CONSTRUCTION PLANS FOR

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

PROJECT NO. SP19-1

ACCOUNT NUMBERS:

147120.BLDGS31.4053122-541104

147190.LANDIMP.5455301.6014-4054111-541101

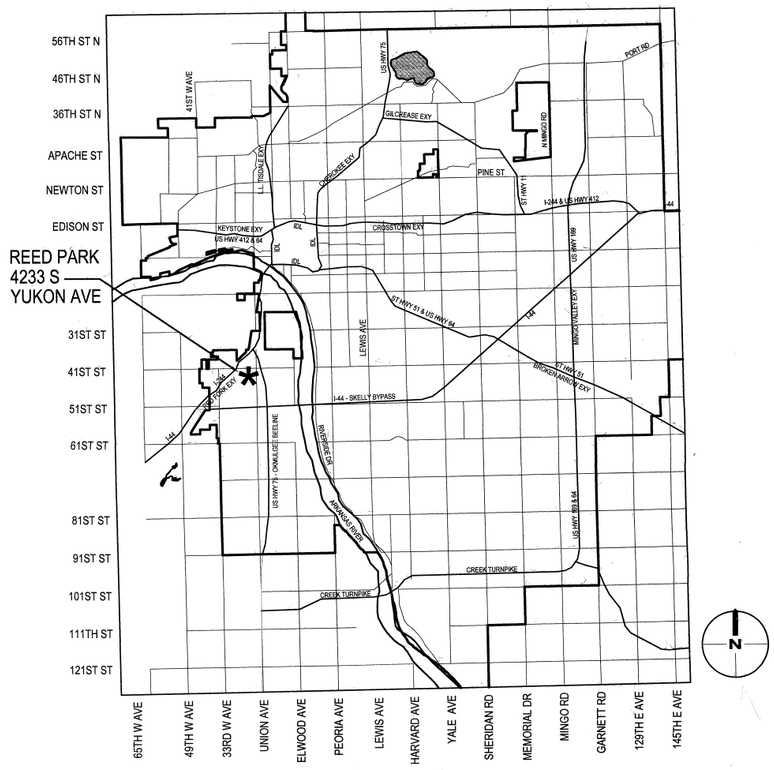
CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

100% CONSTRUCTION DRAWINGS: 7-24-2020

DRAWING INDEX	
Sheet Number	Sheet Title
--	COVER SHEET
G100	PAY ITEMS
G101	SITE SURVEY
G102	OVERALL SITE KEY
G103	TREE PROTECTION PLAN
G104	SITE DEMOLITION PLAN
G105	SITE MATERIALS PLAN
C100	UTILITY PLAN
C101	SANITARY SEWER P&P
C102	WATER EXTENSION P&P
C103	SERVICE LINE P&P
C104	STORM P&P
G107	SITE LAYOUT PLAN
G108	SITE GRADING PLAN
G109	SITE DETAILS - A
G110	SITE DETAILS - B
G111	SHADE STRUCTURES
G200	POOL DECK LAYOUT PLAN
G201	POOL DECK GRADING PLAN
G300	SPLASH PAD LAYOUT PLAN
G301	SPLASH PAD GRADING PLAN
G302	SPLASH PAD EQUIPMENT PLAN & SCHEDULE
G303	SPLASH PAD DETAILS - A
G304	SPLASH PAD DETAILS - B
G305	SPLASH PAD DETAILS - C
G306	SPLASH PAD DETAILS - D
G307	SPLASH PAD DETAILS - E
G001	GENERAL INFORMATION & CODE ANALYSIS
A001	SCHEDULES AND DETAILS
A002	EQUIPMENT SCHEDULE & DETAILS
A003	PARTITION TYPES & DETAILS
A101	ARCHITECTURAL FLOOR PLAN - REFERENCE
A102	ARCHITECTURAL FLOOR PLAN - DIMENSION
A103	REFLECTED CEILING PLAN AND ROOF PLAN
A201	EXTERIOR ELEVATIONS
A301	BUILDING SECTIONS
A311	BUILDING SECTIONS & DETAILS
A312	BUILDING SECTIONS & DETAILS
A500	ARCHITECTURAL DETAILS
S001	GENERAL STRUCTURAL NOTES
S002	SPECIAL INSPECTIONS

DRAWING INDEX CONT.	
Sheet Number	Sheet Title
S100	FOUNDATION PLAN
S101	ROOF FRAMING PLAN
S501	FOUNDATION DETAILS
S511	FRAMING DETAILS
S601	CMU DETAILS
P001	PLUMBING LEAD-IN
P101	PLUMBING PLANS
P601	PLUMBING SCHEDULES
M001	MECHANICAL LEAD-IN
M101	MECHANICAL PLAN
M601	MECHANICAL SCHEDULES
E001	ELECTRICAL LEAD-IN
ES101	ELECTRICAL SITE PLAN
E101	ELECTRICAL PLANS
E601	ELECTRICAL SCHEDULE
PL100	OVERALL AQUATIC PLAN
PL101	GENERAL DETAILS AND SCHEDULES
PL110	POOL A - LEISURE POOL PLAN
PL111	POOL A - LEISURE POOL DIMENSION PLAN
PL112	POOL A - LEISURE POOL SECTIONS
PL113	POOL A - LEISURE POOL DETAILS
PL114	POOL A - LEISURE POOL DETAILS
PL200	STRUCTURAL NOTES, PLAN, AND SCHEDULE
PL211	STRUCTURAL DETAILS
PL212	STRUCTURAL GENERAL DETAILS
PL220	STRUCTURAL WALL DETAILS
PL300	OVERALL PIPING PLAN
PL301	PIPING DETAILS
PL310	POOL PIPING PLAN FILTRATION & ACTIVITY PIPING PLAN
PL311	POOL GUTTER AND SUCTION PIPING PLAN
PL400	MECHANICAL EQUIPMENT PLAN
PL401	MECHANICAL SCHEDULE
PL402	MECHANICAL DETAILS
PL403	MECHANICAL DETAILS
PL404	MECHANICAL DETAILS
PL405	MECHANICAL DETAILS
PL406	MECHANICAL DETAILS
PL500	MECHANICAL SCHEMATIC
PL501	ELECTRICAL SCHEMATIC
PL600	PIPE PENETRATION



CITY OF TULSA

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH CURRENT CITY OF TULSA CODES AND ORDINANCES, ENGINEERING SERVICES STANDARDS, AND TULSA PARKS STANDARDS AND SPECIFICATIONS. (CITY OF TULSA ORDINANCES AND CODE AMENDMENTS SUPERCEDE NATIONAL CODES.)

CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING, AND ANY OTHER ITEMS LOCATED WITHIN AND OUTSIDE THE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR THROUGH HIS WORK IN THIS CONTRACT SHALL BE REPAIRED TO ORIGINAL CONDITION, BY THE CONTRACTOR, AT HIS OWN EXPENSE.

CONTRACTORS WILL COORDINATE WITH IDENTIFIED MAINTENANCE OPERATIONS PERSONNEL FOR APPLICATION, SHUT OFF, AND REMOVAL OF ALL UTILITIES.

CITY OF TULSA STANDARD DETAILS

102	PROJECT SIGN
126	SILT FENCE AND CONSTRUCTION ENTRANCE
304	BEDDING DETAIL - RIGID PIPE
305	BEDDING DETAIL - SEMI RIGID PIPE
351	BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE
363	RISER DETAIL WITH SLOPED TRENCH
756	PRIVATE STORM SEWER CONNECTED TO PUBLIC STORM SEWER

UTILITY COORDINATION BOX	
	NUMBER
ENGINEERING SERVICES	
WATER DESIGN	918-596-9566
WASTEWATER DESIGN	918-596-9564
TRANSPORTATION DESIGN	918-596-9636
TRAFFIC ENGINEERING DESIGN	918-596-9744
STORMWATER DESIGN	918-596-9498
ONG	918-831-8261
COX COMMUNICATIONS	918-286-4716
PSO/AEP	918-250-6257
PARKS MAINTENANCE	918-596-2486

PLANS PREPARED BY:

ALABACK DESIGN LANDSCAPE ARCHITECTS

GH2 ARCHITECTS

CEC

WTI WATER TECHNOLOGY INC.

APPROVED BY

CITY ENGINEER — DATE 10.02.2020

PARKS DIRECTOR — DATE 9-29-2020

BEFORE YOU DIG CALL OKIE

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION: SP19-1

SUMMARY OF PAY QUANTITIES

#	DESCRIPTION	PAY ITEM NOTES	UNIT	QTY
01	OWNER'S ALLOWANCE	1	ALLOW	1
02	GENERAL SITE CONDITIONS	2	LOT	1
03	SWPPP DOCUMENTATION & MANAGMENT	3	LOT	1
04	PAVEMENT SAW CUT	4	LF	90
05	DEMOLITION	5	LOT	1
06	CONSTRUCTION STAKING	6	LOT	1
07	EXCAVATION & GRADING	7	CY	3700
08	STRIP & STOCKPILE OF TOPSOIL	8	CY	600
09	IMPORTED GENERAL FILL	9	CY	250
10	BERMUDA SOD	10	SY	5100
11	KNOX BOX	11	EA	1
12	5" THICK CONCRETE SIDEWALK	12	SY	1870
13	5" THICK COLORED CONCRETE - TAN	13	SY	264
14	5" THICK COLORED CONCRETE - ORANGE	14	SY	175
15	3" METAL POST AND CHAIN	15	EA	3
16	CONDUIT AND WIRING TO LIGHTS	16	LF	350
17	POLE LIGHT AND FOOTING	17	EA	6
18	ELECTRICAL SERVICE	18	SYSTEM	1
19	1" BURIED ELECTRICAL CONDUIT AND WIRING	19	LF	91
20	1" SURFACE MOUNTED ELECTRICAL CONDUIT AND WIRING	20	LF	10
21	1 1/2" BURIED ELECTRICAL CONDUIT AND WIRING	21	LF	300
22	1 1/2" SURFACE MOUNTED ELECTRICAL CONDUIT AND WIRING	22	LF	10
23	2" TELEPHONE CONDUIT	23	LF	70
24	2" BACKFLOW PREVENTER	24	EA	1
25	2" PEX WATER LINE	25	LF	508
26	1 1/2" PEX PIPE - EQUIPMENT LINES	26	LF	620
27	3/4" PEX PIPE	27	LF	55
28	4" SCH40 PVC DRAIN LINE	28	LF	55
29	6" SCH40 PVC DRAIN LINE	29	LF	490
30	8" SCH40 PVC DRAIN LINE	30	LF	150
31	12" SCH40 PVC DRAIN LINE	31	LF	290
32	5" CHANNEL DRAIN	32	LF	153
33	12" DECK DRAIN	33	EA	2
34	18" AREA DRAIN	34	EA	6
35	18" WATER PLAYGROUND DRAIN, P-TRAP	35	EA	1
36	24" WATER PLAYGROUND DRAIN, P-TRAP	36	EA	1
37	GATE VALVE IN VALVE BOX	37	EA	3
38	5' STORM SEWER MANHOLE	38	EA	1
39	2" GAS LINE	39	LF	168
40	8' HT. BLACK VINYL COATED CHAIN LINK FENCE	40	LF	398
41	3' WIDE x 8' HT. BLACK VINYL COATED CHAIN LINK FENCE GATE	41	EA	2
42	3.5' WIDE x 8' HT. BLACK VINYL COATED CHAIN LINK FENCE GATE	42	EA	6
43	DOUBLE 5' WIDE x 8' HT. BLACK VINYL COATED CHAIN LINK FENCE GATE	43	EA	1
44	PANIC HARDWARE	44	EA	6
45	POOL BUILDING - COMPLETE	45	SYSTEM	1
46	POOL BUILDING - PAD	46	CY	140
47	POOL - COMPLETE	47	SYSTEM	1
48	POOL - PAD	48	CY	215
49	WATER PLAYGROUND - PAD	49	CY	306
50	WATER PLAYGROUND PLAY EQUIPMENT - COMPLETE	50	LOT	1
51	VAULT - COMPLETE, WATER PLAYGROUND CONTROLLER, AND ACTIVATOR	51	LOT	1
52	DRINKING FOUNTAIN (INCLUDING CONNECTIONS, SHUTOFF VALVE)	52	EA	1
53	SHADE SHELTER RELOCATON	53	LOT	1
54	WATER PLAYGROUND STONE WORK	54	TON	62
55	COORDINATION WITH PSO	55	LOT	1
56	SITE FURNISHINGS INSTALLATION	56	LOT	1

SUMMARY OF PAY QUANTITIES - ALTERNATES

#	DESCRIPTION	PAY ITEM NOTES	UNIT	QTY
57	ADDITIVE ALTERNATE 1 - SYNTHETIC TURF	57	LOT	1
58	ADDITIVE ALTERNATE 2 - ENTRANCE SHADE ACCENT	58	LOT	1
59	ADDITIVE ALTERNATE 3 - REFILLABLE CO2 TANK	59	LOT	1
60	ADDITIVE ALTERNATE 4 - SITE FURNISHINGS	60	LOT	1
61	DEDUCTIVE ALTERNATE 5 - CMU BLOCK	61	LOT	1

SUMMARY OF ALTERNATES

ADDITIVE ALTERNATE #1: SYNTHETIC TURF
PROVIDE AND INSTALL SYNTHETIC TURF AND SYSTEM AS DETAILED ON PLANS. BASE BID IS SOD FOR SYNTHETIC TURF AREA. REMOVE THE COST OF SOD WHERE TURF IS INSTALLED.

ADDITIVE ALTERNATE #2: ENTRANCE SHADE ACCENT
INCLUDES STRUCTURE IN ITS ENTIRETY, FOOTINGS AND HARDWARE, AND MATCHING DECORATIVE ENTRANCE GATE.

ADDITIVE ALTERNATE #3: REFILLABLE C02 TANK
REPLACES CANISTERS WITH PERMANENT CO2 TANK. INCLUDES EXTERNAL REFILL PORT AND ALL PLUMBING/FIXTURES NEEDED TO COMPLETE THE CONVERSION.

ADDITIVE ALTERNATE #4: SITE FURNISHINGS
BASE BID IS FOR THE CITY OF TULSA TO PURCHASE THE SITE FURNISHINGS (BENCHES, PICNIC TABLES, AND BIKE RACKS) AND THE CONTRACTOR TO INSTALL THEM. THIS ADDITIVE ALTERNATE IS FOR THE CONTRACTOR TO PURCHASE THE SITE FURNISHINGS.

DEDUCTIVE ALTERNATE #5: CMU TO REPLACE METAL PANEL
DEDUCT METAL PANELS FROM ABOVE THE CMU AND REPLACE WITH ADDITIONAL CMU.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE PAID FOR PAY ITEMS ON THE BASIS OF ACTUAL QUANTITY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SURVEY INFORMATION PHOTOS TO VERIFY ANY ADDITIONAL QUANTITIES BEYOND WHAT IS SHOWN ON THE PAY ITEMS SCHEDULE.

2. BASIS OF PAYMENT FOR ITEMS OF WORK:
FULL COMPENSATION FOR FURNISHING ALL SUPPLIES, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, AND LABOR REQUIRED TO DO THE WORK.

3. ITEMS LISTED OR SHOWN ON DRAWINGS AND/ OR DESCRIBED IN SPECIFICATIONS THAT ARE NOT INCLUDED AS A SEPARATE PAY ITEM QUANTITY SHALL BE CONSIDERED INCIDENTAL AND THE COST SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS. THE PRICE BID FOR ALL WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, INCIDENTALS, AND ALL OTHER REQUIRED ITEMS TO COMPLETE THE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.

PAY ITEM NOTES

1. APPROVED BY THE OWNER PRIOR TO USE.
2. INCLUDES ALL ITEMS IDENTIFIED IN SPECIFICATION SECTIONS 01 5000 TEMPORARY FACILITIES AND CONTROLS AND 01 5639 TEMPORARY TREE AND PLANT PROTECTION.
3. INCLUDES DOCUMENTATION AND CONTINUING MAINTENANCE OF POLLUTION PREVENTION MEASURES DURING THE DURATION FOR THE PROJECT.
4. SAW CUT FULL DEPTH REQUIRED FOR SPECIFIED PAVEMENT DEMOLITION.
5. INCLUDES DEMOLITION AND DISPOSAL OF ALL ITEMS NOTED ON THE DEMOLITION PLAN.
6. SURVEY AND CONTROL AND SETTING REFERENCE HORIZONTAL AND VERTICAL POINTS FOR CONSTRUCTION COMPONENTS. PROVIDE LICENSED SURVEY OF FORM-WORK AND DRAIN ELEVATIONS OF POOL AND FINISH FLOOR OF BUILDING PRIOR TO POURING CONCRETE FOR APPROVAL BY OWNER AND ARCHITECT.
7. EXCAVATION OF ALL MATERIALS ENCOUNTERED. MOVING, PLACEMENT, AND COMPACTION OF EXISTING SOILS AS REQUIRED ON SITE TO ACHIEVE FINISH ELEVATIONS SHOWN ON SITE GRADING PLAN. INCLUDES LIFTING OF ANY MANHOLES OR ACCESS HATCHES TO FINISH GRADE IF ENCOUNTERED. EXISTING EXCAVATED SOIL SHOULD BE USED BEFORE IMPORTING SOIL IF SUITABLE FOR GENERAL FILL. CONTRACTOR TO SPREAD AND DRY EXISTING SOIL, IF NEEDED, TO MAKE SOIL SUITABLE FOR GENERAL FILL.
8. STRIPPING AND STOCKPILING OF TOP 4" OF SOIL AND THE REPLACEMENT OF THE TOPSOIL DURING FINISH GRADING.
9. FURNISHING, PLACEMENT, AND COMPACTION OF GENERAL FILL IN PLACE PER CITY OF TULSA STANARDS.
10. LAYING AND ROLLING OF BERMUDA SOD. INCLUDES PREPARING FINAL GRADE TO SMOOTH, EVEN TEXTURE, LAYING SOD, AND ROLLING THE SOD TO AN EVEN TEXTURE. INCLUDES MAINTENANCE PERIOD AS DESCRIBED IN SPECIFICATIONS.
11. KNOX BOX COMPLETE IN PLACE
12. INSTALLATION OF 5" THICK 3500 PSI CONCRETE SLABS WITH REINFORCEMENT. ITEM INCLUDES FORMS, EXPANSION AND SAW CUT JOINTS, ZIPCAP, JOINT SEALANT, AND AGGREGATE BASE.
13. INSTALLATION OF 5" THICK 3500 PSI CONCRETE SLABS WITH REINFORCEMENT. ITEM INCLUDES FORMS, EXPANSION AND SAW CUT JOINTS, COLORED JOINT SEALANT, CONCRETE COLORANT, AND AGGREGATE BASE.
14. INSTALLATION OF 5" THICK 3500 PSI CONCRETE SLABS WITH REINFORCEMENT. ITEM INCLUDES FORMS, EXPANSION AND SAW CUT JOINTS, COLORED JOINT SEALANT, CONCRETE COLORANT, AND AGGREGATE BASE.
15. PER DETAIL ON PLANS, PROVIDE AND INSTALL 3 INCH DIA. STEEL POST AND CONCRETE FOOTING, FOR CITY OF TULSA TRASH RECEPTACLES. INCLUDE CHAINS, PER DETAIL.
16. INCLUDES LABOR, EQUIPMENT, MATERIALS AND ACCESSORIES, EXCAVATION, CONDUIT, WIRING, AND CONNECTION TO POLE LIGHT AS WELL AS BACKFILL.
17. INCLUDES LABOR, EQUIPMENT, MATERIALS AND ACCESSORIES, EXCAVATION, CONDUIT IN THE FOOTING, CONCRETE FOOTING, POLE, LIGHT FIXTURE, AND AGGREGATE BEDDING MATERIAL
18. INCLUDES ALL LABOR, EQUIPMENT, MATERIALS, CONDUIT, WIRING, AND COORDINATION, TO CONNECT POWER FROM TRANSFORMERS TO THE BUILDING.
19. INSTALLATION OF 1" ELECTRICAL CONDUIT AND WIRING AS DESCRIBED ON DRAWINGS AND IN NOTES. PROVIDE ALL CONNECTIONS FOR WORKING SYSTEM, TRENCHING, AND BACKFILL.
20. INSTALLATION OF 1" ELECTRICAL SURFACE MOUNTED CONDUIT AND WIRING AS DESCRIBED ON DRAWINGS AND IN NOTES. PROVIDE ALL CONNECTIONS FOR A WORKING SYSTEM.
21. INSTALLATION OF 1 1/2" ELECTRICAL CONDUIT AND WIRING AS DESCRIBED ON DRAWINGS AND IN NOTES. PROVIDE ALL CONNECTIONS FOR WORKING SYSTEM, TRENCHING, AND BACKFILL.
22. INSTALLATION OF 1 1/2" ELECTRICAL SURFACE MOUNTED CONDUIT AND WIRING AS DESCRIBED ON DRAWINGS AND IN NOTES. PROVIDE ALL CONNECTIONS FOR A WORKING SYSTEM.
23. INCLUDES ALL LABOR AND MATERIALS FOR CONDUIT & ACCESSORIES IN PLACE FROM BUILDING TO TELEPHONE PROVIDER CONNECTION.
24. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF A BACKFLOW PREVENTER, CONCRETE PAD, 15 AMP CIRCUIT TO GFI OUTLET, WATER PRESSURE REDUCER IF REQUIRED, AND HEAT TAPE. BACKFLOW ENCLOSURE BY C.O.T.
25. INSTALLATION OF 2" PEX WATER LINE, INCLUDES TRENCHING, SAND BEDDING, BACKFILL, AND ASSOCIATED PARTS, FITTINGS, AND CONNECTIONS. PER CITY OF TULSA DETAILS.
26. INSTALLATION OF 1 1/2" PEX WATER LINES AND THEIR INSULATION PER DRAWINGS AND DETAILS, INCLUDES TRENCHING, SAND BEDDING, BACKFILL, COMPACTION, AND ASSOCIATED PARTS, FITTINGS, WARNING TAPE, AND CONNECTIONS.
27. INSTALLATION OF 3/4" PEX WATER LINES AND THEIR INSULATION PER DRAWINGS AND DETAILS, INCLUDES TRENCHING, SAND BEDDING, BACKFILL, COMPACTION, AND ASSOCIATED PARTS, FITTINGS, WARNING TAPE, AND CONNECTIONS.
28. INSTALLATION OF 4" SCH. 40 PVC PIPE AS SHOWN ON PLANS. INCLUDES EXCAVATION, SAND BEDDING, BACKFILL, WARNING TAPE, COMPACTION & ASSOCIATED PARTS, FITTINGS, CONNECTIONS, AND CLEANOUTS.
29. INSTALLATION OF 6" SCH. 40 PVC PIPE AS SHOWN ON PLANS INCLUDES EXCAVATION, SAND BEDDING, BACKFILL, WARNING TAPE, COMPACTION & ASSOCIATED PARTS, FITTINGS, CONNECTIONS, AND CLEANOUTS.
30. INSTALLATION OF 8" SCH. 40 PVC PIPE AS SHOWN ON PLANS INCLUDES EXCAVATION, SAND BEDDING, BACKFILL, WARNING TAPE, COMPACTION & ASSOCIATED PARTS, FITTINGS, CONNECTIONS, AND CLEANOUTS.
31. INSTALLATION OF 12" SCH. 40 PVC PIPE AS SHOWN ON PLANS INCLUDES EXCAVATION, SAND BEDDING, BACKFILL, WARNING TAPE, COMPACTION & ASSOCIATED PARTS, FITTINGS, CONNECTIONS, AND CLEANOUTS.
32. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR COMPLETE INSTALLATION OF THE CHANNEL DRAIN SYSTEM.
33. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF 12" SQUARE DRAINS, CONNECTION TO DRAIN LINES, AND CLEANOUTS PER DRAWINGS AND DETAILS.
34. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF 18" SQUARE DRAINS, CONCRETE COLLARS, CONNECTION TO DRAIN LINES, AND CLEANOUTS PER DRAWINGS AND DETAILS.
35. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF 18" SQUARE DRAINS, P-TRAPS, CONNECTION TO DRAIN LINES, AND CLEANOUTS PER DRAWINGS AND DETAILS.
36. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF 24" SQUARE DRAINS, P-TRAPS, CONNECTION TO DRAIN LINES, AND CLEANOUTS PER DRAWINGS AND DETAILS.
37. PROVIDE AND INSTALL GATE VALVE IN 10" ROUND VALVE BOX PER CITY OF TULSA DETAILS.
38. INCLUDES ALL LABOR, EQUIPMENT, MATERIALS, PERMITS, AND FEES FOR THE COMPLETE INSTALLATION OF A STORM SEWER MANHOLE PER CITY OF TULSA STANDARDS.
39. INCLUDES ALL LABOR, EQUIPMENT, MATERIALS, EXCAVATION, BEDDING, BACKFILL, COMPACTION, CONNECTIONS, PRESSURE REGULATOR, PERMITS, AND FEES FOR A COMPLETE INSTALLATION OF A 2" GAS LINE FROM THE EXISTING COMMUNITY CENTER BUILDING TO THE NEW BUILDING PER CITY OF TULSA STANDARDS.
40. INCLUDES ALL FENCING MATERIAL, HARDWARE, CONCRETE FOOTINGS, LABOR, AND EQUIPMENT NEEDED FOR A COMPLETE FENCING SYSTEM.
41. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NEEDED FOR A COMPLETE GATE.
42. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NEEDED FOR A COMPLETE GATE.
43. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NEEDED FOR A DOUBLE GATE, LATCH, HINGES, DOWNBOLT, AND ABILITY TO LOCK WITH A PADLOCK
44. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE INSTALLATION OF A PANIC HARDWARE SYSTEM AS DESCRIBED IN NOTES AND DETAILS INCLUDING METAL PLATE FOR MOUNTING.
45. INCLUDES ALL LABOR, EQUIPMENT, MATERIALS REQUIRED FOR A COMPLETE INSTALLATION OF THE BUILDING & ITS SYSTEMS TO A LINE 5 FEET OUTSIDE OF THE STRUCTURAL FOOTPRINT OF THE BUILDING. INCLUDES AGGREGATE BASE AND WATER PROOFING BELOW FOOTINGS AND SLABS, DOES NOT INCLUDE [redacted] SELECT FILL. INCLUDES EXCAVATION INTO THE BUILDING PAD FOR FOUNDATIONS AND SYSTEM UTILITIES. PROVIDE ALL CONNECTIONS TO SITE UTILITIES. INCLUDES SPLASHBLOCKS AND ALL BUILDING INCIDENTALS. THE POOL PIPING SYSTEM IS INCLUDED IN PAY ITEM #47.
46. BUILDING PAD TO INCLUDE ALL SUB-GRADE COMPACTION AND SELECT FILL FOR POOL BUILDING TO SUBBASE ELEVATION.
47. INCLUDES ALL LABOR, EQUIPMENT, MATERIALS REQUIRED FOR A COMPLETE INSTALLATION OF THE POOL STRUCTURE, POOL EQUIPMENT, SIGNAGE, ACCESSORIES, AND POOL SYSTEMS INCLUDING THE POOL SYSTEMS INSIDE THE ACID ROOM, CHLORINE ROOM, AND POOL EQUIPMENT ROOM.
48. POOL PAD TO INCLUDE ALL SUB-GRADE COMPACTION AND COMPACTED AGGREGATE/ SELECT FILL FOR THE POOL.
49. WATER PLAYGROUND PAD TO INCLUDE ALL SUB-GRADE COMPACTION AND SELECT FILL FOR WATER PLAYGROUND.
50. PROVIDE AND INSTALL SPECIFIED WATER PLAYGROUND EQUIPMENT. INCLUDES FREIGHT, SECURING EQUIPMENT, FOOTINGS, INSTALL. INSTALL PER MANUFACTURERS INSTRUCTIONS.
51. INSTALLATION OF WATER PLAYGROUND VAULT PER DETAILS AND MANUFACTURERS INSTRUCTIONS, INCLUDES CONCRETE COLLAR, SPLASH PAD CONTROLLER IN MECHANICAL CHASE INSIDE POOL BUILDING.
52. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE COMPLETE INSTALLATION OF SPECIFIED DRINKING FOUNTAIN. INCLUDES WATER LINE CONNECTION, ISOLATION VALVE, WATER LINE, SANITARY DRAIN AND CONNECTION, AND CLEAN OUTS.
53. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR DISASSEMBLING, CLEANING, STORING AND REINSTALLING THE EXISTING SHADE PAVILION AS NOTED ON PLANS AND IN DETAILS.
54. INCLUDES ALL LABOR, AND EQUIPMENT FOR THE INSTALLATION OF BOULDERS, AGG BASE, MORTAR, CONCRETE CURBING, AND DECOMPOSED GRANITE INFILL AS DETAILED ON PLANS AND NOTES.
55. INCLUDES ALL CORRESPONDENCE AND COORDINATION WITH PSO FOR THE REPLACEMENT OF PSO SERVICE AS SHOWN ON PLANS.
56. INCLUDES ALL LABOR FOR THE INSTALLATION OF SITE FURNISHINGS AS DETAILED ON PLANS AND NOTES, EQUIPMENT SUPPLIED BY OWNER.
57. INCLUDES ALL LABOR, AND EQUIPMENT FOR THE INSTALLATION OF SYNTHETIC TURF, AGGREGATE SUBBASE, CONCRETE CURBING AND ALL MATERIALS FOR THE COMPLETE INSTALLATION OF SYNTHETIC TURF. PRICE TO REFLECT THE REDUCTION OF SOD WHERE TURF IS INSTALLED.
58. INCLUDES ALL LABOR, THE INSTALLATION OF THE SHADE CANOPY ACCENT AND DECORATIVE GATES AS DESCRIBED IN PLANS AND DETAILS INCLUDING POSTS, FOOTINGS, AND HARDWARE.
59. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION A PERMANENT REFILLABLE CO2 TANK AS CALLED OUT IN POOL PLANS, INCLUDES REMOTE FILL PORT, PIPING, AND STRAPS. ADDITIONAL COST ABOVE COST OF CO2 CANISTERS IN THE BASE BID.
60. INCLUDES THE PURCHASING AND STORAGE OF SITE FURNISHINGS UNTIL INSTALLATION.
61. INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE INSTALLATION OF CMU BLOCK IN LOCATIONS SHOWN AS METAL PANELING. COST IS FOR CMU IN LIEU OF METAL PANEL SYSTEM.

STATE OF OKLAHOMA — Ian T. Alaback — LICENSED LANDSCAPE ARCHITECT — 92 — 7/24/2020

G100 PAY ITEM QUANTITIES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

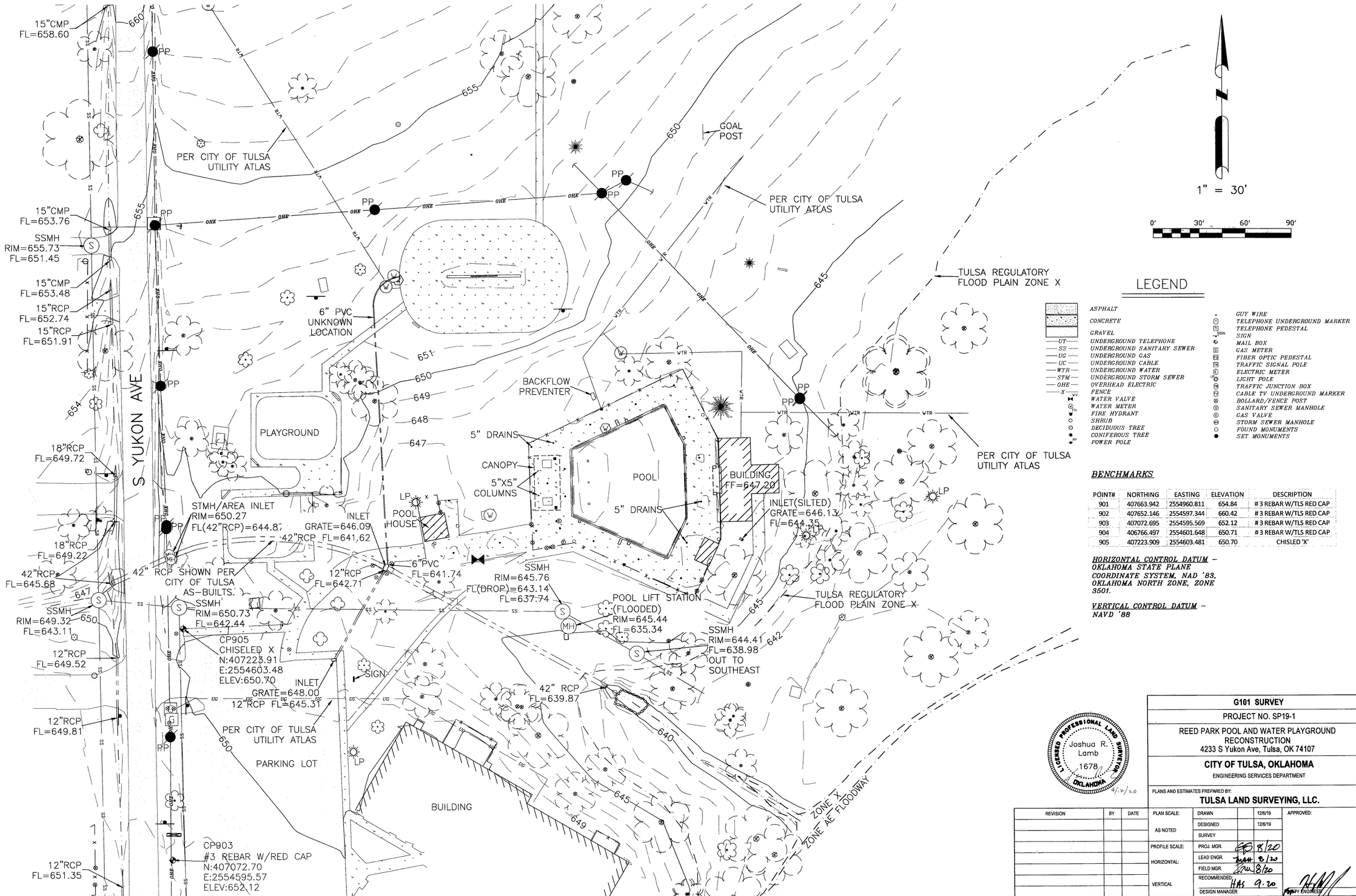
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER		9.20

APPROVED: CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 2 OF 81 SHEETS



LEGEND

- ASPHALT
- CONCRETE
- GRAVEL
- UT — UNDERGROUND TELEPHONE
- SS — UNDERGROUND SANITARY SEWER
- UG — UNDERGROUND GAS
- UC — UNDERGROUND CABLE
- WTR — UNDERGROUND WATER
- STM — UNDERGROUND STORM SEWER
- OHE — OVERHEAD ELECTRIC
- X — FENCE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- SHRUB
- DECIDUOUS TREE
- CONIFEROUS TREE
- POWER POLE
- GUY WIRE
- TELEPHONE UNDERGROUND MARKER
- TELEPHONE PEDESTAL
- SIGN
- MAIL BOX
- GAS METER
- FIBER OPTIC PEDESTAL
- TRAFFIC SIGNAL POLE
- ELECTRIC METER
- LIGHT POLE
- TRAFFIC JUNCTION BOX
- CABLE TV UNDERGROUND MARKER
- BOLLARD/FENCE POST
- SANITARY SEWER MANHOLE
- GAS VALVE
- STORM SEWER MANHOLE
- FOUND MONUMENTS
- SET MONUMENTS

BENCHMARKS

POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION
901	407663.942	2554960.811	654.84	# 3 REBAR W/TLS RED CAP
902	407652.146	2554597.344	660.42	# 3 REBAR W/TLS RED CAP
903	407072.695	2554595.569	652.12	# 3 REBAR W/TLS RED CAP
904	406766.497	2554601.648	650.71	# 3 REBAR W/TLS RED CAP
905	407223.909	2554603.481	650.70	CHISLED 'X'

HORIZONTAL CONTROL DATUM – OKLAHOMA STATE PLANE COORDINATE SYSTEM, NAD '83, OKLAHOMA NORTH ZONE, ZONE 3501.

VERTICAL CONTROL DATUM – NAVD '88

LICENSED PROFESSIONAL LAND SURVEYOR
Joshua R. Lamb
1678
OKLAHOMA
4/7/20

G101 SURVEY

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

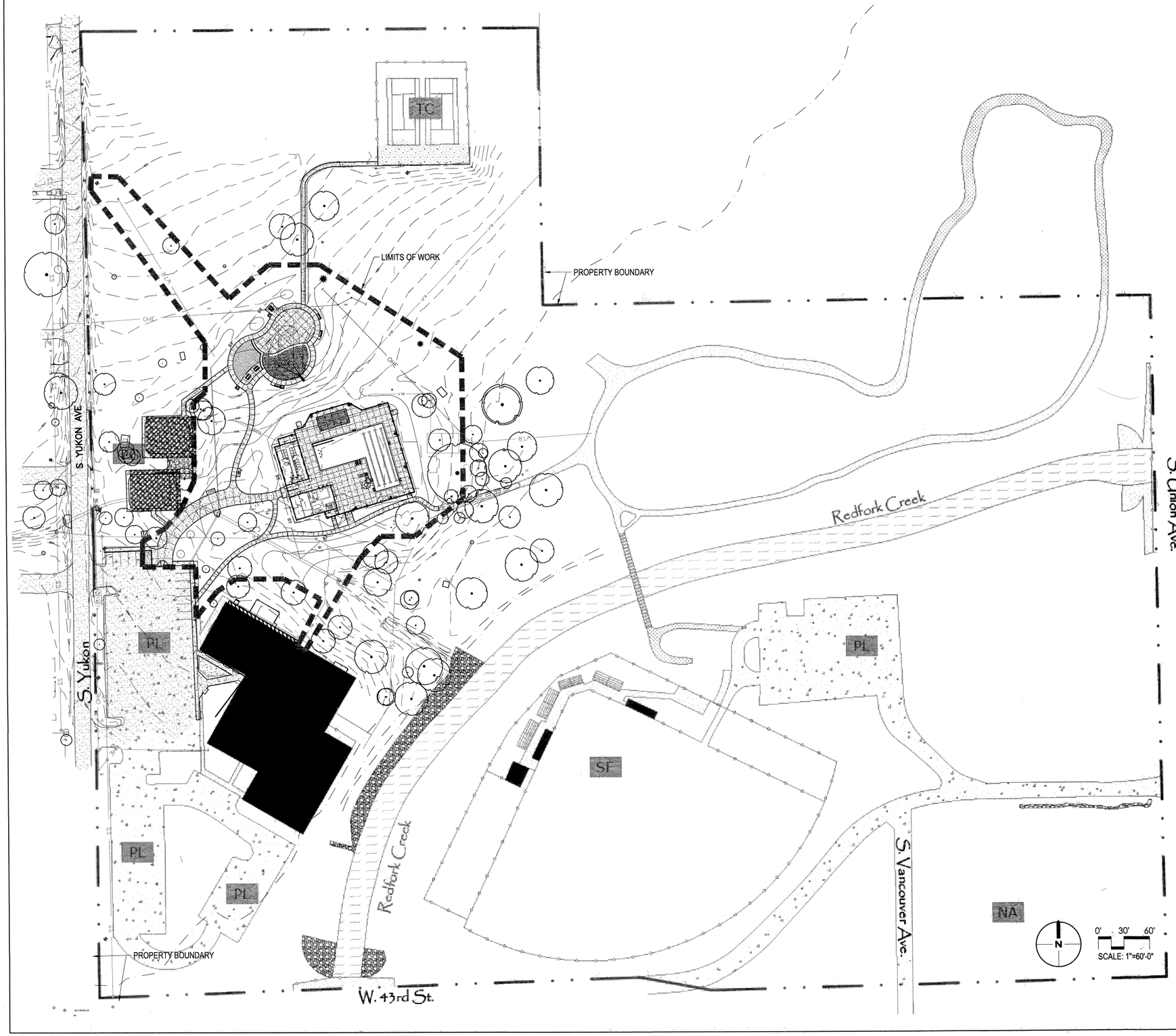
PLANS AND ESTIMATES PREPARED BY:
TULSA LAND SURVEYING, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN		12/6/19
DESIGNED		12/6/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED DESIGN MANAGER	HAS	9.20

APPROVED:
CITY ENGINEER
DATE: 10.02.20
FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 3 OF 81 SHEETS



SITE KEYMAP NOTES

THE SITE INFORMATION ON THIS SHEET WAS PROVIDED BY INCOG AND HAS NOT BEEN VERIFIED BY ALABACK DESIGN.

THE BASE FLOOD ELEVATION IS 644.00'

THE SITE IS APPROXIMATELY 28.1 ACRES IN THE NE QUARTER OF THE NE QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 12 EAST, PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning at a point 35 feet South and 45 feet West of the Northeast corner of said Section 27; thence South on a line parallel to the East line of said Section 27, a distance of 625 feet; thence East at right angles to the last described line a distance of 10 feet; thence South parallel to said East line of Section 27, a distance of 660 feet to the South line of the NE/4 of the NE/4 of Section 27, said point being 35 feet West of the Southeast corner of the NE/4 of the NE/4 of Section 27; thence West on the South line of said NE/4 of the NE/4 a distance of 1204.4 feet to the Southwest corner of the said NE/4 of the NE/4 of Section 27; thence North on the West line of said NE/4 of the NE/4 a distance of 1130 feet to a point 190 feet South of the Northwest corner of said NE/4 of the NE/4; thence East on a line parallel to and 190 feet South of the North line of said Section 27, a distance of 595 feet; thence South on a line parallel to the East line of said Section 27, a distance of 470 feet; thence East on a line parallel to the North line of said Section 27, a distance of 530 feet; thence North on a line parallel to the East line of Section 27, a distance of 625 feet; thence on a line parallel to and 35 feet South of the North line of Section 27, a distance of 150 feet to the point of beginning, containing 28.03 acres, more or less, which includes Lots One (1), Two (2) and Three (3), Block Nine (9) Clinton Homesites Addition to Red Fork now an addition to the City of Tulsa, Tulsa County, State of Oklahoma, according to the recorded plat thereof.
(Book 945, Page 630)

And

A tract of land beginning at a point 522.13 feet South and 195.00 feet West of the Northeast corner of Section 27, Township 19 North, Range 12 East, of Tulsa County, Oklahoma; thence South on a line parallel to the East line of Section 27, a distance of 137.87 feet to a point; thence West on a line parallel to the North line of Section 27 a distance of 530.00 feet to a point; thence East a distance of 530.00 feet to the point of beginning, which said tract contains 1.677 acres more or less.
(Book 2956, Page 250)

Less:

Beginning at a point 35 feet South and 45 feet West of the Northeast corner of Section 27, Township 19 North, Range 12 East, Tulsa County, Oklahoma, thence South on a line parallel to the East line of Section 27 a distance of 487.13 feet to a point; thence West on a line parallel to the North line of Section 27 a distance of 150.00 feet to a point; thence North a distance of 487.13 feet to a point; thence East a distance 150.00 feet to the point of beginning; which described tract contains Lots 1, 2 and 3, of Block 9, Clinton Homesites Addition to Red Fork, now an addition to the City of Tulsa, Tulsa County, Oklahoma, according to the recorded plat thereof.
(Book 2956, Page 250)

Also:

The North five feet (5') and the East five feet (5') of Lot 1 and the North 25' of Lot 2, Block 3, Hilldale Addition to the City of Tulsa, Tulsa County, Oklahoma located in Section 27, T19N, R13E.
(Book 3933, Page 372)

STATE OF OKLAHOMA — John T. Alaback — 92 — LICENSED LANDSCAPE ARCHITECT — 7/22/2020

G102 OVERALL SITE KEY

PROJECT NO. SP19-1

REED PARK POOL AND SPLASH PAD RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

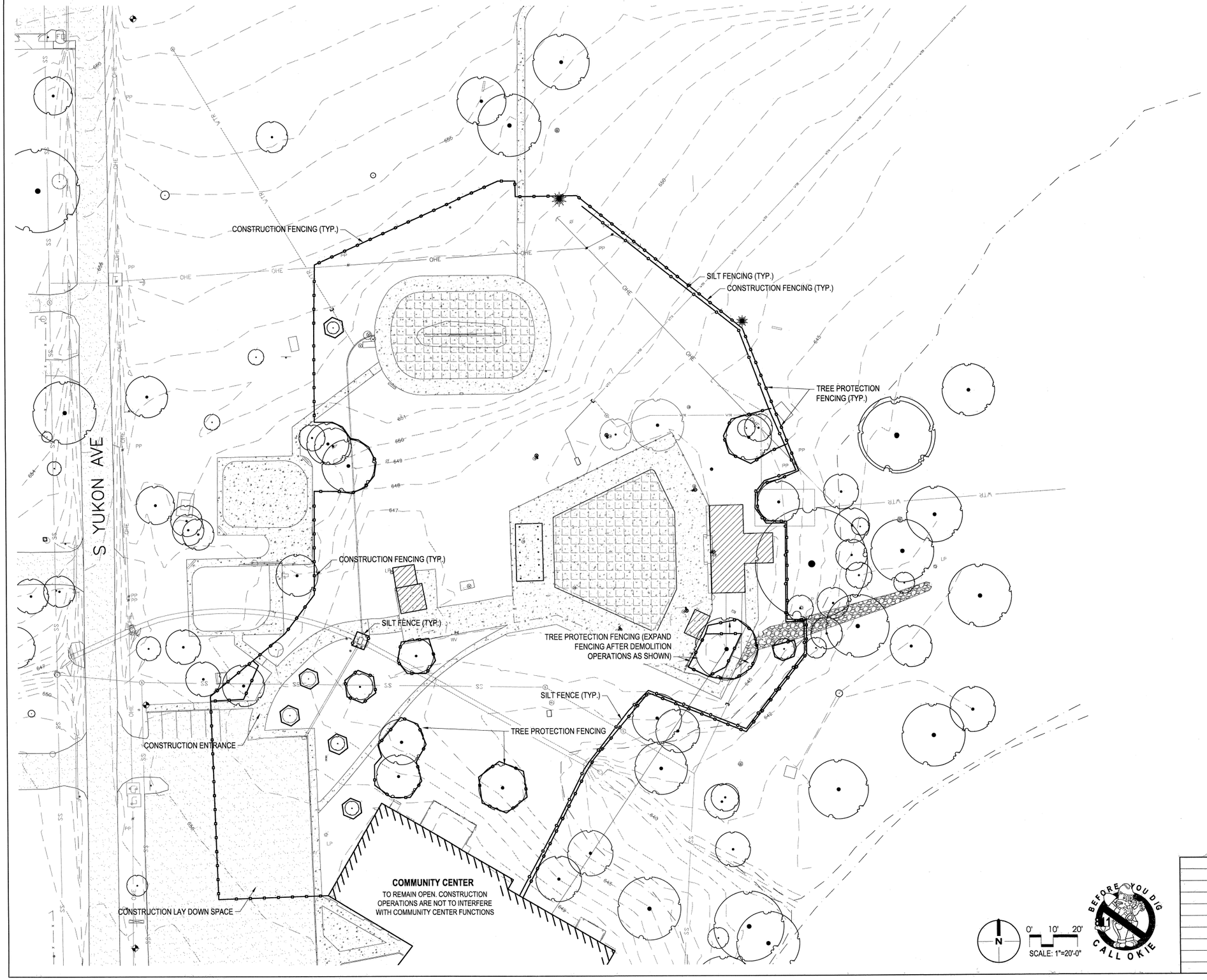
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN		5/22/20
DESIGNED		5/22/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER	HAS	9.20

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 4 OF 82 SHEETS



EROSION CONTROL NOTES

1. SILT FENCE SHALL BE MAINTAINED AND SEDIMENT BUILD-UP REGULARLY REMOVED UNTIL GRADING & PAVING IS COMPLETE AND/OR IS IN PLACE.

2. IN ORDER TO ALLEVIATE DUST CONDITIONS WITHIN THE CITY LIMITS DURING GRADING OPERATIONS, AND AFTER GRADING OPERATIONS ARE COMPLETED, BUT BEFORE PAVEMENT AND/OR PERMANENT EROSION CONTROL WORK IS STARTED, THE CONTRACTOR SHALL SPRINKLE GRADING WITH WATER AT INTERVALS APPROVED BY THE CITY.

3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AND MAINTAINED DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH CITY STANDARDS #126.

4. ALL SILT FENCING SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF DISTURBED EARTH.

5. ADJUST LOCATIONS OF PROPOSED FENCING AS NEEDED TO COORDINATE WITH SITE ACCESS, CONSTRUCTION OPERATIONS.

TREE PROTECTION NOTES

REFER TO SITE DEMOLITION PLAN FOR IDENTIFICATION OF TREES TO BE REMOVED. ARCHITECT OWNER WILL INSPECT AND APPROVE TREE PROTECTION BEFORE WORK BEGINS.

ALL TREES TO BE PRESERVED ON THE PROPERTY SHALL BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION OPERATIONS BY FENCING AS SHOWN. THE TREE PROTECTION SHALL BE PLACED BEFORE ANY EXCAVATING OR GRADING IS BEGUN AND IS TO BE MAINTAINED IN GOOD CONDITION FOR THE DURATION OF THE CONSTRUCTION WORK. NO MATERIAL SHALL BE STORED WITHIN THE TREE PROTECTION FENCING. TREE PROTECTION SHALL REMAIN UNTIL ALL WORK IS COMPLETED. ANY TREES DESIGNATED TO REMAIN SHALL BE PROTECTED AS DESCRIBED HEREIN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THESE REQUIREMENTS AS STATED.

AT CONTRACTORS EXPENSE, DAMAGE DONE TO EXISTING TREE CANOPY, OR ROOT SYSTEMS (WITHIN THE FENCED LIMITS) SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED TREE SURGEON AT THE CITY OF TULSA'S DIRECTION. ROOTS EXPOSED AND/OR DAMAGED DURING GRADING OPERATIONS SHALL BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA, THE CUT SURFACE SHALL BE PAINTED WITH AN APPROVED TREE PAINT, AND HAVE TOPSOIL PLACED OVER EXPOSED THE ROOT AREA IMMEDIATELY

CONSTRUCTION FENCING

ONLY A PORTION OF REED PARK IS TO BE CLOSED DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS NOT TO IMPEDE ON OTHER USES OF THE PARK DURING CONSTRUCTION OPERATIONS. CONTRACTOR RESPONSIBLE FOR SECURING CONSTRUCTION SITE.

LEGEND

SILT FENCING

TREE PROTECTION/ CONSTRUCTION FENCING

IMPERVIOUS AREA

EXISTING IMPERVIOUS AREA: 26,508 FT^2

PROPOSED IMPERVIOUS AREA: 29,037 FT^2

INCREASE IN IMPERVIOUS AREA: 2,529 FT^2

STATE OF OKLAHOMA — Don T. Alaback — 92 — REGISTERED LANDSCAPE ARCHITECT
7/24/2020

BEFORE YOU DIG 811 CALL OKIE

G103 TREE PROTECTION PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER		9.20

APPROVED: CITY ENGINEER

DATE: 10.02.20

FILE: DRAWING:

ATLAS PAGE NO: 192

SHEET 5 OF 81 SHEETS

S YUKON AVE

WATER LINE TO REMAIN

DEMOLISH VALVE BOXES AND PLUMBING
DEMOLISH DRINKING FOUNTAIN, CONCRETE PAD AND PLUMBING
DEMOLISH BACKFLOW DEVICE, PAD, AND PLUMBING

DISC GOLF TEE PAD TO REMAIN

POINT OF CONNECTION FOR NEW STORM LINE.

60'-0"

DEMOLISH BENCH

CAREFULLY SALVAGE PLAQUE AND SAVE FOR REINSTALLATION

PIPE TO REMAIN

DEMOLISH SPLASH PAD PLUMBING AND BASE.

WADING POOL LIKELY PRESENT UNDER SPLASH PAD PAVING, DEMOLISH AND REMOVE WADING POOL IN ITS ENTIRETY AND BACK FILL

DEMOLISH SIGN

DEMOLISH EXISTING BACKFLOW PREVENTER & PAD

DEMOLISH POOL SHELL AND BASE REMOVE EXISTING POOL PIPING/SYSTEMS AND FENCE

ELECTRICAL OUTLETS IN SHELTER COLUMN, REINSTALL IN NEW LOCATION

EXISTING PAVING TO REMAIN

SALVAGE AND STORE EXISTING SHADE STRUCTURE FOR REINSTALLATION

DEMOLISH LIGHT POLE AND CAP WIRING

BUILDING AND FENCED AREA WITH POOL EQUIPMENT AND PLUMBING TO BE DEMOLISHED. DEMOLISH FOOTINGS AND BACKFILL WITH GENERAL FILL

PLUMBING VAULT BELOW, DEMOLISH PLUMBING, TOP 2' OF VAULT, FILL AND CAP

DEMOLISH STRUCTURE AND FOOTINGS

DEMOLISH ALL C.L. FENCING

DEMOLISH BOLLARDS AND CONCRETE SURROUNDING DRAIN GRATE, DO NOT DAMAGE DRAIN GRATE OR DRAIN BOX STRUCTURE

DEMOLISH TOP 2', FILL, AND CAP LIFT STATION

EXISTING TREE TO REMAIN (TYP.)

DISCONNECT GAS LINE AT BUILDING AND CAP RISER

TULSA REGULATORY FLOOD PLAIN

CONTRACTOR TO COORDINATE WITH PSO FOR THE DEMOLITION OF THE EXISTING PSO INFRASTRUCTURE AND INSTALLATION OF THE NEW PSO SYSTEM. CONTRACTOR TO ALSO COORDINATE TELEPHONE CONNECTION FROM YUKON AVE WITH COX COMMUNICATIONS.

EXISTING PSO POWER SYSTEM TO BE REPLACED BY PSO

BENCH TO REMAIN

WATER SERVICE LINE TO DRINKING FOUNTAIN TO REMAIN

PICNIC TABLE TO REMAIN

GRIND STUMP 12" BELOW SURFACE

LIGHT AND ROLE TO REMAIN

DEMOLISH POOL BUILDING, FOUNDATIONS, AGG BASE, SYSTEMS AND CAP UTILITY CONNECTIONS. PROVIDE GENERAL FILL AS NECESSARY TO BRING GRADE FLUSH WITH SURROUNDING GRADES.

EXISTING STORM GRATE TO REMAIN CONTRACTOR TO REMOVE SILT AND DEBRIS FROM STRUCTURE

PICNIC TABLE TO REMAIN

EXISTING SIGN TO REMAIN

18'-10"
24'-7"
25'-0"
33'-7"
6'-0"
33'-0"

N

0' 10' 20'
SCALE: 1"=20'-0"

CALL OKIE

GENERAL DEMOLITION NOTES

CALL 811 FOR INFORMATION ON THE LOCATION OF UNDERGROUND UTILITIES. CONTACT 'OKIE' PRIOR TO DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE UTILITIES (BOTH OVERHEAD AND BURIED) WHICH MAY OCCUR DUE TO HIS ACTION OR LACK OF ACTION ON THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL SEEK THE ASSISTANCE OF LOCAL UTILITIES AND THE OWNER IN LOCATING THE UTILITIES PRIOR TO PERFORMING CONSTRUCTION OPERATIONS IN ANY AREA. CONTACT CITY OF TULSA REP. MR. DAVID BECK AT 918-261-9303 FOR ADDITIONAL UTILITY LOCATIONS BEFORE ANY CONSTRUCTION / DEMOLITION BEGINS.

ALL WORK SHALL BE IN CONFORMANCE WITH CITY OF TULSA CODES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND FEES, INCLUDING BONDS AND INSURANCE AS REQUIRED.

TOPOGRAPHIC SURVEY PROVIDED BY TULSA LAND SURVEYING, LLC. NOT ALL UNDERGROUND UTILITIES ARE SHOWN.

CONTRACTOR SHALL NOTIFY CITY OF TULSA ENGINEERING SERVICES DEPARTMENT AT LEAST 24 HOURS BEFORE THE START OF CONSTRUCTION. CONTACT: RONNY HARVEY AT 918-596-9693.

REPAIR ALL AREAS DAMAGED BY CONSTRUCTION OPERATIONS IN ACCORDANCE WITH THE CITY OF TULSA, AND TULSA PARKS AND REC. STANDARD SPECIFICATIONS. THIS WILL INCLUDE RE-GRADING AND SODDING OF AREAS DISTURBED BY CONSTRUCTION.

DEMOLISH AND REMOVE ITEMS AS SHOWN ON PLANS. REFER ALSO TO SPEC. 02 4119 SELECTIVE DEMOLITION. CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EXISTING CONDITIONS AND DEMOLITION ITEMS PRIOR TO BIDDING. ALL ITEMS SHOWN FOR DEMOLITION ARE TO BE REMOVED AND LEGALLY DISPOSED OF BY CONTRACTOR.

CONTRACTOR TO BE RESPONSIBLE FOR SECURING THE SITE WITH CONSTRUCTION FENCING AND OTHER METHODS.

CITY OF TULSA TO REMOVE ANY SITE FURNISHINGS AND FIXTURES FROM THE SITE AND EXISTING POOL BUILDING FOR REUSE PRIOR TO CONSTRUCTION.

OWNER TO SALVAGE: POOL EQUIPMENT, PLUMBING FIXTURES, BENCHES, TABLES, FENCING FABRIC AND ANY OTHER EXISTING FURNISHINGS DESIRED PRIOR TO CONSTRUCTION OPERATIONS.

DEMOLITION KEY NOTES

1. REMOVE PAVEMENT AND AGGREGATE BASE.
2. SAWCUT FULL DEPTH OF PAVEMENT AT THE LIMITS SHOWN TO PROVIDE A STRAIGHT, CLEAN LINE.
3. REMOVE TREE IN ITS ENTIRETY, GRIND STUMP AND MAJOR ROOTS TO 12" BELOW EXISTING GRADE. REMOVE SURFACE ROOTS OF TREES MARKED FOR DEMOLITION.
4. DEMOLISH UTILITY LINE
5. ABANDON UTILITY LINE
6. CAP UTILITY LINE

DEMOLITION LEGEND

DEMOLISH PAVING AND BASE

EXCAVATE POOL SHELL PAVING AND BASE

DEMOLISH BUILDING/ STRUCTURE AND BASE

STATE OF OKLAHOMA
DAN T. ATALAY
92
REGISTERED LANDSCAPE ARCHITECT
7/24/2020

G104 SITE DEMOLITION PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

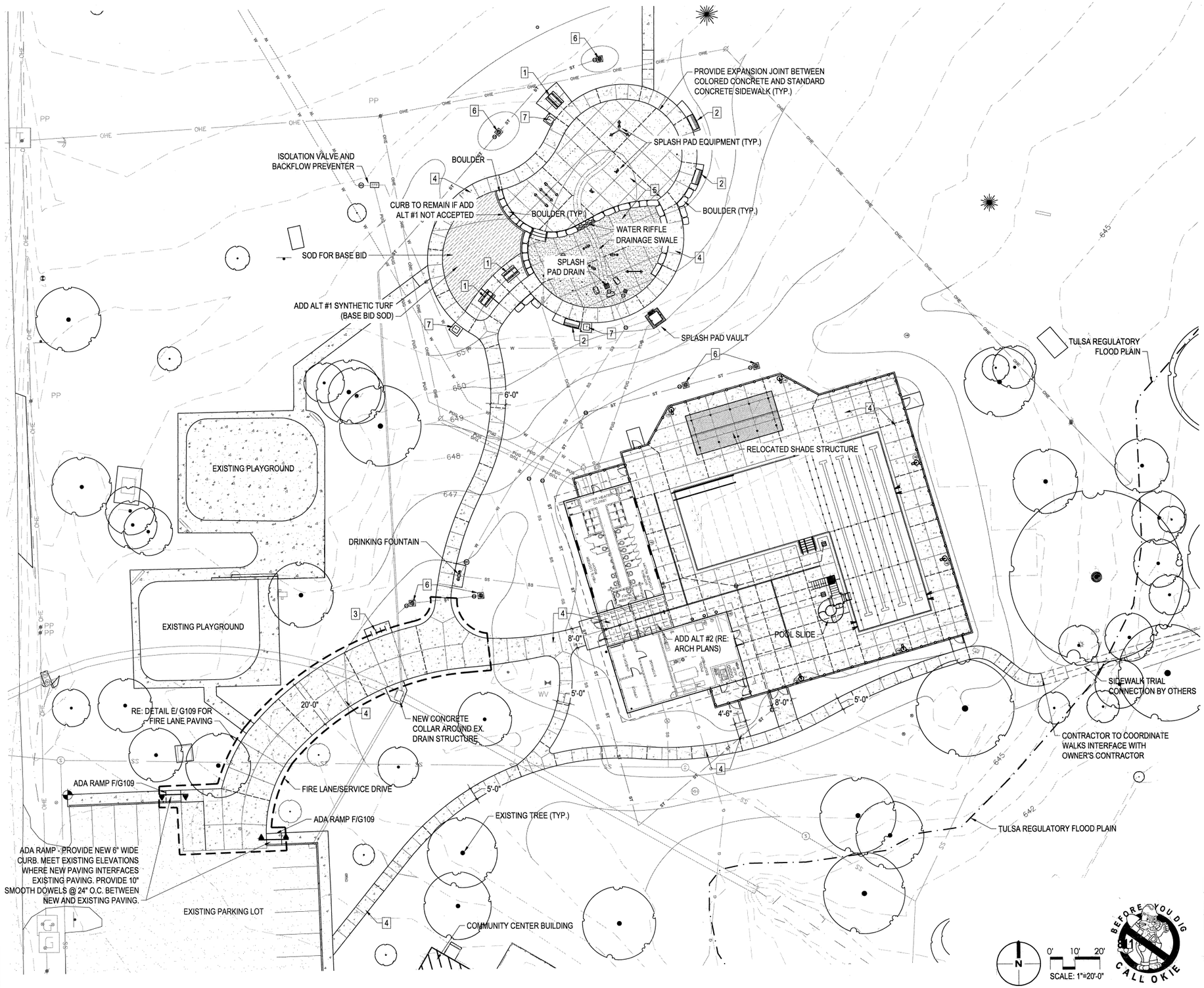
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED:		9.20
DESIGN MANAGER		

APPROVED:

FILE: DRAWING:
DATE: 10.02.20
ATLAS PAGE NO: 192
SHEET 6 OF 81 SHEETS



GENERAL NOTES

CALL 1-800-344-8377 FOR INFORMATION ON THE LOCATION OF ALL UNDERGROUND UTILITIES. CONTACT 'OKIE' PRIOR TO DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE UTILITIES (BOTH OVERHEAD AND BURIED) WHICH MAY OCCUR DUE TO HIS ACTION OR LACK OF ACTION ON THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL SEEK THE ASSISTANCE OF LOCAL UTILITIES AND THE OWNER IN LOCATING THE UTILITIES PRIOR TO PERFORMING CONSTRUCTION OPERATIONS CONTACT CITY OF TULSA REP. FOR ADDITIONAL UTILITY LOCATIONS BEFORE ANY CONSTRUCTION / DEMOLITION BEGINS.

CONTRACTOR TO BE RESPONSIBLE FOR SECURING THE SITE WITH CONSTRUCTION FENCING AND OTHER METHODS.

KEY NOTES

1. 6' PICNIC TABLE
2. 6' BENCH
3. BIKE RACK
4. 5" THICK CONCRETE PAVING
5. 5" THICK COLORED CONCRETE PAVING
6. 18" AREA DRAIN
7. TRASH CAN PAD & ANCHORING POST

ALL UTILITIES TO WATER PLAYGROUND AND POOL BUILDINGS TO BE GPS LOCATED AND LAID WITH TRACER WIRE.

CONTROL JOINT NOTES

SAW CUT CONTROL JOINT. SAW CUT TO A DEPTH OF ¼ THE THICKNESS OF THE SLAB (MINIMUM).

EXPANSION JOINT. ½" W/ ZIP CAP AND CAULK TO MATCH PAVING COLOR. PROVIDE EXPANSION JOINTS IN ALL LOCATIONS WHERE NEW PAVING MEETS EXISTING PAVING, WHERE PAVING MEETS BUILDINGS, FOOTINGS, AND UPRIGHT STRUCTURES.

CONTRACTOR TO PROVIDE SUBMITTAL FOR SAW CUT AND EXPANSION JOINT LAYOUT PRIOR TO POURING CONCRETE.

STATE OF OKLAHOMA — Dan T. Alaback — 92 — REGISTERED LANDSCAPE ARCHITECT — 7/24/2020

G105 SITE MATERIALS PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED

PROFILE SCALE:

HORIZONTAL:

VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER	HAS	9.20

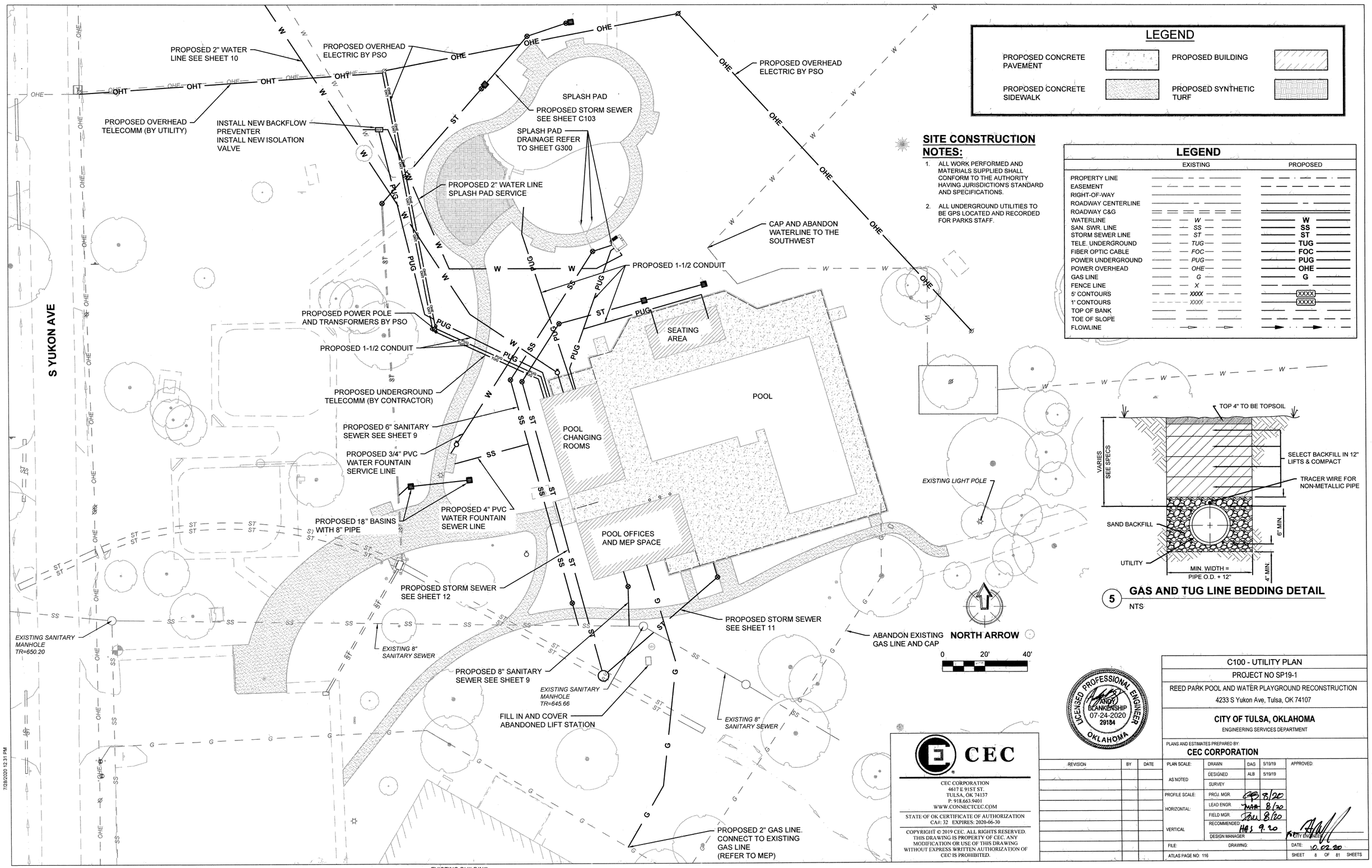
APPROVED: CITY ENGINEER

DATE: 10.02.20

FILE: DRAWING:

ATLAS PAGE NO: 192

SHEET 7 OF 81 SHEETS



LEGEND

PROPOSED CONCRETE PAVEMENT		PROPOSED BUILDING	
PROPOSED CONCRETE SIDEWALK		PROPOSED SYNTHETIC TURF	

SITE CONSTRUCTION NOTES:

1. ALL WORK PERFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO THE AUTHORITY HAVING JURISDICTION'S STANDARD AND SPECIFICATIONS.
2. ALL UNDERGROUND UTILITIES TO BE GPS LOCATED AND RECORDED FOR PARKS STAFF.

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT		
RIGHT-OF-WAY		
ROADWAY CENTERLINE		
ROADWAY C&G		
WATERLINE	W	W
SAN. SWR. LINE	SS	SS
STORM SEWER LINE	ST	ST
TELE. UNDERGROUND	TUG	TUG
FIBER OPTIC CABLE	FOC	FOC
POWER UNDERGROUND	PUG	PUG
POWER OVERHEAD	OHE	OHE
GAS LINE	G	G
FENCE LINE	X	
5' CONTOURS	XXXX	XXXX
1' CONTOURS	XXXX	XXXX
TOP OF BANK		
TOE OF SLOPE		
FLOWLINE		

5 GAS AND TUG LINE BEDDING DETAIL
NTS

CEC
CEC CORPORATION
4617 E 91ST ST.
TULSA, OK 74137
P: 918.663.9401
WWW.CONNECTCEC.COM
STATE OF OK CERTIFICATE OF AUTHORIZATION
CA#: 32 EXPIRES: 2020-06-30

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LICENSED PROFESSIONAL ENGINEER — ANDY BLANKENSHIP — 07-24-2020 — 29134 — OKLAHOMA

REVISION	BY	DATE

C100 - UTILITY PLAN

PROJECT NO SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
CEC CORPORATION

PLAN SCALE: AS NOTED	DRAWN	DAG	5/19/19	APPROVED:
	DESIGNED	ALB	5/19/19	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 116				SHEET 8 OF 81 SHEETS

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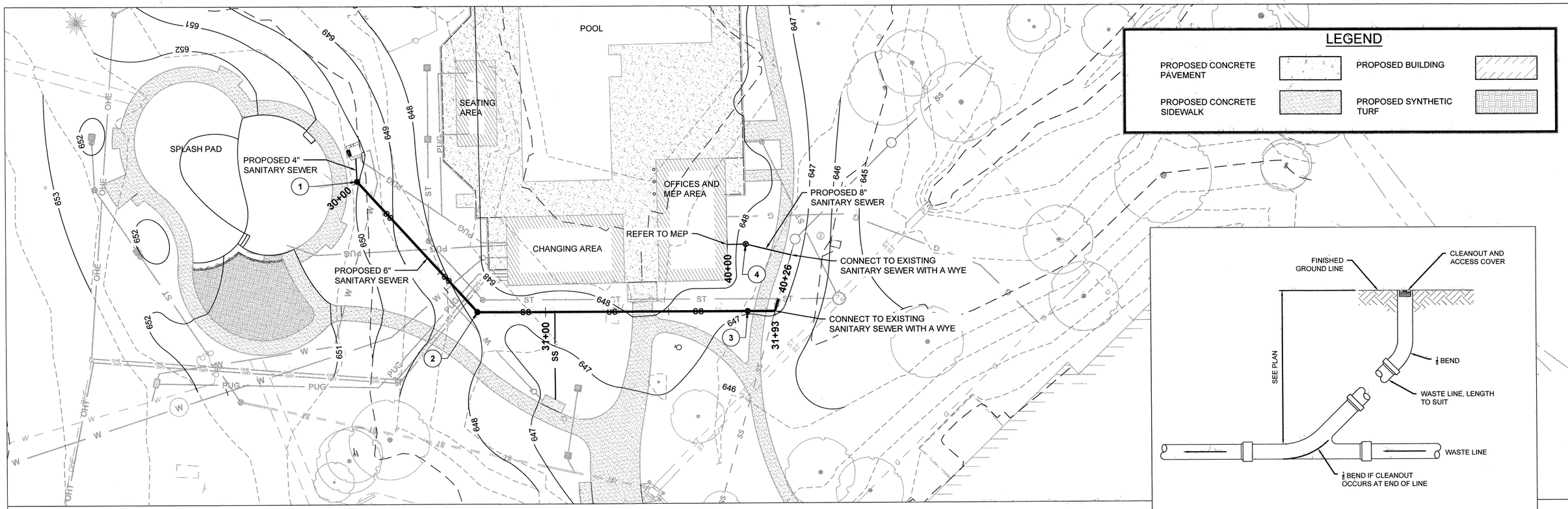
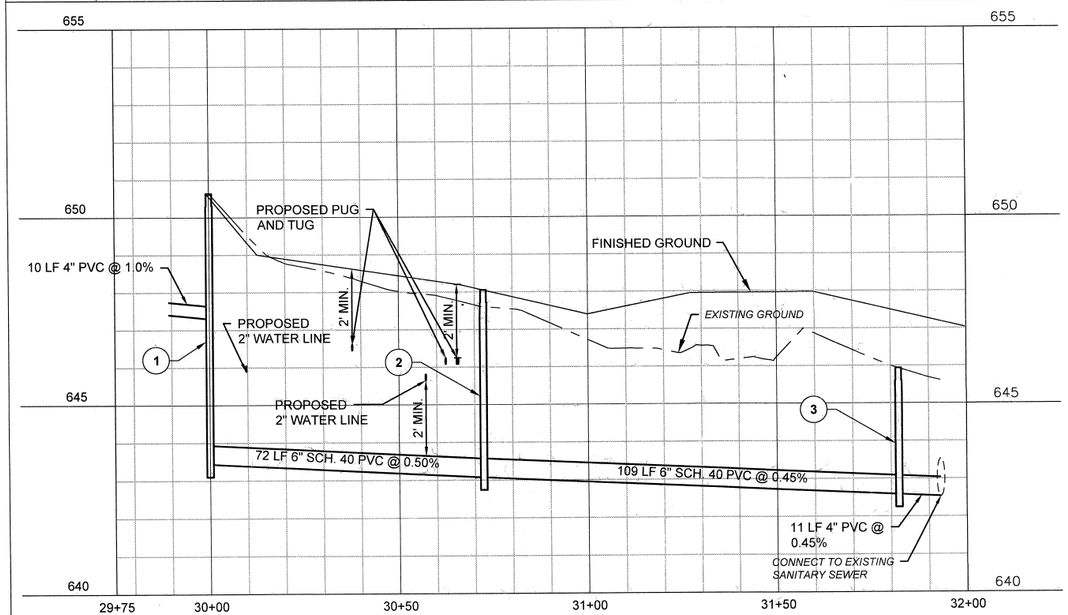


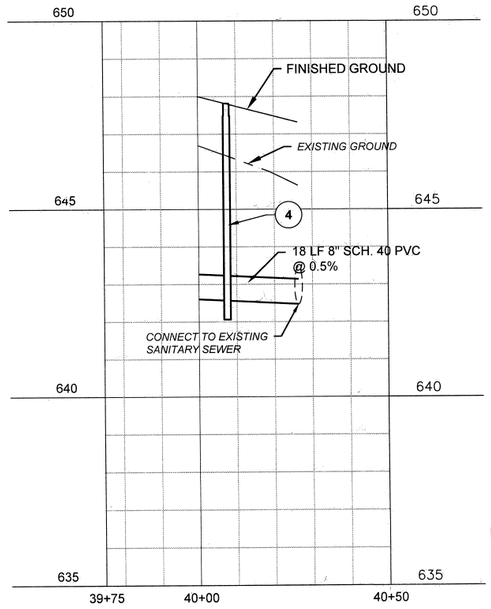
1 SANITARY SEWER CLEANOUT DETAIL
N.T.S.



