CITY OF SEDONA

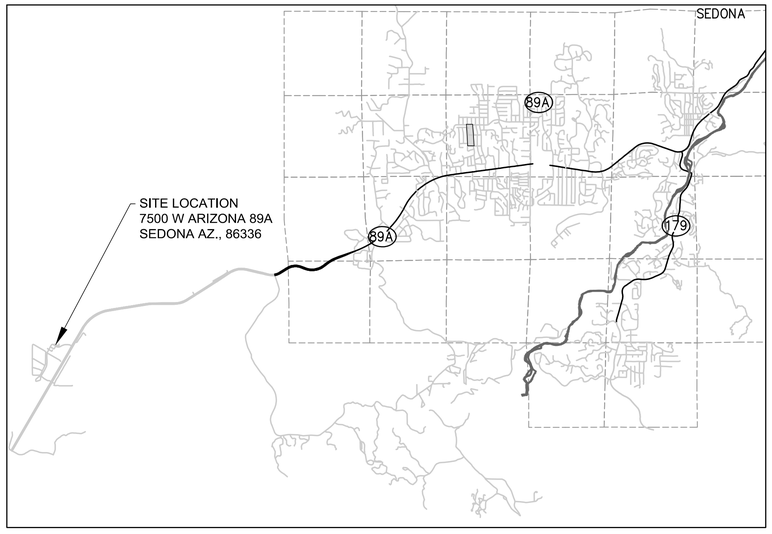
SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT

LOCATED IN A PORTION OF SECTION 25, TOWNSHIP 17 NORTH,
RANGE 4 EAST, GILA AND SALT RIVER MERIDIAN,
YAVAPAI COUNTY, ARIZONA.

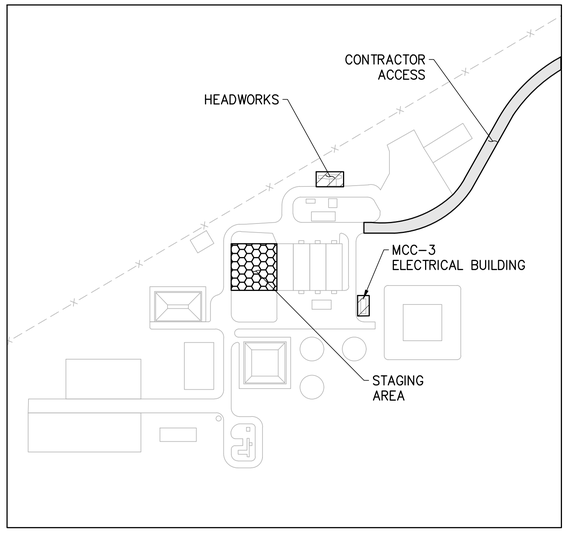
CONTACT INFORMATION

OWNER	CITY OF SEDONA 102 ROADRUNNER DRIVE SEDONA, ARIZONA 86336 (928) 204-7111 J. ANDY DICKEY, P.E. DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
MAYOR	SANDY MORIARTY
VICE MAYOR	JOHN MARTINEZ
CITY COUNCIL	SCOTT JABLOW TOM LAMKIN JON THOMPSON JOHN CURRIVAN JOE VERNIER
CITY MANAGER	JUSTIN CLIFTON
ENGINEER	SUNRISE ENGINEERING, INC. 2152 S VINEYARD, SUITE 123 MESA, AZ 85210 TELEPHONE: (480) 768-8600 FAX: (480) 768-8609 CONTACT: TYSON GLOCK, P.E.
DIRECTOR OF WASTEWATER	CHARLES MOSLEY, P.E., MPA

LOCATION MAP



WASTEWATER RECLAMATION PLANT VIEW



LEGEND

	EXISTING CONCRETE
	EXISTING PAVEMENT
——— s ———	EXISTING SEWER
——— w ———	EXISTING WATER LINE
——— abe ———	EXISTING ABOVE GROUND ELECTRIC
——— uge ———	EXISTING UNDERGROUND ELECTRIC
——— ohe ———	EXISTING OVERHEAD ELECTRIC
	EXISTING PROPERTY LINE
——— x ———	EXISTING BARBED WIRE FENCE
	EXISTING FLOWLINE
X 1443.08	EXISTING SPOT ELEVATION
1440	EXISTING CONTOUR
	EXISTING SIGN
	EXISTING GATE VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING POWER POLE
	EXISTING CATCH BASIN
	EXISTING VEGETATION
	PROPOSED CONCRETE
UGE	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED SIGN
	BRASS CAP MONUMENT
B / D2	PLAN, SECTION OR DETAIL LABEL / DRAWING TITLE/SHEET NUMBER

SHEET INDEX

APPROVAL

APPROVED:

J. ANDY DICKEY, P.E. DATE
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

DIRECTIONS TO THE SITE FROM PHOENIX

GET ON I-17 N/US-60 W FROM WEST WASHINGTON STREET AND W ADAMS STREET; FOLLOW I-17 N TO AZ 260 W/FINNIE FLAT RD IN CAMP VERDE. TAKE EXIT 287 FROM I-17 N; FOLLOW AZ-260 W AND AZ-89A N/E HWY 89A TO 7500 ARIZONA 89A, SEDONA, AZ., 86336.
SITE IS BETWEEN MILE MARKERS 365 & 366 ON W. SR 89A.

UTILITY COORDINATION BLOCK

☐ ARIZONA PUBLIC SERVICE	SANDY FINLEY COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
☐ ARIZONA WATER COMPANY	KEITH SELF COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
☐ SUDDEN LINK	JOHN PATTERSON COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
☐ UNISOURCE	JIM DUNCAN COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
☐ CENTURY LINK	CHAD HENKEL COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____

COORDINATE SYSTEM DETAIL

BENCHMARKS		
POINT	COORDINATES	ELEVATION
BM1	N 8926.56 / E 10937.94	4076.48'
BM2	N 8614.52 / E 8286.01	4029.35'

NOTICE OF EXTENDED PAYMENT PROVISION

(PER ARS 32-1129.01) THIS CONTRACT ALLOWS THE OWNER TO MAKE PAYMENT WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR PROGRESS PAYMENTS, WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR RELEASE OF RETENTION AND WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR FINAL PAYMENT.

RECORD DRAWING STATEMENT

I _____, HEREBY STATE, BASED ON MY FIELD OBSERVATION AND INFORMATION PROVIDED BY THE GENERAL CONTRACTOR AND OTHERS, THAT THE WORK ON SHEETS 1 THROUGH __, MARKED AS "RECORD DRAWING" HAS BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE CONSTRUCTION PLANS, SPECIFICATIONS, INCLUDING CHANGES AND REVISIONS.

REGISTERED LAND SURVEYOR/ENGINEER DATE

REGISTRATION NUMBER EXPIRATION DATE

REV NO.	COMMENT	DATE

Registered Professional Engineer — 52543 — Tyson L. Glock — 08/17/17 — ARIZONA, U.S.A. — Expires 9/30/17

SUNRISE ENGINEERING
2152 SOUTH VINEYARD, SUITE 123
MESA, ARIZONA 85210
TEL 480.768.8600 · FAX 480.768.8609
www.sunrise-eng.com

CITY OF SEDONA
SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
COVER SHEET

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
05623.000	TG	JC	TG/GP	1 of 11	COV

