

SHEET NOTES

1. REFER TO SHEET LC301 FOR SCOPE OF WORK, LEGEND, DRAWING INDEX, POOL NOTES, AND GENERAL INFORMATION.
2. REFER TO LC302 FOR POOL SPECIFICATIONS WHICH APPLY TO PROPOSED WORK DETAILED HEREIN.

SCOPE OF WORK

- ① DECK +/- 11,202 SQ. FT.
- ② POOL AREA FENCE +/- 475 L.F.
- ③ POOL AREA LIGHTING (6)

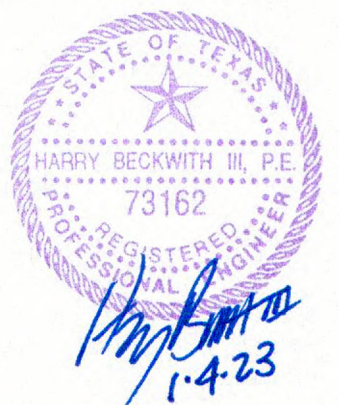
SECTION NOTES

- | | |
|----------|---|
| A | DECK @ TYPICAL POOL WALL STRUCTURAL DETAIL, REF A / LC201 |
| B | DECK @ STEP STRUCTURAL DETAIL, REF B / LC201 |
| C | DECK @ SKIMMER STRUCTURAL DETAIL, REF C / LC201 |
| D | DECK @ SHADE STRUCTURE CONCRETE PIER, REF D / LC201 |
| E | LIGHT POLE FOUNDATION STRUCTURAL DETAIL, REF SHEET LC1 02 AND E / LC201 |
| F | POOL DECK STRUCTURAL DETAIL, REF F / LC201 |
| G | EXPANSION JOINT DETAIL, REF G / LC201 |
| H | DECK @ SLIDE STRUCTURE DETAIL, REF A / LC202 |
| J | FENCE AND GATE DETAIL, REF B / LC202 |

waterscape
CONSULTANTS, INC.
VISUAL AND RECREATIONAL WATER AMENITIES

11002 MAIZE LANE
HOUSTON, TEXAS 77041
PH (713) 532-2007
E-MAIL: HBECKWITH@WATERSCAPECONSULTANTS.COM
TEXAS FIRM REG NO F02771

1. These documents and referenced specifications are the property of Waterscope Consultants, Inc. They are provided on a visual and descriptive representation of the design intent for the work detailed herein.
2. Use of the information presented in these documents and referenced specifications is granted to the project owner by Waterscope Consultants, Inc. for the express purpose of construction of the work detailed herein at the location noted in the title block of this document. Use of these documents and referenced specifications for constructing work at locations other than noted in this document is expressly prohibited. Waterscope Consultants, Inc. will not be liable for any information contained herein which is used at other locations, for other projects, and for other owners.
3. These documents shall not be used to construct the work detailed herein unless so noted in the plan release area of each document.

[illegible]

DAVY CROCKETT MEMORIAL PARK
NEW AQUATICS FACILITY

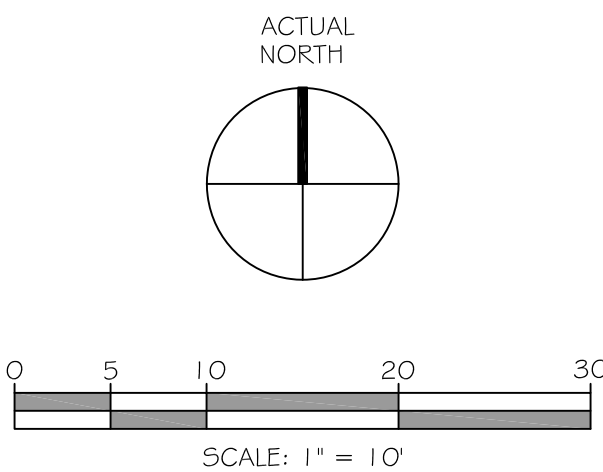
DRAWN BY: HB	CHECKED BY: HB	DATE: Jan. 04, 2023
-----------------	-------------------	------------------------