1 PROPOSED DROP CLEANOUT
STA:30+00.00
N=407412.56
E=2554828.61
RIM=650.64
8 V.F.
INV IN(NE)=647.31 4" PVC
INV OUT(SW)=643.43 6" PVC

2 PROPOSED CLEANOUT
STA:30+72.33
N=407351.65
E=2554789.61
RIM=648.05
5 V.F.
INV IN(NE)=643.07 6" PVC
INV OUT(S)=643.07 6" PVC

3 PROPOSED CLEANOUT
STA:31+82.08
N=407245.68
E=2554818.14
RIM=645.93
4 V.F.
INV IN(N)=642.58 6" PVC
INV OUT(S)=642.58 6" PVC



4 PROPOSED CLEANOUT
STA:40+07.50
N=407253.47
E=2554844.46
RIM=647.81
6 V.F.
INV IN(W)=642.56" PVC
INV OUT(E)=642.55 8" PVC

CITY OF TULSA STANDARDS

351 - BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE

NORTH ARROW

0 20' 40'

LICENSED PROFESSIONAL ENGINEER
ANDY BLANKENSHIP
07-24-2020
29184
OKLAHOMA

CEC

CEC CORPORATION
4617 E 91ST ST.
TULSA, OK 74137
P: 918.663.9401
WWW.CONNECTCEC.COM

STATE OF OK CERTIFICATE OF AUTHORIZATION
CA#: 32 EXPIRES: 2020-06-30

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REVISION	BY	DATE

C101 - SANITARY SEWER P&P

PROJECT NO SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
CEC CORPORATION

PLAN SCALE: AS NOTED	DRAWN	DAG	5/19/19	APPROVED:
	DESIGNED	ALB	5/19/19	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED: DESIGN MANAGER	HAS 9.20		CITY ENGINEER
FILE:	DRAWING:		DATE: 10.02.20	
ATLAS PAGE NO: 116			SHEET 9 OF 81 SHEETS	

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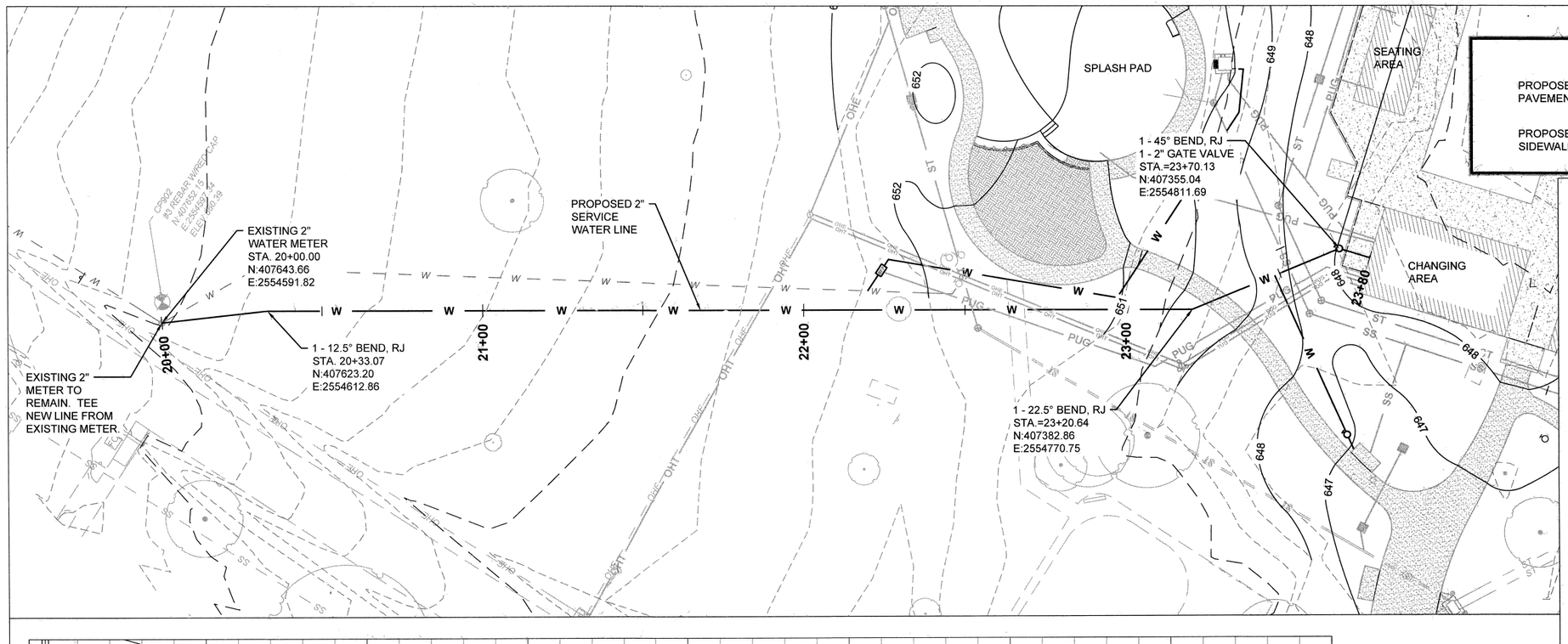
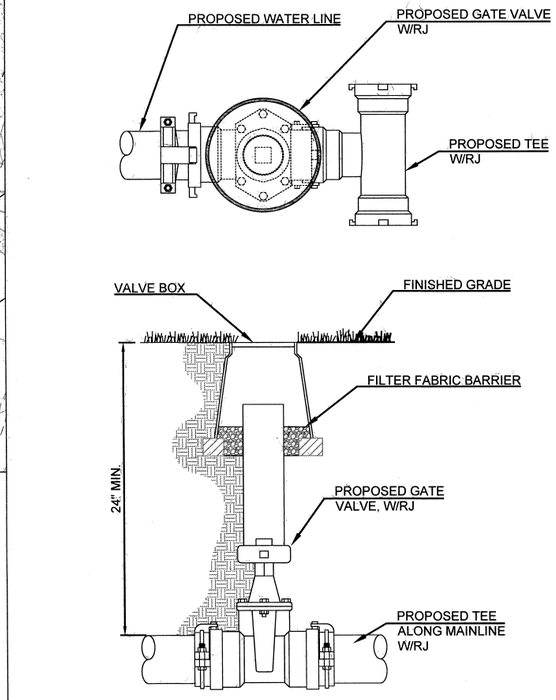
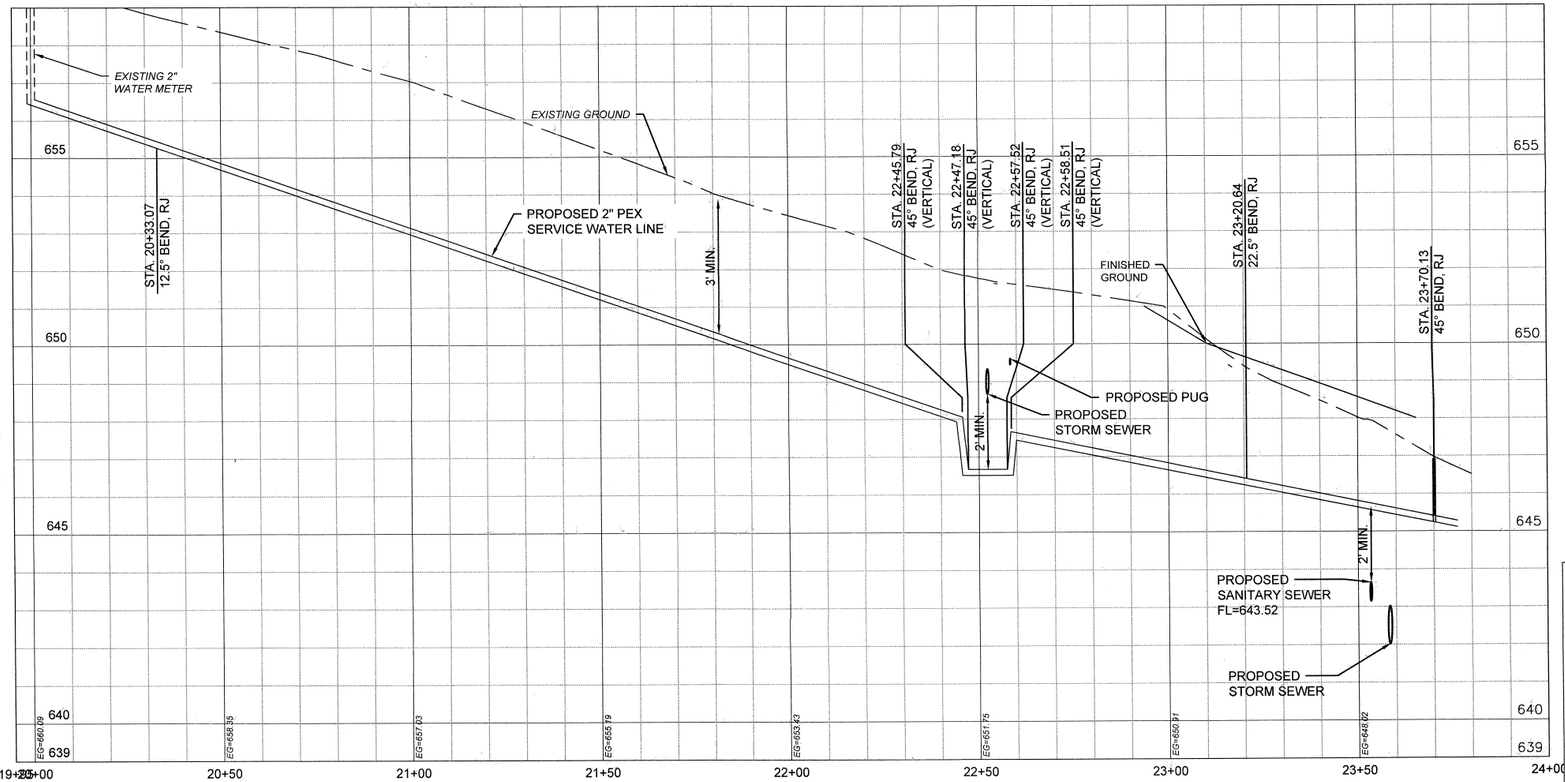


LEGEND

PROPOSED CONCRETE PAVEMENT		PROPOSED BUILDING	
PROPOSED CONCRETE SIDEWALK		PROPOSED SYNTHETIC TURF	



1 GATE VALVE AND BOX DETAIL
N.T.S.



CITY OF TULSA STANDARDS

305 - BEDDING DETAIL-SEMI RIGID PIPE
313 - VALVE BOX
315 - THRUST BLOCKS AND TRENCH CONDITIONS

NORTH ARROW
20'
0 40'

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LICENSED PROFESSIONAL ENGINEER — ANDY BLANKENSHIP 07-24-2020 29184 — OKLAHOMA

C102 - WATER EXTENSION P&P
PROJECT NO SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
CEC CORPORATION

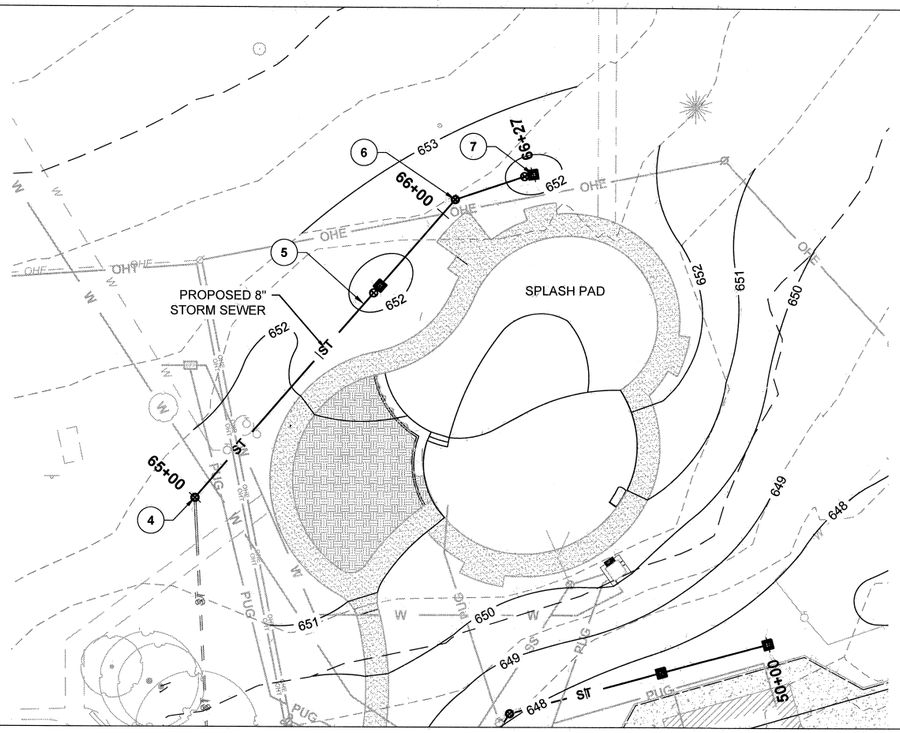
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	DAG	5/19/19
DESIGNED	ALB	5/19/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER	HAS	9-20

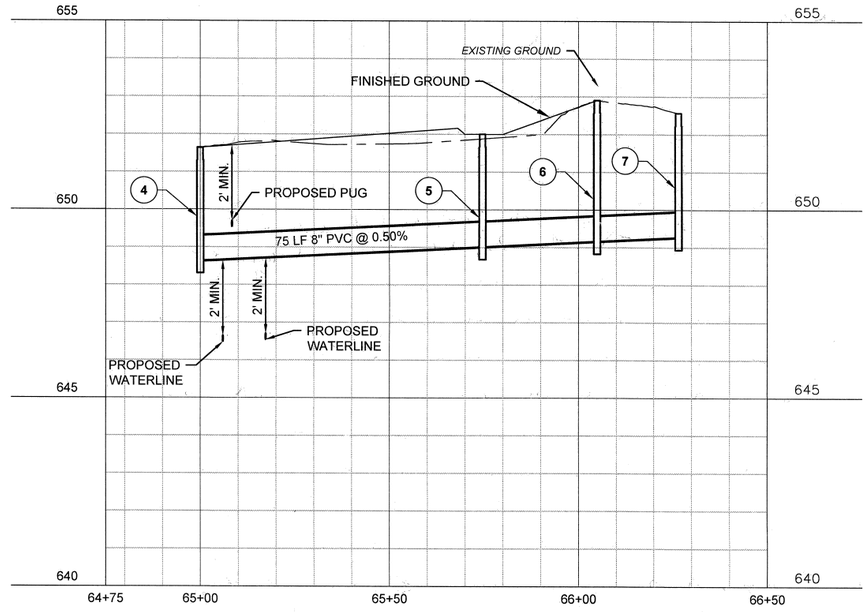
APPROVED: CITY ENGINEER
FILE: DRAWING:
DATE: 12-02-20
ATLAS PAGE NO: 116
SHEET 10 OF 81 SHEETS

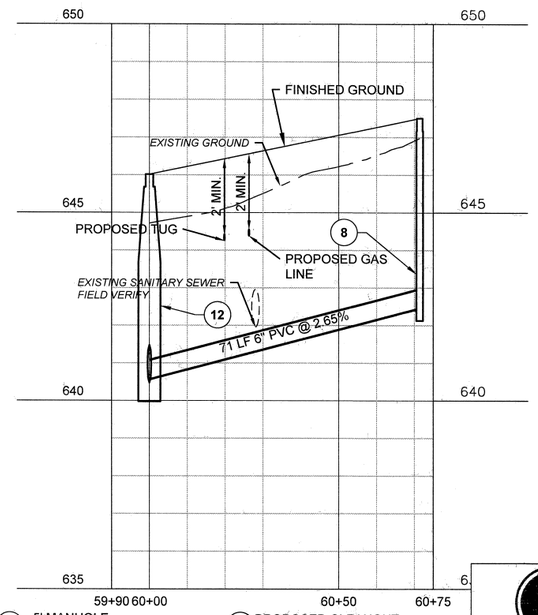
7/28/2020 12:35 PM



LEGEND

- PROPOSED CONCRETE PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SYNTHETIC TURF





4 18" DRAINAGE BASIN
WITH STD. GRATE
FIELD VERIFY
STA:65+00.00
N=407435.43
E=2554729.36
RIM=651.64
4 V.F.
INV IN(NE)=648.64 8" PVC
CONNECT TO EXISTING PIPE
FIELD VERIFY ELEVATION

5 18" DRAINAGE BASIN
WITH STD. GRATE
AND CLEANOUT
STA:65+74.62
N=407491.87
E=2554778.18
RIM=652.00
3 V.F.
INV IN(NE)=649.01 8" PVC
INV OUT(SW)=649.01 8" PVC

6 18" DRAINAGE BASIN
WITH STD. GRATE
STA:66+04.94
N=407514.80
E=2554798.01
RIM=652.90
4 V.F.
INV IN(E)=649.16 8" PVC
INV OUT(SW)=649.16 8" PVC

7 18" DRAINAGE BASIN
WITH STD. GRATE
AND CLEANOUT
STA:66+26.59
N=407521.48
E=2554818.61
RIM=652.56
4 V.F.
INV OUT(W)=649.27 8" PVC

12 5' MANHOLE
STA:60+00.00
N=407211.11
E=2554832.63
RIM=646.01
6 V.F.
INV IN(N)=640.47 6" PVC
INV IN(N)=640.47 12" PVC

8 PROPOSED CLEANOUT
STA:60+71.42
N=407257.80
E=2554886.67
RIM=647.50
6 V.F.
INV IN(SW)=642.46 6" PVC

CITY OF TULSA STANDARDS

305 - BEDDING DETAIL-SEMI RIGID PIPE
313 - VALVE BOX
315 - THRUST BLOCKS AND TRENCH CONDITIONS
504 - STANDARD METER SETTING FOR 2" WATER SERVICE
507 - METER CAN WITH RIM AND LID 2" WATER METER INSTALLATION

NORTH ARROW

0 20' 40'

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CA#: 32 EXPIRES: 2020-06-30

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LICENSED PROFESSIONAL ENGINEER
ANDY BLANKENSHIP
07-24-2020
29184
OKLAHOMA

REVISION	BY	DATE

C103 - SERVICE LINE P&P

PROJECT NO SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

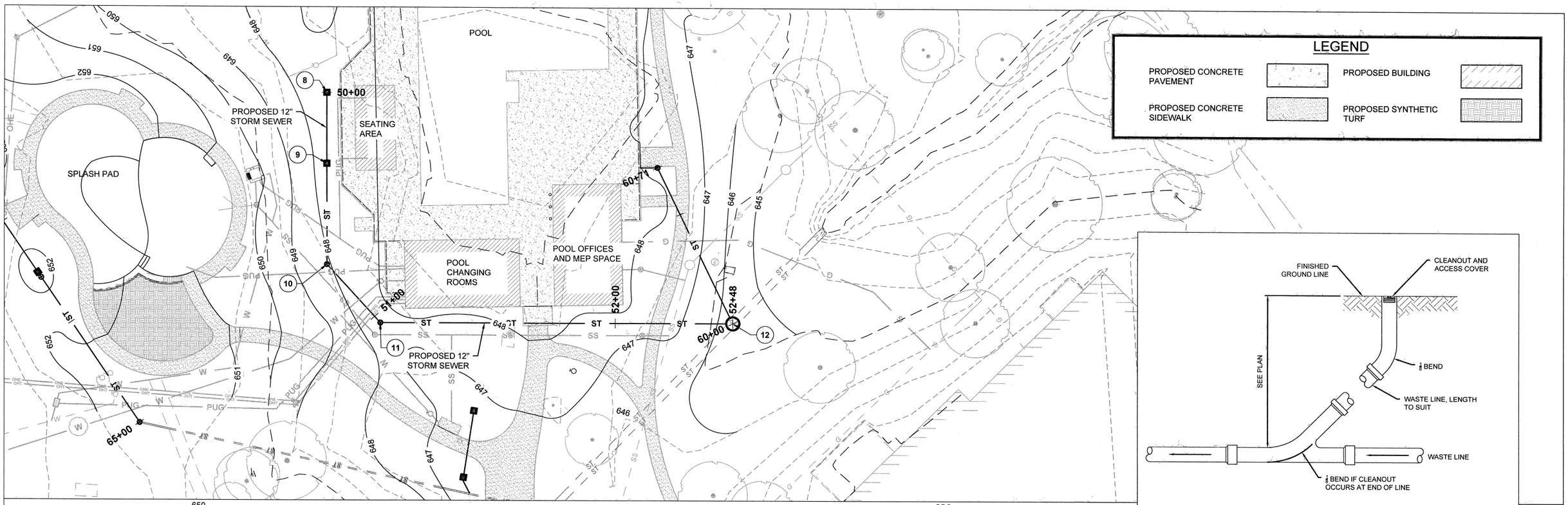
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
CEC CORPORATION

PLAN SCALE: AS NOTED	DRAWN	DAG	5/19/19	APPROVED:
	DESIGNED	ALB	5/19/19	
	SURVEY			
PROFILE SCALE: HORIZONTAL:	PROJ. MGR.		8/20	
	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED		9.20	
	DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:		DATE: 10.02.20	
ATLAS PAGE NO: 116			SHEET 11 OF 81 SHEETS	

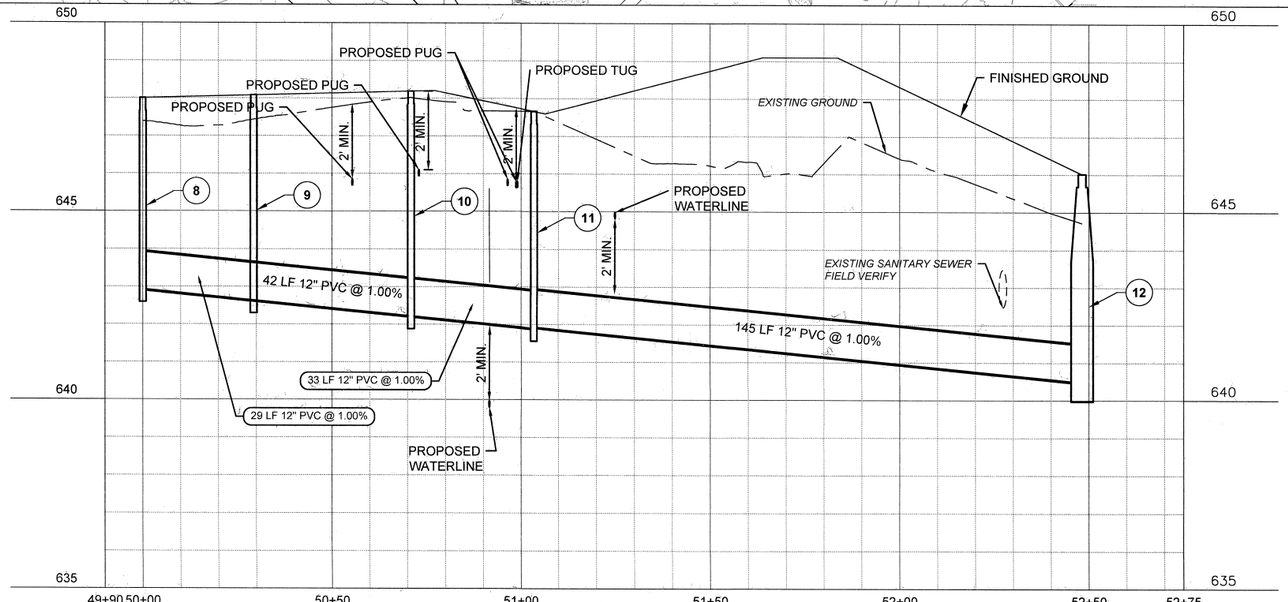
7/28/2020 12:37 PM



LEGEND

- PROPOSED CONCRETE PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SYNTHETIC TURF

1 STORM SEWER CLEANOUT DETAIL
N.T.S.



8 18" DRAINAGE BASIN WITH STD. GRATE AND CLEANOUT
STA:50+00.00
N=407396.93
E=2554881.00
RIM=648.00
6 V.F.
INV OUT(W)=642.92 12" PVC

9 18" DRAINGAE BASIN WITH STD. GRATE
STA:50+29.29
N=407389.23
E=2554852.74
RIM=648.08
6 V.F.
INV OUT(E)=642.63 12" PVC
INV OUT (W)=642.62 12" PVC

10 PROPOSED CLEANOUT
STA:50+70.90
N=407378.28
E=2554812.60
RIM=648.18
6 V.F.
INV IN(E)=642.21 12" PVC
INV OUT(SW)=642.21 12" PVC

11 PROPOSED CLEANOUT
STA:51+03.51
N=407350.82
E=2554795.01
RIM=647.66
6 V.F.
INV IN(NE)=641.89 12" PVC
INV OUT(S)=641.92 12" PVC

12 5' MANHOLE
STA:52+48.19
N=407211.11
E=2554832.63
RIM=646.01
6 V.F.
INV IN(N)=640.47 12" PVC
EXISTING FL = 640.47

CITY OF TULSA STANDARDS

351 - BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE
775 - STANDARD PRECAST CONCRETE STORMWATER MANHOLE

NORTH ARROW

0 20' 40'

LICENSED PROFESSIONAL ENGINEER
ANDY BLANKENSHIP
07-24-2020
29184
OKLAHOMA

CEC
CEC CORPORATION
4617 E 91ST ST.
TULSA, OK 74137
P: 918.663.9401
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STATE OF OK CERTIFICATE OF AUTHORIZATION
CA#: 32 EXPIRES: 2020-06-30

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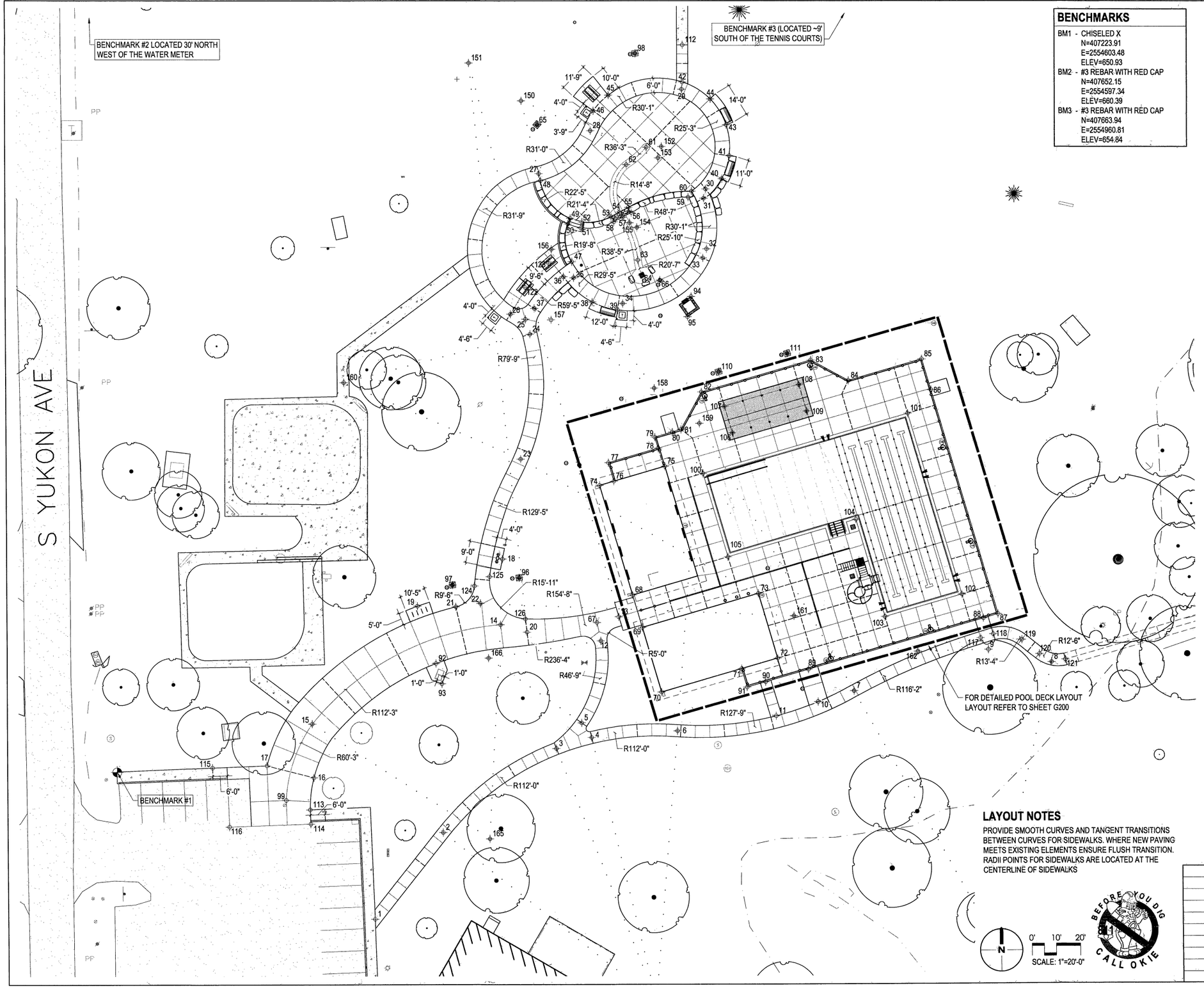
REVISION	BY	DATE

C104 - STORM P&P
PROJECT NO SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
CEC CORPORATION

PLAN SCALE: AS NOTED	DRAWN	DAG	5/19/19	APPROVED:
	DESIGNED	ALB	5/19/19	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER
FILE:	DRAWING:			DATE: 8.07.20
ATLAS PAGE NO: 116				SHEET 12 OF 81 SHEETS

7/28/2020, 12:38 PM



BENCHMARKS

BM1 - CHISELED X
N=407223.91
E=2554603.48
ELEV=650.93

BM2 - #3 REBAR WITH RED CAP
N=407652.15
E=2554597.34
ELEV=660.39

BM3 - #3 REBAR WITH RED CAP
N=407663.94
E=2554960.81
ELEV=654.84

NORTHINGS & EASTINGS POINT SCHEDULE - SITE

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1	N 407163.10	E 2554709.52	73	N 407297.49	E 2554868.57
2	N 407198.78	E 2554737.95	74	N 407342.34	E 2554803.42
3	N 407233.37	E 2554784.97	75	N 407350.17	E 2554830.25
4	N 407237.91	E 2554799.53	76	N 407344.05	E 2554809.29
5	N 407243.95	E 2554795.45	77	N 407351.72	E 2554807.05
6	N 407240.57	E 2554834.93	78	N 407357.71	E 2554827.53
7	N 407256.96	E 2554907.90	79	N 407362.28	E 2554826.20
8	N 407268.86	E 2554989.46	80	N 407364.40	E 2554833.45
9	N 407274.11	E 2554963.41	81	N 407365.45	E 2554837.05
10	N 407252.50	E 2554893.00	82	N 407380.95	E 2554845.55
11	N 407246.62	E 2554875.66	83	N 407394.14	E 2554890.66
12	N 407278.00	E 2554803.46	84	N 407385.64	E 2554906.16
13	N 407287.87	E 2554810.96	85	N 407394.50	E 2554936.49
14	N 407284.73	E 2554762.27	86	N 407381.71	E 2554940.23
15	N 407243.69	E 2554684.06	87	N 407288.84	E 2554967.36
16	N 407221.48	E 2554684.64	88	N 407287.09	E 2554961.38
17	N 407226.45	E 2554665.27	89	N 407265.96	E 2554889.06
18	N 407311.93	E 2554763.13	90	N 407260.80	E 2554871.39
19	N 407292.45	E 2554727.78	91	N 407258.58	E 2554863.78
20	N 407281.67	E 2554773.16	92	N 407268.66	E 2554735.32
21	N 407292.14	E 2554743.62	93	N 407260.21	E 2554737.70
22	N 407293.55	E 2554753.87	94	N 407420.62	E 2554841.46
23	N 407353.26	E 2554770.94	95	N 407412.22	E 2554839.99
24	N 407405.10	E 2554775.03	96	N 407304.23	E 2554770.01
25	N 407411.27	E 2554773.21	97	N 407301.19	E 2554742.33
26	N 407413.41	E 2554767.04	98	N 407521.48	E 2554818.61
27	N 407471.61	E 2554778.84	99	N 407212.21	E 2554673.16
28	N 407489.36	E 2554800.04	100	N 407347.23	E 2554846.02
29	N 407506.52	E 2554837.75	101	N 407371.94	E 2554930.58
30	N 407465.20	E 2554847.52	102	N 407296.99	E 2554952.48
31	N 407461.33	E 2554846.74	103	N 407287.74	E 2554920.80
32	N 407440.35	E 2554847.90	104	N 407328.10	E 2554909.01
33	N 407436.59	E 2554846.36	105	N 407312.64	E 2554856.13
34	N 407417.75	E 2554813.29	106	N 407363.99	E 2554858.23
35	N 407428.48	E 2554793.05	107	N 407374.94	E 2554854.89
36	N 407428.92	E 2554788.84	108	N 407383.94	E 2554885.75
37	N 407415.81	E 2554776.79	109	N 407372.99	E 2554888.95
38	N 407418.41	E 2554800.71	110	N 407389.38	E 2554852.70
39	N 407415.01	E 2554811.17	111	N 407396.95	E 2554880.99
40	N 407469.39	E 2554854.24	112	N 407525.00	E 2554838.09
41	N 407478.90	E 2554857.33	113	N 407208.27	E 2554683.07
42	N 407509.49	E 2554838.02	114	N 407202.41	E 2554683.27
43	N 407491.76	E 2554856.10	115	N 407225.60	E 2554642.79
44	N 407502.48	E 2554849.53	116	N 407201.27	E 2554649.69
45	N 407504.09	E 2554807.48	117	N 407278.85	E 2554960.16
46	N 407497.62	E 2554801.23	118	N 407280.49	E 2554965.38
47	N 407435.10	E 2554792.29	119	N 407278.17	E 2554977.27
48	N 407468.69	E 2554779.53	120	N 407272.26	E 2554984.46
49	N 407453.03	E 2554791.79	121	N 407269.89	E 2554995.27
50	N 407450.75	E 2554790.77	122	N 407424.58	E 2554773.12
51	N 407449.09	E 2554796.11	123	N 407434.48	E 2554782.81
52	N 407451.55	E 2554796.56	124	N 407300.75	E 2554751.36
53	N 407453.75	E 2554808.56	125	N 407304.64	E 2554757.84
54	N 407455.62	E 2554812.04			
55	N 407457.58	E 2554815.67	RADII POINTS		
56	N 407455.40	E 2554816.89	150	N 407501.77	E 2554771.61
57	N 407453.45	E 2554813.28	151	N 407517.46	E 2554749.88
58	N 407451.54	E 2554809.75	152	N 407482.72	E 2554829.35
59	N 407461.77	E 2554840.35	153	N 407478.08	E 2554827.93
60	N 407464.26	E 2554841.74	154	N 407449.28	E 2554819.18
61	N 407482.46	E 2554823.06	155	N 407451.17	E 2554816.19
62	N 407475.23	E 2554814.84	156	N 407440.28	E 2554783.91
63	N 407435.78	E 2554819.51	157	N 407411.01	E 2554783.74
64	N 407429.47	E 2554821.25	158	N 407382.62	E 2554826.04
65	N 407491.87	E 2554778.18	159	N 407367.97	E 2554844.64
66	N 407427.41	E 2554828.65	160	N 407385.12	E 2554697.85
67	N 407285.60	E 2554801.91	161	N 407288.12	E 2554883.20
68	N 407296.92	E 2554816.67	162	N 407273.37	E 2554934.31
69	N 407283.48	E 2554820.60	163	N 407155.42	E 2554964.36
70	N 407256.64	E 2554828.43	164	N 407128.99	E 2554825.51
71	N 407266.25	E 2554861.55	165	N 407196.14	E 2554757.37
72	N 407270.62	E 2554876.42	166	N 407270.92	E 2554757.22

LAYOUT NOTES

PROVIDE SMOOTH CURVES AND TANGENT TRANSITIONS BETWEEN CURVES FOR SIDEWALKS. WHERE NEW PAVING MEETS EXISTING ELEMENTS ENSURE FLUSH TRANSITION. RADII POINTS FOR SIDEWALKS ARE LOCATED AT THE CENTERLINE OF SIDEWALKS

BEFORE YOU DIG CALL OKIE

STATE OF OKLAHOMA Dan T. Alaback 92 REGISTERED LANDSCAPE ARCHITECT 7/24/2020

REVISION	BY	DATE

G107 SITE LAYOUT PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

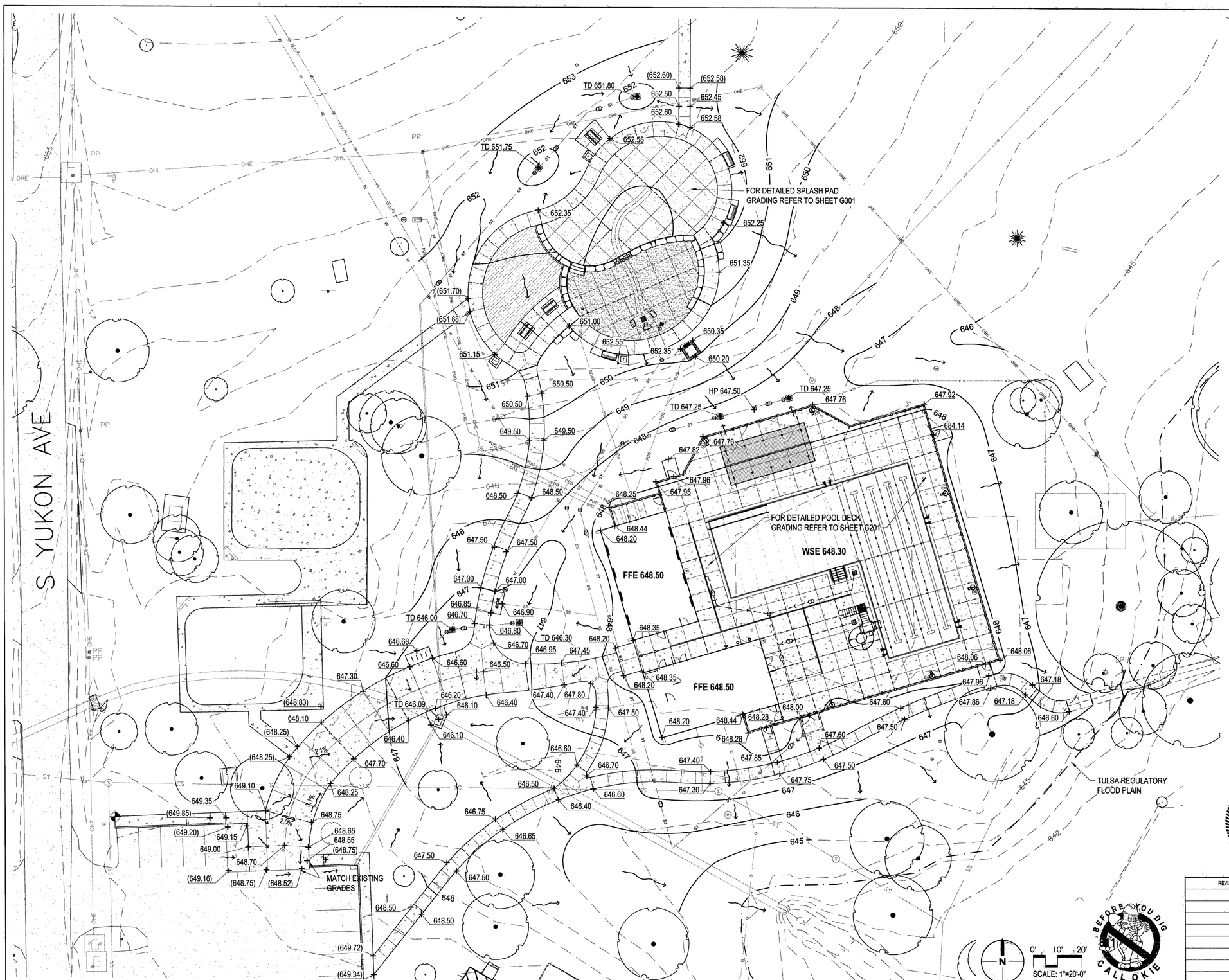
PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

PLAN SCALE: AS NOTED	DRAWN	BC	7/24/20
	DESIGNED	DA	7/24/20
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		8/20
HORIZONTAL:	LEAD ENGR.		8/20
	FIELD MGR.		8/20
VERTICAL	RECOMMENDED: DESIGN MANAGER		9.20

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 10.02.20

ATLAS PAGE NO: 192 SHEET 13 OF 81 SHEETS



GRADING & DRAINAGE SCHEDULE

SYMBOL	MATERIAL	DETAIL REFERENCE
	5" CHANNEL DRAIN	DET. E / SHT. G110
12	12" SQUARE DECK DRAIN	DET. D / SHT. G110
	18" ROUND AREA DRAIN WITH CONCRETE COLLAR	DET. F / SHT. G110
	CLEAN OUT	NA
ST	DRAIN PIPE - SCH40	NA
ST 6 / ST 8	DRAIN PIPE SIZE	NA
	APPROXIMATE DIRECTION OF SURFACE FLOW	NA
603.18	PROPOSED ELEVATION (FINISHED GRADE)	NA
(603.18)	EXISTING ELEVATION (FINISHED GRADE)	NA
TD	TOP OF DRAIN GRATE (⅛" BELOW TOP OF PAVING)	NA
TW	TOP OF WALL	NA
HP	HIGH POINT	NA
LP	LOW POINT	NA

GRADING AND SODDING NOTES

1. THE BASE FLOOD ELEVATION IS 644.00'

2. FOR NEW PAVING AREAS, PROVIDE POSITIVE DRAINAGE IN DIRECTION INDICATED ON PLANS.

3. WHERE NEW SIDEWALKS ABUT EXISTING PAVING TO REMAIN ENSURE FLUSH TRANSITION. FIELD ADJUST NEW SIDEWALKS TO MATCH ELEVATIONS OF EXISTING PAVING. PROVIDE EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING.

4. ALL NEW PAVING AREAS SHALL COMPLY WITH ADA STANDARDS AND HAVE A MAXIMUM 2% CROSS SLOPE, 5% LONGITUDE SLOPE

5. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.

6. EXISTING SPOT ELEVATIONS AND TOPOGRAPHIC DATA PROVIDED BY TULSA LAND SURVEYORS. SOME EXISTING GRADES WERE DETERMINED BY INTERPOLATION, CONTRACTOR TO VERIFY EXISTING GRADES AND INSTALL NEW PAVING FLUSH WITH EXISTING PAVING.

7. FOR SOIL DESCRIPTIONS, EXCAVATION INSTRUCTIONS, AND FILL REQUIREMENTS REFER TO SPECIFICATION 31 2000 EARTH MOVING. BEFORE PERFORMING ANY EARTHWORK OPERATIONS REFER TO SPECIFICATION 31 2000 FOR INSTRUCTIONS. WHERE EARTHWORK OCCURS NEAR OR AROUND TREES, ENSURE FINISHED GRADE PRESERVES THE EXISTING ELEVATION OF SOIL AROUND TREE TRUNKS.

8. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED, IN ACCORDANCE WITH PLANS AND SODDING SPECIFICATIONS - SECTION 32 9200. REPAIR ALL AREAS DAMAGED BY CONSTRUCTION OPERATIONS IN ACCORDANCE WITH THE CITY OF TULSA PARKS AND REC. STANDARD SPECS. RE-GRADE AS NEEDED TO PROVIDE A SMOOTH FINISHED GRADE AND RESOD ALL DISTURBED AREAS WITH 'U3' BERMUDA GRASS. ADD TOPSOIL AS NEEDED TO REPAIR RUTS OR DEPRESSIONS. AT CONCLUSION OF CONSTRUCTION, REMOVE ALL EQUIPMENT AND SURPLUS MATERIALS.

STATE OF OKLAHOMA — Tom T. Alaback — 92 — REGISTERED LANDSCAPE ARCHITECT — 7/24/2020

G108 SITE GRADING PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED		9.20
DESIGN MANAGER		

APPROVED:

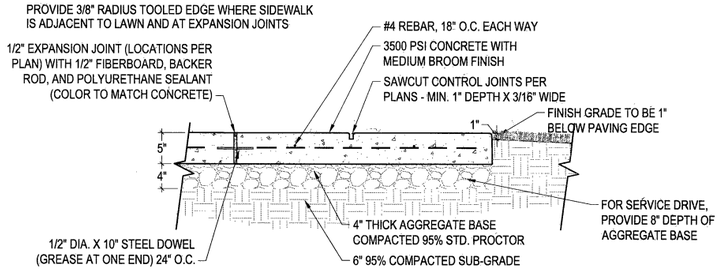
CITY ENGINEER

FILE: DRAWING:

DATE: 10.02.20

ATLAS PAGE NO: 192

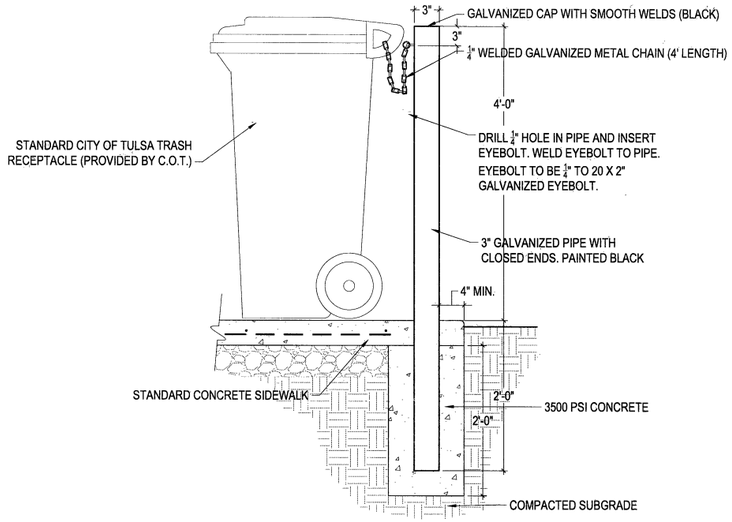
SHEET 14 OF 81 SHEETS



A CONCRETE SIDEWALK / POOL DECK SECTION

SCALE 1"=1'-0"

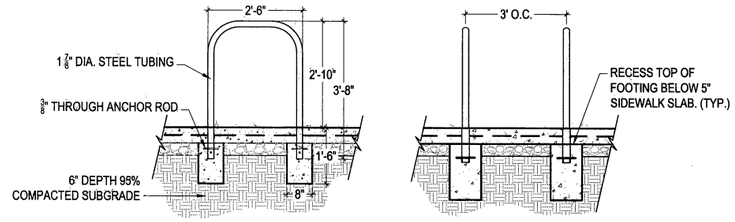
0 1'



B TRASH RECEPTACLE ANCHORING POST

SCALE 1"=1'-0"

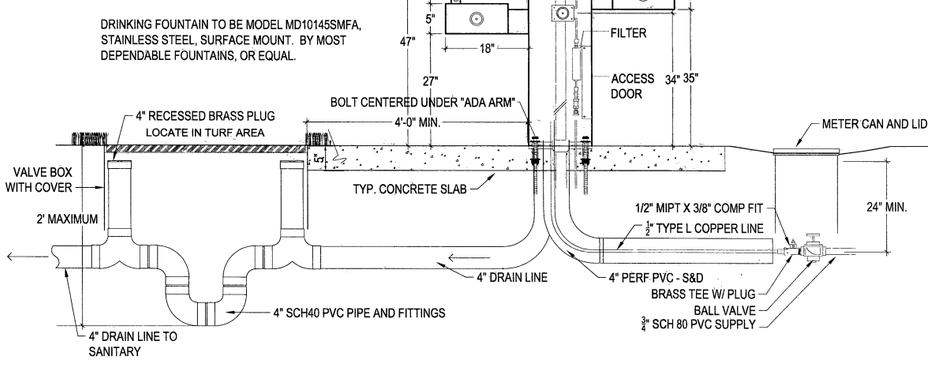
0 1'



C BIKE RACK DETAIL

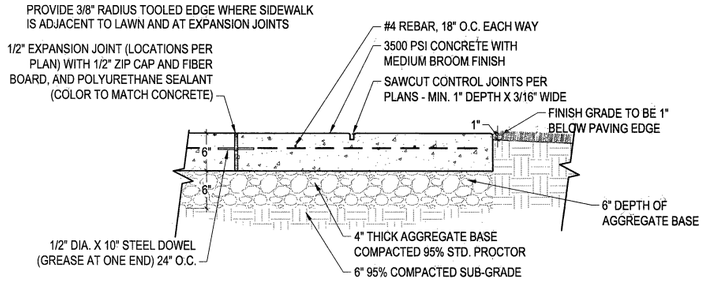
SCALE 1"=1'-0"

0 1'



D DRINKING FOUNTAIN DETAIL

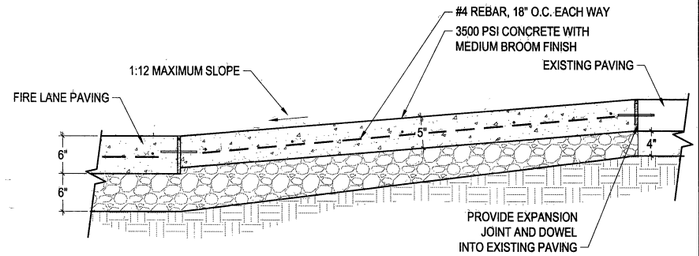
SCALE: NTS



E CONCRETE FIRE LANE SECTION

SCALE 1"=1'-0"

0 1'



F ADA RAMP SECTION

SCALE 1"=1'-0"

0 1'

SITE FURNISHINGS SCHEDULE - PRE-APPROVED MANUFACTURERS

QTY	ITEM	MANUFACTURER	DETAIL	NOTES
3	6' PICNIC TABLE	BEDFORD TECHNOLOGY 2424 ARMOUR ROAD, WORTHINGTON, MN (800) 721-9037 WWW.PLASTICBOARDS.COM	N/A	PARK SCAPE SERIES 72" RECYCLED PLASTIC SLAT BENCH WITH STEEL POWDER COATED FRAME, OR APPROVED EQUAL. SURFACE MOUNT WITH NON-CORROSIVE TRI-GROOVE SECURITY BOLT ANTI-THEFT HARDWARE. SEAT COLOR: CEDAR. FRAME COLOR: MATTE BLACK.
3	6' BENCH	BEDFORD TECHNOLOGY	N/A	PARK SCAPE SERIES 72" RECYCLED PLASTIC SLAT TABLE (ALL TABLES TO BE ADA ACCESSIBLE) WITH STEEL POWDER COATED FRAME, OR APPROVED EQUAL. SURFACE MOUNT WITH NON-CORROSIVE TRI-GROOVE SECURITY BOLT ANTI-THEFT HARDWARE. SEAT COLOR: CEDAR. FRAME COLOR: MATTE BLACK.
4	BICYCLE RACK	GRABER MANUFACTURING INC. 1080 UNIEK DRIVE WAUNAKEE, WI 53597 (800) 448-7931, (608) 849-1080 WWW.MADRAX.COM, SALES@MADRAX.COM	C / SHT. G109	BIKE RACK TO BE UX MODEL BIKE RACK - IN GROUND MOUNTED, MODEL UX190-IG(SF). FINISH: POWDERCOAT COLOR SELECTION BY OWNER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. MANUFACTURED BY GRABER, MADRAX DIVISION, OR APPROVED EQUAL.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S DIRECTIONS AND AS SHOWN ON DETAILS. RECEIVE APPROVAL OF FINAL PLACEMENT OF FURNISHINGS PRIOR TO ANCHORING. PROVIDE COLOR SAMPLES FOR APPROVAL FOR ALL FURNISHINGS. REFER ALSO TO SPECIFICATION 12 9300 - SITE FURNISHINGS.

STATE OF OKLAHOMA — Tim T. Alaback — 92 — LICENSED LANDSCAPE ARCHITECT — 7/24/2020

REVISION	BY	DATE

G109 SITE DETAILS - A

PROJECT NO. SP19-1

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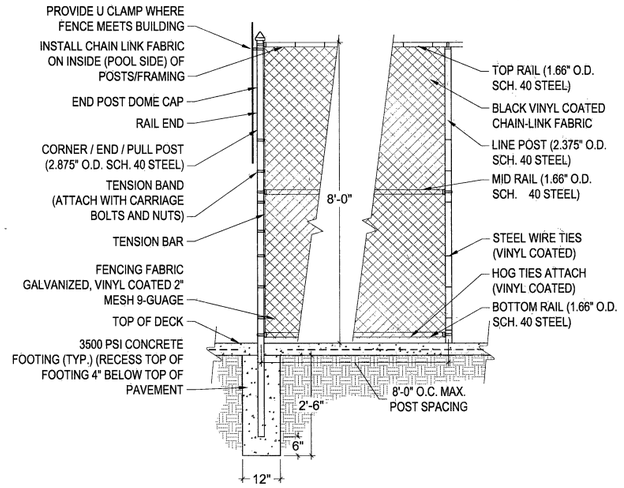
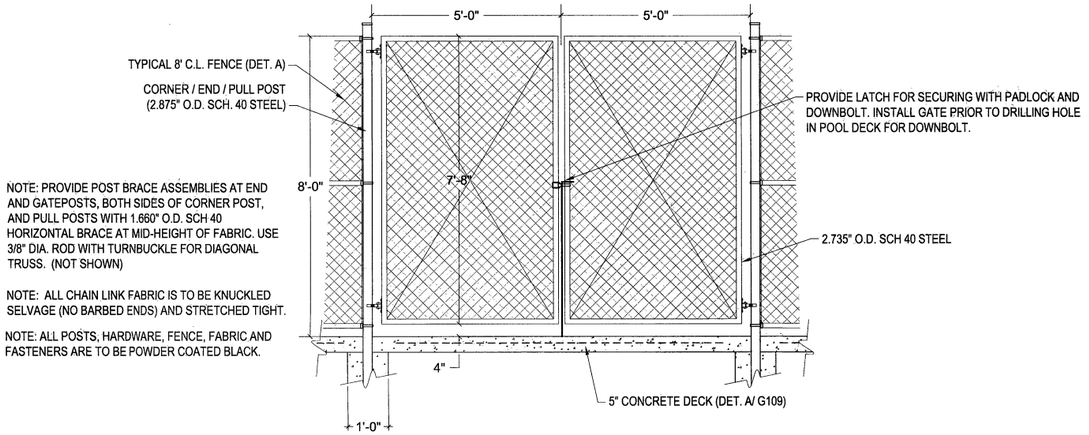
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	GB 8/20		
HORIZONTAL:	LEAD ENGR.	8/20		
	FIELD MGR.	8/20		
VERTICAL	RECOMMENDED: DESIGN MANAGER	HBJ 9.20		CITY ENGINEER
FILE:	DRAWING:			DATE: 10.2.20
ATLAS PAGE NO: 192				SHEET 15 OF 81 SHEETS



A CHAIN LINK FENCE DETAIL

SCALE 1/2"=1'-0"

0 1'



NOTE: PROVIDE POST BRACE ASSEMBLIES AT END AND GATEPOSTS, BOTH SIDES OF CORNER POST, AND PULL POSTS WITH 1.660" O.D. SCH 40 HORIZONTAL BRACE AT MID-HEIGHT OF FABRIC. USE 3/8" DIA. ROD WITH TURNBUCKLE FOR DIAGONAL TRUSS. (NOT SHOWN)

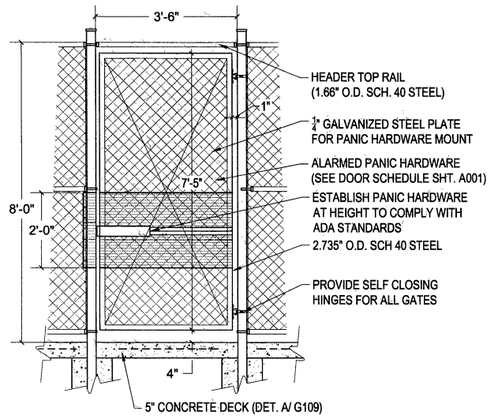
NOTE: ALL CHAIN LINK FABRIC IS TO BE KNUCKLED SELVAGE (NO BARBED ENDS) AND STRETCHED TIGHT.

NOTE: ALL POSTS, HARDWARE, FENCE, FABRIC AND FASTENERS ARE TO BE POWDER COATED BLACK.

B DOUBLE CHAIN LINK FENCE GATE DETAIL

SCALE 1/2"=1'-0"

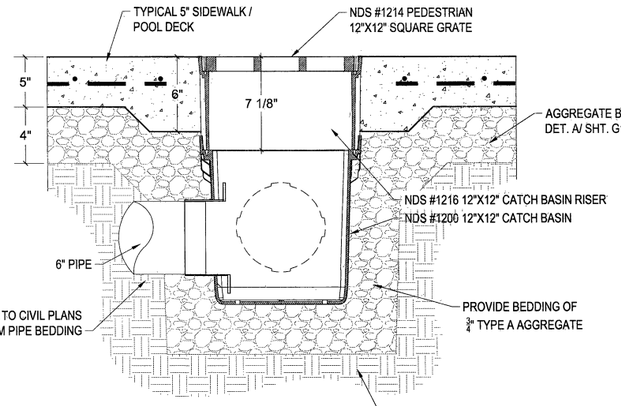
0 1'



C CHAIN LINK FENCE GATE DETAIL

SCALE 1/2"=1'-0"

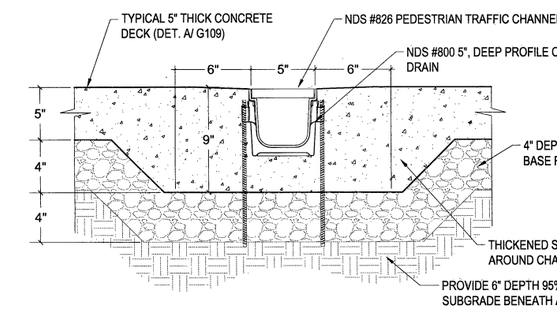
0 1'



D 12" DRAIN GRATE (POOL DECK)

SCALE 2"=1'-0"

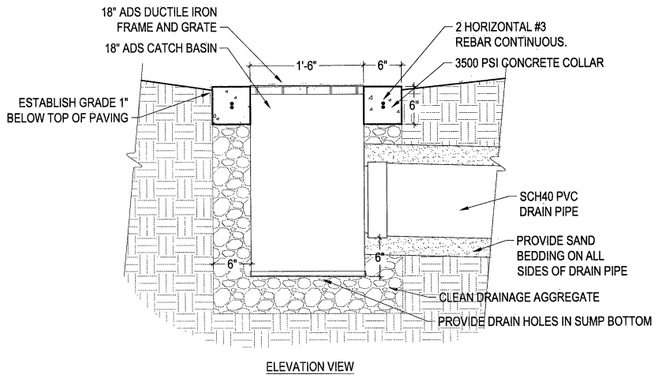
0 1'



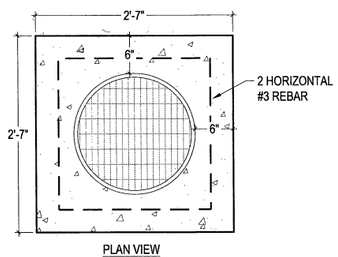
E 5" WIDE CHANNEL DRAIN (POOL DECK)

SCALE 2"=1'-0"

0 1'



ELEVATION VIEW



PLAN VIEW

F AREA DRAIN DETAIL

SCALE: 1"=1'-0"

0 1'



G110 SITE DETAILS - B

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

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ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED

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VERTICAL

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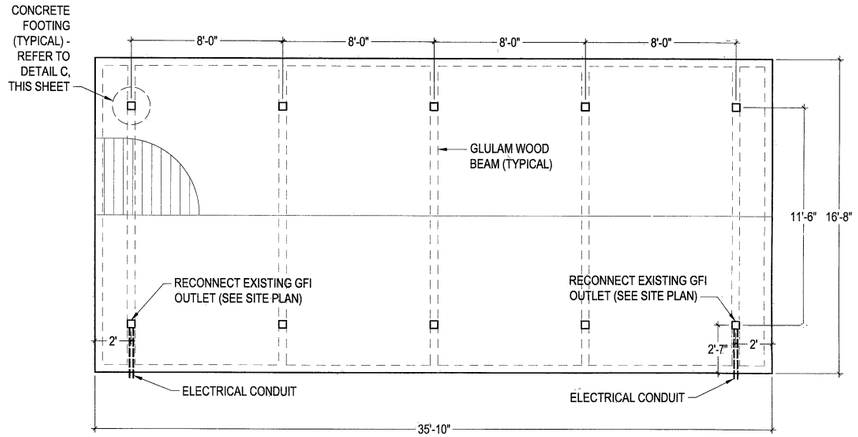
DESIGNED	DA	7/24/20	
SURVEY			
PROJ. MGR.		8/5/20	
LEAD ENGR.		8/5/20	
FIELD MGR.		8/5/20	
RECOMMENDED: DESIGN MANAGER		8.5.20	CITY ENGINEER

FILE: DRAWING:

DATE: 8.06.20

ATLAS PAGE NO: 192

SHEET 16 OF 81 SHEETS



A RELOCATED EXISTING SHELTER - PLAN

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

0 4'

SHADE STRUCTURE RELOCATION NOTES

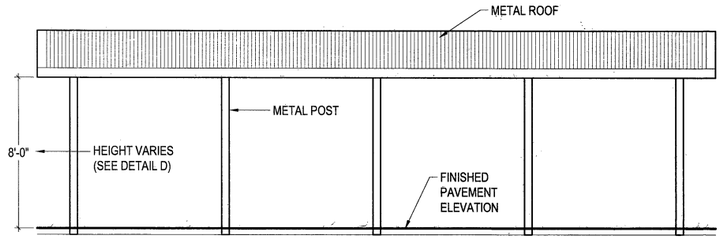
STRUCTURE REMOVAL

NOTE: SHADE STRUCTURE CONFIGURATION AND STEEL SIZES INDICATED ON THIS SHEET ARE APPROXIMATE AND FOR PLANNING. CONTRACTOR TO VISIT SITE, INSPECT THE STRUCTURE, AND VERIFY DIMENSIONS. NOTIFY OWNER OF ANY POTENTIAL ISSUES PRIOR TO REMOVAL, VERIFY PLAN DIMENSIONS, ELEVATIONS, STEEL TUBE SIZE, STEEL BASEPLATE SIZE AND THICKNESS, STEEL GUSSET PLATE THICKNESS, WOOD WIDTH AND DEPTH FOR ROOF DECKING, WOOD WIDTH AND DEPTH OF GLU-LAM GIRDERS. NOTIFY OWNER AND STRUCTURAL ENGINEER OF RECORD OF SIZES. TAKE PHOTOGRAPHS TO DOCUMENT THE EXISTING STRUCTURE AND INSTALLATION DETAILS.

CONTRACTOR TO CAREFULLY DISASSEMBLE STRUCTURE AND STORE FOR REINSTALLATION. RECORD AND REPAIR ANY DAMAGE TO THE STRUCTURE DURING RELOCATION. SALVAGE BOLTS FROM POST / BEAM CONNECTIONS FOR REASSEMBLY. REMOVE STRUCTURE CAREFULLY TO AVOID DAMAGE. PROVIDE TEMPORARY BRACING AS NEEDED FOR REMOVAL OF ROOF STRUCTURE. SAW CUT PAVING AS NEEDED FOR POST REMOVAL, AND REMOVE ALL CONCRETE FROM BURIED PORTIONS OF POSTS.

STRUCTURE REASSEMBLY

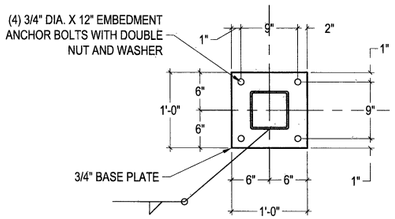
REASSEMBLE THE SHADE STRUCTURE TO MATCH ORIGINAL INSTALLATION, AND PER DETAILS ON PLANS. PROVIDE ALL NECESSARY HARDWARE, BOLTS, PLATES, ETC. AS REQUIRED FOR COMPLETE REASSEMBLY. STRUCTURE IS TO BE CAREFULLY ERECTED TO BE PLUMB / LEVEL. POSTS ARE TO BE POWDER COATED (COLOR TO MATCH EXISTING COLOR.) REMOVE RUST / FLAKING AT BASE OF POSTS BY SAND BLASTING PRIOR TO PAINTING, AND PRIME COAT PAINT ALL BARE METAL. RECESS THE TOP OF ALL POST FOOTINGS TO BE LEVEL AND AT THE SAME ELEVATION, PER DETAILS. REFER TO GRADING PLAN FOR FINISHED SLAB ELEVATIONS. DUE TO 2% CROSS SLOPE NORTH TO SOUTH, EAVE HEIGHT WILL VARY ± THREE (3) INCHES. PRIOR TO POURING FOOTING, VERIFY POST LENGTH AND DESIRED EAVE HEIGHT WITH OWNER.



B RELOCATED EXISTING SHELTER - FRONT ELEVATION

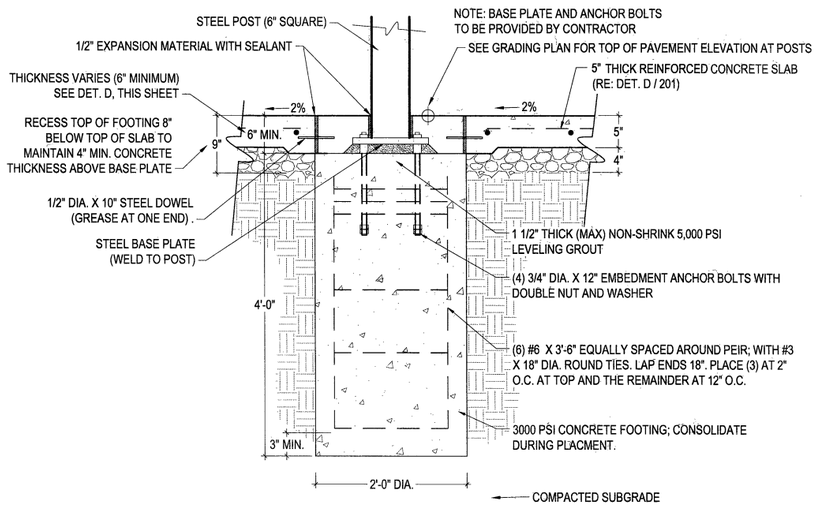
SCALE: 1/4"=1'-0"

0 4'



BASE PLATE PLAN DETAIL

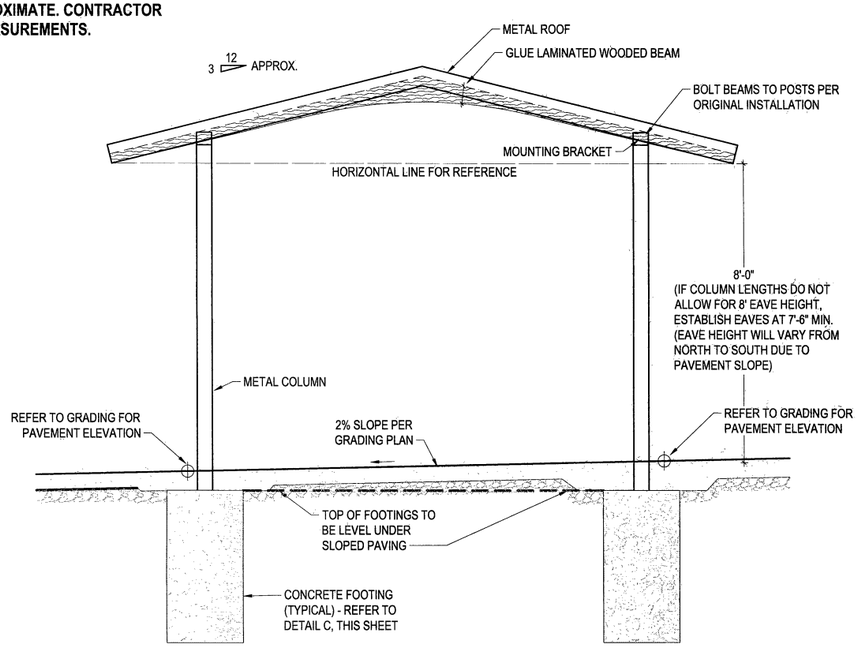
NOTE: DRAWINGS OF EXISTING SHADE STRUCTURE ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL MEASUREMENTS.



C FOOTING DETAIL FOR RELOCATED EXISTING SHELTER

SCALE: 1"=1'-0"

0 1'



D RELOCATED EXISTING SHELTER - END ELEVATION

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

0 2'

STRUCTURAL NOTES

1. GENERAL ITEMS

1.01 This project shall conform to the International Building Code 2015 edition. Reference to other standard specifications or codes shall be the latest standard or code adopted and published.

1.02 Contractor shall verify all existing conditions, dimensions, and elevations before construction. Notify the Architect and Structural Engineer of any discrepancies.

1.03 Contractor shall coordinate structural contract documents with architectural, mechanical, electrical, plumping, and civil. Notify the Architect and Structural Engineer of any conflicts and/or omissions.

1.04 Contractor shall be responsible for the design, adequacy, and safety of temporary bracing, shoring, and supports. Structural elements are not stable until the structure has been erected and all connections have been made. Concrete members are not stable until they have reached their 28-day compressive strength.

1.05 Construction of structural foundations, framing and components shall be performed in a workmanlike manner, plumb, level and straight in accordance with standard tolerances of the specified material, and to the standard codes and specifications associated with the structural materials.

1.06 Gravity Loads:

Occupancy or Use	Uniform	Concentrated
Roof Live Load	20 PSF	
Roof Dead Load	10 PSF	

1.07 Snow Load:
Ground Snow Load _____ Pg =10 PSF

1.08 Wind Load:
Basic Wind Speed _____ V = 115 MPH

1.09 Seismic Load:
Seismic Importance Factor _____ Ie = 1.0
Spectral Response Acceleration _____ Ss =0.131
Spectral Response Acceleration _____ S1 = 0.068

2. FOUNDATIONS

2.01 The design of foundations is based on the criteria established in the geotechnical engineering report by Terracon GeReport, Project No. 04195064, dated 8/22/2019 and presumptive values noted in Section 1806.2, 2015 IBC.

2.02 Foundations are based on bearing in native soils with an allowable net bearing pressure of 2000 PSF and an allowable Lateral pressure of 100 PSF/foot below grade.

3. CONCRETE

3.01 All concrete work shall conform to ACI 301, "Specifications for Structural Concrete Buildings." Design is based on ACI 318, "Building Code Requirements for Structural Concrete."

3.02 Unless noted otherwise, all concrete shall be normal weight and have the following minimum 28 day compressive strength.
Foundations _____ 3000 psi

3.04 Concrete mix design and testing shall be performed in accordance with ACI 318, "Building Code Requirements for Structural Concrete." Concrete placement and curing shall be in accordance with ACI 301, standard specification. Concrete shall be consolidated using vibrators.

3.05 Reinforcing bars shall be Grade 60, ASTM A-615.

3.06 Reinforcing steel shall have the following concrete cover unless noted otherwise.
Concrete cast against Earth (not formed) _____ 3"

3.07 Anchor bolts and embedded plates shall be securely fastened with templates and be in place prior to concrete being poured.

4. STEEL

5.01 All structural steel construction shall conform to the AISC Steel Construction Manual, thirteenth edition.

5.02 Specifications for Steel Materials:
Structural steel bars, plates, and rolled sections shall be ASTM A36, 36 KSI yield.
Rectangular Hollow Steel Sections shall be ASTM 500, Grade B, 46 KSI yield.
Anchor Bolts shall be ASTM F1554, Grade 36, 36 KSI yield.

5.03 Welding shall conform to AWS D1.1. Electrodes: E70XX. Weld sizes to meet requirements of AISC, unless noted otherwise on Plans.

5. WOOD

6.01 Wood decking shall be 2x8 T&G Southern Pine No. 2 or better.

6.02 Wood beams shall be glu-laminated beams, nominal 8x4 at bearing and 12x4 at midspan or deeper, Southern Pine 16F-E1.3 or better.

6.03 Attachment of decking to beams shall be treated deck screws, #8 x 3" or better, 2 per plank.

6.04 Attachment of beam to steel column shall be (5) 12d nails or #10x 2" each gusset plate.

Paul M. Rose — Digitally signed by Paul M. Rose Date: 2020.05.15 15:13:52 -05'00'

PROFESSIONAL ENGINEER — REGISTERED — PAUL MICHAEL ROSE — 15669 — OKLAHOMA

C.A. 3685
Expires 6/ 30/2021

PHILLIPS SLAUGHTER ROSE
203 E. Main
Jenks, OK 74037
918 488-9995

G111 SHADE STRUCTURES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

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REVISION	BY	DATE

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DESIGNED	PR	5/22/20	
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LEAD ENGR.		8/20	
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RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER

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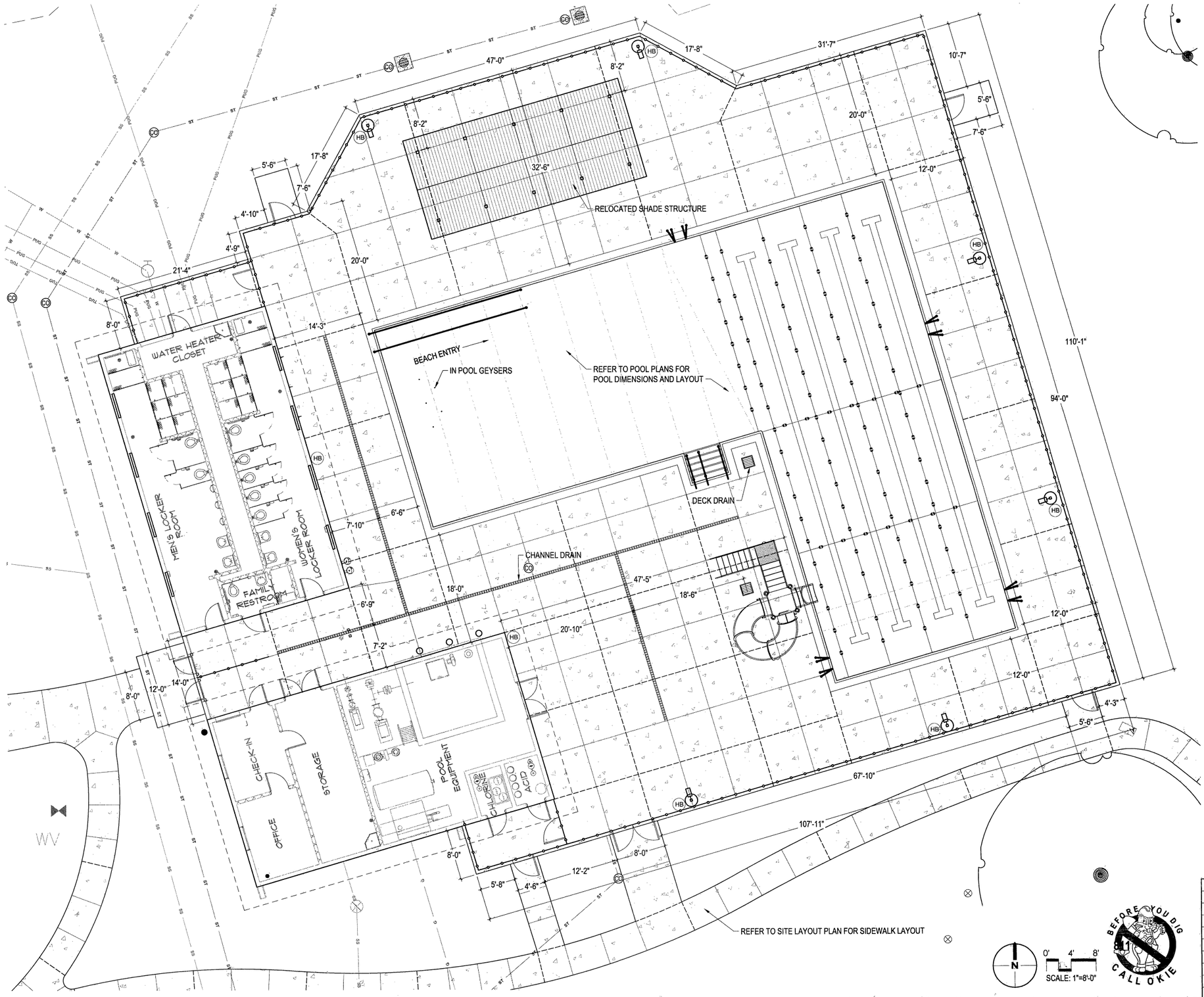
SHEET 17 OF 82 SHEETS



CONTROL JOINT NOTES

- SAW CUT CONTROL JOINT. SAW CUT TO A DEPTH OF ¼ THE THICKNESS OF THE SLAB (MINIMUM).
- EXPANSION JOINT. ½" W/ ZIP CAP AND CAULK TO MATCH PAVING COLOR. PROVIDE EXPANSION JOINT WHERE NEW PAVING MEETS EXISTING PAVING, WHERE PAVING MEETS BUILDINGS, FOOTINGS, AND UPRIGHT STRUCTURES.

CONTRACTOR TO PROVIDE SUBMITTAL FOR SAW CUT AND EXPANSION JOINT LAYOUT PRIOR TO POURING CONCRETE.

STATE OF OKLAHOMA — Dan T. Alaback — REGISTERED LANDSCAPE ARCHITECT — 92 — 7/24/2020

G200 POOL DECK LAYOUT PLAN

PROJECT NO. SP19-1

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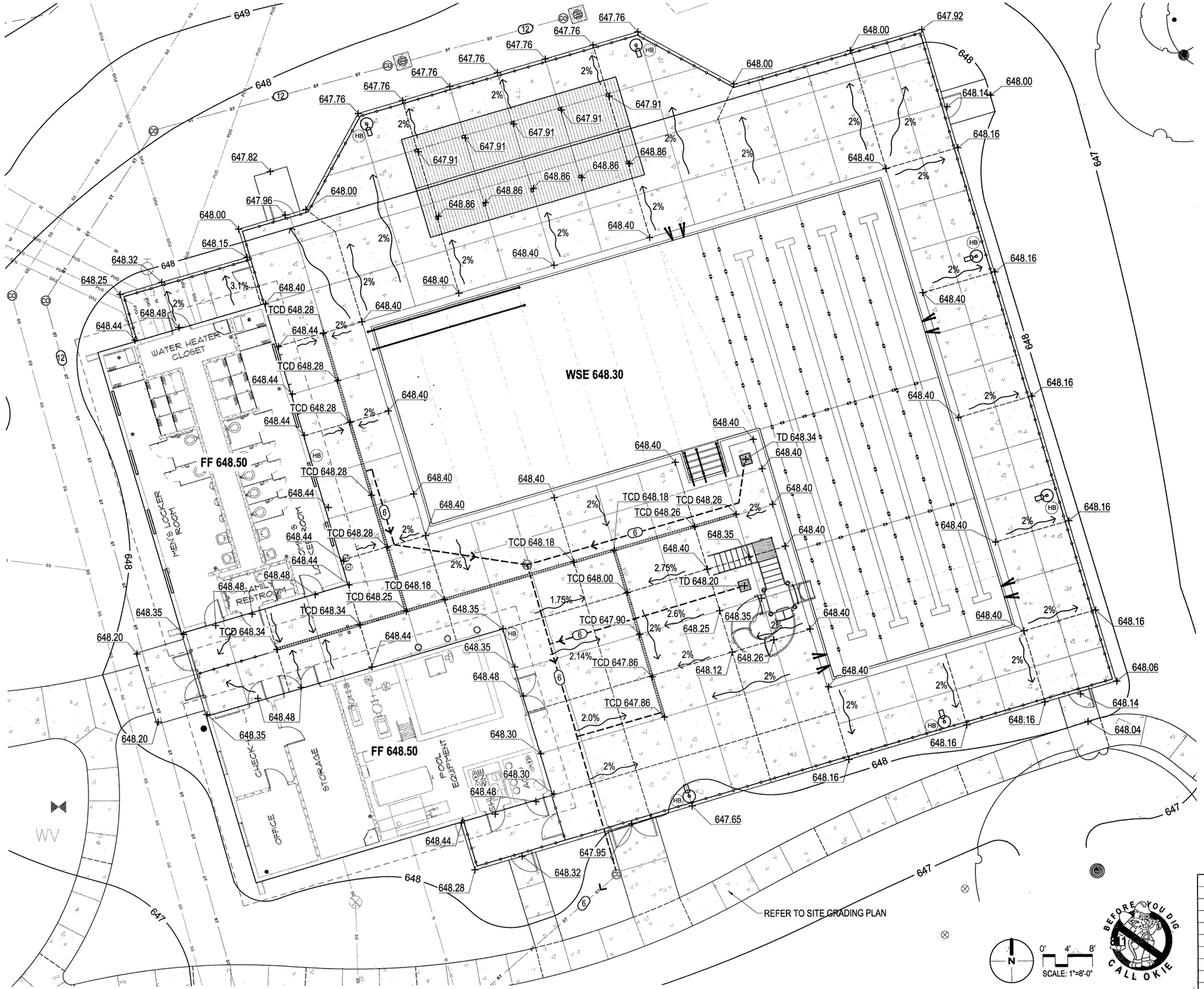
ATLAS PAGE NO: 192 SHEET 18 OF 81 SHEETS



GRADING & DRAINAGE SCHEDULE

SYMBOL	MATERIAL	DETAIL REFERENCE
	5" CHANNEL DRAIN	DET. E / SHT. G110
12	12" SQUARE DECK DRAIN	DET. D / SHT. G110
CO	CLEAN OUT	NA
	DRAIN PIPE - SCH 40 UNDER PAVING	NA
6 / 6	DRAIN PIPE SIZE	NA
	APPROXIMATE DIRECTION OF SURFACE FLOW	NA
99.90	PROPOSED ELEVATION (FINISHED GRADE)	NA
(603.18)	EXISTING ELEVATION (FINISHED GRADE)	NA
FF	FINISHED FLOOR ELEVATION	NA
WSE	WATER SURFACE ELEVATION	NA
TD	TOP OF DRAIN GRATE (⅛" BELOW TOP OF PAVING)	NA
TCD	TOP OF CHANNEL DRAIN GRATE (⅛" BELOW TOP OF PAVING)	NA
HP	HIGH POINT	NA
LP	LOW POINT	NA

GRADING AND SODDING NOTES

1. THE BASE FLOOD ELEVATION IS 644.00'
2. FOR NEW PAVING AREAS, PROVIDE POSITIVE DRAINAGE IN DIRECTION INDICATED ON PLANS.
3. WHERE NEW SIDEWALKS ABUT EXISTING PAVING TO REMAIN ENSURE FLUSH TRANSITION. FIELD ADJUST NEW SIDEWALKS TO MATCH ELEVATIONS OF EXISTING PAVING. PROVIDE EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING.
4. ALL NEW PAVING AREAS SHALL COMPLY WITH ADA STANDARDS AND HAVE A MAXIMUM 2% CROSS SLOPE
5. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
6. EXISTING SPOT ELEVATIONS AND TOPOGRAPHIC DATA PROVIDED BY TULSA LAND SURVEYORS
7. FOR SOIL DESCRIPTIONS, EXCAVATION INSTRUCTIONS, AND FILL REQUIREMENTS REFER TO SPECIFICATION 31 2000 EARTH MOVING. BEFORE PERFORMING ANY EARTHWORK OPERATIONS REFER TO SPECIFICATION 31 2000 FOR INSTRUCTIONS. WHERE EARTHWORK OCCURS NEAR OR AROUND TREES, ENSURE FINISHED GRADE PRESERVES THE EXISTING ELEVATION OF SOIL AROUND TREE TRUNKS.
8. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED, IN ACCORDANCE WITH PLANS AND SODDING SPECIFICATIONS - SECTION 32 9200. REPAIR ALL AREAS DAMAGED BY CONSTRUCTION OPERATIONS IN ACCORDANCE WITH THE CITY OF TULSA PARKS AND REC. STANDARD SPECS. RE-GRADE AS NEEDED TO PROVIDE A SMOOTH FINISHED GRADE AND RESOD ALL DISTURBED AREAS WITH 'U3' BERMUDA GRASS. ADD TOPSOIL AS NEEDED TO REPAIR RUTS OR DEPRESSIONS. AT CONCLUSION OF CONSTRUCTION, REMOVE ALL EQUIPMENT AND SURPLUS MATERIALS.

STATE OF OKLAHOMA — Dan T. Alaback — 1992 — REGISTERED LANDSCAPE ARCHITECT — 7/24/2020

G201 POOL DECK GRADING PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED

PROFILE SCALE:

HORIZONTAL:

VERTICAL

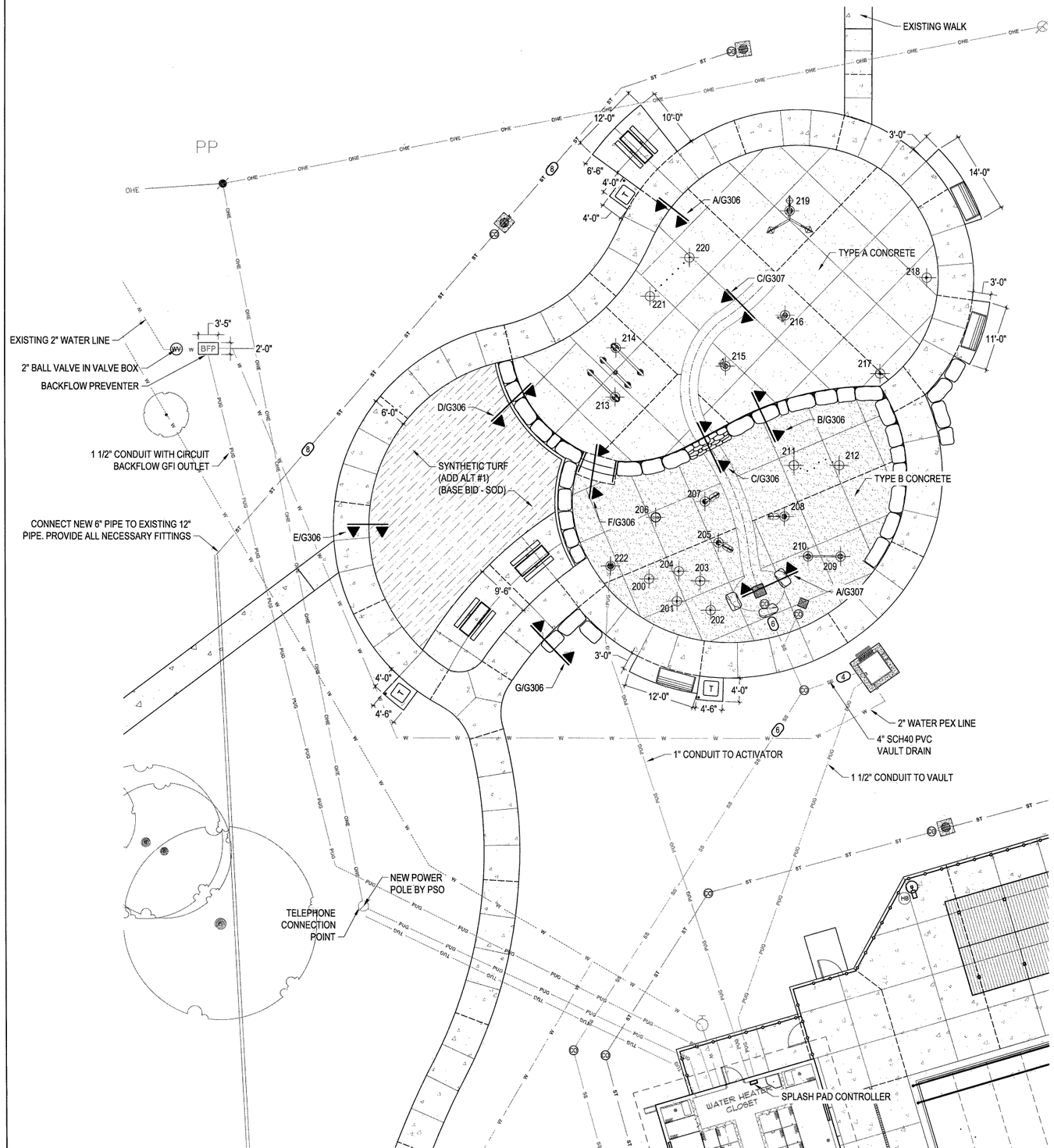
DRAWN	BC	7/24/20	APPROVED:
DESIGNED	DA	7/24/20	
SURVEY			
PROJ. MGR.		8/8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER

FILE: DRAWING:

ATLAS PAGE NO: 192

DATE: 10.02.20

SHEET 19 OF 81 SHEETS



COLORED CONCRETE LEGEND

ALL CONCRETE TO BE 3,500 PSI 5" THICK WITH REINFORCING AND JOINTS PER DETAIL A SHT. G109. POUR A 24" X 24" MOCK-UP PANEL OF FINISHED COLOR/ PATTERN FOR EACH CONCRETE TYPE FOR APPROVAL BY OWNER PRIOR TO POURING FINAL CONCRETE. COLORED CONCRETE TO HAVE SANDSCAPE FINISH, OR APPROVED EQUAL. REFER TO SPECIFICATION 32 1316 DECORATIVE CONCRETE PAVING.

TYPE A - COLORED CONCRETE
INTEGRAL COLORED CONCRETE, COLOR: 'CAFE AU LAIT', SANDSCAPE SURFACE TEXTURE (OR APPROVED EQUAL).

TYPE B - COLORED CONCRETE
INTEGRAL COLORED CONCRETE, COLOR: 'PAINTED DESERT', SANDSCAPE SURFACE TEXTURE (OR APPROVED EQUAL).