811 Know what's below. Call before you dig. 1-800-782-5348

RE-BID SET 8-17-17

SEI GENERAL NOTES

1. ALL SITE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS BY THE JHA (JURISDICTION HAVING AUTHORITY) UNLESS SPECIFICALLY STATED OTHERWISE IN THESE PLANS.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING PERMITS, RENEWAL OF LAPSED PERMITS, AND OBTAINING ANY NEW PERMITS, INCLUDING, BUT NOT LIMITED TO A DUST CONTROL PERMIT, AND TRAFFIC CONTROL PERMITS AS REQUIRED BY THE JHA.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING.
4. THE CONTRACTOR SHALL NOTIFY THE JHA'S INSPECTION DEPARTMENT 24 HOURS PRIOR TO CONSTRUCTION. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CALL BLUE STAKE AT (602) 263-1100 AT LEAST 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
6. THE CONTRACTOR SHALL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. SUNRISE ENGINEERING, INC. WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES IF SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE PROPER AUTHORITY(S) IF THERE ARE OBSTRUCTIONS TO PROPOSED IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY EXISTING ITEM REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR LOCATION OF SERVICE AND/OR RELOCATION OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND SAFELY DISPOSE OF ALL REMOVAL MATERIAL AND DEBRIS DEEMED UNSALVAGEABLE BY THE DIRECTOR OF WASTEWATER PER THE PROVISIONS SET FORTH IN MAG SPECIFICATION 350.
11. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL ON AND AROUND THE CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES. NO WORK WILL BE CONSIDERED COMPLETE UNTIL ALL PAVEMENTS HAVE BEEN SWEPT CLEAN OF DIRT AND DEBRIS.
13. PRIOR TO MOVING OR DESTROYING PROTECTED NATIVE PLANT SPECIES, THE CONTRACTOR SHALL FILE A FORMAL NOTICE OF INTENT WITH THE ARIZONA DEPARTMENT OF AGRICULTURE NATIVE PLANTS (602) 542-3292.
14. A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
15. THE CONTRACTOR SHALL PROVIDE A LICENSED SURVEYOR FOR THE SURVEYING/CONSTRUCTION STAKING OF ALIGNMENT AND GRADE FOR EACH MAIN AND/OR FACILITY AS SHOWN ON THE PLANS.
16. EXACT POINT OF MATCHING, TERMINATION AND OVERLAY, IF NECESSARY, MAY BE DETERMINED IN THE FIELD BY THE ENGINEER OF RECORD OR THE RESIDENT ENGINEER OVERSEEING THE PROJECT CONSTRUCTION.
17. ANY AMBIGUITIES OR DEFICIENCIES DISCOVERED ON THESE PLANS ARE TO BE RESOLVED BY SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE. ANY MODIFICATIONS TO THESE PLANS MADE BY ANYONE OTHER THAN SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE IS SOLELY RESPONSIBLE FOR THOSE MODIFICATIONS.
18. THE CONTRACTOR SHALL RE-GRADE ALL EARTHEN DRIVEWAYS DISTURBED WITHIN THE RIGHT-OF-WAY DURING THE CONSTRUCTION AND RE-COMPACT THE TOP 1-FEET OF SURFACE MATERIAL TO A MINIMUM COMPACTION OF 90% MAXIMUM DRY DENSITY. THE RE-GRADED DRIVEWAYS SHALL BE OVERLAID WITH A 0.5' LAYER OF HALF-INCH MINUS ROADWAY GRAVEL AND RAKED SMOOTH.
19. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL AND BARRICADES FOR WORK IN THE RIGHT-OF-WAY PER THE STANDARDS SET FORTH BY THE JHA.
20. INTERFERENCE WITH PLANT OPERATIONS OR SHUTDOWNS SHALL BE COORDINATE AND APPROVED BY THE CHIEF PLANT OPERATOR.
21. DESIGNATED STAGING AREAS SHALL BE RESTORED TO THE ORIGINAL CONDITIONS OR BETTER AT THE END OF CONSTRUCTION ACTIVITIES.

ABBREVIATIONS

ABC	AGGREGATE BASE COURSE
AC	ASPHALT CONCRETE
ALT	ALTERNATIVE
BC	BACK OF CURB
BCF	BRASS CAP FLUSH
BCHH	BRASS CAP IN HAND HOLE
BCR	BEGIN CURB RETURN
BM	BENCHMARK
BTM	BOTTOM
CB	CATCH BASIN
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CONST	CONSTRUCTION
CY	CUBIC YARD
D/W	DRIVEWAY
DWG	DRAWING
DTL	DETAIL
E	EAST
ECR	END CURB RETURN
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX, EXIST	EXISTING
FA	FOUL AIR
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLANGE
FND	FOUND
FO	FIBER OPTIC
FPS	FEET PER SECOND
FT	FOOT, FEET
G	GAS, GUTTER, GRADE
GM	GAS METER
GB	GRADE BREAK
GEN	GENERATOR
GPM	GALLONS PER MINUTE
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HW	HIGHWATER
IN.	INCH, INCHES
INV	INVERT
IRRIG	IRRIGATION
JHA	JURISDICTION HAVING AUTHORITY
L	LENGTH
LF	LINEAR FEET
LT	LEFT
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MH	MANHOLE
MJ	MECHANICAL JOINT
MNPT	MALE NOMINAL PIPE THREAD
MOPO	MAINTENANCE OF PLANT OPERATIONS
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
P/L	PROPERTY LINE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCC	PORTLAND CEMENT CONCRETE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVI	POINT OF VERTICAL INTERSECTION
PW	PROCESSED PLANT WATER
R	RADIUS
RW	RAW WATER
R/W	RIGHT-OF-WAY
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
RJ	RESTRAINED JOINT
RS	RAW SEWAGE
RT	RIGHT
S	SEWER, SLOPE, SOUTH
S/M	SAWCUT AND MATCH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SPEC	SPECIFICATION
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SWK	SIDEWALK
SY	SQUARE YARD
TAN	TANGENT
TBC	TOP BACK OF CURB
T, TEL	TELEPHONE
TL	TRUE LENGTH
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
VNAE	VEHICLE NON-ACCESS EASEMENT
Vr	VOLUME REQUIRED
Vp	VOLUME PROVIDED
W	WATER, WEST, WITH
XFMR	TRANSFORMER

DESIGN CRITERIA

DESIGN FLOWS	VALUE
AVERAGE FLOW	2.00 MGD
PEAK FLOW	6.91 MGD

CHANNEL CONFIGURATION	VALUE
CHANNEL WIDTH	1.5 FEET
CHANNEL DEPTH	6.0 FEET
CHANNEL BOTTOM ELEVATION	4,056.00 FEET
MAXIMUM WATER DEPTH	4.75 FEET
PARSHALL FLUME BOTTOM ELEVATION	4,057.25 FEET
FREEBOARD	1.25 FEET
DOWNSTREAM WATER LEVEL @ PEAK FLOWS	3.07 FEET

SCREEN CONFIGURATION	VALUE
NUMBER OF SCREENS	2
SCREEN MATERIAL	316SS
ANGLE OF SCREENS	75°
BAR SPACING	0.25 INCHES
MAX HEAD LOSS THROUGH SCREENS	12 INCHES
SCREEN OPERATION	TIMER AND WATER LEVEL DIFFERENTIAL SENSORS

SPECIAL INSPECTIONS

ITEM
EXPANSION/EPOXY ANCHORS

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REV NO.	COMMENT	DATE

Registered Professional Engineer — Tyson L. Glock — 52543 — Civil — Date Signed 08/17/17 — ARIZONA, U.S.A. — Expires 9/30/17

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CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
GENERAL NOTES, LEGEND, ABBREVIATIONS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
05623.000	TG	JC	TG/GP	2 of 11	GN1

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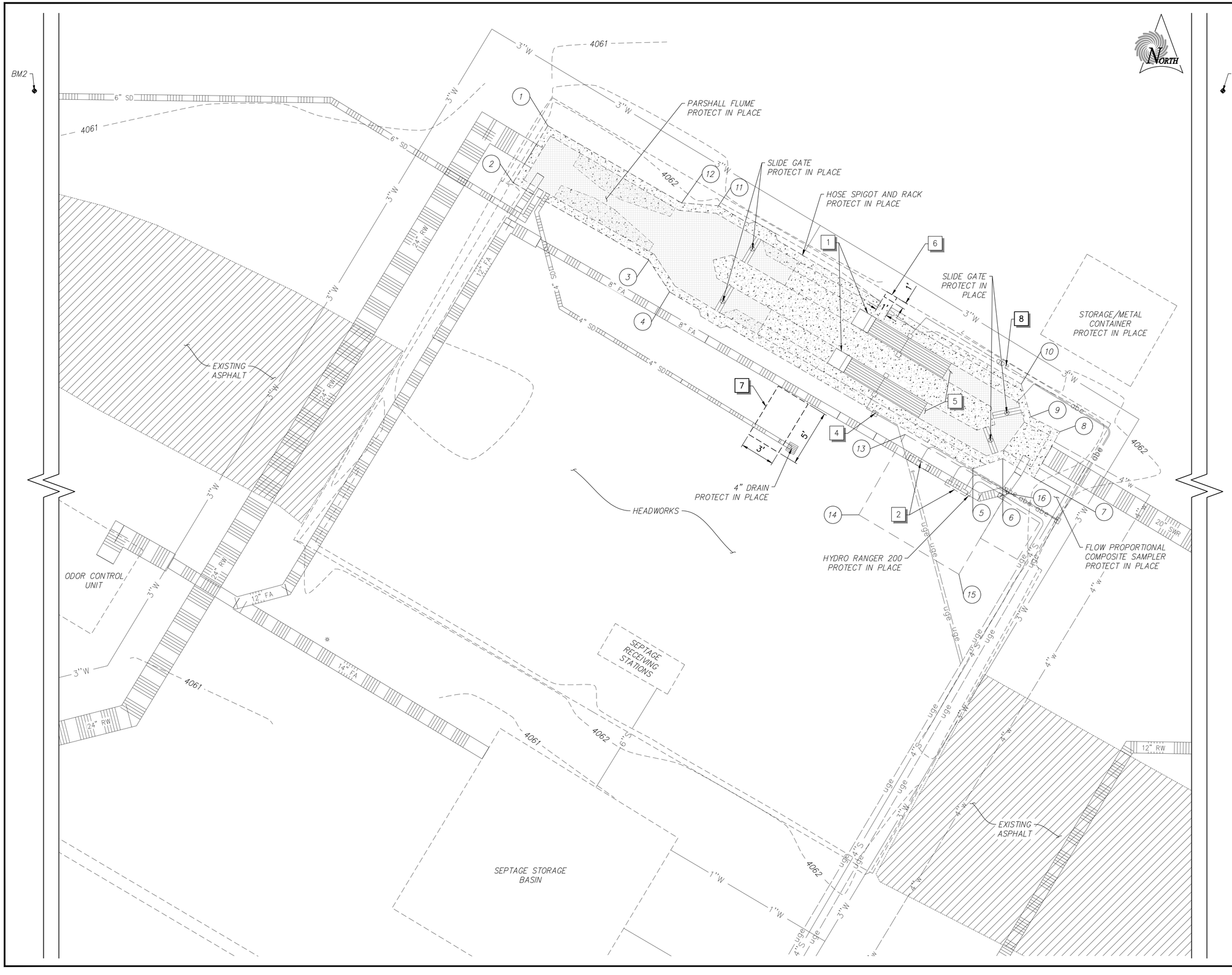

