



CITY OF BOISE



CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

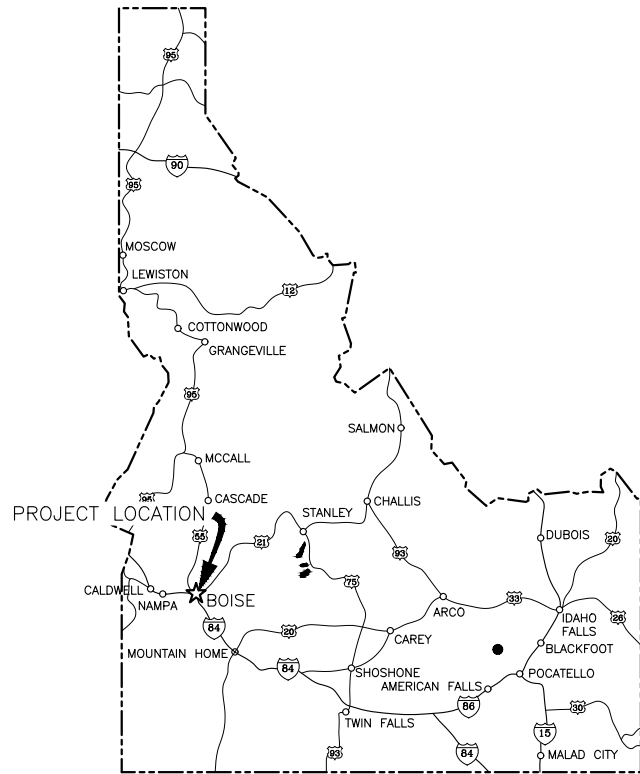
2023 WINTER SPILLWAY MODIFICATIONS
AUGUST, 2023

CITY OF BOISE

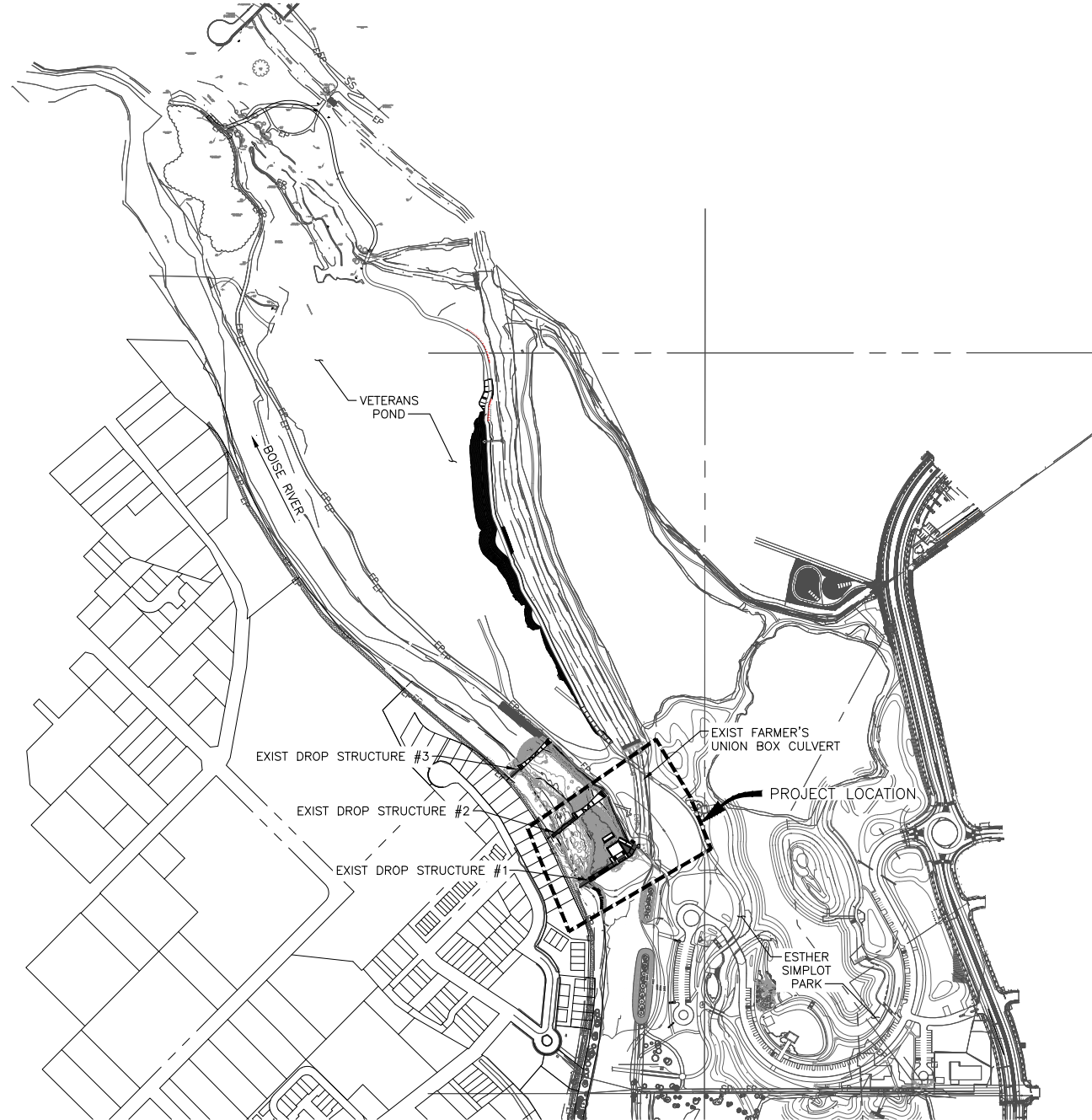
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION

BOISE WHITEWATER PARK

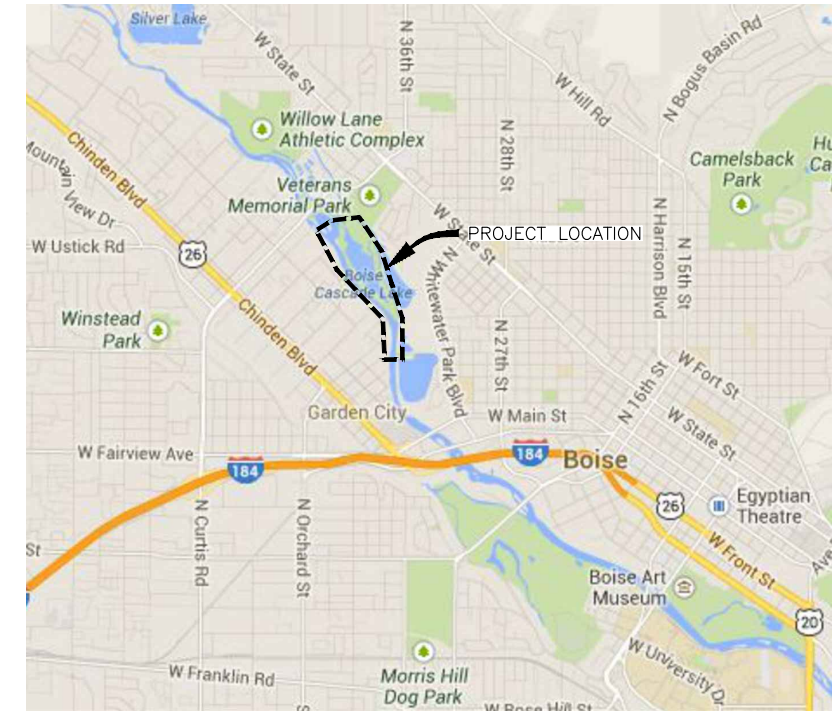
2023 WINTER SPILLWAY MODIFICATIONS



LOCATION MAP
 NTS



PROJECT LIMITS
 NTS



VICINITY MAP
 NTS

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION BOISE WHITEWATER PARK
LOCATION MAP, VICINITY MAP, AND PROJECT LIMITS

DESIGNED <u>J. BOAG</u>
DRAWN <u>R. WOOD</u>
CHECKED <u>M. McMILLEN</u>
ISSUED DATE <u>08/09/23</u>

DRAWING
G001
SHEET 1 OF 19
SCALE: AS NOTED

Path: C:\Users\WoodR\Box\MCM\Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\3001.dwg Plot date: Aug 14, 2023 10:02pm
 JOB NO. 13-108

SHEET NO.	DRAWING NO.	DESCRIPTION
GENERAL		
		COVER
1	G001	LOCATION MAP, VICINITY MAP, AND PROJECT LIMITS
2	G002	DRAWING INDEX
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4	G004	STANDARD SYMBOLS
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33	E104	SITE CONDUIT ROUTING PLAN
34	E105	GATE #5 MODIFICATION DIAGRAM

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B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

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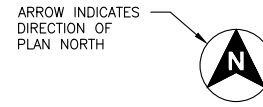
DRAWING INDEX

DESIGNED J. BOAG
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

DRAWING
G002
SHEET 2 OF 19
SCALE: AS NOTED

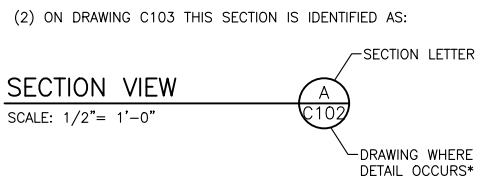
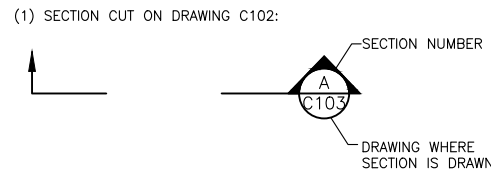
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SHEET SYMBOLS

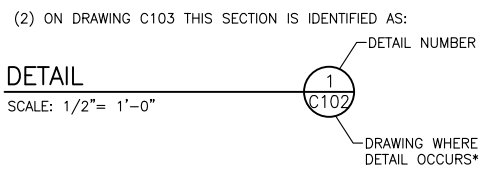
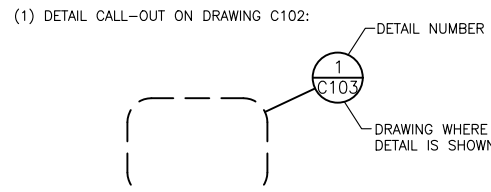


PLAN
SCALE: 1/2" = 1'-0"

SECTION IDENTIFICATION

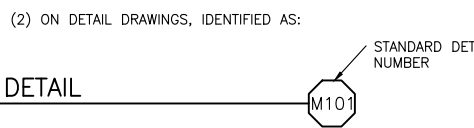
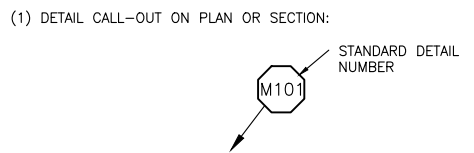


DETAIL IDENTIFICATION



*NOTE: IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A LINE.

STANDARD DETAIL IDENTIFICATION



SITE PLAN LINE TYPES

— X — X —	FENCE LINE
— OHP —	OVERHEAD POWER
— P — P —	UNDERGROUND POWER
— 455 —	MAJOR CONTOUR
— 456 —	MINOR CONTOUR
— ... —	EDGE OF WATERLINE
— TOE — TOE —	TOE OF SLOPE
— TOB — TOB —	TOP OF BANK
— SS — SS —	SANITARY SEWER
— SD — SD —	STORM DRAIN
— EP — EP —	EDGE OF PAVEMENT
— EG — EG —	EDGE OF GRAVEL
— W —	WATTLE
— SF — SF —	SILT FENCE
— CF — CF —	CONSTRUCTION FENCE
— GAS — GAS —	GAS LINE
— PW — PW —	POTABLE WATER
— PE/L —	POWER EASEMENT LINE
— GE/L —	GAS EASEMENT LINE
— - - - -	CONSTRUCTION LIMITS
— W —	STRAW WATTLES
— SF —	SILT FENCE
— TC —	TURBIDITY CURTAIN
— - - - -	PARCEL LINES

SITE PLAN SYMBOLS

	CONIFER TREE: FIR, SPRUCE, LARCH OR PINE, 8" DIAMETER OR LARGER.
	DECIDUOUS TREE: COTTONWOOD, HAWTHORN, ASPEN, 8" DIAMETER OR LARGER.
	MANHOLE
	ELECTRIC BOX
	STORM DRAIN MANHOLE
	FIRE HYDRANT
	YARD HYDRANT
	SURVEY CONTROL POINT, AS NOTED.
	POLE ANCHOR
	POWER POLE
	LIGHT POLE
	SIGN
	CONTROL POINT
	SITE COORDINATES
	HORIZONTAL CONTROL POINT
	VERTICAL CONTROL POINT
	HORZ AND VERT CONTROL POINT
	FINISHED ELEVATION
	EXISTING ELEVATION
	BENCH MARK
	SOIL BORING LOCATION
	TEST PIT LOCATION
	MONITORING WELL
	PRODUCTION WELL

HATCH SYMBOLS

	ROCK, TYPE AS NOTED (PLAN/SECTION)
	BED ROCK
	EXISTING GRADE (SECTION)
	NEW SOIL (SECTION)
	CONCRETE (SECTION/PLAN)
	SAND, GROUT (PLAN/SECTION)
	GRATING (PLAN)
	RIP RAP (PLAN/SECTION)
	GRASS (PLAN)
	COFFER DAM
	DEMOLITION AREA
	ASPHALT PAVEMENT PEDESTRIAN
	GRASS PATHWAY PEDESTRIAN
	SAND PATHWAY PEDESTRIAN
	CONCRETE PATHWAY PEDESTRIAN

GENERAL NOTES:

- ALL SYMBOLS ARE NOT NECESSARILY USED THIS IS A STANDARD DRAWING SHOWING COMMON SYMBOLS ON THIS PROJECT.
- 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 DRAWING FOR USAGE.

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B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

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DESIGNED J. BOAG
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

STANDARD SYMBOLS

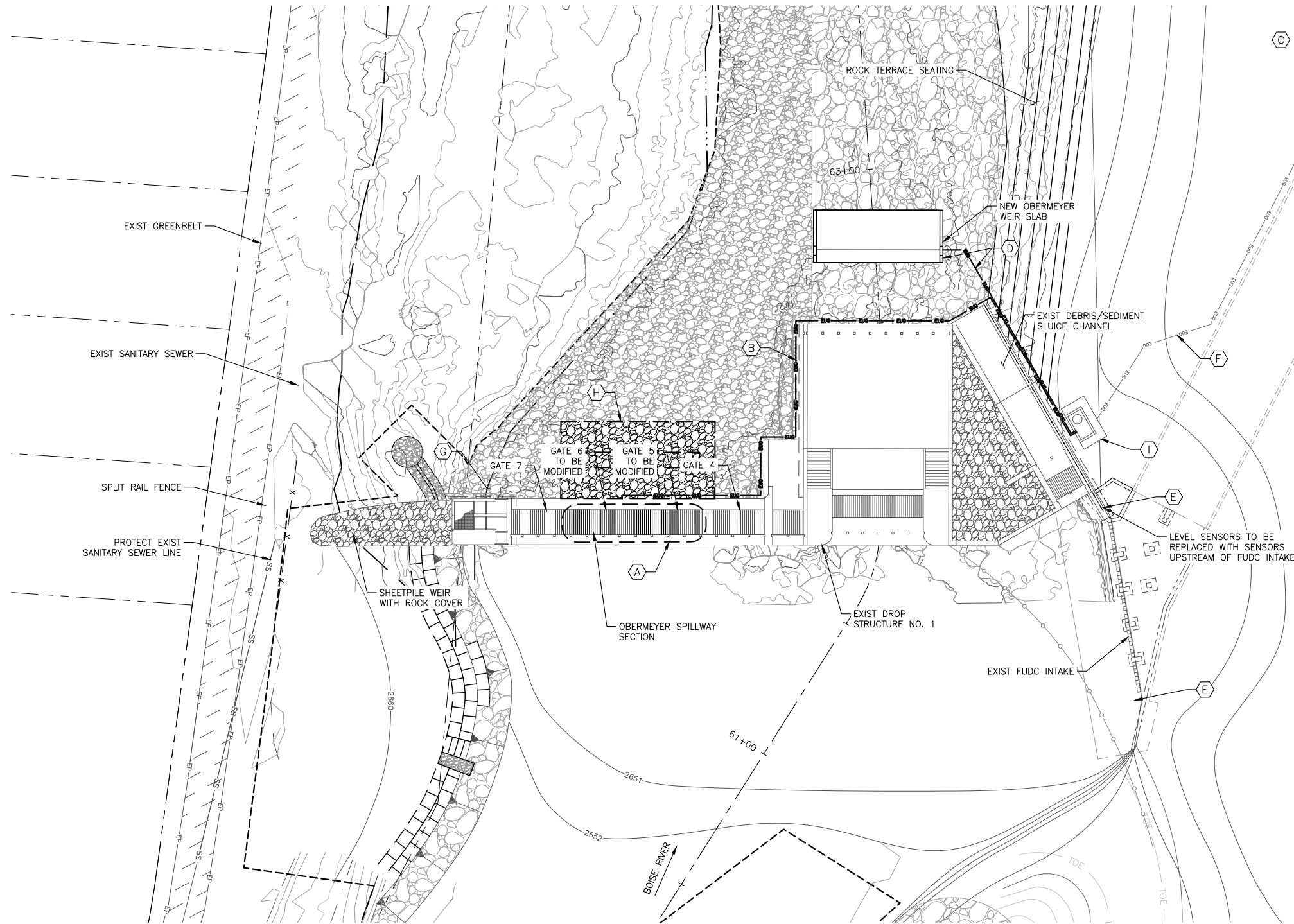
DRAWING

G004

SHEET 4 OF 19

SCALE: AS NOTED

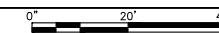
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- SHEET KEY NOTES:**
- A REMOVE AND MODIFY GATES 5 AND 6 PER OBERMEYER DRAWINGS. MODIFICATIONS INCLUDE SPLITTING WEIR TO TWO (APPROXIMATELY EQUAL 10' SECTIONS) SECTIONS, ADDING SEAL LEAKS, SEAL FACING BARS, NEW SMALLER AIR BAGS, ADDING AN ADDITIONAL INCLINOMETER AND CABLE, REVISING RETAINING STRAPS. SEE OBERMEYER SHOP DRAWINGS FOR GATE MODIFICATION DETAILS.
 - B ADD TWO NEW CONTROL ZONES FROM EQUIPMENT BUILDING AND ROUTE ALONG DOWNSTREAM EDGE OF STRUCTURES AS SHOWN ON MECH DRAWINGS. ENCASE LINES IN CONCRETE PER STRUCTURAL DRAWINGS.
 - C CONFIGURATION OF AIR PIPING IN EQUIPMENT ROOM AS SHOWN ON MECH AND ELEG DRAWINGS. MCMILLEN TO MODIFY PLC PROGRAMMING FOR THE NEW GATE CONFIGURATION.
 - D NEW 40' W X 4' TALL OBERMEYER WEIR TO BE ADDED TO STABILIZE EXISTING WAVESHAPER GATE TO BE ADDED WITH NEW SLAB, END WALLS, AIRLINE(S) AND CONDUIT AS REQUIRED BY OBERMEYER DRAWINGS.
 - E ABANDON EXISTING EMBEDDED STILLING WELLS AND ADD NEW STILLING WELL UPSTREAM OF FUDC INTAKE. RUN CONDUIT ON UNDERSIDE OF EXISTING HANDRAIL, PAINT CONDUIT TO MATCH HANDRAIL.
 - F ROUTE NEW AIR LINES AND CONDUIT ALONG EXISTING UTILITY ROUTING.
 - G MITIGATE LEAKAGE BY INSTALLATION OF MEMBRANE ON LEFT BANK AS SHOWN ON CIVIL DRAWINGS.
 - H ADD PLUNGE POOL DIRECTLY DOWNSTREAM OF MODIFIED SPILLWAY GATES PER CIVIL DRAWINGS.
 - I REMOVE UNIT HEATER AND WIRING TO PURGE VALVES IN VAULT. REPLACE TERMINALS FOR INSTRUMENTATION WITH WATERPROOF HEAT SHRINK SPLICES.

REACH 2 DROP STRUCTURE 1 DESIGN MODIFICATION PLAN

SCALE: 1" = 20'



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 BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
 DESIGN MODIFICATION PLAN

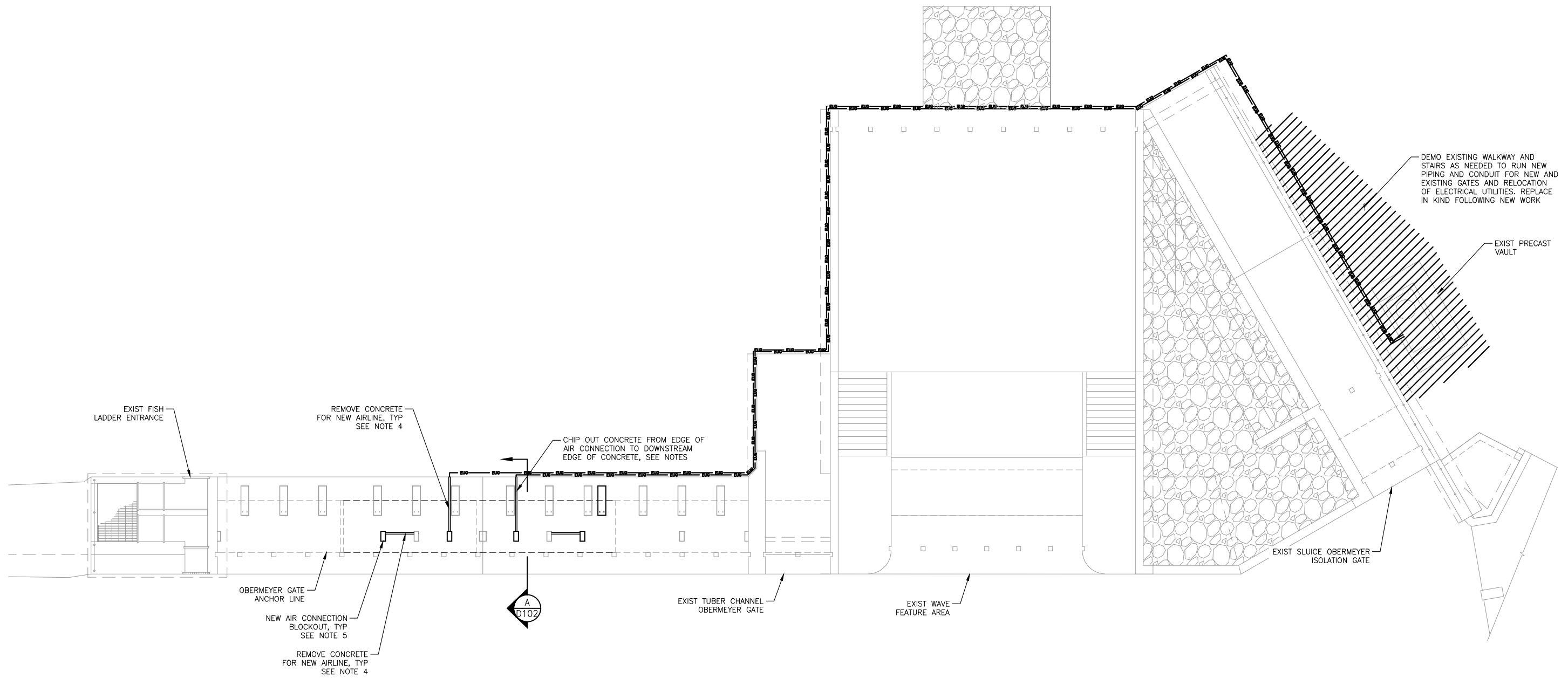
DESIGNED J. BOAG
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
G005
 SHEET 5 OF 19
 SCALE: AS NOTED

Path: C:\Users\Woodron\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\6005.dwg Plot date: Aug 14, 2023 10:02pm

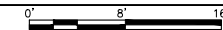
SHEET NOTES:

1. ALL AREAS OF CONCRETE DEMOLITION SHALL FIRST BE SAWCUT TO A DEPTH OF 3/4-INCH AROUND THE ENTIRE PERIMETER OF REMOVAL. DRILL CORNERS OF INTERSECTING SAWCUTS TO PREVENT OVERCUT.
2. CONCRETE REMOVAL WITHIN THE LIMITS OF THE SAWCUT MAY BE ACHIEVED THROUGH CHIPPING.
3. EXISTING REINFORCING SHALL NOT BE CUT OR REMOVED.
4. NEW AIRLINES SHALL BE CHIPPED OUT TO A DEPTH OF 2.5 INCHES.
5. NEW AIR CONNECTION BLOCKOUT SHALL BE CHIPPED OUT 6 INCHES.



