SUN PEAK HOA

POOL COMMON AREA

CONSTRUCTION PLANS

PARK CITY
VICINITY MAP

SHEET INDEX

STATE OF UTAH
CARL N. BERG
LICENSED LANDSCAPE ARCHITECT
6367790

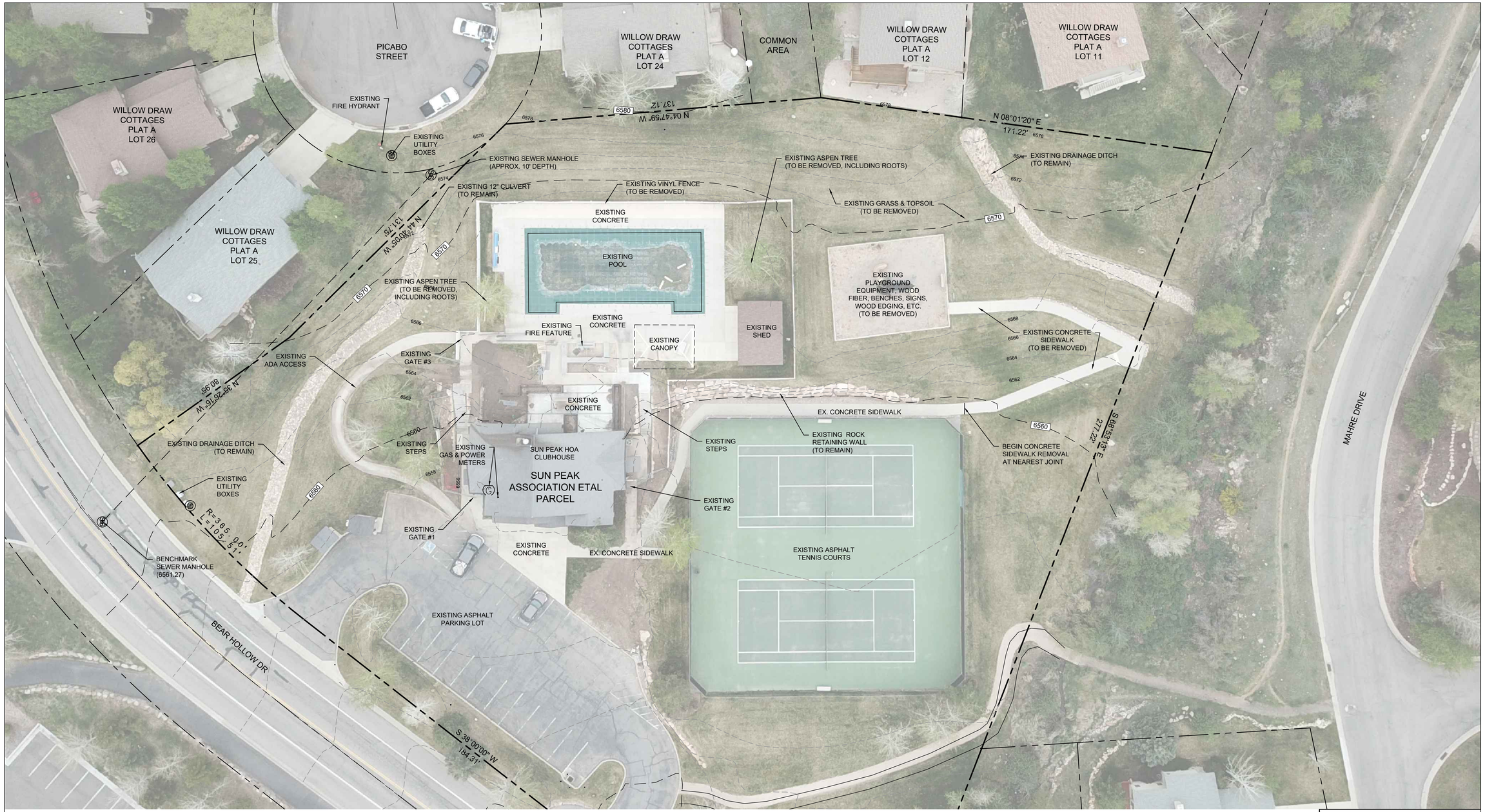
01 DEC 2021

SUN PEAK HOA
POOL COMMON AREA

COVER SHEET

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

DESIGN BY: CNB DRAWN BY: CNB	DATE: 01 DEC 2021 REV:	SHEET L00



Scale 1" = 20'

Scale 1" = 40' for 11x17

STATE OF UTAH
CARLYN BERG
7162790
Licensed Landscape Architect

01 DEC 2021

SUN PEAK HOA

POOL COMMON AREA

EXISTING CONDITIONS & DEMOLITION PLAN

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L01

PICABO STREET

183.88'

23.54'

28.95'

ROCK RETAINING WALLS

12x12 PERGOLA

12x12 PERGOLA

12x12 PERGOLA

12x12 PERGOLA

18.72'

8.74'

14.80'

9.50'

18.04'

9.50'

11.00'

12.60'

3.50'

5.00'

14.73'

6.00'

25.50'

3.00'

13.52'

5.00'

7.49'

6.00'

12.00'

4.52'

EXISTING CONCRETE

13.44'

4.00'

6.00'

32.59'

4.50'

34.83'

16.06'

26.69'

10.00'

16x18 PERGOLA

16x18 PERGOLA

PROPOSED POOL (SEE POOL PLANS)

12.00'

14.00'

4.50'

29.83'

4.00'

49.49'

10.00'

48.00'

10.00'

34.00'

70.94'

17.77'

EXISTING POOL

10.00'

51.36'

90.88'

PROPOSED 4' SIDEWALK AT 4.9% (SEE SHEET L04a)

14.48'

6.00'

8.00'

23.44'

16.62'

68

68

PROPOSED SWING GATE #3 (SELF CLOSING & LOCKING WITH PANIC BAR)

12.71'

16x18 PERGOLA

OUTDOOR SHOWER

EXISTING SHED (NEW MECHANICAL ROOM FOR POOL)

16x18 PERGOLA

OUTDOOR KITCHEN

28.10'

8.00'

8.50'

EXISTING FIRE FEATURE

EXISTING CONCRETE

EXISTING CANOPY

BOCCE BALL COURT

8.00'

44.00'

68

68

EXISTING ADA ACCESS

PROPOSED SWING GATE #1 (SELF CLOSING & LOCKING WITH PANIC BAR)

133.66'

68

EXISTING RETAINING WALL

PROPOSED 4' SIDEWALK AT 4.9% (SEE SHEET L04a)

69

EXISTING CHAIN LINK FENCE

43.96'

SUN PEAK HOA CLUBHOUSE

EXISTING SELF CLOSING GATE

PROPOSED SWING GATE #2 (SELF CLOSING & LOCKING WITH PANIC BAR)

EXISTING CHAIN LINK FENCE

LEGEND

- CONCRETE POOL DECK (4,100 SF, INCLUDING 18 STAIR RISERS) SEE SHEET L07 FOR DETAILS
- CONCRETE WALL SEE SHEET L07 FOR DETAILS
- HANDRAILS -STEPS (24 LF) -ADA RAMP (62 LF) SEE SHEET L08 FOR DETAILS
- ROCK RETAINING WALLS SEE GRADING PLAN ON SHEET L04 FOR DETAILS
- (8) TIMBER PERGOLAS (4) 12'x12' - 8" POSTS (INCLUDES 4' CANTILEVER TOWARD POOL DECK AND SLATS ON 3 SIDES) (4) 16'x18' - 8" POSTS, OPEN ON ALL SIDES CONTRACTOR TO PROVIDE PROPOSED SPECS WITH BID
- BOCCE BALL COURT (44'x8') SEE SHEET L07 FOR DETAILS
- CHAIN LINK FENCE (BLACK) (575 LF, INCLUDING 2 SELF CLOSING GATES) SEE SHEET L08 FOR DETAILS

CONTRACTOR NOTES:

CONTRACTOR TO INCLUDE CONSTRUCTION SPECIFICATIONS FOR THE FOLLOWING ITEMS WITH THE BID PROPOSAL:

PERGOLAS
(4) 12'x12' - 8" POSTS (INCLUDES 4' CANTILEVER TOWARD POOL DECK AND SLATS ON 3 SIDES
(4) 16'x18' - 8" POSTS, OPEN ON ALL SIDES

OUTDOOR KITCHEN (TO INCLUDE):
-SINK
-MINI FRIDGE
-GAS BBQ
-COUNTER TOPS
-3 BAR STOOLS

STATE OF UTAH
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01 DEC 2021

N

10' 0 10' 20'

Scale 1" = 10'

Scale 1" = 20' for 11x17

SUN PEAK HOA

POOL COMMON AREA

SITE IMPROVEMENT PLAN

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
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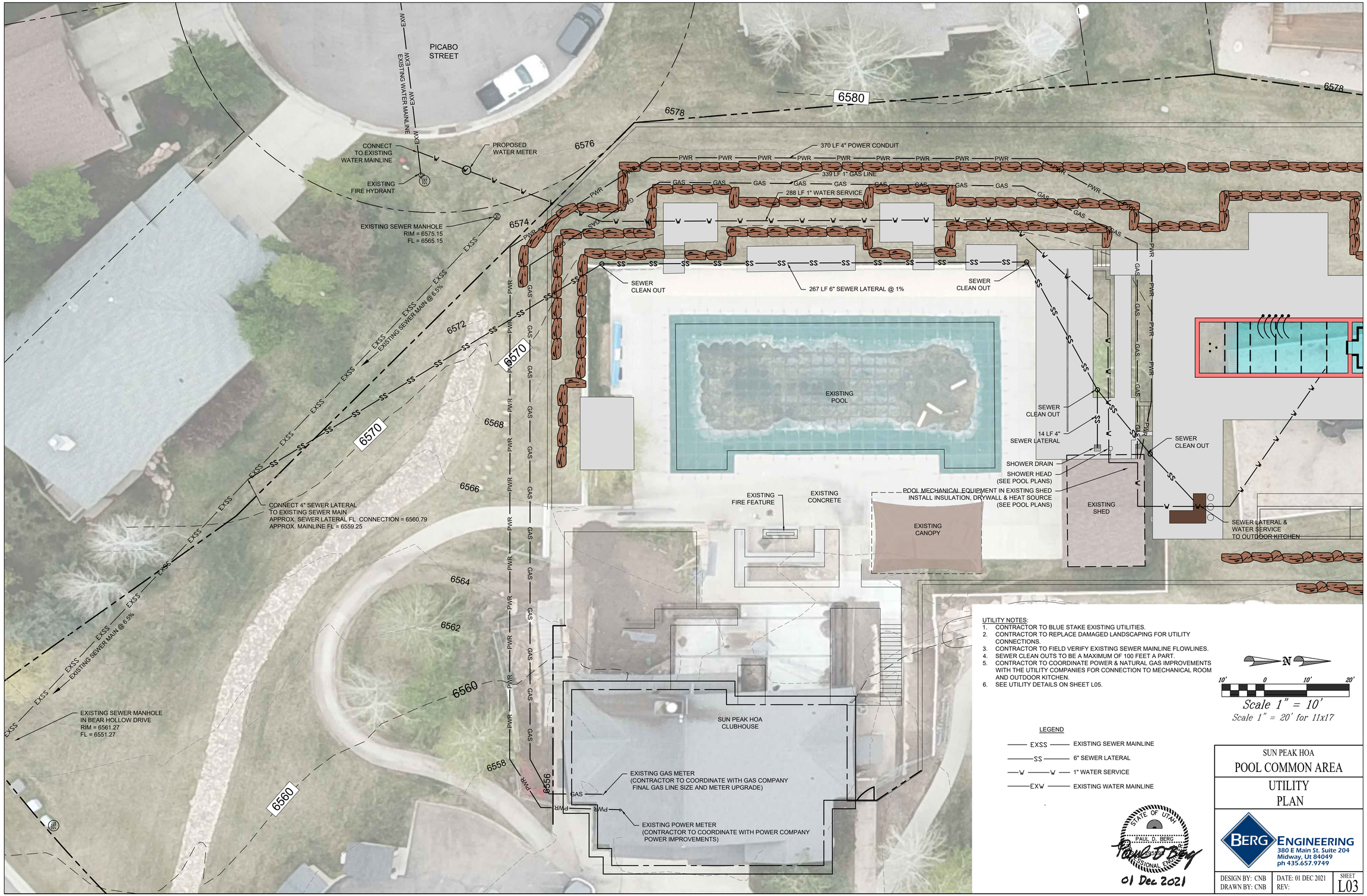
DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L02



UTILITY NOTES:

1. CONTRACTOR TO BLUE STAKE EXISTING UTILITIES.
2. CONTRACTOR TO REPLACE DAMAGED LANDSCAPING FOR UTILITY CONNECTIONS.
3. CONTRACTOR TO FIELD VERIFY EXISTING SEWER MAINLINE FLOWLINES.
4. SEWER CLEAN OUTS TO BE A MAXIMUM OF 100 FEET A PART.
5. CONTRACTOR TO COORDINATE POWER & NATURAL GAS IMPROVEMENTS WITH THE UTILITY COMPANIES FOR CONNECTION TO MECHANICAL ROOM AND OUTDOOR KITCHEN.
6. SEE UTILITY DETAILS ON SHEET L05.

N

10' 0 10' 20'

Scale 1" = 10'

Scale 1" = 20' for 11x17

LEGEND

- EXSS — EXISTING SEWER MAINLINE
- SS — 6" SEWER LATERAL
- W — W — 1" WATER SERVICE
- EXW — EXISTING WATER MAINLINE

STATE OF UTAH
PAUL D. BERG
6350547
PROFESSIONAL ENGINEER
Paul D Berg
01 Dec 2021

SUN PEAK HOA

POOL COMMON AREA

UTILITY PLAN

BERG ENGINEERING
380 E Main St. Suite 204
Midway, Ut 84049
ph 435.657.9749

DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L03

PICABO STREET

EXISTING POOL

EXISTING FIRE FEATURE

EXISTING CONCRETE

EXISTING CANOPY

EXISTING SHED

SUN PEAK HOA CLUBHOUSE

GRAVEL SUMP
6 LF 4" PIPE

12" CATCH BASIN

13 LF 4" PIPE

14 LF 4" PIPE

23 LF 4" PIPE

9 LF 4" PIPE

10 LF 4" PIPE

25 LF 4" PIPE

38 LF SLOT DRAIN

18 LF 4" PIPE

SLOT DRAIN

6566.10 SHOWER DRAIN

LEGEND

- 4" N-12 ADS SMOOTH PIPE (190 LF)
- 12"x12" RAINBIRD CATCH BASIN (12 TOTAL)
- 5' GRAVEL SUMP
- ROCK RETAINING WALL - 4' MAX HEIGHT (BLONDE SANDSTONE)

EX	EXISTING GRADE
TOS	TOP OF STAIR
BOS	BOTTOM OF STAIR
TOW	TOP OF WALL
BOW	BOTTOM OF WALL

N

10' 0 10' 20'

Scale 1" = 10'

Scale 1" = 20' for 11x17

STATE OF UTAH
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01 DEC 2021

SUN PEAK HOA

POOL COMMON AREA

GRADING PLAN

berg LANDSCAPE ARCHITECTS
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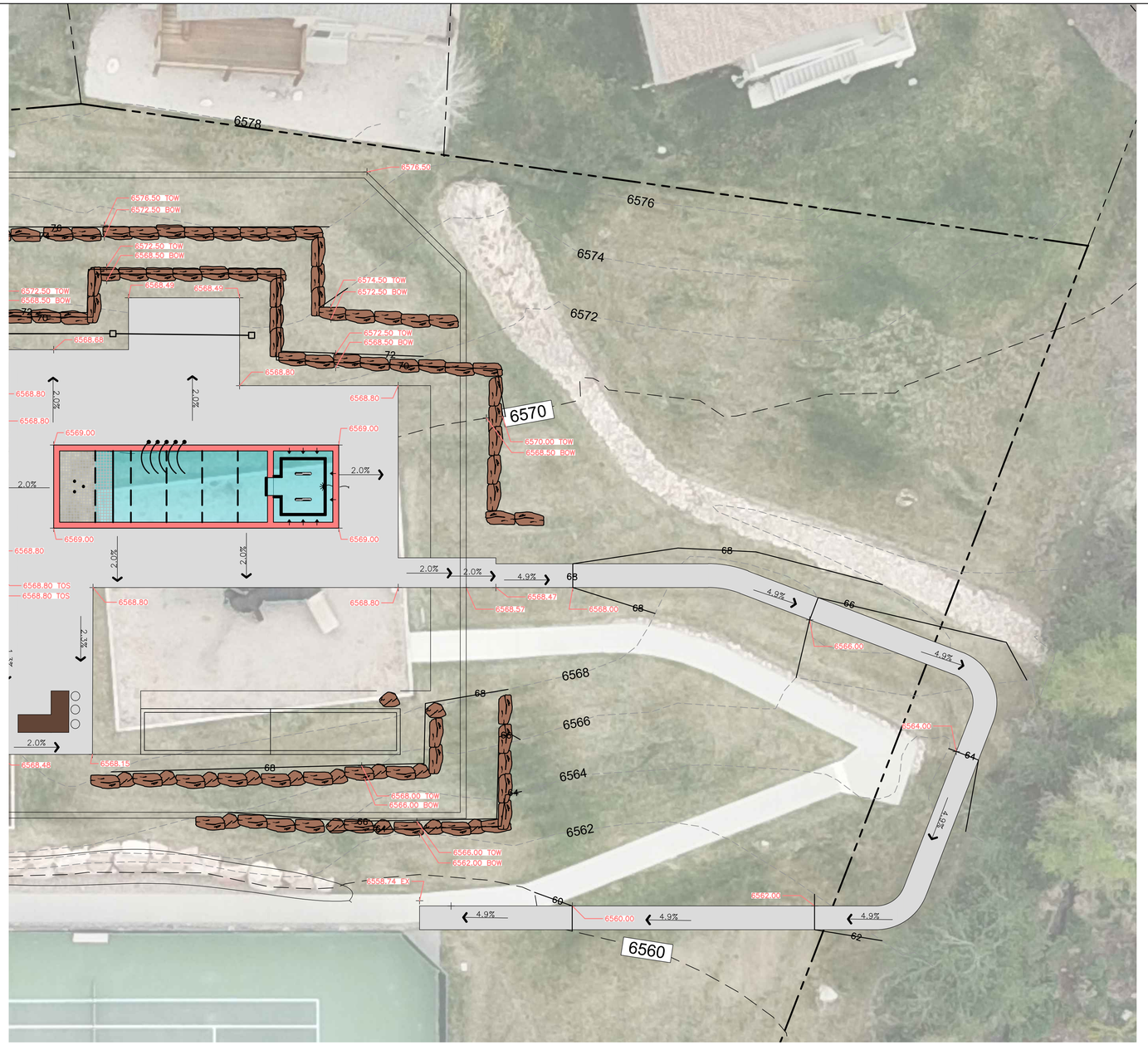
DRAWN BY: CNB	REV:	



LEGEND

———	4" N-12 ADS SMOOTH PIPE (190 LF)
□	12"x12" RAINBIRD CATCH BASIN (12 TOTAL)
	ROCK RETAINING WALL - 4' MAX HEIGHT (BLONDE SANDSTONE)

EX	EXISTING GRADE
TOS	TOP OF STAIR
BOS	BOTTOM OF STAIR
TOW	TOP OF WALL
BOW	BOTTOM OF WALL

N

10' 0 10' 20'

Scale 1" = 10'

Scale 1" = 20' for 11x17

ESTATE OF UTAH
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01 DEC 2021

SUN PEAK HOA

POOL COMMON AREA

SIDEWALK GRADING PLAN

berg LANDSCAPE ARCHITECTS
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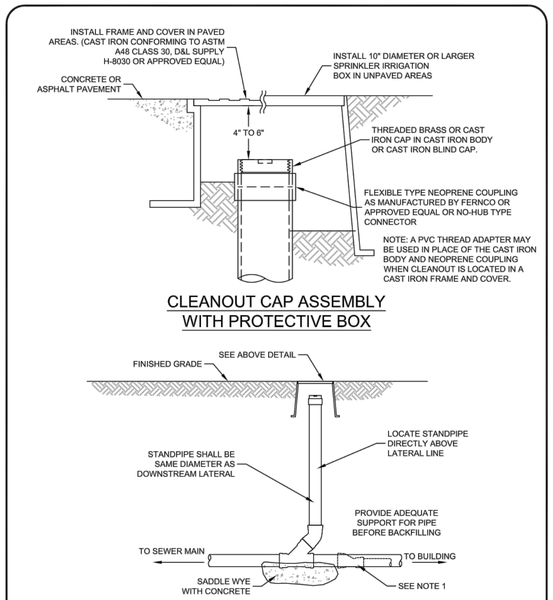
DESIGN BY: CNB
DRAWN BY: CNB
DATE: 01 DEC 2021
REV:
SHEET L04a

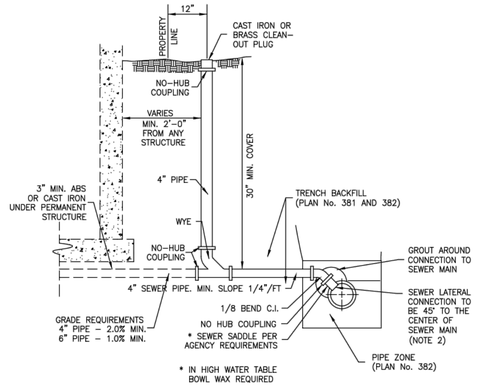


CLEANOUT CAP ASSEMBLY WITH PROTECTIVE BOX

SANITARY SEWER CLEANOUT

NOTES:
1. FOR TRANSITION FROM 4" (UPSTREAM) TO 6" (DOWNSTREAM) LATERALS, TRANSITION SHALL OCCUR AT A CLEANOUT AND SHALL BE ACCOMPLISHED WITH AN ECCENTRIC REDUCER ON THE UPSTREAM SIDE OF THE WYE
2. FOR LATERALS USING HDPE PIPE:
   45° BEND SHALL BE 3 SEGMENT HDPE BEND
   WYE SHALL BE PREFABRICATED (NOT MOLDED) WYE
   ALL JOINTS SHALL BE FUSION WELDED

Snyderville Basin Water Reclamation District	SANITARY SEWER CLEANOUT AND PROTECTIVE BOX	STANDARD DETAIL LAT-07 Revision Date: 4/20/20



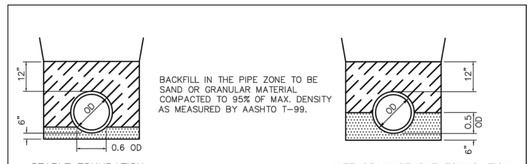
SECTION

Sewer lateral connection

1. INSPECTION:
   A. Prior to installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   B. Prior to backfilling, secure inspection of installation by ENGINEER. Give at least 24 hours notice.

2. INSTALLATION:
   A. Provide agency approved wye or tee with appropriate donut. Verify whether CONTRACTOR or agency is to install the wye.
   B. Tape wrap pipe as required by soil conditions.
   C. Remove core plug from sewer main. Do not break into sewer main to make connection.
   D. Stainless steel straps required.

3. BACKFILL: Provide and place per APWA Section 33 05 20. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction.



TRENCH NOTES

1. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL.
2. NO ROCK LARGER THAN 1.5 INCHES IN DIAMETER FOR DUCTILE IRON PIPE OR 3/4 INCHES IN DIAMETER FOR PVC AND HDPE PIPE SHALL BE ALLOWED (1) WITHIN 6 INCHES OF THE PIPE. (2) AS BACKFILL MATERIAL FOR BEDDING, OR (3) AS BACKFILL MATERIAL IN THE PIPE ZONE.

PIPE BEDDING MATERIAL

SAND

FINE SAND (NON-PLASTIC) AND CLAYEY (CLAY FILLED) GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES, AND GRAVEL-CLAY MIXTURES. THIS MATERIAL IS NOT ALLOWED FOR BEDDING IN WET TRENCHES.

SIEVE	% PASSING
3/4"	100
NO. 4	80-100
NO. 10	30-50
NO. 40	10-30
NO. 200	7-15

GRANULAR

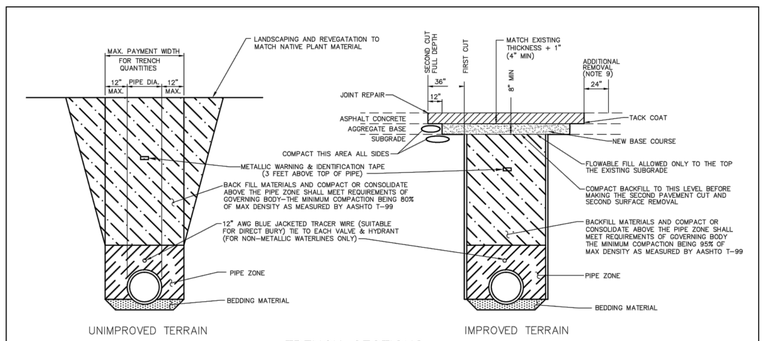
SAND AND GRAVEL WELL GRADED AND READILY COMPACTED, NON-PLASTIC, CLASSIFICATION A-1, ASTM 3282.

SIEVE	% PASSING
3/4"	100
NO. 4	60-100
NO. 40	15-60
NO. 200	0-15

BEDDING MATERIAL GRADATION FOR WET OR UNSTABLE FOUNDATION

FOR DUCTILE IRON:		FOR PVC AND HDPE:	
SIEVE	% PASSING	SIEVE	% PASSING
1-1/2"	100%	3/4"	100%
NO. 4	5%	NO. 4	5%

REV. NO.	PREPARED BY:	SUMMIT WATER DISTRIBUTION CO.	STANDARD DWG. NO.
1. 10/4/95 2. 11/6/00 3. 4/3/13 4. 5/18/15 5. 12/31/15	Bowen Collins & Associates, Inc. CONSULTING ENGINEERS	PIPE BEDDING DETAILS	2A

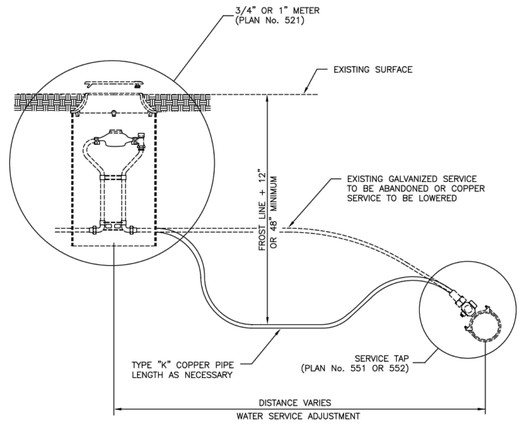


TRENCH SECTIONS

NOTES:
1. THE CONTRACTOR SHALL LOCATE, HORIZONTALLY AND VERTICALLY, ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE LAYING PIPE WITHIN 200 FEET OF UTILITY CROSSING OR PIPE CONNECTION BY POT HOLING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL OF THE REQUIREMENTS ESTABLISHED FOR SAFE TRENCHING.
3. PAYMENT FOR TRENCH QUANTITIES SHALL BE FOR ACTUAL AMOUNTS, BUT NOT TO EXCEED MAXIMUM SHOWN FOR IMPROVED TERRAIN.
4. CONTRACTORS MAY USE SLOPING WALLS IN IMPROVED TERRAIN, BUT PAYMENT SHALL BE AS STATED IN NOTE NO. 3.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND THEIR SERVICES, AND HE SHALL PROTECT THEM FROM DAMAGE AT ALL TIMES.
6. THE CONTRACTOR SHALL PLACE TEMPORARY AND PERMANENT SURFACES TO CONFORM TO THE REQUIREMENTS OF THE AGENCY ISSUING THE PERMIT.
7. THE CONTRACTOR SHALL RESTORE ALL EXISTING IMPROVEMENTS TO THEIR ORIGINAL CONDITION OR BETTER. ALL COSTS FOR RESTORATION OF IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
8. TRACER WIRE SHALL BE WRAPPED AROUND ALL NON-METALLIC PIPE.
9. IF A SAW CUT IN THE DIRECTION OF VEHICULAR TRAVEL IS WITHIN A WHEEL PATH, SWDC MAY ORDER ADDITIONAL PAVEMENT REMOVAL SO SAW CUT IS FALLS OUTSIDE A WHEEL PATH.

REV.	DATE	BY	DESCRIPTION
3	12/31/15	TSC	UPDATE PER SWDC
2	8/99	DW	ADDED NOTES
1	10/95	RB	ADDED NOTES

Bowen Collins & Associates, Inc. CONSULTING ENGINEERS	SUMMIT WATER DISTRIBUTION COMPANY	TRENCH DETAILS	STD. DWG. NO. 2



Water service line

1. INSPECTION: Prior to backfilling trench excavation, secure inspection of installation by ENGINEER.

2. BACKFILL: Provide and place per APWA Section 33 05 20. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction.

3. FITTINGS: Provide brass fittings and nipples. Do not use galvanized materials.

SUN PEAK HOA

POOL COMMON AREA

UTILITY DETAILS

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
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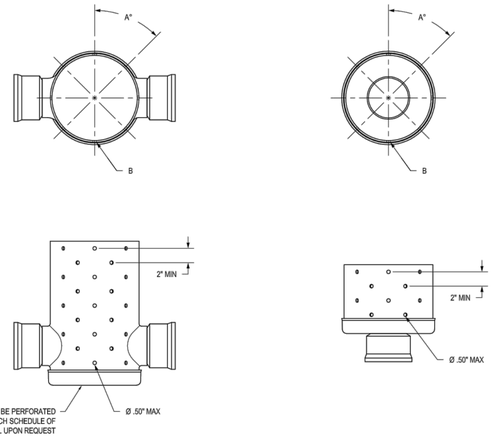
DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET L05
DRAWN BY: CNB	REV:	

PERFORATION SCHEDULE



STRUCTURE SIZE	A° ANGLE BETWEEN HOLES	B NUMBER OF HOLES
8"	90°	4
10"	90°	4
12"	60°	6
15"	60°	6
18"	45°	8
24"	45°	8
30"	36°	10

1 - PERFORATIONS SHOULD NOT BE ON OR WITHIN 1" OF ADAPTERS.
2 - HOLES SHOULD BE STAGGERED EVERY OTHER ROW, AS SHOWN.
3 - TO PREVENT BLOCKAGE OF PERFORATIONS, BASIN SHOULD BE WRAPPED IN AN ENGINEER APPROVED GEO-TEXTILE FABRIC.

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DRAWN BY	CJA	MATERIAL	
DATE	7-20-99		
REVISED BY	JJC	PROJECT NO./NAME	
DATE	4-25-12		
DWG SIZE	A	SCALE NTS	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
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PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: NYLOPLAST STRUCTURE PERFORATION SCHEDULE

DWG NO. 7001-110-008 REV D

Section 2721

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for structure sizes 8", 10", 12", 15", 18", 24", 30" and 36" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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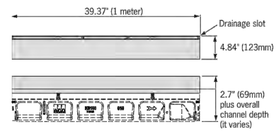
DRAWN BY	CJA	MATERIAL	
DATE	3-10-00		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	02-21-18		
DWG SIZE	A	SCALE 1:1	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

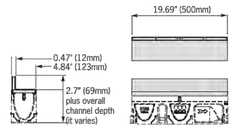
TITLE: 8 IN - 36 IN DRAIN BASIN SPECIFICATIONS

DWG NO. 7001-110-011 REV J

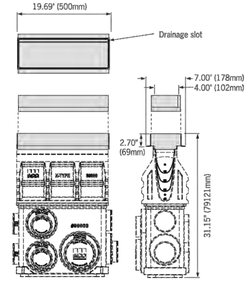
One meter unit



Half meter unit



Access unit (must be used with catch basin and can also be used with channels)



Specifications

General
The surface drainage system shall be ACO Drain Brickslot, as manufactured by ACO Polymer Products, Inc. or equal approved.

Materials
The Brickslot top is manufactured from 11 gauge galvanized steel.

The nominal clear opening for Brickslot slot is 7/16" (11mm) with overall width of 4.84" (123mm). Tapered slot prevents debris from being trapped. For use with K100 and KS100 channels. See separate ACO Spec info sheet for channel details. Brickslot is secured by 'QuickLok' boltless locking system. Access units have frames that fit catch basin or channels with a separate cover unit that can be removed for maintenance.

Installation
The trench drain system shall be installed in accordance with the manufacturer's installation instructions and recommendations.

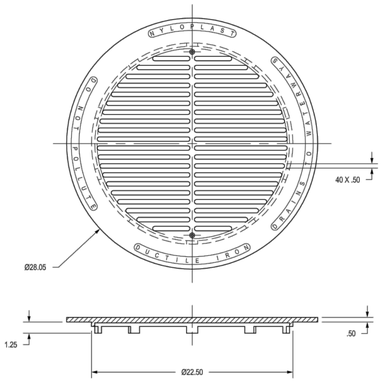
ACO DRAIN
Brickslot - galvanized steel

Description	Part No.	Invert Depth inches	Invert Depth mm	Weight lbs.
Brickslot (galvanized steel) - 39.37" (1m)	**98999**	2.70	69	18.4
Brickslot (galvanized steel) - 19.69" (0.5m)	**98988**	2.70	69	9.2
Brickslot access unit (galv. steel) -19.69" (0.5m)	**96877**	2.70	69	16.9
QuickLok/PowerLok grate removal tool	**01318**			0.3

Notes:
1. For use with K100 and KS100 channels, and Series 900 catch basins.
2. Add 2.7" (69mm) to channel invert for total channel invert.
3. Brickslot can also be used with H100K-10 and H100KS-10.
4. Only access covers can be removed once Brickslot has been installed.

2401DI

APPROX. DRAIN AREA = 164.94 SQ IN
APPROX. WEIGHT = 67.50 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE HAS LIGHT DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36.

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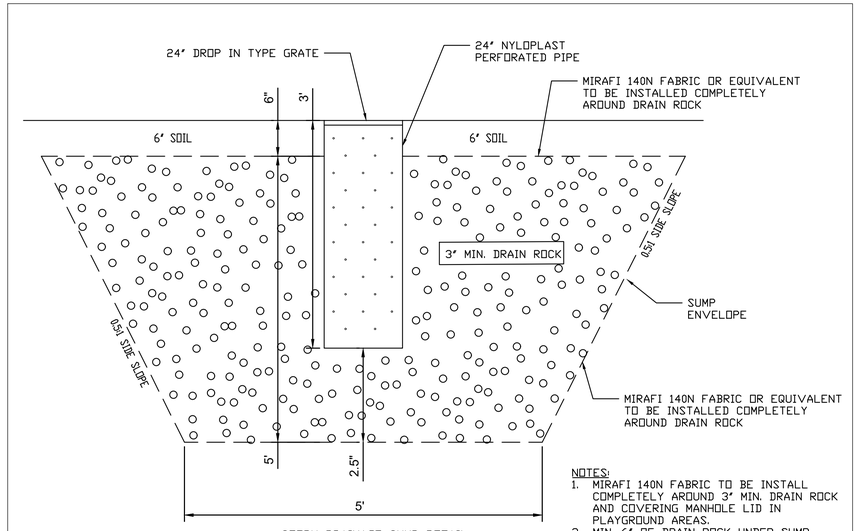
DRAWN BY	CJA	MATERIAL	
DATE	7-5-01		
REVISED BY	JJC	PROJECT NO./NAME	
DATE	2-22-11		
DWG SIZE	A	SCALE 1:8	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

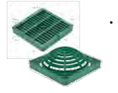
TITLE: 24 IN DROP IN

DWG NO. 7001-110-075 REV D

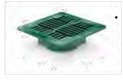


STORM DRAINAGE SUMP DETAIL
(NOT TO SCALE)

NOTES:
1. MIRAFI 140N FABRIC TO BE INSTALL COMPLETELY AROUND 3' MIN. DRAIN ROCK AND COVERING MANHOLE LID IN PLAYGROUND AREAS.
2. MIN. 6' OF DRAIN ROCK UNDER SUMP MANHOLE.

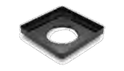


- **Plastic Square Grates.** Flat profiles available in 9", 12" and 18" sizes. Atrium profiles available in 9" and 12" sizes. Flat grates available in green, black, sand and gray. Atrium grates available in green and black.



- **Universal Square Grates.** 7" flat profile designed to fit 3" or 4" sizes of corrugated, triple wall or S & D pipe or 3", 4" or 6" S & D fittings, in addition to Rain Bird's 6" round catch basin. Available in green, black, sand and gray.

- **Square Catch Basins.** Two outlet models available in 9", 12" and 18" sizes. Four outlet models available In 12" and 18" sizes. Using one of Rain Bird's basin adapters, you can connect to 3", 4" or 6" corrugated, triple wall and S & D pipe.



- **Square Low-Profile Basins.** Available in 9" and 12" sizes.

- **Square Basin Kits.** Popular 9" and 12" basins are packed with the following:
  - » One 9" or 12" square flat grate in green or black
  - » Two basin adapters that accept 3" or 4" pipe
  - » One basin plug

RAIN BIRD 12" CATCH BASIN WITH GRATE
(NOT TO SCALE)

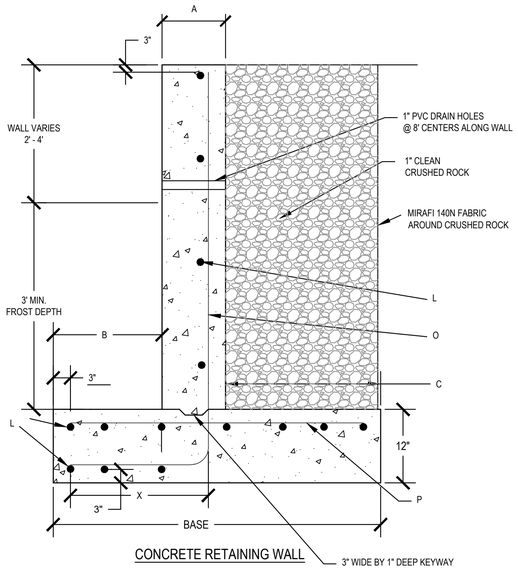
SUN PEAK HOA
POOL COMMON AREA
DRAINAGE DETAILS

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

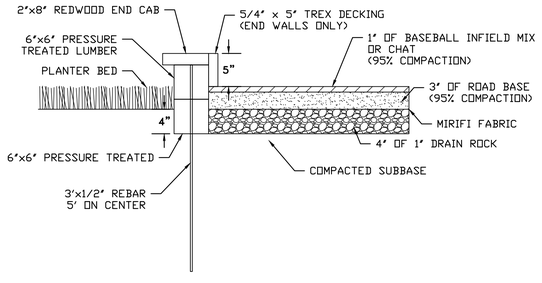
DESIGN BY: CNB
DRAWN BY: CNB
DATE: 01 DEC 2021
REV:
SHEET L06

RETAINING WALL NOTES:
1. CONCRETE FOR WALL SHALL BE 4,500 PSI
2. MIN. OF 24 INCHES OF CLEAN CRUSHED ROCK SHALL BE INSTALLED BEHIND RETAINING WALL. FILTER FABRIC TO BE INSTALLED AROUND CRUSHED ROCK.
3. 12 INCHES OF GRANULAR BASE TO BE PLACED UNDER THE FOOTING OF THE WALL AND COMPACTED TO 95%.
4. EXPANSION JOINTS SHALL BE PLACED AT LEAST EVERY 20 FEET CENTER TO CENTER IN THE WALL, AND BETWEEN THE RETAINING WALL AND CONCRETE STAIRS
5. CONTRACTOR TO VERIFY FROST DEPTH REQUIREMENTS WITH LOCAL BUILDING OFFICIAL AND VERIFY 36" FROST DEPTH.

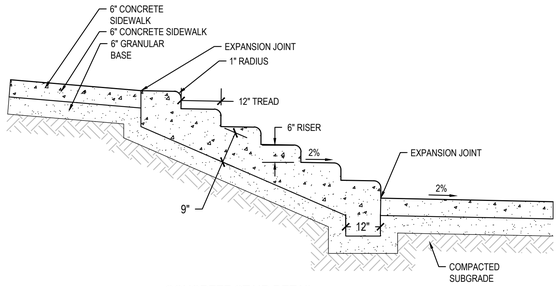
TOTAL HEIGHT	BASE	A	B	C	L	O	P	X
3	3'-0"	10"	1'-1"	1'-1"	#4 @10"	#3 @18"	#3 X 2'-6" @ 18"	1'-5"
4	3'-5"	10"	1'-3"	1'-4"	#4 @10"	#4 @18"	#3 X 2'-11" @ 18"	1'-7"
5	4'-1"	10"	1'-5"	1'-10"	#4 @10"	#4 @18"	#3 X 3'-7" @ 18"	1'-9"
6	4'-8"	10"	1'-7"	2'-3"	#4 @10"	#4 @12"	#3 X 4'-2" @ 18"	1'-11"
7	5'-2"	10"	1'-9"	2'-7"	#4 @10"	#4 @ 8"	#3 X 4'-8" @ 18"	2'-1"



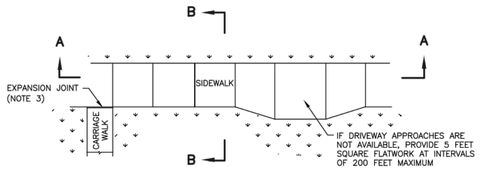
CONCRETE RETAINING WALL



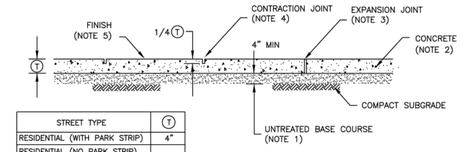
BOCCE BALL COURT
CROSS SECTION DETAIL



CONCRETE STAIR DETAIL



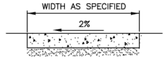
PLAN



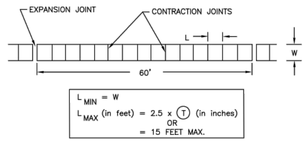
STREET TYPE	T
RESIDENTIAL (WITH PARK STRIP)	4"
RESIDENTIAL (NO PARK STRIP)	6"
OTHER	
REPLACEMENTS	MATCH EXISTING, 4" MIN.

SEE DRIVEWAY APPROACH PLANS FOR SIDEWALK THICKNESS AT DRIVEWAYS

SECTION A–A



SECTION B–B



SIDEWALK JOINT DETAIL

Concrete sidewalk

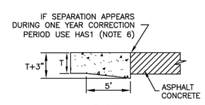
1. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23.
   A. Do not use gravel as a substitute for untreated base course without ENGINEER's permission.
   B. Place material per APWA Section 32 05 10.
   C. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment.

2. CONCRETE: Class 4000 per APWA Section 03 30 04.
   A. If necessary, provide concrete that achieves design strength in less than 7 days. Caution; concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   B. Place concrete per APWA Section 03 30 10.
   C. Provide 1/2 inch radius on concrete edges exposed to public view
   D. Cure concrete per APWA Section 03 39 00 with type ID Class A or B (clear with fugitive dye) membrane forming compound unless specified otherwise.

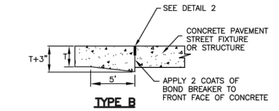
3. EXPANSION JOINT: Make expansion joints vertical, full depth, 1/2 inch wide with type F1 joint filler material per APWA Section 32 13 73.
   A. Set top of filler flush with surface of concrete.
   B. Expansion joints are not required in slip formwork except at the start or end of the installation activity.

4. CONTRACTION JOINT: Make contraction joints vertical.
   A. 1/8 inch wide and 1 inch deep or 1/4 slab thickness if slab is greater than 4 inches thick.
   B. Maximum length to width ratio for non-square panels is 1.5 to 1.

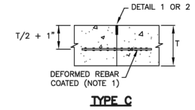
5. FINISH: Broomed.



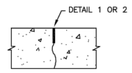
TYPE A



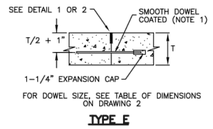
TYPE B



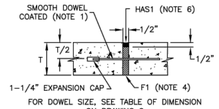
TYPE C



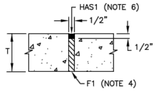
TYPE D



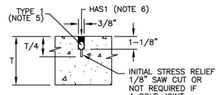
TYPE E



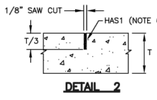
TYPE F



TYPE G



DETAIL 1



DETAIL 2

Concrete pavement joints

1. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel rebar or smooth steel dowels with diameter and length as indicated.
   A. Space rebar and dowels at 12 to 15 inches on center.
   B. Grease dowels to provide movement in expansion joints.
   C. Keep tie bars in the vertical center of the concrete slab and perpendicular to the joint during concrete placement.

2. SAWING: Keep at least 3 working power saws on-site when concrete is being placed. Saw crack control joints (contraction joints) before shrinkage cracking takes place. Do not tear or ravel concrete during sawing. In cool weather, the joint sawing may be delayed only for the time required to prevent tearing and raveling the concrete. Cut joint to dimensions recommended by sealant manufacturer and approved by ENGINEER.

3. JOINTS: Lay out joints to aid construction and control random cracking.
   A. Longitudinal joint spacing is 12 feet for concrete pavement less than 9 inches thick and 15 feet for concrete pavement 9 inches thick and thicker.
   B. Transverse joints spacing is 30 x T (slab thickness in feet) where the maximum slab length to slab width ratio is 1.5 to 1.
   C. Extend transverse contraction joints continuously across the full width of the concrete. Make the joints coincide with curb and gutter joints.
   D. Make adjustments in joint locations to meet inlet or manhole locations.

4. JOINT FILLER: Type F1 per APWA Section 32 13 73, extending to the bottom of the concrete slab.

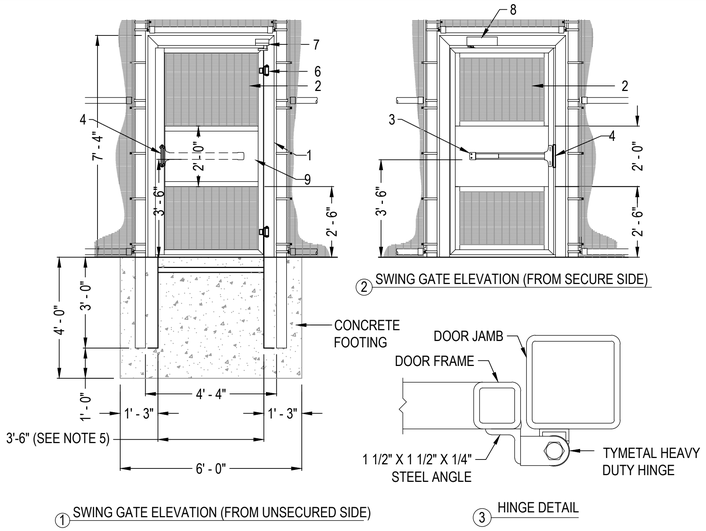
5. BACKER ROD: Type 1 (round rod) APWA Section 32 13 73. It must be oversized approximately 25 percent to fit tightly into each joint and compatible with hot poured sealant.

6. JOINT SEALANT: Hot applied, APWA Section 32 13 73. Remove dirt, oil and curing compounds from joint reservoir. Seal joints immediately after cleaning.

