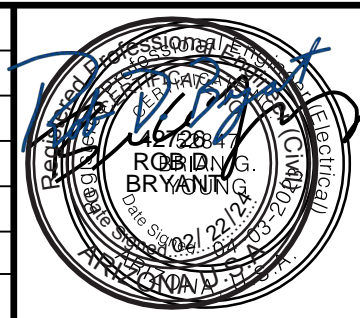


1 DETAIL
NTS

REFER TO SITE PLAN E-101 FOR CONTINUATION



VERIFY SCALE	NO	DATE	REVISION	BY	APVD
BAR IS ONE INCH ON ORIGINAL DRAWING					
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY					



DESIGN
T. ADAMS
DRAWN
D. LEWCHANIN
CHECKED
B. YOUNG
APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

ENLARGED STORAGE BUILDING PLANS

DATE
FEBRUARY 2024
PROJECT NO. 21-064
DRAWING NO. ED-002
SHEET NO. 10

CIVIL LEGEND

	SPOT ELEVATION
	CONTOUR LINE
	CUT SLOPE (HORIZ:VERT)
	EMBANKMENT - FILL SLOPE (HORIZ:VERT)
	DRAINAGEWAY OR DITCH
	DIRECTION OF FLOW
	CENTER LINE, BUILDING, ROAD
	PROPERTY LINE
	RIGHT OF WAY, EASEMENT OR SETBACK
	STAGING OR WORK AREA LIMITS
	STRUCTURE, BUILDING OR FACILITY LOCATION POINT COORDINATES
	STRUCTURE, BUILDING OR FACILITY
	RETAINING WALL
	CONCRETE CURB
	ARCHITECTURAL FENCE
	GUARD RAIL / BARRICADE
	CHAIN LINK FENCE WITH 3 STRAND BARBED WIRE TOPPING
	ARCHITECTURAL FENCE
	WIRE FENCE
	BARBED WIRE
	SINGLE SWING GATE
	DOUBLE SWING GATE
	SLIDING GATE
	CULVERT
	WALL
	BRUSH / TREE LINE
	TREE
	DEMOLITION
	AUTOMATIC AIR RELEASE VALVE
	MANUAL AIR RELEASE VALVE
	WATER SURFACE

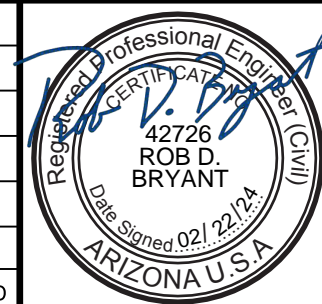
CIVIL PATTERN LEGEND

	BEDROCK
	ROCKS OR RIPRAP
	SAND
	AGGREGATE BASE
	NATURAL SOIL
	COMPACTED SOIL
	CONCRETE
	GROUT
	CONTROLLED LOW STRENGTH MATERIAL (CLSM)
	PAVEMENT
	GRATING

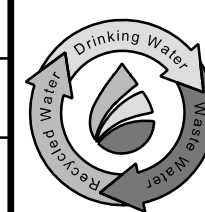
NOTES:

- EXISTING PIPING, EQUIPMENT AND TOPOGRAPHY ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING, EQUIPMENT, STRUCTURES AND FINISHED GRADE ARE SHOWN HEAVY-LINED.
- THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS MAY APPEAR ON THIS SHEET BUT MAY NOT BE USED ON THE PLANS.

NO	DATE	REVISION	BY	APVD



DESIGN	R. BRYANT
DRAWN	D. LEWCHANIN
CHECKED	R. BRYANT
APPROVED	R. BRYANT



WATERWORKS
ENGINEERS

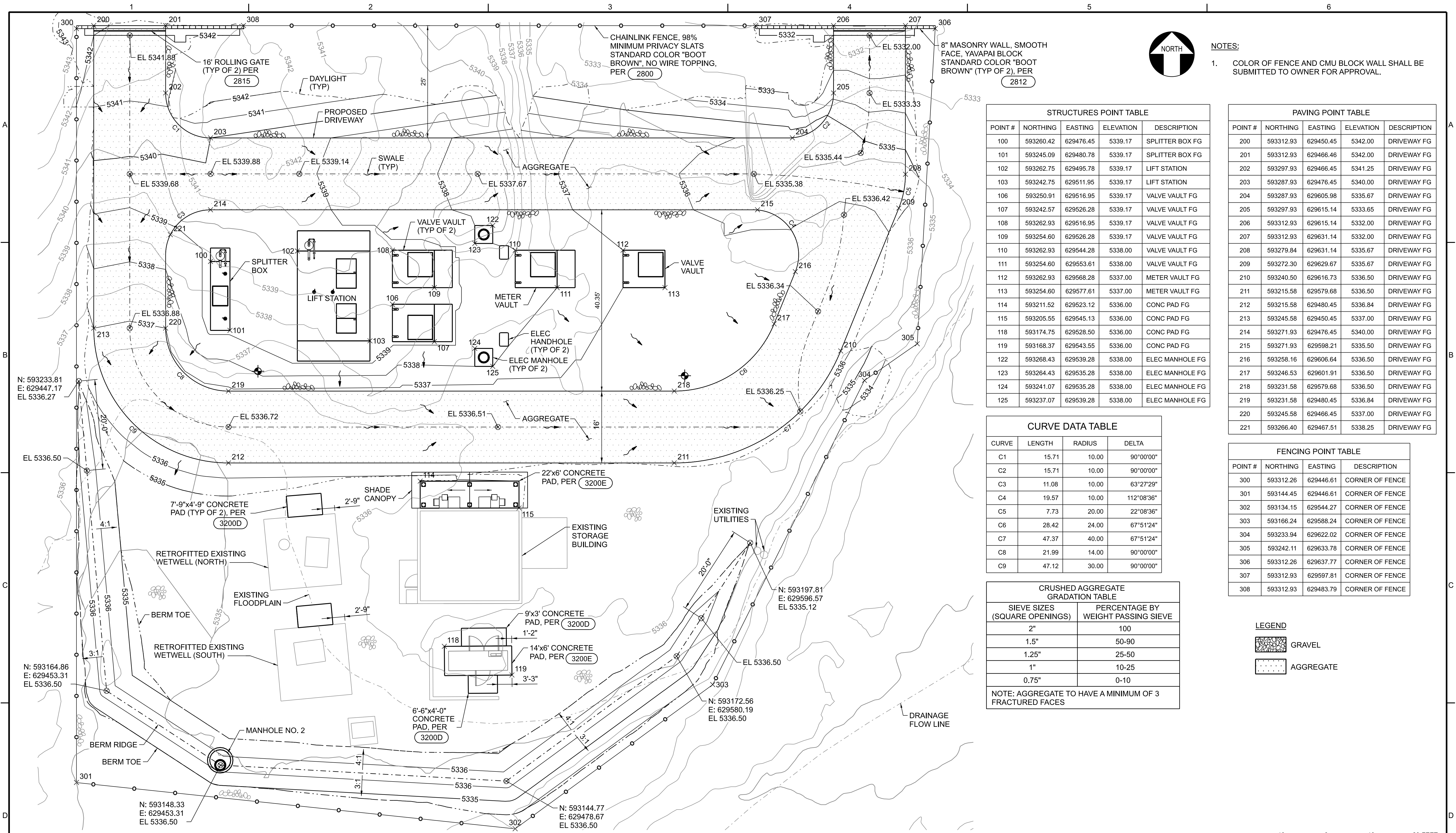
SCOTTSDALE, AZ



YAVAPAI HILLS
LIFT STATION

CIVIL
SYMBOLS & LEGEND

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	C-001
SHEET NO.	11



NOTES:
 1. COLOR OF FENCE AND CMU BLOCK WALL SHALL BE SUBMITTED TO OWNER FOR APPROVAL.

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	593260.42	629476.45	5339.17	SPLITTER BOX FG
101	593245.09	629480.78	5339.17	SPLITTER BOX FG
102	593262.75	629495.78	5339.17	LIFT STATION
103	593242.75	629511.95	5339.17	LIFT STATION
106	593250.91	629516.95	5339.17	VALVE VAULT FG
107	593242.57	629526.28	5339.17	VALVE VAULT FG
108	593262.93	629516.95	5339.17	VALVE VAULT FG
109	593254.60	629526.28	5339.17	VALVE VAULT FG
110	593262.93	629544.28	5338.00	VALVE VAULT FG
111	593254.60	629553.61	5338.00	VALVE VAULT FG
112	593262.93	629568.28	5337.00	METER VAULT FG
113	593254.60	629577.61	5337.00	METER VAULT FG
114	593211.52	629523.12	5336.00	CONC PAD FG
115	593205.55	629545.13	5336.00	CONC PAD FG
118	593174.75	629528.50	5336.00	CONC PAD FG
119	593168.37	629543.55	5336.00	CONC PAD FG
122	593268.43	629539.28	5338.00	ELEC MANHOLE FG
123	593264.43	629535.28	5338.00	ELEC MANHOLE FG
124	593241.07	629535.28	5338.00	ELEC MANHOLE FG
125	593237.07	629539.28	5338.00	ELEC MANHOLE FG

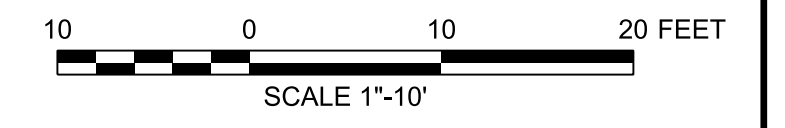
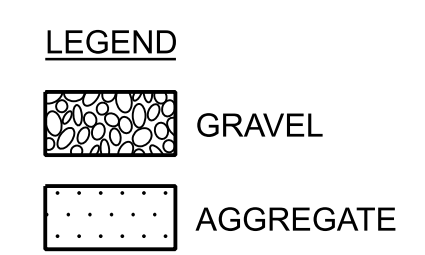
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	593312.93	629450.45	5342.00	DRIVEWAY FG
201	593312.93	629466.46	5342.00	DRIVEWAY FG
202	593297.93	629466.45	5341.25	DRIVEWAY FG
203	593287.93	629476.45	5340.00	DRIVEWAY FG
204	593287.93	629605.98	5335.67	DRIVEWAY FG
205	593297.93	629615.14	5333.65	DRIVEWAY FG
206	593312.93	629615.14	5332.00	DRIVEWAY FG
207	593312.93	629631.14	5332.00	DRIVEWAY FG
208	593278.84	629631.14	5335.67	DRIVEWAY FG
209	593272.30	629629.67	5335.67	DRIVEWAY FG
210	593240.50	629616.73	5336.50	DRIVEWAY FG
211	593215.58	629579.68	5336.50	DRIVEWAY FG
212	593215.58	629480.45	5336.84	DRIVEWAY FG
213	593245.58	629450.45	5337.00	DRIVEWAY FG
214	593271.93	629476.45	5340.00	DRIVEWAY FG
215	593271.93	629598.21	5335.50	DRIVEWAY FG
216	593258.16	629606.64	5336.50	DRIVEWAY FG
217	593246.53	629601.91	5336.50	DRIVEWAY FG
218	593231.58	629579.68	5336.50	DRIVEWAY FG
219	593231.58	629480.45	5336.84	DRIVEWAY FG
220	593245.58	629466.45	5337.00	DRIVEWAY FG
221	593266.40	629467.51	5338.25	DRIVEWAY FG

CURVE	LENGTH	RADIUS	DELTA
C1	15.71	10.00	90°00'00"
C2	15.71	10.00	90°00'00"
C3	11.08	10.00	63°27'29"
C4	19.57	10.00	112°08'36"
C5	7.73	20.00	22°08'36"
C6	28.42	24.00	67°51'24"
C7	47.37	40.00	67°51'24"
C8	21.99	14.00	90°00'00"
C9	47.12	30.00	90°00'00"

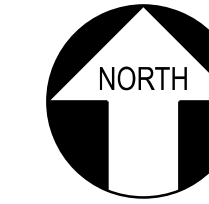
POINT #	NORTHING	EASTING	DESCRIPTION
300	593312.26	629446.61	CORNER OF FENCE
301	593144.45	629446.61	CORNER OF FENCE
302	593134.15	629544.27	CORNER OF FENCE
303	593166.24	629588.24	CORNER OF FENCE
304	593233.94	629622.02	CORNER OF FENCE
305	593242.11	629633.78	CORNER OF FENCE
306	593312.26	629637.77	CORNER OF FENCE
307	593312.93	629597.81	CORNER OF FENCE
308	593312.93	629483.79	CORNER OF FENCE

SIEVE SIZES (SQUARE OPENINGS)	PERCENTAGE BY WEIGHT PASSING SIEVE
2"	100
1.5"	50-90
1.25"	25-50
1"	10-25
0.75"	0-10

NOTE: AGGREGATE TO HAVE A MINIMUM OF 3 FRACTURED FACES



VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		DESIGN R. BRYANT			YAVAPAI HILLS LIFT STATION	CIVIL	DATE FEBRUARY 2024
		DRAWN D. LEWCHANIN					
NO. DATE REVISION BY APVD		CHECKED R. BRYANT	SCOTTSDALE, AZ				PROJECT NO. 21-064
		APPROVED R. BRYANT					DRAWING NO. C-101
							SHEET NO. 12



NOTES:

1. TAPPING SLEEVE AND VALVE PER MAG STD DTL 340.

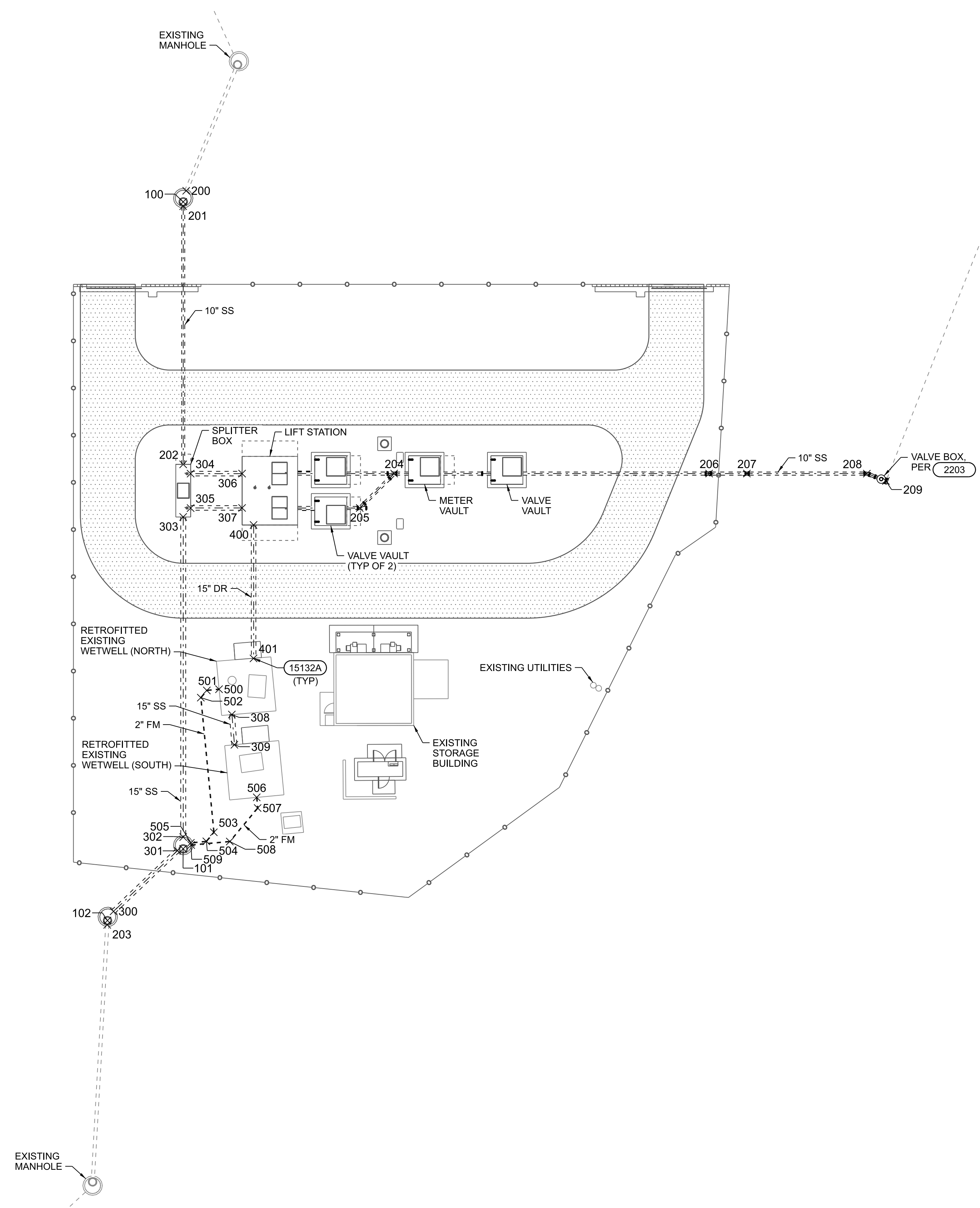
MANHOLE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	593336.95	629478.61	5341.00	MANHOLE NO. 1 RIM
101	593148.33	629478.61	5336.50	MANHOLE NO. 2 RIM
102	593127.42	629456.55	5335.00	MANHOLE NO. 3 RIM

10" SS YARD PIPING POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	593340.19	629479.50	5336.54	10" IN INV
201	593335.70	629478.61	5336.50	10" OUT INV
202	593260.42	629478.61	5328.71	10" IN INV
203	593126.17	629456.48	5330.55	10" IN INV
204	593257.74	629540.11	5330.97	10" WYE CL
205	593247.70	629530.07	5330.97	10" WYE CL
206	593257.74	629631.91	5330.97	10" 45° BEND DOWN CL
207	593257.74	629642.91	5319.90	10" 45° BEND UP CL
208	593257.72	629677.87	5319.90	10" 22.5° BEND CL
209	593255.58	629683.43	5319.90	10"x8" TAPPING SLEEVE CL

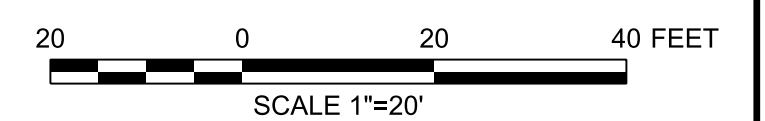
15" SS YARD PIPING POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	593130.09	629458.32	5329.08	15" OUT INV
301	593147.82	629476.91	5328.90	15" IN INV
302	593151.75	629478.61	5329.00	15" OUT INV
303	593245.09	629478.61	5328.77	15" IN INV
304	593257.71	629480.78	5328.71	15" OUT INV
305	593247.67	629480.78	5328.71	15" OUT INV
306	593257.73	629495.78	5328.67	15" IN INV
307	593247.71	629495.78	5328.67	15" IN INV
308	593187.47	629492.80	5328.17	15" SS IN INV
309	593178.67	629493.54	5328.08	15" SS OUT INV

15" DR YARD PIPING POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
400	593242.75	629499.12	5328.18	15" OUT INV
401	593203.85	629499.12	5327.76	15" IN INV

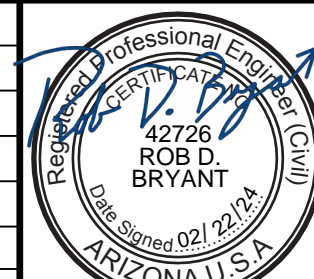
2" FM YARD PIPING POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	593194.87	629489.06	5330.80	2" OUT INV
501	593194.51	629485.50	5330.78	2" 45° BEND INV
502	593192.40	629483.76	5330.77	2" 45° BEND INV
503	593153.16	629487.55	5330.57	2" 45° BEND INV
504	593150.52	629485.37	5330.54	2" 45° BEND INV
505	593150.07	629480.85	5330.49	2" IN INV
506	593163.33	629500.05	5330.80	2" OUT INV
507	593160.22	629500.33	5330.77	2" 45° BEND INV
508	593150.47	629492.20	5330.64	2" 45° BEND INV
509	593149.44	629480.95	5330.53	2" IN INV