REACH 2 – DROP STRUCTURE 1 DEMOLITION PLAN

SCALE: 1/8" = 1'-0"



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 BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
 DEMOLITION PLAN

DESIGNED	B. BARRON
DRAWN	R. WOOD
CHECKED	M. MERKLEIN
ISSUED DATE	08/09/23

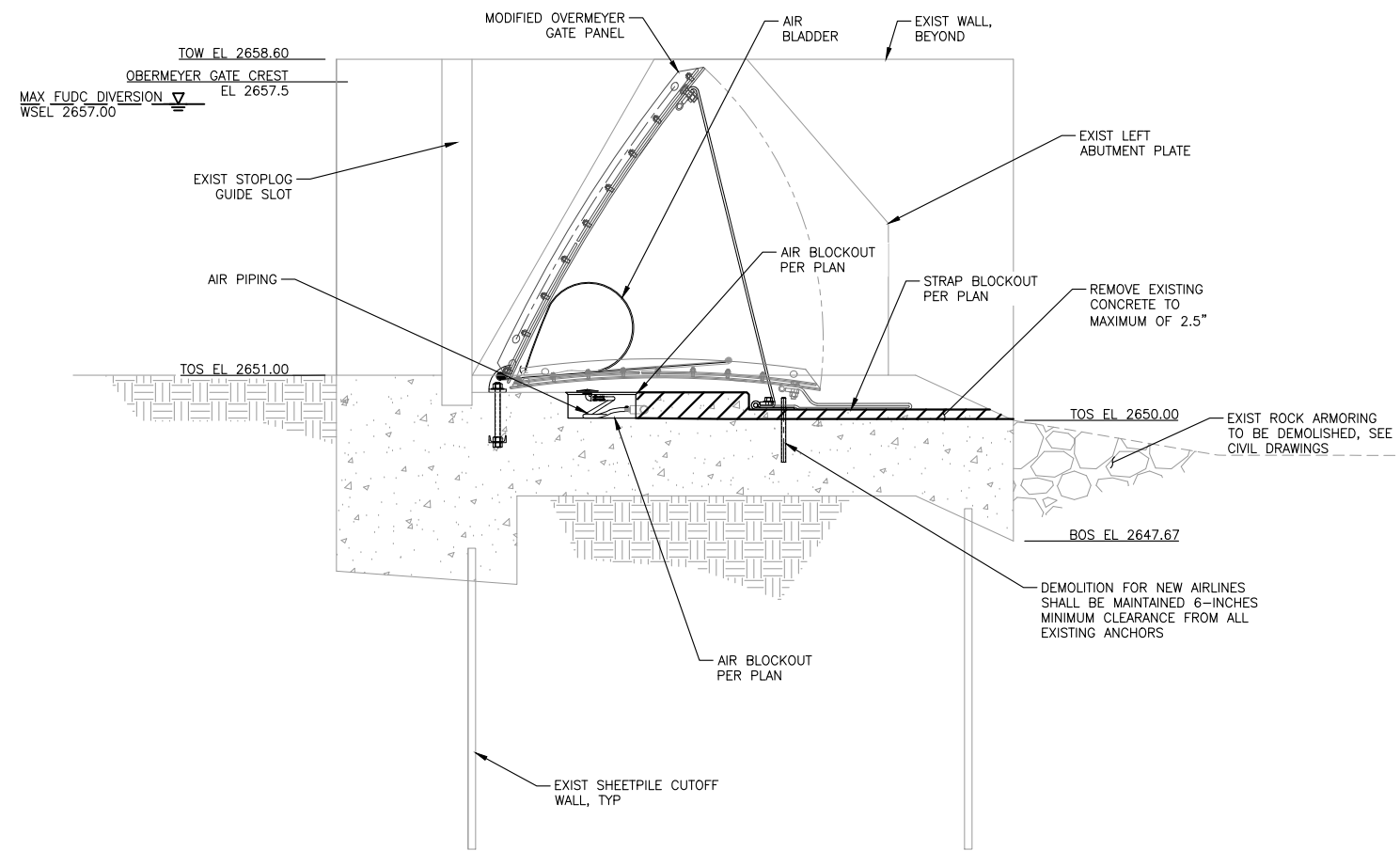
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D101

SHEET ---- OF 19

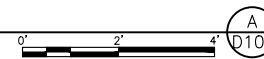
SCALE: AS NOTED

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REACH 2 DROP STRUCTURE 1 SPILLWAY DEMOLITION SECTION

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



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 BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
 DEMOLITION SECTION

DESIGNED B. BARRON
 DRAWN R. WOOD
 CHECKED M. MERKLEIN
 ISSUED DATE 08/09/23

DRAWING
D102
 SHEET --- OF 19
 SCALE: AS NOTED

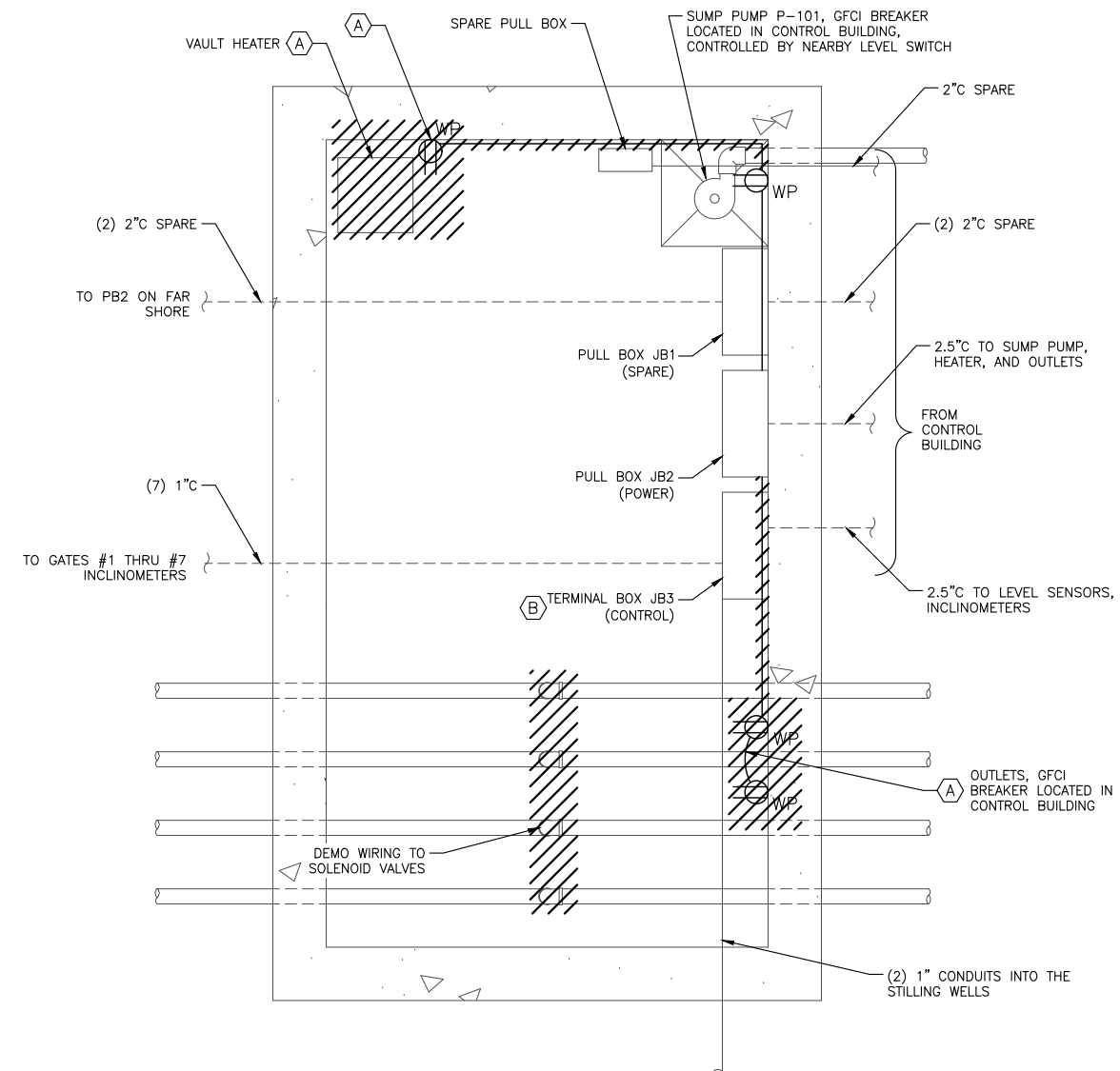
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SHEET GENERAL NOTES:

1. DE-ENERGIZE, DISCONNECT, AND REMOVE ALL WIRING FROM CONTROL BUILDING TO VAULT FOR EQUIPMENT TO BE DEMOLISHED.
2. PRESERVE AND PROTECT ANY EQUIPMENT, PULL BOXES, OR CIRCUITS NOT SPECIFICALLY INDICATED FOR DEMOLITION. SEE ELECTRICAL DRAWINGS FOR MORE WORK IN THIS AREA.

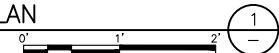
SHEET KEY NOTES:

- A DEMO INDICATED OUTLETS AND UNIT HEATER AND ASSOCIATED CONDUITS WITHIN VAULT.
- B DISCONNECT INCLINOMETER CABLES AND TAPE AND PRESERVE FOR SPLICING. DISCONNECT AND DEMO WIRING FROM LEVEL SENSORS. DEMO TERMINAL BLOCKS, DESICCANTS, AND DIN RAIL FROM JB3 AND CLEAN INTERIOR FOR REUSE.



AIRLINE VAULT DEMOLITION PLAN

SCALE: 1" = 1'-0"



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B	08/09/23	MDM	SUBMITTAL DRAWINGS
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AIRLINE VAULT DEMOLITION
 PLAN

DESIGNED	M. SKELTON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

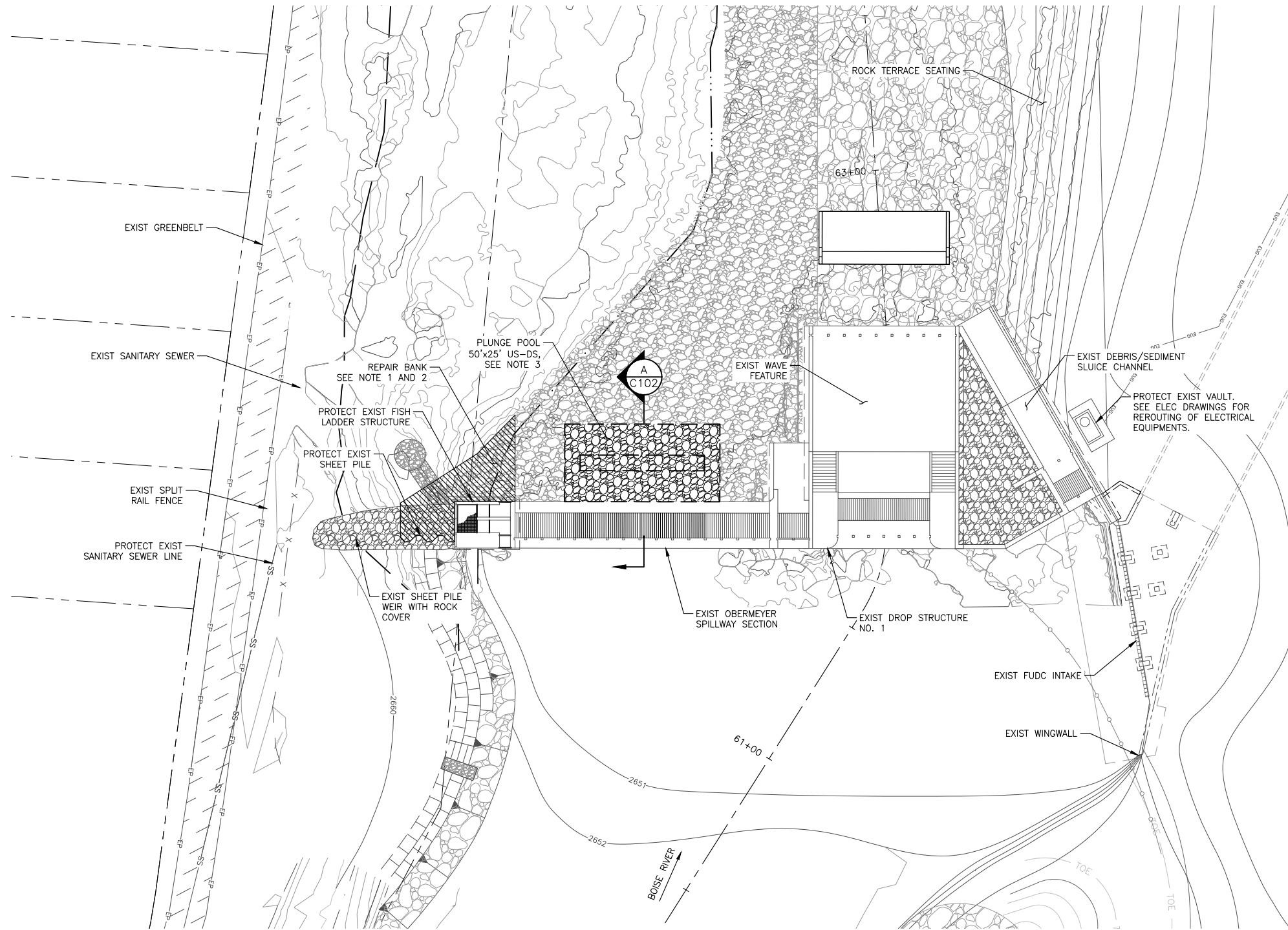
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D103

SHEET ---- OF 19

SCALE: AS NOTED



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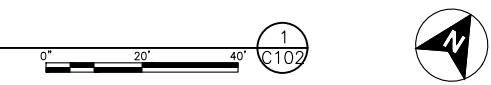
SHEET NOTES:

1. DEMOLISH AND REPLACE ROCK COVER, RIPRAP, AND PORTION OF GROUTED RIPRAP CHANNEL ALONG LEFT BANK BETWEEN THE EXISTING TREELINE TO THE EXISTING SHEET PILE FOR THE INSTALLATION OF THE GEOMEMBRANE LINER AND GROUTING OF RIPRAP.
2. FIELD FIT 40MIL LLDPE GEOMEMBRANE LINER AT A MINIMUM DEPTH OF 6 FT FROM EXISTING GRADE. BACKFILL WITH RIPRAP IN-KIND AND RECONSTRUCT GROUTED RIPRAP CHANNEL IN-KIND. RIPRAP SHALL BE GROUTED AND GRENDED FOR A SMOOTH FINISH.
3. EXCAVATE APPROXIMATELY 412 CYD, INCLUDING OVEREXCAVATION, FOR PLUNGE POOL. POOL SHALL BE CENTERED ALONG MODIFIED GATES. SEE SECTION ON C102 FOR PLUNGE POOL AND BACKFILL DETAILS.

LEGEND:

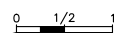
-  EXIST RIPRAP, D₅₀=3'φ
-  EXIST RIPRAP, D₅₀=5'φ

REACH 2 - DROP STRUCTURE 1 CIVIL PLAN
SCALE: 1" = 20'



REV	DATE	BY	DESCRIPTION
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REACH 2 DROP STRUCTURE 1
CIVIL PLAN

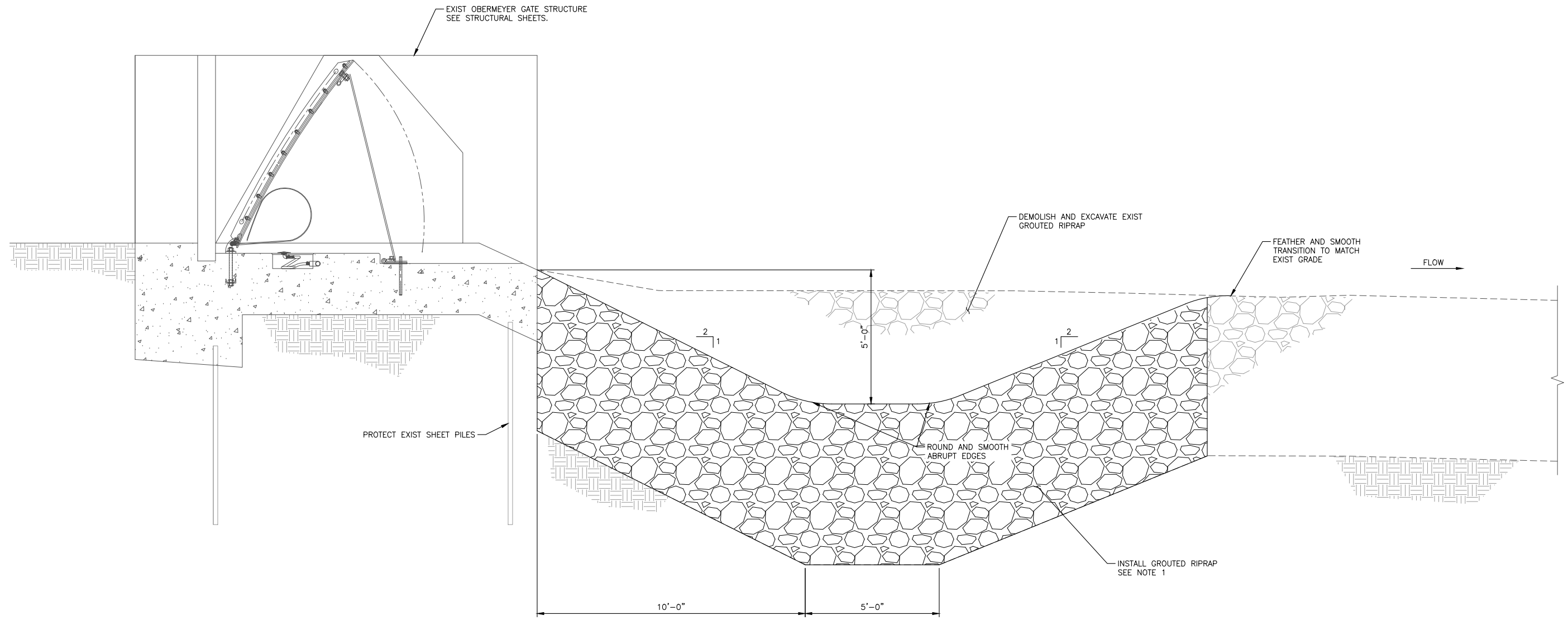
DESIGNED K. VO
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

DRAWING
C101
SHEET --- OF 19
SCALE: AS NOTED

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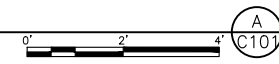
SHEET NOTES:

1. PLACE RIPRAP D50 = 3 FT AND GROUT TO MATCH EXIST. SEE SPECS FOR RIPRAP MATERIAL AND GROUTING METHOD. GROUTED RIPRAP SHALL BE GRENDED FOR A SMOOTH FINISH.