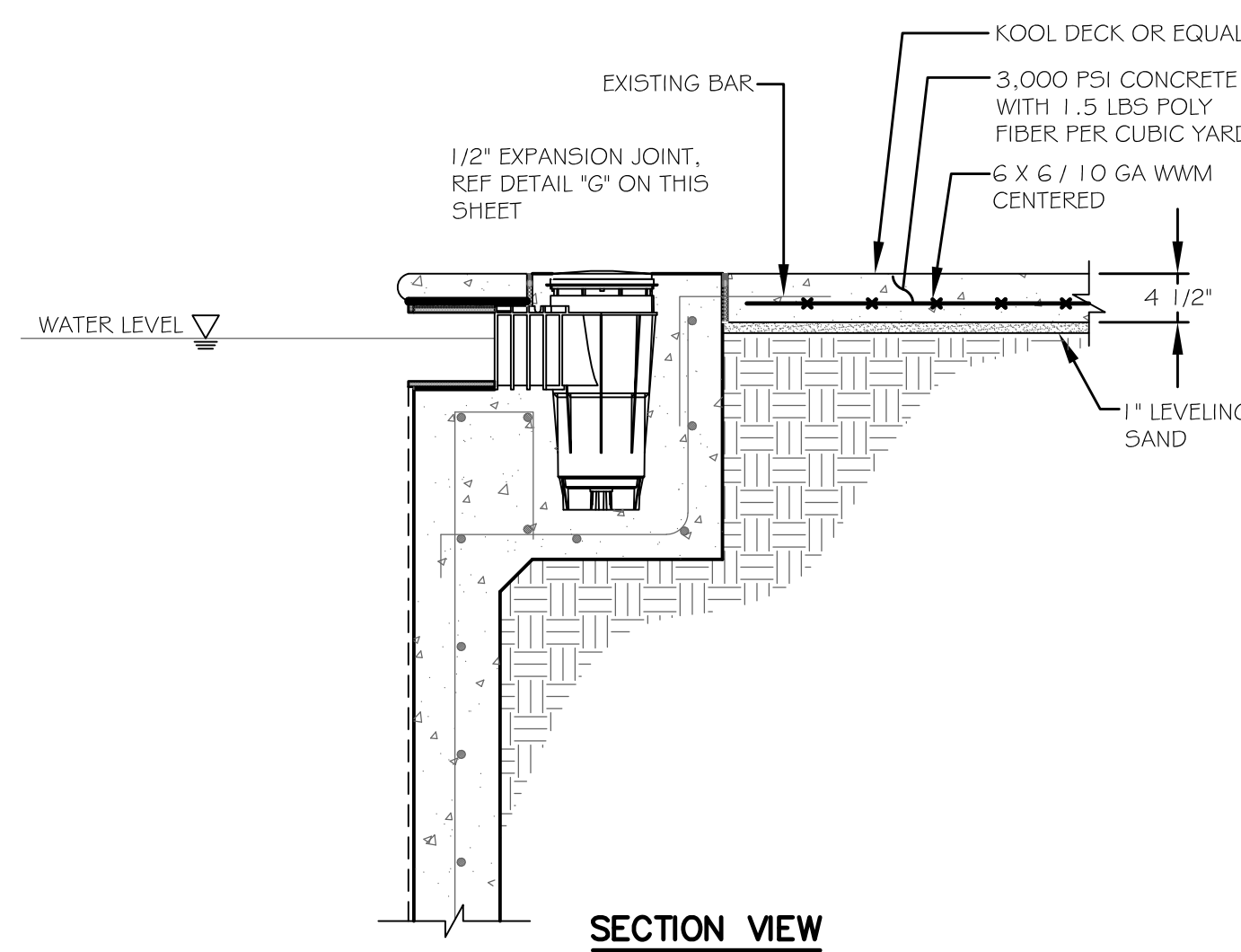
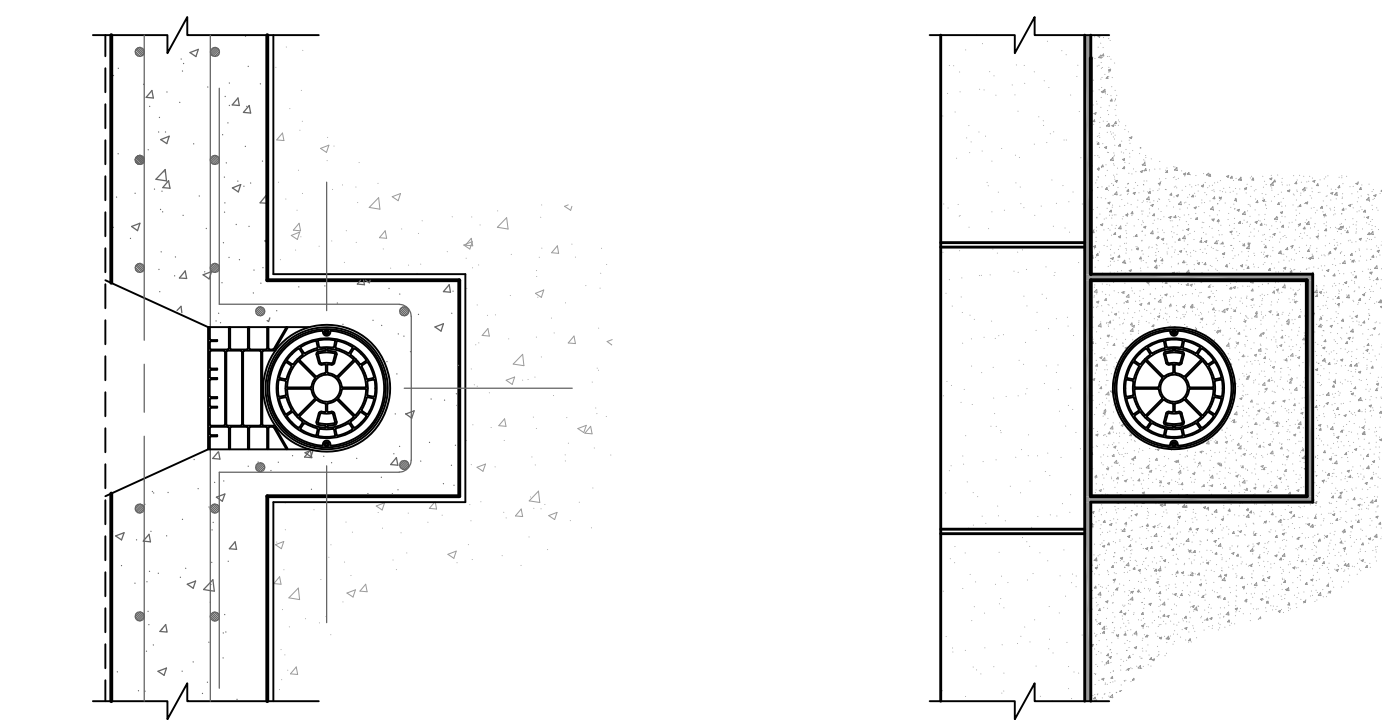
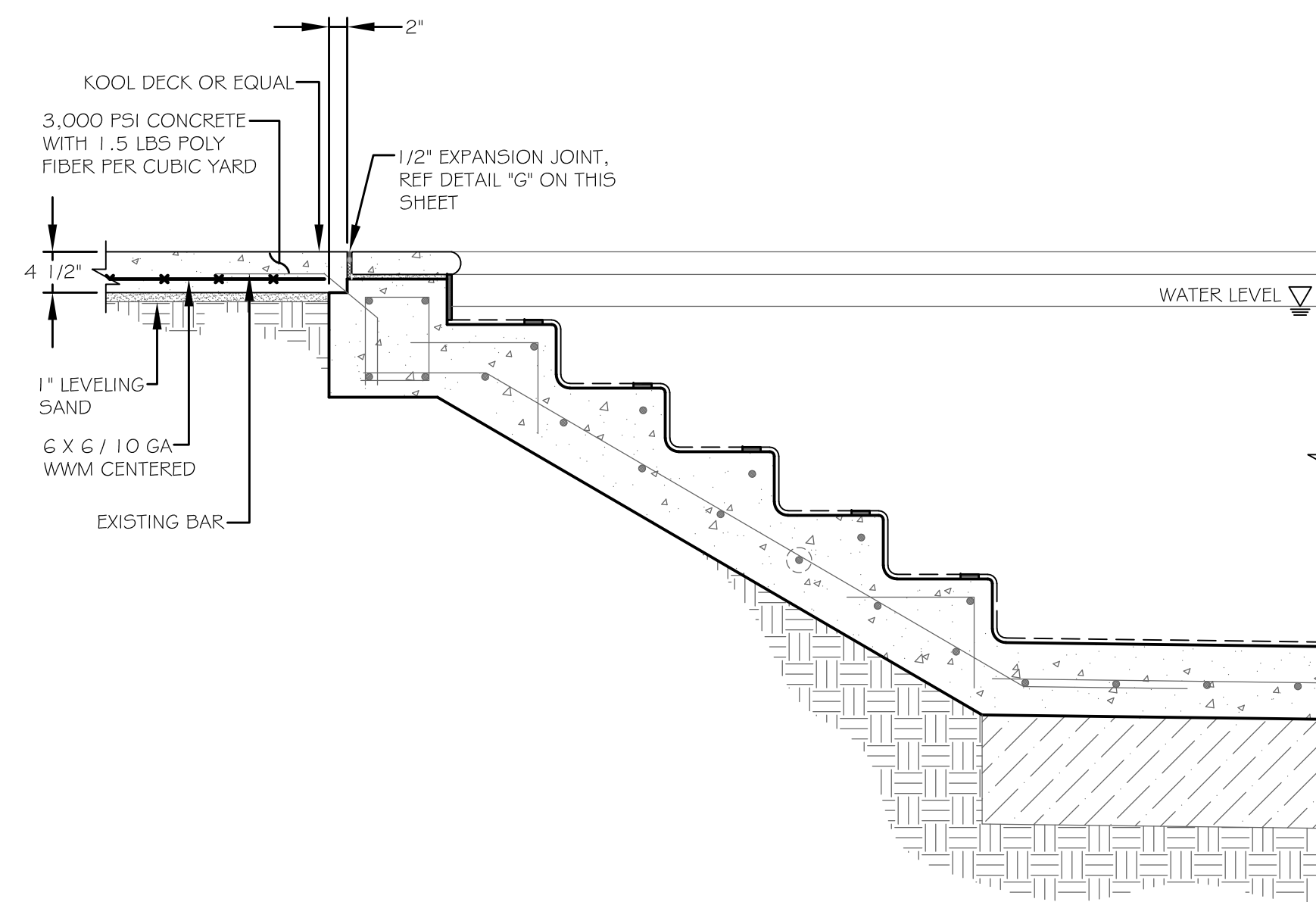
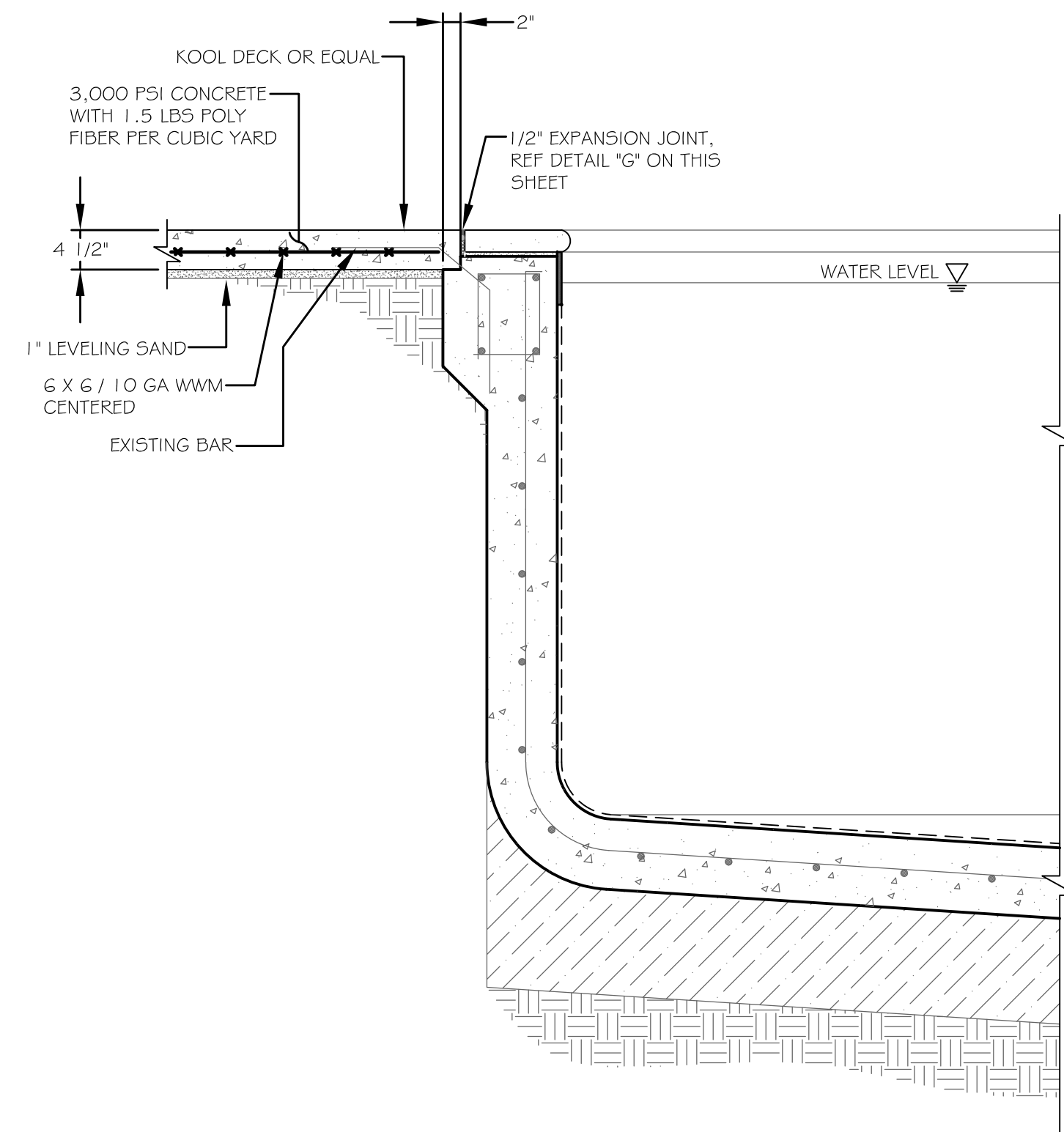
OVERALL SITE PLAN

LC101

FULL SIZE 24"X36"

PROJ NO: 2019-415





SHEET NOTES

1. REFER TO SHEET LC301 FOR SCOPE OF WORK, LEGEND, DRAWING INDEX, POOL NOTES, AND GENERAL INFORMATION.
2. REFER TO LC302 FOR POOL SPECIFICATIONS WHICH APPLY TO PROPOSED WORK DETAILED HEREIN.

waterscape
CONSULTANTS, INC.
VISUAL AND RECREATIONAL WATER AMENITIES

11002 MAIZE LANE
HOUSTON, TEXAS 77041

E-MAIL: HBECKWITH@WATERSCAPECONSULTANTS.COM
TEXAS FIRM REG NO. F-02771

1. These documents and referenced specifications are the property of Watercourse Consultants, Inc. They are provided as a visual and descriptive representation of the design intent for the work detailed herein.
2. Use of the information presented in these documents and referenced specifications is granted to the project owner by Watercourse Consultants, Inc. for the express purpose of constructing the work detailed herein at the location noted in the title block of this document. Use of these documents and referenced specifications for constructing work at locations other than noted in this document is expressly prohibited. Watercourse Consultants, Inc. will not be liable for any information contained herein if it is used at other locations, for other projects, and for other owners.
3. These documents shall not be used to construct the work detailed herein unless so noted in the plan release area of each document.



