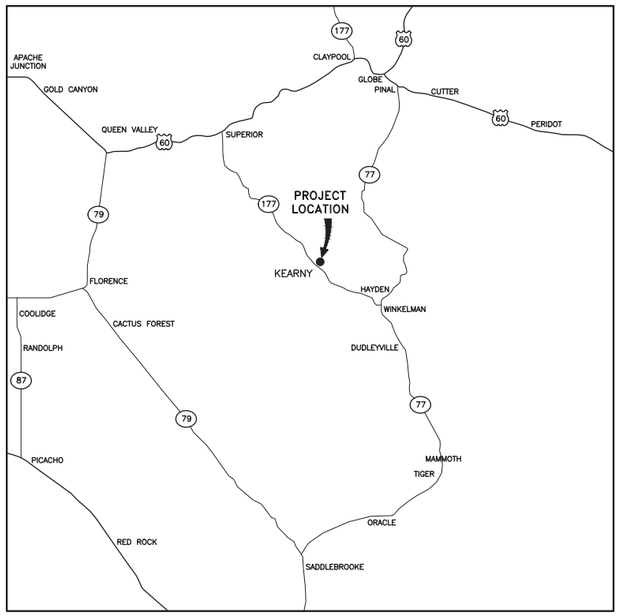
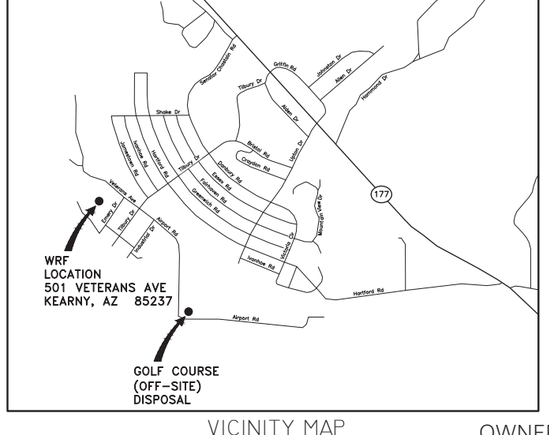
TOWN OF KEARNY
DEPARTMENT OF PUBLIC WORKS

PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

ISSUED FOR CONSTRUCTION
JUNE 2026



LOCATION MAP
SCALE:NTS



VICINITY MAP
SCALE:NTS

MAYOR
CURTIS STACY

VICE MAYOR
ALEYNIA BOATMAN

COUNCIL MEMBERS
THOMAS O'CONNOR
JACKIE JACKELS
ALEYNIA BOATMAN
BRIAN COLEMAN
DAVID HERRERA

BASIS OF BEARING
THE BASIS OF BEARING AND ALL MONUMENTATION SHOWN HEREON IS BASED ON THE SOUTHWESTERLY LINE OF APN: 301-15-003E, USING A BEARING OF NORTH 75 DEGREES 15 MINUTES 20 SECONDS WEST AS SHOWN ON THE RECORD OF SURVEY, RECORDED IN SURVEY BOOK 22, PAGE 33, PCR.

BENCHMARK
AN ASSUMED FINISHED FLOOR ELEVATION OF 1835.00' ON THE ONSITE BUILDING AS SHOWN HEREIN.

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OWNER
TOWN OF KEARNY
912-C TILBURY DRIVE
KEARNY, ARIZONA 85137
PHONE: 520-363-5547
FAX: 520-363-7527
CONTACT: SHARON JAKUBOWSKI WOLZ (TOWN MANAGER)

ENGINEER
NCS ENGINEERS
202 E. EARLL DR, STE 110 PHOENIX, AZ 85012
PHONE: (602)629-0206
FAX: (602)629-0223
CONTACT: RAMESH NARASIMHAN, PE

APPROVAL

TOWN MAYOR DATE

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

NCS ENGINEERS EST-1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed 06/04/26
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Drawn:	KJA
Design:	SJW
Date:	06/04/2026
Client Project No.	----
Project No.	2280
Sheet No.	G-01

Z:_CAD Data Transfer\2280 - Kearny WWTP Improvements\CAD\Kearny Water Reclamation Facility Phase 2\2280 - Town of Kearny - KEARNY WATER RECLAMATION FACILITY Phase 2 - Standard\G-01-04.dwg, Jun 04, 2026 - 2:24pm

GENERAL NOTES

1. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINES. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.'
2. EXISTING PIPING, ELECTRICAL, AND UTILITIES ARE BASED ON EXISTING RECORDS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING PIPING, ELECTRICAL, AND UTILITIES AND AVOIDING DAMAGE TO THE SAME. CONTRACTOR IS RESPONSIBLE FOR:
   a. DAMAGE WORK TO SUCH UTILITIES CAUSED AS A RESULT OF WORK.
   b. DAMAGES TO EXISTING WALKS, WALLS, CURBS, PAVEMENTS, AND TREES ETC.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL PLANS FOR DEMOLITION ITEMS.
4. WHERE INDICATED, DIMENSIONS AND ELEVATIONS TO BE FIELD VERIFIED.
5. ANY EQUIPMENT TO BE REMOVED AND SALVAGED WILL BE MARKED BY ENGINEER PRIOR TO WORK BEGINNING, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
6. CONTRACTOR TO MAINTAIN ACCESS TO ALL FACILITIES AT THE SITE TO OWNER TO CONTINUE OPERATIONS DURING CONSTRUCTION. IF THE WORK REQUIRES INTERRUPTION OF EXISTING ACCESS TO OPERATING FACILITIES, THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS AS APPROVED BY THE OWNER TO THESE FACILITIES.
7. CONTRACTOR TO MAINTAIN ACCESS FOR EMERGENCY RESPONSE VEHICLES DURING CONSTRUCTION.
8. CONTRACTOR SHALL COORDINATE WORK SCHEDULES WITH THE TOWN SO AS TO PREVENT ANY CONFLICTING WORK CONDITIONS. LOCATIONS OF TEMPORARY FACILITIES, PARKING, ETC. SHALL BE COORDINATED WITH THE TOWN.
9. CONTRACTOR SHALL PROVIDE TEMPORARY SAFETY AND SECURITY FENCING AND SITE IMPROVEMENTS AS NEEDED AT NO EXTRA COST. THE EXISTING FACILITY SHALL BE MAINTAINED AND SECURED.
10. CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF AT LEAST WEEKLY BY THE CONTRACTOR. KEEP SITE AREA CLEAN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY AT THE SITE WHILE CONSTRUCTION IS IN PROGRESS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE PUBLIC FROM ANY HAZARDS ARISING FROM CONSTRUCTION OPERATIONS AND PROTECTING EXISTING AND NEW IMPROVEMENTS FROM DAMAGE DUE TO ACCIDENT OR VANDALISM.
12. IF THERE ARE ANY QUESTIONS REGARDING THE PLANS OR THE INTENT OF THE DESIGN, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND DISCUSS THE ISSUE SO THAT IT IS CLARIFIED OR RESOLVED PRIOR TO THE START OF CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND OBTAINING ANY PERMITS NEEDED TO COMPLETE THE PROJECT, POTENTIALLY INCLUDING AN AGENCY BUSINESS LICENSE, RIGHT OF WAY WORK PERMIT, WATER USAGE AGREEMENT, ETC., AND INCLUDE THE COSTS FOR THE SAME, IF ANY, IN THE PROJECT BID PRICES.
14. THE CONTRACTOR SHALL EMPLOY EFFECTIVE STORM WATER MANAGEMENT TO PREVENT EROSION AND/OR SILT AND DEBRIS FROM LEAVING THE CONSTRUCTION SITE DURING THE ENTIRE DURATION OF THE PROJECT BY APPROPRIATE MEANS INCLUDING THE USE OF SAND BAGS, WADDLES, HAY BALES, TEMPORARY SILTATION BASIN, SILT DIKES/DAMS, SHORING, ETC.
15. ALL PROJECT IMPROVEMENTS INCLUDING BUT NOT LIMITED TO MANHOLE FRAMES, VALVE BOXES, VAULTS, HANDHOLES, FIRE HYDRANTS, ETC., SHALL BE SET OR RESET TO FINISHED GRADE OF THE SURROUNDING GROUND OR PAVEMENT SURFACE WHETHER OR NOT SPECIFICALLY CALLED OUT ON THE PLANS OR IN THE SPECIFICATIONS.

GENERAL YARD PIPING NOTES

1. EXISTING PIPING AND EQUIPMENT ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING AND EQUIPMENT ARE SHOWN HEAVY-LINED
2. EXISTING UNDERGROUND UTILITIES OBTAINED FROM AS-BUILT DATA AND PROVIDED FROM THE TOWN. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION PRIOR TO EXCAVATION. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
3. UNDERGROUND DIP SHALL BE MECHANICAL JOIN, MECHANICALLY RESTRAINED (UNO) AND BE POLYETHYLENE WRAPPED.
4. UNLESS OTHERWISE SHOWN, ALL PIPING SHALL HAVE A MINIMUM OF 3' COVER.
5. RESTORE DIRT AND/OR GRAVEL ROADS TO CONDITIONS THAT EXISTED PRIOR TO START OF CONSTRUCTION.
6. ALL NEW PIPING MUST BE PROPERLY FLUSHED, PRESSURE TESTED, CHLORINATED OR BACTERIOLOGICALLY TESTED, AS REQUIRED.
7. MINIMUM ALLOWABLE CLEARANCE BETWEEN PIPES AT CROSSINGS SHALL BE 6'', BACKFILL WITH A CONTROLLED LOW STRENGTH CEMENT SLURRY.

UTILITIES NOTES

1. THE LOCATION OF THE UTILITIES MAY OR MAY NOT BE ACCURATELY SHOWN ON THE PROJECT PLANS.
2. THERE MAY BE OTHER UTILITY LINES AND FACILITIES PRESENT THAT ARE IN SERVICE OR HAVE BEEN ABANDONED WITHIN THE PROJECT CORRIDOR OR AREA THAT ARE NOT SHOWN ON THE PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AZ811 PRIOR TO COMMENCING ANY DIGGING ACTIVITIES TO HAVE THE LOCATIONS OF THE UTILITIES MARKED IN THE FIELD AT THE PROJECT SITE. EXISTING PIPING, ELECTRICAL, AND UTILITIES ARE BASED ON EXISTING RECORDS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING PIPING, ELECTRICAL, AND UTILITIES AND AVOIDING DAMAGE TO THE SAME.
4. THE CONTRACTOR SHALL 'POTHOLE' TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITY FACILITIES TO IDENTIFY ANY POTENTIAL CONFLICTS BETWEEN UTILITY FACILITIES AND THE PROPOSED IMPROVEMENTS AND, IF NEEDED, REVIEW THE INFORMATION WITH THE OWNER AND THE ENGINEER TO RESOLVE ANY POTENTIAL CONFLICT PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL OBSERVE ALL POSSIBLE PRECAUTIONS WHEN WORKING IN CLOSE PROXIMITY TO EXISTING UTILITY LINES AND/OR STRUCTURES TO PROTECT THE SAME AND AVOID ANY DAMAGE TO THE UTILITY FACILITIES.
6. SHOULD ANY UTILITY FACILITY BE DAMAGED BY THE CONTRACTOR'S ACTIVITIES, THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE UTILITY OWNER FOR THE REPAIR OF THE FACILITY AT NO ADDITIONAL COST TO THE PROJECT.

ADEQ NOTES

1. NEW WASTEWATER SYSTEM COMPONENTS, INCLUDING PIPE, VALVES, FITTINGS, AND EQUIPMENT SHALL NOT BE PUT INTO SERVICE UNTIL DISINFECTION HAS BEEN COMPLETED IN ACCORDANCE WITH ENGINEERING BULLETIN NO. 8, AAC R9-8-266B OR AWWA C652-92.
2. PRESSURE AND LEAKAGE TESTING SHALL BE COMPLETED PER THE REQUIREMENTS OF ADEQ BULLETIN NO.10, CHAPTER 7.L.2, PRESSURE AND LEAKAGE TESTING, TESTS SHALL BE WITNESSED BY THE ENGINEER AND/OR OWNER AND COPIES OF THE TESTING RESULTS SHALL BE PROVIDED TO THE ENGINEER.
3. IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE (A.A.C). R18-5-504, ALL CONSTRUCTION MATERIALS SHALL BE LEAD FREE.

CONSTRUCTION JOBSITE SAFETY NOTES

1. THE CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
2. THE SAFETY REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
4. NEITHER THE OWNER NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, AND MAINTENANCE FOR ALL SAFETY DEVICES INCLUDING SHORING.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
7. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES AND REGULATIONS AS SET FORTH BY OSHA CONCERNING THE PROJECT WORK AND JOBSITE ACTIVITIES.
8. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL PLANS FOR DEMOLITION ITEMS.
9. PROVIDE TEMPORARY THRUST RESTRAINT FOR EXISTING PIPING WHENEVER THE WORK REQUIRES. CONTRACTOR SHALL REPLACE OR RESTORE THE EXISTING RESTRAINT SYSTEM TO LIKE-NEW CONDITIONS.
10. DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATION TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
11. EXISTING EQUIPMENT TO BE REMOVED AND SLAVED SHALL BE MARKED BY ENGINEER OR OWNER PRIOR TO WORK, UNLESS OTHERWISE NOTED ON THE CONTRACT DOCUMENTS.
12. ALTHOUGH SUCH WORK MAY NOT BE SPECIFICALLY INDICATED, FURNISH AND INSTALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES AND DEVICES INCIDENTAL TO, OR NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
13. EXCAVATED SOIL IS TO BE USED TO FILL IN LOW SPOTS PRIOR TO BEING HAULED OFF SITE. CONTRACTOR SHALL ESTABLISH A SUITABLE STAGING AREA FOR STORAGE OF EXCAVATED SOIL.
14. ALL MATERIALS WHICH MAY COME IN CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF INTERNATIONAL STANDARD 60 AND 61.
15. REFER TO PROJECT SPECIFICATION FOR ANY SUPPLEMENT DETAILS REFERRED TO IN THE DRAWINGS.
16. MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED, PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
17. COORDINATES AND DIMENSIONS SHOWN FOR ROADWAY IMPROVEMENTS ARE TO FACE OF CURB OR EDGE OF PAVEMENT.
18. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
19. UNLESS SHOWN IN THE DRAWINGS, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE OR GRAVEL SURFACE SHALL BE GRADED SMOOTH AND COMPACTED AS SPECIFIED.
20. CONTRACTORS SHALL TAKE ALL OTHER MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.
21. WHERE ALUMINUM IS TO BE EMBEDDED IN CONCRETE, THE ALUMINUM SHALL FIRST BE COATED WITH COAL TAR EPOXY.
22. BACKFILLING OF PIPING AND STRUCTURES SHALL NOT BE STARTED UNTIL INSTALLATION IS APPROVED BY THE OWNER.
23. UNLESS OTHERWISE NOTED, ALL PVC INSTALLATION ABOVE GROUND SHALL BE PAINTED PER SPECIFICATION SECTION 09800.
24. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLES, VALVE BOXES, CLEANOUTS, BLIND FLANGED PIPING, AND FIRE HYDRANTS WITHIN WORK LIMITS REQUIRED TO MATCH PROPOSE FINAL GRADE.
    GOVERNING BUILDING CODES:
    2018 INTERNATIONAL BUILDING CODE
    2017 NATIONAL ELECTRICAL CODE
    2018 INTERNATIONAL PLUMBING CODE
    2018 INTERNATIONAL FIRE CODE
25. "EXCESSIVE LEAKAGE" MEANS ANY AMOUNT OF LEAKAGE IN EXCESS OF THAT PERMITTED UNDER THE AWWA STANDARD, APPLICABLE TO THE PARTICULAR PIPE MATERIAL OR VALVE TYPE. [R18-9-E301(D)(1)(D), R18-5-502(C)].
26. ALL TANKS AND VESSELS CONSTRUCTED ONSITE SHALL BE LEAK TESTED IN ACCORDANCE WITH A.A.C. R18-9-A314(5)(D).
27. CONTRACTOR SHALL REFER PROJECT SPECIFICATIONS DIVISION 01 SECTION 01030 AND 01040 FOR MOPO PLAN.
34. SUPPORT, EXTERIOR EXPOSED STEEL, ETC. SHALL BE PREPARED AND COATED PER THE FOLLOWING TABLE. FOLLOW MANUFACTURER RECOMMENDATIONS. DO NOT PAINT CONCRETE SLABS, CORROSION RESISTANT SURFACES, ETC.

CONDITION	TREATMENT	STEEL	CAST AND DUCTILE IRON
EXPOSED TO SUN, NON IMMERSION	SURFACE PREPARATION	SSPC-SP6 / NACE 3 COMMERCIAL BLAST CLEANING	NAPF 500-03-04 ABRASIVE BLAST CLEANING OF DUCTILE IRON PIPE (EXTERNAL PIPE)
	FIRST COAT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 4-6 MILS DFT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT
	SECOND COAT	TNEMEC SERIES 1090 EXCELLA-SHIELD DTM, APPLIED AT 3-5 MILS DFT	TNEMEC SERIES 1090 EXCELLA-SHIELD DTM, APPLIED AT 3-5 MILS DFT
NOT EXPOSED TO SUN, NON IMMERSION	SURFACE PREPARATION	SSPC-SP6 / NACE 3 COMMERCIAL BLAST CLEANING	NAPF 500-03-04 ABRASIVE BLAST CLEANING OF DUCTILE IRON PIPE (EXTERNAL PIPE)
	FIRST COAT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 4-6 MILS DFT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT
	SECOND COAT	TNEMEC SERIES N69 HI-BUILD EPOXOLINE APPLIED AT 4-6 MILS DFT	TNEMEC SERIES N69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT
IMMERSION NON-POTABLE WATER	SURFACE PREPARATION	SSPC-SP10 / NACE 2 NEAR WHITE BLAST CLEANING	NAPF 500-03-04 ABRASIVE BLAST CLEANING OF DUCTILE IRON PIPE (EXTERNAL PIPE)
	FIRST COAT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT
	SECOND COAT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT	TNEMEC SERIES N-69 HI-BUILD EPOXOLINE APPLIED AT 6-8 MILS DFT
IMMERSION POTABLE WATER	SURFACE PREPARATION	SSPC-SP10 / NACE 2 NEAR WHITE BLAST CLEANING	NAPF 500-03-04 ABRASIVE BLAST CLEANING OF DUCTILE IRON PIPE (EXTERNAL PIPE)
	COATING THICKNESS ACHIEVED IN 1 OR MORE	TNEMEC SERIES 22 EPOXOLINE, APPLIED AT 20-40 MILS DFT	TNEMEC SERIES 22 EPOXOLINE, APPLIED AT 20-40 MILS DFT

ABBREVIATIONS

*	FIELD VERIFY
**	CONFIRM WITH SUPPLIER
&	AND
@	AT
ø	DIAMETER
ARV	AIR/VACUUM RELEASE VALVE
BV	BUTTERFLY VALVE
CONC	CONCRETE
CV	CHECK VALVE
DET	DETAIL
DIA	DIAMETER
DI	DUCTILE IRON
DIP	DUCTILE IRON PIP
EPS	INTERMEDIATE EFFLUENT PUMP STATION
EL	ELEVATION
ERS	REUSE PUMP STATION
EWL	EFFLUENT WATER LINE
FM	FLOW METER
GPM	GALLONS PER MINUTE
GV	GATE VALVE
IE	INVERT ELEVATION
INF	TREATMENT INFLUENT LINE
IP	INFLUENT PIPE
LAH	HIGH LEVEL ALARM
LSH	HIGH LEVEL SWITCH
LSL	LOW LEVEL SWITCH
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MGD	MILLION GALLON PER DAY
NTS	NOT TO SCALE
OF	OVERFLOW
PI	PRESSURE INDICATOR
PIT	PRESSURE TRANSDUCER
PM	PROPELLER METER
PMP	PUMP
PSH	PRESSURE SWITCH
PSV	PRESSURE SUSTAINING VALVE
PV	PLUG VALVE
PW	POTABLE WATER
RED	REDUCER
SCH	SCHEDULE
SHT	SHEET
SL	SEWER LINE
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STD	STANDARD
TBD	TO BE DETERMINED
TEF	TREATED EFFLUENT
TOC	TOP OF CONCRETE
TOW	TOP OF WALL
(TYP)	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UV	ULTRAVIOLET

Rev No	Revision Note	Date	Design	Drawn	Checked

NCS ENGINEERS EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ. 85012
(602) 629-0206

Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: DRAWING INDEX AND ABBREVIATIONS	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-G-02	Sheet G-02

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or visit Arizona811.com

ISSUED FOR CONSTRUCTION

SURVEY NOTES

1. SOURCE OF TOPOGRAPHY SHOWN ON THE CIVIL PLANS IS A SURVEY MAP PROVIDED BY AL LAND SURVEY INC. 2022. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.
2. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.
3. HORIZONTAL DATUM: NAD 83, ARIZONA CENTRAL ZONE
   VERTICAL DATUM: NGVD 29
4. MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
5. COORDINATES AND DIMENSIONS SHOWN FOR ROADWAY IMPROVEMENTS ARE TO FACE OF CURB OR EDGE OF PAVEMENT.
6. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
7. UNLESS OTHERWISE NOTED ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE OR GRAVEL SURFACE SHALL BE GRADED SMOOTH AND COMPACTED AS SPECIFIED.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION CONTROL DEVICES DURING CONSTRUCTION. EROSION CONTROL INCLUDING DEVICES SILT FENCING, RUNOFF CONTAINMENT BERMS, AND STRAW BALES ARE THE MINIMUM REQUIRED.
9. CONTRACTOR SHALL TAKE ALL OTHER MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.

CIVIL LEGEND

- STAGING OR WORK AREA LIMITS
- N 1000.00 / E 1000.00 — STRUCTURE, BUILDING OR FACILITY LOCATION POINT - COORDINATES
- AIR RELIEF VALVE
- BACKFLOW PREVENTER ASSEMBLY
- BOLLARD
- BUMPER CURB
- BUSH
- BUTTERFLY VALVE
- AGAVE CACTUS
- BARREL CACTUS
- CENTRIFUGAL PUMP
- CHECK VALVE
- CHOLLA CACTUS
- PEAR CACTUS
- SAGUARO CACTUS
- CARSONITE MARKER
- CLEANOUT
- CONTROL POINT
- DRYWELL
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- FLAG POLE
- SWING GATE
- GATE VALVE
- GRATE
- GUY WIRE
- EHEADWALL
- LIGHT POLE
- DOUBLE LIGHT POLE
- MAILBOX
- COMMUNICATION MANHOLE
- MANHOLE
- GAS MANHOLE
- SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GAS METER
- WATER METER
- MAGNETIC FLOW METER
- MONITORING WELL
- MONUMENT FLUSH
- MONUMENT IN HAND HOLE
- PARKING METER
- TELEPHONE PEDESTAL
- CABLE TELEVISION PEDESTAL
- UTILITY POLE
- COMMUNICATION PULL BOX
- ELECTRICAL PULL BOX
- FIBER OPTIC PULL BOX
- TRAFFIC SIGNAL PULL BOX
- UNKNOWN PULL BOX
- BOULDER OR ROCK OUTCROP
- SIGN
- TRAFFIC SIGNAL MAST ARM
- TRAFFIC SIGNAL POLE
- SITE LIGHTING
- MESQUITE TREE
- PALM TREE
- PALO VERDE TREE
- TREE
- GAS VALVE

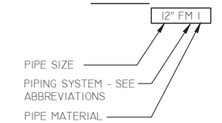
CIVIL LEGEND (CONTINUED)

- IRRIGATION VALVE
- WATER VALVE
- BUILDING SETBACK LINE
- DISTRICT BOUNDARY OR CITY LIMITS
- EASEMENT
- JURISDICTION LINE
- MID-SECTION LINE OR LIMITS OF TREATMENT EQUIPMENT PIPING
- PROPERTY LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SECTION LINE
- CANAL, CHANNEL OR DITCH
- CURB AND GUTTER
- ASPHALT PAVEMENT
- UNPAVED ROAD
- CHAINLINK FENCE
- WIRE VALVE
- WOOD FENCE
- FLOW LINE
- GUARD RAIL
- MASONRY WALL
- CONTOUR
- RAILROAD TRACK
- SINGLE CURB
- SIDEWALK
- CABLE TELEVISION
- COMMUNICATION
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- FIBER OPTIC
- FIRE LINE
- GAS
- IRRIGATION LINE (18" OR SMALLER)
- IRRIGATION LINE (21" OR LARGER)
- RECLAIMED WATER (18" OR SMALLER)
- RECLAIMED WATER (20" OR LARGER)
- TELEPHONE
- SEWER LINE (18" OR SMALLER)
- SEWER LINE (21" OR LARGER)
- STORM DRAIN (18" OR SMALLER)
- STORM DRAIN (21" OR LARGER)
- WATER (18" OR SMALLER)
- WATER (20" OR LARGER)
- WATER (20" OR LARGER)

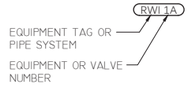
PIPE MATERIAL

1 - DUCTILE IRON
2 - SCHEDULE 10 PVC
3 - SCHEDULE 80 PVC
4 - SCHEDULE 10 STAINLESS STEEL
5 - SDR 35 PVC
6 - CAST IRON
7 - GALVANIZED STEEL
8 - UV-RESISTANT FLEXIBLE THERMOPLASTIC HOSE

PIPE TAG



EQUIPMENT TAG



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NCS ENGINEERS
EST. 1994
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

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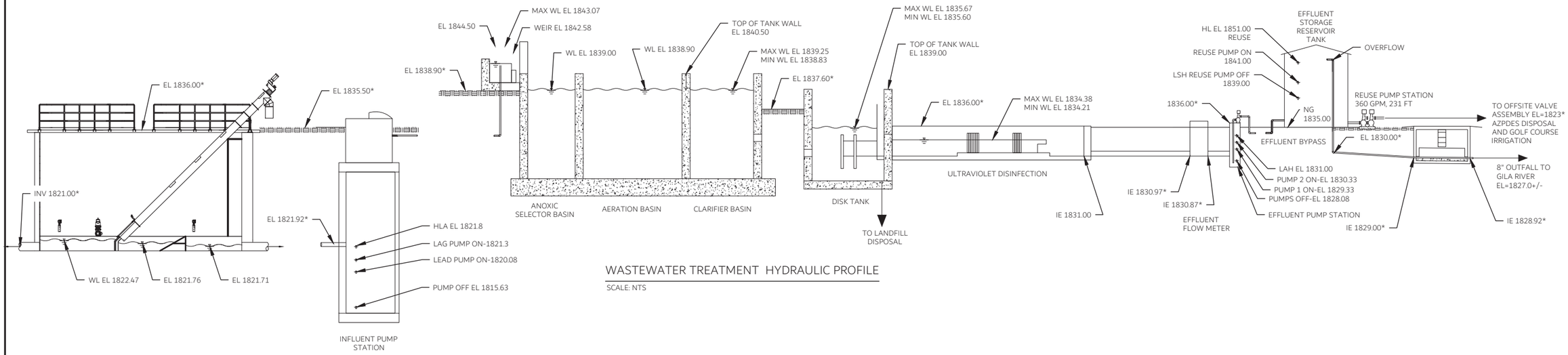
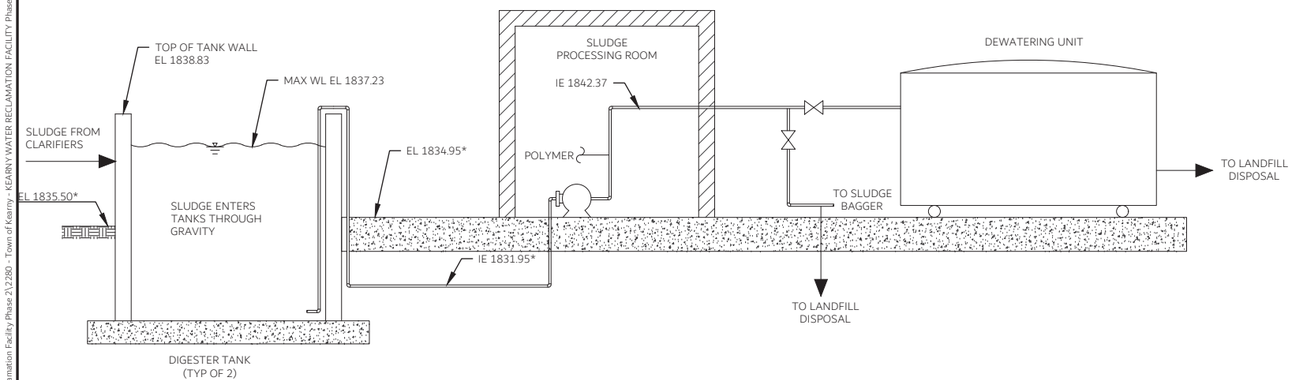
Sheet Title: GENERAL SYMBOLS AND NOTES	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-G-03	Sheet G-03



WASTEWATER TREATMENT HYDRAULIC PROFILE

SCALE: NTS



SLUDGE HYDRAULIC PROFILE

SCALE: NTS

NOTES:
1. SHOWN ELEVATIONS ARE IN FEET.
2. * - FIELD VERIFY THE PROVIDED ELEVATIONS

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Revision Note | Rev No | Checked | Drawn | Design | Date

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202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: HYDRAULIC PROFILES	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-G-04	Sheet G-04

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1. EQUIPMENT TAGS ARE SHOWN FOR NEW PROPOSED EQUIPMENT ONLY.