PLUNGE POOL SECTION

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



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PLUNGE POOL SECTION

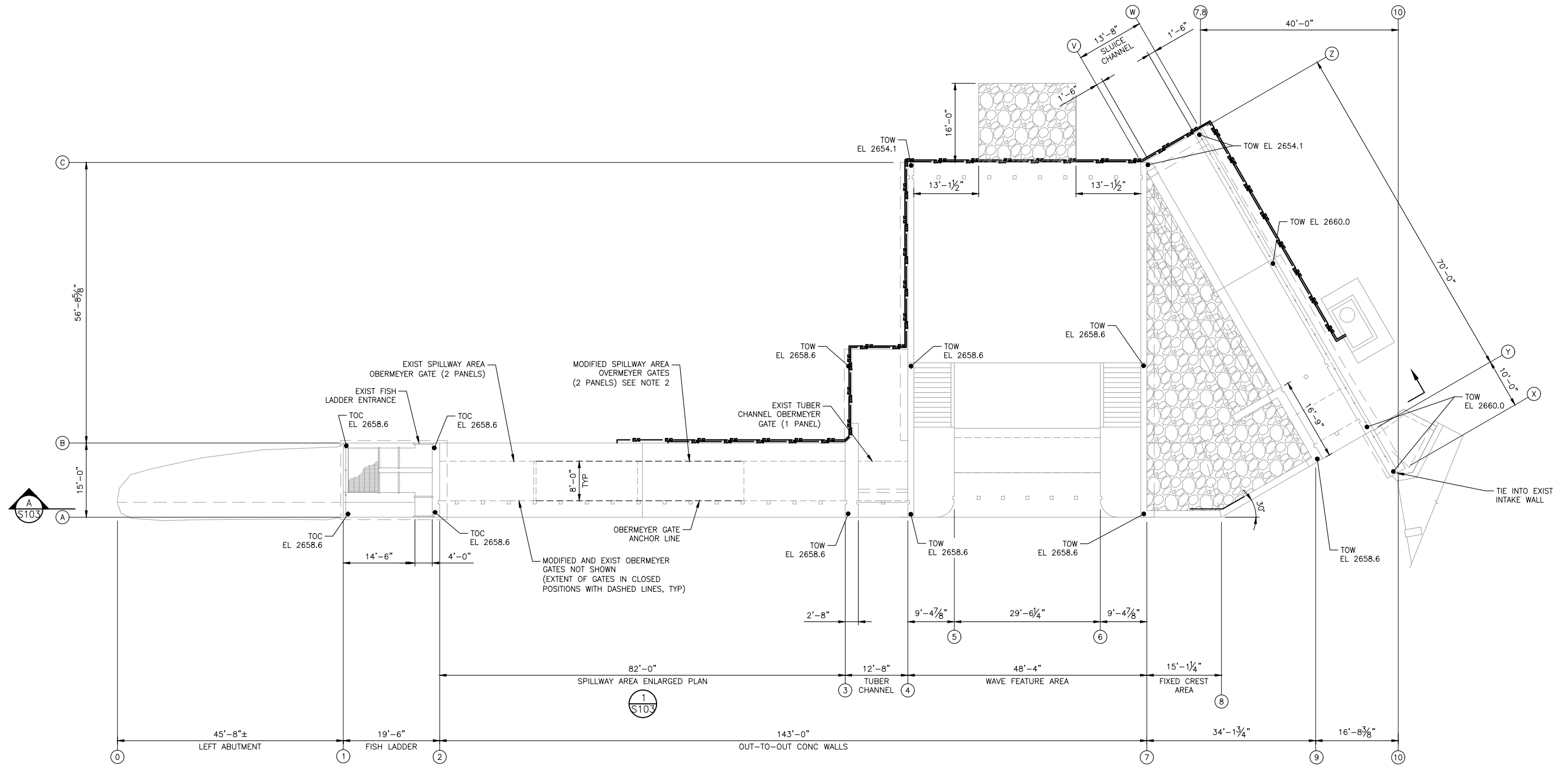
DESIGNED K. VO
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

DRAWING
C102
SHEET --- OF 19
SCALE: AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\C102.dwg Plot date: Aug 14, 2023 10:03pm

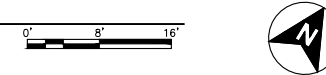
SHEET NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS.
2. EXISTING GATES TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



REACH 2 – DROP STRUCTURE 1 TOP PLAN

SCALE: 3/32" = 1'-0"



REV	DATE	BY	DESCRIPTION
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REACH 2 DROP STRUCTURE 1
 TOP PLAN

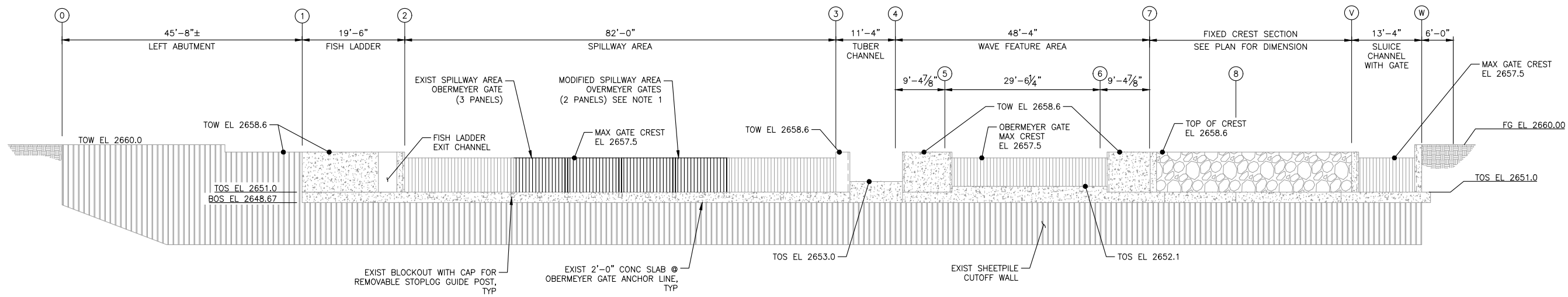
DESIGNED	A. JABIR
DRAWN	R. WOOD
CHECKED	M. MERKLEIN
ISSUED DATE	08/09/23

DRAWING	S102
SHEET	---- OF 19
SCALE:	AS NOTED

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\S102.dwg Plot date: Aug 14, 2023 10:03pm
 JOB NO. 13-108

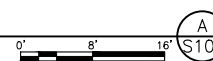
SHEET NOTES:

- EXISTING GATE TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



REACH 2 - DROP STRUCTURE 1 SECTION

SCALE: 3/32" = 1'-0"



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1 SECTION

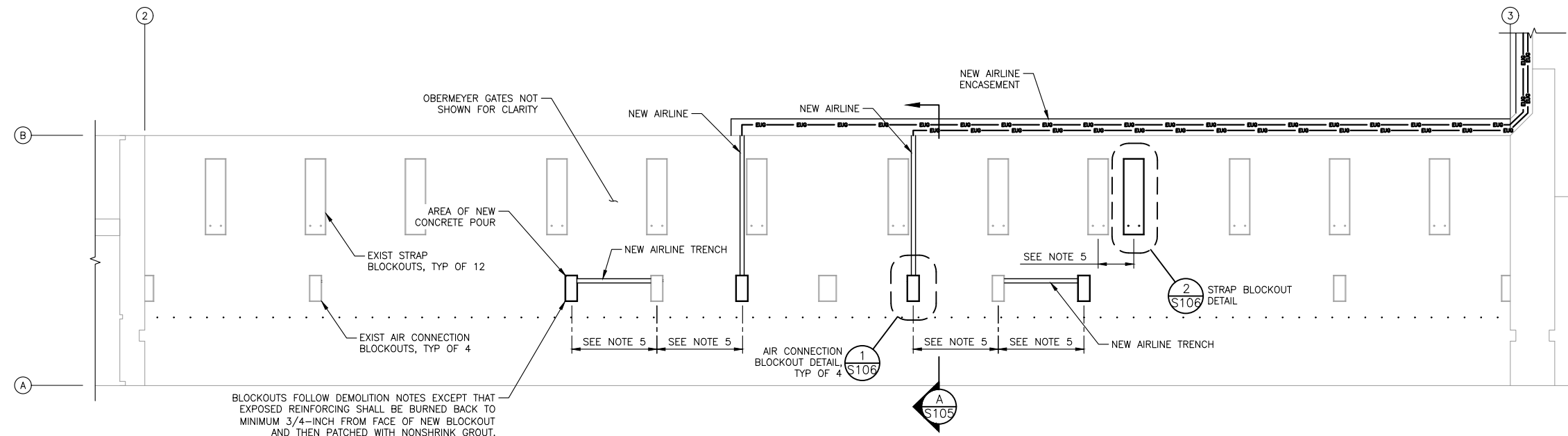
DESIGNED	A. JABIR
DRAWN	R. WOOD
CHECKED	M. MERKLEIN
ISSUED DATE	08/09/23

DRAWING	S103
SHEET	--- OF 19
SCALE	AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\S103.dwg Plot date: Aug 14, 2023 10:03pm

SHEET NOTES:

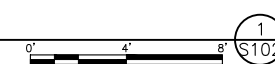
1. ALL NEW AIRLINES SHALL BE ENCASED IN A NON-SHRINK EPOXY GROUT.
 - A. PRIOR TO GROUTING ANCHOR AIRLINES AT MINIMUM 2'-0" SPACING,
 - B. ENSURE EXISTING CONCRETE IS ROUGHENED TO 1/4-INCH AMPLITUDE.
 - C. APPLY BONDING AGENT TO CONCRETE.
 - D. PLACE NONSHRINK EPOXY GROUT TO ENCASE NEW AIRLINES AND COVER NEW AIRLINES WITH MINIMUM 3/4" OF COVER.



BLOCKOUTS FOLLOW DEMOLITION NOTES EXCEPT THAT EXPOSED REINFORCING SHALL BE BURNED BACK TO MINIMUM 3/4-INCH FROM FACE OF NEW BLOCKOUT AND THEN PATCHED WITH NONSHRINK GROUT.

REACH 2 DROP STRUCTURE 1 SPILLWAY – GATE BLOCKOUTS AND ANCHOR PLAN

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



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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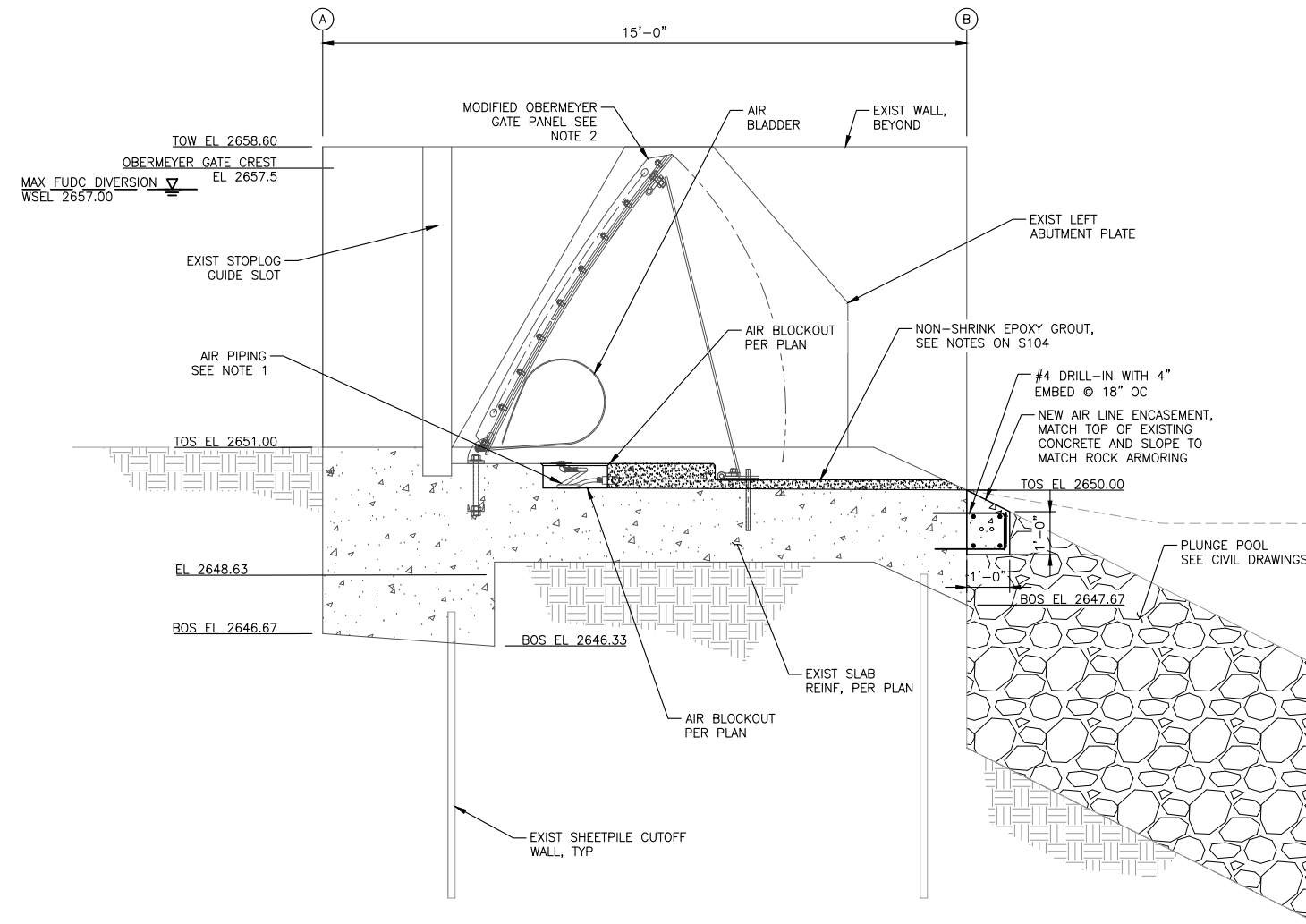
REACH 2 DROP STRUCTURE 1
 SPILLWAY PLAN

DESIGNED B. BARRON
 DRAWN R. WOOD
 CHECKED M. MERKLEIN
 ISSUED DATE 08/09/23

DRAWING
S104
 SHEET --- OF 19
 SCALE: AS NOTED

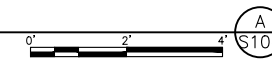
SHEET NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR FIBER OPTIC AND OBERMEYER GATE CONDUIT REQUIREMENTS.
2. EXISTING GATE TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



SECTION

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



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



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REACH 2 DROP STRUCTURE 1
 SPILLWAY SECTION

DESIGNED	B. BARRON
DRAWN	R. WOOD
CHECKED	M. MERKLEIN
ISSUED DATE	08/09/23

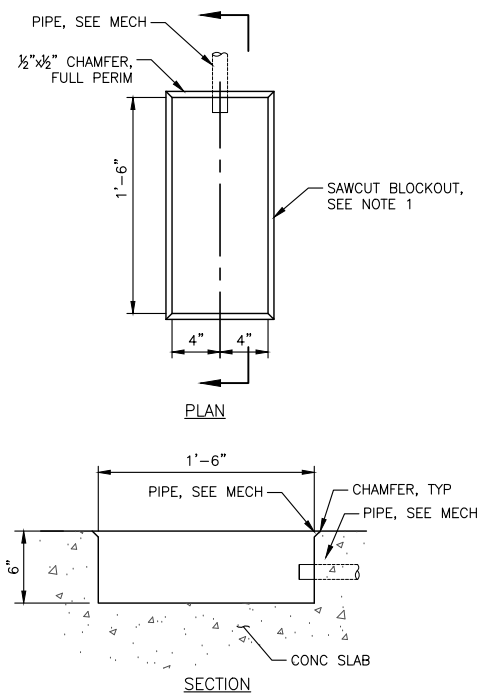
DRAWING

S105

SHEET 10 OF 19

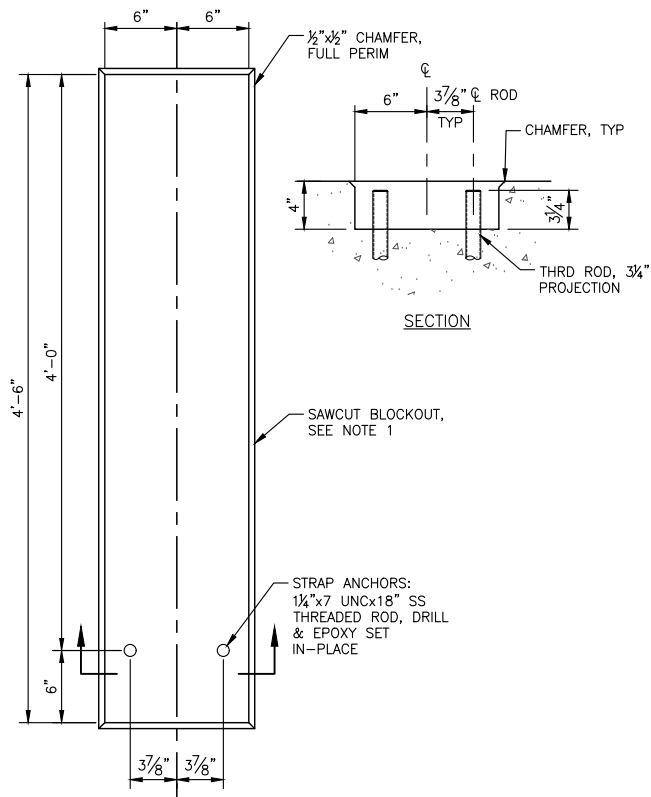
SCALE: AS NOTED

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\S105.dwg Plot date: Aug 14, 2023 10:03pm



AIR CONNECTION BLOCKOUT DETAIL

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



STRAP BLOCKOUT DETAIL

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

SHEET NOTES:

1. SAWCUT BLOCKOUTS WITH 1/2"x1/2" CHAMFER. SAWCUT FINISH SHALL BE SMOOTH AND FLAT WITHIN +/- 0.125". APPLY XYPEX CONCENTRATE CONCRETE WATERPROOFING COATING OR APPROVED EQUAL TO ALL SAWCUT SURFACES. BURN BACK REINFORCEMENT 2" FROM SURFACE OF SAWCUT AND PATCH HOLES WITH NON SHRINK GROUT.
2. CORE DRILL BLOCKOUT CORNERS TO PREVENT OVERCUT, OR PATCH OVERCUT WITH NONSHRINK GROUT
3. NONSHRINK GROUT SHALL BE SIKAGROUT 212 OR APPROVED EQUAL
4. STRAP ANCHORS SHALL BE SST HILTI HAS THREADED ROD WITH RE 500 V3 EPOXY OR APPROVED EQUAL

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

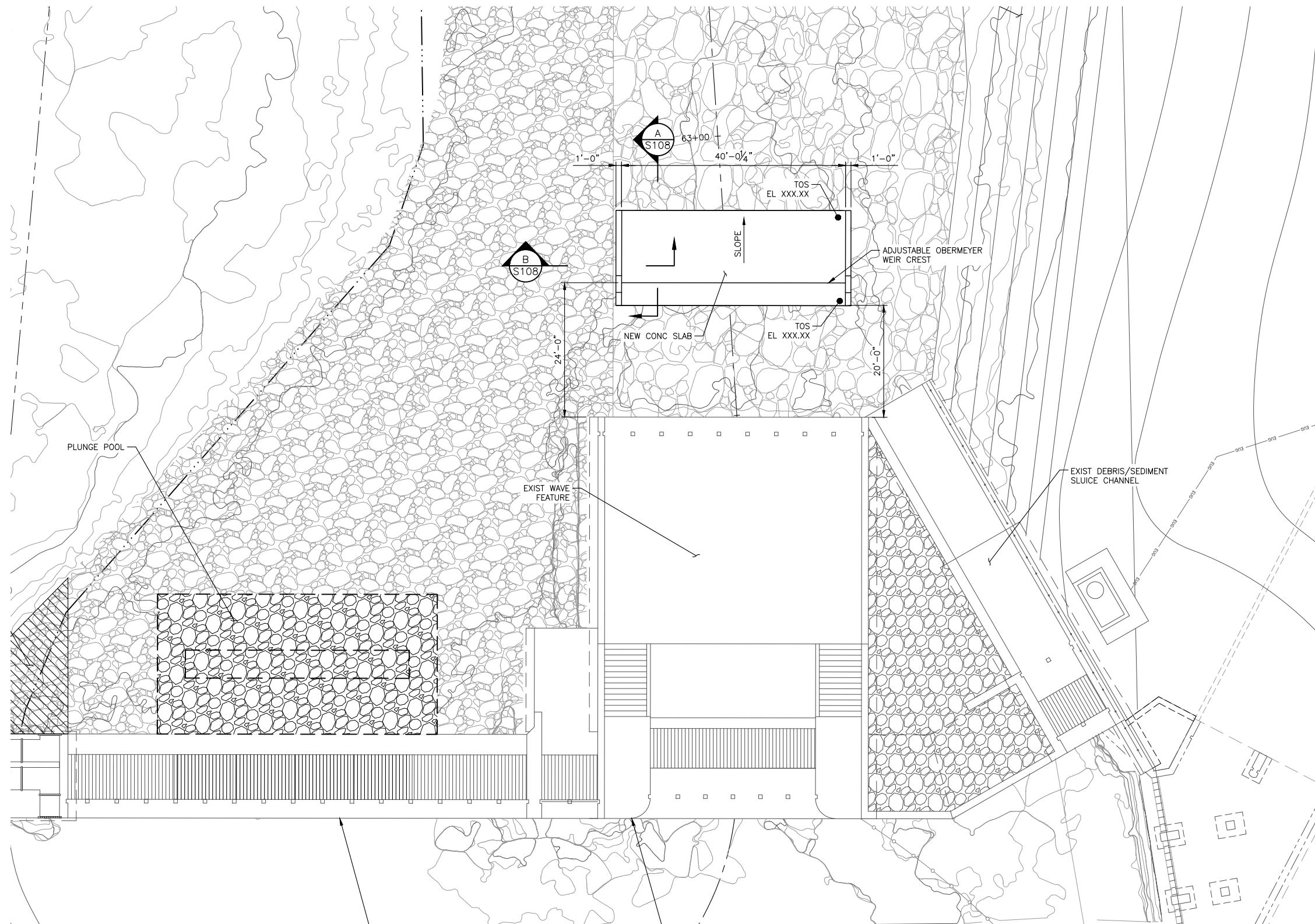


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BLOCKOUT DETAILS

DESIGNED B. BARRON
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 08/09/23

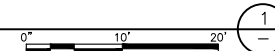
DRAWING
S106
SHEET 11 OF 19
SCALE: AS NOTED

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ADJUSTABLE WEIR SLAB FOUNDATION PLAN

SCALE: 1" = 10'



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE
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 BOISE WHITEWATER PARK

ADJUSTABLE WEIR SLAB
 FOUNDATION PLAN

DESIGNED	B. BARRON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

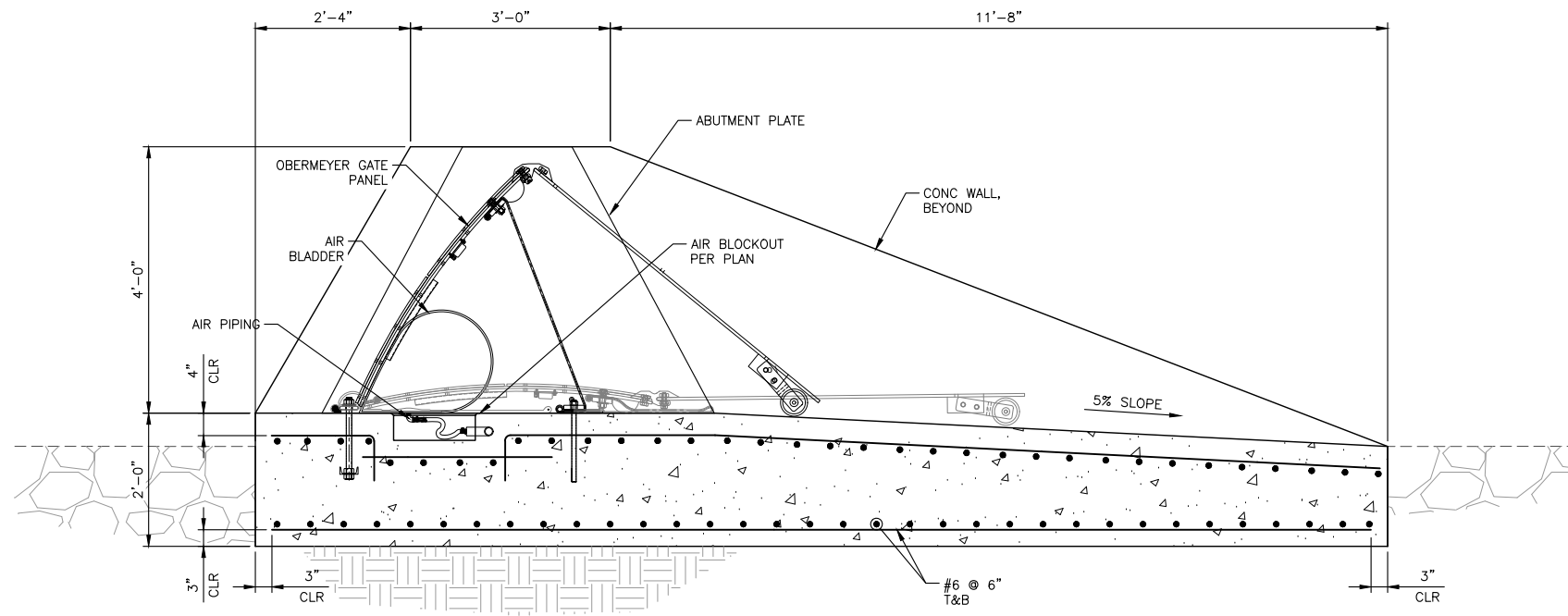
DRAWING

S107

SHEET ---- OF 19

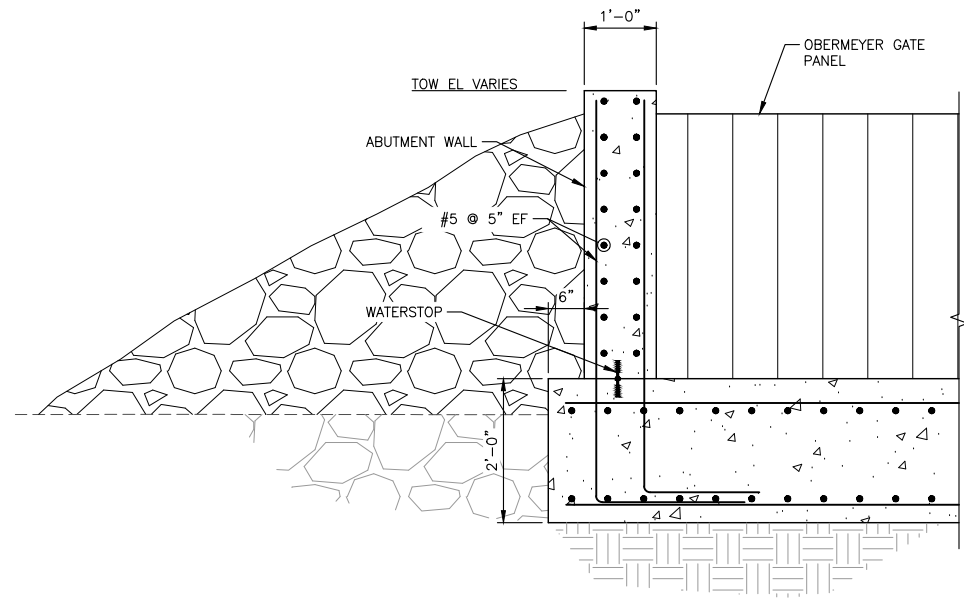
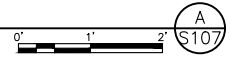
SCALE: AS NOTED