SUN PEAK HOA
POOL COMMON AREA
CONCRETE DETAILS

BERG ENGINEERING
380 E Main St. Suite 204
Midway, Ut 84049
ph 435.657.9749

DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L07



1 SWING GATE ELEVATION (FROM UNSECURED SIDE)

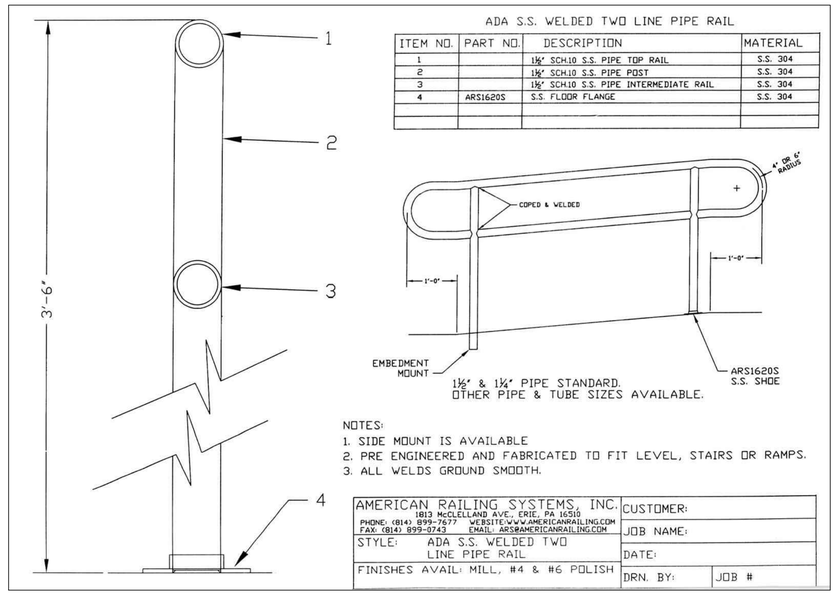
2 SWING GATE ELEVATION (FROM SECURE SIDE)

3 HINGE DETAIL

NOTES:
1. THE OPENING IN THE FENCE LINE SHALL BE BUILT TO ACCOMMODATE THE DOOR JAMB PER THE OWNERS SPECIFICATIONS.
2. GATE FRAME WILL BE FILLED WITH 1/2" x 3" x 8 GA. WELDED WIRE MESH.
3. PANIC BAR TO BE DETEX #V40 OR APPROVED EQUAL.
   DETEX EXTERIOR TRIM OR APPROVED EQUAL TO ALLOW KEY FOB ACCESS FROM UNSECURED SIDE.
4. ACCESS HANDLE (GATE ACCESS WITH KEY FOB, KEY FOB TO BE LOCATED PER MANUFACTURERS SPECIFICATIONS).
5. STANDARD OPENING SIZES: 3'-0", 3'-6", 4'-0" AND 5'-0".
6. HEAVY DUTY HINGE (2 TYPICAL).
7. DOOR POSITION SWITCH.
8. DOOR CLOSER.
9. 24" MOUNTING PLATE.
10. ELECTRIC STRIKE.
11. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. DO NOT SCALE DRAWINGS.

HIGH SECURITY STEEL, SPECIAL LOCKING DEVICES

PEDESTRIAN SWING GATE - PANIC BAR AND LOCK SYSTEM



ADA S.S. WELDED TWO LINE PIPE RAIL

ITEM NO.	PART NO.	DESCRIPTION	MATERIAL
1		1½" SCH.10 S.S. PIPE TOP RAIL	S.S. 304
2		1½" SCH.10 S.S. PIPE POST	S.S. 304
3		1½" SCH.10 S.S. PIPE INTERMEDIATE RAIL	S.S. 304
4	ARS1620S	S.S. FLOOR FLANGE	S.S. 304

1½" & 1¼" PIPE STANDARD.
OTHER PIPE & TUBE SIZES AVAILABLE.

NOTES:
1. SIDE MOUNT IS AVAILABLE
2. PRE ENGINEERED AND FABRICATED TO FIT LEVEL, STAIRS OR RAMPS.
3. ALL WELDS GROUND SMOOTH.

AMERICAN RAILING SYSTEMS, INC. 1813 McCLELLAND AVE., ERIE, PA 16510 PHONE: (814) 899-7677 WEBSITE:WWW.AMERICANRAILING.COM FAX: (814) 899-0743 EMAIL: ARS@AMERICANRAILING.COM	CUSTOMER:	
STYLE: ADA S.S. WELDED TWO LINE PIPE RAIL	JOB NAME:	
	DATE:	
FINISHES AVAIL: MILL, #4 & #6 POLISH	DRN. BY:	JOB #

CHAIN LINK FENCE NOTES
USE TWISTED AND BARBED SELVATE WITH PIPE, TOP AND BOTTOM

TENSION WIRE: USE ZINC COATED, GALVANIZED, NO. 7 GAGE SPRING COIL STEEL. SET SIRE AT 1 INCH OVER NATURAL GROUND OR 6 INCHES OVER CONCRETE STRUCTURES.

PIPE: USE ASTM A 120, SCHEDULE 40, HOT DIPPED ZINC COATED STEEL.

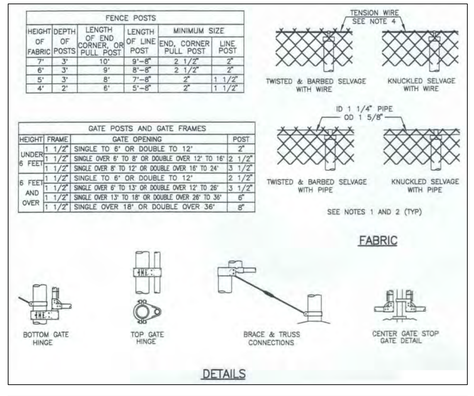
POST SPACING:
LOCATE POSTS AT EQUAL SPACING FOR EACH SEGMENT WITH MAXIMUM SPACING OF AS SHOWN BELOW:

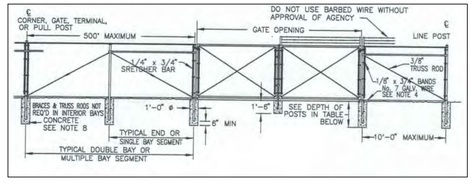
TANGENT SECTIONS TO 500' RADIUS:	10 FEET
200' TO 500' RADIUS	8 FEET
100' TO 200' RADIUS	6 FEET
LESS THAT 100' RADIUS	5 FEET

PROVIDE PULL POSTS AT 500' MAXIMUM INTERVALS. CHANGES IN LINE OF 30° OR MORE ARE CONSIDERED CORNERS.

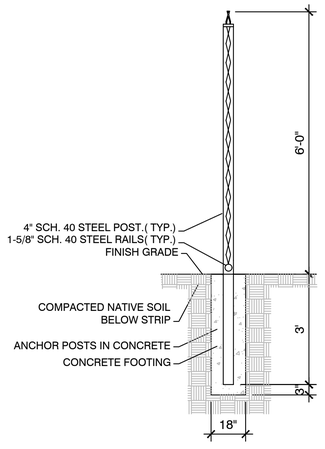
BARB WIRE ARM: FACE ARM TOWARDS EXTERIOR OF FENCED AREA.

CONCRETE USED FOR FENCE INSTALLATION SHALL BE CLASS 4000. APPLY A SEALING/CURING COMPOUND.





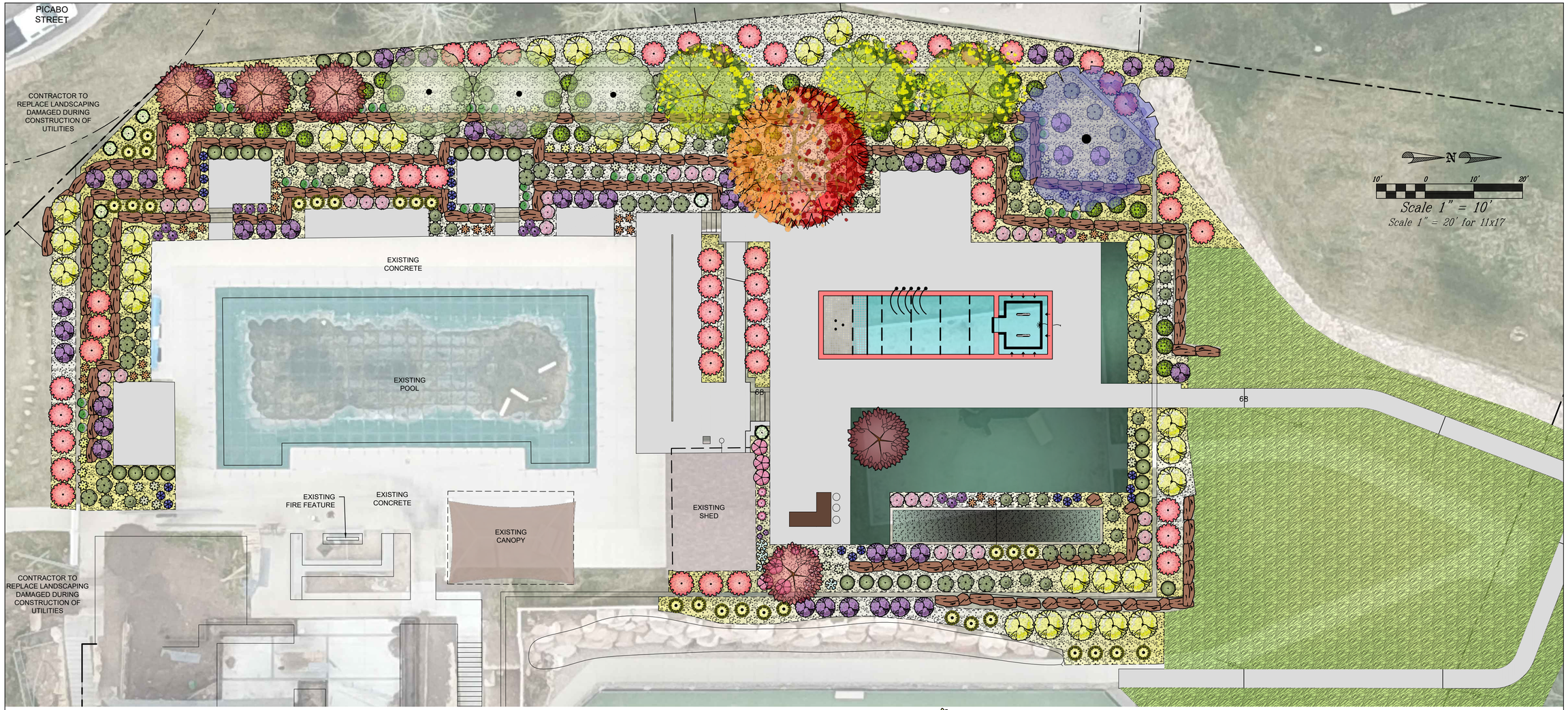
CHAIN LINK FENCE & GATE DETAIL
POWDER COATED: BLACK



SUN PEAK HOA
POOL COMMON AREA
CONCRETE DETAILS

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

DESIGN BY: CNB
DRAWN BY: CNB
DATE: 01 DEC 2021
REV:
SHEET L08



PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
	1	Autumn Blaze Maple / Acer freemanii `Autumn Blaze`	B&B	2" Cal	
	1	Autumn Purple Ash / Fraxinus americana `Autumn Purple`	B&B	2" Cal	
	5	Canada Red Chokecherry / Prunus virginiana `Canada Red`	B&B	2" Cal	
	3	Shademaster Locust / Gleditsia triacanthos inermis `Shademaster` TM	B&B	2" Cal	
	3	Spring Snow Crab Apple / Malus x `Spring Snow`	B&B	2" Cal	

EVERGREEN TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
	6	Wells Blue Totem Columnar Spruce / Picea pungens glauca fastigiata `Wells Blue Totem`	B & B		5-7`

SHRUBS	QTY	COMMON / BOTANICAL NAME	CONT
	46	Black Lace Elderberry / Sambucus nigra `Black Lace`	5 gal
	54	Compact Burning Bush / Euonymus alatus `Compactus`	5 gal
	35	Elderberry / Sambucus nigra `Sutherland Gold`	5 gal
	37	Endless Summer / Hydrangea macrophylla `Bailmer` TM	5 gal
	27	Japanese Spirea / Spiraea japonica `Anthony Waterer`	5 gal
	27	Tallhedge Buckthorn / Rhamnus frangula columnaris	5 gal
	45	Tatarian Dogwood / Cornus alba `Ivory Halo` TM	5 gal

GRASSES	QTY	COMMON / BOTANICAL NAME	CONT
	28	Feather Reed Grass / Calamagrostis x acutiflora `Karl Foerster`	1 gal

EVERGREEN SHRUBS	QTY	COMMON / BOTANICAL NAME	CONT
	44	Mugo Pine / Pinus mugo `Slowmound`	5 gal

PERENNIALS	QTY	COMMON / BOTANICAL NAME	CONT
	25	Black-eyed Susan / Rudbeckia fulgida sullivantii `Goldsturm`	1 gal
	6	Bleeding Heart / Dicentra spectabilis	1 gal
	47	Emerald Blue Moss Phlox / Phlox subulata `Emerald Blue`	1 gal
	15	German Iris / Iris germanica	1 gal
	32	Golden Creeping Jenny / Lysimachia nummularia `Aurea`	1 gal
	6	Heartleaf Bergenia / Bergenia cordifolia `Winterglut`	1 gal
	3	Palace Purple Coral Bells / Heuchera micrantha `Palace Purple`	1 gal
	6	Plantain Lily / Hosta x `Hadspen Blue`	1 gal
	21	Purple Coneflower / Echinacea purpurea	1 gal
	48	Shasta Daisy / Leucanthemum x superbum `Broadway Lights`	1 gal

GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONT
	1,233 sf	Kentucky Bluegrass / Poa pratensis	sod
	5,641 sf	Native Grass Mix / Native Grass Mix	Hydroseed

MULCH	QTY	COMMON / BOTANICAL NAME	CONT
	11,489 sf	2-4" Cobble Rock w/Dewitt Pro-5 Weed Barrier / Washed Landscape Rock	mulch
	273 sf	Grey Chat / 4" Grey Chat	Mulch

STATE OF UTAH
CARLYN BERG
162790
Licensed Landscape Architect
01 DEC 2021

SUN PEAK HOA

POOL COMMON AREA

PLANTING PLAN

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

DESIGN BY: CNB
DRAWN BY: CNB
DATE: 01 DEC 2021
REV:
SHEET L09

GENERAL PLANTING NOTES:

1. CODES, LAWS, REGULATIONS & PERMITS BY FEDERAL, STATE, COUNTY AND CITY AGENCIES FOR DESIGN CONCEPT, MATERIALS AND WORKMANSHIP MUST BE RESEARCHED AND SATISFIED BY THE CONTRACTOR. REPORT ANY PROBLEMS OR REQUIREMENTS TO THE LANDSCAPE ARCHITECT. THE CONTRACTOR MUST VERIFY THE REGULATIONS FOR AND SECURE ANY PERMITS BEFORE BEGINNING CONSTRUCTION. THE COST FOR THE PERMIT FEES MAY BE SUBMITTED TO THE OWNER FOR REIMBURSEMENT. CALL BLUE STAKES AND REFER TO DRAINAGE AND CIVIL PLANS BEFORE ANY TRENCHING OR EXCAVATION.

2. CONSTRUCTION SAFETY & CLEANUP MUST MEET OSHA STANDARDS AT ALL TIMES. ALL CONTRACTORS MUST HAVE ADEQUATE LIABILITY, PERSONNEL INJURY AND PROPERTY DAMAGE INSURANCE. CLEAN UP MUST BE PERFORMED DAILY, AND ALL HARDSCAPE ELEMENTS MUST BE WASHED FREE OF DIRT AND MUD ON FINAL CLEAN UP. CONSTRUCTION MUST OCCUR IN A TIMELY MANNER.

3. LANDSCAPE PLANS AND DETAIL DRAWINGS ARE SCHEMATIC ONLY, DISCREPANCIES MAY EXIST, INCLUDING BUT NOT LIMITED TO BUILDING LOCATION, PROPERTY LINES, ANY DIMENSIONS SPECIFIED OR IMPLIED. THE CONTRACTOR WILL BE REQUIRED TO ADJUST PLANS AS NECESSARY TO RETAIN CONCEPT INTEGRITY. CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT IF DISCREPANCIES EXIST.

4. PLANT MATERIAL EXCAVATION. CONTRACTOR TO CALL BLUE STAKE AND MAKE REFERENCE TO DRAINAGE AND CIVIL PLANS BEFORE EXCAVATION FOR PLANT MATERIAL. ALL HOLES MUST ALLOW FOR A MINIMUM OF SIX (6) INCHES OF SPECIFIED PLANTING MIX BACKFILL MATERIAL ON ALL SIDES OF ROOT BALL FOR SHRUBS, AND 3X BALL DIAMETER FOR TREES.

5. PLANT MATERIAL BACKFILL MUST BE A WELL MIXED COMBINATION OF 2/3 NATIVE SOIL AND 1/3 ORGANIC COMPOSED MATERIAL. DEEP WATER ALL PLANT MATERIAL IMMEDIATELY AFTER PLANTING. ADD BACKFILL MATERIAL TO DEPRESSIONS AS NECESSARY.

6. PLANT MATERIAL AND LANDSCAPE ELEMENTS WILL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY ITEMS THAT ARE NOT FIRST CLASS PREMIUM QUALITY WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. ANY PLANT MATERIAL THAT IS NOT PREMIUM QUALITY OR APPEARS STRESSED IN ANY WAY DURING THE GUARANTEE PERIOD MAY REQUIRE REPLACEMENT. THE CONTRACTOR MUST SCHEDULE A PRE AND POST GUARANTEE MEETING WITH THE OWNER'S REPRESENTATIVE FOR INSPECTION. FAILURE TO DO SO WILL MEAN THE OFFICIAL GUARANTEE PERIOD HAS NOT BE ACTIVATED OR DE-ACTIVATED.

7. PLANT MATERIAL SHALL CONFORM TO NURSERY STANDARDS ACCORDING TO AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA) AND SHALL BE FREE FROM ALL PESTS, EGGS, DISEASES, AND SHALL BE REPRESENTATIVE OF SPECIES IN SIZE, QUALITY, FORM, COLOR AND NOT ROOT BOUND, DAMAGED OR SUBSTANDARD IN ANY WAY. 10% OF EACH PLANT MATERIAL SPECIES SHALL BE TAGGED WITH BOTANICAL NAME FROM THE NURSERY OR SUPPLIER, TAGS SHALL REMAIN ON PLANT MATERIAL UNTIL FINAL ACCEPTANCE.

8. TOP SOIL MUST BE A PREMIUM QUALITY DARK SANDY LOAM, FREE OF ROCKS, CLODS, ROOTS, AND PLANT MATTER. THE TOPSOIL WILL BE EVENLY SPREAD AND SMOOTH GRADED ON A CAREFULLY PREPARED SUBGRADE TO A DEPTH OF SIX (6) INCHES IN SHRUB AREAS, SIX (6) INCHES UNDER SOD AREAS.

9. AS SOWN ON THE PLANS. 2"-4" SMOOTH GRAY COBBLE ROCK MULCH TO A DEPTH OF FOUR (4) INCHES OVER DEWITT PRO-5 WEED BARRIER. WOOD MULCH TO A DEPTH OF FOUR (4) INCHES OVER DEWITT PRO-5 WEED BARRIER. MULCH SHALL BE EVENLY SPREAD ON A CAREFULLY PREPARED GRADE TO A MINIMUM DEPTH AS SPECIFIED, THE TOP OF ALL AREAS OF MULCH SHALL BE ONE (1) INCH BELOW THE GRADE OF THE ADJACENT CURB, WALK, OR EDGE OF PAVEMENT.

10. SOD MUST BE PREMIUM QUALITY, ULTRA GREEN, EVENLY CUT, ESTABLISHED, HEALTHY, WEED AND DISEASE FREE, AND FROM AN APPROVED SOURCE. SOD MUST BE DELIVERED AND LAID IMMEDIATELY AFTER CUTTING. SOD MUST BE LAID WITHOUT GAPS BETWEEN PIECES ON A CAREFULLY PREPARED TOPSOIL LAYER. THE LAID SOD MUST BE IMMEDIATELY WATERED AFTER INSTALLATION. ANY BURNED AREAS WILL REQUIRE REPLACEMENT. ADJUST SPRINKLER SYSTEM TO ASSURE HEALTHY GREEN SURVIVAL OF THE SOD WITHOUT WATER WASTE.

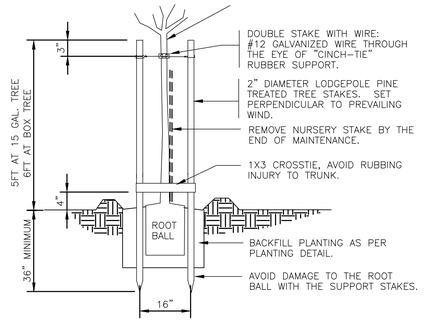
11. FERTILIZER FOR SOD AREAS SHALL BE PELLETIZED, N-P-K AS APPROVED BY LANDSCAPE ARCHITECT FOR SEASONAL ADJUSTMENT. USE 20 LBS PER 5,000 SQUARE FEET OR AS PER MANUFACTURER'S SPECIFICATIONS. SPREAD EVENLY ON A CAREFULLY PREPARED TOPSOIL LAYER JUST PRIOR TO LAYING SOD.

12. QUANTITIES LISTED ON PLANS ARE FOR THE CONTRACTORS CONVENIENCE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL QUANTITIES LISTED ON THE PLANS AND THE AVAILABILITY OF ALL PLANT MATERIALS AND THEIR SPECIFIED SIZES PRIOR TO SUBMITTING A BID. THE CONTRACTOR MUST NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO SUBMITTING A BID IF THE CONTRACTOR DETERMINES A QUANTITY DEFICIENCY OR AVAILABILITY PROBLEM WITH SPECIFIED MATERIAL.

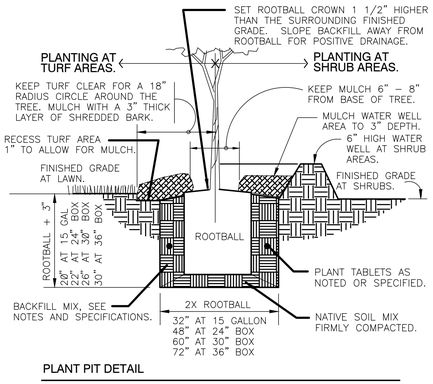
13. STAKING AND GUYING REMOVAL IS THE CONTRACTORS RESPONSIBILITY. CONTRACTOR SHALL REMOVE TREE GUYING AND STAKING IN A TIMELY MANOR ONCE STAKED TREES HAVE TAKEN ROOT. NO STAKING SHALL REMAIN BEYOND A REASONABLE TIME FOR ROOT PENETRATION AND STABILIZATION.

14. TREE WRAPPING MAY BE USED TO PROTECT YOUNG TREES FROM WINTER DAMAGE. TREE WRAPS SHALL BE INSTALLED IN THE FALL. IF THE CONTRACTOR INSTALLS WRAPS FOR TREE PROTECTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROMPTLY REMOVE WRAPS THE FOLLOWING SPRING.

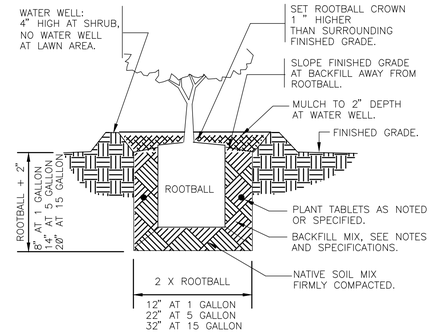
15. AUTOMATIC IRRIGATION SYSTEMS SHALL FULLY IRRIGATE ALL LANDSCAPE MATERIAL.



STAKING DETAIL

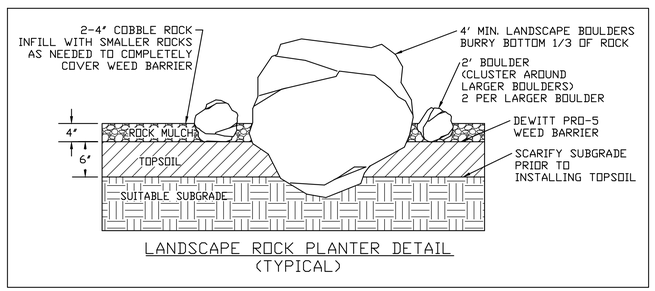


PLANT PIT DETAIL

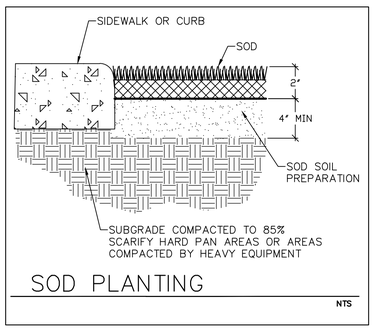


1 TREE PLANTING DOUBLE STAKE
1" = 1'-0" 329343.19-03

2 SHRUB PLANTING
1" = 1'-0" 329333.13-01



LANDSCAPE ROCK PLANTER DETAIL
(TYPICAL)



SOD PLANTING
NTS

SUN PEAK HOA
POOL COMMON AREA
LANDSCAPE DETAILS

berg LANDSCAPE ARCHITECTS
380 E Main St, Suite 204
Midway, Ut 84049 ph. (801) 723-2000

DESIGN BY: CNB
DRAWN BY: CNB
DATE: 01 DEC 2021
REV:
SHEET L10

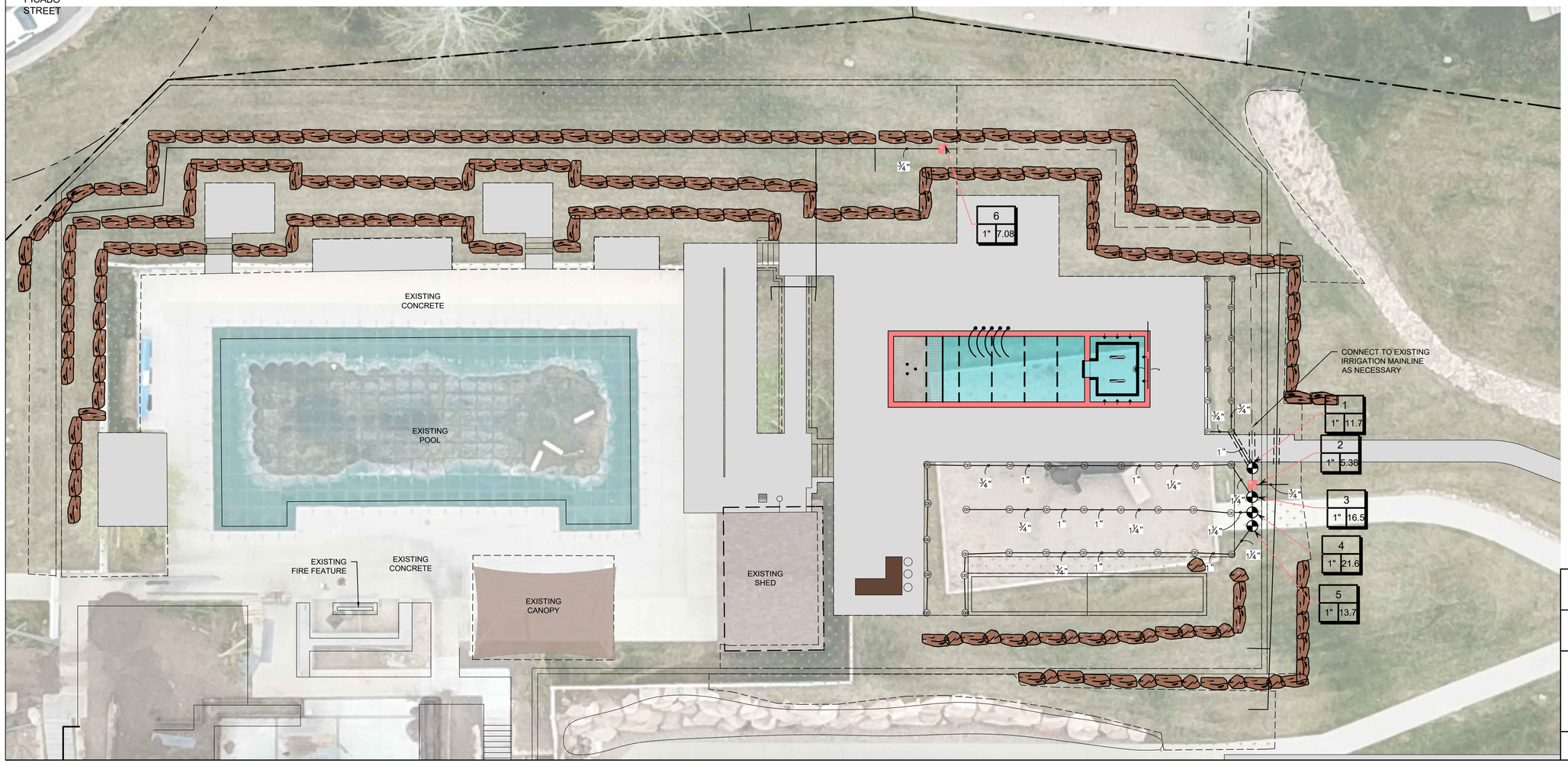
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
4 6 8 10 4 6 8 10 12 15 18 12 15 18	Rain Bird 1804-SAM ADJ Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve.	31	30
4 6 8 10 4 6 8 10 12 15 18 12 15 18	Rain Bird 1804-SAM ADJ Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve.	12	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-100-PRB-LC 1" Wide Flow Drip Control Kit, for Light Commercial Uses. 1" PEB Valve, with 1" Pressure Regulating 40psi Basket Filter. 0.3-20 GPM.	2
	Area to Receive Drip Emitters Rain Bird XB-PC Single Outlet, Pressure Compensating Drip Emitters. Flow rates of 0.5gph=blue, 1.0gph=black, and 2.0gph=red. Comes with a self-piercing barb inlet x barb outlet. Emitter Notes: 0.5 GPH emitters (1 assigned to each 1 gal plant) 1.0 GPH emitters (2 assigned to each 5 gal plant) 2.0 GPH emitters (3 assigned to each B & B, 8-10' plant) 2.0 GPH emitters (3 assigned to each B & B, 1" Cal plant) 2.0 GPH emitters (3 assigned to each B & B, 5-7' plant) 1.0 GPH emitters (2 assigned to each 5 gal plant) 0.5 GPH emitters (1 assigned to each 1 GAL plant) 2.0 GPH emitters (3 assigned to each B&B, 2" Cal plant) 2.0 GPH emitters (3 assigned to each B&B, 1.5" Cal plant) 2.0 GPH emitters (3 assigned to each B&B, 8-10' plant) 2.0 GPH emitters (3 assigned to each B&B, 5-7' plant) 2.0 GPH emitters (3 assigned to each B&B, 6' plant) 0.5 GPH emitters (3 assigned to each B&B, 1" Cal plant)	11,358 s.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB 1" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	4
	Irrigation Lateral Line: PVC Schedule 40 3/4"	492.3 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1"	75.9 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	51.7 l.f.
	Irrigation Mainline: PVC Schedule 40	125.5 l.f.
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	19.5 l.f.

Valve Callout



N

10' 0 10' 20'

Scale 1" = 10'

Scale 1" = 20' for 11x17

STATE OF UTAH
CARLY N. BERG
7162790
Licensed Landscape Architect

01 DEC 2021

SUN PEAK HOA

POOL COMMON AREA

IRRIGATION PLAN

berg LANDSCAPE ARCHITECTS
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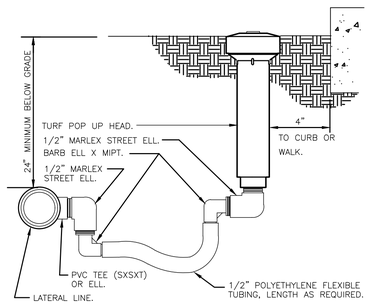
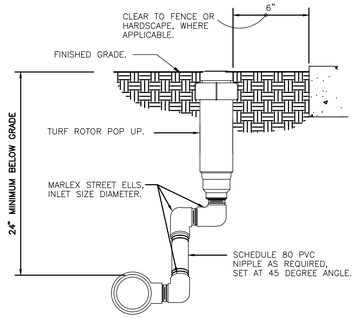
Midway, Ut 84049 ph. (801) 723-2000

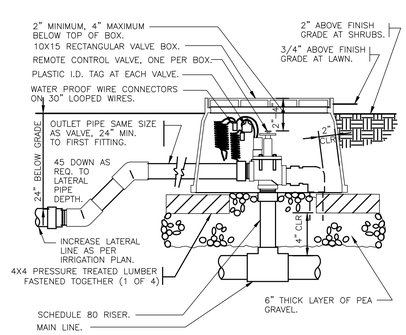
DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L11



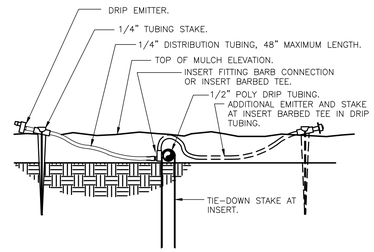
1 TURF SPRAY FLEX ASSEMBLY



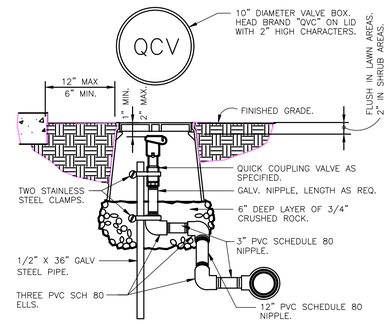
2 TURN ROTOR MARLEX ASSEMBLY



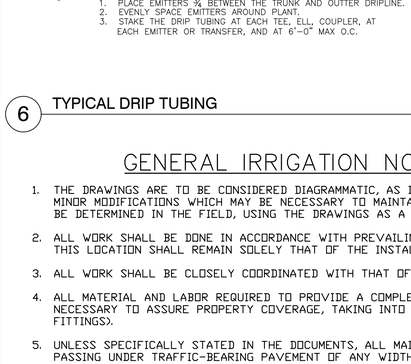
3 ELECTRIC REMOTE CONTROL VALVE



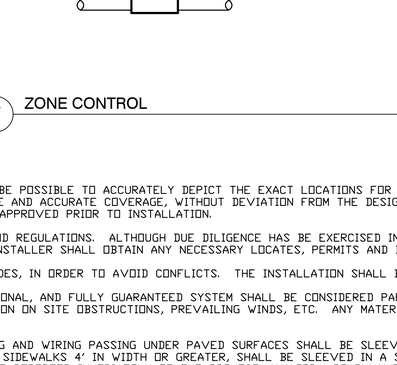
4 DRIP EMITTER AT 1/4" TUBING



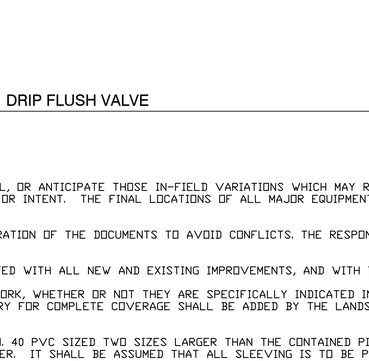
5 QUICK COUPLING VALVE IN BOX



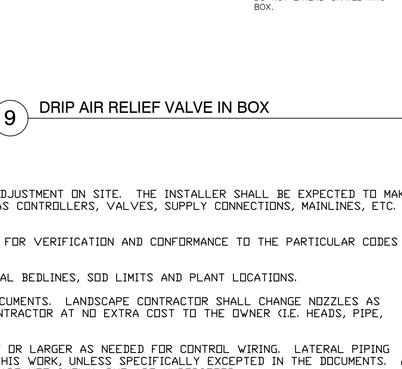
6 TYPICAL DRIP TUBING



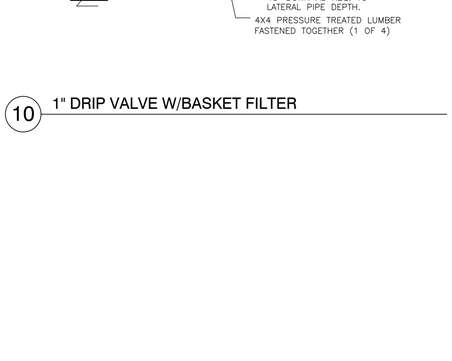
7 ZONE CONTROL



8 DRIP FLUSH VALVE



9 DRIP AIR RELIEF VALVE IN BOX



10 1" DRIP VALVE W/BASKET FILTER

GENERAL IRRIGATION NOTES:

1. THE DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, AS IT MAY NOT BE POSSIBLE TO ACCURATELY DEPICT THE EXACT LOCATIONS FOR ALL MATERIAL, OR ANTICIPATE THOSE IN-FIELD VARIATIONS WHICH MAY REQUIRE ADJUSTMENT ON SITE. THE INSTALLER SHALL BE EXPECTED TO MAKE MINOR MODIFICATIONS WHICH MAY BE NECESSARY TO MAINTAIN COMPLETE AND ACCURATE COVERAGE, WITHOUT DEVIATION FROM THE DESIGN CONCEPTS OR INTENT. THE FINAL LOCATIONS OF ALL MAJOR EQUIPMENT, SUCH AS CONTROLLERS, VALVES, SUPPLY CONNECTIONS, MAINLINES, ETC. SHALL BE DETERMINED IN THE FIELD, USING THE DRAWINGS AS A GUIDE, AND APPROVED PRIOR TO INSTALLATION.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH PREVAILING CODES AND REGULATIONS. ALTHOUGH DUE DILIGENCE HAS BE EXERCISED IN THE PREPARATION OF THE DOCUMENTS TO AVOID CONFLICTS. THE RESPONSIBILITY FOR VERIFICATION AND CONFORMANCE TO THE PARTICULAR CODES FOR THIS LOCATION SHALL REMAIN SOLELY THAT OF THE INSTALLER, THE INSTALLER SHALL OBTAIN ANY NECESSARY LOCATES, PERMITS AND INSPECTIONS.
3. ALL WORK SHALL BE CLOSELY COORDINATED WITH THAT OF OTHER TRADES, IN ORDER TO AVOID CONFLICTS. THE INSTALLATION SHALL BE COORDINATED WITH ALL NEW AND EXISTING IMPROVEMENTS, AND WITH THE ACTUAL BEDLINES, SOD LIMITS AND PLANT LOCATIONS.
4. ALL MATERIAL AND LABOR REQUIRED TO PROVIDE A COMPLETE, OPERATIONAL, AND FULLY GUARANTEED SYSTEM SHALL BE CONSIDERED PART OF THE WORK, WHETHER OR NOT THEY ARE SPECIFICALLY INDICATED IN THE DOCUMENTS. LANDSCAPE CONTRACTOR SHALL CHANGE NOZZLES AS NECESSARY TO ASSURE PROPERTY COVERAGE, TAKING INTO CONSIDERATION ON SITE OBSTRUCTIONS, PREVAILING WINDS, ETC. ANY MATERIAL NECESSARY FOR COMPLETE COVERAGE SHALL BE ADDED BY THE LANDSCAPE CONTRACTOR AT NO EXTRA COST TO THE OWNER (I.E. HEADS, PIPE, FITTINGS).
5. UNLESS SPECIFICALLY STATED IN THE DOCUMENTS, ALL MAINLINE PIPING AND WIRING PASSING UNDER PAVED SURFACES SHALL BE SLEEVED WITH SCH. 40 PVC SIZED TWO SIZES LARGER THAN THE CONTAINED PIPE, OR 1" OR LARGER AS NEEDED FOR CONTROL WIRING. LATERAL PIPING PASSING UNDER TRAFFIC-BEARING PAVEMENT OF ANY WIDTH, OR UNDER SIDEWALKS 4' IN WIDTH OR GREATER, SHALL BE SLEEVED IN A SIMILAR MANNER. IT SHALL BE ASSUMED THAT ALL SLEEVING IS TO BE PART OF THIS WORK, UNLESS SPECIFICALLY EXCEPTED IN THE DOCUMENTS. ANY NEEDED SLEEVES WHICH ARE UNUSABLE OR CANNOT BE FOUND SHALL BE REPORTED IMMEDIATELY TO THE PROJECT MANAGER. ROADWAY/DRIVEWAY SLEEVES ARE CALLED OUT ON THIS DRAWING. ALL SIDEWALK SLEEVES ARE NOT SHOWN, BUT ARE UNDERSTOOD.
6. CONTROL WIRING SHALL BE ROUTED WITH THE MAINLINE WHEREVER POSSIBLE.
7. ALL HEADS SHALL BE OF THE PROPER TYPE FOR THE PLANT MATERIAL WHERE LOCATED, AND SHALL BE INSTALLED IN THE PRESCRIBED MANNER, PLUMB, AND WITH THE PROPER HEIGHT WITH RESPECT TO GRADE AND PLANT HEIGHT. ALL HEADS AND OTHER EQUIPMENT SHALL BE INSTALLED WITH ADEQUATE AND UNIFORM CLEARANCES FORM ALL PAVING, CURBS, SIDEWALKS, WALLS, AND OTHER OBSTACLES, SO THAT DAMAGE TO EQUIPMENT DOES NOT OCCUR DURING LANDSCAPE MAINTENANCE OPERATIONS. ALL SPRINKLERS SHALL BE ADJUSTED TO OBTAIN MAXIMUM COVERAGE OF PLANT MATERIAL. WHILE MINIMIZING OVERSPRAY ONTO WINDOWS OR WALLS, OR OTHER IMPERVIOUS SURFACES, PARTICULARLY WOODWORK AND/OR TRIM. THE INSTALLER SHALL UTILIZE SUITABLE PRESSURE-COMPENSTING SCREENS OR ADJUSTABLE-ARC NOZZLES WHERE REQUIRED TO ACHIEVE MAXIMUM COVERAGE CONTROL.
9. EACH CONTROLLER SHALL REQUIRE A STANDARD 120-VAC POWER FEED, WHICH SHALL BE COORDINATED AND HOOKED UP BY THE INSTALLER OR HIS DESIGNATED ELECTRICIAN. A 3-WIRE POWER INPUT SURGE ARRESTOR SHALL BE PROVIDED ON THE POWER FEED, AND A DEDICATED GROUND ROD OR RODS SHALL BE INSTALLED, WHICH PROVIDE A RESISTANCE OF NO GREATER THAN 10 OHMS TO EARTH.
10. HARCO FITTINGS ARE REQUIRED ON AND NEAR ALL CHANGES IN DIRECTION.
11. LATERAL LINES SHALL BE NO SMALLER THAN 1". PIPES SHALL CARRY NO MORE THAN THE FOLLOWING.

1" PIPE MAX.	12GPM
1 1/4" PIPE MAX.	22GPM
1 1/2" PIPE MAX.	30GPM
2" PIPE MAX.	50GPM
2 1/2" PIPE MAX.	75GPM

12. INSTALL MANUAL DRAINS AT ALL LOW POINTS ON THE MAINLINE PIPE WITH ADEQUATELY SIZED SUMPS.
13. THE INSTALLER SHALL BE EXPECTED TO BE FAMILIAR WITH AND FOLLOW THE INSTRUCTIONS CONTAINED HEREIN, ON THE DRAWINGS, IN THE CONSTRUCTION DETAILS, AND IN THE WRITTEN SPECIFICATIONS. SHOULD A CONFLICT BE DISCOVERED WITHIN THE DOCUMENTS, IMMEDIATELY NOTIFY THE PROJECT MANAGER AND REQUEST CLARIFICATION.
14. PROVIDE A REPRODUCIBLE IRRIGATION PLAN TO ARCHITECT AND OWNER SHOWING ALL PIPE, HEADS, VALVES, DRAINS, CLOCKS, ETC. AFTER CONSTRUCTION. PROVIDE INSTRUCTIONS TO MAINTENANCE PERSONNEL FOR WINTERIZATION. PROVIDE A COLOR CODED PLAN AT THE CONTROLLER LOCATION.

SUN PEAK HOA

POOL COMMON AREA

IRRIGATION DETAILS

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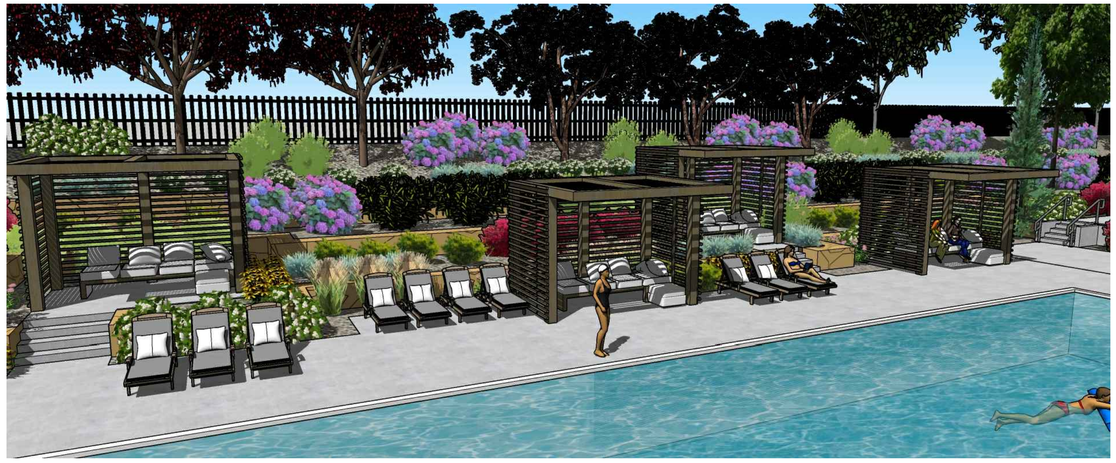
DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET L12
DRAWN BY: CNB	REV:	



SUN PEAK HOA

POOL COMMON AREA

3D RENDERINGS
SHEET 2

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DESIGN BY: CNB	DATE: 01 DEC 2021	SHEET
DRAWN BY: CNB	REV:	L14

SUN PEAK HOA

POOL COMMON AREA

3D RENDERINGS
SHEET 1

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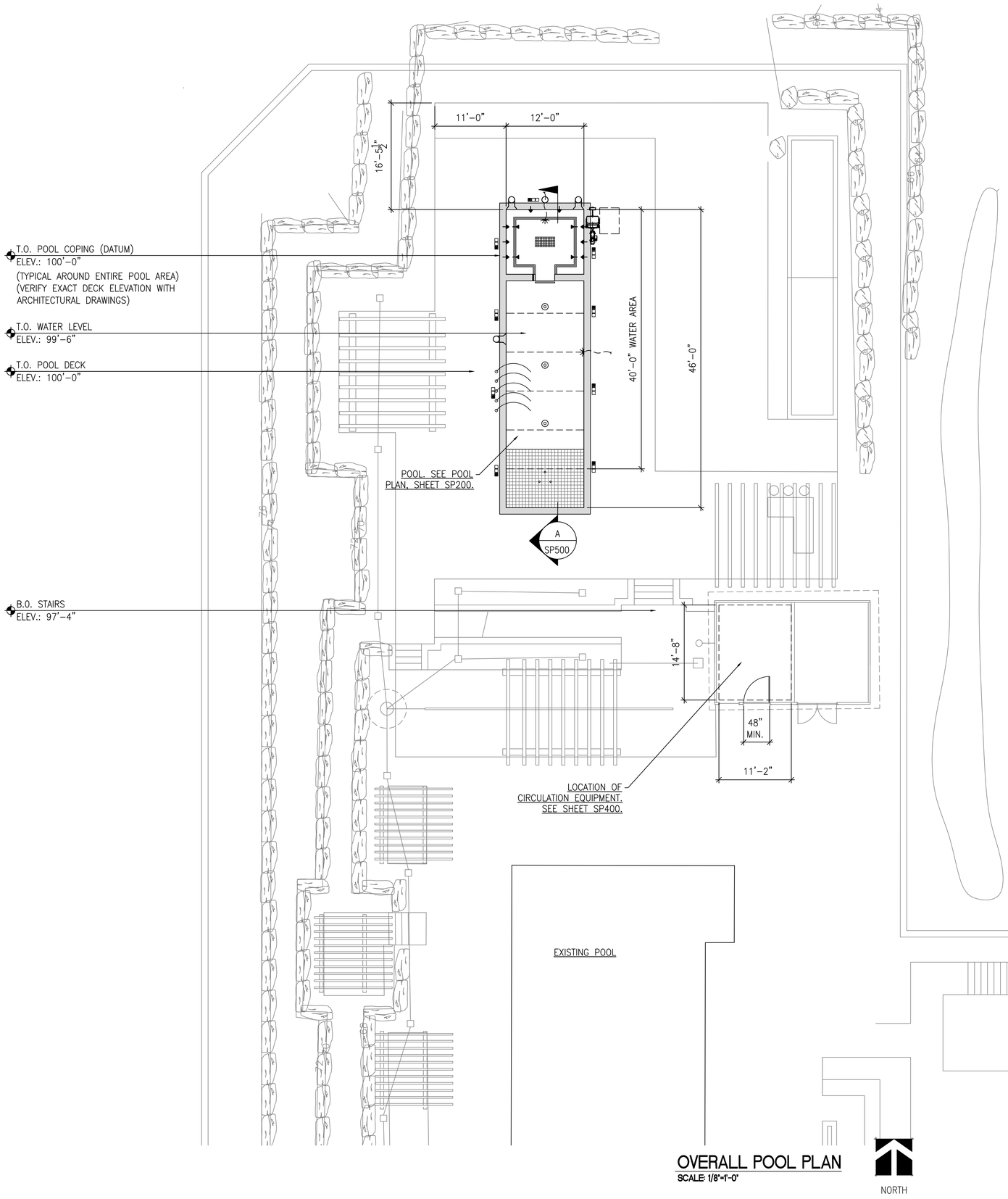
DESIGN BY: CNB DRAWN BY: CNB	DATE: 01 DEC 2021 REV:	SHEET L13



POOL LAYOUT ON SITE:

1. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
2. POOL CONTRACTOR SHALL HAVE POOL LAID-OUT ON SITE BY A PROFESSIONAL SURVEYOR PRIOR TO EXCAVATION.
3. CIVIL, ARCHITECTURAL, AND LANDSCAPE ARCHITECTURAL PLANS AND DIMENSIONS GOVERN.
4. POOL CONTRACTOR IS RESPONSIBLE FOR POOL SPECIFIC SURVEY WORK. AN ELECTRONIC FILE OF THE POOL BASE MAY BE PROVIDED TO THE CONTRACTOR FOR SURVEYOR'S USE. SEE CIVIL DRAWINGS FOR REFERENCE POINTS AND ADDITIONAL SITE INFORMATION.
5. COORDINATE POOL PLAN DATUM OF 100'-0" WITH CIVIL ELEVATIONS

NOTE:
FOR BONDING REQUIREMENTS SEE ELECTRICAL NOTES AND THE 2020 N.E.C., ARTICLE 680, OR CURRENT ADOPTED ELECTRICAL CODE.