PLAN
1" = 20'-0"



NO	DATE	REVISION	BY	APVD



DESIGN
R. BRYANT
DRAWN
D. LEWCHANIN
CHECKED
R. BRYANT
APPROVED
R. BRYANT



WATERWORKS
ENGINEERS

SCOTTSDALE, AZ



YAVAPAI HILLS
LIFT STATION

CIVIL
YARD PIPING PLAN

DATE
FEBRUARY 2024
PROJECT NO.
21-064
DRAWING NO.
C-102
SHEET NO.
13

PIPING SYMBOLS			PUMPS		ACTUATORS		MISC FITTING SYMBOLS		PIPING DESIGNATIONS	
SYMBOL	SINGLE LINE	DESCRIPTION	SYMBOL	PUMP TYPE	SYMBOL	ACTUATOR TYPE	SYMBOL	EQUIPMENT TYPE	DOUBLE LINE PIPES	
		EXISTING PIPE (SCREENED)		CENTRIFUGAL PUMP		MOTOR ACTUATOR		Y STRAINER		
		NEW PIPE		SUBMERSIBLE PUMP		PNEUMATIC ACTUATOR		PULSATION DAMPER		
		EXISTING PIPE TO BE ABANDONED		VERTICAL TURBINE PUMP (PLAN)		SOLENOID ACTUATOR		GAUGE		
		EXISTING PIPE TO BE DEMOLISHED OR REMOVED AND SALVAGED		DIAPHRAGM METERING PUMP	GATES / WEIR			DIAPHRAGM SEAL	<p>NOTES:</p> <ol style="list-style-type: none"> MOTORIZED VALVE SHOWN, MANUAL VALVE SIMILAR. 	
VALVES				VERTICAL TURBINE PUMP (SECTION)	MISC EQUIPMENT			RUPTURE DISK (PRESSURE)	<p>NOTES:</p> <ol style="list-style-type: none"> ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS AND THE PIPING SCHEDULE. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS. 	
SYMBOL	VALVE TYPE			AXIAL FLOW PUMP	SYMBOL	GATE / WEIR TYPE		RUPTURE DISK (VACUUM)	<p>GENERAL PIPING NOTES:</p> <ol style="list-style-type: none"> LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. MINIMUM COVER SHALL BE 36 INCHES UNLESS OTHERWISE SHOWN. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED. APPROPRIATE STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. ALL OF THE VARIOUS APPLICATIONS ARE NOT NECESSARILY USED IN THE PROJECT. ALL PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, GROOVED END, OR SCREWED PIPING, SHALL BE PROVIDED WITH TRUST PROTECTION AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST DETAILS AND NOTES ON DRAWINGS. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS ARE ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT. THE CONTRACTOR FOR THIS PROJECT IS RESPONSIBLE FOR COORDINATING AND PERFORMING THE CONNECTION OF THE PIPING AND ASSOCIATED APPURTENANCES INSTALLED UNDER THIS CONTRACT TO BOTH THE EXISTING PIPING AND FACILITIES. PRIOR TO SUBMITTING PIPING DRAWINGS FOR ANY NEW PIPE THAT IS TO CONNECT TO OR CROSS AN EXISTING PIPE OR STRUCTURE, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE OR STRUCTURE TO VERIFY ITS EXACT LOCATION, SIZE, MATERIALS, AND INVERT ELEVATIONS. COMPONENTS SHOWN WITH A DOUBLE ASTERISK (**) ARE PART OF A PACKAGE SYSTEM. SEE EQUIPMENT SPECIFICATIONS. 	
	BALL VALVE			BLOWER FAN	SYMBOL	TYPE		CAP		
	VENTED BALL VALVE			CENTRIFUGAL BLOWER		AIR DIFFUSER		MALE QUICK CONNECT		
	CORPORATION STOP VALVE			BLOWER TYPE		SPRAY BAR OR DIFFUSER		FEMALE QUICK CONNECT		
	BUTTERFLY VALVE			MAGNETIC FLOWMETER		EMERGENCY EYEWASH AND SHOWER		MALE QUICK CONNECT WITH CAP		
	DIAPHRAGM VALVE			PROPELLER FLOWMETER				QUICK CONNECT COUPLING		
	GATE VALVE			FILTER				QUICK CONNECT COUPLING		
	KNIFE GATE			CARTRIDGE FILTER (SMALL)				DRAIN		
	GLOBE VALVE			CARTRIDGE FILTER (LARGE)				DRAIN		
	MUD VALVE			BASKET STRAINER				SIGHT GLASS		
	MULTIPORT VALVE			MIXER				CALIBRATION COLUMN		
	NEEDLE VALVE			STATIC MIXER				ROTAMETER		
	PINCH VALVE			WAFER STATIC MIXER				ROTAMETER WITH NEEDLE VALVE		
	PLUG VALVE							SAMPLE		
	PLUG VALVE (ECCENTRIC)							WATER SURFACE		
	BALL CHECK VALVE							EQUIPMENT TAG		
	DOUBLE DISK SWING CHECK VALVE									
	DUCKBILL CHECK									
	SILENT CHECK VALVE									
	SWING CHECK VALVE									
	TELESCOPING VALVE									
	AIR RELIEF VALVE									
	AIR VACUUM VALVE									
	COMBINATION AIR RELIEF AIR VACUUM VALVE									
	PRESSURE REGULATING VALVE									
	PRESSURE RELIEF VALVE									
	HOSE BIBB OR FLUSHING CONNECTION									
	BACKFLOW PREVENTER VALVE									

NO	DATE	REVISION	BY	APVD



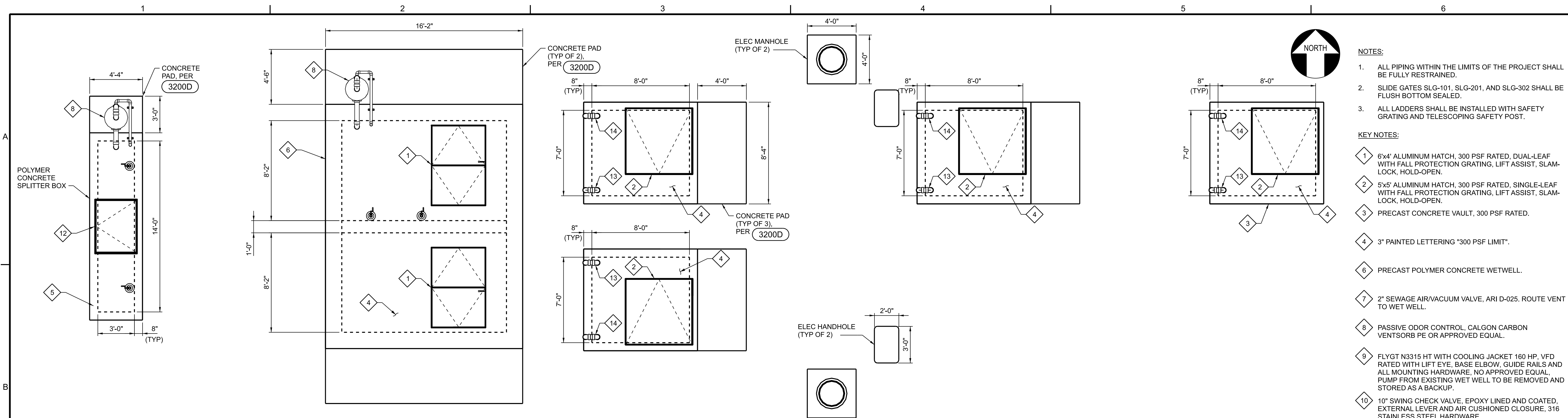
DESIGN	R. BRYANT
DRAWN	D. LEWCHANIN
CHECKED	R. BRYANT
APPROVED	R. BRYANT



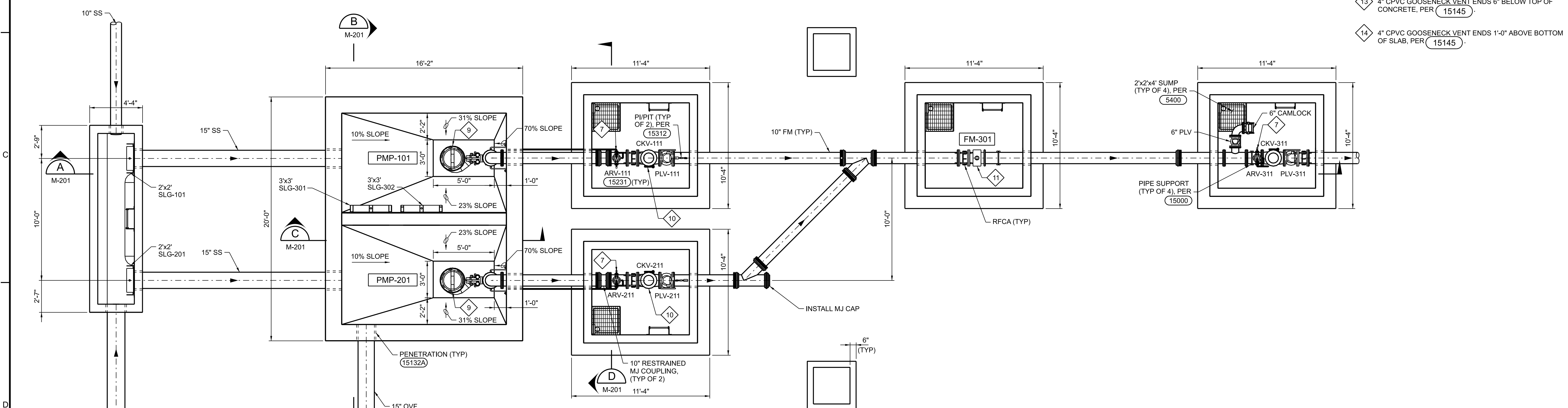
YAVAPAI HILLS
LIFT STATION

MECHANICAL
MECHANICAL LEGEND

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	M-001
SHEET NO.	14

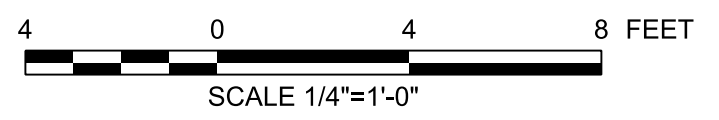


UPPER PLAN
1/4" = 1'-0"



LOWER PLAN
1/4" = 1'-0"

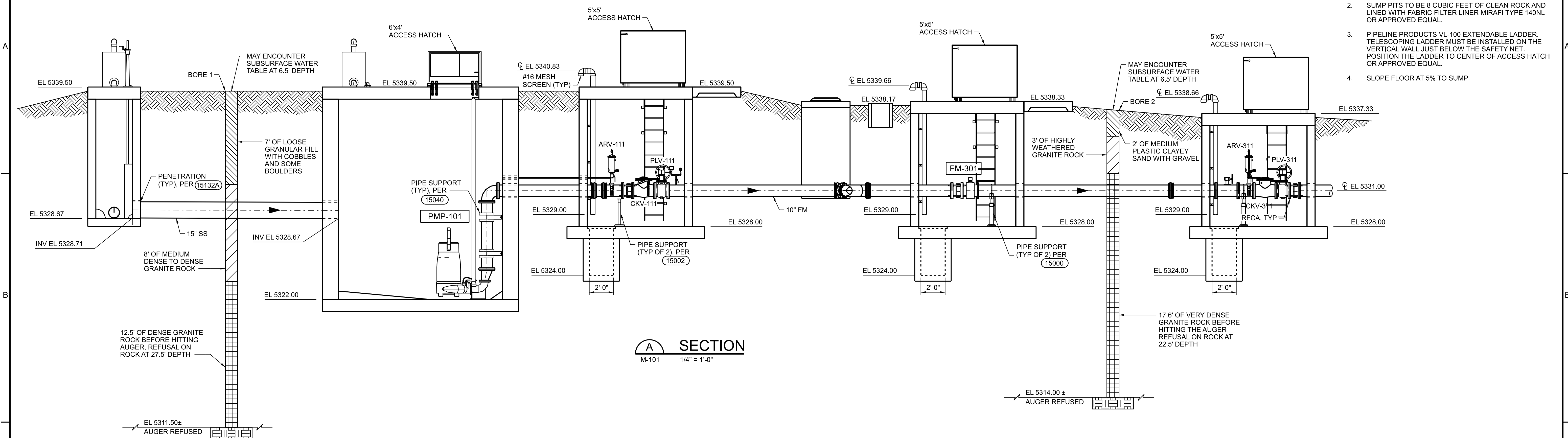
- NOTES:**
- ALL PIPING WITHIN THE LIMITS OF THE PROJECT SHALL BE FULLY RESTRAINED.
 - SLIDE GATES SLG-101, SLG-201, AND SLG-302 SHALL BE FLUSH BOTTOM SEALED.
 - ALL LADDERS SHALL BE INSTALLED WITH SAFETY GRATING AND TELESCOPING SAFETY POST.
- KEY NOTES:**
- 6'x4' ALUMINUM HATCH, 300 PSF RATED, DUAL-LEAF WITH FALL PROTECTION GRATING, LIFT ASSIST, SLAM-LOCK, HOLD-OPEN.
 - 5'x5' ALUMINUM HATCH, 300 PSF RATED, SINGLE-LEAF WITH FALL PROTECTION GRATING, LIFT ASSIST, SLAM-LOCK, HOLD-OPEN.
 - PRECAST CONCRETE VAULT, 300 PSF RATED.
 - 3" PAINTED LETTERING "300 PSF LIMIT".
 - PRECAST POLYMER CONCRETE WETWELL.
 - 2" SEWAGE AIR/VACUUM VALVE, ARI D-025, ROUTE VENT TO WET WELL.
 - PASSIVE ODOR CONTROL, CALGON CARBON VENTSORB PE OR APPROVED EQUAL.
 - FLYGT N3315 HT WITH COOLING JACKET 160 HP, VFD RATED WITH LIFT EYE, BASE ELBOW, GUIDE RAILS AND ALL MOUNTING HARDWARE, NO APPROVED EQUAL, PUMP FROM EXISTING WET WELL TO BE REMOVED AND STORED AS A BACKUP.
 - 10" SWING CHECK VALVE, EPOXY LINED AND COATED, EXTERNAL LEVER AND AIR CUSHIONED CLOSURE, 316 STAINLESS STEEL HARDWARE.
 - 10" MAG METER, PTFE LINED WITH REMOTE DISPLAY (ELECTRIC RACK).
 - 3'x4' ALUMINUM HATCH, 300 PSF RATED, SINGLE-LEAF WITH FALL PROTECTION GRATING, LIFT ASSIST, SLAM-LOCK, HOLD-OPEN.
 - 4" CPVC GOOSENECK VENT ENDS 6" BELOW TOP OF CONCRETE, PER 15145.
 - 4" CPVC GOOSENECK VENT ENDS 1'-0" ABOVE BOTTOM OF SLAB, PER 15145.



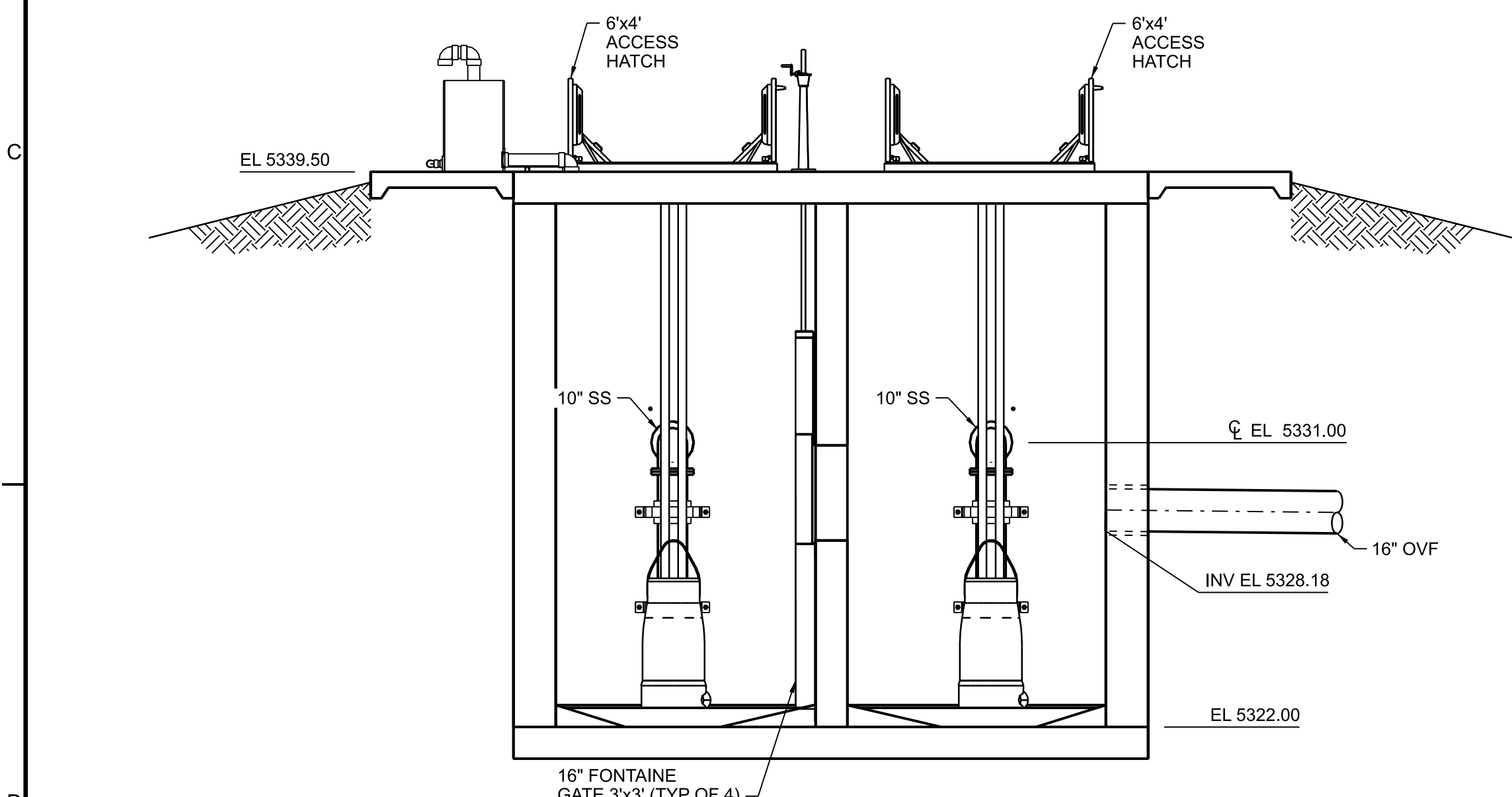
<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>		<p>DESIGN R. BRYANT</p> <p>DRAWN D. LEWCHANIN</p> <p>CHECKED R. BRYANT</p> <p>APPROVED R. BRYANT</p>	<p>WATERWORKS ENGINEERS</p> <p>SCOTTSDALE, AZ</p>	<p>CITY OF PRESCOTT ARIZONA</p>	<p>MECHANICAL</p> <p>YAVAPAI HILLS LIFT STATION</p>	<p>DATE FEBRUARY 2024</p> <p>PROJECT NO. 21-064</p> <p>DRAWING NO. M-101</p> <p>SHEET NO. 15</p>
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NOTES:

