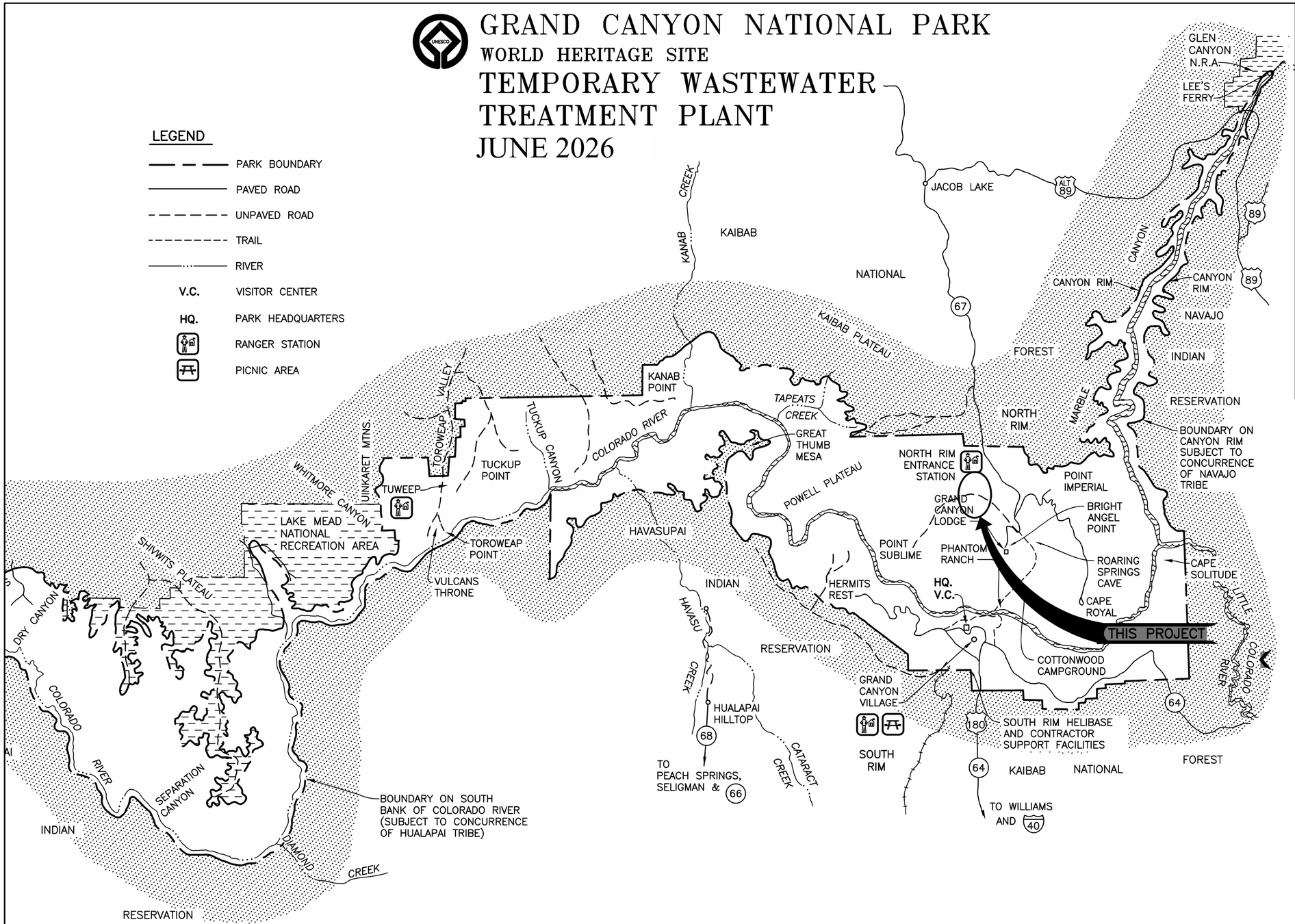
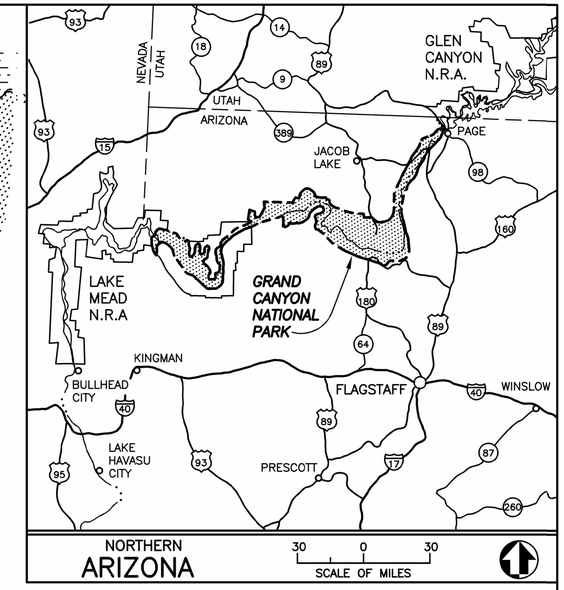
GRAND CANYON NATIONAL PARK