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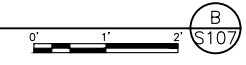
ADJUSTABLE WEIR SLAB FOUNDATION SECTION

SCALE: 3/4" = 1'-0"



ADJUSTABLE WEIR WALL SECTION

SCALE: 3/4" = 1'-0"



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

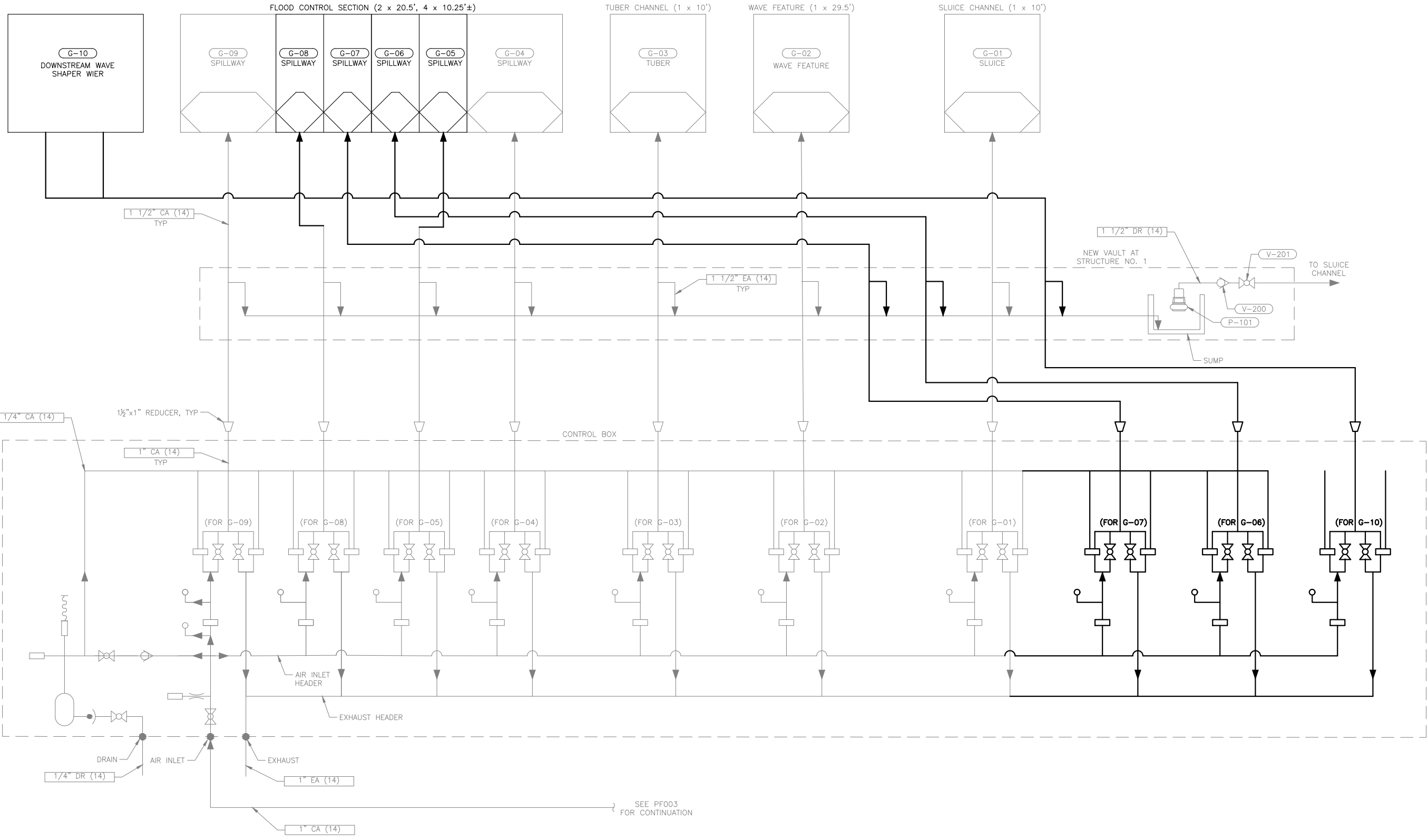


CITY OF BOISE
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ADJUSTABLE WEIR SLAB FOUNDATION SECTION

DESIGNED B. BARRON
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 08/09/23

DRAWING
S108
SHEET --- OF 19
SCALE: AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 Mclaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\S108.dwg Plot date: Aug 14, 2023 10:04pm



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS



CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

DESIGNED J. DALLAS
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

REVISIONS

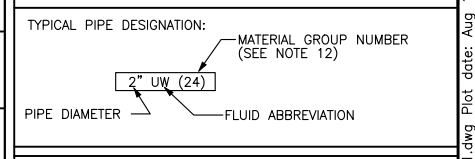
DRAWING
PF002
 SHEET 12 OF 19
 SCALE: AS NOTED

Path: C:\Users\WoodR\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD_PFD002.dwg Plot date: Aug 14, 2023 10:04pm
 JOB NO. 13-108

FLUID ABBREVIATION	FUNCTION THIS LIST MAY INCLUDE FLUIDS NOT USED IN THIS PROJECT (* SEE NOTE 5)	ALLOWABLE PIPING MATERIAL GROUP NO. (SEE NOTES 1 AND 4)				FIELD TEST REQUIREMENTS (SEE NOTE 3 AND NOTE 4)		
		EXPOSED PIPING (SEE NOTE 14)		BURIED PIPING (SEE NOTE 13)		MINIMUM TEST PRESSURE PSI	TEST MEDIUM	LEAKAGE ALLOWANCE (SEE NOTE 2)
		3" DIA AND SMALLER	4" DIA AND LARGER	3" DIA AND SMALLER	4" DIA AND LARGER			
COMMONLY USED FLUIDS								
TD	TANK / PROCESS DRAIN (TANK/BASIN)	16	12,16	16	12,16,17,27	NOTE 6	WATER	--
VT	VENT (SEE NOTE 18)	15,16	15,16	--	--	15 IN Hg	VACUUM	(A) (D) NOTE 18
OTHER COMMONLY USED FLUIDS								
CA	COMPRESSED AIR	2,14	--	14	--	150	AIR	(A)
EA	EXHAUST AIR	2,14	--	14	--	150	AIR	(A)

PIPING MATERIAL SCHEDULE (SEE NOTE 1)			
GROUP NO.	PIPE MATERIAL	FITTINGS / JOINTS	LININGS AND COATINGS (SEE NOTE 13)
1	STEEL, ASTM A53, SCHEDULE 40, BLACK WELDED.	2 1/2" AND SMALLER, MALLEABLE IRON, ASME B16.3, THREADED, BANDED, BLACK, 150 PSI OR STEEL, ASME B16.9, BUTT-WELDED. 3" AND LARGER, CAST IRON, ASME B16.1, 125 PSI FLANGED OR MECHANICAL COUPLING OR (STEEL, ASME B16.9, BUTT WELDED).	NOT APPLICABLE
2	STEEL, ASTM A53, SCHEDULE 40, BLACK WELDED, GALVANIZED	2 1/2" AND SMALLER, MALLEABLE IRON, ASME B16.3, THREADED, BANDED, GALVANIZED 150 PSI. 3" AND LARGER, CAST IRON, ASME B16.1, 125 PSI FLANGED OR MECHANICAL COUPLING.	SEE SECTION 15025
11	DUCTILE IRON, ASME A21.51, (AWWA C151 AND MODIFIED PER SECTION 02565) (TYP SERVICE - RAW, POTABLE & SANITARY SEWER)	DUCTILE IRON AWWA C110 AND MODIFIED PER SECTION 02565, BELL AND SPIGOT JOINTS (RESTRAINT OR NON-RESTRAINT), MECH CPLNG, FLGD OR MECH JTS, 250 PSI ,(PRESS. RATING) 12" AND SMALLER, 150 PSI, (PRESS. RATING) 14" AND LARGER, WITH 125 PSI ASME B16.1 FLANGES. FOR HIGHER PRESS. RATING, REFER TO MFTR CATALOG.	SEE SECTION 02565
14	STAINLESS STEEL, TYPE 316, ASTM A312, SCHEDULE 40S.	STAINLESS STEEL, TYPE 316, THREADED, WELDED SLIP-ON FLANGE ASME B16.3, OR SOCKET WELDED FITTINGS SCHEDULE 40S, OR 150 PSIG THREADED FLANGED. (THREADED JOINTS NOT ALLOWED FOR OZG, OXG, LOX SERVICE)	NOT APPLICABLE
16	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT. ASTM D1785. (TYP SERVICE - INDOORS/COVERED)	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT, SOCKET SOLVENT WELD JOINTS, ASTM D2467. (SOLVENT & GLUE SHALL BE COMPATIBLE WITH FLUID SERVICE)	NOT APPLICABLE

LIST OF SAMPLE LINES	
PIPE DESIGNATION	SAMPLE POINT



NOTES:

NOTE 1
ALTHOUGH SEVERAL PIPE MATERIAL GROUPS MAY BE LISTED ON THIS SHEET FOR A GIVEN FLUID SERVICE, CONTRACTOR SHALL PROVIDE ONLY THE PIPE MATERIAL GROUP SHOWN ON THE DRAWINGS AND SPECIFIED FOR THAT FLUID SERVICE.

NOTE 2
LEAKAGE ALLOWANCE IS AS FOLLOWS:
A. PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE.
B. PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE FOR UNBURIED PIPE AND NOT MORE THAN 0.02 GALLON PER HOUR PER INCH DIAMETER PER 100 FEET OF BURIED PIPE.
C. PIPES SO DESIGNATED SHALL NOT SHOW A LEAKAGE OF MORE THAN 0.15 GALLON PER HOUR PER INCH OF DIAMETER PER 100 FEET OF PIPE.
D. PIPES SO DESIGNATED SHALL NOT SHOW A LOSS OF PRESSURE OF MORE THAN 5 PERCENT.
E. PIPE SO DESIGNATED SHALL NOT SHOW A LOSS OF VACUUM OF MORE THAN 4 INCHES MERCURY COLUMN.

NOTE 3
FOR FIELD TEST PROCEDURES AND ADDITIONAL TEST REQUIREMENTS, SEE PIPING SECTION OF SPECIFICATIONS.

NOTE 4
NO SUBSTITUTIONS U.N.O. IN THE SPECIFICATIONS.

NOTE 5
PIPING GROUP FUNCTION SHOWN THUS * SHALL BE INSULATED PER SPECIFICATIONS.

NOTE 6
STATIC WATER TEST WITH SURFACE 5 FEET ABOVE HIGH POINT OF PIPE.

NOTE 7
INSPECTION AND TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE PLUMBING CODE.

NOTE 8
NO APPARENT LEAKS UNDER NORMAL OPERATING CONDITIONS.

NOTE 13
FOR FULL PIPE LINING AND COATING REQUIREMENTS, SEE SPECIFICATIONS.

NOTE 14
EXPOSED PIPING SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS. COLORS TO BE SELECTED BY OWNER.

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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BOISE WHITEWATER PARK

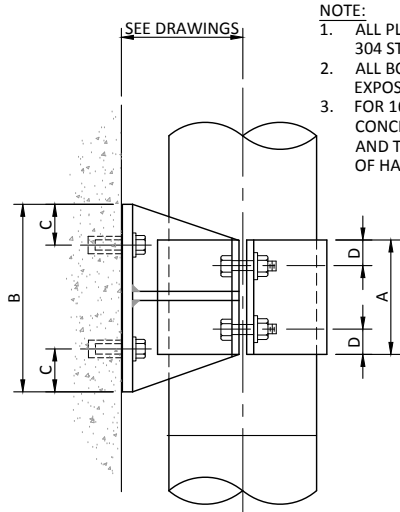
STANDARD MECHANICAL AND PIPING SCHEDULES

DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

DRAWING
GM001
SHEET --- OF 19
SCALE: AS NOTED

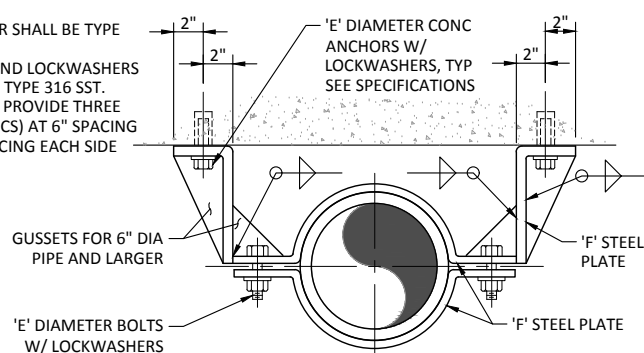
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JOB NO. 13-108



NOTE:

1. ALL PLATE EXPOSED TO WATER SHALL BE TYPE 304 STAINLESS STEEL.
2. ALL BOLTS, ANCHORS, NUTS AND LOCKWASHERS EXPOSED TO WATER SHALL BE TYPE 316 SST.
3. FOR 16"-24" DIAMETER PIPES, PROVIDE THREE CONCRETE ANCHORS (SEE SPECS) AT 6" SPACING AND TWO GUSSETS AT 4" SPACING EACH SIDE OF HANGER.

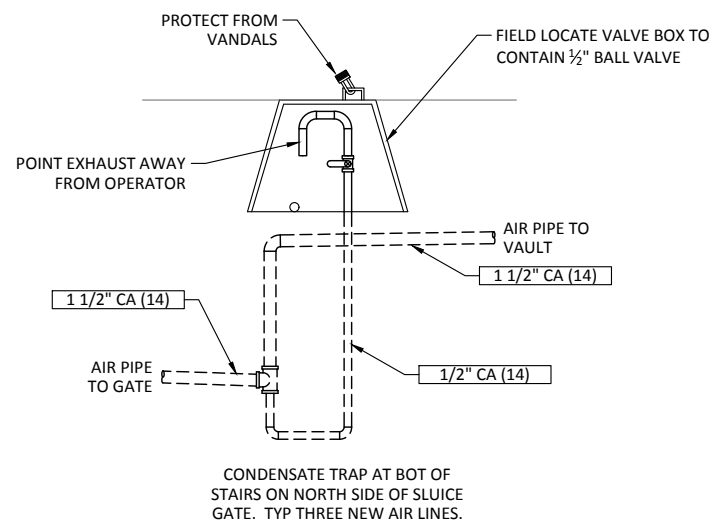


DIMENSIONS IN INCHES						
PIPE DIAMETER	"A"	"B"	"C"	"D"	"E"	"F"
3 TO 8	6	10	1 1/2"	1	5/8	3/4
10 TO 14	8	12	2	1 1/2"	3/4	3/8
16 TO 24	12	16	2	1 1/2"	3/4	3/8

PIPE HANGER FOR INDIVIDUAL PIPE

SCALE: NTS

M134



CONDENSATE PURGE VALVE DETAIL

SCALE: NTS

M900

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

DESIGNED J. DALLAS
 DRAWN R. WOOD
 CHECKED M. McMILLEN
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STANDARD MECHANICAL DETAILS

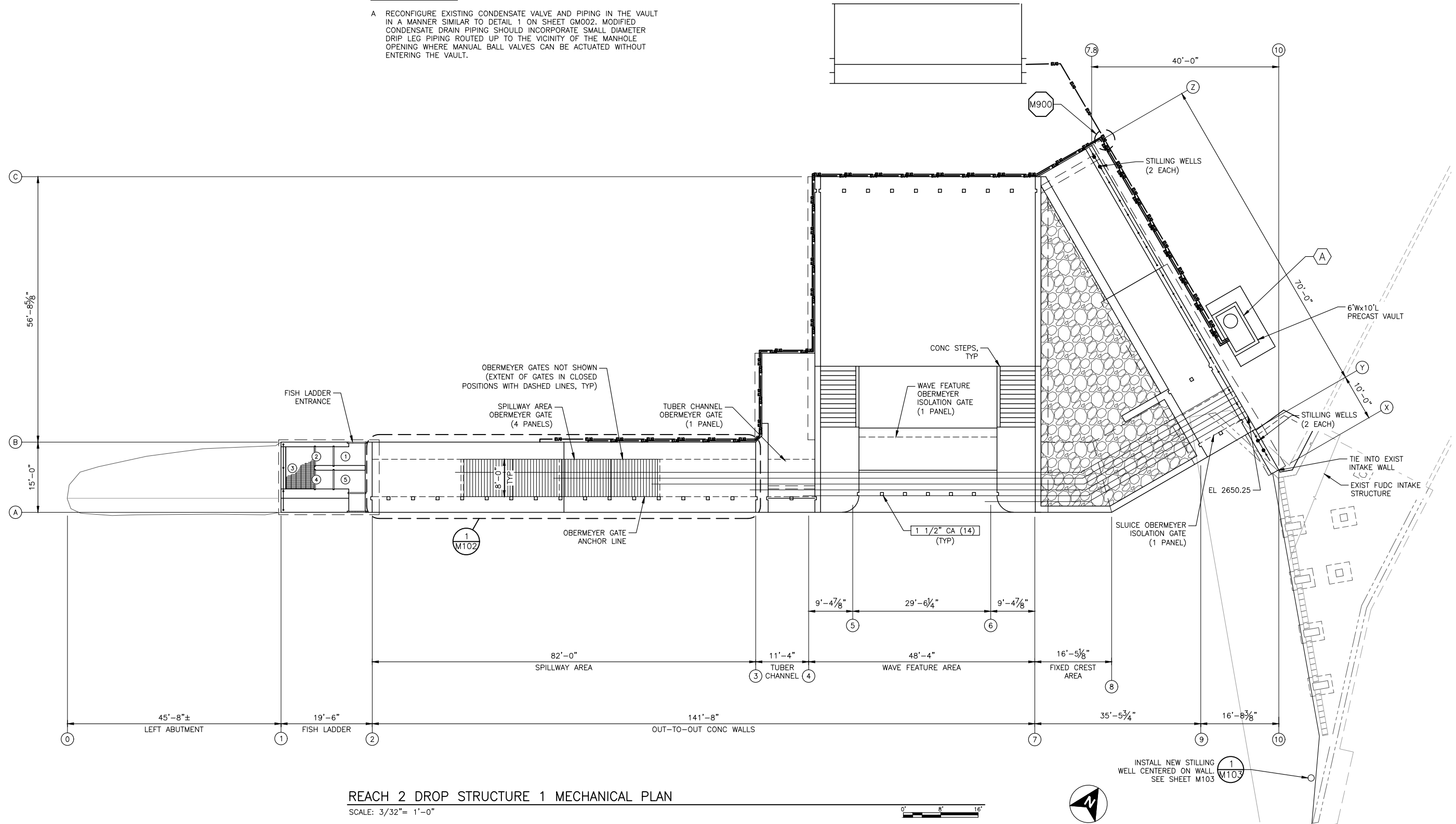
DESIGNED J. DALLAS
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
GM002
 SHEET OF 19
 SCALE: AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design-Build\6.3 CAD\GM002.dwg Plot date: Aug 14, 2023 10:04pm

SHEET KEY NOTES:

A RECONFIGURE EXISTING CONDENSATE VALVE AND PIPING IN THE VAULT IN A MANNER SIMILAR TO DETAIL 1 ON SHEET GM002. MODIFIED CONDENSATE DRAIN PIPING SHOULD INCORPORATE SMALL DIAMETER DRIP LEG PIPING ROUTED UP TO THE VICINITY OF THE MANHOLE OPENING WHERE MANUAL BALL VALVES CAN BE ACTUATED WITHOUT ENTERING THE VAULT.