DEMOLITION NOTES

1. REMOVE EXISTING SCREENING EQUIPMENT PER SPEC 02900
2. REMOVE EXISTING CONTROL PANEL PER SPEC 02900
3. NOT USED
4. REMOVE EXISTING DISCONNECT PER SPEC 02900
5. CUT AND REMOVE OR ADD SECTION OF FRP PLATE AS NEEDED TO COVER CHANNEL. IF ADDITIONAL SECTION IS NEEDED IT SHALL BE IN KIND TO EXISTING FRP.
6. SAWCUT AND REMOVE EXISTING CURB
7. SAWCUT AND REMOVE EXISTING CONCRETE SLAB
8. CONTRACTOR TO REMOVE ABOVE GROUND CONDUIT BETWEEN THE CONTROLLER AND SCREEN

BENCHMARKS

POINT	COORDINATES	ELEVATION
BM1	N 8926.56 / E 10937.94	4076.48'
BM2	N 8614.52 / E 8286.01	4029.35'

POINT DATA

NO.	NORTHING	EASTING	ELEVATION
1	8585.81	9853.83	4061.84
2	8580.90	9850.84	4061.82
3	8574.24	9862.54	4061.88
4	8571.50	9864.31	4061.83
5	8556.26	9890.44	4061.89
6	8557.13	9893.02	4061.91
7	8555.48	9895.73	4061.97
8	8559.45	9897.94	4061.93
9	8560.73	9895.44	4061.94
10	8563.55	9894.61	4061.95
11	8578.91	9868.54	4061.84
12	8579.16	9865.36	4061.84
13	8559.21	9884.62	4061.84
14	8552.29	9880.62	4061.89
15	8547.17	9889.24	4061.82
16	8554.15	9893.39	4061.88

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SCALE
0 4' 8'
HORIZ: 1" = 4'

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CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
HORIZONTAL CONTROL, TOPO, AND DEMO PLAN

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
05623.000	TG	JC	TG/GP	3 of 11	TOPO

RE-BID SET 8-17-17

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CONSTRUCTION NOTES

1. BULL SHARK SCREENS (18 INCH WIDE BY 72 IN DEEP) WITH FREEZE PROTECTION BY HYDRO–DYNE MODEL# STR 17–143–6 L. INSTALL AT LOCATION OF EXISTING SCREEN.
2. WHITETIP SHARK WASHING COMPACTOR (8 INCH) BY HYDRO–DYNE
3. SLUICE BY HYDRO–DYNE. EXACT SLUICE TIE IN ELEVATIONS TO SCREENS AND COMPACTORS TO BE PROVIDED BY SYSTEM MANUFACTURER. SLUICE REQUIRES A 1–2% SLOPE FROM SCREEN TO WASHING COMPACTOR. SLUICE BOLTS TO SCREEN AND COMPACTOR.
4. NEMA 4X 508A UL CONTROL PANEL (CONTROLS THE SCREENS AND THE WASHING COMPACTOR)
5. NOT USED
6. 1" SCH40 GALVANIZED STEEL TEE
7. 1" SCH40 GALVANIZED STEEL PIPE, LENGTH PER PLAN
8. 1" SCH40 GALVANIZED STEEL 90° BEND
9. 1" SCH40 GALVANIZED STEEL CAP
10. 3" X 1 " SCH40 GALVANIZED STEEL TEE
11. REPLACE CONCRETE CURB IN KIND, SQUARE FOOTAGE PER PLAN
12. WATER CONNECTION, SIZE PER PLAN. SEE DETAIL C, DRAWING DT1
13. 24" X 24" PIPE CROSSOVER RAMP WITH USABLE SPAN 3" X 3" PER VESTIL MANUFACTURING CORP. MODEL URTH 24 OR APPROVED EQUAL
14. SLUICE GATE PER MANUFACTURE'S RECOMMENDATIONS
20. BOLLARD PER SPEC 05570 (BID ALTERNATIVE)
21. 3" BRASS THREADED SINGLE UNION BALL VALVE BY APOLLO OR APPROVED EQUAL

GENERAL NOTES

1. NEW ABOVE GROUND GALVANIZED STEEL PIPING AND FITTINGS SHALL BE PROTECTED WITH FIBER INSULATION AND ALUMINUM SHIELD.
2. THE FIBER INSULATION MATERIAL SHALL BE 1 INCH THICK PER MICRO–LOK BY JOHNS MANVILLE OR APPROVED EQUAL.
3. THE ALUMINUM SHIELD SHALL WRAP AROUND COMPLETELY THE INSULATED PIPE WITH ONLY ONE SEAM. THE ALUMINUM SHIELD SHALL BE INSUL–MATE ALUMINUM ROLL JACKETING PER RPR PRODUCTS INC., OR APPROVED EQUAL.
4. GALVANIZED STEEL WATER LINE SHALL BE SUPPORTED PER DETAIL D, DRAWING DT1.
5. INSTALL 1" STRAINER PROVIDED BY SYSTEM MANUFACTURES BEFORE ALL WATER CONNECTIONS.

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SITE PLAN

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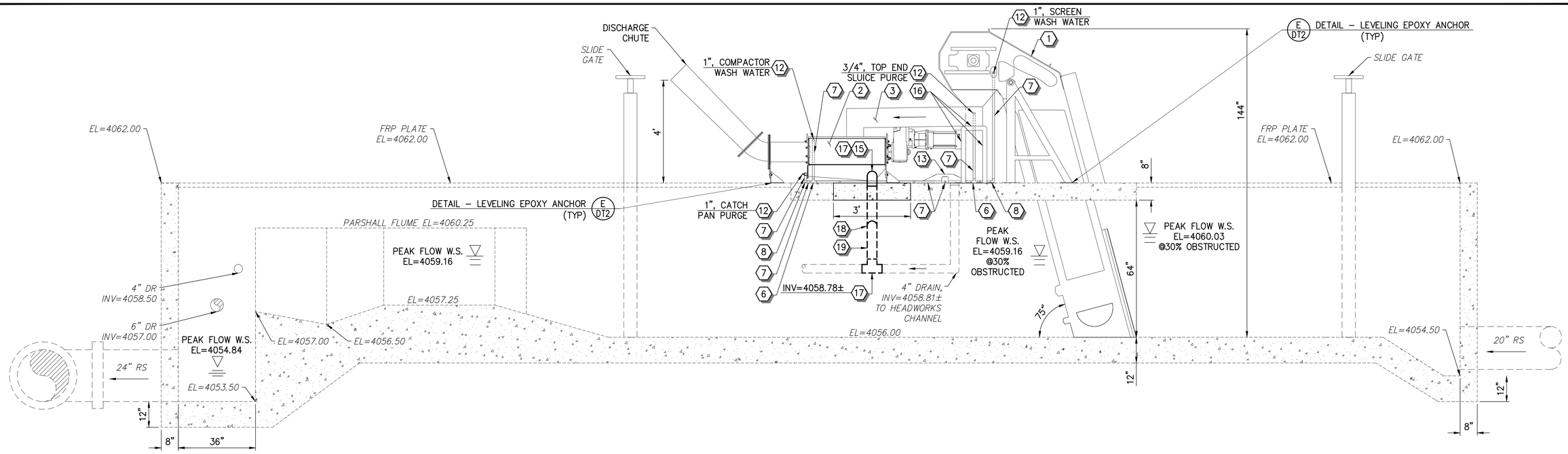
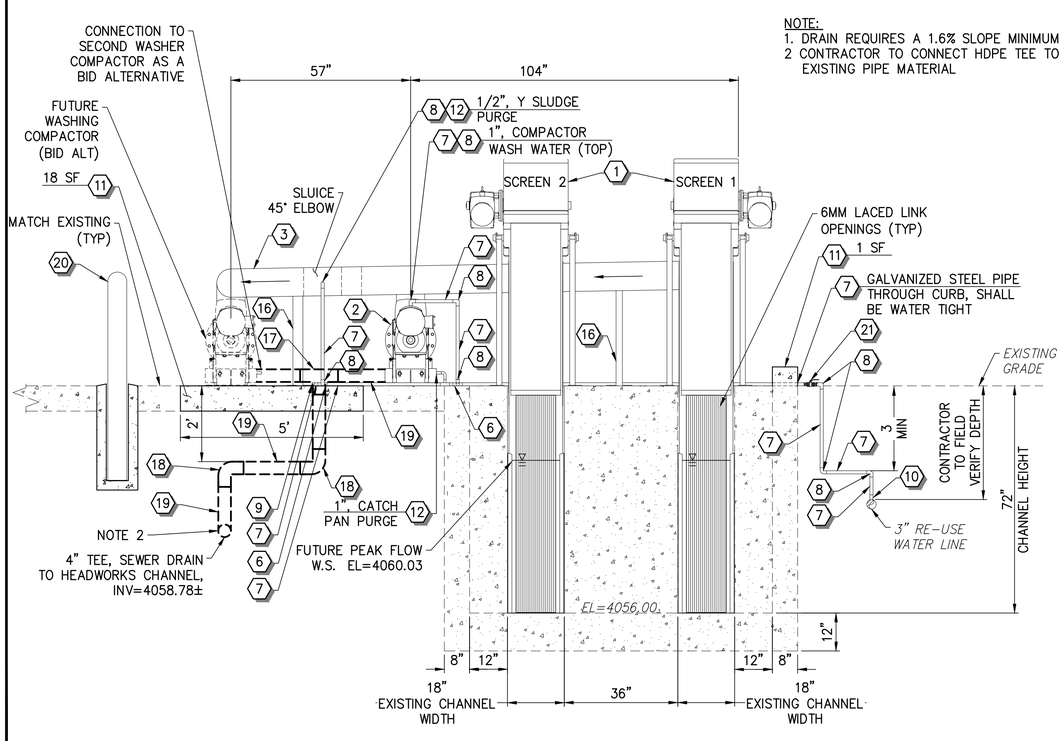
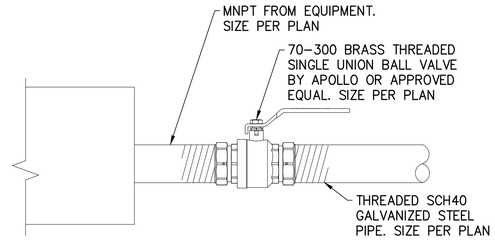