WORLD HERITAGE SITE

TEMPORARY WASTEWATER TREATMENT PLANT

JUNE 2026





SCALE OF MILES

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PMIS – 318719

A/E FIRM	Mark	Sheet	REVISION	Date	Initial
PRIME: HDR ENGINEERING, INC. DENVER, CO 80202					
	V		CONSTRUCTION DOCUMENTS	JUNE 2026	

Registered Professional Engineer (Civil) CERTIFICATE NO. 85332 CHRIS CARPENTER Date Signed 6/9/26 ARIZONA U.S.A.

QUALITY DESIGN CERTIFICATION

- ☐ Prepared in Accordance with Design Development (Title I) _____ Drawing No.
- OR
- ☐ Variance from Design Development (Title I) Approved by Superintendent on _____ Date
- OR
- ☐ Construction Drawing Not Preceded by Design Development (Title I)

Project Manager _____ Date _____

CONSTRUCTION DOCUMENTS

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
COVER SHEET
LOCATION WITHIN PARK
NORTH RIM
NAME OF PARK
GRAND CANYON NATIONAL PARK

REGION	COUNTY	STATE
INTERMOUNTAIN	COCONINO	ARIZONA

DRAWING NO. 113 182752A

PKG. NO. 318719

SHEET 1 OF 90

BASIC DATA: LAND STATUS MAP 113/80,011 7/75; PARK MINI FOLDER 1989; REVISED & REDRAWN 2/91. UPDATED 11/98. SGS.

6/9/2026 Lynch, Nicole C:\Users\nlynch\DC\ACCDocs\HDR\10414450_NPS_GRCA_N_Rim_Utility_2026\Project Files\CAD_HDR\DRAWINGS\TEMPORARY WASTEWATER\GENERAL\G001.dwg