2. NEW EQUIPMENT OR MODIFICATIONS SHOWN IN BOLD

INFLUENT

OVERFLOW PUMP

AUGER SCREEN

INFLUENT CHANNEL

BL_201

BL_202

BL_203

AEROBIC BLOWERS

TO DRAIN PUMP STATION

SCUM AND RETURN ACTIVATED SLUDGE (AIRLIFTS)

SURGE FLOW TANK

BV_205

BV_206

SELECTOR ANOXIC BASIN 1

BV_203

SEQUENCING ANOXIC BASIN 1

SECONDARY SEDIMENTATION 1 (MULTIPLE HOPPERS)

FILTER BYPASS

INFLUENT PUMP STATION

M

SLIDE GATES AND BAR SCREENS

NEW FLOW SPLITTER BOX

AERATION BASIN

TERTIARY FILTER

UV DISINFECTION

SEQUENCING ANOXIC BASIN 2

SECONDARY SEDIMENTATION 2 (MULTIPLE HOPPERS)

BV_204

BACKWASH TO ONSITE LIFT STATION

BV_207

BV_208

SELECTOR ANOXIC BASIN 2

DRAIN PUMP STATION

ONSITE LIFT STATION

SCUM AND RETURN ACTIVATED SLUDGE (AIRLIFTS)

WASTE ACTIVATED SLUDGE

TANK BYPASS

BAGS TO LANDFILL DISPOSAL

SLUDGE BAGGER

FM_302

OUTFALL TO GILA RIVER

TANK OVERFLOW

EFFLUENT PUMP 1

EFFLUENT PUMP 2

EFFLUENT PUMP STATION

55 GAL POLYMER DRUM

POLYMER DOSING PUMP

BV_306

ARV304

FM_301

PSH

PIT

PI

PI_302

BV_304

CV_301

BV_302

ARV302

ARV301

PI_301

BV_301

PSH301

PIT301

REUSE PUMP 1

PMP301

EFFLUENT STORAGE RESERVOIR TANK

AEROBIC DIGESTER 1

AEROBIC DIGESTER 2

SLUDGE PUMP

TURBO TEE (POLYMER BLEND)

PI_301

COM301

3,000 GAL HYDROPENUMATIC TANK

REUSE PUMP 2

PMP302

BV_305

CV_302

ARV303

BV_303

REUSE JOCKEY PUMP

PMP303

BV_308

CV_303

ARV305

BV_307

REUSE PUMP STATION

OFFSITE IRRIGATION VALVE ASSEMBLY

PSV_51

PI_52

PI_51

PM_52

PM

PV_52

CV_51

PV_51

PM_51

TO GILA RIVER

TO GOLF COURSE IRRIGATION (REUSE)

BV_201

BV_202

PERM-A-NATER DEWATERING UNIT

DEWATERING UNIT TO LANDFILL DISPOSAL

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PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed 09/30/26
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: PROCESS FLOW DIAGRAM	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-G-05	Sheet G-05

Jun 04, 2026 - 2:17pm
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OFFSITE VALVE ASSEMBLY VALVE AND METER SCHEDULE						
TAG NUMBER	LOCATION	SERVICE	VALVE TYPE	SIZE (IN.)	BODY MATERIAL	QUANTITY
CV-51	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	CHECK VALVE	4	DIP	1
PV-51	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	PLUG VALVE	4	DIP	1
PSV-51	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	PRESSURE SUSTAINING VALVE	2	DIP	1
PM-51	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	PROPELLER METER	4	DIP	1
PV-52	OFFSITE VALVE ASSEMBLY	LINE TO GOLF COURSE IRRIGATION	PLUG VALVE	4	DIP	1
PM-52	OFFSITE VALVE ASSEMBLY	LINE TO GOLF COURSE IRRIGATION	PROPELLER METER	4	DIP	1
PI-51	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	PRESSURE INDICATOR	-	DIP	1
PI-52	OFFSITE VALVE ASSEMBLY	LINE TO GILA RIVER	PRESSURE INDICATOR	-	DIP	1
PI-303	HYDROPNUEMATIC TANK	EFFLUENT TANK TO GOLF COURSE	PRESSURE INDICATOR	-	DIP	1
COM-301	HYDROPNUEMATIC TANK	EFFLUENT TANK TO GOLF COURSE	AIR VOLUME CONTROL	-	-	1
AIR PIPING IMPROVEMENTS SCHEDULE						
TAG NUMBER	LOCATION	SERVICE	VALVE TYPE	SIZE (IN.)	BODY MATERIAL	QUANTITY
BV-201	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
BV-202	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
BV-203	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	6	SS	1
BV-204	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	6	SS	1
BV-205	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
BV-206	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
BV-207	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
BV-208	SECONDARY TREATMENT BASIN	AIR PIPING	ACTUATED BUTTERFLY VALVE	4	SS	1
REUSE PUMP STATION VALVE AND METER SCHEDULE						
TAG NUMBER	LOCATION	SERVICE	VALVE TYPE	SIZE (IN.)	BODY MATERIAL	QUANTITY
BV-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	8	GALVANIZED	1
BV-302	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	6	GALVANIZED	1
BV-303	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	6	GALVANIZED	1
BV-304	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	4	GALVANIZED	1
BV-305	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	4	GALVANIZED	1
BV-306	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	6	GALVANIZED	1
BV-307	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	3	GALVANIZED	1
BV-308	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	BUTTERFLY VALVE	2	GALVANIZED	1
ARV-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	AIR RELEASE VALVE	3/4	GALVANIZED	1
ARV-302	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	AIR RELEASE VALVE	3/4	GALVANIZED	1
ARV-303	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	AIR RELEASE VALVE	3/4	GALVANIZED	1
ARV-304	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	AIR RELEASE VALVE	3/4	GALVANIZED	1
ARV-305	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	AIR RELEASE VALVE	3/4	GALVANIZED	1
CV-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	CHECK VALVE	6	GALVANIZED	1
CV-302	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	CHECK VALVE	6	GALVANIZED	1
CV-303	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	CHECK VALVE	3	GALVANIZED	1
PI-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	PRESSURE INDICATOR	2-1/2"	GALVANIZED	1
PI-302	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	PRESSURE INDICATOR	2-1/2"	GALVANIZED	1
PIT-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	PRESSURE TRANSDUCER	1/4	GALVANIZED	1
PSH-301	REUSE PUMP STATION	PUMP SKID (INCLUDED WITH SKID)	PRESSURE SWITCH	1/4	GALVANIZED	1
FM-301	REUSE PUMP STATION	PUMP SKID	FLOW METER	1/2	GALVANIZED	1
FM 302	EFFLUENT STORAGE TANK	EFFLUENT OUTFALL TO GILA RIVER	PARSHALL FLUME FLOW METER	3"	CONCRETE	1
REUSE PUMP STATION PUMP SCHUELDLE						
TAG NUMBER	LOCATION	SERVICE	PUMP MANUFACTURER AND MODEL			SIZE (HP)
PMP-301	REUSE PUMP STATION	REUSE PUMP	GRUNDFOS LC2595-3			40
PMP-302	REUSE PUMP STATION	REUSE PUMP	GRUNDFOS LC2595-3			40
PMP-302	REUSE PUMP STATION	JOCKEY PUMP	EBARA SERIES EXMSU10-6			5

SCHEMATIC SYMBOL LEGEND:

- PNUEMATIC BUTTERFLY VALVE
- GATE VALVE
- FLOW CONTROL VALVE
- BUTTERFLY VALVE
- MAGNETIC FLOW METER
- PRESSURE GAUGE
- PROPELLER METER
- PRESSURE SWITCH HIGH
- PUMP
- SAMPLE TAP
- CHECK VALVE
- AIR RELEASE VALVE
- PROPELLER METER
- PRESSURE RELIEF VALVE

Rev No	Revision Note	Date	Design	Drawn	Checked

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202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: EQUIPMENT SCHEDULE

Drawn By: KJA	Date: 06/04/2026	
Design By: SJW	Date: 06/04/2026	
Approved By: SJW	Date: 06/04/2026	

Project Location: TOWN OF KEARNY

Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

Client Project No.	Project No.	Scale	File Name	Sheet
	2280	AS NOTED	2280-G-06	G-06

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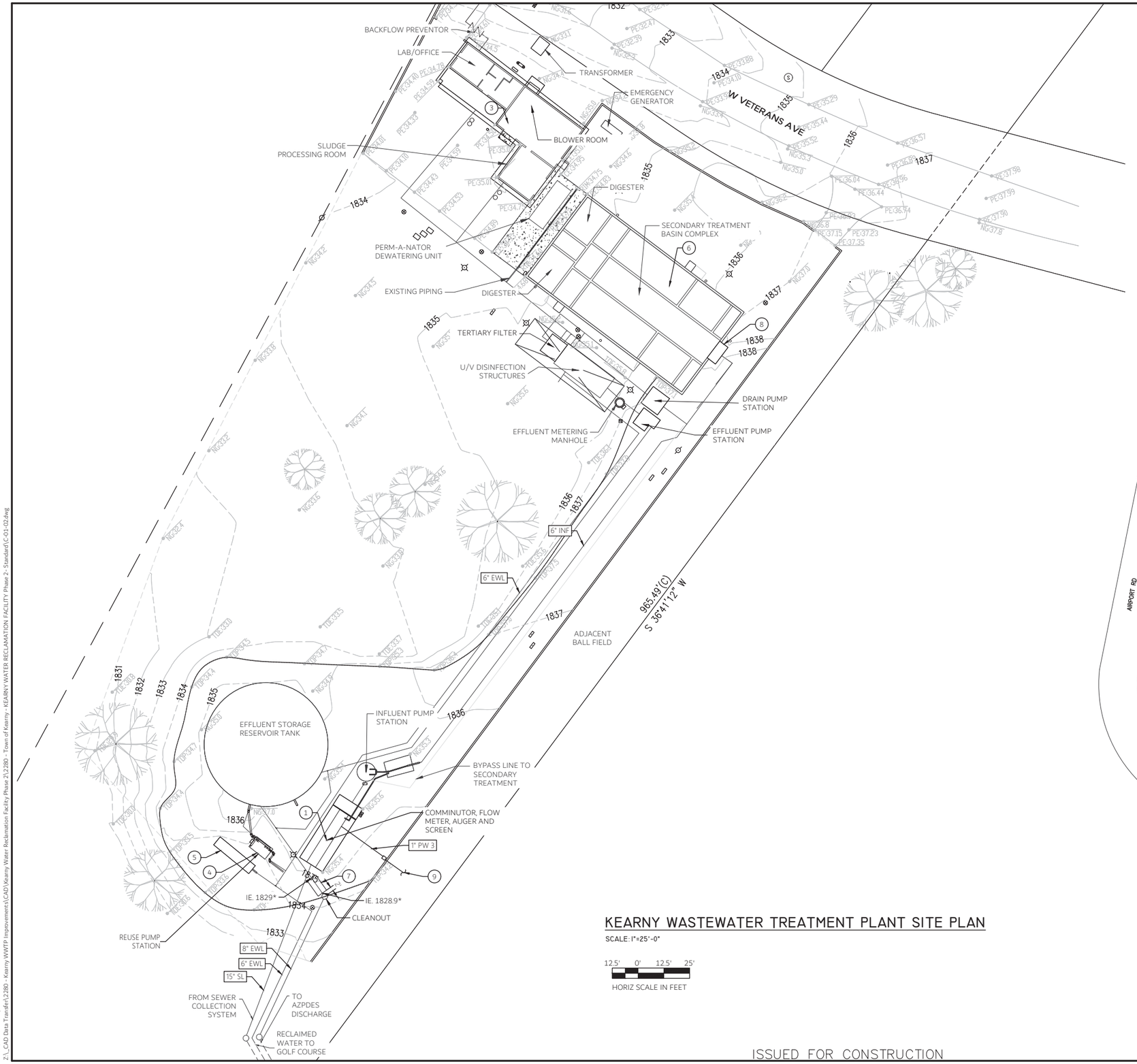
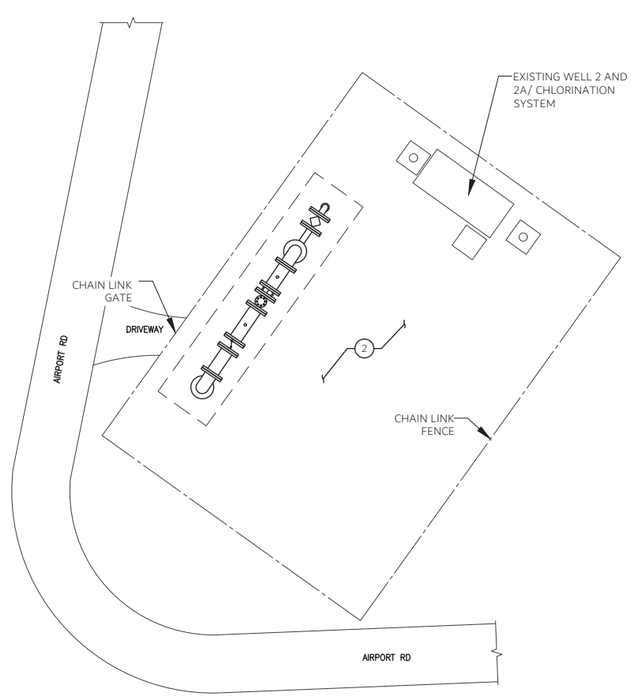


KEARNY WASTEWATER TREATMENT PLANT SITE PLAN

SCALE: 1"=25'-0"

12.5' 0' 12.5' 25'

HORIZ SCALE IN FEET



OFF-SITE VALVE ASSEMBLY PLAN VIEW

SCALE: 1"=5'-0"

LATITUDE: 33°02'53.7"N

LONGITUDE: 110°54'44.3"W

2.5' 0' 2.5' 5'

HORIZ SCALE IN FEET

CONSTRUCTION NOTES

NO.	DESCRIPTION
1	INFLUENT CHANNEL IMPROVEMENTS. SEE SHEET M-01
2	OFFSITE VALVE ASSEMBLY SEE SHEET C-04 FOR DEMOLITION PLAN AND M-08 FOR IMPROVEMENTS PLAN
3	BLOWER ROOM IMPROVEMENTS SEE SHEET C-02 FOR DETAILS
4	REUSE PUMP STATION SEE SHEET M-03 FOR DETAILS
5	HYDROPNEUMATIC STEEL TANK, SEE SHEET M-03
6	SECONDARY TREATMENT BASIN IMPROVEMENTS SEE SHEET M-02
7	8'x4'x5'-6" MONITORING/SAMPLING VAULT PER CITY OF SCOTTSDALE DETAIL 2460 WITH PARSHALL FLUME WITH 3" THROAT WITH END PROJECTIONS VPC FIBERGLASS OR APPROVED EQUAL. INVERTS PER PLAN, SEE DETAILS M-11
8	SPLITTER BOX IMPROVEMENTS SEE SHEET M-08
9	1" POTABLE WATER LINE. SEE SHEET C-05 AND NOTES

NOTES:

1. CONTRACTOR TO FIELD VERIFY ON-SITE WATER SOURCE PRIOR CONSTRUCTION AND ROUTE WATERLINE TO AUGER SCREEN.
2. CONTRACTOR TO CONFIRM PRESSURE OF THE POTABLE WATER LINE AND REPORT TO ENGINEER IF THE PRESSURE IS NOT SUITABLE FOR THE AUGER SCREEN.

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(602) 629-0206

Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: OVERALL SITE PLAN AND KEY MAP	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-C-01	Sheet C-01

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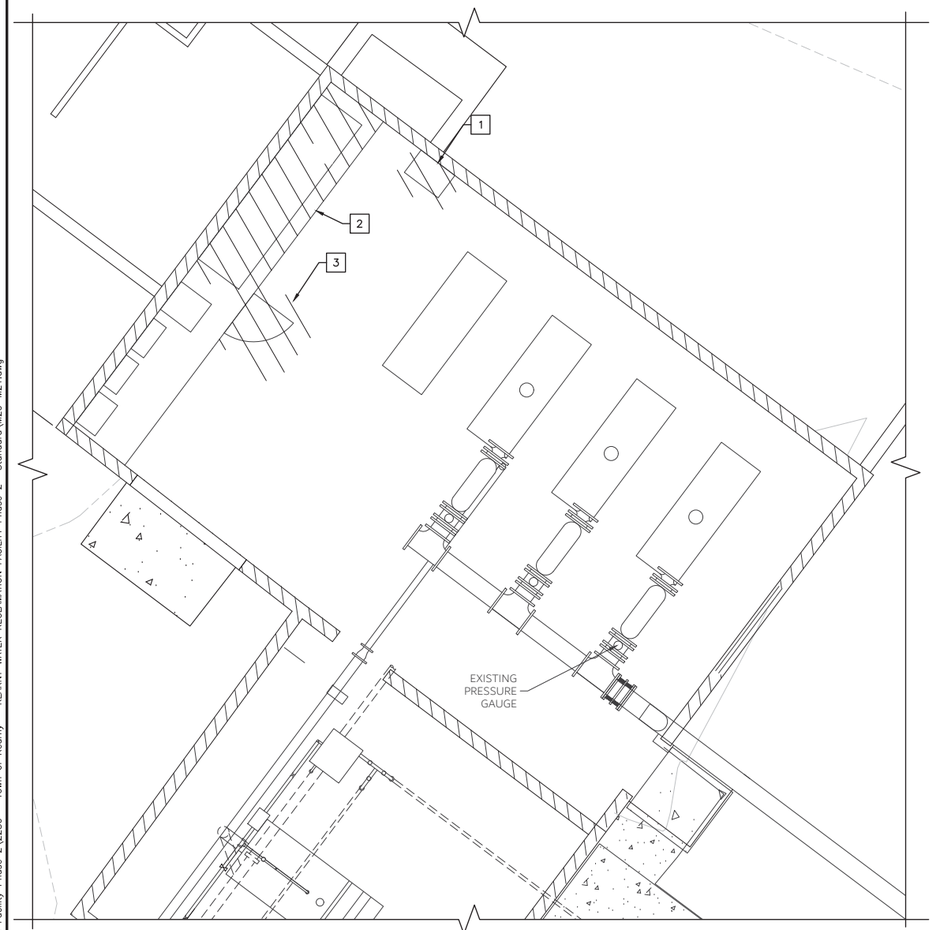
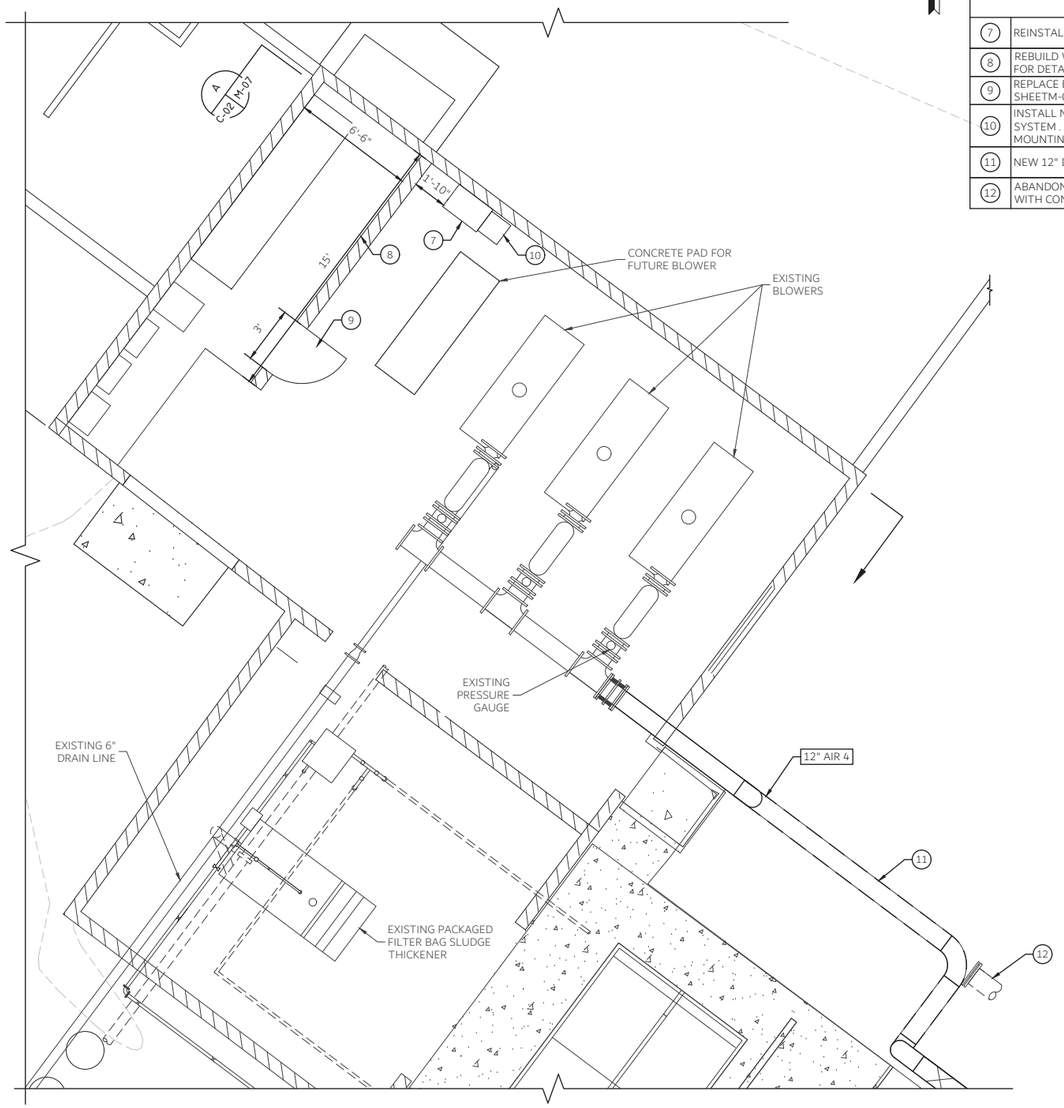


BLOWER ROOM DEMOLITION PLAN
SCALE: 1/4"=1'-0"



BLOWER ROOM MECHANICAL PLAN VIEW
SCALE: 1/4"=1'-0"

REMOVAL AND RECONSTRUCTION NOTES

	DESCRIPTION
1	REMOVE EXISTING PLANT AIR COMPRESSOR AND TANK SYSTEM
2	REMOVE EXISTING SECTION OF ELECTRICAL ROOM WALL. SEE SHEET M-09 FOR DETAILS
3	REMOVE EXISTING MAN DOOR TO ELECTRICAL ROOM. SEE SHEET M-07 FOR DETAILS

CONSTRUCTION NOTES

	DESCRIPTION
7	REINSTALL EXISTING PLANT AIR COMPRESSOR
8	REBUILD WALL TO ELECTRICAL ROOM. SEE DETAIL 6 ON SHEET M-07 FOR DETAILS
9	REPLACE EXISTING MAN DOOR TO ELECTRICAL ROOM. SEE DETAIL 6 ON SHEETM-07 FOR DETAILS
10	INSTALL NEW 40 CFM DESICCATOR/DRYER FOR EXISTING PLANT AIR SYSTEM . MOUNT ON EXISTING CMU WALL USING P1000T UNISTRUT MOUNTING CHANNELS.
11	NEW 12" DIP AIR PIPING SEE SHEET M-02 FOR MORE DETAILS
12	ABANDON IN PLACE EXISTING 12" UNDERGROUND AIR PIPING. FILL WITH CONCRETE AS PER 2018 INTERNATIONAL PLUMBING CODE.