A ~ SECTION - HEADWORKS
SCALE: 1" = 2'



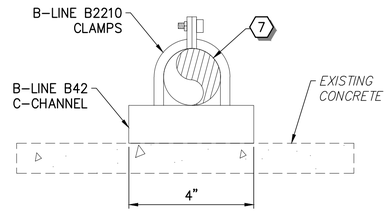
NOTE:
1. DRAIN REQUIRES A 1.6% SLOPE MINIMUM
2 CONTRACTOR TO CONNECT HDPE TEE TO EXISTING PIPE MATERIAL

B ~ SECTION - BAR SCREEN EQUIPMENT, SLUICE, AND WASHING COMPACTOR
SCALE: 1" = 2'



NOTES:
1. THIS IS A TYPICAL WATER CONNECTION TO SCREEN SYSTEM. CONNECTION MAY BE HORIZONTAL OR VERTICAL. BALL VALVE SHALL BE LOCATED FOR EASY ACCESS BY OPERATOR.
2. WHERE REQUIRED BY SCREEN MANUFACTURER SOLENOID VALVE SHALL BE LOCATED DOWNSTREAM OF BALL VALVE.

C ~ DETAIL - WATER CONNECTION
NOT TO SCALE



NOTES:
1. CONCRETE SCREWS SHALL BE B-LINE ACS-25-225H.
2. MAXIMUM DISTANCE BETWEEN PIPE SUPPORTS SHALL NOT EXCEED 5'. PIPE SUPPORTS SHALL BE LOCATED AT ALL FITTINGS.

D ~ DETAIL - PIPE SUPPORT
NOT TO SCALE

CONSTRUCTION NOTES

1. BULL SHARK SCREENS (18 INCH WIDE BY 72 IN DEEP) BY HYDRO-DYNE MODEL# STR 17-143-6 L. INSTALL AT LOCATION OF EXISTING SCREEN
2. WHITETIP SHARK WASHING COMPACTOR (8 INCH) BY HYDRO-DYNE
3. SLUICE BY HYDRO-DYNE
6. 1" SCH40 GALVANIZED STEEL TEE
7. 1" SCH40 GALVANIZED STEEL PIPE
8. 1" SCH40 GALVANIZED STEEL 90° BEND
9. 1" SCH40 GALVANIZED STEEL CAP
10. 3" X 1 " SCH40 GALVANIZED STEEL TEE
11. REPLACE CONCRETE IN KIND
12. WATER CONNECTION, SIZE PER PLAN. SEE DETAIL C, DRAWING DT1
13. 24" X 24" PIPE CROSSOVER RAMP WITH USABLE SPAN 3" X 3" PER VESTIL MANUFACTURING CORP. OR APPROVED EQUAL
15. 4" FERNCO COUPLING DRAIN OUTLET
16. PIPE SUPPORT PER SLUICE MANUFACTURER'S RECOMMENDATIONS
17. 4" HDPE DR 21 TEE
18. 4" HDPE DR 21 90° BEND
19. 4" HDPE DR 21 PIPE
20. BOLLARD PER SPEC 05570 (BID ALTERNATIVE)
21. 3" BRASS THREADED SINGLE UNION BALL VALVE BY APOLLO OR APPROVED EQUAL

GENERAL NOTES

1. NEW ABOVE GROUND GALVANIZED STEEL PIPING AND FITTINGS SHALL BE PROTECTED WITH FIBER INSULATION AND ALUMINUM SHIELD.
2. THE FIBER INSULATION MATERIAL SHALL BE 1 INCH THICK PER MICRO-LOK BY JOHNS MANVILLE OR APPROVED EQUAL.
3. THE ALUMINUM SHIELD SHALL WRAP AROUND COMPLETELY THE INSULATED PIPE WITH ONLY ONE SEAM. THE ALUMINUM SHIELD SHALL BE INSUL-MATE ALUMINUM ROLL JACKETING PER RPR PRODUCTS INC., OR APPROVED EQUAL.
4. GALVANIZED STEEL WATER LINE SHALL BE SUPPORTED PER DETAIL D, DRAWING DT1.
5. INSTALL 1" STRAINER PROVIDED BY SYSTEM MANUFACTURES BEFORE ALL WATER CONNECTIONS.

NOTICE OF EXTENDED PAYMENT PROVISION

(PER ARS 32-1129.01) THIS CONTRACT ALLOWS THE OWNER TO MAKE PAYMENT WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR PROGRESS PAYMENTS, WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR RELEASE OF RETENTION AND WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR FINAL PAYMENT.

REV NO.	COMMENT	DATE

Registered Professional Engineer — 52543 — Tyson L. Glock — 05/17/17 — Date Signed — ARIZONA, U.S.A. — Expires 9/30/17

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CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
DETAILS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
05623.000	TG	JC	TG/GP	5 of 11	DT1

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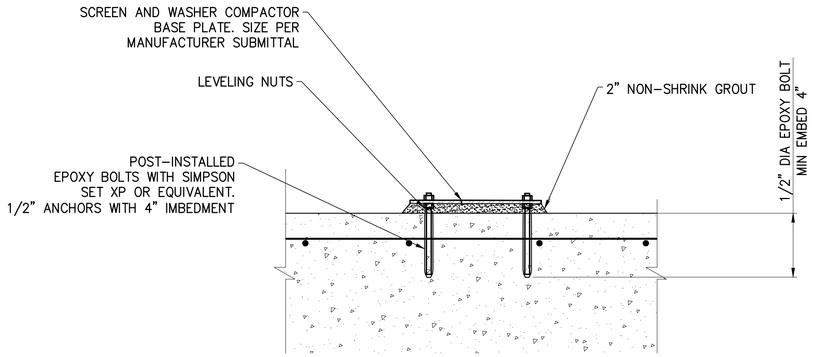

E ~ DETAIL - LEVELING EPOXY ANCHOR
SCALE: NTS

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REV NO.	COMMENT	DATE

Registered Professional Engineer
52543
Tyson L.
Glock
08/17/17
Date Signed
ARIZONA, U.S.A.
Expires 9/30/17

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05623.000	TG	JC	TG/GP	6 of 11	DT2

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ELECTRICAL STANDARDS LEGEND

(ALL SYMBOLS MAY NOT BE USED IN DRAWINGS)

- DIRECT BURIED OR CONCRETE EMBEDDED CONDUIT
- CONDUIT RUN EXPOSED
- PROCESS FLOW
- PNEUMATIC SIGNAL
- ELECTRICAL SIGNAL
- PANEL OR ENCLOSURE
- STAND–BY GENERATOR (???KW G XXXA) ??? DENOTES SIZE
- GENERATOR MAIN BREAKER XXX DENOTES BREAKER SIZE
- WP — WALL PACK FIXTURE. MOUNTING HEIGHT AS INDICATED IN DRAWINGS
- FL — FLOOD LIGHT 7'–2" ABOVE FLOOR
- EXIT — EMERGENCY EXIT SIGN 7'–2" ABOVE FLOOR
- EM — EMERGENCY LIGHTING PACK 7'–2" ABOVE FLOOR
- HIGH/LOW BAY LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
- 1' X 4' LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
- (G) INDICATOR LAMP – LETTER INDICATES COLOR
- (R) FLASHING BEACON – LETTER INDICATES COLOR
- (MS) MOTION SENSOR
- EXHAUST FAN
- OTHER LIGHT FIXTURE AS INDICATED IN DRAWINGS.
- AUDIBLE ALARM OR HORN
- JB — UNDERGROUND JUNCTION/PULLBOX – SIZE 5 UNLESS OTHERWISE INDICATED
- J — STEEL JUNCTION/PULLBOX
- (E) ELECTRIC MANHOLE
- XX — FUSE; XX – DENOTES AMPERAGE
- GFCI — 120 V GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
- WP — 120 V DUPLEX RECEPTACLE, WP (WEATHERPROOF)