GRAND CANYON NATIONAL PARK

WORLD HERITAGE SITE

REHABILITATE NORTH RIM INFRASTRUCTURE

TEMPORARY WASTEWATER TREATMENT PLANT

SHEET	SUB SHEET	TITLE OF SHEET
1	G001	COVER SHEET
2	G002	SHEET INDEX
3	G003	ABBREVIATIONS
4	G004	LEGEND
5	G005	PROJECT AREAS AND VICINITY MAP
6	G105	NORTH RIM CONSTRUCTION CAMP VICINITY MAP
7	G106	NORTH RIM WWTP CONSTRUCTION TRAILERS & HELICOPTOR STAGING AREA
8	C101	TEMPORARY WWTP OVERALL SURVEY CONTROL AND POTHOLING PLAN
9	C102	TEMPORARY WWTP SURVEY CONTROL AND POTHOLE POINT TABLES
10	C103	TEMPORARY WWTP OVERALL SITE PLAN
11	C104	TEMPORARY WWTP OVERALL GRADING AND GESC PLAN
12	C105	TEMPORARY WWTP GRADING POINT TABLES
13	C106	TEMPORARY WWTP OVERALL YARD PIPING PLAN
14	C401	TEMPORARY WWTP YARD PIPING ENLARGED PLAN 1
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16	C501	CIVIL DETAILS - ACCESS AND UTILITIES
17	C502	CIVIL DETAILS - ACCESS AND UTILITIES
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19	C504	CIVIL DETAILS - GESC CONTINUED
20	C505	CIVIL DETAILS - GENERAL
21	C506	CIVIL DETAILS
22	C801	TEMPORARY WWTP YARD PIPING PLAN AND PROFILE 10" SS
23	C802	TEMPORARY WWTP YARD PIPING PROFILE
24	S001	TEMPORARY WWTP STRUCTURAL GENERAL NOTES
25	S100	TEMPORARY WWTP RETAINING WALL PLAN DETAILS
26	S400	INFLUENT SCREENING CHANNEL - PLAN
27	S500	TEMPORARY WWTP STRUCTURAL DETAILS PADS AND REINFORCING
28	S501	TEMPORARY WWTP STRUCTURAL DETAILS NOTES
29	S502	TEMPORARY WWTP STRUCTURAL DETAILS NOTES
30	A101	ARCHITECTURAL PLAN AND ELEVATIONS
31	A102	ARCHITECTURAL PLAN AND ELEVATIONS
32	A301	ARCHITECTURAL SECTIONS AND DETAILS
33	A302	ARCHITECTURAL SECTIONS AND DETAILS
34	D101	INFLUENT SCREENING VAULT - LOWER PLAN
35	D102	INFLUENT LIFT STATION - PLANS
36	D103	EQUALIZATION TANK - PLAN
37	D104	MBR UNIT - PLAN
38	D105	UV DISINFECTION - PLAN
39	D106	CHEMICAL STORAGE CONTAINER 1 - PLAN
40	D107	CHEMICAL STORAGE CONTAINER 2 - PLAN
41	D108	FILTRATE LIFTSTATION PLANS
42	D301	INFLUENT SCREENING VAULT - SECTION
43	D302	INFLUENT SCREENING VAULT - SECTION
44	D303	INFLUENT LIFT STATION - SECTIONS
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46	D305	MBR UNIT - SECTION
47	D306	UV DISINFECTION - SECTION
48	D307	CHEMICAL STORAGE CONTAINER 1 - SECTION
49	D308	CHEMICAL STORAGE CONTAINER 2 - SECTION
50	D309	FILTRATE LIFTSTATION SECTIONS
51	D501	PROCESS DETAILS - PIPE PENETRATION
52	D601	PROCESS DESIGN CRITERIA
53	D602	PROCESS FLOW DIAGRAM
54	D603	HYDRAULIC PROFILE
55	M101	CHEMICAL STORAGE CONTAINER 1
56	M102	CHEMICAL STORAGE CONTAINER 2
57	M301	CHEMICAL STORAGE CONTAINER 1
58	M302	CHEMICAL STORAGE CONTAINER 2
59	P101	CHEMICAL STORAGE CONTAINER 1
60	P102	CHEMICAL STORAGE CONTAINER 2
61	P301	CHEMICAL STORAGE CONTAINER 1
62	P302	CHEMICAL STORAGE CONTAINER 2
63	E103	TEMPORARY WWTP OVERALL ELECTRICAL SITE PLAN
64	E111	CHEMICAL STORAGE CONTAINER 1 POWER PLAN
65	E112	CHEMICAL STORAGE CONTAINER 2 POWER PLAN
66	E121	CHEMICAL STORAGE CONTAINER 1 LIGHTING PLAN
67	E122	CHEMICAL STORAGE CONTAINER 2 LIGHTING PLAN
68	E201	TEMPORARY WWTP ELEVATION DETAIL T1A & MCB1
69	E501	TEMPORARY WWTP CONDUIT TRENCH DETAIL
70	E502	TEMPORARY WWTP ELECTRICAL DETAILS
71	E503	TEMPORARY WWTP ELECTRICAL DETAILS GROUNDING & TRENCH
72	E601	TEMPORARY WWTP SINGLE LINE DIAGRAM 1
73	E602	TEMPORARY WWTP SINGLE LINE DIAGRAM 2
74	E604	TEMPORARY WWTP ELECTRICAL PANELBOARD SCHEDULES
75	E605	TEMPORARY WWTP STORAGE CONTAINER LUMINAIRE SCHEDULES
76	E650	TEMPORARY WWTP ELECTRICAL LIGHTING PHOTOMETRIC ANALYSIS
77	Y001	INSTRUMENTATION AND CONTROLS LEGEND
78	Y002	INSTRUMENTATION AND CONTROLS LEGEND CONTINUED
79	Y601	INFLUENT LIFT STATION P&ID
80	Y602	EQUALIZATION TANK P&ID
81	Y603	TEMPORARY WASTEWATER TREATMENT UNIT 1 P&ID
82	Y604	TEMPORARY WASTEWATER TREATMENT UNIT 2 P&ID
83	Y605	UV DISINFECTION P&ID
84	Y606	SODIUM HYPOCHLORITE P&ID
85	Y607	CITRIC ACID SYSTEM P&ID
86	Y608	CAUSTIC SODA SYSTEM P&ID
87	Y609	SUPPLEMENTAL CARBON P&ID
88	Y610	SLUDGE DRYING BEDS P&ID
89	Y611	FILTRATE LIFT STATION P&ID
90	Y612	MISCELLANEOUS SYSTEM P&ID