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202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

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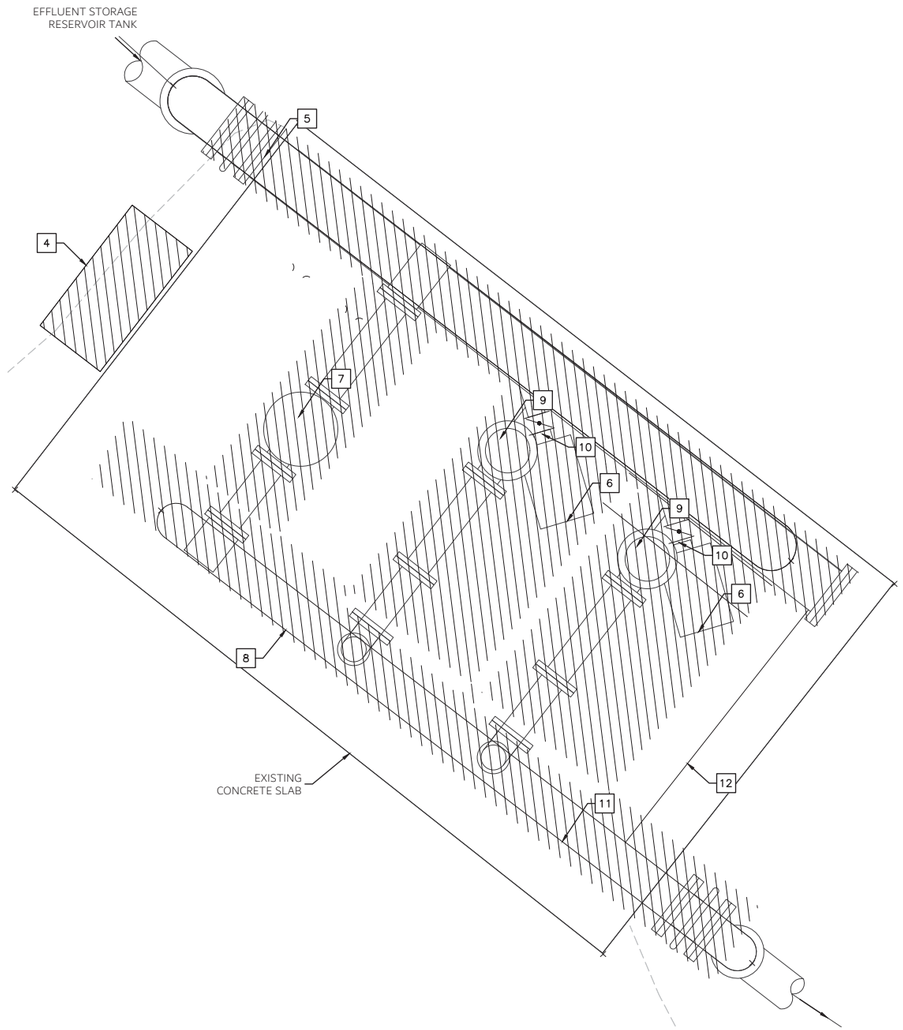
STEVEN JOHN WEDWICK
Date Signed 06/04/2026
ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

2' 0' 2' 4'
HORIZ SCALE IN FEET

ISSUED FOR CONSTRUCTION

Sheet Title: BLOWER ROOM DEMOLITION AND NEW PUMP STATION PLAN	Drawn By: KJA		Date: 06/04/2026
	Design By: SJW		Date: 06/04/2026
	Approved By: SJW		Date: 06/04/2026
Project Location: TOWN OF KEARNY			Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS
Client Project No.	Project No. 2280	Scale 1"=10'-0"	File Name 2280-C-02 / Sheet C-02



REUSE PUMP STATION DEMOLITION PLAN

SCALE: 1" = 1'-0"

EXISTING SPLITTER BOX DEMOLITION PLAN

SCALE: 1" = 2'-0"

REMOVAL AND RECONSTRUCTION KEY NOTES

	DESCRIPTION
4	REMOVE AND REPLACE WITH VENDOR SUPPLIED PUMP CONTROL PANEL. SEE ELECTRICAL SHEETS
5	REMOVE AND REPLACE EXISTING 8" DI SUCTION PIPING INCLUDING FLANGED ELBOW LEADING TO PIPING UNDERGROUND. SEE SHEETS M-03 AND M-04
6	REMOVE AND REPLACE EXISTING EFFLUENT REUSE PUMP. SEE SHEETS M-03 AND M-04
7	REMOVE AND REPLACE EXISTING EFFLUENT REUSE JOCKEY PUMP. SEE SHEETS M-03 AND M-04
8	REMOVE AND REPLACE EXISTING 6" DI EFFLUENT REUSE PUMP DISCHARGE PIPING INCLUDING FLANGED ELBOW LEADING TO PIPING UNDERGROUND. SEE SHEETS M-03 AND M-04
9	REMOVE EXISTING CLA-VAL CONTROL VALVE. SEE SHEETS M-03 AND M-04
10	REMOVE EXISTING CLAMP TYPE BUTTERFLY VALVES (TYP 4)
11	REMOVE AND REPLACE EXISTING SAMPLE TAP. SEE SHEETS M-03 AND M-04
12	REMOVE AND REPLACE EXISTING PUMP SKID. SEE SHEETS M-03 AND M-04
13	REMOVE AND REPLACE EXISTING SPLITTER BOX. SEE SHEET M-09

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ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

0.5' 0' 0.5' 1'
HORIZ SCALE IN FEET

Sheet Title: REUSE PUMP STATION DEMOLITON PLAN	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No.: 2280	Scale	File Name: 2280-C-03 / Sheet: C-03

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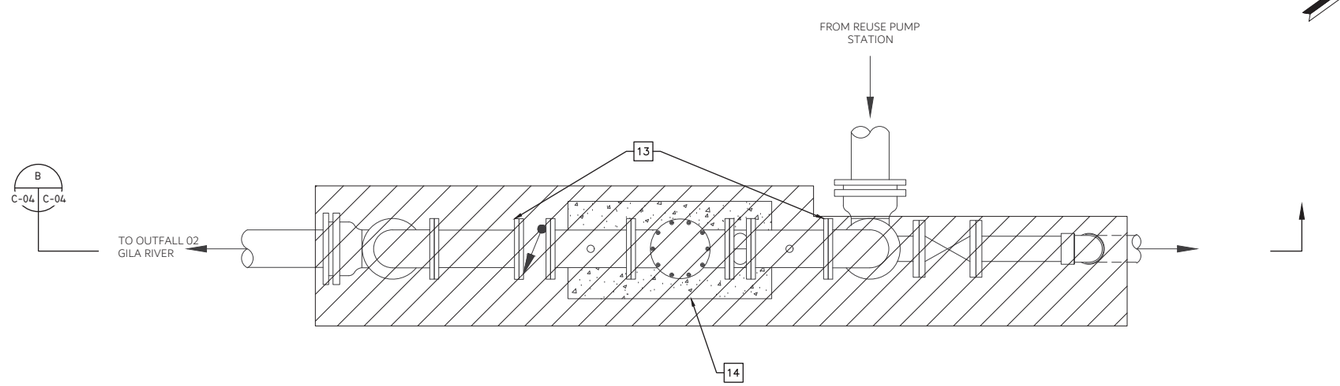
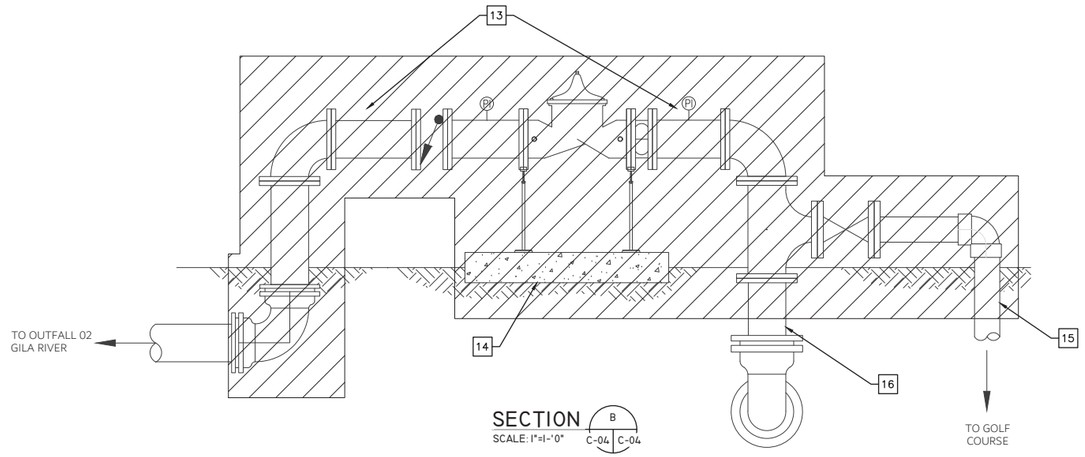
REMOVAL AND RECONSTRUCTION NOTES

NO.	DESCRIPTION
13	REMOVE EXISTING PIPING, VALVES, AND METERS PER SECTION ON THIS SHEET
14	REMOVE EXISTING CONCRETE PAD
15	REMOVE TO NEXT FITTING BELOW GROUND
16	REMOVE PIPE SPOOL TO BELOW GROUND MJ FITTING



OFF SITE VALVE DEMOLITION PLAN

SCALE: 1"=1'-0"



SECTION B C-04 C-04

SCALE: 1"=1'-0"

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Registered Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: OFFSITE VALVE AND PIPING DEMOLTION	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-C-04	Sheet C-04

0.5' 0' 0.5' 1'

HORIZ SCALE IN FEET

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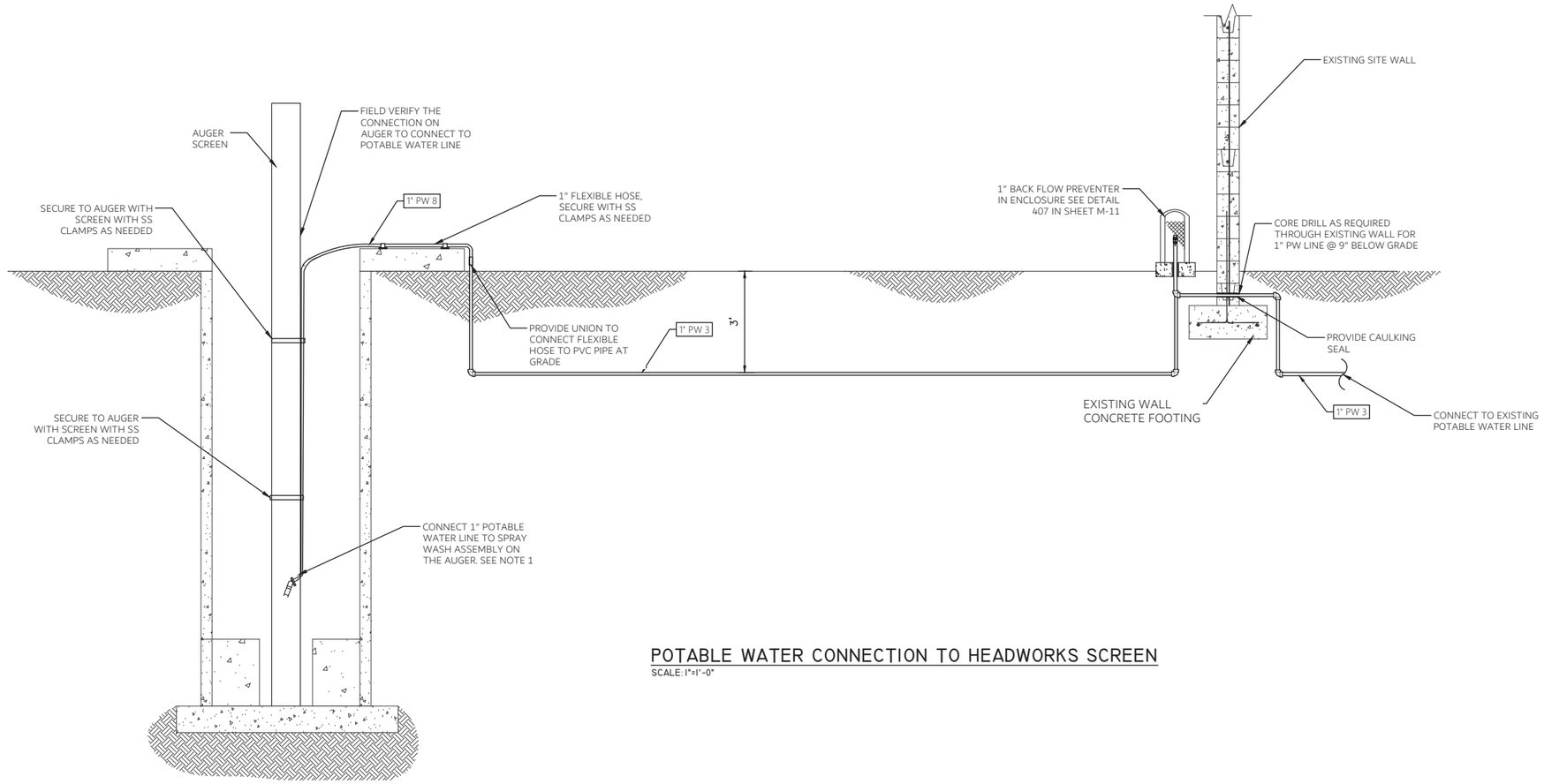

POTABLE WATER CONNECTION TO HEADWORKS SCREEN

SCALE: 1"=1'-0"

NOTE:

1. CONTRACTOR TO CONFIRM PRESSURE OF THE POTABLE WATER LINE AND REPORT TO ENGINEER IF THE PRESSURE IS NOT SUITABLE FOR THE AUGER SCREEN

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0.5' 0' 0.5' 1'
HORIZ SCALE IN FEET

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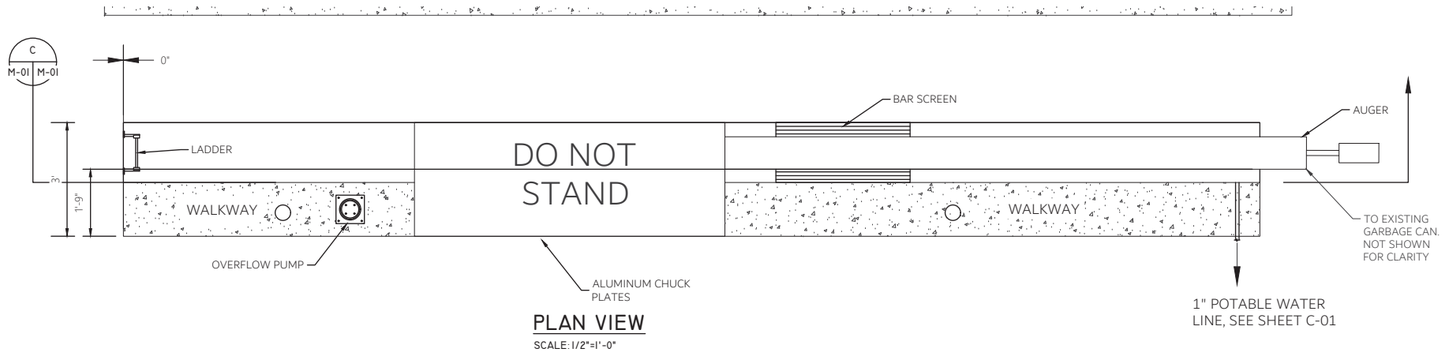
Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

Sheet Title: POTABLE WATER CONNECTION TO HEADWORKS SCREEN	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-C-05	Sheet C-05

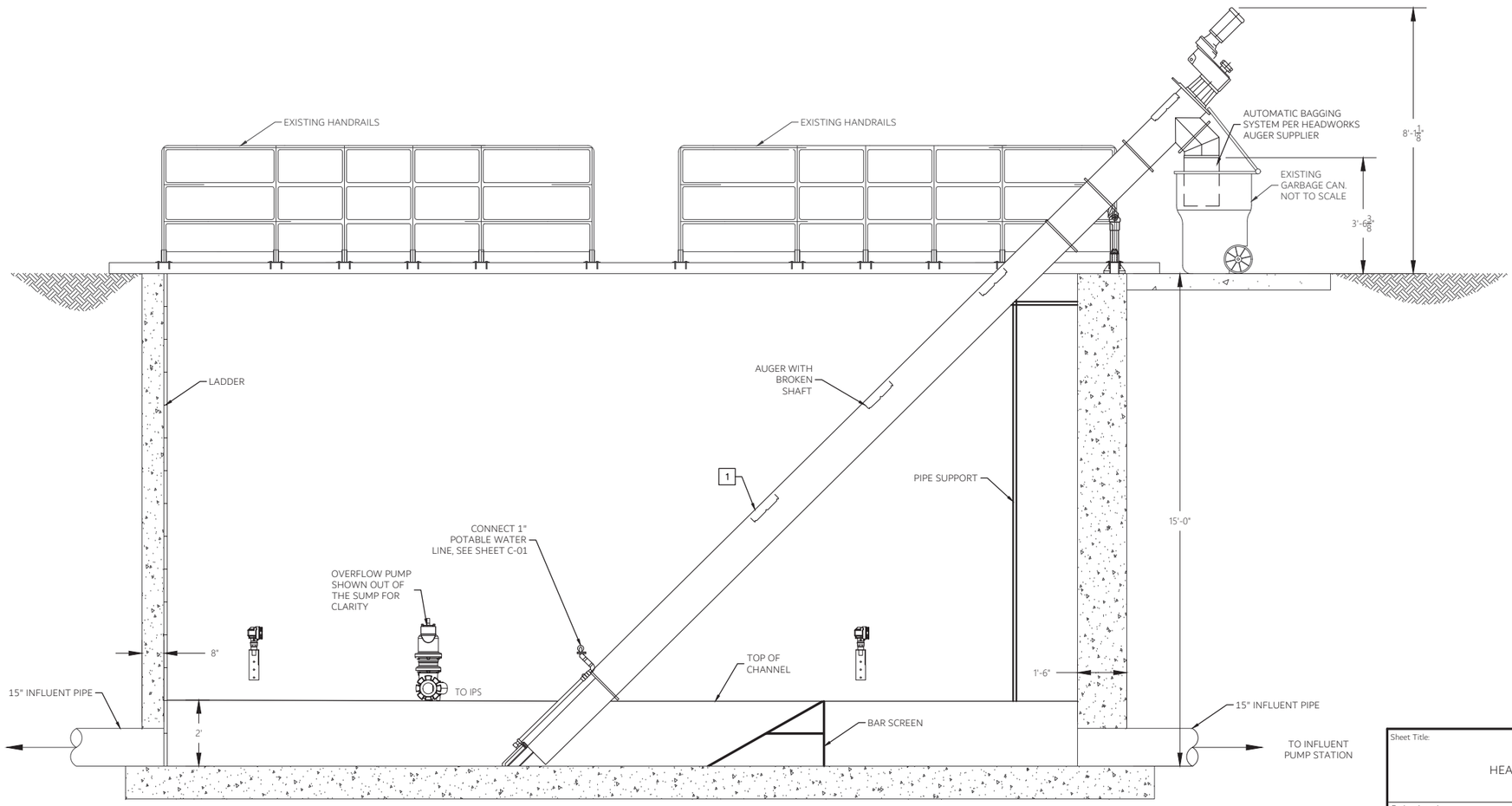
Jun 04, 2026 - 2:17pm
Z:_CAD Data Transfer\2280 - Kearny WWTP Improvements\CAD\Kearny Water Reclamation Facility Phase 2\2280 - Town of Kearny - KEARNY WATER RECLAMATION FACILITY Phase 2 - Standard\C-01-02.dwg

REMOVAL AND RECONSTRUCTION NOTES	
NO.	DESCRIPTION
1	REMOVE AND REPLACE AUGER IN KIND



PLAN VIEW

SCALE: 1/2"=1'-0"



SECTION C M-01 M-01

SCALE: 1/2"=1'

1' 0' 1' 2'

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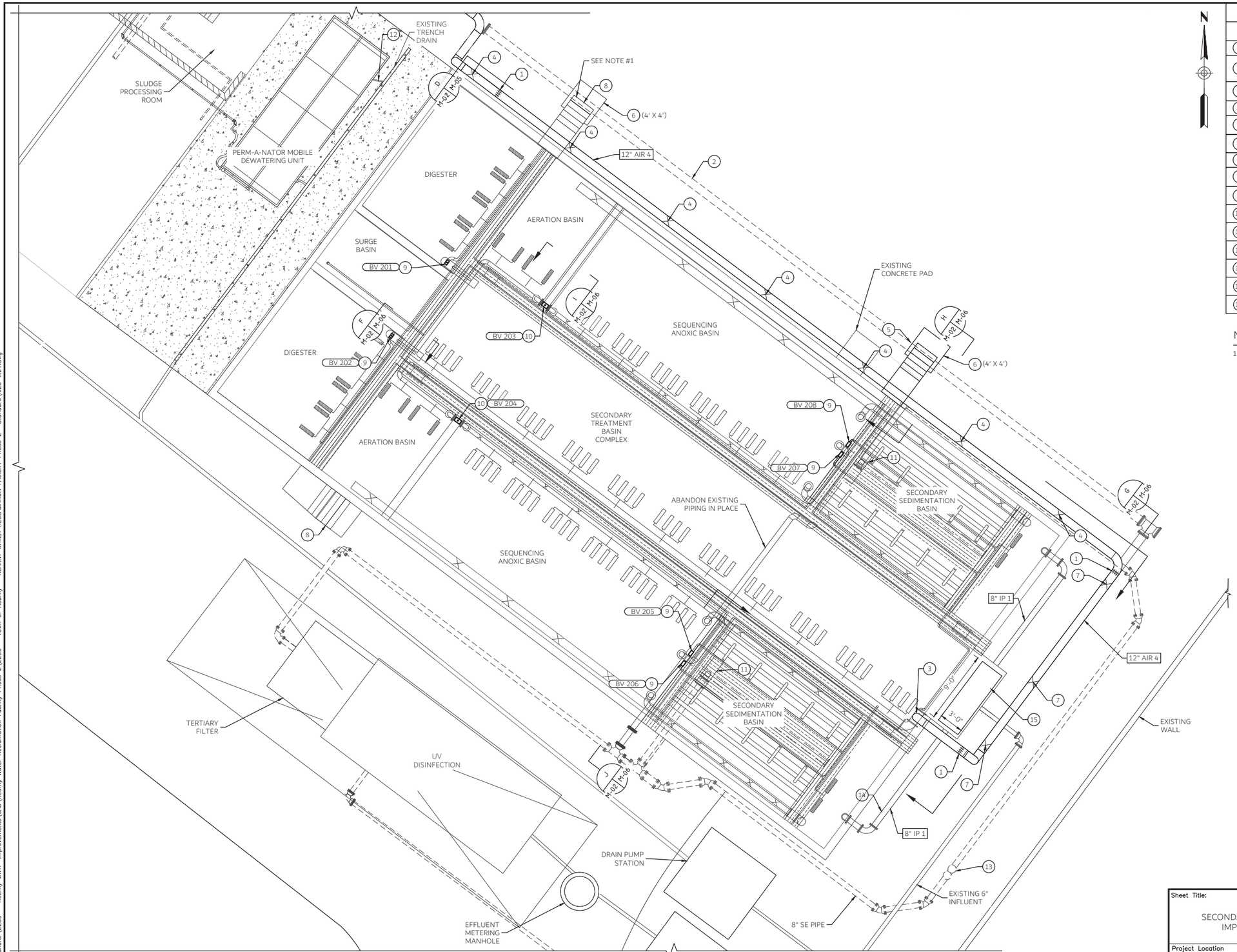
Registered Professional Engineer (Civil) 35182 STEVEN JOHN WEDWICK State of Arizona ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: HEADWORKS	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-01	Sheet M-01



SECONDARY TREATMENT BASIN IMPROVEMENTS MECHANICAL PLAN

SCALE: 1/6"=1'-0"

ISSUED FOR CONSTRUCTION

CONSTRUCTION NOTES

	DESCRIPTION
1	DISASSEMBLING JOINT, DRESSER TYPE OR EQUAL
2	ABANDON IN PLACE EXISTING 12" AIR UNDERGROUND PIPING. FILL WITH CONCRETE. AS PER 2018 INTERNATIONAL PLUMBING CODE
3	CONNECT TO EXISTING AIR PIPING
4	PIPE CLAMP. SEE TYP. 303 SEE SHEET M-10 FOR DETAILS
5	REINSTALL/ROTATE EXISTING STAIRS AND PLATFORM 90 DEGREES AS SHOWN
6	EQUIPMENT PAD PER TYP. 200 SEE SHEET M-10 FOR DETAILS
7	PIPE SUPPORT. SEE TYP. 317 SEE SHEET M-10 FOR DETAILS
8	NEW STAIRCASE TO SECONDARY TREATMENT COMPLEX BASIN, PER MANUFACTURER
9	REMOVE AND REPLACE 4'' PNEUMATIC BUTTERFLY VALVE, SEE SHEET M-06 FOR SECTION
10	REMOVE AND REPLACE 6'' PNEUMATIC BUTTERFLY VALVE, SEE SHEET M-06 FOR SECTION
11	REMOVE AND REPLACE WEIR BOX
12	FLEXIBLE TUBING
13	TWO WAY CLEANOUT, SEE MAG DETAIL 440-4 IN SHEET M-11
14	REPLACE EXISTING 8" DIP PIPE WITH NEW PIPING
15	NEW SPLITTER BOX, SEE SHEET M-09 FOR DETAIL

NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR A STAIRCASE FOR APPROVAL BY ENGINEER THAT IS SIMILAR TO EXISTING STAIRCASE ON NORTH EAST SIDE OF BASIN. PROVIDE STRUCTURAL CALCULATIONS FOR STAIRCASE AND ANCHORS THAT ARE STAMPED AND SEALED BY AN ARIZONA LICENSED STRUCTURAL P.E.