- 240 V RECEPTACLE
- DISCONNECT SWITCH
- 20A / 3P — CIRCUIT BREAKER – UPPER NUMBER INDICATES AMP TRIP RATING – LOWER NUMBER INDICATES POLES
- MOTOR OVERLOAD
- EQUIPMENT GROUND
- LIGHT SWITCH, SINGLE POLE, MOUNT 4'–6" ABOVE FLOOR ON BUILDING WALL
- WP — LIGHT SWITCH, SINGLE POINT MOUNT 4'–6" ABOVE FLOOR ON BUILDING WALL, WEATHER PROOF
- (R) RELAY
- (TR1) TIMING RELAY
- (TDR) TIMING DELAY RELAY
- (CR) CONTROL RELAY COIL
- (M) MAGNETIC RELAY
- MOMENTARY PUSH–BUTTON SWITCH
- OFF / HAND / AUTO — HAND–OFF–AUTO SELECTOR SWITCH
- NORMALLY CLOSED PUSHBUTTON
- NORMALLY OPEN PUSHBUTTON
- (RTM) RUNNING TIME METER
- MOTOR STARTER – NUMBER INDICATES SIZE
- NORMALLY CLOSED CONTACTS
- NORMALLY OPEN CONTACTS
- CONTACTOR OR STARTER, NUMBER DENOTES NEMA SIZE
- (10) MOTOR – NUMBER INDICATES HORSEPOWER RATING

- FM — FLOW METER
- ETM — ELAPSED TIME METER
- LIMIT SWITCH
- INSTRUMENT TRANSFORMER
- CT — CURRENT TRANSFORMER
- POWER TRANSFORMER
- T — THERMOSTAT
- G.F.I. — GROUND FAULT INTERRUPTER
- AUXILIARY CONTACT
- INTERLOCK
- PUMP
- S OR S — SOLENOID VALVE
- VALVE WITH MANUAL OPERATOR
- M — ELECTRIC MOTOR OPERATED VALVE (MODULATING OR NON–MODULATING)
- M — MOTOR OPERATED VALVE WITH LIMIT SWITCH ASSEMBLY
- I — COMPUTER/CONTROL INPUT
- O — CONPUTER/CONTROL OUTPUT
- LP1–XX — CIRCUIT LABEL: LP1 – PANEL NAME, XX – CIRCUIT NUMBER
- EXPLOSION PROOF SEAL OFF
- X–YYY — CONDUIT IDENTIFICATION, REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR QUANTITY AND FILL:
  - X = CONDUIT TYPE
    - P–POWER
    - C–CONTROL
    - F–FIBER OPTIC CABLE
    - X–OTHER
  - YYY = ID
- --- OTHER SYMBOLS AS SHOWN ON DRAWINGS

GENERAL ELECTRICAL REQUIREMENTS

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES. ALL WORK SHALL BE DONE IN A NEAT, PROFESSIONAL, FINISHED AND SAFE MANNER, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AND ALL ELECTRICAL WORK AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ANY OTHER APPLICABLE CODES.
2. MATERIAL, EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ENGINEER BEFORE ORDERING.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS PROJECT AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITIONS 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.
7. ALL CONDUCTORS SHALL BE THHN/THWN COPPER, STRANDED RATED AT 600 VOLTS UNLESS OTHERWISE NOTED. ALUMINUM WIRE WILL NOT BE ALLOWED.
8. ALL CONDUCTORS SHALL BE INSTALLED IN A CONDUIT SYSTEM EXCEPT WHERE NOTED IN DRAWINGS. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR CONDUIT TYPE AND SIZE. WHERE CONDUIT SIZE IS NOT CALLED OUT, CONDUIT SHALL BE INSTALLED PER SPECIFICATINO 16010 AND SIZED PER LATEST ADOPTED EDITION OF THE NEC.
9. ALL UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 3/4" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. ALL UNDERGROUND ELBOWS SHALL BE RIGID LONG SWEEP WRAPPED WITH 3M–50 10 MIL PIPE WRAP OR APPROVED EQUAL EXCEPT FOR COMMUNICATIONS CABLE AND CONDUIT WHEN SPECIFIED DIFFERENTLY ON THE DETAILED ELECTRICAL DRAWINGS.
10. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE RATED FOR HEAVY DUTY SERVICE.
11. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE GROUNDED BODY TYPE DEVICES.
12. THE CONTRACTOR SHALL INSTALL ALL INSTRUMENTS AND CONTROLS, INCLUDING HVAC AND CONTROL PANELS. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL INSTRUMENT, CONTROL AND HVAC DRAWINGS FOR TOTAL SCOPE OF WORK.
13. ALL PANELS, DISCONNECTS AND SWITCHGEAR ON THE OUTSIDE OF THE BUILDING SHALL BE NEMA 3R TYPE ENCLOSURES UNLESS OTHERWISE SPECIFIED. CT CABINET AND METER BASE SHALL BE OUTSIDE THE BUILDING.
14. SURGE PROTECTIVE DEVICES (SPD) SHALL BE SIZED FOR 160KA AMPS UNLESS OTHERWISE NOTED.
15. ALL CONDUIT FOR ALL EQUIPMENT, INCLUDING EQUIPMENT FURNISHED BY OTHERS, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
16. ALL CONDUIT, WHERE LEAVING ELECTRICAL EQUIPMENT TO GO UNDERGROUND, MUST BE ANCHORED TO THE FOUNDATION WITH STAND–OFF BRACKETS TO ALLOW FOR SUFFICIENT CLEARANCE FOR FOOTINGS AND WALL STUDS ON THE WALLS IN THE BUILDING. ALL RGS CONDUIT AND ELBOWS USED UNDERGROUND WILL BE WRAPPED WITH AN APPROVED PIPE WRAP. (TYP. FOR ALL BUILDINGS)
17. ALL WIRING IN CLASS I HAZARDOUS LOCATIONS SHALL COMPLY WITH NEC 501. WET WELL SHALL BE CONSIDERED CLASS I DIV 1, GROUPS C&D.

GENERAL ELECTRICAL ABBREVIATIONS

MCP	MOTOR CIRCUIT PROTECTOR	CB	CIRCUIT BREAKER	EMH	ELECTRICAL MANHOLE	RTU	REMOTE TERMINAL UNIT
NC	NORMALLY CLOSED	CNTL	CONTROL	MTU	MASTER TERMINAL UNIT	SPD	SURGE PROTECTIVE DEVICE
NO	NORMALLY OPEN	IC	INSTRUMENTATION CONDUIT	TSP	TWISTED SHIELDED PAIRS	PP	POWER PANEL
SPC	SPARE CONDUIT	INST	INSTRUMENT	VFD	VARIABLE FREQUENCY DRIVE	PCP	PUMP CONTROL PANEL
PLC	PROGRAMMABLE LOGIC CONTROLLER	HMI	HUMAN MACHINE INTERFACE	SPIC	SPARE INSTRUMENT CONDUIT		
ATS	AUTOMATIC TRANSFER SWITCH	SSSS	SOLID STATE SOFT START	WP	WEATHERPROOF		
LCP	LOCAL CONTROL PANEL	ACB	AIR CIRCUIT BREAKER	OL	MOTOR OVERLOAD		
C	CONDUIT	AFF	ABOVE FINISHED FLOOR	LP	LIGHTING PANEL		
		AFG	ABOVE FINISHED GRADE				

RE-BID SET 8-17-17

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REV NO.	COMMENT	DATE

Registered Professional Engineer (Electrical) CERTIFICATE NO. 53659 J. RANDALL KNAPP Date Signed 08-16-2017 ARIZONA, U.S.A.