REACH 2 DROP STRUCTURE 1 MECHANICAL PLAN
 SCALE: 3/32" = 1'-0"

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
 MECHANICAL PLAN

DESIGNED	J. DALLAS
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

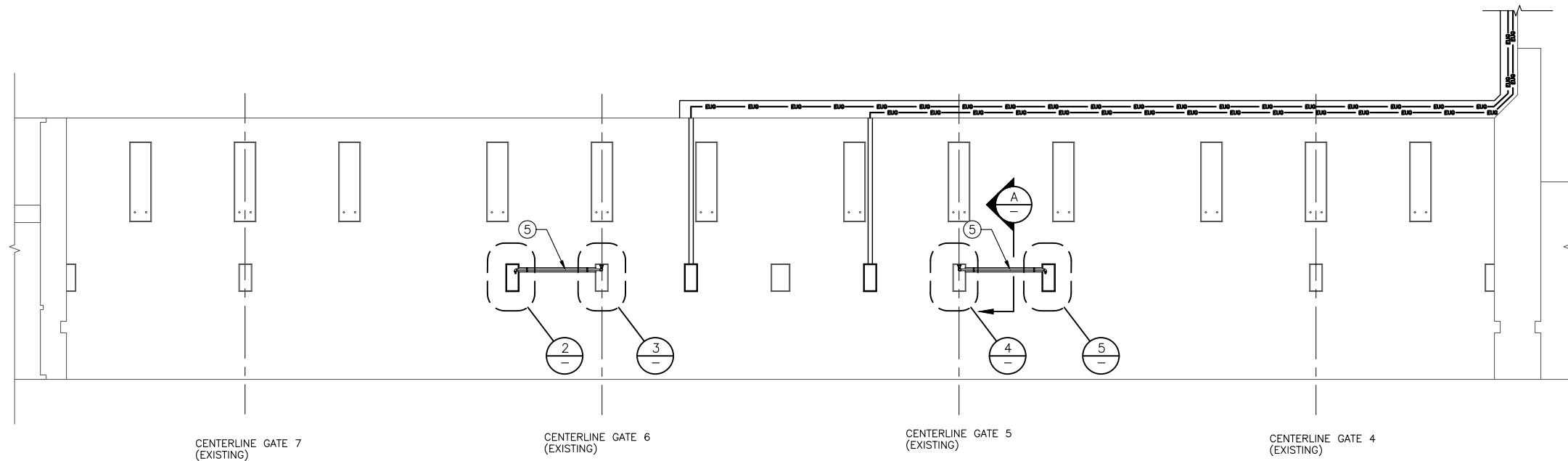
DRAWING	M101
SHEET	13 OF 19
SCALE:	AS NOTED

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\M101.dwg Plot date: Aug 14, 2023 10:04pm
 JOB NO: 13-108

SHEET NOTES:

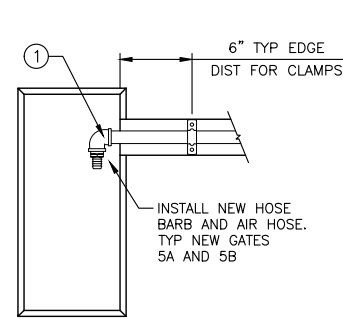
- CONTRACTOR TO FIELD VERIFY THAT EXISTING AIR LINE ARRANGEMENT IN AIR BLOCKOUTS MATCHES THAT SHOWN ON OBERMEYER 17-1888-G4-7 SERIES OF DRAWINGS. CONSULT ENGINEER IF AS-BUILD CONDITIONS DIFFER.
- USE TEFLON TAPE AND APPROPRIATE THREAD SEALANT TO MAKE UP ALL THREADED PIPE JOINTS.
- CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING AIR BLOCKOUTS AND NEW AIR BLOCKOUTS, AND ADJUST PIPE LENGTH ACCORDINGLY.
- CONTRACTOR TO FIELD VERIFY LENGTH OF ITEM B. SIZE SUCH THAT NEW HORIZONTAL AIR LINES ARE FLUSH WITH EXISTING CONCRETE SURFACE.

BILL OF MATERIALS			
ITEM NUMBER	ITEM DESCRIPTION	SMITH-COOPER INTL. PART NUMBER	QTY
1	150# 90 DEGREE ELBOW, 3/4", STAINLESS STEEL, NPT THREADS	S3116E 006	6
2	150# 90 DEGREE STREET ELBOW, 3/4", STAINLESS STEEL, NPT THREADS	S3116SE006	2
3	150" TEE, 3/4", STAINLESS STEEL, NPT THREADS	S3116T 006	1
4	3/4" NIPPLE, STAINLESS STEEL, NPT THREADS	S8346HN006	1
5	3/4" STAINLESS STEEL SEAMLESS PIPE PER ASTM A312, NPT THREADED ENDS, 58" LONG	S6146SP006	2
6	3/4" STAINLESS STEEL SEAMLESS PIPE PER ASTM A312, NPT THREADED ENDS, 1-3/4" LONG	S6146SP006	3
7	304 SS ROUTING CLAMP FOR 3/4" PIPE	MCMMASTER CARR PN: 8874T13	9



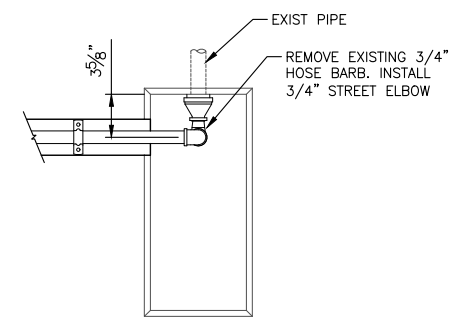
REACH 2 DROP STRUCTURE 1 SPILLWAY – GATE BLOCKOUTS

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



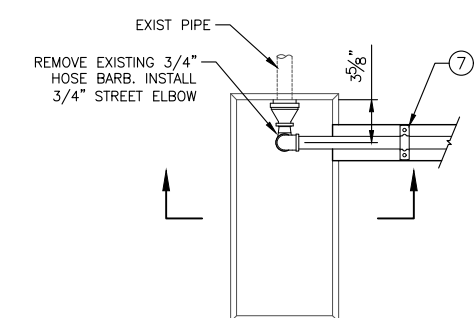
NEW GATE 8 AIR BLOCKOUT

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



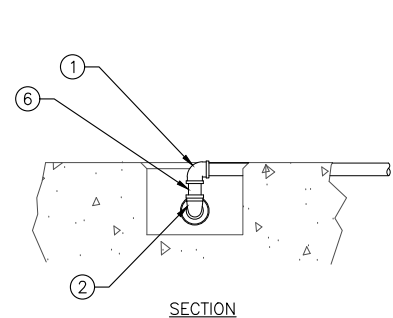
EXISTING GATE 6 AIR BLOCKOUT

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



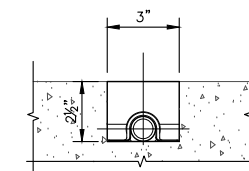
EXISTING GATE 5 AIR BLOCKOUT

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



NEW GATE 5 AIR BLOCKOUT

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



SECTION

SCALE: 3" = 1'-0"

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

SPILLWAY PLAN AIRLINE MODS

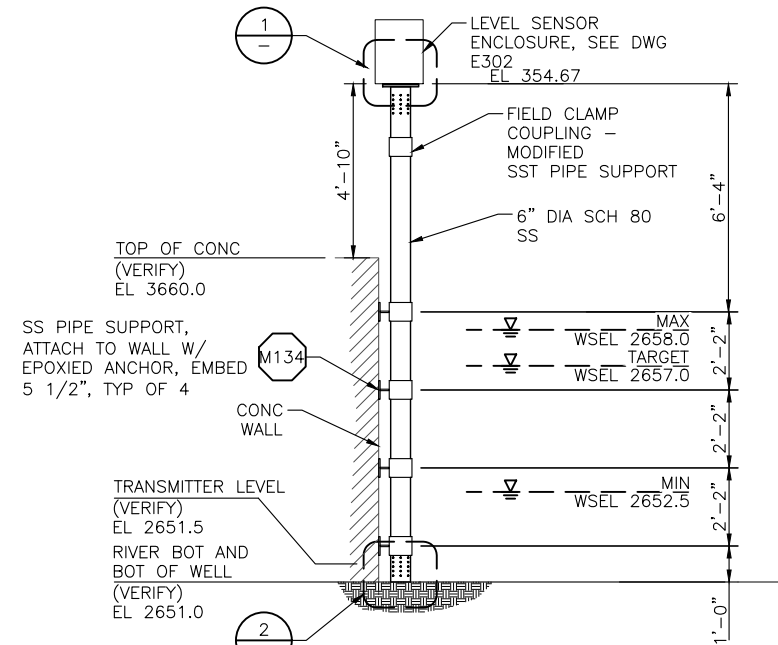
DESIGNED J. DALLAS
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
M102
 SHEET 14 OF 19
 SCALE: AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\M102.dwg Plot date: Aug 14, 2023 10:04pm

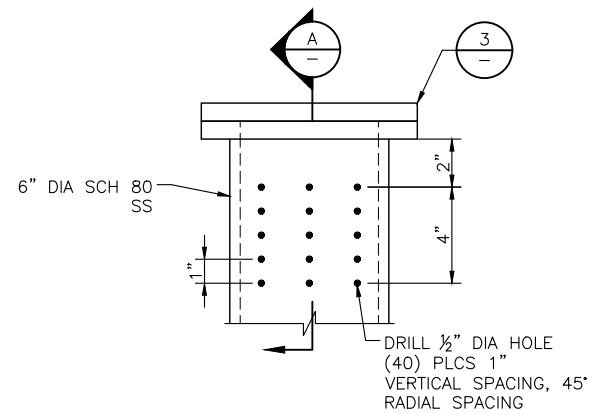
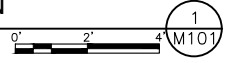
SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS. NOTIFY THE ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING THE RELATED WORK.
2. FIELD VERIFY ANY OBSTACLES ATTACHED TO THE WALL THAT MAY INTERFERE WITH STILLING WELL INSTALLATION AS SHOWN. NOTIFY THE ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH RELATED WORK.



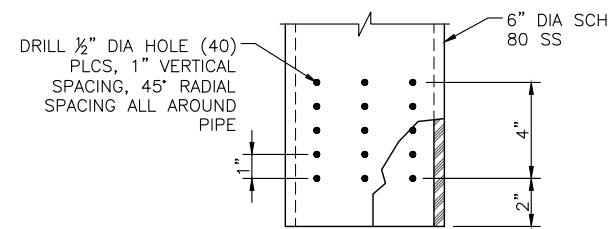
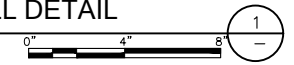
STILLING WELL ELEVATION

SCALE: 3/8" = 1'-0"



TOP OF STILLING WELL DETAIL

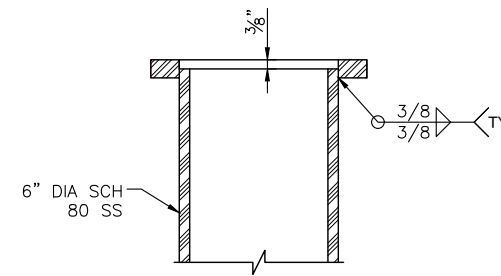
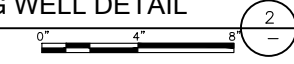
SCALE: 3" = 1'-0"



SIDE VIEW

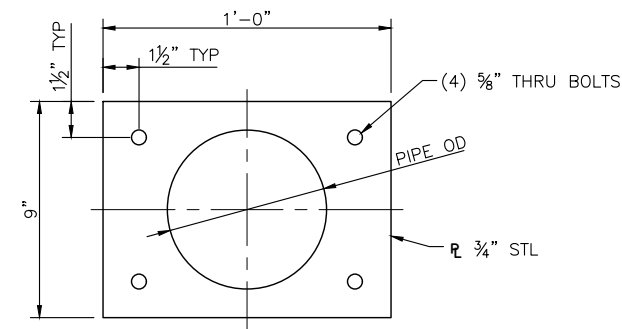
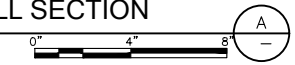
BOTTOM OF STILLING WELL DETAIL

SCALE: 3" = 1'-0"



TOP OF STILLING WELL SECTION

SCALE: 3" = 1'-0"



STILLING WELL CAP PLATE

SCALE: 3" = 1'-0"



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CITY OF BOISE	
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION BOISE WHITEWATER PARK	
STILLING WELL ELEVATION AND DETAILS	

DESIGNED	J. DALLAS
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

DRAWING	M103
SHEET	OF 19
SCALE:	AS NOTED

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JOB NO: 13-108

ABBREVIATIONS

2TSP	MULTI-TWISTED TWO PAIR, OVERALL SHIELDED
A, AMP	AMP AMPERE
AAAC	ALL ALUMINUM ALLOY CONDUCTOR
AF	AMPERE FRAME SIZE
AFF	ABOVE FINISHED FLOOR
AH	AMPERE HOURS
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
A/R	AS REQUIRED
AT	AMPERE TRIP, AUTO, AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AVR	AUTOMATIC VOLTAGE REGULATOR
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CTRL	CONTROL
CO	CONDUIT ONLY
CONTD	CONTINUED
CP	CONTROL PANEL
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DUCT BANK
DET	DETAIL
DIAG	DIAGRAM
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DSL	MANUAL DISCONNECT SWITCH, 3-POLE, GANG OPERATED
DWG(S)	DRAWING(S)
EL	ELEVATION
EMER	EMERGENCY
EPT	EXCITATION POWER TRANSFORMER
EV	ELECTRICAL VAULT
EQUIP	EQUIPMENT
FDR	FEEDER
GEN	GENERATOR
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
GFI	GROUND-FAULT INTERRUPTION
GFP	GROUND-FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GSU	GENERATOR STEP-UP TRANSFORMER
HH	HAND HOLE
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HPU	HYDRAULIC POWER UNIT
HTR	HEATER
HZ	HERTZ (CYCLES PER SECOND)
I/O	INPUT/OUTPUT
INST	INSTANTANEOUS
INTLK	INTERLOCK
IP	INTERNET PROTOCOL
IPB	ILLUMINATED PUSH BUTTON
JB	JUNCTION BOX
JCRN	JIB CRANE
KCMIL	THOUSAND CIRCULAR MILLS
kV	KILOVOLTS
kVA	KILOVOLT AMPERES (APPARENT POWER)
kVAR	KILOVARS (REACTIVE POWER)
kW	KILOWATTS (REAL POWER)
kWH	KILOWATT HOUR
LP	LIGHTING PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
mA	MILLIAMPERES
M	MOTOR MAN MANUAL
MAN	MANUAL
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFM	MULTIFUNCTIONAL METER
MH	MAN HOLE
MTS	MANUAL TRANSFER SWITCH
mV	MILLIVOLTS
NC	NORMALLY CLOSED

NGR	NEUTRAL GROUNDING RESISTOR
NO	NORMALLY OPEN, NUMBER
NP	NAMEPLATE
NTS	NOT TO SCALE
OL	OVERLOAD
PB	PULLBOX, PUSH BUTTON
PC	PHOTOELECTRIC CONTROL UNIT
PCC	POINT OF COMMON CONNECTION
PH	PHASE
PNL	PANEL
PLC	PROGRAMMABLE LOGIC CONTROLLER
POI	POINT OF INTER-CONNECTION
PTT	PUSH-TO-TEST
PVC	POLYVINYL CHLORIDE
RCP	RECEPTACLE
REF	REFERENCE
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	REMOTE I/O
RTD	RESISTANCE TEMPERATURE DETECTOR
S	SYNC SCOPE
SA	SURGE ARRESTER
SC	SURGE CAPACITOR
SDP	STANDBY DISTRIBUTION PANEL
SEC	SECOND
SEL	SELECTOR, SCHWEITZER ENGINEERING LABORATORIES
SPEC	SPECIFICATION
SS	STAINLESS STEEL
S/S	STATION SERVICE
STA	STATION
SW	SWITCH
SWGR	SWITCHGEAR
TB	TERMINAL BLOCK, TERMINAL BOX
TS	THERMOSTAT
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TX	TRANSMITTER
TYP	TYPICAL
UP	UTILITY POWER
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VC	VIDEO CAMERA
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF (NEMA 4)
XFMR	TRANSFORMER
XLPE	CROSS LINKED POLYETHYLENE
XP	EXPLOSION PROOF
YL	YARD LIGHT

CONTROL RELAY AND DEVICES INDEX

3	CHECKING OR INTERLOCKING RELAY
4	MASTER CONTACTOR
5	STOPPING DEVICE
12	OVER-SPEED DEVICE
13	SYNCHRONOUS-SPEED DEVICE
14	UNDER-SPEED DEVICE
15	SPEED/FREQUENCY MATCHING DEVICE
20	ELECTRIC OPERATED VALVE
21	DISTANCE RELAY
23T	THERMOSTAT
24	VOLT/HERTZ RELAY
25	SYNCHRONOUS CHECK DEVICE
25A	AUTOMATIC SYNCHRONIZATION DEVICE
26	APPARATUS THERMAL DEVICE
27	UNDERVOLTAGE RELAY
30	ANNUNCIATOR RELAY
32	REVERSE POWER RELAY
33	POSITION SWITCH
34	MASTER SEQUENCE DEVICE
37	UNDERCURRENT/UNDERPOWER RELAY
38	BEARING PROTECTION DEVICE
39	VIBRATION DETECTOR
40	FIELD RELAY
41	FIELD CURRENT BREAKER
43	MANUAL TRANSFER/SELECTOR DEVICE
46	REVERSE PHASE/PHASE BALANCE RELAY
48	INCOMPLETE SEQUENCE RELAY
49	MACHINE/TRANSFORMER THERMAL RELAY
50	INSTANTANEOUS OVERCURRENT RELAY
51C	AC TIME OVERCURRENT RELAY
50/51	VOLTAGE-CONTROLLED TIME OVERCURRENT RELAY
52	TIME AND INSTANTANEOUS OVERCURRENT RELAY
52G	AC CIRCUIT BREAKER
52L	GENERATOR CIRCUIT BREAKER
53	LINE CIRCUIT BREAKER
54	EXCITER/DC GENERATOR RELAY
55	HIGH SPEED DC CIRCUIT BREAKER
57	POWERFACTOR RELAY
59	GROUND SWITCH
59N	OVERVOLTAGE RELAY
60	NEUTRAL OVERVOLTAGE RELAY
61	VOLTAGE BALANCE RELAY
62	CURRENT BALANCE RELAY
63	TIME DELAY RELAY
64	LIQUID OR GAS PRESSURE LEVEL/FLOW RELAY
65	GROUND PROTECTIVE RELAY
67	GOVERNOR
70	AC DIRECTIONAL OVERCURRENT RELAY
71	ELECTRIC OPERATED RHEOSTAT
72	TRANSFORMER OIL LEVEL TRIP/ALARM DEVICE
74	DC CIRCUIT BREAKER
76	ALARM RELAY
79	DC OVERCURRENT RELAY
81	AUTOMATIC RECLOSING RELAY
810/U	FREQUENCY RELAY
83	OVER/UNDER FREQUENCY RELAY
85	AUTOMATIC SELECTIVE CONTROL/TRANSFER RELAY
86	CARRIER/PILOT WIRE RECEIVER RELAY
87	LOCKOUT RELAY
87G	DIFFERENTIAL PROTECTIVE RELAY
87T	GENERATOR DIFFERENTIAL RELAY
89	TRANSFORMER DIFFERENTIAL RELAY
90	LINE ISOLATING SWITCH
94	REGULATING DEVICE
95	TRIPPING RELAY
	SUPERVISION ALARM

METERING SYSTEMS AND DEVICES INDEX

A	AMMETER
Ahr	AMPERE HOUR METER
AS	AMMETER SELECTOR SWITCH
C	COUNTER
CMC	CONTACT MAKING CLOCK
D	DEMAND METER
ET	ELAPSE TIME METER
F	FREQUENCY METER
G	GALVANOMETER
GFD	GROUND FAULT DETECTOR
HZ	FREQUENCY METER
KV	KILO-VOLTMETER
KW	KILO-WATTMETER
KWH	KILO-WATT HOUR METER
mA	MILLI-AMMETER (TRANSDUCER)
OHM	OHMMETER
OSC	OSCILLOGRAPH
PH	PHASE METER
PI	POSITION INDICATOR
PF	POWER FACTOR METER
REC	RECORDER
RF	REACTIVE FACTOR METER
SYN	SYNCHROSCOPE
T	TEMPERATURE METER
TLM	TELEMETER
V	VOLTMETER
VAR	VARMETER
VRHr	VAR HOUR METER
VS	VOLTMETER SELECTOR SWITCH
W	WATTMETER
Whr	WATT HOUR METER

PILOT - INDICATOR LIGHT INDEX

A	AMBER
B	BLUE
C	CLEAR
G	GREEN
NE	NEON
O	ORANGE
OP	OPALESCENT
P	PURPLE
R	RED
W	WHITE
Y	YELLOW

- GENERAL NOTES:**
- THESE ABBREVIATIONS APPLY TO THE ELECTRICAL DISCIPLINE OF CONTRACT DRAWINGS ONLY.
 - LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
 - ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "AT" MAY MEAN AMPERE TRIP OR AUTO; "NO" MAY MEAN NORMALLY OPEN OR NUMBER; "PB" MAY MEAN EITHER PULLBOX OR PUSH BUTTON.
 - 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.

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
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CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

STANDARD ELECTRICAL ABBREVIATIONS
 AND DEVICE INDEXES

DESIGNED	M. SKELTON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

DRAWING	GE001
SHEET	--- OF 19
SCALE:	AS NOTED

FIRE ALARM/DETECTION SYSTEM

- FA FIRE ALARM PANEL
- RA REMOTE ANNUNC PANEL
- M MANUAL PULL STATION
- H GAS MAN RELEASE STN
- A GAS MAN ABORT STN
- B F.A. BELL
- S F.A. SIREN
- DD DUCT SMOKE DETECTOR
- TD THERMAL DETECTOR
- ID IONIZATION DETECTOR
- FV FIRE WATER VALVE LIMIT
- SD SMOKE DETECTOR
- FS FLOW SWITCH
- PS PRESSURE SWITCH
- TS THERMAL/SMOKE DETECTOR
- ELD END OF LINE DEVICE

PRIVATE TELEPHONE SYSTEM

- SB SWITCHBOARD
- TC TERMINAL CABINET
- D DESK PHONE
- W WALL PHONE

PRIVATE ETHERNET NETWORK SYSTEM

- DATA JACK
- VOICE/DATA JACK

PAGE/SOUND SYSTEM

- A AMPLIFIER
- WS SPEAKER, WALL MTD
- CS SPEAKER, CEIL MTD
- WH HORN, WALL MTD
- CH HORN, CEIL MTD
- MIC MICROPHONE
- P HANDSET

TELEVISION SYSTEM

- TV JACK
- TV JACK
- TV JACK

INTRUSION ALARM/ACCESS SYSTEM

- IA CENTRAL ALARM PANEL
- RA REMOTE ANNUNC PANEL
- M MANDOR ALARM CONTACT
- V VEHICLE DOOR ALARM CONTACT
- W WINDOW ALARM CONTACT
- E ELECTRIC DOOR ACCESS CONTROL
- C CARD DOOR ACCESS CONTROL
- K KEY ACTIVATED STATION
- B I.A. BELL
- S I.A. SIREN
- PB PUSHBUTTON DOOR ACCESS
- PE PHOTO ELECTRIC DOOR ACCESS
- MD MOTION DETECTOR

CLOCK SYSTEM

- M MASTER CLOCK
- C SECONDARY CLOCK

WATCHMANS SYSTEM

- C CONTROL/CENTRAL STATION
- K KEY STATION

CCTV SYSTEM

- CCTV CAMERA FIXED POSITION
- CCTV CAMERA ROTATING
- CCTV CCTV MONITOR
- CCTV CCTV MONITOR

LOW VOLTAGE ELECTRICAL DEVICES

- CB -CIRCUIT BREAKER SWITCH
- UF -UNFUSED DISCONNECT SWITCH
- F -FUSED DISCONNECT SWITCH
- M -MOTOR STARTER MANUAL
- M -MOTOR STARTER MAGNETIC
- CBM -MOTOR STARTER MAG. COMBINATION C.B. SW.
- FM -MOTOR STARTER MAG. COMBINATION FUSED D.S.
- PS -PUSHBUTTON SW. EMERG. STOP
- PS -PUSHBUTTON SW. STOP/START
- PS -PUSHBUTTON STATION
- IS -SELECTOR SWITCH
- FS -FLOAT SWITCH
- LI -LEVEL SWITCH
- BI -BIN LEVEL SWITCH
- LS -LIMIT SWITCH
- PS -PRESSURE SWITCH
- PE -ELECTRICAL/PNEUMATIC SWITCH
- PT --PRESSURE TRANSMITTER
- SV -SOLENOID VALVE
- T -THERMOSTAT
- TS -TEMPERATURE SWITCH
- B-HTR BASEBOARD HEATER
- C-HTR CEILING HEATER
- F-W WALL HEATER WITH FAN
- BUH BLOWER UNIT HEATER
- F-W FAN WALL MOUNT
- F-C FAN CEILING MOUNT
- EMV ELECTRIC MOTOR VERTICAL MTD
- EMH ELECTRIC MOTOR HORIZONTAL MTD
- U -UTILITY METER