NOTE:
PROVIDE A CONTINUOUS WALL, FENCE OR BARRIER AROUND POOL AND SPA AREA. DESIGN AND INSTALLATION BY OTHERS. SEE "ITEMS PROVIDED BY GENERAL CONTRACTOR", SHEET SP101, FOR REQUIREMENTS.

NOTE:
ALL PROPERTY LINES, SETBACKS, EASEMENTS, ETC., SHOWN ON THIS PLAN, ARE FOR INFORMATION ONLY AND WERE PROVIDED BY OTHERS.

NOTE:
SEE ARCHITECTURAL DRAWINGS FOR EXACT ELEVATIONS AND EXACT LOCATION OF THE POOL AND SPA ON THE PROPERTY. REPORT ANY DISCREPANCIES TO POOL ENGINEER.

NOTE:
RESTROOM AND SHOWER FACILITIES DESIGN AND INSTALLATION BY OTHERS. POOL CONTRACTOR SHALL PROVIDE ARCHITECTURAL FLOOR PLANS WITH RESTROOM FACILITIES ADJACENT TO POOL LOCATION WITH PROPER FIXTURE COUNTS TO LOCAL HEALTH DEPARTMENT. REQUIRED SANITARY FIXTURE COUNTS ARE SHOWN ON SHEET SP101.

OVERALL POOL PLAN
SCALE: 1/8"=1'-0"

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SUN PEAK
1950 BEAR HOLLOW DRIVE
PARK CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
CHARLES ROSS MIDERSON
146589-2203
11-9-21
STATE OF UTAH
HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

OVERALL POOL PLAN

DATE	NOV. 9, 2021
REVISED	-
DRAWN BY	JN
JOB #	21-866FS
DRAWING NO.	SP100

RESTROOM AND SHOWER FACILITIES REQUIREMENTS:

1. THE FACILITY SHALL PROVIDE A RESTROOM WITH SHOWER FACILITY FOR EACH GENDER.
2. THE ENTRANCES AND EXITS MUST BE DESIGNED TO BREAK THE LINE OF SIGHT INTO THE RESTROOM AND SHOWER FACILITIES.
3. THE MINIMUM NUMBER OF TOILETS AND SHOWERS MUST BE BASED UPON THE DESIGNED MAXIMUM BATHER LOAD.
4. REQUIRED NUMBERS OF FIXTURES MUST BE BASED UPON 50 PERCENT OF THE TOTAL NUMBER OF BATHERS BEING MALE AND 50 PERCENT BEING FEMALE, EXCEPT WHERE THE FACILITY IS USED EXCLUSIVELY BY ONE GENDER.
5. THE MINIMUM NUMBER OF SANITARY FIXTURES MUST BE IN ACCORDANCE WITH THE FOLLOWING:

   TOILETS:

   1 FOR 1 TO 25 MALES OR FEMALES
   2 FOR 26 TO 75 MALES OR FEMALES
   3 FOR 76 TO 125 MALES OR FEMALES
   4 FOR 126 TO 200 MALES OR FEMALES
   5 FOR 201 TO 300 MALES OR FEMALES
   6 FOR 301 TO 400 MALES OR FEMALES

   OVER 400, ADD ONE FIXTURE FOR EACH ADDITIONAL 200 MALES OR 150 FEMALES.

   - WHERE URINALS ARE PROVIDED, ONE TOILET LESS THAN THE NUMBER SPECIFIED MAY BE PROVIDED FOR EACH URINAL INSTALLED, EXCEPT THE NUMBER OF TOILETS IN SUCH CASES MAY NOT BE REDUCED TO LESS THAN ONE HALF OF THE MINIMUM SPECIFIED.
   - THE LOCAL HEALTH DEPARTMENT MAY EXEMPT ANY BATHERS WHO HAVE PRIVATE USE FIXTURES AVAILABLE WITHIN 150 FEET OF THE POOL FROM THE TOTAL NUMBER OF BATHERS USED TO CALCULATE THE NUMBER OF FIXTURES REQUIRED.

   LAVATORIES:
   MUST BE PROVIDED ON THE BASIS OF ONE FOR EACH TOILET UP TO FOUR, THEN ONE FOR EACH TWO ADDITIONAL TOILETS.

   SHOWERS:
   THE FACILITY SHALL PROVIDE SHOWERS FOR EACH GENDER AND SHALL ENCLOSE THESE SHOWERS FOR PRIVACY. A MINIMUM OF ONE SHOWER HEAD FOR EACH GENDER MUST BE PROVIDED FOR EACH 50 BATHERS OR FRACTION THEREOF.

6. POTABLE WATER MUST BE PROVIDED AT ALL SHOWER HEADS. WATER HEATERS AND THERMOSTATICALLY CONTROLLED MIXING VALVES MUST BE INACCESSIBLE TO BATHERS AND MUST BE CAPABLE OF PROVIDING 2 GALLONS PER MINUTE OF 90 DEGREE F. WATER TO EACH SHOWER HEAD FOR EACH BATHER.
7. IF UNISEX FACILITIES ARE PROVIDED THEY MAY COUNT TOWARD THE TOTAL NUMBER OF REQUIRED FIXTURES IN THIS SECTION AS LONG AS THE UNISEX FACILITIES ARE PROVIDED IN MULTIPLES OF TWO.
8. SOAP MUST BE DISPENSED AT ALL LAVATORIES AND SHOWERS.
9. SOAP DISPENSERS MUST BE CONSTRUCTED OF METAL OR PLASTIC.
10. USE OF BAR SOAP OR ANY COMMUNAL SOAP ITEM IS PROHIBITED.
11. DISPOSABLE TOWELS OR AIR DRYERS MUST BE PROVIDED FOR ALL LAVATORIES.
12. FIXTURES MUST BE DESIGNED SO THAT THEY MAY BE READILY CLEANED. FIXTURES MUST WITHSTAND FREQUENT CLEANING AND DISINFECTING.
13. THE OPERATOR SHALL MAINTAIN ALL AREAS AND FIXTURES WITHIN RESTROOM FACILITIES IN AN OPERABLE, CLEAN AND SANITARY CONDITION.
14. RESTROOM AND SHOWER FACILITIES MUST BE CONSTRUCTED OF MATERIALS THAT HAVE SMOOTH, NON-SLIP SURFACES, AND ARE IMPERVIOUS TO MOISTURE.
15. FLOOR MUST SLOPE TO A DRAIN AND BE CONSTRUCTED TO PREVENT ACCUMULATION OF WATER.
16. CARPETING MAY NOT BE INSTALLED ON RESTROOM AND SHOWER FLOORS.
17. JUNCTIONS BETWEEN WALLS AND FLOORS MUST BE COVED.
18. AT LEAST ONE COVERED WASTE RECEPTACLE MUST BE PROVIDED IN EACH RESTROOM.

SANITARY FIXTURES:

MINIMUM REQUIREMENTS (N.I.P.C.)

3 WATER CLOSET: FEMALE
2 WATER CLOSET: MALE
1 URINAL: MALE
3 LAVATORY: FEMALE
3 LAVATORY: MALE
2 SHOWER: MALE
2 SHOWER: FEMALE

CLEANING EQUIPMENT

ONE (1) – 24" VACUUM HEAD – "FLEX-O-VAC" W/2" HOSE CONNECTION

ONE (1) – 50' VACUUM HOSE 2"ø

ONE (1) – 20' VACUUM HOSE 2"ø

ONE (1) – HANDLE EXTENSION SECTION 12' LONG

ONE (1) – LEAF SKIMMER W/16' LONG HANDLE

ONE (1) – WALL BRUSH 24" LONG W/16' LONG HANDLE

ONE (1) – SKIMMER PLATE (SPA)

SAFETY AND ACCESSIBILITY NOTES:

SAFETY ITEMS, REQUIRED SIGNS, HEALTH ISSUES, AND RESTROOM REQUIREMENTS THAT ARE INDICATED ON THE DRAWINGS, OR IN THE SPECIFICATIONS ARE FOR GENERAL GUIDANCE ONLY. THE POOL CONTRACTOR, AND/OR THE OWNER/OPERATOR OF THE FACILITY SHALL BE RESPONSIBLE FOR FURNISHING AND MAINTAINING ALL ITEMS REQUIRED BY THE REGULATIONS FOR THE DESIGN, CONSTRUCTION, AND OPERATION OF PUBLIC SWIMMING POOLS.

OSHA SAFETY DURING CONSTRUCTION:
CONTRACTORS SHALL REFERENCE AND FOLLOW OSHA STANDARDS 29 CFR AND ALL OTHER APPLICABLE STANDARDS.

(IF SWIMMING POOL ADA ACCESS IS SHOWN) THESE PLANS ONLY ADDRESS AMERICANS WITH DISABILITY ACT (ADA) ACCESSIBILITY INTO THE SWIMMING POOL WATER FROM THE ADJACENT DECK. THIS PLAN DOES NOT COVER ACCESSIBILITY OF THE ENTIRE FACILITY. THE OWNER OR THEIR AGENT SHALL BE RESPONSIBLE FOR REVIEW, ASSESSMENT AND DESIGN FOR ALL ADA ACCESSIBILITY REQUIREMENTS.

TEST KITS

PROVIDE ONE (1) – TEST KIT THAT SHALL INCLUDE TESTING CAPABILITIES FOR: UNSTABILIZED FREE CHLORINE, FREE RESIDUAL CHLORINE, TOTAL CHLORINE, BROMINE, IODINE, pH, ACID AND BASE DEMAND, TOTAL ALKALINITY AND CYANURIC ACID.
MANUFACTURER: TAYLOR (OR APPROVED EQUAL)

PROVIDE ONE (1) – TEST KIT FOR TOTAL DISSOLVED SOLIDS.

REQUIRED SAFETY EQUIPMENT

TWO SETS TOTAL ARE REQUIRED TO BE PROVIDED BY OWNER. SOME MAY BE EXISTING (NIPC).

TWO – COAST GUARD APPROVED RING BUOY WITH AN ATTACHED ROPE EQUAL IN LENGTH TO THE MAXIMUM WIDTH OF THE POOL PLUS 10'.

TWO – AMERICAN RED CROSS APPROVED RESCUE TUBE.

TWO – LIFE POLE OR SHEPHERD'S CROOK W/BLUNTED ENDS. MIN. 12' LONG (3.66 METERS).

ONE – FIRST AID KIT – WHICH INCLUDES THE FOLLOWING:
EYE DRESSING PACKET (2 UNITS)
TRIANGULAR BANDAGE (2 UNITS)
CPR SHIELD (1 UNIT)
SCISSORS (1 UNIT)
TWEEZERS (1 UNIT)
LATEX GLOVES (6 PAIRS)
1 INCH ADHESIVE COMPRESS (2 UNITS)
2 INCH ADHESIVE COMPRESS (2 UNITS)
3 INCH ADHESIVE COMPRESS (2 UNITS)
4 INCH ADHESIVE COMPRESS (2 UNITS)
3 INCH SQUARE PLAIN GAUZE PAD (2 UNITS)
GAUZE ROLLER BANDAGE (2 UNITS)
PLAIN ABSORBENT GAUZE – 0.5 SQ YDS (1 UNIT)
PLAIN ABSORBENT GAUZE – 24 INCHES x 72 INCHES (1 UNIT)
BANDAGE TAPE (2 UNITS)
BUTTERFLY CLOSURES – 1 BOX (1 UNIT)
3 INCH ACE BANDAGE (1 UNIT)
ASSORTED ADHESIVE BAND-AIDS – 1 BOX (1 UNIT)

ELECTRICAL NOTES:

GENERAL:

1. "N.E.C." IN THESE NOTES AND ON THESE PLANS REFERS TO 2020 NATIONAL ELECTRIC CODE (NFPA 70), ARTICLE 680. WATER DESIGN INC. TAKES NO EXCEPTION TO THE USE OF CURRENT ADOPTED ELECTRICAL CODE, IF PERMITTED BY LOCAL BUILDING AUTHORITY, OR AS SPECIFIED BY ELECTRICAL ENGINEER. ALL INSTALLATION OF THE ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE APPLICABLE PROVISIONS SET FORTH IN THE LOCAL CURRENT ADOPTED ELECTRICAL CODE.

ITEMS PROVIDED BY ELECTRICAL CONTRACTOR (NIPC):

(THE FOLLOWING ITEMS SHALL BE ENGINEERED AND SPECIFIED BY AN ELECTRICAL ENGINEER AND PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR. THE ELECTRICAL TRADES' RESPONSIBILITIES ARE NOT LIMITED TO THESE ITEMS.)

2. PROVIDE ELECTRICAL SERVICE AND CONNECTIONS TO ALL PUMP MOTORS, CIRCUIT BREAKERS, DISCONNECTS, PANELS, RELAYS, CONTROLLERS, OR OTHER POOL EQUIPMENT IN EQUIPMENT ROOM.
3. PROVIDE ELECTRICAL CONNECTIONS TO HEATER AS REQUIRED.
4. PROVIDE AN EMERGENCY SHUT OFF SWITCH FOR EACH HEATER NEAR THE ENTRANCE TO THE EQUIPMENT ROOM, IF REQUIRED PER LOCAL BOILER CODE.
5. PROVIDE BONDING AND GROUNDING OF POOL SHELL TO EQUIPOTENTIAL BONDING GRID IN DECK, PUMP MOTORS AND OTHER EQUIPMENT IN THE EQUIPMENT ROOM.
6. PROVIDE POOL EQUIPMENT INTERLOCKING. INTERLOCK THE CIRCULATION PUMP WITH THE CHEMICAL CONTROLLER, FEEDERS AND OTHER DISINFECTION EQUIPMENT (UV, OZONE, ETC.). INTERLOCK THE CIRCULATION PUMP WITH THE HEATER IF A FLOW SWITCH IS NOT INSTALLED ON THE HEATER.
7. PROVIDE MINIMUM 5 HORIZONTAL FOOT CANDLES OF DECK LIGHTING PER SQUARE FOOT OF POOL DECK AREA (OR PER LOCAL SWIMMING POOL CODE) IF USED AT NIGHT.
8. ELECTRICAL WIRING OR POWER SUPPLY LINES SHALL NOT BE ROUTED UNDERGROUND BENEATH THE POOL OR SPA SHELL.
9. NO OUTLETS WITHIN 6 FT. OF POOL. ALL OUTLETS 6 FT. TO 20 FT. FROM THE INSIDE WALL OF THE POOL SHALL BE G.F.C.I. PROTECTED PER N.E.C. REQUIREMENTS.
10. AT LEAST ONE ELECTRICAL OUTLET ON A GENERAL-PURPOSE BRANCH SHALL BE PROVIDED AND LOCATED NOT LESS THAN 6 FT. AND NOT MORE THAN 20 FT. FROM THE INSIDE WALL OF THE POOL. PROVIDE G.F.C.I. PROTECTION PER N.E.C. REQUIREMENTS.
11. ALL ELECTRICAL EQUIPMENT, INSTALLED ADJACENT TO POOL, (LUMINARIES, MOTORS, CONTROLLERS, ELECTRICAL OUTLETS, FANS, GAS-FIRED FIRE PITS, ETC.) SHALL BE G.F.C.I. PROTECTED IN ACCORDANCE WITH ALL APPLICABLE ARTICLES OF THE N.E.C.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT FROM J-BOX TO LIGHT NICHE (EXCEPT FIRST 4'-0" AT NICHE) AND PROVIDE J-BOX AND HOOK-UP. SEE UNDERWATER LIGHT AND J-BOX DETAILS. SEE ELECTRICAL PLAN (BY OTHERS). ALL ELECTRICAL WORK AND GROUNDING SHALL BE PER THE N.E.C. COMPONENTS SHALL BE IN COMPLIANCE WITH UL 1241 "JUNCTION BOXES FOR SWIMMING POOL FIXTURES".
13. PROVIDE LIGHT SWITCHES FOR UNDERWATER LIGHTS IN A LOCATION WHERE THEY ARE NOT ACCESSIBLE BY BATHERS. (SWITCH LOCATION DETERMINED BY OWNER/ARCHITECT). SWITCH UNDERWATER LIGHTS ON THE END WALL OF THE POOL SEPARATELY FROM THE UNDERWATER LIGHTS ON THE SIDE WALLS.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL EMERGENCY SHUT-OFF SWITCH(ES) AND 15 MINUTE MAX. THERAPY PUMP TIMER(S) INCLUDING WIRING, CONDUIT, AND CONNECTIONS PER THE N.E.C.

ITEMS PROVIDED BY POOL CONTRACTOR:

15. POOL CONTRACTOR SHALL BE RESPONSIBLE FOR BONDING OF ALL EQUIPMENT AND METAL ITEMS IN OR NEAR THE POOL, INCLUDING: LIGHTS, NICHES, RAILINGS, ADA LIFT SLEEVE, REINFORCING STEEL, ETC. WITH A #8 BARE GROUND WIRE. ALL BONDING SHALL BE PER THE N.E.C.
16. POOL CONTRACTOR SHALL PROVIDE FIRST 4'-0" OF CONDUIT AND SUFFICIENT LENGTH OF CORD FROM EACH UNDERWATER LIGHT TO ITS J-BOX AND TO ALLOW FOR LIGHT TO REACH DECK FOR SERVICING. SEE JUNCTION BOX DETAIL. SEE ELECTRICAL PLANS FOR J-BOX LOCATIONS (BY OTHERS).
17. POOL WATER SHALL BE IN DIRECT CONTACT WITH APPROVED BONDED CORROSION-RESISTANT CONDUCTIVE SURFACE, THAT EXPOSES NOT LESS THAN 9 SQ. IN. OF SURFACE TO POOL WATER AT ALL TIMES, UNLESS OTHERWISE IN DIRECT CONNECTION WITH BONDED PARTS.
18. POOL CONTRACTOR SHALL PROVIDE SPA TIMER(S).
19. POOL CONTRACTOR SHALL PROVIDE EMERGENCY SHUT-OFF SWITCH(ES).

ITEMS PROVIDED BY MECHANICAL AND PLUMBING DESIGNER AND CONTRACTOR:

(THE FOLLOWING ITEMS SHALL BE DESIGNED BY A MECHANICAL/PLUMBING ENGINEER AND PROVIDED BY A MECHANICAL/PLUMBING CONTRACTOR, HOWEVER THE MECHANICAL TRADES' RESPONSIBILITIES ARE NOT LIMITED TO THESE ITEMS.)
(NIPC)

1. BUILDINGS CONTAINING INDOOR POOLS, POOL EQUIPMENT ROOMS, ACCESS SPACES, BATHHOUSES, DRESSING ROOMS, SHOWER ROOMS AND TOILET SPACES MUST BE VENTILATED IN ACCORDANCE WITH AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS STANDARD 62.1-2004. (MAXIMUM AMBIENT AIR TEMPERATURE OF THE EQUIPMENT ROOM IS 104° F).
2. PROVIDE SEALED COMBUSTION AIR FOR HEATERS PER HEATER MANUFACTURER'S SPECIFICATION AND LOCAL CODES.
3. PROVIDE REQUIRED FUEL CONNECTIONS, REGULATORS, GAS VALVES, AND GAS LINE VENTS FOR HEATER PER MANUFACTURES SPECIFICATIONS AND LOCAL CODES.
4. PROVIDE REQUIRED DUCT WORK AND/OR VENT PIPING AND CONNECTIONS FOR HEATER PER MANUFACTURERS SPECIFICATIONS AND LOCAL CODES.
5. PROVIDE FLOOR DRAINS AND SEWER CONNECTIONS AS REQUIRED BY LOCAL CODES AND AS SHOWN ON DRAWINGS (I.E. IN BACKWASH PIT AND EQUIPMENT ROOM FLOOR). SIZE SEWER LINE IN THE BACKWASH PIT TO HANDLE FILTER BACKWASH RATES AS SHOWN ON PLANS OR AS REGULATED BY LOCAL CODES.
6. OUTDOOR POOL DECK DRAINS SHALL DRAIN TO STORM SEWER OR APPROVED WASTE.
7. PROVIDE POTABLE WATER LINE (SIZED AS SPECIFIED ON DRAWINGS) WITH SHUT-OFF VALVES TO LOCATIONS SHOWN ON DRAWINGS OR AS DIRECTED BY POOL CONTRACTOR.
8. PROVIDE HOSE BIBS IN POOL AREAS TO ALLOW FOR A COMPLETE WASH DOWN OF THE POOL DECKS.
9. CHEMICAL STORAGE CLOSETS SHALL BE VENTILATED TO AN OUTSIDE LOCATION IF USED.
10. PER OSHA AND ANSI REQUIREMENTS, MECHANICAL SHALL PROVIDE AND INSTALL EITHER PLUMBED EYE WASH AND EMERGENCY SHOWER STATION OR SELF CONTAINED GRAVITY FEED EYE WASH AND EMERGENCY SHOWER STATION, IN LOCATION(S) SHOWN ON THE POOL DRAWINGS, WHERE THE EYES OR BODY OF ANY PERSON MAY BE EXPOSED TO INJURIOUS CORROSIVE MATERIALS. STATIONS MUST HAVE TEPID WATER SUPPLY LINES AND DRAIN LINES.

REQUIRED SIGNS:

(SIGNS REQUIRED TO BE IN PLAIN VIEW)

POOL SAFETY SIGNS:

THE FOLLOWING SIGNS SHALL BE POSTED NEAR POOL
(LETTERS AT LEAST 4" HIGH WITH A STROKE WIDTH OF AT LEAST ONE-HALF INCH):

- "NO RUNNING"
- "NO LIFEGUARD ON DUTY"
- "NO DIVING"

THE FOLLOWING SIGNS SHALL BE POSTED NEAR POOL
(LETTERS AT LEAST 2" HIGH):

- "BATHERS SHOULD NOT SWIM ALONE."
- "CHILDREN 14 YEARS OF AGE AND UNDER SHOULD NOT USE POOL WITHOUT RESPONSIBLE ADULT SUPERVISION."

THE FOLLOWING SIGN SHALL BE POSTED NEAR POOL
(ANY POOL ENCLOSURE WHICH IS ACCESSIBLE TO THE PUBLIC WHEN ONE OR MORE OF THE POOLS ARE NOT BEING MAINTAINED FOR USE, SHALL PROTECT THOSE CLOSED POOLS FROM ACCESS BY A SIGN AND A BARRIER):

- "POOL IS CLOSED"
- "SPA IS CLOSED"

MAXIMUM BATHER LOAD SIGNS:

- "SPA MAXIMUM BATHER LOAD: 48 PERSONS"

EMERGENCY TELEPHONE NUMBERS SIGN:

A SIGN WITH 2" HIGH CAPITAL LETTERING MUST BE POSTED IN THE IMMEDIATE VICINITY OF THE POOLS STATING THE LOCATION OF THE NEAREST TELEPHONE AND EMERGENCY TELEPHONE NUMBERS WHICH SHALL INCLUDE:

* 911 (OR OTHER LOCAL EMERGENCY NUMBER)

SPA CAUTION SIGN:

A SPA POOL MUST HAVE AN EASILY READABLE CAUTION SIGN MOUNTED ADJACENT TO THE ENTRANCE TO THE SPA WHICH CONTAINS THE FOLLOWING INFORMATION:

A) THE WORD "CAUTION" CENTERED AT THE TOP OF THE SIGN IN LARGE BOLD LETTERS AT LEAST TWO INCHES IN HEIGHT.
B) ELDERLY PERSONS AND THOSE SUFFERING FROM HEART DISEASE, DIABETES OR HIGH BLOOD PRESSURE SHOULD CONSULT A PHYSICIAN BEFORE USING THE SPA.
C) PERSONS SUFFERING FROM A COMMUNICABLE DISEASE TRANSMISSIBLE VIA WATER MAY NOT USE THE SPA POOL. PERSONS USING PRESCRIPTION MEDICATIONS SHOULD CONSULT A PHYSICIAN BEFORE USING THE SPA.
D) INDIVIDUALS UNDER THE INFLUENCE OF ALCOHOL OR OTHER IMPAIRING CHEMICAL SUBSTANCES SHOULD NOT USE THE SPA.
E) BATHERS SHOULD NOT USE THE SPA ALONE.
F) PREGNANT WOMEN SHOULD NOT USE THE SPA WITHOUT CONSULTING THEIR PHYSICIAN.
G) PERSONS SHOULD NOT SPEND MORE THAN 15 MINUTES IN THE SPA IN ANY ONE SESSION.
H) CHILDREN UNDER THE AGE OF 14 MUST BE ACCOMPANIED AND SUPERVISED BY AT LEAST ONE RESPONSIBLE ADULT OVER THE AGE OF 18 YEARS OLD.
I) CHILDREN UNDER THE AGE OF 5 YEARS ARE PROHIBITED FROM BATHING IN A HOT TUB OR SPA.
J) RUNNING OR ENGAGING IN UNSAFE ACTIVITIES OR HORSEPLAY IN OR AROUND THE SPA IS PROHIBITED.

PERSONAL HYGIENE AND BEHAVIOR RULES SIGN:

THE FACILITY OPERATOR AND STAFF IS RESPONSIBLE FOR THE ENFORCEMENT OF THE FOLLOWING PERSONAL HYGIENE AND BEHAVIOR RULES:

EASILY READABLE PLACARDS EMBODYING THE FOLLOWING RULES OF PERSONAL HYGIENE AND BEHAVIOR MUST BE CONSPICUOUSLY POSTED IN THE POOL ENCLOSURE AND IN THE DRESSING ROOMS AND OFFICES. LETTERING SHALL BE MINIMUM ONE-HALF INCH HIGH. SIGN TITLE OF PERSONAL HYGIENE AND BEHAVIOR RULES SHALL HAVE 2 INCH HIGH LETTERING.
1) A BATHER USING THE FACILITY MUST TAKE A CLEANSING SHOWER BEFORE ENTERING THE POOL ENCLOSURE. A BATHER LEAVING THE POOL TO USE THE TOILET MUST TAKE A SECOND CLEANSING SHOWER BEFORE RETURNING TO THE POOL ENCLOSURE.
2) A PERSON HAVING A COMMUNICABLE DISEASE TRANSMISSIBLE BY WATER MUST BE EXCLUDED FROM PUBLIC POOLS. A PERSON HAVING ANY EXPOSED SUB-EPIDERMAL TISSUE, INCLUDING OPEN BLISTERS, CUTS, OR OTHER LESIONS MAY NOT USE A PUBLIC POOL. A PERSON WHO HAS OR HAS HAD DIARRHEA WITHIN THE LAST TWO WEEKS CAUSED BY AN UNKNOWN SOURCE OR FROM ANY COMMUNICABLE OR FECAL-BORNE DISEASE MAY NOT ENTER ANY PUBLIC POOL.
3) ANY CHILD UNDER THREE YEARS OLD, ANY CHILD NOT TOILET TRAINED, AND ANYONE WHO LACKS CONTROL OF DEFECATION SHALL WEAR A WATER RESISTANT SWIM DIAPER AND WATERPROOF SWIMWEAR. SWIM DIAPERS AND WATERPROOF SWIMWEAR SHALL HAVE WAIST AND LEG OPENINGS FITTED SUCH THAT THEY ARE IN CONTACT WITH THE WAIST OR LEG AROUND THE ENTIRE CIRCUMFERENCE.
4) RUNNING, BOISTEROUS PLAY OR ROUGH PLAY, EXCEPT SUPERVISED WATER SPORTS, ARE PROHIBITED.
5) DIAPERS SHALL BE CHANGED ONLY IN RESTROOMS OR CHANGING STATIONS AND SHALL NOT BE CHANGED AT POOLSIDE. THE PERSON OR PERSONS WHO CHANGE THE DIAPER MUST WASH THEIR HANDS THOROUGHLY WITH SOAP BEFORE RETURNING TO THE POOL. THE DIAPERED PERSON MUST UNDERGO A CLEANSING SHOWER BEFORE RETURNING TO THE POOL.

CHEMICAL STORAGE ROOM DOOR SIGN:

(PROVIDED BY POOL CONTRACTOR)
PROVIDE AN NFPA 704 MARKING SYSTEM IDENTIFICATION PLACARD ON THE ENTRY DOOR TO THE STORAGE AREA OF EACH CHEMICAL STORAGE ROOM AS REQUIRED BY THE NFPA 704.

GENERAL NOTES:

1. "POOL" MEANS ONLY THE NEW POOL INCLUDED IN THIS PROJECT.
2. NIPC = NOT IN POOL CONTRACT.
3. ALL PLAN DIMENSIONS ARE POOL WALL TO POOL WALL. (U.O.N.)
4. POOL WATER TEMPERATURES FOR GENERAL USE MUST BE WITHIN THE RANGE OF 82°F TO 86°F.
5. THE MINIMUM WATER TEMPERATURE FOR A POOL IS 78°F. THE MAXIMUM WATER TEMPERATURE FOR A SPA IS 104°F.
6. A PUBLIC POOL MUST BE EQUIPPED WITH A FIRST AID KIT WHICH INCLUDES ALL THE ITEMS LISTED IN THE REQUIRED SAFETY EQUIPMENT NOTES. THE POOL CONTRACTOR SHALL PROVIDE THE OWNER WITH THE FIRST AID KIT.
7. ALL POOLS SHALL COMPLY WITH THE STATE OF UTAH HEALTH REGULATION FOR DESIGN, CONSTRUCTION AND OPERATION OF PUBLIC POOLS, AS WELL AS THE ANSI/NSPI STANDARDS FOR PUBLIC POOLS.
8. ALL CORNERS PROTRUDING INTO POOLS OR SPAS SHALL BE A 2 INCH RADIUS OR LARGER.
9. POOLS SHALL NOT BE LOCATED WHERE GROUND WATER EXISTS ABOVE BOTTOM OF POOL DURING HIGH WATER TABLE OCCURRENCES UNLESS TWO (2) HYDROSTATIC RELIEF VALVES ARE INSTALLED AT THE LOW POINT IN THE POOL.
10. POOL FLOOR SHALL NOT EXCEED A 1'-0" DROP IN ELEVATION FOR EACH 10'-0" IN HORIZONTAL DISTANCE IN WATER DEPTHS LESS THAN 5 FEET.
11. A DIVING BOARD IS NOT PERMITTED ON THIS POOL.
12. DEPTH MARKERS TO BE AT SIDES AND AT EACH END OF PERIMETER OF POOL.
13. ENGINEERING CONSULTANTS, ARCHITECT, AND POOL CONTRACTOR SHALL NOT BE HELD LIABLE, NOR RESPONSIBLE, FOR ANY LIFE SAFETY ISSUES REGARDING THE OPERATION OF THE POOL AND POOL FACILITIES.
14. PRIOR TO INSTALLATION OF THE POOL, A PLOT PLAN WILL BE SUBMITTED TO THE BUILDING INSPECTION DEPARTMENT FOR APPROVAL.
15. PRIOR TO BEGINNING CONSTRUCTION OF THE POOL, THE CONTRACTOR MUST SUBMIT PLANS TO THE LOCAL HEALTH DEPT. AND RECEIVE BACK A COPY OF THE APPROVED PLANS.
16. A 15 MINUTE (MAXIMUM) TIMER FOR EACH JET PUMP MUST BE PROVIDED AT A LOCATION AWAY FROM THE SPA WATER'S EDGE WHERE BATHERS MUST EXIT SPA TO RESET (MINIMUM 5' FROM WATER'S EDGE). ELECTRICAL CONTRACTOR SHALL PROVIDE, CONDUIT, WIRING, AND SHALL CONNECT TIMER TO THERAPY JET PUMPS IN EQUIPMENT ROOM (NIPC).
17. AN EMERGENCY SHUT-OFF SWITCH MUST BE PROVIDED FOR THE SPA IN ACCORDANCE WITH N.E.C. ARTICLE 680 (MINIMUM 5' FROM WATER'S EDGE). ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, WIRING AND SHALL INTERLOCK SHUT-OFF SWITCH TO EACH SPA PUMP.
18. IN THE POOL PLANS, WATER DEPTH IS INDICATED BETWEEN ARROWHEADS (e.g. <3'-6">).

ITEMS PROVIDED BY GENERAL CONTRACTOR:

(THE FOLLOWING ITEMS SHALL BE PROVIDED, HOWEVER THE GENERAL CONTRACTOR'S RESPONSIBILITIES ARE NOT LIMITED TO THESE ITEMS.)
(NIPC)

1. NIPC = NOT IN POOL CONTRACTORS CONTRACT.
2. ALL SITE PREPARATION BY GENERAL CONTRACTOR.
3. THE GENERAL CONTRACTOR SHALL VERIFY THE LOCATION OF CABLES, CONDUITS, PIPES, SEWERS AND OTHER UNDERGROUND UTILITIES AND SHALL TAKE PROPER PRECAUTIONS TO AVOID DAMAGE TO SUCH UTILITIES. IN THE EVENT OF A CONFLICT OR DISCREPANCIES, THE GENERAL CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER AND REQUEST FOR NECESSARY RELOCATION. FAILURE TO FOLLOW THIS PROCEDURE PLACES UPON THE GENERAL CONTRACTOR THE RESPONSIBILITY OF MAKING REPAIR OR REPLACE SUCH DAMAGE AT HIS OWN EXPENSE.
4. RESTROOM FACILITIES AND SHOWERS ARE EXISTING AND/OR THE RESPONSIBILITIES OF THE OWNER.
5. A FENCE OR OTHER BARRIER IS REQUIRED AND MUST PROVIDE COMPLETE PERIMETER SECURITY OF THE FACILITY, AND BE AT LEAST 6 FEET IN HEIGHT. OPENINGS THROUGH THE FENCE OR BARRIER OTHER THAN ENTRY OR EXIT ACCESS WHEN THE ACCESS IS OPEN, MAY NOT PERMIT A SPHERE GREATER THAN 4 INCHES TO PASS THROUGH IT AT ANY LOCATION. HORIZONTAL MEMBERS SHALL BE EQUAL TO OR MORE THAN 45 INCHES APART. A FENCE OR BARRIER THAT HAS AN ENTRANCE TO THE FACILITY MUST BE EQUIPPED WITH A SELF-CLOSING AND SELF-LOCKING GATE OR DOOR. EXCEPT FOR SELF-LOCKING MECHANISMS, SELF-LATCHING MECHANISMS MUST BE AT LEAST 54 INCHES ABOVE THE GROUND AND MUST BE PROVIDED WITH HARDWARE FOR LOCKING THE GATE WHEN THE FACILITY IS NOT IN USE. A LOCK THAT IS SEPARATE FROM THE LATCH AND A SELF-LOCKING LATCH SHALL BE INSTALLED WITH THE LOCK'S OPERABLE MECHANISM (KEY HOLE, ELECTRONIC SENSOR, OR COMBINATION DIAL) BETWEEN 34 INCHES AND 48 INCHES ABOVE THE GROUND. ALL GATES FOR THE POOL ENCLOSURE SHALL OPEN OUTWARD FROM THE POOL. THE GATE OR DOOR SHALL HAVE NO OPENING GREATER THAN 1/2 INCHES WITHIN 18 INCHES OF THE LATCH RELEASE MECHANISM. POOL FENCE OR BARRIER SHALL ALSO MEET REQUIREMENTS OF LOCAL CODES WHERE THE POOL IS BEING BUILT. THE FENCE OR BARRIER MUST BE BUILT AND INSTALLED PER THE HEALTH DEPARTMENT AND/OR BUILDING DEPARTMENT REQUIREMENTS PRIOR TO FILLING THE POOL WITH WATER.
6. GENERAL CONTRACTOR TO PROVIDE NECESSARY ELECTRICAL AND MECHANICAL WORK IN POOL AREAS AND EQUIPMENT ROOM INCLUDING: AREA LIGHTING, VENTILATION, DRAINAGE, ETC. ACCORDING TO LOCAL CODES (NIPC).
7. OUTDOOR AREA DECK LIGHTING REQUIRED PER SWIMMING POOL CODE. SEE ELECTRICAL ITEMS.
8. GENERAL CONTRACTOR TO PROVIDE EQUIPOTENTIAL BONDING GRID FOR POOL DECKING PER THE 2020 NEC ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE, SEE ELECTRICAL NOTES.
9. PROVIDE BACKWASH / EVACUATION SUMP IN EQUIPMENT ROOM.
10. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE POOL 1/4" PER FOOT TO 3/8" PER FOOT TO DECK DRAINS.
11. POOL DECK AND REQUIRED DECK DRAINS ARE TO BE PROVIDED PER LOCAL CODE REQUIREMENTS.
12. OWNER IS RESPONSIBLE FOR FILLING THE POOL WITH WATER.

CONSTRUCTION OBSERVATION SCHEDULE:

OPTIONAL: 3 VISITS BY POOL ENGINEER IN PROPOSAL.

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Water Design Inc

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SUN PEAK
1950 BEAR HOLLOW DRIVE
PARK CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
CHARLES ROSS MIDERSON
146589-2202
11-9-21
STATE OF UTAH

HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

NOTES

DATE: NOV. 9, 2021
REVISED: -
DRAWN BY: JN
JOB #: 21-866FS
DRAWING NO.: SP101

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POOL DATA:

SIZE:	46'–0" X 12'–0"
WATER AREA:	40'–0" X 12'–0"
WATER DEPTH:	0'–0" TO 3'–0"
SHAPE:	RECTANGULAR
CONST. TYPE:	SHOTCRETE
TOTAL AREA:	543 SQ. FT.
AREA BELOW WATER LINE:	471 SQ.FT.
PERIMETER:	116'–0"
VOLUME:	5,223 GALLONS
MIN. FLOW:	130 GPM
MAX. FLOW:	170 GPM
TURNOVER:	28 MIN.

POOL FITTING LEGEND

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
	FLOOR OUTLET FRAME AND GRATES	SEE FITTING SCHEDULE SHEET SP300		
	WALL INLET	SEE FITTING SCHEDULE SHEET SP300		
	FLOOR INLET	SEE FITTING SCHEDULE SHEET SP300		
	SKIMMER	SEE FITTING SCHEDULE SHEET SP300		
	HYDROTHERAPY JET FITTING	SEE FITTING SCHEDULE SHEET SP300		
	WATER FLOWER FITTING	SEE FITTING SCHEDULE SHEET SP300		
	BUBBLER FITTING	SEE FITTING SCHEDULE SHEET SP300		
	DECK JETS FITTING	SEE FITTING SCHEDULE SHEET SP300		

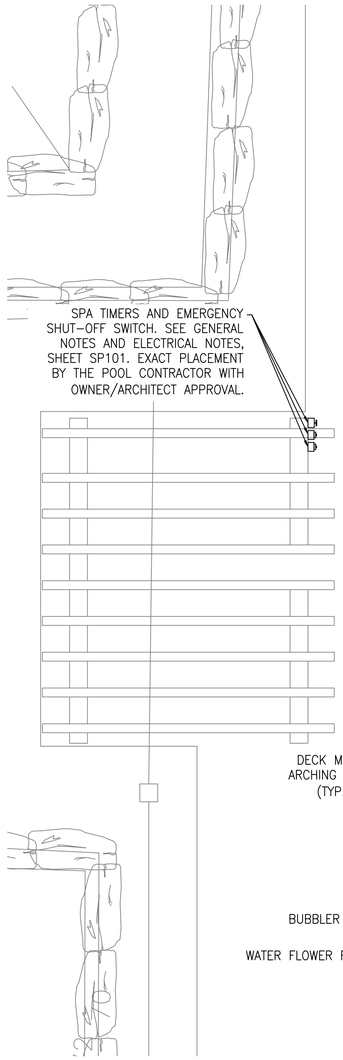
POOL MATERIAL SCHEDULE

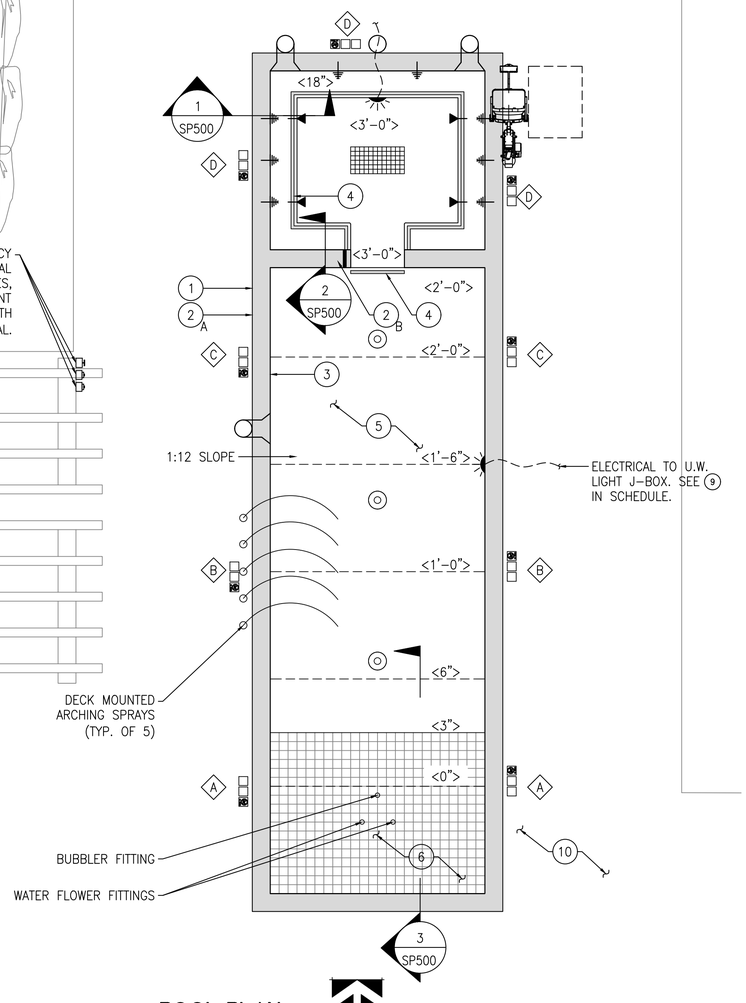
MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
1	STRUCTURE	ENTIRE POOL	SEE SP500	SHOTCRETE OR GUNITE
2 A	COPING	AROUND POOL PERIMETER	1 / SP600	PRECAST OR CAST–IN–PLACE CONCRETE
	REMARKS: COPING SHALL PROVIDE HAND HOLD AROUND PERIMETER OF POOL.			
2 B	FINGER WALL COPING	AT ALL FINGER WALLS	1 / SP600	COPING TO MATCH POOL PERIMETER COPING
	REMARKS: COPING SHALL PROVIDE HANDHOLD AROUND PERIMETER OF WALL. CONCRETE TO MATCH POOL PERIMETER COPING.			
3	TILE AT POOL WATERLINE	AROUND POOL PERIMETER AND ON FINGER WALLS (EXCEPT SOUTH END)	1 / SP600	6" BAND OF FROST PROOF CERAMIC TILE
	REMARKS: TILE FINISH SHALL BE WATERPROOF AND FREE FROM DEFECTS.			
4	TILE FOR STEP AND BENCH TRIM	STEP AND BENCH EDGES	1 / SP600	2" NON–SLIP, FROST PROOF CERAMIC TILE
	REMARKS: SHALL BE OF CONTRASTING COLOR TO POOL FINISH. TILE FINISH SHALL BE WATERPROOF AND FREE FROM DEFECTS. NON–SLIP TILE.			
5	POOL FINISH	POOL INTERIOR	N/A	WATERPROOF PLASTER
	REMARKS: FINISH SHALL BE WATERPROOF AND FREE FROM DEFECTS. FINISH COLOR SHALL BE WHITE OR LIGHT IN COLOR.			
6	ZERO ENTRY TILE	AT ZERO ENTRY AREA	3 / SP500	2" X 2" NON–SLIP, FROST–PROOF, CERAMIC TILE
	REMARKS: TILE SHALL EXTEND DOWN THE POOL FLOOR TO A POINT WHERE THE WATER LEVEL IS 3" DEEP. TILE FINISH SHALL BE NON–SLIP, WATERPROOF AND FREE FROM DEFECTS. TILE SHALL BE WHITE OR LIGHT IN COLOR.			
A	DEPTH MARKER TILES ON DECK	SEE PLAN	4 / SP600	IN–LAYS, INC. FT SERIES IN SERIES
	REMARKS: 6" x 6" FROST–PROOF, NON–SKID TILE WITH 4" HIGH NUMBERS WITH CONTRASTING COLOR BACKGROUND ON POOL DECK. SEE DETAIL FOR DEPTH MARKER KEY. WATER DEPTH SHALL BE PLAINLY MARKED AT LOCATION OF MINIMUM AND MAXIMUM POOL WATER DEPTHS AND AT ONE FOOT INCREMENTS OF DEPTH. MARKERS SHALL BE SPACED AT MAXIMUM 25'–0" C.C.			
	DEPTH MARKER TILES ON VERTICAL WALL	SEE PLAN	4 / SP600	IN–LAYS, INC. FT SERIES IN SERIES
	REMARKS: 6" x 6" FROST–PROOF, GLAZED TILE WITH 4" HIGH NUMBERS WITH CONTRASTING COLOR BACKGROUND ON VERTICAL WALL AT WATERLINE. SEE DETAIL FOR DEPTH MARKER KEY. WATER DEPTH SHALL BE PLAINLY MARKED AT LOCATION OF MINIMUM AND MAXIMUM POOL WATER DEPTHS AND AT ONE FOOT INCREMENTS OF DEPTH. MARKERS SHALL BE SPACED AT MAXIMUM 25'–0" C.C.			
NO DIVING	"NO DIVING" ICON TILES	SEE PLAN	4 / SP600	IN–LAYS, INC. MG SERIES
	REMARKS: 6" X 6" NON–SKID, FROST–PROOF, "NO DIVING" TILE WITH LETTERING AND ICON ON CONTRASTING COLOR BACKGROUND. PLACE ON DECK AT 25'–0" C.C. MAXIMUM SPACING ADJACENT TO DEPTH MARKERS IN LOCATIONS AS SHOWN ON THE PLAN.			