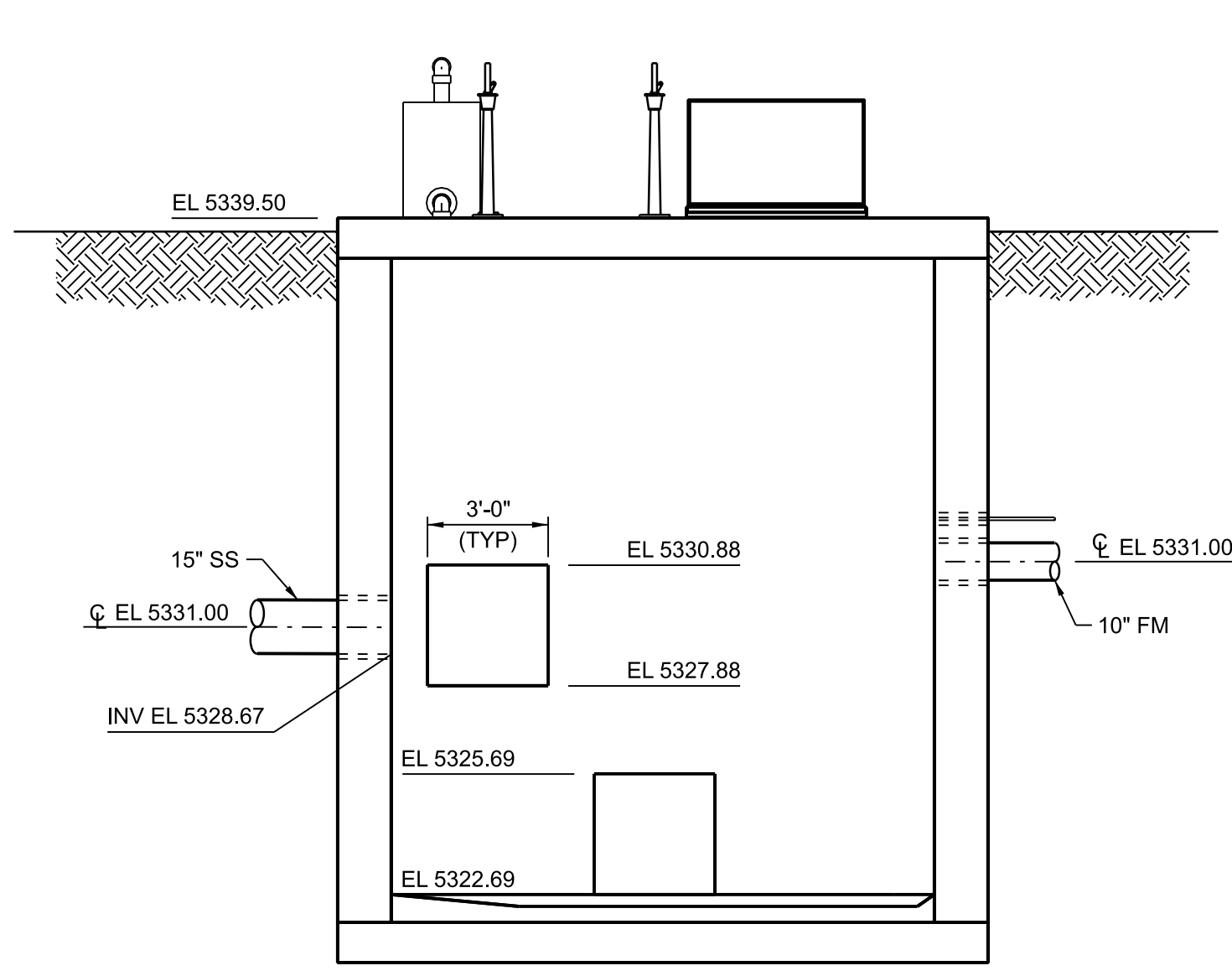
- REFER TO ETC GEOTECHNICAL REPORT SECTION "LATERAL DESIGN PARAMETERS" REGARDING EXCAVATION TRENCHING LOAD REQUIREMENTS.
- SUMP PITS TO BE 8 CUBIC FEET OF CLEAN ROCK AND LINED WITH FABRIC FILTER LINER MIRAFI TYPE 140NL OR APPROVED EQUAL.
- PIPELINE PRODUCTS VL-100 EXTENDABLE LADDER. TELESCOPING LADDER MUST BE INSTALLED ON THE VERTICAL WALL JUST BELOW THE SAFETY NET. POSITION THE LADDER TO CENTER OF ACCESS HATCH OR APPROVED EQUAL.
- SLOPE FLOOR AT 5% TO SUMP.



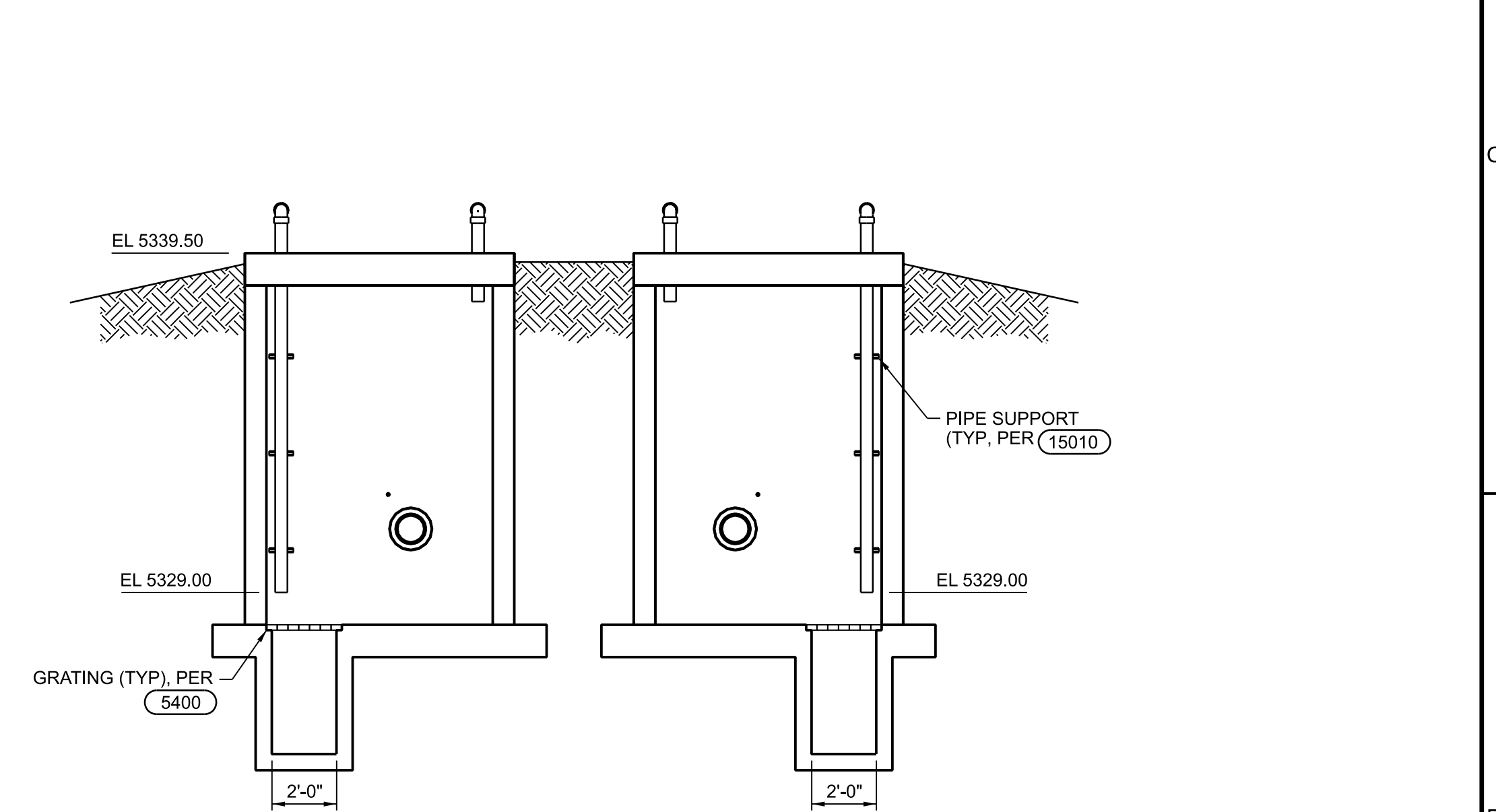
A SECTION
M-101 1/4" = 1'-0"



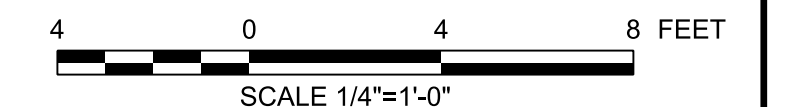
B SECTION
M-101 1/4" = 1'-0"



C SECTION
M-101 1/4" = 1'-0"



D SECTION
M-101 1/4" = 1'-0"



VERIFY SCALE			DESIGN	R. BRYANT
BAR IS ONE INCH ON ORIGINAL DRAWING			DRAWN	D. LEWCHANIN
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			CHECKED	R. BRYANT
			APPROVED	R. BRYANT
NO	DATE	REVISION	BY	APVD

WATERWORKS ENGINEERS
 SCOTTSDALE, AZ

CITY OF PRESCOTT ARIZONA

YAVAPAI HILLS LIFT STATION

MECHANICAL
LIFT STATION SECTIONS

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	M-201
SHEET NO.	16

SINGLE LINE & CONTROL DIAGRAM SYMBOLS

PUSH BUTTONS			SELECTOR SWITCHES			FLOW & LEVEL SWITCHES			TIMERS			MISCELLANEOUS DEVICES (CONT)		CONDUITS & CONDUCTORS (CONT)				
NORMALLY OPEN (NO)	NORMALLY CLOSED (NC)	DESCRIPTION:	NORMALLY OPEN (NO)	NORMALLY CLOSED (NC)	DESCRIPTION:	NORMALLY OPEN (NO)	NORMALLY CLOSED (NC)	DESCRIPTION:	NORMALLY OPEN (NO)	NORMALLY CLOSED (NC)	DESCRIPTION:	SINGLE LINE / CONTROL DIAGRAM	DESCRIPTION:	SINGLE LINE / CONTROL DIAGRAM	DESCRIPTION:			
		EMERGENCY STOP PUSH BUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)			FOUR (4) POSITION, FOUR (4) POLE SELECTOR SWITCH			LIQUID LEVEL (FLOAT) NO: CLOSURES ON RISING LEVEL NC: OPENS ON RISING LEVEL			ON DELAY NOTC: NORMALLY OPEN TIMED CLOSING, WHEN ENERGIZED NCTO: NORMALLY CLOSED TIMED OPENING, WHEN ENERGIZED		FIXED RESISTOR		CHASSIS GROUND			
		PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN						FLOW SWITCH (AIR, WATER, ETC.) NO: CLOSURES ON INCREASED FLOW NC: OPENS ON INCREASED FLOW			OFF DELAY NOTO: NORMALLY OPEN, TIMED OPENING WHEN DEENERGIZED NCTC: NORMALLY CLOSED, TIMED CLOSING WHEN DEENERGIZED		VARIABLE RESISTOR		NEUTRAL			
		START/STOP PUSH BUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP				OTHER SWITCHES			TERMINALS & CONNECTORS						SEPARABLE CONNECTOR SIFICATION SHOWN.			
PILOT LIGHTS			RELAYS					AUXILIARY SWITCH CONTACT			TOGGLE SWITCH		DOT		DIODE	MOTOR		
		PUSH TO TEST, 110V S6 LAMP UNLESS NOTED. LETTER IS LENS COLOR: R = RED G = GREEN A = AMBER Y = YELLOW B = BLUE W = WHITE C = CLEAR			RELAY CONTACT: NORMALLY OPEN (NO) NORMALLY CLOSED (NC)			FOOT SWITCH			PROXY SWITCH		SQUARE		ZENER DIODE		MOTOR STARTER COIL	
SELECTOR SWITCHES					LATCH RELAY COIL			PULL CORD			A-PLUG		ROUND		CAPACITOR		MOTOR	
		TWO (2) POSITION SELECTOR SWITCH			POSITION (LIMIT) SWITCH			PHOTO EYE			SINGLE POLE DOUBLE THROW (SPDT) MAINTAIN		HEXAGON		SUPPRESSOR		OVERLOAD	
		TWO (2) POSITION, TWO (2) POLE SELECTOR SWITCH			TORQUE SWITCH NO: CLOSURES ON HIGH TORQUE NC: OPENS ON HIGH TORQUE			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM UP		DIAMOND		GROUND		RESISTOR OR RESISTIVE ELEMENT	
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH	PRESSURE & TEMPERATURE SWITCHES					SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM BOTH			TRIANGLE		PDB#	POWER DISTRIBUTION BOX		RECEPTACLES		STRIP HEATER OR HEATING ELEMENT
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH			PRESSURE SWITCH NO: CLOSURES ON RISING PRESSURE NC: OPENS ON DROPPING PRESSURE			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM UP			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM BOTH		P#	PLUG / JACK		ENCLOSURE LIGHT		HIGH VOLTAGE, GROUP OPERATED, AIR BREAK SWITCH * CONTINUOUS AMPERE RATING
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH			VACUUM SWITCH NO: CLOSURES ON RISING PRESSURE NC: OPENS ON DROPPING PRESSURE			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM UP		J#	JACK / PLUG		GROUND CHASSIS		MOTOR CONTACT: NORMALLY OPEN (NO) NORMALLY CLOSED (NC)
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH			DIFFERENTIAL PRESSURE SWITCH NO: CLOSURES ON RISING DIFFERENTIAL PRESSURE NC: OPENS ON DROPPING DIFFERENTIAL PRESSURE			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM UP		P#	PLUG RIGHT OR UP		RECEPTACLES		KVAR CAP
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH			TEMPERATURE SWITCH NO: CLOSURES ON RISING TEMPERATURE NC: OPENS ON RISING TEMPERATURE			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN			SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM UP		J#	JACK LEFT OR DOWN		ENCLOSURE LIGHT		THREE PHASE KVAR
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN	MISCELLANEOUS DEVICES			CONDUITS & CONDUCTORS		TIMERS				
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		ABE#	BELL		CONDUCTORS NOT CONNECTED		ON DELAY COIL			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		ABU#	BUZZER		CONDUCTORS CONNECTED		ON DELAY MOTOR			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		AH#	HORN		CONDUCTOR SHIELD		ON DELAY MOTOR			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		VM#	VOLT METER		CONDUCTOR SHIELD TWISTED PAIR		OFF DELAY MOTOR			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		AM#	AMP METER		FIELD CONDUCTOR SHIELD		OFF DELAY MOTOR			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		BAT#	BATTERY		FIELD CONDUCTOR SHIELD TWISTED PAIR		OFF DELAY MOTOR			
		TWO (2) POSITION, THREE (3) POLE SELECTOR SWITCH						SINGLE POLE DOUBLE THROW (SPDT) RETURN FROM DOWN		BAT#	BATTERY		EARTH GROUND		OFF DELAY MOTOR			

<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING</p> <p>0" 1"</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>			<p>DESIGN: T. ADAMS</p> <p>DRAWN: D. LEWCHANIN</p> <p>CHECKED: B. YOUNG</p> <p>APPROVED: R. BRYANT</p>	<p>WATERWORKS ENGINEERS</p>	<p>CITY OF PRESCOTT ARIZONA</p>	<p>YAVAPAI HILLS LIFT STATION</p>	<p>ELECTRICAL</p> <p>LEGEND AND SYMBOLS 1</p>	<p>DATE: FEBRUARY 2024</p> <p>PROJECT NO.: 21-064</p> <p>DRAWING NO.: E-001</p> <p>SHEET NO.: 17</p>
	NO	DATE	REVISION	BY	APVD			
	<p>FILENAME: L:\CAD\Projects\21-064 Prescott Yavapai Hills LSI\Deliverables\2164D-E001.dgn</p>							
	<p>PLOT DATE: 2/14/2024</p>							

SINGLE LINE, CONTROL DIAGRAM & PLAN SYMBOLS

DISCRETE I/O		POWER EQUIPMENT & DEVICES			POWER EQUIPMENT & DEVICES (CONT)			POWER EQUIPMENT & DEVICES (CONT)			LIGHTING FIXTURES & EQUIPMENT (CONT)	
SINGLE LINE / CONTROL DIAGRAM	DESCRIPTION:	SINGLE LINE OR CONTROL DIAGRAM	PLAN VIEW	DESCRIPTION:	SINGLE LINE OR CONTROL DIAGRAM	PLAN VIEW	DESCRIPTION:	SINGLE LINE OR CONTROL DIAGRAM	PLAN VIEW	DESCRIPTION:	PLAN VIEW	DESCRIPTION:
	DISCRETE INPUT			NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, (##A) AMPERE RATING		N/A	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, (##A) AMPERE RATING	N/A		EMERGENCY SHOWER ALARM STATION		AREA LIGHTING CONTACTOR PANEL ### = PANEL NAME
	DISCRETE OUTPUT			FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED (##A) AMPERE RATING (FU#) FUSE RATING			TRANSIENT VOLTAGE SURGE SUPPRESSOR (POWER DISTRIBUTION TYPE)		NA	JUMPER		LIGHTING PANEL BOARD NO. # (240/120V OR 208/120V) ### = PANEL NAME
ANALOG I/O				ANALOG INPUT		N/A	PUSH TO TEST, 110V S6 LAMP UNLESS NOTED, LETTER IS LENS COLOR: R = RED G = GREEN C = CLEAR A = AMBER Y = YELLOW B = BLUE W = WHITE		NA	MOTOR SWITCH		POWER DISTRIBUTION PANEL BOARD NO. # (480V OR 480/277V) ### = PANEL NAME
	ANALOG OUTPUT			MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION "CLR" INDICATES WITH PILOT LIGHT "P" INDICATES NUMBER OF POLES			SOLENOID OPERATED VALVE			JUNCTION BOX		TYPICAL LUMINARIES SEE SCHEDULE FOR SPECIFICS "XX"-FIXTURE TYPE X= PANEL BOARD NAME "b"-CONTROLLED BY SWITCH "b" Y= CIRCUIT NUMBER NL= NIGHT LIGHT (UN-SWITCHED)
FUSES & CIRCUIT BREAKERS			N/A	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH		N/A	ELAPSED TIME METER			PULL BOX		WALL MOUNTED LUMINAIRE REFER TO SCHEDULE FOR SPECIFICS. (NOTATIONS SAME AS ABOVE)
	THERMAL MAGNETIC CIRCUIT BREAKER TRIP RATING ABOVE; FRAME RATING BELOW. TYPICAL FOR OTHER TYPES OF BREAKERS. BREAKER TO BE 3 POLE UNLESS NOTED OTHERWISE AS 1P OR 2P		N/A	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER			UNIT HEATER			WATER HEATER		GROUND ROD
	DRAWOUT MEDIUM VOLTAGE POWER BREAKER UPPER NUMBER INDICATES LONG TIME TRIP SETTING LOWER NUMBER INDICATES BREAKER CONTINUOUS CURRENT RATING		N/A	METER (M##) WM - WATT METER WHM - WATT HOUR METER WHDM - WATT HOUR DEMAND METER PF - POWER FACTOR METER TRANSUDCER (T##) AX - CURRENT TRANSUDCER WX - WATT TRANSUDCER			DAMPER MOTOR			MOTOR OPERATED VALVE "XXXX" DENOTES LOOP NUMBER TO BE OBTAINED FROM INSTRUMENTATION DRAWINGS		GROUND ROD IN GROUNDING WELL
	COMBINATION MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR, MAGNETIC CONTACTOR AND OVERLOAD PROTECTION X= AMPERE SIZE Z= NEMA SIZE		N/A	GENERATOR WITH GENERATION NUMBER, RATINGS AND CONNECTIONS AS NOTED IN CALL OUT ON DRAWING			GEN			GEN		GROUND ROD IN TEST WELL
	MOTOR STARTER WITH MAGNETIC CONTACTOR AND OVERLOAD PROTECTION Z= NEMA SIZE		N/A	MOTOR, NUMERAL INDICATES HORSEPOWER			MTR			MTR		GROUND GRID CABLE CONNECTION, WELDED
	FUSE		N/A	AUTOMATIC TRANSFER SWITCH (ATS) "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE #RATE = INDICATES CONTINUOUS CURRENT RATING # = INDICATES ATS NAME			INTERMEDIATE TERMINAL PANEL		N/A	KEY INTERLOCK		GROUND ROD IN TEST WELL
	FUSED SWITCH		N/A	DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			SCR			KEY INTERLOCK		GROUND ROD IN TEST WELL
TRANSFORMERS				AC MOTOR SPEED CONTROLLER (VARIABLE FREQUENCY DRIVE)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE ONE LINE DIAGRAMS ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 13. ALL OTHER DRY TYPE TRANSFORMERS SHALL HAVE A K-4 RATING. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING			DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
	DUAL TRANSFORMER			DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
	CURRENT TRANSFORMER * QUANTITY XXXX = PRIMARY AMPERE RATING			DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
	POTENTIAL TRANSFORMER (PT) OR CONTROL POWER TRANSFORMER (CPT) * QUANTITY XXXX = PRIMARY VOLTAGE RATING			DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
	INDUCTOR			DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
GROUNDING				DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
SWITCHES				DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
LIGHTING FIXTURES & EQUIPMENT				DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL
VERIFY SCALE				DC MOTOR SPEED CONTROLLER (SILICON CONTROLLED RECTIFIER)			KEY INTERLOCK			KEY INTERLOCK		GROUND ROD IN TEST WELL