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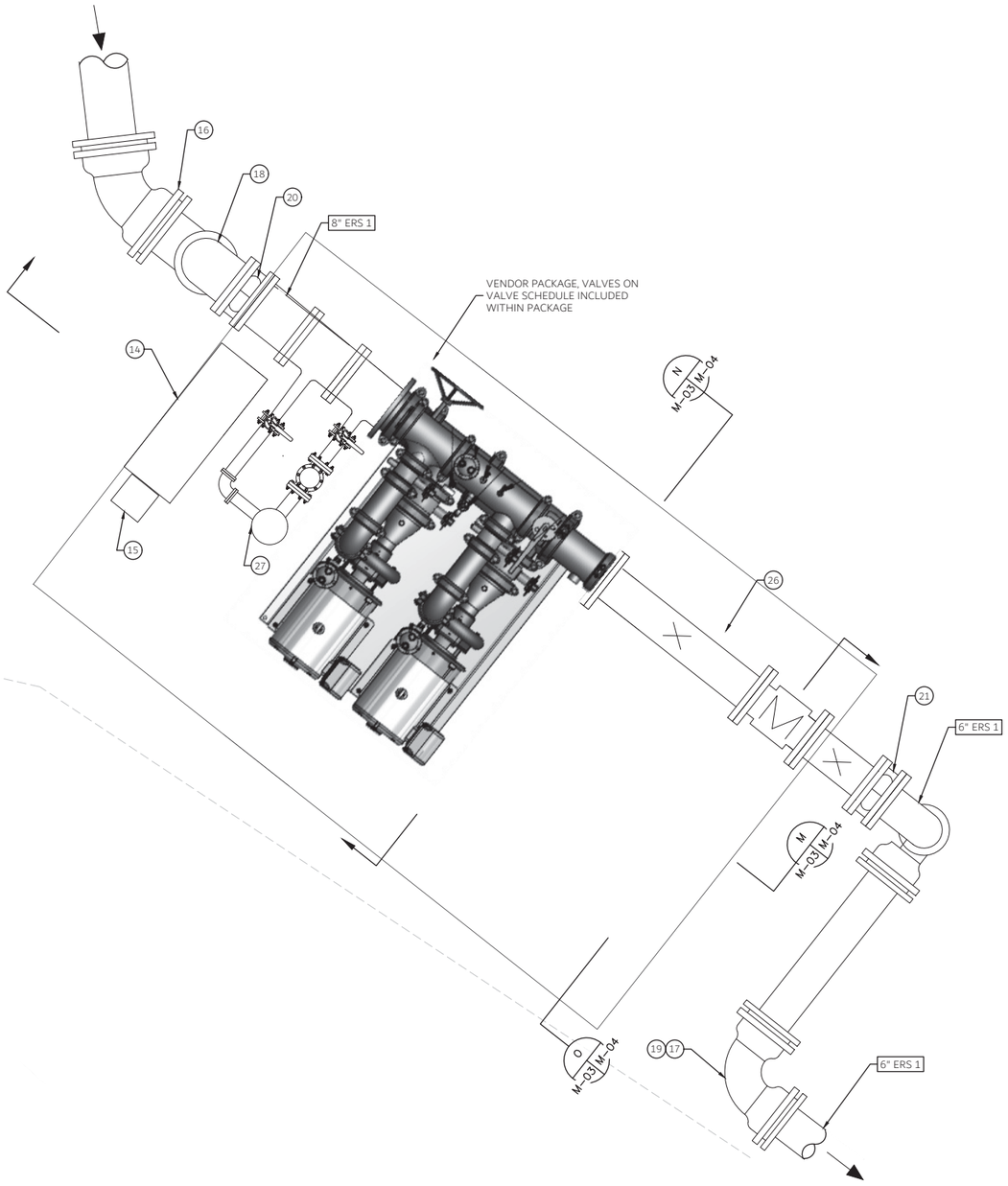
EXPIRATION DATE: 09/30/27

3' 0' 3' 6'

HORIZ SCALE IN FEET

Sheet Title: SECONDARY TREATMENT BASIN IMPROVEMENTS PLAN	Drawn By: KJA		Date: 06/04/2026
	Design By: SJW		Date: 06/04/2026
	Approved By: SJW		Date: 06/04/2026
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale 1/6"=1'-0"	File Name 2280-M-02 / Sheet M-02



REUSE PUMP STATION PLAN VIEW
SCALE: 1"=1'-0"

0.5' 0' 0.5' 1'
HORIZ SCALE IN FEET

GENERAL NOTES

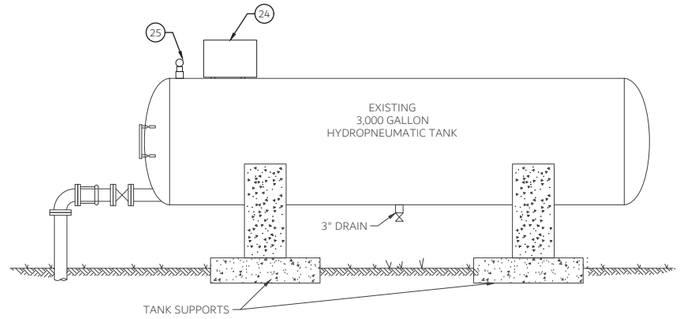
1. PACKAGE CENTRIFUGAL PUMP SYSTEM INCLUDING PUMPS, MOTOR, CONNECTIONS, BUTTERFLY VALVES, PRESSURE REGULATING VALVE, AIR VENTS, CONTROL PANEL, AND INSTRUMENTATION. GRUNDFOS SERIES LC MODEL: LC2595-3 OR EQUAL AND EBARA SERIES EVMSU MODEL: EVMSU10-6 OR EQUAL FOR JOCKEY PUMP.
2. ALL FITTINGS ON VENDOR SUPPLIED PACKAGE TO BE EPOXY COATED GALVANIZED STEEL*. PROVIDE FLANGED END CONNECTIONS AT CONNECTIONS TO 8" ERS 1 AND 6" ERS 1 PIPING.
3. CONTRACTOR TO PROVIDE STAINLESS STEEL BOLTS AND NUTS OR ANCHORS PER MANUFACTURER'S RECOMMENDATIONS TO SECURE SKID TO CONCRETE SLAB

N

CONSTRUCTION NOTES

	DESCRIPTION
14	NEW PUMP CONTROL PANEL, SEE ELECTRICAL SHEETS
15	AC UNIT (N36, HOFFMAN OR EQUIVALENT), SEE ELECTRICAL SHEETS
16	8" DIP WITH FLANGED FITTINGS AND MJ FITTINGS FOR BURIED PIPE
17	6" DIP WITH FLANGED FITTINGS AND MJ FITTINGS FOR BURIED PIPE
18	8" DIP 90° ELBOW
19	6" DIP 90° ELBOW
20	8" RESTRAINED FLEXIBLE BELLOWS COUPLING
21	6" RESTRAINED FLEXIBLE BELLOWS COUPLING
22	ALL FITTINGS ON THE VENDOR SUPPLIED PACKAGE TO BE EPOXY COATED GALVANIZED STEEL
23	ALL PIPING ON THE VENDOR SUPPLIED PACKAGE TO BE STEEL A53
24	REMOVE AND REPLACE HYDROPNEUMATIC TANK AIR VOLUME CONTROLLER
25	REMOVE AND REPLACE HYDROPNEUMATIC PRESSURE GAUGE
26	INSTALL 6" MAG METER
27	INSTALL JOCKEY PUMP, SEE NOTES

* BY PACKAGED PUMP SUPPLIER



HYDROPNEUMATIC TANK
SCALE: 1/3"=1'-0"

1.5' 0' 1.5' 3'
HORIZ SCALE IN FEET

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Registered Professional Engineer (State of Arizona)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: REUSE PUMP STATION	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-03	Sheet M-03

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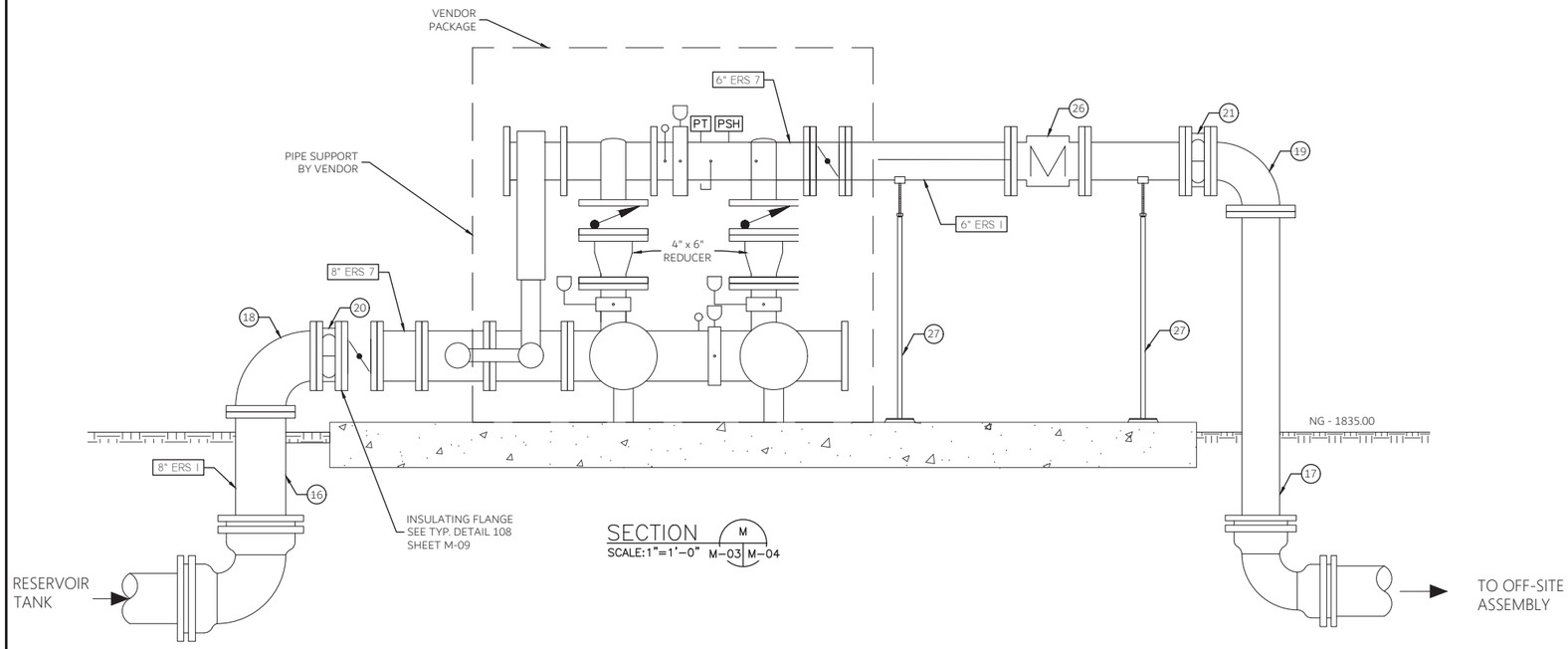
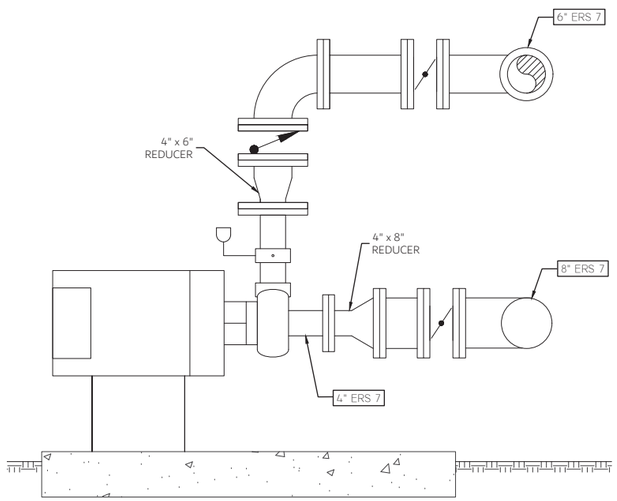
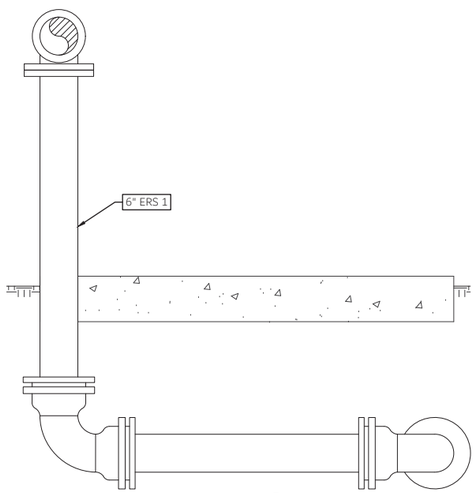


SECTION M
SCALE: 1"=1'-0" M-03 M-04



SECTION N
SCALE: 1"=1'-0" M-03 M-04



SECTION O
SCALE: 1"=1'-0" M-03 M-04

ISSUED FOR CONSTRUCTION

CONSTRUCTION NOTES

	DESCRIPTION
16	8" DIP WITH FLANGED FITTINGS AND MJ FITTINGS FOR BURIED PIPE
17	6" DIP WITH FLANGED FITTINGS AND MJ FITTINGS FOR BURIED PIPE
18	8" DIP 90º ELBOW
19	6" DIP 90º ELBOW
20	8" RESTRAINED FLEXIBLE BELLOWS COUPLING
21	6" RESTRAINED FLEXIBLE BELLOWS COUPLING
26	INSTALL 6" MAG METER
27	PIPE SUPPORT. SEE TYP. 317 SEE SHEET M-10 FOR DETAILS

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Registered Professional Engineer (Civil) 35182 STEVEN JOHN WEDWICK United States of America ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

0.5' 0' 0.5' 1'
HORIZ SCALE IN FEET

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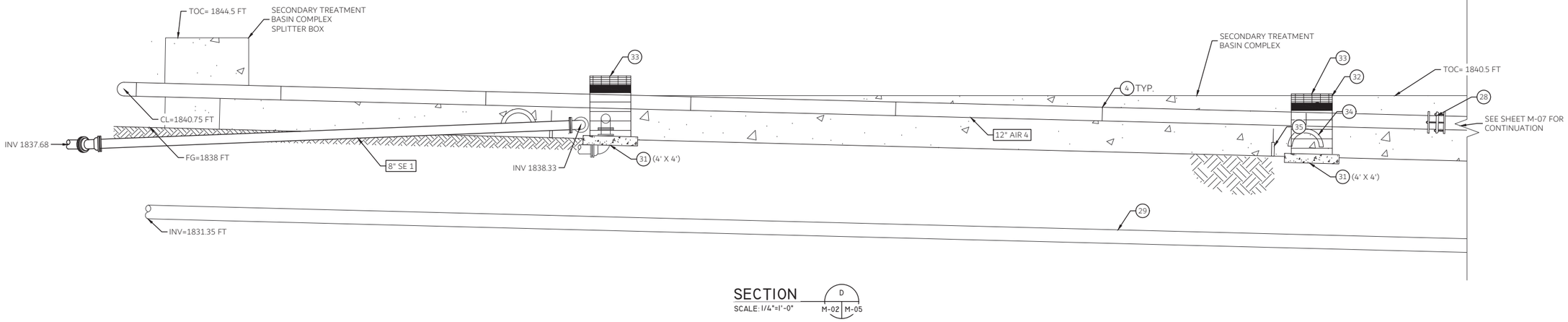
Sheet Title: REUSE PUMP STATION DETAILS	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale 1"=1'-0"	File Name 2280-M31	Sheet M-04

CONSTRUCTION NOTES

	DESCRIPTION
28	DISASSEMBLING JOINT, DRESSER TYPE OR EQUAL
29	FILL ABANDONED PIPING WITH HALF-SACK CLSM PER MAG STANDARD SPECIFICATIONS SECTION 728
4	PIPE CLAMP SEE TYP. 303 SEE SHEET M-10
31	EQUIPMENT PAD PER TYP. 200 SEE SHEET M-10
32	NEW STAIRCASE TO SECONDARY TREATMENT COMPLEX BASIN, PER MANUFACTURER
33	EXISTING 2' X 2' STAIR PLATFORM. ROTATE 90°
34	EXISTING HOSE REEL. PROTECT IN PLACE AND LOWER BY AT LEAST 1' TO AVOID NEW AIR PIPING
35	EXISTING HOSE BIB/HYDRANT. PROTECT IN PLACE AND LOWER AT LEAST 1' TO AVOID NEW AIR PIPING



SECTION D
SCALE: 1/4"=1'-0" M-02 | M-05

2' 0' 2' 4'
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Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

Sheet Title: SECONDARY TREATMENT BASIN IMPROVEMENTS MECHANICAL SECTIONS 1	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-05	Sheet M-05

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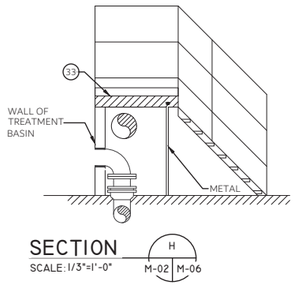
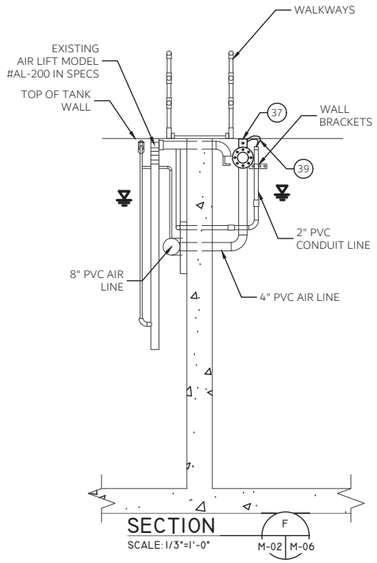
Z:_CAD Data Transfer\2280 - Kearny WWTP Improvements\CAD\Kearny Water Reclamation Facility Phase 2\2280 - Town of Kearny - KEARNY WATER RECLAMATION FACILITY Phase 2 - Standard\M20-M21.dwg



SECTION H
SCALE: 1/3"=1'-0"
M-02 | M-06



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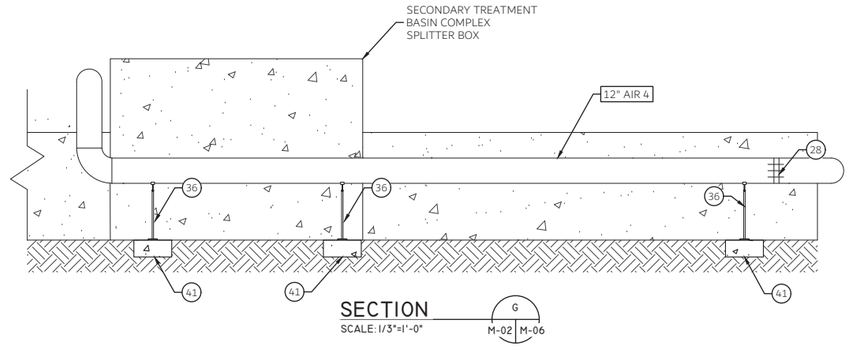
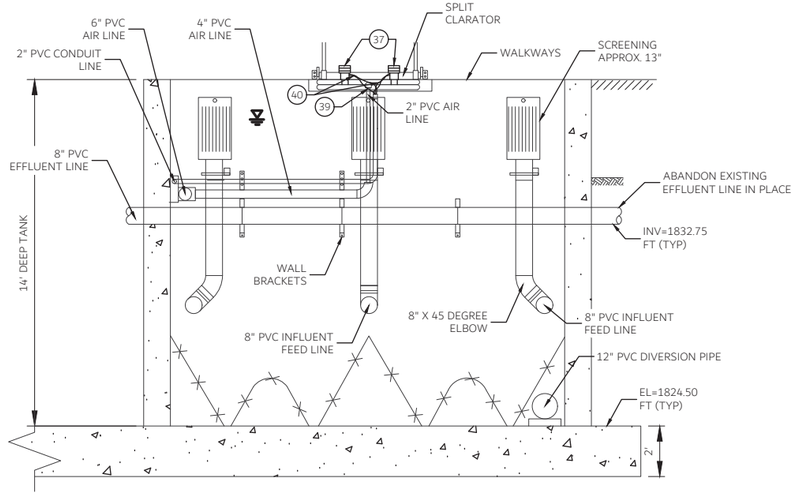
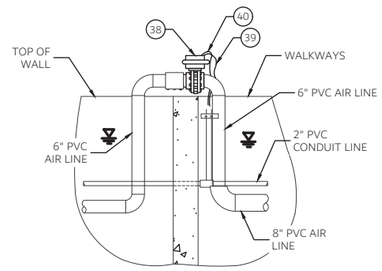
SCALE: 1/3"=1'-0"
M-02 | M-06



SECTION G
SCALE: 1/3"=1'-0"
M-02 | M-06



SECTION J
SCALE: 1/3"=1'-0"
M-02 | M-06



SECTION I
SCALE: 1/3"=1'-0"
M-02 | M-06

CONSTRUCTION NOTES

	DESCRIPTION
28	DISASSEMBLING JOINT, DRESSER TYPE OR EQUAL
33	EXISTING 2' X 2' STAIR PLATFORM. ROTATE 90º
34	EXISTING HOSE REAL. PROTECT IN PLACE AND LOWER BY AT LEAST 1' TO AVOID NEW AIR PIPING
35	EXISTING HOSE BIB/HYDRANT. PROTECT IN PLACE AND LOWER AT LEAST 1' TO AVOID NEW AIR PIPING
36	PIPE SUPPORT. SEE TYP 317 SEE SHEET M-10 FOR DETAILS
37	REMOVE AND REPLACE 4'' PNEUMATIC BUTTERFLY VALVE
38	REMOVE AND REPLACE 6'' PNEUMATIC BUTTERFLY VALVE
39	REPLACE SS TUBING. CONTRACTOR TO VERIFY SIZING. 3/8" 304 SS TUBING.
40	THE ABOVE AIR FILTER IN THE PNEUMATIC VALVE TUBING PROVIDED BY THE VALVE MANUFACTURER
41	INSTALL CONCRETE PAD FOR PIPE SUPPORT PER TYPICAL DETAIL 200 ON SHEET M-10

Rev No	Revision Note	Date	Design	Drawn	Checked

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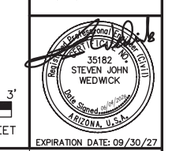

EXPIRATION DATE: 09/30/27

1.5' 0' 1.5' 3'
HORIZ SCALE IN FEET

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Sheet Title: SECONDARY TREATMENT BASIN IMPROVEMENTS MECHANICAL SECTIONS 2	Drawn By: KJA		Date: 06/04/2026
	Design By: SJW		Date: 06/04/2026
	Approved By: SJW		Date: 06/04/2026
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-06 / Sheet M-06

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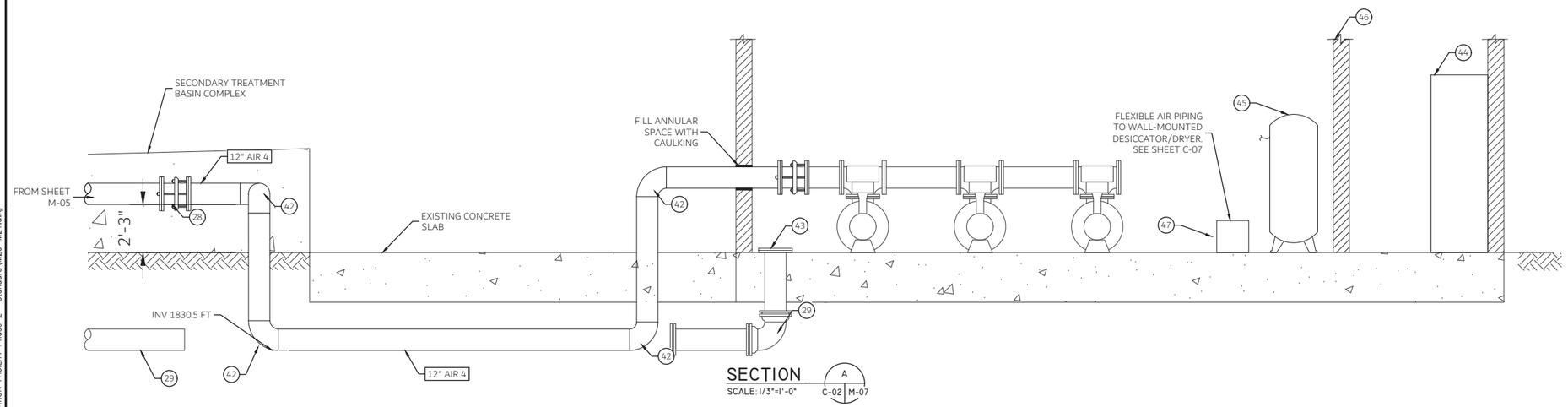
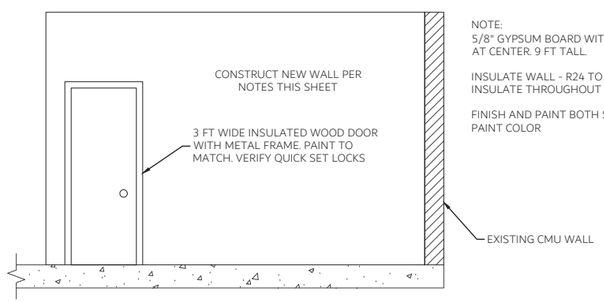


SECTION
SCALE: 1/3"=1'-0"
A | C-02 | M-07



NOTE:
5/8" GYPSUM BOARD WITH 2X4 METAL STUDS AT 2' AT CENTER. 9 FT TALL.