POOL COMPONENT SCHEDULE

(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
	ADA TRANSFER RAIL (USED AS HANDRAIL)	1 (ON FINGER WALL)	12 / SP600	SR SMITH TR–**A VERIFY SIZE
	REMARKS: 316L STAINLESS STEEL RAIL 1.50" O.D. X 0.12" THICK WALL. PROVIDE WITH FLANGE PLATES AND 3/8–16 UNC ANCHOR BOLTS. RAIL SHALL EXTEND TO THE EDGE OF THE COPING.			
	UNDERWATER LIGHT	2	2 / SP600	PENTAIR GLOBRITE LED 12 VOLT WITH TRANSFORMER
	REMARKS: 15 WATT LED LIGHTS (INCANDESCENT EQUIVALENT 80 WATTS). PROVIDE TRANSFORMER AS REQUIRED. PROVIDE SUFFICIENT LENGTH OF CORD TO J–BOX/TRANSFORMER. PROVIDE WITH PVC NICHE FOR SHOTCRETE CONSTRUCTION. SEE ELECTRICAL NOTES SHEET SP101. LED LIGHT AND NICHE SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.			
	ADA LIFT AND ANCHOR	1	4 / SP500	AQUACREEK MIGHTY F–MTY600
	REMARKS: PROVIDE BATTERY OPERATED LIFT COMPLETE WITH DECK ANCHOR KIT (WITH LID AND KEY) #SKU–28510, LIFT COVER #SKU47949, BATTERY CHARGER AND EXTRA 24 VOLT DC BATTERY. CONTRACTOR SHALL PROVIDE THE LIFT ANCHOR FOR INSTALLATION INTO THE POOL DECK WITH FOOTING / THICKENED SLAB PER MANUFACTURER'S RECOMMENDATIONS. INSTALL LIFT PER MANUFACTURER'S RECOMMENDATIONS WITH PROPER SET–BACK AND CLEARANCES. ANCHOR SHALL BE BONDED PER THE REQUIREMENTS OF THE NEC ARTICLE 680.			
	JET PUMP TIMER	1	N/A	15 MINUTE MAXIMUM
	REMARKS: INSTALL PER 2020 NEC ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE. POOL CONTRACTOR TO PROVIDE TIMER AND ELECTRICAL CONTRACTOR TO INSTALL. TIMER SHALL BE MOUNTED IN A LOCATION WHICH REQUIRES THE BATHER TO EXIT THE POOL BEFORE THE TIMER CAN BE RESET.			
	EMERGENCY SHUT OFF SWITCH	1	N/A	SHUT OFF SWITCH
	REMARKS: INSTALL PER 2020 NEC ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE. POOL CONTRACTOR TO PROVIDE SHUT OFF SWITCH AND ELECTRICAL CONTRACTOR TO INSTALL.			

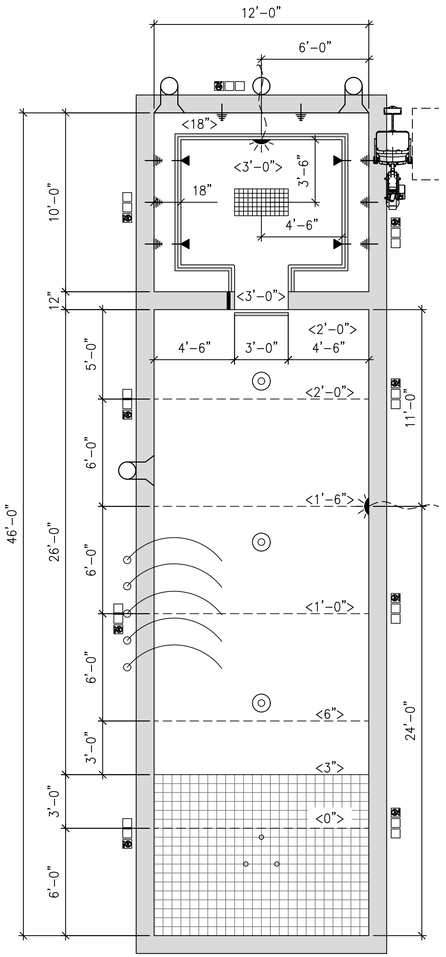




POOL PLAN

SCALE: 1/4"=1'–0"

NORTH



POOL DIMENSION PLAN

SCALE: 1/4"=1'–0"

ITEMS BY OTHERS

(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
9	U.W. LIGHT JUNCTION BOX	BY OTHERS	1 / SP600	SEE ELECTRICAL PLANS PER N.E.C. ARTICLE 680
	REMARKS: NOT SHOWN ON PLAN. JUNCTION BOX(ES) PROVIDED AND INSTALLED PER NEC 680 BY ELECTRICAL CONTRACTOR. LOCATION OF J–BOXES AND LIGHT SWITCHES BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL NOTES SHEET SP101.			
10	POOL DECK	BY OTHERS	CONTINUOUS AROUND POOL	SEE ARCHITECT PLANS NON–SLIP CONCRETE
	REMARKS: MINIMUM 5' WIDE NON–SLIP CONCRETE DECK CONTINUOUS AROUND POOL PERIMETER. SLOPE DECK 1/4" MINIMUM TO 3/8" MAXIMUM PER FOOT AWAY FROM POOL TO DECK DRAINS OR LANDSCAPING.			
11	POOL COVER	BY OWNER	NIPC	FLOATING INSULATED
	REMARKS: NOT SHOWN ON PLANS. PROVIDED BY OWNER.			

SEE ADDITIONAL NOTES SHEETS SP100, SP101, SP300, SP400, AND SP500

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POOL PLAN

DATE: NOV. 9, 2021
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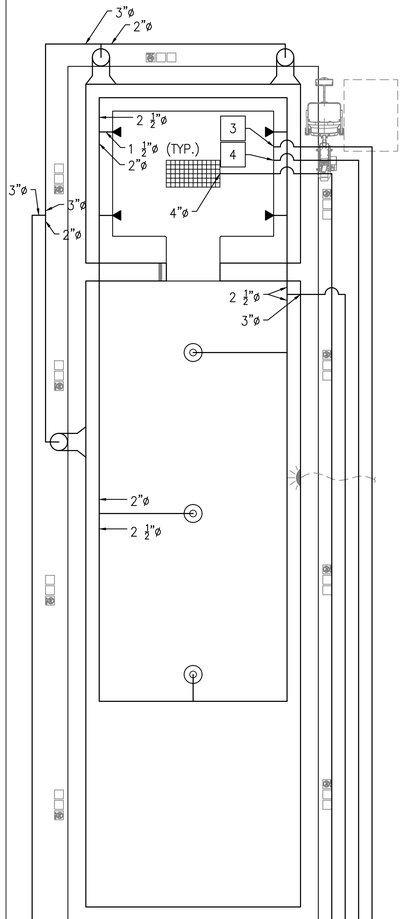
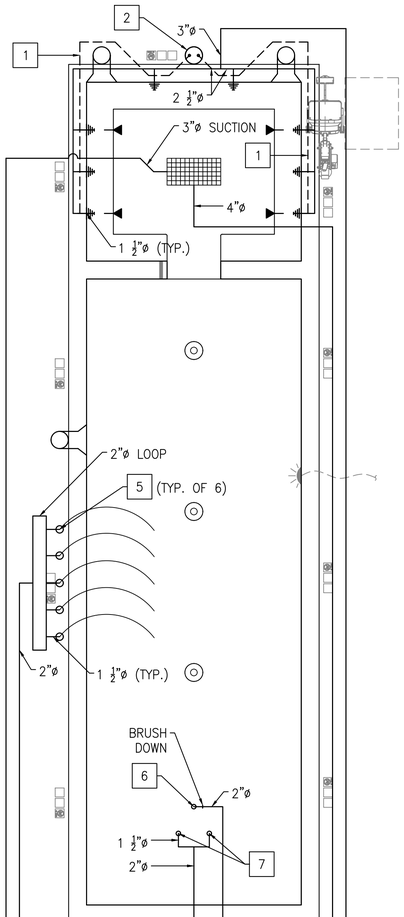
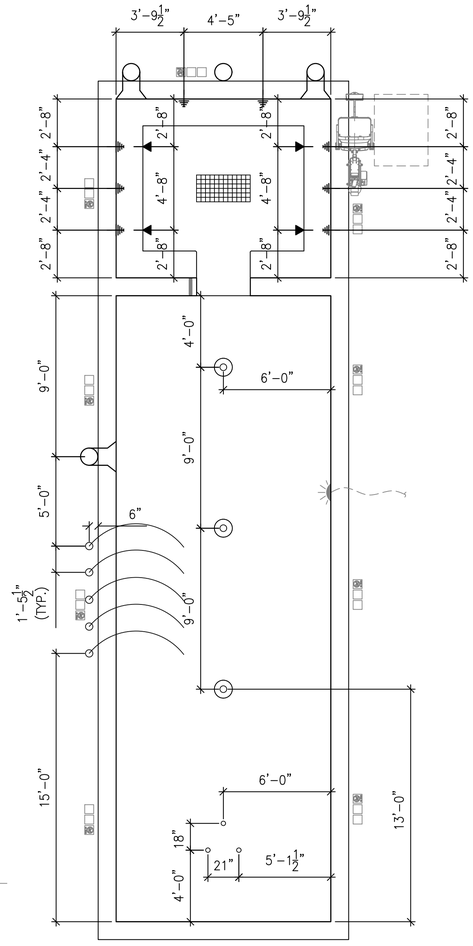
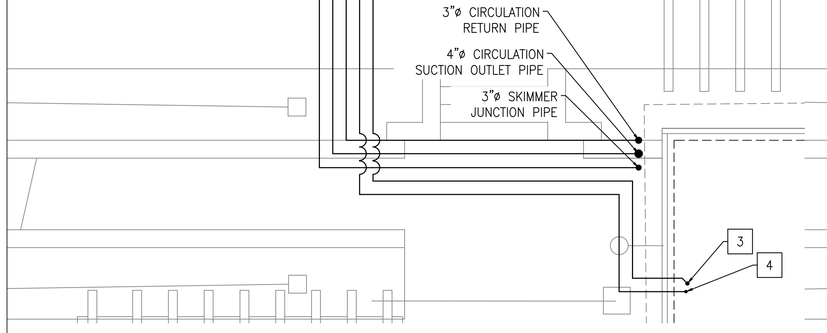






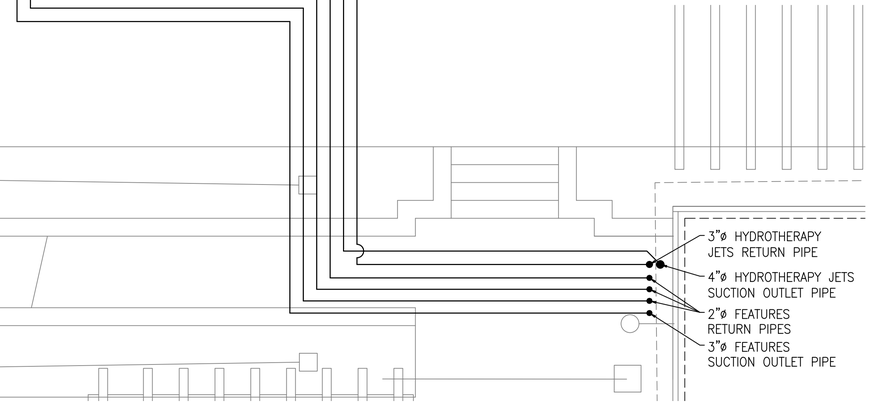
FITTING DIMENSION PLAN

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



CIRCULATION PIPING PLAN

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



JETS AND FEATURE PIPING PLAN

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

FITTING SCHEDULE

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
	CIRCULATION OUTLET FRAME AND GRATE	1	5 SP600	DALDORADO 18" x 36" 24" DEEP SUMP & GRATE
	REMARKS: TAMPER PROOF STAINLESS STEEL FASTENERS REQUIRED. FRAME AND GRATE SHALL BE LISTED ACCORDING TO THE CURRENT ANSI/APSP-16 2011 STANDARD.			
	FLOOR INLET FITTING	3	7 SP600	STA-RITE ADJUSTABLE FITTING
	REMARKS: ADJUST FLOW TO 8 GPM AT 1/8 TURNS OPEN. SPACE INLETS PER PLAN DIMENSIONS. INLETS MUST BE SECURED IN PLACE ONCE ADJUSTED FOR UNIFORM CIRCULATION.			
	WALL INLET FITTING	4	8 SP600	STA-RITE DIRECTIONALLY ADJUSTABLE AND SECURABLE ORIFICE
	REMARKS: 3/4"ø ORIFICE SIZE. SPACE INLETS PER PLAN. INLETS MUST BE SECURED IN PLACE ONCE ADJUSTED FOR UNIFORM CIRCULATION. INLETS MUST BE FLUSH WITH THE POOL WALL AND AT THE BOTTOM OF THE VERTICAL PORTION OF THE WALL ABOVE THE POINT OF FLOOR-TO-WALL TRANSITION.			
	SURFACE SKIMMER	3	6 SP600	AQUASTAR FLOW-STAR # SKR SERIES
	REMARKS: NSF APPROVED W/EQUALIZER LINE WITH LISTED COVER TO COMPLY WITH ANSI/APSP, FLOAT VALVE, CHECK VALVE. PROVIDE ROUND FRAME & LID. PROVIDE ROUND LID AND FRAME. PROVIDE A VACUUM PLATE.			
	HYDRO THERAPY JET FITTING ASSEMBLY	8 JETS	9 SP600	BALBOA WATER GROUP HYDRO JET #10-4100 OR EQUAL
	REMARKS: PROVIDE EXTENSION #10-4400 FOR SHOTCRETE CONSTRUCTION SPAS IF REQUIRED. PROVIDE JET COMPLETE WITH WALL FITTING ASSEMBLY. PROVIDES 15 G.P.M. PER JET.			
1	AIR LINE TO JETS	PER PLAN	10 SP600	2"ø SCH. 40 PVC PIPE FROM AIR INTAKE BOX
	REMARKS: PROVIDE ONE AIR LINE FOR EACH SET OF 4 JETS. PROVIDE TWO AIR LINES TOTAL.			
2	AIR INTAKE BOX	1	10 SP600	PARAMOUNT AIRPORT 004-252-8192-0X
	REMARKS: PROVIDE WITH TWO MUFFLER FITTINGS, AND USE BOTH BOTTOM PORTS FOR AIR LINE CONNECTIONS IF REQUIRED. 8 JETS SHALL BE THE MAXIMUM NUMBER OF JETS PER PORT. PROVIDE ROUND LID AND FRAME.			
3	WATER LEVEL SENSING PIPE	1	SEE POTABLE WATER FILL SCHEMATIC (SP401)	2"ø PIPE
	REMARKS: SENSING LINE FROM POOL BENCH, BELOW WATER LEVEL TO SENSING PIPE IN EQUIPMENT ROOM.			
4	FILL LINE	1	SEE POTABLE WATER FILL SCHEMATIC (SP401)	2"ø PVC PIPE
	REMARKS: TERMINATE FILL LINE AT POOL BENCH. LOCATE SENSOR IN SENSING PIPE. WATER LEVEL CONTROLLER LOCATED IN EQUIPMENT ROOM.			
5	ARCHING DECK SPRAY FEATURE	5	1 SP602	CRYSTAL FOUNTAINS WMD-100
	REMARKS:			
6	BUBBLER FITTING	1	2 SP602	WATER ODYSSEY BUBBLER W091
	REMARKS:			
7	WATER FLOWER FITTING	2	3 SP602	WATER ODYSSEY WATER FLOWER W071
	REMARKS:			

SEE ADDITIONAL NOTES SHEETS SP100, SP101, SP400, AND SP500

NOTE:

PIPING SHOWN DIAGRAMMATICALLY/OFF SET FOR CLARITY. ALL PIPING SHALL BE ENCASED IN SPA WALL OR BENCH. FOR EASE OF INSTALLATION, JET PIPING MAY BE INSTALLED LOW IN WALL/BENCH, EXTENDING INDIVIDUAL PIPE UP TO EACH JET.

AIRLINE PIPING NOTES:

1. AIR PIPING SHOWN DIAGRAMMATICALLY.
2. PIPING SHALL BE INSTALLED WITHOUT AIR-ENTRAPPING HIGH POINTS AND WATER-ENTRAPPING LOW POINTS. AIR PIPES MUST SLOPE CONTINUOUSLY UP TO THE AIR PORTS WITHOUT HIGH-OR-LOW SPOTS.
3. AIR PIPES SHALL BE ROUTED ABOVE JET BODIES.
4. PIPING SHALL BE ROUTED COMPLETELY BELOW WATER LEVEL WITHOUT HIGH-OR-LOW SPOTS PER AIR PORT MANUFACTURER'S RECOMMENDATIONS.

POOL PIPING NOTES:

1. ALL PIPING SHALL BE NSF APPROVED (ANSI/NSF 14), SCHEDULE 40 PVC (UNLESS OTHERWISE NOTED). FLEX PIPING AND HEAT BENDING RIGID PIPING IS NOT ALLOWED AS PART OF THIS DESIGN.
2. ALL PIPING SHALL BE IN ACCORDANCE WITH THE UTAH STATE PLUMBING CODE AND UTAH DEPARTMENT OF PUBLIC HEALTH CODE, THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.
3. ALL BURIED PIPING SHALL BE PROPERLY SUPPORTED, PROTECTED AND INSTALLED IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE (IPC) SECTION 306 (TRENCHING, EXCAVATION AND BACKFILL), ASTM D2774-12 (UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPING), AND ASTM F1668-16 (CONSTRUCTION PROCEDURES FOR BURIED PLASTIC PIPE). ALSO SEE PROJECT SPECIFICATIONS FOR ADDITIONAL PIPE TRENCHING, EXCAVATION AND BACKFILL REQUIREMENTS.
4. POOL CONTRACTOR SHALL MAKE EVERY EFFORT TO CURTAIL THE USE OF FITTINGS TO REDUCE HEAD.
5. PIPING SHALL BE INSTALLED WITHOUT AIR ENTRAPPING HIGH POINTS OR REVERSE SLOPES, I.E. ON DISCHARGE LINES, NO DESCENDING RUNS BEYOND HORIZONTAL OR ASCENDING RUNS; ON SUCTION LINES, NO DESCENDING RUNS BEYOND ASCENDING RUNS.
6. ALL UNDERGROUND PRESSURE AND SUCTION PIPING SHALL SLOPE A MINIMUM OF 1%.
7. THE TEE FEEDING FROM THE COMMON LINE BETWEEN THE SUCTION OUTLETS, TO THE PUMP(S) SHALL BE LOCATED APPROXIMATELY MIDWAY BETWEEN THE OUTLETS (ANSI/APSP-7).
8. PIPING SHALL BE INSTALLED TO PREVENT FREEZING. WINTERIZE PIPING DURING WINTER MONTHS WHEN POOL IS NOT IN OPERATION.
9. ALL PIPING SHALL BE TESTED WITH AN INDUCED STATIC HYDRAULIC PRESSURE TEST AT: SYSTEM OPERATING PRESSURE (PER LOCAL CODES) OR MINIMUM 50 PSI FOR 24 HOURS, OR PER WRITTEN SPECIFICATIONS IF PROVIDED.
10. ALL DRAIN FITTINGS FLOW SHALL NOT EXCEED MANUFACTURER'S SPECIFIED CAPACITY (WITH REGARD TO ORIENTATION I.E. WALL OR FLOOR) WHEN 100% OF CIRCULATION AND/OR FEATURE FLOW RATE OF ASSOCIATED PIPING IS DIRECTED THROUGH SINGLE DRAIN FITTING.
11. ALL PIPING DESIGNED FOR 6' PER SECOND MAXIMUM SUCTION AND 10' PER SECOND MAXIMUM PRESSURE.
12. VERIFY PIPE SIZES WITH THE EQUIPMENT ROOM PLAN AND SCHEMATIC. IF THERE ARE ANY DISCREPANCIES, REPORT THEM TO THE ENGINEER IMMEDIATELY.
13. POOL CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS.
14. OVERALL PIPING IS SHOWN IN DIAGRAMMATIC FORM TO INDICATE WORK TO BE DONE RATHER THAN TO SHOW EXACT ROUTING & LOCATION. MAKE USE OF ALL DATA IN CONTRACT DOCUMENTS. VERIFY AGAINST DEVELOPED FIELD CONDITIONS, & INSTALL WORK IN AN ORDERLY ARRANGEMENT IN A MANNER TO OVERCOME STRUCTURAL, MECHANICAL & ELECTRICAL INTERFERENCE.

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POOL PIPING PLAN

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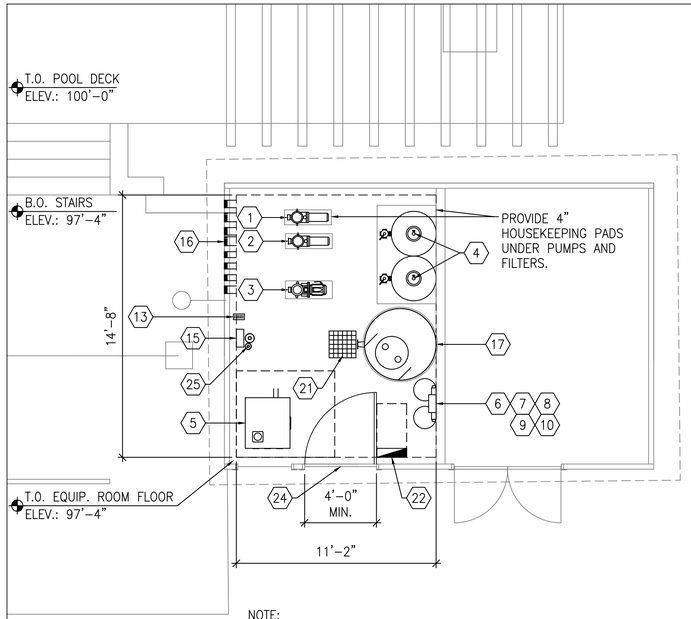

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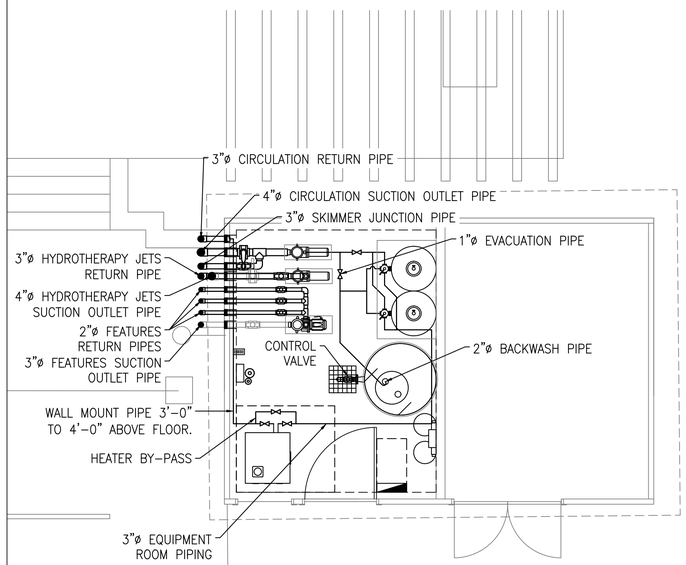
NOTE:
SEE CIRCULATION SCHEDULES THIS SHEET.

NOTE:
SEE CIRCULATION EQUIPMENT SCHEMATICS SHEET SP401.

NOTE:
FOR CONTINUATION OF PIPING TO POOL SEE POOL PIPING PLAN SHEET SP300.

EQUIPMENT ROOM PLAN

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



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NOTE:
FOR CONTINUATION OF PIPING TO POOL, SEE POOL PIPING PLAN SHEET SP300.

EQUIPMENT ROOM PIPING PLAN

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

POOL CIRCULATION EQUIPMENT SCHEDULE

(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
1	PUMP FOR CIRCULATION. WITH HAIR AND LINT STRAINER	1	SEE CIRC. EQUIP. SCHEMATIC	PENTAIR WHISPERFLO XF VS (UP TO 5 HP)
	REMARKS: PUMP COMES WITH INTEGRAL VARIABLE FREQUENCY DRIVE. AT 130 GPM, 78 FEET TDH AVAILABLE. ELECTRICAL REQUIREMENTS: ANY PHASE AND VOLTAGE. 3 AUXILIARY CONTACTS REQUIRED FOR INTERLOCKING. SEE ELECTRICAL INTERLOCK NOTES. VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS. CONTRACTOR MUST PROVIDE AN EASILY READABLE PERMANENT SIGN AT THE PUMP: "FLOW RANGE FOR PUMP IS 130 GPM TO 170 GPM. OWNER/OPERATOR IS RESPONSIBLE FOR NOT EXCEEDING THE MAXIMUM FLOW OF 170 GPM"			
2	PUMP FOR HYDROTHERAPY JETS. WITH HAIR AND LINT STRAINER	1	N/A	PENTAIR WHISPERFLO WFK-12 (3 HP)
	REMARKS: AT 144 GPM, 56 FEET TDH AVAILABLE. ELECTRICAL REQUIREMENTS: 208-230/460 V, 60 Hz, 3-PHASE. SEE ELECTRICAL INTERLOCK NOTES. INTERLOCK WITH EMERGENCY SHUT-OFF SWITCH AND JET PUMP TIMER (SEE SPA PLAN FOR LOCATION). VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS.			
3	PUMP FOR FEATURES. WITH HAIR AND LINT STRAINER	1	N/A	PENTAIR INTELLIFLO VSF (UP TO 3 HP)
	REMARKS: PUMP COMES WITH INTEGRAL VARIABLE FREQUENCY DRIVE. AT 90 GPM, 56 FEET TDH AVAILABLE. ELECTRICAL REQUIREMENTS: 230 V, 60 Hz, SINGLE PHASE. SEE ELECTRICAL INTERLOCK NOTES. VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL PROVIDE BUCK BOOST TRANSFORMER IF 230V SINGLE PHASE POWER IS NOT AVAILABLE.			
4	HIGH RATE SAND FILTER	2	SEE CIRC. EQUIPMENT SCHEMATIC (SP401)	PENTAIR TRITON TR-100C
	REMARKS: 30"ø FILTER. 4.91 SF AREA EACH FILTER. TOTAL FILTER AREA EQUALS 9.82 SF. PROVIDE COMPLETE WITH PENTAIR "HI-FLOW" BACKWASH VALVES FOR MANUAL BACKWASH. BACKWASH EACH FILTER AT 74 GPM FOR A FIVE MINUTE DURATION.			
5	HEATER	1	SEE CIRC. EQUIPMENT SCHEMATIC (SP401)	PENTAIR ET400 400,000 BTU ASME
	REMARKS: 400,000 BTU NATURAL GAS. VENT PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. SUPPLY AIR FOR COMBUSTION AND VENTILATION REQUIRED. PROVIDE SEALED COMBUSTION KIT. SEE MANUFACTURER'S RECOMMENDATIONS FOR AIR SUPPLY REQUIRED. ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE AN EMERGENCY BOILER SHUT OFF SWITCH NEAR THE ENTRANCE TO THE POOL EQUIPMENT ROOM IN ACCORDANCE WITH ALL LOCAL CODES. USE CPVC PIPING IN AND OUT OF HEATER AS REQUIRED BY MANUFACTURER. INSTALL PER MANUFACTURER'S REQUIREMENTS. POOL CONTRACTOR TO COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTOR. SEE CONDENSATION NEUTRALIZER BELOW. ASME VERSION REQUIRED. IECC NOTE: HEATER COMES STANDARD WITH ON/OFF SWITCH AND ELECTRONIC IGNITION.			
	HEATER CONDENSATE NEUTRALIZER	1	SEE CIRC. EQUIP. SCHEMATIC (SP401)	CONDENSATE NEUTRALIZER KIT P/N 475612 OR SIMILAR
	REMARKS: NOT SHOWN ON PLANS. HEATER PRODUCES ACIDIC CONDENSATE. THE CONDENSATE SHALL BE PIPED TO DRAIN WITH NEUTRALIZER KIT. SEE MANUFACTURER'S REQUIREMENTS FOR INSTALLATION.			
6	CHEMICAL CONTROLLER	1	SEE CIRC. EQUIP. SCHEMATIC	PENTAIR INTELLICHEM, IPS, PROMINENT, BECS OR EQUAL
	REMARKS: CONTROLS ORP/PH. 110-120 VAC, <1 AMP. ELECTRICAL INTERLOCKING BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL INTERLOCKING NOTES. PROVIDE POWER FOR THE CONTROLLER ON A SEPARATE CIRCUIT FROM THE POWER FOR THE CHEMICAL FEEDER RELAYS. TWO LAYERS OF INTERLOCKING ARE REQUIRED TO PROTECT AGAINST CHEMICALS FEEDING WHEN THERE IS NO CIRCULATION FLOW: 1. A FLOW SWITCH ON THE SAMPLE STREAM. 2. ELECTRICAL INTERLOCKING THE CHEMICAL CONTROLLER WITH THE CIRCULATION PUMP.			
7	PERISTALTIC PUMP FOR LIQUID CHLORINE FEED	1	SEE CIRC. EQUIPMENT SCHEMATIC (SP401)	STENNER #45-M5
	REMARKS: 120 VAC, 60 Hz, 1.7 AMP, 1/30 FRACTIONAL HP.			
8	PERISTALTIC PUMP FOR pH FEED	1	SEE CIRC. EQUIPMENT SCHEMATIC (SP401)	STENNER #45-M5
	REMARKS: 120 VAC, 60 Hz, 1.7 AMP, 1/30 FRACTIONAL HP.			
9	STORAGE CONTAINER FOR LIQUID CHLORINE	1	SEE CIRC. EQUIP. SCHEMATIC	15 GALLON CONTAINER
	REMARKS: START UP CHEMICALS PROVIDED BY POOL CONTRACTOR. VERIFY STORAGE CAPACITY REQUIRED. PROVIDE VAPOR SHIELD BARREL ASSEMBLY (VAPOR CHECK VALVE) AS MFG BY CEM AQUATICS, AQUATIC COMMERCIAL INDUSTRIES, LINCOLN AQUATICS OR EQUAL. PROVIDE CONTAINER RESTRAINTS. POOL CONTRACTOR SHALL PROVIDE START UP CHEMICALS. STORAGE DRUMS SHALL BE MARKED WITH THE APPROPRIATE HAZARD IDENTIFICATION SIGNS PER REQUIREMENTS OF THE NFPA 704.			
10	STORAGE CONTAINER FOR ACID	1	SEE CIRC. EQUIP. SCHEMATIC	15 GALLON CONTAINER
	REMARKS: START UP CHEMICALS PROVIDED BY POOL CONTRACTOR. VERIFY STORAGE CAPACITY REQUIRED. PROVIDE VAPOR SHIELD BARREL ASSEMBLY (VAPOR CHECK VALVE) AS MFG BY CEM AQUATICS, AQUATIC COMMERCIAL INDUSTRIES, LINCOLN AQUATICS OR EQUAL. PROVIDE CONTAINER RESTRAINTS. POOL CONTRACTOR SHALL PROVIDE START UP CHEMICALS. STORAGE DRUMS SHALL BE MARKED WITH THE APPROPRIATE HAZARD IDENTIFICATION SIGNS PER REQUIREMENTS OF THE NFPA 704.			

POOL CIRCULATION EQUIPMENT SCHEDULE

(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
11	PRESSURE GAUGES AND VACUUM GAUGE	2 FOR FILTER 2 EACH PUMP 8 TOTAL	SEE CIRC. EQUIPMENT SCHEMATIC	0-60 PSI 0-30 Hg
	REMARKS: NOT SHOWN ON PLAN. INTEGRATE TO SHOW FILTER INFLUENT AND EFFLUENT PRESSURES. COMBINATION PRESSURE/VACUUM GAUGE ON SUCTION SIDE OF EACH PUMP.			
12	FILTER ROOM FACE PIPING	IN EQUIPMENT ROOM	SEE PLAN AND CIRC. EQUIPMENT SCHEMATIC	PVC SCHEDULE 40
	REMARKS: 3"ø PIPE.			
13	FLOWMETER	1	SEE CIRC. EQUIP. SCHEMATIC (SP401)	BLUE WHITE #F-30300P
	REMARKS: METER RANGE: 45-240 GPM. MOUNT FLOWMETER IN EASILY READABLE LOCATION. FLOWMETER SHALL BE INSTALLED WITH PROPER RUN OF PIPE UPSTREAM AND DOWNSTREAM OF FLOWMETER PER MANUFACTURER'S RECOMMENDATIONS.			
14	THERMOMETER	3	SEE CIRC. EQUIPMENT SCHEMATIC (SP401)	LETRO
	REMARKS: 30' TO 130'. NOT SHOWN ON PLANS. SEE EQUIPMENT SCHEMATIC. PROVIDE THERMOMETERS ON INFLUENT AND EFFLUENT LINES OF HEATER. INSTALL ONE THERMOMETER IN AN EASILY READABLE LOCATION MINIMUM 10 PIPE DIAMETERS DOWN STREAM FROM THE BYPASS VALVE.			
15	WATER LEVEL CONTROL SYSTEM	1	SEE CIRC. EQUIP. SCHEMATIC (SP401)	LEVOLOR #K-1100
	REMARKS: 110 V, 60 hz, <1 AMP. POOL CONTRACTOR SHALL MAKE CONNECTION TO POTABLE WATER SUPPLY AND PROVIDE MANUAL AND SOLENOID VALVE ON FILL LINE TO POOL BENCH. SENSOR UNIT LOCATED IN SENSING PIPE. SEE POTABLE WATER LINE REMARKS BELOW.			
16	PIPE WALL SLEEVE WITH MODULAR SEAL	PIPE PENETRATIONS	4 / SP401	THUNDERSEAL LINK-SEAL MODEL "C" WITH CENURY-LINE SLEEVE
	REMARKS: PROVIDE MANUFACTURER'S SLEEVE AT ALL BUILDING WALL PENETRATIONS WHERE THERE IS A POTENTIAL FOR GROUNDWATER. POOL CONTRACTOR SHALL PROVIDE SLEEVES. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF SLEEVES WITH POOL CONTRACTOR AND SHALL INSTALL. PROVIDE SEALS WITH STAINLESS STEEL FASTENERS.			
17	BACKWASH TANK	1	5 / SP401	POLY PROCESSING #1100545 WITH LINE TO FLOOR SINK
	REMARKS: BACKWASH EACH HIGH RATE SAND FILTER AT THE FILTER RATE NOTATED IN THE REMARKS ON THE SCHEDULE FOR EACH POOL'S FILTER FOR A 5 MINUTE DURATION. STAGGER BACKWASH CYCLES TO ALLOW RETENTION TANK TO FULLY DRAIN. TANK IS SIZED TO HANDLE REQUIRED BACKWASH RATES. FLOOR SINK BY GENERAL CONTRACTOR. GENERAL CONTRACTOR TO PROVIDE HOUSE KEEPING PAD PER MANUFACTURER'S REQUIREMENTS. DRAIN LINE TO SANITARY SEWER BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL SIZE DRAIN PER THE FLOW REQUIREMENTS OF THE LOCAL SEWER DISTRICT.			

UTILITIES AND ITEMS PROVIDED BY OTHERS

(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
21	BACKWASH AND EVACUATION SUMP	BY OTHERS	7 / SP401	WITH GRATING AND DRAIN TO SANITARY SEWER SEE PLUMBING PLANS
	REMARKS: BACKWASH HIGH RATE SAND FILTER AT 88 GPM MIN. FOR A 5 MINUTE DURATION. SUMP SHALL BE SIZED TO HANDLE REQUIRED BACKWASH RATES. MECHANICAL ENGINEER TO VERIFY SIZE OF SUMP REQUIRED. SUMP AND GRATING BY GENERAL CONTRACTOR. LINE TO SANITARY SEWER BY MECHANICAL CONTRACTOR.			
22	ELECTRICAL PANEL AND/OR MOTOR STARTERS	BY OTHERS	N/A	ALSO SEE ELECTRICAL DRAWINGS (BY OTHERS)
	REMARKS: PANEL AND STARTERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR SHALL INCLUDE WIRING AND CONDUIT. ELECTRICAL CONTRACTOR SHALL MAKE ALL CONNECTIONS TO EQUIPMENT. PROVIDE CONTROL WIRING AS DIRECTED BY POOL CONTRACTOR. SEE ELECTRICAL INTERLOCK NOTES.			
23	EMERGENCY SHOWER AND EYE WASH SINK (BY OTHERS)	BY OTHERS	N/A	SEE PLUMBING DRAWINGS
	REMARKS: TEPID POTABLE WATER AND WASTE LINES REQUIRED. PLUMBING CONTRACTOR SHALL INSTALL EYEWASH SINK IN CHLORINE/ACID STORAGE AREA BY CHEMICAL INJECTION POINTS.			
24	DOOR 4'-0" AT MINIMUM	BY OTHERS		SEE ARCHITECT PLANS
25	POTABLE WATER PIPING AND VALVES TO EQUIPMENT ROOM	BY OTHERS	SEE CIRC. EQUIP. SCHEMATIC (SP401)	SEE PLUMBING PLANS
	REMARKS: POTABLE WATER SUPPLY SHUT OFF VALVE BY PLUMBING CONTRACTOR. PLUMBING CONTRACTOR TO PROVIDE STUB-IN TO POOL EQUIPMENT ROOM. POOL CONTRACTOR TO EXTEND PIPING TO POOL/SPA WALL. PROVIDE SOLENOID VALVE, MANUAL FILL VALVE, AND PROVIDE CONNECTION. 2 TIMES PIPE DIAMETER AIR GAP REQUIRED. SEE WATER LEVEL CONTROL SYSTEM REMARKS ABOVE.			

POOL ELECTRICAL INTERLOCKING NOTES:

ELECTRICAL INTERLOCKING BY ELECTRICAL CONTRACTOR, AND COORDINATED BY THE POOL CONTRACTOR.

PROVIDE INTERLOCKING OF CIRCULATION EQUIPMENT PER POOL DRAWINGS AND SPECIFICATIONS. PROVIDE RELAY AND CONTROL WIRING IN 3/4" CONDUIT AS REQUIRED.

1. INTERLOCK THE CIRCULATION PUMP WITH ITS RESPECTIVE HEATER TEMPERATURE CONTROLS. (IF THE POOL CIRCULATION PUMP SHUTS OFF THE CALL FOR HEAT DEMAND SHOULD SHUT OFF ALSO.)
2. INTERLOCK THE CIRCULATION PUMP WITH ITS RESPECTIVE CHLORINE AND ACID FEED RELAYS. (IF POOL CIRCULATION PUMP SHUTS OFF, THE POWER TO ALL CHLORINE AND ACID FEEDERS SHALL SHUT OFF ALSO.) INTERLOCKING SHALL BE ACCOMPLISHED THROUGH AN ELECTRICAL INTERLOCK CONSISTING OF BOTH:
   A. A FLOW METER OR FLOW SWITCH AT THE CHEMICAL CONTROLLER; AND
   B. CHEMICAL FEEDERS WIRED ELECTRICALLY TO THE CIRCULATION SYSTEM. THIS MAY INCLUDE THE USE OF A DIFFERENTIAL PRESSURE SWITCH, A PUMP POWER MONITOR, OR OTHER SUITABLE MEANS.
3. INTERLOCK SPA TIMERS WITH THEIR RESPECTIVE THERAPY JET PUMPS.
4. INTERLOCK SPA EMERGENCY SHUT OFF SWITCH WITH THE SPA CIRCULATION PUMP AND THE SPA JET PUMP(S).
5. INTERLOCK ALL PUMPS, CHEMICAL CONTROLS, HEAT CONTROLS, AND UNDERWATER LIGHTS WITH AUTOMATIC POOL CONTROL SYSTEM.

EQUIPMENT ROOM NOTES:

1. FILTRATION AND CHEMICAL EQUIPMENT SHALL BE NATIONAL SANITATION FOUNDATION (NSF) APPROVED.
2. EQUIPMENT SHALL BE INSTALLED ON SLABS WITH MINIMUM 4" THICKNESS AND AS REQUIRED TO WITHSTAND THE LOADS ASSOCIATED WITH THE POOL EQUIPMENT AND PIPING.
3. COORDINATE WITH ALL OTHER TRADES & VERIFY EXACT LOCATION OF POOL EQUIPMENT.
4. SEE OVERALL PIPING PLAN TO VERIFY PIPE SIZES AND FOR CONTINUATION OF PIPING. IF THERE ARE ANY DISCREPANCIES, REPORT THEM IMMEDIATELY TO THE ENGINEER.
5. POOL CONTRACTOR SHALL IDENTIFY ALL PIPING AND VALVES BY COLOR CODING OR LABELS AND DIRECTION OF FLOW ARROWS IN ACCORDANCE WITH LOCAL HEALTH CODE.
6. REDUCER FITTINGS SHALL BE USED WHERE PIPE SIZES CHANGE.
7. NO COMMON PIPING OR FITTING ON THE SUCTION SIDE OF THE PUMP IS TO BE SMALLER THAN THE LARGEST SINGLE ELEMENT CONNECTED. DOWNSIZING AND UPSIZING IS TO BE DONE AT THE THROATS OF THE PUMP PORTS.
8. ALL VALVES SHALL HAVE A MINIMUM PRESSURE RATING OF 125 PSI.
9. ALL TRADES SHALL KEEP SPACE ABOVE POOL EQUIPMENT CLEAR FOR THEIR SERVICING.
10. HAIR AND LINT STRAINER OPENINGS SHALL BE NO MORE THAN 1/8". THE HAIR AND LINT STRAINER MUST PROVIDE A FREE FLOW CAPACITY OF AT LEAST FOUR TIMES THE AREA OF THE PUMP SUCTION LINE.
11. FILTER SHALL BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: INFLUENT AND EFFLUENT PRESSURE GAUGES, BACKWASH SIGHT GLASS ON WASTE DISCHARGE LINE, AIR RELIEF VALVE AT THE HIGH POINT OF THE FILTER SYSTEM, AND A VALVED TANK DRAIN.
12. FLOWMETER SHALL BE PROVIDED IN THE INLET RETURN LINE AFTER FILTER AND BEFORE CHEMICAL INJECTION. INSTALL ON A STRAIGHT LENGTH OF PIPE AT A DISTANCE OF AT LEAST 10 PIPE DIAMETERS DOWNSTREAM AND 5 PIPE DIAMETERS UPSTREAM FROM ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE OR PER MANUFACTURER'S SPECIFICATIONS.
13. ALL BACKWASH SHALL BE TO AN APPROVED PLUMBING FIXTURE. ALL BACKWASH SHALL BE RECEIVED INTO THE SANITARY SEWER.
14. HEATERS MUST MEET REQUIREMENTS FOR BOILERS AND PRESSURE VESSELS AS REQUIRED BY THE STATE OF UTAH BOILER AND PRESSURE VESSEL RULES, R616-2. ALL HEATERS GREATER THAN 400,000 BTU SHALL BE CSD-1 COMPLIANT
15. PROVIDE AT LEAST THE MIN. REQUIRED SPACE AROUND THE HEATER PER MFG. SPECS AND LOCAL CODES.
16. PROVIDE HEAT SINK OR CPVC PIPING IF RECOMMENDED BY HEATER MANUFACTURER. INSTALL PER MANUFACTURER RECOMMENDATIONS.
17. WHEN MINIMUM DESIGN FLOW RATE EXCEEDS 65 GPM AND/OR WHEN MAXIMUM DESIGN FLOW RATE EXCEEDS HEATER MANUFACTURERS MAXIMUM ALLOWED FLOW THROUGH HEATER, THE POOL CONTRACTOR SHALL PROVIDE HEATER BYPASS PIPING AND VALVE.
18. INSTALL A THERMOMETER ON HEATER INFLUENT AND EFFLUENT PIPES AND IN THE POOL RETURN LINE A MINIMUM OF 5'-0" AFTER HEATER BYPASS (WHEN A BYPASS VALVE IS PROVIDED).
19. ALL SELF PRIMING CIRCULATING PUMPS SHALL BE INSTALLED NO MORE THAN 2'-0" ABOVE THE OPERATING WATER LEVEL OF THE POOL BEING SERVED. ALL NON-SELF PRIMING PUMPS SHALL BE INSTALLED BELOW THE WATER LEVEL OF THE POOL.
20. PROVIDE A COMBINATION VACUUM/PRESSURE GAUGE ON THE SUCTION SIDE OF ALL PUMPS.
21. PROVIDE A PRESSURE GAUGE ON THE DISCHARGE OF ALL PUMPS.
22. BECAUSE EQUIPMENT IS BELOW WATER LEVEL, ADD ISOLATION VALVES FOR EACH PIECE OF EQUIPMENT.
23. EYE WASH AND EMERGENCY SHOWER PROVIDED AND INSTALLED BY MECHANICAL. SEE "MECHANICAL AND PLUMBING ITEMS".

PIPE VALVE NOTES:

1. ALL VALVES FOR PIPING 3" AND SMALLER SHALL BE PVC BALL VALVES, ASAHI/AMERICAN OMNI OR EQUAL.
2. ALL VALVES 4" AND LARGER SHALL BE BUTTERFLY VALVES ASAHI/ AMERICAN FOUNTAIN COMPATIBLE VALVES ("POOL PRO" OR EQUAL). BUTTERFLY VALVES ARE TO BE MANUFACTURED OF PVC WITH REINFORCED DISKS BUBBLE-TITE WITH STAINLESS STEEL SHAFTS.
3. VALVES 4" AND 6" SHALL BE LEVER OPERATED. VALVES 8" AND ABOVE SHALL BE GEAR OPERATED.
4. ALL CHECK VALVES SHALL BE SPEARS THERMOPLASTIC (PVC OR CPVC), BUTTERFLY TYPE, FLANGED ENDS OR WAFER STYLE CHECK VALVES, WITH PARTS INTENDED FOR TREATED, SWIMMING-POOL WATER. SIZE AS REQUIRED.