Registered Professional Engineer (Civil) CERTIFICATE NO. 85332 CHRIS CARPENTER Date Signed 06/09/26 ARIZONA U.S.A.

A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME: HDR ENGINEERING, INC. DENVER, CO 80202	C. CARPENTER; CADD N. LYNCH; TECH. REVIEW: J. GLOVER; DATE: JUNE 2026	G002	GENERAL SHEET INDEX	113 182752A
				PMIS/PKG NO. 318719
			NORTH RIM - GRAND CANYON NATIONAL PARK	SHEET 2 OF 90

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	AMPERE
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABT	ABOUT
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET, ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
AM	ACUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AO	ANALOG OUTPUT\
AP	ACCES PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	ACOUSTICAL TILE, AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE AUTO AUTOMATIC
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B TO B	BACK-TO-BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER, BOLLARD
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT-UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
CTOC	CENTER TO CENTER
C&G	CURB AND GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG, CATALOGIORY
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED-DENSITY FILL
CE	CONCRETE EDGE
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHBD	CHALKBOARD
CHD	CHORD
CHFR	CHAMFER
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CRL	CORROSION-RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTJ	CONTRACTION JOINT
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER, DRAIN
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON, DIGITAL INPUT
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXP	EXPANSION, EXPOSED
EXIST	EXISTING
EXT	EXTERIOR, EXTERNAL, EXTENSION
F TO F	FACE TO FACE
F&B	FACE AND BYPASS
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDR	FEEDER
FDTN	FOUNDATION
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FN	FENCE
FO	FINISHED OPENING
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND
GA	GAUGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK, GLULAM BEAM
GND	GROUND
GP	GUY POLE
GR	GRAPPLE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GW	GUY WIRE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE
HD	HEAD, HOT DIP
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH-INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH-PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION, FOR EXAMPLE
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS, IRON ROD
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
KW	KILOWATT
L	ANGLE, LENGTH, LAVATORY, LINTEL
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW-PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MASONRY LINTEL
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL, NATIONAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT TO OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPGW	OPTICAL GROUND WIRE
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PDC	POWER DISTRIBUTION CENTER
PE	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE, PRECAST LINTEL
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY, PROPOSED
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE
PVC-RGS	PVC COATED RGS
PVMT	PAVEMENT
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RSOG	ROARING SPRINGS PUMPHOUSE
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK
SA	SUPPLY AIR
SAMU	SOUND-ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT, SILT FENCE
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SJ	SLAB JOINT
SL	SLOPE, STEEL LINTEL
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE
TOW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING, THROUGH PLATE GIRDER
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VERTS	VERTICAL REINFORCING
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VS	VERSUS, VAPOR SEAL
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WTHP	WATERPROOF, WORKING POINT
WTP	WATER TREATMENT PLANT
WWF	WELDED WIRE FABRIC
WWTP	WASTEWATER TREATMENT PLANT
XP	EXPLOSION-PROOF
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION, "INC" MAY MEAN INCLUDED OR INCLUDING, AND "REINF" MAY MEAN REINFORCE OR REINFORCING.
4. SEE INSTRUMENTATION AND GENERAL LEGEND SHEETS FOR PROJECT-SPECIFIC EQUIPMENT AND PIPING SYSTEM ABBREVIATIONS.