Expires: 6/30/2018

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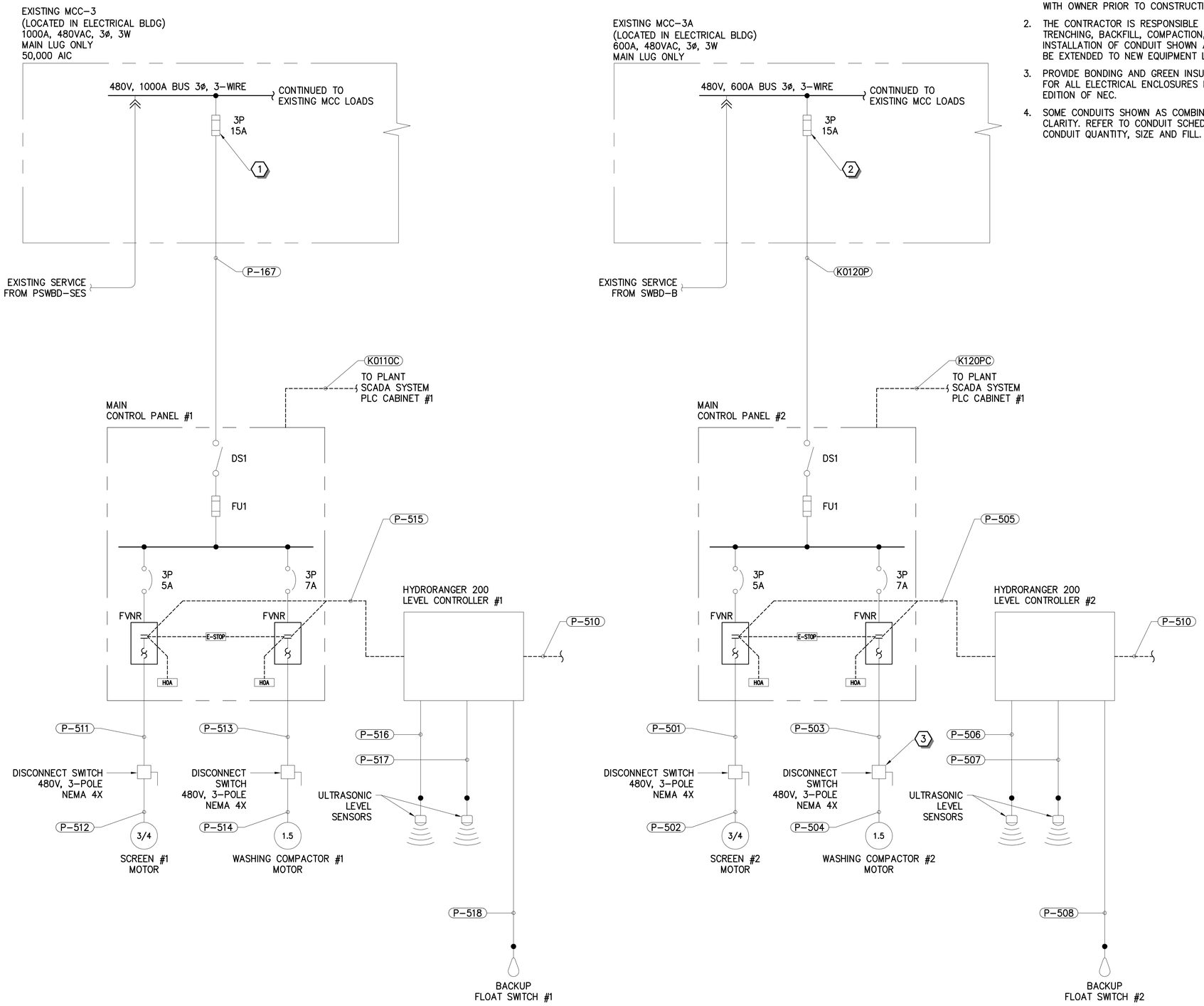
CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
ELECTRICAL NOTES AND SYMBOLS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S05623	JRK	----	JRK	7 of 11	E1

P:\Sedona\s05623 sedona bar screen replacement\tech dept\dwg\Electrical Notes & Symbols.dwg Aug 16, 2017 4:44pm rknapp



SHEET NOTES:

1. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, COMPACTION, AND THE INSTALLATION OF CONDUIT SHOWN AS NEW OR TO BE EXTENDED TO NEW EQUIPMENT LOCATION.
3. PROVIDE BONDING AND GREEN INSULATED GROUND FOR ALL ELECTRICAL ENCLOSURES PER LATEST EDITION OF NEC.
4. SOME CONDUITS SHOWN AS COMBINED FOR CLARITY. REFER TO CONDUIT SCHEDULE FOR CONDUIT QUANTITY, SIZE AND FILL.

KEY NOTES

1. LOCATE STARTER FOR EXISTING SCREEN #1 IN MCC-3 AND REMOVE. PROVIDE AND INSTALL NEW 3-POLE, 15A FUSE AND FUSE HOLDER FOR NEW EQUIPMENT. CONNECT NEW CIRCUIT FOR MAIN CONTROL PANEL #1 TO NEW FUSED CIRCUIT.
2. LOCATE CIRCUIT TO EXISTING SCREEN #2 IN MCC-3A. PROVIDE AND INSTALL NEW 3-POLE, 15A FUSE AND FUSE HOLDER FOR NEW EQUIPMENT. CONNECT NEW CIRCUIT FOR MAIN CONTROL PANEL #2 TO NEW FUSED CIRCUIT.
3. DISCONNECT SWITCH IS INCLUDED AS PART OF BID ALTERNATE #1. INSTALL CONDUIT ONLY TO DISCONNECT SWITCH EQUIPMENT RACK AND CAP IF BID ALTERNATE #1 IS NOT CONSTRUCTED.

RE-BID SET 8-17-17

REV NO.	COMMENT	DATE

Registered Professional Engineer (Electrical) CERTIFICATE NO. 53659 J. RANDALL KNAPP Date Signed 08-16-2017 ARIZONA, U.S.A.
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CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
ELECTRICAL ONE-LINE DIAGRAM

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S05623	JRK	----	JRK	8 of 11	E2.1

CONDUIT AND CONDUCTOR SCHEDULE

	CONDUIT TAG	DESCRIPTION	ROUTING		CONDUIT		CONDUCTORS (CU) PER C.		VOLTAGE	REMARKS OR REFERENCE DRAWING
			FROM	TO	QTY	SIZE	(QTY) & SIZE	GND		
3	P-00X	HIGH CHANNEL ALARM	PLC CABINET #2	HIGH LEVEL FLOAT SWITCH	1		(2) #12 CU AWG	#12	CTRL	LOCATE AND REUSE EXISTING HIGH LEVEL SWITCH CONDUIT
	P-167	POWER FEED TO MAIN CONTROL PANEL #1	MCC-3	MAIN CONTROL PANEL #1	1	3/4"	(3) #12 CU AWG	#12	480	EXISTING CONDUIT, REUSE FOR THIS PROJECT
	C-132	POWER TO LIGHTING CIRCUIT	PANEL CA-2,4	BAR SCREEN CANOPY LIGHT FIXTURE	1	3/4"	(2) #12 CU AWG	#12	120	EXISTING CONDUIT AND CONDUCTOR.
	K0110C	TELEMETRY FOR MAIN CONTROL PANEL #1	MAIN CONTROL PANEL #1	PLC CABINET #2	1	3/4"	(1) 6-STRAND FO		CTRL	CORNING 6-STRAND MULTIMODE SINGLE-ARMORED FO CABLE
	K0120P	POWER FEED TO MAIN CONTROL PANEL #2	MCC-3	MAIN CONTROL PANEL #2	1	3/4"	(3) #12 CU AWG	#12	480	EXISTING CONDUIT, SIZE ASSUMED, REUSE FOR THIS PROJECT
	K0120PC	TELEMETRY FOR MAIN CONTROL PANEL #2	MAIN CONTROL PANEL #2	PLC CABINET #1	1	3/4"	(1) 6-STRAND FO		CTRL	CORNING 6-STRAND MULTIMODE SINGLE-ARMORED FO CABLE
	P-501	FEED TO SCREEN MOTOR #2	MAIN CONTROL PANEL #2	SCREEN #2 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
	P-502	FEED TO SCREEN MOTOR #2	SCREEN #2 DISCONNECT SW.	SCREEN #2	1	3/4"	(3) #12 CU AWG	#12	480	
1	P-503	FEED TO WASHING COMPACTOR #2	MAIN CONTROL PANEL #2	WASH/COMPACTOR DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
2	P-504	FEED TO WASHING COMPACTOR #2	WASH/COMPACTOR DISCONNECT SW.	WASH/COMPACTOR	1	3/4"	(3) #12 CU AWG	#12	480	
	P-505	LEVEL CONTROL	MAIN CONTROL PANEL #2	LEVEL CONTROL PANEL #2	1	3/4"	(10) #14 CU AWG	#14	CTRL	CONDUCTOR COUNT TO BE VERIFIED WITH SUPPLIER
	P-506	LEVEL SENSOR 2-1	LEVEL CONTROL PANEL #2	CHANNEL 2 UPSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-507	LEVEL SENSOR 2-2	LEVEL CONTROL PANEL #2	CHANNEL 2 DOWNSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-508	CHANNEL 2 HIGH LEVEL SWITCH	LEVEL CONTROL PANEL #2	CHANNEL 2 LEVEL SWITCH	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-509	SCREEN #2 SOLENOID CONTROL	VERIFY SOLENOID LOCATION							
	P-510	MAIN CONTROL PANELS 1 & 2 CONNECTION	MAIN CONTROL PANEL #1	MAIN CONTROL PANEL #2	1	1"			CTRL	SEE P-520 AND P-523. USE AS NEEDED.
	P-511	FEED TO SCREEN MOTOR #1	MAIN CONTROL PANEL #1	SCREEN #1 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
	P-512	FEED TO SCREEN MOTOR #1	SCREEN #1 DISCONNECT SW.	SCREEN #1 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
	P-513	FEED TO WASHING COMPACTOR #1	MAIN CONTROL PANEL #1	WASH/COMPACTOR DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	INSTALL MANUFACTURER SUPPLIED CABLE
	P-514	FEED TO WASHING COMPACTOR #1	WASH/COMPACTOR DISCONNECT SW.	WASH/COMPACTOR	1	3/4"	(3) #12 CU AWG	#12	480	
	P-515	LEVEL CONTROL	MAIN CONTROL PANEL #1	LEVEL CONTROL PANEL #1	1	3/4"	(10) #14 CU AWG	#14	CTRL	CONDUCTOR COUNT TO BE VERIFIED WITH SUPPLIER
	P-516	LEVEL SENSOR 1-1	LEVEL CONTROL PANEL #1	CHANNEL 1 UPSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-517	LEVEL SENSOR 1-2	LEVEL CONTROL PANEL #1	CHANNEL 1 DOWNSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-518	CHANNEL 1 LEVEL SWITCH	LEVEL CONTROL PANEL #1	CHANNEL 1 LEVEL SWITCH	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
	P-519	SCREEN #1 SOLENOID CONTROL	MAIN CONTROL PANEL #1/2	SCREEN #1 SOLENOID	1	3/4"	(2) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION
	P-520	SLUICE WATER SOLENOID CONTROL (LOWER)	MAIN CONTROL PANEL #1	SLUICE UPPER SOLENOID	1	3/4"	(2) #14 CU AWG	#14	CTRL	ROUTE TO MAIN CTRL PNL #2 THRU MAIN CTRL PNL #1
	P-521	WASHING COMPACTOR #1 SOLENOID CONTROL	MAIN CONTROL PANEL #1	WASH/COMPACTOR #1 SOLENOID 1&2	1	3/4"	(4) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION
2	P-522	WASHING COMPACTOR #2 SOLENOID CONTROL	MAIN CONTROL PANEL #2	WASH/COMPACTOR #2 SOLENOID 1&2	1	3/4"	(4) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION
	P-523	SLUICE WATER SOLENOID CONTROL (UPPER)	MAIN CONTROL PANEL #1	SLUICE LOWER SOLENOID	1	3/4"	(2) #14 CU AWG	#14	CTRL	ROUTE TO MAIN CTRL PNL #2 THRU MAIN CTRL PNL #1