ALL UTILITIES TO WATER PLAYGROUND AND POOL BUILDINGS TO BE GPS LOCATED AND LAID WITH TRACER WIRE.

NORTHINGS & EASTINGS POINT SCHEDULE - SPLASH PAD EQUIPMENT

POINT	NORTHING	EASTING
200	N 407431.49	E 2554802.73
201	N 407427.69	E 2554807.44
202	N 407426.17	E 2554813.10
203	N 407431.14	E 2554811.35
204	N 407432.79	E 2554807.73
205	N 407437.66	E 2554814.39
206	N 407441.92	E 2554803.85
207	N 407444.63	E 2554812.12
208	N 407442.09	E 2554825.54
209	N 407435.33	E 2554835.02
210	N 407435.33	E 2554829.50
211	N 407450.79	E 2554827.15
212	N 407450.79	E 2554834.82
213	N 407462.35	E 2554797.01
214	N 407470.69	E 2554797.14
215	N 407467.62	E 2554815.62
216	N 407476.26	E 2554825.72
217	N 407466.39	E 2554841.74
218	N 407482.69	E 2554849.62
219	N 407494.06	E 2554826.44
220	N 407486.04	E 2554809.58
221	N 407479.44	E 2554802.98
222	N 407433.68	E 2554796.22

N

0' 5' 10'

SCALE: 1"=10'-0"

STATE OF OKLAHOMA
Tom T. Alaback
REGISTERED LANDSCAPE ARCHITECT
7/24/2020

G300 SPLASH PAD LAYOUT & MATERIALS PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED

PROFILE SCALE:

HORIZONTAL:

VERTICAL

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DESIGNED	DA	7/24/20	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED: DESIGN MANAGER		9-20	CITY ENGINEER

FILE: DRAWING:

DATE: 10.02.20

ATLAS PAGE NO: 192

SHEET 20 OF 81 SHEETS



GRADING SCHEDULE

SYMBOL	DESCRIPTION
	18" SQUARE DRAIN
	EXISTING CONTOUR
	PROPOSED CONTOUR
	APPROXIMATE DIRECTION OF SURFACE FLOW
603.18	EXISTING ELEVATION (FINISHED GRADE)
(603.18)	PROPOSED ELEVATION (FINISHED GRADE)
TD	TOP OF DRAIN GRATE (1/8" BELOW TOP OF PAVING)
TF	TOP OF FOOTING
HP	HIGH POINT
LP	LOW POINT

GRADING AND SODDING NOTES

1. THE BASE FLOOD ELEVATION IS 644.00'

2. FOR NEW PAVING AREAS, PROVIDE POSITIVE DRAINAGE IN DIRECTION INDICATED ON PLANS.

3. WHERE NEW SIDEWALKS ABUT EXISTING PAVING TO REMAIN ENSURE FLUSH TRANSITION. FIELD ADJUST NEW SIDEWALKS TO MATCH ELEVATIONS OF EXISTING PAVING. PROVIDE EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING.

4. ALL NEW PAVING AREAS SHALL COMPLY WITH ADA STANDARDS AND HAVE A MAXIMUM 2% CROSS SLOPE

5. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.

6. EXISTING SPOT ELEVATIONS AND TOPOGRAPHIC DATA PROVIDED BY TULSA LAND SURVEYORS

7. FOR SOIL DESCRIPTIONS, EXCAVATION INSTRUCTIONS, AND FILL REQUIREMENTS REFER TO SPECIFICATION 31 2000 EARTH MOVING. BEFORE PERFORMING ANY EARTHWORK OPERATIONS REFER TO SPECIFICATION 31 2000 FOR INSTRUCTIONS. WHERE EARTHWORK OCCURS NEAR OR AROUND TREES, ENSURE FINISHED GRADE PRESERVES THE EXISTING ELEVATION OF SOIL AROUND TREE TRUNKS.

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N

0' 5' 10'

SCALE: 1"=10'-0"

STATE OF OKLAHOMA
Dan T. Alaback
LICENSED LANDSCAPE ARCHITECT
92
7/24/2020

G301 SPLASH PAD GRADING PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE:	DRAWN	BC	7/24/20	APPROVED:
AS NOTED	DESIGNED	DA	7/24/20	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED: HAS 9.20 DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 21 OF 81 SHEETS

SPLASH PAD EQUIPMENT SCHEDULE

SYMBOL	QTY.	DESCRIPTION/MODEL NO.	MODEL NUMBER	DETAIL REFERENCE	VALVE SIZE	FOOTING TYPE	COLOR / NOTES
	5	JET STREAMS	VOR 7512	DETAIL A, SHEET G303	1 1/2"	N/A	N/A (FLUSH MOUNT)
	2	ROOSTER TAIL	VOR 0303	DETAIL A, SHEET G303	1 1/2"	N/A	N/A (FLUSH MOUNT)
	2	SEAWEED N°3	VOR 7781	DETAIL A, SHEET G305	1 1/2"	N/A	POST GREEN
	3	CATTAIL	VOR 7538	DETAIL D, SHEET G305	1 1/2"	N/A	POST GREEN, TOP RED
	1	FROG N°4	VOR 7403	DETAIL B, SHEET G305	1 1/2"	SAFESWAP No1	POST GREEN
	1	BOLLARD ACTIVATOR N°2	VOR 7399	DETAIL I, SHEET G305	1 1/2"	SAFESWAP No1	POST GREEN, SPHERE BLUE
	1	BULLFROG LOOP	VOR 0000	DETAIL C, SHEET G305	1 1/2"	SAFESWAP No1	POST GREEN
	1	WATER TUNNEL N°1	VOR 0304	DETAIL G, SHEET G305	1 1/2"	N/A	N/A (FLUSH MOUNT)
	1	WATER TUNNEL N°3	VOR 7641	DETAIL H, SHEET G305	1 1/2"	N/A	N/A (FLUSH MOUNT)
	1	ORBIT	VOR 7398	DETAIL E, SHEET G305	1 1/2"	SAFESWAP No1	POSTS GREEN, SPHERES BLUE, RED, AND YELLOW
	1	FLOWER N°9	VOR 7541	DETAIL F, SHEET G305	1 1/2"	SAFESWAP No1	POSTS BROWN, GREEN BUCKET

REFER ALSO TO SPECIFICATION #11 6800 - WATER PLAYGROUND EQUIPMENT
ALL EQUIPMENT IS BASED ON VORTEX OR APPROVED EQUAL.

PIPING NOTES

ALL WATER AND DRAIN LINES TO HAVE 3" SAND BEDDING ON ALL SIDES. ALL WATER LINES TO BE LAID WITH TRACER WIRE.

FOR TRANSITIONS FROM SCH. 80 PVC WATER LINE (FROM VAULT TO EDGE OF SPLASH PAD) TO PEX WATER LINE, (BELOW SPLASH PAD / PAVEMENT) SEE DETAIL A, THIS SHEET. TRANSITIONS SHALL BE MADE OUTSIDE OF CONCRETE SLAB.

ALL PEX WATER LINES UNDER PAVEMENT TO BE IN FOAM PLUMBING TUBULAR PIPE INSULATION SLEEVES. ENSURE FOAM SLEEVING IS PROVIDED AROUND ALL JOINTS AND PIPING RUNS. SEAL ALL JOINTS IN THE FOAM SLEEVES WITH ALUMINUM TAPE.

ALL WATER LINES UNDER PAVEMENT TO BE PEX. WATER LINES TO HAVE 24" MIN. COVER. ELECTRICAL SERVICE TO HAVE SCH. 40 PVC CONDUIT WITH 24" MIN. COVER. MINIMUM WATER SUPPLY PIPE SIZE TO BE 1 1/2" DIAMETER.

CONTRACTOR WILL VERIFY THAT WATER RUNS TO DRAINS AND NOT OFF PAD. CONTRACTOR WILL VERIFY THAT SURFACE DRAINS ARE PLUGGED WITH BLOW UP BALL TO PREVENT CONSTRUCTION DEBRIS FROM BEING WASHED DOWN DRAINS, UNTIL PROJECT IS COMPLETE. CITY WILL CAMERA DRAINS UP TO 2 TIMES ONLY. ANY ADDITIONAL WILL BE PROVIDED BY CONTRACTOR.

PIPING SCHEMATIC IS DIAGRAMMATIC IN NATURE. SUPPLY LINES SHOWN ON SCHEMATIC ARE ROUTED ONLY TO PROVIDE CLARITY OF CONNECTION TO WATER PLAYGROUND EQUIPMENT. SUPPLY LINES SHALL BE INSTALLED WITH THE MOST DIRECT PATH ALLOWABLE FROM THE VAULT TO WATER PLAYGROUND EQUIPMENT. WATER SUPPLY PIPING CONNECTED TO MULTIPLE WATER PLAYGROUND EQUIPMENT SHALL BE INSTALLED TO PROVIDE EQUAL WATER PRESSURE. SUBMIT SHOP DRAWING FOR OWNER APPROVAL.
LOCAL CODES AND SITE CONDITIONS SHALL DETERMINE FINAL ROUTING.

REFER TO PLAY PRODUCT MANUFACTURERS PRODUCT DRAWINGS & SPECIFICATIONS FOR INSTALLATION DETAILS.

PIPING SHALL SLOPE FROM THE WATER FEATURES TO THE COMMAND CENTER AT A MINIMUM SLOPE OF 2% TO ALLOW FOR WINTERIZATION.

PIPE SIZES FROM SOLENOID VALVES TO WATER FEATURES ASSUME A MAXIMUM DISTANCE OF 100 FEET.

BALL VALVES FOR WINTERIZING WATER FEATURE SUPPLY LINES SHALL BE PROVIDED BY THE CONTRACTOR.

WHEN CONNECTING MULTIPLE WATER FEATURES TO ONE FEEDER LINE, THE TEE SHALL BE PLACED AT THE MID POINT BETWEEN EACH WATER FEATURE OR A PIPE BOX SHALL BE INSTALLED TO ENSURE BALANCED FLOW.

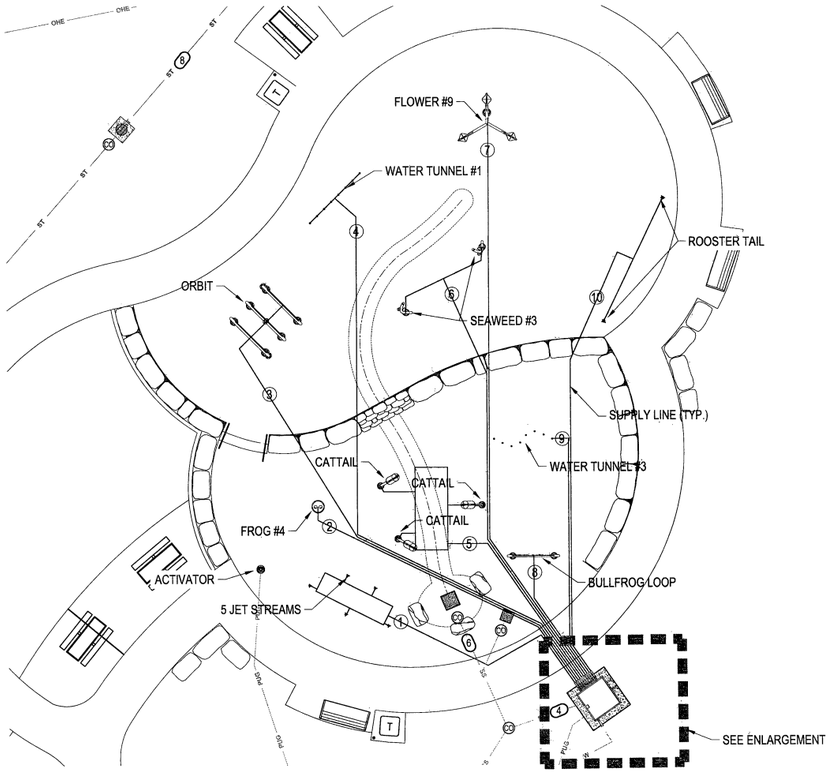
THE FEATURE SEQUENCING SHALL BE PROGRAMMED BY THE MANUFACTURER TO OPERATE AT A MAXIMUM OF 95 GPMS.

ALL CONNECTIONS TO THE CONTROLLER SHALL BE PERFORMED USING AN APPROVED NEMA 4X CONNECTOR.

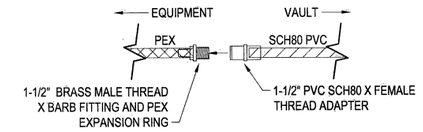
A MINIMUM WATER PRESSURE OF 60 PSI IS REQUIRED AT THE COMMAND CENTER MANIFOLD. TOTAL PLAY PRODUCT FLOW: 160 GPM.
PROGRAM SEQUENCE PROVIDED BY MANUFACTURER TO HAVE FLOW RATE NOT TO EXCEED 95 GPMs.

SPLASHPAD EQUIPMENT SCHEDULE:

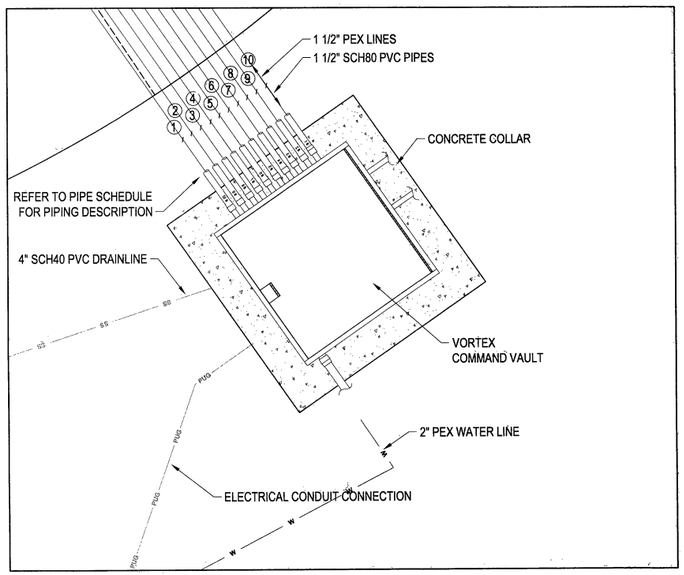
DESCRIPTION	QTY
VORTEX BOLLARD ACTIVATOR No2 (SW, SF) VOR-7399	1
1" ELECTRICAL CONDUIT FROM CONTROLLER TO ACTIVATOR: 5 CONDUCTORS #22 AWG. 164' LONG CABLE PROVIDED BY MANUFACTURER ANY ADDITIONAL LENGTH TO BE PROVIDED BY CONTRACTOR.	1
VORTEX VAULT COMMAND CENTER VOR-1600	1
VORTEX SMARTFLOW 2 CONTROLLER VOR-0710	1
1 1/2" ELECTRICAL CONDUIT FROM CONTROLLER TO VALVES IN VORTEX COMMAND CENTER: 20 CONDUCTORS #14 AWG.	1
ELECTRICAL SERVICE TO SPLASHPAD CONTROLLER: 120 VAC, 20 AMPS SERVICE.	1
ELECTRICAL GROUND PER LOCAL CODE 14 AWG.	1
4" DRAIN LINE FROM VORTEX VAULT COMMAND CENTER TO SANITARY SEWER. REFER TO VORTEX VAULT COMMAND CENTER DETAILS.	1
CAST IN PLACE CONCRETE COLAR. REFER TO VORTEX VAULT COMMAND CENTER DETAILS.	1
POTABLE WATER LINE. 60 PSI, 100 GPM	1



B WATER SUPPLY PIPING SCHEMATIC
SCALE: 1" = 10'-0"



A TYP. PVC/ PEX PIPE JOINT DETAIL
NOT TO SCALE



C WATER SUPPLY VAULT SCHEMATIC ENLARGEMENT
SCALE: 1" = 2'-0"

PIPING SCHEDULE

LINE	PRODUCT	QTY	LINE SIZE
1	SEAWEED N°3 (SW, PC)	2	1 1/2"
2	ROOSTER TAIL (EM, LFN)	2	1 1/2"
3	CATTAIL	3	1 1/2"
4	WATER TUNNEL N°1 (SW, PC)	1	1 1/2"
5	WATER TUNNEL N°3 (SW, PC)	1	1 1/2"
6	ORBIT (SW, SF)	1	1 1/2"
7	JET STREAMS (EM)	5	1 1/2"
8	FROG N°4 (EM)	1	1 1/2"
9	BULLFROG LOOP	1	1 1/2"
10	FLOWER N°9	1	1 1/2"

STATE OF OKLAHOMA — DAN T. ALABACK — REGISTERED LANDSCAPE ARCHITECT — 92 — 7/24/2020

G302 SPLASH PAD EQUIPMENT PLAN AND SCHEDULE

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

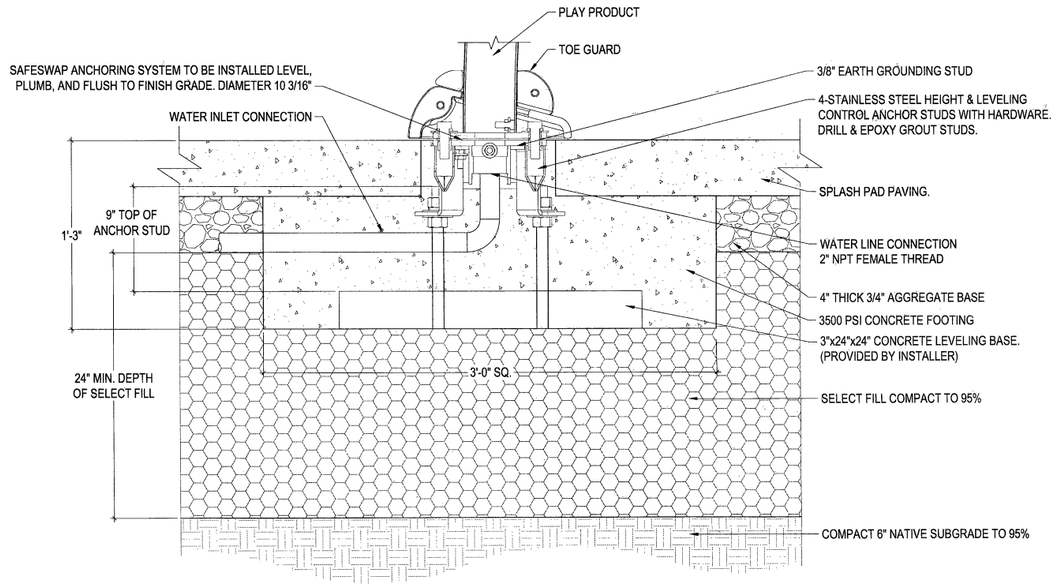
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	BC	7/24/20
DESIGNED	DA	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER	HAS	9-20

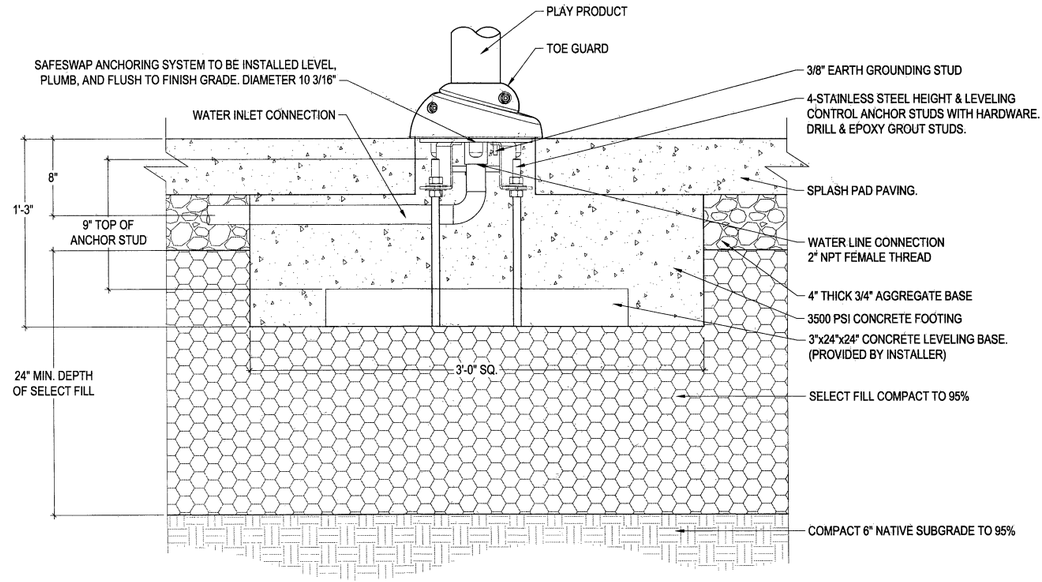
APPROVED: CITY ENGINEER

FILE: DRAWING:
DATE: 10.02.20
ATLAS PAGE NO: 192
SHEET 22 OF 81 SHEETS



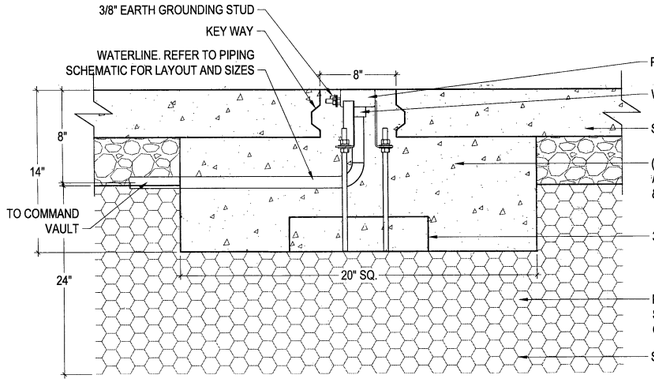
A **ANCHORING SYSTEM SAFESWAP #1**

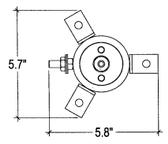
NOT TO SCALE



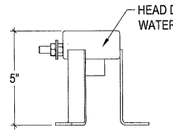
B **ANCHORING SYSTEM SAFESWAP #2**

NOT TO SCALE

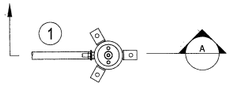




PLAN VIEW



ELEVATION VIEW



PLAN VIEW - EMBEDDED EQUIPMENT LOCATION

C **DIRECTIONAL WATER JET / JET STREAM / WATER JELLY / ROOSTER TAILS**

NOT TO SCALE

ALL EQUIPMENT SHOWN TO BE MANUFACTURED BY VORTEX OR APPROVED EQUAL.

STATE OF OKLAHOMA — Dan T. Alaback — 92 — LICENSED LANDSCAPE ARCHITECT — 7/24/2020

G303 SPLASH PAD DETAILS - A

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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REVISION	BY	DATE

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	DESIGNED	DA	7/24/20	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
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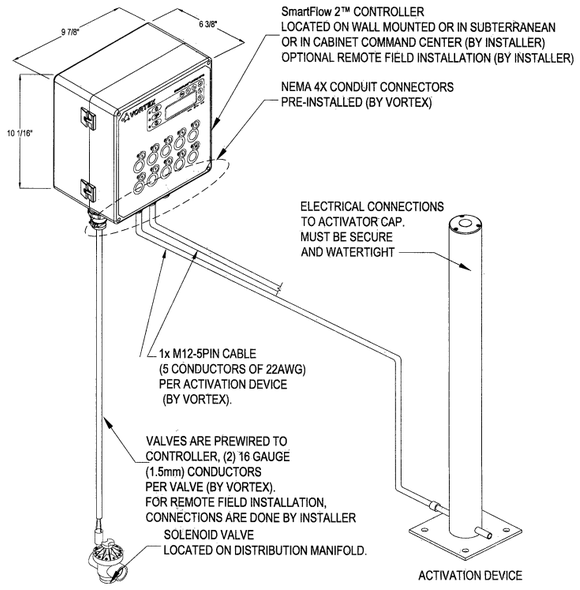
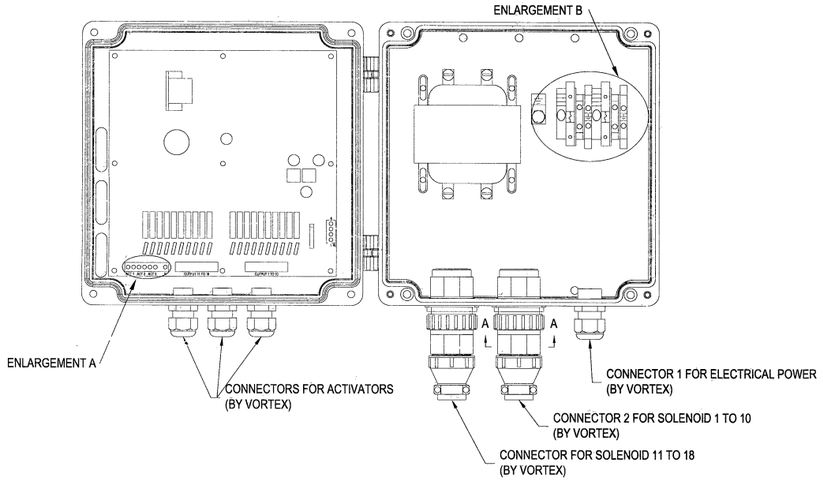
VERTICAL	RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 23 OF 81 SHEETS



A CONTROLLER AND ACTIVATOR WIRING

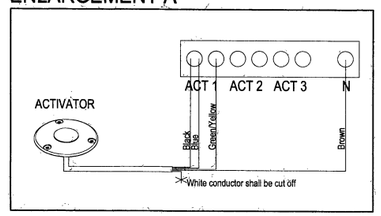
NOT TO SCALE



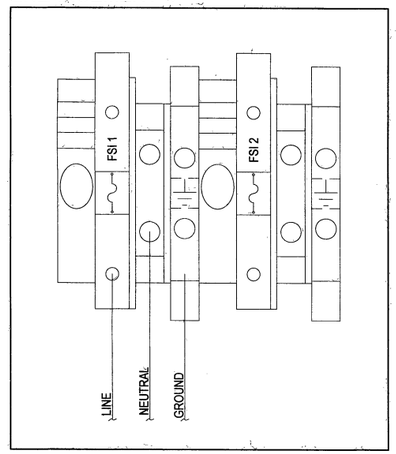
B PLAN VIEW - SUBTERRANEAN COMMAND VAULT

NOT TO SCALE

ENLARGEMENT A



ENLARGEMENT B



PIN	CONNECTOR	SIGNAL
1-2	1	OUTPUT 1
3-4	1	OUTPUT 2
5-6	1	OUTPUT 3
7-8	1	OUTPUT 4
9-10	1	OUTPUT 5
11-12	1	OUTPUT 6
13-14	1	OUTPUT 7
15-16	1	OUTPUT 8
17-18	1	OUTPUT 9
19-20	1	OUTPUT 10

NOTE:

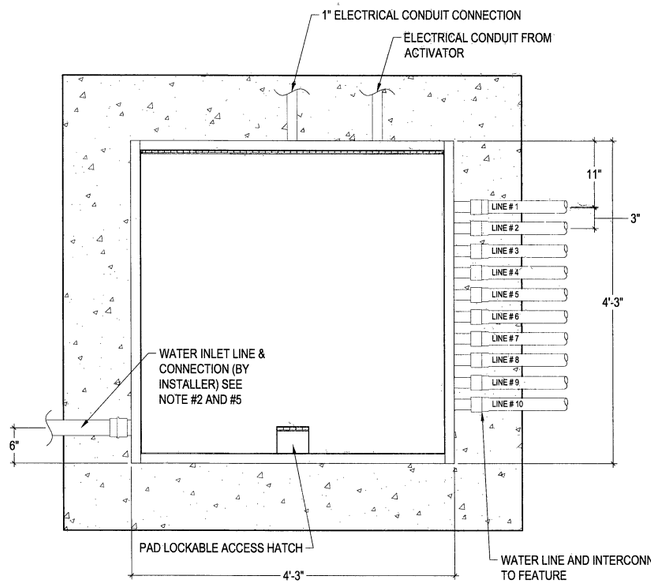
FSI 1 - TERMINAL FUSE BLOCK
2 AMPS 120 VAC TYPE GDC-2A
1 AMPS 240 VAC TYPE GDC-1A

FSI 2 - TERMINAL FUSE BLOCK
4 AMPS 240 VAC TYPE GDC-4A

ANY ADDITIONAL FIELD HOLES
IN THE ENCLOSURE SHALL BE
DONE USING NEMA 4X COMPLIANT
CONNECTOR. FAILURE TO DO SO
WILL VOID THE NEMA 4X OF THE
ENCLOSURE.

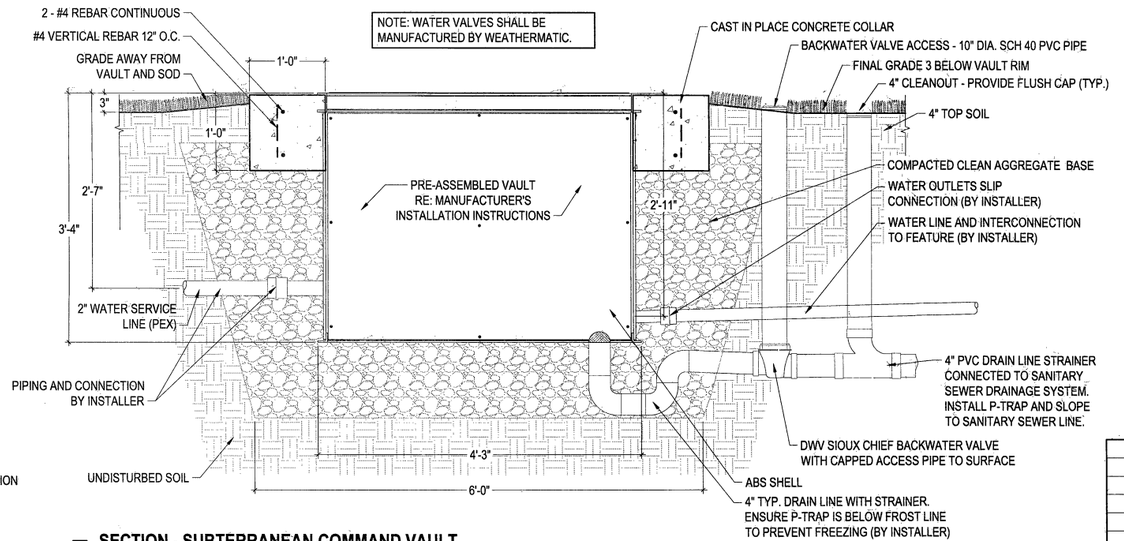
NOTES:

1. SEE PIPING AND ELECTRICAL SCHEMATIC DETAIL.
2. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
3. IF CONTROLLER IS REMOTE LOCATED, CONDUCTORS # 18 AWG AT 10' LONG PROVIDED FOR THE CONTROLLER AND JUNCTION BOX BY VORTEX. ADDITIONAL CONDUCTORS LENGTH, MIN. #16 AWG, TO BE PROVIDED BY INSTALLER. FOR QUANTITY AND SIZE, SEE PIPING AND ELECTRICAL SCHEMATIC DETAIL. GROUNDING OF JUNCTION BOX DONE BY INSTALLER.
4. WATER INLET CAN BE 1x3". 3" FEMALE NPT CONNECTION INSIDE COMMAND CENTER IS PROVIDED BY VORTEX.
5. BY INSTALLER/BY CONTRACTOR MAY REFER TO SERVICE PROVIDERS OTHER THAN THE EQUIPMENT MANUFACTURER. PLEASE REFER TO PROJECT SPECIFICATION FOR DETAILS OF RESPONSIBILITY.



D PLAN VIEW - SUBTERRANEAN COMMAND VAULT

NOT TO SCALE



E SECTION - SUBTERRANEAN COMMAND VAULT

NOT TO SCALE

STATE OF OKLAHOMA
TONY T. ALABACK
92
REGISTERED LANDSCAPE ARCHITECT
7/24/2020

REVISION.	BY	DATE

G304 SPLASH PAD DETAILS - B

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

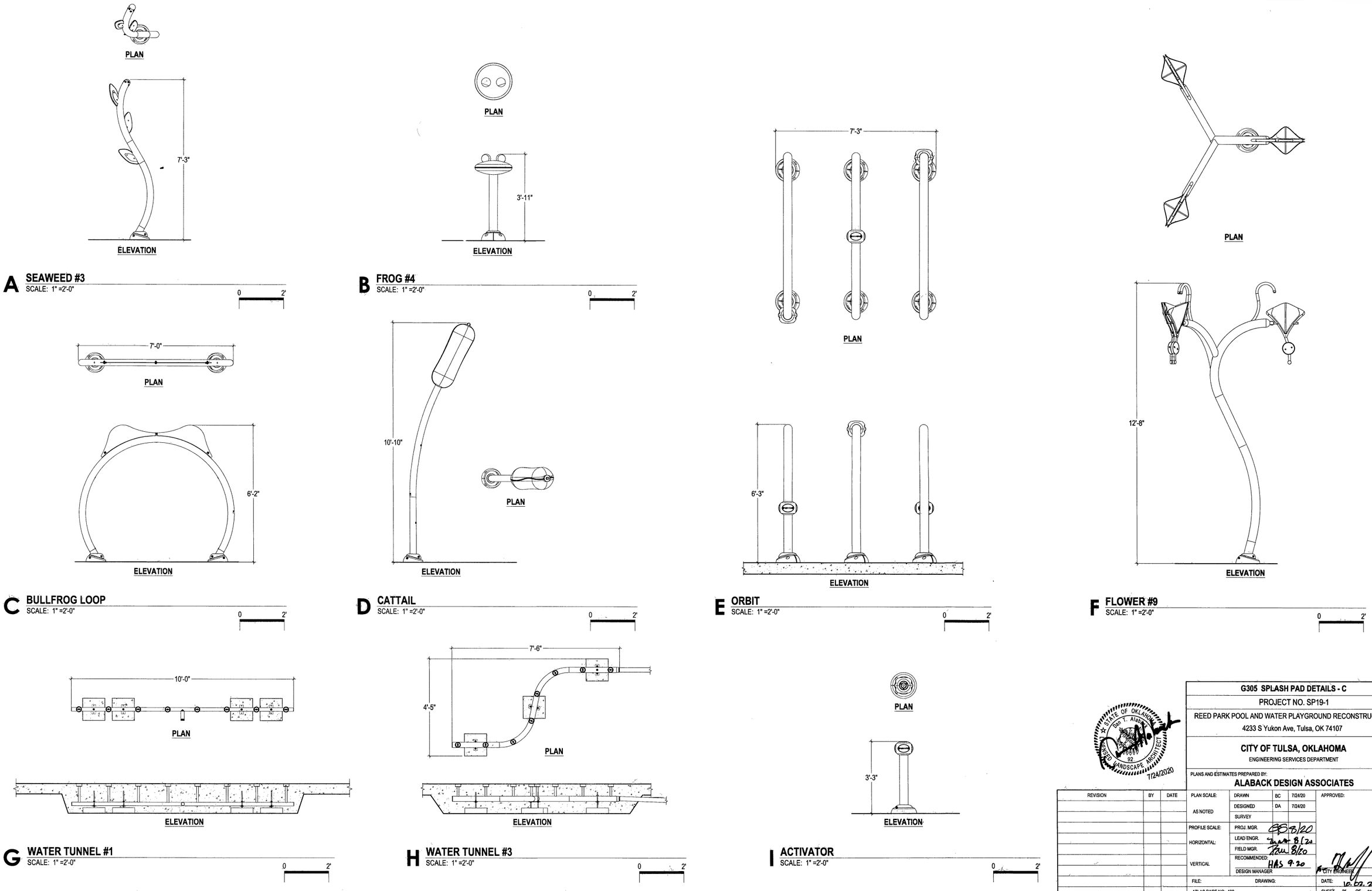
CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

PLAN SCALE: AS NOTED	DRAWN	BC	7/24/20	APPROVED:
	DESIGNED	DA	7/24/20	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED:		9-20	
	DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 24 OF 81 SHEETS



A SEAWEED #3
SCALE: 1" =2'-0"

B FROG #4
SCALE: 1" =2'-0"

C BULLFROG LOOP
SCALE: 1" =2'-0"

D CATTAIL
SCALE: 1" =2'-0"

E ORBIT
SCALE: 1" =2'-0"

F FLOWER #9
SCALE: 1" =2'-0"

G WATER TUNNEL #1
SCALE: 1" =2'-0"

H WATER TUNNEL #3
SCALE: 1" =2'-0"

I ACTIVATOR
SCALE: 1" =2'-0"

STATE OF OKLAHOMA
Dan T. Alaback
LICENSED LANDSCAPE ARCHITECT
92
7/24/2020

REVISION	BY	DATE

G305 SPLASH PAD DETAILS - C

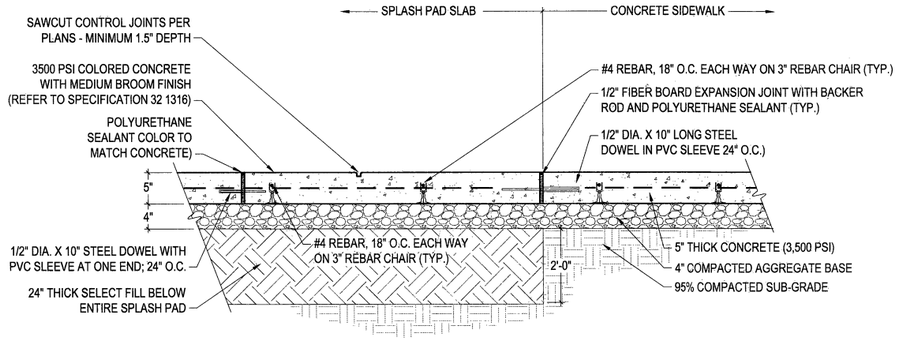
PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
ALABACK DESIGN ASSOCIATES

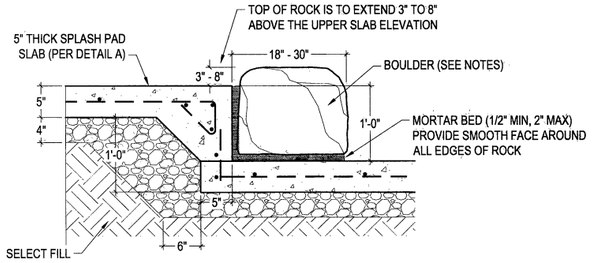
PLAN SCALE:	DRAWN	BC	7/24/20	APPROVED:
AS NOTED	DESIGNED	DA	7/24/20	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	GS	8/20	
HORIZONTAL:	LEAD ENGR.	[illegible]	8/20	
	FIELD MGR.	[illegible]	8/20	
VERTICAL	RECOMMENDED:	HAS	9.20	
	DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 25 OF 81 SHEETS



A TYPICAL SPLASH PAD SLAB/ SIDEWALK TRANSITION SECTION

SCALE 1"=1'-0"

0 1'



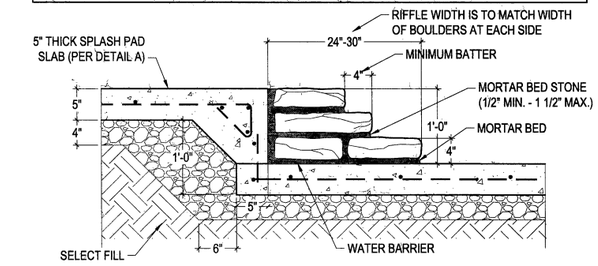
B ROCK EDGE - SECTION A

SCALE 1"=1'-0"

0 1'

WATER RIFFLE NOTES

RIFFLE TO BE NATURAL IN CHARACTER, HAVING A VARIETY OF ROCK HEIGHTS AND WIDTHS TO CREATE WATER TURBULENCE AND VISUAL INTEREST. ROCK TYPE IS TO MATCH THE TYPE OF STONE BEING PROVIDED FOR BOULDERS. ALL ROCK IS TO BE MORTARED IN PLACE AND COMPLETELY SECURE AND IMMOBILE. RECEIVE APPROVAL OF STONE TYPE PER PROCESS DESCRIBED IN BOULDER NOTES.



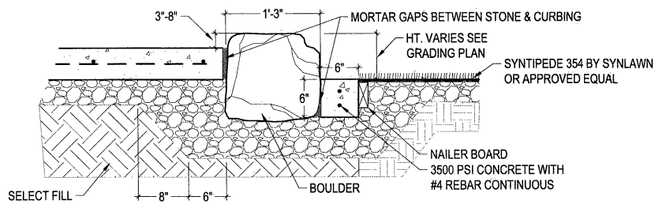
C WATER RIFFLE - SECTION B

SCALE 1"=1'-0"

0 1'

BOULDER NOTES

BOULDERS ARE TO BE SANDSTONE, LIMESTONE, OR HACKETT WITH CHARACTER AND SHAPE THAT IS CONDUCIVE TO TIGHT JOINTS AS SHOWN IN DETAILS. BOULDERS ARE TO BE DENSE AND WITH NO LOOSE EDGES THAT ARE PRONE TO BREAKING OR SPALLING, AND BOULDERS ARE TO HAVE NO SHARP EDGES. BOULDERS ARE TO BE CAREFULLY HANDLED TO AVOID MECHANICAL DAMAGE. AS SHOWN IN DETAILS, ALL VOIDS BETWEEN ROCKS AND OTHER ROCKS AND CONCRETE ARE TO BE COMPLETELY FILLED WITH HIGH STRENGTH MORTAR. ALL ROCKS ARE TO BE COMPLETELY SECURE AND IMMOBILE. LOCATE ALL STONES IN PLACE PRIOR TO MORTARING FOR OWNER AND ARCHITECT TO APPROVE. PROVIDE PHOTOGRAPHS FOR APPROVAL PRIOR TO ORDERING STONE. CITY TO APPROVE BOULDERS AT PROJECT SITE PRIOR TO INSTALLATION.

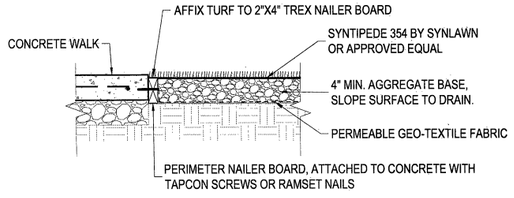


D ROCK EDGE - SECTION C

SCALE 1"=1'-0"

0 1'

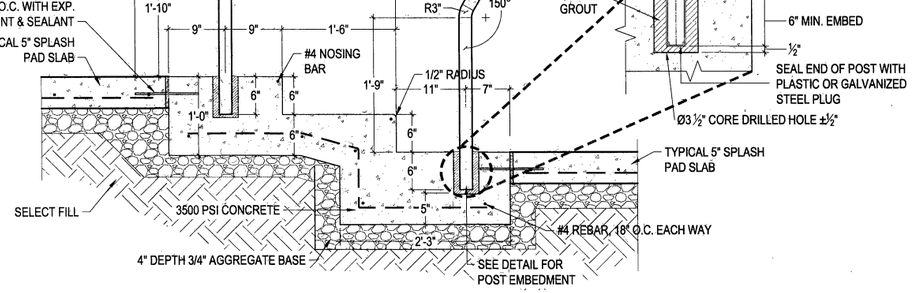
NOTE: PROVIDE OWNER WITH 200 SQUARE FEET OF SYNTHETIC TURF FOR FUTURE REPAIRS.



E SYNTHETIC TURF SECTION - ADD ALT #1

SCALE 1"=1'-0"

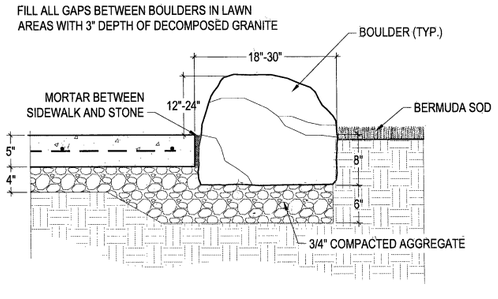
0 1'



F STAIR AND HANDRAIL DETAIL

SCALE 1"=1'-0"

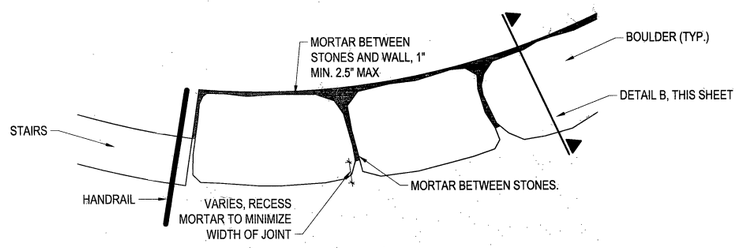
0 1'



G FREE STANDING ROCK DETAIL

SCALE 1"=1'-0"

0 1'



H ROCK EDGE - PLAN ENLARGEMENT

SCALE 1"=1'-0"

0 1'

STATE OF OKLAHOMA — Dan T. Alaback — 92 — LICENSED LANDSCAPE ARCHITECT — 7/24/2020

G306 SPLASH PAD DETAILS - D

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

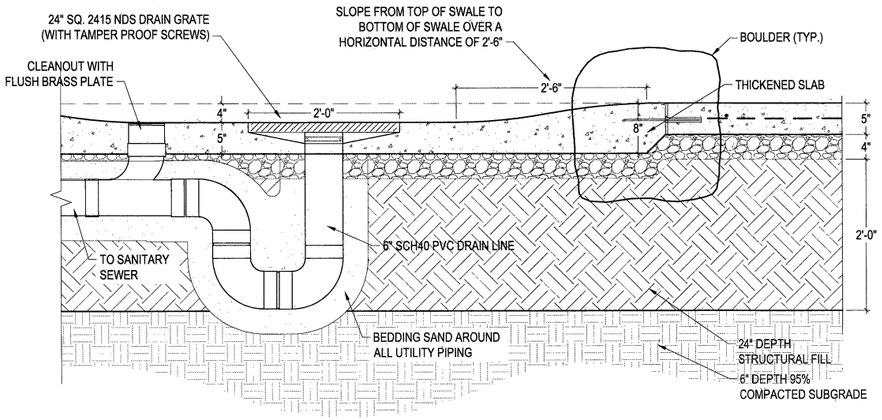
DRAWN	BC	7/24/20	APPROVED:
DESIGNED	DA	7/24/20	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER

FILE: DRAWING:

DATE: 10.02.20

ATLAS PAGE NO: 192

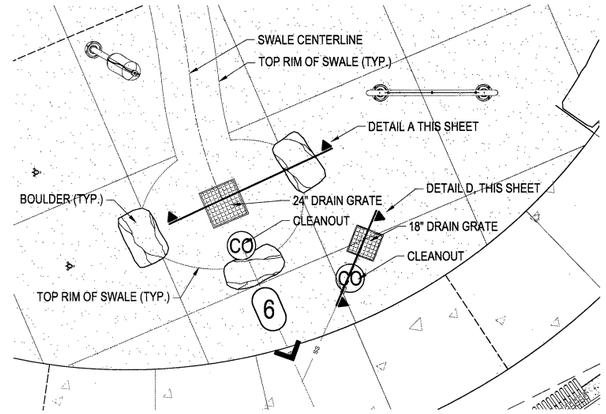
SHEET 28 OF 81 SHEETS



A SPLASH PAD SWALE DRAIN ELEVATION

SCALE 1"=1'-0"

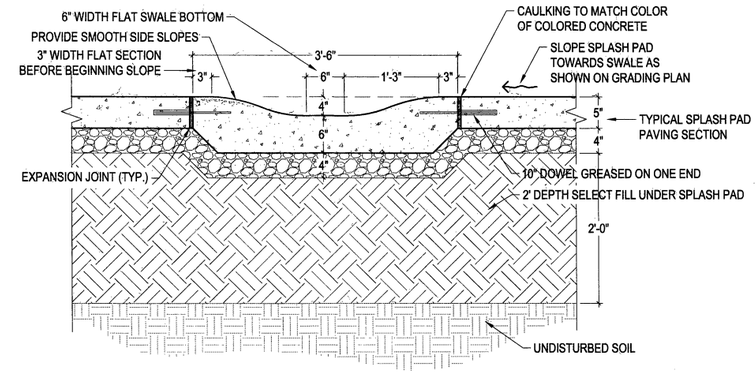
0 1'



B SPLASH PAD DRAIN PLAN ENLARGEMENT

SCALE 1"=1'-0"

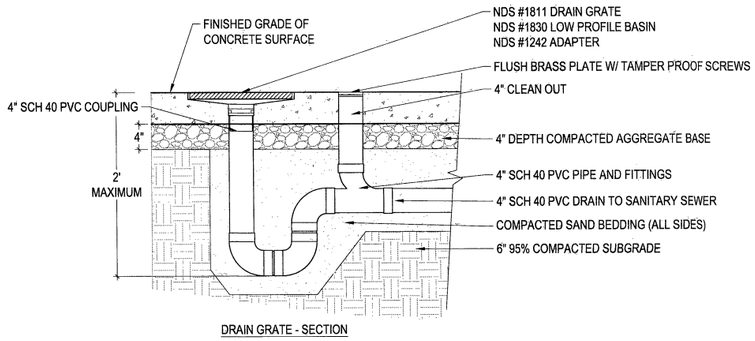
0 1'



C SPLASH PAD SWALE SECTION

SCALE 1"=1'-0"

0 1'

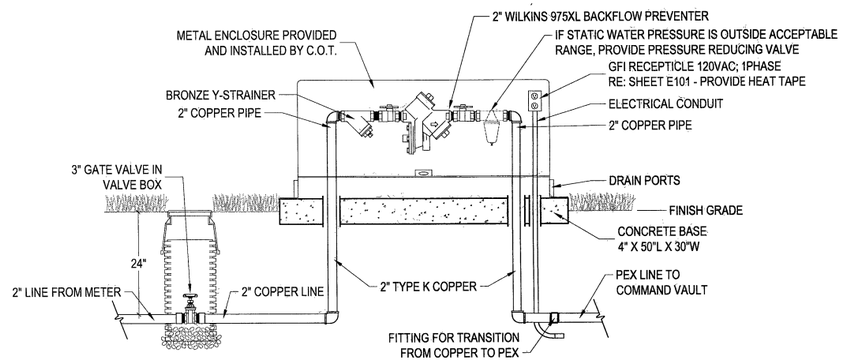


DRAIN GRATE - SECTION

D SPLASH PAD DECK DRAIN

SCALE: 1"=1'-0"

0 1'



NOTE: BACKFLOW PREVENTER MUST BE MOUNTED A MIN. OF 12" ABOVE FIN. GRADE.

E BACKFLOW PREVENTER DETAIL

NOT TO SCALE

STATE OF OKLAHOMA
Tim T. Alaback
92
LICENSED LANDSCAPE ARCHITECT
7/24/2020

REVISION	BY	DATE

G307 SPLASH PAD DETAILS - E

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

ALABACK DESIGN ASSOCIATES

PLAN SCALE: AS NOTED	DRAWN	BC	7/24/20
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	SURVEY		
PROFILE SCALE:	PROJ. MGR.		8/20
HORIZONTAL:	LEAD ENGR.		8/20
	FIELD MGR.		8/20
VERTICAL	RECOMMENDED: DESIGN MANAGER	HAJ	9.20

APPROVED:

CITY ENGINEER

DATE: 10.02.20

FILE: DRAWING:

ATLAS PAGE NO: 192

SHEET 27 OF 81 SHEETS

CODE ANALYSIS

SUMMARY OF THE PROJECT

THE BUILDING DEPICTED IN THESE CONSTRUCTION DOCUMENTS IS A NEW BATH HOUSE WITH AN OUTDOOR SWIMMING POOL.

APPLICABLE CODES

2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL PLUMBING CODE (IPC)
2014 NATIONAL ELECTRIC CODE (NEC)
2015 INTERNATIONAL FIRE CODE (IFC)
2015 INTERNATIONAL MECHANICAL CODE (IMC)
2010 ADA ACCESSORY GUIDELINES FOR BUILDINGS AND FACILITIES (ADA)
2009 AMERICAN NATIONAL STANDARDS A117.1
OKLAHOMA STATE DEPARTMENT OF HEALTH PUBLIC BATHING PLACE REGULATIONS (310:315)
TULSA COUNTY HEALTH

USE OR OCCUPANCY

303.1 ASSEMBLY GROUP A-5 FOR POOL, B FOR BUILDING

TABLE 307.1 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS
OXIDIZER CLASS 3 (CHLORINE) 20 GALLONS/200 LBS (NOTE K.)
CORROSIVE (MURIATIC ACID) 500 LIQUID GALLONS (TABLE 307.1(2))

TABLE 415.3.2 OXIDIZERS: LIQUIDS AND SOLIDS, CLASS 3, 1200 LBS OR LESS A DETACHED BUILDING NOT REQUIRED.

GENERAL BUILDING HEIGHTS AND AREAS

NON-SEPARATED USE GROUPS: GROUP B:
TYPE VB NON-COMBUSTIBLE NON-SPRINKLERED:

502.1 BUILDING AREA 3,118 SF

TABLE 503 HEIGHT AND AREA LIMITATIONS OF BUILDING:

ALLOWABLE HEIGHT: 1 STORY/40 FEET
ALLOWABLE AREA: 9,000 SF

TYPE OF CONSTRUCTION

TABLE 601 STRUCTURAL ELEMENT: FIRE RESISTANCE RATING:

STRUCTURAL FRAME	0
BEARING WALLS	0
NON BEARING WALLS	0
FLOOR	0
CONSTRUCTION	0
ROOF CONSTRUCTION	

TABLE 602 FIRE-RESISTANCE RATING REQUIRED FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE:

	GROUP A	GROUP S-1
X< 5	1 HOUR	2 HOUR
5 ≤ X < 10	1 HOUR	2 HOUR
10 ≤ X < 30	0 HOUR	0 HOUR
X ≥ 30	0 HOUR	0 HOUR

FIRE AND SMOKE PROTECTION

707 FIRE BARRIERS

TABLE 721.1.(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS
3. CONCRETE MASONRY UNITS 8 INCHES (2 HR)

INTERIOR FINISHES

TABLE 803.11 INTERIOR FINISH REQUIREMENTS: TYPE B (NONSPRINKLERED)

EXIT ENCLOSURES /EXIT PASSAGEWAYS:	CLASS A MATERIALS
CORRIDORS PROVIDING EXIT ACCESS:	CLASS A MATERIALS
ROOMS OR ENCLOSED SPACES:	CLASS C MATERIALS

FIRE PROTECTION SYSTEMS

903.2.1.3 GROUP B AUTOMATIC SPRINKLER SYSTEM NOT REQUIRED

906 PORTABLE FIRE EXTINGUISHERS PER NFPA 10

TABLE 906.3 FIRE EXTINGUISHER FOR CLASS A FIRE HAZARDS:

MINIMUM RATED SINGLE EXTINGUISHER	2-A
MAX FLOOR AREA PER UNIT OF A	3,000 SF
MAX FLOOR AREA FOR FIRE EXTINGUISHER	11,250 SF
MAX TRAVEL DISTANCE FOR EXTINGUISHER	75 FT

2,326 SF / 3,000 SF = 1 UNITS OF A (1) 2-A

907 MANUAL FIRE ALARM AND DETECTION SYSTEM NOT REQUIRED (LESS THAN 300 OCCUPANT LOAD)

MEANS OF EGRESS

TABLE 1004.1.2 MAX. FLOOR AREA ALLOWANCES PER OCCUPANT UNIT OF AREA

LOCKER ROOMS	50 GSF / OCCUPANT	1,003 GSF/50 = 21 OCCUPANTS
ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOMS	300 GSF / OCCUPANT	1,078 GSF/300 = 4 OCCUPANTS
BUSINESS AREAS	100 GSF / OCCUPANT	262 GSF/100 = 3 OCCUPANTS
TOTAL POOL HOUSE OCCUPANT LOAD		28 OCCUPANTS
OUTDOOR POOLS	50 GSF / OCCUPANT	4,100 GSF/50 = 82 OCCUPANTS
OUTDOOR POOL DECKS	15 GSF / OCCUPANT	8,935 GSF/15 = 596 OCCUPANTS
TOTAL OUTDOOR POOL AREA OCCUPANT LOAD		706 OCCUPANTS

1005.3.2 MEANS OF EGRESS SIZING 0.2 INCHES PER OCCUPANT
706 x 0.2 = 141.2" REQUIRED
240" PROVIDED

1029.1 MEANS OF EGRESS SIZING - ASSEMBLY MAIN EXIT 0.2 INCHES PER OCCUPANT
(649 x 50%) x 0.2 = 70.6" REQUIRED
72" PROVIDED

TABLE 1006.3.1 MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD: 2 EXITS (1-500 OCCUPANTS)
MINIMUM NUMBER OF EXITS FOR OUTDOOR POOL AREA: 3 EXITS (501-1000 OCCUPANTS)

TABLE 1006.3.2 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY FOR GROUP A CANNOT EXCEED AN OCCUPANT LOAD OF 49

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE: WITHOUT SPRINKLER; 200 FEET

1109.2.1 FAMILY OR ASSISTED TOILET AND BATHING ROOMS IS REQUIRED

3109.3 PUBLIC SWIMMING POOLS SHALL BE COMPLETELY ENCLOSED BY A FENCE AT LEAST 4 FEET IN HEIGHT

3109.4.1.5 CHAIN LINK DIMENSIONS. MAXIMUM MESH SIZE FOR CHAIN LINK FENCES SHALL BE 2 1/4 INCH SQUARE.

PLUMBING FIXTURE COUNT

TABLE 2902.1 MINIMUM NUMBER OF PLUMBING FACILITIES PER FLOOR: (A-5)

OK HEALTH DEPARTMENT
REQUIRED (OAC 310:315-7-7 : BATHING CAPACITY) : POOL AREA: 4,100 = 4,100/15 = 273 OCCUPANTS
137 MALE OCCUPANTS
137 FEMALE OCCUPANTS

FIXTURE TYPE	OK HEALTH DEPARTMENT FACTOR (OAC 310:315)	OK HEALTH DEPARTMENT REQUIRED (OAC 310:315 274 BATHING CAPACITY)	NUMBER PROVIDED
WATER CLOSETS - FIRST 100	MEN (100) 1:100 WOMEN (100) 1:100	MEN 1 WOMEN 3	MEN: 1 WOMEN: 3
WATER CLOSETS - EACH ADDITIONAL 100	MEN (37) 1:100 WOMEN (37) 1:50	MEN 1 WOMEN 1	MEN: 1 WOMEN: 1
WATER CLOSETS - TOTAL	MEN (137) WOMEN (137)	MEN 2 WOMEN 4	MEN 2 WOMEN 5
URINALS - FIRST 100	MEN (100) 1:100	MEN 2	MEN: 2
URINALS - EACH ADDITIONAL 100	MEN (37) 1:100	MEN 1	MEN: 1
URINALS - TOTAL	MEN (137) 1:100	MEN 3	MEN: 3
LAVATORIES	MEN / WOMEN 1:100	MEN / WOMEN 2	MEN / WOMEN: 2
DRINKING FOUNTAIN	1 PER 500 OCCUPANTS:	1	2
SERVICE SINK		1	1
SHOWERS	MEN / WOMEN 1:40	MEN: 4 WOMEN: 4	MEN: 4 WOMEN: 4 DECK SHOWERS: 3
FAMILY OR ASSISTED TOILET AND BATHING ROOM (TOILET, LAVATORY AND SHOWER)		1	1

SYMBOLS

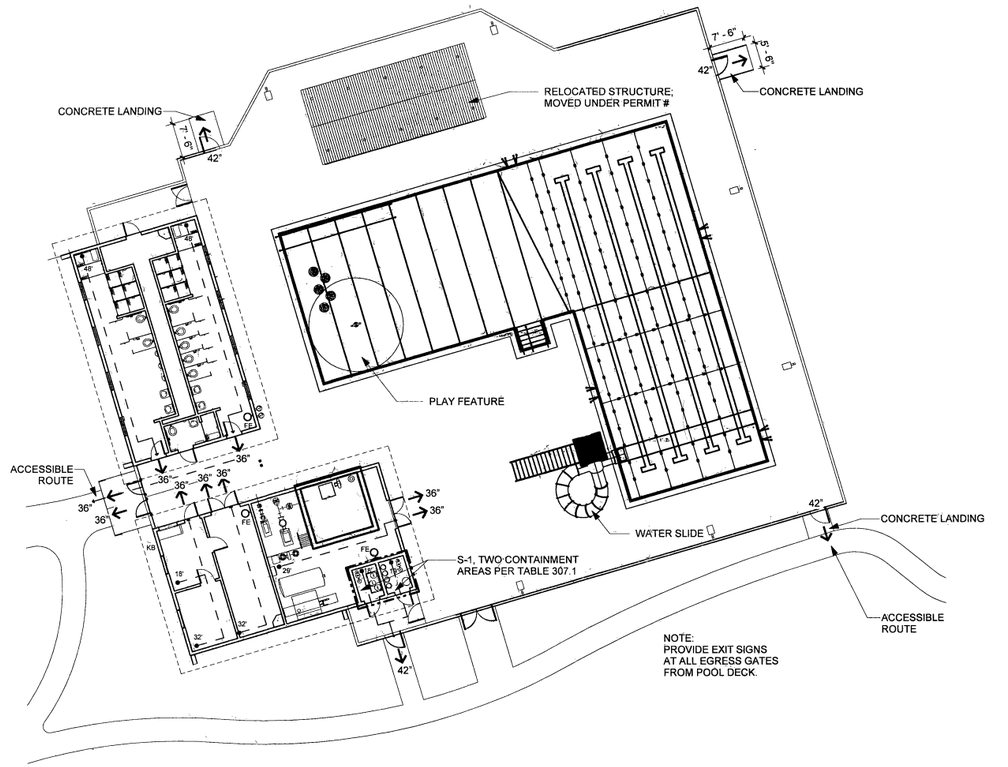
BUILDING SECTION REFERENCE (X / AXX)
WALL / MILLWORK SECTION REFERENCE
ENLARGED FLOOR PLAN OR PLAN DETAIL REFERENCE (X / XXX)
ROOM NAME / ROOM NUMBER (FAMILY CHANGING / 112)
DOOR SYMBOL (XXX)
WINDOW SYMBOL (X)
EQUIPMENT SYMBOL (X)
ELEVATION SYMBOL (K / 22)
PARTITION TYPE SYMBOL (A)
ELEVATION OR HEIGHT SYMBOL
STRUCTURAL GRID INDICATORS (A / 1)
SHOWER HEAD

LEGEND

- LINE OF TRAVEL
  - TRAVEL DISTANCE TO EXITS = 250' MAX (IBC 1016.1)
  - COMMON PATH OF TRAVEL = 75' MAX (IBC 1014.3)
  - DEAD ENDS = 50' MAX, FULLY SPRINKLED (IBC 1018.4)
- FE — FIRE EXTINGUISHER 2A WITH SEMI-RECESSED CABINET
  - 75' MAX TRAVEL DISTANCE TO EXTINGUISHER (NFPA 10, 3-2.1)
- LOCATION OF EXIT DISCHARGE (EXIT WIDTH IN INCHES)
- KB — KNOX BOX
- 2 HOUR FIRE BARRIER
- SITE LIGHT POLE

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT OF ANY DIMENSIONAL DISCREPANCIES FOR CLARIFICATION.
2. DIMENSIONS UNLESS NOTED OTHERWISE:
   TO FACE OF CONCRETE AND MASONRY;
   TO CENTERLINE OF COLUMNS OR OTHER GRID POINTS; TO CENTERLINE FRAMED WINDOW AND DOOR OPENINGS; TO FINISH FACE OF CLEAR WIDTHS; TO FINISH FACE OF PARTITIONS



A LIFE SAFETY PLAN
1/16" = 1'-0"
0' 8' 16' 32'

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA
OK
LICENSED ARCHITECT
07.24.20

GH2 ARCHITECTS

G001 - GENERAL INFORMATION & CODE ANALYSIS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020
DESIGNED	TC	05/19/2020
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED DESIGN MANAGER		9.20

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING: Designer
ATLAS PAGE NO: 116
SHEET 28 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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7/23/2020 10:41:05 AM

INTERIOR FINISH SCHEDULE

Room Number	Room Name	Floor Finish	Base Finish	North Wall Finish	East Wall Finish	South Wall Finish	West Wall Finish	Ceiling Finish	Notes
100	BREEZEWAY		---					---	
101	CHECK-IN	SC	RB-1	EXY3	EXY 3	EXY3	EXY3	GYP	
102	OFFICE	SC	RB-1	EXY3	EXY3	EXY3	EXY3	GYP	
103	STORAGE	SC	---	EXY3	EXY3	EXY3	EXY3	GYP	
104	POOL EQUIPMENT	SC	---	---	---	---	---	GYP	
105	ACID	SC	---	---	---	---	---	SC	
106	CHLORINE	SC	---	---	---	---	---	SC	
107	MEN'S LOCKER ROOM	EXY1	EXY2	EXY3	EXY4	EXY3	EXY3	GYP	
108	FAMILY RESTROOM	EXY1	EXY2	EXY4	EXY3	EXY3	EXY3	GYP	
109	WOMEN'S LOCKER ROOM	EXY1	EXY2	EXY3	EXY3	EXY3	EXY4	GYP	
110	WATER HEATER CLOSET	SC	---	---	---	---	---	OTS	

FINISH LEGEND

NOTES:
1. PAINT ALL EXPOSED MECHANICAL, ELECTRICAL, COMMUNICATIONS, PLUMBING, SPRINKLER COMPONENTS TO MATCH ADJACENT SURFACE COLOR UNLESS NOTED OTHERWISE.
2. MP-1 - ADD ALTERNATE #5: REMOVE METAL PANELS AND EXTEND CMU TO ROOF STRUCTURE.

FLOOR FINISH:

- SC — SEALED CONCRETE; FINISH: GREY
- EXY1 — EPOXY DOUBLE BROADCAST SYSTEM; COLOR: GREY

BASE FINISH:

- RB-1 — RUBBER BASE; MANUF: JOHNSONITE; COLOR: PEWTER
- EXY2 — 8" EPOXY COVE BASE; MANUF: TNEMEC; COLOR: GREY

WALL FINISH:

- CMU-1 — 8" CONCRETE MASONRY UNIT; STYLE: SMOOTH FACE; COLOR: ARCTIC WHITE; SIZE: 8" X 8" X 16"
- CMU-2 — 8" CONCRETE MASONRY UNIT; STYLE: SPLIT FACE; COLOR: COAL; SIZE: 8" X 8" X 16"
- GB-1 — GLASS UNIT MASONRY; STYLE: WECK - NUBIO; COLOR: BLUE; SIZE: 7.5" X 7.5" X 3"
- GB-2 — GLASS UNIT MASONRY; STYLE: WECK - ARCTIC; COLOR: CLEAR/FROSTED; SIZE: 8" X 8" X 4"
- PT-1 — MANUF: TNEMEC; COLOR: ARCHITECT TO SELECT FROM MANUFACTURE'S FULL RANGE.
- PT-2 — MANUF: TNEMEC; COLOR: ARCHITECT TO SELECT FROM MANUFACTURE'S FULL RANGE.
- PT-3 — MANUF: SHERWIN WILLIAMS; FINISH: GLOSS; COLOR: # SW 7007 BRIGHT WHITE
- EXY3 — MANUF: SHERWIN WILLIAMS; FINISH: SEMI-GLOSS; COLOR: # SW 7009 PEARLY WHITE
- EXY4 — MANUF: SHERWIN WILLIAMS; FINISH: SEMI-GLOSS; COLOR: # SW 9056 FRENCH MOIRE

CEILING FINISH:

- GYP — WATER RESISTANT GYPSUM BOARD; PAINT - PT-1; MANUF: SHERWIN WILLIAMS; COLOR: # SW 7007 BRIGHT WHITE
- SC — SEALED CONCRETE

MISCELLANEOUS:

- SS-1 — STAINLESS STEEL
- P-1 — SOLID PLASTIC TOILET PARTITIONS; MANUF: SCRANTON PRODUCTS; STYLE: COLOR-THRU PHENOLIC FLOOR MOUNTED W/ OVERHEAD; COLOR: GREY
- VIN — VINYL COATED COLOR: BLACK
- SM-1 — STANDING SEAM METAL ROOF; COLOR: BRISTOL BLUE
- MP-1 — PREFINISHED METAL PANEL; COLOR: BRISTOL BLUE; ADD ALTERNATE #5
- MP-2 — PARASOLEIL PANEL; COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL COLOR RANGE. ADD ALTERNATE #2

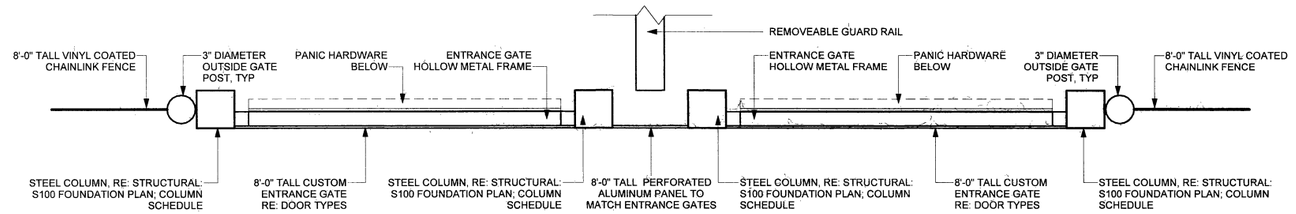
DOOR SCHEDULE

DOOR NO.	DOOR WIDTH	DOOR HEIGHT	DOOR MTL	DOOR TYPE	HEAD	JAMB	SILL	DOOR HARDWARE SET	FRAME MTL.	FRAME TYPE	FIRE RATING	COMMENTS
100A	3' - 0"	8' - 0"	PM	F	---	---	---	10.0	HM	-	-	1.7.
100B	3' - 0"	8' - 0"	PM	F	---	---	---	10.0	HM	-	-	1.7.
101A	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	4.0	HM	1	-	2.
101B	4' - 0"	4' - 8"	HM	C	D/25	C/25	B/25	11.0	NA	-	-	3.
101C	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	5.0	HM	1	-	
102	3' - 0"	7' - 0"	HM	B	D/24	C/24	B/24	7.0	HM	1	-	
103	6' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	1.0	HM	1	-	2.4.5.
104	6' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	1.0	HM	2	-	2.4.5.9.
105	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	3.0	HM	1	-	2.5.9.
106	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	3.0	HM	1	-	2.5.9.
107	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	8.0	HM	1	-	2.
108	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	6.0	HM	1	-	2.
109	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	8.0	HM	1	-	2.
110	3' - 0"	7' - 0"	HM	A	D/24	C/24	B/24	2.0	HM	2	-	2.5.8.
111	3' - 6"	8' - 0"	CL	D	---	---	---	11.0	CL	-	-	6.
112	3' - 6"	8' - 0"	CL	D	---	---	---	9.0	CL	-	-	6.7.
113	3' - 6"	8' - 0"	CL	D	---	---	---	9.0	CL	-	-	6.7.
114	3' - 6"	8' - 0"	CL	D	---	---	---	9.0	CL	-	-	6.7.
115	3' - 6"	8' - 0"	CL	E	---	---	---	11.0	CL	-	-	4.6.
116	3' - 6"	8' - 0"	CL	D	---	---	---	11.0	CL	-	-	6.
117	3' - 6"	8' - 0"	CL	D	---	---	---	11.0	CL	-	-	6.

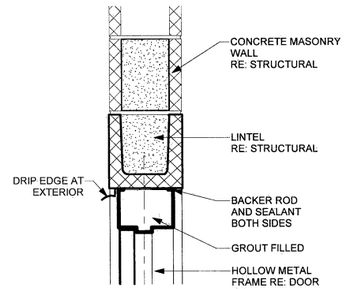
NOTES:

1. CUSTOM METAL PANEL DOOR - PARALSOLEIL - "CONSTELLA" PATTERN, COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE.
2. LOUVERED VENT; RE. SHEET A201
3. COILING DOOR
4. PAIR (2) OF DOORS
5. UNDERCUT DOOR, RE: MECHANICAL
6. VINYL COATED CHAINLINK GATE
7. DOOR HARDWARE TO INCLUDE ED5200(A) RIM/SECURE BOLT EXIT ONLY - 630 PANIC HARDWARE
8. 180 DEGREE DOOR SWING AND WITH HOLD OPEN HARDWARE
9. PHENOLIC KICK PLATES

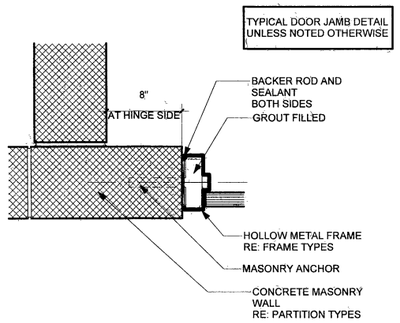
GENERAL NOTES:
ALL HARDWARE TO MEET ADA AND ANSI ACCESSIBILITY REQUIREMENTS.
ALL TOILET PARTION STALL DOORS TO PROVIDE A MINUMUM OF 32" CLEAR TO MEET ADA/ANSI 117.1 - 2003 REQUIREMENTS.
ALL HOLLOW METAL DOORS AND FRAMES TO BE GALVANIZED.
ALL EGRESS GATES TO HAVE 7" X 10" PLASTIC EMERGENCY EXIT SIGN INSTALLED PER IBC 1013.1 REQUIREMENTS AND MEET 1013.4 TACTILE SIGN REQUIREMENTS.
ALL EGRESS GATES TO HAVE SELF CLOSING HINGES.



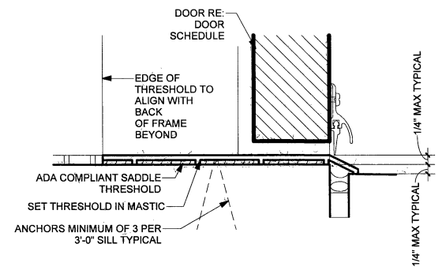
E FENCE POST JAMB AT ENTRANCE
1 1/2" = 1'-0"



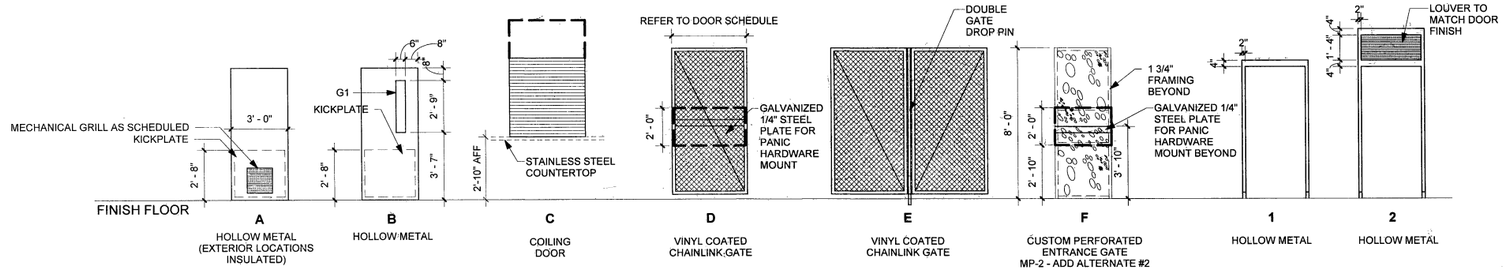
D DOOR HEAD AT CMU
1 1/2" = 1'-0"



C DOOR JAMB AT CMU
1 1/2" = 1'-0"



B EXTERIOR THRESHOLD
6" = 1'-0"



A DOOR TYPES AND FRAMES
1/4" = 1'-0"

STATE OF OKLAHOMA · MICHAEL RAY HALL · No. 3381 · TULSA, OK · LICENSED ARCHITECT
07.24.20

GH2 ARCHITECTS

A001 - SCHEDULES & DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020	APPROVED:
DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED:			
DESIGN MANAGER			CITY ENGINEER

FILE: DRAWING: Designer
DATE: 10.02.20
ATLAS PAGE NO: 116
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Concept Drawings GH2 PROJECT #:20180157

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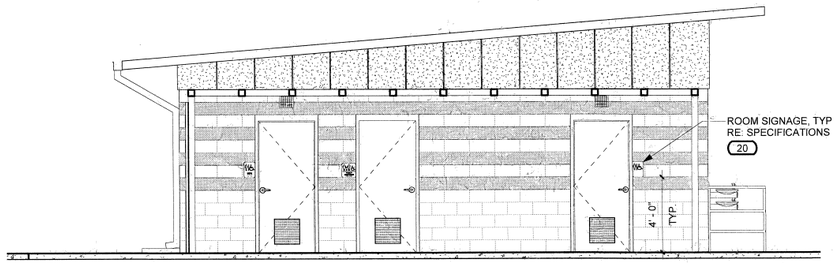
ACCESSORY AND EQUIPMENT SCHEDULE

#	DESCRIPTION	FURNISHES	INSTALLATION	FINAL HOOK-UP	NOTES
1	TOILET TISSUE (DUAL-ROLL) DISPENSER	CONTRACTOR	CONTRACTOR	CONTRACTOR	
2	NAPKIN DISPOSAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
3	RECESSED MOUNTED SOAP DISH (SHOWER), RE: PLUMBING	CONTRACTOR	CONTRACTOR	CONTRACTOR	
4	SOAP DISPENSER	CONTRACTOR	CONTRACTOR	CONTRACTOR	
5	1 1/2" GRAB BAR 42" HORIZONTAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
6	1 1/2" GRAB BAR 36" HORIZONTAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
7	1 1/2" GRAB BAR 18" VERTICAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
8	1 1/2" GRAB BAR 54" HORIZONTAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
9	1 1/2" GRAB BAR 18" HORIZONTAL	CONTRACTOR	CONTRACTOR	CONTRACTOR	
10	ELECTRIC HAND DRYER	CONTRACTOR	CONTRACTOR	CONTRACTOR	
11	BENCH - TUFFTEC BENCH BY SCRANTON PRODUCTS, 60"W X 20"D X 18"H, GREY	CONTRACTOR	CONTRACTOR	CONTRACTOR	
12	MIRROR	CONTRACTOR	CONTRACTOR	CONTRACTOR	
13	SHOWER CURTAIN, CURTAIN ROD AND CURTAIN HOOKS	CONTRACTOR	CONTRACTOR	CONTRACTOR	
14	ADA FOLDING SHOWER SEAT	CONTRACTOR	CONTRACTOR	CONTRACTOR	
15	SURFACE MOUNTED COAT HOOK	CONTRACTOR	CONTRACTOR	CONTRACTOR	
16	BABY CHANGING STATION (ADA)	CONTRACTOR	CONTRACTOR	CONTRACTOR	
17	SURFACE MOUNTED 36" MOP AND BROOM HOLDER	CONTRACTOR	CONTRACTOR	CONTRACTOR	
18	OPEN STORAGE LOCKERS"	CONTRACTOR	CONTRACTOR	CONTRACTOR	1.
19	SIGNAGE (POOL RULES)	OWNER	OWNER	OWNER	
20	ROOM SIGNAGE, RE: SPECIFICATIONS	CONTRACTOR	CONTRACTOR	CONTRACTOR	
21	BUILDING ADDRESS SIGNAGE	CONTRACTOR	CONTRACTOR	CONTRACTOR	
22	MOMORAIL EQUIPMENT TROLLEY SYSTEM	CONTRACTOR	CONTRACTOR	CONTRACTOR	2.

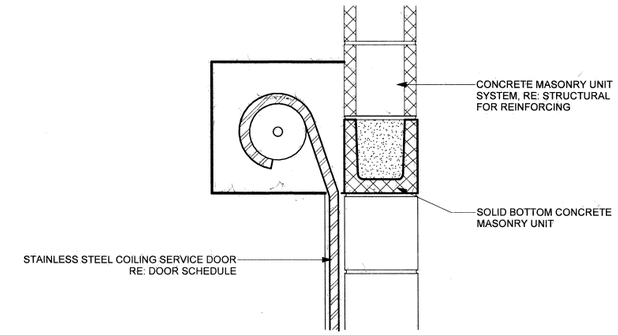
NOTES
1. WIRE MESH SECURITY CAGE - VENTILATED LOCKER- 18" X 18" By COGAN, 1 TIER - 4 DOOR, SWING DOOR, STEEL WIRE MESH
2. PROVIDE PUSH BEAM TROLLEY FOR AT LEAST #1500 LBS WEIGHT, CHAINS, AND COMPONENTS FOR A COMPLETE SYSTEM. BASIS OF DESIGN: OZ LIFTING PRODUCTS. RE. STRUCTURAL FOR HOIST BEAM.