DECK @ TYPICAL POOL WALL STRUCTURAL DETAIL

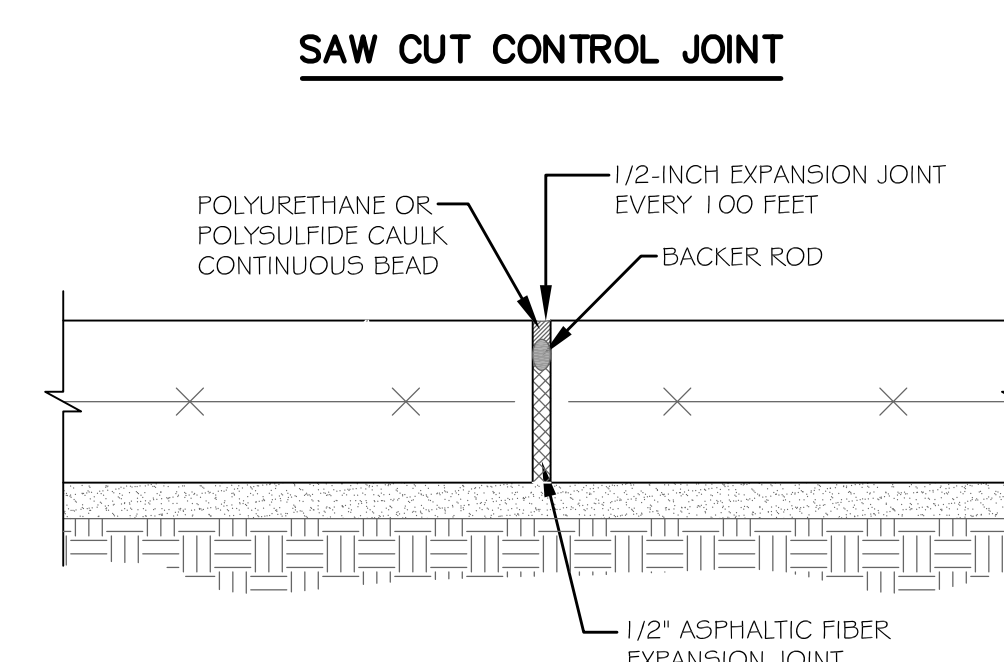
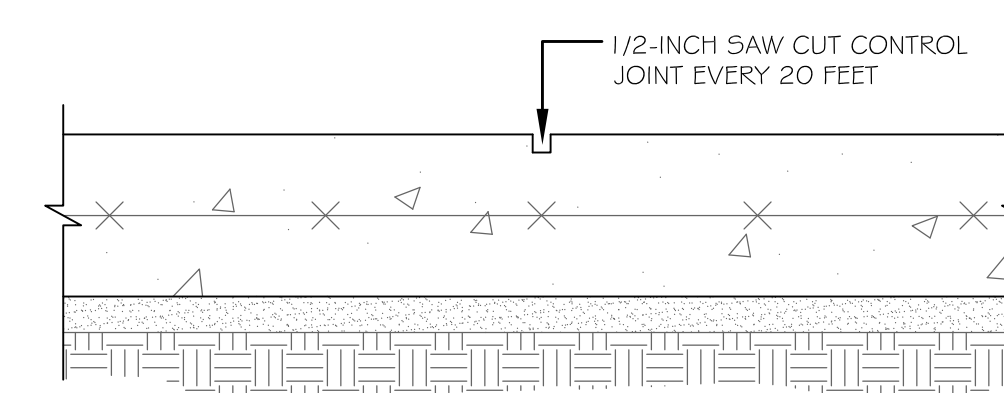
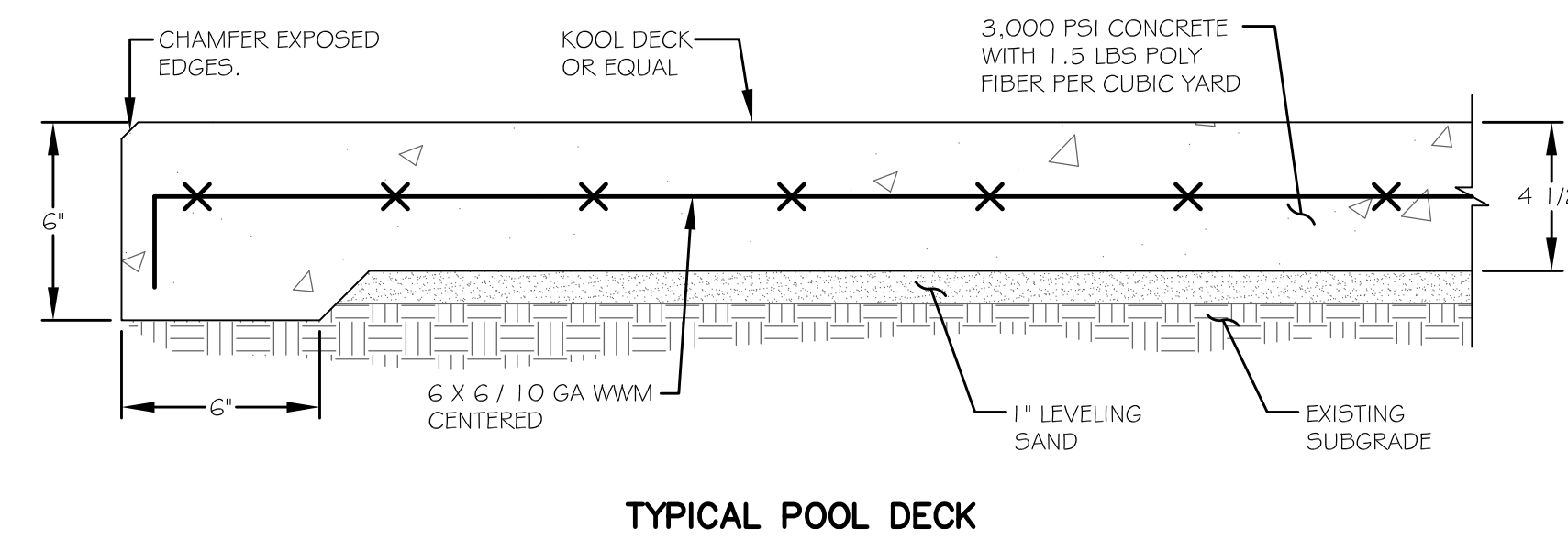
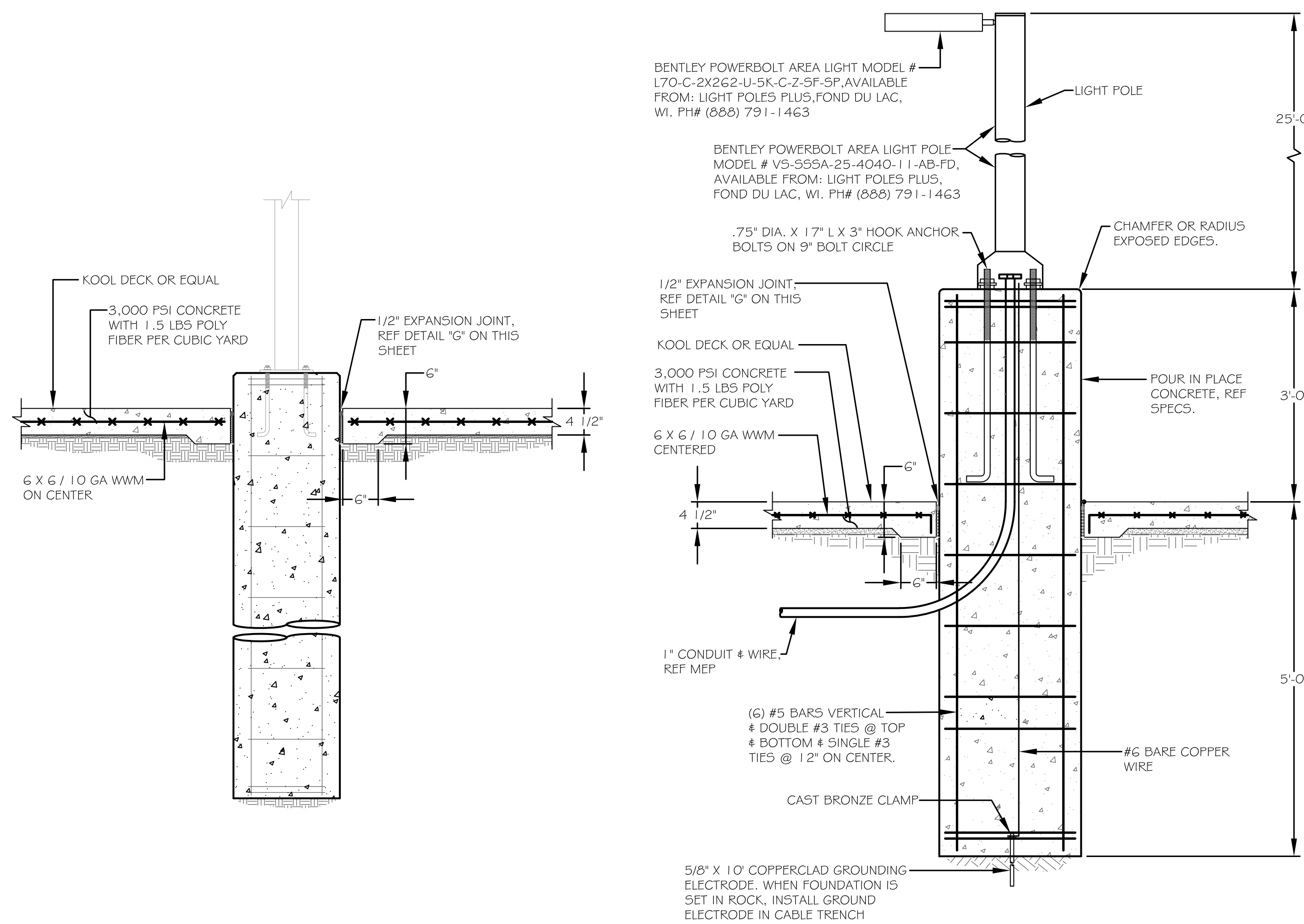
SCALE: $3/4" = 1'-0"$

DECK @ STEP STRUCTURAL DETAIL (B)