INSULATE WALL - R24 TO BE USED TO FULLY INSULATE THROUGHOUT

FINISH AND PAINT BOTH SIDES. MATCH EXISTING PAINT COLOR

DETAIL 6
SCALE: NTS C-02 | M-07

CONSTRUCTION NOTES

	DESCRIPTION
28	DISASSEMBLING JOINT, DRESSER TYPE OR EQUAL
42	12" X 12" SCH 10 SS ELBOW, WELDED
43	INSTALL 12'' BLIND FLANGE
29	FILL ABANDONED PIPING WITH HALF-SACK CLSM PER MAG STANDARD SPECIFICATIONS SECTION 728
44	INSTALL PANEL AND NEW BLOWER VFD SYSTEM. SEE ELECTRICAL SHEETS FOR DETAILS
45	REINSTALL EXISTING PLANT AIR COMPRESSOR
46	REBUILD WALL TO ELECTRICAL ROOM, REFER TO DETAIL 6
47	INSTALL NEW 40 CFM DESICCATOR/DRYER FOR EXISTING PLANT AIR SYSTEM . MOUNT ON EXISTING CMU WALL USING P1000T UNISTRUT MOUNTING CHANNELS.

Rev No	Revision Note	Date	Design	Drawn	Checked

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Registered Professional Engineer
35182
STEVEN JOHN WEDWICK
Date Signed 06/04/2026
ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

1.5' 0' 1.5' 3'
HORIZ SCALE IN FEET

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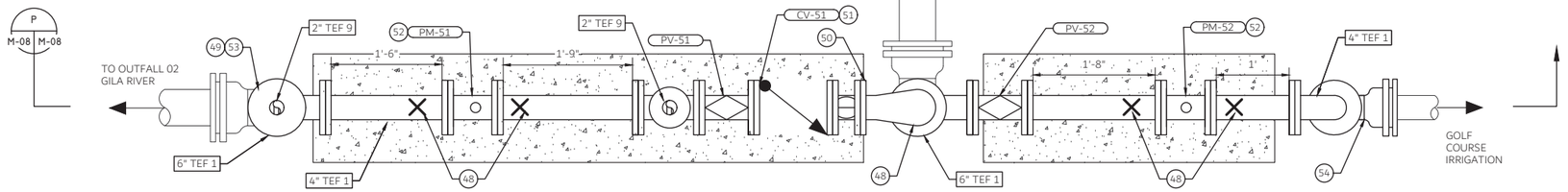
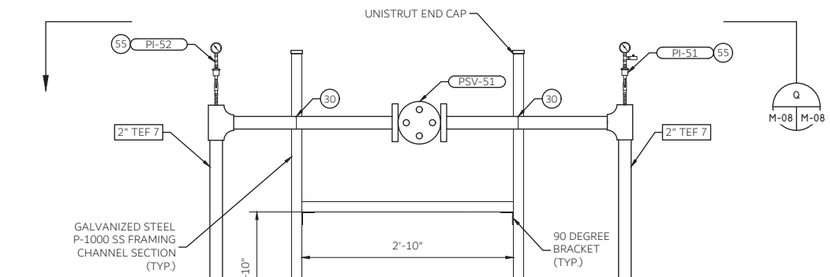
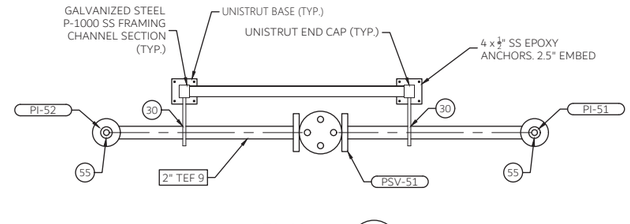
Sheet Title: BLOWER ROOM SECTIONS	Drawn By: KJA		Date: 06/04/2026
	Design By: SJW		Date: 06/04/2026
	Approved By: SJW		Date: 06/04/2026
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale 1/3"=1'-0"	File Name 2280-M-07 / Sheet M-07



OFF-SITE VALVE ASSEMBLY PLAN VIEW

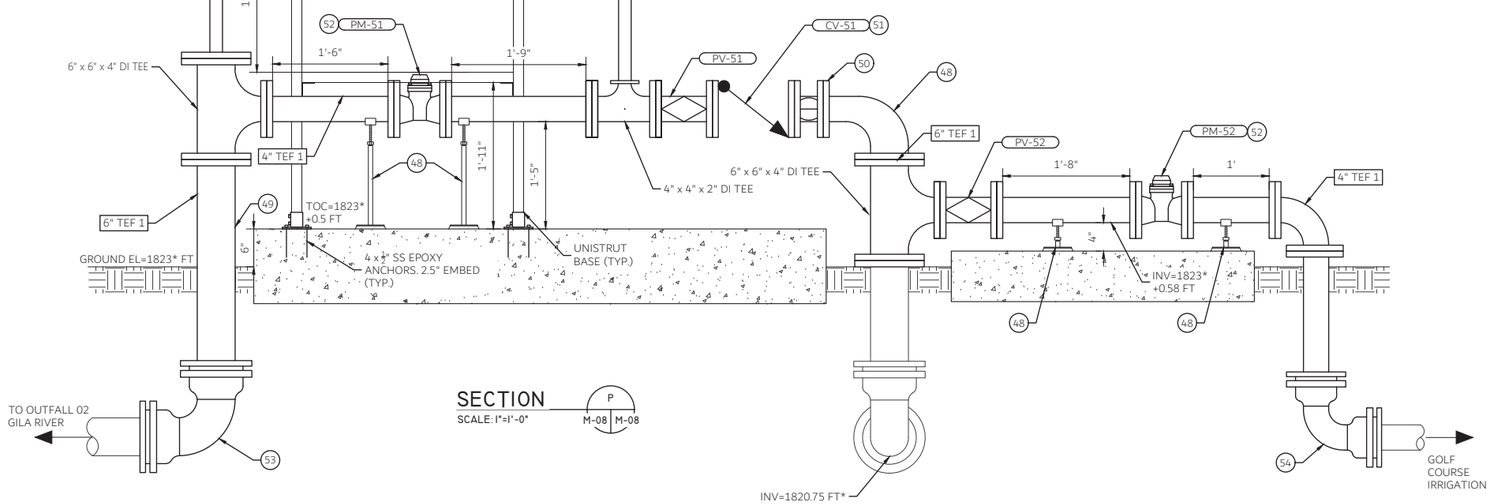
SCALE: 1"=1'-0"





PLAN

SCALE: 1"=1'-0" Q M-08 M-08



SECTION

SCALE: 1"=1'-0" P M-08 M-08

CONSTRUCTION NOTES

	DESCRIPTION
30	PIPE CLAMP. SEE TYP. 303 IN SHEET M-10 FOR DETAILS
48	PIPE SUPPORT. SEE TYP. 302 IN SHEET M-10 FOR DETAILS
48	6" X 4" REDUCING 90º DIP ELBOW
49	INSTALL NEW 6" DI INLET PIPING TO FLANGED ELBOW LEADING TO PIPING UNDERGROUND
50	INSTALL 4" BELLOWS COUPLING
51	INSTALL 4" CHECK VALVE
52	INSTALL 4" PROPELLER METER OR EQUAL
53	6" ELBOW CONNECTION TO EXISTING LINE
54	4" ELBOW CONNECTION TO EXISTING LINE
55	INSTALL NEW PRESSURE GAUGE/PRESSURE TRANSMITTER SEE TYP 153 SHEET M-11
56	INSTALL MJ x MJ 90º ELBOW ON EXISTING LINE, FIELD VERIFY PIPE MATERIAL AND DIAMETER

Rev No	Revision Note	Date	Design	Drawn	Checked

NCS ENGINEERS EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ. 85012
(602) 629-0206

Registered Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed 06/04/2026
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

ISSUED FOR CONSTRUCTION

HORIZ SCALE IN FEET 0.5' 0' 0.5' 1'

Sentinel drivers 811 at least two full working days before you begin excavation
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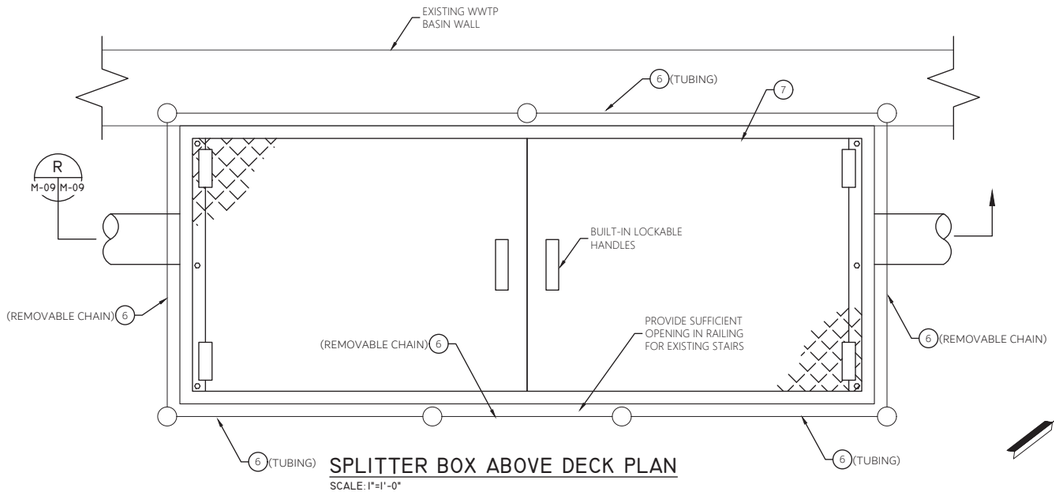
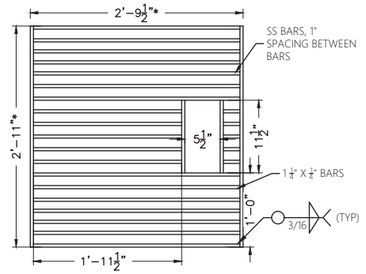
Call 811 or click Arizona811.com

Sheet Title: OFFSITE VALVE ASSEMBLY PLAN AND SECTION	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-08	Sheet M-08



SPLITTER BOX ABOVE DECK PLAN

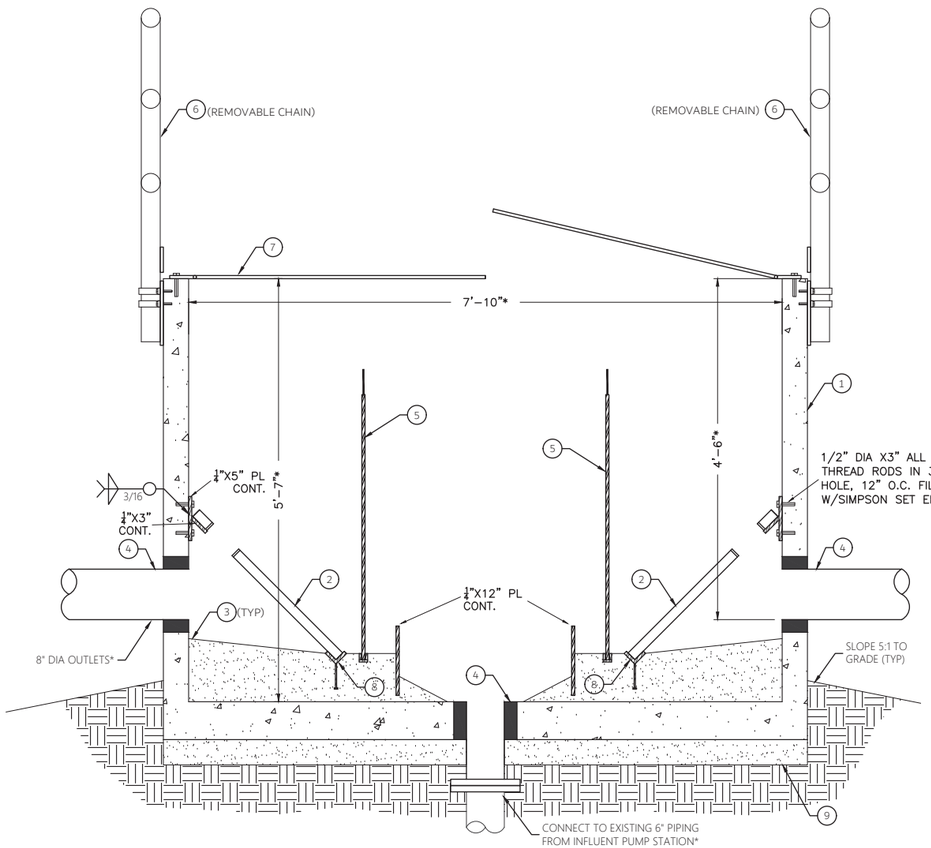
SCALE: 1"=1'-0"



REMOVABLE BAR SCREEN

SCALE: NTS

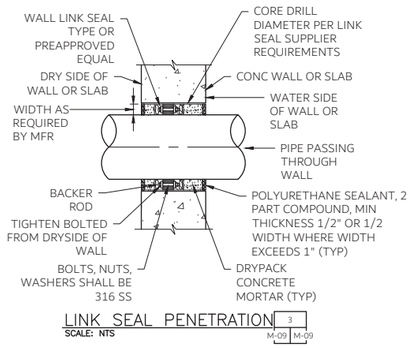
1 M-09 M-09



SECTION

SCALE: 1'=1'-0"

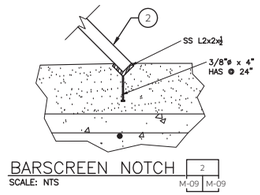
R M-11 M-11



LINK SEAL PENETRATION

SCALE: NTS

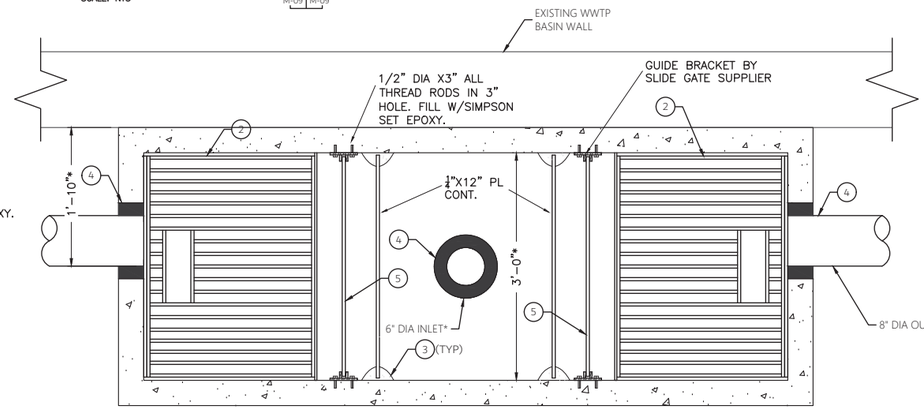
3 M-09 M-09



BARSCREEN NOTCH

SCALE: NTS

2 M-09 M-09



SPLITTER BOX BELOW DECK PLAN

SCALE: 1"=1'-0"

CONSTRUCTION NOTES

	Description
1	PRECAST VAULT BY OLSEN PRECAST OR EQUAL, SIZE PER PLANS AND SECTION THIS SHEET. REVIEW AND APPROVAL IS REQUIRED BY ENGINEER AS DEFERRED SUBMITTAL.
2	REMOVABLE BAR SCREEN WITH OVERFLOW PER DETAIL THIS SHEET
3	HAND PLACED GROUT.
4	LINK SEAL PIPE PENETRATION PER DETAIL THIS SHEET.
5	ALUMINUM STOP GATE AND HANDLE WITH CHANNEL
6	SIDE MOUNTED HANDRAIL WITH TOE PLATE PER TYP 100. NOTE LOCATIONS ON PLAN WHERE CHAIN IS USED INSTEAD OF TUBING.
7	CHECKER PLATE ALUMINUM LID BOLTED TO PRECAST VAULT, WITH TWO INTEGRAL LOCKABLE HATCHES, CAPABLE OF WITHSTANDING A LIVE LOAD OF 50 PSF AND 500 LB DISTRIBUTED OVER 1 SQUARE FOOT.
8	BARSCREEN NOTCH PER DETAIL THIS SHEET.
9	4" AB COMPACTED TO 95% OVER 95% COMPACTED SUBGRADE

NOTES

1. UNLESS OTHERWISE NOTIFIED, ALL METAL AND HARDWARE IS TO BE TYPE 316 STAINLESS STEEL.

Rev No	Revision Note	Date	Design	Drawn	Checked

NCS ENGINEERS
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer — 35182 — STEVEN JOHN WEDWICK — Date Signed — ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title: SPLITTER BOX PLAN, SECTION, AND DETAILS	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-09	Sheet M-09

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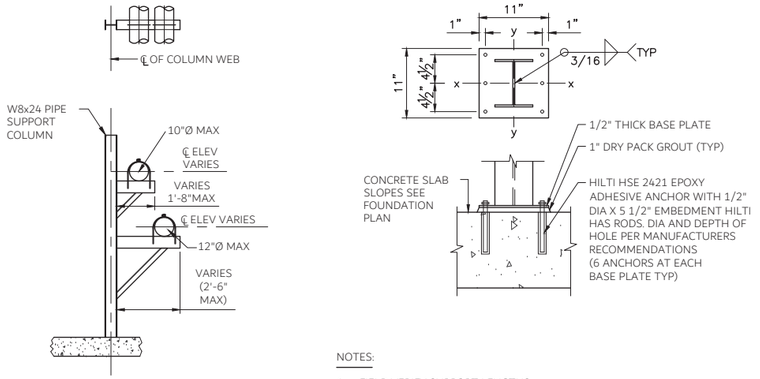
Z:_CAD Data Transfer\2280 - Kearny WWTP Improvements\CAD\Kearny Water Reclamation Facilty Phase 2\2280 - Town of Kearny - KEARNY WATER RECLAMATION FACILITY Phase 2 - Standard\M-01-11.dwg



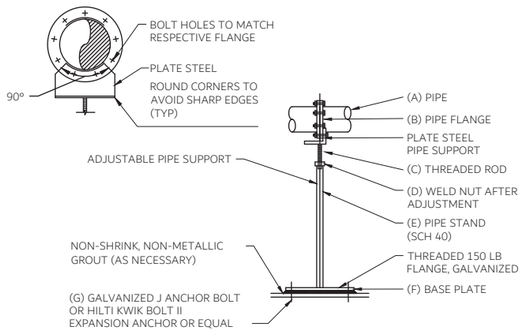
NOTES:

1. FIELD VERIFY SUPPORT LENGTHS.
2. PROVIDE 3" CLEARANCE BETWEEN THE PIPE SUPPORT AND U-BOLT AROUND PIPE.

LATERAL WELDED PIPE SUPPORT TYPE II

TYP 305

SCALE: NTS



PIPE SIZE	A	B	C, D	E	F	G
2"-4"	1/2"	2"x1/4"	1"	1 1/2" Ø	6"x6"x3/8"	4-1/2" DIA
6"-10"	5/8"	2"x1/4"	1 1/2"	2" Ø	6"x6"x3/4"	4-1/2" DIA
12"-18"	3/4"	3"x3/8"	2"	3" Ø	10"x10"x3/8"	4-5/8" DIA

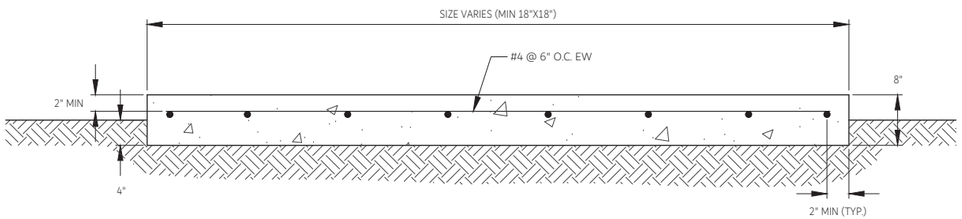
NOTES:

1. SEE TABLE FOR DIMENSIONS AND NOTES.
2. ALL ADJUSTABLE PIPE SUPPORTS SHALL BE CARBON STEEL.
3. PROVIDE 5" EMBEDMENT FOR ALL ANCHOR BOLTS AND ANCHORS INTO CONCRETE SLAB.

FLANGED PIPE SUPPORT

TYP 302

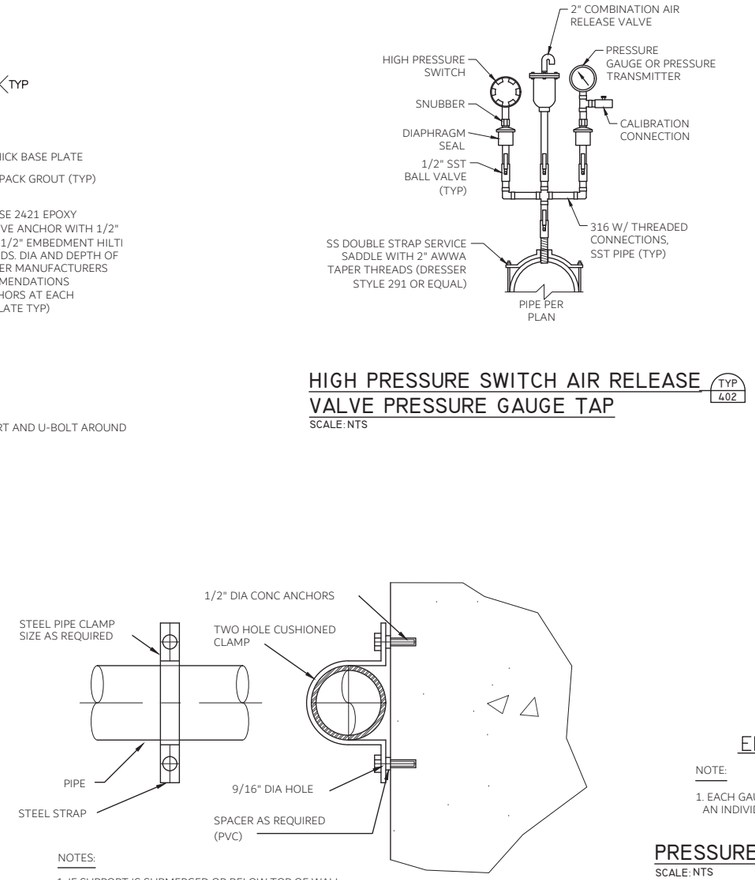
SCALE: NTS



EQUIPMENT PAD

TYP 200

SCALE: NTS



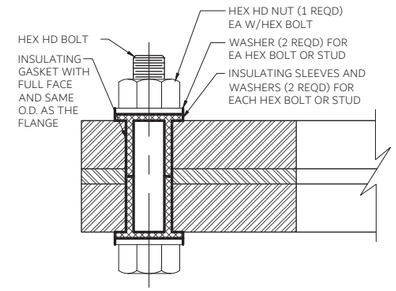
NOTES:

1. IF SUPPORT IS SUBMERGED OR BELOW TOP OF WALL OF HYDRAULIC STRUCTURE, STRAP SHALL BE STAINLESS STEEL.
2. SUPPORT CHANNEL AND PIPE CLAMP SHALL BE U-716-7/8 TWO HOLE CUSHIONED CLAMP WITH GOLD GALV HARDWARE FINISH OR EQUAL.
3. MAX SPACING BETWEEN COPPER PIPE SUPPORTS IS SIX FEET.

PIPE CLAMP

TYP 303

SCALE: NTS



NOTES:

1. HEX HEAD BOLT AND HEX HEAD NUT ARE ASTM A-307, GRADE "B" CADMIUM PLATED OR ZINC COATED
2. FOR BURIED PIPING COAT AND/OR WRAP IN POLYETHELENE IN ACCORDANCE WITH SPECS.
3. FULL FACED GASKET WITH THE SAME OUTSIDE DIAMETER AS THE FLANGE AND PRECISION CUT BOLT HOLES.
4. GASKET MATERIAL: NEOPRENE FACE PHENOLIC
5. INSULATING SLEEVES AND WASHERS MANUFACTURED OF HIGH DENSITY POLYETHELENE.