Registered Professional Engineer (Civil) CERTIFICATE NO. 85332 CHRIS CARPENTER DATE SIGNED 06/09/26 ARIZONA U.S.A.

A/E FIRM
PRIME:
HDR ENGINEERING, INC.
DENVER, CO 80202

DESIGNED: N. HUMPHREY
CADD: N. LYNCH
TECH. REVIEW: B. LUSTER
DATE: JUNE 2026

SUB SHEET NO. G003

TITLE OF SHEET
GENERAL
ABBREVIATIONS

NORTH RIM - GRAND CANYON NATIONAL PARK

DRAWING NO. 113 / 182752A
PMIS/PKG NO. 318719
SHEET 3 OF 90

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MATERIALS IN PLAN/SECTION

FILLED REGIONS - MATERIALS
"MATERIAL" FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT REPRESENTS AN ACTUAL MATERIAL OR PRODUCT.

- MATERIAL - BITUMINOUS PAVING (ASPHALT)
- MATERIAL - CONCRETE - ARCHITECTURE PRECAST WALL PANEL
- MATERIAL - CONCRETE - ARCHITECTURAL PRECAST WALL PANEL
- MATERIAL - CONCRETE - CAST-IN-PLACE
- MATERIAL - CONCRETE - GLASS FIBER REINFORCED
- MATERIAL - CONCRETE - LIGHTWEIGHT
- MATERIAL - CONCRETE - STRUCTURAL
- MATERIAL - EFIS
- MATERIAL - FILL - COURSE - CRUSHED STONE
- MATERIAL - FILL - FINE - GRAVEL
- MATERIAL - FILL - FINE - SAND
- MATERIAL - FILL - MEDIUM - GRAVEL
- MATERIAL - FILTER POINT MAT - PLAN
- MATERIAL - FIREPROOFING - MINERAL WOOL
- MATERIAL - FIREPROOFING - SEALANT
- MATERIAL - FIREPROOFING - SPRAY-APPLIED
- MATERIAL - FLOOR - CARPET - STYLE 1
- MATERIAL - FLOOR - CARPET - STYLE 2
- MATERIAL - FLOOR - TERRAZZO - STYLE 1
- MATERIAL - FLOOR - TERRAZZO - STYLE 2
- MATERIAL - GLAZING
- MATERIAL - GLAZING - SPANDREL
- MATERIAL GRATING - PLAN
- MATERIAL GRATING - SECTION
- MATERIAL - GROUT
- MATERIAL - GYPSUM - PLASTER
- MATERIAL - GYPSUM - WALLBOARD
- MATERIAL - INSULATION - BATTING - SECTION
- MATERIAL - INSULATION - RIGID FOAM
- MATERIAL - MASONRY - BRICK
- MATERIAL - MASONRY - CMU
- MATERIAL - MASONRY - DOLMITE
- MATERIAL - MASONRY - MORTAR
- MATERIAL - MASONRY - STRUCTURAL CLAY TILE
- MATERIAL - METAL - ALUMINUM
- MATERIAL - METAL - CHECKERED PLATE - PLAN
- MATERIAL - METAL - ORNAMENTAL
- MATERIAL - METAL - STEEL
- MATERIAL - PLASTER STUCCO
- MATERIAL - PLASTIC
- MATERIAL - RESILIENT TILE
- MATERIAL - RIPRAP - PLAN AND/OR SECTION
- MATERIAL - SEALANT - ACOUSTICAL
- MATERIAL - SEALANT - FIRE SEALANT
- MATERIAL - SOD - SECTION
- MATERIAL - SOIL - COMPACTED - EARTH
- MATERIAL - SOIL - COMPACTED - FINE
- MATERIAL - SOIL - UNDISTURBED - FINE
- MATERIAL - SOIL - UNDISTURBED - EARTH
- MATERIAL - STONE - CAST
- MATERIAL - STONE - CUT FINISHED
- MATERIAL - SYSTEM - DRAINABLE EXTERIOR INSULATION AND FINISH
- MATERIAL - TERRAZZO - 1
- MATERIAL - TERRAZZO - 2
- MATERIAL - TILE - PORCELAIN
- MATERIAL - WEEP JOINT MORTAR PROTECTION SYSTEM - SECTION
- MATERIAL - WOOD - FINISH - COURSE GRAIN
- MATERIAL - WOOD - FINISH - FINE GRAIN
- MATERIAL - WOOD - FINISH VERTICAL GRAIN
- MATERIAL - WOOD FLOORING
- MATERIAL - WOOD - GLULAM
- MATERIAL - WOOD - MDF
- MATERIAL - WOOD - PARTICLE BOARD
- MATERIAL - WOOD - PLYWOOD
- MATERIAL - WOOD - CONTINUOUS - SECTION
- MATERIAL - WOOD - BLOCKING - SECTION