PIPE HANGER NOTES:

THE PIPE HANGERS SHALL BE ADJUSTABLE B-LINE FIGURE B3105 STAINLESS STEEL OR EQUAL. PIPE SUPPORTS SHALL BE ADJUSTABLE B-LINE FIGURE B3092 STAINLESS STEEL SADDLE SUPPORT WITH FIGURE B3088T STAINLESS STEEL STAND OR APPROVED EQUAL. PIPE HANGERS AND SUPPORTS SHALL BE CONSTRUCTED OF STAINLESS STEEL AND SHALL BE LOCATED AS NEEDED TO ADEQUATELY SUPPORT ALL PIPING AND COMPONENTS. POOL CONTRACTOR MAY FABRICATE SPECIAL HANGERS OR SUPPORTS SUBJECT TO APPROVAL OF THE ARCHITECT. PVC PIPING SHALL NOT BE UNSUPPORTED FOR LENGTHS IN EXCESS OF SIX FEET. PROVIDE ADEQUATE SUPPORTS AND SPACING AS TO AVOID PIPE SAGGING BETWEEN SUPPORTS AND TO SUPPORT AGAINST THE EFFECTS OF WATER HAMMER. ALL POOL PIPING LARGER THAN 3" MUST BE SUPPORTED FOR SEISMIC LOADS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. THE POOL CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SEISMIC BRACING.

PROVIDE THE DETAILS AND ENGINEERING CALCULATIONS (WET STAMPED AND SIGNED) FOR ALL NON-STRUCTURAL COMPONENTS PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS & ATTACHMENTS, DESIGNED T RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7-05. SUBMIT TO THE BUILDING DEPARTMENT AS A DEFERRED SUBMITTAL (IF REQUIRED BY BUILDING INSPECTOR).

SEE ADDITIONAL NOTES SHEETS SP100, SP101 SP300, AND SP500

SYMBOL LEGEND

	VALVE
	VALVE
	VALVE
	VALVE
	CHECK VALVE

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SUN PEAK
1950 BEAR HOLLOW DRIVE
PARK CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
CHARLES ROSS MIDERSON
145580-2203
11-9-21
STATE OF UTAH
HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

EQUIPMENT ROOM PLAN

DATE: NOV. 9, 2021
REVISED: -
DRAWN BY: JN
JOB #: 21-866FS
DRAWING NO.: SP400

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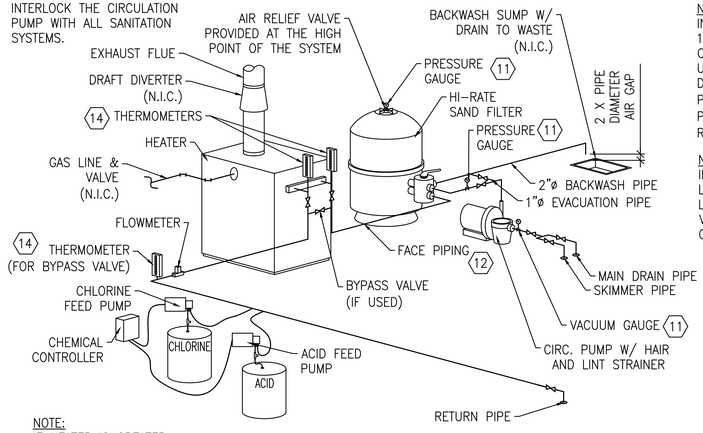
NOTE:
INTERLOCK THE CIRCULATION PUMP WITH ALL SANITATION SYSTEMS.



NOTE:
IF HEATER IS GREATER THAN 200,000 BTU IT SHALL BE ASME CODE STAMPED & REGISTERED BY THE NAT'L BOARD OF INSPECTORS.

NOTE:
INSTALL FLOWMETER WITH 10 X PIPE DIAMETERS OF STRAIGHT PIPE UPSTREAM AND 5 X PIPE DIAMETERS OF STRAIGHT PIPE DOWNSTREAM. (OR PER MANUFACTURER'S RECOMMENDATIONS)

NOTE:
IF CIRC. EQUIPMENT IS LOCATED BELOW WATER LEVEL, ADD ISOLATION VALVES ON EACH PIECE OF EQUIPMENT.

NOTE:
ALL PLUMBING MUST BE IDENTIFIED BY A COLOR CODE OR LABELS ON ALL PIPING AND VALVES. INCLUDE FLOW DIRECTION ARROWS.

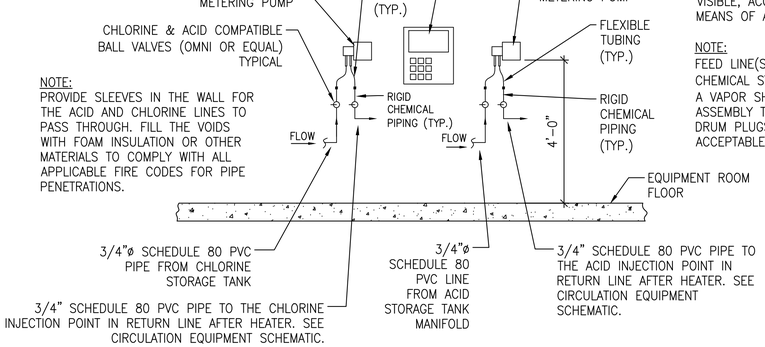
NOTE:
FEED LINE(S) INSERTED IN THE CHEMICAL STORAGE DRUM(S) SHALL UTILIZE A VAPOR SHIELD/CHECK VALVE TEE ASSEMBLY TO PROVIDE AIR TO THE TANK. DRUM PLUGS LEFT OFF FOR AIR SUPPLY NOT ACCEPTABLE.

CIRCULATION EQUIPMENT SCHEMATIC
SCALE: NONE

NOTE:
PROVIDE CHEMICAL PIPING/TUBING CONTENT IDENTIFICATION AND FLOW DIRECTION MARKINGS.

NOTE:
ANCHOR CHLORINE AND ACID FEED LINES TO WALL AND/OR CEILING. PROVIDE ANCHORS AT 3'-0" C.C. MAX.

NOTE:
MOUNT FEED PUMPS ON WALL (TYPICAL).



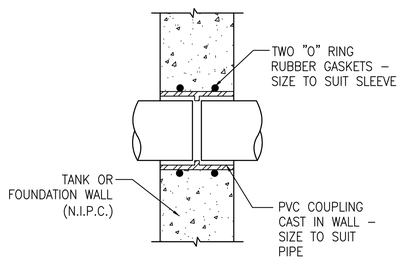
NOTE:
READILY ACCESSIBLE MANUAL VALVES SHALL BE INSTALLED ON THE SUPPLY PIPING AND TUBING AT THE POINT OF USE AND AT THE TANK, CYLINDER OR BULK SOURCE. THE MANUAL EMERGENCY SHUTOFF VALVES SHALL BE IDENTIFIED AND THE LOCATION SHALL BE CLEARLY VISIBLE, ACCESSIBLE AND INDICATED BY MEANS OF A SIGN.

NOTE:
FEED LINE(S) INSERTED IN THE THE CHEMICAL STORAGE DRUM(S) SHALL UTILIZE A VAPOR SHIELD / CHECK VALVE TEE ASSEMBLY TO PROVIDE AIR TO THE TANK. DRUM PLUGS LEFT OFF FOR AIR NOT ACCEPTABLE.

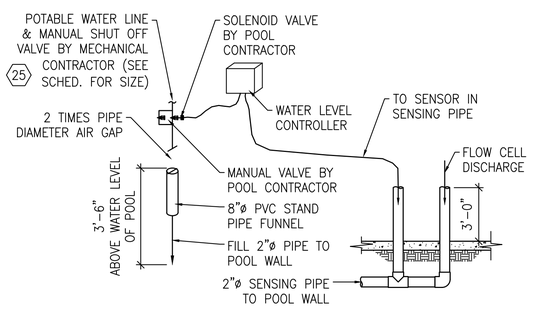
NOTE:
PROVIDE SLEEVES IN THE WALL FOR THE ACID AND CHLORINE LINES TO PASS THROUGH. FILL THE VOIDS WITH FOAM INSULATION OR OTHER MATERIALS TO COMPLY WITH ALL APPLICABLE FIRE CODES FOR PIPE PENETRATIONS.

NOTE:
LENGTH OF FLEXIBLE TUBING AT THE CHEMICAL STORAGE DRUM(S) AND THE PERISTALTIC PUMP(S) SHALL BE KEPT TO A MINIMUM (APPROXIMATELY 24 INCHES).

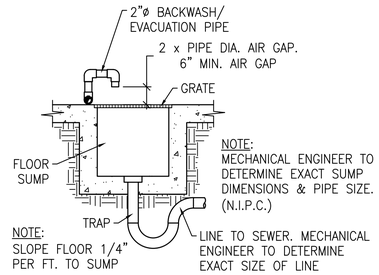
CHLORINE AND ACID FEED PUMP DETAIL
SCALE: SCHEMATIC ONLY — 1 / SP401



PIPE WALL SLEEVE DETAIL
SCALE: NONE — 4 / SP401



POTABLE WATER FILL SCHEMATIC
SCALE: NONE

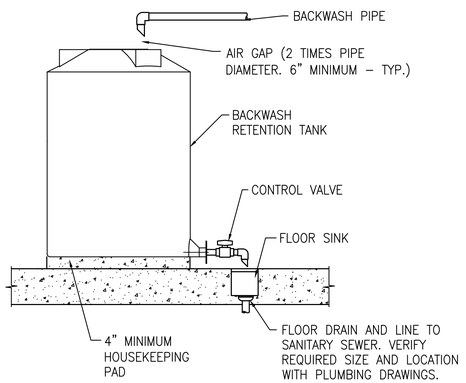


NOTE:
SLOPE FLOOR 1/4" PER FT. TO SUMP

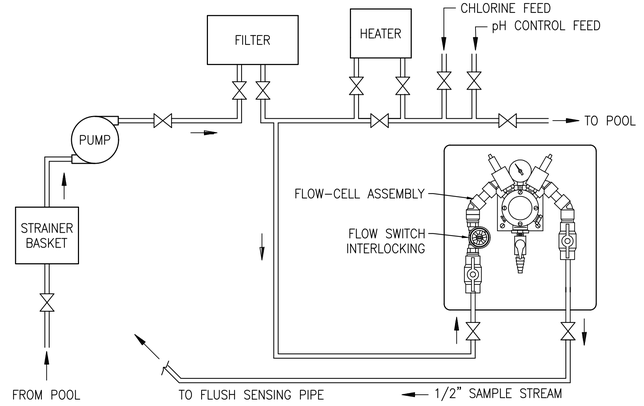
NOTE:
MECHANICAL ENGINEER TO DETERMINE EXACT SUMP DIMENSIONS & PIPE SIZE. (N.I.P.C.)

LINE TO SEWER. MECHANICAL ENGINEER TO DETERMINE EXACT SIZE OF LINE

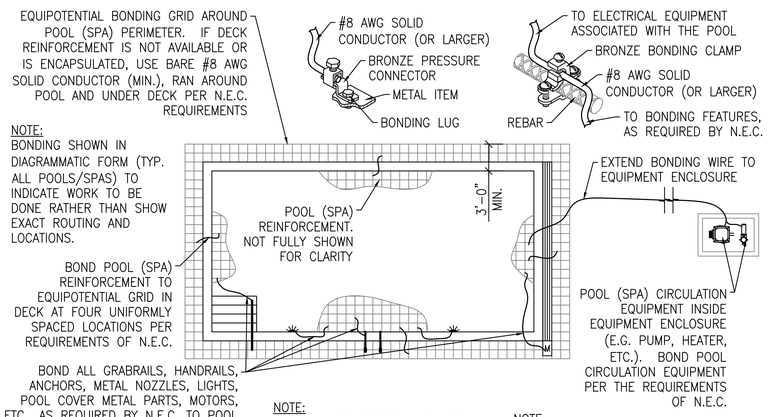
BACKWASH SUMP DETAIL
SCALE: 1/2"=1'-0" — 2 / SP401



BACKWASH TANK DETAIL
SCALE: NONE — 5 / SP401



CHEMICAL FEED SYSTEM SCHEMATIC
SCALE: SCHEMATIC ONLY



NOTE:
ELECTRICAL SCOPE SHOWN FOR REFERENCE ONLY. THE PROJECT ELECTRICAL ENGINEER (DESIGN SUPPLIER) SHALL BE RESPONSIBLE FOR ALL REQUIRED ELECTRICAL DESIGN.

NOTE:
BOND ALL EQUIPMENT AND METAL ITEMS IN OR NEAR THE POOL (SPA) WITH A #8 AWG SOLID CONDUCTOR. INCLUDING: ANCHORS, METAL FITTINGS, RAMP ANCHORS, REINFORCEMENT, DECK GRID, PUMPS, HEATERS, ETC.

NOTE:
"N.E.C." ON THIS DETAIL REFERS TO 2020 NATIONAL ELECTRIC CODE (NFPA 70), ARTICLE 680. WATER DESIGN INC. TAKES NO EXCEPTION TO USE OF CURRENT ADOPTED CODE, IF PERMITTED BY LOCAL BUILDING AUTHORITY, OR AS USED BY ELECTRICAL ENGINEER.

SAMPLE BONDING PLAN
SCALE: NONE — 3 / SP401

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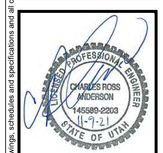

HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

CIRCULATION EQUIPMENT SCHEMATICS

DATE: NOV. 9, 2021
REVISED: -
DRAWN BY: JN
JOB #: 21-866FS
DRAWING NO.: SP401

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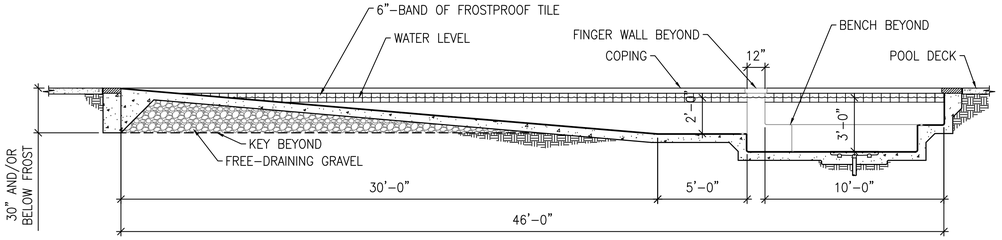
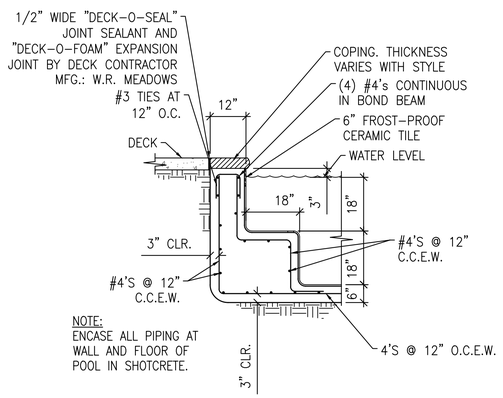
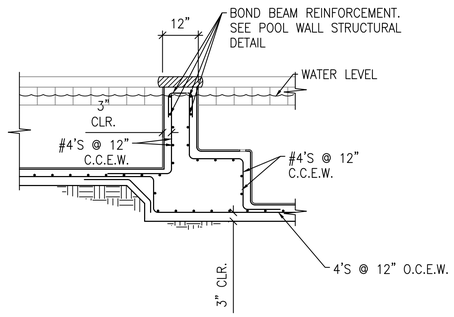


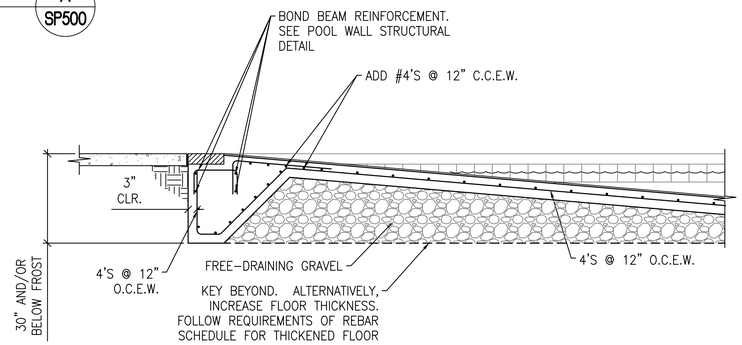
POOL LONGITUDINAL SECTION

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

A SP500







POOL WALL STRUCTURAL DETAIL

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

1 SP500

FINGER WALL STRUCTURAL DETAIL

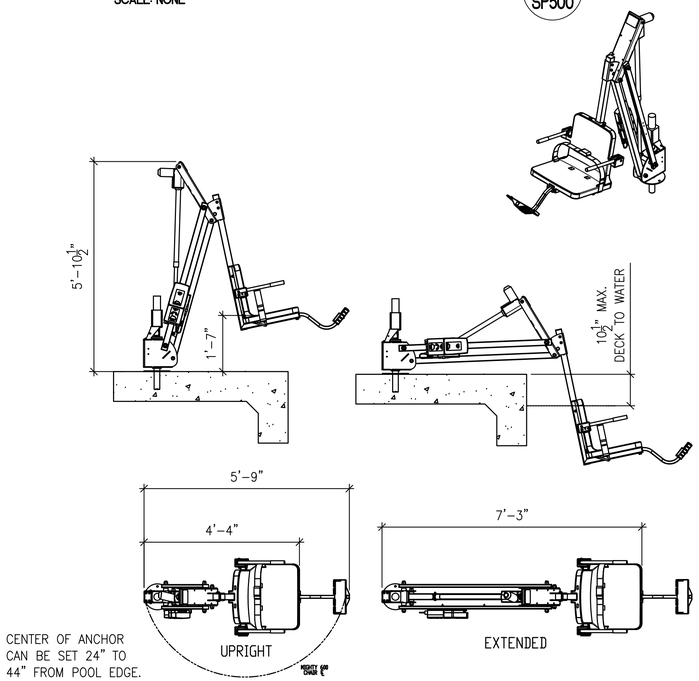
SCALE: 1/2"=1'-0"

2 SP500

ZERO ENTRY STRUCTURAL DETAIL

SCALE: NONE

3 SP500



ADA LIFT DETAIL

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

4 SP500

POOL STRUCTURAL ITEMS:

1. POOLS AND SPAS BUILT USING THIS PLAN SHALL CONFORM TO APPLICABLE DESIGN CODES (E.G. THE MOST CURRENT INTERNATIONAL BUILDING CODE [IBC]) AS ADOPTED BY THE CITY AND COUNTY WHERE THE POOL IS BEING INSTALLED.
2. THE FOLLOWING CODES WERE USED AS A BASIS FOR POOL DESIGN: THE INTERNATIONAL BUILDING CODE, ACI 318, ACI 318.2, ACI506R (GUIDE TO SHOTCRETE), ACI COMPILATION NO. 6. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF LISTED CODES AND LOCAL ORDINANCES. THE MOST STRICT CODE SHALL TAKE PRECEDENCE.
3. POOL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE. THE ENGINEER SHALL BE CONSULTED IF ANY SURCHARGE OR CONDITIONS DIFFER FROM DETAILS SHOWN HEREIN.
4. POOL CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE ALL DIMENSIONS AND SETBACKS OF THE POOL CONFORM TO THE REQUIREMENTS OF THE APPROVING BUILDING OFFICIALS FOR THE LOCATION WHERE THE POOL IS BEING BUILT. THIS INCLUDES BOTH EXISTING STRUCTURES AND PROPERTY LINES.
5. THE POOL MUST BE FOUNDED ENTIRELY IN SUITABLE ORIGINAL UNDISTURBED NATIVE SOIL OR FOUNDED ENTIRELY IN COMPACTED FILL SOIL WHICH HAS BEEN COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY. COMPACTED FILL SOIL MUST BE CERTIFIED BY A LICENSED GEOTECHNICAL ENGINEER.
6. UP TO A LEVEL NOT MORE THAN 24 INCHES BELOW THE RIM OF THE POOL, EXCAVATIONS FOR POOL SHALL BE IN SUITABLE FIRM UNDISTURBED SOIL OR IN SOILS THAT HAVE BEEN COMPACTED TO 95% OF THEIR MAXIMUM DRY DENSITY UNDER QUALIFIED SUPERVISION AND HAVE BEEN APPROVED BY THE LOCAL BUILDING AUTHORITY. SOILS FOR POOLS SHALL HAVE A MINIMUM SOILS BEARING VALUE OF 1500 LBS. PER SQUARE FOOT. THE POOL CONTRACTOR IS RESPONSIBLE FOR SUBGRADE PREPARATION SO THAT SETTLEMENT IS NEGLIGIBLE TO AVOID UNANTICIPATED STRESS ON CONCRETE WHICH CAN CAUSE CRACKING.
7. THE POOL ENGINEER HAS NOT INSPECTED THE POOL SITE. THIS POOL DESIGN IS BASED ON THE FINDINGS OF THE GEOTECHNICAL INVESTIGATION BY **CMT ENGINEERING LABORATORIES** AND ITS REPORT DATED . THE OWNER IS RESPONSIBLE FOR WARRANTING THE ADEQUACY OF THIS DESIGN TO ALL SUBSURFACE AND SOIL CONDITIONS ON THIS PROJECT. SHOULD SOIL TYPES AND/OR SITE CONDITIONS VARY FROM THOSE DOCUMENTED IN THE GEOTECHNICAL REPORT AND THIS POOL DESIGN, IT IS THE RESPONSIBILITY OF THE OWNER TO NOTIFY THE POOL ENGINEER TO OBTAIN REVISED ENGINEERING DETAILS.
8. POOL CONTRACTOR SHALL PROVIDE ALL SHORING AS REQUIRED.
9. POOL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PLACING CONCRETE.
10. ALL SHOTCRETE WORK SHALL MEET THE CLEARANCE, SPLICES, REBOUND, CURING AND TESTING REQUIREMENTS OF SECTION 1908 OF THE IBC.
11. SHOTCRETE SHALL BE MACHINE MIXED SUCH THAT THE 28 DAY COMPRESSIVE STRENGTH IS 4000 PSI. SHOTCRETE SHALL BE KEPT CONSTANTLY WET FOR 14 DAYS MIN. BY OWNER. NOTE THAT PROVISIONS SHALL BE MADE TO HOLD THE REINFORCING BARS IN PLACE DURING PLACEMENT OF SHOTCRETE TO MAINTAIN CLEARANCE BETWEEN THE STEEL AND THE FACE OF CONCRETE IN ACCORDANCE WITH THE IBC CODE REQUIREMENTS.
12. REINFORCING BARS SHALL BE DEFORMED INTERMEDIATE GRADE AND CONFORM TO ASTM DESIGN, A615, GRADE AS INDICATED ON THE REINFORCING SCHEDULE. THE REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS.
13. THE REINFORCING STEEL CALLED OUT IN ALL STEEL AND SHOTCRETE SCHEDULES IS FOR TOTAL STEEL.
14. ALL REINFORCING STEEL SHALL BE IN PLACE BEFORE CONCRETE PLACING IS COMMENCED AND SHALL BE NEW, FREE FROM DIRT, OIL, PAINT AND MILL SCALE AND SHALL BE POSITIONED AND OF THE SIZE INDICATED ON THE DRAWINGS, AND SHALL BE SECURED BY NOT LESS THAN 16 GAUGE ANNEALED TIE WIRE. ALL REINFORCEMENT BARS SHALL BE DETAILED, BOLSTERED AND SUPPORTED IN ACCORDANCE WITH ACI STANDARD 315. U.O.N. PROVIDE CONCRETE COVER FOR REBAR AS FOLLOWS:
   - CONCRETE CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND – 3.00 INCHES;
   - CONCRETE CAST AGAINST FORM, BUT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, #5 BARS AND SMALLER – 1.50 INCHES;
   - CONCRETE CAST AGAINST FORM, BUT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, #6 BARS AND LARGER – IF ALLOWED IN ACCORDANCE WITH 2018 IBC, SECTION 1908 – 2.00 INCHES.
15. ALL PIPING SHALL MAINTAIN A MINIMUM ONE AND A HALF (1 ½") INCH CLEARANCE FROM VERTICAL REINFORCING STEEL BARS.
16. ALL STEEL & ELECTRICAL ITEMS IN OR NEAR THE POOL SHALL BE BONDED & GROUNDED IN ACCORDANCE WITH THE MOST CURRENT NATIONAL ELECTRIC CODE (N.E.C.) ARTICLE 680 OR CURRENT ADOPTED N.E.C.
17. ALL CONCRETE PLACEMENT WORK SHALL BE IN ACCORDANCE WITH ACI–301 AND ACI–302. WHEN CONCRETE IS PLACED DURING HOT WEATHER CONFORM TO ACI 305R. WHEN PLACED DURING COLD WEATHER CONFORM TO ACI 306R.
18. THE STRUCTURAL ASPECT OF THE DESIGN CONTAINED ON THIS PLAN COVERS ONLY THE WATER FEATURE STRUCTURES WHOSE DESIGNS ARE SHOWN ON THIS PLAN (UNLESS OTHERWISE NOTED). IT DOES NOT INCLUDE DESIGN FOR ANY OTHER STRUCTURE OR CIVIL ELEMENT INCLUDED IN THIS PROJECT.
19. POOLS SHALL NOT BE LOCATED WHERE GROUND WATER EXISTS ABOVE BOTTOM OF POOL DURING HIGH WATER TABLE OCCURRENCES UNLESS TWO (2) HYDROSTATIC PRESSURE RELIEF VALVES ARE INSTALLED AT THE LOW POINT IN THE POOL.
20. THE DESIGN CONTAINED ON THIS PLAN IS NOT APPROVED FOR:

A) AREAS WITH COLLAPSIBLE SOILS OR EXPANSIVE SOILS WITH EQUIVALENT FLUID PRESSURES ABOVE THE STATED EQUIVALENT FLUID PRESSURES ON THE REBAR SCHEDULE. IF THESE TYPES OF SOILS ARE PRESENT, ADDITIONAL SOILS ANALYSIS AND ENGINEERING IS REQUIRED.

B) COVE RADIUS (TRANSITIONAL RADIUS BETWEEN WALL AND FLOOR) OTHER THAN THAT SHOWN ON POOL DRAWINGS. IF SITE CONDITIONS AND/OR EXCAVATION TECHNIQUES ARE NOT SUITABLE FOR WALL CONSTRUCTION PER THESE DRAWINGS AND COVE RADIUS NEEDS TO BE ALTERED, ADDITIONAL ENGINEERING IS REQUIRED.

21. EARTH SLOPES DRAINING TOWARD POOLS SHALL BE INTERCEPTED BY A DRAINAGE SYSTEM DESIGNED TO ASSURE ADEQUATE DRAINAGE OF WATER SO THAT HYDROSTATIC PRESSURES CAN'T BUILD UP BEHIND AND AROUND THE POOL WALLS.
22. BOTTOM OF ALL POOL FOOTINGS SHALL BE AT LEAST 2 FEET 6 INCHES BELOW GRADE OR BELOW FROST LEVEL, WHICHEVER IS DEEPER.
23. ALL CEMENT FOR CONCRETE WORK SHALL CONFORM TO REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR THE "PORTLAND CEMENT", SERIAL DESIGNATION C–150 OF THE ASTM AND SHALL BE THE TYPE REQUIRED IN THE SOILS REPORT.
24. WATER USED IN CONCRETE SHALL BE POTABLE. CALCIUM CHLORIDE, ALUMINUM CONDUIT, PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO CONCRETE SHALL NOT BE USED IN CONCRETE.

STANDARD REBAR AND SHOTCRETE SCHEDULE
ASTM A615 GRADE 40

1. U.O.N. POOL FLOOR THICKNESS SHALL BE EQUAL TO 6".
2. POOL FLOOR REINFORCEMENT SHALL BE:
   - FOR FLOOR THICKNESS UP TO 8" – #4'S@12" C.C.E.W.;
   - – II – FROM 9" TO 12" – #4'S@8" C.C.E.W.;
   - FOR EACH ADDITIONAL 8" OF THICKNESS, OR FRACTION THEREOF, ADD AREA OF REINFORCEMENT EQUIVALENT TO #4'S@12" C.C.E.W.
3. POOL WALL VERTICAL REINFORCEMENT IS CALLED OUT ON DETAILS. IF POOL WALL THICKNESS IS INCREASED DUE TO FIELD CONDITIONS, AMOUNT OF VERTICAL REBAR IN THAT AREA SHALL BE INCREASED TO PROVIDE AT LEAST 0.2% REINFORCEMENT RATIO.
4. POOL WALL HORIZONTAL REINFORCEMENT IS CALLED OUT ON DETAILS. FOR EACH ADDITIONAL 3" OF THICKNESS, OR FRACTION THEREOF, ADD AREA OF REINFORCEMENT EQUIVALENT TO #3'S@12" C.C.E.W.

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SUN PEAK
1950 BEAR HOLLOW DRIVE
PARK CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
CHARLES ROSS ANDERSON
145580-2203
11-9-21
STATE OF UTAH
HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

STRUCTURAL DETAILS

DATE	NOV. 9, 2021
REVISED	-
DRAWN BY	JN
JOB #	21-866FS
DRAWING NO.	SP500

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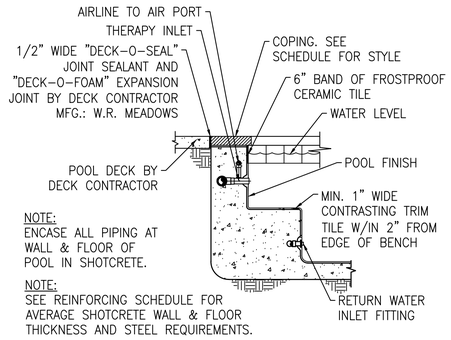
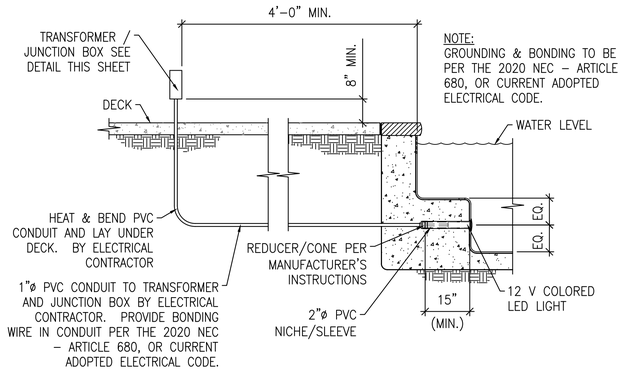


POOL WALL DETAIL

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

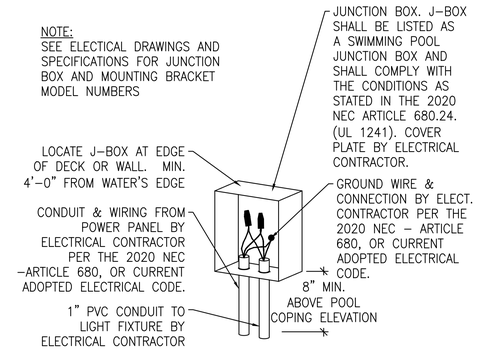
1 SP600



UNDERWATER LIGHT DETAIL

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

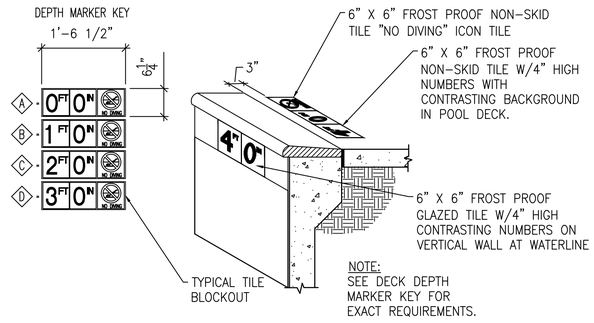
2 SP600



UNDERWATER LIGHT JUNCTION BOX DETAIL

SCALE: NONE

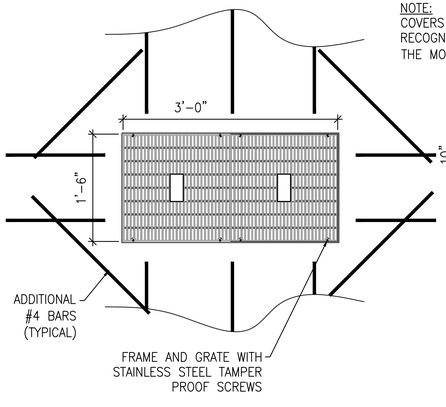
3 SP600

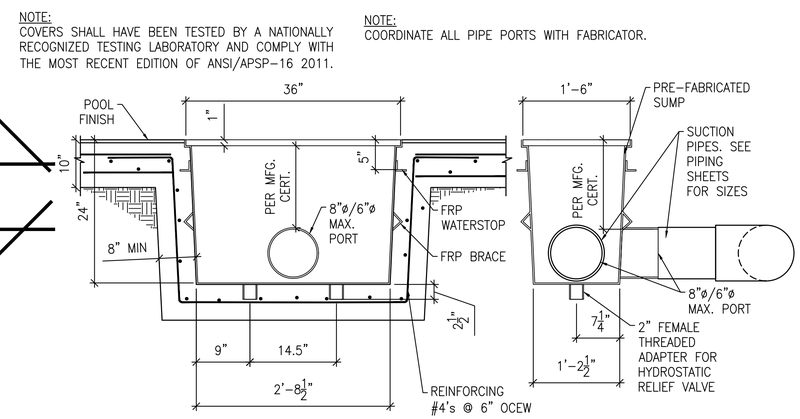


DEPTHMARKER TILES DETAIL

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

4 SP600

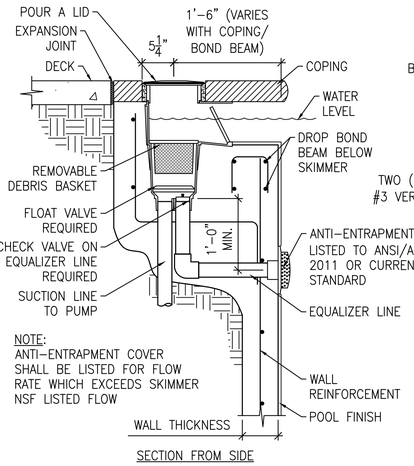




CIRCULATION OUTLET FRAME AND GRATE

SCALE: 1"=1'-0"

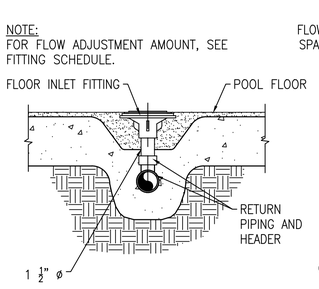
5 SP600



SKIMMER DETAIL

SCALE: 1"=1'-0"

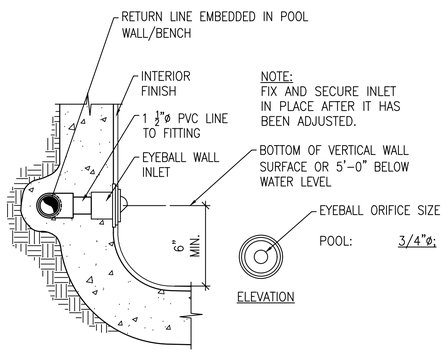
6 SP600



ADJUSTABLE FLOOR INLET DETAIL

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

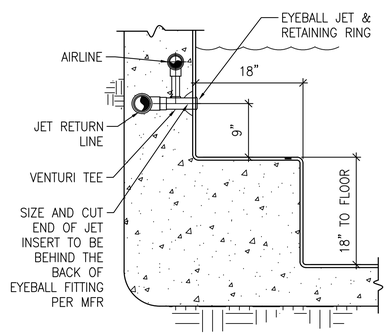
7 SP600



ADJUSTABLE WALL INLET DETAIL

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

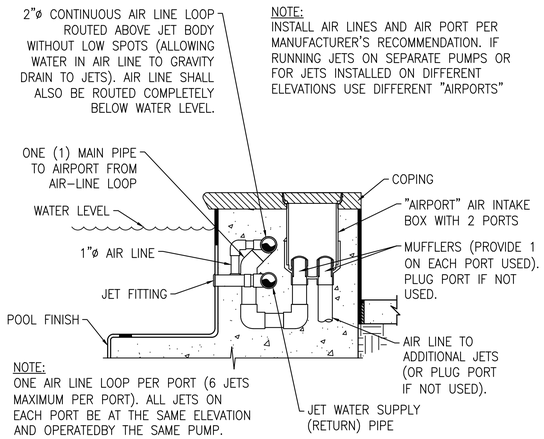
8 SP600



HYDROTHERAPY JET DETAIL

SCALE: 1"=1'-0"

9 SP600



AIR PORT DETAIL

SCALE: 1"=1'-0"

10 SP600

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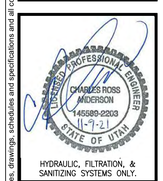

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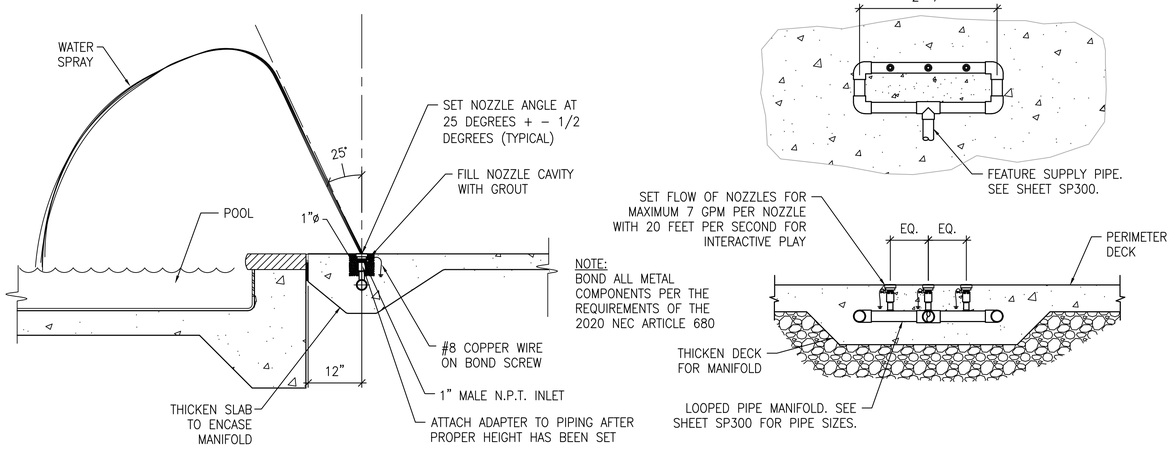


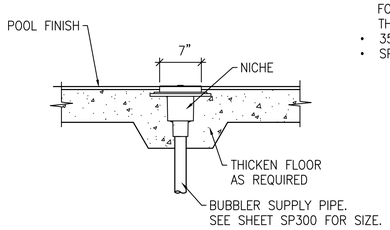
NOTE:
BOND ALL METAL COMPONENTS PER THE REQUIREMENTS OF THE 2020 NEC ARTICLE 680

ARCHING STREAM JET DETAIL

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

1 / SP601

NOTE:
GROUNDING & BONDING TO BE PER THE 2020 NEC – ARTICLE 680, OR CURRENT ADOPTED ELECTRICAL CODE.



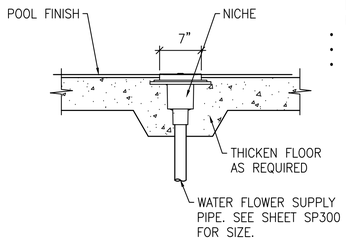
NOTES:
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS
- BUBBLERS ARE DESIGNED TO BE INSTALLED FLUSH WITH THE POOL FINISH.
- BUBBLER NICHE IS DESIGNED FOR 1 1/2"ø PVC PIPE FOR THE WATER SUPPLY.
- 35 GPM
- SPRAY HEIGHT: 1 FT

BUBBLER DETAIL

SCALE: 1" = 1'-0"

2 / SP601

NOTE:
GROUNDING & BONDING TO BE PER THE 2020 NEC – ARTICLE 680, OR CURRENT ADOPTED ELECTRICAL CODE.



NOTES:
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS
- WATER FLOWERS ARE DESIGNED TO BE INSTALLED FLUSH WITH THE POOL FINISH.
- WATER FLOWER NICHE IS DESIGNED FOR 1 1/2"ø PVC PIPE FOR THE WATER SUPPLY
- SPAY HEIGHT: 1 FT
- SPREAD: 2 FT
- FLOW REQUIREMENTS: 10 GPM

WATER FLOWER DETAIL

SCALE: 1" = 1'-0"

3 / SP601

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ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
4. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
5. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
6. ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER, OR PASS THROUGH ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
7. NO WIRING SHALL RUN IN DUCT WORK.
8. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
9. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
10. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
11. ELECTRICAL CONTRACTOR SHALL REVIEW ALL ARCHITECT'S ELEVATIONS, SECTIONS, AND FLOOR PLANS PRIOR TO ROUGH-IN OF ELECTRICAL JUNCTION BOXES.
12. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2-1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
13. ELECTRICAL CONTRACTOR SHALL MEET WITH THE POOL AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES, AND ROUGH-IN REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING, AND CEILING INSTALLATIONS.
14. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
15. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
16. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
17. AT THE END OF THE JOB, PROVIDE BLANK COVER PLATES TO MATCH THE OTHER COVER PLATES FOR ALL JUNCTION BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION
	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL
	BRANCH CIRCUIT CONCEALED IN GROUND OR FLOOR
A-1,3	BRANCH CIRCUIT HOMERUNS TO PANEL
135	ROOM NUMBER
CH 1	MECHANICAL EQUIPMENT SYMBOL
1	KEYED NOTE REFERENCE
42X	FEEDER TAG (SEE FEEDER SCHEDULE)
	LIGHTING AND POWER PANELBOARD
NON-FUSED / FUSED	DISCONNECT SWITCH
NON-FUSED / FUSED	DISCONNECT SWITCH WITH MOTOR STARTER
	MOTOR STARTER
VFD	VARIABLE FREQUENCY DRIVE
C	CONDUIT STUB
J	JUNCTION BOX
	ELECTRIC VEHICLE CHARGING STATION
WP / A-3 / RCF	WEATHERPROOF / PANEL SPACE ASSIGNMENT / EQUIPMENT DESIGNATION
WP	WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE
GFCI	PROTECTED BY FAULT CIRCUIT INTERRUPTER
+44	MOUNTING HEIGHT ABOVE FLOOR OR GRADE GIVEN IN INCHES.
REF	REFRIGERATOR
DW	DISHWASHER
DISP	DISPOSAL
WASH	WASHING MACHINE
EWC	ELECTRIC WATER COOLER
USB	HUBBELL USB15AC5W OR EQUAL DUPLEX PLUS USB CHARGER
TR	TAMPER RESISTANT
	DUPLEX RECEPTACLE OUTLET
	QUAD RECEPTACLE OUTLET
	SPLIT WIRED DUPLEX RECEPTACLE OUTLET
	220V RECEPTACLE OUTLET
	ISOLATED GROUND RECEPTACLE
	RECEPTACLE FLOOR DEVICE
	CEILING MOUNTED DEVICE
	SPECIAL RECEPTACLE
	MOTOR OUTLET
	EXHAUST FAN
T	THERMOSTAT OUTLET
S	REMOTE SENSOR OUTLET
	TELEPHONE OUTLET
(#)	COMPUTER DATA OUTLET (#) INDICATES JACK QUANTITIES
	NETWORK AND VOICE OUTLET
	WIRELESS ACCESS POINT CEILING MOUNTED
TV	TELEVISION OUTLET

SYMBOL	EXPLANATION
F1	FIXTURE TYPE SYMBOL
	LINIER FIXTURE (TYPICAL)
	EMERGENCY LIGHTING UNIT
	SURFACE OR PENDANT MOUNTED FIXTURE
	RECESSED FIXTURE
	WALL MOUNTED FIXTURE
	WALL PACK
	STRIP FIXTURE
	TRACK LIGHTING
BUG-EYE / EXPRESS	EMERGENCY LIGHTING UNIT
	WALL MOUNTED EXIT LIGHT (SINGLE FACE)
	WALL MOUNTED EXIT LIGHT (DOUBLE FACE)
	CEILING MOUNTED EXIT LIGHT
	CEILING MOUNTED EXIT LIGHT (DOUBLE FACE)
	EXIT LIGHT WITH PROTECTIVE COVER
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3-WAY SWITCH
4	4-WAY SWITCH
D	DIMMER SWITCH
K	KEYED SWITCH
T	TIMER SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD
F	PADDLE FAN SPEED CONTROL. (CANARM "CN" SERIES)
OC	OCCUPANCY SENSOR SWITCH
LV	LOW VOLTAGE CONTROL SWITCH
LV/D	LOW VOLTAGE CONTROL SWITCH WITH DIMMER
OC/D	OCCUPANCY SENSOR CONTROL SWITCH WITH DIMMER
OC/2	DUAL RELAY OCCUPANCY SENSOR CONTROL SWITCH
$$	DOUBLE GANG SWITCH
$a,b,c / $a,b	LOW VOLTAGE MULTI BUTTON CONTROL SWITCH (LETTER INDICATES CONTROL OF CORRESPONDING FIXTURES)
$$$	CONTROLLING SWITCH (LETTER INDICATES CONTROL OF CORRESPONDING FIXTURES)
S	OCCUPANCY SENSOR (CEILING MOUNTED)
DT / PIR	DUAL TECHNOLOGY OCCUPANCY SENSOR (CEILING MOUNTED) / PASSIVE INFRARED OCCUPANCY SENSOR (CEILING MOUNTED)
RC	ROOM CONTROLLER
LS	DAYLIGHT SENSOR
P	PHOTOCELL
V	VOLUME CONTROL
	WALL SPEAKER
	CEILING SPEAKER
	SURVEILLANCE CAMERA
DVR	SURVEILLANCE DIGITAL VIDEO RECORDER
NURSE	NURSE CALL ANNUNCIATOR PANEL
N	NURSE CALL EMERGENCY CALL DEVICE
N	NURSE CALL EMERGENCY CALL LIGHT

SYMBOL	EXPLANATION
	TAMPER AND FLOW
FACP	FIRE ALARM CONTROL PANEL
RFAA	REMOTE FIRE ALARM ANNUNCIATOR PANEL
NAC	FIRE ALARM NAC PANEL
VOICE	FIRE ALARM VOICE PANEL
D/H	DOOR HOLDER
F/S	FIRE/SMOKE DAMPER
F	FIRE ALARM PULL STATION
	FIRE ALARM STROBE
	FIRE ALARM HORN/STROBE
LF	FIRE ALARM HORN/STROBE (LF = LOW FREQUENCY)
	FIRE ALARM HORN/STROBE WITH PROTECTIVE COVER
	FIRE ALARM SPEAKER/STROBE
LF	FIRE ALARM SPEAKER/STROBE (LF = LOW FREQUENCY)
	FIRE ALARM SPEAKER
LF	FIRE ALARM SPEAKER (LF = LOW FREQUENCY)
	FIRE ALARM HORN
LF	FIRE ALARM HORN (LF = LOW FREQUENCY)
	FIRE ALARM STROBE CEILING MOUNTED
	FIRE ALARM HORN/STROBE CEILING MOUNTED
LF	FIRE ALARM HORN/STROBE CEILING MOUNTED (LF = LOW FREQUENCY)
	FIRE ALARM HORN CEILING MOUNTED
LF	FIRE ALARM HORN CEILING MOUNTED (LF = LOW FREQUENCY)
	SMOKE DETECTOR (SUBSCRIPT AS INDICATED BELOW)
B	SMOKE ALARM BATTERY-BACKED
C	SMOKE/CARBON MONOXIDE ALARM COMBO BATTERY-BACKED
D	DUCT SMOKE DETECTOR
R	SMOKE DETECTOR WITH ADDRESSABLE RELAY
S	SMOKE DETECTOR WITH SOUNDER BASE
	HEAT DETECTOR
	GAS DETECTOR
CO / CO/NO2	CARBON MONOXIDE DETECTOR / CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR (GARAGE)
	ADA TWO-WAY COMMUNICATIONS SYSTEM
KP	ACCESS CONTROL KEY PAD
CR	ACCESS CONTROL CARD READER
Sos	ACCESS CONTROL DOOR STRIKE
ML	ACCESS CONTROL MAG LOCK
DS	ACCESS CONTROL DOOR SENSOR
	ACCESS CONTROL REQUEST TO EXIT
	PUSHBUTTON
B	BELL

NOTE: ALL SYMBOLS MAY NOT BE USED.