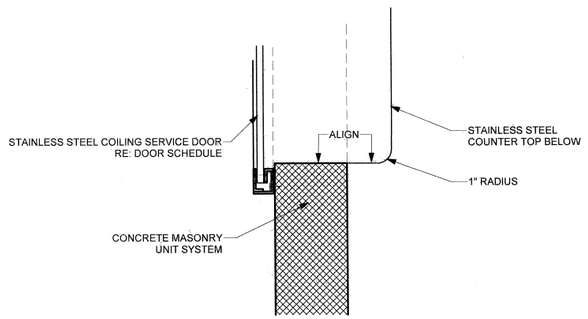
F RESTROOM SIGNAGE
1/4" = 1'-0"

A ACCESSIBILITY REQUIREMENTS
1/4" = 1'-0"

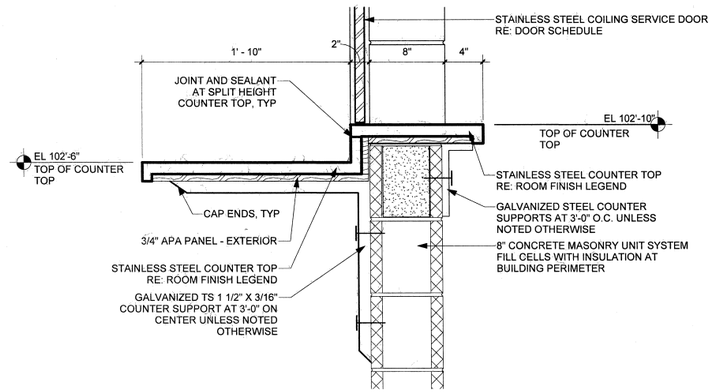
E FENCE POST DETAIL AT BUILDING WALL
1 1/2" = 1'-0"



D COILING DOOR HEADER
1 1/2" = 1'-0"



C COILING DOOR JAMB
1 1/2" = 1'-0"



B COILING DOOR SILL
1 1/2" = 1'-0"

1. ALL MANUALLY OPERATED FIXTURES TO COMPLY WITH ADA, AND ACCESSIBILITY CODE.
2. GRAB BAR AND SEAT SHALL WITHSTAND A LOAD OF NOT LESS THAN 250 POUNDS APPLIED AT ANY POINT.
3. HOT WATER AND DRAIN PIPES UNDER LAVATORY SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.
4. PROVIDE 30" WIDE FRONT-IN CLEARANCE FOR WHEELCHAIR ACCESS AT SINK AND URINAL
5. ALL SIGNAGE SHALL COMPLY WITH ADA AND IBC/ANSI 117.1 ACCESSIBLE CODE.
6. ADJUST ALL DOOR CLOSERS TO A MAXIMUM OF 5 LBS OF FORCE.
7. ACCESSIBLE TOILET AND CHANGING COMPARTMENTS SHOULD HAVE A SELF CLOSING DOOR.
8. ACCESSIBLE TOILETS: HAND OPERATED FLUCH VALVES SHALL BE MOUNTED 36" MAX ABOVE FINISHED FLOOR AND MOUNTED ON THE OPEN SIDE OF THE WATER CLOSET

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA, OK
LICENSED ARCHITECT
07.24.20

GH2 ARCHITECTS

A002 - EQUIPMENT SCHEDULE & DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020	APPROVED:
DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER

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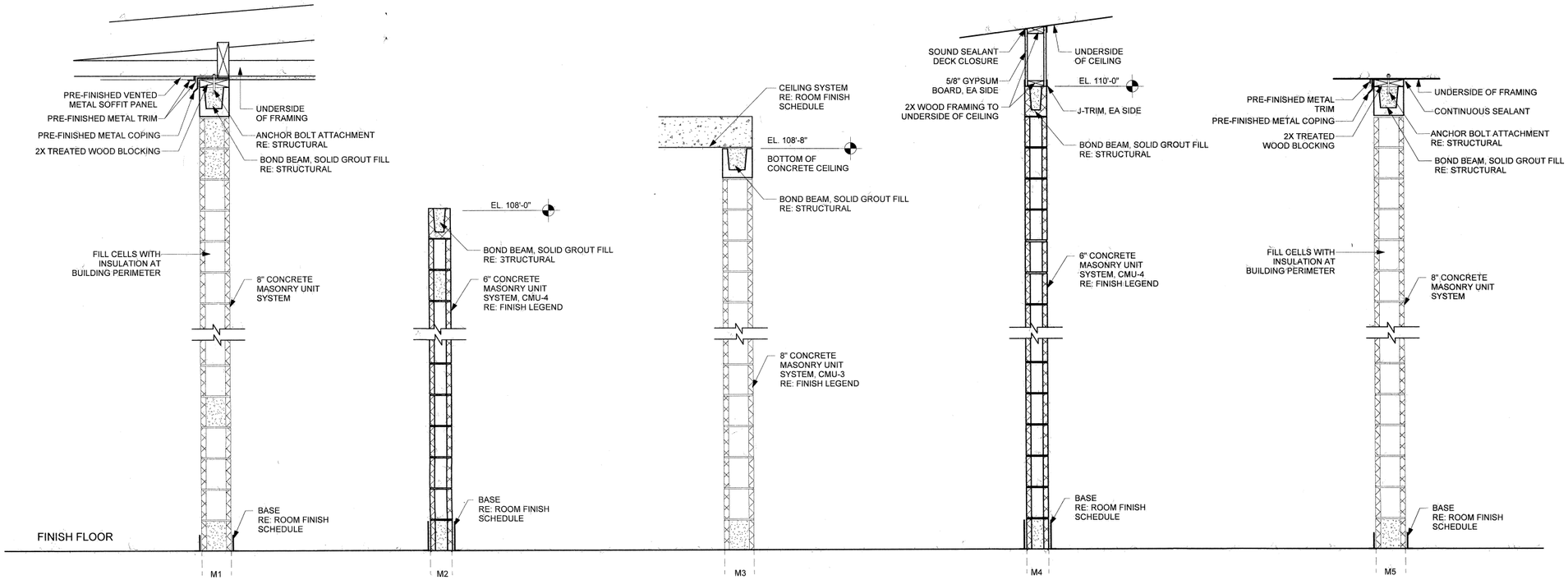
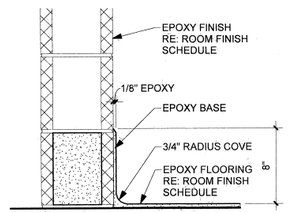


B PARTITION TYPES

3/4" = 1'-0"



A EPOXY COVE BASE

1 1/2" = 1'-0"

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA, OK
LICENSED ARCHITECT

07.24.20

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GH2 ARCHITECTS

A003 - PARTITION TYPES AND DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

PLAN SCALE: AS NOTED	DRAWN	NS	05/19/2020	APPROVED:
	DESIGNED	TC	05/19/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL:	RECOMMENDED			
	DESIGN MANAGER		9.20	CITY ENGINEER

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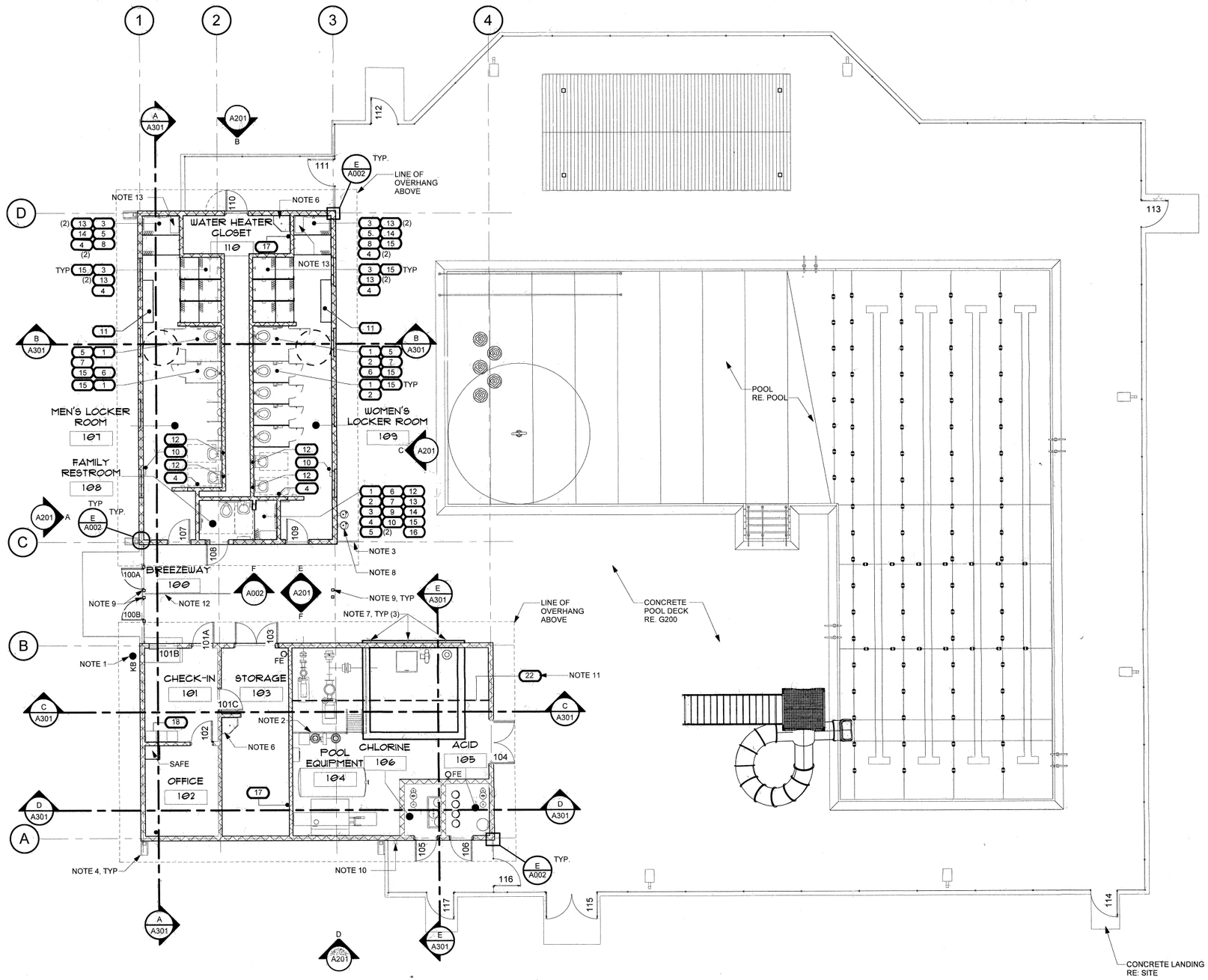

KEY NOTES

1. KNOX BOX PER CITY OF TULSA FIRE DEPARTMENT. VERIFY LOCATION WITH CITY OF TULSA FIRE MARSHAL PRIOR TO INSTALL AT MASONRY WALLS. RECESS INTO CONCRETE MASONRY.

2. REMOVABLE 1 1/2" OUTSIDE DIAMETER HOT-DIP GALVANIZED PIPE GUARD RAIL, RE: STRUCTURAL.

3. 1 1/2" OUTSIDE DIAMETER HOT-DIP GALVANIZED PIPE GUARDRAIL, RE: ACCESSIBILITY REQUIREMENTS

4. 12" X 24" CONCRETE SPASH BLOCK AT DOWNSPOUT

5. ALL EXTERIOR WALLS TO BE 8" CONCRETE MASONRY UNIT SYSTEMS
RE: PARTITION TYPES AND WALL SECTIONS FOR MORE INFORMATION

6. MOP SINK, RE: PLUMBING

7. EXTERIOR SHOWER HEAD, RE: PLUMBING

8. DRINKING FOUNTAIN, RE: PLUMBING

9. TUBE STEEL COLUMNS, PAINT, PT-3
RE: STRUCTURAL

10. VALVE FOR CO2 BULK TANK.

11. MONORAIL SYSTEM ABOVE, RE: STRUCTURAL. COORDINATE EXACT LOCATION IN FIELD WITH PUMP LOCATIONS AND PIPING LINES.

12. REMOVEABLE RAILING.

13. ADA BENCH AFFIXED TO WALL.

14. FLOOR HATCH FOR SURGE TANK ACCESS.

15. LADDER FOR PUMP ROOM ACCESS.

PARTITION LEGEND

CONCRETE MASONRY

A FLOOR PLAN - REFERENCE

1/8" = 1'-0"

0' 4' 8' 16'

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 23381
TULSA
OK
LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A101 - ARCHITECTURAL FLOOR PLAN - REFERENCE

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

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DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED			
DESIGN MANAGER		9.20	CITY ENGINEER

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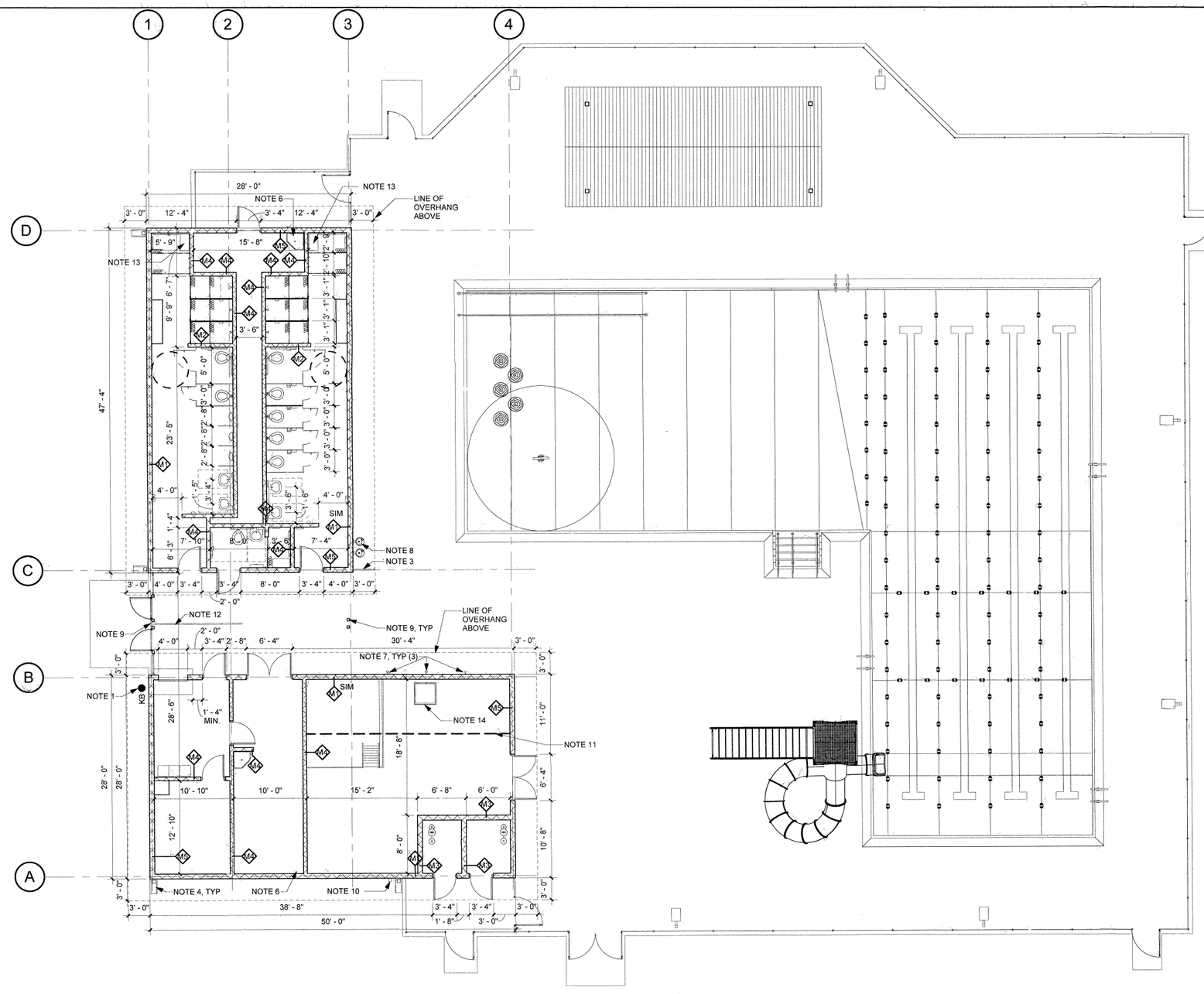

NOTES

1. KNOX BOX PER CITY OF TULSA FIRE DEPARTMENT. VERIFY LOCATION WITH CITY OF TULSA FIRE MARSHAL PRIOR TO INSTALL AT MASONRY WALLS. RECESS INTO CONCRETE MASONRY.

2. REMOVABLE 1 1/2" OUTSIDE DIAMETER HOT-DIP GALVANIZED PIPE GUARD RAIL, RE: STRUCTURAL.

3. 1 1/2" OUTSIDE DIAMETER HOT-DIP GALVANIZED PIPE GUARDRAIL, RE: ACCESSIBILITY REQUIREMENTS

4. 12" X 24" CONCRETE SPASH BLOCK AT DOWNSPOUT

5. ALL EXTERIOR WALLS TO BE 8" CONCRETE MASONRY UNIT SYSTEMS
RE: PARTITION TYPES AND WALL SECTIONS FOR MORE INFORMATION

6. MOP SINK, RE: PLUMBING

7. EXTERIOR SHOWER HEAD, RE: PLUMBING

8. DRINKING FOUNTAIN, RE: PLUMBING

9. TUBE STEEL COLUMNS, PAINT, PT-3
RE: STRUCTURAL

10. VALVE FOR CO2 BULK TANK.

11. MONORAIL SYSTEM ABOVE, RE: STRUCTURAL. COORDINATE EXACT LOCATION IN FIELD WITH PUMP LOCATIONS AND PIPING LINES.

12. REMOVEABLE RAILING.

13. ADA BENCH AFFIXED TO WALL.

14. FLOOR HATCH FOR SURGE TANK ACCESS.

15. LADDER FOR PUMP ROOM ACCESS.

PARTITION LEGEND

CONCRETE MASONRY

A FLOOR PLAN - DIMENSION

1/8" = 1'-0"

0' 4' 8' 16'

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA, OK
LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A102 - ARCHITECTURAL FLOOR PLAN - DIMENSION

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

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	DESIGNED	TC	05/19/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL:	RECOMMENDED DESIGN MANAGER		8.20	CITY ENGINEER
FILE:	DRAWING: Designer			DATE: 8.02.20
ATLAS PAGE NO: 116				SHEET 33 OF 81 SHEETS

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Concept Drawings GH2 PROJECT # 20180157

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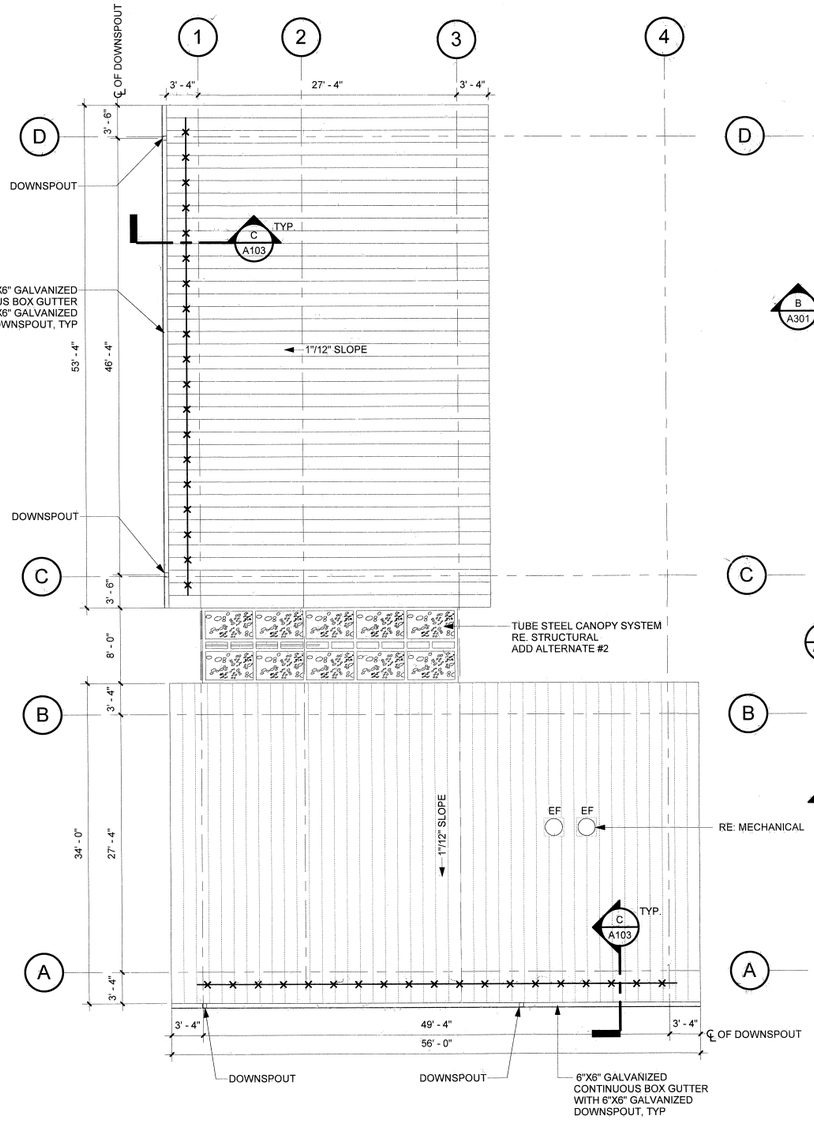
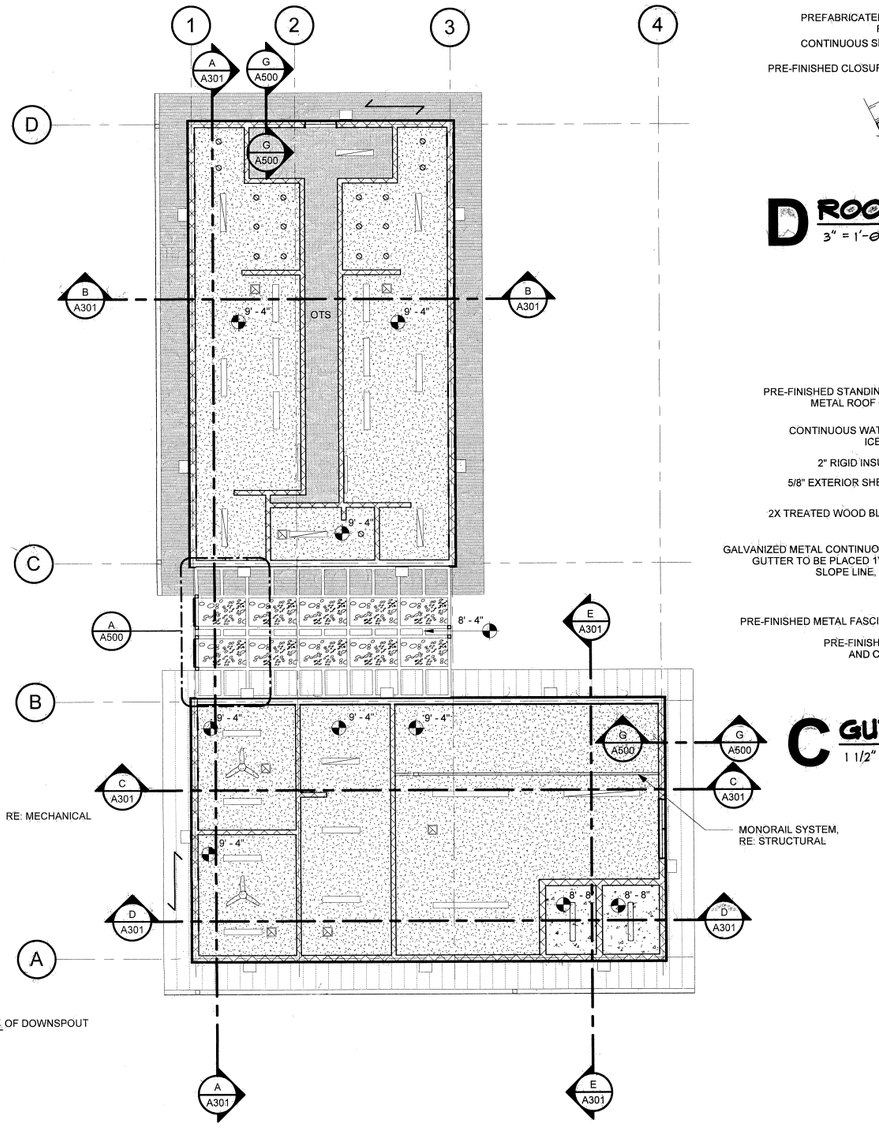


B ROOF PLAN

1/8" = 1'-0"

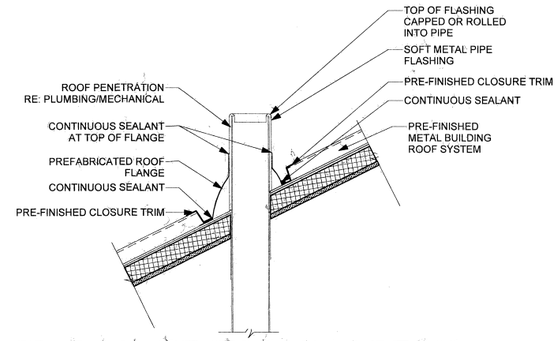
0' 4' 8' 16'



A REFLECTED CEILING PLAN

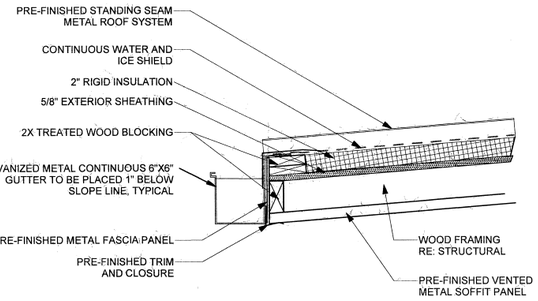
1/8" = 1'-0"

0' 4' 8' 16'



D ROOF PENETRATION DETAIL

3" = 1'-0"



C GUTTER DETAIL

1 1/2" = 1'-0"

LEGEND

CEILING MATERIAL

- CONCRETE (SEALED)
- PRE-FINISHED VENTED METAL SOFFIT PANEL, SM-1, ATTACH DIRECTLY TO BOTTOM OF TRUSS SYSTEM.
- GYPSUM, ATTACH DIRECTLY TO BOTTOM OF TRUSS SYSTEM U.N.O. PAINT PT-1, RE: FINISH SCHEDULE
- DIRECTION OF SOFFIT PANEL RUN

ROOF MATERIAL

- PRE-FINISHED STANDING SEAM METAL ROOF SYSTEM, SM-1
- PRE-FINISHED METAL PANEL, MP-2. ATTACH DIRECTLY TO CANOPY FRAME.
- DS — 6"X6" GALVANIZED DOWNSPOUT, CENTER STRAP BETWEEN HORIZONTAL CMU JOINTS TYPICAL
- SNOW GUARDS

LIGHT FIXTURES: RE: ELECTRICAL

- STRIP LIGHT FIXTURE
- CAN LIGHT FIXTURE
- WALL SCONCE (MOUNT 7'-9" AFF TO BOTTOM OF SCONCE)
- CEILING FAN (MOUNT 9'-0" AFF TO BOTTOM OF FAN)

GENERAL ROOF NOTES

1. ALL CURBS, STACK VENTS, AND ROOF PENETRATIONS TO BE INSTALLED PER PROJECT SPECIFIC DETAILS, APPROVED BY ROOFING MANUFACTURER.
2. VERIFY EXACT LOCATIIONS OF ALL ROOF PENETRATIONS AND ROOF CURBS WITH STRUCTURAL, PLUMBING AND MECHANICAL DRAWINGS.
3. ALL VENT LOCATIONS SHALL BE VERIFIED WITH PLUMBING AND MECHANICAL DRAWINGS.
4. MECHANICAL SUB-CONTRACTOR TO COORDINATE INSTALLATION AND ACCEPTANCE OF PRE-FABRICATED CURBS AND PENETRATIONS WITH ROOF MANUFACTURE. GENERAL CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING, NAILING, ETC. AS REQUIRED FOR A WATERTIGHT AND WATER PROOF ASSEMBLY
5. PROVIDE PRE-MOLDED DECK FLUTE FILLERS AT EDGE OF DECK OPENINGS.

STATE OF OKLAHOMA
MICHAEL RAY HALL
No 3381
TULSA, OK
LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A103 - REFLECTED CEILING PLAN AND ROOF PLAN

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020	APPROVED:
DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		6/8/20	
LEAD ENGR.		6/8/20	
FIELD MGR.		6/8/20	
RECOMMENDED DESIGN MANAGER		HAS 9.20	CITY ENGINEER

FILE: DRAWING: Designer
DATE: 10.02.20
ATLAS PAGE NO: 116
SHEET 34 OF 81 SHEETS

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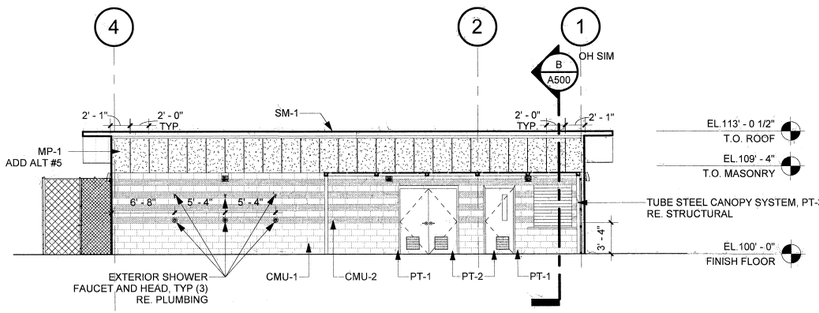
GENERAL NOTES

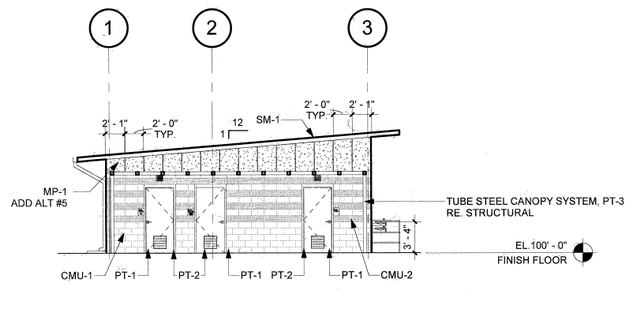
1. ALL STEEL COLUMNS GALVANIZED, TYPICAL
2. MP-1: ADD ALTERNATE #5 - REMOVE METAL PANELS AND EXTEND CMU TO ROOF STRUCTURE.
3. MP-1: ADD ALTERNATE #2 - PARASOLEIL PANEL.



F INTERIOR ELEVATION

1/8" = 1'-0"

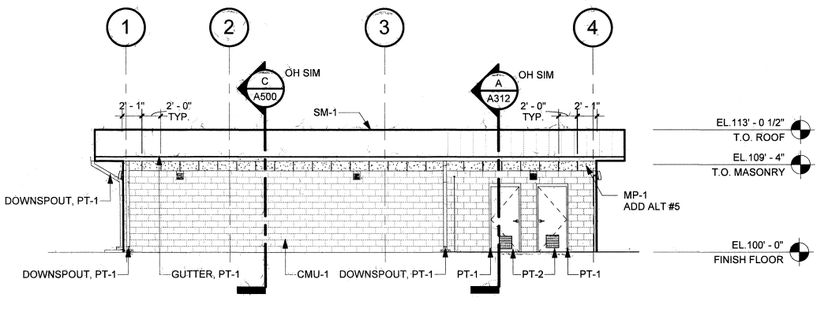
0' 4' 8' 16'



E INTERIOR ELEVATION

1/8" = 1'-0"

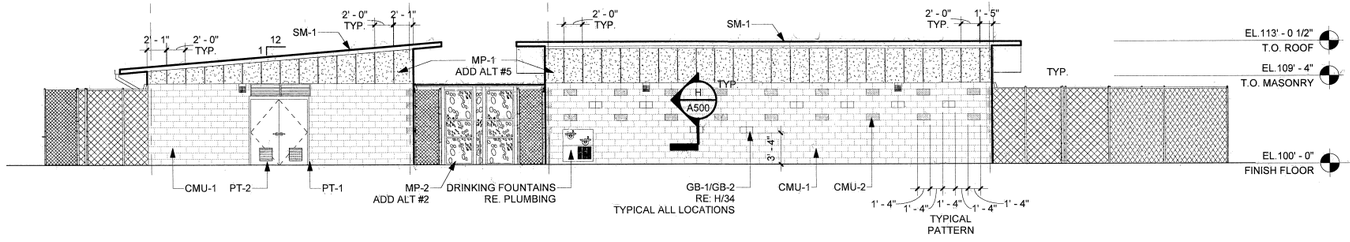
0' 4' 8' 16'



D EXTERIOR ELEVATIONS

1/8" = 1'-0"

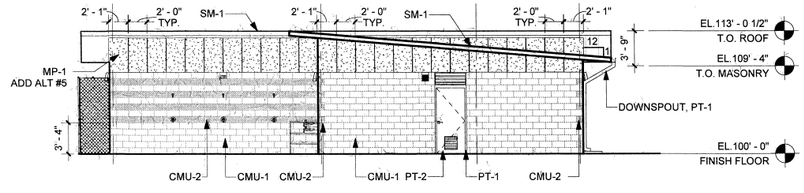
0' 4' 8' 16'



C EXTERIOR ELEVATIONS

1/8" = 1'-0"

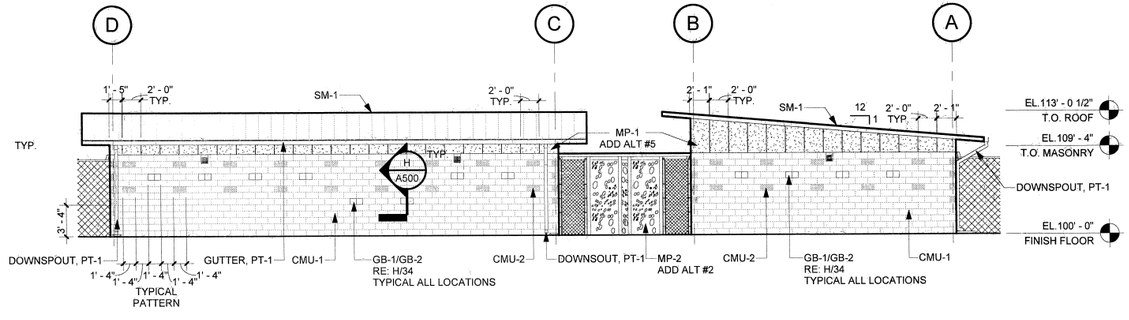
0' 4' 8' 16'



B EXTERIOR ELEVATIONS

1/8" = 1'-0"

0' 4' 8' 16'



A EXTERIOR ELEVATIONS

1/8" = 1'-0"

0' 4' 8' 16'



07.24.20

GH2 ARCHITECTS

A201 - EXTERIOR ELEVATIONS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020	APPROVED:
DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED:			
DESIGN MANAGER		9.20	CITY ENGINEER

FILE: DRAWING: Designer
DATE: 10.02.20
ATLAS PAGE NO: 116
SHEET 35 OF 81 SHEETS

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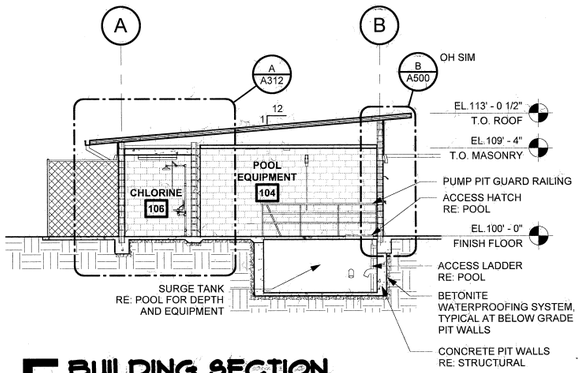
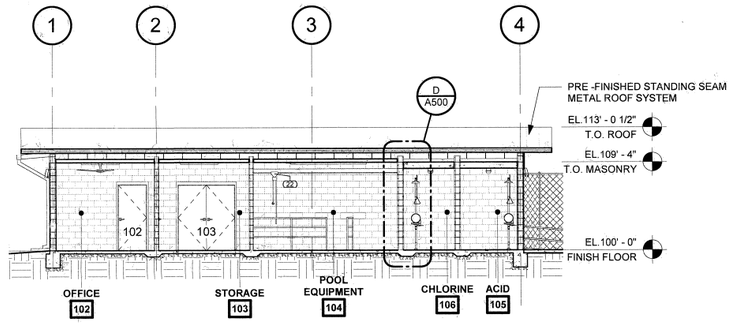


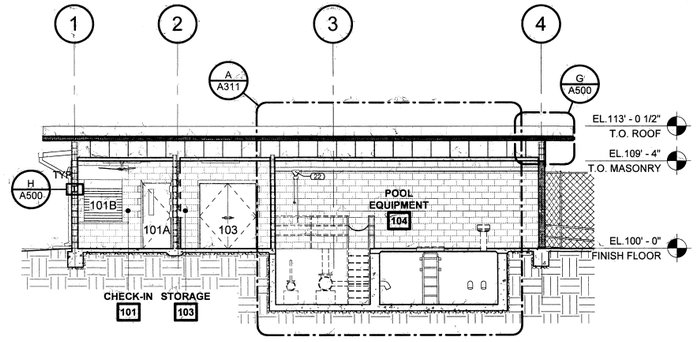
E BUILDING SECTION

1/8" = 1'-0"



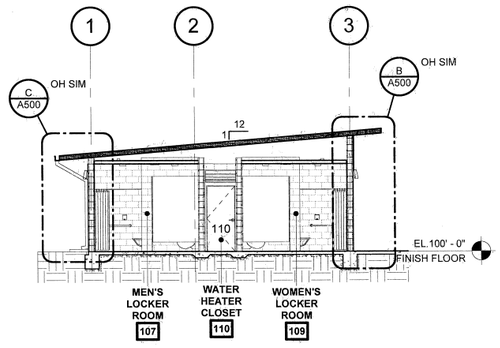
D BUILDING SECTION

1/8" = 1'-0"



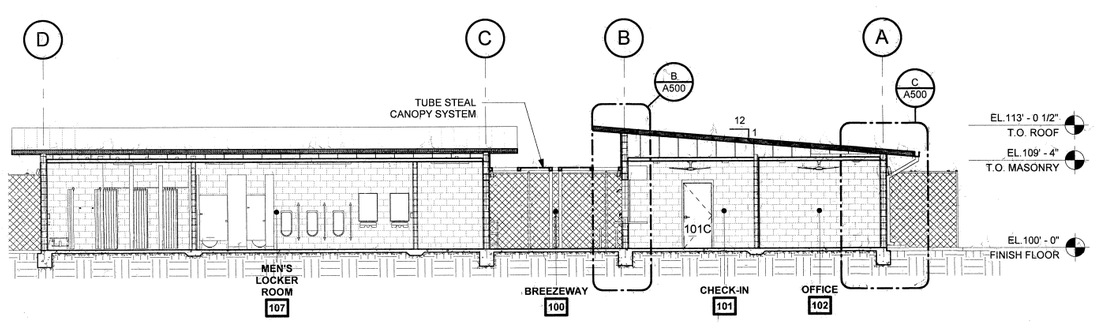
C BUILDING SECTION

1/8" = 1'-0"



B BUILDING SECTION

1/8" = 1'-0"



A BUILDING SECTION

1/8" = 1'-0"

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA, OK
LICENSED ARCHITECT

07-24-20

REVISION	BY	DATE

GH2 ARCHITECTS

A301 - BUILDING SECTIONS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

PLAN SCALE: AS NOTED	DRAWN	NS	05/19/2020	APPROVED:
	DESIGNED	TC	05/19/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	EB	8/20	
HORIZONTAL:	LEAD ENGR.	MHH	8/20	
	FIELD MGR.	TCM	8/20	
VERTICAL:	RECOMMENDED: DESIGN MANAGER	HHS	9.20	CITY ENGINEER
FILE:	DRAWING: Designer			DATE: 10.02.20
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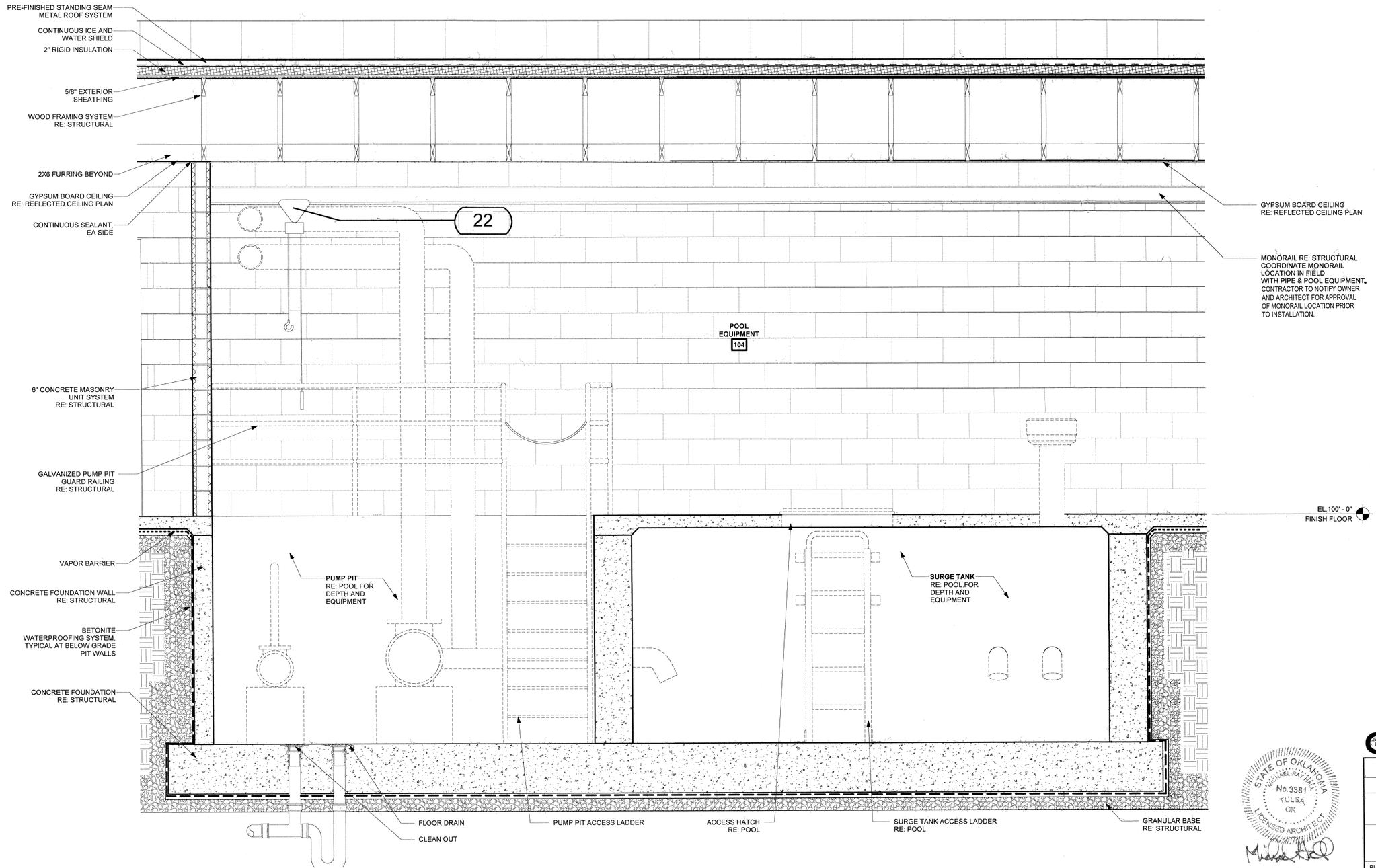

A PUMP PIT DETAIL AND SURGE TANK DETAIL

3/4" = 1'-0"

STATE OF OKLAHOMA · MICHAEL RAY HALL · No. 3381 · TULSA, OK · LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A311 - BUILDING SECTIONS AND DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED	DRAWN	NS	05/19/2020	APPROVED:
	DESIGNED	TC	05/19/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL:	RECOMMENDED DESIGN MANAGER		9.20	CITY ENGINEER
FILE:	DRAWING: Designer			DATE: 10.02.20
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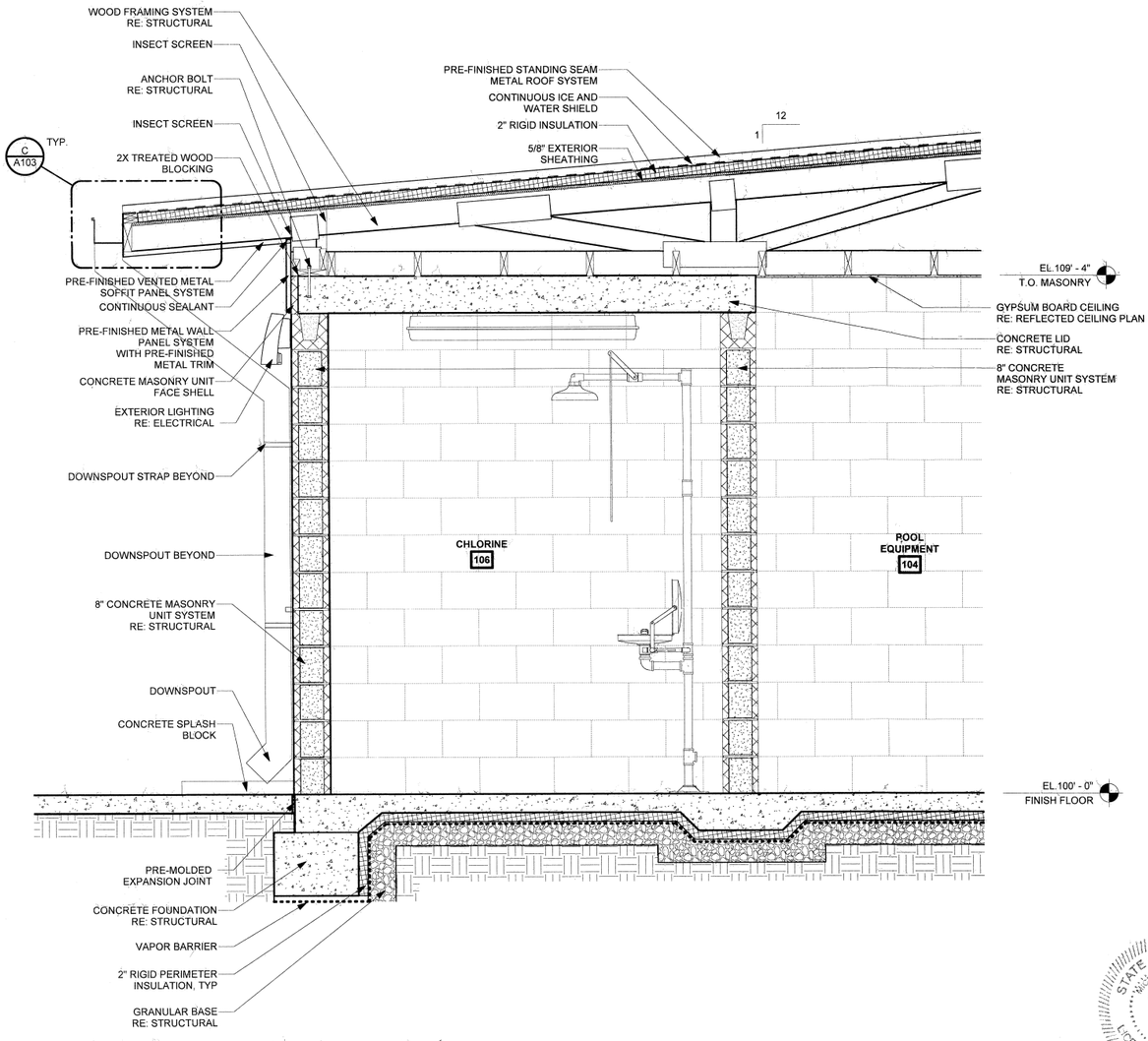

A SECTION AT EQUIPMENT ROOMS

3/4" = 1'-0"

STATE OF OKLAHOMA
MICHAEL RAY HALL
No. 3381
TULSA
OK
LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A312 - BUILDING SECTIONS AND DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED	DRAWN	NS	05/19/2020	APPROVED:
	DESIGNED	TC	05/19/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL:	RECOMMENDED DESIGN MANAGER		9.20	CITY ENGINEER
FILE:	DRAWING: Designer			DATE: 9.02.20
ATLAS PAGE NO: 116				SHEET 38 OF 81 SHEETS

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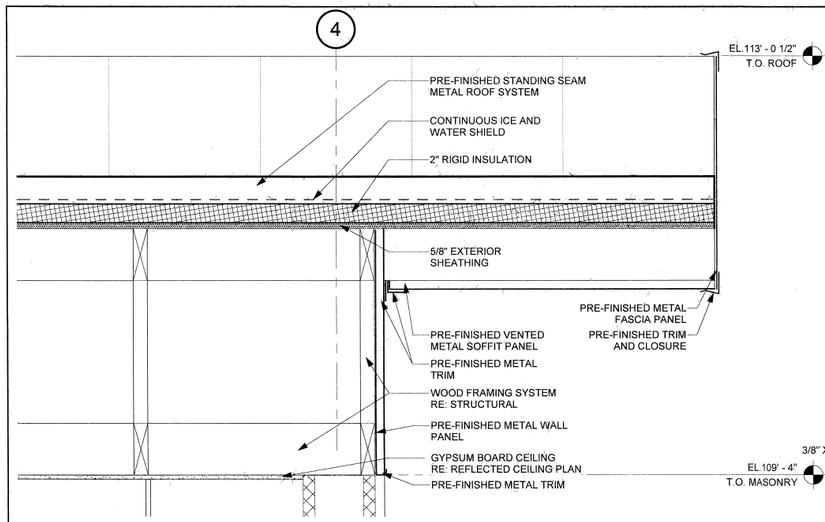
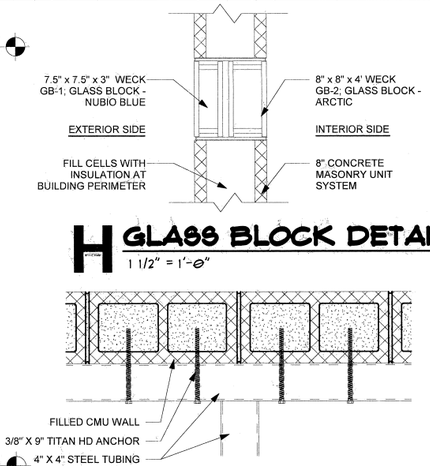
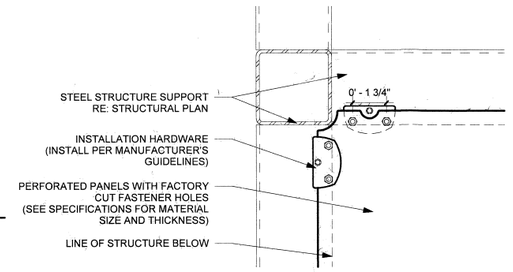


G EAVE DETAIL
1 1/2" = 1'-0"

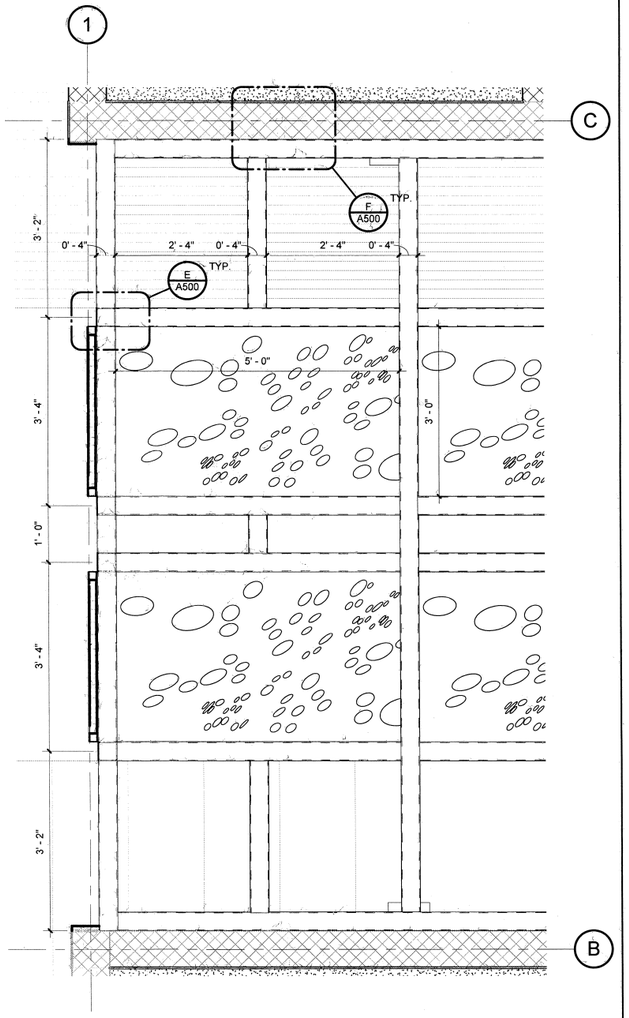


H GLASS BLOCK DETAIL
1 1/2" = 1'-0"

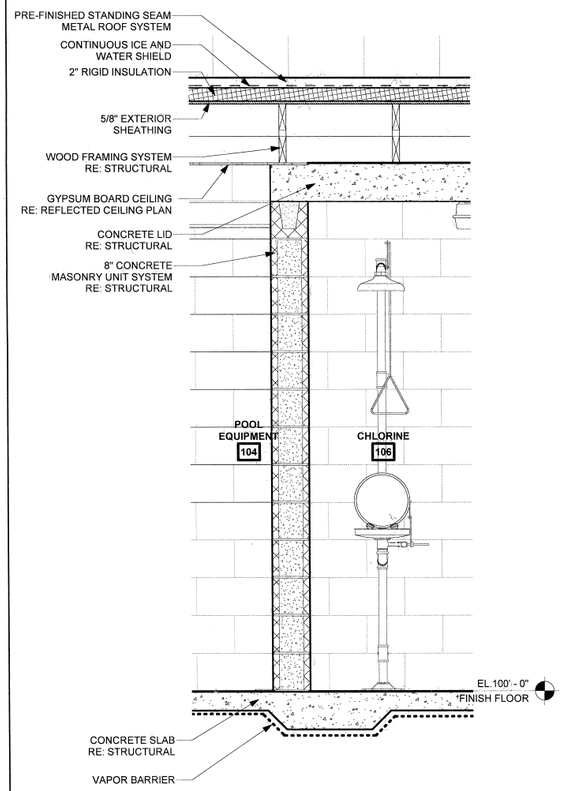
F CANOPY DETAIL
1 1/2" = 1'-0"



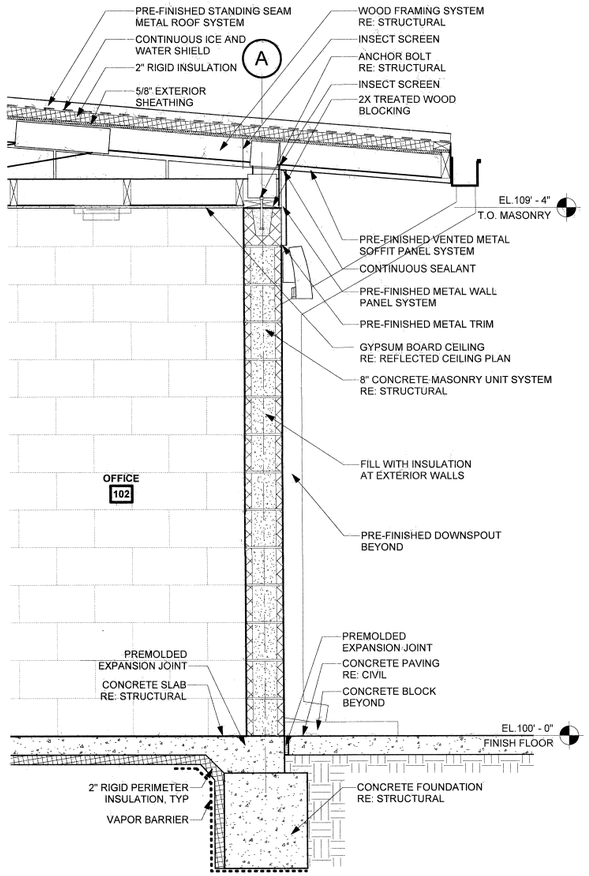
E CANOPY DETAIL
3" = 1'-0"



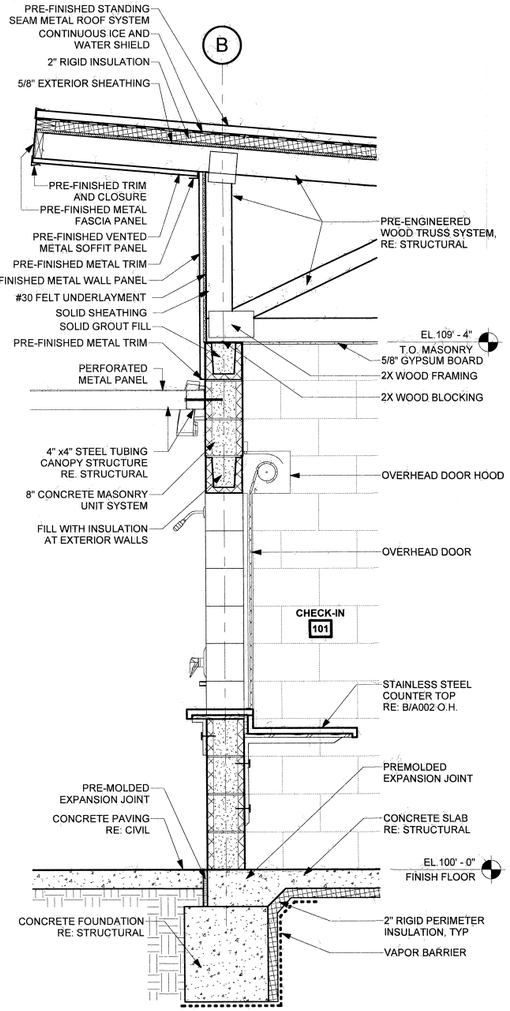
A CANOPY FRAME DETAIL
3/4" = 1'-0"



D SECTION AT CHLORINE
3/4" = 1'-0"



C OVERHANG WITH GUTTER DETAIL
3/4" = 1'-0"



B CHECK-IN DETAIL
3/4" = 1'-0"

STATE OF OKLAHOMA · MICHAEL RAY HALL · No. 23381 · TULSA, OK · LICENSED ARCHITECT

07.24.20

GH2 ARCHITECTS

A500 - ARCHITECTURAL DETAILS

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
GH2 ARCHITECTS, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	NS	05/19/2020	APPROVED:
DESIGNED	TC	05/19/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED		9.20	
DESIGN MANAGER			CITY ENGINEER

FILE: DRAWING: Designer
DATE: 10.02.20
ATLAS PAGE NO: 116
SHEET 39 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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GENERAL NOTES

DESIGN PARAMETERS

1. BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE
2. DEAD LOADS:
   A. ROOF ..... 20 PSF
3. LIVE LOADS:
   A. ROOF ..... 20 PSF (UNIFORM)
4. SNOW LOADS:
   A. GROUND SNOW LOAD, Pg ..... 10 PSF
5. WIND LOADS:
   A. BASIC WIND SPEED (3 SECOND GUST) ..... 115 MPH
   B. RISK CATEGORY II
   C. EXPOSURE CLASSIFICATION C
   D. INTERNAL PRESSURE COEFFICIENT ..... +/-0.18
   E. BASIC WIND PRESSURE (qh,UNFACTORED) ..... 24.4 PSF
   F. DESIGN WIND PRESSURE ON EXTERIOR WALLS (C&C LOAD BASED ON 100 SQ.FT AREA)
      - END ZONES, (3'-0") ..... -27.4 PSF
      - INTERIOR ZONES ..... -24.7 PSF
   G. DESIGN UPLIFT PRESSURE ON ROOFS (C&C LOAD BASED ON 100 SQ.FT AREA)
      - CORNER ZONES, (12'-0") ..... -33.7 PSF
      - EDGE ZONES, (6'-0") ..... -33.7 PSF
      - INTERIOR ZONES ..... -31.3 PSF
6. SEISMIC LOADS:
   A. SPECTRAL RESPONSE ACCELERATION(SHORT PERIOD), Ss 0.132
   B. SPECTRAL RESPONSE ACCELERATION,(1-SEC. PERIOD), S1 ..... 0.069
   C. SPECTRAL RESPONSE COEFFICIENT,(SHORT PERIOD), Sds 0.106
   D. SPECTRAL RESPONSE COEFFICIENT,(1-SEC. PERIOD), Sd1 ..... 0.078
   E. SITE CLASS C
   F. IMPORTANCE FACTOR, I 1.0
   G. SEISMIC DESIGN CATEGORY ..... B
   H. BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM ..... ORDINARY REINFORCED MASONRY SHEAR WALLS
   I. RESPONSE MODIFICATION FACTOR, R 2.0
   J. SYSTEM OVER-STRENGTH FACTOR, W 2.5
   K. DEFLECTION AMPLIFICATION FACTOR, Cd 1.75
   L. ANALYSIS PROCEDURE ..... EQUIVALENT LATERAL FORCE
7. FOUNDATIONS:
   ISOLATED AND CONTINUOUS FOUNDATIONS HAVE BEEN DESIGN FOR AN ALLOWABLE NET BEARING PRESSURE OF 2,000 PSF, PER THE RECOMMENDATIONS PROVIDED IN THE REFERENCE GEOTECHNICAL REPORT RECOMMENDATIONS.

GENERAL

1. STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO THE SHOP DRAWINGS AND FIELD WORK.
2. WHERE CONFLICT EXISTS AMONG VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
3. WHERE MEMBER LOCATIONS ARE NOT SPECIFICALLY DIMENSIONED, THE FOLLOWING RULES SHALL APPLY:
   A. COLUMNS ARE CENTERED ON GRID LINES.
   B. FOOTINGS ARE CENTERED BENEATH COLUMNS.
   C. CONTINUOUS FOOTINGS ARE CENTERED BENEATH WALLS.
   D. FRAMING MEMBERS ARE EITHER LOCATED ON GRID LINES OR ARE EQUALLY SPACED BETWEEN LOCATED MEMBERS.
4. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.
5. THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING AND RESHORING, OR ANY OTHER PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.
6. WEIGHTS OF MECHANICAL EQUIPMENT SHOWN ON THE STRUCTURAL PLANS ARE FOR UNITS SPECIFIED BY THE MECHANICAL ENGINEER. CONTRACTOR SHALL VERIFY THE WEIGHTS. ANY SUBSTITUTIONS THAT RESULT IN INCREASED WEIGHT SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. THE SIZE AND LOCATION OF EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE VERIFIED BY THE CONTRACTOR. OPENINGS AND PENETRATIONS NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
8. PRIOR TO FABRICATION AND/OR ERECTION OF ANY MATERIALS, THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS AND SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER OF RECORD OR THE ARCHITECT IMMEDIATELY UPON DISCOVERY.
9. BACKFILL BOTH SIDES OF ALL FOUNDATION AND RETAINING WALLS EQUALLY UNTIL LOW SIDE IS UP TO FINISH GRADE. DO NOT BACKFILL ANY WALLS UNTIL CONCRETE HAS REACHED ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
10. CONNECTIONS OF SYSTEMS DESIGNED BY THE CONTRACTOR'S ENGINEER SUCH AS, BUT NOT LIMITED TO, CLADDING, STAIRS, ELEVATORS AND MEP LOADS ARE ASSUMED TO IMPOSE VERTICAL AND/OR HORIZONTAL LOADS ON THE BASE BUILDING STRUCTURAL MEMBERS WITHOUT GENERATING TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SUPPLEMENTARY BRACING MEMBERS AS REQUIRED TO PREVENT TORSION ON THE BASE BUILDING STRUCTURE.
11. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIAL OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE APPROVED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED:
   A. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST.
   B. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND THE ICC REPORT IS SUBMITTED WITH THE REQUEST.
12. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
13. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF 360 ENGINEERING GROUP, PLLC. IS SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK COMPLETED AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN A MANNER INDICATING THAT THE WORK, WHEN FULLY COMPLETED, WILL BE IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS AN EXHAUSTIVE OR CONTINUOUS CHECK OF THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

DIVISION 2 - FOUNDATIONS

1. RECOMMENDATIONS CONTAINED IN "GEOTECHNICAL ENGINEERING REPORT - CITY OF TULSA - REED PARK POOL", PROJECT NUMBER 4195064 BY TERRACON CONSULTANTS, INC DATED AUGUST 22, 2019 WERE USE FOR DESIGN.
2. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING PROOF ROLLING AND SHALL INSPECT THE SUBGRADE PRIOR TO ANY FILL OPERATIONS. ALL COMPACTED FILL SHALL BE CONTINUOUSLY INSPECTED BY THE OWNER'S SELECTED INDEPENDENT TESTING LABORATORY.
3. FOOTINGS SHALL BEAR EITHER ON COMPETENT NATIVE SOIL OR COMPACTED STRUCTURAL FILL AS PER THE GEOTECHNICAL REPORT. EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 24 INCHES BELOW FINISH GRADE UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER AND/OR BUILDING OFFICIAL. IF THE SOIL AT THE BEARING ELEVATIONS SHOWN IS OF QUESTIONABLE BEARING VALUE, THE STRUCTURAL ENGINEER OF RECORD OR ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
4. ALL FILL MATERIAL UNDER THE STRUCTURE SHALL COMPLY WITH REQUIREMENTS STATED IN THE GEOTECHNICAL REPORT, UNO.
5. PROVIDE A MINIMUM OF A 4-INCH CLEAN, FREE-DRAINING GRANULAR SUBBASE FILL BELOW ALL INTERIOR SLABS-ON-GRADE UNLESS NOTED OR DETAILED OTHERWISE. SUBBASE SHALL MEET GRADATION REQUIREMENTS OF ASTM C-33 SIZE NO. 67, UNLESS SPECIFICALLY NOTED OTHERWISE.
6. A POLYETHYLENE FILM VAPOR RETARDER, MEETING THE REQUIREMENTS IN THE SPECIFICATIONS, SHALL BE PLACED BELOW ALL INTERIOR SLABS-ON-GRADE PER THE FOUNDATION PLAN NOTES.
7. THE CONTRACTOR IS CAUTIONED AGAINST LOADING SLAB-ON-GRADE WITH CONSTRUCTION EQUIPMENT. THE SLAB HAS NOT BEEN DESIGNED FOR CONSTRUCTION EQUIPMENT AND MAY REQUIRE AN INCREASE IN SLAB THICKNESS AND/OR REINFORCEMENT. IF THE CONSTRUCTION LOADING EXCEEDS THE DESIGN LOADS SHOWN IN THE DESIGN CRITERIA, THE CONTRACTOR IS REQUIRED TO SUBMIT CALCULATIONS SIGNED AND SEALED BY A REGISTERED STRUCTURAL, CIVIL, OR GEOTECHNICAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADEQUACY OF THE SLAB.
8. EXTERIOR FOOTINGS FOR STAIRS AND RAMPS SHALL BEAR AT OR BELOW MINIMUM BEARING DEPTH.
9. FOUNDATION WALLS SHALL HAVE ADEQUATE TEMPORARY BRACING INSTALLED BY THE CONTRACTOR BEFORE BACKFILL IS PLACED AGAINST THEM. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED.

DIVISION 3 - CONCRETE

1. ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301.
2. CONTRACTOR SHALL FOLLOW ACI 306.1 FOR COLD WEATHER CONCRETE PLACEMENT AND CURING GUIDELINES.
3. ARRANGEMENTS AND DETAIL OF REINFORCING BENDS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF PUBLICATION SP-66, "ACI DETAILING MANUAL" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
4. UNLESS NOTED OTHERWISE, BAR SPLICES SHALL BE CLASS B TENSION LAPS AND SHALL BE LAPPED WITH MINIMUM LENGTHS AS LISTED IN THE LAP LENGTH SCHEDULE, WHERE REQUIRED IN REINFORCING. SHORTER LAPS MAY BE ACCEPTABLE IF SPECIFIC LOCATIONS OF ALTERNATE LAPS ARE SHOWN ON THE REINFORCING PLACEMENT DRAWINGS AND CALCULATIONS ARE SUBMITTED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED, JUSTIFYING THE ALTERNATE LAP LENGTHS.
5. PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC. FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION BEFORE PLACING CONCRETE. DO NOT "WET STICK" DOWELS.
6. ALL WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF 12" AT THE SIDES AND ENDS.
7. LOCATIONS AND SIZES OF OPENINGS, SLEEVES, ETC. REQUIRED FOR OTHER TRADES MUST BE VERIFIED BY THESE TRADES BEFORE PLACING CONCRETE.
8. ALL SLOTS, SLEEVES, TRENCHES AND OTHER EMBEDDED ITEMS SHALL BE SET AND SECURED AGAINST MOVEMENT BEFORE THE CONCRETE IS PLACED. SEE ARCHITECTURAL, ELECTRICAL, MECHANICAL, PLUMBING, AND VENDOR DRAWINGS FOR SIZES, AND LOCATIONS. COORDINATE LOCATIONS, SPACING, AND SIZES WITH THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.
9. AS PART OF THE SUBMITTAL PROCESS, THE ELECTRICAL AND MECHANICAL CONTRACTOR(S) SHALL SUBMIT PROPOSED ROUTING PLAN FOR ALL PIPES, CONDUITS, OR OTHER DEVICES TO BE EMBEDDED IN THE CONCRETE. THE SUBMITTAL SHALL SHOW SPECIFIC SIZES AND LOCATIONS OF ALL PROPOSED EMBED ITEMS REFERENCING PROXIMITY TO BEAM, COLUMN, AND SLAB EDGES. NO ITEMS SHALL BE ALLOWED TO BE EMBEDDED IN THE CONCRETE WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
10. CONDUITS AND PIPES EMBEDDED IN CONCRETE SLABS MAY BE NO LARGER THAN 1/3 OF THE SLAB THICKNESS (BASED ON THE MAXIMUM OUTSIDE DIAMETER) AND SHALL HAVE A CENTER-TO-CENTER SPACING NO LESS THAN THREE (3) CONDUIT DIAMETERS. REGARDLESS OF DIAMETER, THE MINIMUM CLEAR SPACING BETWEEN CONDUITS OR REINFORCING SHALL BE (1) INCH.
11. NO MORE THAN FOUR CONDUITS MAY BE PLACED ADJACENT TO EACH OTHER WITHOUT PRIOR APPROVAL IN WRITING FROM THE STRUCTURAL ENGINEER OF RECORD.
12. NO ALUMINUM CONDUITS, DEVICES, OR FIXTURES MAY BE EMBEDDED INTO THE CONCRETE SO THAT THE ALUMINUM IS IN DIRECT CONTACT WITH THE CONCRETE.
13. CORNER BARS SHALL BE PROVIDED FOR ALL HORIZONTAL REINFORCING BARS AT THE INTERSECTIONS AND CORNERS OF ALL STRIP FOOTINGS, BEAMS, AND WALLS UNLESS NOTED OTHERWISE. CORNER BARS SHALL BE OF THE SAME SIZE AND GRADE AS THE HORIZONTAL REINFORCING THEY CONNECT. MINIMUM LAP LENGTHS SHALL BE AS INDICATED ABOVE UNLESS NOTED OTHERWISE.
14. FOR EXTERIOR RETAINING WALLS AND BUILDING STEM WALLS EXPOSED TO VIEW ACROSS THE LENGTH OF WALL, PROVIDE FORMED "V" CONTROL JOINTS AT 15'-0" OC MAX.

LAP LENGTHS FOR SPLICES

BAR SIZE	TOP BARS**	OTHER
#3	1'-5"	1'-4"
#4	1'-11"	1'-5"
#5	2'-4"	1'-10"
#6	2'-10"	2'-2"
#7	4'-7"	3'-7"
#8	5'-10"	4'-6"
#9	7'-2"	5'-6"

* BASED ON MINIMUM CONCRETE COVER OF 1 1/2", A MINIMUM CENTER-TO-CENTER BAR SPACING OF THREE BAR DIAMETERS, AND 3,000 PSI CONCRETE.

** TOP BARS ARE HORIZONTAL BARS WITH MORE THAN (12) INCHES OF CONCRETE CAST BELOW BARS.

REQUIRED CONCRETE STRENGTHS (28 DAY)

CONCRETE ELEMENT	f'c (PSI)
FOOTINGS, PIERS AND GRADE BEAMS	3,000
FOUNDATION WALLS AND PEDESTALS	4,000
SLABS-ON-GRADE	3,500

REINFORCEMENT MATERIALS

REINF ELEMENT	ASTM	Fy (KSI)	Fu (KSI)
TYP REINFORCING	A615	60	90
WELDED AND BENT REINF	A706	60	80
WELDED WIRE REINFORCING, SMOOTH	A185	65	75
WELDED WIRE REINFORCING, DEFORMED	A497	70	80

REINFORCEMENT COVER REQUIREMENTS

LOCATION	COVER (IN)
CONCRETE CAST AGAINST EARTH	3
CONCRETE CAST IN FORMS, EXPOSED TO WEATHER OR EARTH	2
SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER	1

DIVISION 4 - MASONRY

1. CONCRETE MASONRY UNITS SHALL MEET ASTM SPECIFICATION C90, GRADE N TYPE 1 BLOCK WITH A MINIMUM UNIT COMPRESSIVE STRENGTH OF 1900 PSI. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY ASSEMBLY IS SHALL BE 1,500 PSI.
2. MORTAR SHALL MEET ASTM SPECIFICATION C270 FOR TYPE "S" MORTAR.
3. GROUT SHALL MEET ASTM SPECIFICATION C476 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI.
4. GROUT PLACED BY THE LOW LIFT GROUTING METHOD SHALL BE MECHANICALLY CONSOLIDATED USING A VIBRATOR WITH A MAXIMUM 3/4 INCH DIAMETER HEAD.
5. HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER TYPE (REFERENCE SPECIFICATION). JOINT REINFORCEMENT SHALL BE SPACED AT 8 INCHES ON CENTER BELOW FINISHED FLOOR AND IN PARAPETS, AND 16 INCHES ON CENTER ABOVE FINISHED FLOOR.
6. CONCRETE MASONRY SHALL BE LAID IN RUNNING BOND.
7. CONCRETE MASONRY BELOW FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS AND SHALL HAVE ALL THE CELLS FULLY GROUTED. CONCRETE MASONRY ABOVE FINISHED FLOOR SHALL BE MEDIUM WEIGHT OR LIGHT WEIGHT AND IS TO BE GROUTED AT REINFORCED CELLS AND BOND BEAMS. ALL CELLS WITH REINFORCING SHALL BE GROUTED SOLID.
8. REFER TO WALL SECTIONS AND DETAILS FOR MISCELLANEOUS BOND BEAM LOCATIONS AND EMBEDDED ITEMS. USE OPEN KNOCK OUT BOND BEAM BLOCK. DO NOT USE THROUGH TYPE BLOCKS FOR BOND BEAMS. DO NOT CONTINUE BOND BEAM REINFORCING THROUGH CONTROL JOINTS.
9. REINFORCING STEEL SHALL MEET ASTM SPECIFICATION A615, GRADE 60.
10. ANCHORS INSTALLED IN GROUT FILLED CONCRETE MASONRY UNITS SHALL BE USED WHERE SPECIFIED ON THE DRAWINGS. ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. USE HILTI HY-270 ADHESIVE ANCHORING SYSTEM OR HILTI KWIK BOLT 3 EXPANSION ANCHOR, REFERENCE DETAILS FOR ANCHOR SIZE AND EMBEDMENT. SUBSTITUTIONS TO THE SPECIFIED ANCHORS MUST BE APPROVED BY THE ENGINEER OF RECORD.
11. CONSTRUCTION BRACING FOR MASONRY WALLS SHALL BE DESIGNED AND DETAILED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

DIVISION 5 - STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL MEET THE FOLLOWING MINIMUM YIELD STRENGTHS (Fy):

		YIELD	ASTM SPECIFICATION
A.	WIDE FLANGE SHAPES	50 KSI	A992
B.	OTHER SHAPES, BARS, PLATES AND RODS	36 KSI	A36
C.	SQUARE AND RECTANGULAR HSS	46 KSI	A500, GRADE B
D.	ROUND HSS	42 KSI	A500, GRADE A
E.	STRUCTURAL STEEL PIPE	35 KSI	A53, TYPE E, GRADE B
F.	ANCHOR RODS	55 KSI	F1554
G.	ALL-THREAD RODS	36 KSI	A36
H.	HEADED STUD ANCHORS	65 KSI (TENSILE)	A108 (GRADE DESIGNATIONS 1010-1020 INCLUSIVE)

2. BOLTS FOR STEEL BEAM AND COLUMN CONNECTIONS SHALL BE 3/4" DIAMETER ASTM A325 HIGH-STRENGTH BOLTS INSTALLED SNUG TIGHT, UNO.
3. WHERE FIELD AND SHOP WELDS ARE INDICATED ON THE DRAWINGS, THEY SHALL BE THE SIZE AND TYPE NOTED. ALL WELDING OF STRUCTURAL STEEL SHALL BE DONE IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 CORRESPONDING TO THE AISC SPECIFICATION USED, AND ALL WELDS INCLUDING FIELD WELDS SHALL BE MADE BY CERTIFIED WELDERS USING E70XX ELECTRODES.
4. WHERE FILLED WELD SIZES ARE NOT INDICATED ON WELD SYMBOLS, FILLET SIZE SHALL BE 1/16TH INCH SMALLER THAN THICKNESS OF THINNER MATERIALS BEING JOINED.
5. COMPLETE PENETRATION WELDS ARE INDICATED BY NOTATION "CP" ON WELD SYMBOLS, PARTIAL PENETRATION BY "PP".
6. PROVIDE DOUBLE NUTS AND DOUBLE WASHERS FOR STEEL COLUMN ANCHOR BOLTS TO ALLOW FOR ADJUSTMENT IN BASE PLATE ELEVATION.
7. COMPOSITE CONSTRUCTION STEEL BEAMS AND GIRDERS DO NOT REQUIRE SHORING.
8. STUD CONNECTORS FOR COMPOSITE BEAMS AND GIRDERS SHALL BE 3/4" DIA. X 3 3/4" AND SHALL BE WELDED THROUGH METAL DECK DIRECTLY TO THE STEEL MEMBER.
9. STUD SPACING ON COMPOSITE BEAMS AND GIRDERS SHALL NOT BE LESS THAN 4 1/2" ALONG THE LENGTH OF ANY MEMBER AND SHALL NOT EXCEED 32". MINIMUM STUD SPACING ACROSS THE WIDTH OF ANY FLANGE SHALL NOT BE LESS THAN 3".
10. DO NOT PAINT SURFACES WHICH RECEIVE WELDED STUDS.
11. EXPOSED STEEL LABELED AS ARCHITECTURALLY EXPOSED STEEL REQUIRES HIGHER TOLERANCES FOR CONSTRUCTION. REFER TO SPECIFICATIONS SECTION 051200 FOR REQUIREMENTS. FLARE BEVEL WELDS FOR ARCHITECTURALLY EXPOSED TUBE SHAPED SECTIONS SHALL BE BEVELED 45 DEGREES, WELDED AND GRINDED SMOOTH.
12. ALL STEEL MEMBERS NOTED OR INDICATED ON PLANS, ELEVATIONS, SECTIONS OR DETAILS SHALL BE SHOP ROLLED BY THE STEEL FABRICATOR. SHOP DRAWINGS SHALL INDICATED CURVATURE DATA AND FULL PENETRATION SPLICE LOCATIONS.
13. REFERENCE SPECIFICATIONS FOR MISC. STEEL REQUIREMENTS NOT SHOWN ON STRUCTURAL PLANS.
14. TOUCH UP ALL FIELD WELDS ON GALVANIZED SURFACES WITH GALVANIZING REPAIR PAINT.
15. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING THE COSTS FOR ALL MISCELLANEOUS STEEL IN THEIR BID, REGARDLESS OF WHETHER THOSE ITEMS ARE INDICATED ON THE STRUCTURAL DRAWINGS. THEEE COSTS SHALL INCLUDE, BUT NOT LIMITED TO, MISCELLANEOUS STEEL ITEMS SHOWN ON ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
16. UNLESS DETAILED OTHERWISE OR REACTIONS ARE INDICATED, BEAM CONNECTIONS SHALL BE SELECTED TO SUPPORT ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE "ALLOWABLE UNIFORM LOAD TABLES" IN PART 3 OF THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION, FOR THE GIVEN BEAM SIZE, SPAN AND STEEL SPECIFICATION OR FOR THE BEAM REACTION SHOWN ON THE DRAWINGS, WHICHEVER IS GREATER. THE MINIMUM BEAM CONNECTION SHALL NOT BE SMALLER THAN THOSE LISTED IN TABLES 10-1 AND 10-2 OF THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION, FOR THE GIVEN BEAM DEPTH, BOLT DIAMETER AND WELD SPECIFICATION.
17. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN AND ADEQUACY OF ALL CONNECTIONS THAT ARE NOT DESIGNED OR FULLY DETAILED ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS, DEPICTING THE CONFIGURATIONS AND FABRICATION DETAILS, ALONG WITH CALCULATIONS, SEALED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED; SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW.
18. UNLESS OTHERWISE INDICATED, BEAM REACTIONS SHOWN ON THE PLANS ARE DESIGN SERVICE LEVEL (ASD) GRAVITY (DEAD LOAD PLUS LIVE LOAD) SHEAR LOADS. ANY AXIAL OR OTHER LOADS REQUIRED MUST BE CONSIDERED IN ADDITION TO THE VERTICAL REACTIONS SHOWN.
19. THE MINIMUM DESIGN LOAD FOR ANY CONNECTION SHALL BE 6 KIPS (ASD),OR 10 KIPS (LRFD), REGARDLESS OF THE BEAM REACTION(S) SHOWN ON THE PLANS.
20. STEEL FRAMES ARE NON SELF-SUPPORTING AND COLUMN ANCHOR RODS ARE DESIGNED FOR A COMPLETED CONDITION ONLY. METAL ROOF DECK, BEAM-TO-COLUMN MOMENT CONNECTIONS, PORTAL FRAMES, AND DIAGONAL BRACES ARE REQUIRED TO PROVIDE LATERAL STABILITY FOR THE FRAME AND BUILDING. THIS INCLUDES RESISTANCE TO WIND AND SEISMIC FORCES DURING AND AFTER CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING REQUIRED TO MAINTAIN STABILITY UNTIL THE LATERAL FORCE RESISTING SYSTEM FOR THE BUILDING IS COMPLETE.
21. STAIR SUPPLIER TO PROVIDE POST/HANGER SUPPORTS AT INTERMEDIATE LANDINGS AS REQUIRED. POST/HANGERS ARE TO CONCENTRICALLY LOAD BEAMS.
22. AT ROOF ACCESS LADDERS, PROVIDE (2) C6X10.2 VERTICALS IN STUD WALL. SEE ARCH FOR LOCATIONS.
23. FIELD CUTTING, DRILLING OR OTHER MODIFICATION OF STRUCTURAL STEEL COMPONENTS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. WHERE BEAM PENETRATIONS CANNOT BE AVOIDED OR WHERE CUTTING IS REQUIRED, THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER OF RECORD ALL PERTINENT INFORMATION INCLUDING PENETRATION SHAPE, SIZE, LOCATION AND METHOD OF CUTTING OPENINGS.
24. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE GALVANIZED OR PAINTED WITH TNEMEC EPOXY SYSTEM OR SIMILAR SYSTEM MEETING THE REQUIREMENT FOR PAINTING STRUCTURAL STEEL IN THE PROJECT SPECIFICATIONS. ALL OTHER STEEL MEMBERS SHALL BE FURNISHED WITH A SHOP COAT OF TNEMEC RED OR GRAY OXIDE PRIMER OR SIMILAR SYSTEM MEETING THE REQUIREMENT FOR PAINTING STRUCTURAL STEEL IN THE PROJECT SPECIFICATIONS. ALL PRIMERS SHALL BE COMPATIBLE WITH TOP COATINGS SPECIFIED.