NO	DATE	REVISION	BY	APVD



DESIGN
T. ADAMS
DRAWN
D. LEWCHANIN
CHECKED
B. YOUNG
APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

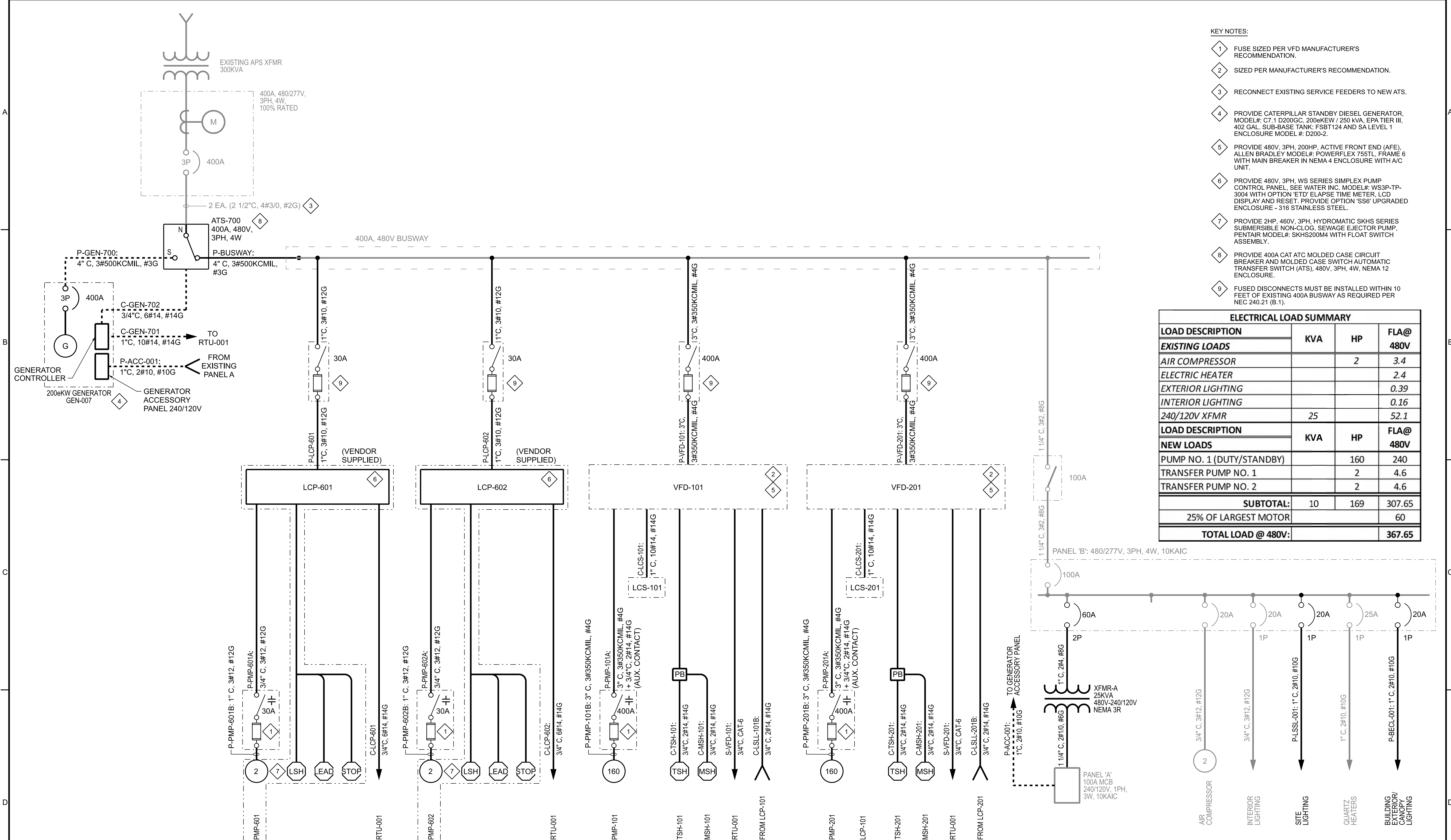
ELECTRICAL
LEGEND AND SYMBOLS 2

DATE
FEBRUARY 2024
PROJECT NO.
21-064
DRAWING NO.
E-002
SHEET NO.
18

PLAN VIEW SYMBOLS

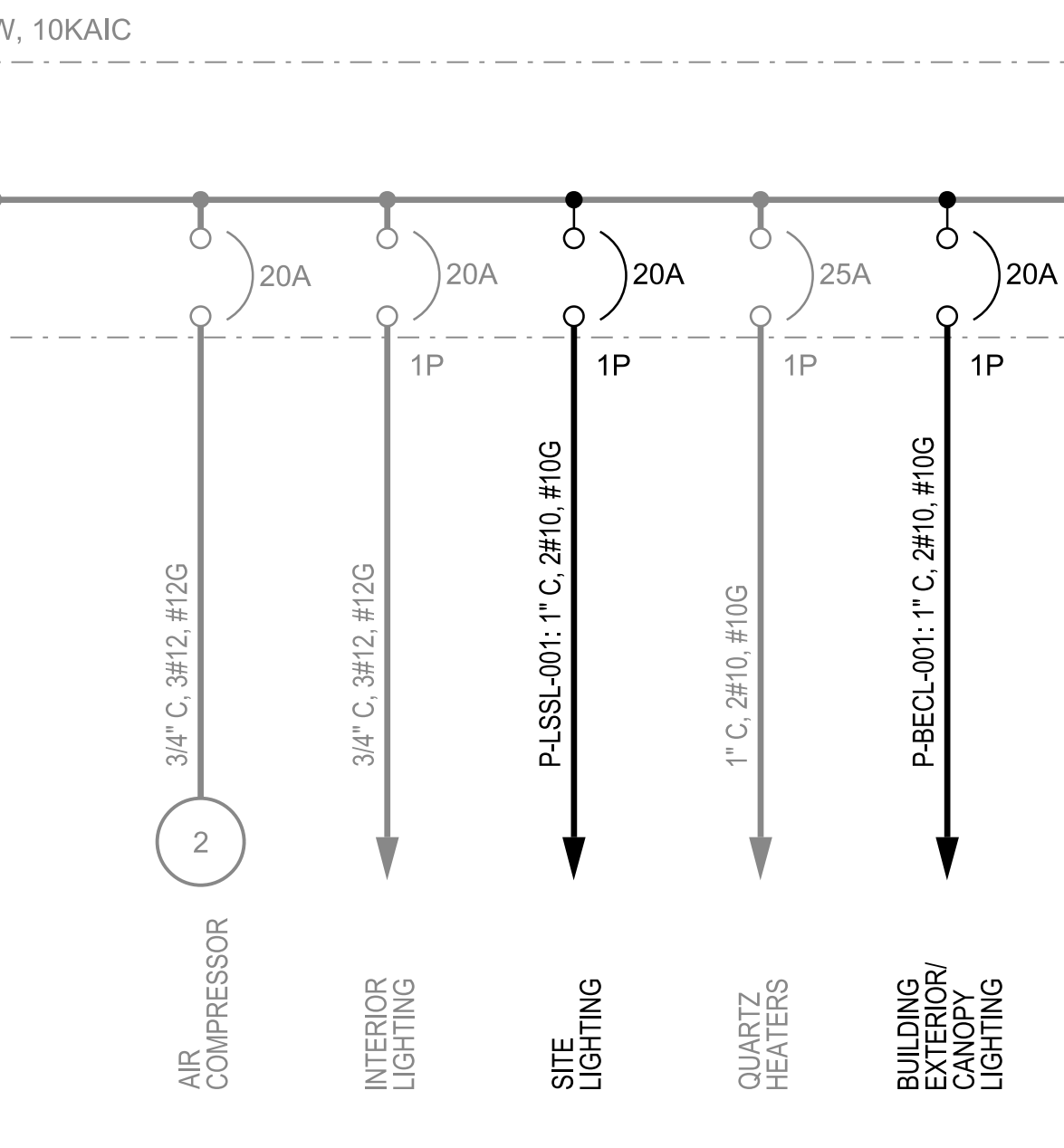
CONDUIT		POWER RECEPTACLES		TELECOMMUNICATION SYSTEM (CONT)		FIRE ALARM / LIFE SAFETY (CONT)		AREA CLASSIFICATION	
PLAN VIEW	DESCRIPTION:	PLAN VIEW	DESCRIPTION:	PLAN VIEW	DESCRIPTION:	PLAN VIEW	DESCRIPTION:	PLAN VIEW	DESCRIPTION:
	EXPOSED CONDUIT	##A LP-### Y	208V, 3P, 4W, RECEPTACLE ##A = AMPERE RATING AS NOTED LP-### = PANEL BOARD NUMBER Y = CIRCUIT NUMBER	C ²	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE	STB ???	WEATHERPROOF HIGH DENSITY FIRE ALARM STROBE LIGHT		INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	HIDDEN / CONCEALED CONDUIT	##A LP-### Y	240V, 20, 3W, RECEPTACLE ##A = AMPERE RATING AS NOTED LP-### = PANEL BOARD NUMBER Y = CIRCUIT NUMBER	S	PAGING STATION, SURFACE MOUNTED		SPRINKLER FLOW ALARM SWITCH		
	UNDERGROUND CONDUIT	##A LP-### Y	FLOOR OUTLET BOX WITH TYPE OUTLET INDICATED	VC	REMOTE WALL MOUNTED VOLUME CONTROL, FOR CEILING SPEAKER (MOUNT UP 5'-0" AFF UNO)	CM	ADDRESSABLE CONTROL MODULE		
	DUCT BANK	##A LP-### Y	480V, 3P, 4W RECEPTACLE AND DISCONNECT SWITCH ##A = AMPERE RATING AS NOTED X = PANEL BOARD NUMBER Y = CIRCUIT NUMBER	A	PAGING SPEAKER AMPLIFIER ASSEMBLY	MM	ADDRESSABLE MONITOR MODULE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.	
	OVERHEAD POWER LINES	##A LP-### Y	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W UNLESS OTHERWISE NOTED * = C - MOUNTED ABOVE COUNTERTOP GF - GROUND FAULT INTERRUPTER TYPE WP - WEATHERPROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSER X = PANEL BOARD NUMBER Y = CIRCUIT NUMBER	FIRE ALARM / LIFE SAFETY		SD	SMOKE DETECTOR		
	GROUNDING CONDUCTOR	##A GFCI WP X Y		200 R	FIRE ALARM HEAT DETECTOR 135Y FIXED TEMPERATURE UNLESS OTHER- WISE NOTED. "200" DENOTES 200YF TYPE "R" DENOTES FIXED TEMPERATURE RATE-OF-RISE TYPE.	TELECOMMUNICATION SYSTEM		INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN.	
	CONDUITS IDENTIFIED BY A NUMBER SHALL BE LISTED IN THE CONDUIT BLOCK DIAGRAM			DSD ¹	FIRE ALARM DUCT SMOKE DETECTOR PHOTOCELL TYPE UNLESS OTHERWISE NOTED. "I" DENOTES IONIZATION TYPE.	TTB	TELEPHONE TERMINAL BOARD 4FT X 8FT X 3/4 INCH UNLESS NOTED OTHERWISE		
	CONDUITS IDENTIFIED BY LETTERS SHALL CONFORM TO THE TABLES IN THE LEGEND			DSD ²	FIRE ALARM DUCT SMOKE DETECTOR		TELEPHONE OUTLET, WALL TYPE (MOUNT 1'-6" AFF UNO)		
	CONDUIT STUBBED OUT AND CAPPED	##A LP-### Y	QUAD RECEPTACLE, 20A, 120V, 2P, 3W UNLESS OTHERWISE NOTED NOTATION SAME AS ABOVE	FACP-####	FIRE ALARM CONTROL PANEL	FAVP-####	TELEPHONE OUTLET AND FLOOR BOX		
	FLEXIBLE CONDUIT OR MANUFACTURER'S CABLE(S)	SECURITY SYSTEM		FARAP-####	FIRE ALARM REMOTE ANNUNCIATOR		TELEPHONE/DATA OUTLET, WALL TYPE (MOUNT 1'-6" AFF UNO)		
	CONDUIT TURNED DOWN	KP	SECURITY SYSTEM KEY PAD	M WP	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0" WP DENOTES WEATHERPROOF COVER		TELEPHONE/DATA OUTLET AND FLOOR BOX		
	CONDUIT TURNED UP	CR	SECURITY SYSTEM CARD ACCESS READER	F	OUTDOOR WEATHERPROOF FIRE ALARM MASTER BOX	C ¹	PAGING SPEAKER, WALL MOUNTED "H1" AND "C1" DENOTES TYPE. H=HORNC=CONE		
	INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE	MD	SECURITY ALARM MOTION DETECTOR	F	WP FIRE ALARM SPEAKER, MOUNT UP 7'-8"	H H ²	PAGING SPEAKER, WALL MOUNTED, BIDIRECTIONAL NOTATIONS SAME AS ABOVE		
	CONDUIT HOME RUN, XXX DENOTES DESTINATION CONTRACTOR SHALL FIELD ROUTE FROM EQUIPMENT TO DESIGNATED LOCATION	CCTV	CLOSED CIRCUIT TV CAMERA	S	FIRE ALARM STROBE, WALL MOUNT UP 6'-8" OR AT CEILING	H H			
	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR			F	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8"	F H			
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES, EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.			F H	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, CEILING MOUNT				
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.				SPRINKLER VALVE SUPERVISORY SWITCH				
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES, EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.			F O	FIRE ALARM BELL				
	THREE 4-INCH CONDUITS								

<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING</p> <p>0 1"</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>			<p>DESIGN</p> <p>T. ADAMS</p> <p>DRAWN</p> <p>D. LEWCHANIN</p> <p>CHECKED</p> <p>B. YOUNG</p> <p>APPROVED</p> <p>R. BRYANT</p>	<p>WATERWORKS ENGINEERS</p>	<p>CITY OF PRESCOTT ARIZONA</p>	<p>YAVAPAI HILLS LIFT STATION</p>	<p>ELECTRICAL</p> <p>LEGEND AND SYMBOLS 3</p>	<p>DATE</p> <p>FEBRUARY 2024</p> <p>PROJECT NO.</p> <p>21-064</p> <p>DRAWING NO.</p> <p>E-003</p> <p>SHEET NO.</p> <p>19</p>										
	<table border="1"> <tr> <th>NO</th> <th>DATE</th> <th>REVISION</th> <th>BY</th> <th>APVD</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO	DATE	REVISION	BY	APVD						<p>SCOTTSDALE, AZ</p>		<p>FILENAME: L:\CAD\Projects\21-064 Prescott Yavapai Hills LSI\Deliverables\2164D-E003.dgn</p>		<p>PLOT DATE: 2/14/2024</p>		<p>PLOT TIME: 3:40:52 PM</p>
NO	DATE	REVISION	BY	APVD														



- KEY NOTES:**
- 1 FUSE SIZED PER VFD MANUFACTURER'S RECOMMENDATION.
 - 2 SIZED PER MANUFACTURER'S RECOMMENDATION.
 - 3 RECONNECT EXISTING SERVICE FEEDERS TO NEW ATS.
 - 4 PROVIDE CATERPILLAR STANDBY DIESEL GENERATOR, MODEL#: C7.1 D200GC, 200eKEW / 250 KVA, EPA TIER III, 402 GAL. SUB-BASE TANK: FSBT124 AND SA LEVEL 1 ENCLOSURE MODEL #: D200-2.
 - 5 PROVIDE 480V, 3PH, 200HP, ACTIVE FRONT END (AFE), ALLEN BRADLEY MODEL#: POWERFLEX 7551L, FRAME 6 WITH MAIN BREAKER IN NEMA 4 ENCLOSURE WITH A/C UNIT.
 - 6 PROVIDE 480V, 3PH, WS SERIES SIMPLEX PUMP CONTROL PANEL, SEE WATER INC. MODEL#: WS3P-TP-3004 WITH OPTION 'ETD' ELAPSE TIME METER, LCD DISPLAY AND RESET. PROVIDE OPTION 'SS6' UPGRADED ENCLOSURE - 316 STAINLESS STEEL.
 - 7 PROVIDE 2HP, 460V, 3PH, HYDRAMATIC SKHS SERIES SUBMERSIBLE NON-CLOG, SEWAGE EJECTOR PUMP, PENTAIR MODEL#: SKHS200M4 WITH FLOAT SWITCH ASSEMBLY.
 - 8 PROVIDE 400A CAT ATC MOLDED CASE CIRCUIT BREAKER AND MOLDED CASE SWITCH AUTOMATIC TRANSFER SWITCH (ATS), 480V, 3PH, 4W, NEMA 12 ENCLOSURE.
 - 9 FUSED DISCONNECTS MUST BE INSTALLED WITHIN 10 FEET OF EXISTING 400A BUSWAY AS REQUIRED PER NEC 240.21 (B.1).