ABBREVIATIONS INDEX

#	NUMBER	DC	DIRECT CURRENT	KW	KILOWATT	PT	POTENTIAL TRANSFORMER
ϕ	PHASE	DISP	DISPOSAL	LRA	LOCKED ROTOR AMPS	PV	PHOTOVOLTAIC
1ϕ	SINGLE PHASE	DRY	DRYER	LTG	LIGHTING	PVC	POLYVINYL CHLORIDE
2P	TWO-POLE	DW	DISHWASHER	MATV	MASTER ANTENNA TELEVISION	(R)	RELOCATE
3ϕ	THREE PHASE	DWG	DRAWING	MAX	MAXIMUM	RECP	RECEPTACLE
4P	FOUR-POLE	EC	EMPTY CONDUIT	MB	MAIN BUS	REF	REFRIGERATOR
AC	ALTERNATING CURRENT	EM	EMERGENCY	MCB	MAIN CIRCUIT BREAKER	REQ	REQUIRED
AFF	ABOVE FINISHED FLOOR	EMG	EMERGENCY GENERATOR	MCC	MOTOR CONTROL CENTER	RLA	RATED LOAD AMPS
AFG	ABOVE FINISHED GRADE	EMT	ELECTRICAL METALLIC TUBING	MCM	1000 CIRCULAR MILLS	RMS	ROOT MEAN SQUARE
AFP	ARC FAULT PROTECTOR	EPO	EMERGENCY POWER OFF	MH	MANHOLE	SE	SERVICE ENTRANCE
AHJ	AUTHORITY HAVING JURISDICTION	EWC	ELECTRIC WATER COOLER	MIC	MICROPHONE	SPD	SURGE PROTECTION DEVICE
AIC	AMP INTERRUPTING CURRENT (SYMMETRICAL)	EWH	ELECTRIC WATER HEATER	MIN	MINIMUM	SPEC	SPECIFICATION
AL	ALUMINUM	(E)	EXISTING	MLO	MAIN LUGS ONLY	SPK	SPEAKER
AM	AMPS METER	(F)	FUTURE	MNF	MANUFACTURER	SS	SELECTOR SWITCH
AMP	AMPERE	FA	FIRE ALARM	MTG	MOUNTING	SW	SWITCH
ANN	ANNUNCIATOR	FACP	FIRE ALARM CONTROL PANEL	MTR	MOTOR	SWBD	SWITCHBOARD
ATS	AUTOMATIC TRANSFER SWITCH	FC	FOOT CANDLE	MW	MICROWAVE	SWGR	SWITCHGEAR
AUX	AUXILIARY	FLA	FULL LOAD AMPS	(N)	NEW	TTB	TELEPHONE TERMINAL BOARD
AWG	AMERICAN WIRE GAUGE	FT	FOOT	N/A	NOT APPLICABLE	TBC	TELEPHONE TERMINAL CABINET
BC	BARE COPPER	FRZ	FREEZER	NC	NORMALLY CLOSED	TV	TELEVISION
BFG	BELOW FINISH GRADE	FS	FUSED SWITCH	NEC	NATIONAL ELECTRICAL CODE	TYP	TYPICAL
C	CONDUIT	GFAF	DUAL FUNCTION GFCI/AFCI CIRCUIT BREAKER	NEMA	NATIONAL MANUFACTURING ASSOCIATION	UG	UNDERGROUND
CAB	CABINET	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NFC	NATIONAL FIRE CODE	UNO	UNLESS NOTED OTHERWISE
CATB	COMMUNITY ANTENNA TELEVISION	GFEP	GROUND-FAULT EQUIPMENT PROTECTION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	UPS	UNINTERRUPTIBLE POWER SUPPLY
CATV	CABLE TELEVISION	GFP	GROUND FAULT PROTECTOR	NFS	NON FUSED SWITCH	V	VOLT (KV-KILOVOLT)
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	GRC	GALVANIZED RIGID CONDUIT	NIC	NOT IN CONTRACT	VA/R	VOLT-AMPS/REACTIVE
CKT	CIRCUIT	GRD	GROUND	NL	NIGHT LIGHT	VM	VOLT METER
CLG	CEILING	HP	HORSE POWER	NO	NORMALLY OPEN	W	WATTS
CNTR	CONTRACTOR	HZ	HERTZ	NTS	NOT TO SCALE	W/	WITH
CO	CONVENIENCE OUTLET	IG	ISOLATED GROUND	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	WASH	WASHER
CRT	COMPUTER TERMINAL	IMC	INTERMEDIATE METALLIC CONDUIT	OFOI	OWNER FURNISHED OWNER INSTALLED	WH	WATTHOUR
CT	CURRENT TRANSFORMER	IN	INCH	OS&Y	OUTSIDE SCREW AND YOKE	W/O	WITHOUT
CU	COPPER	J-BOX	JUNCTION BOX	PB	PUSH BUTTON	WP	WEATHER PROOF
C/W	CONDUIT WITH	KV	KILOVOLT	PF	POWER FACTOR	XFMR	TRANSFORMER
(D)	DEMOLISH/DELETE	KVA	KILOVOLT AMPERES	PFR	PHASE FAILURE RELAY	XFMR-SW	TRANSFORMER SWITCH
DB	DECIBEL	KVAR	KILOVARS	PNL	PANEL	XP	EXPLOSION PROOF

NOTE: THIS IS A TYPICAL ABBREVIATION LIST. NOT ALL ABBREVIATIONS MAY BE USED ON THIS PROJECT.

DESIGN CONTACTS

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ELECTRICAL TEAM LEAD:	MANUEL MASBERNAT
ELECTRICAL DESIGNER:	CHASE CHRISTENSEN

SHEET INDEX

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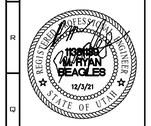


REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

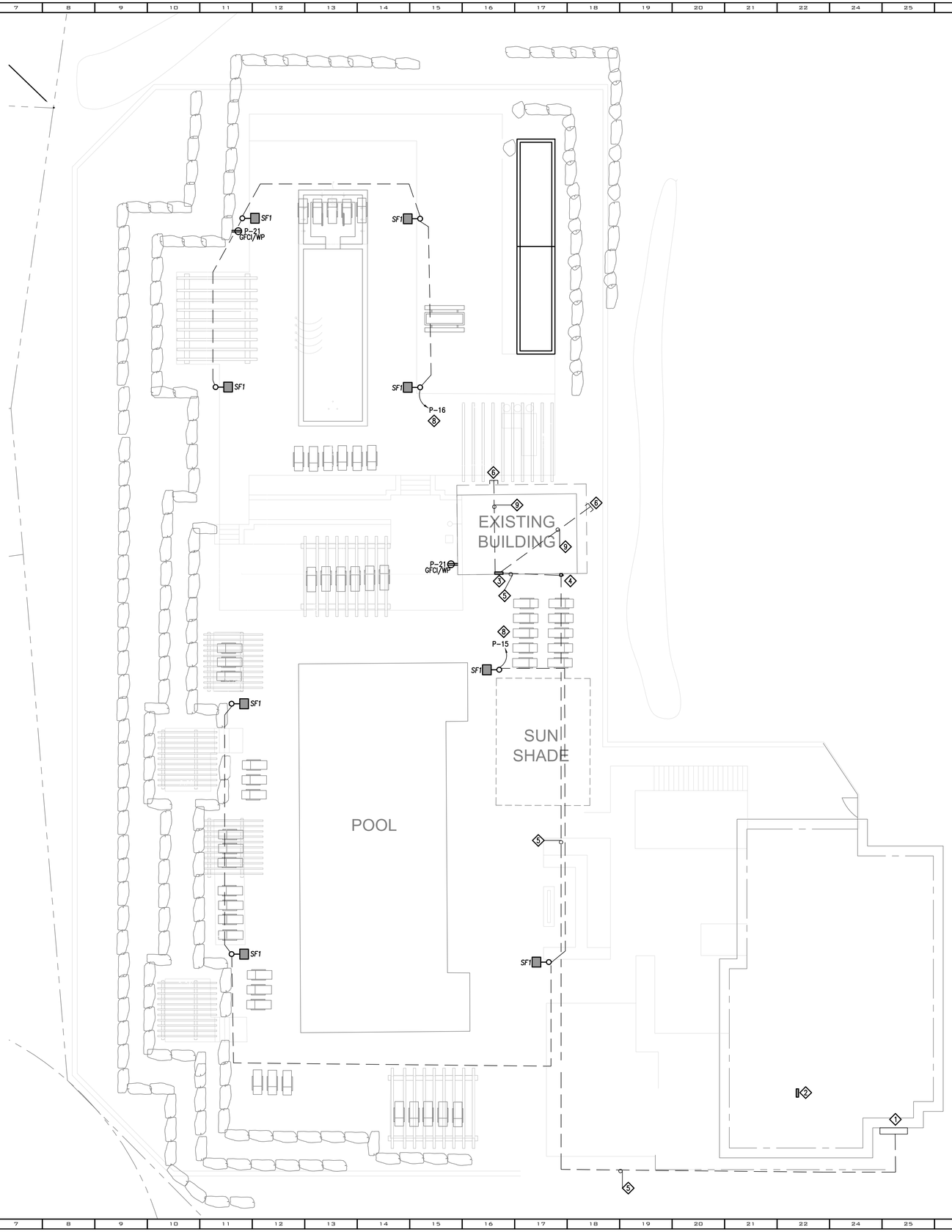
DRAWING TITLE:
ELECTRICAL COVERSHEET

DRAWN BY:	CHECKED BY:
CC	RB

DATE PLOTTED: 12/03/2021

PROJECT #: J21317.00

E0.0



ELECTRICAL KEYED NOTES:

1. EXISTING METERING AND MDP.
2. EXISTING PANEL "A".
3. NEW PANEL "P."
4. NEW 125A BUILDING DISCONNECT.
5. SEE POWER ONE-LINE DIAGRAM FOR CONDUIT AND CONDUCTOR REQUIREMENTS.
6. STUB CONDUITS FOR FUTURE KITCHEN. COORDINATE WITH OWNER PRIOR TO ROUGH-IN. CAP AND MARK CONDUITS.
7. CONDUITS STUB FOR FUTURE TENNIS COURT. COORDINATE WITH OWNER PRIOR TO ROUGH-IN.
8. CONTROL VIA TIME CLOCK.
9. (2) 1" CONDUITS.

SITE ELECTRICAL PLAN
SCALE: 3/32" = 1'-0"

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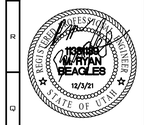


REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
SITE
ELECTRICAL
PLAN

DRAWN BY:	CHECKED BY:
CC	RB

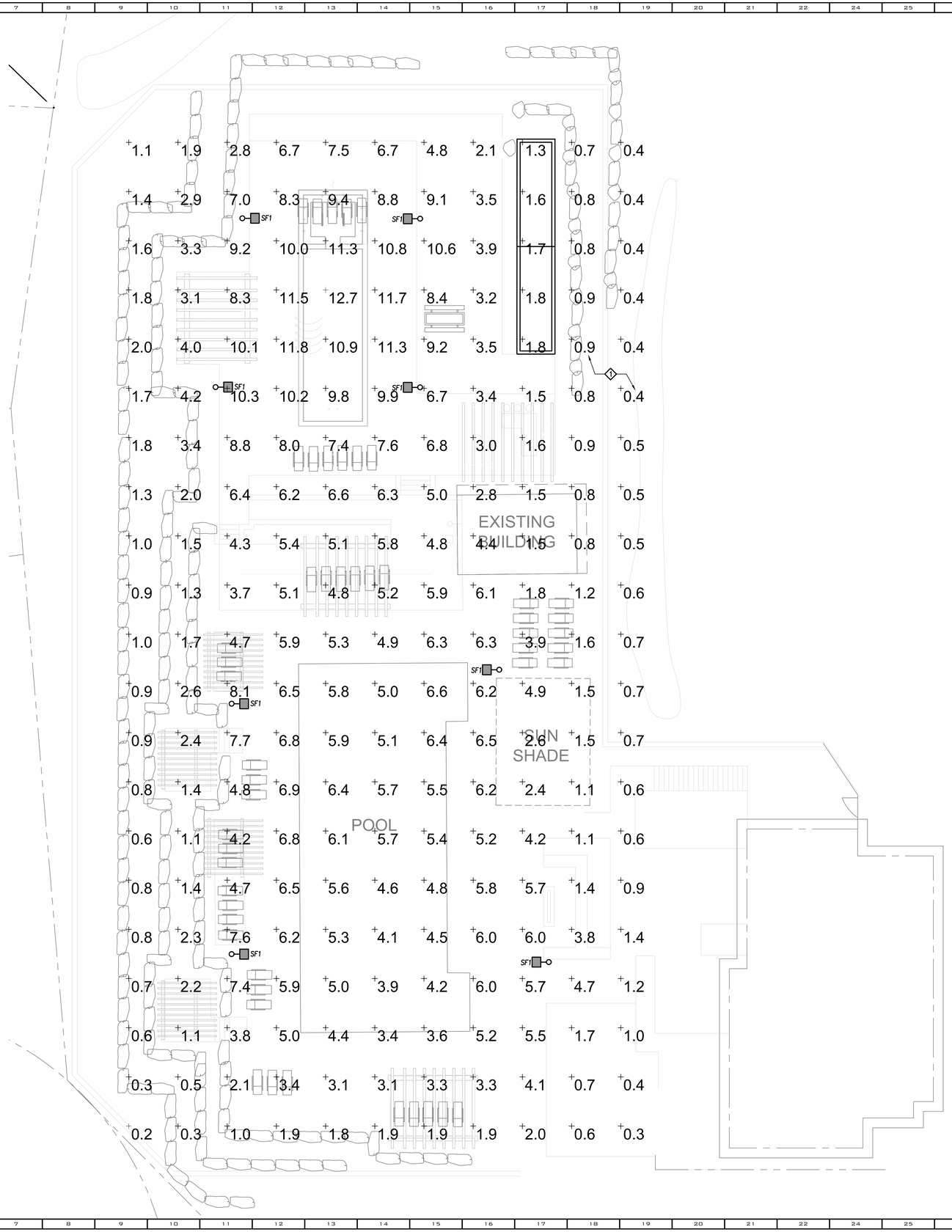
DATE PLOTTED:
12/03/2021

PROJECT #:
J21317.00

E1.0

ELECTRICAL KEYED NOTES:

1 INDICATES FOOT CANDLES.



SITE PHOTOMETRIC PLAN

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

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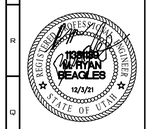


REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: SITE PHOTOMETRIC PLAN

DRAWN BY:	CHECKED BY:
CC	RB

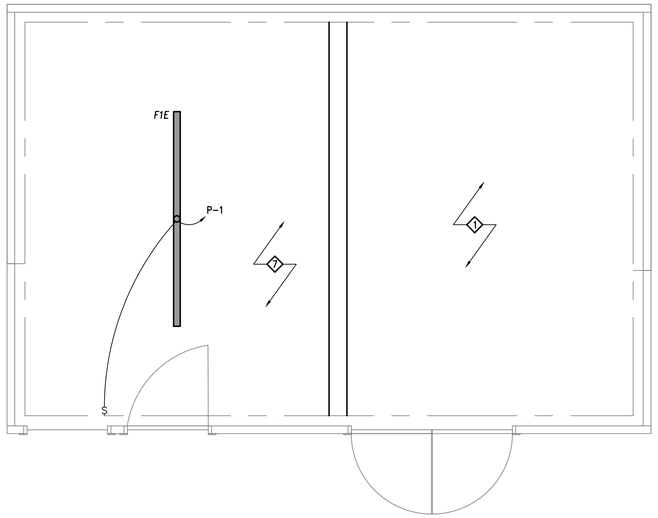
DATE PLOTTED: 12/03/2021

PROJECT #: J21317.00

E1.1

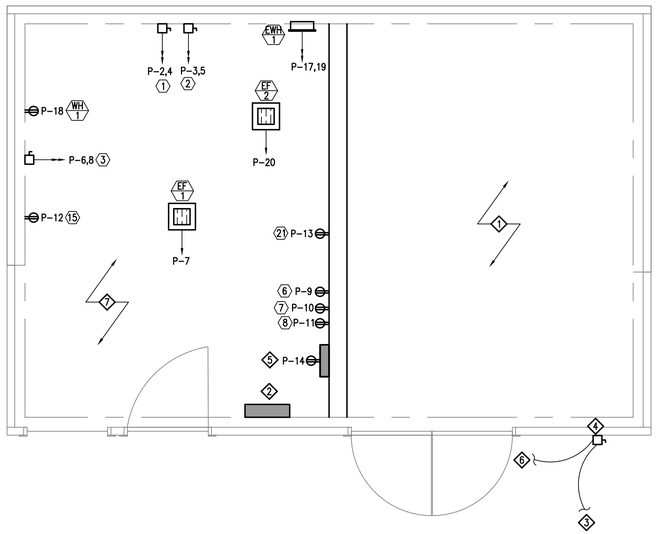
ELECTRICAL KEYED NOTES:

1. EXISTING TO REMAIN.
2. NEW PANEL "P".
3. TO EXISTING PANEL "A" IN EXISTING BUILDING. SEE ONE-LINE DIAGRAM FOR CONDUIT AND CONDUCTOR REQUIREMENTS. PANEL IS LOCATED APPROXIMATELY 6,540 FEET FROM PANEL "P". VERIFY EXACT LENGTH WITH OWNER PRIOR TO ROUGH-IN.
4. 125A BUILDING DISCONNECT.
5. TIME CLOCK.
6. TO PANEL "P".
7. EQUIPMENT AND WIRING SHALL COMPLY WITH NEC 680.14 AND 300.6. APPROVED WIRING METHODS PER NEC 680.14.



N

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



N

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

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REGISTERED PROFESSIONAL ENGINEER
TIGHE W. RYAN BEAGLES
12/3/21
STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: LIGHTING & POWER PLAN

DRAWN BY:	CHECKED BY:
CC	RB

DATE PLOTTED: 12/03/2021

PROJECT #: J21317.00

E2.1

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SERVICE		DISCONNECT		STARTER	LOAD			MOCP/ BRKR	REMARKS
		VOLTS	PHASE	SIZE	FUSE		HP/TON	VA	AMPS		
EF 1	EXHAUST FAN	120 V	1Ø	INTEGRAL PLUG	-	-		65	0.5A	15A	EF CONTROLLED BY 24-HR TIMER
EF 2	EXHAUST FAN	120 V	1Ø	INTEGRAL PLUG	-	-		15	0.1A	15A	EF CONTROLLED BY 24-HR TIMER
EWH 1	ELECTRIC WALL HEATER	240 V	1Ø	T-STAT	-	-		1,992	8.3A	20A	
WH 1	WATER HEATER	120 V	1Ø	PLUG/ CORD	-	-		1,392	11.6A	20A	

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	LAMPS		FIXTURE			DESCRIPTION	REMARKS
			TYPE	QTY.	VOLTS	WATTS	MOUNTING		
F1E	LITHONIA (OR APPROVED EQUAL)	FEML384 4000LM IMACD MD MVOLTM GZ10 4000K 80CRI BE6WCP	LED 4000 KELVIN 4000 LUMENS 80 CRI	-	120	23.6	SURFACE CEILING	VAPOR TIGHT 48" LED STRIP WITH EMERGENCY BATTERY PACK	

SITE LIGHTING FIXTURE SCHEDULE

FIXT #	FIXTURE						LAMPS		POLE			REMARKS
	MANUFACTURER	CATALOG #	VOLTS	#/POLE	WATTS	MOUNTING	TYPE	QTY/FIXT.	MANUFACTURER	HEIGHT	CATALOG #	
SF1	MCGRAW-EDISON	GLEON-SA3-A-735-U-T4FT	120	1	96	POLE	LED	-	LITHONIA GARDCO MCGRAW SPAULDING LTG CMT UNITED LSI	16'-0"	SSS 14 4C SSS-14-4-11 SSS-4A14-SFXXX SSS-14-4D-1-*-*SCBA ZA14-4-0-HS-PC-BC RPSQ-14-4-11 4SQBX-S11G-14-X-4BC	

POOL EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SERVICE		DISCONNECT		LOAD			MOUNTING HEIGHT	REMARKS
		VOLTS	PHASE	SIZE	NEMA	HP/TON	VA	AMPS		
1	CIRCULATION PUMP	240 V	1Ø	-	-	5 HP	6,720	28		
2	HYDROTHERAPY PUMP	240 V	1Ø	-	-	3 HP	4,080	17		
3	PUMP	240 V	1Ø	-	-	3 HP	4,080	17		
6	CHEMICAL CONTROLLER	120 V	1Ø	-	-		120	1 A		
7	CHLORINE FEED	120 V	1Ø	-	-		204	1.7 A		
8	PERISTALITIC PUMP	120 V	1Ø	-	-		204	1.7 A		
15	WATER LEVEL CONTROL SYSTEM	120 V	1Ø	-	-		120	1 A		
21	BACKWASH SUMP	120 V	1Ø	-	-		120	1 A		

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH POOL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

PANEL SCHEDULE "P"

VOLTAGE: 240 / 120 VOLTS — **BUS RATING (AMPS):** 125 — **REMARKS:**
MOUNTING: SURFACE — **PHASE:** 1 — **MAIN LUGS ONLY**
ENCLOSURE: NEMA 4X — **WIRE:** 3 — **SHORT CIRCUIT RATING:** 10,000

CIRCUIT BREAKER				CIRCUIT NAME	FEEDER			CKT. LOAD		LOAD/PHASE (VA)		CKT. LOAD		FEEDER			CIRCUIT NAME	CIRCUIT BREAKER			
No.	AMPS	POLE	MOD.		C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	WATTS	DEMAND FACTOR	GRD	WIRE	C		MOD.	POLE	AMPS	No.
1	20	1	GFCI	POOL EQUIP. LTG	½"	#12	#12	1.25	24	3,384		3,360	1.00	#10	#8	½"	CIRQULATION PUMP (1)	GFCI	2	40	2
3	30	2	GFCI	HYDROTHERAPY PUMP (2)	½"	#10	#10	1.00	2,040		5,400	3,360	1.00	-	#8	-	-	GFCI	-	-	4
5	-	-	GFCI	-	-	#10	-	1.00	2,040	4,080		2,040	1.00	#10	#10	½"	PUMP (3)	GFCI	2	30	6
7	20	1	-	EF-1	½"	#12	#12	1.00	65		2,105	2,040	1.00	-	#10	-	-	GFCI	-	-	8
9	20	1	GFCI	CHEMICAL CONTROLLER (6)	½"	#12	#12	1.00	120	324		204	1.00	#12	#12	½"	CHLORINE FEED (7)	GFCI	1	20	10
11	20	1	GFCI	PERISTALITIC PUMP (8)	½"	#12	#12	1.00	204		324	120	1.00	#12	#12	½"	CONTROL SYSTEM (15)	GFCI	1	20	12
13	20	1	GFCI	BACKWASH PUMP (21)	½"	#12	#12	1.00	120	620		500	1.00	#12	#12	½"	TIME CLOCK	GFCI	1	20	14
15	20	1	GFCI	POOL LTG	½"	#12	#12	1.25	384		652	268	1.25	#12	#12	½"	POOL LTG	GFCI	1	20	16
17	20	2	-	EWH-1	½"	#12	#12	1.00	996	2,388		1,392	1.00	#12	#12	½"	WH-1	GFCI	1	20	18
19	-	-	-	-	-	#12	-	1.00	996		1,011	15	1.00	#12	#12	½"	EF-2	-	1	20	20
21	20	1	GFCI	POOL RECEPTS	½"	#12	#12	1.00	360	360			1.00				SPACE	-			22
23			-	SPACE				1.00			0		1.00				SPACE	-			24
25			-	SPACE				1.00		0			1.00				SPACE	-			26
27			-	SPACE				1.00			0		1.00				SPACE	-			28
29			-	SPACE				1.00		0			1.00				SPACE	-			30
31			-	SPACE				1.00			0		1.00				SPACE	-			32
33			-	SPACE				1.00		0			1.00				SPACE	-			34
35			-	SPACE				1.00			0		1.00				SPACE	-			36
37			-	SPACE				1.00		0			1.00				SPACE	-			38
39			-	SPACE				1.00			0		1.00				SPACE	-			40
41			-	SPACE				1.00		0			1.00				SPACE	-			42

NOTES

1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
4. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B
5. ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

ØA	ØB	TOTALS	
11,156	9,492	20,648	CONNECTED LOAD (VA)
		86	CONNECTED LOAD (A)
6	163	169	DEMAND FACTOR ADJUSTMENTS (VA)
11,162	9,655	20,817	TOTAL LOAD (VA)
93	80		TOTAL LOAD (A)
		93	MAXIMUM LOAD (A)
54%	46%		PHASE BALANCE

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REGISTERED PROFESSIONAL ENGINEER — BRIAN W. RYAN BEAGLES — 12/3/21 — STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

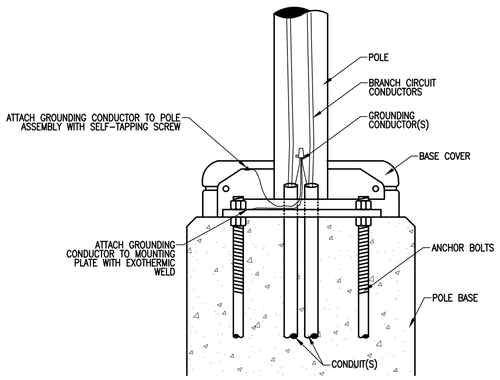
DRAWING TITLE: ELECTRICAL SCHEDULES

DRAWN BY: CC | CHECKED BY: RB

DATE PLOTTED: 12/03/2021

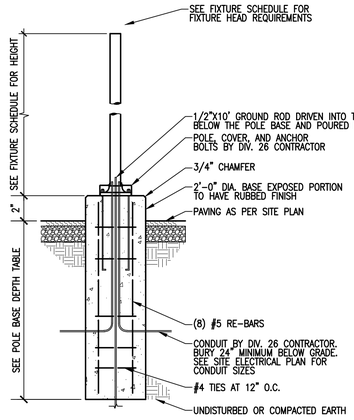
PROJECT #: J21317.00

E6.1



1 POLE LIGHT GROUNDING DETAIL

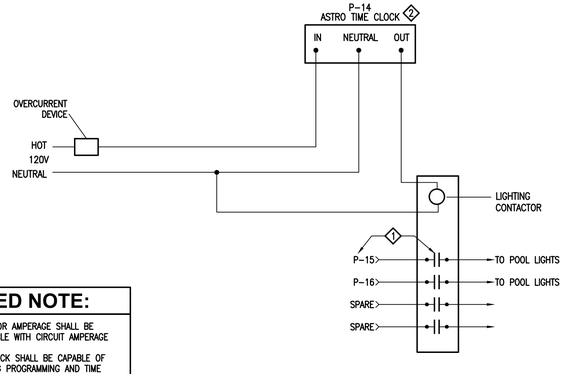
SCALE: NTS



POLE BASE DEPTH TABLE	
POLE HEIGHT	FOOTING DEPTH
8'-0"	2'-6"
12'-0"	3'-0"
15'-0"	4'-0"
18'-0"	4'-0"
20'-0"	4'-0"
25'-0"	5'-0"
30'-0"	5'-0"
40'-0"	6'-0"

2 POLE BASE DETAIL

SCALE: NTS



KEYED NOTE:

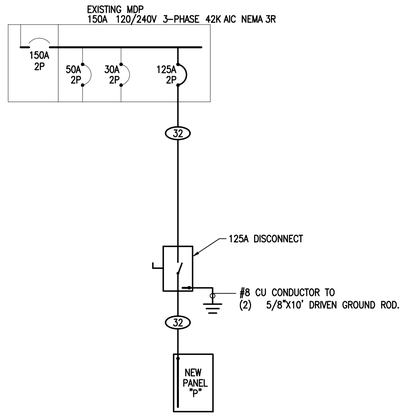
1. CONTACTOR AMPERAGE SHALL BE COMPATIBLE WITH CIRCUIT AMPERAGE
2. TIME CLOCK SHALL BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

3 LIGHTING CONTROL WIRING DIAGRAM

SCALE: NTS

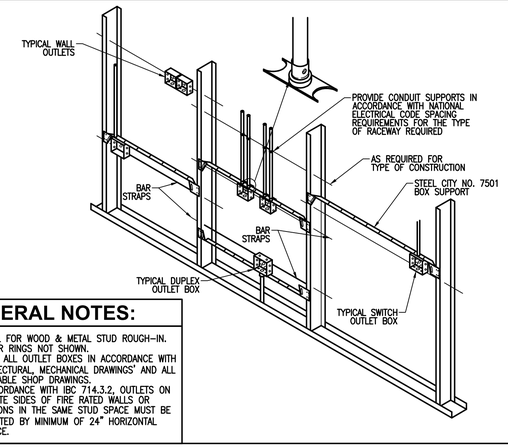
KEYED NOTES:

1. METER PER POWER COMPANY STANDARDS.
2. PROVIDE AVAILABLE FAULT CURRENT FIELD MARKINGS AT PANEL PER NEC 110.24.
3. ARC ENERGY REDUCTION PER NEC 240.87.



4 POWER ONE-LINE DIAGRAM

SCALE: NTS



GENERAL NOTES:

1. TYPICAL FOR WOOD & METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL, MECHANICAL DRAWINGS' AND ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH IBC 714.3.2, OUTLETS ON OPPOSITE SIDES OF FIRE RATED WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY MINIMUM OF 24" HORIZONTAL DISTANCE.

5 ROUGH-IN DETAIL FOR CONDUIT

SCALE: NTS

COPPER FEEDER SCHEDULE

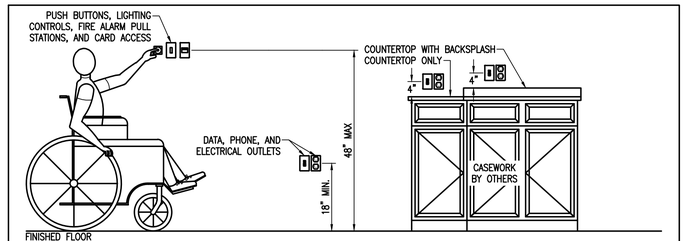
TYPE	CONDUIT SIZE PVC	CONDUIT SIZE EMT	CONDUCTORS QUAN.	CONDUCTORS SIZE	75°C AMP RATING
212	3/4"	3/4"	2	#12	25
312	3/4"	3/4"	3	#12	
412	3/4"	3/4"	4	#12	
20	3/4"	3/4"	2	#10	35
30	3/4"	3/4"	3	#10	
40	3/4"	3/4"	4	#10	
28	3/4"	3/4"	2	#8	50
38	3/4"	3/4"	3	#8	
48	3/4"	3/4"	4	#8	
26	3/4"	3/4"	2	#6	65
36	3/4"	3/4"	3	#6	
46	1"	1"	4	#6	
24	3/4"	3/4"	2	#4	85
34	1"	1"	3	#4	
44	1-1/4"	1-1/4"	4	#4	
23	1"	1"	2	#3	100
33	1"	1"	3	#3	
43	1-1/4"	1-1/4"	4	#3	
22	1"	1"	2	#2	115
32	1-1/4"	1-1/4"	3	#2	
42	1-1/4"	1-1/4"	4	#2	

TYPE	CONDUIT SIZE PVC	CONDUIT SIZE EMT	CONDUCTORS QUAN.	CONDUCTORS SIZE	75°C AMP RATING
21	1-1/4"	1-1/4"	2	#1	130
31	1-1/4"	1-1/4"	3	#1	
41	1-1/2"	1-1/2"	4	#1	
21X	1-1/4"	1-1/4"	2	1/0	150
31X	1-1/2"	1-1/2"	3	1/0	
41X	1-1/2"	1-1/2"	4	1/0	
22X	1-1/4"	1-1/4"	2	2/0	175
32X	1-1/2"	1-1/2"	3	2/0	
42X	2"	2"	4	2/0	
23X	1-1/2"	1-1/4"	2	3/0	200
33X	2"	2"	3	3/0	
43X	2"	2"	4	3/0	
24X	1-1/2"	1-1/2"	2	4/0	230
34X	2"	2"	3	4/0	
44X	2-1/2"	2-1/2"	4	4/0	
225	2"	2"	2	250 KCMIL	255
325	2"	2"	3	250 KCMIL	
425	3"	2-1/2"	4	250 KCMIL	
230	2"	2"	2	300 KCMIL	285
330	2-1/2"	2-1/2"	3	300 KCMIL	
430	3"	2-1/2"	4	300 KCMIL	

TYPE	CONDUIT SIZE PVC	CONDUIT SIZE EMT	CONDUCTORS QUAN.	CONDUCTORS SIZE	75°C AMP RATING
235	2"	2"	2	350 KCMIL	310
335	2-1/2"	2-1/2"	3	350 KCMIL	
435	3"	2-1/2"	4	350 KCMIL	
240	2"	2"	2	400 KCMIL	335
340	2-1/2"	2-1/2"	3	400 KCMIL	
440	3"	3"	4	400 KCMIL	
250	2-1/2"	2-1/2"	2	500 KCMIL	380
350	3"	2-1/2"	3	500 KCMIL	
450	4"	3-1/2"	4	500 KCMIL	
260	2-1/2"	2-1/2"	2	600 KCMIL	420
360	3-1/2"	3-1/2"	3	600 KCMIL	
460	4"	4"	4	600 KCMIL	

EQUIPMENT GROUNDING CONDUCTORS SCHEDULE	
OVERCURRENT DEVICE	COPPER
15	14
20	12
30	10
40	10
60	10
100	8
200	6
300	4
400	3
500	2
600	1
800	1/0

NOTE:
1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN (ABOVE GRADE) OR THWN (BELOW GRADE) UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.



6 DEVICE MOUNTING HEIGHTS INSTALLATION DETAIL

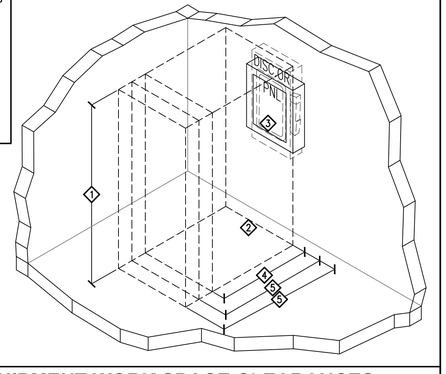
SCALE: NTS

KEYED NOTES:

1. THE MINIMUM HEADROOM OF WORKING SPACE SHALL BE 6½ FT.
2. THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE PANEL DOOR SHALL OPEN AT LEAST 90 DEGREES.
3. ALL CIRCUIT BREAKERS OR DISCONNECT HANDLES SHALL BE NOT MORE THAN 6 FT 7 IN. ABOVE THE FLOOR WHEN IN THEIR HIGHEST POSITION.
4. 3 FT CLEARANCE IF 0-150V TO GROUND
5. 3.5FT CLEARANCE IF 151-600V TO GROUND. 4FT IF EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

GENERAL NOTE:

1. ALL WORKING SPACE CLEARANCE FROM FACE OF PANEL.



7 ELECTRICAL EQUIPMENT WORK SPACE CLEARANCES

SCALE: NTS

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REGISTERED PROFESSIONAL ENGINEER
RYAN BEAGLES
12/3/21
STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

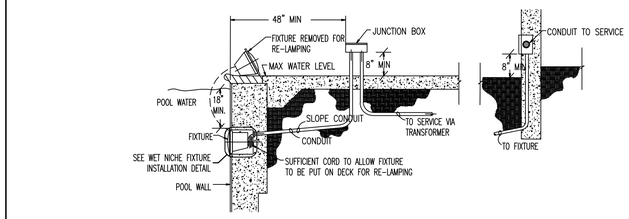
DRAWING TITLE: ELECTRICAL DETAILS

DRAWN BY:	CHECKED BY:
CC	RB

DATE PLOTTED: 12/03/2021

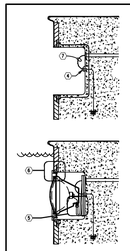
PROJECT #: J21317.00

E7.1



8 POOL ELECTRICAL FIXTURE INSTALLATION DETAIL

SCALE: SCALE: NONE



NOTES:

1. THESE INSTALLATION DETAILS ARE TYPICAL FOR HYDRELL 4400 AND 4800 SERIES WET NICHE FIXTURES. IF AN ALTERNATED FIXTURE IS USED, INSTALL GROUNDING PER MANUFACTURERS REQUIREMENTS. ADDITIONAL INSTALLATION REQUIREMENTS ARE ON MANUFACTURERS LITERATURE. THEY ARE ALSO TYPICAL FOR AMERICAN PRODUCTS AQUA.
2. THE INSTALLER IS RESPONSIBLE FOR PROPER INSTALLATION. THESE FIXTURES MUST BE INSTALLED BY A QUALIFIED PERSON IN ACCORDANCE WITH 2008 NEC 680 AND RELEVANT LOCAL CODES.
3. METAL PARTS OF THE FIXTURE AND FORMING SHELL IN CONTACT WITH THE POOL WATER SHALL BE BRASS OR OTHER APPROVED CORROSION RESISTANT METAL.

THE TERMINATION OF THE NO. 8 CONDUCTOR IN THE FORMING SHELL SHALL BE COVER WITH, OR 7. ENCAPSULATED IN, A LISTED POTTING COMPOUND TO PROTECT SUCH CONNECTION FROM THE POSSIBLE DETERIORATING EFFECT OF POOL WATER⑦

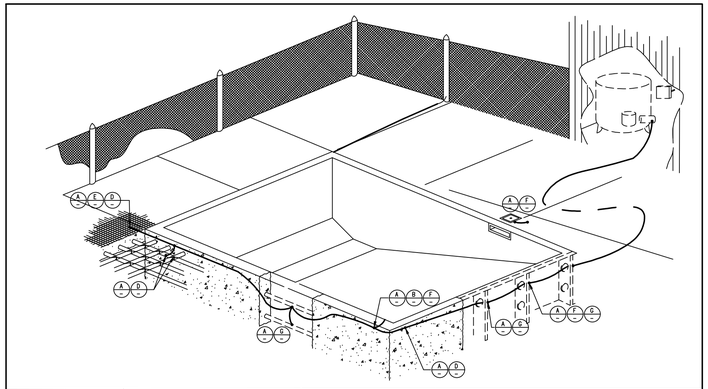
THE END OF THE FLEXIBLE-CORD JACKET AND THE FLEXIBLE-CORD CONDUCTOR TERMINATIONS WITHIN A FIXTURE SHALL BE COVERED WITH, OR ENCAPSULATED IN, A SUITABLE POTTING COMPOUND TO PREVENT THE ENTRY OF WATER INTO THE FIXTURE THROUGH THE CORD OR ITS CONDUCTORS. IN ADDITION, THE GROUNDING CONNECTION WITHIN A FIXTURE SHALL BE SIMILARLY TREATED TO PROTECT SUCH CONNECTION FROM THE DETERIORATING EFFECT OF POOL WATER IN THE EVENT OF WATER ENTRY INTO THE FIXTURE.

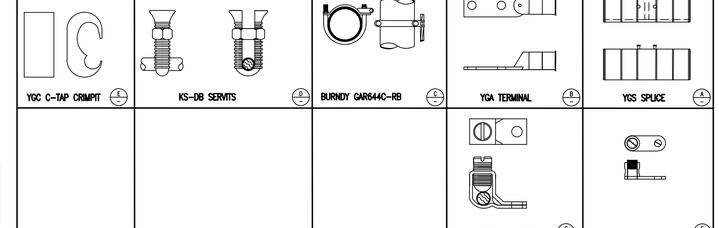
④ THE FIXTURE SHALL BE BONDED TO AND SECURED TO THE FORMING SHELL BY A POSITIVE LOCKING DEVICE THAT ENSURES A LOW-RESISTANCE CONTACT AND REQUIRES A TOOL TO REMOVE THE FIXTURE FROM THE FORMING SHELL. BONDING IS NOT REQUIRED FOR FIXTURES LISTED FOR THE APPLICATION, HAVING NO NON-CURRENT CARRYING METAL PARTS.

WHERE A NONMETALLIC CONDUIT IS USED, A NO. 8 INSULATED COPPER CONDUCTOR SHALL BE INSTALLED IN THIS CONDUIT WITH PROVISIONS FOR TERMINATING IN THE FORMING SHELL, JUNCTION BOX, TRANSFORMER ENCLOSURE OR GROUND FAULT CIRCUIT INTERRUPTER ENCLOSURE UNLESS A LISTED LOW-VOLTAGE LIGHTING SYSTEM IS USED NOT REQUIRING GROUNDING.