DIVISION 6 - WOOD TRUSSES

1. ALL MEMBERS SHALL BE CUT FROM LUMBER WHICH BEARS THE PROPER GRADE-MARK STAMP OF A RECOGNIZED GRADING ASSOCIATION OR LICENSED LUMBER INSPECTION AGENCY.
2. NO LUMBER SHALL BE USED WHICH DOES NOT APPEAR TO CONFORM TO THE PROPER DIMENSION AND/OR GRADES.
3. WOOD TRUSSES ARE TO BE DESIGNED NAIL PLATE TRUSSES IN ACCORDANCE WITH THE GUIDELINES OF THE TRUSS PLATE INSTITUTE. TRUSS CONNECTOR PLATES SHALL BE MANUFACTURED FROM ONLY PRIME, COMMERCIAL QUALITY GALVANIZED STEEL OF NO LESS THAN 20-GAUGE THICKNESS, WHICH HAS MINIMUM YIELD STRENGTH OF 33 KSI AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 58 KSI. CORROSION RESISTANT COATING SHALL BE 1-1/4 OZ. PER SQUARE FOOT, COMMERCIAL CLASS HOT-DIPPED GALVANIZED OR EQUIVALENT.
4. HANGERS FOR WOOD MEMBERS SHALL BE AS MANUFACTURED BY "SIMPSON STRONG TIE COMPANY" OR EQUAL. SIZES AND THICKNESS OF MATERIAL TO BE DETERMINED BY THE LOADING CONDITIONS AS DETERMINED BY THE TRUSS ENGINEER.
5. DEFLECTIONS SHALL BE LIMITED TO L/360 FOR BOTH INDIVIDUAL MEMBERS AND TRUSSES. ALL WOOD MEMBERS SHALL HAVE A MINIMUM WIDTH OF 1-1/2" WITH A MINIMUM DEPTH OF 3-1/2".
6. EACH TRUSS SHALL BE PERMANENTLY STAMPED WITH THE NAME AND ADDRESS OF THE TRUSS FABRICATOR.
7. EXACT TRUSS WEB AND CHORD SIZES (SEE ABOVE FOR MINIMUMS) AND LAYOUTS ARE TO BE DETERMINED BY THE MANUFACTURER. TRUSS MANUFACTURER TO DESIGN AND FURNISH ALL TEMPORARY AND PERMANENT TRUSS BRACING REQUIRED FOR STABILITY UNDER THE IMPOSED WIND AND SEISMIC FORCES PER THE "DESIGN CRITERIA" IN THESE GENERAL NOTES AS WELL AS LOADING CONDITIONS DURING CONSTRUCTION.
8. ALL PERMANENT BRACING REQUIRED AT TOP AND BOTTOM CHORDS, VERTICALS AND DIAGONALS SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS AND SHALL BE INSTALLED BY THE CONTRACTOR AS DETAILED ON SHOP DRAWINGS. THE CONTRACTOR SHALL TAKE GREAT CARE IN ERECTING THE TRUSSES AND SHALL PROVIDE SUFFICIENT TEMPORARY BRACING TO PREVENT COLLAPSE DURING ERECTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONNECTED IN PLACE.
9. DURING ENTIRE CONSTRUCTION PERIOD ALL CONTRACTORS SHALL PROVIDE MEANS FOR ADEQUATE DISTRIBUTION OF CONCENTRATED LOADS SO THAT THE CARRYING CAPACITY OF ANY ONE TRUSS AND/OR OTHER COMPONENT IS NOT EXCEEDED.
10. THE TRUSS SUPPLIER SHALL SUBMIT CALCULATIONS AND DETAILED SHOP DRAWINGS FOR ALL TRUSSES TO AR

GENERAL NOTES

SUBMITTALS

1. TRANSMIT SUBMITTALS SUFFICIENTLY IN ADVANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID UNNECESSARY DELAY. THE STRUCTURAL ENGINEER OF RECORD MAY WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS ARE RECEIVED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT ONE ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF) COPY OF ALL REQUIRED SUBMITTALS THROUGH THE ARCHITECT FOR REVIEW. THE ELECTRONIC COPY WILL BE MARKED UP BY THE STRUCTURAL ENGINEER OF RECORD. ONE COPY WILL BE KEPT BY THE STRUCTURAL ENGINEER OF RECORD AND AN ADDITIONAL COPY WILL BE RETURNED TO THE ARCHITECT. THE ARCHITECT WILL KEEP ONE COPY AND RETURN A COPY TO THE CONTRACTOR. THE CONTRACTOR WILL MAKE ADDITIONAL COPIES AS REQUIRED.
3. THE GENERAL CONTRACTOR SHALL SUBMIT, FOR ENGINEER REVIEW, SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
   A. CONCRETE MIX DESIGNS (3)
   B. CONSTRUCTION JOINT LOCATIONS IN STRUCTURAL FLOORS, WALLS AND SLABS-ON-GRADE.
   C. METAL ROOF DECK
   D. REINFORCING STEEL
   E. STRUCTURAL STEEL: SHOP AND ERECTION DRAWINGS (1)
   F. STRUCTURAL STEEL CONNECTIONS OF FRAMING AND BRACING ELEMENTS (1, 4)

   NOTES:
   1. SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED PER THE PROJECT SPECIFICATIONS
   2. SHALL BE SUBMITTED TO THE ENGINEER FOR RECORD ONLY AND WILL NOT RECEIVE THE ENGINEER'S SHOP DRAWING STAMP
   3. SHALL BE SUBMITTED TO THE ENGINEER AND THE OWNER'S TESTING AGENCY FOR REVIEW
   4. ITEM IS A DEFERRED SUBMITTAL WHICH HAS NOT BEEN COMPLETE AND IS TO BE SUBMITTED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. THE MANUFACTURER, CONSULTANT, OR CONTRACTOR, AS APPROPRIATE SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF RECORD FOR REVIEW.

4. ALL SHOP DRAWINGS MUST BE REVIEWED AND ELECTRONICALLY STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.

SPECIAL INSPECTIONS

1. SPECIAL INSPECTION SHALL BE PROVIDED BY THE OWNER ACCORDING TO SECTION 1705 OF IBC 2015. THE APPROVED SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR SHALL SEND REPORTS TO THE OWNER, THE BUILDING OFFICIAL, THE ARCHITECT, THE STRUCTURAL ENGINEER OF RECORD, AND TO THE CONTRACTOR. THE SPECIAL INSPECTOR SHALL BRING NON-CONFORMING ITEMS TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR AND NOTE ALL SUCH ITEMS IN THE REPORTS. ANY UNRESOLVED ITEM ABOUT THE COVERED WORK SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S CONSTRUCTION MANAGER AS WELL AS THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER OR NOT THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SPECIAL INSPECTION AGENCY REGARDING INDIVIDUAL INSPECTIONS FOR ITEMS LISTED ON THE SCHEDULE AND AS NOTED ON THE BUILDING DEPARTMENT APPROVED PLANS. ADEQUATE NOTICE AND ACCESS TO APPROVED PLANS SHALL BE PROVIDED SO THAT THE SPECIAL INSPECTOR HAS TIME TO BECOME FAMILIAR WITH THE PROJECT.
2. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION DOCUMENTS FOR ADDITIONAL NON-STRUCTURAL SPECIAL INSPECTION ITEMS.
3. IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS AND TESTING:

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION PRIOR TO WELDING
REFERENCE AISC 360-10, TABLE N5.4-1

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	X	--
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X	--
MATERIAL IDENTIFICATION (TYPE/GRADE)	--	X
WELDER IDENTIFICATION SYSTEM	--	X
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) A. JOINT PREPARATION B. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) C. CLEANLINESS (CONDITION OF STEEL SURFACES) D. TACKING (TACK WELD QUALITY AND LOCATION) E. BACKING TYPE AND FIT (IF APPLICABLE)	--	X
CONFIGURATION AND FINISH OF ACCESS HOLES	--	X
FIT-UP OF FILLET WELDS A. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) B. CLEANLINESS (CONDITION OF STEEL SURFACES) C. TACKING (TACK WELD QUALITY AND LOCATION)	--	X
CHECK WELDING EQUIPMENT	--	X

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION DURING WELDING
REFERENCE AISC 360-10, TABLE N5.4-2

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
USE OF QUALIFIED WELDERS	--	X
CONTROL AND HANDLING OF WELDING CONSUMABLES A. PACKAGING B. EXPOSURE CONTROL	--	X
NO WELDING OVER CRACKED TACK WELDS	--	X
ENVIRONMENTAL CONDITIONS A. WIND SPEED WITHIN LIMITS B. PRECIPITATION AND TEMPERATURE	--	X
WPS FOLLOWED A. SETTINGS ON WELDING EQUIPMENT B. TRAVEL SPEED C. SELECTED WELDING MATERIALS D. SHIELDING GAS TYPE/FLOW RATE E. PREHEAT APPLIED F. INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) G. PROPER POSITION	--	X
FIT-UP OF FILLET WELDS A. INTERPASS AND FINAL CLEANING B. EACH PASS WITHIN PROFILE LIMITATIONS C. EACH PASS MEETS QUALITY REQUIREMENTS	--	X

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION AFTER WELDING
REFERENCE AISC 360-10, TABLE N5.4-3

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
WELDS CLEANED	--	X
SIZE, LENGTH AND LOCATION OF WELDS	X	--
WELDS MEET VISUAL ACCEPTANCE CRITERIA A. CRACK PROHIBITION B. WELD/BASE-METAL FUSION C. CRATER CROSS SECTION D. WELD PROFILES E. WELD SIZE F. UNDERCUT G. POROSITY	X	--
ARC STRIKES	X	--
K-AREA[1]	X	--
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X	--
REPAIR ACTIVITIES	X	--
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	X	--

1. WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD.

SPECIAL INSPECTIONS CONTINUED

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION PRIOR TO BOLTING
REFERENCE AISC 360-10, TABLE N5.6-1

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	X	--
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	--	X
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	--	X
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	--	X
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	--	X
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	--	X
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	--	X

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION DURING BOLTING
REFERENCE AISC 360-10, TABLE N5.6-2

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	--	X
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	--	X
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	--	X
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID TOWARD THE FREE EDGES	--	X

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION AFTER BOLTING
REFERENCE AISC 360-10, TABLE N5.6-3

VERIFICATION AND INSPECTION TASK	PERFORM	OBSERVE
DURING ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	X	--

SPECIAL INSPECTION AND VERIFICATION OF CONCRETE CONSTRUCTION
REFERENCE IBC 2015, TABLE 1705.3

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	--	X
REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" C. INSPECT ALL OTHER WELDS	-- -- X	X X --
INSPECT ANCHORS CAST IN CONCRETE	X	--
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN A	X --	-- X
VERIFY USE OF REQUIRED DESIGN MIX.	--	X
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X
INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES B. GROUTING OF BONDED PRESTRESSING TENDONS	X X	-- --
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	X
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X

SPECIAL INSPECTIONS CONTINUED

SPECIAL INSPECTION AND VERIFICATION OF SOILS
REFERENCE IBC 2015, TABLE 1705.6

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	--	X
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	--
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

LEVEL B SPECIAL INSPECTION AND VERIFICATION OF MASONRY CONSTRUCTION
REFERENCE TMS 402-13, TABLE 3.1.2

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5B.1.b.3 FOR SELF-CONSOLIDATING GROUT.	--	X
VERIFICATION OF f'm AND f'asc PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY TMS 402-13.	--	X
VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	--	X
AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE: A. PROPORTIONS OF SITE-PREPARED MORTAR B. CONSTRUCTION OF MORTAR JOINTS C. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES D. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES E. PRESTRESSING TECHNIQUE F. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	-- -- -- -- -- X[1]	X X X X X X[2]
PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE: A. GROUT SPACE B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS E. CONSTRUCTION OF MORTAR JOINTS	-- -- -- -- --	X X X X X
VERIFY DURING CONSTRUCTION: A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION C. WELDING OF REINFORCEMENT D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C)) E. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE F. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE G. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	-- -- X -- X X X[1]	X X -- X -- -- X[2]
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	--	X

1. REQUIRED FOR THE FIRST 5000 SQUARE FEET OF AAC MASONRY.
2. REQUIRED AFTER THE FIRST 5000 SQUARE FEET OF AAC MASONRY.

360 Engineering Group, PLLC
www.360enggroup.com
1201 East 3rd Street
Tulsa, OK 74120
918.518.1124
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ELIAS R. JOHANNSSON 21349 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
07/24/2020

S002 SPECIAL INSPECTIONS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
360 Engineering Group, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
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DRAWN	DN	7/24/20
DESIGNED	DN	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/2
FIELD MGR.		8/20
RECOMMENDED DESIGN MANAGER		8.20

APPROVED:
CITY ENGINEER
DATE: 8.02.20

FILE: DRAWING: DN
ATLAS PAGE NO: 116
SHEET 41 OF 81 SHEETS

CONSTRUCTION DOCUMENTS
GH2 PROJECT #: 20180157
360 ENG PROJECT #:19560

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FOUNDATION SUBSURFACE PREPARATION

IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REVIEW AND ADHERE TO THE SUBSURFACE RECOMMENDATIONS PROVIDED IN, "GEOTECHNICAL ENGINEERING REPORT - CITY OF TULSA - REED PARK POOL", PROJECT NUMBER 4195064 BY TERRACON CONSULTANTS, INC DATED AUGUST 22, 2019 WERE USE FOR DESIGN.

SITE PREPARATION:

1. AREAS WITHIN THE LIMITS OF CONSTRUCTION SHOULD BE STRIPPED AND CLEARED OF SURFACE VEGETATION, TOPSOIL, TREES, AND ANY DEBRIS. ALSO, TREE STUMPS AND MAJOR ROOT SYSTEMS SHOULD BE REMOVED FULL-DEPTH.SURFACE AND SUBSURFACE FEATURES FROM PAST SITE USE SHOULD BE REMOVED FULL-DEPTH. EXCAVATIONS RESULTING FROM TREE STUMP AND ROOT REMOVAL AND DEMOLITION SHOULD BE PROPERLY BACKFILLED WITH TESTED AND APPROVED, ENGINEERED FILL.
2. AFTER STRIPPING AND COMPLETING NECESSARY CUTS AND OVEREXCAVATIONS, BUT PRIOR TO PLACING ANY NEW FILL, THE SUBGRADE SHOULD BE PROOFROLLED TO AID IN LOCATING SOFT, UNSTABLE AREAS. PROOFROLLING SHOULD BE PERFORMED WITH A LOADED TANDEM AXLE DUMP TRUCK WEIGHING AT LEAST 25 TONS. AREAS TOO SMALL TO PROOFROLL SHOULD BE EVALUATED BY THE GEOTECHNICAL ENGINEER. UNSTABLE SOILS SHOULD BE REMOVED FULL-DEPTH, IF THEY CANNOT BE ADEQUATELY STABILIZED IN-PLACE. AFTER COMPLETING THE PROOFROLLING, AND BEFORE PLACING ANY FILL, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 9 INCHES, MOISTURE CONDITIONED, AND COMPACTED AS RECOMMENDED IN FILL COMPACTION REQUIREMENTS WITHIN EARTHWORK SECTION OF THE GEOTECHNICAL REPORT. SHALE BEDROCK WILL NOT REQUIRE SCARIFICATION AND COMPACTION.

SLAB:

1. PROVIDE A MINIMUM 12-INCH LAYER OF ENGINEERED FILL CONSISTING OF IMPORTED LVC MATERIAL BE CONSTRUCTED BENEATH THE GRANULAR LAYER BELOW THE BUILDING FLOOR SLAB.

SHALLOW FOUNDATIONS:

1. APPROVED EXISTING FILL CAN BE USED TO FOR BEARING. OBSERVATION AND TESTING WILL BE REQUIRED DURING FOUNDATION CONSTRUCTION TO VERIFY SUITABLE BEARING MATERIALS ARE ENCOUNTERED.
2. IF UNSUITABLE SOILS ARE FOUND, UNSUITABLE SOILS CAN BE OVER-EXCAVATED AND REPLACE WITH ENGINEERED FILL. OVER-EXCAVATION AND REPLACEMENT OF UNSUITABLE SOILS SHOULD EXTEND LATERALLY AT LEAST 8 INCHES PAST THE EDGE OF FOOTING FOR EACH 12 INCH DEPTH OF OVER-EXCAVATION BELOW THE BEARING LEVEL.

STRUCTURES BELOW GRADE:

1. A GRANULAR BLANKET DRAIN, CONSISTING OF AT LEAST 12 INCHES OF 3/4"-INCH CLEAN, FREE-DRAINING CRUSHED GRAVEL (ASTM NO. 57 STONE) SHOULD BE CONSTRUCTED UNDER BELOW GRADE STRUCTURES

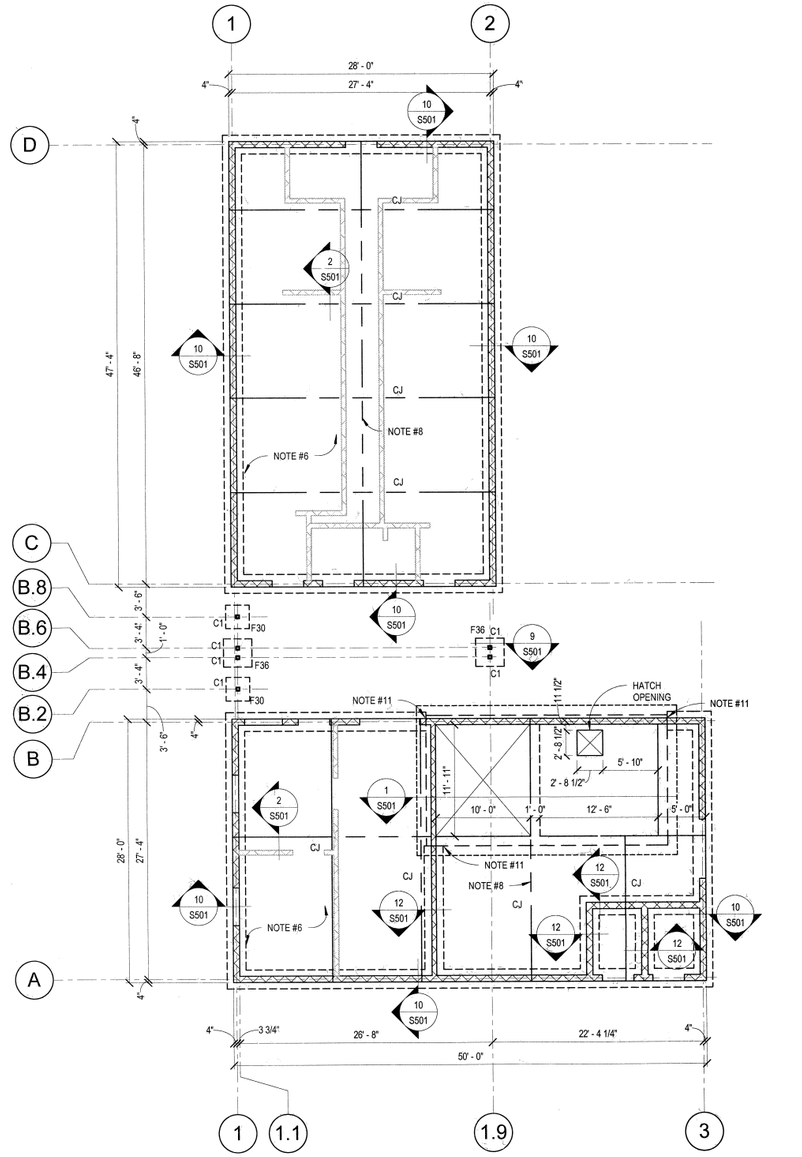
FOUNDATION PLAN NOTES

1. RE: SHEET S001 FOR GENERAL NOTES.
2. RE: ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. COORDINATE SLAB ELEVATIONS AND SLOPES WITH ARCHITECTURAL PLANS.
3. RE: MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.
4. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE DURING CONSTRUCTION FOR THE SLAB AREA. SLAB SUBGRADE SHALL NOT BE ALLOWED TO RETAIN WATER DURING CONSTRUCTION.
5. RE: SHEET S501 FOR REINFORCEMENT AT RE-ENTRANT CORNERS AND DISCONTINUOUS JOINTS.
6. FINISH FLOOR REFERENCE ELEVATION = 100'-0". TYPICAL FLOOR SLAB SHALL BE 4" THICK CONCRETE SLAB-ON-GRADE REINFORCED WITH #4 AT 16" OC EACH WAY OVER 15 MIL MINIMUM VAPOR BARRIER OVER 9" GRANULAR BASE COURSE OVER A MINIMUM 12-INCH THICK LAYER OF LOW VOLUME CHANGE ENGINEERED FILL PER THE GEOTECHNICAL REPORT.
7. CENTER FOOTING BENEATH COLUMN AND LOAD BEARING WALLS SHOWN.
8. CONTROL JOINTS SHOULD NOT BE SPACED MORE THAN 15'-0" OC, AND THE PANELS SO FORMED BY THE CONTROL JOINTS SHOULD NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5.
9. T.O. EXTERIOR FTG = 99'-4" UNO.
10. ALL CONTINUOUS FTG TO BE CF18, UNO.
11. FOOTING REINFORCING TO DOWEL INTO CONCRETE WALL, DRILL AND EPOXY W/ HILTI HY-200 (MIN. 6" EMBED).
12. RE: SHEET S501 FOR CMU WALL REINFORCING DETAILS.

CONTINUOUS FOOTING SCHEDULE		
MARK	SIZE (WxDxL)	REINFORCEMENT
CF18	1'-6"x1'-6"	(2)-#5 CONT T&B W/#3 TIES AT 48" OC

ISOLATED FOOTING SCHEDULE		
MARK	SIZE (LxWxD)	REINFORCEMENT
F30	2'-6"x2'-6"x1'-6"	(4)-#5 BOT BARS, EW
F36	3'-0"x3'-0"x1'-6"	(4)-#5 BOT BARS, EW

COLUMN SCHEDULE		
MARK	SIZE	BASEPLATE
C1	HSS4X4X1/4	B1, RE:7/S501



1 FOUNDATION PLAN
1/8" = 1'-0"

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360 Engineering Group, PLLC
www.360enggroup.com
1201 East 3rd Street
Tulsa, OK 74120
918.518.1124
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ELIAS R. JOHANNSSON 21349 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
07/24/2020

S100 FOUNDATION PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
360 Engineering Group, LLC.

REVISION	BY	DATE

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LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED DESIGN MANAGER		7.20	

FILE: DRAWING: DN
ATLAS PAGE NO: 116

CITY ENGINEER
DATE: 10.02.20
SHEET 42 OF 81 SHEETS

CONSTRUCTION DOCUMENTS
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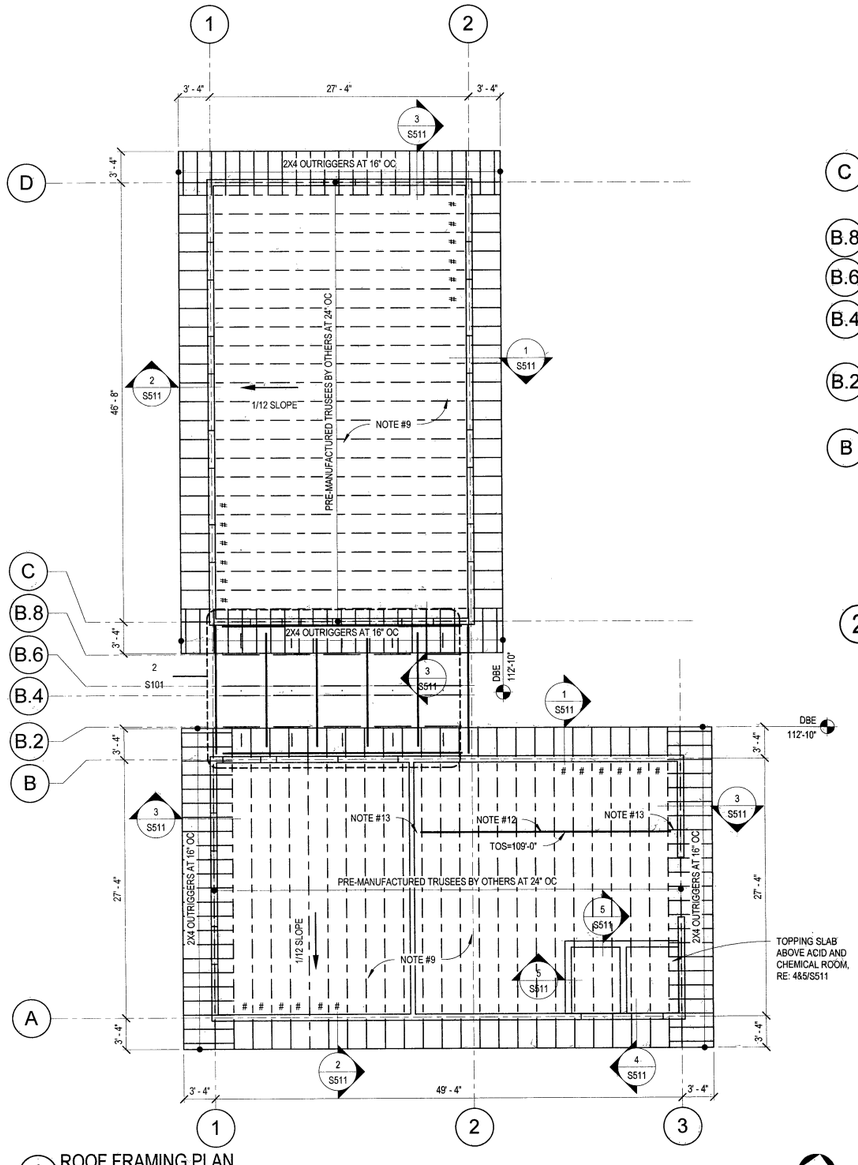
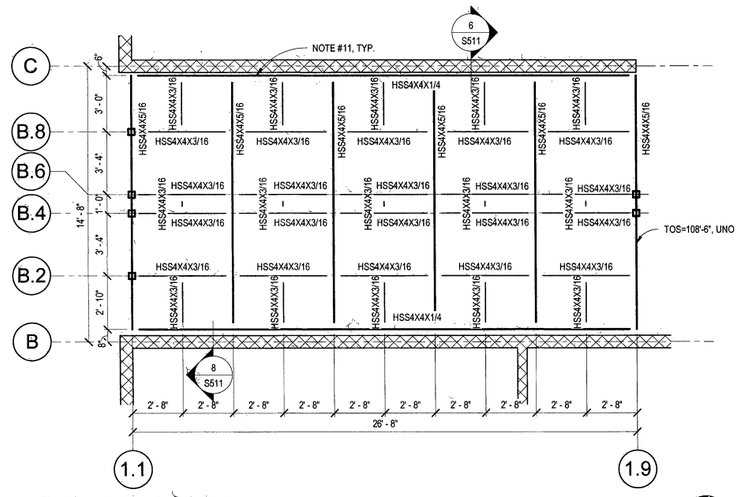
ROOF FRAMING PLAN NOTES

1. RE: SHEET S001 FOR GENERAL NOTES.
2. RE: ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
3. RE: MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATION OF PENETRATIONS NOT INDICATED ON STRUCTURAL DRAWINGS.
4. FASTEN ROOF TRUSSES AT ALL BEARING POINTS W/ (1)-SIMPSON H2.5A STRAP TYP, UNO.
5. # - TRUSS SUPPLIER TO PROVIDE SHEAR BLOCKING PANEL BETWEEN TRUSSES CAPABLE OF TRANSMITTING 400 PLF. WHERE # IS SHOWN AT ROOF RAFTERS, PROVIDE BLOCKING BETWEEN RAFTERS, AND CONTINUE THE SHEATHING OF THE SHEARWALL BELOW TO ATTACH TO THIS BLOCKING.
6. DESIGN END TRUSS TO SUPPORT OUT OF PLANE WIND LOADS. PROVIDE KICKER BRACING TO THE BOTTOM CHORD AT 32" OC MAX. END TRUSS TO BE ALSO CAPABLE OF TRANSMITTING SHEAR LOAD OF 400 PLF TO THE SHEARWALL BELOW.
7. TYPICAL TRUSS BEARING ELEVATION TO BE 109'-4" UNO.
8. ALL FRAMING MEMBERS TO BEAR ON TOP OF COLUMNS/WALLS TYP, UNO.
9. ALL ROOF SHEATHING SHALL BE APA RATED EXPOSURE 1 SHEATHING WITH A MINIMUM THICKNESS OF 19/32", DOC PS-1 OR PS-2, WITH A SPAN RATING OF AT LEAST 32/16 NAILED WITH 8d GALVANIZED COMMON NAILS AT 6" OC AT PANEL EDGES AND AT 12" OC AT INTERMEDIATE SUPPORTS TYP, UNO.
10. SEE SCHEDULE FOR HEADER INFORMATION
11. FULLY WELD ALL HSS MEMBERS TO ONE ANOTHER WITH 3/16" FILLET WELD ALL AROUND.
12. COORDINATE IN FIELD TO CENTER MONORAIL BEAM TO BE CENTERED DIRECTLY OVER POOL PUMP. COORDINATE IN FIELD WITH POOL EQUIPMENT SUPPLIER.
13. GROUT SOLID ALL CELLS DIRECTLY BELOW MONORAIL BEAM LOCATION.



1 ROOF FRAMING PLAN
1/8" = 1'-0"



2 CANOPY FRAMING PLAN
1/4" = 1'-0"

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360 Engineering Group, PLLC
www.360engroup.com
1201 East 3rd Street
Tulsa, OK 74120
918.518.1124
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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
ELIAS R. JOHANNSSON
21349
07/24/2020

S101 ROOF FRAMING PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

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PROJ. MGR.		8/20	
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FIELD MGR.		8/20	
RECOMMENDED:			
DESIGN MANAGER			CITY ENGINEER

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ATLAS PAGE NO: 116
SHEET 43 OF 81 SHEETS

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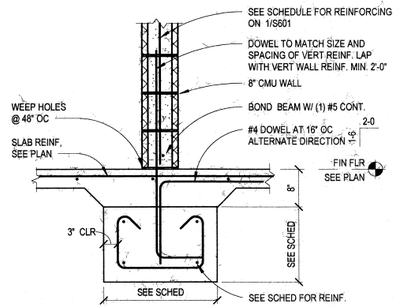
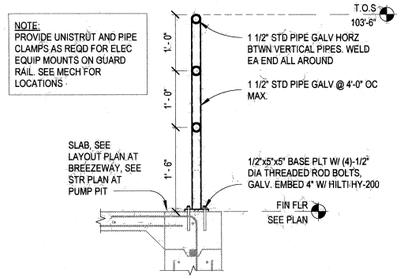
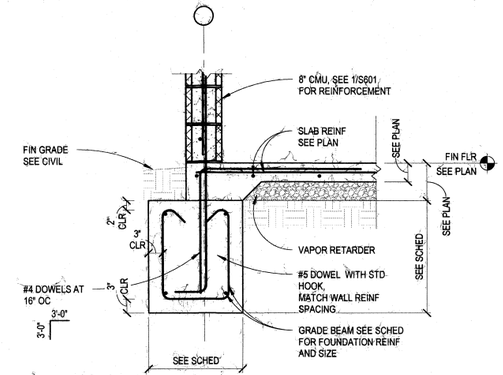


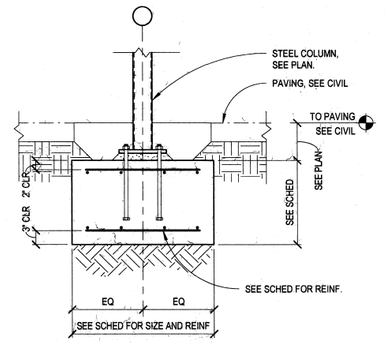
12 FOOTING DETAIL
3/4" = 1'-0"



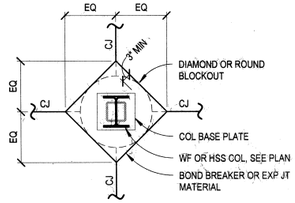
11 HAND RAIL DETAIL
3/4" = 1'-0"

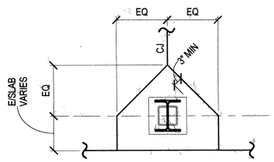


10 TYP EXTERIOR SECTION
3/4" = 1'-0"



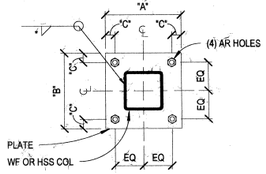
9 FOOTING DETAIL
3/4" = 1'-0"





ENLARGED BLOCKOUTS MAY BE REQUIRED AT BRACED FRAME LOCATIONS FOR GUSSET PLATE CLEARANCE.

8 TYPICAL COLUMN BLOCKOUT
NO SCALE



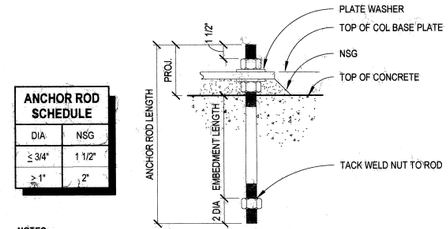
TYPE A

COLUMN BASE PLATE SCHEDULE

MARK	TYPE	PLATE THK	DIMENSIONS "A"	"B"	"C"	"D"	ANCHOR RODS (DIA X EMBED)
B1	A	3/4"	0'-10"	0'-10"	0'-1 1/2"	N/A	3/4" x 1'-0"

NOTES:
1. USE OVERSIZED HOLES AND WASHERS FOR ANCHORS RODS ACCORDING TO AISC MANUAL (14 ED.) TABLE 14.2 UNO.
2. SEE THIS SHEET FOR ANCHOR ROD DETAIL AND GROUT INFORMATION.
3. * - INDICATES MINIMUM FILLET WELD PER AISC.

7 COLUMN BASE PLATE SCHEDULE
NO SCALE

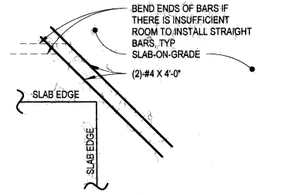


ANCHOR ROD SCHEDULE

DIA	NSG
≤ 3/4"	1 1/2"
≥ 1"	2"

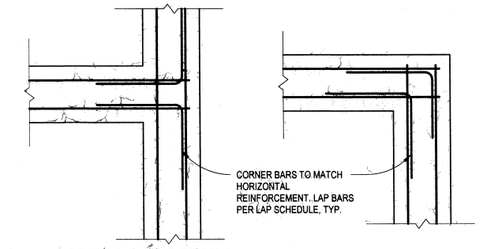
NOTES:
1. REFER TO BASE PLATE SCHEDULE FOR ANCHOR ROD SIZE AND EMBEDMENT.
2. ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 UNLESS NOTED OTHERWISE.
3. ALL ANCHOR RODS SHALL BE FURNISHED WITH HEAVY HEX NUTS AND CUT WASHERS OF SPECIFICATIONS COMPATIBLE WITH THOSE OF THE THREADED SHANKS UNLESS NOTED OTHERWISE.
4. FOR CONVENTIONAL COLUMNS (WF AND HSS SHAPES) A NUT SHALL BE PLACED UNDER THE BASE PLATE AND USED FOR LEVELING.
5. HEADED BOLTS MAY BE SUBSTITUTED FOR RODS AS SHOWN.
6. NON-SHRINK GROUT (NSG) SHALL BE NONMETALLIC WITH A MINIMUM COMPRESSIVE STRENGTH OF 8,000 PSI AT 28 DAYS.

6 ANCHOR ROD DETAILS
NO SCALE

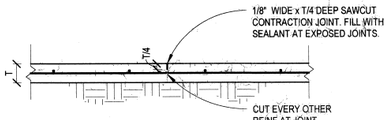


5 TYP RE-ENTRANT CORNER BAR
NO SCALE

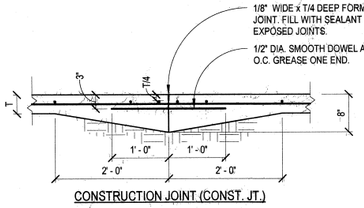
4 REINFORCING AT SLAB JOINT
NO SCALE



3 CORNER BAR DETAILS
NO SCALE



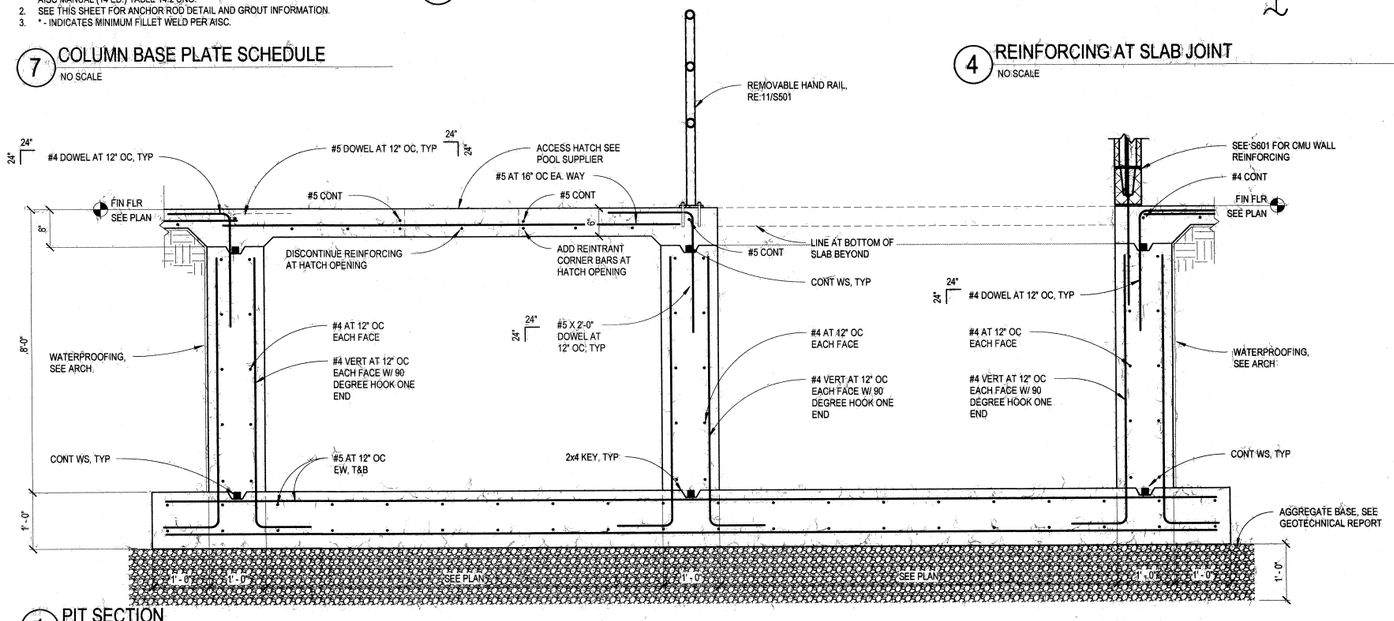
CONTRACTION JOINT (CJ)



CONSTRUCTION JOINT (CONST. JT.)

NOTES:
1. SEE FOUNDATION PLAN(S) FOR ADDITIONAL SLAB INFORMATION, INCLUDING DEPTH AND REINFORCING.
2. THE SAWCUTTING SHOULD BE DONE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT CUTTING W/O CHIPPING, SPALLING OR TEARING BUT NOT MORE THAN 8 HOURS AFTER CASTING.
3. DOWELS SHALL BE PARALLEL TO THE SLAB'S TOP SURFACE AND PERPENDICULAR TO THE SLAB JOINT. DOWELS SHALL BE A MINIMUM OF 6" FROM ANY SLAB EDGE.

2 JOINT DETAILS
NO SCALE



1 PIT SECTION
3/4" = 1'-0"

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www.360enggroup.com
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Tulsa, OK 74120
918.518.1124
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LICENSED PROFESSIONAL ENGINEER
ELIAS R. JOHANNSSON
21349
OKLAHOMA
07/24/2020

S501 FOUNDATION DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
360 Engineering Group, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:
DRAWN DN 7/24/20
DESIGNED DN 7/24/20
SURVEY
PROJ. MGR. 8/3/20
LEAD ENGR. 8/20
FIELD MGR. 8/20
RECOMMENDED 9.20
DESIGN MANAGER
APPROVED:
CITY ENGINEER
FILE: DRAWING: DN
DATE: 10.30.20
ATLAS PAGE NO: 116
SHEET 44 OF 81 SHEETS

CONSTRUCTION DOCUMENTS
GH2 PROJECT #: 20180157
360 ENG PROJECT #:19560
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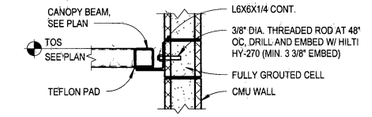
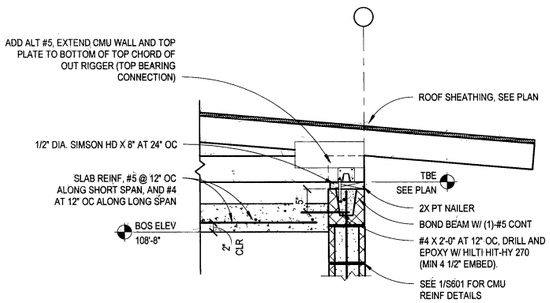
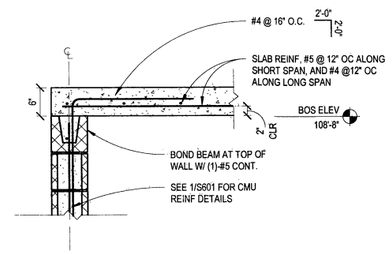


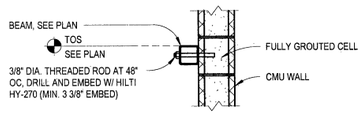
8 CANOPY DETAIL
3/4" = 1'-0"



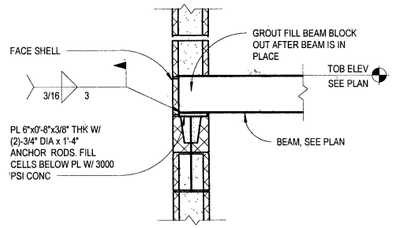
4 SECTION AT ACID ROOM
3/4" = 1'-0"



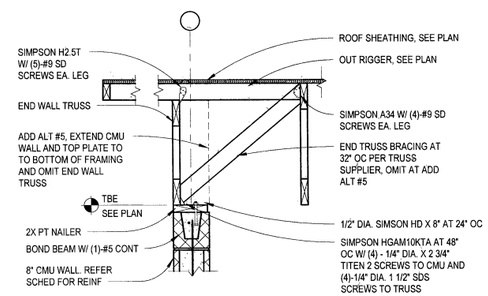
5 WALL SECTION
3/4" = 1'-0"



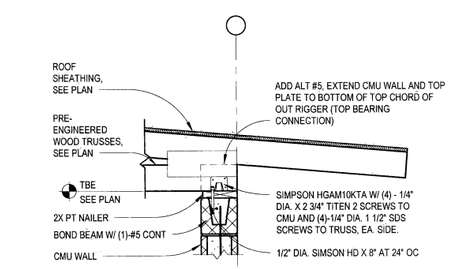
6 CANOPY DETAIL
3/4" = 1'-0"



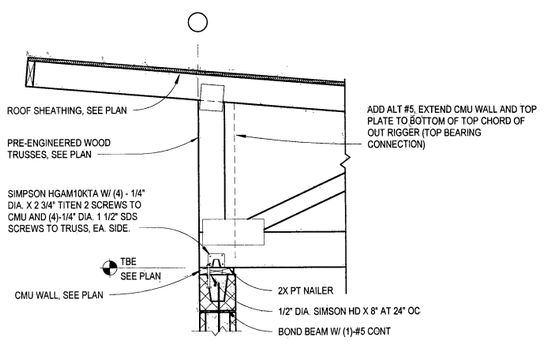
7 MONORAIL BEAM BEARING
3/4" = 1'-0"



3 ROOF DETAIL WITH TRUSS PARALLEL TO WALL
3/4" = 1'-0"



2 ROOF DETAIL WITH TRUSS PERPENDICULAR TO WALL
3/4" = 1'-0"



1 ROOF DETAIL WITH TRUSS PERPENDICULAR TO WALL
3/4" = 1'-0"

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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
ELIAS R. JOHANNSSON
21349
07/24/2020

S511 FRAMING DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION

4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
360 Engineering Group, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	DN	7/24/20
DESIGNED	DN	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED:		8.5.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER
DATE: 10.02.20
SHEET 45 OF 81 SHEETS

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CONSTRUCTION DOCUMENTS GH2 PROJECT #: 20180157
360 ENG PROJECT #:19560

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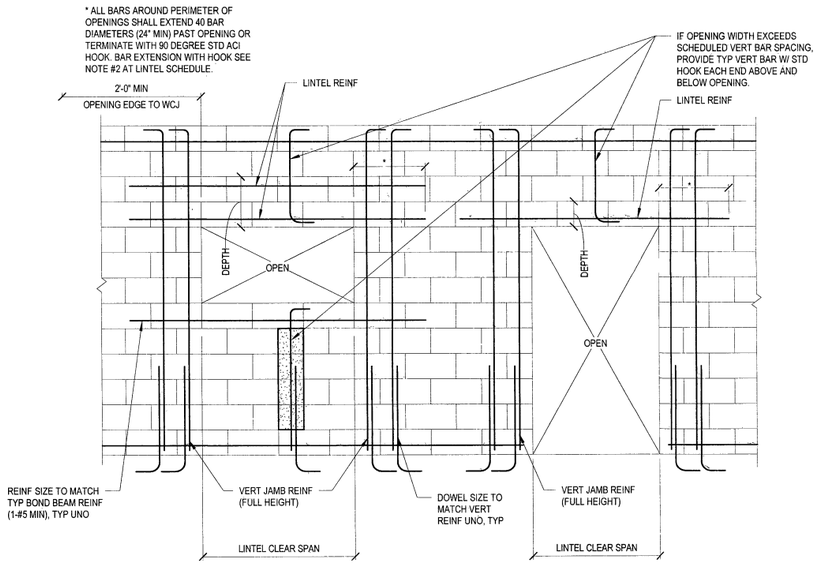
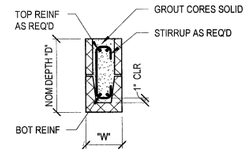


OPENINGS **DOORS**

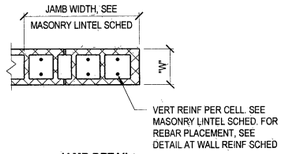
5 ADDITIONAL REINFORCEMENT AROUND WALL OPENINGS

3/4" = 1'-0"

CONCRETE MASONRY LINTEL REINFORCEMENT SCHEDULE							
NOM WIDTH "W"	LINTEL NOM DEPTH "D"	LINTEL CLEAR SPANS (S) LINTEL MARK	LINTEL HORIZ REINF	STIRRUP	JAMB NOM WIDTH	JAMB VERT REINF PER CELL	REMARKS
8"	8"	0'-0" < S ≤ 4'-0"	(1)-#5 BOT	N/A	16"	(1)-#5	
8"	16"	4'-1" < S ≤ 8'-0"	(2)-#5 T&B	N/A	16"	(2)-#5	



LINTEL DETAIL



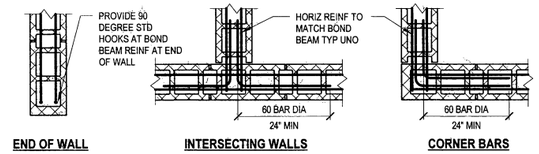
JAMB DETAIL

NOTES:

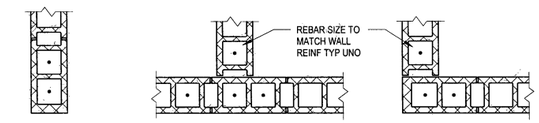
1. SEE STRUCT PLANS FOR GENERAL LOCATION OF MARKED LINTELS. SIZE AND REINF OF LINTELS UNMARKED ON PLAN SHALL BE BASED ON OPENING CLEAR SPAN AS SHOWN ON THE MASONRY LINTEL SCHEDULE. SEE ARCH FOR SPECIFIC LOCATION AND CLEAR SPAN OF ALL LINTELS.
2. MASONRY LINTELS SHALL SPAN CONTINUOUSLY BETWEEN BEARINGS EACH SIDE. EXTEND TOP AND BOTTOM REINF 40 BAR DIAMETERS BEYOND EDGE OF OPENING OR EXTENDED (JAMB WIDTH -4", 1'-8" MIN) BEYOND EDGE OF OPENING AND TERMINATE WITH 90 DEGREE STD HOOK.
3. MASONRY LINTEL FRAMING INTO PERPENDICULAR MASONRY WALL SHALL BE SUPPORTED BY JAMB LOCATED ALONG PERPENDICULAR MASONRY WALL, CENTERED AT LINTEL WITH JAMB WIDTH AND REINF AS SHOWN ON MASONRY LINTEL SCHEDULE.
4. AT MASONRY LINTEL FRAMING INTO PERPENDICULAR CAST IN PLACE CONCRETE WALL, EXTEND DOWEL INTO CONCRETE WITH ACI STD HOOK AND MATCH DOWEL SIZE AND SPACING WITH LINTEL REINF.

4 MASONRY LINTEL SCHEDULE

3/4" = 1'-0"



HORIZONTAL REINFORCEMENT



VERTICAL REINFORCEMENT

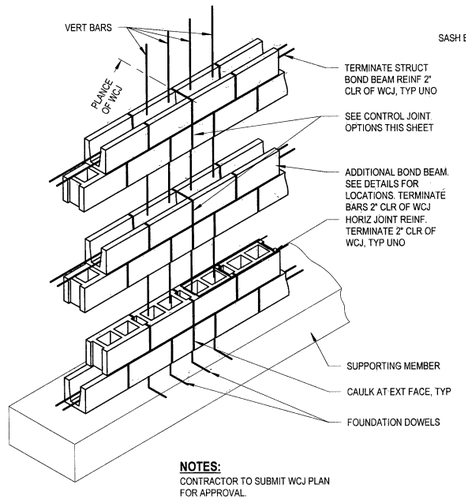
NOTES:

1. REINFORCEMENT SHOWN IS IN ADDITION TO MINIMUM WALL REINFORCEMENT SHOWN IN CONC MASONRY WALL REINF SCHEDULE.
2. REINFORCING TO BE CONTINUOUS FROM FOOTING TO TOP OF WALL. FILL CORES SOLID WITH GROUT AS NOTED IN THE SPECIFICATIONS OR GENERAL NOTES. SEE CONCRETE MASONRY NOTES FOR REINF LAPPING LENGTH.

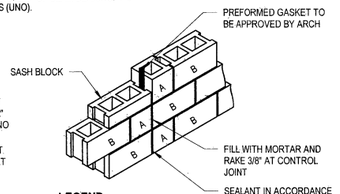
3 DETAIL - TYP CMU WALL INTERSECTIONS

3/4" = 1'-0"

MAX SPACING OF WCJ IS 3 TIMES WALL HEIGHT (36'-0" MAX) FLOOR TO FLOOR UNO. DO NOT LOCATE WCJ WITHIN 2'-0" OF OPENINGS, 1'-0" OF JOIST BEARING, 2'-0" OF BEAM BEARING, 4'-0" OF CORNERS AND 0'-8" OF EMBED PLATES AND ANCHORS (UNO).



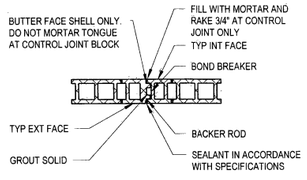
NOTES:
CONTRACTOR TO SUBMIT WCJ PLAN FOR APPROVAL.



LEGEND
A = 8" CMU LENGTH
B = 16" CMU LENGTH

TYP WALL CONTROL JOINT - OPTION 1

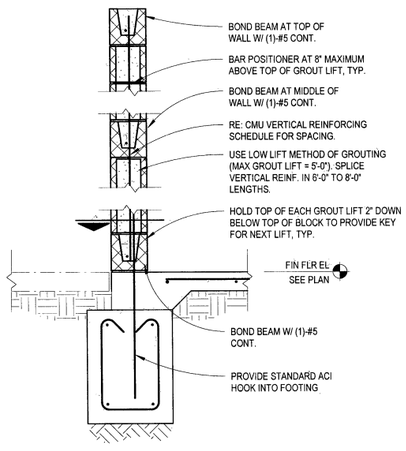
1. USE CMU LENGTHS ABOVE AT INTERIOR PARTITIONS WHEN THEY WORK WITH BLDG DIMENSIONS.
2. ONLY FOR USE WITH WALLS RATED AS LESS THAN 4 HOUR FIRE WALLS.
3. SEE OPTION 2 FOR ALL 4 HOUR FIRE WALLS.

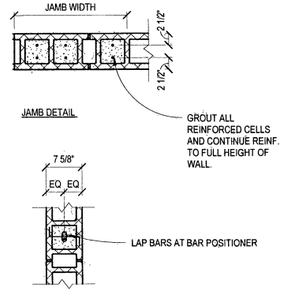


TYP WALL CONTROL JOINT - OPTION 2
REQUIRED FOR ALL CONTROL JOINTS IN 4 HOUR FIRE WALLS

2 DETAIL - TYP CMU WALL CONTROL JOINT (WCJ)

1/2" = 1'-0"





CMU VERTICAL REINFORCING SCHEDULE	
8"	(1)-#5 VERT. AT 48" OC WITH (1)-#5 DOWEL @ 48" OC.

NOTES:
1. GROUT SOLID ALL CELLS WITH REINFORCING.
2. USE BOND BEAM BLOCKS WITH OPEN BOTTOMS ONLY AT BOND BEAM LOCATIONS. DO NOT USE THROUGH-TYPE BLOCKS AT BOND BEAMS.
3. DO NOT CONTINUE BOND BEAM REINFORCING THROUGH CONTROL JOINTS.
4. ALL MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
5. REFER DETAILS FOR LOCATION OF ADDITIONAL BOND BEAMS WITH (1)-#5 CONTINUOUS.
6. PROVIDE (2)-#5 AT EACH LINTEL AND EXTEND 24" PAST OPENING.

1 CMU WALL REINFORCING DIAGRAM

3/4" = 1'-0"

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www.360enggroup.com
1201 East 3rd Street
Tulsa, OK 74120
918.518.1124
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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
ELIAS R. JOHANNSSON
23349
07/24/2020

S601 CMU DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
360 Engineering Group, LLC.

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

DRAWN	Author	7/24/20
DESIGNED	Author	7/24/20
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED		9.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING: Designer
ATLAS PAGE NO: 116
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CONSTRUCTION DOCUMENTS
GH2 PROJECT #: 20180157
360 ENG PROJECT #:19560

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MEP ABBREVIATIONS

A	AMPERES
AAV	AUTOMATIC AIR VENT
ACU	AIR CONDITIONING UNIT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALM	ALARM
ALT	ALTERNATE
AMB	AMBIENT
ARCH	ARCHITECT OR ARCHITECTURAL
BAT	BATTERY
BBH	BASEBOARD HEATER
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDUIT
CB	CIRCUIT BREAKER
CD	CONDENSATE DRAIN
CEG	CEILING EXHAUST GRILLE
CER	CEILING EXHAUST REGISTER
CFCI	CONTRACTOR FURNISHED & INSTALLED
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CONTROLS INTEGRATOR
CKT	CIRCUIT
CL	CENTERLINE
CO	CLEANOUT OR CONDUIT ONLY
COND	CONDENSATE OR CONDENSER
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
COMPR	COMPRESSOR
CR	CRITICAL BRANCH
CRG	CEILING RETURN GRILLE
CRR	CEILING RETURN REGISTER
CSD	CEILING SUPPLY DIFFUSER
CSR	CEILING SUPPLY REGISTER
CTR	CENTER
CU	CONDENSING UNIT
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DET	DETECTOR
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISC	DISCONNECT
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWV	DRAIN, WASTE AND VENT
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENG	ENGINEER
ENT	ENTERING
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXT	EXTERIOR
(E)	EXISTING
F	FAHRENHEIT OR FUSE
F&I	FURNISH AND INSTALL
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN OR FIRE DAMPER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FHC	FIRE HOSE CABINET
FHD	FIRE HYDRANT
FL	FLOW LINE
FLUOR	FLUORESCENT
FP	FIRE PROTECTION WATER SUPPLY
FPHB	FROST PROOF HOSE BIBB
FPRF	FIRE PROOFING
FS	FLOOR SINK
FSP	FIRE STANDPIPE
FT	FEET
FU	FUSE
G	GAS OR GROUND
GA	GAUGE
GBD	GRAVITY BACKDRAFT DAMPER
GC	GENERAL CONTRACTOR
GD	GUTTER DRAIN
GEN	GENERAL
GF	GROUND FAULT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GPM	GALLONS PER MINUTE
GR	GRADE
GRS	GALVANIZED RIGID STEEL
GT	GREASE TRAP
GV	GRAVITY VENT
GYP	GYPSUM BOARD
H	HIGH OR HUMIDISTAT
HB	HOSE BIBB
HD	HUB DRAIN
HP	HORSEPOWER
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HWR	HEATING WATER RETURN OR HOT WATER RETURN
HWS	HEATING WATER SUPPLY
HWT	HOT WATER TANK
HZ	HERTZ
I	INSTANTANEOUS
IA	INSTRUMENT AIR-MED GAS
ID	INSIDE DIAMETER
IES	ILLUMINATING ENGINEERS SOCIETY
IG	ISOLATED GROUND
IWH	INSTANTANEOUS WATER HEATER
IN	INCHES
INSUL	INSULATED
INTLK	INTERLOCK
J	JUNCTION BOX
JB	JUNCTION BOX
KVA	KILOVOLT-AMP
KW	KILOWATT
L	LENGTH OR LAVATORY
LAHJ	LOCAL AUTHORITY HAVING JURISDICTION
LAT	LEAVING AIR TEMPERATURE
LOC	LOCATION
LP	LOW PRESSURE OR LIGHT POLE
LPT	LOW POINT
LS	LIFE SAFETY BRANCH
LT	LIGHT OR LONG TIME
LTG	LIGHTING
LV	LOW VOLTAGE
LVR	LOUVER
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MA	COMPRESSED AIR-MED GAS
MAT'L	MATERIAL
MAX	MAXIMUM
MBD	MULTI-BLADE DAMPER
MBH	1,000 BTUH
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MK	MARK
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTR	MOTOR
N	NITROGEN-MED GAS
N2O	NITROUS OXIDE-MED GAS
NC	NORMALLY CLOSED OR NOISE COEFFICIENT
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT, UNSWITCHED
NO	NORMALLY OPEN OR NUMBER
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
O2	OXYGEN-MED GAS
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
OSD	OPEN SITE DRAIN
OSDH	OKLAHOMA STATE DEPARTMENT OF HEALTH
O/H	OVERHEAD
ø	DIAMETER OR PHASE
P	POLE
PB	PULL BOX OR PUSH BUTTON
PC	PHOTOCELL OR PULL CHAIN
PD	PRESSURE DROP
PH	PHASE
PNL	PANEL
PP	POWER POLE
PRI	PRIMARY ELECTRICAL VOLTAGE
PRV	PRESSURE RELIEF VALVE OR PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
R/A	RETURN AIR
RD	ROOF DRAIN
RE	REFERENCE
RE: 01/P1	REFERENCE DETAIL NUMBER/SHEET NUMBER
RECIRC	RECIRCULATION
RECT	RECTANGLE
REQD	REQUIRED
RF	RETURN FAN OR RADIO FREQUENCY
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S	SUCTION REFRIGERANT LINE OR STEAM
S/A	SUPPLY AIR
SAN	SANITARY
SC	STEAM CONDENSATE
SCHD	SCHEDULE
SD	SMOKE DETECTOR, SMOKE DAMPER OR STORM DRAIN
SF	SUPPLY FAN
SK	SINK
SLV	SLEEVE
SQ	SQUARE
SP	STANDPIPE
SPD	SURGE PROTECTION DEVICE
SS	SANITARY SEWER OR STAINLESS STEEL
ST	SHORT TIME
STD	STANDARD
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
T	THERMOSTAT
TC	TIMECLOCK
TD	TRENCH DRAIN
TDH	TOTAL DISCHARGE HEAD
TEL	TELEPHONE
TEMP	TEMPERATURE OR TEMPORARY
TG	TRANSFER GRILLE
THRU	THROUGH
TL	TWISTLOCK
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
U	URINAL
UT	UNDERGROUND TELEPHONE
U/G	UNDERGROUND
V	VOLTS, VENT, VALVE, OR VACUUM
VA	VALVE OR VOLT AMP
VAC	VOLTS ALTERNATING CURRENT OR VACUUM-MED GAS
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFVI	VENDOR FURNISHED, VENDOR INSTALLED
VTR	VENT THROUGH ROOF
VM	VOLT METER
W	WATER OR WIDTH
W/	WITH
W/O	WITHOUT
WAP	WIRELESS ACCESS POINT
WB	WET BULB
WC	WATER CLOSET OR WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE OR WIRE GUARD
WH	WATER HEATER OR WALL HYDRANT
WHM	WATT HOUR METER
WP	WEATHER PROOF
XFMR	TRANSFORMER
XFR	TRANSFER
YH	YARD HYDRANT

GENERAL PLUMBING NOTES

1. WORK SHOWN ON THE DRAWINGS IS TO BE COORDINATED WITH ALL OTHER TRADES AND ACTUAL CONDITIONS OF CONSTRUCTION.
2. VERIFY LOCATION AND SIZE OF ALL EXISTING PLUMBING SERVICES INDICATED TO BE EXTENDED, TIED-TO, OR REVISED FOR NEW WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
3. VERIFY THE INVERT ELEVATIONS OF THE BUILDING MAIN SEWER REQUIRED BY THE FURTHERMOST BRANCH LINE AND THE SITE SEWER CONNECTION PRIOR TO BEGINNING WORK. NOTIFY THE ARCHITECT IF ADEQUATE FALL BETWEEN THE TWO CAN NOT BE ACHIEVED.
4. LAY OUT THE PLUMBING SYSTEM IN CAREFUL COORDINATION WITH THE DRAWINGS, DETERMINING THE PROPER ELEVATION FOR ALL COMPONENTS OF THE SYSTEM. FOLLOW THE GENERAL LAYOUT SHOWN ON DRAWINGS IN ALL CASES EXCEPT WHERE OTHER WORK MAY INTERFERE.
5. INSTALL PIPING PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND PARTITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS AND FEATURES.
6. LAY OUT PIPES TO FALL WITHIN THE PARTITIONS OR CHASES. DO NOT REQUIRE FURRING OTHER THAN THOSE SHOWN ON THE DRAWINGS.
7. DO NOT INSTALL DOMESTIC WATER PIPING IN EXTERIOR WALLS. WHERE BUILDING DESIGN FORCES INSTALLATION OF PIPING IN EXTERIOR WALLS, INSTALL PIPING ON THE ROOM SIDE OF THE EXTERIOR WALL INSULATION AND INCREASE THE PIPE INSULATION THICKNESS REQUIRED TO THE NEXT STANDARD THICKNESS (1-1/2 INCH MINIMUM).
8. FIXTURE TRAPS SHALL NOT BE INSTALLED INSIDE EXTERIOR WALLS.
9. CHANGES IN PIPE SIZE NOTED ON THE PLANS SHALL BE MADE AFTER THE LAST FITTING OF THE LARGER PIPE. WHEN SUPPLY PIPES ARE LARGER THAN EQUIPMENT CONNECTION, REDUCE SIZE IMMEDIATELY PRIOR TO ENTRY.
10. MAKE CHANGES IN DIRECTION WITH STANDARD, MANUFACTURED PIPE FITTINGS.
11. CAP ALL PIPE OPENINGS DURING CONSTRUCTION.
12. LABEL PIPING TO IDENTIFY SYSTEM TYPE AND DUTY.
13. COORDINATE THE LOCATION AND METHOD OF ATTACHMENT OF HANGERS AND SUPPORTS FOR THE PIPING SYSTEM TO THE BUILDING STRUCTURE WITH THE ARCHITECT. ESTABLISH THE PROPOSED LOCATIONS OF SYSTEM PIPE ANCHORS AND OBTAIN APPROVAL FROM THE ARCHITECT.
14. PROVIDE PIPING SLEEVES THROUGH EXTERIOR WALLS AND FIRE OR SMOKE RATED WALLS AND ASSEMBLIES. ANNULAR SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE CAULKED AND SEALED. FIRE RATED PENETRATIONS SHALL BE FIRE STOPPED TO MEET RATING OF CONSTRUCTION PENETRATED.
15. DOMESTIC WATER PIPING SHALL BE INSTALLED TO SLOPE TO DRAIN TO PUMP PIT. WHERE CONDITIONS DICTATE A TRAPPED SECTION OF PIPING, A DRAIN VALVE OR CAPPED TEE SHALL BE INSTALLED TO FACILITATE DRAINING OF THE TRAPPED SECTION OF PIPING.
16. THOROUGHLY FLUSH DOMESTIC WATER PIPING. SCREENED OUTLETS SHALL BE REMOVED DURING THE FLUSHING PROCESS AND REINSTALLED AT COMPLETION.
17. INSULATE ALL DOMESTIC HOT,COLD, AND TEMPERED WATER PIPING.
18. INSTALL SHUT-OFF VALVES IN HOT WATER AND COLD WATER LINES AHEAD OF ALL PLUMBING FIXTURE CONNECTIONS AND EQUIPMENT.
19. REVIEW CONNECTION REQUIREMENTS OF ACTUAL EQUIPMENT FURNISHED PRIOR TO ROUGH-IN, INCLUDING EQUIPMENT FURNISHED BY DIVISION 23, ANY OTHER DIVISION, OR THE OWNER. ADJUST ROUGH-IN TO MEET INSTALLATION REQUIREMENTS.
20. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND DIMENSIONED LOCATIONS FOR INSTALLATION COORDINATION OF PLUMBING FIXTURES. FIXTURES DESIGNATED FOR HANDICAP USE SHALL BE INSTALLED TO MEET THE MOST CURRENT APPLICABLE ADA AND/OR ANSI REQUIREMENTS FOR INSTALLATION CLEARANCE AND ACCESS.
21. FLOOR DRAINS AND CLEANOUTS SHALL BE FURNISHED WITH TOP TRIM COMPATIBLE WITH THE FLOOR COVERING MATERIAL. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISH ALTERNATES AFFECTING FLOOR DRAIN AND CLEANOUT TRIM REQUIREMENTS.
22. ALL FLOOR DRAINS SHALL HAVE A MINIMUM WATER SEAL OF THREE INCHES.
23. SLOPE FLOOR TO DRAINS AS NOTED ON THE ARCHITECTURAL DRAWINGS. FLOOR DRAINS SHALL NOT BE INSTALLED WITH "DUCK NEST" AROUND DRAIN.
24. PROVIDE FUNNEL RECEPTOR FOR FLOOR DRAINS WHERE REQUIRED TO PREVENT SPILLAGE FROM INDIRECT WASTE LINES.
25. FLOOR CLEANOUTS SHALL BE LOCATED A MINIMUM OF 18 INCHES FROM WALLS AND OBSTRUCTIONS TO SERVICE.
26. LOCATE CLEANOUTS AT CHANGES OF DIRECTION AND NO MORE THAN 50' ON CENTER INSIDE THE BUILDING AND 100' ON CENTER FOR EXTERIOR PIPING. PROVIDE ADDITIONAL CLEANOUTS AS NOTED OR REQUIRED TO FULLY CLEAN AND SERVICE PIPING SYSTEMS.
27. INSTALL A CLEANOUT AT THE FOOT OF EACH SINK WASTE STACK.
28. PROVIDE ACCESS DOORS FOR ALL INACCESSIBLE VALVES AND CLEANOUTS.
29. COORDINATE LOCATION OF VENT TERMINATIONS WITH OTHER TRADES AND ARCHITECTURAL FEATURES. MAINTAIN REQUIRED CLEARANCES TO OUTSIDE AIR INTAKES, WINDOWS, ETC. AS REQUIRED BY THE OSDH.
30. RUN ALL DRAIN LINES FROM EQUIPMENT OVERFLOW RECEIVERS, ETC. TO FLOOR DRAINS. DRAIN LINES SHALL BE HARD DRAWN COPPER INSTALLED WITH MINIMUM 1/8 INCH PER FOOT SLOPE AND SECURED BY GUIDES AND SUPPORTS FOR THE PIPE SIZE SHOWN. DRAIN LINES SHALL BE NO SMALLER THAN 3/4 INCH. AT EACH ELBOW OF CONDENSATE DRAIN, INSTALL A TEE WITH A CLEANOUT PLUG.
31. NO PVC PIPING SHALL BE UTILIZED ON THIS PROJECT.

PLUMBING SYMBOLS LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
(E)=DCW	DOMESTIC COLD WATER PIPING (EXISTING)		POINT OF CONNECTION
(E)=DHW	DOMESTIC HOT WATER PIPING (EXISTING)	FD	FLOOR DRAIN
(E)=DHWR	DOMESTIC HOT WATER RETURN PIPING (EXISTING)	FCO	FLOOR CLEANOUT
DCW	DOMESTIC COLD WATER PIPING	FS	FLOOR SINK
DHW	DOMESTIC HOT WATER PIPING		BALL VALVE
DHWR	DOMESTIC HOT WATER RETURN PIPING		BUTTERFLY VALVE
TW	TEMPERED WATER PIPING		CHECK VALVE
TWR	TEMPERED WATER RETURN PIPING		CIRCUIT SETTER (Balance to gpm's indicated on plans)
G	NATURAL GAS PIPING		GATE VALVE
PG	PROPANE GAS PIPING		GAS COCK
(E)=SS			GAS PRESSURE REGULATING VALVE
SS	SANITARY SEWER PIPING (EXISTING)		STRAINER
SG	SANITARY GREASE PIPING		TRAP PRIMER DISTRIBUTION UNIT
AW	ACID WASTE PIPING		TRAP PRIMER
V	SANITARY VENT PIPING		BACKFLOW PREVENTER
RD	ROOF DRAIN PIPING		THREE WAY VALVE
ORD	OVERFLOW ROOF DRAIN PIPING		GLOBE VALVE
PP	PERFORATED PIPING		PRESSURE REGULATING VALVE
WC-1	EQUIPMENT IDENTIFICATION		MIXING VALVE
	DEMOLITION PIPING		CAP
S	STEAM PIPING		PLUG
SC	STEAM CONDENSATE PIPING		UNION
	TWO-WAY CLEANOUT		
WCO	WALL CLEANOUT		
X" VTR	VENT THROUGH ROOF		
	WATER HAMMER ARRESTOR		
	HOSE BIBB OR FREEZE PROOF WALL HYDRANT		
	SIAMESE HOSE BIBB OR HYDRANT		

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

OKLAHOMA REGISTERED PROFESSIONAL ENGINEER
JUSTIN F. JOUSH
21528
7/24/20

P001 PLUMBING LEAD-IN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	TH	07/24/2020	APPROVED:
DESIGNED	JR	07/24/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED:			
DESIGN MANAGER			CITY ENGINEER

FILE: DRAWING: DATE: 10.07.20

ATLAS PAGE NO: 116 SHEET 47 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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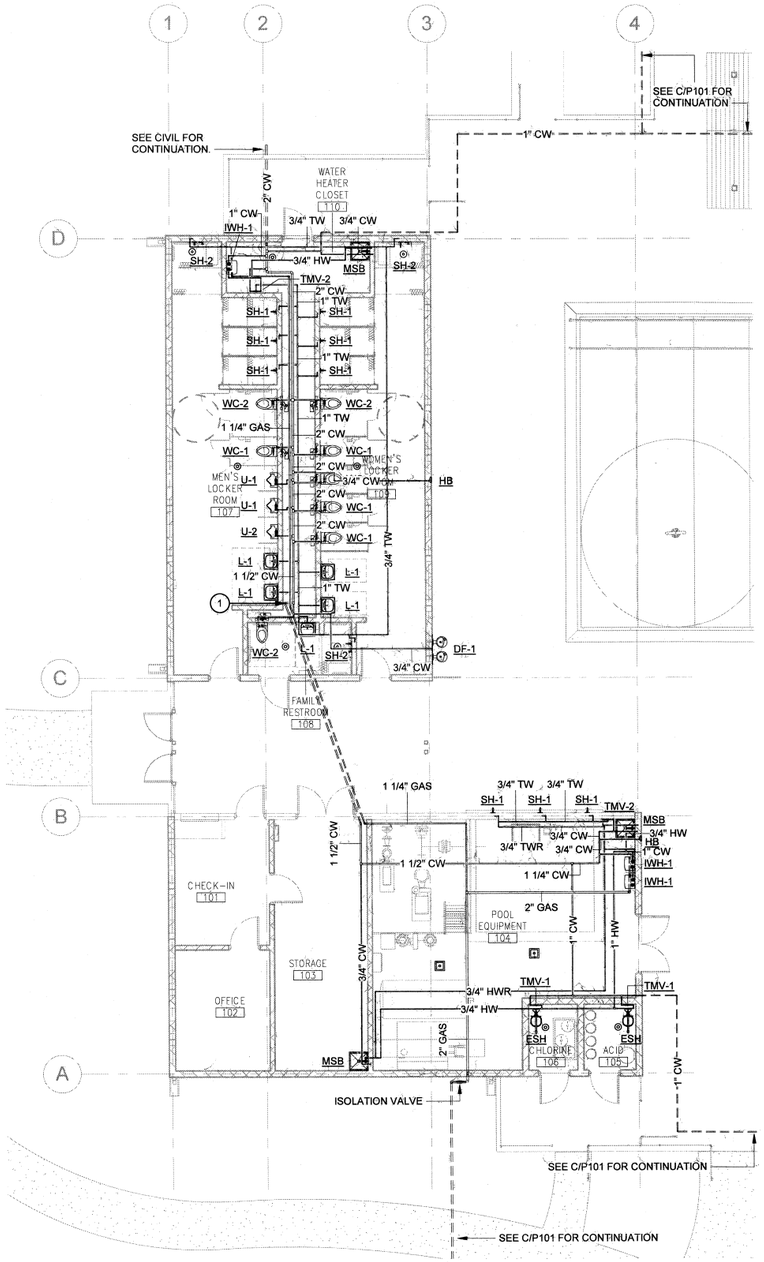
7/23/2020 1:52:19 PM

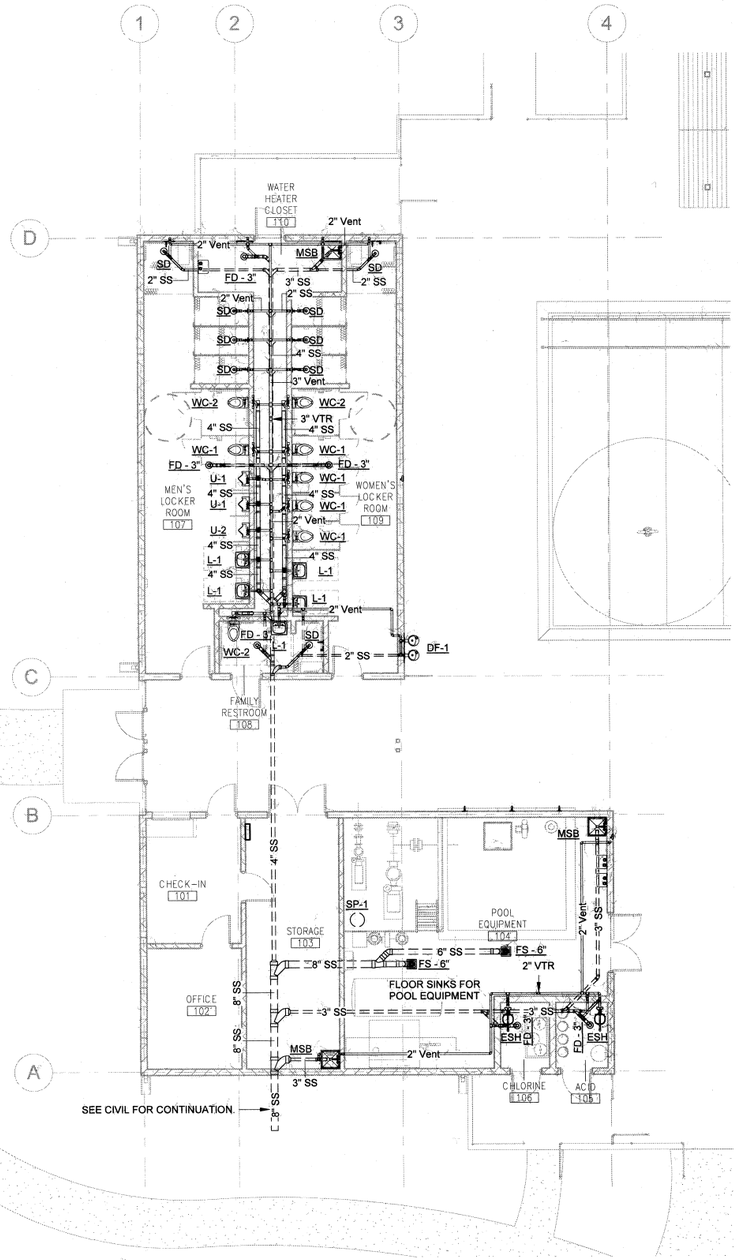
KEYNOTES	
1	PROVIDE LINE SIZED SHUT-OFF VALVE IN VERTICAL.



B DOMESTIC WATER PLAN

1/8" = 1'-0"

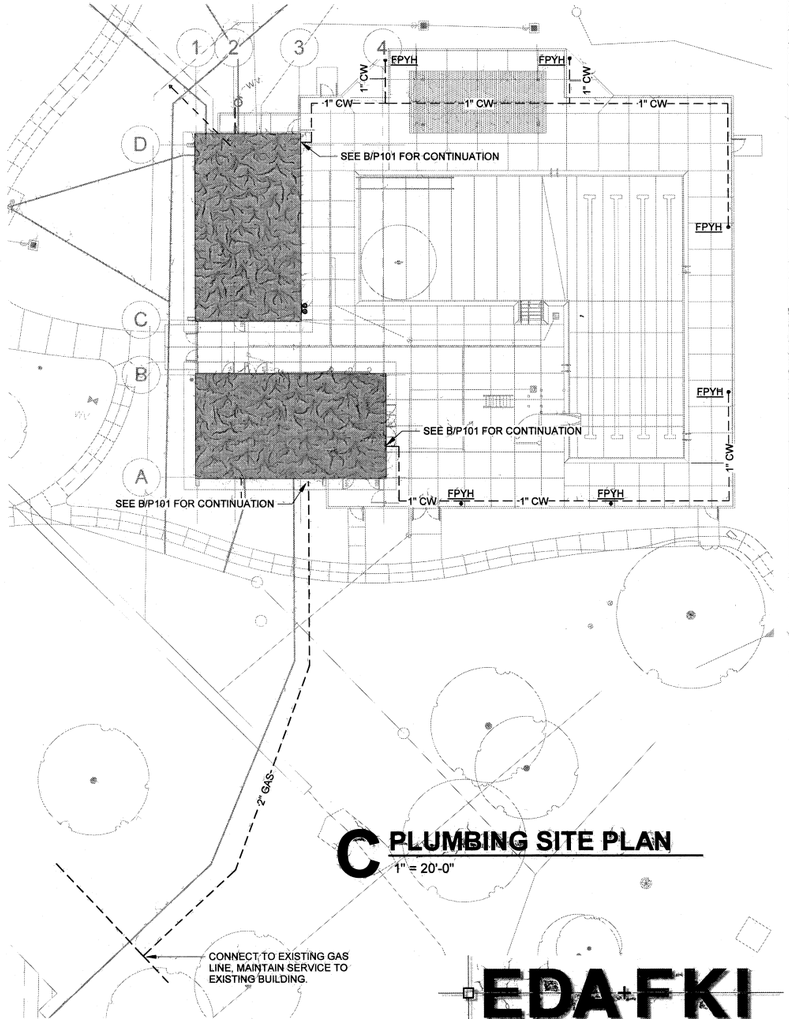
NORTH 0' 4' 8' 16'



A SANITARY / VENT PLAN

1/8" = 1'-0"

NORTH 0' 4' 8' 16'



C PLUMBING SITE PLAN

1" = 20'-0"

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EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

REGISTERED PROFESSIONAL ENGINEER JUSTIN F. ROUSH 21528 OKLAHOMA 7/24/20

P101 PLUMBING PLANS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE:	DRAWN	TH	07/24/2020
AS NOTED	DESIGNED	JR	07/24/2020
	SURVEY		
PROFILE SCALE:	PROJ. MGR.	GS	8/20
HORIZONTAL:	LEAD ENGR.	MAH	8/20
	FIELD MGR.	JRM	8/20
VERTICAL	RECOMMENDED:	HAS	9.20
	DESIGN MANAGER		

APPROVED:

CITY ENGINEER

FILE: DRAWING:

DATE: 10.02.20

ATLAS PAGE NO: 116

SHEET 48 OF 81 SHEETS

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PLUMBING FIXTURE SCHEDULE

PLUMBING CONTRACTOR IS TO EXAMINE ARCHITECTURAL FLOOR PLANS AND APPROPRIATE ELEVATIONS AND DETAILS TO DETERMINE FINAL PLUMBING FIXTURE TYPE AND MOUNTING DETAILS. THE ARCHITECTURAL FLOOR PLANS, ELEVATIONS, AND DETAILS TAKE PRECEDENCE OVER THE PLUMBING DRAWINGS AND PLUMBING FIXTURE SCHEDULE. ANY CONFLICTS BETWEEN PLUMBING DRAWINGS AND ARCHITECTURAL DRAWINGS IS TO BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO BIDDING. PLUMBING FIXTURE SUBMITTALS WILL NOT BE REVIEWED UNLESS PLUMBING CONTRACTOR ATTACHES A LETTER STATING THAT HE HAS COMPLIED WITH THE REQUIREMENTS ABOVE.