ELECTRICAL LOAD SUMMARY			
LOAD DESCRIPTION	KVA	HP	FLA@ 480V
EXISTING LOADS			
AIR COMPRESSOR		2	3.4
ELECTRIC HEATER			2.4
EXTERIOR LIGHTING			0.39
INTERIOR LIGHTING			0.16
240/120V XFMR	25		52.1
LOAD DESCRIPTION			
NEW LOADS			
PUMP NO. 1 (DUTY/STANDBY)		160	240
TRANSFER PUMP NO. 1		2	4.6
TRANSFER PUMP NO. 2		2	4.6
SUBTOTAL:	10	169	307.65
25% OF LARGEST MOTOR			60
TOTAL LOAD @ 480V:			367.65



VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

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NO	DATE	REVISION	BY	APVD



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D. LEWCHANIN

CHECKED
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APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

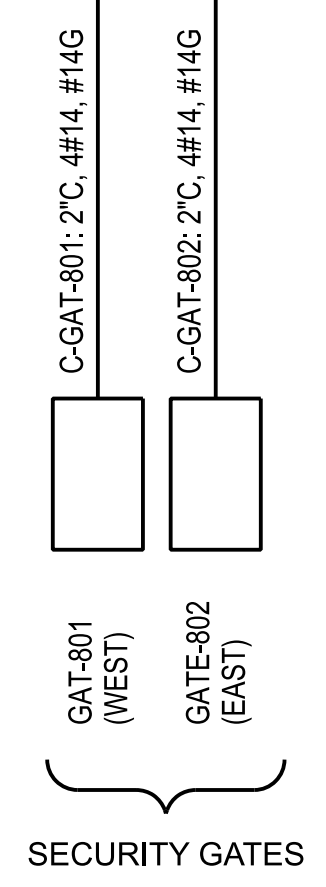
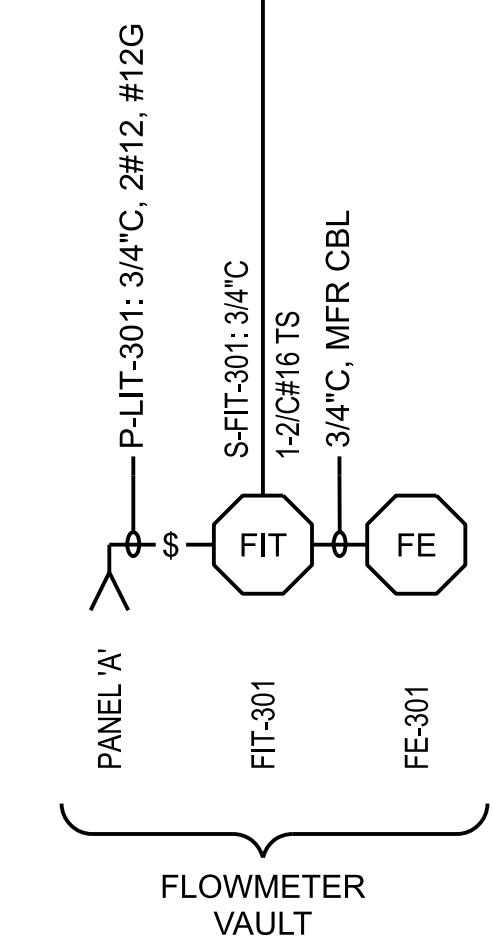
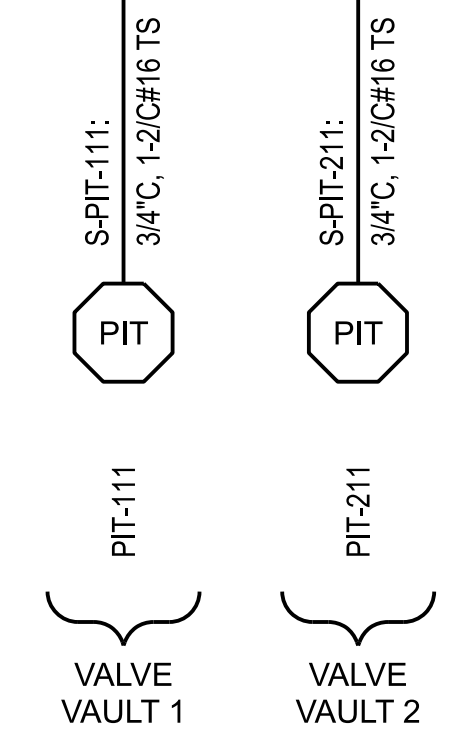
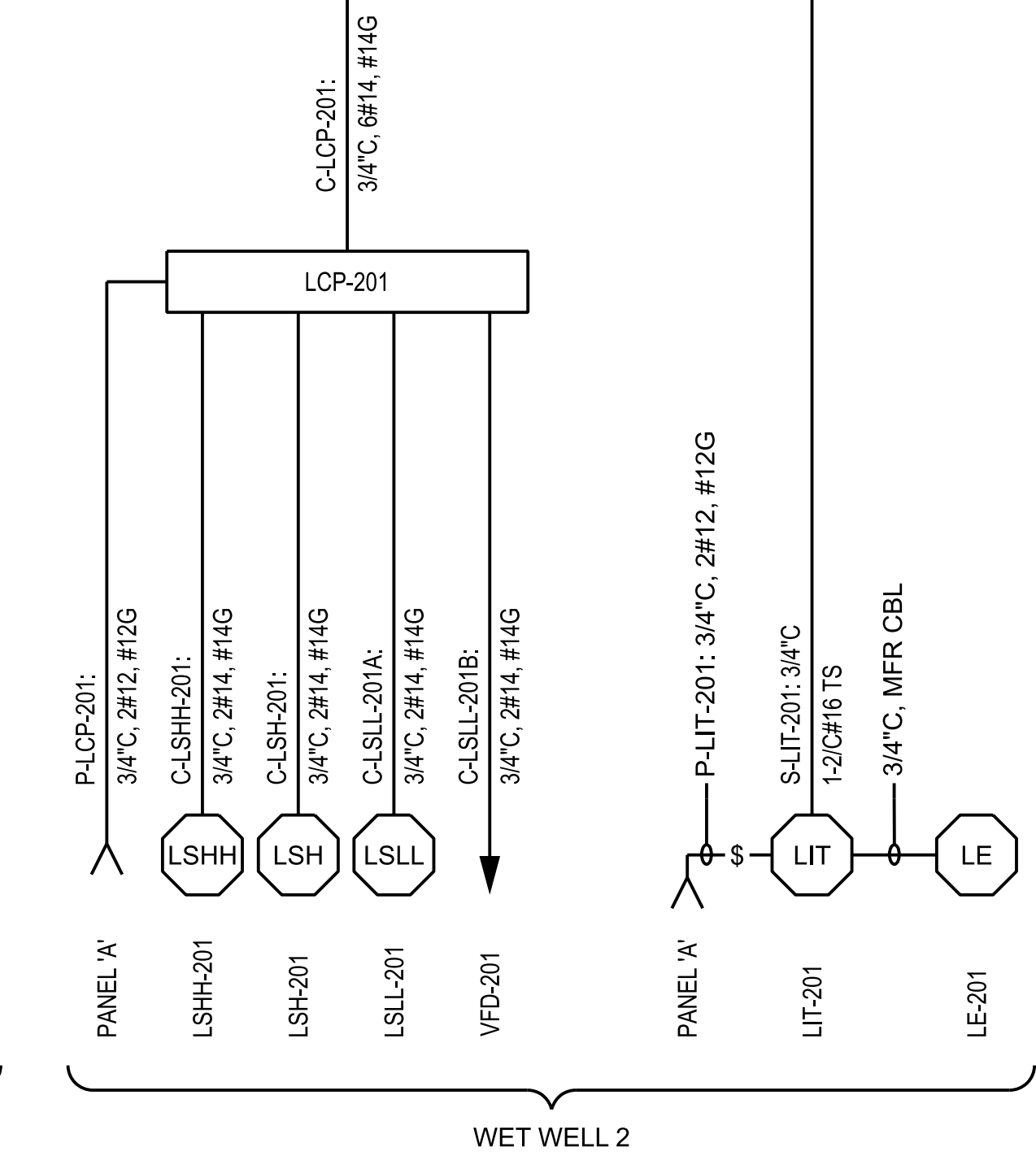
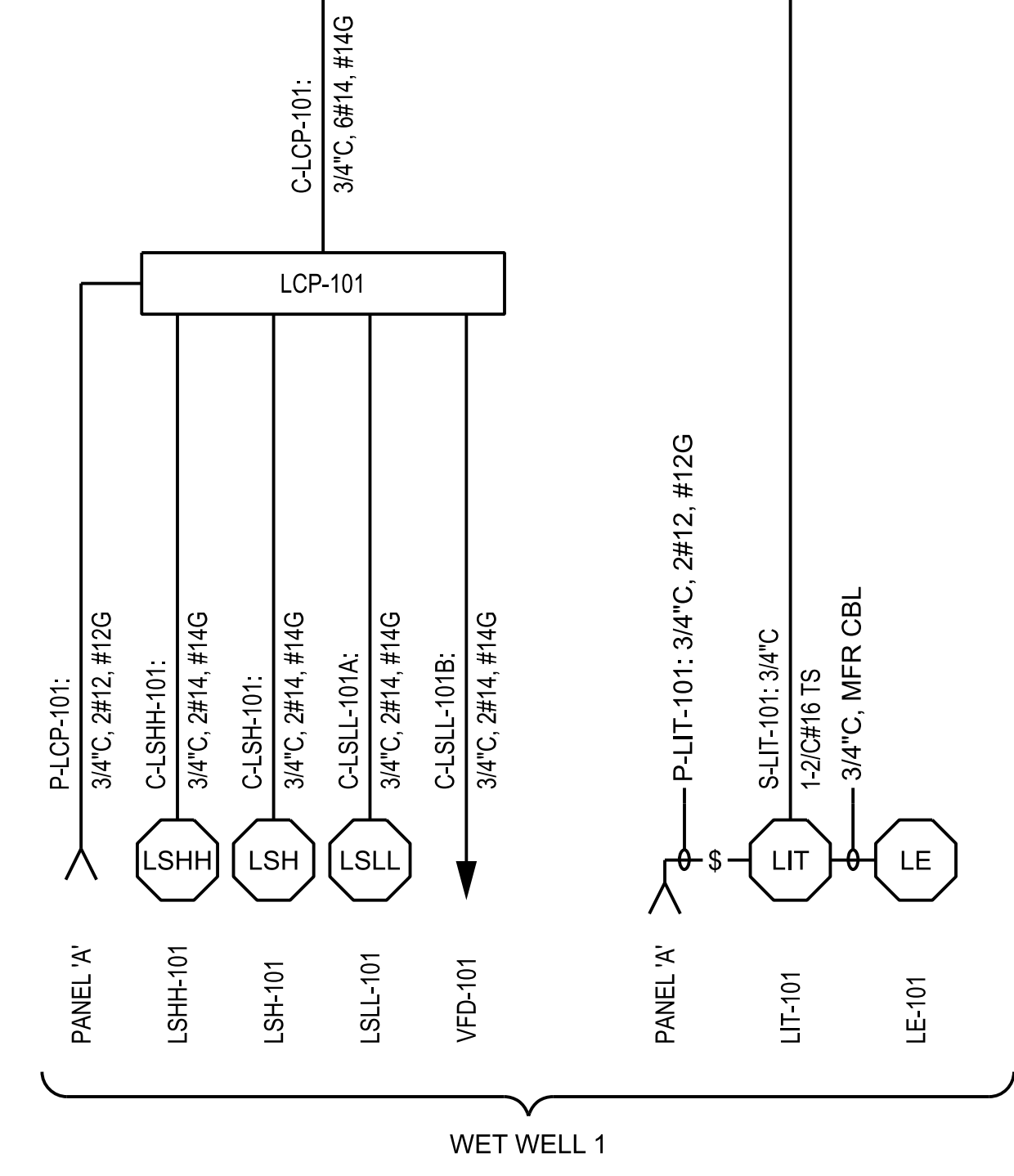
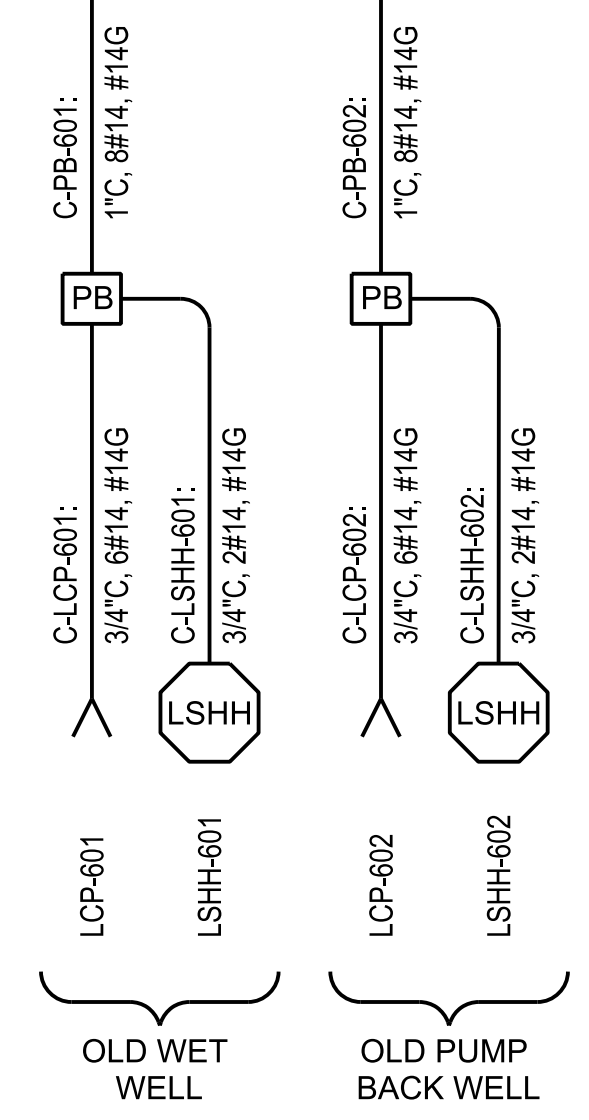
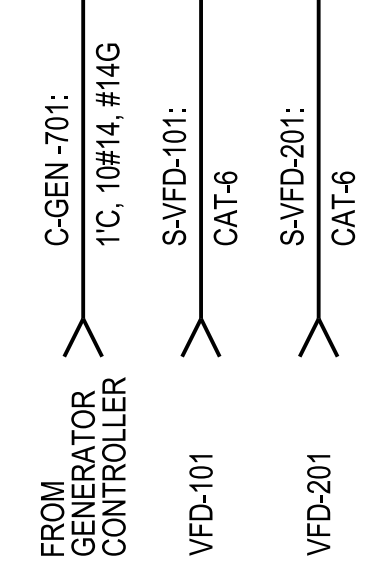
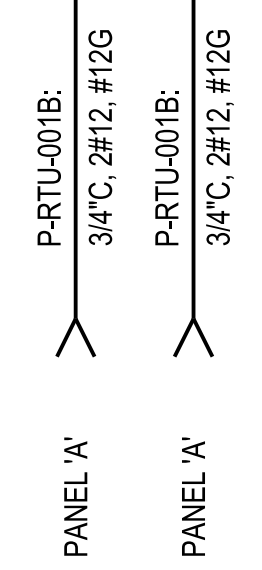
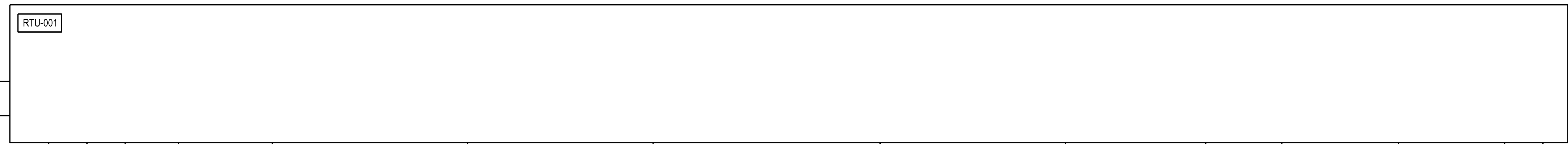
ELECTRICAL
ONE LINE DIAGRAM

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
E-010

SHEET NO.
20

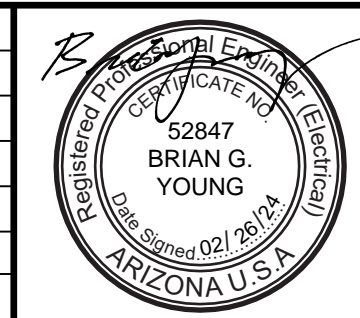


VERIFY SCALE

NO	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



DESIGN
T. ADAMS

DRAWN
D. LEWCHANIN

CHECKED
B. YOUNG

APPROVED
R. BRYANT

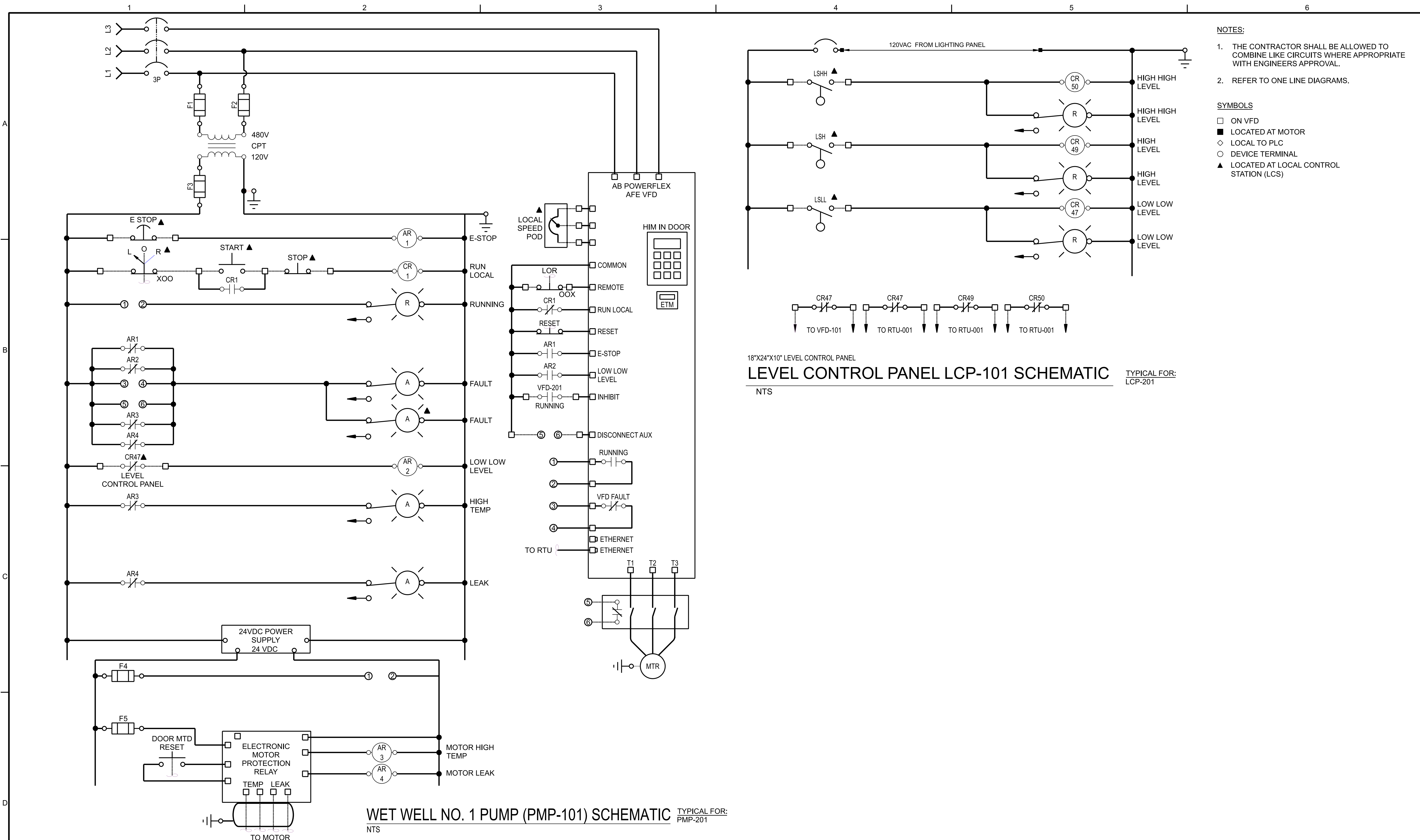


YAVAPAI HILLS
LIFT STATION

ELECTRICAL

BLOCK DIAGRAMS - 1

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	E-020
SHEET NO.	21



- NOTES:**
1. THE CONTRACTOR SHALL BE ALLOWED TO COMBINE LIKE CIRCUITS WHERE APPROPRIATE WITH ENGINEERS APPROVAL.
 2. REFER TO ONE LINE DIAGRAMS.