9 WET NICHE FIXTURE DETAIL

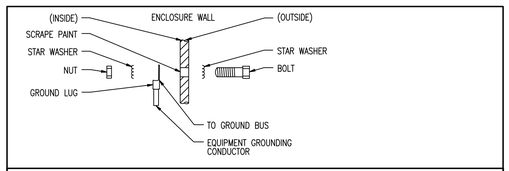
SCALE: SCALE: NONE





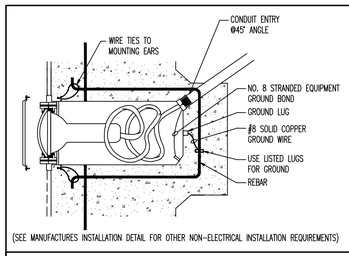
14 TYPICAL POOL GROUNDING DETAIL

SCALE: SCALE: NONE



10 GROUND CONNECTION ENCLOSURE WALL

SCALE: SCALE: NONE

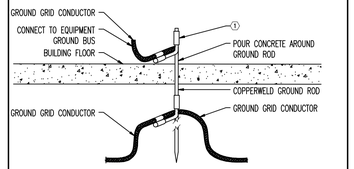


(SEE MANUFACTURES INSTALLATION DETAIL FOR OTHER NON-ELECTRICAL INSTALLATION REQUIREMENTS)

12 COPPER GROUNDING CABLE TIE-IN

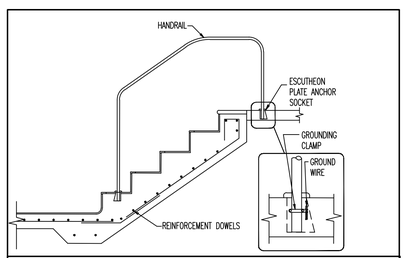
SCALE: SCALE: NONE

BURNDY CATALOG NUMBER	① GROUND CONNECTOR TABLE CABLE TO GROUND ROD ELEMENT "A"	ELEMENT "B"
YGL2C2	– –	– –
YGL29C2	1/2"-5/8" ROD	#6 SOL. (.162) – #2 STR. (.292)
YGL29C29		#2 STR. (.292) – 250 KCMIL (.575)
YGL34C2	5/8"-3/4" ROD	#6 SOL. (.162) – #2 STR. (.292)
YGL34C29		#2 STR. (.292) – 250 KCMIL (.575)
YGL34C34		250 KCMIL (.575) – 500 KCMIL (.813)



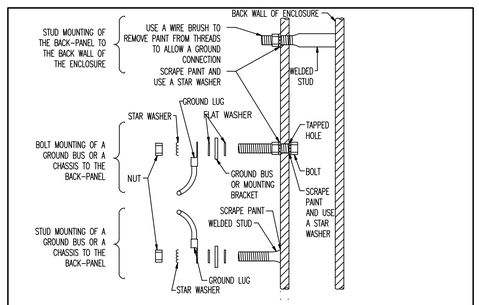
15 GROUND ROD DETAIL

SCALE: SCALE: NONE



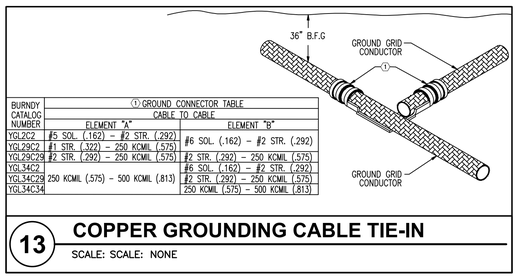
16 GRAB RAIL GROUNDING DETAIL

SCALE: SCALE: NONE



11 ENCLOSURE BACK PLATE GROUNDING

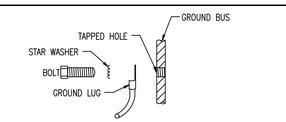
SCALE: SCALE: NONE



BURNDY CATALOG NUMBER	① GROUND CONNECTOR TABLE CABLE TO CABLE ELEMENT "A"	ELEMENT "B"
YGL2C2	#5 SOL. (.162) – #2 STR. (.292)	#6 SOL. (.162) – #2 STR. (.292)
YGL29C2	#1 STR. (.322) – 250 KCMIL (.575)	
YGL29C29	#2 STR. (.292) – 250 KCMIL (.575)	#2 STR. (.292) – 250 KCMIL (.575)
YGL34C2		#6 SOL. (.162) – #2 STR. (.292)
YGL34C29	250 KCMIL (.575) – 500 KCMIL (.813)	#2 STR. (.292) – 250 KCMIL (.575)
YGL34C34		250 KCMIL (.575) – 500 KCMIL (.813)

13 COPPER GROUNDING CABLE TIE-IN

SCALE: SCALE: NONE



17 GROUND BUS CONNECTION

SCALE: SCALE: NONE

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: ELECTRICAL DETAILS

DRAWN BY: CC | CHECKED BY: RB

DATE PLOTTED: 12/03/2021

PROJECT #: J21317.00

E7.2

ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE
   1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
   2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS
   1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
   2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
   3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
   4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS
   1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS
   1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS REQUESTED	TYPE SUBMITTALS
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES
   1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP
   1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
   2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
   3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS
   1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING
   1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
   2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
   3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

CODES AND FEES

A. CODES:
   1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:
   1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.
B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.
C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.
B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.
C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.
D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.
B. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.
C. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT	120/208 VOLT	277/480 VOLT
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C	BLUE	YELLOW	
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

D. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.
E. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE ½", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:
   1. AT EACH TERMINAL.
   2. AT EACH CONDUIT ENTRANCE.
   3. AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.
G. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH--CIRCUIT NUMBERS.
H. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
B. PULL BOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.
C. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH CASKETED COVERS.
D. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIRE MOLD BOXES).
E. ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
F. FLOOR BOXES:
   1. DESCRIPTION: FLOOR BOXES COMPATIBLE WITH FLOOR BOX SERVICE FITTINGS PROVIDED IN ACCORDANCE WITH THE WIRING DEVICES SECTION OF THIS SPECIFICATION; WITH PARTITIONS TO SEPARATE MULTIPLE SERVICES; FURNISHED WITH ALL COMPONENTS, ADAPTERS, AND TRIMS REQUIRED FOR COMPLETE INSTALLATION.
   2. USE CAST IRON OR NONMETALLIC FLOOR BOXES WITHIN SLAB ON GRADE.
   3. USE SHEET-STEEL, CAST IRON, OR NONMETALLIC FLOOR BOXES WITHIN SLAB ABOVE GRADE.
   4. METALLIC FLOOR BOXES: FULLY ADJUSTABLE (WITH INTEGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
   5. MANUFACTURER: SAME AS MANUFACTURER OF FLOOR BOX SERVICE FITTINGS.
G. UNDERGROUND BOXES/ENCLOSURES:
   1. DESCRIPTION: IN-GROUND, OPEN BOTTOM BOXES FURNISHED WITH FLUSH, NON-SKID COVERS WITH LEGEND INDICATING TYPE OF SERVICE AND STAINLESS STEEL TAMPER RESISTANT COVER BOLTS.
   2. SIZE: AS INDICATED ON DRAWINGS.
   3. DEPTH: AS REQUIRED TO EXTEND BELOW FROST LINE TO PREVENT FROST UPHEAVAL, BUT NOT LESS THAN 12 INCHES.
   4. APPLICATIONS:
      a. SIDEWALKS AND LANDSCAPED AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 8 LOAD RATING.
      b. PARKING LOTS, IN AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 15 LOAD RATING.
      c. DO NOT USE POLYMER CONCRETE ENCLOSURES IN AREAS SUBJECT TO DELIBERATE VEHICULAR TRAFFIC.
H. COMPOSITE UNDERGROUND BOXES/ENCLOSURES: COMPLY WITH SCTE 77.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT
   1. HUBBELL 5352
   2. ARROW HART 5352
C. SINGLE POLE SWITCHES - 20 AMP, 120 VOLT
D. WEATHERPROOF RECEPTACLES - 20 AMP, 125 VOLT - NEMA 5-20R
   1. HUBBELL 5352 WITH 5205 COVER INTERMATIC GUARDIAN
   2. I SERIES, NEMA 3R COVER
   3. ARROW HART 5352 WITH 4500 COVER
E. G.F.C.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20 R
   1. HUBBELL GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER
F. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.
B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
C. PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDING LOCATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.
B. ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.
C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.
D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.
E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.
F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.
B. ALL TERMINATIONS SHALL BE MARKED "75°C ONLY", "60/75° C" OR LISTED FOR USE OF 75° C INSULATED CONDUCTORS AT FULL 75° C AMPACITY.
C. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.
D. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR RECESSED MOUNTED AS CALLED FOR IN THE DRAWINGS.
E. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
F. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.
G. QUALITY STANDARD: SQUARE D TYPE QO.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.
B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.
D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
   2. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

INTERRUPTION OF SERVICE AND OWNER'S OPERATION

A. THE ELECTRICAL CONTRACTOR SHALL ORGANIZE HIS WORK SO THAT THESE ALTERATIONS AND ADDITIONS SHALL CAUSE A MINIMUM OF INTERFERENCE AND DISTURBANCE TO THE OWNER. ARRANGEMENTS SHALL BE MADE WITH THE OWNER AND ENGINEER BEFORE INTERRUPTING SERVICE IN ANY AREA. A WRITTEN DETAILED METHOD OF INTERRUPTION PROCEDURE INDICATING ELAPSED TIME REQUIRED AND TIME OF INTERRUPTION SHALL BE PREPARED BY THE ELECTRICAL CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL.
B. ALL INTERRUPTIONS OF SERVICE SHALL BE MADE WHEN THE LOAD IS AT A MINIMUM AND SHALL BE SCHEDULED AT THE OWNER'S CONVENIENCE. (SERVICE INTERRUPTIONS WILL BE SCHEDULED FOR OTHER THAN NORMAL DAYTIME WORKING HOURS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE NECESSARY COST FOR OVERTIME LABOR IN ALL BIDS.)
C. AT NO TIME SHALL THE ELECTRICAL CONTRACTOR OR HIS EMPLOYEES NORMALLY WORKING ON THE PROJECT LEAVE THE FACILITY DURING A TIME WHEN ANY NORMALLY LIVE CIRCUITS OR FEEDERS ARE DISCONNECTED, WITHOUT PERMISSION OF THE ENGINEER.
D. ALL MATERIALS, CONNECTIONS AND EQUIPMENT FOR TEMPORARY CONTROL OR POWER WIRING TO MAINTAIN CONTINUITY OF SERVICE DURING CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

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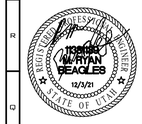

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
ELECTRICAL SPECIFICATIONS

DRAWN BY:	CHECKED BY:
CC	RB

DATE PLOTTED: 12/03/2021

PROJECT #: J21317.00

E8.1

DUCTWORK SEISMIC SUPPORT NOTES:

1. PER ASCE STANDARD 7-16 (OR MOST RECENT VERSION) SEISMIC SUPPORTS ARE NOT REQUIRED FOR THE FOLLOWING CONDITIONS:
   1.1. HVAC DUCTS ARE SUSPENDED WITH HANGERS 12" OR LESS IN LENGTH.
   1.2. HVAC DUCTS HAVE A CROSS-SECTIONAL AREA OF LESS THAN 6 SQUARE FEET.
2. IF INSTANCES OCCUR WHERE HVAC DUCT IS SUSPENDED WITH HANGERS GREATER THAN 12" IN LENGTH AND HVAC DUCT HAS A CROSS-SECTIONAL AREA GREATER THAN 6 SQUARE FEET SYSTEM CONNECTORS AND COMPONENTS SHALL BE COMPATIBLE AND DESIGNED FOR THE APPLICATION THAT THEY ARE USED FOR. SHALL HAVE A MINIMUM OF TWO TRANSVERSE BRACES PER STRAIGHT DUCT RUN WITH A MAXIMUM DISTANCE OF 30' BETWEEN TRANSVERSE BRACES. SHALL HAVE A MINIMUM OF ONE LONGITUDINAL BRACE PER STRAIGHT DUCT RUN WITH A MAXIMUM DISTANCE OF 40' BETWEEN LONGITUDINAL BRACES. BRACING SHALL ONLY OCCUR AT OR NEAR AREAS WHERE SUFFICIENT DUCT STIFFNESS IS PRESENT (AT OR NEAR JOINT CONNECTIONS).
3. FOR SEISMIC BRACING OF MECHANICAL EQUIPMENT AN INDEPENDENT SEISMIC AND VIBRATION CONTROL SUBCONTRACTOR WITH EXPERIENCE, COMPUTING CAPABILITIES, AND MANUFACTURED PRODUCTS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR. INDEPENDENT SEISMIC CONSULTANT SHALL PROVIDE REQUIRED COMPUTATIONS, SHOP DRAWINGS, AND MANUFACTURED PRODUCTS TO MEET THE MINIMUM REQUIREMENTS OF ASCE 7-16 AND INTERNATIONAL BUILDING CODES (LATEST ADOPTED EDITION) FOR THE RESPECTIVE SEISMIC DESIGN FOR SEISMIC ZONE WITH IMPORTANCE FACTOR 1.5. SEISMIC SUBCONTRACTOR SHALL EXERCISE THE QUALITY CONTROL FOR THIS WORK AND SHALL NOT BE LIMITED TO INSTRUCTIONS DIRECTED TO THE MECHANICAL CONTRACTOR. THE SEISMIC SUBCONTRACTOR SHALL CERTIFY IN WRITING THAT THEY HAVE INSPECTED THE INSTALLATION AND THAT ALL ISOLATION ANCHORS AND SEISMIC RESTRAINT MATERIALS ARE INSTALLED CORRECTLY AND FUNCTIONING PROPERLY. CERTIFICATION SHALL BE PROVIDED AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2018 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
2. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
4. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
5. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

PROJECT MECHANICAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A THERMOSTAT COMPATIBLE WITH SCHEDULED VENTILATION EQUIPMENT. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD. INSTALL THERMOSTAT AT 48" A.F.F..
2. COORDINATE EXACT LOCATION OF ALL VENTILATION UNITS WITH GENERAL CONTRACTOR. VERIFY IN FIELD.
3. SIZING FOR EQUIPMENT COMBUSTION AIR AND VENT PIPING DETERMINED USING MANUFACTURERS SPECIFICATIONS, ACTUAL LENGTH AND CONFIGURATION INFORMATION FROM FIELD.
4. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION OF REQUIRED MANUFACTURER START-UP FOR EQUIPMENT INCLUDING MANUFACTURER, MODEL NUMBER, SERIAL NUMBER, COOLING CAPACITY, GAS HEATING INPUT, ALL ENTERING AND LEAVING TEMPERATURES, CONNECTED CIRCUIT VOLTAGE, AND VERIFICATION OF PROPER FUNCTION OF THERMOSTAT. CONTRACTOR SHALL PROVIDE MANUALS FOR EQUIPMENT AND NAME OF SERVICE AGENCY.
5. USING CFM NOTED ON PLANS INSTALL GRILLES AND DIFFUSERS WITH MAXIMUM NOISE CRITERIA (NC) OF 25.
6. DUCTWORK SIZING, ROUTING, AND LOCATION TO BE FIELD VERIFIED AND APPROVED FOR ANY CHANGES TO THE DUCT SIZING AND/OR ROUTING PRIOR TO DUCT FABRICATION AND INSTALLATION. DUCTWORK FABRICATED PRIOR TO FIELD VERIFICATION AND APPROVALS THAT NEEDS TO BE ALTERED WILL BE ALTERED AS NEEDED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
7. ALL GAS FIRED EQUIPMENT WILL BE TESTED BY CERTIFIED GAS INSTALLERS AND HAVE GREEN STICKERS STATING COMPLIANCE WITH ALL REQUIRED LOCAL AND 2018 IFGC REQUIREMENTS.
8. HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
9. COORDINATE EXACT LOCATION IN FIELD OF ALL NEW MECHANICAL UNITS WITH GENERAL CONTRACTOR/OWNER REPRESENTATIVE.
10. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A CONTINUOUSLY OPERATING EXHAUST FAN FOR CHEMICAL STORAGE. COORDINATE POOL CHEMICAL STORAGE WITH OWNER REPRESENTATIVE AND POOL SUPPLIER PLANS PRIOR TO INSTALLATION. SEE SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION.

SUBMITTALS:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

SITE CONDITIONS

CITY:	PARK CITY, UT
ELEVATION:	7,000'
OUTDOOR CONDITIONS:	
WINTER:	HTG: 2° F
SUMMER:	CLG: 91° F
INDOOR CONDITIONS	
WINTER:	HTG: 60° F
SUMMER:	CLG: 80° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

DESIGN CONTACTS

PROJECT MANAGER	CHARLES DAVENPORT
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	CHARLES DAVENPORT

MECHANICAL SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
	RETURN AIR GRILLE/DUCT
	SUPPLY AIR DIFFUSER/DUCT
	EXHAUST AIR INTAKE GRILLE
	EXHAUST FAN
T X-X	THERMOSTAT/SENSOR
S X-X	SENSOR
X	MECHANICAL EQUIPMENT SYMBOL
#	KEYED NOTE REFERENCE
NECK / SIZE CFM TAG	NECK: NECK AND BRANCH DUCT SIZE. CFM: CFM OF DIFFUSER OR GRILLE. TAG: DIFFUSER OR GRILLE CALL-OUT.
	SUPPLY AIR DUCTWORK
	RETURN AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	OUTSIDE AIR DUCTWORK
R/D	RADIATION DAMPER
F/D	FIRE/SMOKE DAMPER
	BALANCING DAMPER

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Mark L. Makin
#658829
MARK L. MAKIN
12/1/21
STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
MECHANICAL NOTES & LEGENDS

DRAWN BY:	CHECKED BY:
CLD	MLM

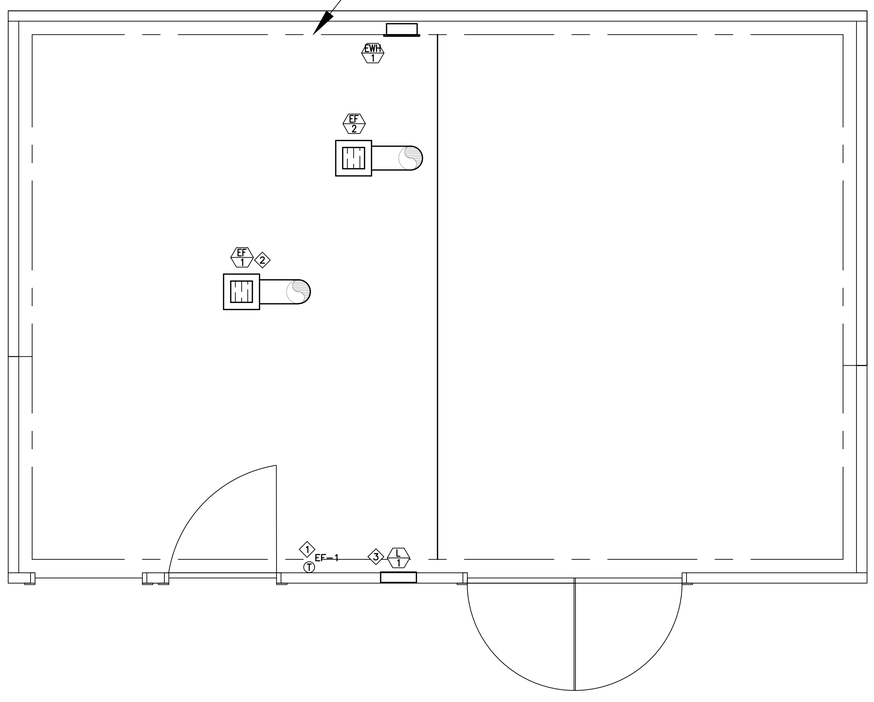
DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

M0.01

POOL ROOM MECHANICAL EQUIPMENT HAS NOT BEEN SHOWN. IT IS ANTICIPATED THAT THE POOL DESIGN WILL BE PERMITTED SEPARATELY. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE WITH POOL SUPPLIER AND PROVIDE THE REQUIRED MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR CAN EXPECT TO PROVIDE AND INSTALL AT MINIMUM THE FOLLOWING:

1. TWO LOUVERS WITH INSECT SCREENS.
2. EXHAUST FAN AND DUCTING TO EXTERIOR WITH LINE VOLTAGE CONTROLS. (50 CFM CHEMICAL STORAGE ROOM FAN TO RUN 24/7.)
3. OUTSIDE/COMBUSTION AIR DUCT WITH GRILLES AND INSECT SCREENS.
4. POOL BOILER/HEATING VENTING.



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

MECHANICAL KEYED NOTES:

1. FIELD VERIFY 7-DAY PROGRAMMABLE THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F..
2. PROPOSED LOCATION OF CEILING EXHAUST FAN. COORDINATE FINAL FAN AND DUCT TERMINATION LOCATIONS WITH OWNER'S REPRESENTATIVE AND STRUCTURAL. SEE MECHANICAL SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION.
3. PROPOSED LOCATION OF RELIEF AIR LOUVER. COORDINATE FINAL LOCATION WITH OWNER'S REPRESENTATIVE AND OTHER TRADES. SEE MECHANICAL SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION.

ELECTRIC WALL HEATER SCHEDULE

MARK	DESIGN GUIDE	NOMINAL BTUH	ELECTRICAL			MOUNTING	REMARKS
			VOLTS/PH/HZ	NOMINAL LOAD WATTS	FULL LOAD AMPS		
EWH 1	BROAN 178	6,827	240/1/60	2,000	8.3	SURFACE/WALL	1, 2, 3, 4, 5, 6, 7

1. APPROVED MANUFACTURERS: BROAN, BERKO, QMARK, MARKEL, RAYWALL, REZNOR, KING (SUBJECT TO PROJECT DOCUMENT CONFORMANCE)
2. DOWNFLOW 20 GAUGE STEEL LOUVERS, WHITE ENAMEL FINISH UNLESS SPECIFIED DIFFERENTLY BY ARCHITECT AND/OR OWNER REPRESENTATIVE.
3. CONTRACTOR SHALL INSTALL EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
4. WITH INTEGRAL THERMOSTAT.
5. PERMANENTLY LUBRICATED MOTOR.
6. PROVIDE WITH SURFACE MOUNTING KIT WHERE REQUIRED AND OR AS DIRECTED BY OWNER REPRESENTATIVE.
7. ELECTRICAL CONTRACTOR SHALL VERIFY CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, MCA, MOCP, ETC.) WITH MECHANICAL SUBMITTALS BEFORE ROUGH IN.

LOUVER SCHEDULE

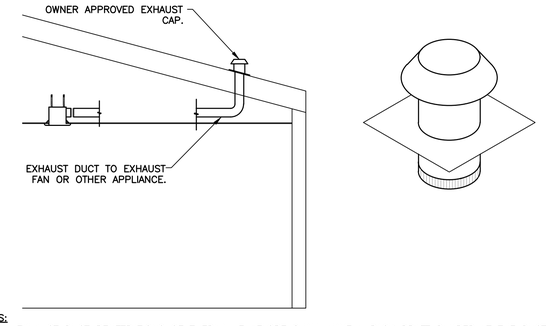
MARK	LOUVER DIMENSIONS		DESIGN GUIDE		REMARKS
	WIDTH (INCHES)	LENGTH (INCHES)	MANUFACTURER	MODEL	
L 1	12	12	DAYTON	#20UC25	1, 2, 3, 4, 5, 6

1. APPROVED MANUFACTURERS: GREENHECK, RUSKIN, DAYTON, (SUBJECT TO PROJECT DOCUMENT CONFORMANCE).
2. WITH BIRD SCREEN.
3. WITH GRAVITY DAMPER.
4. DRAINABLE FIXED BLADE CONSTRUCTION.
5. ALUMINUM CONSTRUCTION
6. COLOR AS DIRECTED BY OWNER REPRESENTATIVE.

CEILING EXHAUST FAN SCHEDULE

MARK	NOMINAL CFM	TOTAL STATIC PRESSURE IN. W.C.	ELECTRICAL				SOUND RATING SONES	DESIGN GUIDE	REMARKS
			RATED LOAD WATTS	VOLTS	HERTZ	PHASE			
EF 1	290	0.25	65	115	60	1	<2.0	PANASONIC FV SERIES	1, 2, 3, 4, 5, 6
EF 1	50	0.25	15	115	60	1	<2.0	PANASONIC FV SERIES	1, 2, 3, 4, 5, 6

1. APPROVED MANUFACTURERS: BROAN, FANTECH, ACME, CARNES, PENN, COOK, BREIDERT, COOLAIR, CAPTIVE AIRE, S&P, GREENHECK, TWIN CITY FAN, DELTA BREEZ, AIR KING. (SUBJECT TO PROJECT DOCUMENT CONFORMANCE)
2. EXHAUST FAN SHALL HAVE INTEGRAL BACKDRAFT DAMPER.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL CIRCUIT CONDUIT AND MAKE CONNECTION.
4. MECHANICAL CONTRACTOR SHALL PROVIDE LINE VOLTAGE THERMOSTAT. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL CIRCUIT CONDUIT AND MAKE CONNECTION. SET T-STAT AT 80 deg F.
5. WITH POLY GRILLE KIT.
6. ELECTRICAL CONTRACTOR SHALL VERIFY CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, MCA, MOCP, ETC.) WITH MECHANICAL SUBMITTALS BEFORE ROUGH IN.
7. EXHAUST FAN SHALL BE CONFIGURED FOR CONTINUOUS OPERATION. PLACEMENT IN CHEMICAL STORAGE AREA (INDICATED BY POOL DESIGNER. CONTRACTOR SHALL VERIFY LOCATION WITH POOL PLANS, OWNER REPRESENTATIVE ETC.



NOTES:
1. ALL EXHAUST DUCT PENETRATIONS OF THERMAL ENVELOPE SHALL HAVE A BACK DRAFT DAMPER AT THE DUCT PENETRATION.
2. OWNER REPRESENTATIVE APPROVED EXHAUST CAP WITH SCREEN. INSTALL ABOVE LOCAL SNOW LEVEL.

TYPICAL SLOPED ROOF CAP DETAIL
SCALE: NONE

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: MECHANICAL PLAN

DRAWN BY:	CHECKED BY:
CLD	MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

M3.01

SECTION 23 Mechanical – GENERAL PROVISIONS
Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

A. Provisions of this section apply to all work specified in all sections under Division 23.

B. In addition, work in Division 23 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

C. Contractor is responsible for results deviating from the plans.

– **Examination of Premises:** Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.

– **The Mechanical Contractor** shall be licensed and hold a current contracting license that has been valid for a minimum of two years as a Mechanical Contractor in the State where the project is located.

– **The Mechanical Contractor** shall have a minimum of five years experience installing commercial cooling and heating systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers as a separate document in addition to the mechanical bid submitted if required by the General Contractor.

– **The Mechanical Contractor** shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the mechanical bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IBC, IMC, IPC, NEC, NFPA codes and all City codes.
B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards.
1. 2018 International Mechanical Code
2. 2018 International Building Code
3. 2018 International Energy Code
4. 2018 International Plumbing Code
5. 2018 International Energy Code
6. 2018 International Fuel Gas Code
7. ASHRAE 90.1 – 2016
***Current codes adopted by the respective jurisdiction will supercede this list of codes.

C. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

D. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

D. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22 & 23. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 & 23 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 23.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 23 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Mechanical Wiring:**

A. Provide all temperature control wiring, all interlock wiring, and equipment control wiring for the equipment that is to be provided under this Division unless specifically shown on electrical drawings.

B. All wiring shall be not less than No. 14 insulated, color coded wire in electrical metallic tubing. Installation shall comply with Division 26.

C. Before ordering motors, equipment, etc., verify the available voltage and phase with the electrical trades.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Under the Automatic Temperature Control section of these specifications, furnish and install all wiring, conduit, electric automatic temperature control devices, thermostats, relays, pneumatic electric switches, automatic control switches and pilot lights. See the Automatic Temperature Control Section, for additional detailed information.

D. All loose starters and control devices for equipment furnished under Division 23 (except as otherwise specified under Automatic Temperature Control Section) are to be furnished under that particular section of Division 23 and installed under the electrical division.

E. Contractor shall be responsible for the checking and testing of all controls and the interlocks for a complete and satisfactory operating system.

F. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

G. Submit a complete list of all motors prior to final closeout of job indicating the location, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

H. All field wiring and equipment must conform to the applicable section of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section, before, during and after installation.

B. Replacements: In the event of damage immediately repair all damaged and defective work to the approval of the Engineer, at no additional cost to the Owner.

– **Job Conditions**

A. Examination of site: Examine the site and include in bid proposal all conditions under which work is to be performed.

– **Miscellaneous**

A. Permit and Fees: Apply and pay for all necessary permits, inspections, examinations and fees or charges required by Public Authorities having jurisdiction.

B. Locations and Accessibility: Contractor shall fully inform himself regarding peculiarities and limitations of space available for installation of work under this section. Valves, motors, controls and other devices requiring service. Maintenance and adjustments shall be placed in fully accessible positions and locations, provide access doors where required in ductwork and/or construction whether specifically detailed or not, and mender all such devices accessible.

C. Scaffolding: Furnish all scaffolding, rigging and hoisting as required for the proper execution of the work.

D. All HVAC equipment shall be labeled. Information on labels shall include: Identification number and name same as the drawings, flow and static pressure and the area to which the unit serves. Labels shall be black faced Formica with white engraved lettering at least $\frac{1}{8}$" inch high.

E. All gas fired equipment shall include a label indication that the appliance has been adjusted, modified or re–calibrated for the altitude wherein the project is to be located. The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Submittals**

A. Shop Drawings: Within 15 days after award of contract, and before any of the materials of this section are fabricated and delivered to the jobsite, submit complete shop drawings and equipment submittals for the Engineer to review in accordance with these specifications. show all details of all ductwork and equipments pads.

B. Product Data:
1. Submit six (6) copies of all manufacturer's product data simultaneously with all shop drawings submittals.

2. Product data to include, all air conditioning equipment, hangers, fans and other standard items as required to complement shop drawings for a submittal indications products to be used on this work.
C. Record Drawings: Maintain throughout the progress of the work project record drawings and submit to the Owner.
D. Operating Manuals and Maintenance Manuals:

1. Submit four (4) copies of all operating instructions and maintenance manuals.

2. Fully instruct Owner's operating personnel and demonstrate performance, operation and maintenance of equipment. Amount of allocated for said instruction and demonstration of equipment and systems shall be part of these obligations. Submit to Engineer a letter signed by Owner's representative who will operate system stating that he has been fully instructed by contractor about operation and maintenance of equipment and system.

3. Submit one (1) additional set of approved instructions and one (1) additional set of approved control diagrams.

E. Guarantees: In addition to equipment warranties, furnish a written guarantee against defects in materials and workmanship for one year. Guarantee shall include repair of damage to, or replacement of any part of equipment or premises caused by leaks or breaks in pipe or equipment provided under this section.

– **Equipment Identification**

A. Except for individual room heating units and items furnished under temperature control all items of mechanical equipment, including fans, pumps, boilers and electrical switches and starters for mechanical equipment and gauges shall be labeled.
B. Information on labels shall include the following:

1. Identification number and name. Generally this number and name shall be the same as that shown on the drawings or in the specs.

2. If the item is a fan or pump, the flow and head shall be indicated.

3. If the item is part of a unit, the label shall have in addition to its item number, the number of the main item it is serving.

4. Valves shall be tagged with the area served and their normal operating positions shall be indicated.

5. Where the main unit is served by the valve is apparent, only the valve function needs to be included on the nameplate.

C. The types of Nameplates shall be as follows:
1. The valve tags shall be $\frac{1}{2}$" embossed aluminum tapes with identification on one side for valves. Tags for magnetic starters shall be screwed to the metal starter cover. Gags sags shall be Addressograph No. B–5300.

2. Equipment nameplates shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$" high.

D. Valve tags shall be connected to valve stems by steel rings or chains. Screws shall be used for equipment labels prior to installation. The contractor shall submit to the Engineer a complete list of all valves and each item of equipment to be identified with the proper identification.

PART 2 – PRODUCTS

– **Machinery Drives:**

A. Use V–belts designed for 150% of capacity for all belt drives. For multiple belt drives, use matched sets, so marked at the factory.

B. On drives with not more than two belts, provide adjustable pitch motor sheaves with the midpoint of the adjustment range equal to that required to achieve the specified fan capacity.

C. On motors with drives with more than two belts, furnish nonadjustable sheaves, providing the specified fan capacity.

– **Machinery Accessories:**

A. Lubricating Devices: Provide all oil level gauges, oil pressure gauges, grease cups, grease gun fittings, as required by the equipment. Extend all lubricating fittings to readily accessible locations.

B. Guards: Provide totally–enclosed OSHA type belt guards for all rotating equipment. Design guards to be readily removable for access to belt drives.

– **Equipment Design and Installation:**

A. Uniformity: Unless otherwise specified, provide all equipment of same type or classification by the same manufacturer.

B. Design: Design all equipment in accordance with ASME, AGA, UL and other applicable technical standards as follows:

C. Pressures vessels – ASME Code constructed and stamped

D. Electric appliances – UL labeled

E. Fire protection equipment – UL approved and labeled

F. Fans – AMCA rated and stamped

G. Cooling equipment – ARI certified

H. Fire dampers, smoke dampers, combination fire and smoke dampers – UL listed

I. Concrete Inserts:

1. The work under this section includes furnishing and installing all concrete inserts required for all materials and equipment specified herein or in other sections of Division 23.

2. Provide concrete inserts equal to Unistrut Series 3200 with standard, plain, oiled finish. Provide exposed Unistrut pipe supports with factory finished enamel paint.

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
MECHANICAL SPECIFICATIONS

DRAWN BY:	CHECKED BY:
CLD	MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

M7.01

– **Diffusers, Registers and Grilles**

Air distribution equipment shall be of sizes, types, and capacities indicated.

A. Registers, grilles, and diffusers of the sizes shown on the drawings and described here in shall be furnished and installed. all grilles, diffusers and registers shall be complete with frames with rubber gaskets suitable for the area and wall construction where shown on the drawings.

B. Finish for all registers, diffusers, grilles, etc. shall be off–white unless otherwise selected by the Owner/Owner Representative. Approved manufacturers for all air distribution products shall be Price Industries, Nailor, Metal Air, Tuttle & Bayley, Carnes, Hart and Cooley, or Anemostat.

C. Supply air shall be introduced into conditioned space in such a manner that conditioned air and room air is rapidly and evenly mixed, resulting in equalization of temperature and draftless air distribution through zone of occupancy with temperature differentials up to 25 degrees F for both cooling and heating air. Quantities and throws shall be as indicated.

D. Velocity of moving air below 5 foot level, during cooling cycle, shall not exceed limits of either 50 fpm at 1.5 degrees F below average room temperature or 70 fpm at 1 degree F below average room temperature. Velocity of moving air at the 1 foot level, during heating cycle shall not be less than 10 fpm. Temperature difference at or below the 5 foot level shall not exceed the following: 2 degrees F below average room temperature at 30 fpm, 1.5 degrees F below average room temperature at 50 fpm, 1 degree F below average room temperature at 70 fpm. Sound pressure level in all octave bands for each diffuser shall not exceed NC35 noise criteria curve at task level when units operate at designed capacities.

E. Ceiling diffusers, grilles and registers shall be independently supported from the structure so that they are not depending on the ceiling for support.

F. Ceiling diffusers may be round necked or equivalent size square neck. Provide square to round neck adapter as necessary. Flex duct shall typically connect directly to the diffuser using a 1–1/2" radius flexible duct elbow. If space does not allow for a full 1–1/2" radius to be provided, then a lined sheet metal boot shall be provided. The flexible duct shall be connected to the side of the sheet metal boot. The flexible duct shall not be connected to the top of the sheet metal boot.

G. Ceiling supply air diffusers shall be louvered faced directional diffuser model SMD manufactured by Price Industries with border type 36 for lay in ceiling or border type 1 for surface mounting in other than lay in ceilings, baked enamel finish, blow and pattern shown on the drawings.

H. Supply, exhaust, transfer and return air grilles mounted on walls 6 feet above the floor shall be Price Industries model 635, with 45–degree deflection, 1/2" blade spacing, horizontal extruded aluminum blades, baked enamel finish.

I. Supply, exhaust, transfer and return air grilles mounted on walls lower than 6 feet above the floor shall be sight–proof, heavy duty gymnasium type equal to Price Industries model 91 (or equal) with horizontal 45–degree deflection blades, 3/8" blade spacing, baked enamel finish.

J. Drum louvers shall be Price Industries model HCD (or equall) with opposed blade damper.

K. Exposed duct round diffuser shall be Price Industries model RCD (or equal), 3–position adjustment, 4 cone style, baked enamel finish.

M. Linear slot supply diffusers shall be Price Industries model SDS75, extruded aluminum frame construction with 180° range of air pattern adjustments.

N. Make up air supply diffusers shall be Price Industries model PDC perforated face ceiling diffusers, fixed 1–way air pattern, hinged removable perforated face screen, baked enamel finish.

O. Ceiling filter return air grilles in lay in ceiling shall be Price Industries model 10FF, with hinged, perforated faceplate and 1" filter for lay in T–bar application, baked enamel finish. The contractor shall provide the 1" filter.

P. Ceiling filter return grilles and transfer air grilles shall be Price Industries model PDR or PDDR perforated diffuser with removable perforated faceplate in lay in T–bar application, bake enamel finish.

Q. Ceiling return, exhaust and transfer air grilles for surface mounting in other than lay in ceilings shall be Price industries model 10F, with perforated removable faceplate, baked enamel finish.

– **Ducts and Sheet Metal Work**

A. Provide ducts, plenums, access doors, fresh air intakes, and exhaust as indicated and required. All ductwork shall be constructed, erected and tested in accordance with the most restrictive of local regulations, procedures and detailed in the ASHRAE Handbook of Fundamentals or the applicable standards adopted by the Sheet Metal and Air Conditioning Contractors National Association (SMACNA). Provide prefabricated spiral lockseam ducts and fittings and rectangular ducts of galvanized steel. Aluminum flexible ductwork or gypsum board ductwork is not acceptable.

B. All connections to main ducts shall be made with low loss fittings.

C. Flat duct surfaces shall be crimped diagonally regardless of size. Longitudinal joints in all duct sizes may be flat lock joints. Transverse joints and intermediate bracing shall be constructed of galvanized sheet metal or galvanized structural angles in accordance with requirements of ASHRAE Guide and public authorities having jurisdiction.

D. Transverse joints on all ducts shall be sealed with mastic or tape.

E. Longitudinal joints on ducts with internal static pressures in excess of 0.75 inches of water pressure shall be sealed with mastic or tape.

F. Lock joints shall be hammered to make them airtight. Inside of duct shall present a smooth surface to flow air.

G. Changes in size of ducts shall increase gradually with a slope of not more than 12 inches in 5 feet where possible, but not more than 12 inches in 3 feet in any event.

H. Turns shall be made with throat radius of not less then the duct width.

I. Plenums shall be made of 18 gauge galvanized sheet steel reinforced horizontally on a maximum of 48" centers by 1–1/2"x1–1/4"x $\frac{1}{8}$" galvanized angles reinforced vertically by 1–1/2" standing seams.

– **Temperature Controls**

A. Thermostats shall be provided with the air conditioning units. They shall be installed and wired by the HVAC contractor. T–stats for roof top units shall be programmable with night setback and override control.

– **Ceiling Mounted Fan**

A. Ceiling type exhaust fans of the capacity shown on the drawings shall be furnished and installed. Fans shall be direct drive of RPM shown and shall be complete with fan housing, inlet grille, backdraft damper and motor. Noise level shall not exceed 3.8 sones. Air quantities shall be certified by AMCA. Fans shall be from manufacturer listed in the equipment schedule.

– **Equal Materials and Substitutions**

A. In addition to manufacturers specified, the following shall also be considered equal. Provided corresponding models meet specified requirements. Equivalent substituted equipment named herein shall be submitted to Architect for approval. Submit alternate selections for prior approval. Must be received by Engineer 10 days prior to due date/bid opening.

Insulation:	Certainteed, Manville, Fiberglas
Air Filters:	AAF, Farr or Engineer approved equivalent.
Diffusers and Grilles:	Titus, Nailor, Price, Krueger, Hart and Cooley, Carnes, or Engineer approved equivalent.
Ceiling Exhaust Fan:	Broan, Fantech, Acme, Carnes, Penn, Cook, Breidert, Coolair, Captive aire, S&P, Greenheck, Twin City Fan, Delta Breez, Air King. (subject to project document conformance)

– **Aluminum Louvers**

A. Louvers are to be furnished and all connections made by the Mechanical contractor. Louvers shall be fixed, drain–able type, 12–gauge extruded aluminum. Louvers shall be AMCA certified rated for no water carry–over at free area velocities less than 100 fpm. In no case shall free area be less than 50% of the face area. Frames shall be box channel flanged type as selected by Architect for mounting in a wall. A 1/4" galvanized mesh insect screen shall be provided behind louver. Aluminum louvers shall be anodized in color selected by Architect. Louvers to be Airolite (K6776), Venco, Ruskin, American Warming and Ventilating, Air Balance or Louvers and Dampers.

– **ELectric Wall Heater**

A. The heating equipment shall include and electric automatic fan forced air heater suitable for small area heating. The heater shall be designed for wall mounting, recess or surface. Heaters shall be UL listed.

B. Backbox: the backbox shall be designed for duty as a recessed rough–in box in either masonry or frame installations and is also used with the surface mounting frame in surface mounting installations. The backbox shall be heavy gauge galvanized steel and shall contain knockouts through which power leads are brought.

C. Inner frame assembly: The heater assembly which fits into the backbox shall consist of a heavy gauge steel fan panel upon which is mounted all of the operational parts of the heater. The inner frame assembly shall be completely pre–wired.

D. Heating element: The heating element shall be of the non–glowing design consisting of an 80/20 nickel–chromium resistance wire enclosed in a steel sheath to which plate fins are copper brazed. It shall be warranted for 5 years. The element shall cover the entire air discharge area to ensure uniform heating of all discharge air.

E. Motor and controls: The fan motor shall be impedance protected, permanently lubricated and with totally enclosed rotor. Fan control shall be of the bi–metallic, snap–action type and shall activate fan after heating element reaches operating temperature, and continue to operate the fan after the thermostat is satisfied and until all heated air has been discharged. The thermostat shall be single pole type on all models. Thermal cutout shall be bi–metallic, snap–action type designed to shut off heat in the event of overheating. The fan shall be five–bladed aluminum. The fan motor shall be totally enclosed.

F. Surface mounting frame: The surface mounting frame shall be of heavy gauge steel designed to mount around the backbox for a finished surface installation. Slot knock outs shall be provided for power supply conduit.

G. Front cover: The louvered front cover shall be of heavy gauge steel with a powder paint finish. A plug button will be provided to replace the thermostat knob and render the unit tamper–resistant.

H. Finish: All sheet metal parts, except the galvanized steel backbox, shall be phosphatized, then completely painted by a powder paint process. Heater shall be from the manufacturers listed in the equipment schedule.

PART 3 – EXECUTION

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Cutting and Patching:**
Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:**
Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:**
Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural and mechanical drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Contractor shall provide all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:
D.1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

E. Mechanical equipment installed on the roof shall not be installed any closer than 10'–0" to the edge of the roof unless there is a 42" high parapet or equipment guardrail.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

– **Equipment identification**

A. All major equipment shall bear firmly attached metal nameplates which state name of manufacturer, model number and electrical data.

– **Discrepancies**

A. In the event of discrepancy, immediately notify the Owner.

B. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

– **Initial Lubrication, Adjusting, and Filling Systems**

A. Before operating any mechanical system, equipment bearings shall be lubricated and bolts, pulleys, and other moving parts checked for alignment and tolerances in accordance with manufacturer's operating instructions. Vibrations and noise shall be suppressed.

– **Cleaning of Equipment, Materials and Premises**

A. Be painted smooth and clean, ready for painters. Clean entire premises of unused materials, rubbish, debris, grease spots and dirt left by subcontractor.

– **Equipment and Material**

A. Install all equipment and material per manufacturer's recommendations.

– **Accessibility**

A. Install work readily accessible for normal operation, reading of instruments, adjustment, service inspection and repair, provide access panels where indicated and required. Access panels shall be the responsibility of respective subcontractors.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–In."

– **Equipment Final Connections:**

A. Provide all piping and duct final connections for all equipment under Division 22 & 23 as required herein specified and indicated on the drawings.

B. Air Conditioning, Heating, and Ventilating: Provide final connections complete with necessary valves, drains, unions, flanges and duct connections for equipment furnished and installed under other sections of the specifications, except as otherwise designated. Included under the HVAC sections of the specifications are the final connections to the following:

B.1. Condensate and evaporative cooler drain piping from air conditioning equipment.

B.2. Supply, return, relief, outside air and exhaust duct connections for all equipment including exhaust fans.

B.3. Piping connections for all equipment.

B.4. Duct connections for all kitchen hoods.

– **Machinery Drives:** After tests have been performed on the air conditioning and air handling systems, make without cost no more than two changes in the size of the nonadjustable sheaves to obtain the required air quantities.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

A.1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

A.2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

A.3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

H. Roof Mounted Equipment (Steel Supported): Provide curbs and flashings for metal support structures as shown in the latest SMACNA manual for roof supports.

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer. (Galvanized ductwork and factory painted equipment shall be considered as having primed surface.)

B. Finished painting is specified under Division 9.

– **Objectionable Noise and Vibration:** Construct and brace the metal partitions, ducts and sheet metal housings to prevent vibration or rattling when systems are in operation. Install connections to equipment so noise and vibration will not reach the conditioned area through ducts, piping, conduit, sheet metal work, or the building structure. Provide power–driven equipment suspended from the structure with spring type isolation.

– **Welding:**

A. Procedures:

A.1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

A.2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

B.1. Manual shielded metal–arc.

B.2. Gas tungsten–arc.

B.3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

D.1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

D.2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

– **Operation**

D. Place system in operation and regulate and adjust to Owner's satisfaction. System shall operate quietly and without vibration or noise.

E. Contractor shall make necessary field adjustments for even temperatures throughout the project.

– **Certification**

A. Upon completion, the contractor shall inspect work of this section and deliver to Owner a written certification that installed materials and workmanship conform to specifications.

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MARK L. MAKIN
#368829
12/7/21
STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
MECHANICAL SPECIFICATIONS

DRAWN BY: CLD
CHECKED BY: MLM
DATE PLOTTED: 11/03/2021
PROJECT #: J21317.00

M7.02

PROJECT PLUMBING NOTES:

1. SEE PIPING SCHEMATIC(S) FOR ADDITIONAL INFORMATION ON WASTE & VENT, GAS, AND CULINARY WATER PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL ALL REQUIRED VALVES IN PIPING SYSTEM. REMOVE OR RELOCATE ANY EXISTING PLUMBING FIXTURES & ASSOCIATED PIPING IN CONFLICT WITH THIS PLUMBING PLAN. COORDINATE ALL REQUIREMENTS WITH OWNER REPRESENTATIVE. EXTEND OR REMOVE & TERMINATE ANY PIPING AS REQUIRED. MAINTAIN FUNCTIONALITY OF ALL DOWNLINE FIXTURES. RETURN ANY REMOVED FIXTURES & PIPING TO OWNER REPRESENTATIVE OR DISPOSE FIXTURES AND PIPING AS DIRECTED BY OWNER REPRESENTATIVE. VERIFY ALL ITEMS WITH OWNER REPRESENTATIVE.PROVIDE AND INSTALL NEW 1-1/2"ø WATER SUPPLY LINE. PROVIDE AND INSTALL ALL REQUIRED SHUT-OFF(S), ETC. (FIELD VERIFY LOCATION WITH SITE CONDITIONS AND OWNER REPRESENTATIVE.)
4. PROVIDE AND INSTALL 4"ø SEWER LINE. FIELD LOCATE. MAKE CONNECTION TO COMPLETE BUILDING SEWER SYSTEM. VERIFY ALL INVERT ELEVATIONS AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE AND CIVIL PLANS.
5. FIELD LOCATE EXISTING GAS METER(S). VERIFY LOCATION AND ALL REQUIREMENTS WITH OWNER'S REPRESENTATIVE AND GAS COMPANY.
6. WHERE REQUIRED PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL 2 POUND TO 4 OUNCE PRESSURE REGULATORS WITH LEAK-LIMITING DEVICE AND TEST TEE FITTING. IFGC 410.
7. INSULATE ALL HOT AND COLD WATER PIPING PER APPLICABLE CODES. ALL EXPOSED HOT AND COLD WATER PIPING SHALL BE INSULATED. INSULATE HOT WATER PIPING THAT IS PLACED IN UN-INSULATED INTERIOR WALLS. EXCEPTION: VERTICAL AND HORIZONTAL COLD WATER PIPING LOCATED INSIDE OF INTERIOR WALLS MAY HAVE THE INSULATION OMITTED.
8. MAKE PROVISIONS FOR A TRAP GUARD WHERE NOTED AND/OR CALLED FOR.
9. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
10. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
11. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10-FEET FROM ALL FRESH AIR INTAKES.
12. WATER PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 605.3, 605.4 & 605.5.
13. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
14. NATURAL GAS PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IFGC SECTION 403.
15. TRENCHES THAT ARE EXCAVATED BELOW THE INSTALLATION LEVEL OF PIPE (SUCH THAT THE TRENCH BOTTOM DOES NOT FORM THE BED FOR THE PIPE) SHALL BE BACKFILLED TO THE INSTALLATION LEVEL OF THE BOTTOM OF THE PIPE WITH SAND OR FINE GRAVEL PLACED IN LAYERS OF 6 INCHES MAXIMUM DEPTH. THE BACKFILL SHALL BE COMPACTED AFTER EACH PLACEMENT. 2018 IPC 306.2.1.

SUBMITTAL NOTES:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND PIPE CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PROJECT PLUMBING NOTES:

16. PROVIDE AND INSTALL MARKING/LOCATING TAPE FOR ALL BURIED GAS LINES.
17. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL BACKFLOW PREVENTER AT ALL HOSE BIB LOCATIONS.
18. PAINT ALL EXTERIOR GAS PIPING WITH WEATHER RESISTANT PAINT.
19. COORDINATE POOL HEATER FLUE (BY OTHERS) WITH OWNER'S REPRESENTATIVE AND STRUCTURAL..
20. THERMAL AND SOUND INSULATION AND COVERINGS, LININGS, AND ADHESIVES (WHEN USED) INSTALLED IN CONCEALED AND EXPOSED SPACE SHALL HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTING IN ACCORDANCE WITH ASTM E 84.
21. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
22. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL HEAT TRACE AND INSULATION FOR ALL PIPING INSTALLED IN AN UNCONDITIONED SPACE.
23. PIPING SCHEMATIC(S) FOR ADDITIONAL INFORMATION ON WASTE & VENT, GAS AND CULINARY WATER PIPING DIAMETERS.
24. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
25. PROVIDE AND INSTALL ALL REQUIRED VALVES IN PIPING SYSTEM. REMOVE OR RELOCATE ANY EXISTING PLUMBING FIXTURES & ASSOCIATED PIPING IN CONFLICT WITH THIS PLUMBING PLAN. COORDINATE ALL REQUIREMENTS WITH OWNER REPRESENTATIVE. EXTEND OR REMOVE & TERMINATE ANY PIPING AS REQUIRED. MAINTAIN FUNCTIONALITY OF ALL DOWNLINE FIXTURES. RETURN ANY REMOVED FIXTURES & PIPING TO OWNER REPRESENTATIVE OR DISPOSE FIXTURES AND PIPING AS DIRECTED BY OWNER REPRESENTATIVE. VERIFY ALL ITEMS WITH OWNER REPRESENTATIVE.
26. MAKE CONNECTION TO EXISTING SEWER LINE. MODIFY SEWER LINE TO ACCOMMODATE NEW PLUMBING FIXTURES. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS.
27. MAKE CONNECTION TO EXISTING NATURAL GAS LINE. VERIFY SIZE AND ALL REQUIREMENTS. SEE PLANS FOR MINIMUM MAIN GAS PIPE SIZE. SEE GAS PIPING SCHEMATICS FOR SYSTEM PRESSURE.
28. COORDINATE ALL REQUIRED SAW CUTTING OF EXISTING FLOOR OR SLAB FOR DRAIN PIPING, ETC. WITH GENERAL CONTRACTOR. REPAIR FLOOR OR SLAB AS DIRECTED BY OWNER REPRESENTATIVE. PROVIDE AND INSTALL EPOXY DOWELS AT SLAB TO SLAB JOINTS.
29. MAKE PROVISIONS FOR A TRAP GUARD WHERE NOTED AND/OR CALLED FOR.
30. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
31. PAINT ALL EXTERIOR GAS PIPING WITH WEATHER RESISTANT PAINT.
32. PLUMBING CONTRACTOR SHALL INCLUDE PRICING TO INVESTIGATE EXISTING SEWER LINE LOCATIONS AND INVERT ELEVATIONS. GIVE RECOMMENDATIONS TO OWNER FOR MOST ECONOMICAL AND LEAST INTRUSIVE WAY TO CONNECT NEW DRAIN PIPING IN ADDITION TO EXISTING DRAIN PIPING.
33. PLUMBING CONTRACTOR SHALL VISIT THE PROJECT SITE DURING THE BIDDING PROCESS.