CONTROL ELECTRICAL DEVICES

- S SPST SWITCH
- S³ -3 WAY SWITCH; LETTER INDICATES LIGHTING CIRCUIT
- S^{WP} SPST WEATHERPROOF SWITCH
- S^M -MOTOR SWITCH, NONFUSED
- OS WALL MOUNTED OCCUPANCY SENSOR
- OS CEILING MOUNTED OCCUPANCY SENSOR
- D DUPLEX RECEPTACLE
- S SINGLE RECEPTACLE
- D^{WP} DUPLEX WEATHERPROOF RECEPTACLE
- D^{GFI} DUPLEX GROUND FAULT INTERRUPTER RECEPT
- C CLOCK RECEPTACLE
- F FLOOR RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE

ELECTRICAL LIGHTING FIXTURES

- SURFACE/PENDANT FLUORESCENT
- SURFACE/PENDANT FLUORESCENT, NIGHT LIGHT / EMERGENCY
- RECESSED FLUORESCENT
- RECESSED FLUORESCENT, NIGHT LIGHT / EMERGENCY
- LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- LIGHT FIXTURE SURFACE WALL MOUNT
- LIGHT FIXTURE RECESSED CEILING MOUNT
- LIGHT FIXTURE RECESSED WALL MOUNT
- HAZARD LIGHT FIXTURE CEILING MOUNT
- EXIT LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- EXIT LIGHT FIXTURE SURFACE WALL MOUNT
- EXIT LIGHT FIXTURE RECESSED WALL MOUNT
- EMERGENCY LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- EMERGENCY LIGHT FIXTURE SURFACE WALL MOUNT
- EMERGENCY LIGHT FIXTURE RECESSED CEILING MOUNT
- EMERGENCY LIGHT FIXTURE RECESSED WALL MOUNT
- EMERGENCY LIGHTING UNIT, 1 HEAD
- EMERGENCY LIGHTING UNIT, 2 HEAD
- EMERGENCY LIGHTING UNIT, 3 HEAD
- SURFACE MTD. DISTR. PANELBOARD
- FLUSH MTD. DISTR. PANELBOARD

POWER DISTRIBUTION/GROUNDING/ROADWAY LIGHTING

- O POLE CONCRETE
- POLE WOOD
- ◁ POLE MOUNTED TRANSFORMER
- ← DOWN GUY
- ←○ SIDEWALK GUY
- M MANHOLE
- H HANDHOLE
- V VAULT
- S PAD MOUNTED SWITCH
- T TRANSFORMER VAULT
- ▲ PAD MOUNTED TRANSFORMER
- GROUND ROD
- GROUND ROD WITH ACCESS BOX
- GROUND CONNECTION EXOTHERMIC
- GROUND CONNECTION MECHANICAL BOLTED
- ▲ GROUND CONNECTION TO PIPE RACK
- ←○ GROUND COIL (PIGTAIL) 5'0" (1.5M)
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 4'
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 6'
- LF-1 STREET LIGHT & BRACKET, 1 FIXTURE
- LF-1 STREET LIGHT & BRACKET, 2 FIXTURE
- LF-1 STREET LIGHT & BRACKET, 3 FIXTURE
- LF-1 STREET LIGHT & BRACKET, 4 FIXTURE

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
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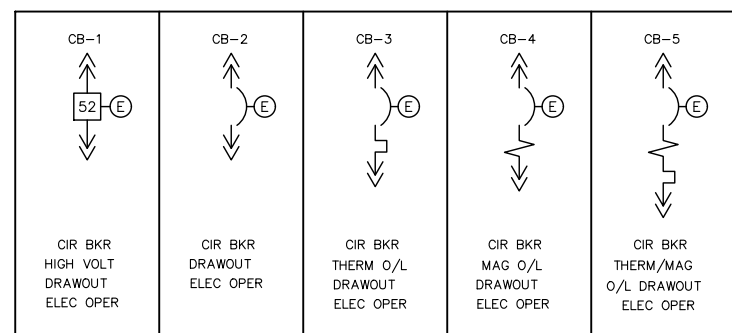
CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

ELECTRICAL STANDARD SYMBOLS 1

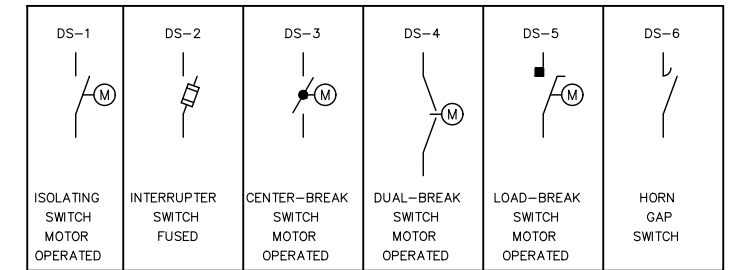
DESIGNED	M. SKELTON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

DRAWING	GE002
SHEET	----OF 19
SCALE:	AS NOTED

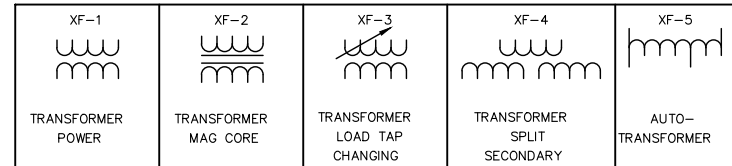
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 JOB NO. 13-108



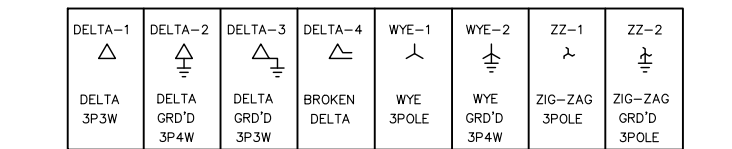
CIRCUIT BREAKER SYMBOLS



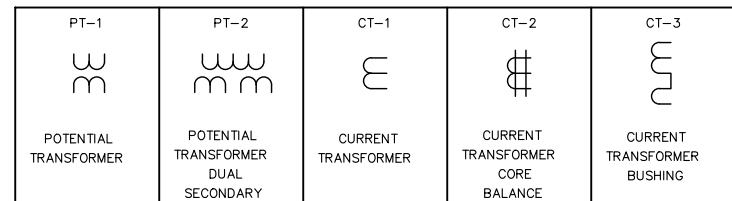
H.V. ISOLATING SWITCHES



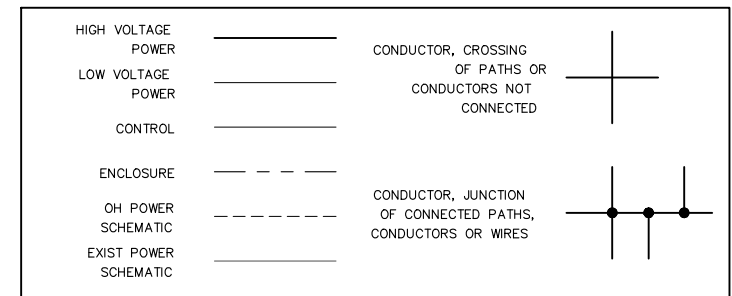
POWER TRANSFORMER SYMBOLS



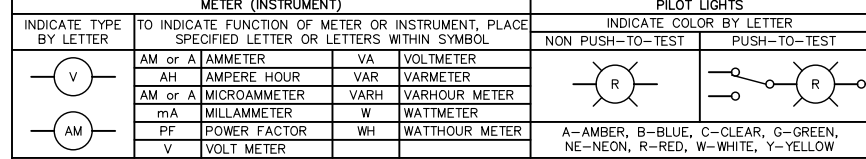
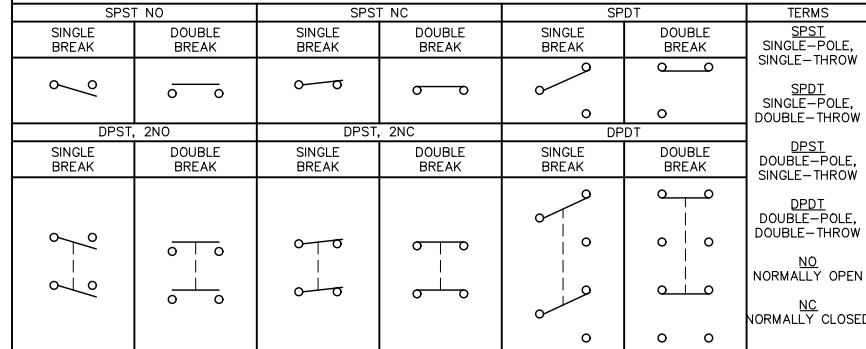
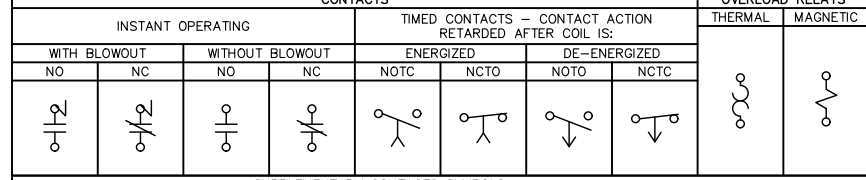
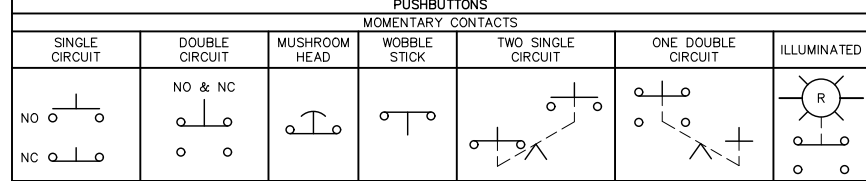
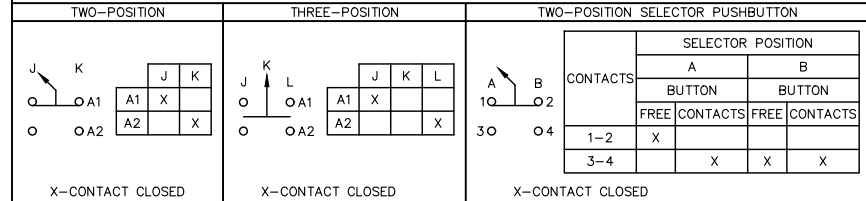
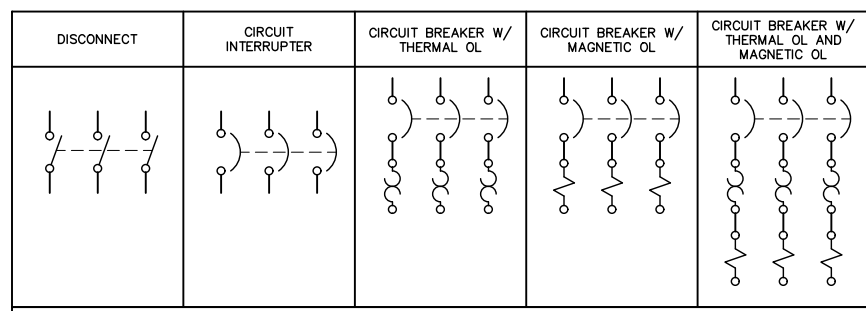
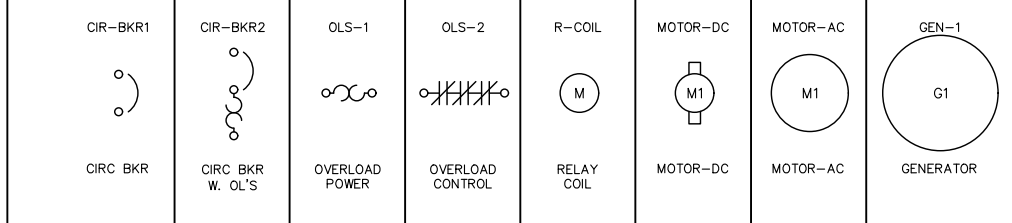
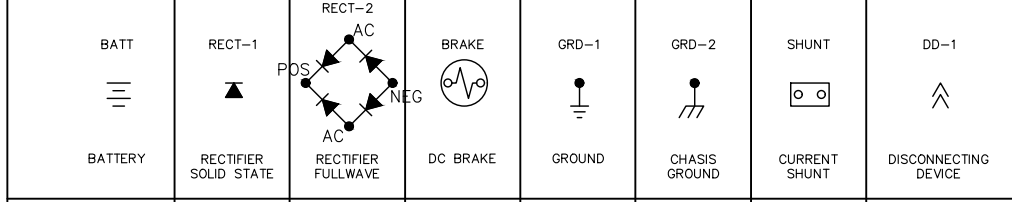
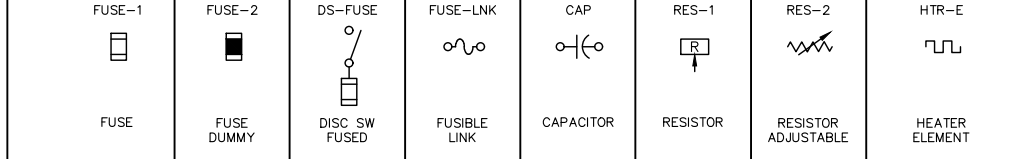
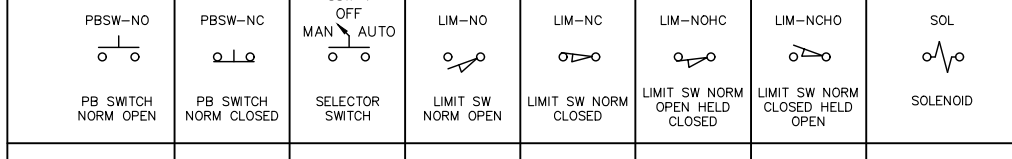
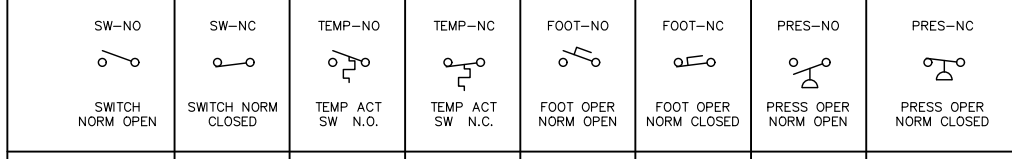
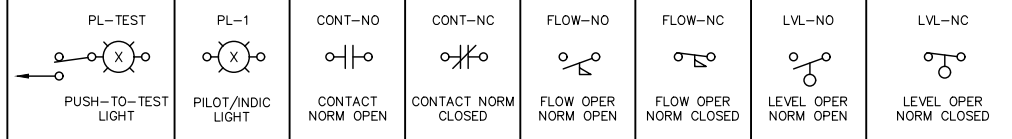
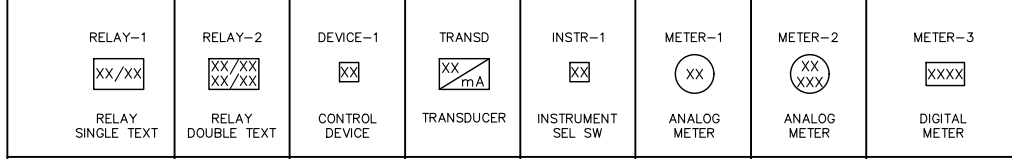
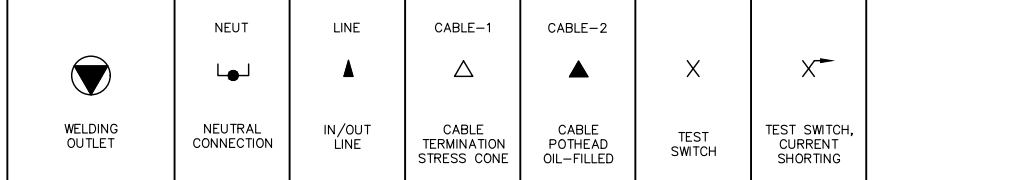
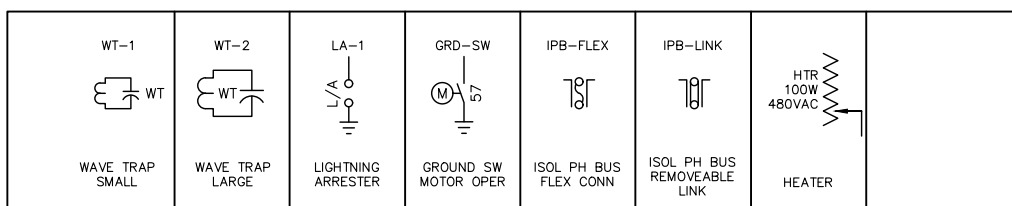
TRANSFORMER WINDING CONNECTIONS



POTENTIAL/CURRENT TRANSFORMER SYMBOLS



LINETYPE AND CONNECTION SYMBOLS



WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

ELECTRICAL STANDARD SYMBOLS 2

DESIGNED M. SKELTON
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
GE003
 SHEET -- OF 19
 SCALE: AS NOTED

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.01 Internal Design\6.0 Plans and Specs\6.3 CAD\GE003.dwg Plot date: Aug 14, 2023 10:05pm
 JOB NO. 13-108

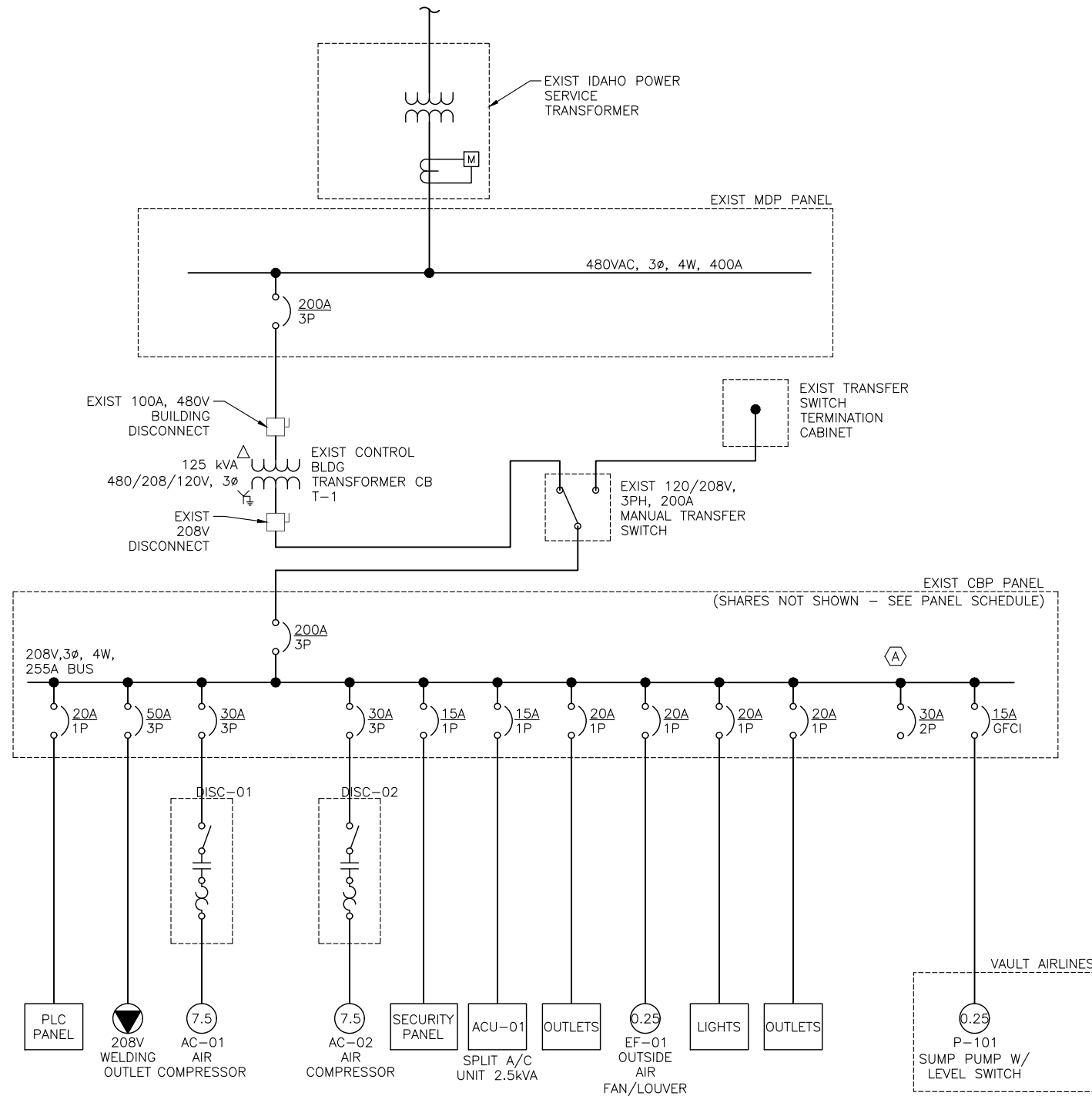
SHEET KEY NOTES:

A DE-ENERGIZE AND DEMOLISH WIRING FROM BREAKER PREVIOUSLY FEEDING VAULT HEATER.

SHEET NOTES:

1. EXISTING EQUIPMENT SHOWN ON THIS DRAWING PROVIDED BASED ON RECORD DRAWINGS FROM AUGUST 30, 2019. VERIFY FIELD CONDITIONS PRIOR TO PERFORMING MODIFICATIONS.