INSULATING FLANGE

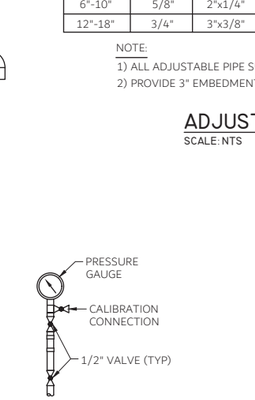
TYP 108

SCALE: NTS

HIGH PRESSURE SWITCH AIR RELEASE VALVE PRESSURE GAUGE TAP

TYP 402

SCALE: NTS



ELEVATION

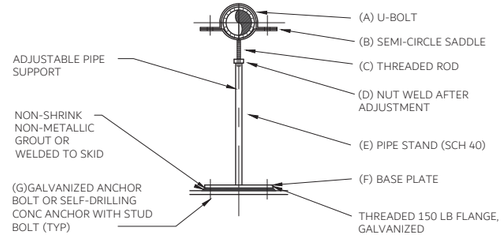
NOTE:

1. EACH GAUGE/TRANSMITTER SHALL HAVE AN INDIVIDUAL CONNECTION TO PIPE.

PRESSURE GAUGE DETAIL

TYP 153

SCALE: NTS



PIPE SIZE	A	B	C, D	E	F	G
2"-4"	1/2"	2"x1/4"	1"	1 1/2" Ø	6"x6"x3/8"	4-1/2" DIA
6"-10"	5/8"	2"x1/4"	1 1/2"	2" Ø	6"x6"x3/4"	4-1/2" DIA
12"-18"	3/4"	3"x3/8"	2"	3" Ø	10"x10"x3/8"	4-5/8" DIA

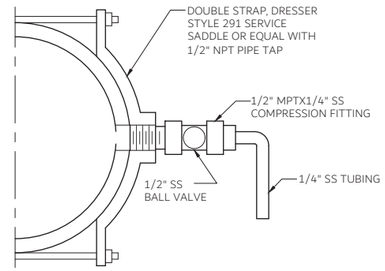
NOTE:

1) ALL ADJUSTABLE PIPE SUPPORTS WILL BE CARBON STEEL.
2) PROVIDE 3" EMBEDMENT FOR ALL ANCHOR BOLTS INTO CONCRETE SLAB.

ADJUSTABLE PIPE SUPPORT

TYP 317

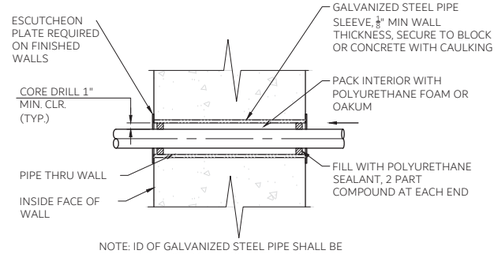
SCALE: NTS



SAMPLE TAP

TYP 405

SCALE: NTS



NOTE: ID OF GALVANIZED STEEL PIPE SHALL BE THE NEXT LARGER SIZE ABOVE THE OD OF THE SLEEVED PIPE PLUS 1" MIN.

PIPE THROUGH CONCRETE WALL

TYP 312

SCALE: NTS

ISSUED FOR CONSTRUCTION

Revision Note | Rev No | Checked | Drawn | Design | Date

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202 EAST EARLL DRIVE, STE 110
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(602) 629-0206

Registered Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 09/30/27

Sheet Title: MECHANICAL DETAILS – 1	Drawn By: KJA	Date: 06/04/2026	
	Design By: SJW	Date: 06/04/2026	
	Approved By: SJW	Date: 06/04/2026	
Project Location: TOWN OF KEARNY	Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS		
Client Project No.	Project No. 2280	Scale AS NOTED	File Name 2280-M-10 / Sheet M-10

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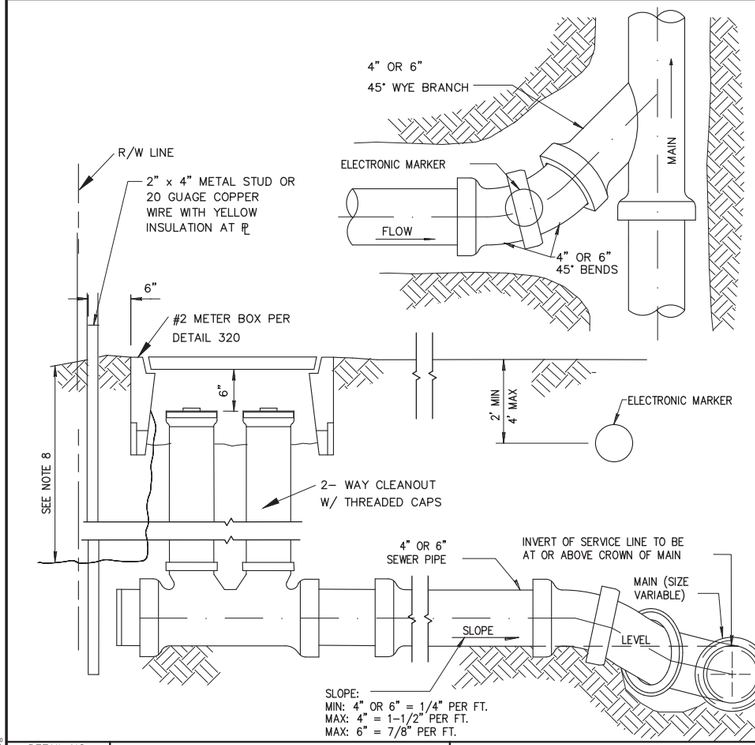
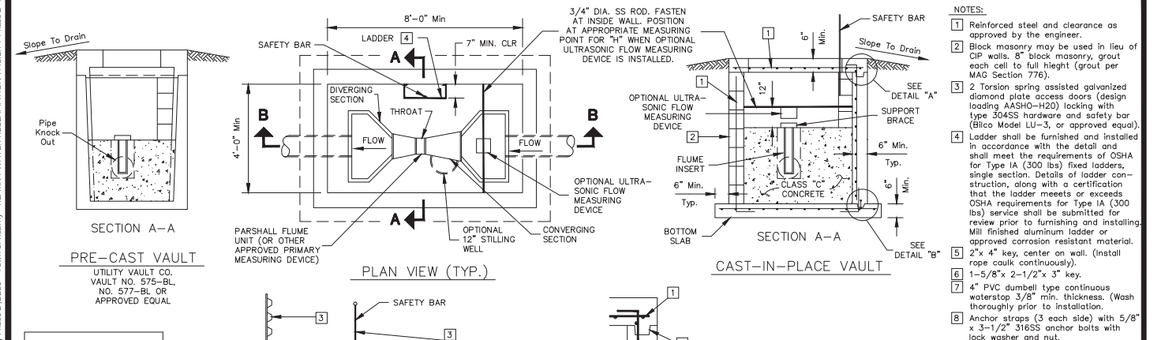


NOTES:

1. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS HOUSE CONNECTION. TAP EXTENDS TO PROPERTY LINE IN ALLEYS OR STREETS OR TO EASEMENT LINE.
2. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
3. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
4. IF DEPTH REQUIRES, MINIMUM SLOPE CAN BE REDUCED TO 1/8" PER FOOT PROVIDED STUB IS STAKED TO GRADE.
5. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
6. END OF TAP TO BE SEALED AND MARKED AS NOTED.
7. ELECTRONIC MARKER SHALL BE A 3M MODEL 1424-XR/ID [4" DIAMETER SELF LEVELING MARKER BALL GREEN IN COLOR] OR APPROVED EQUAL OR AS REQUIRED BY THE LOCAL AGENCY.
8. # 14 BARE COPPER LOCATOR WIRE ACCESSIBLE AT R/W AND AT PROPERTY OWNER CLEANOUT BOX NO GREATER THAN 4' DEEP.
9. STAMP OR WELD THE LETTER "S" ON LID OF METER BOX.

DETAIL NO.			REVISED	DETAIL NO.
440-2	MARICOPA ASSOCIATION of GOVERNMENTS — STANDARD DETAIL ENGLISH	TYPE 'B' – SEWER BUILDING CONNECTION TWO-WAY CLEANOUT AND METER BOX AT R/W (WHEN SPECIFIED BY LOCAL AGENCY)	01-01-2007	440-2



NOTES:

1. Reinforced steel and clearance as approved by the engineer.
2. Block masonry may be used in lieu of CIP walls. 8" block masonry, grout each cell to full hieght (grout per MAG Section 776).
3. 2 Torsion spring assisted galvanized diamond plate access doors (design loading AASHO–H20) locking with type 304SS hardware and safety bar (Bilco Model LU–3, or approved equal).
4. Ladder shall be furnished and installed in accordance with the detail and shall meet the requirements of OSHA for Type IA (300 lbs) fixed ladders, single section. Details of ladder construction, along with a certification that the ladder meeets or exceeds OSHA requirements for Type IA (300 lbs) service shall be submitted for review prior to furnishing and installing. Mill finished aluminum ladder or approved corrosion resistant material.
5. 2"x 4" key, center on wall. (install rope caulk continuously).
6. 1–5/8"x 2–1/2"x 3" key.
7. 4" PVC dumbell type continuous waterstop 3/8" min. thickness. (Wash thoroughly prior to installation.
8. Anchor straps (3 each side) with 5/8" x 3–1/2" 316SS anchor bolts with lock washer and nut.

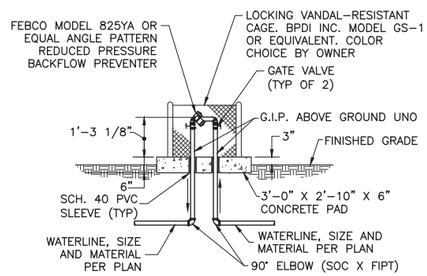
GENERAL NOTES

1. All construction shall conform to MAG Specifications and Details and City of Scottsdale Supplement to MAG Specifications and Details, unless modified on the plans.
2. All concrete floors, walls and top slab of the structure shall conform to MAG section 725, Class A, minimum compressive strength at 28 days = 3,000 psi.
3. All concrete for the grout fillet inside the structure shall conform to MAG Section 725, Class C, minimum compressive strength at 28 days = 2,000 psi.
4. All steel reinforcing shall be deformed bars, Grade 60, billet steel conforming to ASTM Specification No. A–615, latest edition.
5. The Monitoring/Sampling Vault shall be installed on the owner's property as close to the customer tap to the City sewer as feasible, and approved by the City of Scottsdale.
6. Flume size should be based upon the minimum and maximum flow rates and velocities to insure free–flow conditions.
   –Maximum Flow = 70%–100f maximum capacity of selected flume size.
   –0.5 inches of flow should exist at the minimum actual flow.
7. Flume floor elevation should be high enough, relative to downstream conditions, to prevent submerged flow (50% submergence is acceptable at maximum flow), install the flume level (longitudinally and transversely) in the converging section.
8. Upstream flow should be wave free, non–turbulent, and symmetrical having a uniform velocity (1fps minimum to 3 fps maximum) at least 10 times the diameter of the upstream sewer pipe in length in the approach channel. Bends upstream in the flume will NOT be allowed for a distance of 25 pipe diameters unless conditions in the approach section of the flume will not be adversely affected.
9. The flume shall be installed off–center and away from the ladder to allow the maximum working space for City personnel.
10. It shall be the owner's responsibility to properly maintain the flume in accordance with the manufacturers recommendations to ensure the accuracy of the measurement.

EQUIPMENT DESCRIPTION

A Fisher and Porter type 10F1940, Hinde Engineering Company, PS–1001, or approved equal molded fiberglass reinforced polyester Parshall Flume shall be installed. The flume shall be molded in one piece with ample wall thickness and reinforcing ribs to prevent distorsion during shipment, installation and operation. The flume shall be self–supporting and require no external supporting structure. Interior dimensions shall conform to those in the latest revision of Water Measurement Manual published by the U.S. Department of the interior, Water and Power Resources Services. The throat width and flume height (*E dimension) shall be per plan.

DETAIL NO.		APPROVED BY:		DETAIL NO.
2460	City of Scottsdale Standard Details	Scottsdale Standards & Specifications Committee	MONITORING/SAMPLING VAULT	2460



BACKFLOW PREVENTER IN ENCLOSURE (TYP 407)

SCALE: NTS

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ISSUED FOR CONSTRUCTION

Rev No	Revision Note	Date	Design	Drawn	Checked

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202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Civil)
35182
STEVEN JOHN WEDWICK
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 09/30/27

Sheet Title:		Drawn By:	KJA	Date:	06/04/2026
MECHANICAL DETAILS – 2		Design By:	SJW	Date:	06/04/2026
		Approved By:	SJW	Date:	06/04/2026
Project Location: TOWN OF KEARNY		Project name: PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS			
Client Project No.	Project No. 2280	Scale: AS NOTED	File Name: 2280-M-11		Sheet: M-11

Jun 04, 2026 - 2:17pm
Z:_CAD Data Transfer\2280 - Kearny WWTP Improvements\CAD\Kearny Water Reclamation Facility Phase 2\2280 - Town of Kearny - KEARNY WATER RECLAMATION FACILITY Phase 2 - Standard\M-01-11.dwg

SCHEMATIC DIAGRAM SYMBOLS

(CR)	CONTROL RELAY	HAND AUTO XO	2 POSITION SELECTOR SWITCH POSITION LEGEND: X=CLOSED O=OPEN
(TD)	TIME DELAY RELAY	OFF HAND AUTO XOO	3 POSITION SELECTOR SWITCH HAND – OFF – AUTO POSITION LEGEND: X=CLOSED O=OPEN
(AR)	ALARM RELAY		NORMALLY CLOSED PUSH BUTTON
(ETM)	ELAPSED TIME METER		LOCKOUT STOP PUSH BUTTON
(M)	MOTOR STARTER OR CONTACTOR COIL		NORMALLY OPEN PUSH BUTTON
(PC)	PHOTO CELL		EMERGENCY STOP PUSH BUTTON (MAINTAINED)
(R)	BEACON ALARM LIGHT LETTER INDICATES COLOR R=RED, A=AMBER, B=BLUE, G=GREEN	AMPS	DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES
(R)	PILOT LIGHT LETTER INDICATES COLOR R=RED, A=AMBER, B=BLUE, G=GREEN		LIMIT OR POSITION SWITCH
	OUTPUT DV/DT FILTER	PSH	PRESSURE SWITCH HIGH
	HEATING ELEMENT	PSL	PRESSURE SWITCH LOW
	TRANSFORMER		FLOW SWITCH
CT	CURRENT TRANSFORMER		LEVEL FLOAT SWITCH
	GROUND CONNECTION	T ICTO	TIMER RELAY CONTACT INSTANTANEOUS CLOSE TIME DELAY OPEN
	GENERATOR	T NOTC	TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE
HORN	HORN		TEMPERATURE SWITCH
5	FULL VOLTAGE NON–REVERSING (FVNR) MOTOR STARTER OR CONTACTOR NUMBER DESIGNATES NEMA SIZE		FUSE
	NORMALLY OPEN CONTACT	AMPS	FUSEHOLDER OR FUSEBLOCK
	NORMALLY CLOSED CONTACT		THERMAL OVERLOAD RELAY
DI	RTU OR PLC CONTACT		TERMINAL BLOCK
			DEVICE LOCATED AT REMOTE LOCATION
			CONDUIT SEALOFF

POWER SINGLE LINE DIAGRAM SYMBOLS

	JUNCTION BOX WITH POWER DISTRIBUTION BLOCK OR LUGS	AMPS POLES	CIRCUIT BREAKER, SHOWN WITH TRIP RATING AND NUMBER OF POLES
	CONDUIT SEALOFF	AMPS MCP POLES	MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES
	LTC CONNECTION	AMPS POLES	DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES
	MC CONNECTION	MMR	MOTOR MANAGEMENT RELAY
	BOND TO METALLIC WATER PIPE	SSS	SOLID STATE STARTER
UM	UTILITY METER	VFD	VARIABLE FREQUENCY DRIVE
HP	MOTOR, NUMBER DESIGNATES NEMA HORSEPOWER SIZE	HF	HARMONIC FILTER
	FUSE	EOL	ELECTRONIC OVERLOAD RELAY
AMPS	FUSEHOLDER OR FUSEBLOCK		GROUND CONNECTION

SITE PLAN SYMBOLS

	TELEPHONE OUTLET		FIELD DEVICE
$	SINGLE POLE SWITCH		GROUND ROD
$3	3 WAY SWITCH		DUPLEX RECEPTACLE
$4	4–WAY SWITCH		ANTENNA MAST
$M	MANUAL MOTOR STARTER		CONDUIT SEALOFF
	SPECIAL PURPOSE OR WELDING OUTLET		DISCONNECT SWITCH
S	SMOKE DETECTOR	M	MOTOR
T	THERMOSTAT		CONDUIT TURN UP
			CONDUIT TURN DOWN

CIRCUIT SCHEDULE LEGEND

AAA–BC

- SEQUENCE NUMBER
- TYPE C=CONTROL P=POWER
- DEVICE SERVED

ELECTRICAL ABBREVIATIONS

A	AMPERE
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AI	ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
AO	ANALOG OUTPUT
AS	AIR SUPPLY
ATS	AUTOMATIC TRANSFER SWITCH
BC	BYPASS CONTACTOR
BLW	BLOWER
C	CONDUIT
CB	CIRCUIT BREAKER
CCW	COUNTER CLOCKWISE
CL2	CHLORINE
CON	CONTACTOR
CPB	CONTROL PULLBOX
CU	COPPER, BARE
CV	CONTROL VALVE
CW	CLOCKWISE
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DISCRETE INPUT
DO	DISCRETE OUTPUT
DP	DISTRIBUTION PANEL
DV/DT	DIFFERENTIAL VOLTAGE/TIME
DWG	DRAWING
ETM	ELAPSED TIME METER
EOL	ELECTRONIC OVERLOAD
EXIST	EXISTING
FA	FOUL AIR
FC	FAIL CLOSED
FE	FLOW ELEMENT
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON–REVERSING
FW	FINISHED WATER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRS	GALVANIZED RIGID STEEL
H, HI	HIGH
H2S	HYDROGEN SULFIDE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HOR	HAND–OFF–REMOTE
I	CURRENT
IC	INSTRUMENTATION CABLE
ICR	INTERMITTENT CYCLE REACTOR
IO	INPUT/OUTPUT
ISC	SHORT CIRCUIT CURRENT
JB	JUNCTION BOX
L, LO	LOW
LAN	LOCAL AREA NETWORK
LC	LOOP CONTROLLER
LCL	LEVEL CONTROL, LOW
LCP	LOCAL CONTROL PANEL
LOS	LOCK–OUT–STOP
LOR	LOCAL/OFF/REMOTE
LS	LEVEL (i.e., FLOAT) SWITCH
LTC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
M	MOTOR
MA	MANUAL/AUTO
mA	MILLIAMP
MAX	MAXIMUM
MC	MANUFACTURER'S CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR(S)	MANUFACTURER(S)
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAMS PER LITER
MH	MANHOLE
MIN	MINIMUM
MOV	MOTOR OPERATED VALVE
MMR	MOTOR MANAGEMENT RELAY
MTU	MASTER TELEMETRY UNIT
NEC	NATIONAL ELECTRICAL CODE
NECA	NATIONAL ELECTRICAL CONTRACTOR ASSOCIATION
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NIC	NOT IN CONTRACT
NOTC	NORMALLY OPEN TIMED CLOSED
NPW	NON–POTABLE WATER
NS	NITROGEN SUPPLY
NTS	NOT TO SCALE
NTU	TURBIDITY
OF	OVERFLOW
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OLR	OVERLOAD RELAY
OO	ON/OFF (MAINTAINED)
OR	OFF–REMOTE
OSC	OPEN/STOP/CLOSE
P	PHASE
PB	PULL BOX
PCP	PROCESS CONTROL PANEL
PCV	PRESSURE CONTROL VALVE
PFR	PHASE/POWER FAILURE RELAY
PI	PULSE INPUT
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLI	PLANT INFLUENT
PMP	PUMP
PNL	PANEL
PO	PULSE OUTPUT
PPB	POWER PULLBOX
PPG	POUNDS PER GALLON
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PR	PAIR
PRES	PRESSURE
PS	PRESSURE SWITCH
PSH	PRESSURE SWITCH, HIGH
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RAS	RETURN ACTIVATED SLUDGE
RW	RAW WATER
RF	RADIO FREQUENCY
RIO	REMOTE INPUT OUTPUT
RS	RAW SEWAGE
RSP	RAW SEWAGE PUMP
RST	RESET
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RWT	REFLECTED WAVE TRAP
SCA	SHORT CIRCUIT AMPS
SCCR	SHORT CIRCUIT CURRENT RATING
SEQ	SERVICE ENTRANCE EQUIPMENT
SES	SERVICE ENTRANCE SECTION
SLC	SINGLE LOOP CONTROLLER
SLOS	START–LOCK–OUT–STOP
SMC	SUBMERSIBLE MANUFACTURER CABLE
SO2	SULFUR DIOXIDE
SP	SET POINT
SPC	SPARE CONDUIT
SPR	SPARE
SS	START/STOP
SSS	SOLID STATE STARTER (SOFT START)
ST	SHUNT TRIP
SWBD	SWITCHBOARD
TC	TELEPHONE CABLE
TS	TEMPERATURE SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE
WAS	WASTE ACTIVATED SLUDGE
WP	WEATHERPROOF
XFMR	TRANSFORMER
XMR	TRANSFORMER
XMTR	TRANSMITTER
ZS	POSITION (i.e., LIMIT) SWITCH

ELECTRICAL LINETYPES

- EXPOSED CONDUIT
- EXISTING EXPOSED CONDUIT
- UNDERGROUND CONDUIT
- EXISTING UNDERGROUND CONDUIT
- BARE COPPER GROUND CONDUCTOR
- EXISTING OR FUTURE
- NEW ELECTRICAL EQUIPMENT
- DEMOLITION
- DETAIL VIEW OR MATCHING
- E – CAPPED CONDUIT STUB OUT
- PXXX / CXXX – GROUPED CONDUIT AND CIRCUIT IDENTIFICATION TAGS. REFER TO THE POWER SINGLE–LINE, SCHEMATIC CONNECTION DIAGRAMS AND CIRCUIT SCHEDULE FOR CONDUIT SIZES AND CONTENTS.

P=POWER
C=CONTROL

GENERAL NOTES

1. THE COMPLETED INSTALLATION SHALL COMPLY WITH LATEST REVISION OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE COMPLETED IN A NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH THE LATEST NECA STANDARDS OF INSTALLATION UNDER COMPETENT SUPERVISION. INSTALL GROUNDING PER NEC.
2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND OTHER FACTORS, WHICH MAY AFFECT THE EXECUTION OF THE WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITIES PROVIDING SERVICES ON THIS PROJECT, AND SHALL COMPLY WITH ALL THEIR INSTALLATION REQUIREMENTS.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISION OF NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR THE OWNER, WILL BE REJECTED AS DEFECTIVE.
6. LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK. DAMAGED PAINT AND FINISHES SHALL BE TOUCHED UP OR REPAINTED WITH MATCHING COLOR PAINT AND FINISH.
7. CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THWN STRANDED COPPER. #4 AWG THROUGH #2 AWG SHALL BE XHHW STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW–2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 AWG GROUND.
8. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH.
9. CONDUITS SHALL BE MARKED AT EACH END WITH MATCHING NUMBERED BRASS TAGS. SPARE CONDUITS SHALL HAVE A PULL STRING INSTALLED, SECURED, AND CAPPED.
10. EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS). MINIMUM SIZE 3/4 INCH, UNLESS OTHERWISE NOTED ON THE PLANS. CONDUITS INSTALLED IN WET OR CORROSIVE LOCATIONS SHALL BE PVC COATED GRS.
11. SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED, AND RATED FOR HEAVY DUTY SERVICE.
12. WIRING DEVICES SHALL BE SPECIFICATION GRADE.
13. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING, SCHEDULING, DOCUMENTING, AND PERFORMING THE WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM FOR THE FACILITY IS PROVIDED. ACCURATE SHOP AND RECORD DRAWINGS, AND O&M MANUALS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK.
14. TYPICAL DETAILS SHALL APPLY IN ALL CASES, WHETHER SPECIFICALLY REFERRED TO OR NOT.