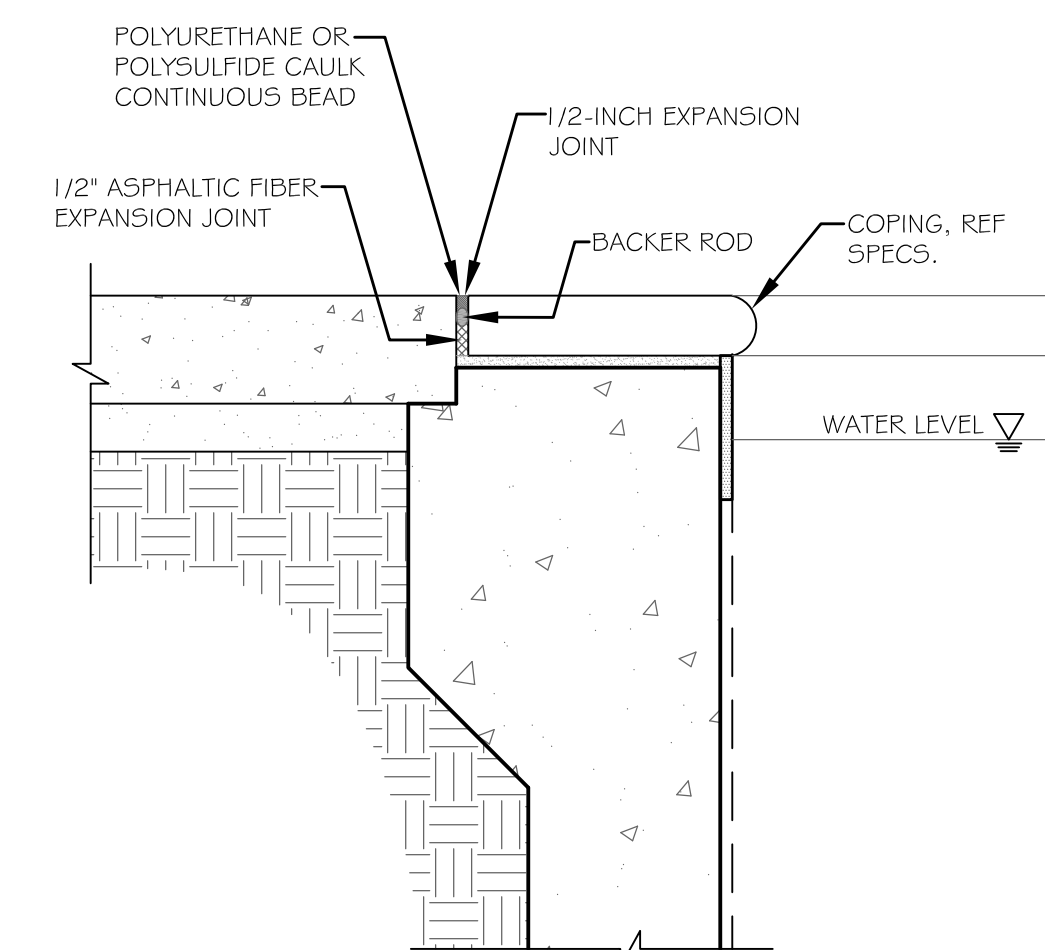
SCALE: 3/4" = 1'-0"

DECK @ SKIMMER STRUCTURAL DETAIL

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



EXPANSION JOINT



DECK @ SHADE STRUCTURE CONCRETE PIER

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

LIGHT POLE FOUNDATION STRUCTURAL DETAIL

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

POOL DECK STRUCTURAL DETAIL

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

EXPANSION JOINT DETAIL

SCALE = N.T.S.

DAVY CROCKETT MEMORIAL PARK
NEW AQUATICS FACILITY

DRAWN BY: H.B.	CHECKED BY: H.B.	DATE: Jan. 04, 2023
-------------------	---------------------	------------------------

STRUCTURAL DETAILS

LC201

FULL SIZE 24"X36"

PROJ NO: 2019-415



FENCE & GATE DETAIL

SCALE = N.T.S.

B

1. REFER TO SHEET LC301 FOR SCOPE OF WORK, LEGEND, DRAWING INDEX, POOL NOTES, AND GENERAL INFORMATIONS.
2. REFER TO LC302 FOR POOL SPECIFICATIONS WHICH APPLY TO PROPOSED WORK DETAILED HEREIN.

waterscape
CONSULTANTS, INC.
VISUAL AND RECREATIONAL WATER AMENITIES

11002 MAIZE LANE
HOUSTON, TEXAS 77041
E-MAIL: HBECKWITH@WATERSCAPECONSULTANTS.COM
TEXAS FIRM REG NO F-02771

1. These documents and referenced specifications are the property of Wetorscape Consultants, Inc. They are provided on a visual and descriptive representation of the design intent for the work detailed herein.
2. Use of the information presented in these documents and referenced specifications is granted to the project owner by Wetorscape Consultants, Inc. for the express purpose of constructing the work detailed herein at the location noted in the title block of this document. Use of these documents and referenced specifications for constructing work at locations other than those noted in this document is expressly prohibited. Wetorscape Consultants, Inc. will not be liable for any liability contained herein which is used at other locations, for other projects, and for other owners.
3. These documents shall not be used to construct the work detailed herein unless so noted in the plan release area of each document.

[illegible]

DAVY CROCKETT MEMORIAL PARK
NEW AQUATICS FACILITY

DRAWN BY: H.B.	CHECKED BY: H.B.	DATE: Jan. 04, 2023
-------------------	---------------------	------------------------

STRUCTURAL DETAILS

LC202

FULL SIZE 24"X36"

PROJ NO: 2019-415

GENERAL NOTES

1. Work shall comply with applicable local, state, and national codes in effect when work is initiated. Where the Construction Documents (plans and specifications) establish a standard which exceeds the requirements of the applicable codes, the Construction Documents will set the minimum standard necessary for completion of the work.
2. Work shall comply with all aspects of the General, Supplementary (if any), and Special Conditions (if any) of the Construction Documents.
3. The Construction Documents include both pictorial plans which detail the location and layout of the structures, equipment, and fixtures required for this work as well as written specifications which detail the design intent, standards of construction, and minimal requirements for equipment and system components. The completed work must comply with all aspects of both documents.
4. These Plans are essentially diagrammatic, intended mainly to indicate the overall scope of work. Equipment and material locations, sizes and orientation may be distorted for clarity in presentation. Contractor shall ensure the permanent location of all systems allows access to each component for operation and maintenance needs.
5. It is the Contractor's responsibility to verify field conditions which affect the layout of the work including access, existing improvements, other ongoing or pending work at the site, and existing Owner occupied spaces, uses, or services. Damage to any existing facilities, whether in place prior to start of the work or begun after start of the work, or disruption to existing or planned activities at the site will be repaired at the expense of the Contractor.
6. Work shall conform to written dimensions as noted or referenced in the plans and within the tolerances noted in the specifications. In all cases where scales are shown, written dimensions shall take precedence over scaled dimensions. It is the Contractor's responsibility to request clarification or additional information if any portion of the Contract Documents does not provide sufficient detail to construct the work in accordance with the design intent. Failure of the Contractor to request additional information in a timely manner will not be cause for time extensions or claims for work delays.
7. Elements of the work, including but not limited to pump vaults, valve vaults, pool fittings, light fixtures, and electrical panels, are subject to minor relocation as directed by the Owner or Design Team.
8. No work items shall be located in public easements unless specifically directed by the Construction Documents.
9. Refer to Architectural, Landscape Architectural, MEP, and/or Civil plans for coordination, layout, and connection information as noted in these plans or as required to complete work per the design intent.

STRUCTURAL NOTES

1. Excavate pool area to accommodate proposed structure, associated pipe and conduit, and pool fittings. Proof roll area under proposed structures to ensure the underlying soil is consolidated and without soft areas or voids. Install structural fill and compacted sand bedding as necessary to ensure proposed structure is properly supported. Contractor shall immediately notify Engineer of any conditions which would indicate poor soil conditions or unsuitable bearing capacity of the supporting soils.
2. Unless noted otherwise, all dimensions are to finished face of structure including coping, veneer, tile, plaster, or other finishes applied to the underlying structure.
3. Unless noted otherwise, all concrete reinforcing steel adjacent to soil or water surfaces shall have a minimum of 3-inches of concrete cover. Finishes which are inherently waterproof (plaster and tile) or which include a waterproof setting material (grout or caulk) will provide an equivalent thickness of cover up to a maximum of 1-inch. All other concrete reinforcing steel shall have a minimum of 2-inches of concrete cover.
4. All pool fittings shall be properly braced and supported or anchored to adjacent concrete reinforcing steel prior to concrete placement to prevent shifting or displacement.
5. All pool fittings shall have a minimum cover of 6-inches of concrete, unless noted otherwise. Bend concrete reinforcing steel around pool fittings to create a continuous mat. If the concrete reinforcing steel must be cut to allow the placement of a pool fitting or penetration, provide double bars set at 45° on four sides around fitting or penetration to ensure proper reinforcement.
6. All concrete reinforcing steel shall be cut, bent, spliced, installed, and supported in strict accordance with ACI standards.
7. All concrete shall be mixed, placed, vibrated, and finished in strict accordance with ACI standards. Where necessary install suitable construction joints with water stop and properly lapped and spaced dowels.
8. Concrete shall not be placed during poor weather conditions (rain and cold) which would adversely affect the finish or strength of the finished structure.
9. Unless noted otherwise, do not connect pool structure to adjacent slabs, decks, building structures, or other features which may exhibit differential settlement. Provide suitable expansion joints properly finished with backer rods and caulk between pool structure and adjacent structures.

PLUMBING NOTES

1. Piping shown is Schematic. Install Piping in a Direct Manner using the fewest Fittings possible and with Minimal Impact on other work (Existing or Planned). Where possible combine multiple pipes in a common trench.
2. Minimum burial depth of all pipe and fittings is 24-inches, unless noted otherwise.
3. Maximum allowable number of bends (90° and 45°) between pump and any pool fitting is 10. This applies to both suction and discharge lines. If additional fittings are required, provide detailed layout of proposed piping to Engineer for approval prior to installation.
4. Maximum allowable number of bends (90° and 45°) in branch lines (after tee connections or valve vault manifolds) is 4. This applies to both suction and discharge lines. If additional fittings are required, provide detailed layout of proposed piping to Engineer for approval prior to installation.
5. All pipe lines shall be installed with a continuous slope to prevent air pockets. If a high point is required in any pipe line, notify Engineer immediately.
6. All pipe and fitting material shall comply with NSF 50 or equivalent.
7. All discharge (pressurized) pipe and fittings shall be Schedule 80 PVC. All suction or drain (non-pressurized) pipe and fittings shall be Schedule 40 PVC. All penetrations through a pool wall or floor shall be copper, bronze, or brass with suitable water stop fittings. All PVC pipe and fittings shall be glue joint or threaded with Teflon pipe tape. All metallic pipe and fittings shall be wrought sweat type fittings or threaded Teflon pipe tape. All chemical feeder tubing shall be polypropylene or polycarbonate flexible tubing suitable for the intended purpose fully enclosed in electrical conduit. Use CPVC pipe and fittings for all air or heated water piping.
8. Bedding, backfill, thrust blocks, and pipe supports shall be installed in accordance with the Specifications or applicable codes and modern construction practices.
9. All pipe and fittings shall be pressure tested prior to covering with bedding or backfill.