MARK	FIXTURE	MANUFACTURER	MODEL	COLOR	CARRIER	WASTE CONNECTION	VENT CONNECTION	CW CONNECTION	HW CONNECTION	REMARKS / ACCESSORIES
DF-1	Drinking Fountain - Two Level	Most Dependable Fountain	10485-WMSS	Stainless Steel	Wall	2"	2"	3/4"		Two Level Unit (ADA Compliant), Push Button Water Fountain, Vandal Resistant, Angle Stop (No Lead), with Bottle Filler
ESH	Emergency Shower with Eye Wash	Bradley Corporation	S19314	Safety Yellow	Floor	1 1/4"	2"	1 1/4"		Combination Drench Shower and Halo™ Eyewash or Eye/Face Wash
FD - 3"	Floor Drain	Zurn	ZN415-6B	Nickle Bronze Top	Floor	3"	2"			6" Diameter Adjustable Nickle Bronze Strainer
FPYH	Freeze Proof Yard Hydrant	Woodford Manufacturing Company	Y34	Standard				1"		
FS - 6"	Floor Sink	Zurn	Z-1995-25	White	Floor	6"	2"			24 x 16 A.R.E. Sani-Flor Receptor, 17" Sump Depth
HB	Hose Bibb	Woodfrod Manufacturing Company	B75	Standard	Wall			3/4"		Loose Key Operator, Vacuum Breaker, Locking Cover
IWH-1	Instantaneous Water Heater	Navien	NPE-240A	Standard	Wall			3/4"	3/4"	Premium Condensing Tankless Gas Water Heater (NPE-A), 199,900 BTU/H Input
L-1	Lavatory	Kohler	K-2031	White	Wall	1 1/4"	2"	3/8"	3/8"	wall-mount lavatory with T&S Brass TB0712VF05 Faucet
MSB	Mop Service Basin	Williams	SB-900	Standard	Floor	3"	2"	3/4"	3/4"	T-15-VB Supply, T-40 Mop Hanger, T-35 Hose and Wall Hook, S/S Cap, S/S Wall Guard
SD	Shower Drain	Zurn	ZN415	Nickle Bronze Top	Floor	2"	2"			Open Top for Tailpiece from Shower Strainer, Inside Neoprene Outlet Gasket, Combination Invertable Membrance Clamp and Adjustable Collar with Seepage Slots
SH-1	Trim Only (Field Built)	Bradley	50B	Chrome	Wall				1/2"	S15 Shower Head
SH-2	Trim Only (Field Built ADA)	Bradley	50B	Chrome	Wall				1/2"	B24 Hand Shower, 24" Slide Bar, 5 Foot Hose
SP-1	Sump Pump	Weil	2515 S	316 Stainless Steel	Sump Pit	3"				300 GPM, 25 ft HD, 5 hp, 1750 RPM, 230V, 3 phase, Fiberglass Sump Pit with Fiberglass Cover
TMV-1	Tempering Valve	Acorn Engineering Company	ET71-2	Brass	Wall			3/4"	3/4"	ET71-2 Brass Valve Body With 3/4" NPT Inlet & 1" NPT Outlet Connections
TMV-2	Tempering Valve	Acorn Engineering Company	SFST	Brass	Wall			1/2"	1/2"	ST7069 Brass Valve Body With 1/2" NPT Connections
U-1	Urinal	Kohler	K-25048-ET	White	Wall	2"	2"	3/4"		Blowout Urinal with Top Spud, Sloan 180-1-XL Flush Valve, Low Consumption, Standard Height
U-2	Urinal (ADA)	Kohler	K-25048-ET	White	Wall	2"	2"	3/4"		Blowout Urinal with Top Spud, Sloan 180-1-XL Flush Valve, Low Consumption, ADA Height
WC-1	Water Closet	Kohler	K-96053	White	Wall	4"	2"	1"		Sloan Regal 111-XL Flush Valve with K-4670-C Open Front Seat (White)
WC-2	Water Closet (ADA)	Kohler	K-96057	White	Wall	4"	2"	1"		Sloan Regal 111-XL Flush Valve with K-4670-C Open Front Seat (White)

EQUIPMENT GAS LOADS SCHEDULE

MARK	LOAD (INPUT)
IWH-1	199,900 x 3 = 599,700
TOTAL	**599,700**

METER TO BE SIZED FOR TOTAL SHOWN. PIPE SIZING BASED ON 0.2 IN. H20 PRESSURE LOSS AND 125 FT. EQUIVALENT LENGTH

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.0890 | f: 918.515.4338

JUSTIN R. FOLOUSH 21528 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
7/24/20

P601 PLUMBING SCHEDULES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE: HORIZONTAL:
VERTICAL

DRAWN	TH	07/24/2020	APPROVED:
DESIGNED	JR	07/24/2020	
SURVEY			
PROJ. MGR.	GB	8/20	
LEAD ENGR.	MAH	8/20	
FIELD MGR.	JRH	8/20	
RECOMMENDED: DESIGN MANAGER	HAS	9.20	CITY ENGINEER

FILE: DRAWING: DATE: 10.02.20

ATLAS PAGE NO: 116 SHEET 49 OF 81 SHEETS

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MEP ABBREVIATIONS

A	AMPERES	FLUOR	FLUORESCENT	OSD	OPEN SITE DRAIN
AAV	AUTOMATIC AIR VENT	FP	FIRE PROTECTION WATER SUPPLY	OSDH	OKLAHOMA STATE DEPARTMENT OF HEALTH
ACU	AIR CONDITIONING UNIT	FPHB	FROST PROOF HOSE BIBB	O/H	OVERHEAD
AFCI	ARC FAULT CIRCUIT INTERRUPTER	FPRF	FIRE PROOFING	ø	DIAMETER OR PHASE
AFF	ABOVE FINISHED FLOOR	FS	FLOOR SINK	P	POLE
AFG	ABOVE FINISHED GRADE	FSP	FIRE STANDPIPE	PB	PULL BOX OR PUSH BUTTON
AHJ	AUTHORITY HAVING JURISDICTION	FT	FEET	PC	PHOTOCELL OR PULL CHAIN
AHU	AIR HANDLING UNIT	FU	FUSE	PD	PRESSURE DROP
ALM	ALARM	G	GAS OR GROUND	PH	PHASE
ALT	ALTERNATE	GA	GAUGE	PNL	PANEL
AMB	AMBIENT	GBD	GRAVITY BACKDRAFT DAMPER	PP	POWER POLE
ARCH	ARCHITECT OR ARCHITECTURAL	GC	GENERAL CONTRACTOR	PRI	PRIMARY ELECTRICAL VOLTAGE
BAT	BATTERY	GD	GUTTER DRAIN	PRV	PRESSURE RELIEF VALVE OR PRESSURE REDUCING VALVE
BBH	BASEBOARD HEATER	GEN	GENERAL		
BDD	BACKDRAFT DAMPER	GF	GROUND FAULT	PSI	POUNDS PER SQUARE INCH
BFF	BELOW FINISHED FLOOR	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PVC	POLYVINYL CHLORIDE
BFG	BELOW FINISHED GRADE	GND	GROUND	PWR	POWER
BKR	BREAKER	GPM	GALLONS PER MINUTE	R/A	RETURN AIR
BMS	BUILDING MANAGEMENT SYSTEM	GR	GRADE	RD	ROOF DRAIN
BOD	BOTTOM OF DUCT	GRS	GALVANIZED RIGID STEEL	RE	REFERENCE
BTU	BRITISH THERMAL UNIT	GT	GREASE TRAP	RE: 01/P1	REFERENCE DETAIL NUMBER/SHEET NUMBER
BTUH	BRITISH THERMAL UNIT PER HOUR	GV	GRAVITY VENT	RECIRC	RECIRCULATION
C	CONDUIT	GYP	GYPSUM BOARD	RECT	RECTANGLE
CB	CIRCUIT BREAKER	H	HIGH OR HUMIDISTAT	REQD	REQUIRED
CD	CONDENSATE DRAIN	HB	HOSE BIBB	RF	RETURN FAN OR RADIO FREQUENCY
CEG	CEILING EXHAUST GRILLE	HD	HUB DRAIN	RH	RELATIVE HUMIDITY
CER	CEILING EXHAUST REGISTER	HP	HORSEPOWER	RPM	REVOLUTIONS PER MINUTE
CFCI	CONTRACTOR FURNISHED & INSTALLED	HT	HEIGHT	RTU	ROOF TOP UNIT
CFM	CUBIC FEET PER MINUTE	HTG	HEATING	S	SUCTION REFRIGERANT LINE OR STEAM
CHWR	CHILLED WATER RETURN	HTR	HEATER	S/A	SUPPLY AIR
CHWS	CHILLED WATER SUPPLY	HW	HOT WATER	SAN	SANITARY
CI	CONTROLS INTEGRATOR	HWR	HEATING WATER RETURN OR HOT WATER RETURN	SC	STEAM CONDENSATE
CKT	CIRCUIT			SCHD	SCHEDULE
CL	CENTERLINE	HWS	HEATING WATER SUPPLY	SD	SMOKE DETECTOR, SMOKE DAMPER OR STORM DRAIN
CO	CLEANOUT OR CONDUIT ONLY	HWT	HOT WATER TANK		
COND	CONDENSATE OR CONDENSER	HZ	HERTZ	SF	SUPPLY FAN
CONT	CONTINUOUS	I	INSTANTANEOUS	SK	SINK
CONTR	CONTRACTOR	IA	INSTRUMENT AIR-MED GAS	SLV	SLEEVE
COORD	COORDINATE	ID	INSIDE DIAMETER	SQ	SQUARE
COMPR	COMPRESSOR	IES	ILLUMINATING ENGINEERS SOCIETY	SP	STANDPIPE
CR	CRITICAL BRANCH	IG	ISOLATED GROUND	SPD	SURGE PROTECTION DEVICE
CRG	CEILING RETURN GRILLE	IWH	INSTANTANEOUS WATER HEATER	SS	SANITARY SEWER OR STAINLESS STEEL
CRR	CEILING RETURN REGISTER	IN	INCHES	ST	SHORT TIME
CSD	CEILING SUPPLY DIFFUSER	INSUL	INSULATED	STD	STANDARD
CSR	CEILING SUPPLY REGISTER	INTLK	INTERLOCK	SURF	SURFACE
CTR	CENTER	J	JUNCTION BOX	SW	SWITCH
CU	CONDENSING UNIT	JB	JUNCTION BOX	SWBD	SWITCHBOARD
CW	COLD WATER	KVA	KILOVOLT-AMP	T	THERMOSTAT
CWR	CONDENSER WATER RETURN	KW	KILOWATT	TC	TIMECLOCK
CWS	CONDENSER WATER SUPPLY	L	LENGTH OR LAVATORY	TD	TRENCH DRAIN
DB	DRY BULB	LAHJ	LOCAL AUTHORITY HAVING JURISDICTION	TDH	TOTAL DISCHARGE HEAD
DDC	DIRECT DIGITAL CONTROL	LAT	LEAVING AIR TEMPERATURE	TEL	TELEPHONE
DET	DETECTOR	LOC	LOCATION	TEMP	TEMPERATURE OR TEMPORARY
DFU	DRAINAGE FIXTURE UNIT	LP	LOW PRESSURE OR LIGHT POLE	TG	TRANSFER GRILLE
DIA	DIAMETER	LPT	LOW POINT	THRU	THROUGH
DIFF	DIFFUSER	LS	LIFE SAFETY BRANCH	TL	TWISTLOCK
DIM	DIMENSION	LT	LIGHT OR LONG TIME	TTB	TELEPHONE TERMINAL BOARD
DISC	DISCONNECT	LTG	LIGHTING	TTC	TELEPHONE TERMINAL CABINET
DIV	DIVISION	LV	LOW VOLTAGE	TV	TELEVISION
DN	DOWN	LVR	LOUVER	TYP	TYPICAL
DP	DISTRIBUTION PANEL	LVG	LEAVING	UE	UNDERGROUND ELECTRIC
DS	DOWNSPOUT	LWT	LEAVING WATER TEMPERATURE	UH	UNIT HEATER
DTL	DETAIL	MA	COMPRESSED AIR-MED GAS	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	MAT'L	MATERIAL	U	URINAL
DWH	DOMESTIC WATER HEATER	MAX	MAXIMUM	UT	UNDERGROUND TELEPHONE
DWV	DRAIN, WASTE AND VENT	MBD	MULTI-BLADE DAMPER	UIG	UNDERGROUND
E/A	EXHAUST AIR	MBH	1,000 BTUH	V	VOLTS, VENT, VALVE, OR VACUUM
EAT	ENTERING AIR TEMPERATURE	MCC	MOTOR CONTROL CENTER	VA	VALVE OR VOLT AMP
EF	EXHAUST FAN	MD	MOTORIZED DAMPER	VAC	VOLTS ALTERNATING CURRENT OR VACUUM-MED GAS
EL	ELEVATION	MDP	MAIN DISTRIBUTION PANEL		
ELEC	ELECTRICAL	MECH	MECHANICAL	VAV	VARIABLE AIR VOLUME
ELEV	ELEVATOR	MEZZ	MEZZANINE	VEL	VELOCITY
EM	EMERGENCY	MFR	MANUFACTURER	VERT	VERTICAL
EMT	ELECTRICAL METALLIC TUBING	MIN	MINIMUM	VFD	VARIABLE FREQUENCY DRIVE
ENG	ENGINEER	MK	MARK	VFVI	VENDOR FURNISHED, VENDOR INSTALLED
ENT	ENTERING	MSB	MAIN SWITCHBOARD	VTR	VENT THROUGH ROOF
EQUIP	EQUIPMENT	MTD	MOUNTED	VM	VOLT METER
EWC	ELECTRIC WATER COOLER	MTR	MOTOR	W	WATER OR WIDTH
EWT	ENTERING WATER TEMPERATURE	N	NITROGEN-MED GAS	W/	WITH
EXH	EXHAUST	N2O	NITROUS OXIDE-MED GAS	W/O	WITHOUT
EXT	EXTERIOR	NC	NORMALLY CLOSED OR NOISE COEFFICIENT	WAP	WIRELESS ACCESS POINT
(E)	EXISTING	NEC	NATIONAL ELECTRICAL CODE	WB	WET BULB
F	FAHRENHEIT OR FUSE	NF	NON-FUSED	WC	WATER CLOSET OR WATER COLUMN
F&I	FURNISH AND INSTALL	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	WCO	WALL CLEANOUT
FA	FIRE ALARM	NG	NATURAL GAS	WG	WATER GAUGE OR WIRE GUARD
FACP	FIRE ALARM CONTROL PANEL	NIC	NOT IN CONTRACT	WH	WATER HEATER OR WALL HYDRANT
FC	FOOT CANDLE	NL	NIGHT LIGHT, UNSWITCHED	WHM	WATT HOUR METER
FCO	FLOOR CLEANOUT	NO	NORMALLY OPEN OR NUMBER	WP	WEATHER PROOF
FCU	FAN COIL UNIT	NPT	NATIONAL PIPE THREAD	XFMR	TRANSFORMER
FD	FLOOR DRAIN OR FIRE DAMPER	NTS	NOT TO SCALE	XFR	TRANSFER
FEC	FIRE EXTINGUISHER CABINET	O2	OXYGEN-MED GAS	YH	YARD HYDRANT
FF	FINISH FLOOR	OA	OUTSIDE AIR		
FG	FINISH GRADE	OBD	OPPOSED BLADE DAMPER		
FHC	FIRE HOSE CABINET	OC	ON CENTER		
FHD	FIRE HYDRANT	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED		
FL	FLOW LINE				
		OFOI	OWNER FURNISHED, OWNER INSTALLED		
		ORD	OVERFLOW ROOF DRAIN		

MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	RECTANGULAR SUPPLY AIR DUCT DOWN; (UP)
	RECTANGULAR RETURN AIR DUCT DOWN; (UP)
	RECTANGULAR EXHAUST AIR OR OUTSIDE AIR DUCT DOWN; (UP)
	ROUND DUCT DOWN; (UP)
12ø	ROUND DUCT - SIZE INDICATES INSIDE DIAMETER DIMENSION
12/8	RECTANGULAR DUCT - SIZE INDICATES INSIDE WIDTH/DEPTH DIMENSION
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	STRAIGHT 'SPIN-IN' EXTRACTOR FITTING WITH MANUAL VOLUME DAMPER
	DUCT TRANSITION - (RECTANGLE TO RECTANGLE)
	DUCT TRANSITION - (RECTANGLE TO ROUND)
	ROUND FLEXIBLE DUCT
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	COMBINATION FIRE / SMOKE DAMPER
12/8	SINGLE LINE DUCTWORK
	MANUAL VOLUME DAMPER
M	MOTORIZED DAMPER
B	BACKDRAFT DAMPER
	DIFFUSER, CEILING, SUPPLY AIR
	DIFFUSER, CEILING, SUPPLY AIR
	DIFFUSER, CEILING, ROUND
	GRILLE, CEILING, RETURN AIR
	DIFFUSER/ GRILLE, SIDE WALL
	GRILLE, CEILING, EXHAUST
	AIRFLOW DIRECTION
	CONNECT TO EXISTING
T AHU-1	THERMOSTAT FOR AHU-1: MTD 48" AFF, U.N.O. COORDINATE W/ DIV. 26 FOR CONDUIT ROUTING
H AHU-1	HUMIDISTAT FOR AHU-1: MTD 48" AFF, U.N.O. COORDINATE W/ DIV. 26 FOR CONDUIT ROUTING
AHU-1	EQUIPMENT IDENTIFICATION
NG	NATURAL GAS PIPING
CD	UNIT CONDENSATE DRAIN PIPING
RS	REFRIGERANT SUCTION PIPING
RL	REFRIGERANT LIQUID PIPING
	GATE VALVE
	BALL VALVE
	CALIBRATED BALANCING VALVE (CIRCUIT SETTER)
T	TEMPERATURE GAUGE
P	PRESSURE GAUGE
	GAS COCK VALVE
	DUCT TO BE DEMOLISHED OF MODIFIED SHOWN DASHED
	NEW DUCT SHOWN W/BOLD LINE WEIGHT CONNECT TO EXISTING SHOWN W/LIGHT LINE WEIGHT

GENERAL MECHANICAL NOTES

1. WORK SHOWN ON THE DRAWINGS IS TO BE COORDINATED WITH ALL OTHER TRADES AND ACTUAL CONDITIONS OF CONSTRUCTION.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE CODE REQUIREMENTS, MANUFACTURER RECOMMENDATIONS, AND ADHERE TO REQUIRED CLEARANCES FOR OPERATION AND SERVICE.
3. ELECTRICAL REQUIREMENTS OF FURNISHED AND INSTALLED DIVISION 23 EQUIPMENT AND SYSTEM COMPONENTS SHALL BE PROVIDED IN WRITING BY THE DIVISION 23 CONTRACTOR TO THE DIVISION 26 CONTRACTOR FOR INCLUSION AND COORDINATION OF DIVISION 26 WORK.
4. PROVIDE FLEXIBLE DUCT CONNECTIONS TO AIR HANDLING EQUIPMENT.
5. DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MOST RECENT SMACNA STANDARDS FOR PRESSURE AND VELOCITY. ALL DUCT JOINTS SHALL BE SEALED AS NOTED IN THE SPECIFICATIONS.
6. DUCT SIZES SHOWN ON DRAWING ARE INSIDE, CLEAR DIMENSIONS.
7. MAKE TRANSITIONS FROM DUCTWORK SIZES SHOWN ON THE DRAWINGS TO THE EQUIPMENT DUCT CONNECTION SIZES. VERIFY EQUIPMENT CONNECTION SIZES WITH FACTORY CERTIFIED DRAWINGS. MAKE ALL TRANSITIONS IN ACCORDANCE WITH THE MOST RECENT SMACNA STANDARDS.
8. ALL MAJOR BRANCH DUCTS SHALL BE CONSTRUCTED USING OPPOSED BLADE DAMPERS OR SPLITTER DAMPERS AND SUITABLE LOCKING DEVICES FOR BALANCING OF THE DUCT SYSTEM.
9. TURNING VANES SHALL BE INSTALLED IN ALL RECTANGULAR 90 DEGREE ELBOWS IN SUPPLY, RETURN, AND EXHAUST DUCTWORK, AND AS INDICATED ON THE DRAWINGS.
10. MINIMIZE FLEXIBLE DUCT LENGTHS TO AIR DEVICES (MAXIMUM OF FIVE FEET). USE FLEX DUCT ONLY IN FULLY ACCESSIBLE CEILING SPACES. PROVIDE A 90 DEGREE SHEET METAL ELBOW AT THE CEILING DIFFUSER NECK CONNECTION. PROVIDE A SADDLE UNDER FLEXIBLE DUCT HANGERS TO SUPPORT THE DUCT AND PREVENT DUCTWORK "PINCHING". FLEXIBLE DUCT SHALL BE INSTALLED TO PREVENT REDUCTION OF DUCT CROSS SECTION.
11. THE CONTRACTOR SHALL COORDINATE ROUTING AND SIZE OF THE DUCTWORK WITH THE EXISTING FINAL BUILDING CONDITIONS (STRUCTURE SIZE/LOCATION, LIGHT LOCATIONS, ARCHITECTURAL FEATURES, AND WORK OF OTHER TRADES). WHERE DUCT SIZES MUST BE REVISED FROM THOSE SHOWN ON THE DRAWINGS, MAINTAIN THE SAME CROSS SECTIONAL AREA, VELOCITY, AND PRESSURE DROP. WHEN NECESSARY, REROUTE DUCT TO CLEAR OBSTRUCTIONS WITH A MINIMUM NUMBER OF FITTINGS AND ELEVATION CHANGES. WHERE DUCTWORK MUST BE SIGNIFICANTLY ALTERED FROM THAT SHOWN ON THE DRAWINGS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING.
12. THE DIVISION 23 CONTRACTOR SHALL TEST AND BALANCE HVAC SYSTEMS. TEST AND BALANCE SHALL BE PERFORMED AND REPORTED AS DESCRIBED BY NEBB WITH NEW AND CLEAN FILTERS. CLEAN DUCTWORK, AND FULLY FUNCTIONAL EQUIPMENT CONTROLS / DEVICES AT THE TIME OF TESTING.
13. MAINTAIN MINIMUM 10'-0" CLEAR BETWEEN ANY FLUE, VENT OR TOILET EXHAUST AND OUTSIDE AIR INTAKES. WHERE MINIMUM HORIZONTAL DISTANCE CANNOT BE PROVIDED, EXTEND THE FLUE VENT 3'-0" ABOVE THE OUTSIDE AIR INTAKE.
14. PROVIDE SMOKE DETECTORS IN RETURN DUCTS FOR HVAC UNITS WITH 2000 CFM AND GREATER CAPACITY. PROVIDE SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS FOR HVAC UNITS WITH 15000 CFM AND GREATER CAPACITY. SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15 AND COORDINATED WITH DIVISION 26 CONTRACTOR. PROVIDE REMOTE INDICATOR AND TEST STATION WHERE UNITS ARE NOT READILY VISIBLE FOR INSPECTION. INTERLOCK DETECTORS WITH THE BUILDING FIRE ALARM SYSTEM.
15. INSTALL ALL MOTOR DRIVEN EQUIPMENT WITH VIBRATION ISOLATORS OR PADS TO REDUCE NOISE TRANSFER. TYPE AND METHOD OF ISOLATION SHALL BE AS SPECIFIED FOR THE DUTY, TYPE, AND APPLICATION OF THE EQUIPMENT.
16. ALL EQUIPMENT SHALL BE PERMANENTLY LABELED WITH SECURED SIGNAGE.
17. CONDENSATE PIPING SHALL BE AS NOTED ON THE DRAWING, BUT IN NO CASE SHALL BE LESS THAN 1-1/4 INCHES.
18. ROUTE CONDENSATE PIPING TO AN APPROVED DISCHARGE LOCATION. PROVIDE A CONDENSATE TRAP WITH CLEANOUTS AND VENT ON THE DISCHARGE SIDE OF THE TRAP FOR ALL UNITS WITH COOLING COILS. TRAP DEPTH SHALL BE A MINIMUM OF THE UNIT TOTAL PRESSURE PLUS 2 INCHES.
19. INTERLOCK SMOKE DAMPERS WITH THE BUILDING FIRE ALARM SYSTEM.
20. FIRE DAMPERS SHALL BE DYNAMIC TYPE WITH A MINIMUM 98% FREE AREA. PROVIDE FIRE DAMPERS IN ALL DUCT PENETRATIONS OF FIRE RATED ASSEMBLIES WITH ACCESS DOORS FOR OBSERVATION AND MAINTENANCE. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND RATING OF FIRE RATED WALLS, CEILINGS, AND FLOOR ASSEMBLIES.

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C/A, 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

OKLAHOMA LICENSED PROFESSIONAL ENGINEER JUSTIN R. BOUSH 21528
7/24/20

M001 MECHANICAL LEAD-IN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	TH	07/24/2020
DESIGNED	JR	07/24/2020
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER		9.22

APPROVED: CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 116
SHEET 50 OF 81 SHEETS

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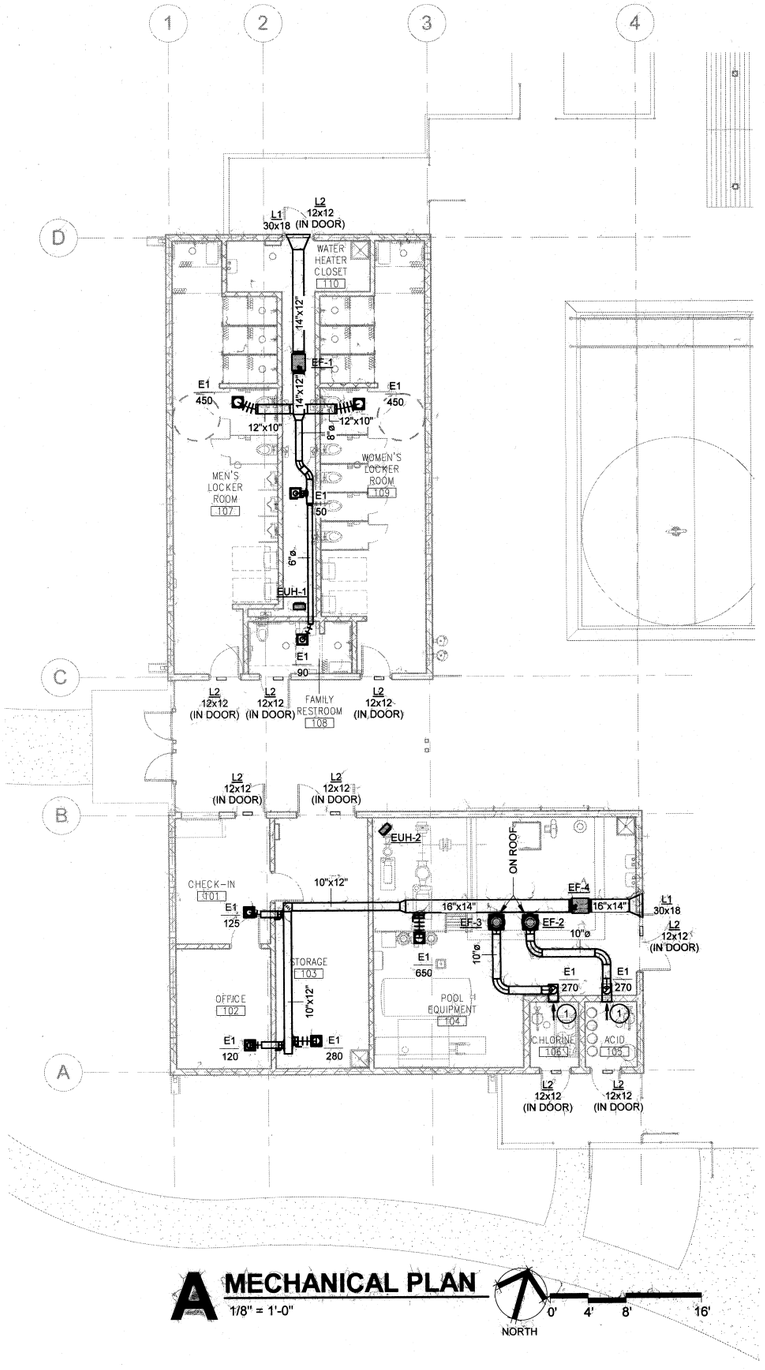
KEYNOTES	
1	GRILLE TO BE INSTALLED 12" AFF



A MECHANICAL PLAN

1/8" = 1'-0"

NORTH 0' 4' 8' 16'

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EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

M101 MECHANICAL PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

JUSTIN REED 21528 LICENSED PROFESSIONAL ENGINEER OKLAHOMA 7/24/20

REVISION	BY	DATE

PLAN SCALE: AS NOTED	DRAWN	TH	07/24/2020	APPROVED:
	DESIGNED	JR	07/24/2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL:	LEAD ENGR.			
	FIELD MGR.			
VERTICAL	RECOMMENDED:			
	DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:			DATE: 10.22.20
ATLAS PAGE NO: 116				SHEET 51 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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Exhaust Fan Schedule													
Mark	Manufacturer	Model Number	Exhaust Air Flow	Static pressure	Fan RPM	Tip Speed	Sones	Location	Fan Accessories	Notes	Input Power	Voltage	Phase
EF-1	Greenheck	SQ-100-VG	1040 CFM	0.5	1636	4790 FPM	9.5	110 WATER HEATER CLOSET	DS, GBD	B, E, G, H, I	186 W	115 V	1
EF-2	GREENHECK	CUE-090-VG	270 CFM	0.5	1483	4222 FPM	7.4	ROOF	BS, DS, CB, GBD	E, G, H, I	75 W	115 V	1
EF-3	GREENHECK	CUE-090-VG	270 CFM	0.5	1483	4222 FPM	7.4	ROOF	BS, DS, CB, GBD	E, G, H, I	75 W	115 V	1
EF-4	Greenheck	SQ-120-VG	1175 CFM	0.5	1380	4742 FPM	8.4	104 POOL EQUIPMENT	DS, GBD	A, E, G, H, I	373 W	115 V	1

ACCESSORIES:
BS = BIRD SCREEN
CB = SLOPED CURB
DS = DISCONNECT SERVICE
GBD = GRAVITY BACKDRAFT DAMPER

NOTES:
A. TIMER CONTROLLED
B. SWITCH WITH LIGHTS
C. WALL SWITCH
D. SWITCH AT PANEL
E. SPEED CONTROL SWITCH
F. BELT DRIVE
G. DIRECT DRIVE
H. REFER TO SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS
I. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.

Air Terminal Schedule							
Type Mark	Manufacturer	Model	Size	Material	Mounting Frame	Accessories	Notes
E1	Titus	350RL	12"x12"	Steel - Titus - 26 White	Surface Mount	OBD	A, B, C, D, E
L1	Ruskin	ELF375DX	See Plans	Aluminum - Brushed	Surface Mount	BS	A, B, C
L2	Ruskin	ELF15J	See Plans	Aluminum - Brushed	Surface Mount	BS	A, B, C

ACCESSORIES:
OBD = OPPOSED BLADE DAMPER
DD = DRAFT DAMPER

NOTES:
A. COORDINATE LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS WITH CEILING GRID, LIGHT LOCATIONS, STRUCTURAL MEMBERS AND ARCHITECTURAL FEATURES.
B. FINAL FINISHES OF ALL AIR DEVICES SHALL BE VERIFIED WITH ARCHITECTS FINISH AND PAINTING SCHEDULE.
C. PROVIDE PLENUM FOR DUCT CONNECTION OR SQUARE TO ROUND AS REQUIRED.
D. CAPACITIES AS INDICATED ON DRAWINGS.
E. RUNOUT AND NECK SIZE AS INDICATED IN NECK AND RUNOUT SCHEDULE ON DRAWINGS.

Unit Heater Schedule (Electric)								
Mark	Manufacturer	Model	Air Flow	Mounting Height (ft)	Notes	kW	Voltage	Phase
EUH-1	QMark	MUH0581	350 CFM	8'	A, B, C, D	5	208	3
EUH-2	QMark	MUH0581	350 CFM	8'	A, B, C, D	5	208	3

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
1010 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 f: 918.515.4338

M601 MECHANICAL SCHEDULES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

JUSTIN R. BOUSH 21528 REGISTERED PROFESSIONAL ENGINEER OKLAHOMA
7/24/20

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	TH	07/24/2020
DESIGNED	JR	07/24/2020
SURVEY		
PROJ. MGR.		8/20
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RECOMMENDED: DESIGN MANAGER		9.20

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ATLAS PAGE NO: 116
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MEP ABBREVIATIONS

A	AMPERES
AAV	AUTOMATIC AIR VENT
ACU	AIR CONDITIONING UNIT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALM	ALARM
ALT	ALTERNATE
AMB	AMBIENT
ARCH	ARCHITECT OR ARCHITECTURAL
BAT	BATTERY
BBH	BASEBOARD HEATER
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDUIT
CB	CIRCUIT BREAKER
CD	CONDENSATE DRAIN
CEG	CEILING EXHAUST GRILLE
CER	CEILING EXHAUST REGISTER
CFCI	CONTRACTOR FURNISHED & INSTALLED
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CONTROLS INTEGRATOR
CKT	CIRCUIT
CL	CENTERLINE
CO	CLEANOUT OR CONDUIT ONLY
COND	CONDENSATE OR CONDENSER
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
COMPR	COMPRESSOR
CR	CRITICAL BRANCH
CRG	CEILING RETURN GRILLE
CRR	CEILING RETURN REGISTER
CSD	CEILING SUPPLY DIFFUSER
CSR	CEILING SUPPLY REGISTER
CTR	CENTER
CU	CONDENSING UNIT
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DET	DETECTOR
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISC	DISCONNECT
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWV	DRAIN, WASTE AND VENT
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENG	ENGINEER
ENT	ENTERING
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXT	EXTERIOR
(E)	EXISTING
F	FAHRENHEIT OR FUSE
F&I	FURNISH AND INSTALL
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN OR FIRE DAMPER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FHC	FIRE HOSE CABINET
FHD	FIRE HYDRANT
FL	FLOW LINE
FLUOR	FLUORESCENT
FP	FIRE PROTECTION WATER SUPPLY
FPHB	FROST PROOF HOSE BIBB
FPRF	FIRE PROOFING
FS	FLOOR SINK
FSP	FIRE STANDPIPE
FT	FEET
FU	FUSE
G	GAS OR GROUND
GA	GAUGE
GBD	GRAVITY BACKDRAFT DAMPER
GC	GENERAL CONTRACTOR
GD	GUTTER DRAIN
GEN	GENERAL
GF	GROUND FAULT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GPM	GALLONS PER MINUTE
GR	GRADE
GRS	GALVANIZED RIGID STEEL
GT	GREASE TRAP
GV	GRAVITY VENT
GYP	GYPSUM BOARD
H	HIGH OR HUMIDISTAT
HB	HOSE BIBB
HD	HUB DRAIN
HP	HORSEPOWER
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HWR	HEATING WATER RETURN OR HOT WATER RETURN
HWS	HEATING WATER SUPPLY
HWT	HOT WATER TANK
HZ	HERTZ
I	INSTANTANEOUS
IA	INSTRUMENT AIR-MED GAS
ID	INSIDE DIAMETER
IES	ILLUMINATING ENGINEERS SOCIETY
IG	ISOLATED GROUND
IWH	INSTANTANEOUS WATER HEATER
IN	INCHES
INSUL	INSULATED
INTLK	INTERLOCK
J	JUNCTION BOX
JB	JUNCTION BOX
KVA	KILOVOLT-AMP
KW	KILOWATT
L	LENGTH OR LAVATORY
LAHJ	LOCAL AUTHORITY HAVING JURISDICTION
LAT	LEAVING AIR TEMPERATURE
LOC	LOCATION
LP	LOW PRESSURE OR LIGHT POLE
LPT	LOW POINT
LS	LIFE SAFETY BRANCH
LT	LIGHT OR LONG TIME
LTG	LIGHTING
LV	LOW VOLTAGE
LVR	LOUVER
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MA	COMPRESSED AIR-MED GAS
MAT'L	MATERIAL
MAX	MAXIMUM
MBD	MULTI-BLADE DAMPER
MBH	1,000 BTUH
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MK	MARK
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTR	MOTOR
N	NITROGEN-MED GAS
N2O	NITROUS OXIDE-MED GAS
NC	NORMALLY CLOSED OR NOISE COEFFICIENT
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT, UNSWITCHED
NO	NORMALLY OPEN OR NUMBER
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
O2	OXYGEN-MED GAS
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
OSD	OPEN SITE DRAIN
OSDH	OKLAHOMA STATE DEPARTMENT OF HEALTH
O/H	OVERHEAD
ø	DIAMETER OR PHASE
P	POLE
PB	PULL BOX OR PUSH BUTTON
PC	PHOTOCELL OR PULL CHAIN
PD	PRESSURE DROP
PH	PHASE
PNL	PANEL
PP	POWER POLE
PRI	PRIMARY ELECTRICAL VOLTAGE
PRV	PRESSURE RELIEF VALVE OR PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
R/A	RETURN AIR
RD	ROOF DRAIN
RE	REFERENCE
RE: 01/P1	REFERENCE DETAIL NUMBER/SHEET NUMBER
RECIRC	RECIRCULATION
RECT	RECTANGLE
REQD	REQUIRED
RF	RETURN FAN OR RADIO FREQUENCY
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S	SUCTION REFRIGERANT LINE OR STEAM
S/A	SUPPLY AIR
SAN	SANITARY
SC	STEAM CONDENSATE
SCHD	SCHEDULE
SD	SMOKE DETECTOR, SMOKE DAMPER OR STORM DRAIN
SF	SUPPLY FAN
SK	SINK
SLV	SLEEVE
SQ	SQUARE
SP	STANDPIPE
SPD	SURGE PROTECTION DEVICE
SS	SANITARY SEWER OR STAINLESS STEEL
ST	SHORT TIME
STD	STANDARD
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
T	THERMOSTAT
TC	TIMECLOCK
TD	TRENCH DRAIN
TDH	TOTAL DISCHARGE HEAD
TEL	TELEPHONE
TEMP	TEMPERATURE OR TEMPORARY
TG	TRANSFER GRILLE
THRU	THROUGH
TL	TWISTLOCK
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
U	URINAL
UT	UNDERGROUND TELEPHONE
U/G	UNDERGROUND
V	VOLTS, VENT, VALVE, OR VACUUM
VA	VALVE OR VOLT AMP
VAC	VOLTS ALTERNATING CURRENT OR VACUUM-MED GAS
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFVI	VENDOR FURNISHED, VENDOR INSTALLED
VTR	VENT THROUGH ROOF
VM	VOLT METER
W	WATER OR WIDTH
W/	WITH
W/O	WITHOUT
WAP	WIRELESS ACCESS POINT
WB	WET BULB
WC	WATER CLOSET OR WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE OR WIRE GUARD
WH	WATER HEATER OR WALL HYDRANT
WHM	WATT HOUR METER
WP	WEATHER PROOF
XFMR	TRANSFORMER
XFR	TRANSFER
YH	YARD HYDRANT

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	LIGHT FIXTURE 2x4
	LIGHT FIXTURE 2x4 EMERGENCY AND/OR NIGHT LIGHT
	LIGHT FIXTURE 2x2
	WALL MOUNTED STAIR LIGHT FIXTURE
	INDUSTRIAL STRIP LIGHT FIXTURE
	EXIT SIGN
	RECESSED DOWNLIGHT
$	TOGGLE SWITCH - SINGLE POLE 20A-120/277V
$3	TOGGLE SWITCH - THREE WAY
$4	TOGGLE SWITCH - FOUR WAY
$D	LIGHTING DIMMER SWITCH
$DOS	LIGHTING DIMMER SWITCH WITH INTEGRAL OCCUPANCY SENSOR
$WP	TOGGLE SWITCH - WEATHER PROOF
$NL	NIGHT LIGHT SWITCH
$LV	SINGLE POLE MOMENTARY SWITCH - WIRE TO LOW VOLTAGE CONTROLLER OF PATIENT BED LIGHT CONTROL READING/AMBIENT LIGHT FUNCTIONS
$T	TIMER SWITCH
$or	OVERRIDE SWITCH
$OS	WALL MOUNTED OCCUPANCY SENSOR
MS 1	CEILING MOUNTED LIGHT SWITCHING OCCUPANCY SENSOR-LOW VOLTAGE
MS 2	CEILING MOUNTED LIGHT SWITCHING OCCUPANCY SENSOR-LINE VOLTAGE
PP	POWER PACK FOR OCCUPANCY SENSOR
	INDICATES DEVICE TO BE MOUNTED ABOVE COUNTER
	DUPLEX RECEPTACLE 20A, 120V U.N.O.
	DOUBLE DUPLEX RECEPTACLE 20A, 120V U.N.O.
	250V/1PHASE RECEPTACLE 20A U.N.O.
	GROUND FAULT CURRENT INTERRUPTER RECEPT 20A U.N.O.
#	POWER/DATA RECESSED FLOOR BOX-LEGRAND #RFB4E-OG OR APPROVED EQUAL, # INDICATES NUMBER OF DATA DROPS
#	POWER/DATA POKE THROUGH-STANDARD # INDICATES NUMBER OF DATA DROPS
#	POWER/DATA POKE THROUGH-FURNITURE FEED # INDICATES NUMBER OF DATA DROPS
	TWIST LOCK RECEPTACLE-REFER TO PLANS FOR NEMA DESIGNATION
	PANELBOARD
T	TRANSFORMER
ATS	AUTOMATIC TRANSFER SWITCH
AFD	ADJUSTABLE FREQUENCY DRIVE - MECHANICAL CONTRACTOR
	DISCONNECT SWITCH
J	JUNCTION BOX
	GROUND ROD
	INDICATES CONDUIT CONCEALED IN WALL OR CEILING SPACE
	INDICATES CONDUIT RUN BELOW CONCRETE FLOOR OR BELOW FINISHED GRADE
	INDICATES CIRCUIT HOMERUN

SYMBOL	DESCRIPTION
	COMMUNICATION OUTLET WITH 2-DATA DROPS U.N.O.
AV	COMMUNICATION OUTLET WITH 1-CAT.6 AND 1-HDMI CONNECTOR
TV	TV OUTLET WITH 1-RG6 AND 1-CAT.6 DROP
WAP	PROVIDE 1 DATA DROP FOR OFOI WIRELESS ACCESS POINT AT CEILING
IC	INTERCOMM STATION, REFER TO SPECIFICATIONS.
S	CEILING MOUNTED PA SYSTEM SPEAKER
F	CEILING MOUNTED FIRE ALARM SYSTEM SPEAKER
F	CEILING MOUNTED FIRE ALARM SYSTEM SPEAKER WITH STROBE
S	FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED U.N.O
S CO	FIRE ALARM SMOKE DETECTOR WITH INTEGRAL CARBON DIOXIDE DETECTOR
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM MAGNETIC DOOR HOLDER
	FIRE ALARM STROBE ONLY - CEILING MOUNTED U.N.O.
	FIRE ALARM HORN STROBE - CEILING MOUNTED
	FIRE ALARM HORN STROBE - WALL MOUNTED
	FIRE ALARM HEAT DETECTOR
	WALL MOUNTED DIGITAL CLOCK, PROVIDE 20A, 120V CIRCUIT AND DATA CONNECTION. REFER TO SPECIFICATIONS.
	RECEESED AV WALL BOX WITH 20A DUPLEX RECEPTACLE, 1-RG6 AND 1-CAT.6 DROP. PROVIDE AND WIRE RECEPTACLE. PROVIDE CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE FOR DATA CABLING. LEGRAND #EFSB4 OR APPROVED EQUAL.

INDICATES GROUND CONDUCTOR

INDICATES NEUTRAL CONDUCTOR

INDICATES LINE CONDUCTOR

PROVIDE GROUNDING CONDUCTOR WITH ALL BRANCH CIRCUITS AND FEEDERS

1 Ref / -1 Ref / A101 / 1 Ref / -1 Ref — ELEVATION REF. — INTERIOR ELEVATION — SHEET REF.

GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES. IN EVENT OF CONFLICT BETWEEN DRAWINGS, SPECIFICATIONS, CODES AND ORDINANCES, THE MOST STRINGENT REQUIREMENT FROM THE AUTHORITY HAVING JURISDICTION SHALL TAKE PRECEDENCE.
2. THE CONTRACTOR SHALL PROCURE ALL NECESSARY PERMITS OR LICENSES REQUIRED FOR WORK, PAY ALL LAWFUL FEES, INCLUDING, BUT NOT LIMITED TO UTILITY DEPOSITS, INSPECTION FEES, AND CONSTRUCTION PERMITS.
3. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR EXACT LOCATION OF EQUIPMENT TO BE INSTALLED SO THAT ANY INTERFERENCE OF THE DIFFERENT EQUIPMENT SHALL BE INSTALLED SO AS TO FUNCTION PROPERLY. COORDINATE POWER REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT BEFORE FINAL ROUGH IN AND INSTALLATION.
4. EACH BIDDER SHALL CAREFULLY CHECK DRAWINGS. IN THE EVENT ANY PROPOSED OR ALTERNATE EQUIPMENT REQUIRES SPACE, SUPPORT OR LAYOUT CONDITIONS OTHER THAN THOSE SHOWN ON THE PLANS, BIDDERS SHALL NOTIFY ARCHITECT FOR SUCH SPACE PRIOR TO TAKING BIDS.
5. PROVIDE PROTECTION FOR ALL ITEMS OF APPARATUS, FIXTURES, APPLIANCES, MATERIALS, EQUIPMENT, AND INSTALLATION SO AS TO PREVENT DAMAGE BY ANY TRADE. CONTRACTOR SHALL REPLACE, AT NO EXPENSE TO THE OWNER, ANY ITEM THAT IS MARRED, DEFACED, OR BROKEN PRIOR TO ACCEPTANCE BY OWNER.
6. MECHANICAL AND ELECTRICAL PLANS ARE DIAGRAMMATIC, BUT THEY SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION OF THE BUILDING AND WORK OF OTHER TRADES WILL ALLOW. CONTRACTOR SHALL COORDINATE THE GENERAL WORK IN ORDER THAT THEIR WORK WILL BE PROPERLY INSTALLED IN THE BUILDING. THE APPROVAL OF THE ARCHITECT SHALL BE OBTAINED BEFORE ANY DEVIATIONS FROM THESE PLANS ARE MADE.
7. CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED TO ENERGIZE EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.
8. CONTRACTOR SHALL INFORM ARCHITECT OF EXISTING CONDITIONS THAT ARE DISCOVERED DURING WORK IN PROGRESS THAT WOULD REQUIRE DEVIATIONS AND ADDITIONAL COSTS FROM THE ORIGINAL CONSTRUCTION DOCUMENTS BEFORE PROCEEDING WITH WORK.
9. WHERE DEVICES ARE SHOWN SIDE BY SIDE CONTROLLING DIFFERENT VOLTAGES, PROVIDE SEPARATE BOX AND PLATE AS REQUIRED.
10. UNLESS OTHERWISE NOTED, ALL RECEPTACLES SHALL BE MOUNTED AT + 18" A.F.F. AND SWITCHES +48" A.F.F. TO CENTER OF DEVICE. COORDINATE MOUNTING OF OUTLETS OVER COUNTERS WITH ARCHITECTURAL ELEVATIONS BEFORE INSTALLATION.
11. ROUTE ALL CONDUCTORS IN CONDUIT PER NEC OR AUTHORITY HAVING JURISDICTION.
12. PROVIDE GALVANIZED RIGID CONDUIT ELBOWS WHERE STUBBED UP THROUGH SLAB. ALL EXPOSED EXTERIOR CONDUIT SHALL BE RIGID UNLESS NOTED OTHERWISE.
13. FEEDERS: CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED. INSTALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.
14. BRANCH CIRCUITS: CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS AND CEILINGS. CONDUIT AND EMT SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS SPECIFICALLY INDICATED. INSTALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.
15. ALL JUNCTION BOXES TO BE PERMANENTLY MARKED WITH CIRCUIT NUMBER ON OUTSIDE OF BOX WHEN ABOVE CEILING, AND ON INSIDE OF BOX WHEN CONCEALED IN WALL (NOT WITH MARKER).
16. ANY CONDUIT STUB-UPS FOR SPECIAL SYSTEMS AND OTHER EQUIPMENT SHALL HAVE ROUNDED PROTECTIVE BUSHINGS AT THE TOP OF CONDUIT.

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

RYAN N. GROGG 23690 — LICENSED PROFESSIONAL ENGINEER — OKLAHOMA — 7/24/2020

E001 ELECTRICAL LEAD-IN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	DB	07/24/2020	APPROVED:
DESIGNED	RG	07/24/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED		9.20	
DESIGN MANAGER			CITY ENGINEER

FILE: DRAWING: DATE: 10.02.20

ATLAS PAGE NO: 116 SHEET 53 OF 81 SHEETS

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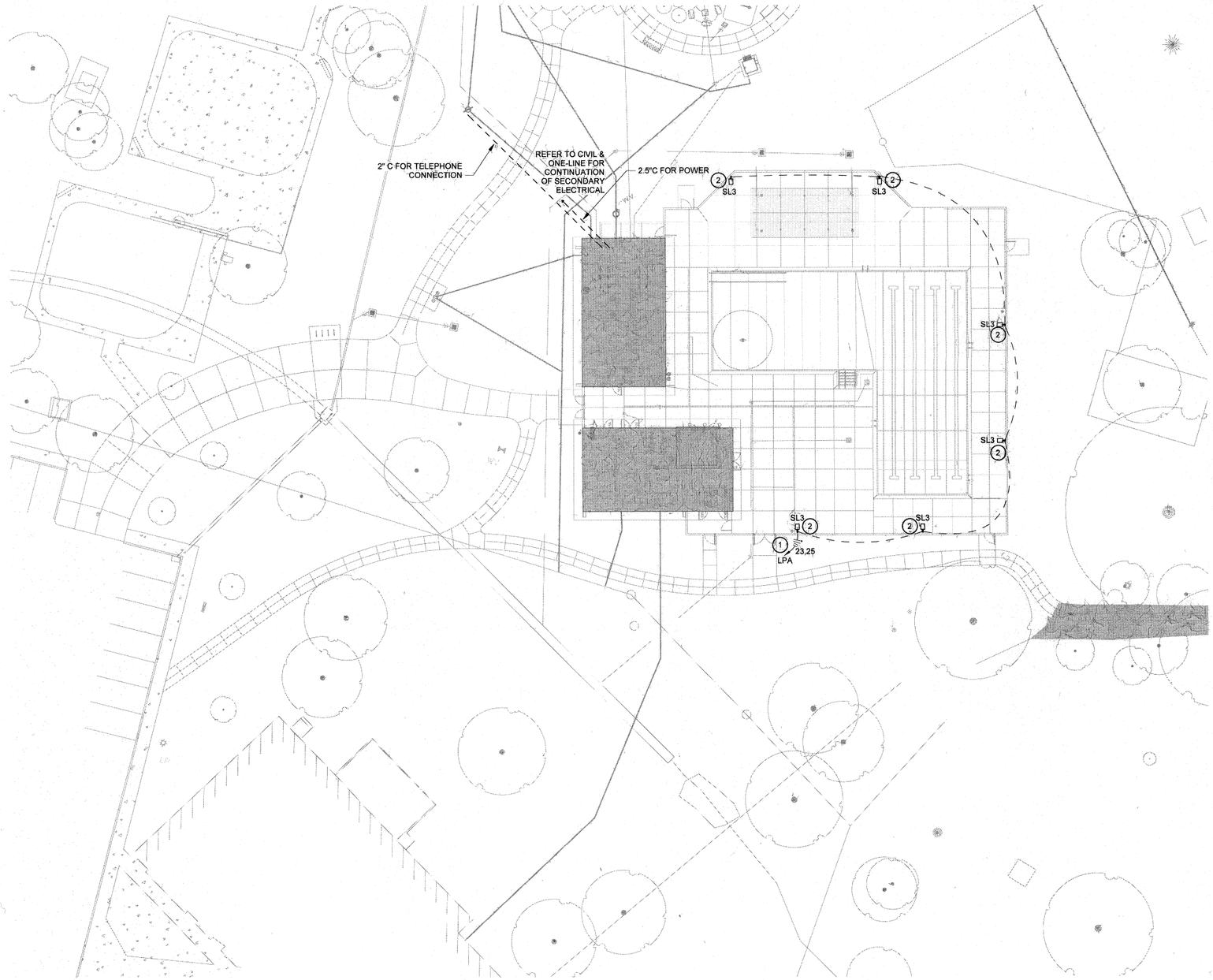
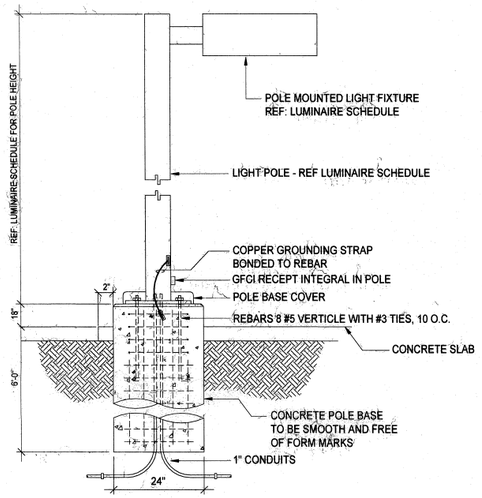
KEYNOTES	
1	WIRE THROUGH EXTERIOR LIGHTING CONTACTOR & ROOF MOUNTED PHOTOCELL.
2	WEATHER PROOF GFCI RECEPTACLE MOUNTED ON POLE.



A SITE LIGHTING PLAN
1" = 20'-0"



B POLE BASE DETAIL
N.T.S.

EDA+FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.358.6890 | f: 918.515.4338

RYAN N. GROGG 23690 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
7/24/2020

ES101 ELECTRICAL SITE PLAN

PROJECT NO. SP19-1
REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	DB	07/24/2020
DESIGNED	RG	07/24/2020
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED DESIGN MANAGER		9.20

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 116
SHEET 54 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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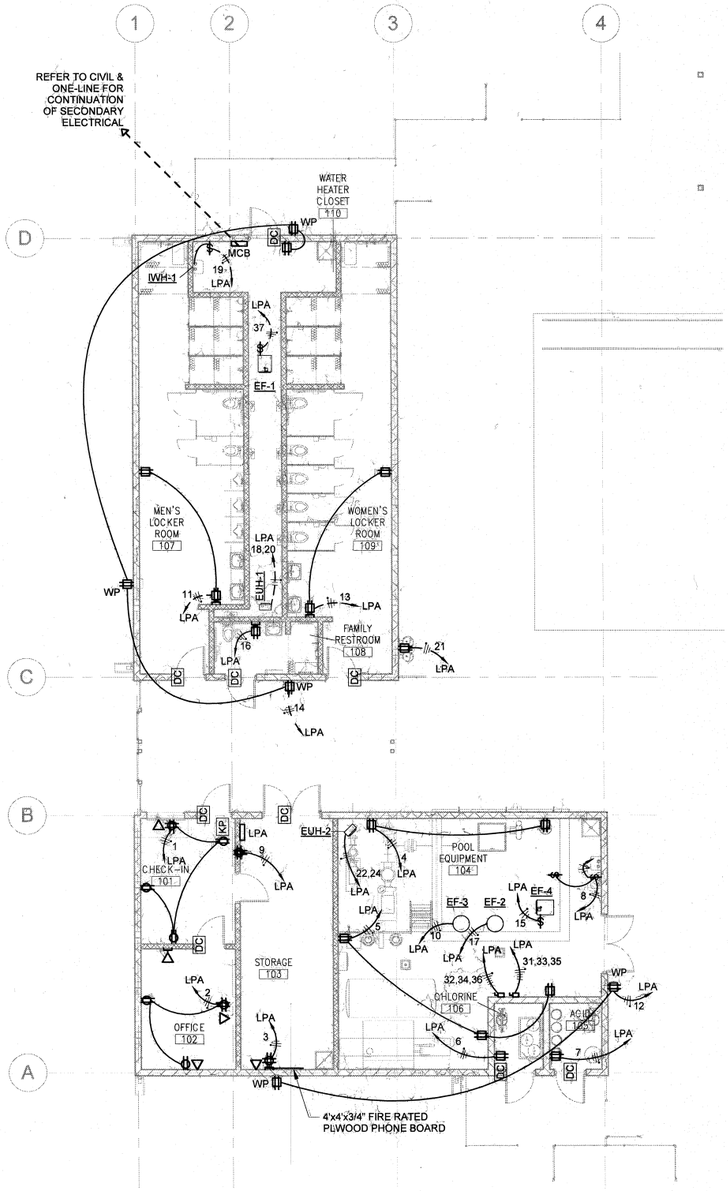
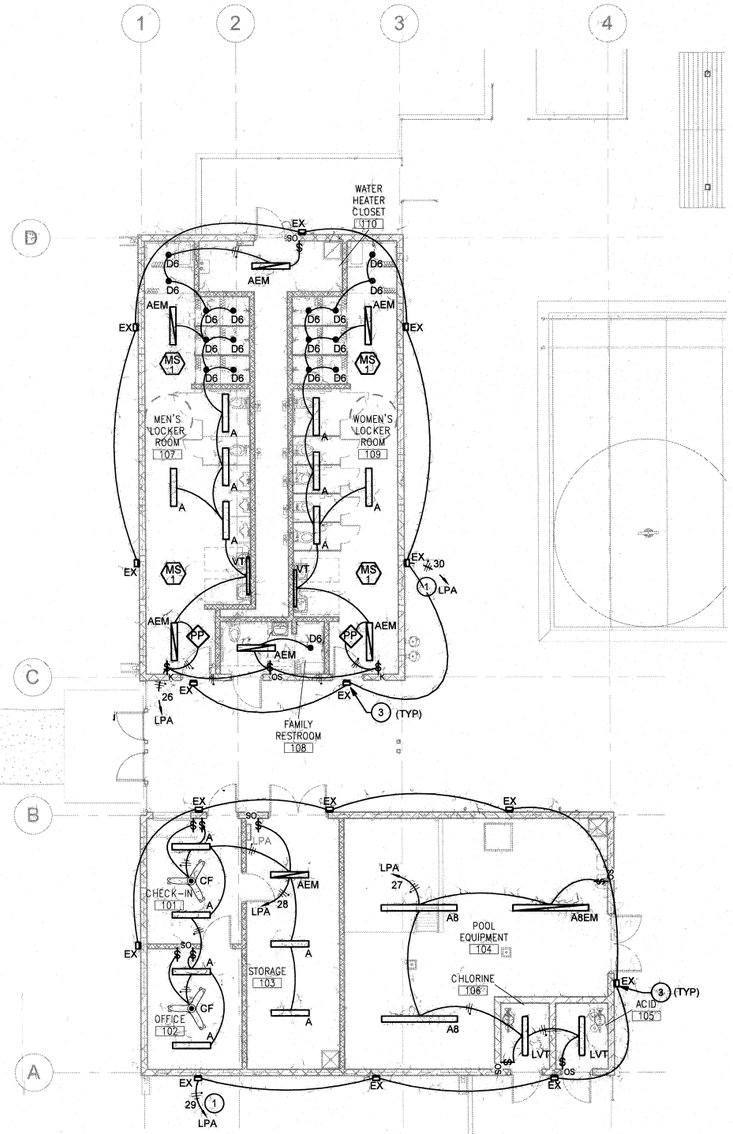
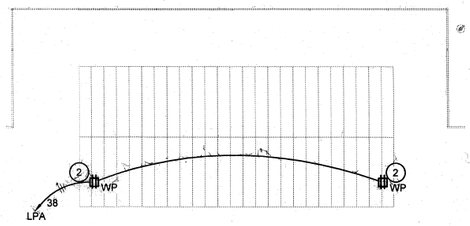
KEYNOTES	
1	WIRE THROUGH EXTERIOR LIGHTING CONTACTOR & ROOF MOUNTED PHOTOCELL.
2	MOUNT TO VERTICAL STRUCTURE @ 18" A.F.P. PROVIDE LOCKABLE COVERS.
3	COORDINATE EXACT MOUNTING LOCATION AND HEIGHT OF EXTERIOR LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS.



B POWER PLAN
1/8" = 1'-0"



A LIGHTING PLAN
1/8" = 1'-0"



C SHELTER POWER PLAN
1/8" = 1'-0"

NORTH 0' 4' 8' 16'

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EDA + FKI Engineers PC
Oklahoma C.A. 50
10810 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.8890 | f: 918.515.4338

RYAN N. GROGG 23690 LICENSED PROFESSIONAL ENGINEER OKLAHOMA 7/24/2020

E101 ELECTRICAL PLANS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
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VERTICAL

DRAWN	DB	07/24/2020	APPROVED:
DESIGNED	RG	07/24/2020	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED DESIGN MANAGER		9.20	CITY ENGINEER

FILE: DRAWING:
DATE: 10.02.20
ATLAS PAGE NO: 116
SHEET 55 OF 81 SHEETS

Concept Drawings GH2 PROJECT #:20180157

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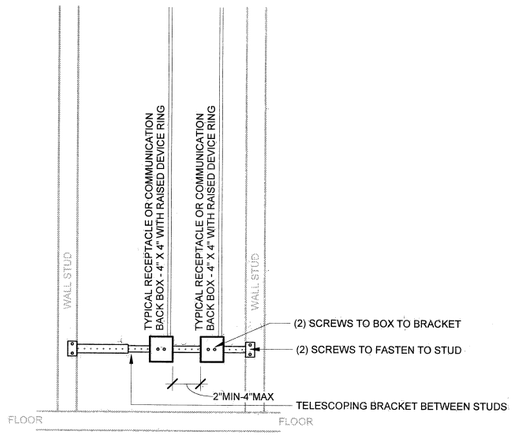
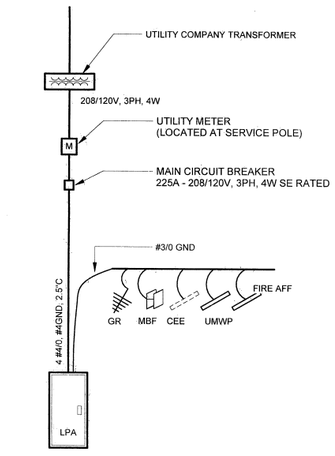


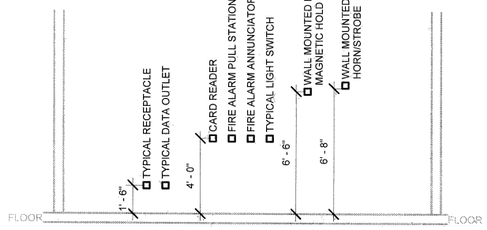
B Electrical Back Box Mounting Detail

NTS



A One Line Diagram

NTS



** THESE ARE TYPICAL MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.
REFERENCE PLAN SHEETS FOR PARTICULAR MOUNTING HEIGHTS.**

C Typical Electrical Device Mounting Heights Detail

1/4" = 1'-0"

Luminaire Schedule

TYPE	Manufacturer	Model	Approved Manufacturer's	Lamp	Apparent Load	Input Voltage	Mounting	Description	URL
A	Luminaire Lighting	VPF44404000CC120-277CPWHT		LED	36 VA			Utility LED Wraparound	
A8	Cooper Lighting	8VT2LD59DRWUNV		LED	36 VA			Utility LED Wraparound	www.eaton.com/lighting
A8EM	Cooper Lighting	8VT2LD59DRWUNV-EL10W		LED	36 VA			Utility LED Wraparound	www.eaton.com/lighting
AEM	Luminaire Lighting	VPF44404000CC120-277CPWHT-EMB10ST		LED	36 VA			Utility LED Wraparound	www.eaton.com/lighting
CF	Oxygen	3-103-6 Coda		LED	50 VA			White Finish	
D6	Halo Commercial	PD6-15-EDO10-PDM6B-940-61V-W		LED	18 VA			6" LED Recessed Downlight - 1500 Lumens	http://www.cooperindustries.com/content/public/en/lighting/products/recessed_commercial_downlighting/led/_851403.ssd.brands.lighting!commercial_halo!led.html#product-tabs
EX	Lumark	XTOR6B-W-BZ		LED	41 VA	Universal	Surface	LED Wall pack	http://www.cooperindustries.com/content/public/en/lighting/products/outdoor_wall_mount_lighting/_829374.ssd.brands.lighting!lumark!led.html#product-tabs
LVT	Cooper Lighting	4VT3LD54WUNVL840CD1SSL		LED	57 VA			2', 4' and 8' Industrial LED	www.eaton.com/lighting
SL3	McGraw-Edison	GLEON-AE-04-LED-E1-T3-BZ		LED	213 VA	Universal	Pole	Pole Mounted Street Light-Single Head-Type 3 Distribution	http://www.cooperindustries.com/content/public/en/lighting/products/area_site_lighting/_823028.ssd.html#product-tabs
VT	Luminaire Lighting	VPF44404000CC120-277CPWHT		LED	31 VA	Universal	Surface	VAPORTITE LED 4FT	http://www.cooperindustries.com/content/public/en/lighting/products/highbay_lowbay_industrials/led/_956994.ssd.html

Branch Panel: LPA

Location: STORAGE 103
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Receptacle CHECK-IN 101	20 A	1	900 VA	720 VA		1	20 A	Receptacle OFFICE 102	2
3	Receptacle STORAGE 103	20 A	1		360 VA	360 VA	1	20 A	Receptacle POOL EQUIPMENT 104	4
5	Receptacle POOL EQUIPMENT 104	20 A	1			540 VA	180 VA	1	20 A	Receptacle CHLORINE 106	6
7	Receptacle ACID 105	20 A	1	180 VA	0 VA		1	20 A	POOL EQUIPMENT 104	8
9	Receptacle STORAGE 103	20 A	1		360 VA	500 VA	1	20 A	Power POOL EQUIPMENT 104	10
11	Receptacle MEN'S LOCKER ROOM 107	20 A	1			360 VA	360 VA	1	20 A	Receptacle	12
13	Receptacle WOMEN'S LOCKER ROOM 109	20 A	1	360 VA	720 VA		1	20 A	Receptacle	14
15	EF-4	20 A	1		0 VA	180 VA	1	20 A	Receptacle FAMILY RESTROOM 108	16
17	Power POOL EQUIPMENT 104	20 A	1			500 VA	1500...	2	20 A	HVAC	18
19	WATER HEATER CLOSET 110	20 A	1	0 VA	1500...						20
21	Receptacle	20 A	1		180 VA	1500...					22
23	Site Lighting	20 A	2			639 VA	1500...	2	20 A	HVAC	24
25				639 VA	852 VA		1	20 A	Lighting MEN'S LOCKER ROOM 107	26
27	Lighting POOL EQUIPMENT 104	20 A	1		223 VA	652 VA	1	20 A	Lighting STORAGE 103	28
29	Lighting	20 A	1			328 VA	287 VA	1	20 A	Lighting	30
31				5000...	1866...						32
33	Power POOL EQUIPMENT 104	40 A	3		5000...	1866...	3	60 A	Power POOL EQUIPMENT 104	34
35						5000...	1866...				36
37	EF-1	20 A	1	0 VA	360 VA		1	20 A	Receptacle	38
39	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE	40
41	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	42
		Total Load:		12790 VA	10918 VA	12569 VA				
		Total Amps:		109 A	91 A	107 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	6000 VA	100.00%	6000 VA	
Lighting	3158 VA	100.00%	3158 VA	**Total Conn. Load:** 36254 VA
Other	400 VA	100.00%	400 VA	**Total Est. Demand:** 30503 VA
Power	21598 VA	73.15%	15799 VA	**Total Conn. Current:** 101 A
Receptacle	6120 VA	100.00%	6120 VA	**Total Est. Demand Current:** 85 A

Notes:

EDA + FKI ENGINEERS
EDA + FKI Engineers PC
Oklahoma C.A. 50
10610 E. 45th Street - Suite 201
Tulsa, OK 74146
p: 918.258.6890 | f: 918.515.4338

RYAN N. GROGG 23690 — LICENSED PROFESSIONAL ENGINEER — OKLAHOMA
7/24/2020

E601 ELECTRICAL SCHEDULES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
EDA + FKI ENGINEERS PC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	DB	07/24/2020
DESIGNED	RG	07/24/2020
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED		9.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 116
SHEET 56 OF 81 SHEETS

7/23/2020 11:45:50 AM

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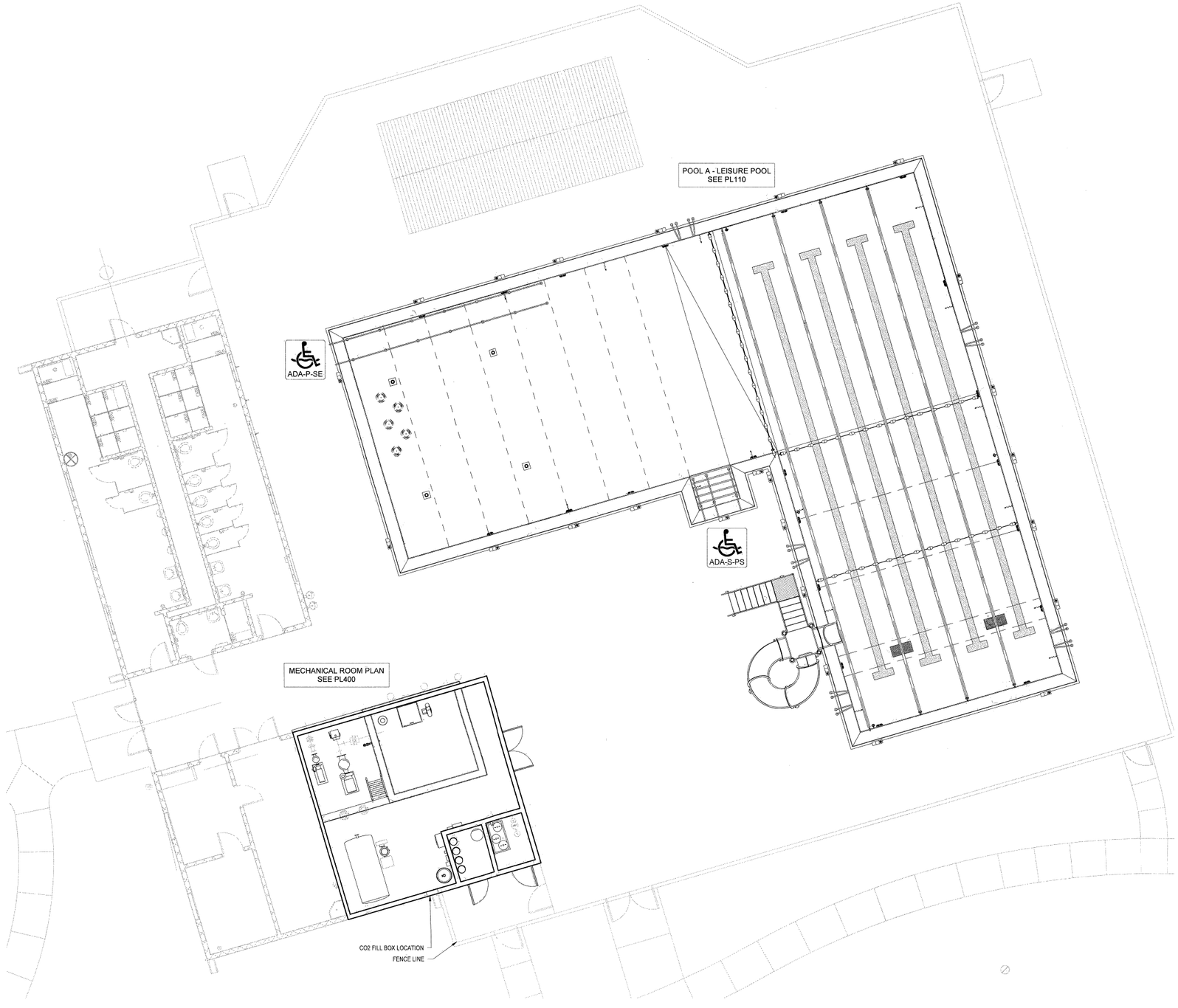

1 PL100 OVERALL AQUATIC LAYOUT PLAN VIEW
1/8" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR TO LOCATE LIFEGUARD CHAIRS AS REQUIRED PER STATE AND LOCAL CODES AND PER OWNER'S SAFETY CONSULTANT.
2. SCHEDULE QUANTITIES ARE SHOWN FOR VALUE ENGINEERING PURPOSES. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY QUANTITIES REQUIRED.
3. CONTRACTOR SHALL CONTACT ENGINEER FOR ELECTRONIC DRAWING FILES PRIOR TO COMMENCING POOL STAKING WORK.
4. ENGINEER WILL PROVIDE ELECTRONIC PLAN VIEW OF ALL POOLS IN AUTOCAD DRAWING FORMAT FOR CONTRACTOR'S USE TO LOCATE STRUCTURES AND RELATED POOL DECK EQUIPMENT.
5. REFER TO PL100 SERIES DRAWINGS FOR ALL POOL PLAN INFORMATION, RELATED EQUIPMENT, AND DETAILS.
6. REFER TO PL200 SERIES DRAWINGS FOR ALL POOL STRUCTURAL PLANS, RELATED INFORMATION, AND DETAILS.
7. REFER TO PL300 SERIES DRAWINGS FOR ALL POOL AND DRAIN PIPING AND RELATED INFORMATION AND DETAILS.
8. REFER TO PL400 SERIES DRAWINGS FOR ALL MECHANICAL EQUIPMENT INFORMATION AND RELATED DETAILS.
9. REFER TO PL500 SERIES DRAWINGS FOR ELECTRICAL SCHEMATICS AND P&IDs.

CODES, STANDARDS AND REGULATIONS:
CONTRACTOR SHALL BE FAMILIAR WITH ALL CODES AND STANDARDS LISTED BELOW AND ALERT THE ARCHITECT/ENGINEER TO CONFLICTS IN THE DRAWINGS

CODE JURISDICTION
TULSA, OKLAHOMA
TULSA COUNTY, OKLAHOMA

HEALTH & SAFETY CODE:
OKLAHOMA STATE DEPARTMENT OF HEALTH, CHAPTER 315, 12/31/1991
PUBLIC BATHING PLACE FACILITY STANDARDS AND PUBLIC BATHING PLACE OPERATIONS, CHAPTER 320, 12/31/1991

MODEL CODES:
2015 INTERNATIONAL SWIMMING POOL AND SPA CODE

ACCESSIBILITY STANDARDS AND REGULATIONS:

UNITED STATES:
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

SCHEDULE - SHEET LIST

SHEET NO.	SHEET NAME
PL100	OVERALL AQUATIC PLAN
PL101	GENERAL DETAILS AND SCHEDULES
PL110	POOL A - LEISURE POOL PLAN
PL111	POOL A - LEISURE POOL DIMENSION PLAN
PL112	POOL A - LEISURE POOL SECTIONS
PL113	POOL A- LEISURE POOL DETAILS
PL114	POOL A - LEISURE POOL DETAILS
PL200	STRUCTURAL NOTES, PLAN(S) AND SCHEDULE
PL211	STRUCTURAL DETAILS
PL212	STRUCTURAL GENERAL DETAILS
PL220	STRUCTURAL WALL DETAILS
PL300	OVERALL PIPING PLAN
PL301	PIPING DETAILS
PL310	POOL A-LEISURE POOL FILTRATION AND ACTIVITY PIPING PLAN
PL311	POOL A - LEISURE POOL GUTTER AND SUCTION PIPING PLAN
PL400	MECHANICAL EQUIPMENT PLAN
PL401	MECHANICAL SCHEDULE
PL402	MECHANICAL DETAILS
PL403	MECHANICAL DETAILS
PL404	MECHANICAL DETAILS
PL405	MECHANICAL DETAILS
PL406	MECHANICAL DETAILS
PL500	MECHANICAL SCHEMATIC
PL501	ELECTRICAL SCHEMATIC
PL600	PIPE PENETRATION

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WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18270

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
9/24/2020

PL100 - OVERALL AQUATIC PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

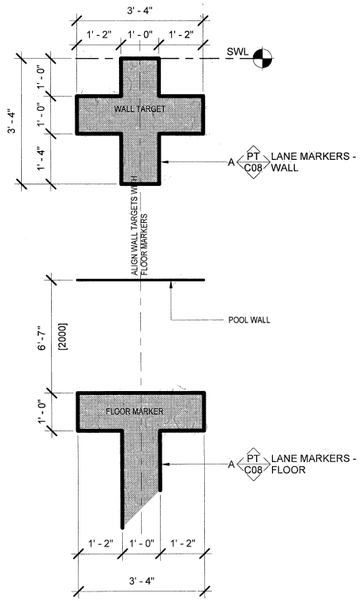
PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

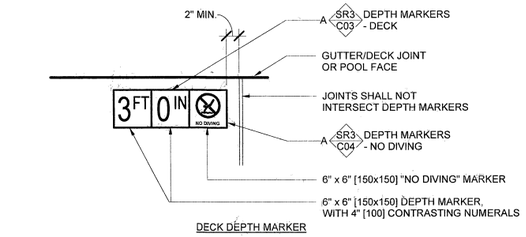
DRAWN	EWL	09/18/19	APPROVED:
DESIGNED	APP	09/18/19	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED: DESIGN MANAGER		9.20	CITY ENGINEER

FILE: DRAWING: DATE: 10.02.20
ATLAS PAGE NO: 192 SHEET 57 OF 81 SHEETS

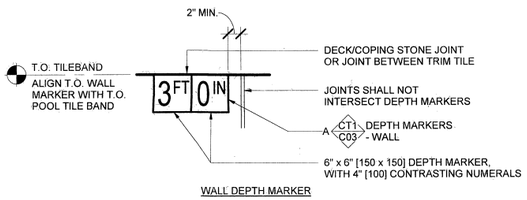


NOTES:
1. TILES SHALL BE INSTALLED SO THAT FINISHED FACE OF TILE IS FLUSH WITH FINISHED SURFACE OF POOL SURFACE
2. ALL TILES SHALL BE IN A CONTRASTING COLOR TO POOL FINISH, BOTH FLOOR AND WALL. CONFIRM TILE COLOR WITH OWNER/ARCHITECT

5 PL101 FLOOR MARKER AND WALL TARGET - USA SWIMMING DETAIL VIEW
1/2" = 1'-0"



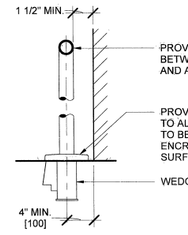
DECK DEPTH MARKER



WALL DEPTH MARKER

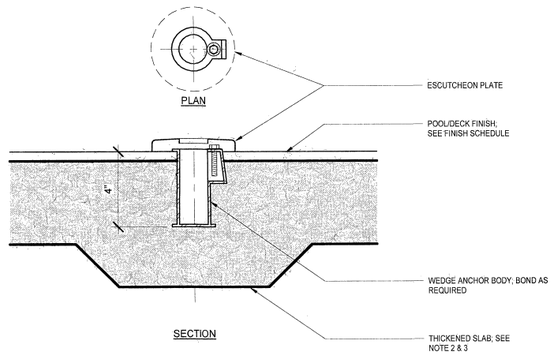
NOTES:
1. WALL DEPTH MARKER AT LOCATIONS AS INDICATED ON PLAN BY THIS SYMBOL.
2. EXCLUDE "NO DIVING" MARKER TILES AT POOL WALL DEPTH MARKER LOCATIONS AND AT POOL DEPTHS GREATER THAN 5'-0".
3. DEPTH MARKERS SHALL BE LEGIBLE FROM INSIDE THE POOL AND FROM THE POOL DECK.
4. THE POOL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING MARKINGS ACCURATE TO WITHIN ONE INCH OF THE CONSTRUCTED WATER DEPTHS AT LOCATIONS INDICATED ON PLAN AT A MAX. 25'-0" SPACING AND IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
5. DEPTH MARKER TEXT SHALL INDICATE THE ACTUAL POOL DEPTH WITHIN 3" AT NORMAL OPERATING WATER LEVEL WHEN MEASURED 3'-0" FROM POOL WALL. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING PROPER TEXT FOR EACH MARKER LOCATION.
6. MARKINGS SHALL BE INSTALLED FLUSH WITH SURROUNDING SURFACES AND RECESSED IF NECESSARY.
7. ALL MARKINGS INSTALLED ON HORIZONTAL SURFACES SHALL HAVE A SLIP RESISTANT FINISH.

2 PL101 DEPTH MARKER DECK & WALL DETAIL VIEW
1" = 1'-0"



NOTES:
1. CONTRACTOR TO PURCHASE AND INSTALL RAIL GOODS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS OF PARTIES HAVING JURISDICTION.
2. CONTRACTOR TO VERIFY HANDRAIL DIMENSIONS PRIOR TO FABRICATION.

4 PL101 RAILING OFFSET TO ADJACENT SURFACE DETAIL VIEW
3/4" = 1'-0"



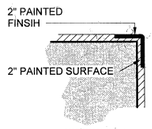
SECTION

NOTES:
1. INSTALL ANCHORS IN LINE WITH RAIL.
2. CONCRETE CLEAR COVER AT ANCHOR SHALL BE 3" MINIMUM. THICKEN SLAB IF NECESSARY TO ACHIEVE MINIMUM COVER.
3. WHEN SECOND LAYER OF CONCRETE IS LOCATED DIRECTLY BELOW SLAB IN WHICH ANCHOR IS PLACED (I.E. STAIRS), CLEAR COVER OF CONCRETE AT ANCHOR IN UPPER SLAB SHALL BE 2" MINIMUM.

3 PL101 ANCHOR DETAIL - WEDGE DETAIL VIEW
3" = 1'-0"

LEGEND - FINISHES & COLOR CODES - POOL A

AREA	FINISHES FINISH ID	FINISHES FINISH	COLORS COLOR ID	COLORS COLOR	NOTES
DECK BAND	SR1	1"x1" SLIP RESISTANT TILE	C01	AS SELECTED BY ARCHITECT	
DEPTH MARKERS - DECK	SR3	6"x6" SLIP RESISTANT TILE	C03	BLACK ON WHITE	
DEPTH MARKERS - NO DIVING	SR3	6"x6" SLIP RESISTANT TILE	C04	BLACK AND RED ON WHITE	
DEPTH MARKERS - WALL	CT1	6"x6" CERAMIC TILE	C03	BLACK ON WHITE	
HANDHOLD	HHP	PVC HANDHOLD	C01	AS SELECTED BY ARCHITECT	
HORIZONTAL SURFACE (WET)	PT	EPOXY PAINT	C06	LIGHT COLOR	RAMUC HI-BUILD EPOXY POOL PAINT WITH NON-SLIP FINISH; WHITE
LANE MARKERS - FLOOR	PT	EPOXY PAINT	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	RAMUC HI-BUILD EPOXY POOL PAINT WITH NON-SLIP FINISH; BLACK
LANE MARKERS - WALL	PT	EPOXY PAINT	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	RAMUC HI-BUILD EPOXY POOL PAINT WITH NON-SLIP FINISH; BLACK
TILE - WATERLINE	KT1	1"x1" KEYSTONE TILE	C01	AS SELECTED BY ARCHITECT	
TRIM CONTRASTING	PT	EPOXY PAINT	C08	AS SELECTED BY ARCHITECT	RAMUC HI-BUILD EPOXY POOL PAINT WITH NON-SLIP FINISH; BLACK IN COLOR TYPE A
VERTICAL SURFACE (WET)	PT	EPOXY PAINT	C06	LIGHT COLOR	RAMUC HI-BUILD EPOXY POOL PAINT WITH NON-SLIP FINISH; WHITE

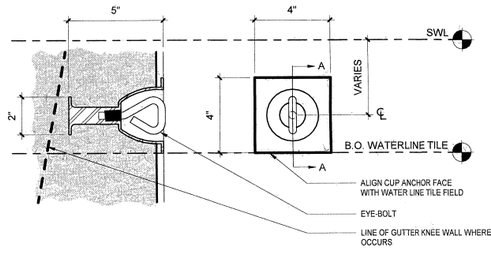


NOSING TYPE A

NOTES:
1. FINISHES PER SCHEDULE UNLESS OTHERWISE INDICATED.
2. ALL HORIZONTAL FINISHES TO BE SLIP-RESISTANT.
3. NOSING TYPE A: 2" MIN. CONTRASTING TILE BAND REQUIRED ON TREAD NOSING UNLESS OTHERWISE NOTED.
4. ALL PERIMETER OVERFLOW GUTTER LIP TO ERANCES SHALL BE INSTALLED LEVEL +/-1/16" MAXIMUM ELEVATON TOLERANCES UNLESS OTHERWISE SPECIFIED.