KEY NOTES

1. CONDUIT IS FOR BID ALT #1 EQUIPMENT. INSTALL CONDUIT ONLY FOR FUTURE USE IF BID ALT #1 IS NOT CONSTRUCTED.
2. CONDUIT IS FOR BID ALT #1 EQUIPMENT. DO NOT PROVIDE OR INSTALL FOR THIS PROJECT IF BID ALT #1 IS NOT CONSTRUCTED.
3. LOCATE CONDUIT TO EXISTING HIGH LEVEL FLOAT SWITCH. INSPECT EXISTING CONDUIT TO ENSURE SUITABILITY FOR REUSE AND INSTALL NEW CONDUCTOR TO NEW HIGHT LEVEL FLOAT SWITCH.

REV NO.	COMMENT	DATE

Registered Professional Engineer (Electrical) CERTIFICATE NO. 53659 J. RANDALL KNAPP Date Signed 08-16-2017 ARIZONA, U.S.A.
Expires: 6/30/2018

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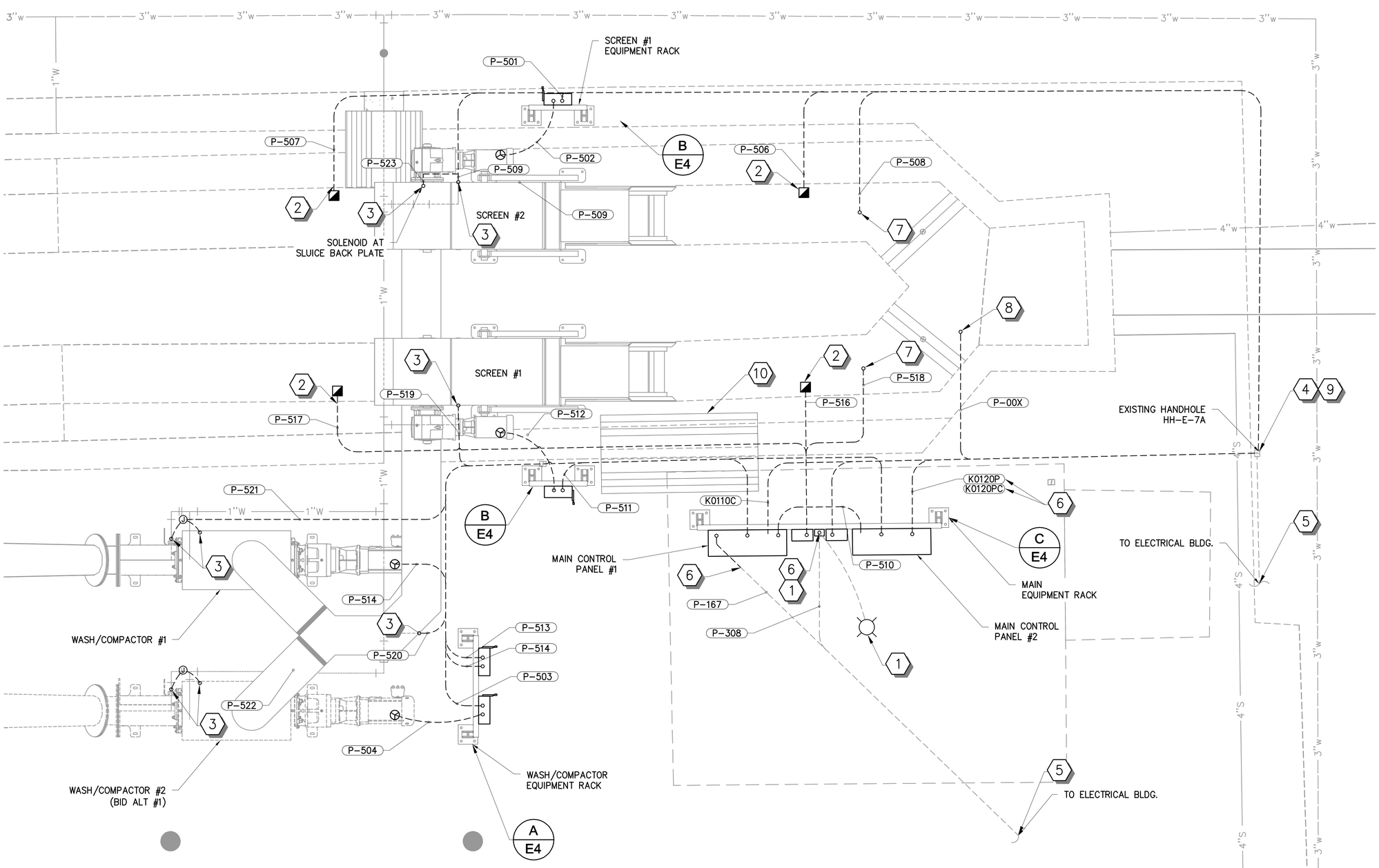
CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
ELECTRICAL CONDUIT SCHEDULE

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S05623	JRK	----	JRK	9 of 11	E2.2

RE-BID SET 8-17-17

RE-BID SET 8-17-17



A ELECTRICAL SITE PLAN
~ 3/4" = 1' AT FULL SCALE (22"x34")

0 1' 2' 4'
HORIZ: 1/2" = 1'

811 Know what's **below.** **Call** before you dig. 1-800-782-5348

SHEET NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE ANY EXCAVATION IS PERFORMED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO NEW CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. NOT ALL CONDUITS ARE SHOWN. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR INDIVIDUAL CONDUIT FILL REQUIREMENTS. CONDUIT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND AVOID OTHER STRUCTURES AS REQUIRED.
3. REFER TO DRAWING E2.2 FOR CONDUIT IDENTIFICATION.
4. REFER TO DRAWING E4 FOR EQUIPMENT SCHEDULE.

KEY NOTES

1. RECONNECT EXISTING LIGHT FIXTURE. EXISTING SWITCH IS LOCATED ON EXISTING CONTROL PANEL THAT IS TO BE REMOVED. RELOCATE SWITCH TO NEW EQUIPMENT RACK AND PROVIDE ALL CONDUIT, FITTINGS, AND HARDWARE TO RESTORE FIXTURE IN GOOD WORKING CONDITION.
2. ULTRASONIC SENSOR LOCATION. HYDRORANGER 200 CONTROLLER AND TRANSDUCERS WILL BE PROVIDED BY SCREEN EQUIPMENT SUPPLIER AND SHALL BE INSTALLED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH SUPPLIER TO DETERMINE EXACT LOCATION FOR NEW EQUIPMENT AND SHALL PROVIDE ALL CONDUIT, FITTINGS AND MOUNTING HARDWARE FOR A WORKING SYSTEM.
3. SOLENOID VALVES WILL BE PROVIDED BY SCREEN EQUIPMENT SUPPLIER. LOCATION SHOWN IS APPROXIMATE. CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER.
4. LOCATE EXISTING HAND HOLE HH-3-7A. INSTALL NEW CONDUCTORS IN EXISTING CONDUIT THROUGH THIS LOCATION. COORDINATE WITH OWNER TO DETERMINE THE COMPLETE PATH TO ELECTRICAL ROOM AND PLANT SCADA SYSTEM.
5. INSTALL NEW CONDUCTORS IN EXISTING CONDUIT WHERE POSSIBLE. SAWCUT CONCRETE AS NECESSARY TO LOCATE EXISTING CONDUIT AND TO INSTALL NEW CONDUIT WHERE REQUIRED. ALL DAMAGED AREAS SHALL BE RESTORED BY CONTRACTOR.
6. INTERCEPT EXISTING CONDUIT AND TIE INTO NEW CONDUIT SYSTEM.
7. CHANNEL LEVEL SWITCH. LEVEL SWITCH AND CABLE PROVIDED BY EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR. PROVIDE CONDUIT, AND ALL MOUNTING HARDWARE FOR A COMPLETE INSTALLATION. COORDINATE WITH EQUIPMENT SUPPLIER FOR DETAILS.
8. REPLACE EXISTING FLOAT SWITCH WITH APG, FT-300A. PROVIDE ALL CONDUIT, CABLE AND MOUNTING HARDWARE FOR A COMPLETE INSTALLATION.
9. INSPECT AND SEAL ALL CONDUITS ENTERING AND LEAVING ELECTRICAL PULL BOXES TO PREVENT RODENT ENTRY INTO CONDUIT SYSTEM.
10. 21" X 48" CONDUIT CROSSOVER RAMP WITH USABLE SPAN 4-1/2" X 3-9/16" PER VESTIL MANUFACTURING CORP., XHCR-48-YB OR APPROVED EQUAL.