- SYMBOLS**
- ON VFD
 - LOCATED AT MOTOR
 - ◇ LOCAL TO PLC
 - DEVICE TERMINAL
 - ▲ LOCATED AT LOCAL CONTROL STATION (LCS)

18"X24"X10" LEVEL CONTROL PANEL
LEVEL CONTROL PANEL LCP-101 SCHEMATIC TYPICAL FOR: LCP-201
 NTS

WET WELL NO. 1 PUMP (PMP-101) SCHEMATIC TYPICAL FOR: PMP-201
 NTS

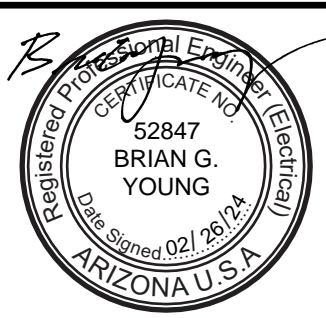
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YAVAPAI HILLS LIFT STATION

ELECTRICAL

SCHEMATICS - 1

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
E-030

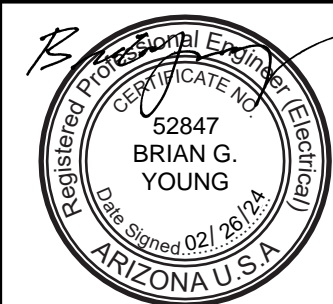
SHEET NO.
22

PANEL B															
100 AMP MAIN CIRCUIT BREAKER RATING				22 KA SHORT CIRCUIT RATING				LOCATION: STORAGE BUILDING							
100 AMP BUS RATING				ELECTRONIC GRADE: NO				ENCLOSURE: NEMA 1							
480/277 VOLTS				60 HZ				MOUNTING: SURFACE							
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER	NOTES		
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C				
1	PANEL A - TRANSFORMER (10kVA)	5.04			30/2		2								
3			5.04				4	SPARE				20/3			
5				1.18			6								
7	AIR COMPRESSOR	1.18			20/3		8	INTERIOR LIGHTING	0.86			20/1			
9			1.18				10	SITE LIGHTING		0.10		20/1			
11	QUARTZ HEATERS			2.00	25/1		12	BUILDING EXTERIOR/CANOPY LIGHTING			0.07	20/1			
13	SPACE						14	SPACE							
15	SPACE						16	SPACE							
17	SPACE						18	SPACE							
19	SPACE						20	SPACE							
SUM OF KVA (ODD):		6.220	6.220	3.180	TRANSFORMER KVA: 17 MIN		SUM OF KVA (EVEN):		0.860	0.100	0.070	25% OF LARGEST MOTOR:			
FEEDER KVA (ODD):		7.480	7.480	3.180			FEEDER KVA (EVEN):		1.075	0.125	0.088	KVA= 0.295			
						TOTAL FEEDER KVA:		19.723			TOTAL AMPS		24		
NOTES:						NOTES:									
1	PROVIDE LOCKING HARDWARE					2	PROVIDE LOCKING RED HARDWARE								
3	EQUIPMENT PROTECTION 30ma GFI					4	PERSONEL PROTECTION 5ma GFI								
5	BRANCH CIRCUIT WIRING: 3/4"C, 2#12, #12G					6	BRANCH CIRCUIT WIRING: 3/4"C, 2#10, #10G								
7	BRANCH CIRCUIT WIRING: 3/4"C, 3#12, #12G					8	BRANCH CIRCUIT WIRING: 3/4"C, 3#10, #10G								
9	BRANCH CIRCUIT WIRING: 1 1/2"C, 3#6, #10G					10									
11						12									

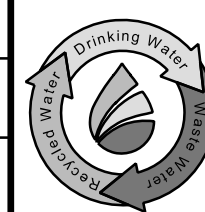
LIGHTING FIXTURE SCHEDULE			
TYPE	WATT	DESCRIPTION	MFR (OR APPROVED EQUAL)
C1	30	15" SQUARE, SEMI-RECESSED, LED CANOPY FIXTURE, 4,564 LUMEN, TYPE 5 DISTRIBUTION, DIE-CAST ALUMINUM, POWDER-COATED FINISH, ACRYLIC LENS, 277V, 0-10V DIMMING, 40K, 70 CRI, 10KV SURGE PROTECTION, IP65 LISTED.	HUBBELL OUTDOOR LIGHTING: VHS-30-4K7-UNV.
WE	18	WALL-MOUNTED LED, FULLY CUT-OFF WITH BACK BOX, 3000 LUMEN, 40K, 277V (MVOLT), EMERGENCY BATTERY BACKUP (CEC COMPLIANT), BUTTON TYPE PHOTOCELL FOR DUSK-TO-DAWN OPERATION, 6KV SURGE PROTECTION, BLACK FINISH, IP65 RATED, DARK-SKY COMPLIANT.	LITHONIA LIGHTING: ARC1 LED P3 40K MVOLT E4WH/PE/SPD6KV/DBLXD/WS BBW DBLXD.
L1	2x18	TWIN LED, FULLY CUT-OFF, POLE MOUNTED AREA LIGHT, 2x2212 LUMEN, T4 DISTRIBUTION, 277V (UNV), UL LISTED. IP 65 RATED. TYPE: P1 POLE.	VISIONAIRE LIGHTING: VSX-II T4 16LC 3 5K UNV SAM GY
P1	-	16 FOOT, SOFT SQUARE, NON-TAPERED ALUMINUM, HINGED BASE POLE. ARM CONFIGURATION: 180°	VALMONT STRUCTURES: S-160040406YH-D2-DCG

PANEL A															
100 AMP MAIN CIRCUIT BREAKER RATING				22 KA SHORT CIRCUIT RATING				LOCATION: STORAGE BUILDING							
100 AMP BUS RATING				ELECTRONIC GRADE: NO				ENCLOSURE:							
240/120 VOLTS				60 HZ				MOUNTING:							
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER	NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER	NOTES		
		PHASE A	PHASE B	PHASE C					PHASE A	PHASE B	PHASE C				
1	STBY GENERATOR	2.88			30/2		2	RECEPTACLES	0.90			20/1			
3	ACCESSORY PANEL		2.88				4	SPARE				20/1			
5	RTU-001(A)	1.20			20/1		6	SPARE				20/1			
7	RTU-001(B)		1.92		20/1		8	P-LIT-101		0.25		20/1			
9	SPARE				30/2		10	P-LIT-201	0.25			20/1			
11							12	P-FIT-301		0.15		20/1			
13	WEST SECURITY GATE	0.18			20/2		14	EAST SECURITY GATE	0.18			20/2			
15			0.18				16		0.18						
17	LCP-101	0.20			20/1		18	LCP-201	0.20			20/1			
19	SPACE				/1		20	SPACE				/1			
21	SPACE				/1		22	SPACE				/1			
23	SPACE				/1		24	SPACE				/1			
SUM OF KVA (ODD):		4.460	4.980		TRANSFORMER KVA: 12 MIN		SUM OF KVA (EVEN):		1.530	0.580		25% OF LARGEST MOTOR:			
FEEDER KVA (ODD):		5.530	6.180				FEEDER KVA (EVEN):		1.868	0.680		KVA= 0.045			
						TOTAL FEEDER KVA:		14.303			TOTAL AMPS		60		
NOTES:						NOTES:									
1	PROVIDE LOCKING HARDWARE					2	PROVIDE LOCKING RED HARDWARE								
3	EQUIPMENT PROTECTION 30ma GFI					4	PERSONEL PROTECTION 5ma GFI								
5	BRANCH CIRCUIT WIRING: 3/4"C, 2#12, #12G					6	BRANCH CIRCUIT WIRING: 3/4"C, 2#10, #12G								
7	BRANCH CIRCUIT WIRING: 3/4"C, 3#12, #12G					8	BRANCH CIRCUIT WIRING: 3/4"C, 2#10, #10G								
9						10									
11						12									

VERIFY SCALE					
BAR IS ONE INCH ON ORIGINAL DRAWING					
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY					
NO	DATE	REVISION	BY	APVD	



DESIGN
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R. BRYANT



WATERWORKS
ENGINEERS

SCOTTSDALE, AZ

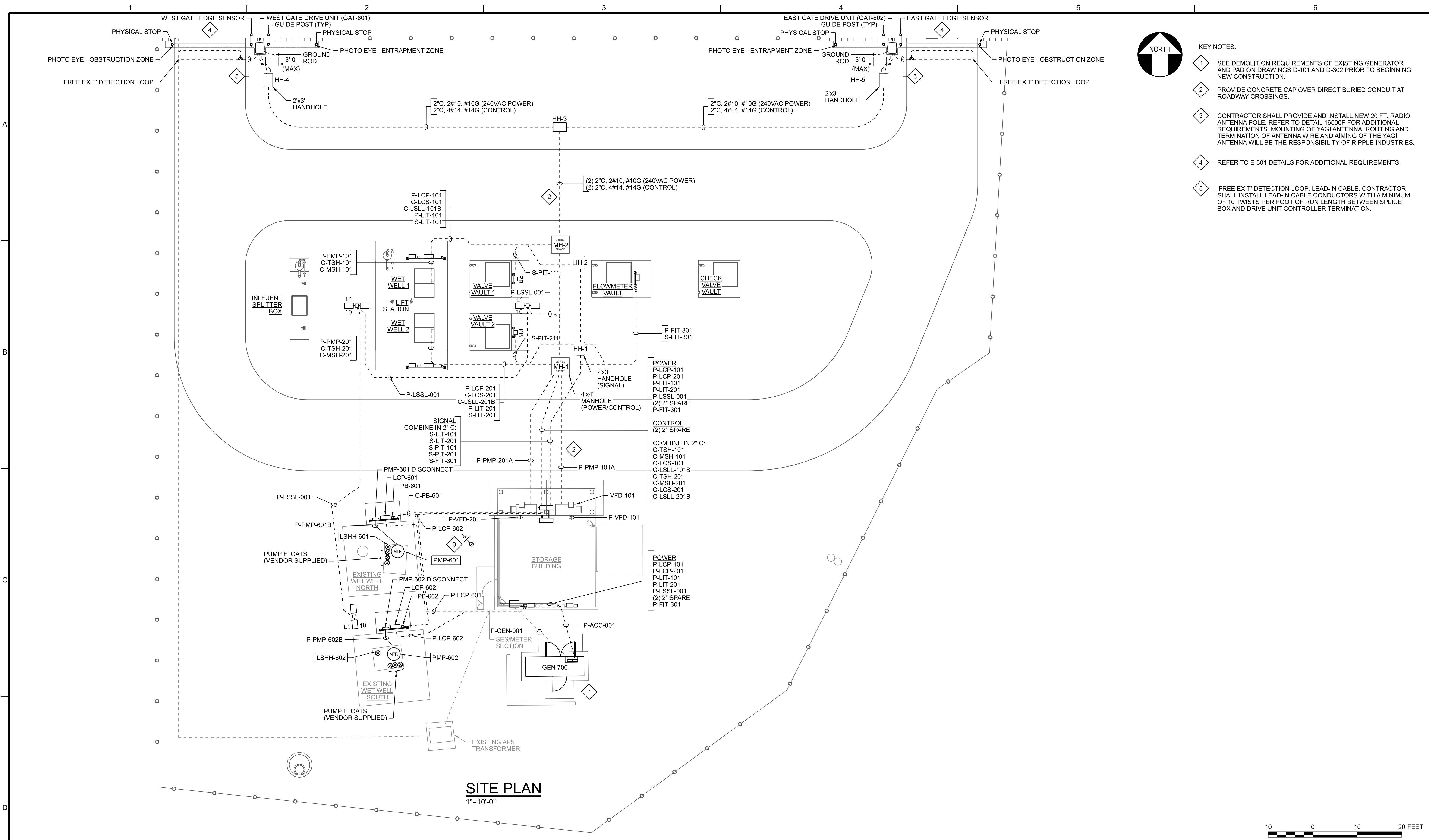


YAVAPAI HILLS
LIFT STATION

ELECTRICAL

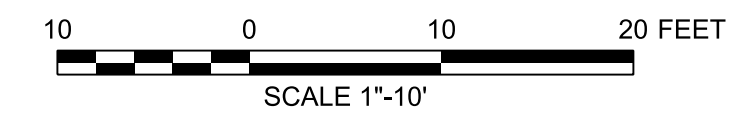
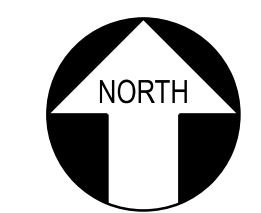
SCHEDULES - 1

DATE
FEBRUARY 2024
PROJECT NO.
21-064
DRAWING NO.
E-040
SHEET NO.
23



SITE PLAN
1"=10'-0"

- KEY NOTES:**
- 1 SEE DEMOLITION REQUIREMENTS OF EXISTING GENERATOR AND PAD ON DRAWINGS D-101 AND D-302 PRIOR TO BEGINNING NEW CONSTRUCTION.
 - 2 PROVIDE CONCRETE CAP OVER DIRECT BURIED CONDUIT AT ROADWAY CROSSINGS.
 - 3 CONTRACTOR SHALL PROVIDE AND INSTALL NEW 20 FT. RADIO ANTENNA POLE. REFER TO DETAIL 16500P FOR ADDITIONAL REQUIREMENTS. MOUNTING OF YAGI ANTENNA, ROUTING AND TERMINATION OF ANTENNA WIRE AND AIMING OF THE YAGI ANTENNA WILL BE THE RESPONSIBILITY OF RIPPLE INDUSTRIES.
 - 4 REFER TO E-301 DETAILS FOR ADDITIONAL REQUIREMENTS.
 - 5 'FREE EXIT' DETECTION LOOP. LEAD-IN CABLE. CONTRACTOR SHALL INSTALL LEAD-IN CABLE CONDUCTORS WITH A MINIMUM OF 10 TWISTS PER FOOT OF RUN LENGTH BETWEEN SPLICE BOX AND DRIVE UNIT CONTROLLER TERMINATION.



VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO	DATE	REVISION	BY	APVD

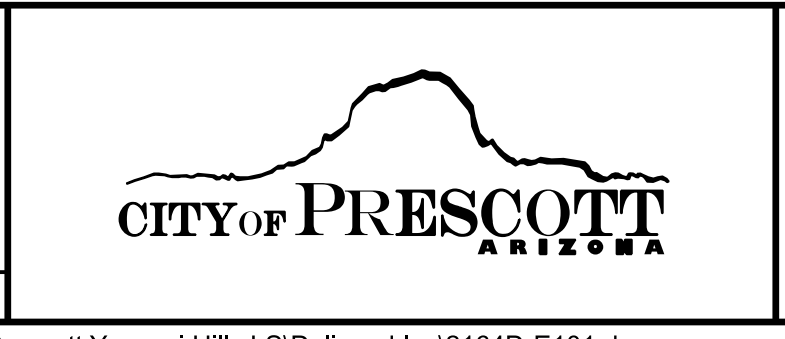


DESIGN
T. ADAMS

DRAWN
D. LEWCHANIN

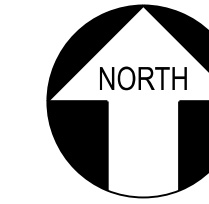
CHECKED
B. YOUNG

APPROVED
R. BRYANT



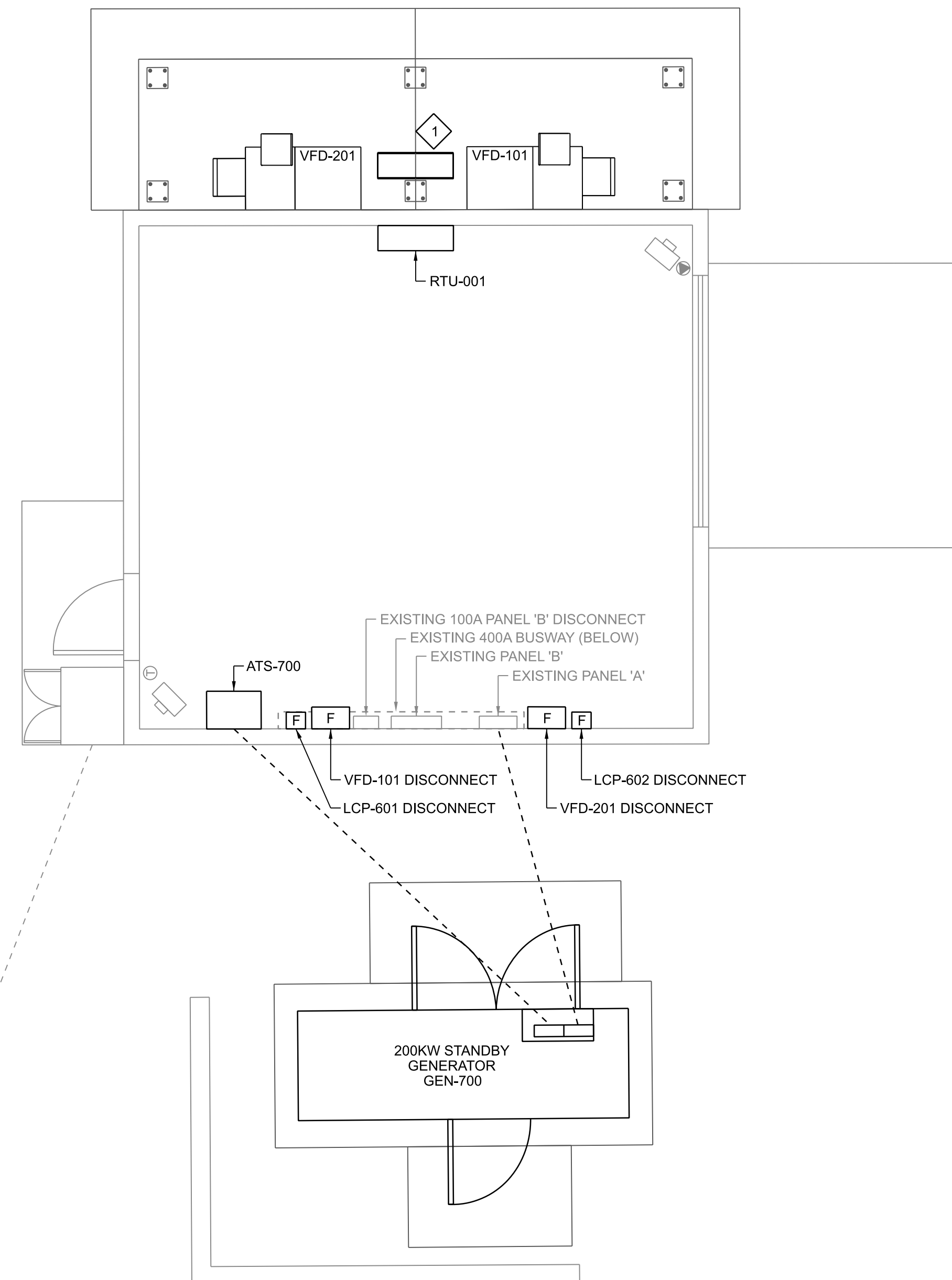
YAVAPAI HILLS
LIFT STATION

ELECTRICAL SITE PLAN	DATE FEBRUARY 2024
	PROJECT NO. 21-064
	DRAWING NO. E-101
	SHEET NO. 24

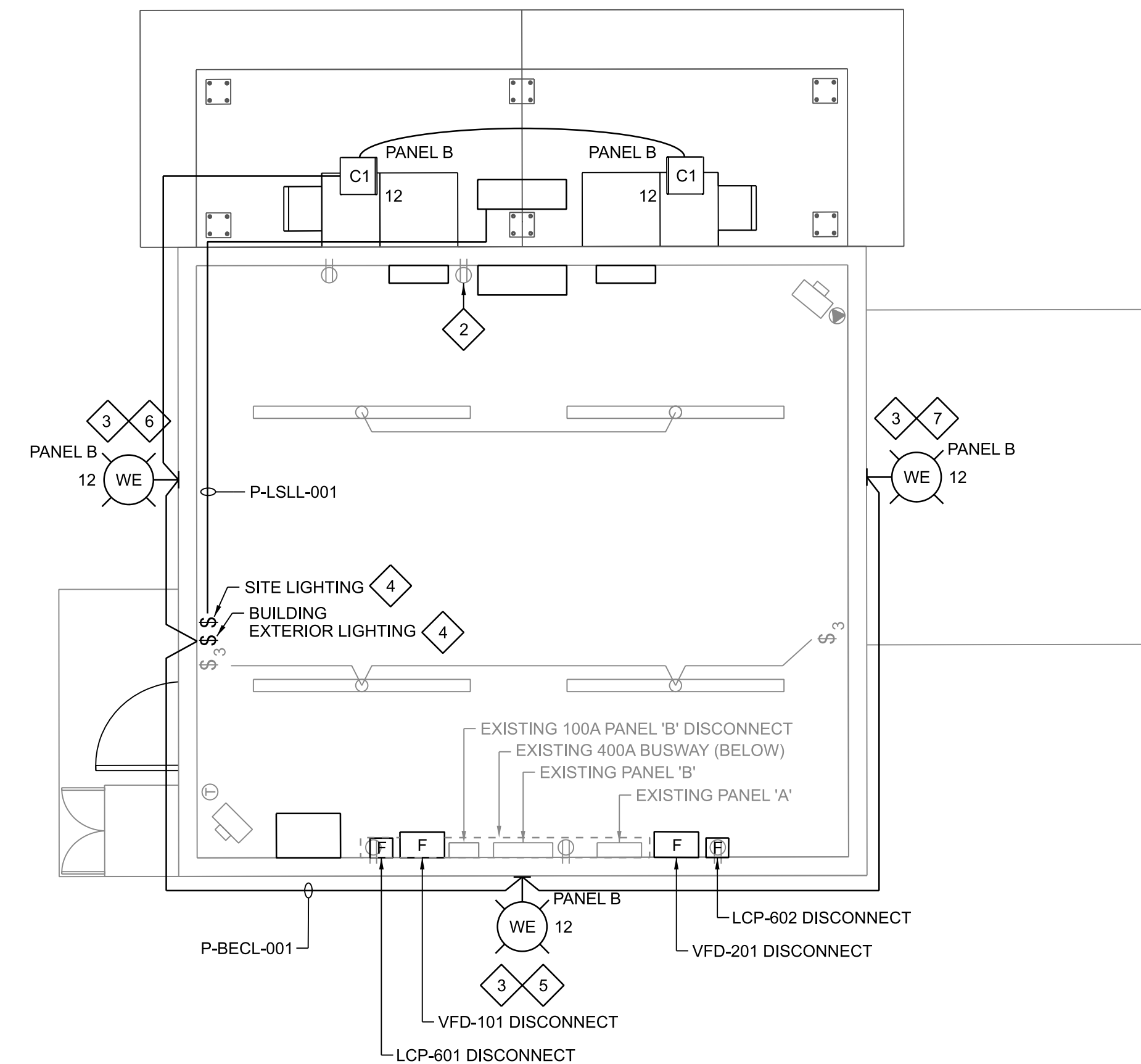


KEY NOTES:

- 1 PROVIDE NEMA 3R WIREWAY MOUNTED ABOVE VFD ENCLOSURES FOR ROUTING OF POWER, CONTROL AND SIGNAL CABLE AND WIRES (P/C & S).
- 2 RELOCATED EXISTING RECEPTACLE. REFER TO DEMOLITION NOTE D7 ON DRAWING ED-002 FOR REQUIREMENTS PRIOR TO BEGINNING NEW WORK IN THIS AREA. SEE ALSO DEMOLITION NOTE D8.
- 3 PROVIDE UN-SWITCHED HOT LEG BACK TO SOURCE FOR FIXTURE'S EMERGENCY DRIVER.
- 4 PROVIDE HEAVY-DUTY, 120/277V SWITCH.
- 5 MOUNT FIXTURE CENTERED ON WALL @ 9'-8 1/2" A.F.F..
- 6 MOUNT FIXTURE CENTERED ON WALL @ 7'-4 1/2" A.F.G..
- 7 MOUNT FIXTURE CENTERED @ 4 1/2" OVER GARAGE DOOR ROUGH OPENING.