FILLED REGIONS - GRAPHICS
GRAPHIC FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT ARE A SIMPLE GRAPHIC PATTERN AND DOES NOT REPRESENT A MATERIAL OR PRODUCT.

- GRAPHIC - CONTRACT LIMIT - NOT-IN-CONTRACT
- GRAPHIC - DEMOLITION
- MATERIAL - RESILIENT SHEET

FILLED REGIONS - SURFACE
SURFACE FILLED REGIONS ARE MODELING HATCH PATTERNS THAT REPRESENT A MATERIAL OR PRODUCT AS REPRESENTED ON A VERTICAL OR HORIZONTAL SURFACE.

CEILING TILES

- SURFACE - CEILING TILE - 24" x 24"
- SURFACE - CEILING TILE - 24" x 24" - DEMO
- SURFACE - CEILING TILE - 24" x 48"
- SURFACE - CEILING TILE - 24" x 48" - DEMO
- SURFACE - CEILING TILE - 24" x 72"
- SURFACE - CEILING TILE - 24" x 72" - DEMO
- SURFACE - CEILING TILE - 48" x 48"
- SURFACE - CEILING TILE - 48" x 48" - DEMO
- SURFACE - CEILING - ACOUSTICAL TILE - SECTION

MASONRY

- SURFACE - MASONRY - BRICK - MODULAR - RUNNING BOND
- SURFACE - MASONRY - CMU - 8" x 16" - RUNNING BOND
- SURFACE - MASONRY - CMU - 8" x 16" - STACKED BOND