REV NO.	COMMENT	DATE

Registered Professional Engineer (Electrical) CERTIFICATE NO 53659 J. RANDALL KNAPP Date Signed 08-15-2017 ARIZONA, U.S.A.
Expires: 6/30/2018

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CITY OF SEDONA

SEDONA WWRP HEADWORKS
BAR SCREEN REPLACEMENT
ELECTRICAL SITE PLAN

SET NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S0562 3	JRK	----	JRK	10 of 11	E3

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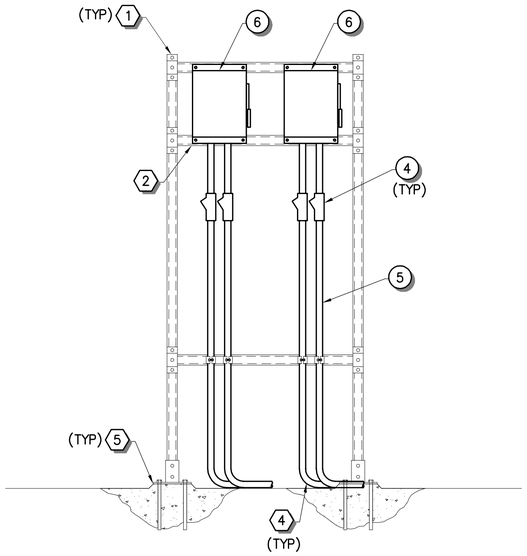
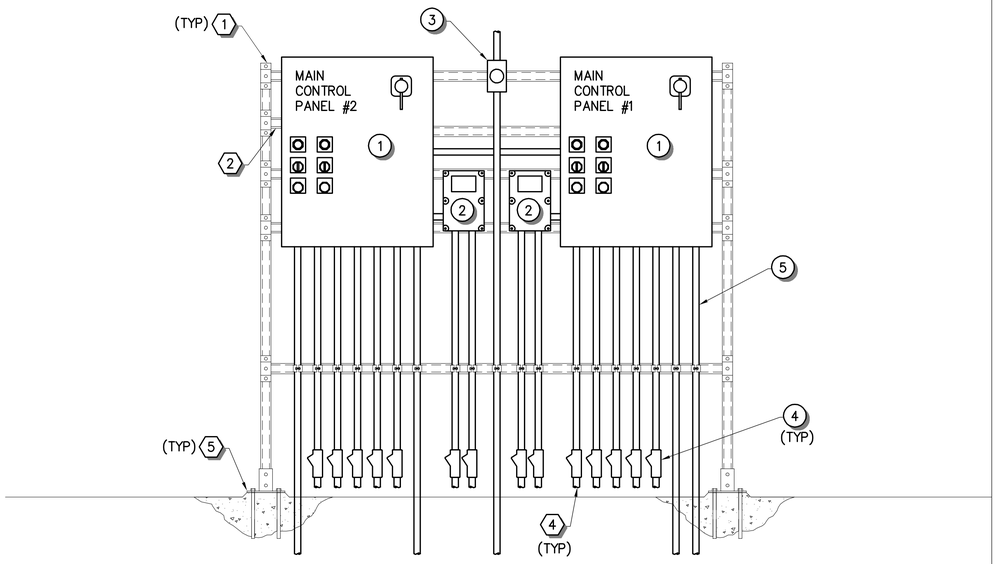
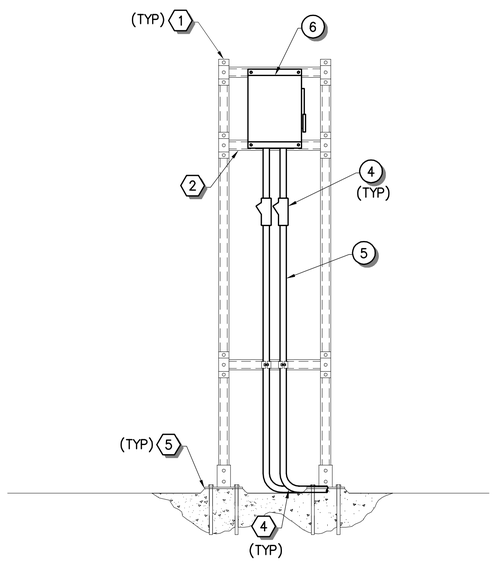


A ~ WASH/COMPACTOR EQUIPMENT ELEVATION
N.T.S.



C ~ MAIN CONTROL PANEL ELEVATION
N.T.S.



B ~ TYPICAL SCREEN EQUIPMENT ELEVATION
N.T.S.

PARTIAL EQUIPMENT LIST

1. MAIN CONTROL PANEL PROVIDED BY EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL INSTALL PER MANUFACTURERS INSTRUCTIONS AND SHALL PROVIDE ALL MATERIALS NECESSARY TO COMPLETE INSTALLATION.

   CONTRACTOR SHALL PROVIDE FIBER TO ETHERNET CONVERTER TO BE MOUNTED INSIDE MAIN CONTROL PANEL. ONE CONVERTER SHALL ALSO BE PROVIDED TO MOUNT IN PLANT PLC CABINET TO FACILITATE ETHERNET COMMUNICATIONS BETWEEN SCREEN/WASHER EQUIPMENT AND PLANT SCADA SYSTEM. FIBER TO ETHERNET CONVERTER SHALL BE NTRON 102MC-SC-MDR OR APPROVED EQUAL.
2. HYDRORANGER 200 LEVEL CONTROLLER PROVIDED BY SCREEN EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR PER MANUFACTURER'S INSTRUCTIONS. COORDINATE ALL WORK WITH EQUIPMENT SUPPLIER.
3. LIGHT SWITCH FOR EXISTING CANOPY FIXTURE. REUSE EXISTING EQUIPMENT IF POSSIBLE. PROVIDE NEW WEATHERPROOF SWITCH AND CONDUIT IF EXISTING IS DAMAGED OR OTHERWISE NOT SERVICEABLE. EXISTING SWITCH TO BE REMOVED FROM EXISTING PANEL AND LOCATED ON NEW EQUIPMENT RACK.
4. CONTRACTOR SHALL PROVIDE CONDUIT SEAL-OFFS RATED FOR HAZARDOUS LOCATIONS PER NEC. CHANNEL SHALL BE CONSIDERED CLASS I DIV 1, AND 10' ENVELOPE AROUND CHANNEL SHALL BE CONSIDERED CLASS I DIV 2.
5. ALL EXPOSED CONDUIT AND FITTINGS SHALL BE PVC COATED RIGID. ALL FITTINGS SHALL BE APPROPRIATE FOR HAZARDOUS CLASSIFICATION.
6. DISCONNECT SWITCH – 480V, 3-POLE, NEMA 4X PROVIDED AND INSTALLED BY CONTRACTOR.

SHEET NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE ANY EXCAVATION IS PERFORMED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO NEW CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. NOT ALL CONDUITS ARE SHOWN. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR INDIVIDUAL CONDUIT FILL REQUIREMENTS. CONDUIT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND AVOID OTHER STRUCTURES AS REQUIRED.
3. EQUIPMENT LAYOUT AND SIZE SHOWN IS TYPICAL ONLY. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER AND REFER TO EQUIPMENT SHOP DRAWINGS TO VERIFY SIZE, LOCATION AND CONDUIT STUB UP REQUIREMENTS.

KEY NOTES

1. 1-5/8" CHANNEL. PROVIDE BACK TO BACK CHANNEL FOR VERTICAL SUPPORTS. PROVIDE ALL MOUNTING HARDWARE REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. PROVIDE 1-5/8" STAINLESS STEEL CHANNEL FOR HORIZONTAL CROSS MEMBERS. PROVIDE SECTIONS AS NECESSARY, WITH A MINIMUM OF TWO (2).
3. CONTRACTOR SHALL SAWCUT EXISTING CONCRETE WHERE CONDUIT IS REQUIRED TO BE INSTALLED UNDER SLAB. CONTRACTOR SHALL RESTORE CONCRETE SURFACE AFTER CONDUIT INSTALLATION AND BACKFILL.
4. SURFACE MOUNT CONDUIT TO HEADWORKS EQUIPMENT WHERE POSSIBLE. PROVIDE ALL MOUNTING AND SUPPORT HARDWARE. WHERE SURFACE MOUNTING WOULD CREATE A HAZARD, CONTRACTOR SHALL INSTALL NEW CONDUIT UNDER SLAB.
5. ANCHOR EQUIPMENT RACK TO CONCRETE SURFACE WITH 1/2" DIAMETER STAINLESS STEEL EPOXY BOLTS MIN. 7" EMBEDMENT. INSTALL 1" CONCRETE PAD AT BASE OF RACK SUPPORT.

RE-BID SET 8-17-17

REV NO.	COMMENT	DATE

Registered Professional Engineer (Electrical) CERTIFICATE NO. 53659 J. RANDALL KNAPP Date Signed 08-16-2017 ARIZONA, U.S.A.
Expires: 6/30/2018

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