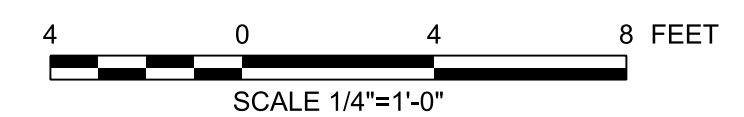


**STORAGE BUILDING
POWER PLAN**
1/4" = 1'-0"

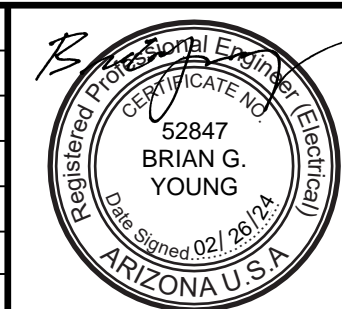


**STORAGE BUILDING
LIGHTING PLAN**
1/4" = 1'-0"

REFER TO E-101 FOR CONTINUATION



NO	DATE	REVISION	BY	APVD



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D. LEWCHANIN
CHECKED
B. YOUNG
APPROVED
R. BRYANT



**WATERWORKS
ENGINEERS**

SCOTTSDALE, AZ



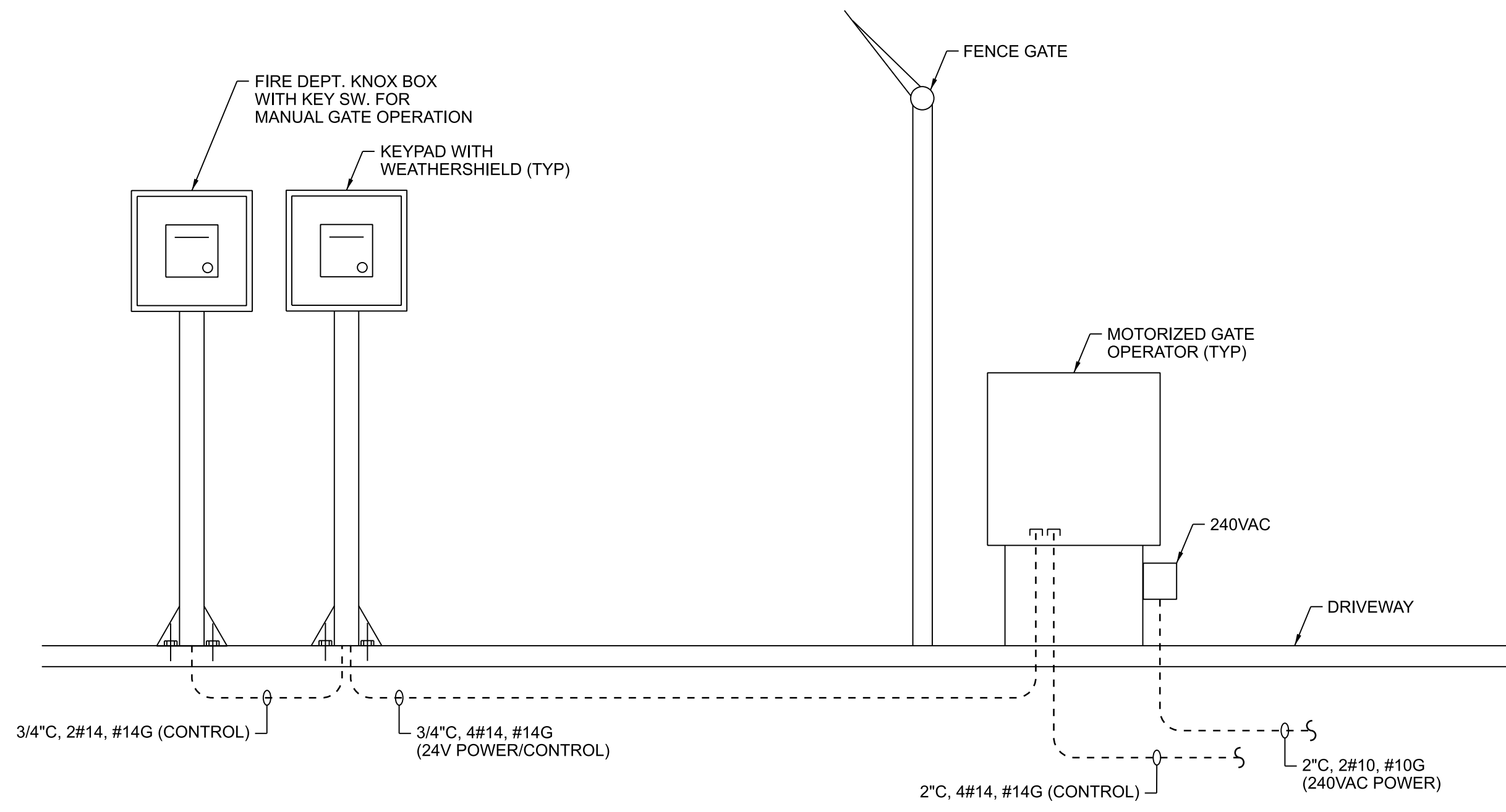
YAVAPAI HILLS
LIFT STATION

STORAGE BUILDING ENLARGED
POWER AND LIGHTING PLANS

ELECTRICAL

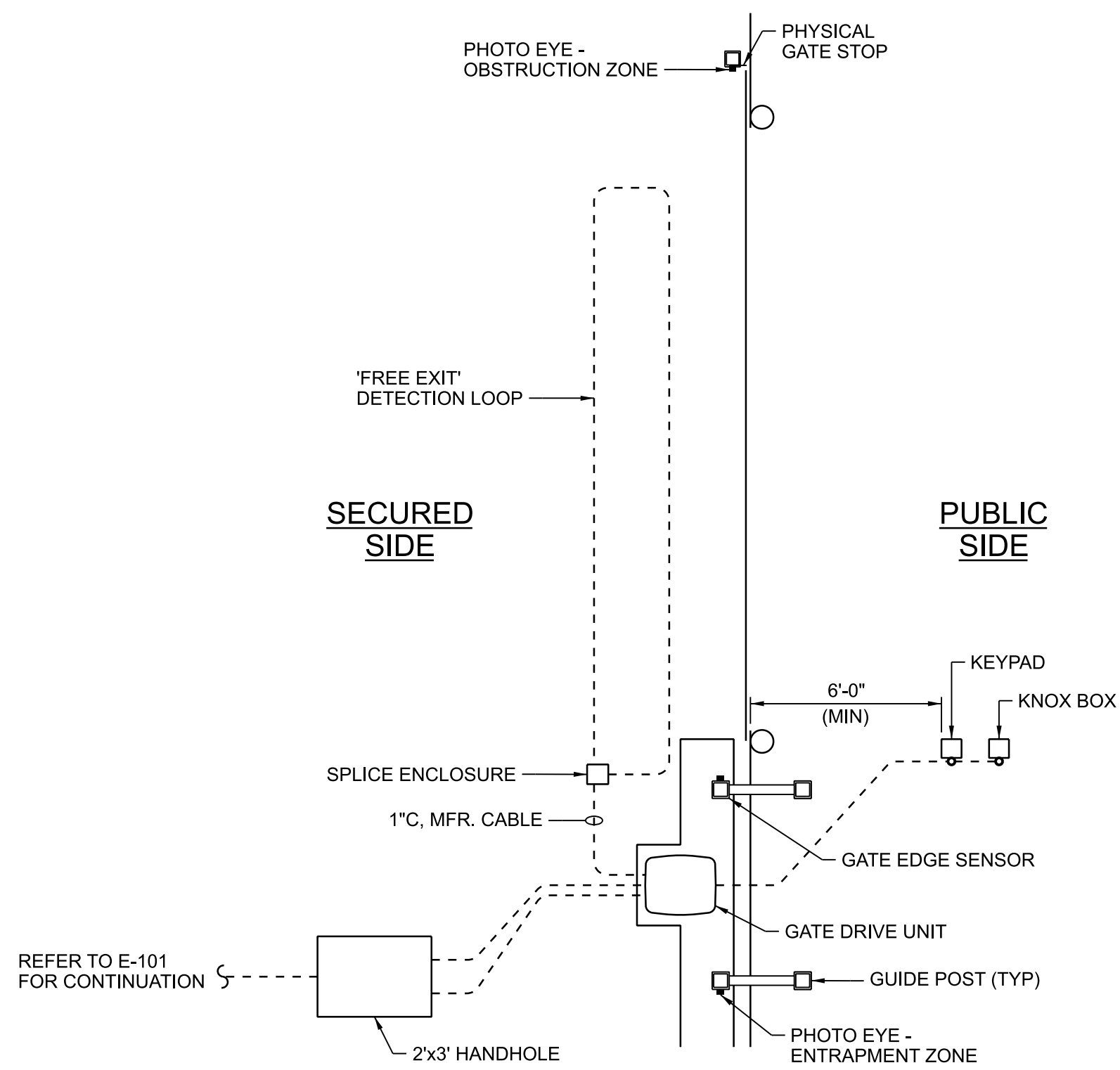
DATE
FEBRUARY 2024

PROJECT NO.
21-064
DRAWING NO.
E-102
SHEET NO.
25



TYPICAL ENTRANCE GATE DETAIL

NTS



ENTRANCE GATE PLAN

NTS

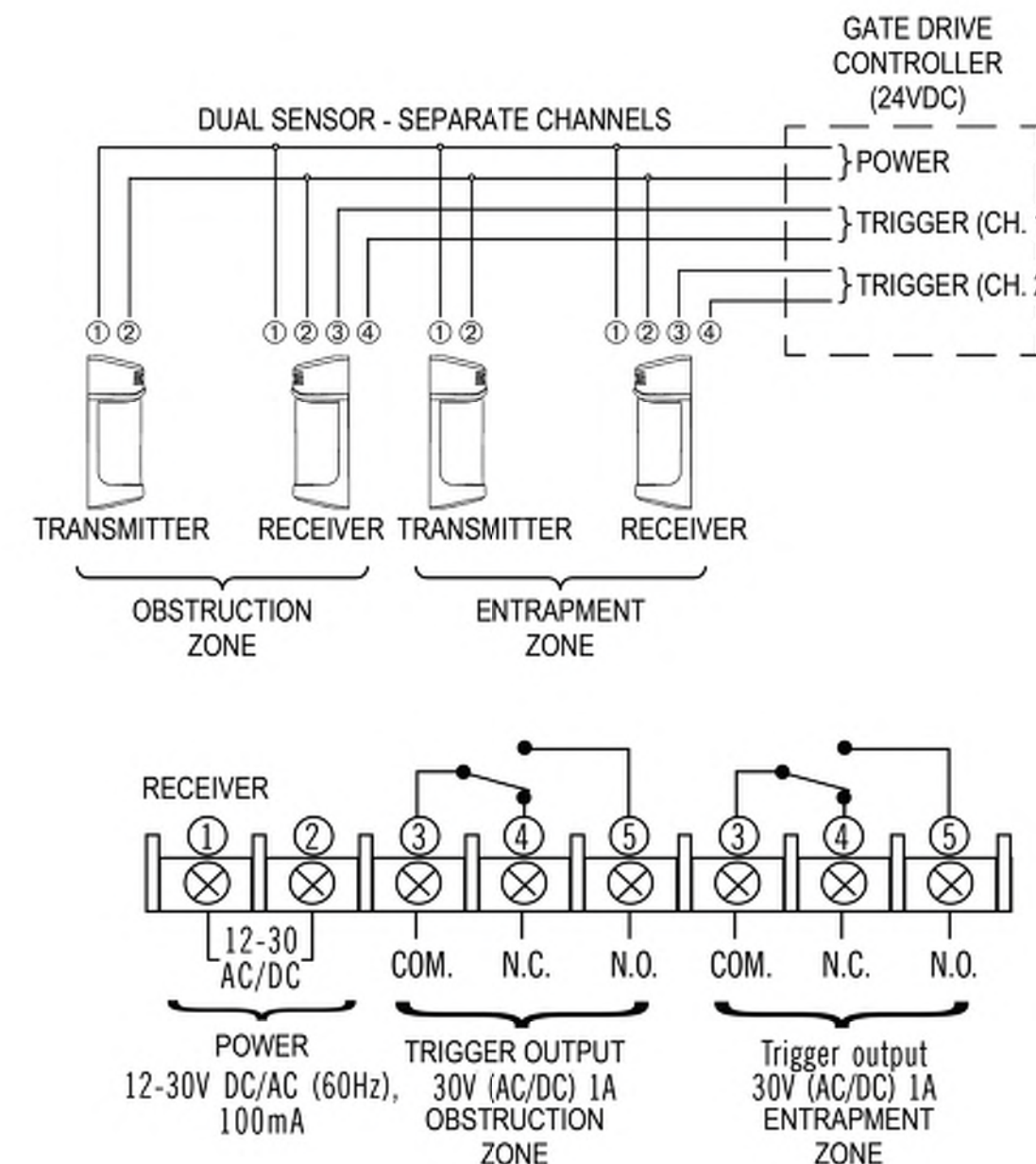
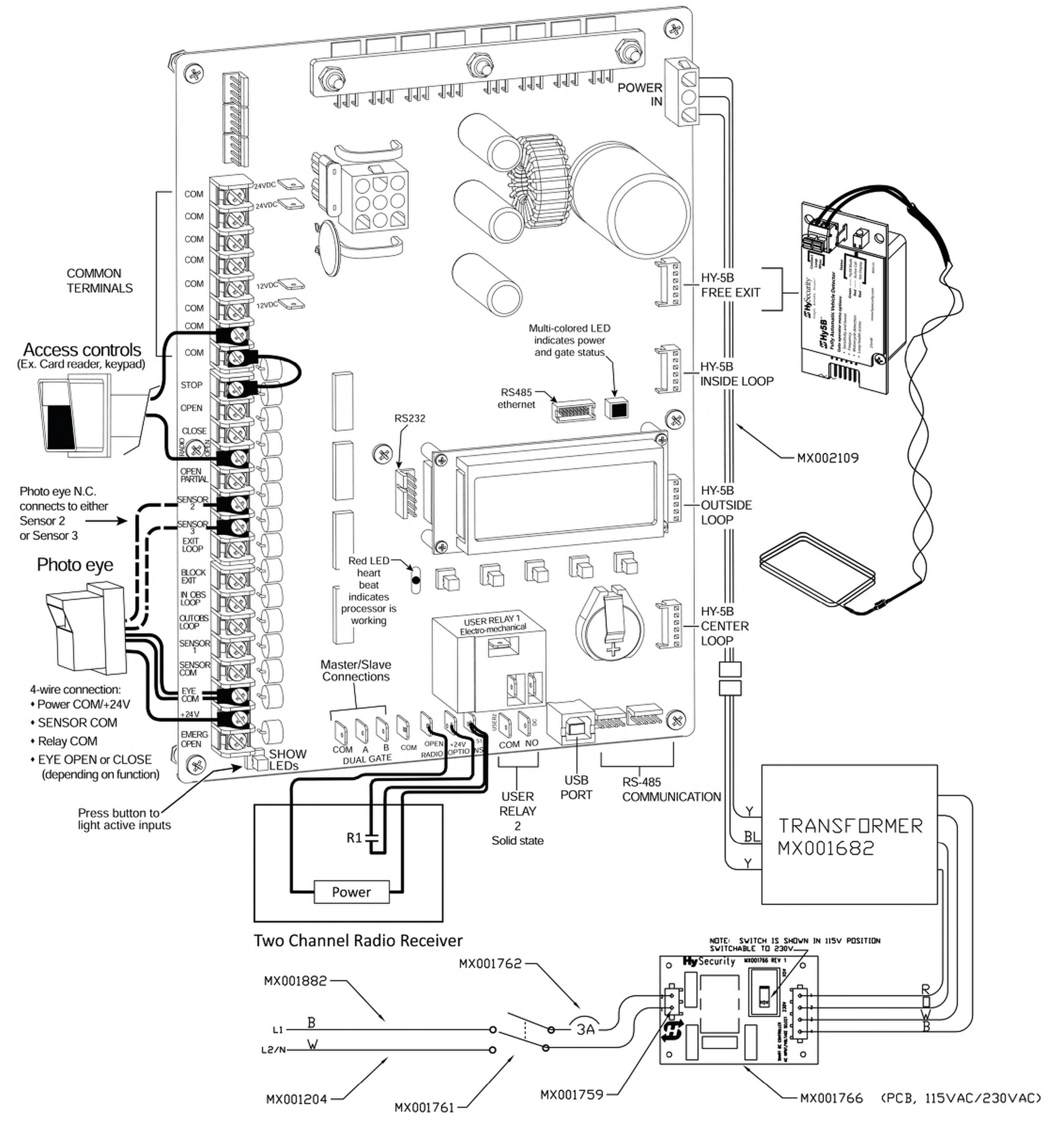