SCHEDULE - SAFETY & MAINTENANCE EQUIPMENT

QTY	PRODUCT NAME	MANUFACTURER	NOTES
1	25 PERSON AQUATIC FIRST AID KIT	WATER SAFETY PRODUCTS	25 PERSON OSHA FIRST AID KIT TO INCLUDE BIOHAZARD COMPLIANCE RESPONSE AND CPR MICROMASK WITH NITRILE GLOVES
1	AUTOMATIC VACUUM CLEANING SYSTEM	AQUAPRODUCTS ULTRAMAX GEMINI	AUTOMATIC CLEANER, RADIO REMOTE CONTROL, ULTRAKART CADDY, DIGITAL TIMER DISPLAY, 120 FT CORD
1	EMERGENCY PHONE	BY OTHERS	EMERGENCY PHONE WITH EMERGENCY NUMBERS POSTED
2	LIFE BUOY	WATER SAFETY PRODUCTS	30" DIA, MADE OF UNICELL SOFT FOAM WITH HARD SHELL COVERING
2	LIFE HOOK & RESCUE POLE	WATER SAFETY PRODUCTS	ANODIZED ALUMINUM POLE, WITH DOUBLE LIFE HOOK. 2 - 8 FEET SECTIONS WITH CONNECTOR & RUBBER END CAP
1	MANUAL VACUUM CLEANING SYSTEM	WILDCAT E.1	SELF CONTAINED, PORTABLE SWIMMING POOL VACUUM SYSTEM. PROVIDE WITH LARGE MARINE BATTERY BOX, STANDARD DEBRIS BAG, SUPERFINE DEBRIS BAG (HH1508) MK POWER DEEP CYCLE, VLRA MARINE GEL BATTERY, SERIES SIZE 27. PROVIDE NOCO G7200 BATTERY CHARGER (HH1900)
5	RESCUE TUBE	WATER SAFETY PRODUCTS	50" LONG x 6" WIDE x 4" THICK. NO CLIPS, NO RINGS. 2" WIDE ADJUSTABLE SHOULDER STRAP , CONNECTED TO TUBE BY 1" STRAPPING. STRAPPING EXTENDS COMPLETELY THROUGH LENGTH OF TUBE.
1	SPINEBOARD W/ HEAD IMMOBILIZER	WATER SAFETY PRODUCTS	X-RAY TRANSLUCENT BACKBOARD WITH HEAD IMMOBILIZER AND BODY STRAPS
5	THROW LINE	WATER SAFETY PRODUCTS	60' MARINE POLYPRO LINE, WITH 3" x 5" LEMON FLOAT
1	WATER TEST KIT	TAYLOR "SERVICE COMPLETE"	FAS DPD CHLORINE KIT



SECTION A-A FRONT VIEW

1 PL101 ANCHOR DETAIL - ROPE CUP DETAIL VIEW
3" = 1'-0"

TAG LEGEND

DRAIN TAG (A-D1): POOL IDENTIFIER; DRAIN DESIGNATOR; DRAIN IDENTIFIER

POOL EQUIPMENT TAG (A01): POOL IDENTIFIER; EQUIPMENT IDENTIFIER

PIPE TAG (P1-20A): LINE TYPE IDENTIFIER; SYSTEM IDENTIFIER; PIPE IDENTIFIER; POOL IDENTIFIER

DIMENSION TAG (100): POINT LOCATION; POINT IDENTIFIER

MECHANICAL EQUIPMENT TAG (P1A): EQUIPMENT IDENTIFIER; SYSTEM IDENTIFIER; POOL IDENTIFIER

ELEVATION TAG: ELEVATION; 100.00 REFERENCE; LOCATION

WATER FEATURE TAG (F01): FEATURE DESIGNATOR; EQUIPMENT IDENTIFIER

POOL STRUCTURAL TAG (AH1): POOL IDENTIFIER; WALL TYPE IDENTIFIER

POOL FIXTURE TAG (A-PF01): POOL IDENTIFIER; POOL FIXTURE DESIGNATOR; EQUIPMENT IDENTIFIER

REVISION TAG (1): REVISION NUMBER

POOL FINISH TAG: FINISH TYPE ID; POOL IDENTIFIER; FINISH COLOR ID; FINISH DESCRIPTION — A QA C01 WATERLINE TILE

DIMENSIONAL UNITS: IMPERIAL UNITS (7/8"); METRIC UNITS (mm)

POOL ACCESSIBILITY TAG (ADA-P-SE): P = PRIMARY; S = SECONDARY; MEANS OF ACCESS

ABBREVIATIONS

B.O.	- BOTTOM OF	P&ID	- PIPING & INSTRUMENTATION DIAGRAM
CJ	- CONTROL JOINT	PL	- POOL LIFT
DIA	- DIAMETER	PS	- POOL STAIRS
EJ	- EXPANSION JOINT	PT	- PAINT
EW	- EACH WAY	SCH	- SCHEDULE
FFE	- FINISH FLOOR ELEVATION	SE	- SLOPED ENTRY
ID	- INSIDE DIAMETER	SS	- STAINLESS STEEL
MAX	- MAXIMUM	SWL	- STATIC WATER LEVEL
MIN	- MINIMUM	T.O.	- TOP OF
NIC	- NOT IN CONTRACT	TS	- TRANSFER SYSTEM
NC	- NORMALLY CLOSED	TUBC	- TRUE UNION CHECK VALVE
NO	- NORMALLY OPEN	TUBV	- TRUE UNION BALL VALVE
NPS	- NOMINAL PIPE SIZE	TW	- TRANSFER WALL
OC	- ON CENTER	TYP	- TYPICAL
OD	- OUTSIDE DIAMETER	WD	- WATER DEPTH
OWE	- OPERATING WATER ELEVATION		

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18270
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LICENSED PROFESSIONAL ENGINEER
HALEY A. GONRAD
24356
OKLAHOMA
7/24/2020

PL101 - GENERAL DETAILS AND SCHEDULES

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

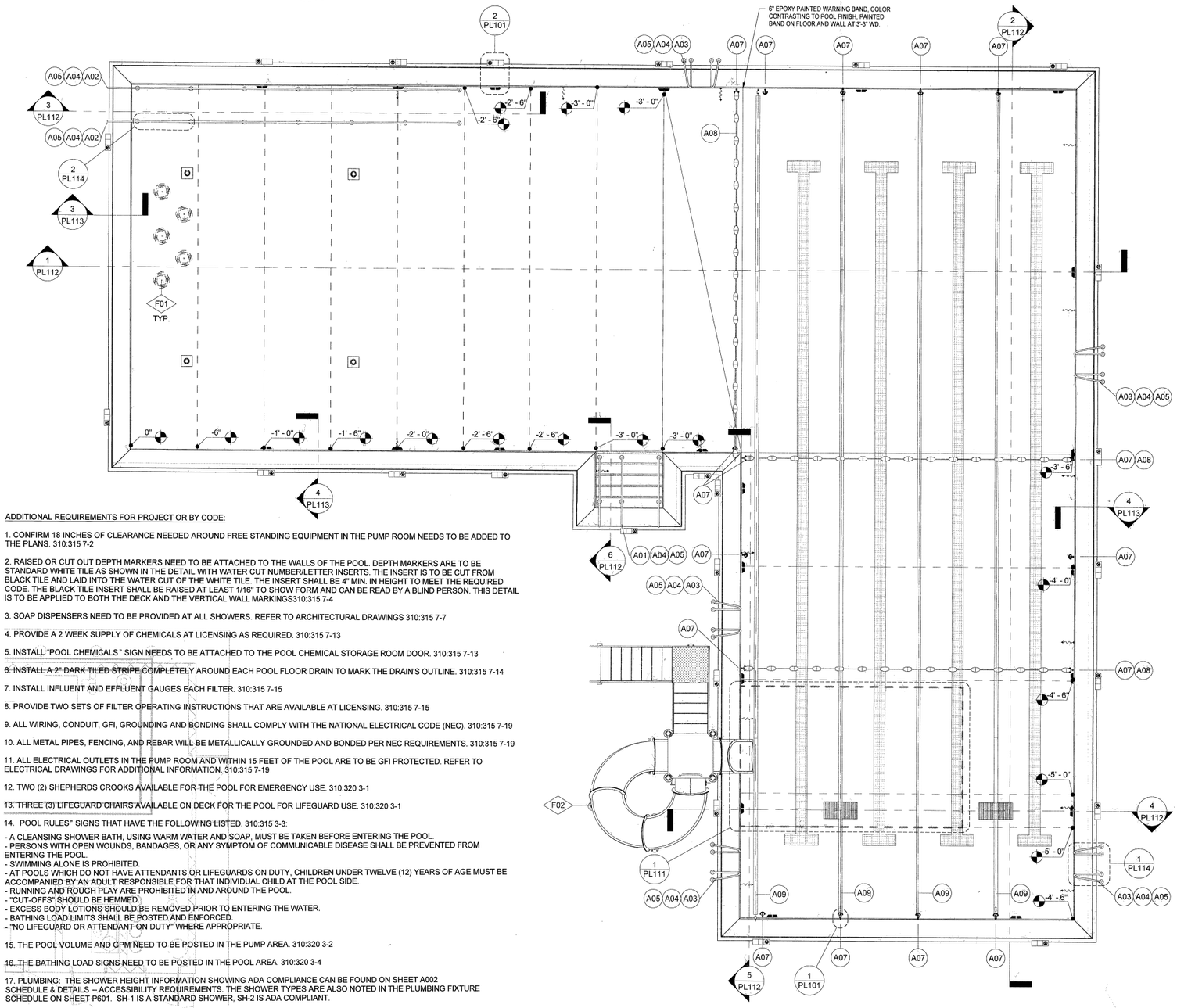
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE: HORIZONTAL: VERTICAL

DRAWN	Author	07/18/14
DESIGNED	Designer	07/18/14
SURVEY		
PROJ. MGR.	CED	8/20
LEAD ENGR.	DAH	8/20
FIELD MGR.	DJM	8/20
RECOMMENDED	HAJ	9.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER

FILE: DRAWING:
DATE: 10.02.20
ATLAS PAGE NO: 192
SHEET 58 OF 81 SHEETS



1 PL110 POOL A - LEISURE POOL PLAN VIEW
3/16" = 1'-0"

ADDITIONAL REQUIREMENTS FOR PROJECT OR BY CODE:

1. CONFIRM 18 INCHES OF CLEARANCE NEEDED AROUND FREE STANDING EQUIPMENT IN THE PUMP ROOM NEEDS TO BE ADDED TO THE PLANS. 310:315 7-2

2. RAISED OR CUT OUT DEPTH MARKERS NEED TO BE ATTACHED TO THE WALLS OF THE POOL. DEPTH MARKERS ARE TO BE STANDARD WHITE TILE AS SHOWN IN THE DETAIL WITH WATER CUT NUMBER/LETTER INSERTS. THE INSERT IS TO BE CUT FROM BLACK TILE AND LAID INTO THE WATER CUT OF THE WHITE TILE. THE INSERT SHALL BE 4" MIN. IN HEIGHT TO MEET THE REQUIRED CODE. THE BLACK TILE INSERT SHALL BE RAISED AT LEAST 1/16" TO SHOW FORM AND CAN BE READ BY A BLIND PERSON. THIS DETAIL IS TO BE APPLIED TO BOTH THE DECK AND THE VERTICAL WALL MARKINGS310:315 7-4

3. SOAP DISPENSERS NEED TO BE PROVIDED AT ALL SHOWERS. REFER TO ARCHITECTURAL DRAWINGS 310:315 7-7

4. PROVIDE A 2 WEEK SUPPLY OF CHEMICALS AT LICENSING AS REQUIRED. 310:315 7-13

5. INSTALL "POOL CHEMICALS " SIGN NEEDS TO BE ATTACHED TO THE POOL CHEMICAL STORAGE ROOM DOOR. 310:315 7-13

6. INSTALL A 2" DARK TILED STRIPE COMPLETELY AROUND EACH POOL FLOOR DRAIN TO MARK THE DRAIN'S OUTLINE. 310:315 7-14

7. INSTALL INFLUENT AND EFFLUENT GAUGES EACH FILTER. 310:315 7-15

8. PROVIDE TWO SETS OF FILTER OPERATING INSTRUCTIONS THAT ARE AVAILABLE AT LICENSING. 310:315 7-15

9. ALL WIRING, CONDUIT, GFI, GROUNDING AND BONDING SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC). 310:315 7-19

10. ALL METAL PIPES, FENCING, AND REBAR WILL BE METALLICALLY GROUNDED AND BONDED PER NEC REQUIREMENTS. 310:315 7-19

11. ALL ELECTRICAL OUTLETS IN THE PUMP ROOM AND WITHIN 15 FEET OF THE POOL ARE TO BE GFI PROTECTED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. 310:315 7-19

12. TWO (2) SHEPHERDS CROOKS AVAILABLE FOR THE POOL FOR EMERGENCY USE. 310:320 3-1

13. THREE (3) LIFEGUARD CHAIRS AVAILABLE ON DECK FOR THE POOL FOR LIFEGUARD USE. 310:320 3-1

14. POOL RULES" SIGNS THAT HAVE THE FOLLOWING LISTED. 310:315 3-3:

- A CLEANSING SHOWER BATH, USING WARM WATER AND SOAP, MUST BE TAKEN BEFORE ENTERING THE POOL.
- PERSONS WITH OPEN WOUNDS, BANDAGES, OR ANY SYMPTOM OF COMMUNICABLE DISEASE SHALL BE PREVENTED FROM ENTERING THE POOL.
- SWIMMING ALONE IS PROHIBITED.
- AT POOLS WHICH DO NOT HAVE ATTENDANTS OR LIFEGUARDS ON DUTY, CHILDREN UNDER TWELVE (12) YEARS OF AGE MUST BE ACCOMPANIED BY AN ADULT RESPONSIBLE FOR THAT INDIVIDUAL CHILD AT THE POOL SIDE.
- RUNNING AND ROUGH PLAY ARE PROHIBITED IN AND AROUND THE POOL.
- "CUT-OFFS" SHOULD BE HEMMED.
- EXCESS BODY LOTIONS SHOULD BE REMOVED PRIOR TO ENTERING THE WATER.
- BATHING LOAD LIMITS SHALL BE POSTED AND ENFORCED.
- "NO LIFEGUARD OR ATTENDANT ON DUTY" WHERE APPROPRIATE.

15. THE POOL VOLUME AND GPM NEED TO BE POSTED IN THE PUMP AREA. 310:320 3-2

16. THE BATHING LOAD SIGNS NEED TO BE POSTED IN THE POOL AREA. 310:320 3-4

17. PLUMBING: THE SHOWER HEIGHT INFORMATION SHOWING ADA COMPLIANCE CAN BE FOUND ON SHEET A002 SCHEDULE & DETAILS – ACCESSIBILITY REQUIREMENTS. THE SHOWER TYPES ARE ALSO NOTED IN THE PLUMBING FIXTURE SCHEDULE ON SHEET P601. SH-1 IS A STANDARD SHOWER, SH-2 IS ADA COMPLIANT.

POOL A-LEISURE DATA

DESCRIPTION	QTY	UNITS		
POOL PERIMETER	330	FEET		
WATER SURFACE AREA	4,103	SQUARE FEET		
POOL VOLUME	97,096	GALLONS		
SURGE TANK - POOL SURGE VOLUME	4,408	GALLONS		
SURGE FACTOR	1.1	GAL/SFT		
SURGE TANK - SLIDE STORAGE VOLUME	80	GALLONS		
CIRCULATION RATE	898	GPM		
TURNOVER/VOLUME/FLOW	60 MIN.	9,858 GAL.	171	GPM
TURNOVER/VOLUME/FLOW	120 MIN.	87,238 GAL.	727	GPM
FILTRATION RATE	12.57	GPM/FT²		
BACKWASH RATE	536	GPM		
PATRON LOAD	273	PERSONS		

SCHEDULE - WATER FEATURE - POOL A

POOL ID	FEATURE ID	FEATURE	QTY	MANUFACTURER	DESCRIPTION	GPM (ea)	GPM (Total)
A	F01	WATER GEYSER	5	CUSTOM	FIELD FABRICATED WATER GEYSER	25	125
A	F02	WATER SLIDE	1	NATURAL STRUCTURES	NATURAL STRUCTURES MODEL 1677-32. 32" ID FIBERGLASS WATER SLIDE FLUME, ULTRA VIOLET STABILIZED GEL COAT	40	40

SCHEDULE - BASIS OF DESIGN - POOL A

POOL ID	EQUIPMENT ID	EQUIPMENT	QTY	MANUFACTURER	DESCRIPTION
A	01	HAND RAILS	3	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CUSTOM FABRICATED, 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	02	RAMP RAILS	2	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CUSTOM FABRICATED, 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	03	GRAB RAILS (PAIRS)	5	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	PRETZEL BEND STYLE, 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	04	WEDGE ANCHOR	40	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CAST BRONZE, 4-1/4" LONG, ACCEPTS 1.500" OD TUBING
A	05	ESCUTCHEON PLATE	40	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	STAINLESS STEEL ROUND ESCUTCHEON FOR 1.50" O.D. RAILS
A	06	IN-WALL STEPS	17	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	17-1/2" x 6", INJECTION MOLDED PLASTIC, PEBBLE TEXTURE, 1/4" WALL THICKNESS
A	07	CUP ANCHOR	16	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	4" SQUARE 304L SS ANCHOR AND 304L SS EYE BOLT
A	08	SAFETY ROPE	3	PARAGON AQUATICS	20mm POLYETHYLENE ROPE WITH 125mm X 225mm HANDI-LOCK FLOAT, VERIFY LENGTH WITH PLANS
A	09	LANE DIVIDERS	4	COMPETITOR SWIM PRODUCTS	4" WAVE QUELLING RACING LANE LINE, COLORS BY OWNER / ARCHITECT

SLIDE INFORMATION:

SLIDE TYPE: SINGLE 32" ID CLOSED FIBERGLASS FLUME SLIDE WITH 270° TURN

SLIDE LENGTH: 29'-1"

SLIDE HEIGHT: 8'-6"

SLIDE FLOW: 20 TO 40 GPM

TOWER INFORMATION:

TOWER HEIGHT: 8'-6"

TOWER MATERIAL: NORTH STAR SERIES: MILD STEEL WITH CHEMICAL RESISTANT AQUA-KOTE UNDERCOATING AND POLESTER POWDER COAT TOPCOAT. NOTE: PLATFORM AND STAIR TREADS ARE TEXTURED AQUA-PLAST COATED ALUMINUM. TOWER ROOK MATERIAL IS FABRIC. FACTORY INSTALLATIONOR ON-SITE TECHNICAL ASSISTANCE.

STAIRS: 36' WIDTH, INNER HANDRAILS (IF APPICABLE); STAIR CONFIGURATION ARE AVAILABLE IN MANY VARIATIONS.

RAILING INFORMATION:

RAILING TYPE: UNPAINTED 304 STAINLESS STEEL WITH 316 STAINLESS STEEL FASTENERS

NOTES:

1. INCLUDE A LOCKING GATE AT ENTRY TO STAIR TOWER
2. PROVIDE DECK MOUNTED RAILING SYSTEM AROUND ANY OBSTRUCTION FROM SLIDE OR SUPPORT SYSTEM WHICH ARE LOWER THAN 7'-0" FROM DECK ELEVATION

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100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18270

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HALEY A. CONRAD 24356 OKLAHOMA PROFESSIONAL ENGINEER 7/24/2020

PL110 - POOL A - LEISURE POOL PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

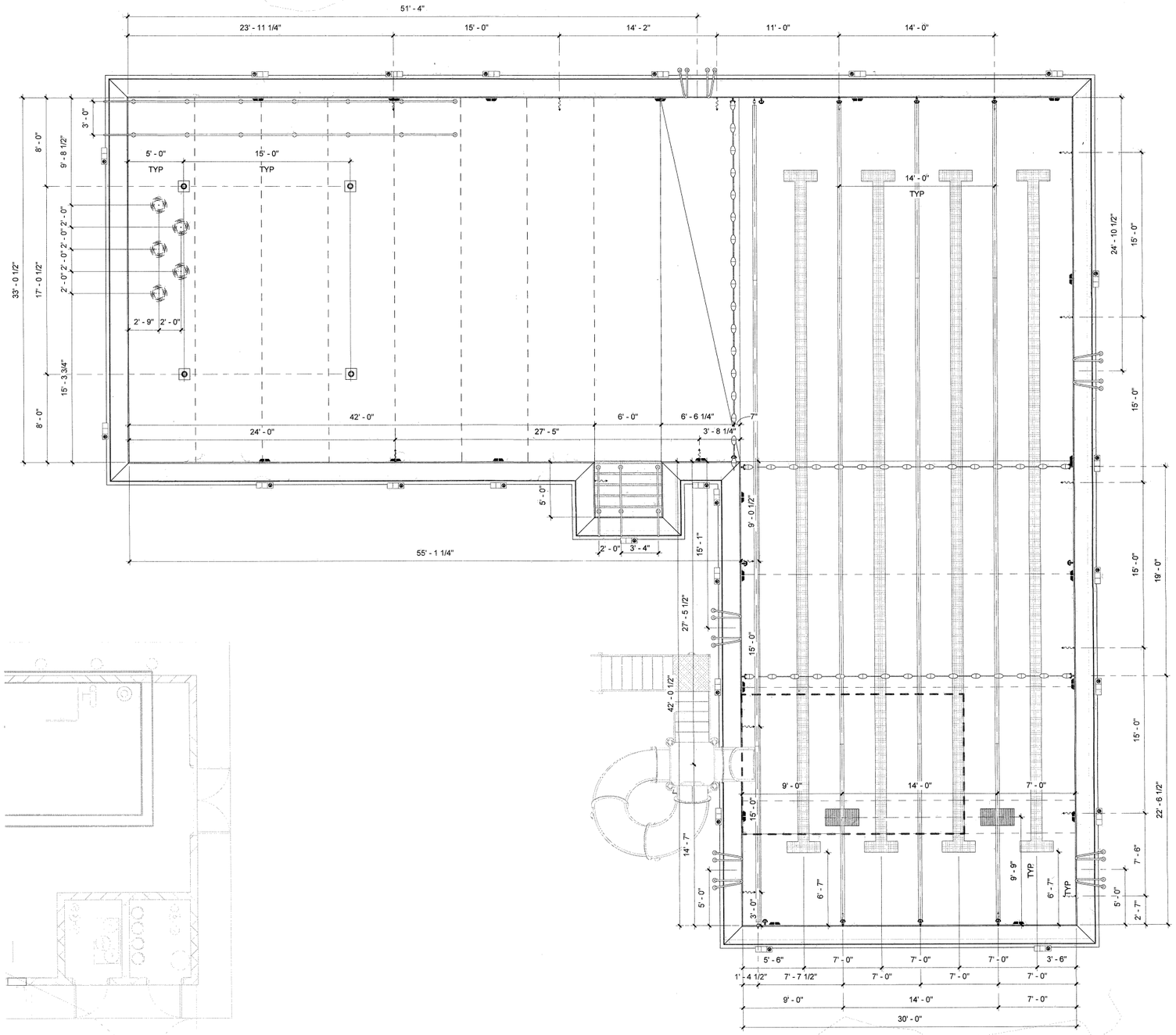
DRAWN	EWL	07/18/14	APPROVED:
DESIGNED	APP	07/18/14	
SURVEY			
PROJ. MGR.	GC	8/20	
LEAD ENGR.	MAH	8/20	
FIELD MGR.	DAW	8/20	
RECOMMENDED: DESIGN MANAGER	HAS	9.20	CITY ENGINEER

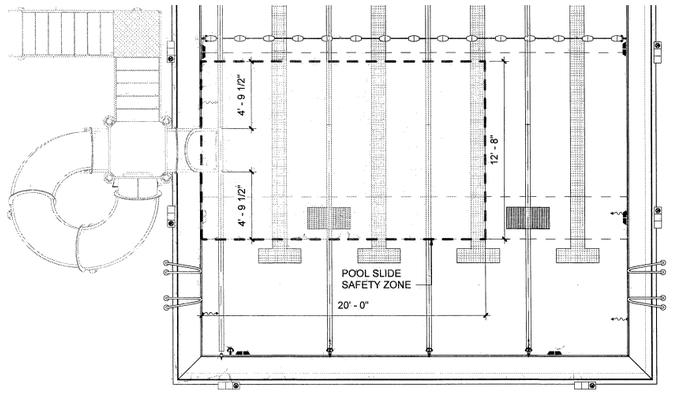
FILE: DRAWING:
ATLAS PAGE NO: 192

DATE: 10.02.20
SHEET 59 OF 81 SHEETS

DIMENSIONING NOTES:

1. ALL DIMENSIONS ARE SHOWN FROM POOL FINISH TO POOL FINISH (THIS SHEET)





1 PL111 POOL A - LEISURE POOL SLIDE ENTRY SAFETY ZONE DIMENSION PLAN VIEW
3/16" = 1'-0"

2 PL111 POOL A - LEISURE POOL DIMENSION PLAN PLAN VIEW
3/16" = 1'-0"

N

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

REVISION	BY	DATE

PL111 - POOL A - LEISURE POOL DIMENSION PLAN

PROJECT NO. SP19-1

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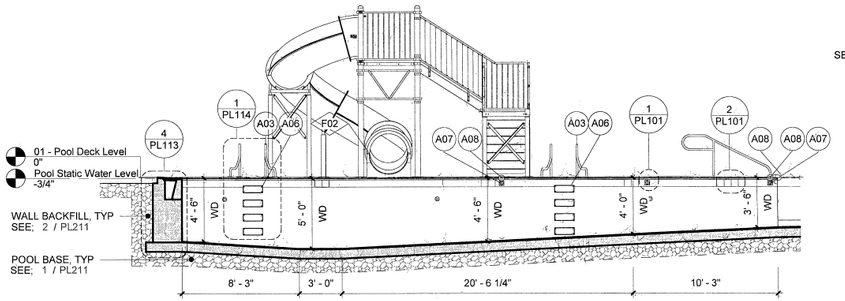
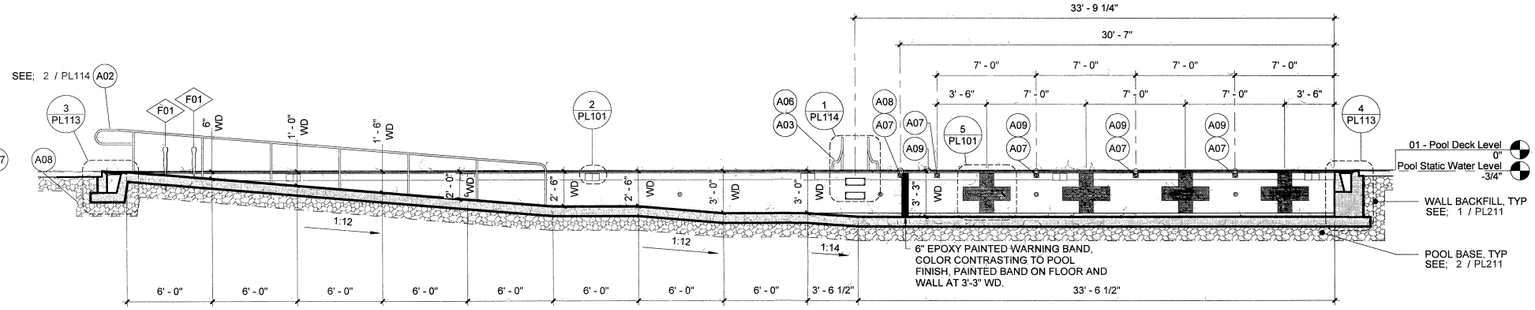
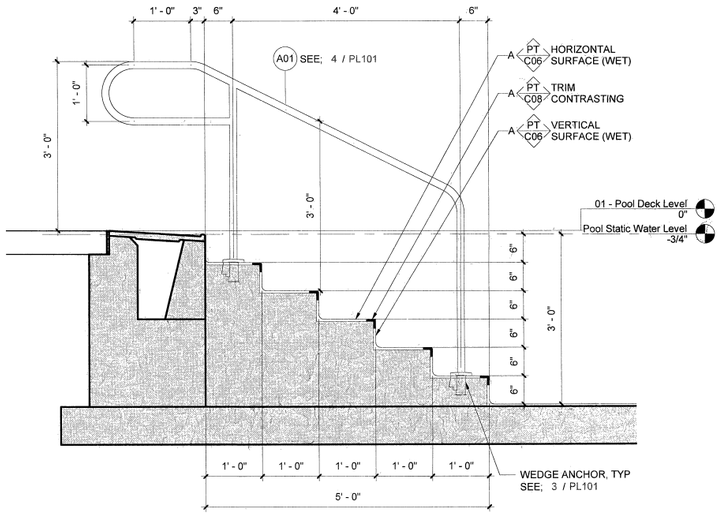
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	GB	8/20	
HORIZONTAL:	LEAD ENGR.	[illegible]	8/20	
	FIELD MGR.	[illegible]	8/20	
VERTICAL	RECOMMENDED:	HAS	9.20	CITY ENGINEER
	DESIGN MANAGER			
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 60 OF 81 SHEETS



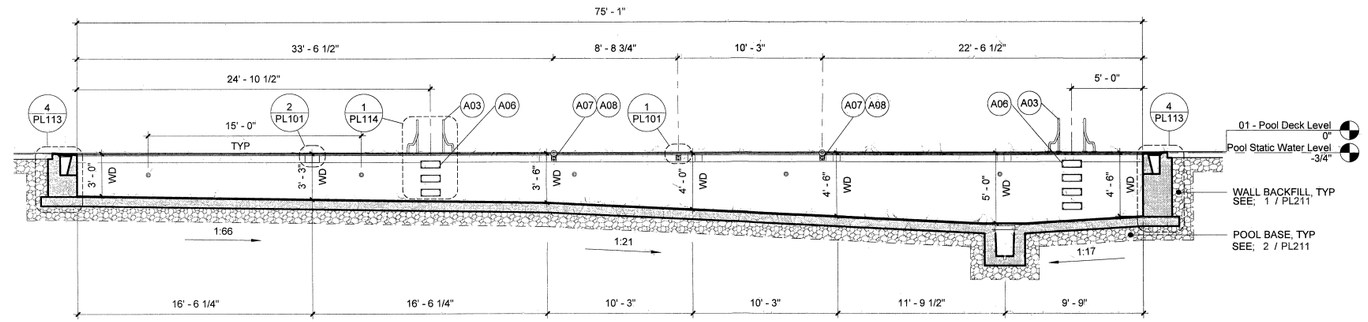
5 | PL112 | POOL A - LEISURE POOL SECTION VIEW
3/16" = 1'-0"



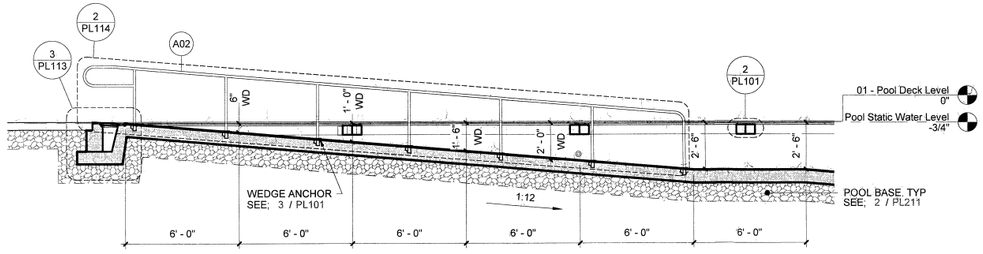
1 | PL112 | POOL A - LEISURE POOL SECTION VIEW
3/16" = 1'-0"



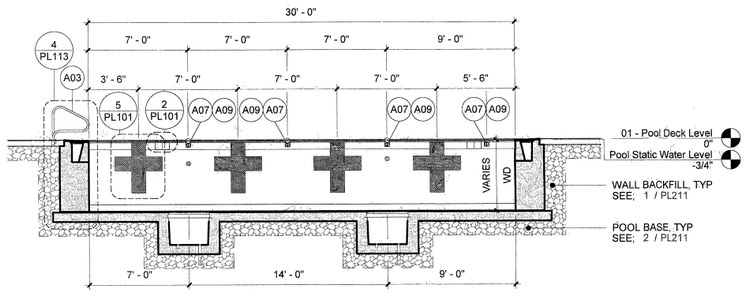
6 | PL112 | POOL A - LEISURE POOL STAIRS SECTION VIEW
3/4" = 1'-0"



2 | PL112 | POOL A - LEISURE POOL SECTION VIEW
3/16" = 1'-0"



3 | PL112 | POOL A - LEISURE POOL SECTION VIEW
1/4" = 1'-0"



4 | PL112 | POOL A - LEISURE POOL SECTION VIEW
3/16" = 1'-0"

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HALEY A. CONRAD 24356 OKLAHOMA LICENSED PROFESSIONAL ENGINEER
7/24/2020

PL112 - POOL A - LEISURE POOL SECTIONS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

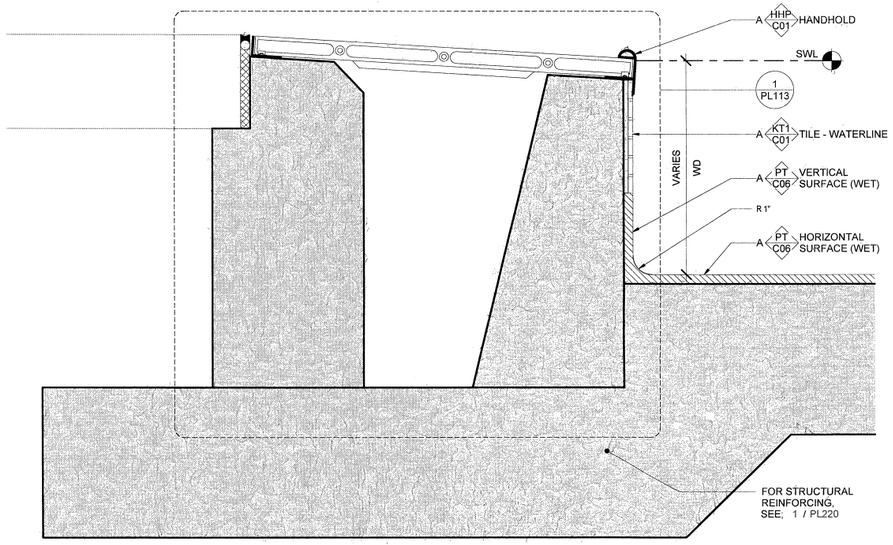
PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

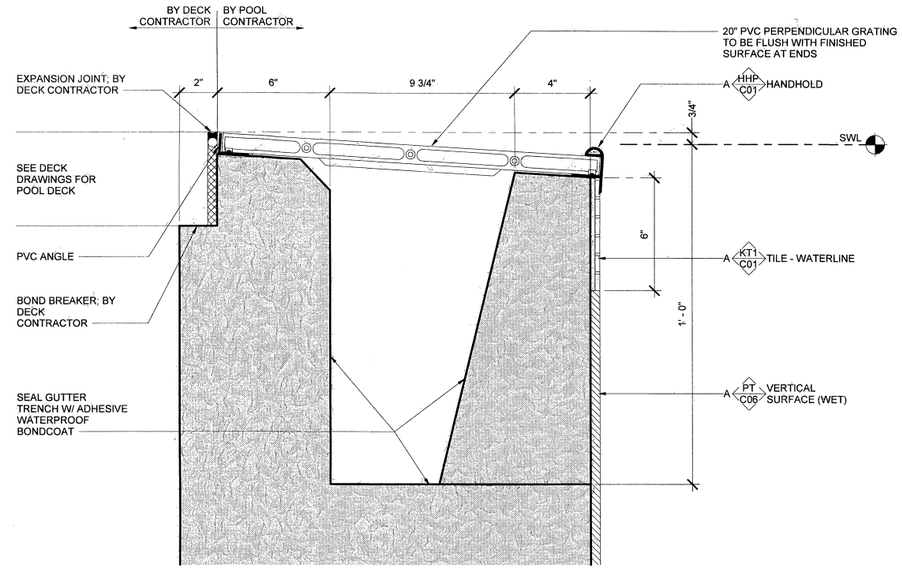
PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	EWL	10/15/19
DESIGNED	APP	10/15/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED:	HAS	9.20
DESIGN MANAGER		

APPROVED:
for CITY ENGINEER
DATE: 10.02.20
FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 61 OF 81 SHEETS

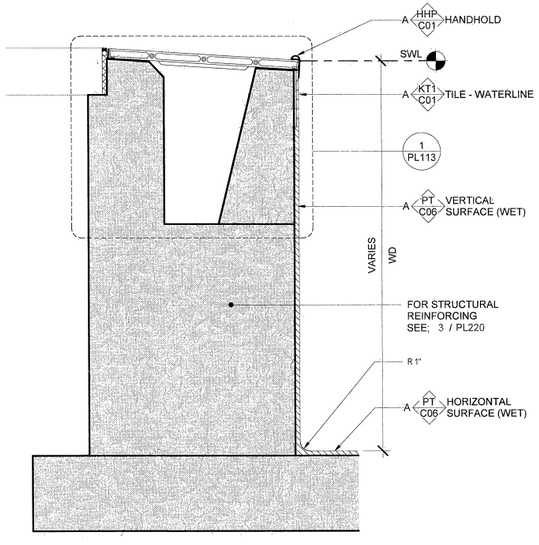


3 | PL113 POOL WALL DETAIL
DETAIL VIEW
3" = 1'-0"

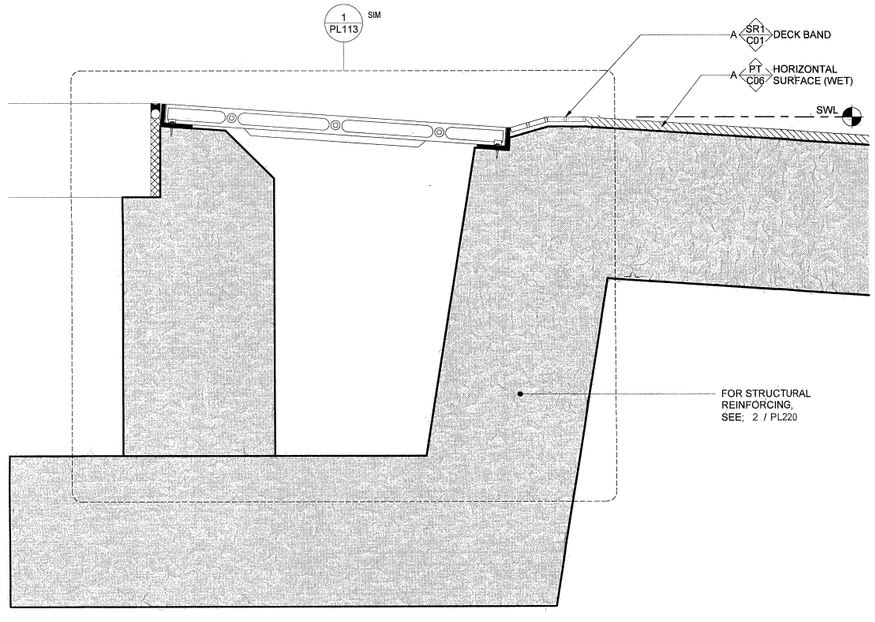


NOTE:
SECURE GRATING ON EACH SIDE WITH SS ANCHORS @ 1'-0" [300mm] INTERVALS.

1 | PL113 POOL WALL DETAIL - FINISH
DETAIL VIEW
3" = 1'-0"



4 | PL113 POOL WALL DETAIL - FINISH
DETAIL VIEW
1 1/2" = 1'-0"



2 | PL113 POOL WALL DETAIL - 0" WD
DETAIL VIEW
3" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL113 - POOL A- LEISURE POOL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
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REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
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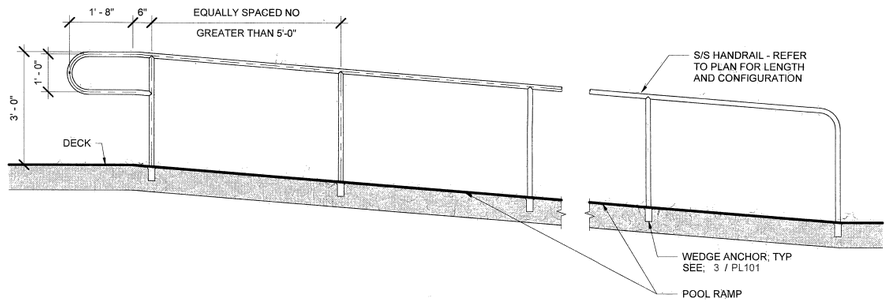
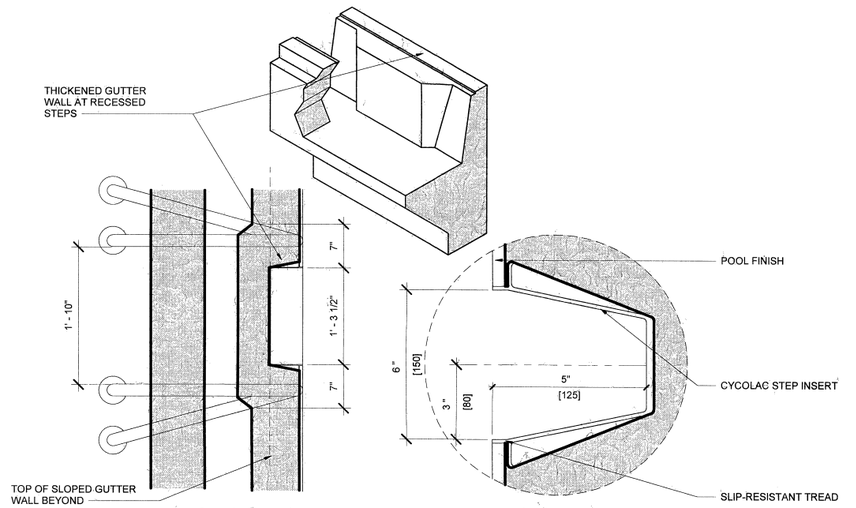
DRAWN	EWL	10/16/19	APPROVED:
DESIGNED	APP	10/16/19	
SURVEY			
PROJ. MGR.		8/20	
LEAD ENGR.		8/20	
FIELD MGR.		8/20	
RECOMMENDED		9.10	
DESIGN MANAGER			CITY ENGINEER

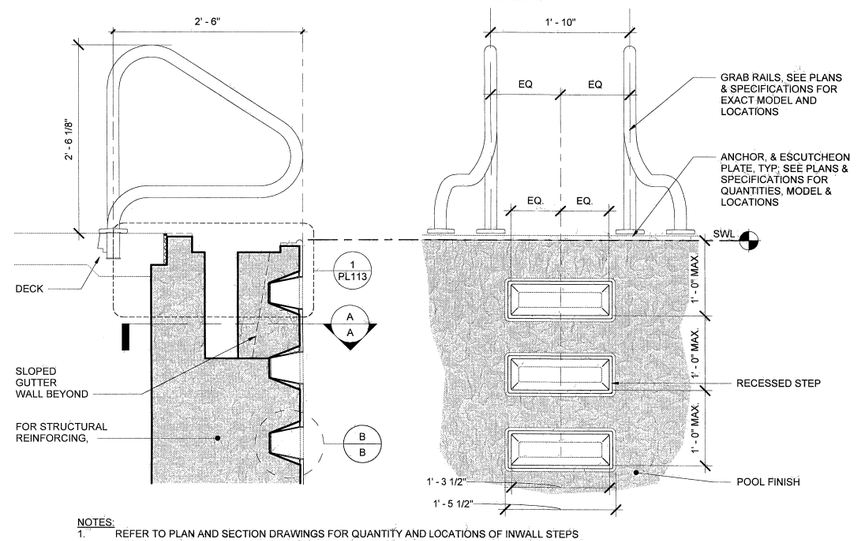
FILE: DRAWING:
ATLAS PAGE NO: 192

DATE: 10.02.20
SHEET 62 OF 81 SHEETS



2 PL114 RAIL DETAIL - RAMP
DETAIL VIEW
1/2" = 1'-0"





NOTES:
1. REFER TO PLAN AND SECTION DRAWINGS FOR QUANTITY AND LOCATIONS OF INWALL STEPS
2. PROVIDE (1) ONE INWALL STEP FOR EVERY 1'-0" OF WATER DEPTH TO A MAXIMUM DEPTH OF 6'-6"
3. MAINTAIN A 6" MINIMUM DISTANCE BETWEEN BOTTOM STEP TREAD AND POOL FLOOR TO ALLOW FOR PROPER CONCRETE COVERAGE

1 PL114 GRAB RAIL DETAIL - CYCOLAC RECESSED STEP
DETAIL VIEW
1" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/31/2020

PL114 - POOL A - LEISURE POOL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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REVISION	BY	DATE

PLAN SCALE: AS NOTED	DRAWN	EWL	10/22/19	APPROVED:
	DESIGNED	APP	10/22/19	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		8/20	
HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED:		9.20	
	DESIGN MANAGER			CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 63 OF 81 SHEETS

NOTE

STRUCTURAL DRAWINGS AND POOL DRAWINGS MUST BE USED IN CONJUNCTION WITH EACH OTHER. POOL DRAWINGS DICTATE ALL FINAL CONDITIONS OF POOL, FEATURES, AND DIMENSIONS OF POOL SHELL, INCLUDING POOL FINISH. UNLESS OTHERWISE INDICATED, STRUCTURAL DIMENSIONS ARE CONCRETE TO CONCRETE, AND DICTATE REQUIRED THICKNESSES FOR STRUCTURAL INTEGRITY ONLY.

GEOTECHNICAL PARAMETERS

SOIL PARAMETERS FOR POOL STRUCTURAL DESIGN

1. POOL DESIGNED FOR THE EMPTY CONDITION (CONTROLLING CASE)
2. CONTRACTOR IS RESPONSIBLE FOR ENGAGING THEIR OWN GEOTECHNICAL ENGINEERING CONSULTANT TO PROVIDE ON SITE SOIL VERIFICATION AS REQUIRED BY CONTRACT.
3. ALL SOIL PARAMETERS FOR THE POOL STRUCTURAL DESIGN ARE BASED UPON RECOMMENDATIONS FROM THE GEOTECHNICAL REPORT BY TERRACON, DATED AUGUST 22, 2019. POOL SUBGRADE AND SOIL PREPARATION SHALL BE EXECUTED IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT AND ALSO IN ACCORDANCE WITH THE CONTRACTOR'S GEOTECHNICAL ENGINEER, AS REQUIRED BY CONTRACT. SHALLOW BEDROCK WAS ENCOUNTERED ON THE SITE. CONTRACTOR SHOULD CONSULT THEIR OWN GEOTECHNICAL CONSULTANT AS STATED ABOVE, AS WELL AS THE ABOVE NOTED GEOTECHNICAL REPORT AT THE OFFICE OF THE ARCHITECT, FOR ADDITIONAL INFORMATION.

- STATED NET ALLOWABLE SOIL BEARING CAPACITY= 2000 PSF
- STATED EQUIVALENT FLUID PRESSURE= 60 PSF/FT
- AN UNDERDRAIN SYSTEM IS PROVIDED TO MITIGATE GROUNDWATER WHEN THE POOL IS EMPTY.

STRUCTURAL AND REINFORCEMENT NOTES

STRUCTURAL NOTES

1. REINFORCEMENT AT WALL CORNERS AND WALL BENDS SHALL BE DETAILED PER THE ASSOCIATED TYPICAL DETAILS. CORNER AND BEND BARS SHALL BE THE SAME SIZE AND SPACING AS THE TYPICAL HORIZONTAL WALL REINFORCING OF THE ASSOCIATED WALLS.
2. UNLESS OTHERWISE INDICATED, ALL WALL REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS. UNLESS OTHERWISE INDICATED, CONTRACTOR MAY SPLICE CONTINUOUS SLAB BARS AT LOCATIONS OF THEIR CHOOSING, EXCEPT THAT TOP BAR SPLICES SHALL BE LOCATED AT MID-SPAN AND BOTTOM BAR SPLICES SHALL BE LOCATED AT SUPPORTS. ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE INDICATED, SHALL SATISFY THE MINIMUM REQUIREMENTS IN LAP SCHEDULE.
3. FOR REINFORCEMENT AT WALL OR FLOOR SLAB PENETRATIONS, SEE; 3 / PL200

REINFORCEMENT NOTES

1. REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, UNLESS OTHERWISE NOTED.
2. ALL LAPS SHALL BE CLASS "B" PER ACI 318 UNLESS OTHERWISE NOTES ON THE DESIGN DRAWINGS OR UNLESS THE DETAILER TAKES SPECIAL CARE TO PROVIDE STAGGERED LAPS. USE TOP BAR LAP LENGTHS FOR ALL HORIZONTAL WALL BARS AND FOR TOP BARS IN SLABS AND BEAMS OVER 14" DEEP
3. LAP LENGTH SHALL BE SPECIFICALLY NOTED ON PLACING DRAWINGS WHERE MORE THAN ONE BAR MAKES UP A CONTINUOUS STRING.
4. TIE POOL REINFORCING STEEL WITH 18-GAUGE ANNEALED WIRE AS SPECIFIED IN THE CRSI 63 RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS. ALL TIE WIRES SHALL BE "MADE TIGHT" FOR ELECTRICAL BONDING PURPOSES, AS REQUIRED BY NEC, ARTICLE 680.
5. ALL HOOKS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.

MILD REINFORCING STEEL MINIMUM CLEAR COVER REQUIREMENTS

COORDINATE WITH REINFORCEMENT STEEL PLACING REQUIREMENTS

3" FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
2" TYPICAL ALL ELSE, UNLESS NOTED OTHERWISE ON DETAILS

REINFORCEMENT CLASS "B" LAP LENGTHS

TABLE BASED UPON 4500 PSI CONCRETE AND 60 KSI REINFORCING STEEL

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
GR-60 TOP BAR	1'-7" [482]	2'-1" [634]	2'-7" [787]	3'-1" [940]	4'-6" [1372]	5'-2" [1575]	5'-10" [1777]	6'-7" [2006]	7'-3" [2210]
GR-60 OTHER BAR	1'-3" [381]	1'-7" [483]	2'-0" [610]	2'-5" [736]	3'-6" [1067]	4'-0" [1211]	4'-6" [1372]	5'-1" [1549]	5'-7" [1701]

STANDARD HOOK DIMENSION

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
HOOK LENGTH	7" [178]	9" [229]	1'-0" [305]	1'-2" [356]	1'-4" [406]	1'-6" [457]	1'-11" [587]	2'-2" [661]	2'-5" [736]

SCHEDULE - STRUCTURAL REQUIREMENTS

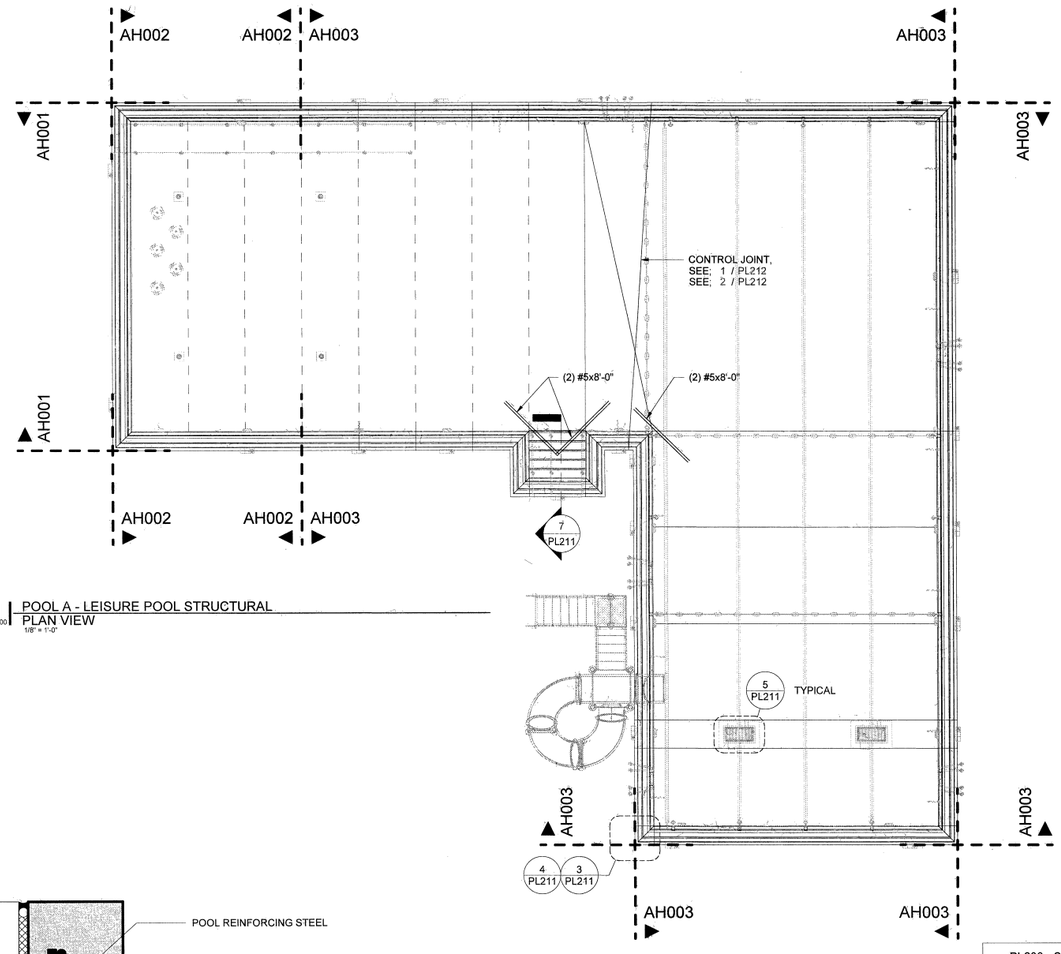
Detail	Pool ID	APPLICABLE STRUCTURAL WALL HEIGHT RANGE (FOR PLAN REFERENCE ONLY)			WALL						FLOOR				
					A				B	C	D			E	F
		Wall height range ID	Minimum applicable wall height	Maximum applicable wall height	Thickness	# of mats of reinforcement	Horizontal reinforcement	Vertical reinforcement	Freeboard height	Backfill thickness	Thickness	# of mats of reinforcement	Reinforcement	Bedding course thickness	Heel
A															
	A	H001	0'-0"	0'-0"	NA	NA	NA	NA	NA	1'-0" MIN	8"	1	#5@8" OC	1'-0" MIN	6"
	A	H002	0'-0"	1'-6 3/4"	NA	NA	NA	NA	0'-0 3/4"	1'-0" MIN	8"	1	#5@8" OC	1'-0" MIN	6"
	A	H003	1'-6 3/4"	5'-0 3/4"	1'-10"	2	#4@8" OC EF	#4@8" OC EF	0'-0 3/4"	1'-0" MIN	8"	1	#5@8" OC	1'-0" MIN	6"

SCHEDULE NOTES

* WHEN A SECTION CONTAINS ONLY ONE MAT OF REINFORCING, THE REINFORCING STEEL SHALL BE CENTERED IN THE SECTION.

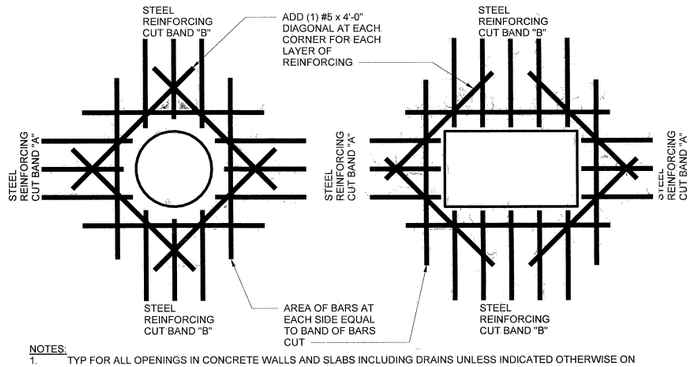
SCHEDULE ABBREVIATIONS:

OC	ON CENTER
EF	EACH FACE
FF	FRONT FACE
BF	BACK FACE
EW	EACH WAY



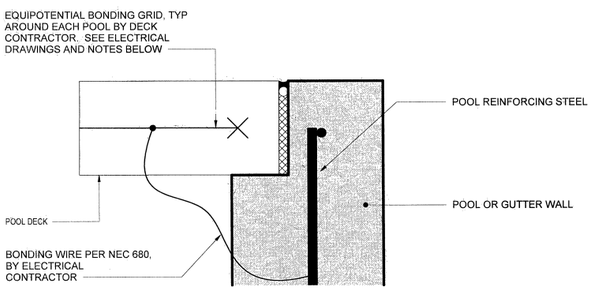
1 PL200 POOL A - LEISURE POOL STRUCTURAL PLAN VIEW
1/8" = 1'-0"

TYPICAL STANDARD DETAILS



NOTES:
1. TYP FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS INCLUDING DRAINS UNLESS INDICATED OTHERWISE ON PLANS.
2. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
3. ALL OPENINGS THROUGH WATERTIGHT TANK REQUIRE WATERSTOPS.
4. PROVIDE MIN LAP AS NOTED OR SHOWN ON PLANS (TYP)

3 PL200 REINFORCING - REINFORCEMENT AT OPENINGS DETAIL VIEW
NOT TO SCALE



NOTES:
1. THIS DETAIL IS INTENDED TO ILLUSTRATE THE EQUIPOTENTIAL BONDING GRID AROUND EACH POOL AS REQUIRED BY NEC 680.
2. THE GRID SHALL CONFORM TO ALL NEC 680 REQUIREMENTS.
3. PER NEC 680, THE GRID SHALL:
   3.a. COMPLETELY SURROUND THE PERIMETER OF THE POOL AND EXTEND 3 FEET HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL.
   3.b. BE ARRANGED IN A 12" X 12" (OR LESS) NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PATTERN.
   3.c. BE BONDED TO THE POOL REINFORCING STEEL.
4. THIS DETAIL IS NOT INTENDED TO DETAIL THE POOL WALLS OR THE DECKS. THE ABOVE POOL WALL IS GENERIC IN NATURE AND IS NOT TYPICAL FOR EACH POOL WALL. SEE POOL SECTIONS AND DECK SECTIONS FOR ADDITIONAL POOL AND DECK CONSTRUCTION REQUIREMENTS.
5. SEE POOL ELECTRICAL DRAWINGS FOR ADDITIONAL BONDING & GROUNDING REQUIREMENTS.

2 PL200 POOL EQUIPOTENTIAL BONDING GRID DETAIL VIEW
NOT TO SCALE

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t 920.887.7375 | #18270

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OKLAHOMA REGISTERED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
7/24/2020

PL200 - STRUCTURAL NOTES, PLAN(S) AND SCHEDULE

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

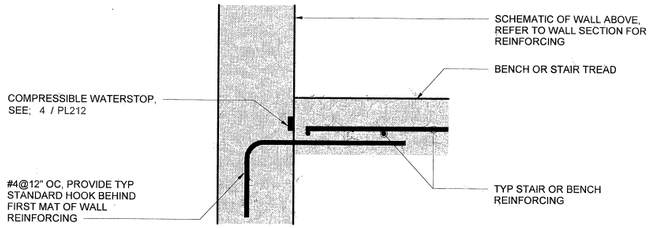
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL:

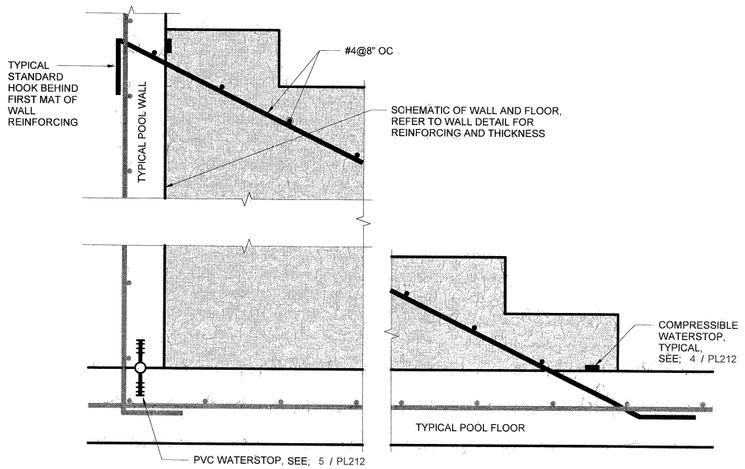
DRAWN	Author	07/18/14
DESIGNED	Designer	07/18/14
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED		9.1.20
DESIGN MANAGER		CITY ENGINEER

APPROVED:

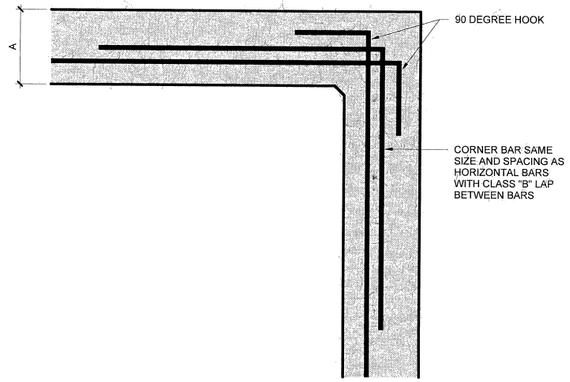
FILE: DRAWING:
DATE: 10.02.20
ATLAS PAGE NO: 192
SHEET 64 OF 81 SHEETS



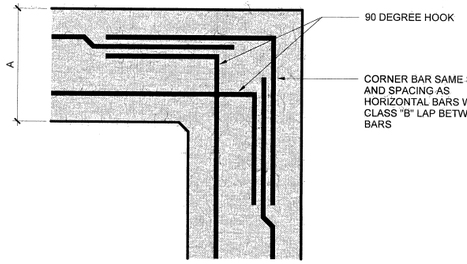
6 | PL211 | REINFORCING - BENCH & STAIR INTERSECTION DETAIL VIEW
NOT TO SCALE



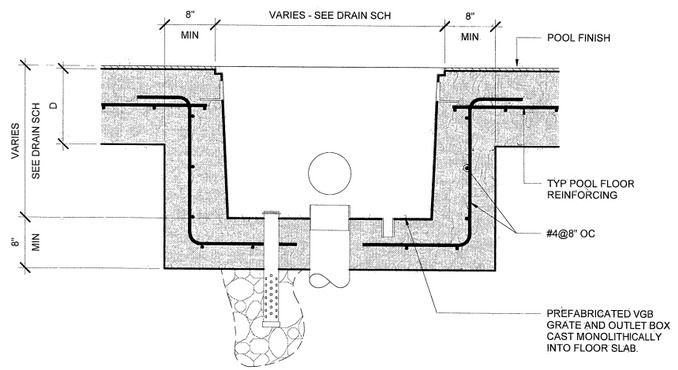
7 | PL211 | REINFORCING DETAIL - STAIR DETAIL VIEW
NOT TO SCALE



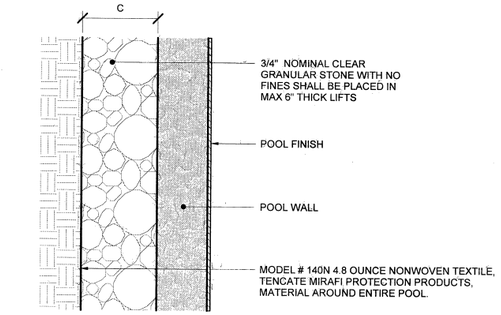
3 | PL211 | REINFORCING - SINGLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE



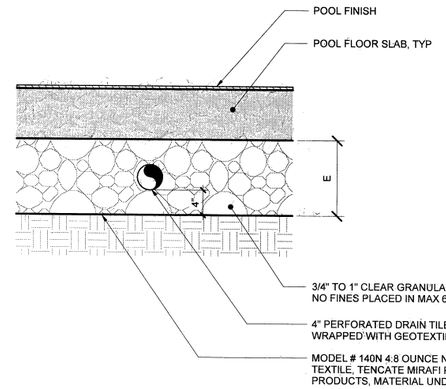
4 | PL211 | REINFORCING - DOUBLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE



5 | PL211 | REINFORCING - FLOOR OUTLET DETAIL VIEW
NOT TO SCALE



1 | PL211 | POOL WALL BACKFILL DETAIL VIEW
NOT TO SCALE



2 | PL211 | FLOOR SUB BASE UNDERDRAIN DETAIL VIEW
NOT TO SCALE

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL211 - STRUCTURAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

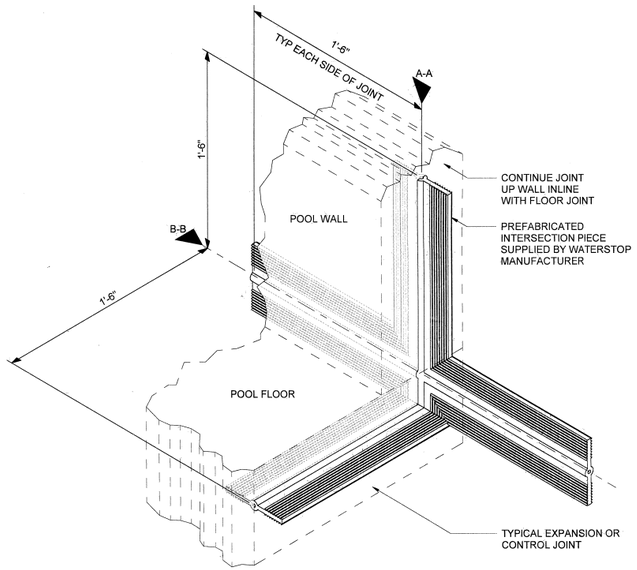
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

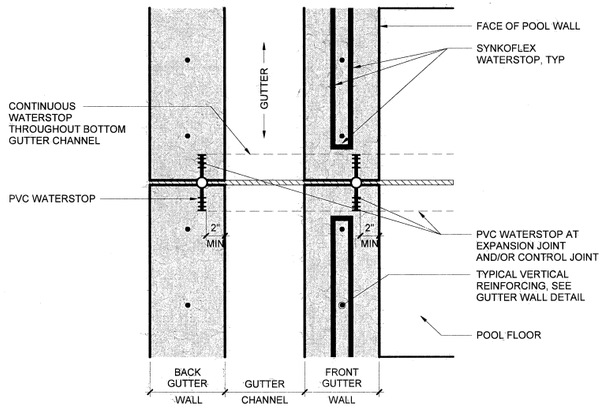
REVISION	BY	DATE

PLAN SCALE: AS NOTED	DRAWN	Author	12/04/19
	DESIGNED	Designer	12/04/19
	SURVEY		
PROFILE SCALE:	PROJ. MGR.	GS	8/20
HORIZONTAL:	LEAD ENGR.	HAS	8/20
	FIELD MGR.	ZW	8/20
VERTICAL	RECOMMENDED: DESIGN MANAGER	HAS	9.20
FILE:	DRAWING:		
ATLAS PAGE NO: 192			

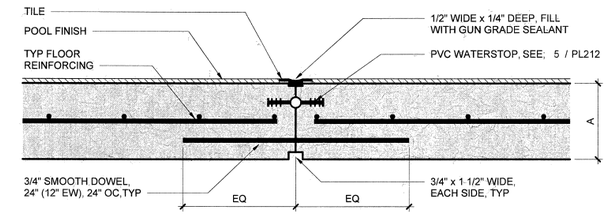
APPROVED:
CITY ENGINEER
DATE: 10.02.20
SHEET 65 OF 81 SHEETS



HORIZONTAL TO VERTICAL INSTALLATION @ TYPICAL JOINT

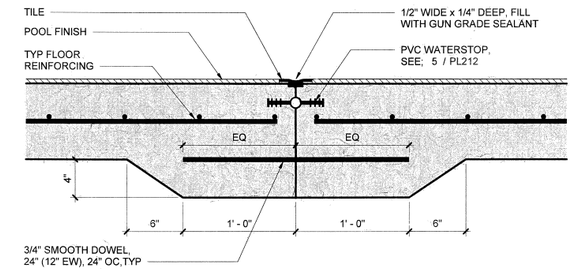


3 PL212 WATERSTOP - WALL/FLOOR JOINT AT GUTTER
DETAIL VIEW
NOT TO SCALE



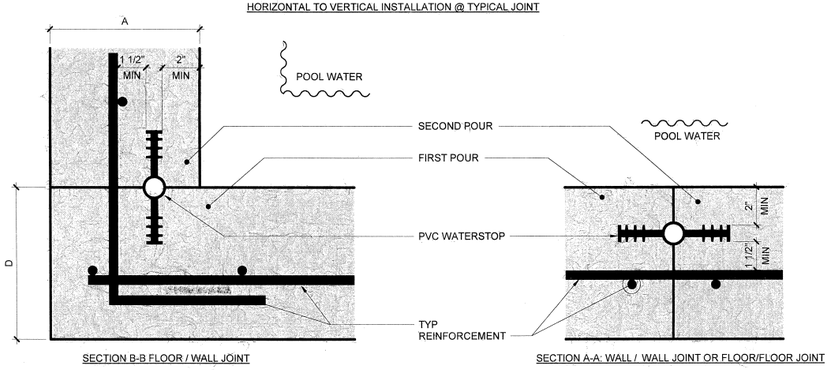
NOTES:
1. EXPANSION/CONTROL JOINTS IN WALLS AND GUTTER SHALL BE LOCATED IN LINE WITH ALL FLOOR JOINTS.
2. SEE FINISH SCHEDULE FOR TILE AND POOL FINISH.

1 PL212 REINFORCING - POOL WALL CONTROL JOINT
DETAIL VIEW
NOT TO SCALE



NOTES:
1. EXPANSION/CONTROL JOINTS IN WALLS AND GUTTER SHALL BE LOCATED IN LINE WITH ALL FLOOR JOINTS.
2. SEE FINISH SCHEDULE FOR TILE AND POOL FINISH.

2 PL212 REINFORCING - POOL FLOOR CONTROL JOINT
DETAIL VIEW
NOT TO SCALE

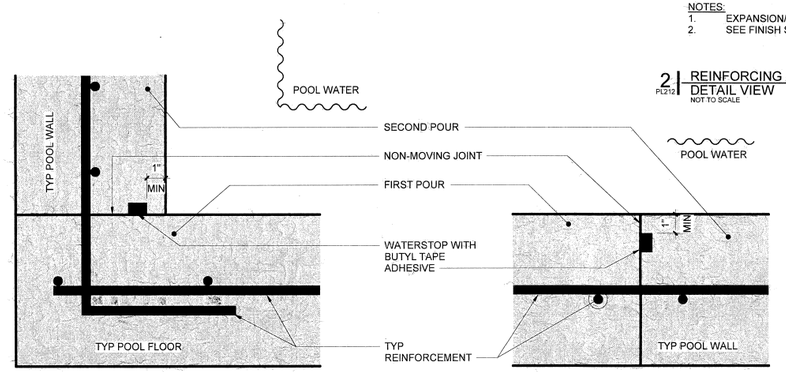


SECTION B-B FLOOR / WALL JOINT

SECTION A-A: WALL / WALL JOINT OR FLOOR/FLOOR JOINT

NOTES:
1. DETAIL IS SCHEMATIC AND INDICATES CLEARANCES AND INSTALLATION INFORMATION ONLY. FOR APPLICABLE INSTALLATION LOCATIONS SEE POOL STRUCTURAL DETAILS.
2. WATERSTOP SHALL BE 6" PVC RIBBED WITH 1" DIA CENTERBULB UNLESS NOTED OTHERWISE.
3. INSTALL WATERSTOP ON WET SIDE(S) OF REINFORCEMENT.
4. ALL WATERSTOPS SHALL BE WELDED PER MANUFACTURER'S REQUIREMENTS.
5. SPACING BETWEEN REINFORCING STEEL AND WATERSTOP SHALL BE NO LESS THAN 1.5 x DIA OF THE LARGEST AGGREGATE IN THE APPROVED CONCRETE MIX.
6. SEE SPECIFIACTION SECTION 131120 FOR ADDTIONAL WATERSTOP REQUIREMENTS.

5 PL212 WATERSTOP - PVC
DETAIL VIEW
NOT TO SCALE



SECTION B-B FLOOR / WALL JOINT

SECTION A-A: WALL / WALL JOINT OR FLOOR/FLOOR JOINT

NOTE:
1. DETAIL IS SCHEMATIC AND INDICATES CLEARANCES AND INSTALLATION INFORMATION ONLY. FOR APPLICABLE INSTALLATION LOCATIONS SEE POOL STRUCTURAL DETAILS.
2. BASIS OF DESIGN IS TYPE KBA-1510FP WATERSTOP BY ADEKA. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER. NOTE THAT CLEARANCES FOR SUBSTITUTIONS MAY DIFFER. REFER TO MANUFACTURER REQUIREMENTS.
3. INSTALL WATERSTOP ON WET SIDE(S) OF REINFORCEMENT.
4. DIMENSION ABOVE IS A MIN FOR CONCRETE COVERAGE AND DOES NOT INCLUDE THE POOL FINISH. PROVIDE ADDITIONAL CONCRETE COVERAGE IF POSSIBLE.
5. PROTECT WATERSTOP FROM WATER, DIRT, DEBRIS, AND DAMAGE PRIOR TO COVERING WITH CONCRETE.
6. SEE SPECIFICATION SECTION 131120 FOR ADDITIONAL WATERSTOP REQUIREMENTS.

4 PL212 WATERSTOP - COMPRESSIBLE NON-MOVING JOINT - ADEKA
DETAIL VIEW
NOT TO SCALE



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PL212 - STRUCTURAL GENERAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

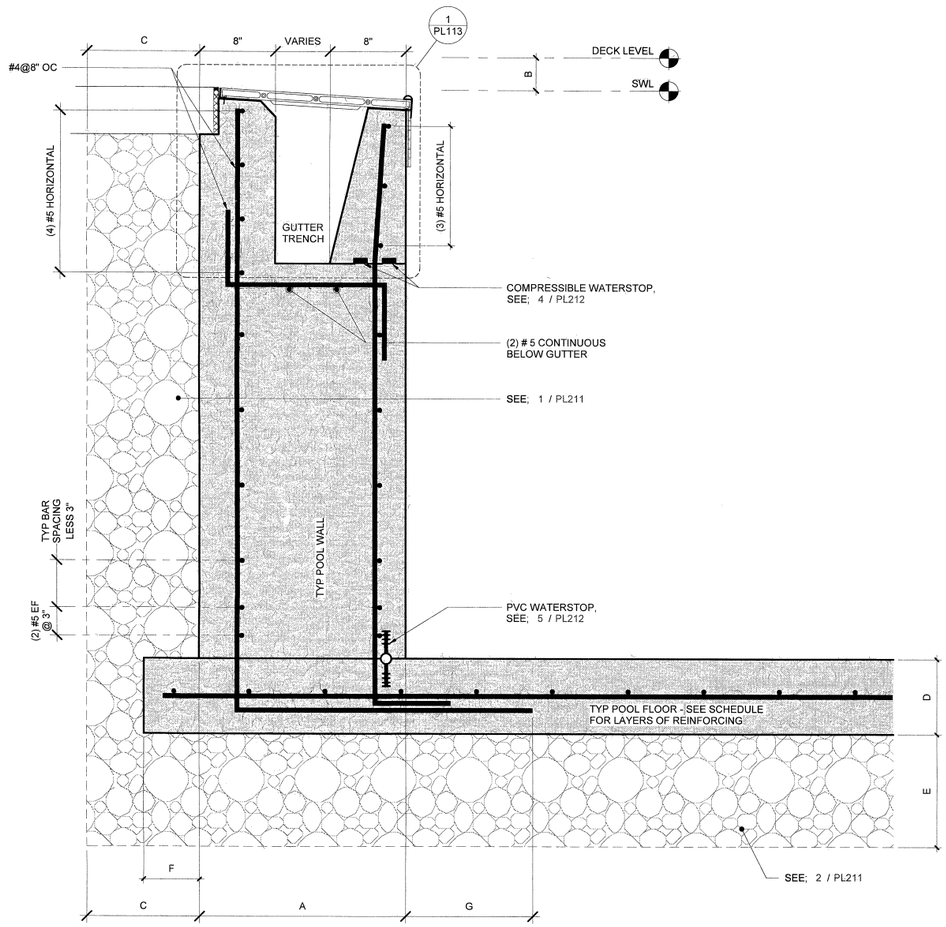
PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

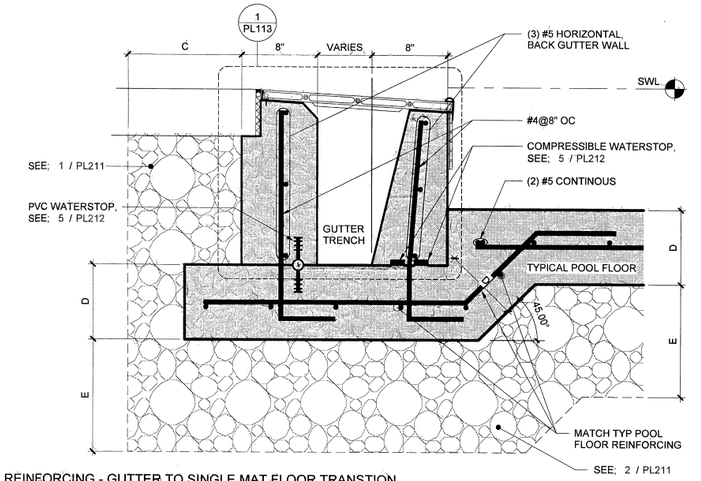
PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	Author	12/04/19
DESIGNED	Designer	12/04/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER		9.20

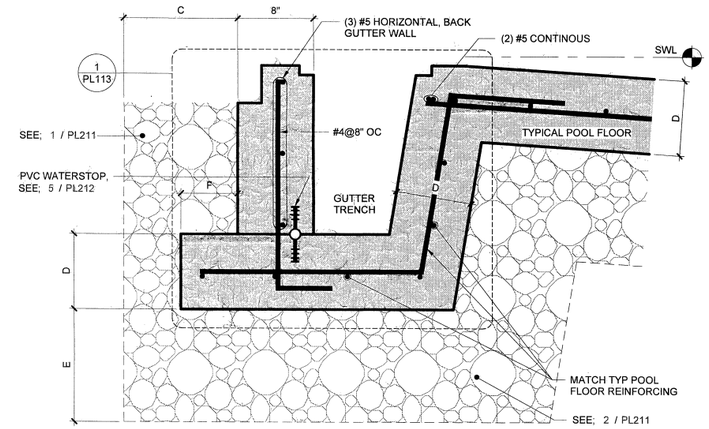
APPROVED: CITY ENGINEER
DATE: 10.02.20
FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 66 OF 81 SHEETS



3 | PL220 REINFORCING - TYPICAL GUTTER WALL
SECTION VIEW
NOT TO SCALE



1 | PL220 REINFORCING - GUTTER TO SINGLE MAT FLOOR TRANSTION
SECTION VIEW
NOT TO SCALE



2 | PL220 REINFORCING - GUTTER TO SINGLE MAT TRANSITION
SECTION VIEW
NOT TO SCALE

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL220 - STRUCTURAL WALL DETAILS

PROJECT NO. SP19-1

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4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

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REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	Author	12/04/19
DESIGNED	Designer	12/04/19
SURVEY		
PROJ. MGR.	PG	8/20
LEAD ENGR.	MAH	8/20
FIELD MGR.	RAH	8/20
RECOMMENDED: DESIGN MANAGER	HAS	9.20

APPROVED:
for CITY ENGINEER
DATE: 10.02.20

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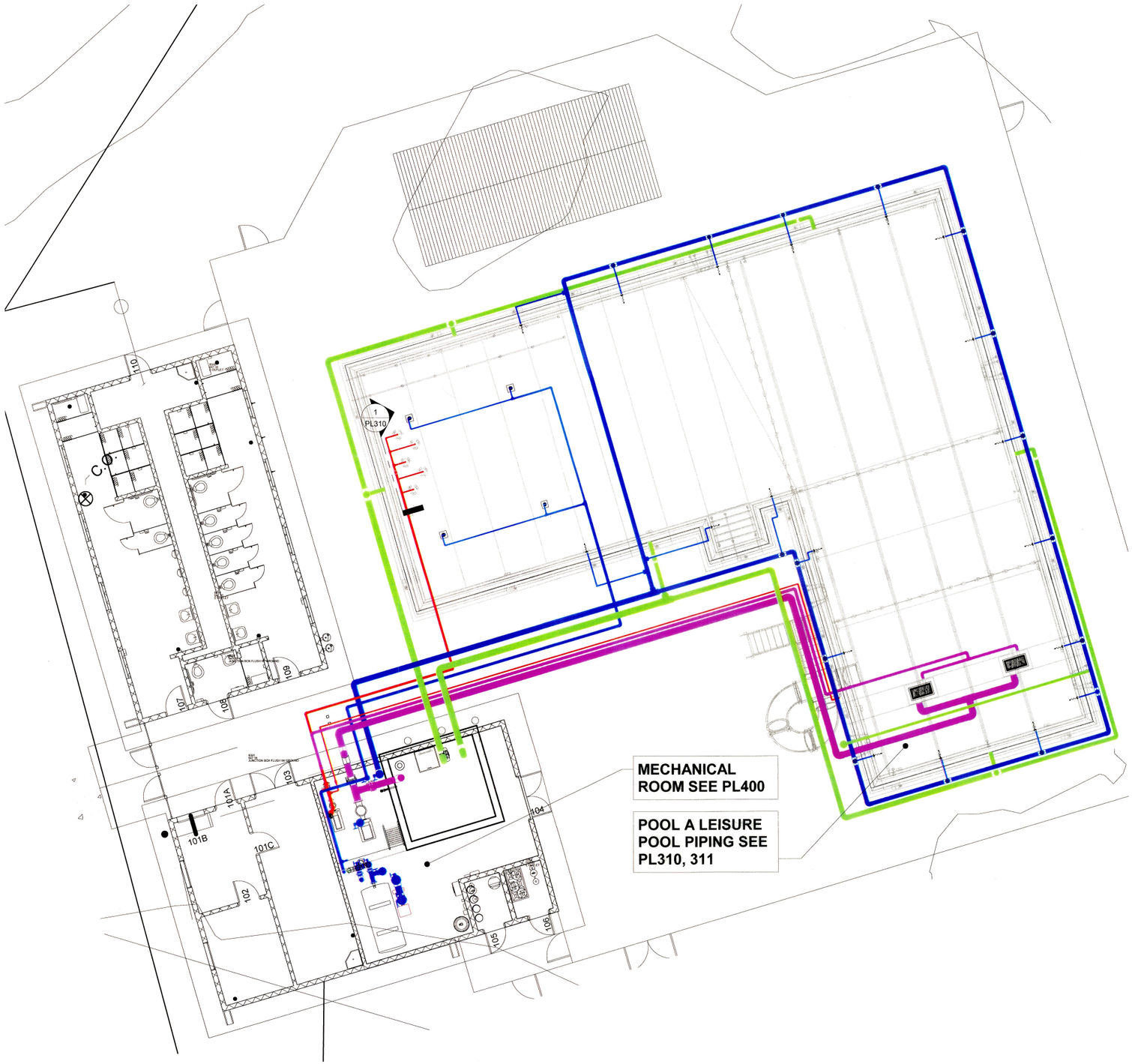
SHEET 67 OF 81 SHEETS



1 PL300 OVERALL PIPING PLAN
PLAN VIEW
1/8" = 1'-0"

POOL CONTRACTOR PIPING PLAN NOTES

THE FOLLOWING NOTES APPLY TO ALL POOL/SLIDE PIPING PLANS:

1. THE PIPING LAYOUTS ON THIS DRAWING ARE SCHEMATIC AND FOR REFERENCE ONLY. PIPING AS SHOWN AS SPREAD OUT FOR CLARITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING FINAL PIPE ROUTING AND ELEVATIONS AND SHALL COORDINATE WITH OTHER TRADES. CONTRACTORS TO PROVIDE GPS LOCATION OF PIPING PER OWNER REQUIREMENTS.
2. REDUCE THE USE OF FITTINGS AND LONG PIPE RUNS TO MINIMIZE HEAD LOSS IN THE SYSTEM.
3. ALL PIPING SHALL BE INSTALLED IN A PIPE TRENCH WITH BEDDING AND COVER MATERIALS PER SPECIFICATIONS. PIPING MAY BE STACKED IN THE PIPE TRENCH.
4. ARROWS DENOTE DIRECTION OF FLOW.
5. REFER TO ALL DISCIPLINES DOCUMENTATION AND COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
6. ALL GRAVITY PIPING SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1" DROP PER 10' LENGTH. ALL OUTDOOR PIPING SHALL BE INSTALLED WITH A SLOPE TO ALLOW COMPLETE DRAINING. PROVIDE WINTERIZING/DRAINING INSTRUCTIONS AND SCHEMATICS TO OWNER.
7. CONTRACTOR SHALL USE SWING JOINTS OR OTHER MEANS AND METHODS AS REQUIRED TO PROVIDE POOL INLET FITTINGS FLUSH AND PERPENDICULAR WITH THE POOL FLOOR AND AS REQUIRED FOR PROPER SLOPE TO DRAIN FOR WINTERIZATION.