ELECTRICAL NOTES

1. Information for electrical services, equipment, components, panels, conduit, wiring, and fixtures depicted in these Plans are schematic. Actual electrical requirements may include multiple conduits, multiple wire runs, additional or sub panels, transformers, junction boxes, or other items necessary to comply with the design intent and applicable codes. Contractor shall supply all electrical equipment and components necessary to ensure the water amenity operates in accordance with the design intent.
2. All metallic components within the perimeter of or within 5-feet outside of the water amenity must be properly bonded in accordance with NEC Section 680.
3. Contractor shall provide and install conduit and wiring in compliance with the Specifications, applicable codes, and best modern construction practices.
4. Contractor shall fully encase all wiring in underwater or pool edge junction boxes with re-enterrable potting compound.

DRAWING INDEX

SHEET #	DESCRIPTION
LC100	COVER SHEET
LC101	OVERALL SITE PLAN
LC102	ELECTRICAL PLAN
LC201	STRUCTURAL DETAILS
LC202	STRUCTURAL DETAILS
LC301	POOL NOTES AND INFORMATIONS
LC302	SPECIFICATIONS

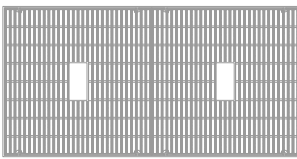







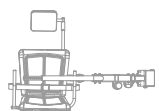

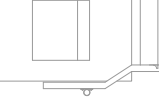










SWIMMING POOL INFO

TxDSHS Classification:.....TxDSHS Class B Pool
Minimum Water Depth:.....3.0 FT.
Maximum Water Depth:.....5.5 FT.
Shallow Water Surface Area:.....2,929 SF.
Deep Water Surface Area:.....480 SF.
Diving Water Surface Area:.....0 SF.
Total Pool Area:.....3,409 SF.
Perimeter:.....294 FT.
Average Depth:.....4.02 FT
Pool Volume:.....102,800 Gal.
Gutter Volume:.....0 Gal.
Surge Tank Volume:.....0 Gal.
Approx. System Volume:.....5,200 Gal.
Total Volume:.....108,000 Gal.
Minimum Turn Over Rate:.....300 GPM.
Design Turn Over:.....370 GPM.
Design Turn Over Rate:.....4.9 HRS.
Total Deck Area:.....6,021 SF.
Maximum Users in Pool:.....214
Maximum Users on Deck:.....120

EQUIPMENT SCHEDULE

Item / Description	Quantity	Manufacturer	Model	Specs / Comments
Circulation System				
Filter Pump	1	Pentair	EQK-750 - 7.5 HP, 460V, 3PH Motor, 9.1A	Minimum flow rate 370 GPM
Filter	1	Pentair	TH54296	Maximum 401 GPM flow rate through
VFD	1	H2FLOW	EF-C-46-12-2-LA-BP-A	Maximum Load is 12.0 Amps
Flow Sensor / Flow Meter	1 ea.	GF Signet	Signet 515 Rotor-X1 / Signet 5090	6" Line Size
Water Level Sensor	1	AquaticControl	ELC-800 W / Deck well	20A BKR
Chemical System				
Chemical Controller	1	Becs Technology	BecSY52	20A BKR
Peristaltic Pump	1	Stenner Pumps	85MHP5	Acid Pump
Peristaltic Pump	1	Stenner Pumps	85MHP5	Bleach Pump
Chemical Tank	1	Stenner Pumps	ST57NC	7.5 Gallon - Acid Tank
Chemical Tank	1	Stenner Pumps	ST530NC	30 Gallon - Bleach Tank
Chemical Spill Tray	1	Eagle Manufacturing	1632	(2) Drum spill containment tray and grate

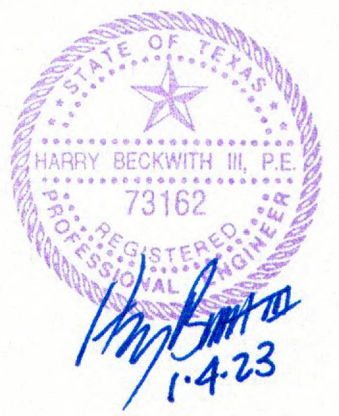
LEGEND

	FILTER MAIN DRAIN
	SKIMMER UNIT
	SIDE WALL RETURN
	BOTTOM RETURN
	WATERFALL WATER LEVEL SENSOR/OVERFLOW
	EMERGENCY DISCONNECT SWITCH
	POOL LADDER
	POOL HAND RAIL
	SWIM LIFT
	LANE ROPE/ROPE ANCHOR
	LIFEGUARD CHAIR
	OUTDOOR SHOWER
	SHOWER DRAIN
	BASKETBALL HOOP, ADD ALT.
	LIGHT POLE
	DISCHARGE LINE
	SUCTION LINE
	OVERFLOW LINE
	DRAIN LINE
	BONDING WIRE
	ELECTRICAL CONDUIT & WIRING

Item / Description	Quantity	Manufacturer	Model	Specs / Comments
In Wall Ladder Rail	0	SR Smith	Figure 4 In-Wall Ladder Hand Rails with 30° setback, 1.90" OD, and 0.145" Wall - Model 101B1 or Equal.	Provide deck anchors and escutcheon plates per Manufacturer's recommendations
In Wall Ladder Step	0	Recreonics	44-054	Provide 3 steps for water depth up to 4-feet, provide 4 steps for water depths exceeding 4-feet
Over Wall Ladder	3	SR Smith	LFB-24-Series	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
Rails	1	SR Smith	3 Bend Rail, 3HR-Series	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
Handicapped Lift	1	Spectrum	Traveler Long Reach - BP350	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
Starting Blocks	0	SR Smith	Legacy Standard Single Post with 26" set back	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
Back Stroke Stanchion	4	SR Smith	10168	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
False Start Stanchion	0	SR Smith	10168	Provide deck anchors and escutcheon plates per Manufacturer's recommendations.
Back Stroke & False Start Flags	2	Recreonics	100' NCAA compliant 92-300	By Owner
Lane Ropes	4	Recreonics	6" Competition 14-330	By Owner
Rope Reel	0	Recreonics	Elite Reel 14-361	By Owner
Life Guard Chair	3	By Owner	66" Sentry LG Stand 42-675	By Owner
Life Hook & Pole	1	Recreonics	Shepard Crook & 16' Pole 12-228	Provide wall mounted hook for storage
Throw Ring & Rope	1	Recreonics	USCG 30" Bouy 12-254 & Fox 40 Throw Bag 12-223	Provide wall mounted hook for storage
Back Board	1	Recreonics	Backboard Package 12-309	By Owner
First Aid Kit	1	Recreonics	24 Unit GP FAK 12-013	By Owner
Pool Water Test Kit	1	Taylor Technologies	K-2005 Complete	Liquid reagent water test kit
Pool Water Test Kit	1	Palintest	Lumiso Pooltest Expert Model LMPXUS	Digital Electronic pool water test system
Wall Brush	1	Spectrum	13210 or Equal	Deluxe 18-inch Pool Brush
Leaf Rake	1	Spectrum	12850 or Equal	Pro series 20-inch X 6-inch leaf rake
Skimmer Head	1	Spectrum	12050	29-inch Pro Vac-Flexible heavy duty vacuum head
Fiberglass Pole	4	Spectrum	13610, 14100, and 14120	(4) 8-foot long fiberglass super handles with sleeves and tool adapter kit for an overall length of 32 feet
Vacuum Hose	1 ea.	Spectrum	12480 and 12670	50-feet of 2-inch heavy duty vacuum hose and 50-feet of 2-inch discharge hose
Vacuum Hose Caddy	1	Spectrum	12500	Stainless Steel vacuum hose caddy
Portable Vacuum Cleaner	1	Spectrum	10600 or Equal	Self-Priming portable vacuum cleaner complete with 150-feet of cord. Cleaner shall be able to handle 5,500 GPH and include a 1.5 HP electric Sta-Rite pump wired for 110VAC. Unit shall be provided with GFI shock protector. Cart shall be solid stainless steel with 105 SF Hammco filter tank. Provide one (1) additional 105 SF cartridge filter, Spectrum Spectra-Vac 1 electric
Poles				Telescopic Poles - provide two (2) fiberglass poles which can be fully adjusted to desired length (between 8 and 16-feet) with a cyclocal locking device, Pool King or equal.
				Vacuum Attachment Poles - provide three (3) 1.25-inch diameter fiberglass poles which can be threaded together to make a single unit up to 24-feet in length. Recreonics or equal.

waterscape CONSULTANTS, INC
VISUAL AND RECREATIONAL WATER AMENITIES
11002 MAIZE LANE
HOUSTON, TEXAS 77041
E-MAIL: HBECKWITH@WATERSCAPECONSULTANTS.COM
TEXAS FIRM REG NO F-02771

1. These documents and referenced specifications are the property of Waterscape Consultants, Inc. They are provided as a visual and descriptive representation of the design intent for the work detailed herein.
2. Use of these documents present in these documents and referenced specifications is granted to the project owner by Waterscape Consultants, Inc. for the express purpose of constructing the work detailed herein at the location noted in the title block of this document. Use of these documents and referenced specifications for constructing work at locations other than noted in this document is expressly prohibited. Waterscape Consultants, Inc. will not be liable for any information contained herein which is used at other locations, for other projects, and for other owners.
3. These documents shall not be used to construct the work detailed herein unless as noted in the plan release area of each document.



ISSUED FOR:		
NO.	DATE	DESCRIPTION
01	02/02/22	ISSUE FOR BID
02	01/04/23	ISSUE FOR REBID

DAVY CROCKETT MEMORIAL PARK
NEW AQUATICS FACILITY

DRAWN BY:	CHECKED BY:	DATE:
H.B.	H.B.	Jan. 04, 2023

POOL NOTES AND INFORMATIONS

LC301

FULL SIZE 24"x36"

PROJ NO: 2019-415

PART I - GENERAL

I.01 SCOPE

- A. Construct the proposed Aquatics Facilities located within the site boundaries as indicated in the Plans and specifications herein. Perform work and furnish all supplementary items and equipment as detailed.
- B. Provide all necessary materials and equipment, including structures and foundations, waterproofing, finishes, hydraulic circulation systems, filtration and water sterilization systems, fittings and piping, water level control and water supply systems, overflow and drain systems, and electrical power and control systems.
- C. The Plans depicting the work are diagrammatic, intended to indicate the proposed scope of work. Equipment and material locations, sizes and orientation may be distorted for clarity in presentation. In all cases where scales are shown, written dimensions shall take precedence over scaled dimensions.