PANEL SCHEDULE														
CBP PANELBOARD		LOCATION: CONTROL BUILDING					PROJECT: BOISE WHITEWATER PARK							
120/208V, 3PH, 4W		225A Bus		200A MCB	NEMA 1			SOURCE OF SUPPLY: TRANSFORMER CB T-1 VIA MANUAL TRANSFER SWITCH						
MOUNTING: SURFACE		AVAIL. FAULT: 24 kA RMS			DEMAND LOAD: 114.3 A			DATE: 08/11/2023		NEUTRAL: ISOLATED				
CKT	DESCRIPTION	LOAD VA	LOAD TYPE	LOAD AMP	CB AMP	CB POLE	PHASE	CB POLE	CB AMP	LOAD AMP	LOAD TYPE	LOAD VA	DESCRIPTION	CKT
1	SUMP PUMP IN VAULT (P-101) (GFCI)	667	M	5.6	15	1	A	1	20	3.0	R	360	RECEPTACLES	2
3	SPARE			0.0	30	2	B	1	20	1.5	R	180	RECEPTACLES	4
5							C	1	20	5.6	M	667	OUTSIDE AIR FAN (EF-01)/LOUVER	6
7	AIR COMPRESSOR (AC-01)	2,880	LM	24.0	30	3	A	1	20	2.9	L	350	LIGHTS	8
9							B	1	15	0.0			SPARE	10
11							C	1	15	5.0	C	600	SECURITY PANEL	12
13	AIR COMPRESSOR (AC-02)	2,880	M	24.0	30	3	A	1	20	8.3	C	1,000	PLC PANEL (CP-03)	14
15							B	1	15	0.0			SPARE	16
17							C	1	15	0.0			SPARE	18
19	208V WELDING OUTLET	4,800	G	40.0	50	3	A	2	15	12.0	C	1,248	SPLIT A/C UNIT	20
21							B				C	1,248		22
23							C							SPARE
25	SPARE			0.0	60	3	A	2	40	0.0			SPARE	26
27							B						SPARE	28
29							C						SPARE	30
31	SPARE			0.0	40	3	A	3	60	0.0			SPARE	32
33							B						SPARE	34
35							C						SPARE	36
37	SPARE			0.0	100	3	A	3	100	0.0			SPARE	38
39							B						SPARE	40
41							C						SPARE	42



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

ONE LINE DIAGRAM

DESIGNED M. SKELTON
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
E001
 SHEET 15 OF 19
 SCALE: AS NOTED

Path: C:\Users\WoodR\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\E001.dwg Plot date: Aug 14, 2023 10:05pm

CIRCUIT SCHEDULE										
CABLE FIELD ID	CABLE INDEX ID	STATUS	CABLE TYPE	CABLE	VOLTAGE/TYPE	FROM	THROUGH	TO	CONDUIT INDEX ID	DESCRIPTION
	C001	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-1	R003, R011	SIGNAL FOR GATE INCLINOMETER 1
	C002	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-2	R003, R012	SIGNAL FOR GATE INCLINOMETER 2
	C003	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-3	R003, R013	SIGNAL FOR GATE INCLINOMETER 3
	C004	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-4	R003, R014	SIGNAL FOR GATE INCLINOMETER 4
	C005	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-5A	R003, R015	SIGNAL FOR GATE INCLINOMETER 5A
	C006	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-5B	R003, R015	SIGNAL FOR GATE INCLINOMETER 5B
	C007	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-6A	R003, R016	SIGNAL FOR GATE INCLINOMETER 6A
	C008	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-6B	R003, R016	SIGNAL FOR GATE INCLINOMETER 6B
	C009	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-7	R003, R017	SIGNAL FOR GATE INCLINOMETER 7
	C010	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-8	R003, R018	SIGNAL FOR GATE INCLINOMETER 8
	C011	EXIST	POWER	2#12, 1#12G	120V, 1PH	CBP	CP-03, JB2 IN VAULT	P-101	R001, R002, R009	POWER FOR VAULT SUMP PUMP
	C012	NEW	SIGNAL	TSP	4-20mA	CP-03	JB3 IN VAULT, EXIST STILLING WELL	LE-1	R003, R007, R008	SIGNAL FOR WATER LEVEL SENSOR 1
	C013	NEW	SIGNAL	TSP	4-20mA	CP-03	JB3 IN VAULT, EXIST STILLING WELL	LE-2	R003, R007, R008	SIGNAL FOR WATER LEVEL SENSOR 2

RACEWAY SCHEDULE									
CONDUIT FIELD ID	CONDUIT INDEX ID	STATUS	CONDUIT TYPE	CONDUIT SIZE	FROM	THROUGH	TO	CIRCUITS	DESCRIPTION
	R001	EXIST	PVC	2-1/2"C	CBP	-	CP-03	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R002	EXIST	PVC	2-1/2"C	CP-03	-	JB2 IN VAULT	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R003	EXIST	PVC	2-1/2"C	CP-03	-	JB3 IN VAULT	C001 THRU C010, C012, C013	EXIST SIGNAL CONDUIT FOR INCLINOMETERS & LEVEL SENSORS
	R004	EXIST	PVC	2"C	CP-03	-	JB4 IN VAULT	-	EXIST SPARE TO JB4
	R005	EXIST	PVC	2"C	CP-03	JB1 IN VAULT	PB2	-	EXIST SPARE TO WEST SHORE PB2
	R006	EXIST	PVC	2"C	CP-03	JB1 IN VAULT	PB2	-	EXIST SPARE TO WEST SHORE PB2
	R007	EXIST	RGS	1"C	JB3 IN VAULT	-	EXIST STILLING WELL	C012, C013	EXIST SIGNAL CONDUIT FOR UPSTREAM LEVEL SENSORS
	R008	NEW	RGS	1"C	EXIST STILLING WELL	-	UPSTREAM STILLING WELL	C012, C013	SIGNAL CONDUIT FOR UPSTREAM LEVEL SENSORS
	R009	EXIST	RGS	1"C	JB2 IN VAULT	-	P-101	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R011	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-1	C001	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 1
	R012	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-2	C002	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 2
	R013	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-3	C003	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 3
	R014	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-4	C004	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 4
	R015	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-5A/5B	C005, C006	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETERS 5A & 5B
	R016	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-6A/5B	C007, C008	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETERS 6A & 6B
	R017	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-7	C009	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 7
	R018	NEW	RGS/PVC	1"C	JB3 IN VAULT	-	ZT-8	C010	SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 8
	R019	EXIST	RGS	1"C	JB3 IN VAULT	-	EXIST STILLING WELL	-	EXIST SPARE CONDUIT TO EXIST STILLING WELL

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

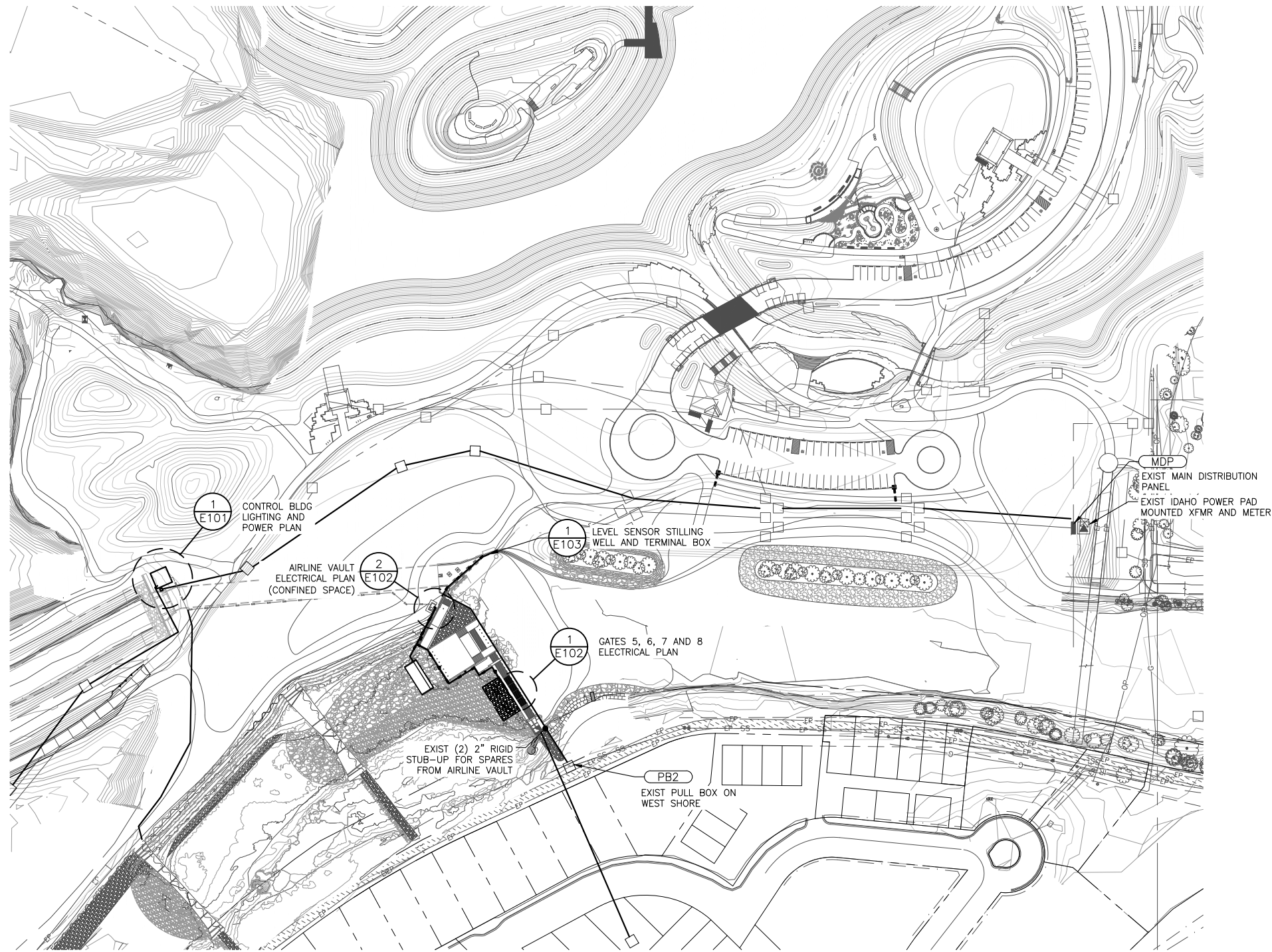
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

RACEWAY AND CIRCUIT SCHEDULES

DESIGNED M. SKELTON
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
E002
 SHEET ---- OF 19
 SCALE: AS NOTED



- SHEET GENERAL NOTES:**
1. REFER TO CIVIL PLANS FOR COORDINATION WITH OTHER EXISTING UTILITIES ON SITE AND FOR INSTRUCTIONS REGARDING LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES.
 2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN ON CIVIL PLANS IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS REGARDING UNDERGROUND FACILITIES DAMAGE PREVENTION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED AS A RESULT OF SITE WORK. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES OR LOCATING SERVICES FOR EXACT UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO DIGGING.
 3. PRESERVE AND PROTECT ALL FACILITIES, STRUCTURES, AND LANDSCAPING OUTSIDE OF THE CONSTRUCTION AREA UNLESS NOTED OTHERWISE.
 4. EXISTING EQUIPMENT, DEVICES, AND CONNECTIONS WHERE SHOWN TO REMAIN ARE TO BE PROTECTED DURING ENTIRE CONSTRUCTION PROCESS. PROTECT ALL CONNECTIONS TO KEEP EXISTING EQUIPMENT ACTIVE. WHERE CONNECTIONS ARE DISRUPTED DUE TO CONSTRUCTION ACTIVITIES, REPAIR AND REPLACE DAMAGED CONNECTIONS.
 5. CONTRACTOR TO PROVIDE THE OWNER WITH 24 HOUR NOTICE PRIOR TO DISCONNECTING POWER OR OTHER UTILITIES.
 6. SEE DWG E104 FOR CONDUIT ROUTING PLAN.

ELECTRICAL SITE PLAN
 SCALE: 1" = 80'

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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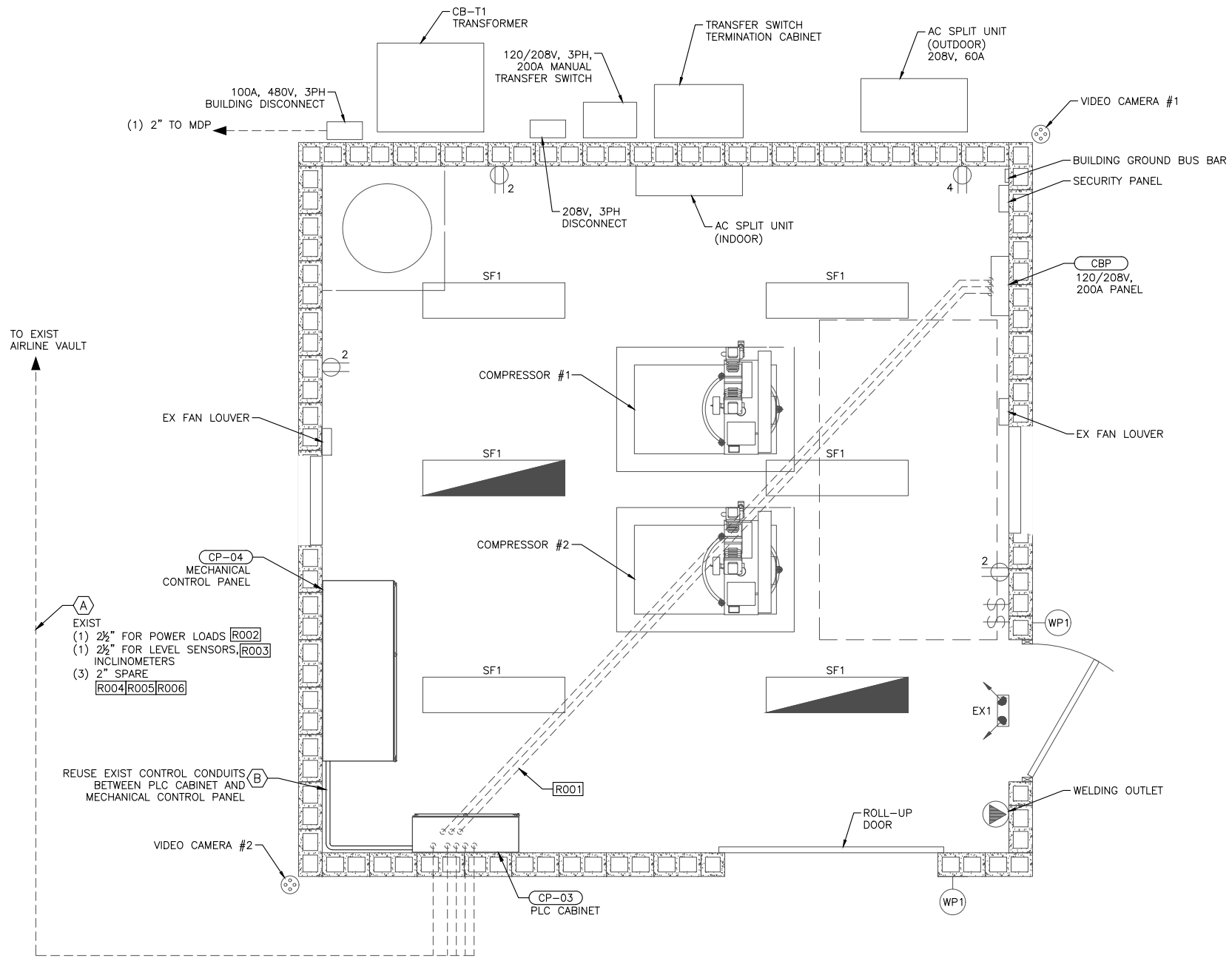
CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

ELECTRICAL SITE PLAN

DESIGNED M. SKELTON
 DRAWN R. WOOD
 CHECKED M. McMILLEN
 ISSUED DATE 08/09/23

DRAWING
E100
 SHEET 16 OF 19
 SCALE: AS NOTED

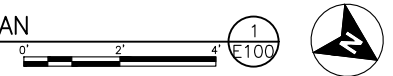
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 JOB NO. 13-108



- SHEET KEY NOTES:**
- A REUSE 2.5" CONTROL CONDUIT TO ROUTE NEW 2/C#16 TWISTED, SHIELDED PAIR INCLINOMETER CABLE FROM PLC CABINET TO AIR LINE VAULT FOR SPILLWAY GATE #5B. PRESERVE SPARE CONDUITS FOR FUTURE USE.
 - B PROVIDE 3#14 FOR NEW GATE INFLATE/DEFLATE SOLENOID VALVES AND 2/C#16 TWISTED, SHIELDED PAIR CABLE FOR NEW GATE PRESSURE TRANSMITTER IN EXISTING CONDUITS.

- SHEET NOTES:**
- 1. UNLESS NOTED OTHERWISE, ALL EQUIPMENT SHOWN ON THIS DRAWING IS EXISTING AND PROVIDED AS FIO BASED ON RECORD DRAWINGS FROM AUGUST 30, 2019.

CONTROL BUILDING LIGHTING AND POWER PLAN
SCALE: 1/2" = 1'-0"



REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

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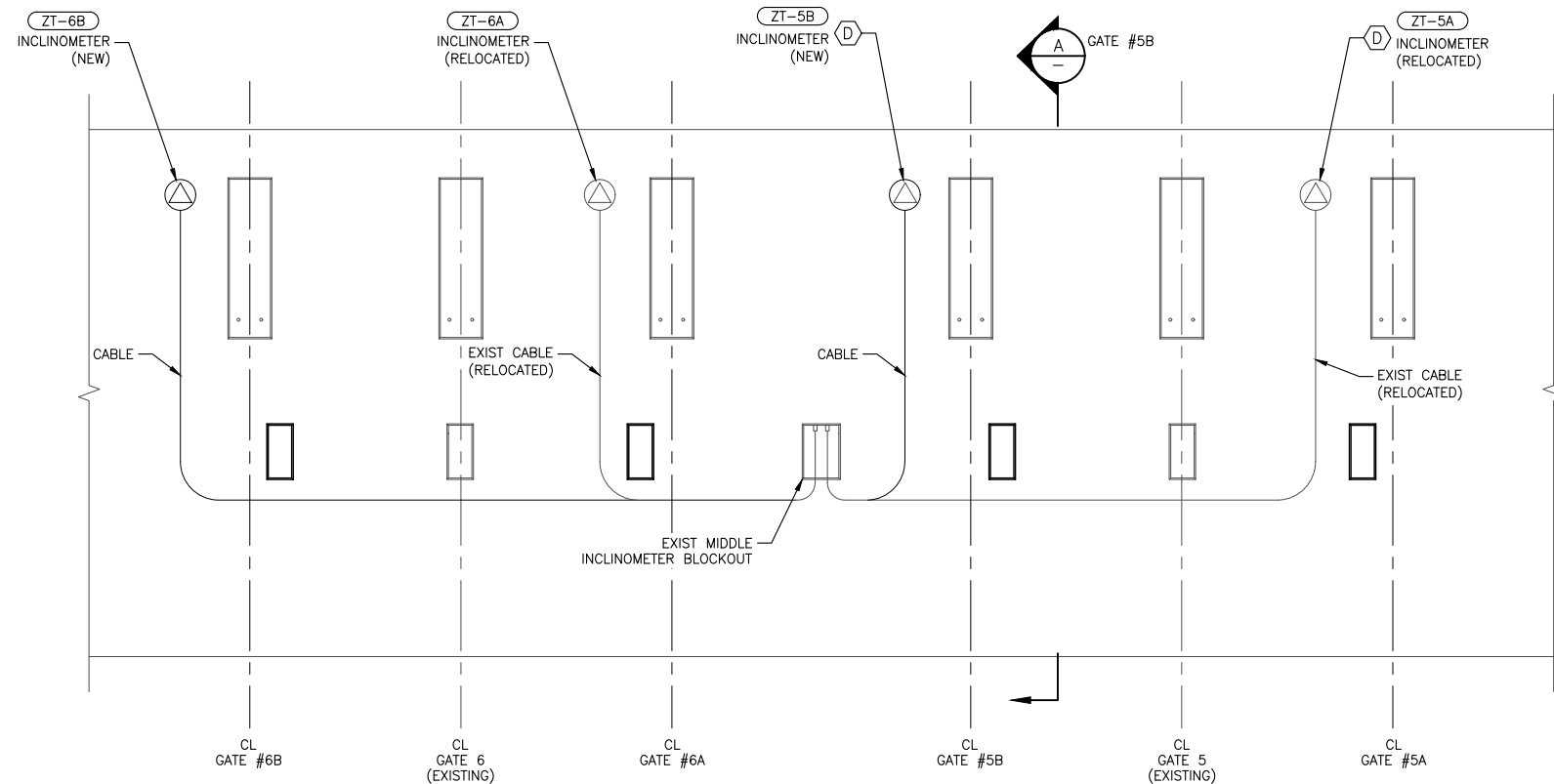
CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

CONTROL BUILDING LIGHTING AND POWER PLAN

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

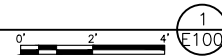
E101
SHEET 17 OF 19
SCALE: AS NOTED

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\E101.dwg Plot date: Aug 14, 2023 10:05pm

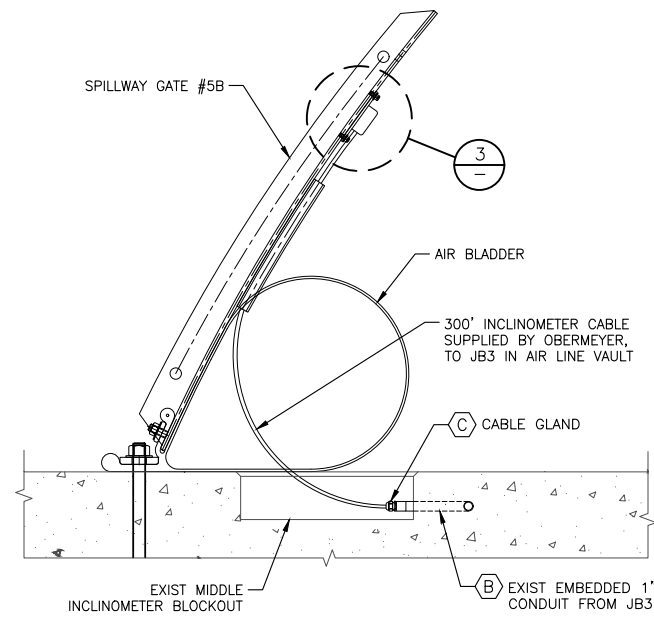


GATES 5A, 5B, 6A AND 6B ELECTRICAL PLAN

SCALE: 3/8" = 1'-0"

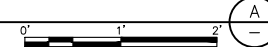


1
E100

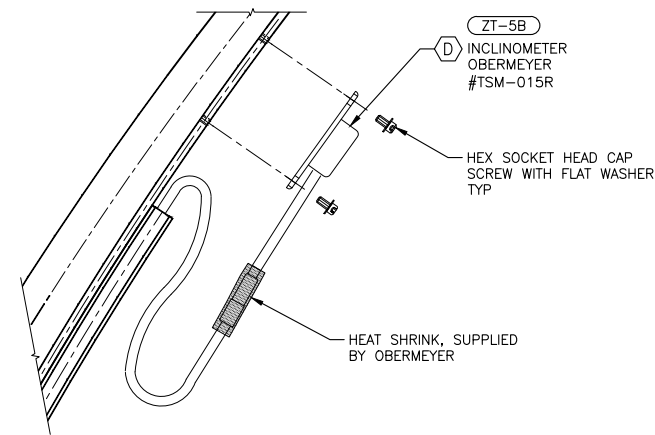


GATE #5B SECTION

SCALE: 1" = 1'-0"