PHOTO EYE WIRING DIAGRAMS

NTS



GATE DRIVE CONTROLLER WIRING DIAGRAM

NTS

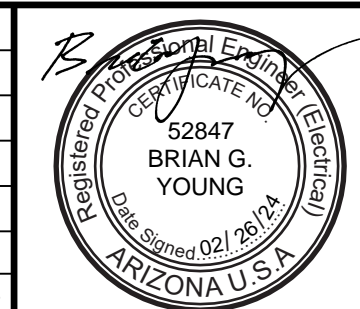
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO.	DATE	REVISION	BY	APVD



DESIGN
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DRAWN
D. LEWCHANIN

CHECKED
B. YOUNG

APPROVED
R. BRYANT



YAVAPAI HILLS
LIFT STATION

ELECTRICAL

DETAILS - 1

DATE
FEBRUARY 2024

PROJECT NO.
21-064

DRAWING NO.
E-301

SHEET NO.
27

PROCESS LINES

LINE WEIGHT, COLOR & LINE TYPE	DESCRIPTION:
	PRIMARY PROCESS LINE
	PRIMARY PROCESS LINE (DEMO)
	PRIMARY PROCESS LINE (FUTURE)
	PRIMARY PROCESS LINE (VENDOR SUPPLIED)
	PRIMARY PROCESS LINE (EXIST)
	SECONDARY PROCESS LINE
	SECONDARY PROCESS LINE (DEMO)
	SECONDARY PROCESS LINE (FUTURE)
	SECONDARY PROCESS LINE (VENDOR SUPPLIED)
	SECONDARY PROCESS LINE (EXIST)
	AUXILIARY / TERTIARY PROCESS LINE
	AUXILIARY / TERTIARY PROCESS LINE (DEMO)
	AUXILIARY / TERTIARY PROCESS LINE (FUTURE)
	AUXILIARY / TERTIARY PROCESS LINE (VENDOR SUPPLIED)
	AUXILIARY / TERTIARY PROCESS LINE (EXIST)
	HEAT TRACE
	INSTRUMENT SUPPLY / CONNECTION TO PROCESS
	CAPILLARY SIGNAL
	ELECTRICAL SIGNAL
	CAT 5E ETHERNET SIGNAL
	FIBER OPTIC SIGNAL
	HYDRAULIC SIGNAL
	MECHANICAL LINK SIGNAL
	PNEUMATIC SIGNAL
	SOFTWARE SIGNAL

PROCESS SYMBOLS

SYMBOL	DESCRIPTION:
	SIGNAL LINE BREAK
	PROCESS LINE BREAK
	SECONDARILY CONTAINED PIPING
	BOX INDICATING FUNCTIONAL GROUPS OR EQUIPMENT THAT REPEATS
	ARROW INDICATES DIRECTION OF PROCESS FLOW
	ARROW INDICATES DIRECTION OF SIGNAL FLOW
	SIGNAL CONNECTION POINT
	PROCESS LINES CROSSING (NOT CONNECTED)
	PROCESS LINES CROSSING (CONNECTED)
	PROCESS GOING TO ANOTHER SHEET (MATCH LETTERS)
	PROCESS LINE FROM ANOTHER SHEET (MATCH LETTERS)
	SIGNAL GOING TO ANOTHER SHEET (MATCH NUMBERS)
	SIGNAL LINE FROM ANOTHER SHEET (MATCH NUMBERS)
	PROCESS LINE CONTINUED OUTSIDE SCOPE OF DRAWINGS
	ANALOG SIGNAL IN
	ANALOG SIGNAL OUT
	DISCRETE SIGNAL IN
	DISCRETE SIGNAL OUT
	PULSED SIGNAL IN
	FLOAT SWITCH
	LIQUID LEVEL / SURFACE
	PIPE SPEC CHANGE
	INSTRUMENT POWER SUPPLY
	RADIO ANTENNA

ISA INSTRUMENT SYMBOLS & IDENTIFICATION

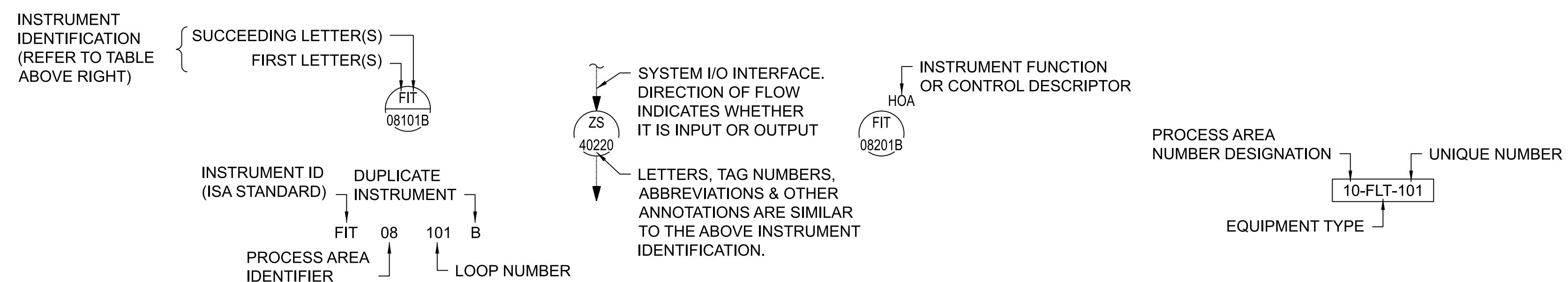
	FIRST LETTERS		SUCCEEDING LETTERS		
	MEASURE / INITIATING VARIABLE	VARIABLE MODIFIER	READOUT / PASSIVE FUNCTION	OUTPUT / ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	CLOSE
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE				MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X-AXIS	ACCESSORY DEVICE, UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

GENERAL INSTRUMENT & DIGITAL INTERFACE SYMBOLS

	FIELD MOUNTED INSTRUMENT	PANEL MOUNTED INSTRUMENT	MCC MOUNTED INSTRUMENT	INACCESSIBLE INSTRUMENT
DISCRETE INSTRUMENTS				
SHARED DISPLAY SHARED CONTROL				
COMPUTER FUNCTION				
PROGRAMMABLE LOGIC CONTROL				

	INSTRUMENT WITH LONG LOOP NUMBER		PURGE OR FLUSHING DEVICE
	INSTRUMENTS SHARING A COMMON HOUSING		REST FOR LATCH-TYPE ACTUATOR
	PILOT LIGHT PANEL MOUNTED		DIAPHRAGM SEAL
	PILOT LIGHT FIELD MOUNTED		UNDEFINED INTERLOCK LOGIC
	PANEL MOUNTED PATCH BOARD POINT 10		ULTRA SONIC
	RADAR		SAMPLE POINT

INSTRUMENT TAG NUMBERING SYSTEM



NO	DATE	REVISION	BY	APVD



DESIGN T. ADAMS
DRAWN D. LEWCHANIN
CHECKED B. YOUNG
APPROVED R. BRYANT



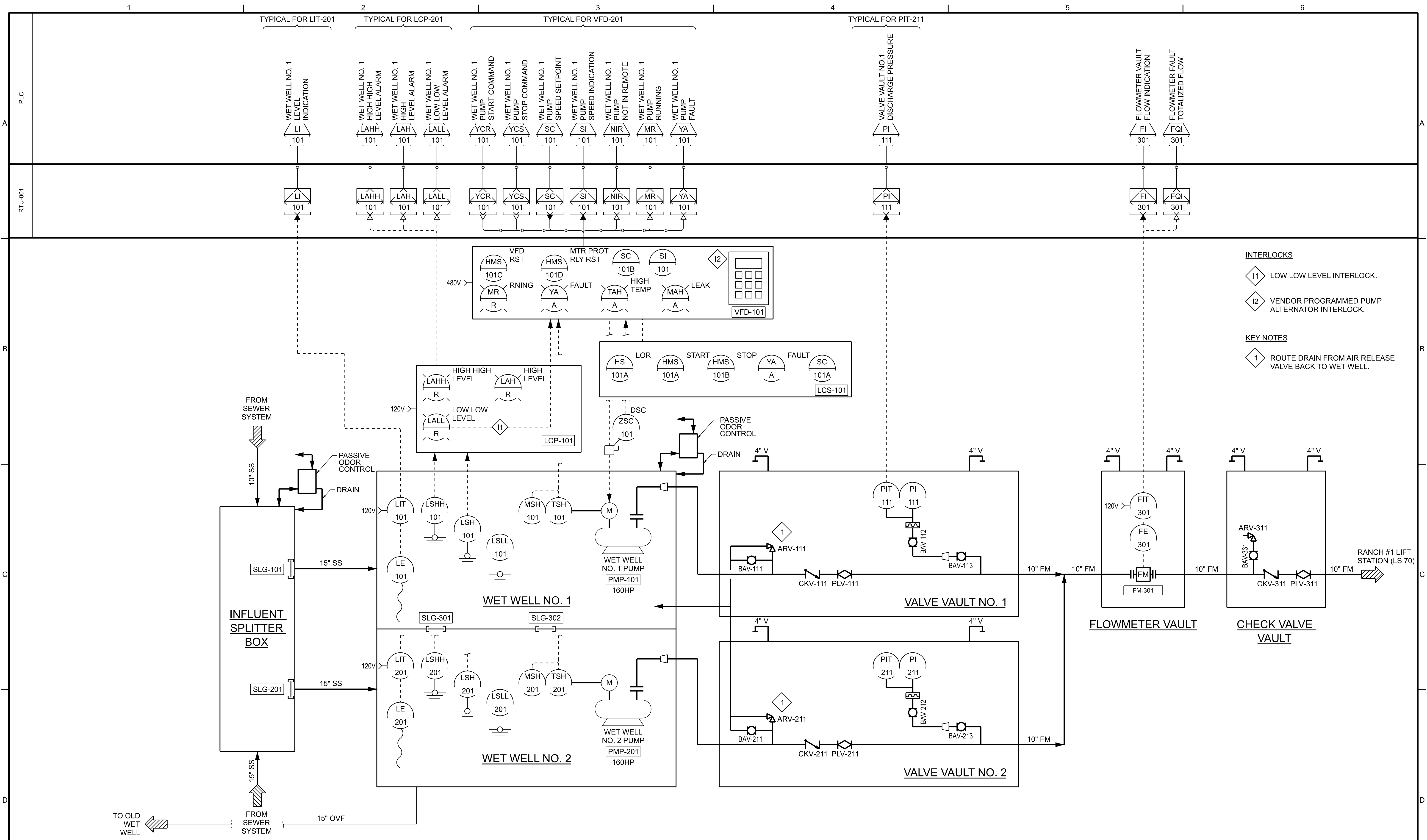
YAVAPAI HILLS
LIFT STATION

INSTRUMENTATION
SYMBOLS AND LEGENDS

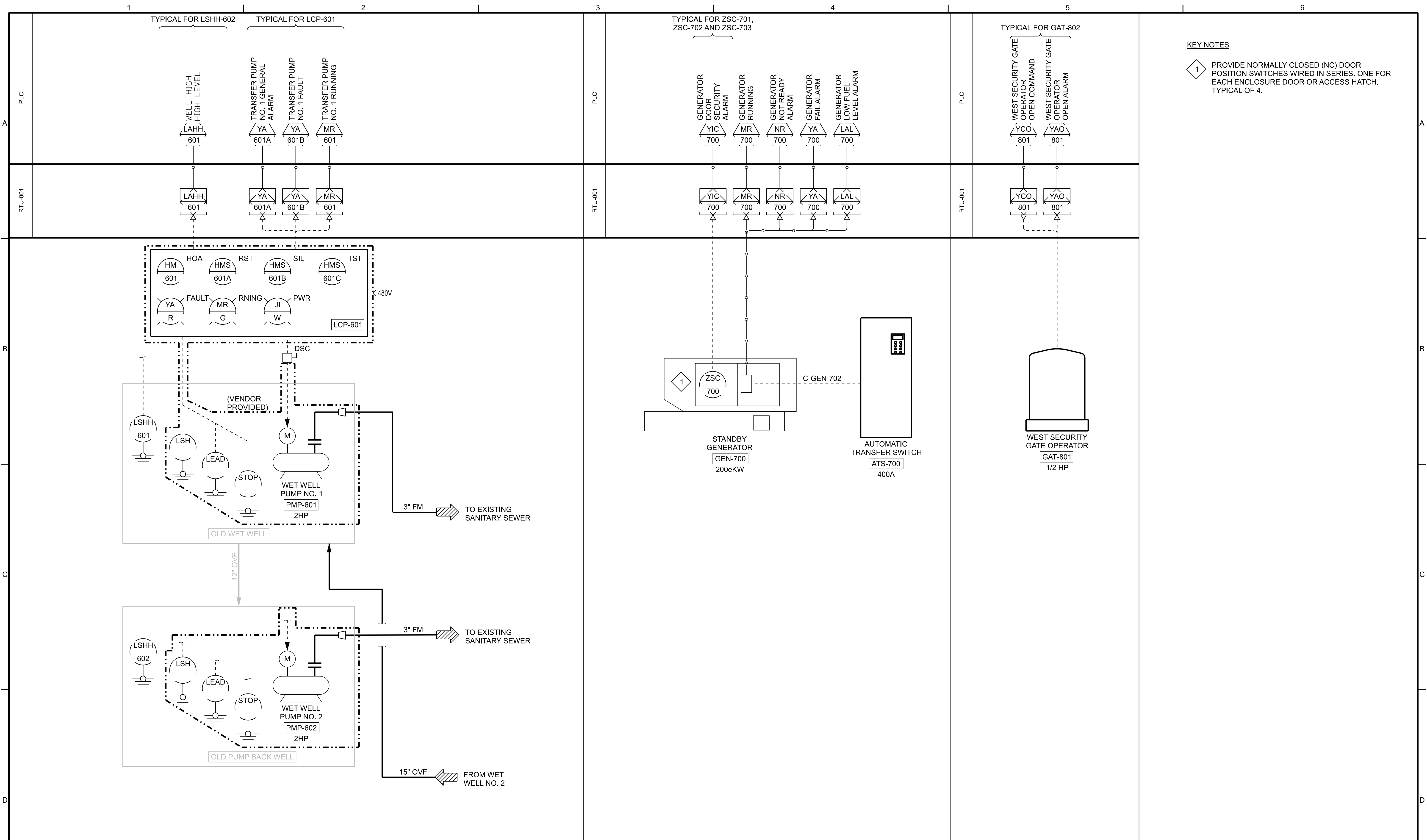
DATE FEBRUARY 2024
PROJECT NO. 21-064
DRAWING NO. N-001
SHEET NO. 28

PROCESS VALVES		PROCESS VALVES (CONT.)		PROCESS FITTINGS & DEVICES		PROCESS EQUIPMENT (CONT.)		PROCESS EQUIPMENT (CONT.)		PROCESS EQUIPMENT	
SYMBOL	DESCRIPTION:	SYMBOL	DESCRIPTION:	SYMBOL	DESCRIPTION:	SYMBOL	DESCRIPTION:	SYMBOL	DESCRIPTION:	SYMBOL	DESCRIPTION:
ARV-### 	AIR RELIEF VALVE	CHK-### 	SILENT CHECK VALVE		BLIND FLANGE		FINE SCREEN		EQUIPMENT MOTOR		AIR INTAKE FILTER
AVV-### 	AIR VACUUM VALVE	CHK-### 	CHECK VALVE]	PIPE CAP		EXPANSION COUPLING		HEAT EXCHANGER		AUTO STRAINER
BFP-### 	BACKFLOW PREVENTER VALVE	TV-### 	TELESCOPING VALVE		FLEXIBLE COUPLING		DIAPHRAGM SEAL		BOILER		BASKET STRAINER
BPRV-### 	BACK PRESSURE REDUCING VALVE		SLIDE GATE / KNIFE GATE		DRAIN		GAUGE		CENTRIFUGE		FILTER
BCV-### 	BALL CHECK VALVE		STOP LOG		DOUBLE CONTAINMENT PIPE		NOZZLE		DUMPSTER		FLOW METER (MAGNETIC)
BAV-### NO BAV-### NC 	BALL VALVE NO = NORMALLY OPEN NC = NORMALLY CLOSED		WEIR		DIFFUSER		EJECTOR		SAFETY SHOWER / EYEWASH STATION		MIXER
BFV-### 	BUTTERFLY VALVE	M			ORIFICE PLATE		CALIBRATION COLUMN		AXIAL FLOW PUMP		BACK DRAFT DAMPER
CARV-### 	COMBINATION AIR RELIEF / AIR VACUUM VALVE	P			PILOT TUBE		WASTE GAS BURNER		GRIT BASIN		BAR RACK
CRP-### 	CORPORATION STOP VALVE	S			PULSATION DAMPER		INJECTION QUILL		GRIT CLASSIFIER WITH CONCENTRATOR		COARSE SCREEN
DPB-### 	DIAPHRAGM VALVE	PROCESS FITTINGS & DEVICES (CONT.)			QUICK CONNECTOR COUPLING WITH CAP		PROGRESSIVE CAVITY PUMP		COARSE GRIT SCREEN		
CHK-### 	DUAL DISK SWING CHECK VALVE	SYMBOL	DESCRIPTION:		QUICK CONNECTOR COUPLING		SUBMERSIBLE PUMP		VERTICAL TURBINE PUMP		
CHK-### 	DUCK BILL CHECK VALVE		SIGHT GLASS		QUICK CONNECTOR COUPLING (FEMALE)		CENTRIFUGAL PUMP				
GAV-### NO GAV-### NC 	GATE VALVE NO = NORMALLY OPEN NC = NORMALLY CLOSED		SILENCER		QUICK CONNECTOR COUPLING (MALE)		METERING PUMP				
GLV-### NO GLV-### NC 	GLOBE VALVE NO = NORMALLY OPEN NC = NORMALLY CLOSED		STATIC MIXER		REDUCER, CONCENTRIC		PERISTALTIC PUMP				
MV-### 	MUD VALVE		SONIC FLOW ELEMENT		REDUCER, ECCENTRIC		CENTRIFUGAL BLOWER				
MPV-### 	MULTI-PORT VALVE(S)		SPRAY BAR		ROTAMETER		BLOWER FAN				
NV-### 	NEEDLE VALVE		TARGET TYPE FLOW ELEMENT		ROTAMETER WITH NEEDLE VALVE		COMPRESSOR POSITIVE DISPLACEMENT				
PV-### 	PINCH VALVE		TOTALIZING ELEMENT: POSITIVE DISPLACEMENT FLOW								
PLV-### NO PLV-### NC 	PLUG VALVE NO = NORMALLY OPEN NC = NORMALLY CLOSED		TURBINE / PROPELLER FLOW ELEMENT								
PRV-### 	PRESSURE RELIEF VALVE		UNION								
PRV-### 	PRESSURE REGULATING VALVE		VENT								
RDV-### 	RUPTURE DISK (PRESSURE RELEASE)		VENTURI TUBE								
RDV-### 	RUPTURE DISK (VACUUM RELEASE)		Y-STRAINER								
			CLEAN OUT								

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0" 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	NO	DATE	REVISION	BY	APVD		DESIGN T. ADAMS	WATERWORKS ENGINEERS SCOTTSDALE, AZ	CITY OF PRESCOTT ARIZONA	YAVAPAI HILLS LIFT STATION	INSTRUMENTATION		SYMBOLS AND ABBREVIATIONS	DATE FEBRUARY 2024
											PROJECT NO. 21-064			
											DRAWING NO. N-002			
											SHEET NO. 29			



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	PROJECT NO. 21-064 DRAWING NO. N-601 SHEET NO. 30											



KEY NOTES

1 PROVIDE NORMALLY CLOSED (NC) DOOR POSITION SWITCHES WIRED IN SERIES. ONE FOR EACH ENCLOSURE DOOR OR ACCESS HATCH. TYPICAL OF 4.

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

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NO.	DATE	REVISION	BY	APVD



DESIGN	T. ADAMS
DRAWN	C. YOUNG
CHECKED	B. YOUNG
APPROVED	R. BRYANT



YAVAPAI HILLS
LIFT STATION

INSTRUMENTATION

PRESCOTT YAVAPAI HILLS
LIFT STATION P&ID

DATE	FEBRUARY 2024
PROJECT NO.	21-064
DRAWING NO.	N-602
SHEET NO.	31