I.02 REQUIREMENTS

- A. Install all materials to comply with the requirements of applicable building ordinances, codes, rules, and regulations of any city, county, state and federal agencies having lawful jurisdiction over this Work.
- B. When the specifications and plans call for or describe materials, workmanship, and construction of a better quality, higher standard or larger size than required by the above agencies, comply with the specifications and plans.
- C. Whether or not mentioned in the specifications or indicated in the plans, furnish any material and labor required for compliance with all rules and regulations.
- D. Provide materials which are new and which comply with applicable standards in every case where such standards have been established for the material in question.
- E. Execute work specified in a first-class and workmanlike manner. Employ only individuals or Contractors skilled in the craft to which they are assigned. Provide adequate supervision to maintain high quality work. Install the work so that it presents a clean and orderly appearance when completed. Locate and install all items which require periodic maintenance to provide ease of access.
- F. Install all material specified herein and shown on the Plans in strict accordance with the manufacturer's instructions and recommendations unless otherwise instructed.
- G. Provide all equipment or material necessary for a complete, ready to operate system, whether or not such items are shown or specified with industry standards, local codes, and the design intent of the Construction Documents.
- H. Unless otherwise indicated, comply with the latest revision at time of bid:
1. Texas Administrative Code, Section 265
 2. International Swimming Pool and Spa Code
 3. National Electric Code, Section 680
 4. American National Standards Institute
 5. American Society of Testing Materials
 6. American Concrete Institute
 7. Concrete Reinforcing Steel Institute
 8. United States Consumer Products Safety Commission
 9. National Sanitation Foundation
- I. Comply with latest revision at time of bid:
1. Americans with Disabilities Act
 2. Texas Department of Licensing and Regulation
 3. The Virginia Graeme Baker Pool and Spa Safety Act

I.03 QUALIFICATIONS

- A. All Mechanical, Electrical and Plumbing Work shall be performed by a qualified Contractor who will provide undivided responsibility for performance of the Work. Contractor shall exhibit evidence of successful completion of similar projects in scope and complexity within the past 5 years.
- B. Pneumatically Placed Concrete (if used) Work shall be performed by a firm with at least 5 years experience in swimming pool and spa construction. Only foremen, nozzle men, gun men, and rod men with at least 3 years of structural experience shall be employed. Satisfactory written evidence of such experience shall be furnished to the Owner upon demand.
- C. Plaster and Tile Work shall be performed by a firm with at least 5 years experience. Satisfactory written evidence of such experience shall be furnished to the Owner upon demand.
- D. Employ craftsmen or subcontractors who have performed similar work on a minimum of 5 previous projects within the last 3 years.

I.04 OPERATION

- A. Prior to Substantial Completion, demonstrate a 7 day, 24 hour per day automatic operation of equipment and systems.
- B. Provide a minimum of 4 complete operations and maintenance manuals covering fountain and pool equipment. Provide bound manuals protected by hard covers, front and back.

I.05 SUBMITTALS

- A. Submit product data and samples for all items specifically indicated by Manufacturer Part or Model Number and for all items covered under standard specifications or standards (such as ASTM, UL, or other standards). Submit product information for all material and assemblies provided by off site vendors including concrete mix design, control panels, pipe manifolds, structural assemblies, stone layout, and prefabricated reinforcing steel.

I.06 GUARANTEE

- A. Provide written warranties, agreeing to repair or replace any pool work including materials, systems, and installation which fails in materials or workmanship or otherwise becomes unseerviceable or objectionable in appearance during the warranty period for two (2) years from date of Substantial Completion.
- B. Provide prompt replacement of all defective workmanship and materials occurring within two (2) years of final acceptance by Owner. This includes all work required to remove and replace defective items and to make all necessary adjustments to restore the entire installation to its original specified conditions at the time of acceptance, including repairs and replacements of other work damaged by enforcement of warranty.

PART 2 - MATERIALS

2.01 GENERAL

- A. Provide equipment not listed but which is obviously required for the complete installation of the pool structure and systems. This equipment includes, but is not limited to, inter-connecting plumbing and piping, valves, special penetrations, supports and hangers, mounting hardware, meters, transformers, and electrical wiring and conduit.
- B. Provide materials in ample quantities as required to avoid delay in the progress of the work and store them so as to prevent interference with other work and damage to or deterioration of the materials.
- C. Transport, handle, store, and protect materials in accordance with the manufacturer's recommendation.

2.02 MECHANICAL

- A. Provide mechanical equipment specified herein and shown on the Plans in the sizes and quantities required to meet the design intent. Provide piping, valves, and connections as recommended by manufacturer or as required for proper operation.
- B. Provide any equipment not listed as supplied by a particular manufacturer but required for a complete ready-to-operate pool system in accordance with local codes and the design intent. This equipment includes, but is not limited to, hardware, gaskets, pipe hangers and supports, and tubing.

2.03 PIPE, FITTINGS, AND APPURTENANCES

- A. Pipe
1. Pipe greater than 3/4" - Schedule 40 PVC iron pipe size, conforms to ASTM D1785.
 2. Pipe 3/4" and smaller - Type M copper, conform to ASTM B86. Wrought sweat type fittings, conform to ASTM B75.
- B. Furnish foundation supports, structural supports, pipe supports, and pipe hangers specified herein, indicated on the plans or required to properly support and brace all piping.
- C. Fittings
1. PVC pipe fittings - Schedule 40 PVC, conform to ASTM D2466.
 2. Schedule 80 PVC pipe fittings - conform to ASTM D2467 for socket connections and ASTM D2464 for threaded connections.
 3. Ductile iron flanged fittings - conform to ASTM A74 and ANSI/AWWA C110.
 4. Use bronze or copper fittings when brass or copper pipe is used.
 5. Make connections between dissimilar metals with dielectric fittings.
 6. Unions - suitable at least 125 PSI and of the same size and material as the adjacent piping.
 7. Flanges - companion type, faced and drilled, complete with 1/8" thick rubber or equal gasket material and suitable for a minimum of 125 PSI. Provide flanges of the same size and material as the adjacent piping.
- D. Valves
1. Valves 2" and smaller - Nibco 2-133 gate valve or equal.
 2. Valves larger than 2" - Nibco LDWD-5022 butterfly valve series or equal.
 3. Automatic solenoid activated valves used for water supply - Toro Series 220 or equal.
 4. Provide valves for use in submerged locations which are specifically designed for such use or approved for such use by the Engineer.
 5. Check valves - Nibco W-920-W water style, spring loaded, double door check or equal.
- E. Pipe Bedding
1. Under all landscaped areas use clean bank run sand free of clay nodules and stones larger than 2" in any dimension to bed all pipes.
 2. Under all structures including pool structures, building foundations, paving, walks, and other similar work use clean bank run sand free of clay nodules and stones larger than 2" in any dimension pug-mill mixed with 2-sacks of cement per ton of sand to bed all pipes.

2.04 ELECTRICAL

- A. Electrical equipment and materials shall comply with the applicable sections of the latest edition of the National Electric Code - National Fire Protection Association, and with NEMA and ASA standards. The electrical equipment shall further comply with Underwriter's Laboratories' standards where such standards have been set.
- B. Comply with National Electric Code and International Swimming Pool & Spa Code, unless local Code Requirements are stricter or call for differing Standards.
- C. Provide Electrical and Control Equipment as indicated in Plans or as required for proper operation of equipment detailed in Plans and specified herein in accordance with the design intent. Install all Electrical Equipment per manufacturer's recommendations, unless noted otherwise.

2.05 STRUCTURAL FILL

- A. Provide structural fill soil material composed of on-site or imported soils with the following criteria:
1. Soil classification - SC according to United Soil Classification System.
 2. Soil liquid limit - less than or equal to 35.
 3. Soil plasticity index - less than or equal to 20.
 4. Maximum soil particle size - 2" or less.
 5. Fine soil content - less than 20% of the soil shall pass a #200 sieve.
 6. Provide soil free of any organic or otherwise deleterious materials.
 7. Stockpile and reuse soils within the existing excavation area which meet these criteria.
 8. Under drain Gravel - well graded, 3/4" to 1-1/2" stone. Do not use lime stone, shale, or recycled concrete.

2.06 CONCRETE MATERIAL

- A. Ready mix concrete - conform to ASTM C94.
- B. Cement - conform to ASTM C150 or C175.
- C. Water - clean and free of deleterious amounts of acid, alkali, or organic matter.
- D. Coarse aggregate - conform to ASTM C33 with a minimum diameter of 1/2" and a maximum diameter of 1 1/2".
- E. Air entraining agent - conform to ASTM C260.
- F. Air content of fresh concrete - between 3% and 5% per ASTM C138 or C173.
- G. Concrete - Class A with a minimum compressive strength of 4,000 PSI at 28 days, a maximum water content of 6 gallons per bag of cement, a minimum of 5 bags of cement per cubic yard, and a slump of 4" to 6", unless noted otherwise.
- H. Provide a minimum of 1.5 pounds of virgin polypropylene-fiber concrete reinforcement. Fibermesh or equal, added to each cubic yard of concrete during mixing.
- I. Provide Xypex Admix C-1000 or equal non-soluble integral concrete waterproofing admixture in all batch mixed or site mixed concrete. Proportion Xypex admixture in strict accordance with Manufacturer's recommendations for concrete design.
- J. Conform to above specifications for all concrete material including concrete to be pumped and site mixed concrete. Provide a minimum mix time of 2 minutes for site mixed concrete.
- K. At Contractor's option, provide air placed concrete (wet mix "Shotcrete" only, 'dry mix 'Gunite' is not acceptable). Minimum compressive strength of air placed concrete shall be 5,000 PSI at 28 days.

2.07 WATERSTOP

- A. Provide preformed, adhesive backed, waterstop joint sealant strips - Synko-Flex 5F-302 or equal.

2.08 WALL PENETRATIONS

- A. Provide Link Seal type pipe to wall penetration closures as manufactured by Thunderline Corporation or equal in the annular space between the pipe and the wall opening. Follow manufacturer's recommendations to determine the model number and number of interlocking synthetic rubber links required for each pipe size and wall opening.
- B. Provide Link Seal Wall Sleeve as manufactured by Thunderline Corporation or equal for each penetration through architectural or structural walls. Follow manufacturer's recommendations to determine the model number of each wall sleeve.