PIPING SEISMIC SUPPORT NOTES:

1. PER ASCE STANDARD 7-16 SEISMIC SUPPORTS ARE NOT REQUIRED FOR THE FOLLOWING CONDITION:
   - 1.1. PIPING IS SUPPORTED BY ROD HANGERS 12" OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE.
   - 1.2. HIGH-DEFORMABILITY PIPING IS USED.
2. IF INSTANCES OCCUR WHERE PIPING IS SUSPENDED BY HANGERS GREATER THAN 12" IN LENGTH, SYSTEM CONNECTORS AND COMPONENTS SHALL BE COMPATIBLE AND DESIGNED FOR THE APPLICATION THAT THEY ARE USED FOR. SHALL HAVE A MINIMUM OF TWO TRANSVERSE BRACES PER STRAIGHT PIPING RUN. THE MAXIMUM DISTANCE BETWEEN TRANSVERSE BRACES WILL BE DETERMINED BY PIPE SIZE AND PIPING COMPOSITION. SHALL HAVE A MINIMUM OF ONE LONGITUDINAL BRACE PER STRAIGHT DUCT RUN. IF LENGTH OF PIPING EXCEEDS LONGITUDINAL BRACE SPACING, ADDITIONAL LONGITUDINAL BRACES WILL BE REQUIRED.
3. FOR SEISMIC BRACING OF PLUMBING EQUIPMENT AND PIPING AN INDEPENDENT SEISMIC AND VIBRATION CONTROL SUBCONTRACTOR WITH EXPERIENCE, COMPUTING CAPABILITIES, AND MANUFACTURED PRODUCTS SHALL BE FURNISHED BY PLUMBING CONTRACTOR. INDEPENDENT SEISMIC CONSULTANT SHALL PROVIDE REQUIRED COMPUTATIONS, SHOP DRAWINGS, AND MANUFACTURED PRODUCTS TO MEET THE MINIMUM REQUIREMENTS OF ASCE 7-16 AND INTERNATIONAL BUILDING CODES (LATEST ADOPTED EDITION) FOR THE RESPECTIVE SEISMIC DESIGN FOR SEISMIC ZONE WITH IMPORTANCE FACTOR 1.5. SEISMIC SUBCONTRACTOR SHALL EXERCISE THE QUALITY CONTROL FOR THIS WORK AND SHALL NOT BE LIMITED TO INSTRUCTIONS DIRECTED TO THE PLUMBING CONTRACTOR. THE SEISMIC SUBCONTRACTOR SHALL CERTIFY IN WRITING THAT THEY HAVE INSPECTED THE INSTALLATION AND THAT ALL ISOLATION ANCHORS AND SEISMIC RESTRAINT MATERIALS ARE INSTALLED CORRECTLY AND FUNCTIONING PROPERLY. CERTIFICATION SHALL BE PROVIDED AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED

DESIGN CONTACTS

PROJECT MANAGER	CHARLES DAVENPORT
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	CHARLES DAVENPORT

PLUMBING SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SS	SANITARY OR WASTE PIPING
- - - - - - - - - -	VENT PIPING
CW	COLD WATER PIPING
HW	HOT WATER PIPING
GAS	GAS PIPING
SD	STORM DRAIN PIPING
RD	ROOF DRAIN PIPING
ORD	OVERFLOW ROOF DRAIN PIPING
GR	GREASE PIPING
RW	RECIRCULATION WATER PIPING
○	PIPE RISER OR FIXTURE CONNECTION
┼	WALL HYDRANT/HOSE BIB
⊕ ○	FLOOR DRAIN
⊡ □	AREA DRAIN
◎	ROOF DRAIN
ø	ROUND MEASUREMENT.
P-#	PLUMBING FIXTURE SYMBOL
M #	MECHANICAL EQUIPMENT SYMBOL
#	KEYED NOTE REFERENCE
PRV	PRESSURE REDUCING VALVE STATION
	GATE VALVE & BACKFLOW PREVENTOR

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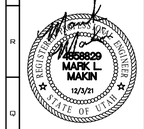


REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

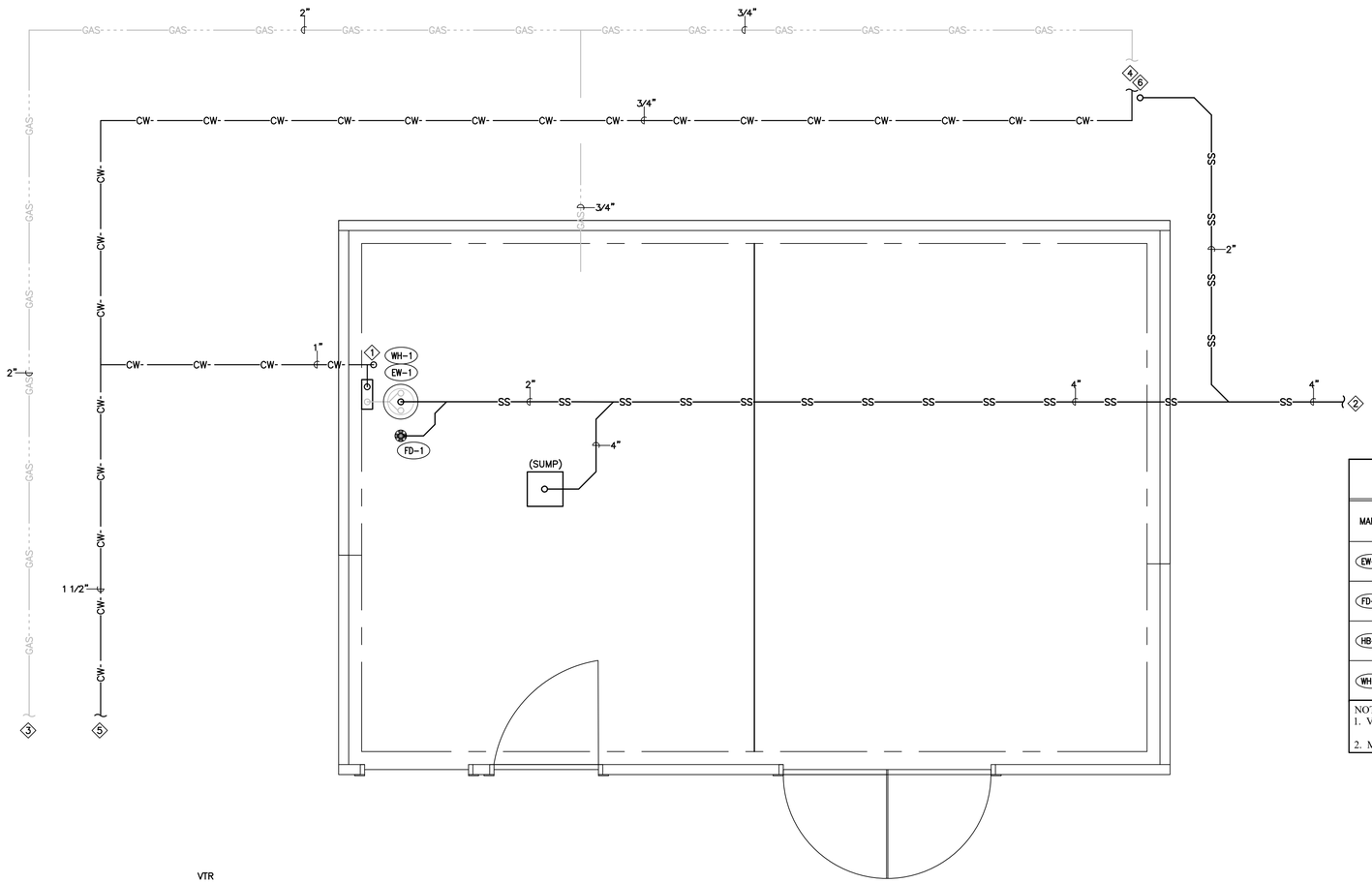
DRAWING TITLE:
PLUMBING NOTES & LEGENDS

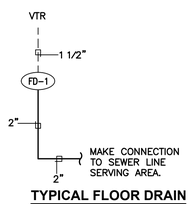
DRAWN BY:	CHECKED BY:
CLD	MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

P0.01





TYPICAL FLOOR DRAIN

GENERAL SHEET NOTES:

1. SEWER LINES ARE SHOWN SCHEMATICALLY FOR CLARITY AND SHALL BE ROUTED WITHIN CONCEALED SPACES (I.E. UNDERGROUND, WALLS, ETC.)

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

POOL ROOM EQUIPMENT NOTES:

POOL ROOM PLUMBING EQUIPMENT HAS NOT BEEN SHOWN. IT IS ANTICIPATED THAT THE POOL DESIGN WILL BE A DEFERRED SUBMITTAL. PLUMBING CONTRACTOR TO COORDINATE WITH POOL SUPPLIER AND PROVIDE THE REQUIRED WATER, GAS, AND DRAIN LOCATIONS CONTACT THE ENGINEER OF RECORD FOR ADDITIONAL INFORMATION DURING SUBMITTAL PROCESS. THE PLUMBING CONTRACTOR CAN EXPECT TO PROVIDE AND INSTALL AT A MINIMUM THE FOLLOWING:

- ONE EYEWASH STATION WITH INSTANTANEOUS WATER HEATER AND TEMPERING VALVE
- ONE 30"X30"X30" BACKWASH SUMP WITH GRATE. VERIFY WITH GENERAL CONTRACTOR IF PLUMBING CONTRACTOR IS TO PROVIDE GRATE.
- INTERIOR HOSE BIB.
- EXTERIOR POOL DECK HOSE BIB.
- 3/4"ø MAIN GAS LINE.
- COMPLETE ALL GAS LINE CONNECTIONS TO POOL EQUIPMENT.
- 1"ø CULINARY WATER CONNECTION/STUB-OUT WITH PRESSURE REDUCING VALVE (SEE POOL PLANS FOR PRESSURE SET-POINT) AND BACK-FLOW PREVENTION.

PLUMBING KEYED NOTES:

1. PROVIDE AND INSTALL CULINARY COLD WATER AND SHUT OFF FOR POOL EQUIPMENT. FIELD VERIFY FINAL LOCATION ONSITE AND WITH OWNER'S REPRESENTATIVE AND POOL EQUIPMENT PROVIDER. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
2. CONNECT TO EXISTING ONSITE SANITARY SEWER LINE. FIELD VERIFY SEWER LINE LOCATION WITH CIVIL UTILITIES AND OWNER'S REPRESENTATIVE. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
3. CONNECT TO EXISTING ONSITE 2-POUND GAS METER, CONNECTION WILL BE ON THE CUSTOMER/OUTLET SIDE, AT MAIN CLUBHOUSE. FIELD VERIFY GAS METER LOCATION ONSITE AND OWNER'S REPRESENTATIVE. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
4. PROVIDE AND INSTALL ABOVE GROUND GAS STUB WITH CAP AND SHUT OFF, SIZING INDICATED, FOR FUTURE EXTERNAL KITCHEN/AMENITIES. FIELD VERIFY FINAL LOCATION ONSITE AND WITH OWNER'S REPRESENTATIVE. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
5. CONNECT TO EXISTING ONSITE CULINARY COLD WATER, CONNECTION WILL BE AFTER THE PRESSURE REGULATOR VALVE, AT MAIN CLUBHOUSE. FIELD VERIFY CULINARY COLD WATER LINE LOCATION ONSITE AND WITH OWNER'S REPRESENTATIVE. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
6. PROVIDE AND INSTALL ABOVE GROUND CULINARY COLD WATER STUB WITH CAP AND SHUT OFF, SIZING INDICATED, FOR FUTURE EXTERNAL KITCHEN/AMENITIES. FIELD VERIFY FINAL LOCATION ONSITE AND WITH OWNER'S REPRESENTATIVE. SEE PLUMBING SCHEDULES AND SCHEMATICS FOR ADDITIONAL INFORMATION.
7. APPROXIMATE LOCATION OF EXISTING GAS STUB. SHOWN HERE FOR REFERENCE.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
EW-1	EYE WASH STATION WITH TEMPERING VALVE	2"	2"	1 1/2"	1/2"	1/2"	OWNER PROVIDED AND PLUMBING CONTRACTOR INSTALLED EYEWASH STATION WITH INTEGRAL TEMPERING VALVE.
FD-1	FLOOR DRAIN/SUMP	4"	4"	2"	——	——	30"X30"X30" (MINIMUM) DRAIN/SUMP FOR POOL EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH POOL SUPPLIER AND OWNER'S REPRESENTATIVE.
HB-1	HOSE BIB, INTERIOR	——	——	——	1/2"	——	WALL MOUNTED HOSE BIB WITH ANTI-SIPHON VACUUM BREAKER AND KEY OPERATED VALVE.
WH-1	ELECTRIC WATER HEATER	——	——	——	3/4"	3/4"	6 GALLON NATURAL ELECTRIC WATER HEATER. 9.7 g.p.h RECOVERY @ 90° RISE. 1.4 KW BTU INPUT @120V/1ø. DESIGN GUIDE EEMAX EMT6.

NOTES:
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.
2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.

SUN PEAK ADDITION GAS CALCULATIONS
(DOMINION, NFPA)

DESIGN CONDITIONS			
CITY:	PARK CITY, UTAH		
LONGEST PIPE:	300 FEET MAXIMUM (VERIFY)		
GAS PRESSURE:	2 LB		
DERATION FACTOR:	803		
EQUIPMENT			
FUTURE	116 CFH	100,000	BTU PER HOUR
KIDDE POOL ROOM	461 CFH	400,000	BTU PER HOUR
TOTAL	577 CFH	500,000	BTU PER HOUR

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: PLUMBING PLAN

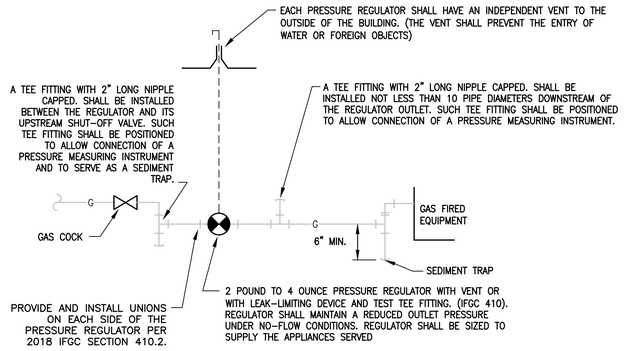
DRAWN BY: CLD | CHECKED BY: MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

P3.01

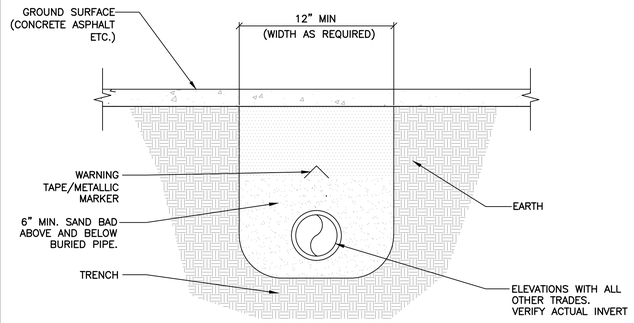
NOTE:
VENT TO OUTSIDE MAY BE ELIMINATED PROVIDED IF REGULATOR IS EQUIPPED WITH AND LABELED FOR USE WITH A VENT LIMITING DEVICE.



PRESSURE REGULATORS INSTALLED INSIDE BUILDING SHALL BE PROVIDED WITH ACCESS.

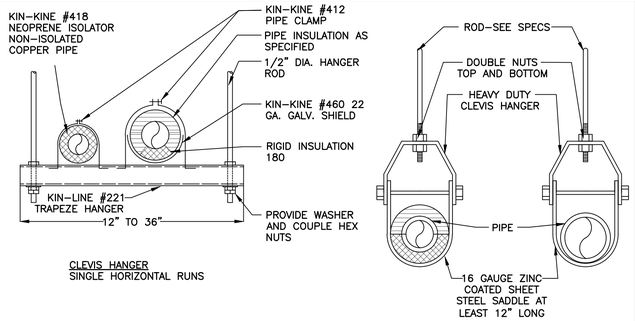
TYPICAL 2LB GAS CONNECTION DETAIL

SCALE: NONE



BURIED PIPE DETAIL

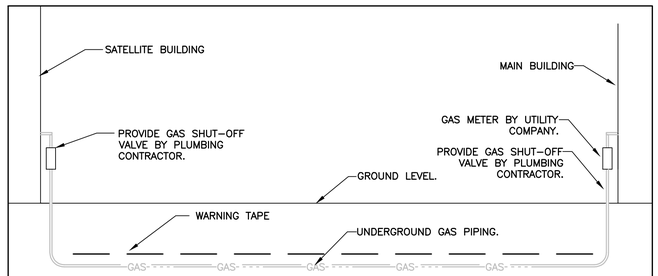
SCALE: NONE



NOTE:
INSTALL 20 MIL THICK PVC ISOLATION TAPE BETWEEN PIPE AND HANGER FOR DISIMILAR MATERIAL. WRAP TAPE AROUND PIPE (DUCT TAPE OR ELECTRICAL TAPE IS NOT ACCEPTABLE)

PIPING WITH TRAPEZE HANGERS DETAIL

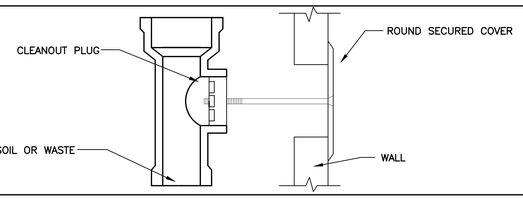
SCALE: NONE



NOTES:
1. PAINT ALL EXTERIOR GAS PIPING WITH WEATHER RESISTANT PAINT.
2. FOR ALL PIPING BELOW GRADE, EXTERIOR OF BUILDING, USE POLYETHYLENE OR POLYVINYL CHLORIDE (PVC) PIPE FOR GAS DISTRIBUTION.
3. UNDERGROUND PIPING SHALL BE INSTALLED WITH A MINIMUM OF 24" COVER WITH 6" OF SHADING MATERIAL ALL AROUND, NOT TO EXCEED #4 SIEVE (SAND). PROVIDE A MINIMUM OF 8" CLEARANCE FROM ALL UNDERGROUND STRUCTURES. INSTALL WARNING TAPE AT ELEVATION/DEPTH AS DIRECTED BY LOCAL UTILITIES. VERIFY BURIAL DEPTH WITH LOCAL UTILITY COMPANY.
4. INSTALL SHUTOFF VALVE OUTSIDE AT ENTRY INTO EACH BUILDING.
5. ABOVEGROUND PIPE SHALL BE ELECTRICALLY BONDED AND GROUNDED AS REQUIRED BY NFPA 54, PAGE 3.14.
6. SEAL ALL PENETRATIONS INTO BUILDINGS WEATHER TIGHT.

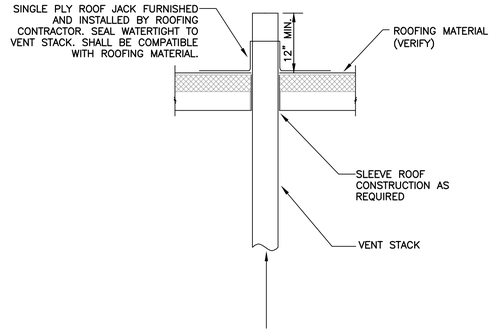
UNDERGROUND GAS PIPING

SCALE: NONE



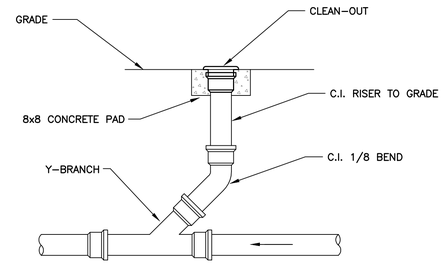
TYPICAL WALL CLEANOUT DETAIL

SCALE: NONE



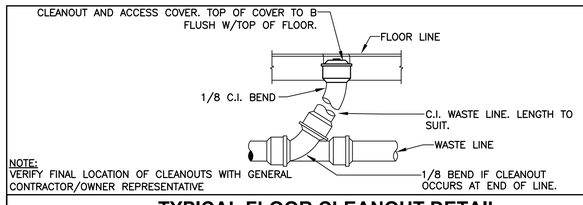
TYPICAL VENT THROUGH FLAT ROOF DETAIL

SCALE: NONE



TYPICAL SURFACE CLEANOUT DETAIL

SCALE: NONE



NOTE:
VERIFY FINAL LOCATION OF CLEANOUTS WITH GENERAL CONTRACTOR/OWNER REPRESENTATIVE

TYPICAL FLOOR CLEANOUT DETAIL

SCALE: NONE

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

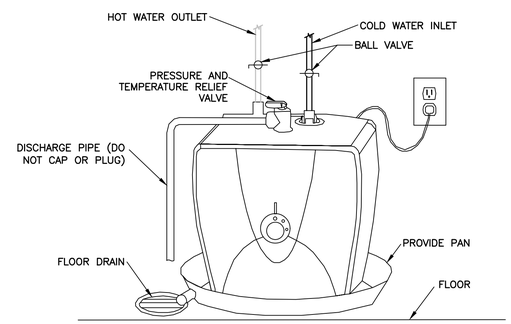
DRAWING TITLE:
PLUMBING DETAILS

DRAWN BY:	CHECKED BY:
CLD	MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

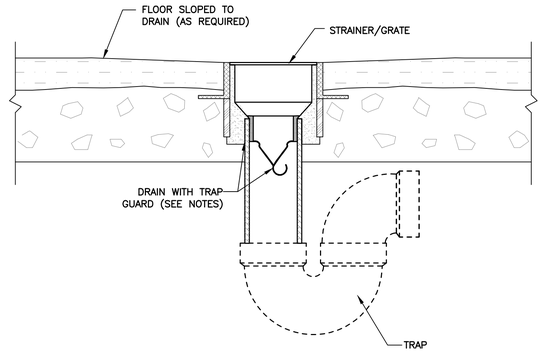
P5.01



NOTE: PROVIDE AND INSTALL COPPER DISCHARGE PIPE FROM T&P RELIEF VALVE TO WALL OR FLOOR DRAIN.

ELECTRIC WATER HEATER DETAIL

SCALE: NONE



NOTES:
1. TRAP GUARD FLOOR DRAIN BY PROSET SYSTEMS INC.
2. FOLLOW ALL MANUFACTURER INSTALLATION AND OTHER INSTRUCTIONS.
3. APPROVED MANUFACTURES: PROSET, J.R. SMITH, RECTORSEAL.

FLOOR DRAIN WITH TRAP GUARD DRAIN SEAL (CONCRETE FLOOR)

SCALE: NONE

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
PLUMBING DETAILS

DRAWN BY:	CHECKED BY:
CLD	MLM

DATE PLOTTED: 11/03/2021

PROJECT #: J21317.00

P5.02

SECTION 22 PLUMBING – GENERAL PROVISIONS
Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all plumbing shown on the drawings and as specified.

A. Work specified in this section

1. Sanitary soil, waste and vent systems.
2. Domestic hot and cold water systems.
3. Domestic water heaters.
4. Furnish and set all sleeves for pipes passing through walls and floors.
5. Pipe covering, insulation and wrapping.
6. Excavation and backfill.
7. Rough–in and final connections to air conditioning equipment of condensate drains.
8. All plumbing fixtures, water heaters, valves, and other miscellaneous items or equipment required for a complete installation.
9. Provide collars at fire rated penetrations.

B. Provisions of this section apply to all work specified in all sections under Division 22. All items indicated on site, Architectural, Mechanical, or Plumbing drawings are to be provided complete from point of connection to finished fixture in conformance with all governing authority requirements. Nothing in these drawings or specifications shall be construed to permit work in violation of governing codes.

C. In addition, work in Division 22 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

1. Examination of Premises: Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
2. The Plumbing Contractor shall be licensed and hold a current contracting license as a Plumbing Contractor that has been valid for a minimum of two years in the State where the project is located.
3. The Plumbing Contractor shall have a minimum of five years experience installing commercial plumbing systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers if required by the General Contractor.
4. The Plumbing Contractor shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the plumbing bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

D. Contractor is responsible for results caused by deviating from the plans.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IMC, IPC, IECC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards:

1. 2018 International Plumbing Code
2. 2018 International Building Code
3. 2018 International Mechanical Code
4. 2018 International Energy Conservation Code.

C. Current codes adopted by the respective jurisdiction will supercede the listed codes.

D. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

E. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

F. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 22 as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 22.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 22 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

D. Submit a complete list of all motors prior to final closeout of job indicating the locations, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

E. All field wiring and equipment must conform to the applicable sections of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

C. AWS D10.12.D10.12M Welded joints for gas piping.

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section before, during, and after installation.

B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Engineer, at not additional cost to the Owner.

– **Submittals:**

A. Manufacturer's Literature: Within 35 days after award of contract and before any of the materials of this section are delivered to the job site submit seven complete brochures of all materials and equipment, per Division 1 of the specifications.

B. Other Submittals:

1. Shop Drawings.
2. Sterilization Test Report
3. Test Data.

C. Sets in bound booklet form of written operating and maintenance instructions and brochures for equipment specified in this section. Fully instruct Owners Operating Personnel.

D. Record Drawings: Keep an accurate dimensioned record of As–Built locations and elevations, as referred to approved base datum, of buried concealed.

E. Operation and Maintenance Instructions: Deliver to Architect tow complete lines, manhole, cleanouts, valves, plugged tees, capped ends, and of work which is installed different from shown in the plans.

– **Miscellaneous:**

A. Examination of the site: Exercise care in examining the site and coordinate all work indicated on the drawings with existing conditions. Report to Architect in writing conditions that will prevent proper provisions of this work. Verify depth and location of all service lines with servicing companies having jurisdiction before excavating, by submission of the bid. The contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required for hookup and as required by the contract documents at no additional cost.

B. Permits and fees: Arrange and pay for all permits, inspections and fee required by all governing agencies.

C. Service connections: Make all necessary arrangements with applicable utility company for connection to existing service lines. Pay all fees associated with work including meters, hookup charge and utility assessments fees.

D. Drawings: Coordinate all space requirements with other trades, drawings indicate desired location and arrangement of piping, equipment, and other items and are to be followed as closely as possible.

PART 2 – PRODUCTS

– **General**

A. Pipe sleeves and wrapping: Provide polished chromium plated and brass set screw flanges where plumbing piping pass through walls, floors, ceilings, and partitions in finished portions of building including flanges on pipes at fixtures. All sleeves in concrete and exterior walls shall be 20 GA. galvanized iron one inch O.D. larger than the pipe, caulked if below grade in a moisture proof manner. All pipes penetrating through fire walls and floors shall be properly safed with Dow Corning 3=6548 silicone RTV foam or equal. Install per manufacturer's directions.

B. Pipe Identification:

1. Piping identification per ANSI and OSHA Standards: Each individual pipeline shall be marked for quick and easy identification as to contents and character of material carried in the pipes by set on SNA or STR Marker.
2. Markers shall be installed and spaced at not more than 20 foot intervals and so located that markers shall be visible where piping is exposed.
3. Color scheme shall be as follows:

	Background or Color Band	Identification Marker
Domestic Hot Water –	Yellow	Black on Yellow
Domestic Hot Water Return –	Yellow	Black on Yellow
Domestic Cold Water –	Green	White on Green
Sanitary Sewer –	Green	White on Green
Sanitary Vent –	Green	White on Green
Natural Gas –	Yellow	Black on Yellow
Storm Water –	Green	White on Green
Freon –	Black	White on Black

C. One marker shall installed at each side of valves, special fittings and at branch take–offs. In furred spaces install one band 2 feet above floor and 19 inches below ceiling line.

D. Materials: Materials when not otherwise definitely specified shall conform to the applicable ASTM, ASME, AGA and ASA standards.

E. All gas fired equipment shall include a label indicating that the appliance has been adjusted, modified or re–calibrated for the altitude where in the project is to be located (Green Sticker). The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Pipe and Fitting Schedule:**

Pipe and Fittings:

A. No pipe of foreign manufacturer will be acceptable on projects required to meet the Buy American Act.

B. All piping, fittings, flanges, etc. shall be free from defects and shall comply with the appropriate ASTM specifications.

C. Black steel pipe: ASTM A53 ERW Grade B, standard weight (schedule 40) or extra strong (schedule 80) as specified.

D. Copper tubing: ASTM B88, Type L or K as specified.

E. PVC pipe and fittings: ASTM D1785 Class 150 with ASTM D 2564 solvent cement joints unless otherwise specified.
Schedule 40. PVC plastic pipe fittings: ASTM F 628, schedule 40.

F. PEX–AL–HPDE distribution system: ASTM F 1986 tubing and metal–insert type with copper or stainless–steel crimp ring and matching PEX–AL–HDPE tube dimensions. Manifold: Multiple–outlet, plastic or corrosion–resistand–metal assembly complying with ASTM F 877: with plastic or corrosion–resistant–metal valve for each outlet.

G. PP piping and fittings: ASTM F 2389; CSA B137.11

H. Acrylonitrile Butadiene Styrene (ABS) plastic pipe: ASTM D 2661, schedule 40, ASTM F 628 schedule 40. ABS plastic pipe fittings: ASTM F 409, accessible and replaceable, solvent cement and threaded types, drain pattern.

I. Cast iron soil pipe and fittings: ASTM A74

J. Welded black steel fittings: ASTM A234 grade B, 150–Pound for standard weight piping, 300–Pound for extra strong piping, or of weight or schedule of matching piping.

K. Threaded malleable iron fittings: ANSI B16.3, 150–Pound for standard weight piping, 300–Pound for extra strong piping, or weight or schedule of matching piping either black or galvanized to match piping.

L. Welded flanges: ASTM A181 grade B, 150–Pound for standard weight piping, 300–Pound for extra strong piping or of equal weight of connected equipment.

M. Copper fittings: Wrought copper, ANSI specification B16.22.

N. Ball valves domestic water: Bronze, fullport, class 150, threaded.
NIBCO T–585 or equal

O. Partition stop valves: T&S B–0415, Loose key type with wall flange.

P. Balancing cocks 2 inches and smaller shall be by Armstrong, NIBCO, Taco or Watts.

Q. Solder: Joints in copper piping above grade shall be stay safe 50 solder or 95–5 solder shall be silfos or silverflow for all refrigerant piping joints.

R. Condensate drains shall be Type L hard copper tubing with wrought–copper fittings (can't be used for condensing gas–fired applications) or PVC pipe and fittings where allowed. A P–trap shall be provided at drains.

S. Gas piping in the building and not buried shall be standard weight black steel pipe and shall have welded fittings. Gas piping buried shall be polyethylene pipe with continuous 18 gauge tracing wire with schedule 40 black steel epoxy coated transition risers and/or transition fittings per ASTM D2513 and installed in accordance with Questar Supply Company (or local utility company) regulations. Paint all exterior exposed gas piping.

T. Chilled water and heating system lines shall be standard weight black steel. Pipe 2–1/2 inch and smaller shall either have welded fittings, mechanical grooved fittings or malleable iron screwed fittings.

U. Domestic hot water, hot water return, and cold water piping shall be Type L or K hard tempered copper pipe with wrought–copper fittings using 95–5 solder. Pex tube piping may be used in lieu of copper on sizes 2–inches and smaller. Where piping is exposed outside partitions, use Type L or K hard copper tubing and wrought copper fittings.

V. Domestic hot water and cold water piping buried below grade shall be Type K soft tempered (annealed) copper without fittings or joints and covered with IMCOA IMCOSHIELD unicellular insulation. PEX tube piping may be used in lieu of copper on sizes 2–inches and smaller.

W. All soil, waste, vent, roof drain and roof drain overflow piping below ground shall be ABS or PVC plastic pipe, rated for domestic waste and vent, with ABS or PVC plastic socket type drain, waste vent pattern fittings, solvent cemented joints. Install ABS drainage pipe and fittings according to ASTM D661. Install PVC drainage pipe and fittings according to ASTM F891.

X. All soil, waste, vent, roof drain and overflow piping above ground shall be standard weight cast iron with no hub coupling or approved material meeting the standards set forth in IPC tables 702.1, 702.2, and 702.3 & 702.4..

Y. Kitchen waste and vent serving fixtures capable of discharging or receiving waste liquids with temperatures in excess of 120 degrees F. shall be piped using No–Hub standard wight cast iron pipe for a minimum of 20 feet before changing to ABS pipe.

– **Roof Flashing:**

A. Sanitary Vent Flashings: SEMCO 1100–3 or 1100–5, with one–piece lead flashing and counterflashing sleeve.

– **Pipe Sleeves:**

A. At concrete walls for floors, adjust–to–crete, paramount, hole–out Sperzel Creteseleve floor sleeves shall extend to top of concrete curbs for piping rising through floors. Wall sleeves shall be flush with finished surface, sleeves shall be sized to allow ½ inch clearance around pipe insulation. Insulation and covering shall be continuous through wall and floor sleeves.

– **Cleanouts:**

A. Full size cleanouts shall be installed at the base of each soil waste stack. All other cleanouts shall be installed where shown on the drawings and where required by State, Local or National Plumbing Codes.

B. All cleanouts shall be installed in locations easily accessible for rodding. Cleanouts in wall shall be JR Smith 4402, in floors JR Smith 4023/ Cleanouts shall be JR Smith, Wade or Josam.

– **Pipe Insulation:**

A. All domestic hot water, hot water recirculation and cold water piping shall be covered with Owens Corning ASJ–25 fiberglass pipe insulation with vapor seal jacket. Insulation thickness shall be ½ inch for cold water and 1 inch for hot water.

B. Insulate all piping under Lavatories accessible to physically handicapped with hot water supply and "P" trap prefabricated insulation, Handi Lav Guard.

– **Pipe Hangers:**

A. Hangers shall be supplied with factory installed isolation and DI–Chromate finish.

B. Pipe 2 inches and smaller: Grinnel F69. Pipe 2–1/2 inch and larger: Grinnel F65. Concrete Inserts: Grinnel 281 and 282. Riser clamps for copper piping: Grinnel 261P, plastic coated. Riser clamps for other piping: Grinnel 261,

C. Hanger rods shall conform to the following: Pipe size 2 inch and smaller: ⅜ inch rods. Pipe size 2–1/2 inch and 3 inch: ½ inch rods. Pipe size 3 inch and larger: ⅝ inch rods.

– **Plumbing Fixtures:**

A. Fixtures shall be the water saving typer with maximum usage of 1.6 gallons per flush for water closets, 2.5 gallons per minute for showers, 3.0 gallons per minute for service sinks, 1.0 gallon per flush for urinals, 0.5 gallons per minute for public lavatories, 2.2 gallons per minute for private lavatories and 2.2 gallons per minute for sinks.

B. All fixtures shall be caulked to the floor or wall with water resistant white butyl rubber caulking compound. Trim for shall match in design. Supply faucets shall have renewable seats and barrels.

PLUMBING EQUIPMENT	MANUFACTURER
Floor Drains & Floor Sinks:	Zurn, JR Smith, Wade, Josam, Ancon, Mifab, Watts, or Equal
Trench Drains:	Zurn, JR Smith, Watts, Josam or approved equal
Roof Drains and Overflow:	Zurn, JR Smith, Wade, Watts, Josam, Ancon, Mifab
Cleanouts:	Zurn, JR Smith, Wade, Josam, Mikro, Mifab, Watts, or Equal
Valves:	Watts, Milwaukee, Crane, Kennedy, Stockham, Miason, Grinnell, Keystone, American Valve, or NIBCO
Shower Valves:	Powers, Symmons, Delta, Leonard, Moen, Bradley, Zurn, Acorn
Pipe Hangers & Supports:	Grinnell, Elcen, Kin–Line, Unistrut, F&S, B–Line, Michigan, Wesanco, or Piping Technology & Products
Insulation:	CertainTeed, Manville, Pittsburgh, Armstrong, LSP Products, or Owens–Corning
Plumbing Faucets:	American Standard, Chicago, Delta, Moen, Kohler, Symmons, T&S, Gerber, Zurn
Plumbing Fixtures:	American Standard, Kohler, Toto, Gerber, Watts, Zurn, Sterling, Lasco
Plumbing Supply Stops:	Eastman, Crane, Kohler, Wolverine, McGuire, Brasscraft, EBC, Zurn, Chicago
Water Closets:	American Standard, Gerber, Kohler, Toto, Sterling
Flush Valves:	Sloan. Delany, Zurn, Moen, American Standard, Gerber
Toilet Seats:	American Standard, Bemis, Kohler, Sperzel, Olsonite, Beneke, Gerber or Church
Pressure Reducing Valves:	Watts series 223, Zurn or Wilkins
Hose Bibs:	Chicago, Acorn, Wolverine, Woodford, McGuire, Watts, Mifab, Josam, Zurn, Sioux Chief, Prier, Smith
Electric Water Coolers: Stainless Steel Sinks:	Elkay, Sunroc, Halsey Taylor, Haws Corporation, Westinghouse, Murdock Elkay, Just, Moen, or approved equal
Disposals:	Insinkerator, Evergrind, Kenmore, or appoved equal
Gas Pressure Regulator:	Fisher, Equimeter, Pietro Fiorentini
Thermostatic Tempered Water Valves:	Symmons, Powers, Leonard, Bradley, Watts, Caleffi, Lawler, Acorn
P–Traps:	American Standard, Kohler, McGuire, Brasscraft, Dearborn, EBC
Shock Absorbers:	Zurn, Smith, Wade, Josam, PPP, Sioux Chief, Watts, Mifab
Sewer Ejectors:	Peabody–Barnes, Weil, Hydromatic, Gorman–Rupp, Swaby, Weinman, Zoeller
Gas Water Heaters:	AO Smith, Bradford White, Rheem, State, Rinnai, Ruud, National, PVI, or approved equal
Electric Water Heaters:	Lochnivar, AO Smith, Rheem, State, Ruud, PVI, National, EEMAX, Chronomite & Vaughn, or approved equal

– **Electric Water Heater:**

A. The water heater(s) shall be an approved manufacturer (see approved manufacturer list in Plumbing Fixtures 2.10). Heater(s) shall be listed by underwriters laboratories. Heater(s) shall have 150 PSI working pressure and be equipped with extruded high density anode rod. All internal surfaces of the heater(s) exposed to water shall be glass–lined with an alkaline borosilicate composition that has been fused to steel by firing at a temperature range of 1600° F. Electric heating elements shall be medium watt density with zinc plated copper sheath. Each element shall be controlled by an individually mounted thermostat and high temperature cutoff switch. The outer jacket shall be baked enamel finish and shall be provided with full size control compartment for performance of service and maintenance through hinged front panels and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided (except on 120V and 277V, not junction box on DEL–6 thru 20). The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three year limited warranty as outlined in the written warranty. Fully illustrated instruction manual to be included.

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REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE:
PLUMBING SPEC'S

DRAWN BY: CLD
CHECKED BY: MLM
DATE PLOTTED: 11/03/2021
PROJECT #: J21317.00

P7.01

– **Domestic Expansion Tank:**

A. ASME 150 PSI steel pressurized expansion tanks for portable use with ASME stamp of the size and capacity shown on the drawings shall be furnished and installed. Tank shall be complete with internal heavy duty Butyl Rubber Diaphragm, rigid Polypropylene liner on water side of tank, complying with FDA. Air charging fitting, tank drain, pressure gauge, air vent and connections as shown on the drawings. Supports for expansion tanks shall be furnished and installed by the plumber. Tanks shall be Watts, Amtrol, Taco, Armstrong or Zurn.

PART 3 – EXECUTION

– **Surface Conditions:**

A. Inspection: All plumbing shall be installed in accordance with the requirements of all governing authorities, The original design, and referenced standards.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Interferences between installed work of various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades at no extra cost to the Owner when so directed by the Architect.

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Locations and Space Requirements:**

A. Contractor shall fully inform himself regarding peculiarities and limitation of spaces available for installation of work under this division. Drawings indicate desired location and arrangement of piping, equipment and other items and are to be followed as closely as possible. Work specified and not clearly defined by drawings shall be installed and arranged in a satisfactory manner. In any case and at any time a change in location required by obstacles or the installation of other trades not shown on the plumbing plans shall be made by contractor without additional charge provided the change is ordered before work is installed and no extra materials are required.

B. Verify all spaces, dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

C. Obtain all necessary rough in data and dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

D. Maintain ample headroom clearances and accessibility. Maintain ceiling heights.

E. Constantly check work of other trades to prevent interference with this installation.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test,uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Plumbing: Provide all services designated and required, including waste and water. Valve and cap all stub–outs for water and gas. Cap all waste and vent outlets.

2. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–In."

– **Equipment Final Connections:**

A. Provide all piping final connections for all equipment under Division 22 as required herein specified and indicated on the drawings.

B. Plumbing: Provide final plumbing connections complete with shutoff valves, risers, traps, vacuum breakers and indirect wastes for all equipment furnished and installed under other sections of these specifications, except as otherwise designated. Included under the Plumbing section of the specifications are the final connections to the following:

1. Miscellaneous equipment specified to be furnished and installed under other divisions of the specifications.

2. Cold water make–up connections to air conditioning equipment.

3. Kitchen equipment, furnished under other sections of the specifications.

– **Sterilization:**

A. Sterilize each unit that will have water in it, the water supply piping and distribution system with liquid chloride or hydrochloride before acceptance of operation in accordance with AWWA C601, "Standard for Disinfection Water Mains" work shall be done by contractor and unless otherwise required by Public Authorities having Jurisdiction, shall conform to the following:

B Materials
1. Liquid Chlorine: U.S. Army Specification 4–1. 2. Hydrochloride: Liquid shall conform to FED. Spec. O–C–11RA (INT. 4).

C. Method: Amount of chlorine shall provide a dosage of 50 PPM minimum. Introduce chlorinating materials into lines and distribution system in approved manner after a contact period of 24 hours during which period chlorine residual shall be maintained at 5 PPM minimum, flush out systems with clean water until residual content is not greater than 0.2 PPM. Flush entire system open and close valves in lines being sterilized several times during contact period.

D. Sterilization report shall be turned into the Engineer for review prior to requesting a substantial completion inspection.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

– **Hangers and Supports:**

A. Hold horizontal pipe runs firmly in place using approved steel and iron hangers, supports, and/or pipe rest unless otherwise indicated. Suspend hanger rods from concrete inserts or from approved brackets, clamps or clips. Hang pipes individually or in groups if supporting structure is adequate to support weight of piping and fluid. Except for buried piping, hang or support pipe runs so that they may expand or contract freely without strain to pipe or equipment.

1. Horizontal steel piping: Provide hangers or supports every 10 ft. except every 8 ft. for piping 1–1/4 inch and smaller.

2. Horizontal copper tubing: For 2 inch diameter and over, provide hangers every 10 feet, for 1–1/2 inch diameter and smaller every 6 feet.

3. Horizontal cast–iron no–hub piping: Provide hangers or supports at each side of no–hub fittings. Provide anti–separation bracing at each 90 degree change in direction.

4. Horizontal cast–iron hub and spigot piping: Provide hangers or supports at each hub.

5. Vertical piping: Support at floor with iron pipe clamps.

– **Test:**

A. Perform test to Architect's satisfaction. Make test in presence of Owner's Rep and at the time suitable to him if requested. Furnish necessary labor and equipment and bear cost for testing. Cost of replacing and/or repairing damage resulting therefor shall be borne by this contractor, should the contractor refuse or neglect to make test necessary to satisfy the Architect that requirement of specifications and drawings are met, such tests may be made by an independent testing company and the contractor charged for all expenses.

B. Hydrostatic test: Make by completely filling piping system with water and eliminating accumulations of air so that leakage, no matter how small, will be apparent on testing gauge immediately. Maintain pressure until pipe under test has been examined, but in no case less than 24 hours. Test system at the following pressure:

SYSTEM	TEST PRESSURE
Domestic Cold Water	150 PSIG
Domestic Hot Water	150 PSIG

C. Sanitary soil, waste, bent systems test: Before installation of fixtures, cap end of system and fill lines with water to 10 feet above the section being tested. (including bents) and allow to stand for at least fifteen (15) minutes before inspection starts. Make test in sections if necessary or convenient. However, include interconnections between new sections and previously tested section in the new test.

D. Roof drainage system: Test as specified for sanitary system.

E. Gas systems: Test with compressed air at 10 PSI for six hours or longer as directed to provide a tight seal without leaks. Use pressure recorder to record pressure of all lines for duration of test.

F. Repair all leaks and retest as required.

– **Cleanouts:**

A. Provide cleanouts where indicated and required. Unless otherwise indicated, cleanouts shall be accessible with extensions to grade to outside of buildings, or to floors above as indicated or required. Do not locate cleanouts in public lobbies and public corridors unless approved by Architect.

B. Membranes: Where waterproofing membrane occurs under floor, bring membrane to cleanout without puncturing and permanently anchor to integral anchoring flange with heavy cast–iron clamping collar and rustproof bolts.

C. Covers: Set cleanout covers with all finished wall, floor or grade. In all cases securely anchor by means of integral lugs and bolts. Where surfacing material such as resilient coverings is specified, ascertain thickness being used and set cleanout top so finished floor is smooth.

D. Use Acorn 3500 thread compound.

– **Pipe Installation:**

A. Make pipe runs straight and true. Springing or forcing piping into place is not permitted. Install in manner to prevent any undue strain on equipment. Make joints smooth and unobstructed inside and out, and ream pipe ends thoroughly to remove burrs. Conceal piping in finished portions of the building except as otherwise directed or indicated. Cap or plug ends and openings in pipe and fittings immediately to exclude dirt until equipment is installed or final connections are made.

B. Install piping to clear beams unless sleeving is indicated. Constantly check work of other trades to prevent interference with this installation. Obtain approval from Architect if coring or cutting of concrete work is necessary due to failure to install required sleeves prior to the time of concrete pour. Cost of coring and cutting work shall be borne by the subcontractor.

C. Exposed plated or enameled pipe: Make connections to equipment with special care. Show not tool marks or threads.

D. Dielectric Unions: Make connections between two dissimilar metal pipes with dielectric unions.

E. Unions: Provide a union on one side of each shutoff valve. At both sides of automatic valves. At equipment connections and elsewhere indicated or required, unless flanges are indicated.

F. Floor, wall ceiling plates: Provide where pipes pierce finished surfaces.

G. Noise: Install soil, waste, and water piping in a manner that prevents any unusual noise from flow of water under normal conditions.

H. Shutoff Valves: Provide where indicated and required for adequate control of system and for isolation of fixture groups and equipment.

I. Buried Pipe: Install with minimum 36 inches coverage unless otherwise indicated. Lay piping accurately to grade where invert elevations are indicated. When required provide thrust blocks per manufacturer's recommendations.

J. Equipment and Materials: Install per manufacturer's recommendations.

K. Accessibility: Install work readily accessible for normal operation, reading of instruments, adjustments, service, inspections and repair. Provide access panels where indicated and required.

L. Pipe Joints: Make screwed joints with a minimum amount of compound applied to the male thread only. All joints shall be made per code requirements and manufacturer's recommendations.

M. Provide pipe isolation at all hangers for non–insulated materials.

N. Piping Rough–in for Fixtures: Support or secure to building construction of firmly anchored waste piping so that pipes cannot be displaced. Do not secure to walls. Use of makeshift devices, such as rope, wire, tape, etc. is prohibited.

O. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The minimum slope for horizontal pipe 4" or larger in diameter may have a slot of not less than 1% (⅛ inch per foot). The minimum slope of horizontal pipe less than 4"; may have a slope of not less than 2% (¼ inch per foot).

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer.

B. Finished painting is specified under Division 9.

– **Connections to Services:** Provide all connections to sanitary sewer lines, storm sewer, gas lines, water lines, electrical services furnished under other contracts, except as otherwise specifically designated. Provide all necessary tees, taps and connections required to properly connect to all mains. Verify all required City requirements before making any piping connections to sanitary sewer, storm sewer, water or gas piping and conform to them during installation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

2. Gas tungsten–arc.

3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

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12/7/21
STATE OF UTAH

REVISIONS:

SUN PEAK HOA
POOL EQUIPMENT ROOM
PARK CITY, UTAH

DRAWING TITLE: PLUMBING SPEC'S

DRAWN BY: CLD
CHECKED BY: MLM
DATE PLOTTED: 11/03/2021
PROJECT #: J21317.00

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