METALS

- SURFACE - ENTRANCE GRID - 65 MM

GENERAL SYMBOLOGY

LINE INDICATES DIRECTION OF PLAN NORTH

NORTH ARROW

MATCH LINE
SEE XX/XXXXXXXXX

MATCH LINE

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

PLAN TITLE ON SHEET

NOTE 1
X VIEW TITLE
XXX 1/4" = 1'-0"
NOTE 2

DETAIL

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.
1. DETAIL NUMBER
2. SHEET WHERE DETAIL IS LOCATED *

SECTION

1. SECTION LETTER
2. SHEET WHERE SECTION VIEW IS FIRST CUT *

ELEVATION

1. ELEVATION IDENTIFICATION NUMBER
2. SHEET WHERE POINT OF VIEW MARKER CAN BE FOUND *

SECTION, DETAIL, ELEVATION TITLE

DETAIL NUMBER
SHEET WHERE DETAIL IS LOCATED *
X / XXX

DETAIL CALLOUT

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET

ARROW INDICATES DIRECTION OF SECTION CUT
SECTION LETTER
SHEET WHERE SECTION IS LOCATED
X / XXX

FULL BUILDING SECTION CUT MARKER

SECTION LETTER
FLAG INDICATES DIRECTION OF SECTION CUT
SHEET WHERE SECTION IS LOCATED
X / XXX

SECTION CUT MARKER

ARROW INDICATES POINT OF VIEW
ELEVATION NUMBER
INTERIOR
EXTERIOR
SHEET WHERE ELEVATION IS LOCATED *

SINGLE ELEVATION OR PHOTO MARKER

ARROW INDICATES POINT OF VIEW ELEVATION
ELEVATION NUMBER
INDICATES SHEET WHERE ELEVATION IS LOCATED

MULTIPLE ELEVATION OR PHOTO MARKER

TARGET ELEVATION

TARGET ELEVATION MARKER

* EXCEPTIONS WHERE SHEET NUMBER IS REPLACED BY A DASH (-)

1. FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2. SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.

GENERAL TAGGING

ROOM/SPACE NAME

- XX-XX — ROOM OR SPACE
- XXX — DOOR
- DOOR MARK XXX, STAIR XXXX — FIRE DOOR/STAIR
- A — NEW COLUMN GRID BUBBLE
- A — EXISTING COLUMN GRID BUBBLE
- X — WALL TYPE
- X — CURTAIN WALL
- X — WINDOW TYPE
- X — ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER
- KEYNOTE NUMBER X — LOUVER TYPE
- ## — SHEET KEYNOTE
- ## — REVISION DELTA

EQUIPMENT IDENTIFICATION

NOTE: THE BELOW EQUIPMENT TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE	EXAMPLE
NPWP2023	
SERVICE ABBREVIATION AREA DESIGNATION	INDICATES NON-POTABLE WATER
EQUIPMENT ABBREVIATION	INDICATES PUMP
BUILDING OR STRUCTURE NUMBER	BUILDING 20
EQUIPMENT NUMBER	PUMP 23

PIPING

NOTE: THE BELOW PIPE TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE	EXAMPLE
36"-PLE	
LINE SIZE	36"
SERVICE	PLANT EFFLUENT

PIPING (ALTERNATE)

FIGURE	EXAMPLE
36"-PLE	
LINE SIZE	36"
SERVICE	PLANT EFFLUENT

GENERAL LINE STYLES

- 4-HOUR FIRE RATED WALL
- 3-HOUR FIRE RATED WALL
- 2-HOUR FIRE RATED WALL
- 1-HOUR FIRE RATED WALL
- COLUMN GRID LINE
- CENTERLINE
- CONTRACT LIMIT
- ELEVATION LINE
- PROPERTY LINE

SHEET NAMING CONVENTION

AREA DESIGNATION

GENERAL AREA DESIGNATIONS LISTED BELOW. LAST DIGIT OF AREA NUMBER DENOTES BUILDINGS AND SUB-AREAS

000	GENERAL SHEETS
010	PIPELINES - NORTH RIM
020	PIPELINES - NORTH RIM TO RSPH DAY USE
030	PIPELINES - NORTH RIM TO SUPAI TUNNEL
040	PIPELINES - RSPH CAVE TO RSPH
050	ROARING SPRINGS PUMPHOUSE (RSPH)
060	NORTH RIM WATER TREATMENT
070	NORTH RIM WASTEWATER TREATMENT
080	NORTH RIM WASTEWATER COLLECTION SYSTEM
090	POWER DISTRIBUTION - NORTH RIM
100	POWER DISTRIBUTION - NORTH RIM TO RSPH
110	POWER DISTRIBUTION - RSPH TO MANZANITA
120	POWER SYSTEM - COTTONWOOD CAMPGROUND