2.09 ADHESIVE CAPSULE ANCHOR

- A. Provide glass encased adhesive capsule to anchor steel reinforcing bars and threaded rods or anchor bolts into precast concrete structures - Williams S69 or equal.

2.10 GROUT

- A. Grout for Equipment Pads: Use 10 parts Portland cement, 10 parts clean sharp sand, 7 parts non-shrink grout aggregate, and 5 1/2 gallons of water per sack of cement.
- B. Grout for Pavers and Stone Setting Beds: Use a proportional mixture of 360 pounds of thick bed mortar mix (Labcrete 226 available from Labcrete International (512) 295-3336) and 5 gallons of latex mortar additive (Labcrete 3701) prepared in accordance with manufacturer's recommendations. Do not add water to mortar and latex additive mixture.
- C. Portland Cement Mortar: Portland Cement - ASTM C-150, Sand - ASTM C-144, Hydrated Lime - ASTM C-206 Type 5 or ASTM C-207 Type 5.
- D. Mortar Setting Bed Mix Design: One Part Portland Cement to three parts damp sand and 1/5 part hydrated lime, with waterproofing admixture mixed in accordance with manufacturer's directions. Provide bond coat consisting of Portland cement paste applied to dampened concrete substrates.
- E. Tile Grout Mix: One part white Portland cement to one part #30 mesh white sand, with waterproofing admixture mixed in accordance with manufacturer's directions.

2.11 PRE-CAST PRODUCTS

- A. Concrete Products - Provide steel reinforced pre-cast concrete products as indicated in the plans.
- B. Stone Products - Provide polypropylene fiber reinforced cultured stone as indicated in the plans.
- C. Brick/Block coping, Florida block and clay by MasterTile or equal, submit colors for approval.

2.12 PLASTER

- A. Provide quartz based plaster material - Wet Edge Technologies 'Ultima White' or equal. DO NOT use plasters or cementeous waterproofings containing silica. Submit available colors, finishes, and texture for approval.

2.13 TILE

- A. Toe Tile on Steps: Provide and install toe tile, color to be selected by Owner, ceramic glazed, frostproof, skid resistant porcelain tile, size 2" x 2", as indicated. Available from: National Pool Tile or approved equivalent by the Engineer. Provide Owner with 2 sq.ft. of each size and color furnished for the future repair.
- B. Penimeter Tile: Provide and install 6" wide penimeter tile band, color to be selected by the Owner, ceramic glazed, frostproof, smooth porcelain tiles, 2" x 2". Available from: National Pool Tile or approved equivalent by the Engineer. Provide Owner with 2 sq.ft. of each size and color furnished for the future repair.
- C. Deck Mounted Depth and Signage Markers: Provide 6" x 6" glazed, skid resistant, frost proof ceramic tile inlays as manufactured by Inlays Mfg., Inc., or equivalent. Letters and numbers shall be 4" in height. Provide 6" x 6" single tile inlays, glazed, skid resistant, frost proof, with international symbol for "No Diving" and "No Running" at locations indicated in Plans. Depth marker locations shall be installed at a maximum of 2'-0" depth intervals and at a maximum of 25 feet apart, as shown on plans.
- D. In-Pool Tiled Depth Markers: Provide 6" x 6" glazed, smooth, frost proof ceramic tile inlays as manufactured by Inlays Mfg., Inc., or equivalent. Provide 6" x 6" single tile inlays, glazed, smooth, frost proof, with number adjusted toward top of marker. Letters and numbers shall be 4" in height. Depth marker locations shall be installed at a maximum of 2'-0" depth intervals and at a maximum of 25 feet apart, as shown on Plans.

2.14 PAINT

- A. Provide Rust-O-Leum extenor flat black or equal.

2.15 CAULK

- A. Primer - P-53+ caulk primer available from Pscora Corporation or equal.
- B. Caulk - GC-2+ polysulfide caulk available from Pscora Corporation or equal.
- C. Backer Rods - Closed cell backer rod, conform to ASTM D-1622-75, Sonneborn or equal.

2.16 EPOXY

- A. Provide 2-component, 100% solids, structural epoxy adhesive - Sikadur 32 or equal.

2.17 METALLIC ITEMS

- A. Miscellaneous metals - hot dip galvanized, unless noted otherwise.
- B. Fasteners
1. Provide stainless steel fasteners, including but not limited to nuts, bolts, washers, and threaded rod.
 2. In all applications where the fasteners will be exposed and accessible provide tamper resistant fasteners and hardware. Do not use "Lock-Tite" or other methodology which would limit periodic removal of the fasteners.
- C. Concrete Reinforcing Steel Material:
1. Welded wire fabric - conform to ASTM A185 with 10 gage and 6" wire spacing. Furnish in flat sheets only.
 2. Lap welded wire fabric a minimum of 6'.
 3. Provide deformed and smooth steel reinforcing bars conforming to ASTM A615, Grade 60.
 4. Bend, clean, place, and tie steel reinforcing bars in accordance with ACI standards.
 5. Unless noted otherwise, lap steel reinforcing bars at splices 30 bar diameters, with a 12" minimum lap. Do not use welded or threaded connector splices.
- D. Ancillary Equipment including grab rails, Ladders, Handicapped Lifts, and Cup Anchors. 300 series stainless steel w / anchors and appurtenances in compliance with manufacturers recommendations

2.18 POOL SIGNAGE

- A. Provide and install pool signs in accordance with Texas Administrative Code Section 265.201(j)(6).

2.19 SHADE STRUCTURES

- A. Provide 10' x 20' x 8' Eave Height four (4) Post Rectangular Hip and Ridge Shade Structure including 3-inch (min) square steel tube posts, 2-inch (min) square steel tube Rafterns and Cross Members, 1/4-inch galvanized steel cable seam inserts, base and fabric anchor plates, and J-Style anchor bolts. All exposed metal shall be galvanized steel and powder coated - color to be approved by Owner prior to installation. Available from All Shade (Houston, TX), Southern Shade (The Woodlands, TX), or equal.
- B. Provide 8' x 8' x 5' Eave Height single Pole Square Umbrella Style Shade Structure including 3-inch (min) square steel tube posts, 2-inch (min) square steel tube Rafterns and Cross Members, 1/4-inch galvanized steel cable seam inserts, base and fabric anchor plates, and J-Style anchor bolts. All exposed metal shall be galvanized steel and powder coated - color to be approved by Owner prior to installation. Available from All Shade (Houston, TX), Southern Shade (The Woodlands, TX), or equal.
- C. Provide Gale Pacific Commercial 95 340 Architectural Shade Fabric or equal (color to be approved by Owner) for all shade structures.

PART 3 - EXECUTION

3.01 GENERAL

- A. Coordinate installation of related materials specified and drawn elsewhere.
- B. Install material and equipment specified herein and shown on the Plans per the manufacturer's instructions and recommendations, unless noted otherwise.
- C. Upon completion of each phase of this work, test equipment, as necessary, to show that it complies with all requirements specified. Testing shall be done in a manner and for duration as directed by the Engineer.
- D. Upon Substantial Completion of work, place the systems in automatic operation and make tests, adjustments, and corrections, as necessary, until systems are proven to be in proper operating condition.
- E. Locate and items which require periodic maintenance such as light fixtures, valves, and strainers to provide ease of access.
- F. Leave all disturbed areas in the pre-construction condition including grading, landscaping, paving, and utilities.
- G. Do not block access to site during Work. Provide barricades as necessary to limit access to Work area.

3.02 MECHANICAL

- A. Install mechanical equipment as detailed in the Plans. Notify Engineer immediately if proposed layout, spacing, dimensions, or clearances conflict with any site conditions.
- B. Provide incidental hardware including bolts, washers, nuts, and gaskets as necessary and in the quantities required to ensure all equipment is securely attached and sealed against the anticipated system pressures and vibration.

3.03 PIPE, FITTINGS, AND APPURTENANCES

- A. Install piping, equipment, and systems with utmost precautions to prevent noise and vibration transmission. Isolate equipment that would tend to cause noise and vibration from adjacent structures with suitable vibration dampeners. Isolate all piping connected to this equipment.
- B. Pipe Installation
1. Use Schedule 80 pipe and fittings for all discharge and pressurized piping systems 3/4" and larger. Use Schedule 40 for all pump intake and drainage (non-pressurized) piping systems. Use drawn or coiled copper tubing and pipe for all discharge and pressurized piping systems smaller than 3/4".
 2. Install piping straight and true in accordance with the best modern practice.
 3. Make pipe runs as direct as possible using a minimum number of fittings.
 4. Install pipe runs with a continuous rise or fall to prevent air pockets. When site conditions dictate that a pipe line will have a high point, an automatic air release valve shall be installed. Notify Engineer immediately if site conditions require a high point in a suction or gravity line.
 5. Cut pipes accurately to fit. Bending or splicing of pipe will not be permitted.
 6. Cut pipe ends square. Thoroughly ream or file pipe ends and wipe clean to remove burrs prior to joining.
 7. Provide a straight run of at least 8 pipe diameters for all pump suction lines into the pump eye, unless otherwise specified or shown on the Plans.
 8. Prior to placement of permanent covering, inspect all pipe, fittings, and accessories for defects and replace all defective, damaged or unsound material.
 9. Remove foreign material from inside the pipe before it is covered or embedded.
 10. Provide clean cuts as specified herein, unless noted on the Plans or as required for conformance with Standard Specifications or standard trade practices.
- C. Pipe Connections
1. Make screwed joints water tight and torque to comply with manufacturer's recommendations.
 2. Solder joints for copper tubing with a non-corrosive paste flux and suitable solder material.
 3. Install unions or flanged connections on at least 1 side of all valves and at all equipment locations so that such equipment may be readily disconnected from the system.
- D. Pipe Supports - Support piping to maintain the required grade and slope, to prevent vibration, and to secure pipe in place. If necessary, arrange supports so as to provide for expansion and contraction of piping.
- E. Valves
1. Locate valves required for control or isolation of any part of the fountain mechanical systems in an accessible position. Where several valves are related as to function, group them together wherever possible or as indicated on the plans.
 2. Install valves with operator above piping unless noted or shown otherwise.
 3. Identify valves as to purpose with permanently numbered tags. List in sequence and place on an approved schedule the number, location, and purpose of each valve. Seal valve schedule in a plastic laminate and include with the Operation and Maintenance Manuals.
- F. Bedding
1. Install a 3-inch minimum thickness of compacted bedding under and around buried piping.
 2. Install a poured in place concrete thrust block with a minimum volume of 1 cubic feet at all discharge pipe direction changes and tees.
- G. Testing of Piping Systems - Pressure test all water piping systems at 30 PSI minimum for a minimum of 4 hours and prove them free of leaks or other defects prior to final connection and backfill.
- H. Overflow and Drainage - Conform with local codes and regulations when connecting drains to public services.
- I. Penetrations - Saw cut, core drill or cast-in-place holes, penetrations, and removable sections in and through concrete walls, floors, or ceilings. No hammer and chisel type penetrations will be allowed. Seal all pipe penetrations with seal seals.
- J. Mark exposed piping with paint or decals indicating service and flow direction. Use different colors for different services. Place markings no more than 36 inches apart.