A



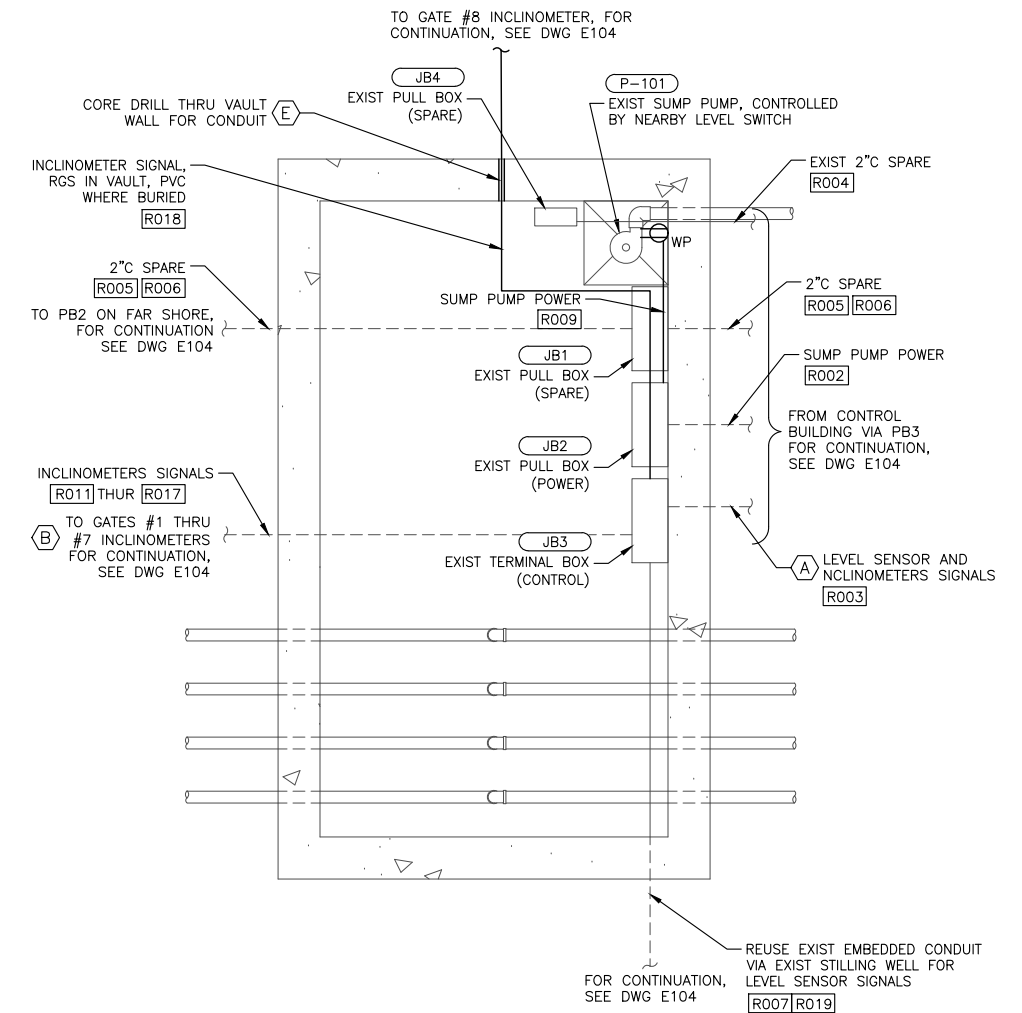
INCLINOMETER DETAIL

SCALE: NTS

3

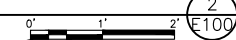
SHEET KEY NOTES:

- A REUSE EXISTING 2.5" CONDUIT FROM BUILDING TO EXISTING JB3 FOR LEVEL SENSOR AND INCLINOMETER CIRCUITS. PROVIDE HEAT SHRINK BUTT SPLICES WITHIN JB3 TO SPLICE INCLINOMETER CABLE FROM GATES TO SIGNAL WIRING FROM BUILDING.
- B REUSE EXISTING 1" CONDUITS TO ROUTE GATES #5A, #5B, #6A, AND #6B INCLINOMETER CABLES FROM JB3 TO GATES #5 & #6 MIDDLE INCLINOMETER BLOCKOUT.
- C REPLACE EXISTING GATES #5 & #6 CABLE GLANDS WITH TWO-HOLE CABLE GLANDS AND PULL BOTH EXISTING AND NEW INCLINOMETER CABLES THROUGH IT. SEAL CABLE GLAND AND CONDUIT WITH HEAT SHRINK.
- D RELOCATE EXISTING GATES #5 & #6 INCLINOMETERS TO GATES #5A & #6A. PROVIDE NEW INCLINOMETER ON GATES #5B & #6B.
- E FILL VOID AROUND CONDUIT WITH GROUT. PROVIDE TRANSITION TO PVC AND TWO-PIECE PVC EXPANSION FITTING ON OUTSIDE OF VAULT.



AIRLINE VAULT ELECTRICAL PLAN

SCALE: 3/4" = 1'-0"



2
E100

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE
 J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
 BOISE WHITEWATER PARK

VAULT ELECTRICAL PLAN
 AND INCLINOMETER DETAILS

DESIGNED	M. SKELTON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

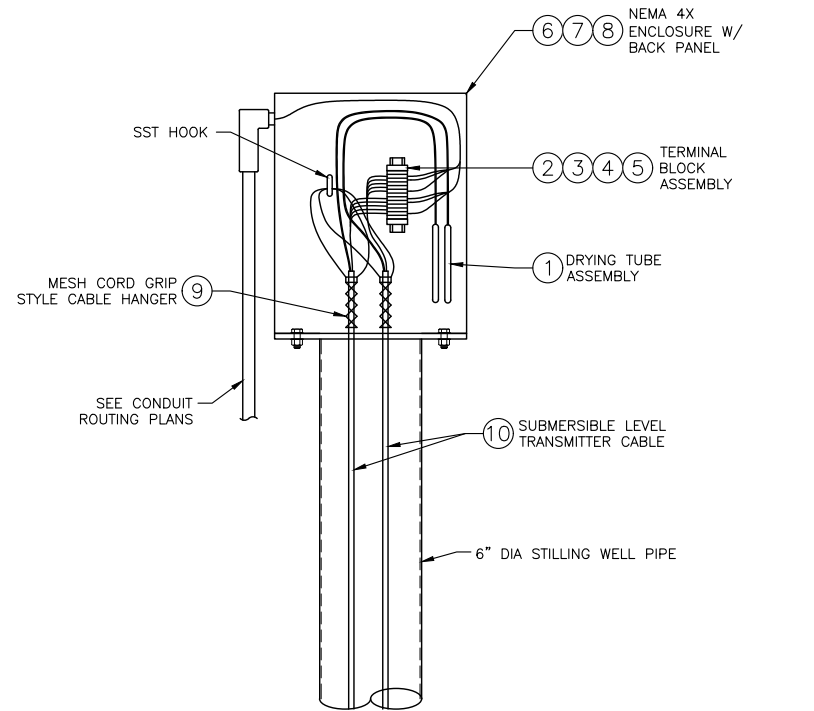
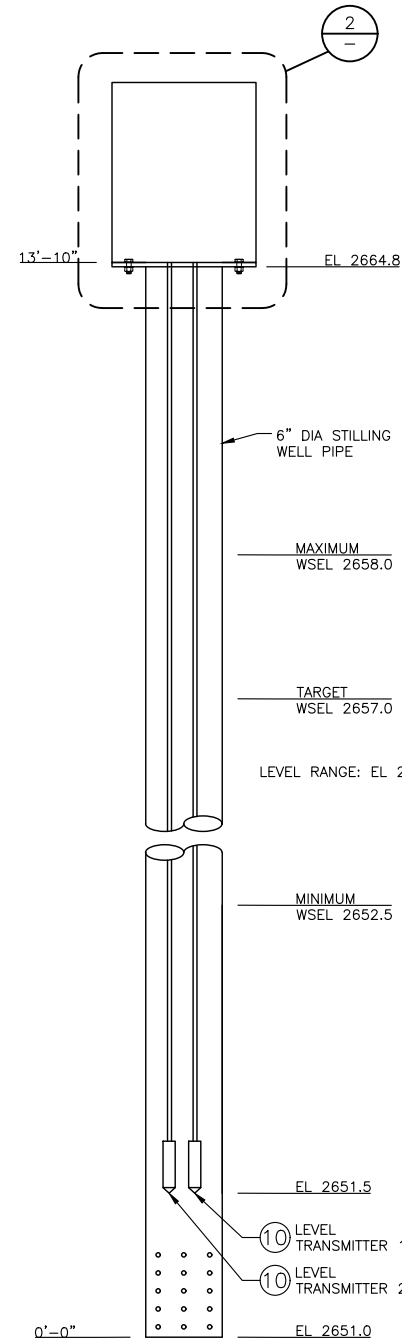
DRAWING

E102

SHEET 18 OF 19

SCALE: AS NOTED

Path: C:\Users\WoodRoo\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\E102.dwg Plot date: Aug 14, 2023 10:05pm



DETAIL
SCALE: NTS

SHEET NOTES:

1. SUPPORT LEVEL SENSOR CABLES WITH MANUFACTURER PROVIDED/APPROVED STRAIN RELIEF/PRESSURE CONNECTORS FROM KELLER AMERICA.
2. COIL EXTRA CABLE FOR SENSOR IN ENCLOSURE.
3. ENSURE STILLING WELL, ENCLOSURE, AND CONDUITS ARE BONDED TO GROUND ACCORDING TO NEC. USE GROUNDING BUSHINGS ON CONDUIT ENTRY TO ENCLOSURE.
4. ATTACH DRYING TUBES TO LEVEL SENSOR CABLE VENT TUBE.

MATERIAL LIST				
ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.
1	2	DRYING TUBES	KELLER AMERICA	N.A.
2	12	UNIVERSAL TERMINAL BLOCKS, UKFN, 30A	PHOENIX	3004362
3	2	END COVER FOR UK4	PHOENIX	3003020
4	2	END BRACKETS, TYPE E/UK	PHOENIX	1201442
5	1	DIN RAIL STYLE MOUNTING TRACK	PHOENIX	1201730
6	1	NEMA 4X SS ENCLOSURE 16Hx12Wx8D	HOFFMAN	CSD16128SS
7	1	BACK PANEL FOR 16Hx12W	HOFFMAN	CP1612G
8	1	PADLOCK HANDLE	HOFFMAN	CWHPTO
9	2	SINGLE EYE MESH CORD GRIP STYLE CABLE HANGER	KELLER AMERICA	N.A.
10	2	INDUSTRIAL SUBMERSIBLE PRESSURE TRANSDUCER, 4-20mA OUTPUT, RANGE AS SHOWN	KELLER AMERICA	ACCULEVEL SERIES

WATER LEVEL SENSORS INSTALLATION DETAIL
SCALE: NTS

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

WATER LEVEL SENSORS
ELECTRICAL DETAILS

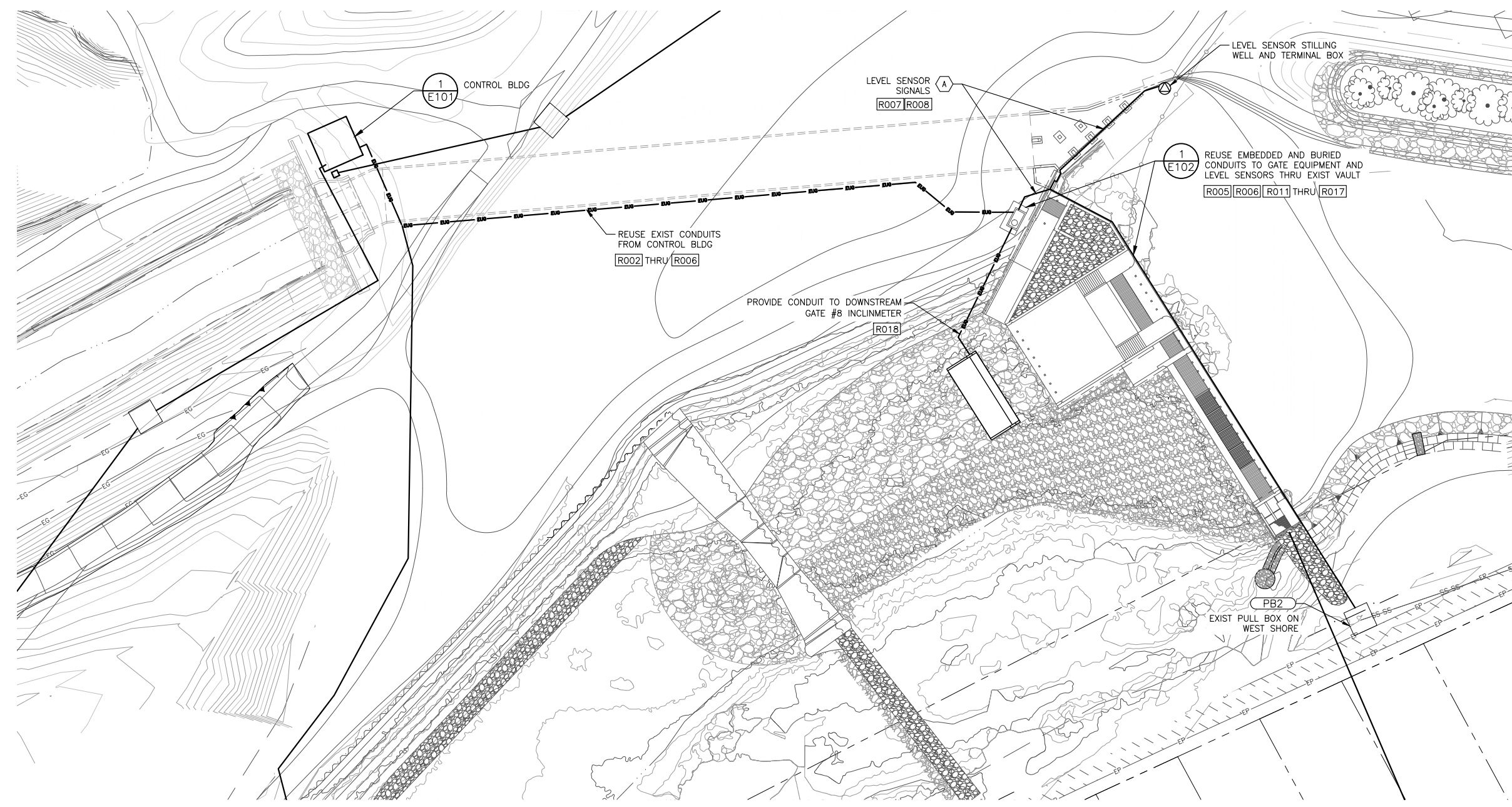
DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 08/09/23

DRAWING
E103
SHEET ---- OF 19
SCALE: AS NOTED

Path: C:\Users\WoodRoa\Box\MCM Projects\City of Boise\Boise River Water Park Design-Build\14.0 McLaughlin Modifications\14.11 Internal Design\6.0 Plans and Specs\6.3 CAD\E103.dwg Plot date: Aug 14, 2023 10:05pm

SHEET KEY NOTES:

A REUSE CONDUITS FROM VAULT TO EXIST STILLING WELL, THEN ROUTE OUT OF STILLING WELL TO EXPOSED ON RIVER SIDE OF CONCRETE. ROUTE CONDUIT ON UNDERSIDE OF EXISTING HANDRAIL TO NEW STILLING WELL. PAINT EXPOSED CONDUIT TO MATCH HANDRAIL.



SITE CONDUIT ROUTING PLAN
 SCALE: 1" = 30'

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
A	11/18/22	MDM	SUBMITTAL DRAWINGS

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

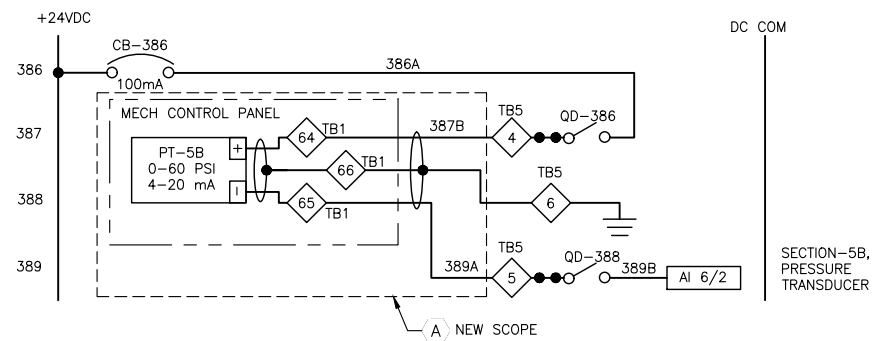
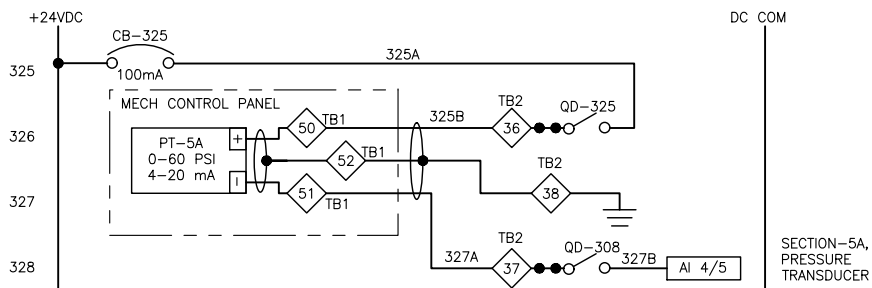
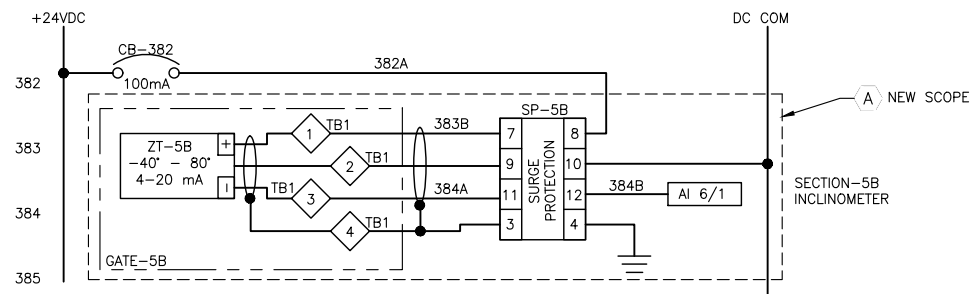
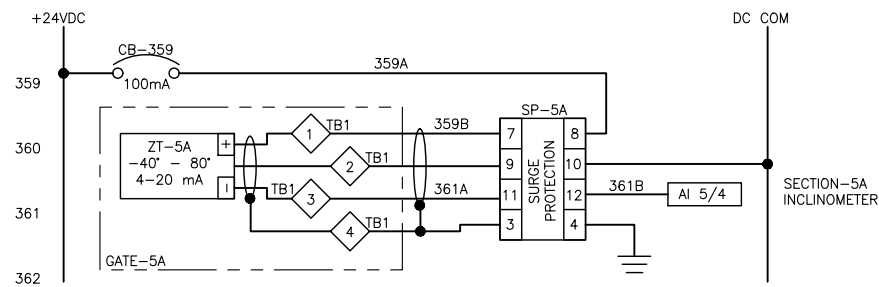
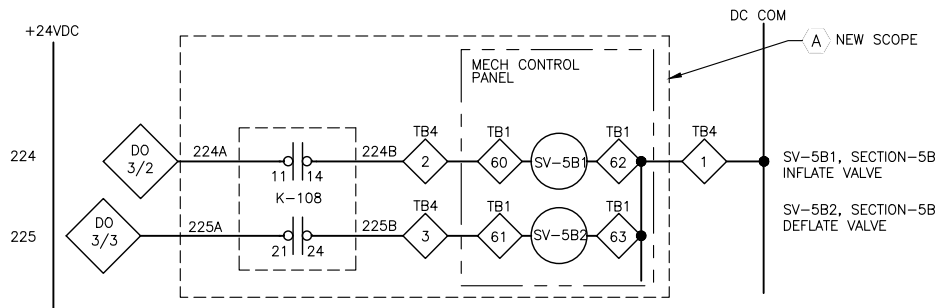
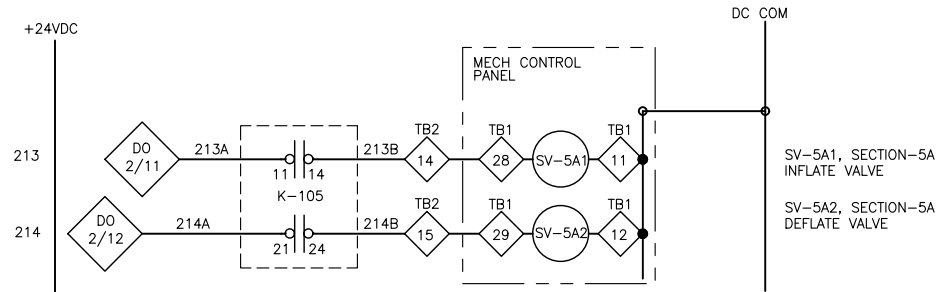
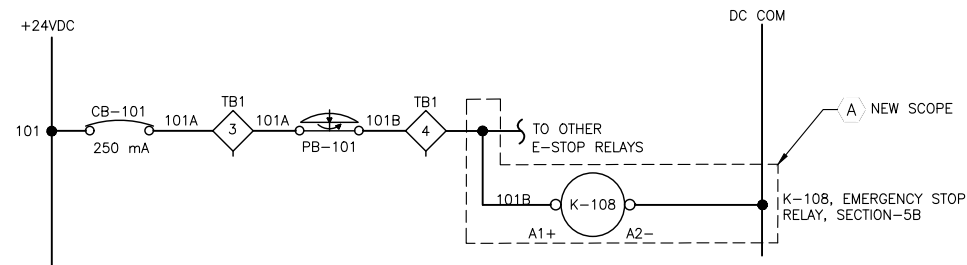


CITY OF BOISE	
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION BOISE WHITEWATER PARK	
SITE CONDUIT ROUTING PLAN	

DESIGNED	M. SKELTON
DRAWN	R. WOOD
CHECKED	M. McMILLEN
ISSUED DATE	08/09/23

DRAWING	E104
SHEET	--- OF 19
SCALE:	AS NOTED

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SHEET KEY NOTES:

A PROVIDE NEW MATERIALS AND WIRING SHOWN TO MATCH EXISTING SIMILAR COMPONENTS.

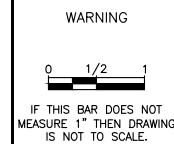
SHEET NOTES:

- PROVIDE THE FOLLOWING CHANGES TO THE PLC AND HMI PROGRAMMING:
 - REVISE SIGNAL AND CONTROL LOOP FOR GATE #5 TO LOOP #5A.
 - ADD SIGNALS FOR THE NEW INCLINOMETER ZT-5B AND PRESSURE TRANSMITTER PT-5B.
 - ADD CONTROL LOOP FUNCTIONALITY FOR GATE #5B SIMILAR TO GATE #5A.
 - MODIFY GATES #6 & #7 CONTROL LOOPS SUCH THAT BOTH GATES OPERATE SIMULTANEOUSLY ON A SINGLE POSITION SIGNAL AND THE OTHER POSITION SIGNAL IS INDICATION ONLY.
- GATE #6 CONTROL MODIFICATIONS TO BE DEVELOPED IN FUTURE DELIVERABLE.

GATE #5 MODIFICATION DIAGRAM

SCALE: NTS

REV	DATE	BY	DESCRIPTION
B	08/09/23	MDM	SUBMITTAL DRAWINGS
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CITY OF BOISE	
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION BOISE WHITEWATER PARK	
GATE #5 MODIFICATION DIAGRAM	

DESIGNED	M. SKELTON	E105
DRAWN	R. WOOD	
CHECKED	M. McMILLEN	
ISSUED DATE	08/09/23	
DRAWING		SHEET 19 OF 19
SCALE: AS NOTED		

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JOB NO. 13-108