SINGLE DISCIPLINE DESIGNATOR & DISCIPLINE ORDER*

G	GENERAL
X	DEMOLITION/HAZARDOUS MATERIAL
V	SURVEYING/MAPPING
C	CIVIL
L	LANDSCAPE
S	STRUCTURAL
A	ARCHITECTURAL
F	FIRE PROTECTION
P	PLUMBING
D	PROCESS
M	MECHANICAL
E	ELECTRICAL
U	UNIVERSAL/OTHER DISCIPLINES
Y	INSTRUMENTATION & CONTROLS

SHEET TYPE DESIGNATOR

0	GENERAL (SYMBOLS, LEGENDS)
1	PLANS
2	ELEVATIONS
3	SECTIONS
4	LARGE SCALE VIEWS
5	DETAILS
6	SCHEDULES AND DIAGRAMS
8	PROFILES
9	3D REPRESENTATIONS

EXAMPLE 1 (WITH BUILDING SERIES, SINGLE LETTER DESIGNATOR)

NORTH RIM WATER TREATMENT STRUCTURAL FOUNDATION PLAN, DRAWING 01

0	6	2					BUILDING OR AREA 02
			S				STRUCTURAL
				1			PLAN
					0	1	SHEET 01
0	6	2	S	1	0	1	EXAMPLE

BUILDING OR AREA DESIGNATION
DISCIPLINE DESIGNATOR
SHEET TYPE DESIGNATOR
SHEET NUMBER

GENERAL NOTES

A. THIS IS STANDARD SHEET SHOWING COMMON SYBOLOGY. AL SYMBOLS ARE NOT NECESARILY USED ON THIS PROJECT.

B. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

Registered Professional Engineer (Civil) CERTIFICATE NO. 85332 CHRIS CARPENTER DATE SIGNED ARIZONA U.S.A.

A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME: HDR ENGINEERING, INC. DENVER, CO 80202	N. HUMPHREY; CADD N. LYNCH; TECH. REVIEW: B. LUSTER; DATE: JUNE 2026	G004	GENERAL LEGEND	113 182752A
				PMIS/PKG NO. 318719
			NORTH RIM - GRAND CANYON NATIONAL PARK	SHEET 4 OF 90

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WORK PHASES SUMMARY

REFER TO SPECIFICATION 01 11 00 – SUMMARY OF WORK FOR ADDITION DETAILS. THE WORK SHALL BE CONDUCTED WITH THE FOLLOWING PHASING REQUIREMENTS:

1. PHASE I: SITE WORK AND UTILITIES
   1.1. WINTER DE–MOBILIZATION.
2. PHASE II: TEMPORARY WWTP AND STORAGE CONTAINER DELIVERY, INSTALLATION, START–UP AND COMMISSIONING
3. PHASE III: OPERATIONS OF TEMPORARY WWTP

1500 0 10 3000 1" = 1500'
SCALE OF FEET

Registered Professional Engineer (Civil) CERTIFICATE NO. 85332 CHRIS CARPENTER DATE SIGNED 04/24/26 ARIZONA U.S.A.

A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME: HDR ENGINEERING, INC. DENVER, CO 80202	G. YOUNG	G005	GENERAL PROJECT AREAS AND VICINITY MAP	113 182752A
	CADD G. YOUNG			PMIS/PKG NO. 318719
	TECH. REVIEW: M. GOUGH/R. RHODES			SHEET
	DATE: JUNE 2026		NORTH RIM – GRAND CANYON NATIONAL PARK	5 OF 90

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1500 0 1500 3000
SCALE OF FEET
1" = 1500'

Registered Professional Engineer (Civil)
CERTIFICATE NO.
85332
CHRIS
CARPENTER
Date Signed
ARIZONA U.S.A.

A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME: HDR ENGINEERING, INC. DENVER, CO 80202	G. YOUNG CADD G. YOUNG TECH. REVIEW: C. CARPENTER DATE: JUNE 2026	G105	GENERAL NORTH RIM CONSTRUCTION CAMP VICINITY MAP NORTH RIM – GRAND CANYON NATIONAL PARK	113 182752A PMIS/PKG NO. 318719 SHEET 6 OF 90

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