3.04 ELECTRICAL

- A. Install and connect electrical equipment specified herein or shown on the Plans in strict accordance with the manufacturers' instructions and recommendations, unless noted otherwise. Provide and install all necessary light fixtures, wiring, conduit, junction boxes, fittings, grounding, and other electrical material and services as necessary to place the pool systems into proper operation.
- B. Comply with the special provisions stated in the NEC Section 680 concerning electrical work in pools and spa.
- C. Make electrical connections to mechanical equipment specified herein and shown in the plans as required to place this equipment in operating service.
- D. Bond all metallic pool fittings and reinforcing mats to ground rod(s) in accordance with NEC
- E. Make connection to junction boxes in or adjacent to the pool tight with thread sealant. Provide and install a re-entrable urethane potting compound in all junction boxes and deck boxes prior to hiling the pool.

3.05 STRUCTURAL FILL

- A. Ensure excavation, grading, fill, and compaction are in compliance with best modern practices.
- B. Notify Engineer if any unsatisfactory materials such as water bearing soils and rock are encountered during excavation. Replace unsatisfactory soils with Structural Fill Material as specified herein to the limits directed by the Engineer.
- C. Proof roll area to receive structural fill and excavate any soft spots and areas with exposed organic material to a minimum depth of 24" below finished grade. Replace excavated soils with soil meeting the requirements for structural fill material and compact to a minimum of 95% ASTM D698 density between 2% and 5% above optimum moisture content.
- D. Install the structural fill in the areas specified in loose lifts with a maximum thickness of 9-inches.
- E. Compact each layer of structural fill to a minimum of 95% ASTM D698 density between 2% and 5% above optimum moisture content. Use care to achieve minimum compaction around pipes, structural footings, and other obstructions in the work area.
- F. Provide Engineer with 2 days notice of any structural fill installation. Allow Engineer and Technicians access to site during installation of structural fill for sampling and testing.

3.06 CAST IN PLACE CONCRETE

- A. Construct all concrete structures to the lines and grades shown in the Plans.
- B. Verify location, orientation, elevation, and other aspects of work prior to installation.
- C. Verify all work which will be covered by concrete work has been completed.
- D. Notify Engineer immediately if any site conditions or existing work differs from the Plans.
- E. Pool Structure Tolerances (including plaster or stone finish)
1. Elevation tolerance of top of pool walls shall be +/- 1/4-inch.
 2. Thickness tolerance of pool walls shall be +/- 1/2-inch.
 3. Plan tolerance from finished face of work to opposite face shall be +/- 1/2-inch.
- F. Form Work
1. All form material and formwork shall be in accordance with acceptable modern practice.
 2. The location of all expansion and construction joints not specifically shown in the documents shall be approved by the Engineer prior to placing reinforcing steel.
- G. Reinforcing Steel and Miscellaneous Metals
1. Install concrete steel reinforcing in accordance with the ACI standards.
 2. All reinforcing steel, anchor bolts, and other inserts shall be secured in position and subject to inspection per local ordinances as required prior to placing concrete.
 3. All conduit and pipe indicated as cast into concrete structures shall be wired to adjacent reinforcing steel.
 4. All reinforcing steel shall be fabricated, shipped, stored, treated, and placed in accordance with acceptable modern practice.
 5. All miscellaneous hardware and fabricated metals, except reinforcing steel and exposed Stainless Steel, shall be primed and painted at the Architects direction.
 6. Bond all metallic pool fittings and reinforcing mats to ground rod(s) in accordance with NEC.

- H. Concrete Placement:
1. Securely brace or support steel reinforcement to prevent shifting during concrete placement.
 2. Convey, place and consolidate concrete in accordance with current industry standards. Arrange construction schedule so all concrete in any one pour can be placed and finished in daylight hours.
 3. If a concrete pump is used to place the concrete, arrange for skilled technicians familiar with this operation.
 4. Provide a smooth finish to top of concrete walls. Install to line and grades shown on Plans.
 5. Allow concrete to cure for a minimum of 72 hours before working in areas adjacent to the fresh concrete. Allow concrete to cure for a minimum of 7 days before placing any load or secondary pour on structure.
- I. Air placed concrete (Gunitex) is not included in these specifications. If used contractor shall comply with engineering specifications provided by others.

3.07 ADHESIVE CAPSULE ANCHOR

- A. Drill holes in fully cured concrete or grout to the dimension and depth recommended by the Manufacturer for the specific anchor to be used. Install anchor bolts and torque nuts per the Manufacturer's recommendations

3.08 PRE-CAST PRODUCTS

- A. Provide precast products which are manufactured, shipped, stored, and installed per standard industry practice.
- B. Ensure that all joints between the various sections of a structure are watertight.
- C. Provide bedding and backfill material per the Manufacturer's recommendations to ensure proper support, leveling, and drainage around structure.

3.09 PLASTER

- A. Water blast finished concrete surface of pool to remove dust, oil, and other loose or deleterious material. If necessary, prepare pool concrete which is to receive a plaster finish by grit blasting or bush hammering to produce a rough bonding of plaster to concrete. If necessary to ensure proper bonding of plaster to concrete, acid wash interior of pool with 20 Baume muriatic acid.
- B. Apply the plaster in the following average thickness:
1. Apply first coat with a minimum thickness of 1/8-inch and a maximum of 1/4-inch.
 2. Apply second coat with a maximum thickness of 1/4-inch.
 3. Allow first coat of plaster to cure for 24 hours before applying second coat.
 4. Float surface of second coat with a wood float to form a dense level surface.
- C. Immediately upon completion of plaster installation, fill pool with potable water. DO NOT allow high velocity water to impact plaster. Keep walls wet during pool filling.
- D. Repair or replace damaged or cracked plaster to match existing.

3.10 TILE

- A. Install the tile in accordance with the Manufacturer's recommendations and the standards referenced herein

3.11 PAINT

- A. Paint all PVC pipe and fittings exposed to exterior weather conditions with 2 coats per Manufacturer's instructions. Brush or spray paint to uniformly coat all surfaces.

3.12 CAULK

- A. Install appropriate sized backer rod in expansion joints and other areas which receive caulking
- B. Ensure all caulk placed in deck joints in continuous and watertight.

3.13 METALLIC ITEMS

- A. Clean all oil, grease, lubricants, or other deleterious materials from metallic items prior to installation. If necessary to ensure corrosion resistance, apply a cold galvanizing compound, machine oil, or other protective coating to exposed metals.
- B. Install structural steel members in strict accordance with the AISC.

3.14 SIGNAGE

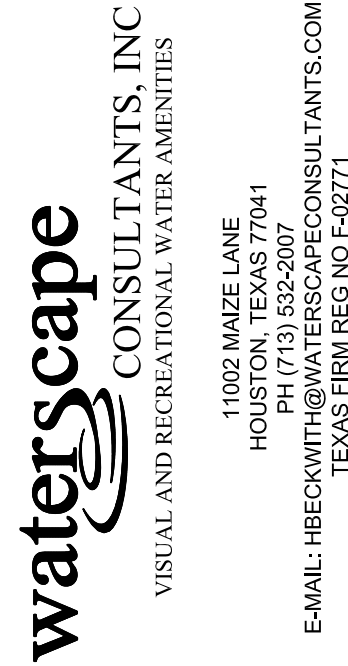
- A. Install signs within pool area as directed by owner and in accordance with manufacturer's recommendations.

3.15 SHADE STRUCTURES

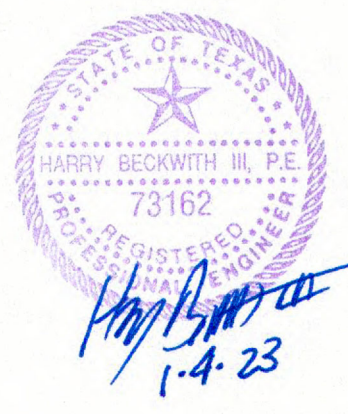
- A. Install shade structure in accordance with manufacturer's recommendations.

3.16 POOL FILLING, START-UP AND COMMISSIONING

- A. Upon completion of all work within the pool perimeter, including circulation system, fill the pool with water from a source designated by the Owner. Provide a schedule including but not limited to pipes, hoses, meters, and labor to fill the pool to the design water level after construction.
- B. Provide Owner with a minimum of 1 replacement unit for all expendable items including lamps.
- C. Backwash the filter, clean strainers, adjust and balance the water flow through the returns, and vacuum pool area to leave systems in a clean and normally operating condition for Owner's use.
- D. Provide assistance as necessary to the Owner and Engineer for balancing the pool systems. This assistance may require the use of general labor or skilled labor such as plumbers or electricians as necessary to achieve the desired pool operation.
- E. Schedule a complete equipment operation and maintenance review with the Owner, Engineer, and maintenance personnel. Ensure systems are programmed and time clocks are set to Owner's requirements prior to O&M review.
- F. Assist Engineer in instructing Owner in use and maintenance of equipment specified herein.



1. These documents and referenced specifications are the property of Waterscape Consultants, Inc. They are provided on a visual and descriptive representation of the design intent for the work detailed herein.
2. Use of the information presented in these documents and referenced specifications is granted to the project owner by Waterscape Consultants, Inc. for the express purpose of constructing the work detailed herein at the location noted in the title block of this document. Use of these documents and referenced specifications for constructing work at locations other than noted in this document is expressly prohibited. Waterscape Consultants, Inc. will not be liable for any information contained herein when it is used for any other projects, and for other owners.
3. These documents shall not be used to construct the work detailed herein unless as noted in the plan notes and one of each document.



ISSUED FOR:		
NO.	DATE	DESCRIPTION
01	02/02/22	ISSUE FOR BID
02	01/04/23	ISSUE FOR REBID



SPECIFICATIONS

LC302

FULL SIZE 24"x36"

PROJ NO: 2019-415