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

ELECTRICAL NOTES, SYMBOLS AND LEGEND

NCS ENGINEERS EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer
74459
AARON G. ARMENTA
Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	E–01

Jun 05, 2026 - 8:42am
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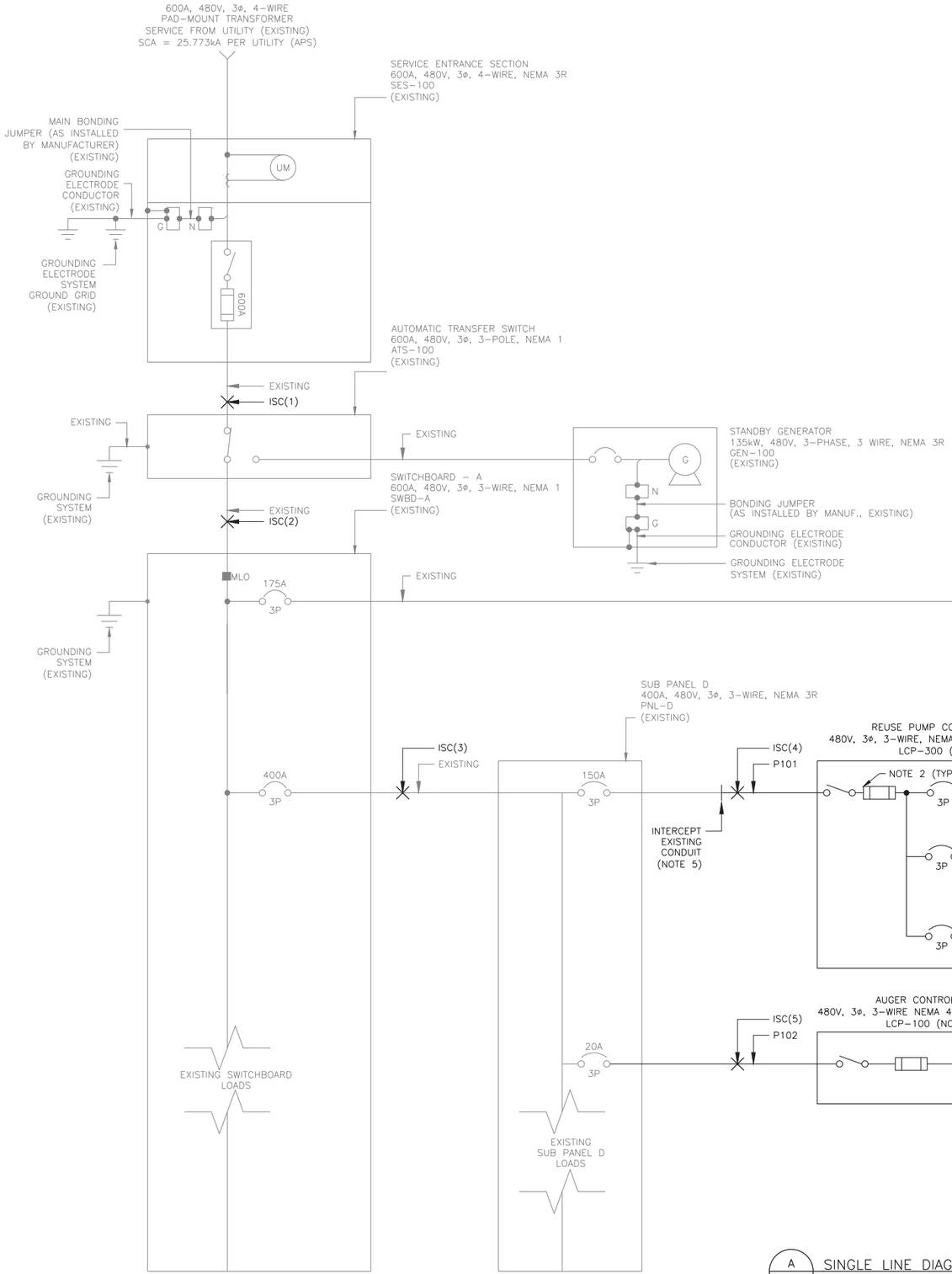

A ~ SINGLE LINE DIAGRAM

ISSUED FOR CONSTRUCTION

CALLOUT NO.	NO. SETS	CONDUIT SIZE	CIRCUIT CONDUCTORS	CIRCUIT NO.'s
P101	1	EXISTING	3 - #1/0, #6 GND	LCP300-P1
P101A	1	1"	3 - #4, #8 GND	PMP301-P1
P101B	1	1"	3 - #4, #8 GND	PMP302-P1
P101C	1	1"	3 - #12, #12 GND	PMP303-P1
P102	1	1"	3 - #12, #12 GND	LCP100-P1
P102A	1	EXISTING	3 - #12, #12 GND	M101-P1

B ~ CALLOUT SCHEDULE

NOTES:

1. ALL SHORT CIRCUIT INTERRUPTING AND PROTECTING DEVICES SHALL HAVE A SHORT CIRCUIT INTERRUPTING RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT ON THE BUS.
2. UNSIZED OVERCURRENT PROTECTIVE DEVICES SHALL BE SIZED PER ASSOCIATED EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
3. ALL OVERCURRENT PROTECTIVE DEVICES SHALL BE PROPERLY COORDINATED SO AS TO ENSURE LOCALIZATION OF OVERCURRENT CONDITIONS TO THE CIRCUIT OR EQUIPMENT AFFECTED.
4. NO ADDITIONAL ELECTRICAL LOAD IS BEING ADDED TO THE SITE POWER SYSTEM. TWO (2) NEW 40HP PUMPS ARE REPLACING TWO (2) EXISTING 40HP PUMPS. ONE (1) NEW 5HP JOCKEY PUMP IS TAKING PLACE OF ONE (1) EXISTING 5HP REUSE PUMP. ONE (1) NEW 2 HP AUGER MOTOR IS REPLACING ONE (1) EXISTING AUGER MOTOR.
5. CONTRACTOR SHALL INTERCEPT AND REUTILIZE EXISTING CONDUIT AS NOTED ON THIS DRAWING. CONDUCTORS SHALL BE REPLACED WITH THE SIZE SPECIFIED IN DETAIL B CALLOUT SCHEDULE.
6. EXISTING INSTALLATION AND EQUIPMENT INFORMATION WAS EXTRACTED FROM DRAWINGS DEVELOPED BY WRIGHT ENGINEERING CORPORATION, DATED 02-19-99 AND INFORMATION COLLECTED DURING VISITS TO THE SITE BY NCS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS ARE AS INDICATED ON THIS DRAWING PRIOR TO BEGINNING WORK.
7. BYPASS AND EOL ARE NOT REQUIRED IF SOLID STATE STARTER PROVIDED INTEGRAL BYPASS CONTRACTOR AND EOL. EOL MUST PROTECT MOTOR IN BYPASS AND NON-BYPASS MODES OF OPERATION.
8. LCP-300 IS TO BE DESIGNED AND FURNISHED BY PUMP VENDOR AS PART OF A PACKAGED SYSTEM FOR THE REUSE PUMPING SKID. CONTRACTOR SHALL INSTALL LCP-300 ACCORDING TO VENDOR INSTALLATION REQUIREMENTS.
9. LCP-100 IS TO BE DESIGNED AND FURNISHED BY AUGER VENDOR AS PART OF A PACKAGED SYSTEM FOR THE AUGER ASSEMBLY. CONTRACTOR SHALL INSTALL LCP-100 ACCORDING TO VENDOR INSTALLATION REQUIREMENTS.

No.	Revision Note	Date	Drawn	Check

PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS
TOWN OF KEARNY

SINGLE LINE DIAGRAM

NCS ENGINEERS
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Specialty)
74459
AARON G. ARMENTA
Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by: ML
Design by: GAR
Approved by: AGA
Date: 06/05/26
Project No.: 2280.22
Sheet No.: E-02

Jun 05, 2026 - 8:45am
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SHORT CIRCUIT CALCULATIONS			
DEFINITIONS		**FORMULAS**	
ISC =	SHORT CIRCUIT CURRENT (AMPS)	3 PH: f =	$\frac{1.732 \times L \times Isc}{N \times C \times V_{L\text{-}L}}$
N =	NUMBER OF CONDUCTORS/PHASE		
L =	LENGTH OF CONDUCTOR (FEET)		
C =	CONSTANT FROM TABLE OF "C"	1 PH: f =	$\frac{2 \times L \times Isc}{N \times C \times V_{L\text{-}L}}$
Isc =	AVAILABLE SHORT-CIRCUIT AMPS		
$V_{L\text{-}L}$ =	LINE TO LINE VOLTAGE (VOLTS)		
V P =	PRIMARY VOLTAGE	1 PH XFMR: f =	$\frac{Isc \times V_P \times \%Z}{100{,}000 \times KVA}$
V s =	SECONDARY VOLTAGE		
% Z =	TRANSFORMER % IMPEDANCE		

ISC(1)

$$f1 = \frac{1.732 \times 10 \times 25{,}773}{2 \times 22736 \times 480} = 0.0205$$

$$M = \frac{1}{1 + 0.0205} = 0.9799$$

ISC(1) = 25,773 x 0.9799 = 25,255 A

ISC(2)

$$f2 = \frac{1.732 \times 3 \times 25{,}255}{2 \times 22736 \times 480} = 0.006$$

$$M = \frac{1}{1 + 0.006} = 0.994$$

ISC(2) = 25,255 x 0.994 = 25,103 A

ISC(3)

$$f3 = \frac{1.732 \times 460 \times 25{,}103}{2 \times 13923 \times 480} = 1.4964$$

$$M = \frac{1}{1 + 1.4964} = 0.4006$$

ISC(3) = 25,103 x 0.4006 = 10,056 A

ISC(4)

$$f4 = \frac{1.732 \times 80 \times 10{,}056}{1 \times 9317 \times 480} = 0.3116$$

$$M = \frac{1}{1 + 0.3116} = 0.7624$$

ISC(4) = 10,056 x 0.7624 = 7,667 A

ISC(5)

$$f5 = \frac{1.732 \times 5 \times 10{,}056}{1 \times 617 \times 480} = 0.2941$$

$$M = \frac{1}{1 + 0.2941} = 0.7727$$

ISC(5) = 10,056 x 0.7727 = 7,771 A

A ~ SHORT CIRCUIT CALCULATIONS

SHEET NO.	CIRCUIT	CONDUCTORS
E-06	LIT101-C1	1 - IC, #14 GND
E-06	LIT102-C1	1 - IC, #14 GND
E-06	FIT301-C1	1 - IC, #14 GND
E-06	FIT301-P1	2 - #14, #14 GND
E-06	PIT301-C1	1 - IC, #14 GND
E-06	PSH301-C1	2 - #14, #14 GND
E-06	TSH101-C1	2 - #14, #14 GND
E-06	SV101-C1	2 - #14, #14 GND
E-06	FIT302-P1	2 - #14, #14 GND
E-06	FE302-C1	1 - IC, #14 GND

B ~ MASTER CIRCUIT SCHEDULE

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

ELECTRICAL SCHEDULES

NCS ENGINEERS EST. 1999
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
74459
AARON G. ARMENTA
Date Signed 06/05/26
ARIZONA, U.S.A.

EXPIRATION DATE: 12/31/27

Drawn by: ML
Design by: GAR
Approved by: AGA
Date 06/05/26
Project No. 2280.22
Sheet No. E-03

Jun 05, 2026 - 8:45am
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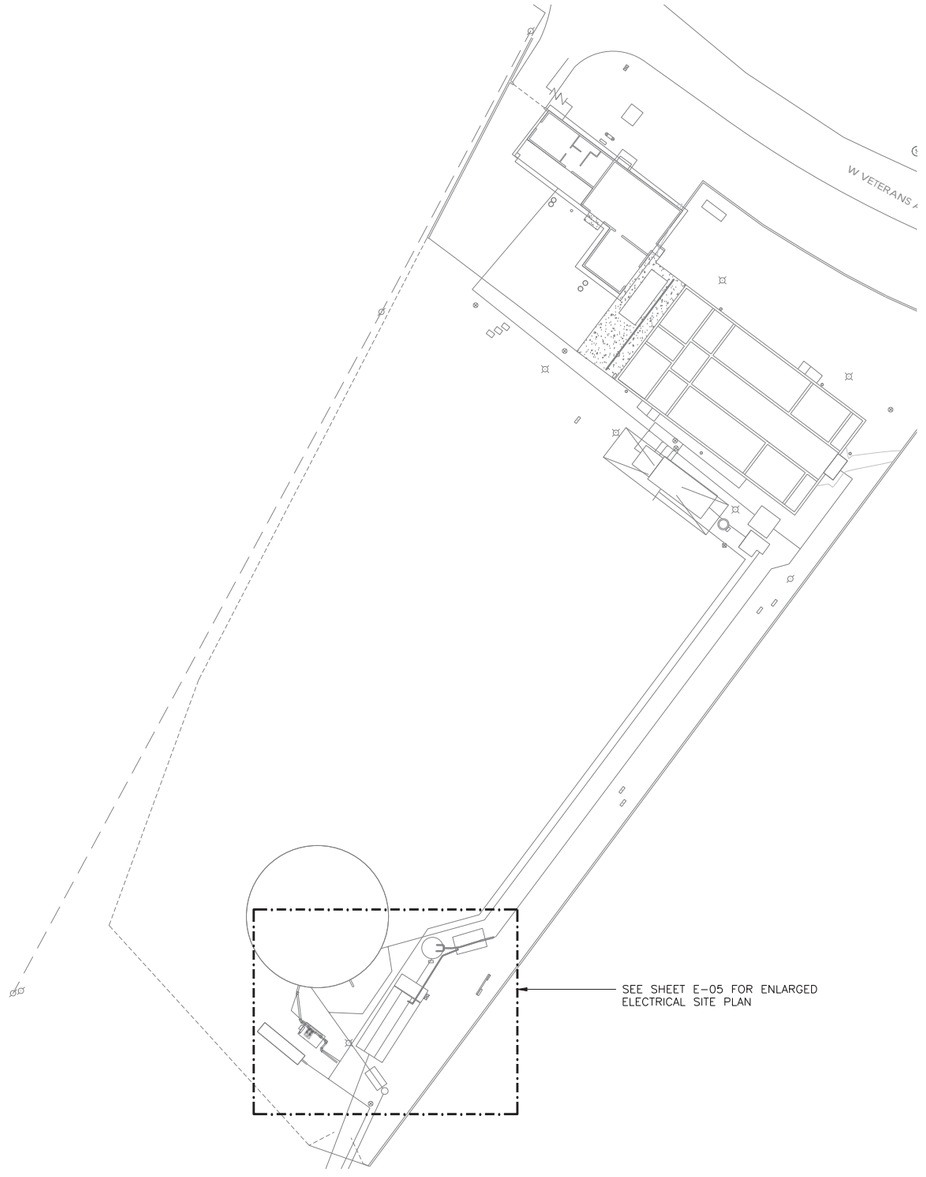

A ~ OVERALL ELECTRICAL SITE PLAN

32 24 16 8 0 16 32

SCALE: 1/32" = 1'-0"

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

OVERALL ELECTRICAL SITE PLAN

NCS ENGINEERS
EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Civil)
74459
AARON G. ARMENTA
Date Signed 12/31/25
ARIZONA, U.S.A.

EXPIRATION DATE: 12/31/27

Drawn by: ML
Design by: GAR
Approved by: AGA
Date 06/05/26
Project No. 2280.22
Sheet No. E-04

Jun 05, 2026 - 8:44am
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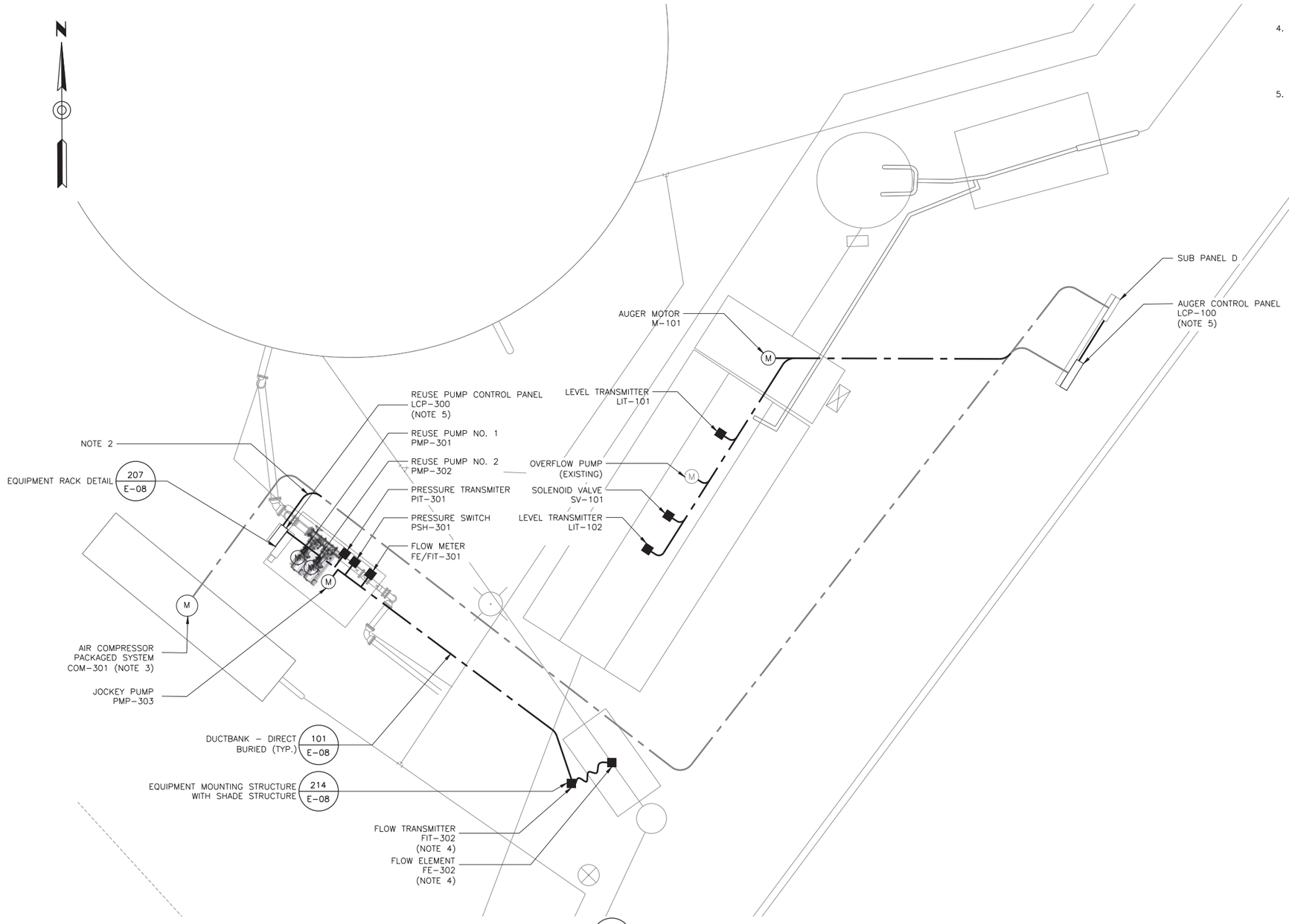
NOTES:

1. ALL CONDUIT ROUTING SHOWN IS SCHEMATIC IN NATURE. CONDUIT ROUTING SHALL BE FIELD DETERMINED BY THE CONTRACTOR. FOR INFORMATION ON FROM/TO CONNECTION OF CONDUITS, NUMBER OF CONDUITS AND TAGS, SEE THE CONDUIT BLOCK DIAGRAM ON SHEET E-07.
2. CONTRACTOR SHALL INTERCEPT AND REUTILIZE EXISTING CONDUIT AS NOTED ON E-02.
3. REUTILIZE EXISTING CONDUCTORS FEEDING AIR COMPRESSOR ON HYDROPNEUMATIC TANK TO POWER NEW/REPLACEMENT AIR COMPRESSOR. EXTEND EXISTING CIRCUIT AND RACEWAY TO NEW COMPRESSOR AS NEEDED WITH 3/4" LFMC OR RMC, AND #12 CONDUCTORS, RESPECTIVELY.
4. FLOW ELEMENT FE-302 AND FLOW TRANSMITTER FIT-302 ARE A LEVEL SENSOR AND TRANSMITTER, RESPECTIVELY, USED TO CALCULATE FLOW THROUGH THE ASSOCIATED FLUME. CONTRACTOR SHALL PROVIDE PROGRAMMING OF LIT TO INDICATE FLOW RATE IN GALLONS PER MINUTE AND FLOW TOTALIZATION IN GALLONS ON THE LOCAL SCREEN OF FIT-302.
5. ENSURE LCP-300 AND LCP-100 ARE BONDED TO THE EXISTING GROUNDING SYSTEM. INSTALL #6 BARE CU. GROUND WIRE AS NEEDED TO EXTEND BOND. CONNECT TO EXISTING GROUNDING SYSTEM WITH EXOTHERMIC WELDS.



A ~ ENLARGED ELECTRICAL SITE PLAN

0 1' 4' 8'

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

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

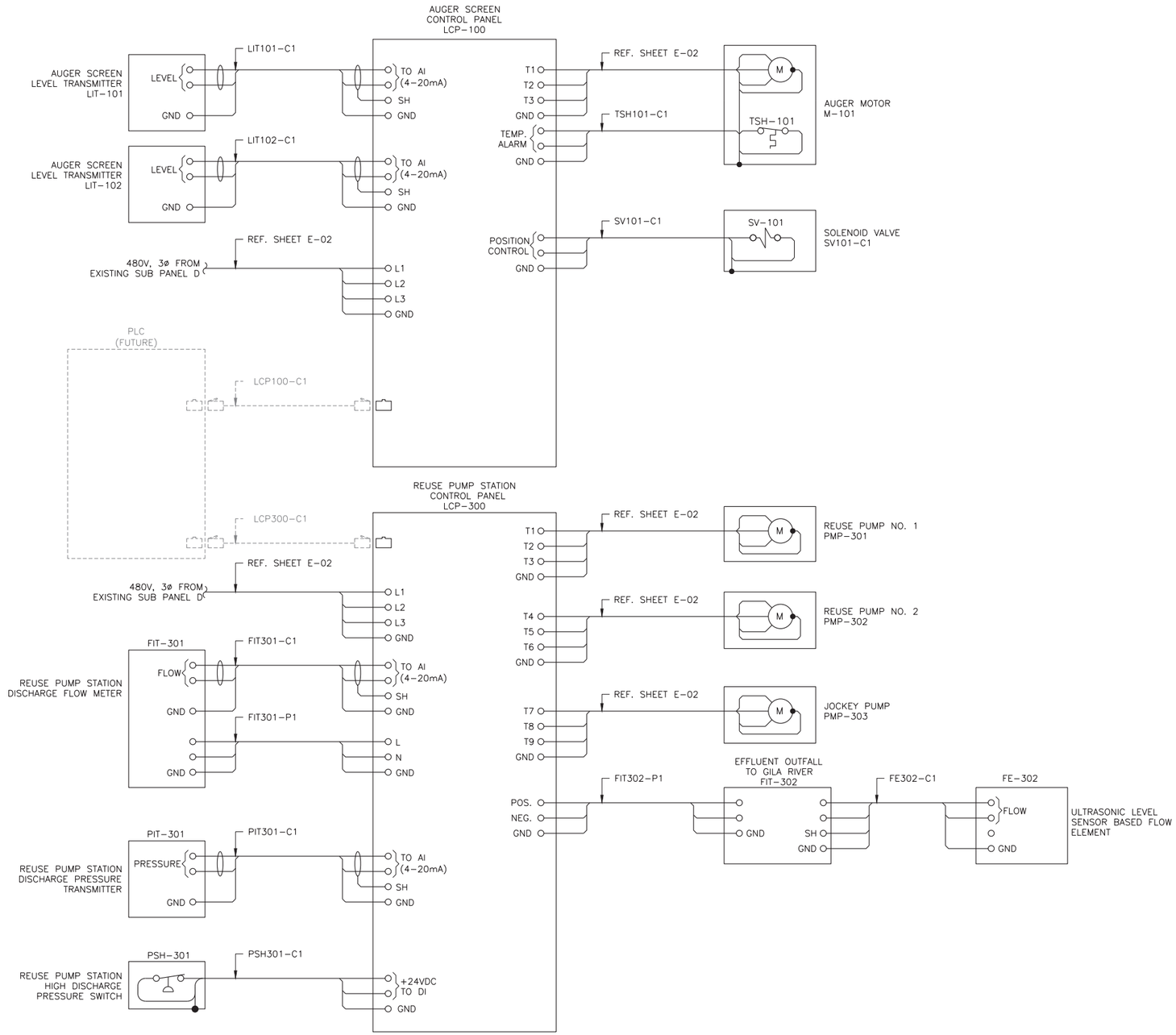
ENLARGED ELECTRICAL SITE PLAN

NCS ENGINEERS EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
74459
AARON G. ARMENTA
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 12/31/27

Drawn by: ML
Design by: GAR
Approved by: AGA
Date: 06/05/26
Project No.: 2280.22
Sheet No.: E-05



A CONNECTION DIAGRAM

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

CONNECTION DIAGRAMS

NCS ENGINEERS EST. 1998
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
74459
AARON G.
ARMENTA
Date Signed 06/05/2026
ARIZONA, U.S.A.

EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	E-06

Jun 05, 2026 - 8:43am
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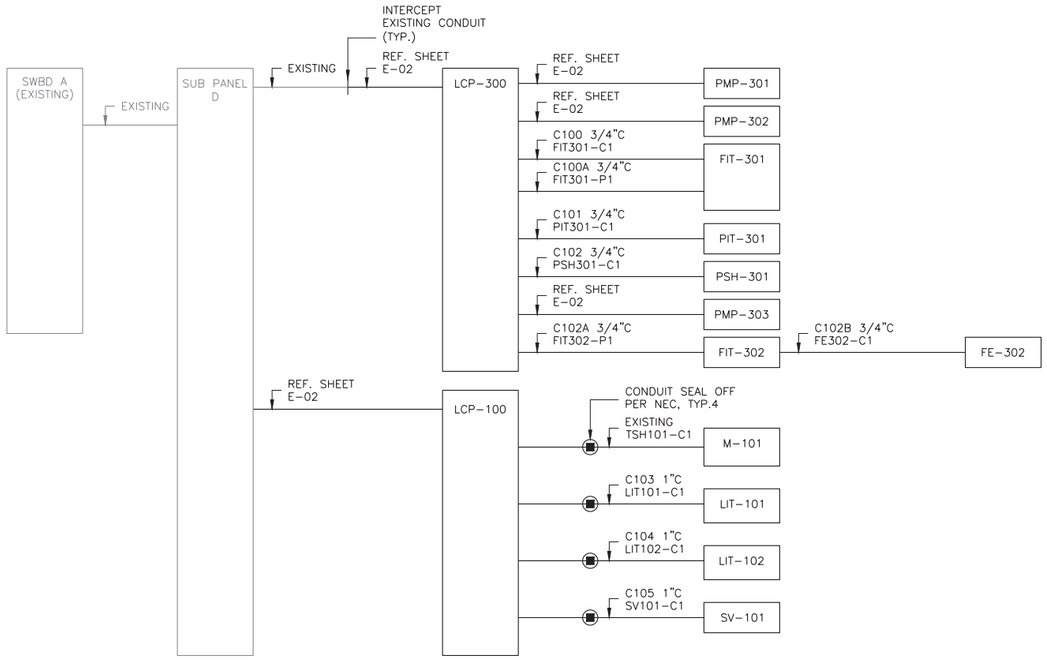
LEGEND:

C100 1"C ← CONDUIT NUMBER & SIZE
RTU100-1 ← CIRCUIT NUMBER(S)



A ~ CONDUIT BLOCK DIAGRAM

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

CONDUIT BLOCK DIAGRAM

NCS ENGINEERS
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
74459
AARON G. ARMENTA
Date Signed 06/05/26
ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by: ML
Design by: GAR
Approved by: AGA
Date 06/05/26
Project No. 2280.22
Sheet No. E-07

Jun 05, 2026 - 8:46am
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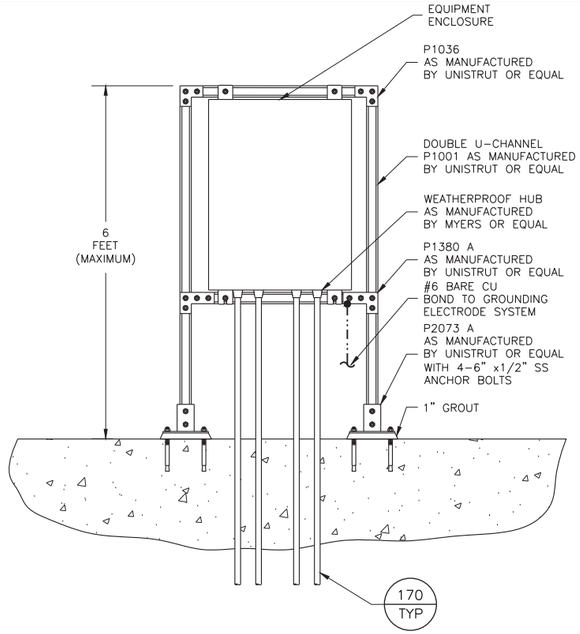
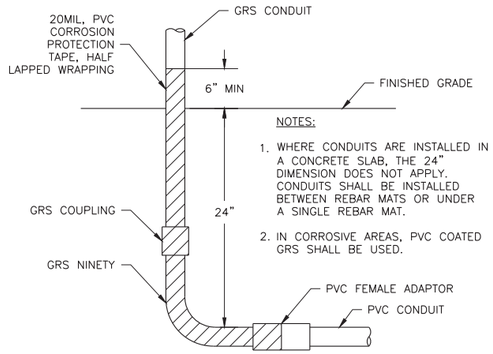


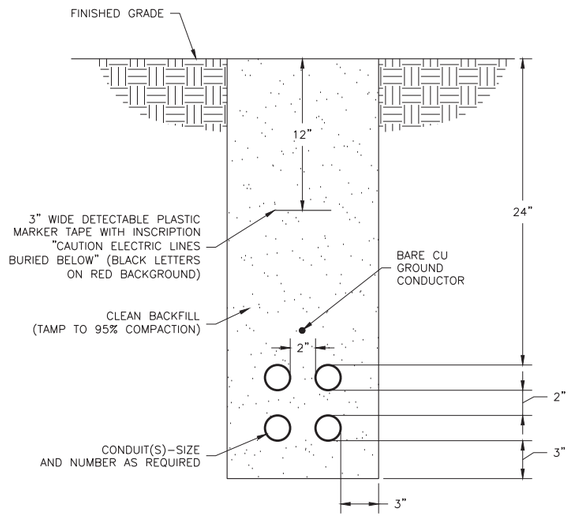
207 TYP EQUIPMENT RACK DETAIL – NON-CLASSIFIED AREAS
NOT TO SCALE



NOTES:

1. WHERE CONDUITS ARE INSTALLED IN A CONCRETE SLAB, THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.

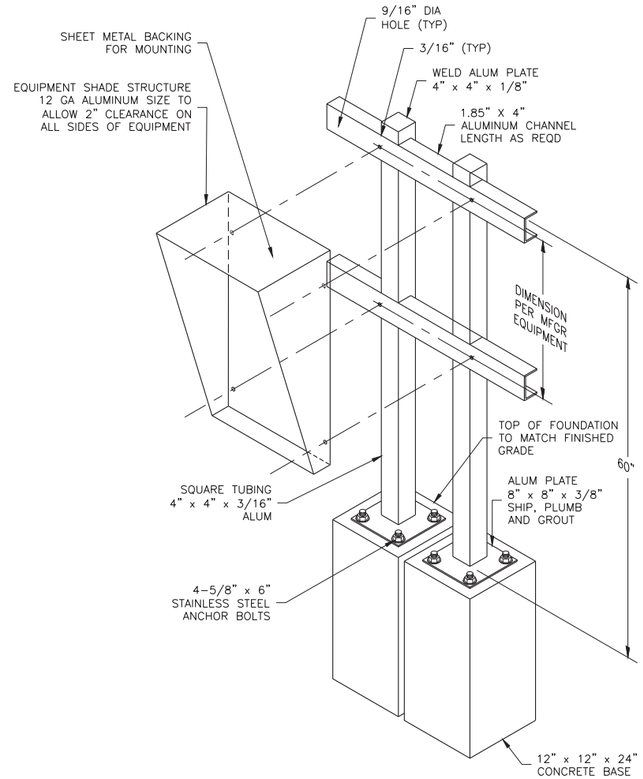
170 TYP GRS STUB UP DETAIL
NOT TO SCALE



NOTES:

1. GROUND CONDUCTOR SHALL RUN CONTINUOUSLY THROUGH MANHOLES AND SHALL CONTINUE FROM DUCTBANK INTO SWITCHGEAR OR BUILDING GROUNDING SYSTEM AND SHALL BE BONDED TO EACH RIGID METAL CONDUIT. SIZE TO BE #4/0 UNLESS OTHERWISE INDICATED ON PLANS.
2. ALL DIMENSIONS ARE MINIMUM.

101 TYP DUCTBANK – DIRECT BURIED
NOT TO SCALE



214 TYP EQUIPMENT MOUNTING DETAIL WITH SHADE STRUCTURE
NOT TO SCALE

LEGEND:

C100 1"C ← CONDUIT NUMBER & SIZE
RTU100-1 ← CIRCUIT NUMBER(S)

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS
TOWN OF KEARNY

ELECTRICAL DETAILS

NCS ENGINEERING EST. 1999
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
74459
AARON G. ARMENTA
Date Signed 06/05/2026
ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	E-08

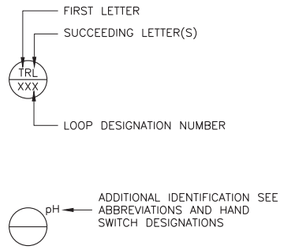
ISA INSTRUMENT IDENTIFICATION TABLE

FIRST LETTERS			SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE		MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYZER		ALARM		AUTO
B	BURNER, COMBUSTION				
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		ELEMENT		
F	FLOW	RATIO			
G	GAUGE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOTION				MIDDLE
N	INTRUSION				NORMAL
O	TORQUE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT CONNECTION		STOP
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD, OR PRINT		RUN OR REMOTE
S	SPEED, FREQUENCY	SAFETY		SWITCH	START
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, LOUVER	
W	WEIGHT		WELL		
X	MOTOR	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

P&ID ABBREVIATIONS

A	AMPERE
AFD	ADJUSTABLE FREQUENCY DRIVE
AI	ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ARV	AIR RELIEF VALVE
AO	ANALOG OUTPUT
AS	AIR SUPPLY
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
CB	CIRCUIT BREAKER
CL2	CHLORINE
CON	CONTACTOR
CU	COPPER
CV	CONTROL VALVE
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DISCRETE INPUT
DO	DISSOLVED OXYGEN, DISCRETE OUTPUT
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
EGO	EMERGENCY GAS OFF
ETM	ELAPSED TIME METER
ETMf	ELAPSED TIME METER (FAST SPEED)
ETMs	ELAPSED TIME METER (SLOW SPEED)
EOL	ELECTRONIC OVERLOAD
EXIST	EXISTING
FA	FOUL AIR
FC	FAIL CLOSED
FE	FINAL EFFLUENT
FR	FORWARD-REVERSE
FS	FLOAT SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FW	FINISHED WATER
GND	GROUND
GAL	GALLONS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H, HI	HIGH
H2S	HYDROGEN SULFIDE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTO
I	CURRENT
IO	INPUT/OUTPUT
IOE	INTERNAL-OFF-EXTERNAL
JB	JUNCTION BOX
L, LO	LOW
LAN	LOCAL AREA NETWORK
LC	LOOP CONTROLLER
LCP	LOCAL CONTROL PANEL
LOS	LOCK-OFF-STOP
LR	LOCAL/REMOTE
LS	LEVEL (i.e.. FLOAT) SWITCH
M	MOTOR
MA	MANUAL/AUTO
mA	MILLIAMP
MC	MANUFACTURE CABLE
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR(S)	MANUFACTURER(S)
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAMS PER LITER
MH	MANHOLE
MLR	MIXED LIQUOR RETURN
MO	MOISTURE
MOD	MODULATED
MTU	MASTER TELEMETRY UNIT
NPW	NON-POTABLE WATER
NS	NITROGEN SUPPLY
NTU	TURBIDITY
O/C	OPEN / CLOSE
OCA	OPEN-CLOSE-AUTO
OCR	OPEN-CLOSE-REMOTE
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OO	ON/OFF (MAINTAINED)
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OSC	OPEN-STOP-CLOSE
PAH	PRESSURE ALARM HIGH
PER	PERMISSIVE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PO	PULSE OUTPUT
POS	POSITION
POT	POTENTIOMETER
PPG	POUNDS PER GALLON
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PR	PAIR
PRES	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RAS	RETURN ACTIVATED SLUDGE
RAW	RAW WATER
REM	REMOTE
RF	RADIO FREQUENCY
RIO	REMOTE INPUT OUTPUT
RS	RAW SEWAGE
RSP	RAW SEWAGE PUMP
RST	RESET
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RUNf	RUN (FAST SPEED)
RUNs	RUN (SLOW SPEED)
SB	SLUDGE BLANKET
SEQ	SERVICE ENTRANCE EQUIPMENT
SES	SERVICE ENTRANCE SECTION
SLC	SINGLE LOOP CONTROLLER
SLOS	START-LOCK-OFF-STOP
SO2	SULFUR DIOXIDE
SOV	SOLENOID OPERATED VALVE
SP	SET POINT
SPD	SPEED
SPR	SPARE
SS	START/STOP (MAINTAINED)
SSS	SOLID STATE STARTER (SOFT START)
STR	MOTOR STARTER
TAH	TEMPERATURE ALARM HIGH
T/M	TEMPERATURE AND/OR MOISTURE
TEMP	TEMPERATURE
TS	TEMPERATURE SWITCH
TSS	TOTAL SUSPENDED SOLIDS
UG	UNDERGROUND
USD	UP/STOP/DOWN
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATER
WAS	WASTE ACTIVATED SLUDGE
WW	WASTEWATER
XMTR	TRANSMITTER
ZS	POSITION (i.e. LIMIT) SWITCH

TAG NUMBERS AND DESIGNATIONS



HAND SWITCH DESIGNATIONS

ES	EMERGENCY STOP
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORA	HAND-OFF-REMOTE-AUTO
JOA	JOG-OFF-AUTO
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
OC	OPEN-CLOSE
OO	ON-OFF
S/S	START STOP PUSH BUTTONS

LINE SYMBOLS

- MAJOR PROCESS PIPING OR FLOW CHANNEL
- EXISTING PROCESS PIPING
- SECONDARY PROCESS PIPING
- EXISTING SECONDARY PROCESS PIPING
- EXISTING PIPING AND EQUIPMENT
- FUTURE PIPING AND EQUIPMENT
- ELECTRICAL SIGNAL
- HYDRAULIC SIGNAL
- PNEUMATIC SIGNAL
- ELECTRICAL DIRECTION ARROW
- SIGNAL CONNECTION POINT
- FLOW ARROW FOR PROCESS PIPING
- PROCESS OR SIGNAL LINE GOING TO ANOTHER SHEET (MATCH LETTERS) — I-3 /A
- PROCESS OR SIGNAL LINE FROM ANOTHER SHEET (MATCH LETTERS) — I-2 /A
- PROCESS LINES CROSSING (NOT CONNECTED)
- INTERNAL SYSTEM SIGNAL LINK (SOFTWARE OR DATA LINK)

P&ID VALVE SYMBOLS

- GATE OR GENERIC VALVE
- 3-WAY VALVE
- 4-WAY VALVE
- ANGLE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- ECCENTRIC PLUG VALVE
- BALL VALVE
- CHECK VALVE
- SWING CHECK VALVE
- STOP CHECK VALVE
- BALL CHECK VALVE
- PINCH VALVE
- DIAPHRAGM VALVE
- DIAPHRAGM VALVE (ALTERNATE)
- GLOBE VALVE
- HAND VALVE
- KNIFE VALVE
- MOTORIZED VALVE ACTUATOR
- SOLENOID VALVE 2-WAY
- SOLENOID VALVE 3-WAY
- PUMP CONTROL VALVE
- FLOW CONTROL VALVE
- PRESSURE RELIEF VALVE
- VACUUM RELIEF VALVE
- PRESSURE REGULATOR WITH REMOTE PROCESS CONNECTION
- PRESSURE REGULATOR SELF CONTAINED
- AIR RELEASE VALVE

P&ID EQUIPMENT AND PROCESS SYMBOLS

- METERING PUMP WITH MANUAL STROKE CONTROL
- ROTARY LUBE PUMP
- SUBMERSIBLE MIXER
- AERATOR
- SUBMERSIBLE PUMP
- DIESEL GENERATOR
- CENTRIFUGAL PUMP
- BLOWER
- LIFT PUMP
- MOTOR OR MOTOR ACTUATOR
- PNEUMATIC ACTUATOR
- SOLENOID
- VERTICAL TURBINE PUMP
- CHLORINE TANK (CL_2)
- WEIGHT SCALE
- AIR COMPRESSOR
- SLUICE GATE
- SAMPLER
- PROPELLER FLOWMETER ELEMENT
- MAGNETIC FLOWMETER ELEMENT
- CL2 FLOWMETER
- INSERTION TYPE MASS FLOW METER (FIT 6)
- MASS FLOW METER ANNUBAR TYPE (FIT)
- DRAIN
- OUTLET SILENCER
- INLET SILENCER
- ROTAMETER
- AIR RELIEF VALVE
- EJECTOR
- DIAPHRAGM SEAL
- DIFFUSER
- DIAPHRAGM
- Y-TYPE STRAINER
- FLOW SWITCH (FS)
- FLUME METER

SENSING, INDICATION, AND CONTROL SYMBOLS

- ULTRASONIC LEVEL TRANSDUCER (LE)
- FLOAT SWITCH (LS)
- BEACON (R) — BEACON R=RED, A=AMBER, B=BLUE, G=GREEN
- STOP (YL / G) — INDICATING LIGHT
- HOA (HS) — HAND SWITCH
- ORP (AIT) — ORP ANALYZER
- pH (AIT) — pH ANALYZER
- AE — ANALYZER ELEMENT
- DO (AE) — DO SENSOR
- ORP (AE) — ORP SENSOR
- pH (AE) — pH SENSOR
- DO (AIT) — DO ANALYZER
- CL2 (AE) — RESIDUAL CL2 CHLORINE SENSOR
- CL2 (AIT) — RESIDUAL CL2 CHLORINE ANALYZER

P&ID INTERFACE SYMBOLS

- AAA BBB / X — PILOT LIGHT X= LENS COLOR, R=RED, G=GREEN, A=AMBER B=BLUE
- AAA BBB / CCC — FIELD DEVICE
- AAA BBB / CCC — PANEL DEVICE
- AAA BBB / CCC — DEVICE MOUNTED IN SUBPANEL
- BBB / CCC — REMOTE I/O TERMINAL
- BBB / CCC — HMI OR OIT FUNCTION
- I / X — INTERLOCK DEVICE OR RELAY X=NOTE REF.
- I/I — DUAL CHANNEL CURRENT ISOLATOR
- DISCRETE INPUT
- DISCRETE OUTPUT
- ANALOG INPUT
- ANALOG OUTPUT
- PULSE INPUT

NOTE:

REFER TO ISA INSTRUMENT IDENTIFICATION TABLE FOR DEFINITION OF LETTERS BBB INSIDE THE BUBBLES. CCC REPRESENTS LOOP ID (IF USED). SEE ABBREVIATIONS LIST FOR SUPERSCRIPT AAA.

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

P&ID SYMBOLS AND LEGEND

NCS ENGINEERING
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical) 74459 AARON G. ARMENTA Date Signed 12/31/25 ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	I-01

Jun 05, 2026 - 8:45am
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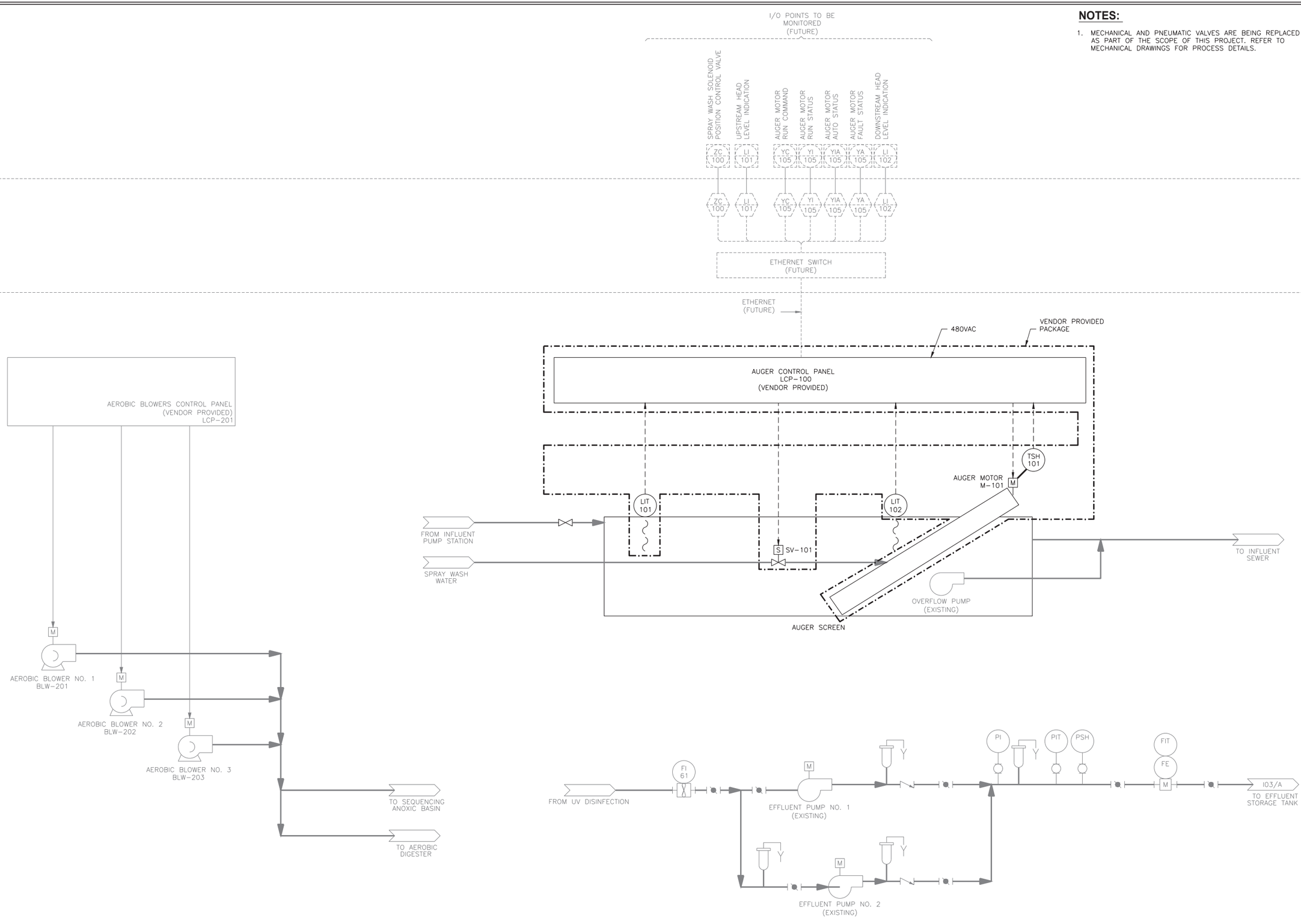
NOTES:

1. MECHANICAL AND PNEUMATIC VALVES ARE BEING REPLACED AS PART OF THE SCOPE OF THIS PROJECT. REFER TO MECHANICAL DRAWINGS FOR PROCESS DETAILS.



ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

TOWN OF KEARNY
PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS

P&ID - SHEET 1

NCS ENGINEERS
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Civil)
74459
AARON G. ARMENTA
Date Signed
ARIZONA, U.S.A.

EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	I-02

Jun 05, 2026 - 8:46am
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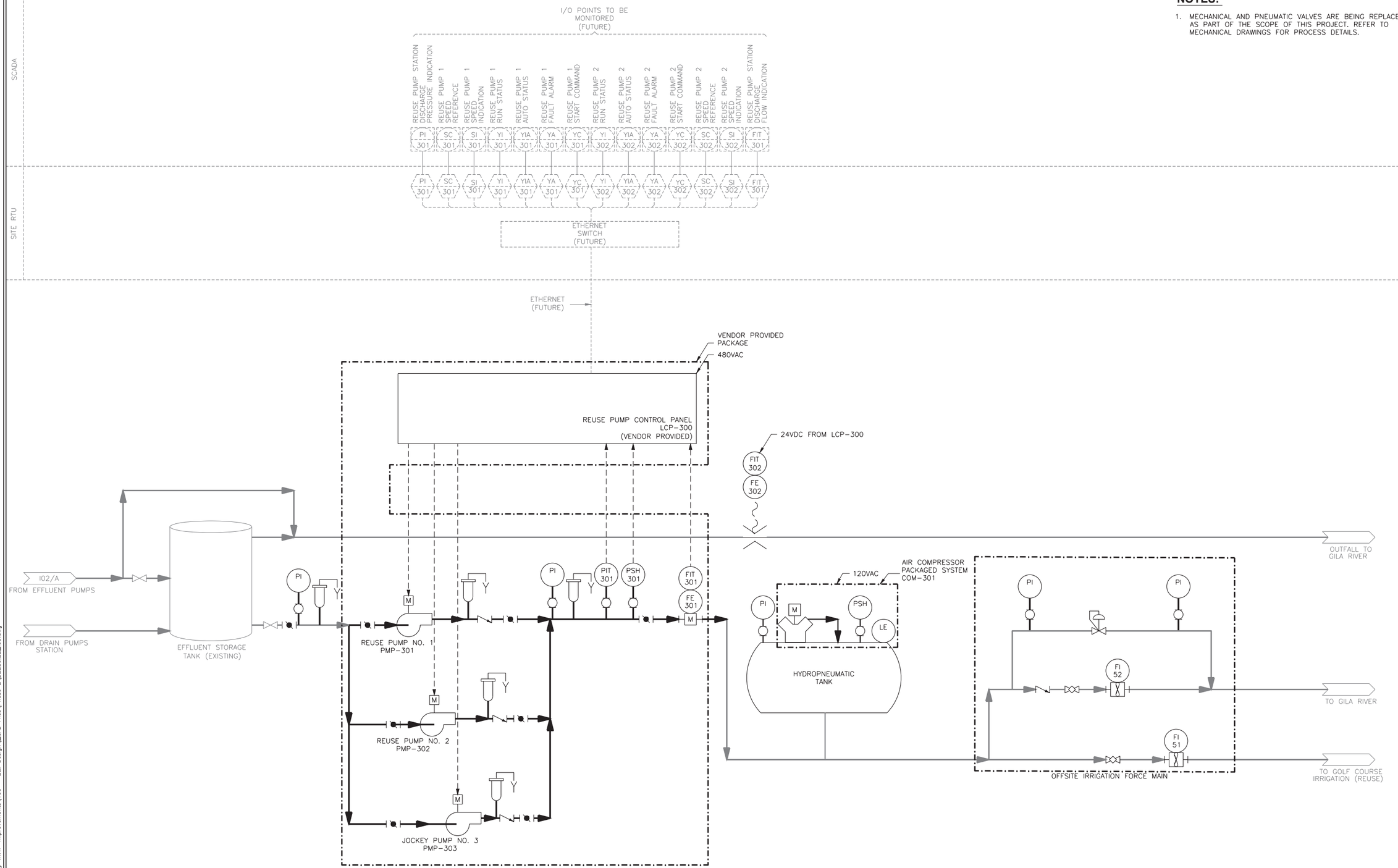

ISSUED FOR CONSTRUCTION

No.	Revision Note	Date	Drawn	Check

PHASE 2 KEARNY WATER RECLAMATION FACILITY IMPROVEMENTS
TOWN OF KEARNY

P&ID - SHEET 2

NCS ENGINEERS
202 EAST EARLL DRIVE, STE 110
PHOENIX, AZ 85012
(602) 629-0206

Registered Professional Engineer (Electrical)
7.4459
AARON G. ARMENTA
Date Signed
ARIZONA, U.S.A.
EXPIRATION DATE: 12/31/27

Drawn by:	ML
Design by:	GAR
Approved by:	AGA
Date	06/05/26
Project No.	2280.22
Sheet No.	I-03

Jun 05, 2026 - 8:42am
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