PIPING NOTES

REFER TO DIVISION 13 SPECIFICATIONS FOR DETAILS

PIPING

a. ALL PIPING SHALL BE IN ACCORDANCE WITH THE OKLAHOMA STATE PLUMBING CODE AND THE OKLAHOMA STATE DEPARTMENT OF HEALTH CODE. THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.
b. ALL PIPING DESIGNED FOR 6'/SECOND MAX SUCTION, 10'/SECOND MAX PRESSURE, AND 3'/SECOND MAX GRAVITY.
c. MAIN DRAIN PIPING SHALL CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 3'/SECOND.
d. ALL ZERO DEPTH GUTTER, GUTTER AND INLET RETURN PIPING MUST BE LAID ON A GRADE SO IT WILL DRAIN TO THE SURGE TANK COMPLETELY BY GRAVITY. MAIN DRAIN LINE PIPING MUST BE LAID ON A GRADE SO; (A) ALL PIPING FROM BENEATH THE POOL TO THE ELEVATION CHANGE SHALL PITCH TO DRAIN TO THE POOL MAIN DRAIN SUMPS AND; (B) ALL PIPING FROM THE ELEVATION CHANGE TO THE SURGE TANK SHALL PITCH TO DRAIN TO THE SURGE TANK. IN ALL INSTANCES WHERE GRAVITY DRAINAGE IS NOT PROVIDED; THE CONTRACTOR SHALL INSTALL DRAIN VALVES SO THAT ALL LINES CAN BE DRAINED COMPLETELY TO SURGE TANK OR ANOTHER APPROVED LOCATION. DRAINAGE PLUGS SHALL BE PROVIDED IN THE PIPING SYSTEM TO ALLOW FOR DRAINING OF POOL PIPING. CONTRACTOR SHALL PROVIDE OPERATION AND DRAINING INSTRUCTIONS TO OWNER.
e. ALL ELEVATIONS TO BE FIELD VERIFIED TO ALLOW FOR PROPER PITCH AND DRAINAGE. PITCH -APPROXIMATE 1"/10'-0". POOL CONTRACTOR SHALL MAKE EVERY EFFORT TO CURTAIL THE USE OF FITTINGS TO REDUCE HEAD.
f. THIS DRAWING IS INTENDED FOR SCHEMATIC USE ONLY!! FINAL LOCATIONS SHALL BE FIELD VERIFIED WITH ALL OTHER TRADES, BY CONTRACTOR.
g. CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS.

DRAINS

a. ALL DRAIN FITTINGS TO CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 1.5'/SECOND THROUGH THE CLEAR AREA OF THE GRATE.
b. FILTER BACKWASH LINE, POOL DRAIN LINE, SURGE TANK DRAIN LINE, SURGE TANK OVERFLOW LINE AND POOL UNDERDRAIN LINE TO DISCHARGE TO SEWER WITH MIN 6" AIR GAP.
c. ALL DRAINS AND OUTLETS SHALL CONFORM WITH ANSI/APSP-16 2011 OR ANY SUCCESSOR STANDARD.

PRESSURE GAUGES

a. PRESSURE GAUGES TO BE INSTALLED ON ALL PUMP SUCTION AND DISCHARGE LINES.

VALVES

a. PROVIDE BACKWATER VALVES AND GEAR OPERATED SUB-SURFACE BUTTERFLY VALVES WITH VALVE EXTENSION FOR ALL POOL AND SURGE TANK DRAIN LINES.
b. EACH VALVE SHALL HAVE A PERMANENT IDENTIFYING LABEL OR TAG ATTACHED TO IT. THE SEQUENCE OF OPERATION, BRIEFLY STATED, SHALL BE PROMINENTLY DISPLAYED.

FLOW METERS

a. FLOWMETER SHALL BE PROVIDED IN THE FILTRATION PUMP DISCHARGE LINE AND IN EACH INLET RETURN LINE AS INDICATED ON THE DRAWINGS. FLOWMETERS SHALL BE INSTALLED ON A STRAIGHT LENGTH OF PIPE WITHOUT ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE (UNINTERRUPTED FLOW). PROVIDE A MIN OF 10 PIPE DIA UPSTREAM AND 5 PIPE DIA DOWNSTREAM FROM THE FLOWMETER OF UNINTERRUPTED FLOW OR INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
b. MAIN FLOWMETER SHALL BE USED TO MONITOR BACKWASH RATE.

FILTERS

a. FILTER SHALL BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: PRESSURE GAUGES, BACKWASH SIGHT GLASS ON WASTE DISCHARGE LINE, AN AIR RELIEF VALVE AT THE HIGH POINT OF THE FILTER AND A VALVED TANK DRAIN.

HEATER

a. EQUIPPED WITH THERMOMETERS, 80-240 DEGREES F WITH 2 DEGREE GRADUATIONS; AUTOMATIC TEMPERATURE LIMITING DEVICE; FLOW SWITCH; HEAT BYPASS VALVE; ALL INFLUENT/EFFLUENT HEAT PIPING TO BE METALLIC; PRESSURE RELIEF VALVE TO BE PROVIDED AND PIPED TO WITHIN 6" OF FLOOR. THE AUTOMATIC TEMPERATURE SWITCH ON THE POOL HEAT SHALL BE SET FOR A MAX OF 100 DEGREES. FURNISH AND INSTALL THERMOMETERS IN INLET AND OUTLET PIPING TO HEAT AND DOWNSTREAM IN THE BLENDED WATER SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL300 - OVERALL PIPING PLAN

PROJECT NO. SP19-1

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SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED:		9.20
DESIGN MANAGER		

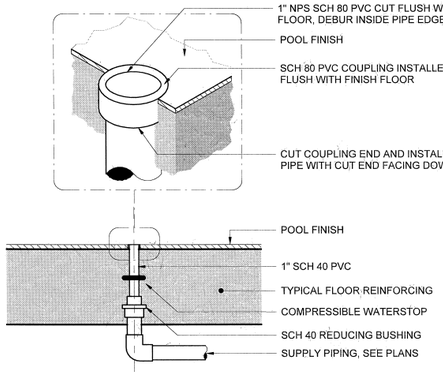
APPROVED:
CITY ENGINEER
DATE: 10.02.20
FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 68 OF 81 SHEETS

SCHEDULE - POOL FIXTURES

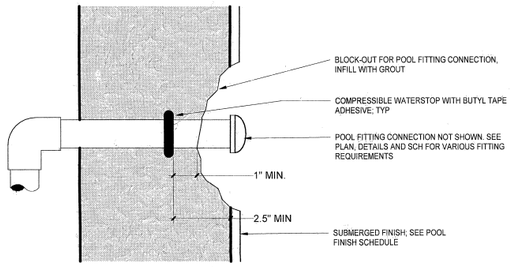
POOL ID	EQUIPMENT ID	FIXTURE	QTY.	MANUFACTURER	DESCRIPTION
A	PF 01	FLOOR INLET	4	STA-RITE	ADJUSTABLE FLOOR INLET FITTING. MODEL NUMBER 8417-0000, 1-1/2" OR 2" IPS SOLVENT WELD, MOLDED ABS PLASTIC BODY WITH INTERNAL NPT THREADS AND ADJUSTING TOP PLATE WITH VANDAL PROOF LOCKING DEVICE, WHITE IN COLOR
A	PF 02	WALL INLET	19	STA-RITE	1-1/2", MOLDED ABS, WHITE IN COLOR, MODEL #08429-0000
A	PF 03	FI-SG-1836-28	2	LAWSON AQUATICS	SEE DRAIN SCHEDULE
A	PF 04	HYDROSTATIC RELIEF VALVE	2	HAYWARD	2" SP1056 HYDROSTATIC RELIEF VALVE

DRAIN SCHEDULE

GRATE ID	DETAIL #	PUMP ID	DESIGN GRATE	TOTAL DESIGN FLOW (gpm)	QTY	DESIGN GRATE WIDTH (ft)	DESIGN GRATE LENGTH (ft)	DESIGN GRATE OPEN AREA (in2)	TOTAL OPEN AREA (in2)	DESIGN POINT FLOW (gpm)	DESIGN POINT VELOCITY (fps)	MAX ALLOWABLE FLOW PER GRATE (gpm)	SYSTEM MAX FLOW PER GRATE (gpm)	SYSTEM MAX VELOCITY (fps)
A-D1	PL301-1	P1A, P2A	LAWSON AQUATICS: FI-SG-1836-28(F2)	1093	2	1.50	3.00	343	687	547	0.51	1600	830	0.78
			-	-	-	-	-	-	-	-	-	-	-	-



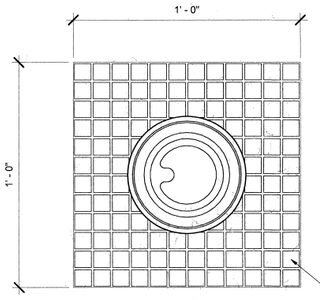
6 | PL301 | GEYSER DETAIL
DETAIL VIEW
NOT TO SCALE



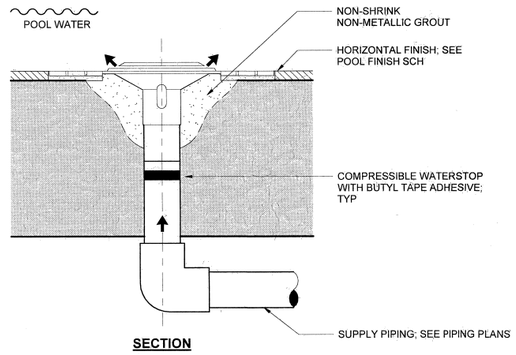
FLOOR / WALL SECTION

NOTES:
1. DETAIL ILLUSTRATES COMPRESSIBLE WATERSTOP FOR PIPE PENETRATIONS THROUGH POOL SHELL. SEE PIPING PLANS AND DETAILS FOR APPLICABLE INSTALLATION LOCATIONS.
2. BASIS OF DESIGN FOR 6" OD PIPES OR LARGER IS TYPE KBA-1510FP COMPRESSIBLE WATERSTOP BY ADEKA. FOR PIPES SMALLER THAN 6" OD USE SYNKOFLEX FLEXIBLE WATERSTOP. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.
3. DIMENSION ABOVE IS A MIN FOR CONCRETE COVERAGE AND DOES NOT INCLUDE THE POOL FINISH. PROVIDE ADDITIONAL CONCRETE COVERAGE IF POSSIBLE.
4. PROTECT WATERSTOP FROM WATER, DIRT, DEBRIS, AND DAMAGE PRIOR TO COVERING WITH CONCRETE.
5. SEE SPECIFICATION SECTION 131120 FOR ADDITIONAL WATERSTOP REQUIREMENTS.
6. STEEL REINFORCEMENT OMITTED FOR CLARITY. SEE STRUCTURAL DETAILS FOR TYPICAL WALL/FLOOR REINFORCING STEEL REQUIREMENTS AND STEEL REQUIREMENTS AROUND PIPE PENETRATIONS. SPACING BETWEEN REINFORCING STEEL AND WATERSTOP SHALL BE NO LESS THAN 1.5xDIAMETER OF THE LARGEST AGGREGATE IN THE APPROVED CONCRETE MIX. INSTALL WATERSTOP ON POOL FINISH SIDE OF REINFORCING STEEL.

4 | PL301 | WATERSTOP DETAIL - TYPICAL POOL PIPE PENETRATION
DETAIL VIEW
NOT TO SCALE



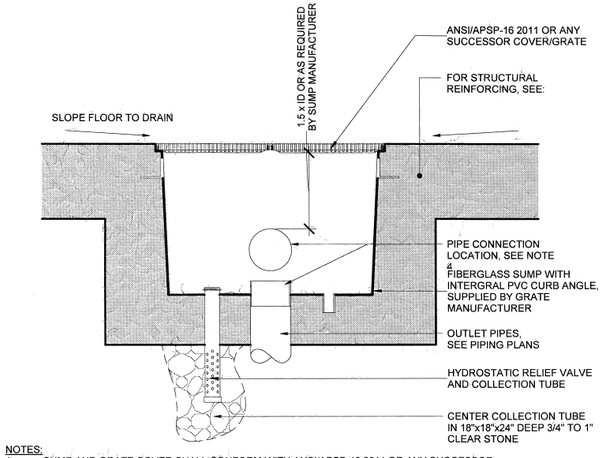
PLAN



SECTION

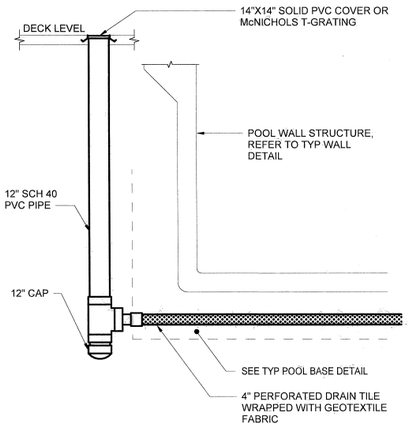
NOTES:
1. ADJUSTMENT BY CONTRACTOR SHALL BE NECESSARY ON SITE TO BALANCE FLOW

2 | PL301 | FLOOR INLET
DETAIL VIEW
NOT TO SCALE

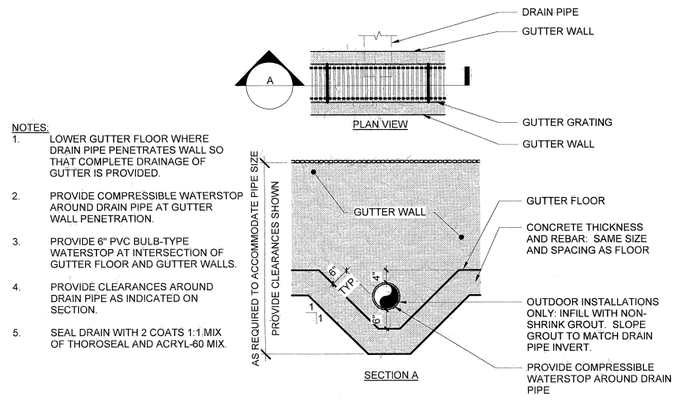


NOTES:
1. SUMP AND GRATE COVER SHALL CONFORM WITH ANSI/APSP-16 2011 OR ANY SUCCESSOR STANDARD. VERIFY GRATE DIMENSIONS AND OUTLET REQUIREMENTS WITH GRATE/SUMP MANUFACTURER PRIOR TO SUBMITTING SHOP DRAWINGS.
2. THE FIBERGLASS SUMP SHALL BE SUPPLIED WITH THE GRATE AS INDICATED IN THE DRAIN SCHEDULE. SUMP MATERIALS SHALL MEET OR EXCEED THE SCHEDULED MANUFACTURER'S SPECIFICATION: 8 OZ. OF FIBERGLASS MAT WITH MARINE QUALITY RESIN, COLORED GELCOAT ON INSIDE, WALL THICKNESS OF 0.19" +/- 0.01", & 2" FRP WATERSTOP GLASSED ONTO SUMP.
3. AT CONTRACTOR'S OPTION, SUMP MAY HAVE BOTTOM OR SIDE OUTLET PIPE CONNECTION.
4. CONTRACTOR SHALL INCLUDE ALL POOL DRAIN/WINTERIZATION PIPE CONNECTIONS AS SHOWN ON PIPING DRAWINGS.
5. UNUSED HYDROSTATIC PORTS SHALL BE PLUGGED.
6. SEE DRAIN SCHEDULE AND PIPE PLANS.
7. SECURE ALL GRATING TO DRAIN SUMP WITH CORROSION RESISTANT FASTENERS IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. FASTENERS SHALL NOT BE REMOVABLE WITHOUT THE USE OF A TOOL AND SHALL MEET ALL CURRENT ANSI/APSP/ICC-16 REQUIREMENTS. INSPECT ALL GRATING AND EACH FASTENER TO ASSURE THEY ARE IN PLACE AND PROPERLY SECURED PRIOR TO OPENING THE POOL FOR PUBLIC USE.

1 | PL301 | OUTLET DETAIL - FLOOR
DETAIL VIEW
NOT TO SCALE



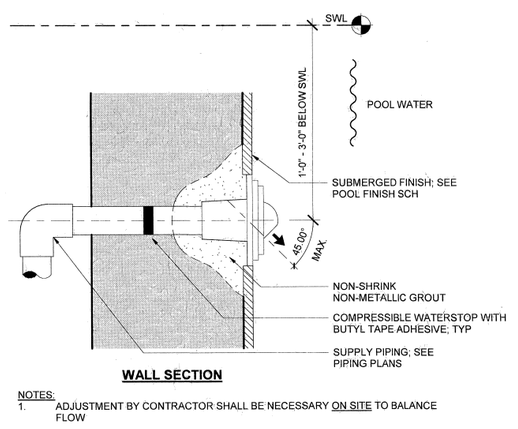
7 | PL301 | OBSERVATION WELL
DETAIL VIEW
NOT TO SCALE



NOTES:
1. LOWER GUTTER FLOOR WHERE DRAIN PIPE PENETRATES WALL SO THAT COMPLETE DRAINAGE OF GUTTER IS PROVIDED.
2. PROVIDE COMPRESSIBLE WATERSTOP AROUND DRAIN PIPE AT GUTTER WALL PENETRATION.
3. PROVIDE 6" PVC BULB-TYPE WATERSTOP AT INTERSECTION OF GUTTER FLOOR AND GUTTER WALLS.
4. PROVIDE CLEARANCES AROUND DRAIN PIPE AS INDICATED ON SECTION.
5. SEAL DRAIN WITH 2 COATS 1:1 MIX OF THOROSEAL AND ACRYL-60 MIX.

SECTION A

5 | PL301 | GUTTER DRAIN PIPE PENETRATION
DETAIL VIEW
NOT TO SCALE



WALL SECTION

NOTES:
1. ADJUSTMENT BY CONTRACTOR SHALL BE NECESSARY ON SITE TO BALANCE FLOW

3 | PL301 | WALL INLET
DETAIL VIEW
NOT TO SCALE

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100 Park Avenue | Beaver Dam, WI 53916
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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL301 - PIPING DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	Author	10/14/19
DESIGNED	Designer	10/14/19
SURVEY		
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LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER		9.20

APPROVED: CITY ENGINEER

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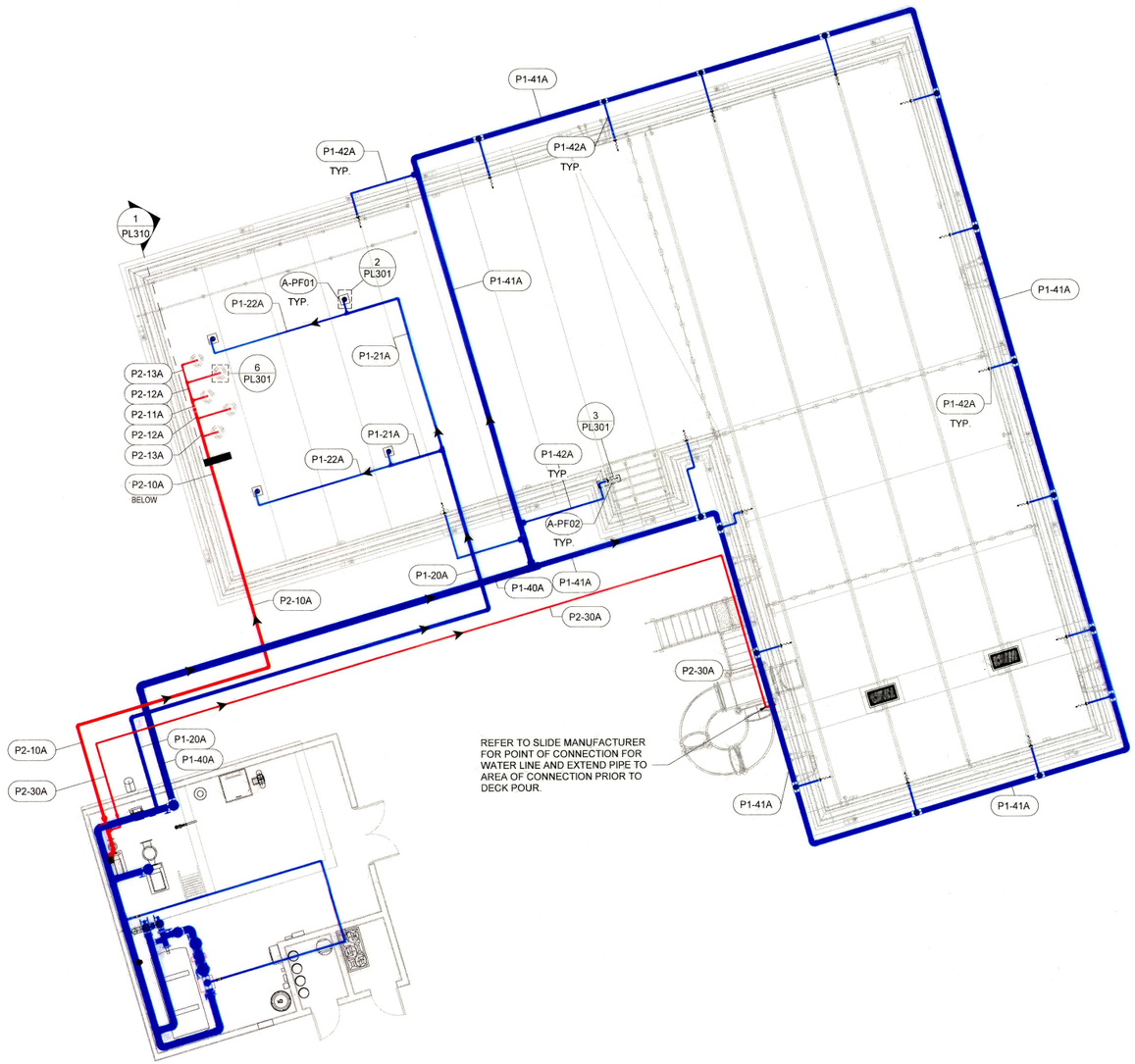
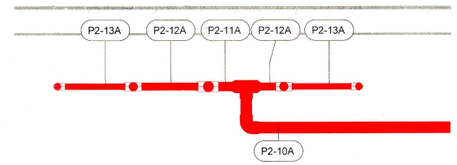
ATLAS PAGE NO: 192
SHEET 69 OF 81 SHEETS



2 | PL310 POOL A - ACTIVITY AND FILTRATION PIPING PLAN VIEW
1/8" = 1'-0"

POOL A - LEISURE PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
P1-20A	PVC SCH 80	4	171	4.9	FLOOR INLET SUPPLY (60 MIN TURNOVER)
P1-21A	PVC SCH 80	2.5	85	6.6	INLET SUPPLY
P1-22A	PVC SCH 80	2	43	4.8	TYPICAL FLOOR INLET CONNECTION
-	-	-	-	-	-
P1-40A	PVC SCH 80	8	727	5.2	WALL INLET SUPPLY (120 MIN TURNOVER)
P1-41A	PVC SCH 80	6	363	4.6	INLET SUPPLY LOOP
P1-42A	PVC SCH 80	1.5	36	6.8	TYPICAL WALL INLET SUPPLY CONNECTION
-	-	-	-	-	-
P2-10A	PVC SCH 80	3	125	6.2	GEYSER SUPPLY
P2-11A	PVC SCH 80	2.5	75	5.8	GEYSER SUPPLY
P2-12A	PVC SCH 80	2	50	5.6	GEYSER SUPPLY
P2-13A	PVC SCH 80	1.5	25	4.7	GEYSER SUPPLY CONNECTION TYPICAL
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
P2-30A	PVC SCH 80	1.5	40	7.5	WATER SLIDE SUPPLY
-	-	-	-	-	-



1 | PL310 GEYSER PIPING SECTION VIEW
NOT TO SCALE

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HALEY A. CONRAD 24356 OKLAHOMA LICENSED PROFESSIONAL ENGINEER
7/24/2020

PL310 - POOL A-LEISURE POOL FILTRATION AND ACTIVITY PIPING PLAN

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

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REVISION	BY	DATE

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DESIGNED	Designer	11/08/19
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FIELD MGR.		8/20
RECOMMENDED		9.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER
DATE: 10.02.20
SHEET 70 OF 81 SHEETS

FILE: DRAWING:
ATLAS PAGE NO: 192

POOL A - LEISURE PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S1-1A	PVC SCH 80	10	898	4.1	FILTRATION PUMP SUCTION - MAIN DRAIN
S1-10A	PVC SCH 80	10	898	4.1	FILTRATION PUMP SUCTION - SURGE TANK
S2-1A	PVC SCH 80	4	165	4.7	ACTIVITY SUCTION
G-4A	PVC SCH 80	4	0	-	POOL UNDERDRAIN
G-10A	PVC SCH 80	10	449	2.0	GUTTER PIPE
G-11A	PVC SCH 80	8	299	2.1	GUTTER PIPE
G-12A	PVC SCH 80	6	150	1.9	GUTTER PIPE CONNECTION TYPICAL
-	-	-	-	-	-
G-20A	PVC SCH 80	10	449	2.0	GUTTER PIPE
G-21A	PVC SCH 80	8	299	2.1	GUTTER PIPE
G-22A	PVC SCH 80	6	150	1.9	GUTTER PIPE CONNECTION TYPICAL



N

1 PL311 POOL A - LEISURE POOL GUTTER AND SUCTION PIPING PLAN VIEW
1/8" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
9/24/2020

PL311 - POOL A - LEISURE POOL GUTTER AND SUCTION PIPING PLAN

PROJECT NO. SP19-1

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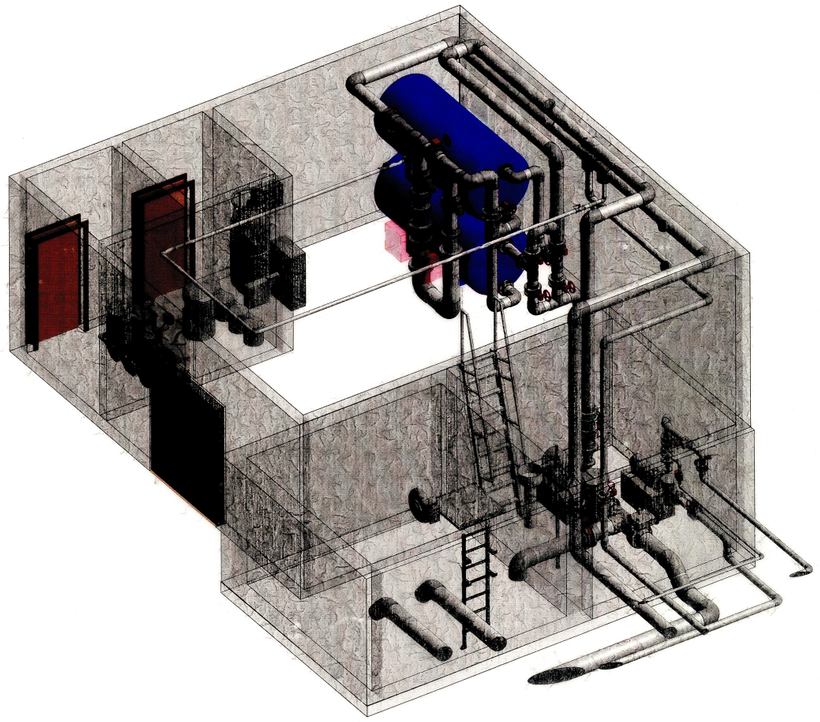
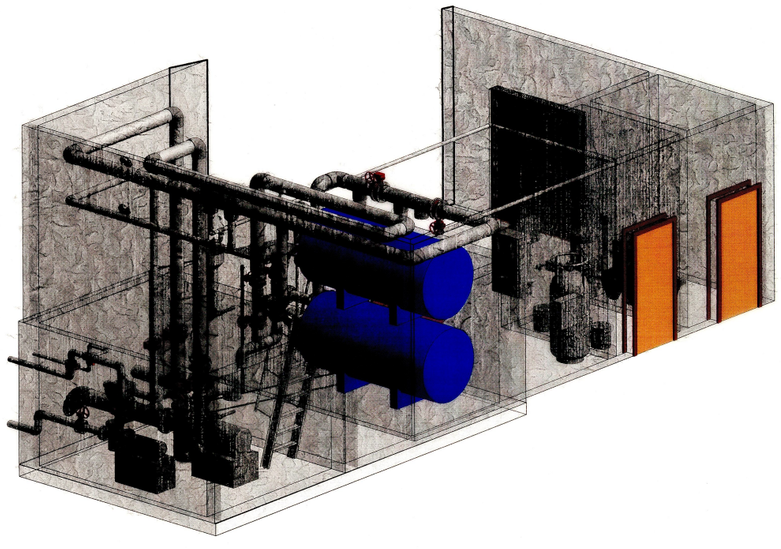
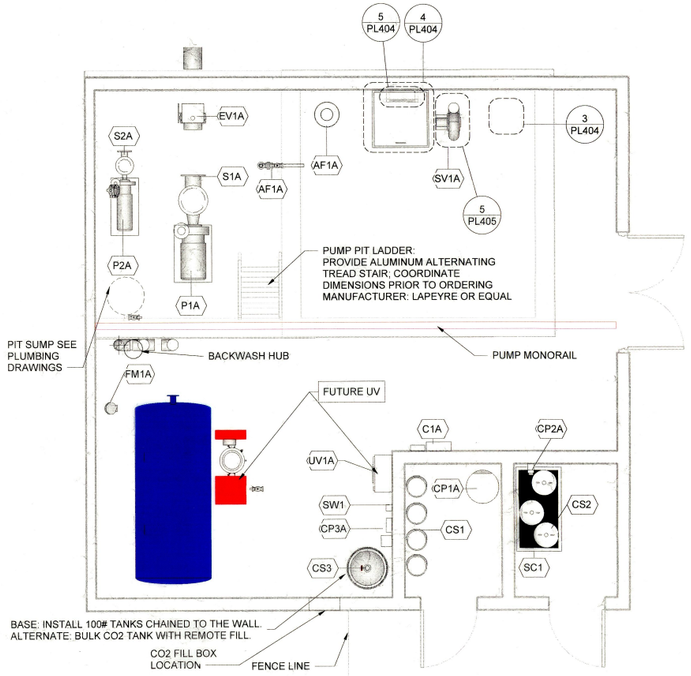


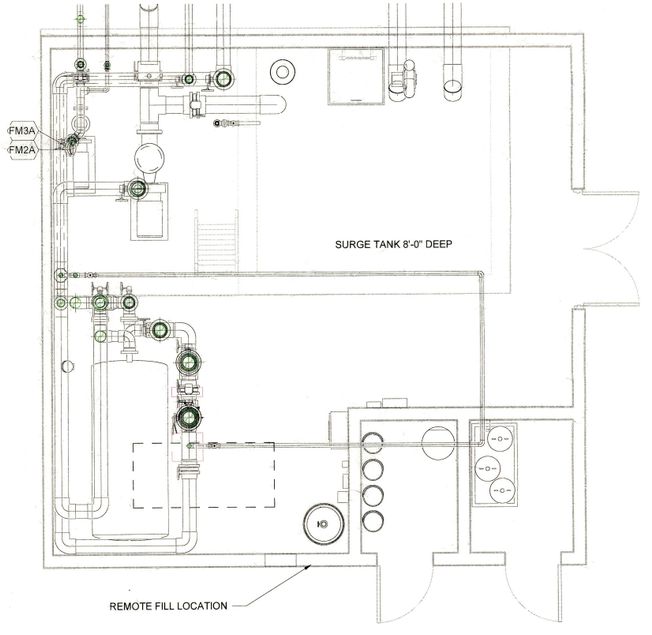
3 | PL400 3D MECHANICAL ROOM ISOMETRIC



4 | PL400 3D MECHANICAL ROOM ISOMETRIC
PLAN VIEW



1 | PL400 MECHANICAL ROOM PIPING LAYOUT
PLAN VIEW
1/4" = 1'-0"



2 | PL400 MECHANICAL ROOM EQUIPMENT LAYOUT
PLAN VIEW
1/4" = 1'-0"

MECHANICAL PLAN NOTES:
DIVISION 13 CONTRACTOR NOTES:

1. VERIFY EQUIPMENT PAD HEIGHT REQUIREMENTS FROM MANUFACTURER AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
2. VERIFY ALL OPENINGS, PENETRATIONS, AND ELEVATIONS AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
3. COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
4. REFER TO STRUCTURAL DRAWINGS FOR FUTURE CORED OPENINGS.
5. REFER TO ARCHITECTURAL PLANS FOR ACTUAL ROOM DIMENSIONS AND FINISHED FLOOR ELEVATIONS.
6. REFER TO PL200-3 FOR REINFORCEMENT AT PIPE PENETRATIONS.
7. SUPPORT PIPES PER PL406-1 THRU 7.
8. ALL SUPPORTS, BRACING, FASTENERS AND HARDWARE IN THE SURGE TANK(S) SHALL BE STAINLESS STEEL.

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

REVISION	BY	DATE

PL400 - MECHANICAL EQUIPMENT PLAN

PROJECT NO. SP19-1

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	DESIGNED	Designer	10/12/17	
	SURVEY			
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HORIZONTAL:	LEAD ENGR.		8/20	
	FIELD MGR.		8/20	
VERTICAL	RECOMMENDED: DESIGN MANAGER		8.9.20	CITY ENGINEER
FILE:	DRAWING:			DATE: 10.02.20
ATLAS PAGE NO: 192				SHEET 72 OF 81 SHEETS

EQUIPMENT SCHEDULE

ID	ITEM	QTY.	MANUFACTURER	BASIS OF DESIGN
P1A	FILTRATION PUMP	1	AURORA PUMP	3801, 5x6x11, 30 HP, 230/460 VOLT, 3 PHASE, 1770 RPM, 898 GPM, @ 80' TDH. 109 MIN AVERAGE TURNOVER, TEFC MOTOR, END SUCTION, CLOSE COUPLED, 316 STAINLESS STEEL IMPELLOR AND FITTED (SF), EPOXY COATED VOLUTE
P2A	FEATURE PUMP	1	PENTAIR PUMP	3801, 2x2.5x9.5, 5 HP, 230/460 VOLT, 3 PHASE, 1770 RPM, 195 GPM, @ 70' TDH, TEFC MOTOR, END SUCTION, CLOSE COUPLED, 316 STAINLESS STEEL IMPELLOR AND FITTED (SF), EPOXY COATED VOLUTE
S1A	STRAINER	1	NEPTUNE BENSON, INC OR MER-MADE FILTER, INC.	10X6 ECCENTRIC REDUCING BASKET STRAINER, FIBERGLASS BODY, TRANSPARENT ACRYLIC LID, STAINLESS STEEL BASKET. PROVIDE WITH EXTRA STAINLESS STEEL BASKET.
S2A	STRAINER	1	NEPTUNE BENSON, INC OR MER-MADE FILTER, INC.	6X3 ECCENTRIC REDUCING BASKET STRAINER, FIBERGLASS BODY, TRANSPARENT ACRYLIC LID, STAINLESS STEEL BASKET. PROVIDE WITH EXTRA STAINLESS STEEL BASKET.
F1A, F2A	FILTER	2	NEPTUNE BENSON, INC.	SHFFG SERIES, #4896SHFFG, 48" DIAMETER FIBERGLASS TANK, 119" LENGTH, 71.4 SQUARE FEET OF TOTAL SURFACE AREA (35.7 SF PER FILTER), 12.57 GPM/SF (FILTER MEDIA RATE), PROVIDE WITH DUAL LEVER STAINLESS STEEL LINKAGE, MANUALLY BACKWASH ONE TANK AT A TIME
UV1A	U.V. CHAMBER (FUTURE N.I.C.)	1	ETS	MODEL WF-230-10N, 10" CONNECTIONS, 480 V, 60 Hz, 3 PHASE, 6.0 kW. PROVIDE WITH ETS "EZ" STRAINER VALVE THAT MATCHES THE PIPE SIZE OF THE FILTRATION MAIN.
C1A	CHEMICAL CONTROLLER	1	BECS TECHNOLOGY	BECSys5 CONTROLLER, CONTINUOUS MONITORING AND CONTROL, WITH SENSORS AND FLOW ASSEMBLY FOR pH RANGE 0-14, ORP RANGE -1000 TO + 1000mV, TEMPERATURE RANGE 0 TO 100 DEGREES C., FREE CHLORINE RANGE 0 TO 20 ppm, TOTAL CHLORINE RANGE 0 TO 20 ppm, PROVIDE COMBINED CHLORINE SYSTEM WITH UV CONTROL, TDS SENSOR 0 TO 10,000 PPM, WITH FLOW CELL, FLOW RANGE 0 TO 8800 GPM, COMPUTER INTERFACE AND REQUIRED SOFTWARE WITH REQUIRED CONNECTING KITS. 110V
CP1A	CHLORINATOR	1	ARCH CHEMICALS	PULSAR 45, 2.0 TO 45 LBS/DAY OUTPUT, USE CALCIUM HYPOCHLORITE FOR DISINFECTANT
CS1	CHEMICAL STORAGE	3	CHEMICAL SUPPLIER	BUCKETS OF CALCIUM HYPOCHLORITE PROVIDED BY OWNER'S CHEMICAL SUPPLIER
CP2A	ACID FEEDER	1	BLUE/WHITE	A-100N SERIES, MODEL #A1N10A-6T, 0 TO 16.08 GALLONS PER DAY OUTPUT, 120 VOLTS, USE MURIATIC ACID FOR pH CONTROL. PROVIDE WITH WEIGHTED FOOT STRAINER.
CS2	CHEMICAL STORAGE	3	CHEMICAL SUPPLIER	15 GALLON CARBOYS PROVIDED BY OWNER'S CHEMICAL SUPPLIER
SC1	CONTAINMENT PALETTE	1	GRAINGER, ULTRATECH INTERNATIONAL	MOLDED, ONE-PIECE POLYETHYLENE CONTAINMENT, MINIMUM 66-GALLON CAPACITY, TWO DRUM PALLET, MIN 3,000 LB LOAD CAPACITY, SUITABLE FOR USE WITH CHEMICAL STORED. CONFORMANT TO ASTM D1998.
CP3A	pH CONTROL	1	BECSYS	4-30 SCFH LOW OUTPUT C02 pH CONTROL SYSTEM, INCLUDING: CO2 SINGLE TANK, C02 FEED SYSTEM, DIFFUSER ASSEMBLY.
CS3	CHEMICAL STORAGE	1	CHART INDUSTRIES	BASE PROVIDE (3) INTERCHANGABLE TANKS CHAINED TO THE WALL, ALTERNATE BULK TANK OPTION. PROVIDE CHART, GARBO-MAX 750, 750# BULK CO2 TANK FOR SWIMMING POOL SYSTEM WITH CORROSION RESISTANT COATING, OUTDOOR FLUSH MOUNT FILL BOX, CO2 FILL HOSE WITH VENT HOSE, REGULATOR, HEATER, AND STAINLESS STEEL CYLINDER/TANK RESTRAINTS PER CODE. PLUMB WITH 3/16" ID 1000PSI BRAIDED HOSE AND 3/8" POLYTUBING FROM REGULATOR TO FEEDER. 112-220V, 1 PHASE, 20 AMP FOR HEATER.
CA1	CO2 ALARM		CO2METER.COM	CO2 ALARM SYSTEM FOR ROOM:MODEL# RAD-0102-6. 110-220V, 1 PHASE
SW1	pH SWITCH	1	AQUATICONTROL TECHNOLOGY	AQUATICONTROL COS - pH CONTROL CROSSOVER SWITCH, 115V, 1 PHASE, 15 AMP. CONNECTED TO CHEMICAL CONTROLLER FOR POWER
AF1A	WATER LEVEL CONTROL	1	BECS TECHNOLOGY	BECSys SLS SURGE LEVEL SENSOR WITH SUBMERSIBLE CABLE: MODEL #BECSysSLS-4-S-A. PROVIDE WITH ASCO 8221 1.5" SLOW CLOSING SOLENOID VALVE, BRASS BODY, BUNA "N" DISC, 110 V, NORMALLY CLOSED, WATERTIGHT ENCLOSURE. NOTE: ONE LOOP POWER SUPPLY IS REQUIRED IN THE BECSsy5 CONTROLLER FOR THIS 4-20 mA INPUT.
FM1A	FLOW METER	1	SIGNET	2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P1-11 PROVIDE WITH FIELD MOUNT FLOW TRANSMITTER MODEL #3-9900-1 AND UNIVERSAL MOUNTING KIT MODEL #3-8050, FLOW AND DESCRIPTION TO BE DISPLAYED ON TRANSMITTER.
FM2A	FLOW METER (60 MINUTE TURNOVER)	1	SIGNET	2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P0-11. PROVIDE WITH FIELD MOUNT FLOW TRANSMITTER MODEL #3-9900-1 AND UNIVERSAL MOUNTING KIT MODEL #3-8050, FLOW AND DESCRIPTION TO BE DISPLAYED ON TRANSMITTER. PROVIDE WITH PVC-U CLAMP-ON SADDLE MODEL NUMBER PV8S040 (4").
FM3A	FLOW METER (120 MINUTE TURNOVER)	1	SIGNET	2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P1-11. PROVIDE WITH FIELD MOUNT FLOW TRANSMITTER MODEL #3-9900-1 AND UNIVERSAL MOUNTING KIT MODEL #3-8050, FLOW AND DESCRIPTION TO BE DISPLAYED ON TRANSMITTER. PROVIDE WITH IRON STRAP-ON SADDLE MODEL NUMBER IR8S080 (8").
FM4A	FLOW METER (SLIDE)	1	H2FLOW CONTROLS, INC.	FLOWVIS FLOW METER, MODEL FV-C-15 (1.5") FLOW RANGE 10-90 GPM, LOCATED AT SLIDE TOWER.
FP1	FLOW METER POWER SUPPLY	1	SIGNET 7310	MODEL#7310-2024, 115 VAC/24VDC, 1.0A POWER SUPPLY. POWER SUPPLIES TO BE FURNISHED WITH NEMA 4X ENCLOSURE.
SV1A	SURGE TANK FAN	1	PLASTEC	MODEL 20, NON-CORROSIVE IN LINE FAN, 250CFM @ 1" WG, 1/5 HP, 120 VOLT. INCLUDE FRAME AND STAINLESS STEEL MOUNTING HARDWARE. COORDINATE WITH HVAC AND ELECTRICAL CONTRACTOR.
EV1A	ELECTRONIC VALVE	1	ASAHI	MODEL DHC-100 AND SERIES 92 ELECTRICAL ACTUATOR WITH BATTERY BACK UP AND MANUAL OVERRIDE 110v

POOL A-LEISURE DATA

DESCRIPTION	QTY	UNITS		
POOL PERIMETER	330	FEET		
WATER SURFACE AREA	4,103	SQUARE FEET		
POOL VOLUME	97,096	GALLONS		
SURGE TANK - POOL SURGE VOLUME	4,408	GALLONS		
SURGE FACTOR	1.1	GAL/SFT		
SURGE TANK - SLIDE STORAGE VOLUME	80	GALLONS		
CIRCULATION RATE	898	GPM		
TURNOVER/VOLUME/FLOW	60 MIN.	9,858 GAL.	171	GPM
TURNOVER/VOLUME/FLOW	120 MIN.	87,238 GAL.	727	GPM
FILTRATION RATE	12.57	GPM/FT²		
BACKWASH RATE	536	GPM		
PATRON LOAD	273	PERSONS		

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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL401 - MECHANICAL SCHEDULE

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

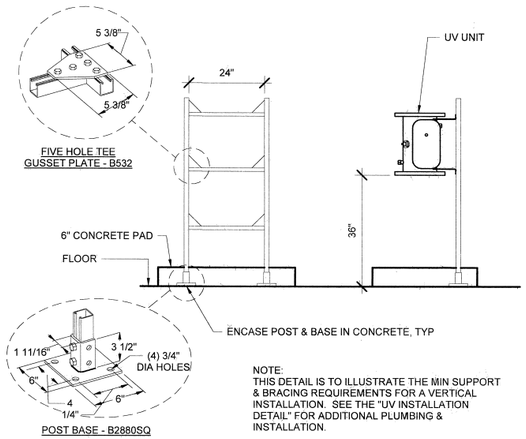
REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE: HORIZONTAL: VERTICAL

DRAWN	Author	10/21/19
DESIGNED	Designer	10/21/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED:		
DESIGN MANAGER		

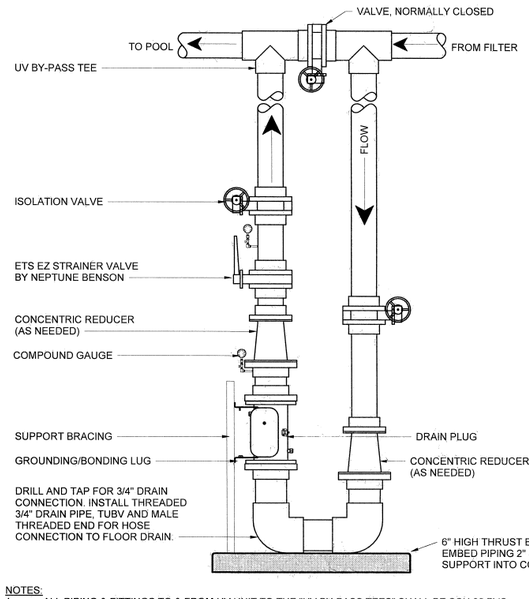
APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 73 OF 81 SHEETS



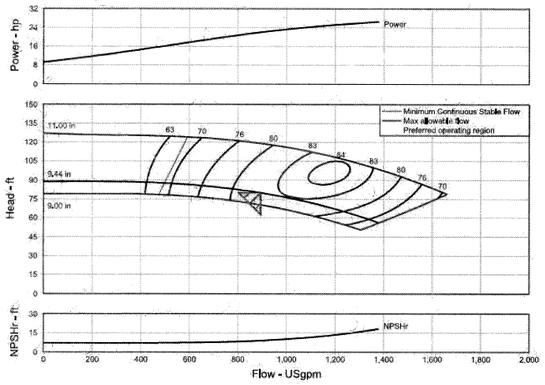
NOTE:
THIS DETAIL IS TO ILLUSTRATE THE MIN SUPPORT & BRACING REQUIREMENTS FOR A VERTICAL INSTALLATION. SEE THE "UV INSTALLATION DETAIL" FOR ADDITIONAL PLUMBING & INSTALLATION.

6 | PL402 UV SUPPORT & BRACING (FUTURE) DETAIL VIEW
NOT TO SCALE

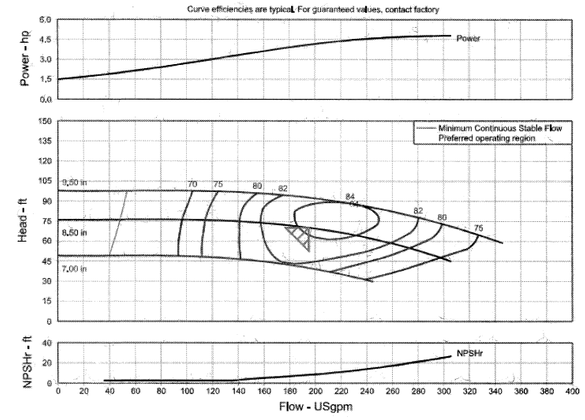


NOTES:
1. ALL PIPING & FITTINGS TO & FROM UV UNIT TO THE "UV BY-PASS TEES" SHALL BE SCH 80 PVC
2. ALL PIPE REDUCTIONS SHALL BE WITH A CONCENTRIC REDUCER AS SHOWN. NO BUSHINGS ALLOWED
3. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR. CONTROL BOX SHALL BE INSTALLED WITHIN 10 FT OF UNIT, WHENEVER POSSIBLE.
4. PROVIDE CLEARANCE AS REQUIRED ADJACENT TO UV UNIT FOR REMOVAL & REPLACEMENT OF UV LAMPS.
5. DO NOT INSTALL VALVES DIRECTLY TO CHAMBER BODY.
6. UV UNIT SHALL BE PROPERLY SUPPORTED & BRACED. SEE REFERENCED "UV SUPPORT & BRACING DETAIL".

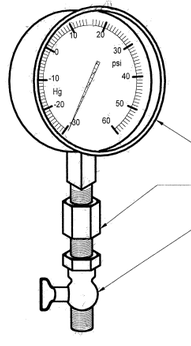
7 | PL402 UV DISINFECTION (FUTURE) DETAIL VIEW
NOT TO SCALE



3 | PL402 P1A PUMP CURVE DETAIL VIEW
NOT TO SCALE



4 | PL402 P2A PUMP CURVE DETAIL VIEW
NOT TO SCALE



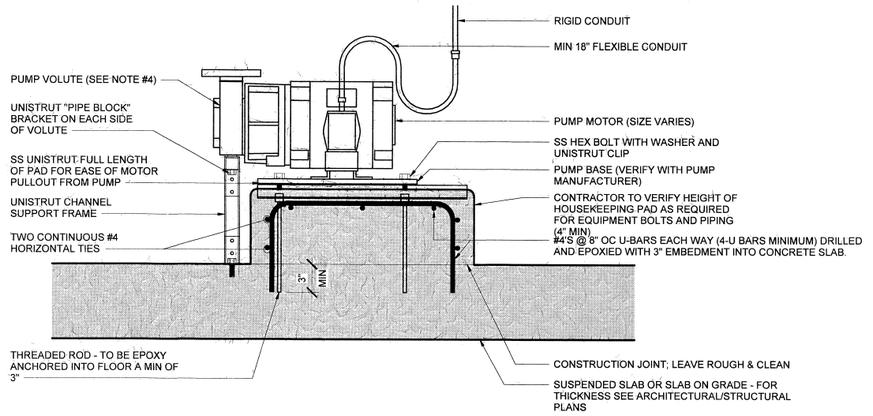
PRESSURE GAUGES SHALL BE INSTALLED BY MEANS OF DRILLING & TAPPING PIPE TO BE MONITORED. THE GAUGE SHALL THEN BE THREADED INTO THE PIPE. PROVIDE WITH SNUBBER & PET COCK.

GAUGE MAY BE USED WHEREVER CRUCIAL VACUUM OR PRESSURE READINGS ARE ESSENTIAL.

4 1/2" SS CASED LIQUID FILLED PRESSURE GAUGES

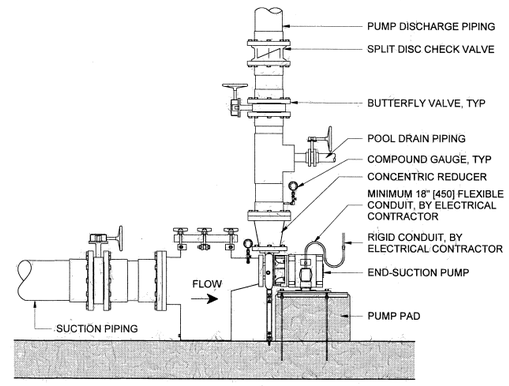
SHALL HAVE A DIAL RANGE PRESSURE OF 60psi & VACUUM RANGE OF 30" Hg THE MINOR GRADUATIONS SHALL HAVE A PRESSURE OF 2psi & VACUUM OF 2"Hg, 1/4" NPT AS MANUFACTURED BY WEKSLER, MARSH, WINTERS OR APPROVED EQUAL.

5 | PL402 COMPOUND GAUGE DETAIL VIEW
NOT TO SCALE



NOTES:
1. PAD SIZE SHALL BE MIN INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ALL THREAD ROD SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER/INSTALLING CONTRACTOR, ALL THREAD ROD SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE PAD IS BEING POURED.
3. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE. EQUIPMENT BASES SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR. SIZES AND LOCATIONS TO BE VERIFIED BY CONTRACTOR.
4. DO NOT ALLOW PUMP VOLUTE TO CARRY WEIGHT OF PIPING. PROVIDE SUPPORT FOR VOLUTE AS ILLUSTRATED ABOVE. SIMILARLY PROVIDE SUPPORT FOR PUMP SUCTION AND DISCHARGE PIPING WHILE ALLOWING FOR PUMP REMOVAL.

1 | PL402 PUMP PAD DETAIL VIEW
NOT TO SCALE



NOTES:
1. REFER TO EQUIPMENT SCHEDULES FOR A STRAINER TYPE AND SIZE.
2. SUPPLY AND INSTALL ECCENTRIC REDUCER ON SUCTION SIDE AS NECESSARY.
3. INSTALL STRAINER OR REDUCER WITH 1/4" [6] FPT GAUGE CONNECTION AS CLOSE TO PUMP AS POSSIBLE.
4. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATIONS.

2 | PL402 PUMP INSTALLATION - SAND FILTER DETAIL VIEW
NOT TO SCALE

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100 Park Avenue | Beaver Dam, WI 53916
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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL402 - MECHANICAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

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PROFILE SCALE:
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VERTICAL

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DESIGNED	Designer	10/14/19
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PROJ. MGR.	EP	8/20
LEAD ENGR.	DAH	8/20
FIELD MGR.	DAH	8/20
RECOMMENDED:	HAC	9.20
DESIGN MANAGER		

APPROVED:
CITY ENGINEER
DATE: 10.02.20

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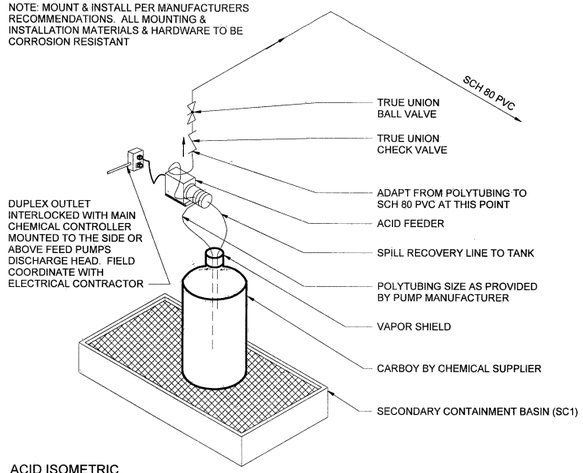
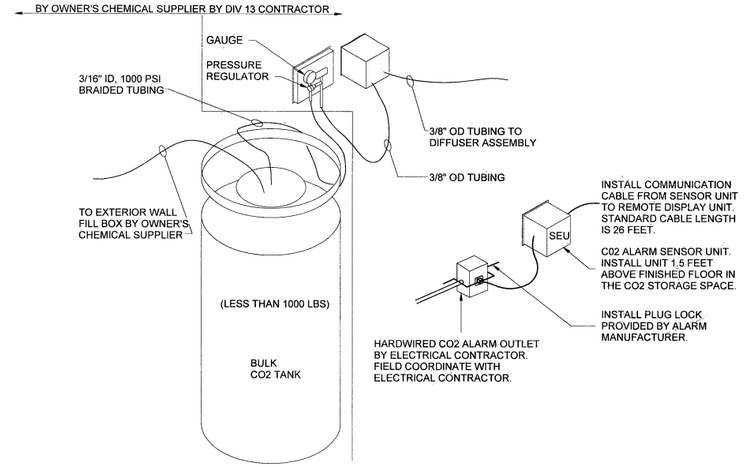
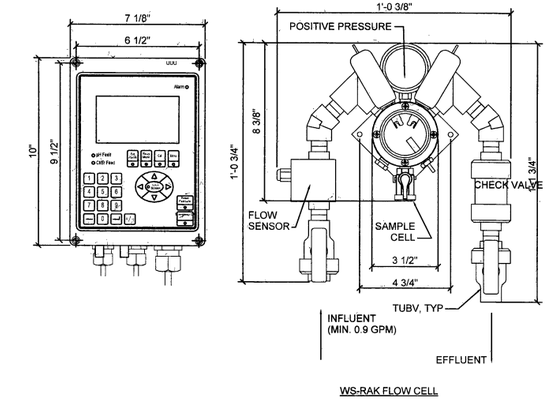
ATLAS PAGE NO: 192
SHEET 74 OF 81 SHEETS



6 | ACID ISOMETRIC DETAIL VIEW
PL403 | NOT TO SCALE

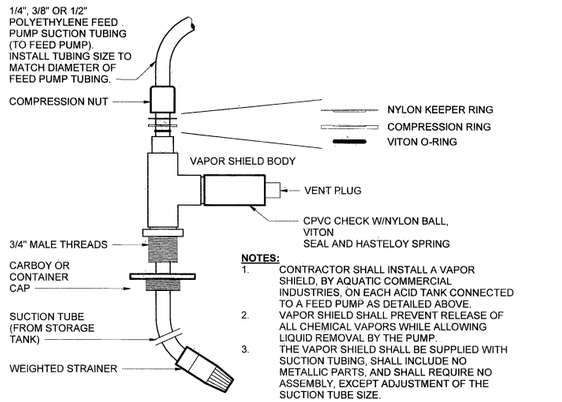


3 | CO2 ISOMETRIC (ALTERNATE) DETAIL VIEW
PL403 | NOT TO SCALE



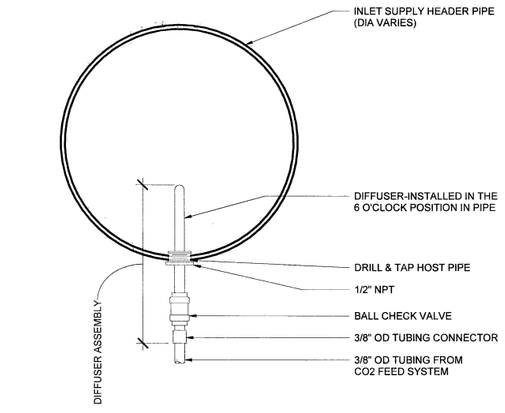
WS-RAK FLOW CELL

1 | CHEMICAL CONTROLLER DETAIL VIEW
PL403 | NOT TO SCALE

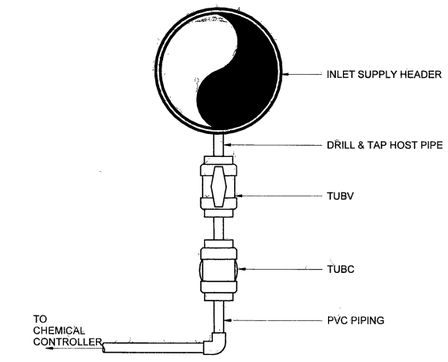


NOTES:
1. CONTRACTOR SHALL INSTALL A VAPOR SHIELD, BY AQUATIC COMMERCIAL INDUSTRIES, ON EACH ACID TANK CONNECTED TO A FEED PUMP AS DETAILED ABOVE.
2. VAPOR SHIELD SHALL PREVENT RELEASE OF ALL CHEMICAL VAPORS WHILE ALLOWING LIQUID REMOVAL BY THE PUMP.
3. THE VAPOR SHIELD SHALL BE SUPPLIED WITH SUCTION TUBING, SHALL INCLUDE NO METALLIC PARTS, AND SHALL REQUIRE NO ASSEMBLY, EXCEPT ADJUSTMENT OF THE SUCTION TUBE SIZE.

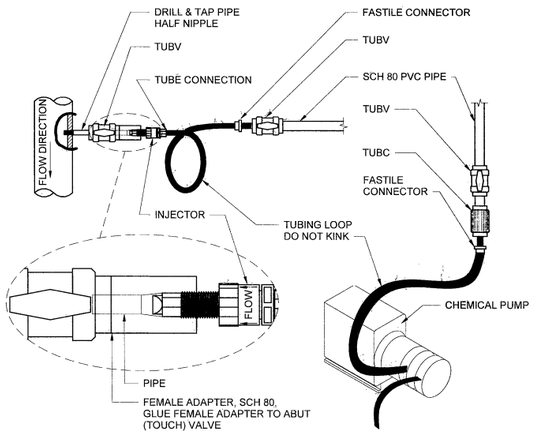
7 | VAPOR SHIELD DETAIL VIEW
PL403 | NOT TO SCALE



4 | CO2 INJECTION DETAIL VIEW
PL403 | NOT TO SCALE

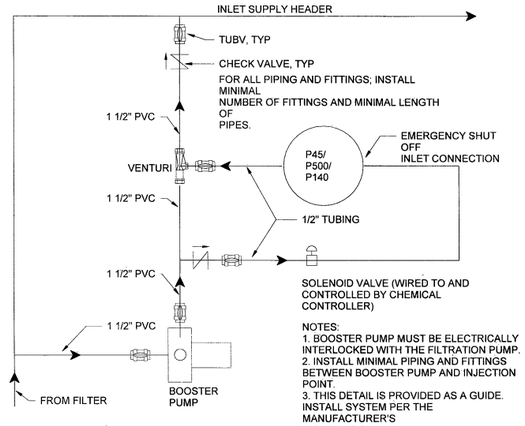


2 | CHEMICAL SAMPLING DETAIL VIEW
PL403 | NOT TO SCALE



NOTE: FOR PIPING USE FASTITE CONNECTOR OR SIMILAR COMPRESSION FITTING.

8 | CHEMICAL INJECTION DETAIL VIEW
PL403 | NOT TO SCALE



NOTES:
1. BOOSTER PUMP MUST BE ELECTRICALLY INTERLOCKED WITH THE FILTRATION PUMP.
2. INSTALL MINIMAL PIPING AND FITTINGS BETWEEN BOOSTER PUMP AND INJECTION POINT.
3. THIS DETAIL IS PROVIDED AS A GUIDE. INSTALL SYSTEM PER THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS/INSTRUCTIONS.

5 | PULSAR DETAIL VIEW
PL403 | NOT TO SCALE

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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
7/31/2020

PL403 - MECHANICAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

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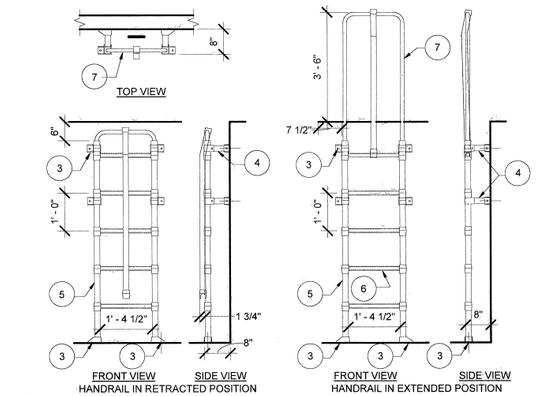
DESIGNED	Designer	10/30/19
SURVEY		
PROJ. MGR.		8/20
LEAD ENGR.		8/20
FIELD MGR.		8/20
RECOMMENDED: DESIGN MANAGER	HAS	9.20

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 10.02.20

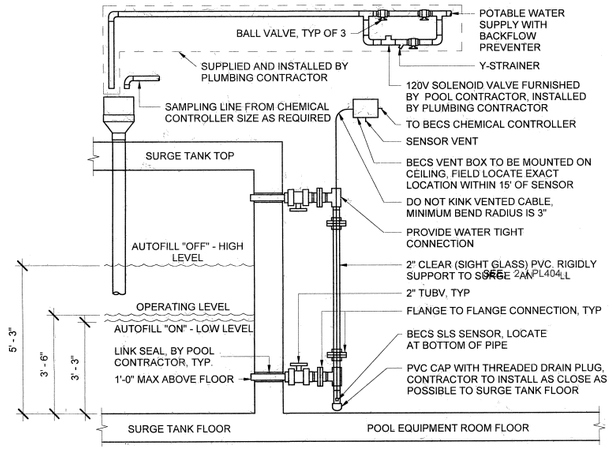
ATLAS PAGE NO: 192 SHEET 75 OF 81 SHEETS



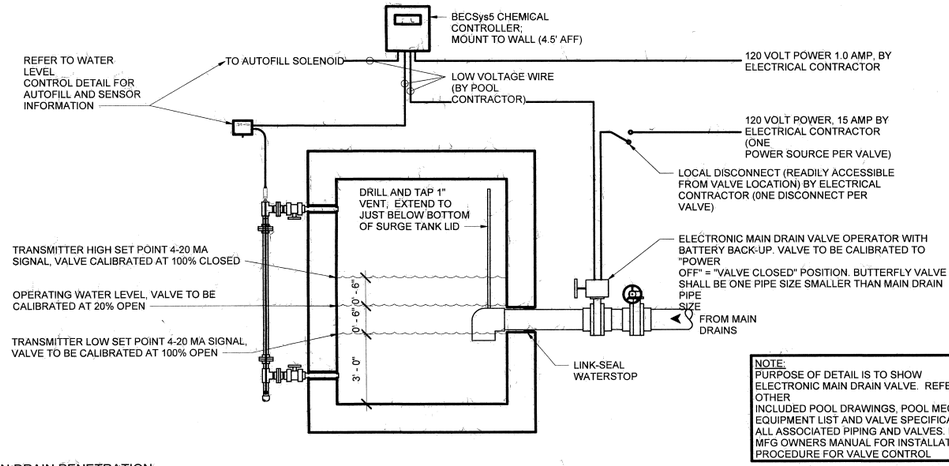
KEYED NOTES:

1. LADDERS WITH PULL-UP HANDRAIL, AVAILABLE IN 5 RUNG THROUGH 25 RUNG.
2. POLYPROPYLENE CONFORMS TO ASTM D-4101. LADDERS MEET ALL ASTM C-497 LOAD REQUIREMENTS & OSHA 1910.26 & 1910.27 SPECIFICATIONS.
3. FASTEN LADDER TO FLOOR & WALL WITH 316L SS 1/2" X 3-3/4" ANCHORS. ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
4. STANDARD ADJUSTABLE MOUNTING BRACKET - 8" OD
5. ALUMINUM REINFORCED COPOLYMER POLYPROPYLENE RAIL 1-3/4" x 1-3/4" DIA
6. STEEL REINFORCED COPOLYMER POLYPROPYLENE RUNG 1-5/8" x 1-1/4" DIA WITH MOLDED FINGER GRIPS, 12" CC
7. ALUMINUM & STEEL REINFORCED COPOLYMER POLYPROPYLENE PULL-UP HANDRAIL. LADDER MANUFACTURED BY LANE INTERNATIONAL CORPORATION, P.O. BOX 925, TUALATIN, OREGON 800-666-0076

5 | PL404 ACCESS LADDER DETAIL VIEW
NOT TO SCALE

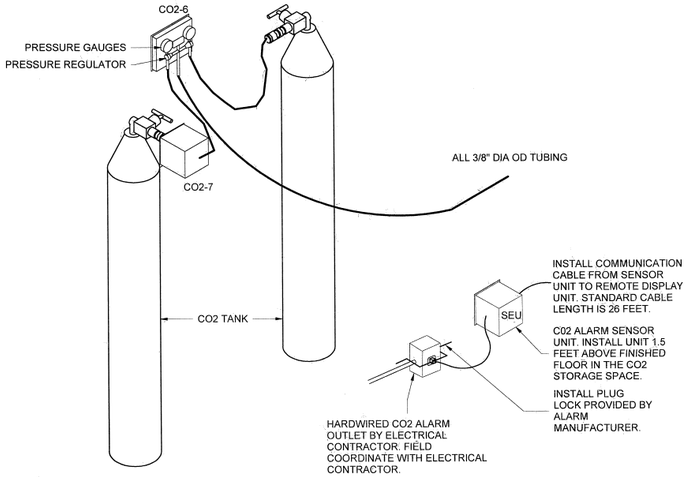


3 | PL404 AUTOFILL/WATER LEVEL CONTROL DETAIL VIEW
NOT TO SCALE



NOTE:
PURPOSE OF DETAIL IS TO SHOW ELECTRONIC MAIN DRAIN VALVE. REFER TO OTHER INCLUDED POOL DRAWINGS, POOL MECHANICAL EQUIPMENT LIST AND VALVE SPECIFICATIONS FOR ALL ASSOCIATED PIPING AND VALVES. REFER TO MFG OWNERS MANUAL FOR INSTALLATION AND PROCEDURE FOR VALVE CONTROL

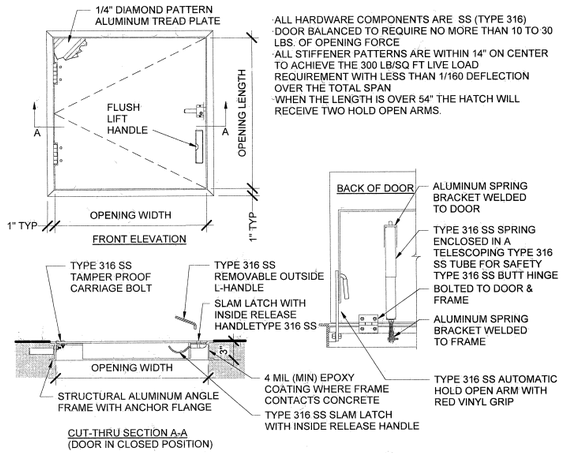
1 | PL404 MAIN DRAIN PENETRATION DETAIL VIEW
NOT TO SCALE



CO2-6 & CO2-7 SYSTEM DIAGRAM NOTE:

a. ASSEMBLE REGULATPR TO TANK USING WASHERS SUPPLIED. CONNECT 3/8"OD POLYTUBE TO CO2 FEEDER.
b. INSTALL DIFFUSER INTO PIPE AT A 6 O'CLOCK POSITION.
c. REFER TO DIVISION 13 FOR DETAILS. CONTRACTOR TO PROVIDE TANK RESTRAINTS PER CODE.

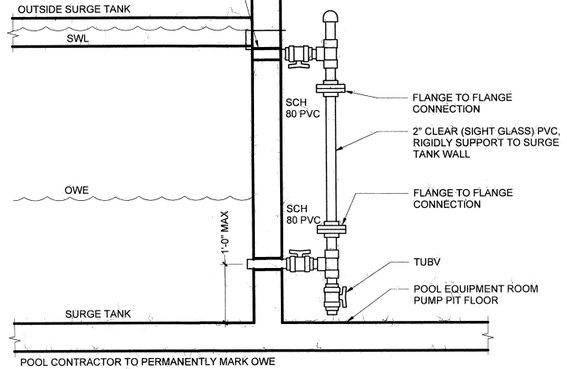
6 | PL404 CO2 ISOMETRIC (BASE) PLAN VIEW
3/4" = 1'-0"



- ALL HARDWARE COMPONENTS ARE SS (TYPE 316)
- DOOR BALANCED TO REQUIRE NO MORE THAN 10 TO 30 LBS. OF OPENING FORCE
- ALL STIFFENER PATTERNS ARE WITHIN 14" ON CENTER TO ACHIEVE THE 300 LB/SQ FT LIVE LOAD REQUIREMENT WITH LESS THAN 1/160 DEFLECTION OVER THE TOTAL SPAN
- WHEN THE LENGTH IS OVER 54" THE HATCH WILL RECEIVE TWO HOLD OPEN ARMS.

BILCO: TYPE J-4AL ACCESS DOOR, RATED AT 300 PSF
NYSTROM: MODEL FDDPA36X36SFL

4 | PL404 ACCESS HATCH (36" x 36") DETAIL VIEW
NOT TO SCALE



2 | PL404 SIGHT TUBE DETAIL VIEW
NOT TO SCALE

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HALEY A. CONRAD
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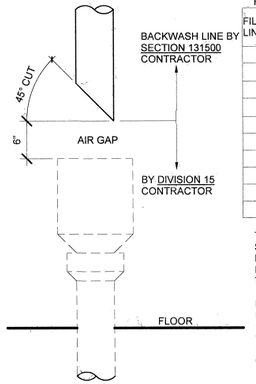
PROFILE SCALE:	PROJ. MGR.	8/20	
HORIZONTAL:	LEAD ENGR.	8/20	
	FIELD MGR.	8/20	
VERTICAL	RECOMMENDED	9.20	
	DESIGN MANAGER		CITY ENGINEER
FILE:	DRAWING:		DATE: 10.02.20
ATLAS PAGE NO: 192			SHEET 76 OF 81 SHEETS



THIS TABLE SPECIFIES THE MIN RECOMMENDED DIA OF THE BACKWASH HUB.

FILTER BACKWASH LINE SIZE	RECOMMENDED BACKWASH HUB SIZE
1"	4"
1.5"	4"
2"	6"
2.5"	6"
3"	8"
4"	10"
6"	12"
8"	16"
10"	20"
12"	24"

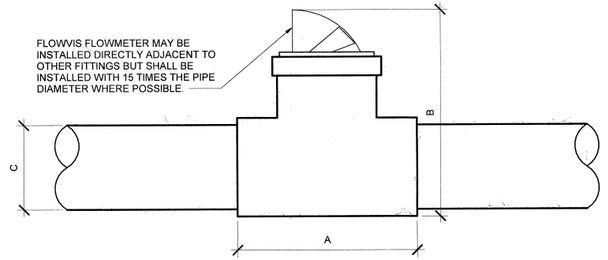
THE DRAIN LINE PIPE SIZE TO THE SANITARY OR STORM SEWER MUST BE DETERMINED BT THE CIVIL/MECHANICAL ENGINEER, BASED ON FLOW VELOCITY IN THE DRAIN PIPING.

PROVIDE ADEQUATE HEIGHT FOR BACKWASH HUB!

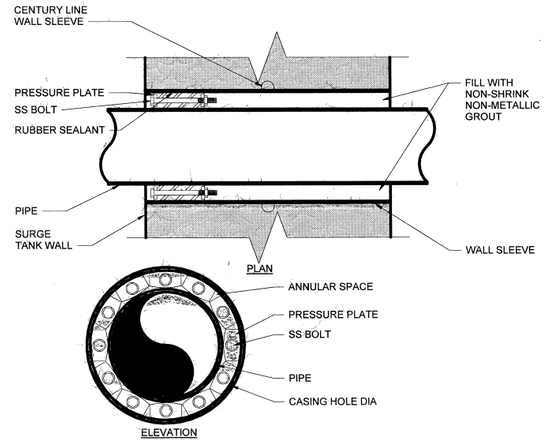
REFER TO PLUMBING DRAWINGS FOR DETAILS AND PIPE CONTINUATION.

4 | PL405 | BACKWASH AIR GAP DETAIL VIEW
NOT TO SCALE

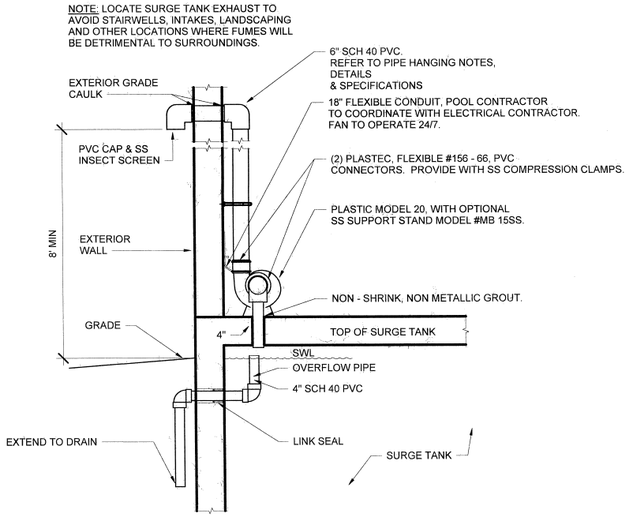
MODEL	A	B	C
FV-C-15	6.5" (165.1)	5.875" (149.23)	SCHEDULE 40 - 1.5"
FV-C	6.5" (165.1)	5.875" (149.23)	SCHEDULE 40 - 2" SLIP AND 2.5" WITH COUPLING
FV-3	8.0" (203.2)	9.5" (241.3)	SCHEDULE 80 - 3"
FV-4	9.5" (241.3)	9.75" (247.65)	SCHEDULE 80 - 4"



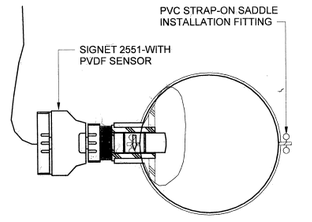
2 | PL405 | FLOW METER DETAIL VIEW
NOT TO SCALE



1 | PL405 | WALL SLEEVE / LINK SEAL DETAIL VIEW
NOT TO SCALE

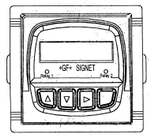


5 | PL405 | SURGE TANK VENT FAN DETAIL VIEW
NOT TO SCALE



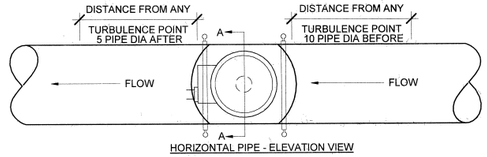
SECTION A-A

NOTE: INSTALL PIPE SUCH THAT AIR CANNOT GET TRAPPED IN AREA OF SENSOR. DO NOT INSTALL IN PIPES WITH FLOW MOVING DOWNWARD OR IN HORIZONTAL SECTIONS OF PIPE THAT ARE HIGHER THAN ADJACENT HORIZONTAL PIPE.



3-8550-1

INDICATOR SPECIFICATIONS: OPERATING VOLTAGE: 12 - 24 VDC TRANSMITTER SHALL MEET APPROPRIATE CE, CSA & UL STANDARDS. ACCURACY: +/- 0.5% OF READING @ 25 DEG. C DEVICE SHALL MEET NEMA 4X & IP65 UNIT SHALL BE NEAR THE TRANSMITTER UTILIZING THE 3-8050 UNIVERSAL MOUNTING KIT DIMENSIONS: 3.8" SQUARE FACE



HORIZONTAL PIPE - ELEVATION VIEW

3 | PL405 | FLOW METER DETAIL VIEW
NOT TO SCALE

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HALEY A. CONRAD 24356 OKLAHOMA LICENSED PROFESSIONAL ENGINEER 7/24/2020

PL405 - MECHANICAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
HORIZONTAL:
VERTICAL

DRAWN	Author	11/22/19
DESIGNED	Designer	11/22/19
SURVEY		
PROJ. MGR.		8/20
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FIELD MGR:		8/20
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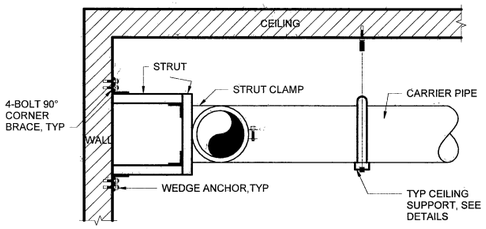
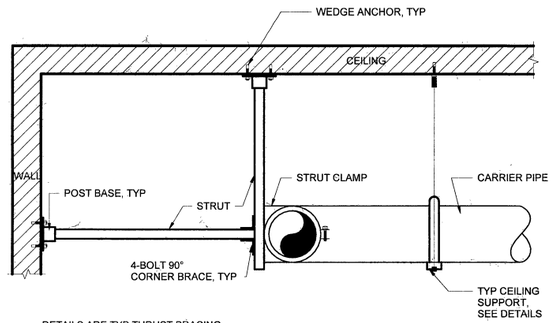


DETAILS ARE TYP THRUST BRACING METHODS, & NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

5 | PL406 | PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



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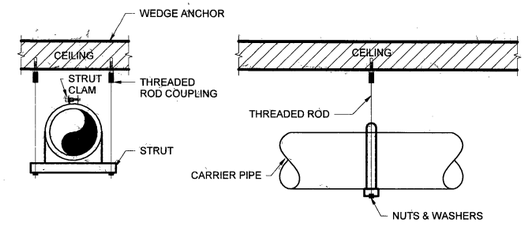
3 | PL406 | PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



NOTES:
1. DETAILS ARE TYP SUPPORT METHODS AND NOT INCLUSIVE OF ALL SITE CONDITIONS.
2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY AND VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINT AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL AND VERTICAL/HORIZONTAL CHANGES IN DIRECTIONS.
4. SEE SECTION 13150 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS AND MATERIALS.
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

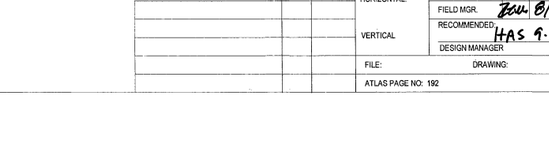
1 | PL406 | PIPE SUPPORT DETAIL VIEW
NOT TO SCALE

MAX ALLOWABLE SUPPORT SPACING FOR PVC PIPE (IN FT)										
NOMINAL PIPE SIZE	SCHEDULE 40					SCHEDULE 80				
	TEMPERATURE (°F)					TEMPERATURE (°F)				
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°
1/2"	4.5	4.5	4	2.5	2.5	5	4.5	4.5	3	2.5
3/4"	5	4.5	4	2.5	2.5	5.5	5	4	3	2.5
1"	5.5	5	4.5	3	2.5	6	5.5	5	3.5	3
1 1/4"	5.5	5.5	5	3	3	6	6	5.5	3.5	3
1 1/2"	6	5.5	5	3.5	3	6.5	6	5.5	3.5	3.5
2"	6	5.5	5	3.5	3	7	6.5	6	4	3.5
2 1/2"	7	6.5	6	4	3.5	7.5	7.5	6.5	4.5	4
3"	7	7	6	4	3.5	8	7.5	7	4.5	4
4"	7.5	7	6.5	4.5	4	9	8	7.5	5	4.5
6"	8.5	8	7.5	5	4.5	10	9.5	9	6	5
8"	9	8.5	8	5	4.5	11	10.5	9.5	6.5	5.5
10"	10	9	8.5	5.5	5	12	11	10	7	6
12"	11.5	10.5	9.5	6.5	5.5	12	11	10	7	6

6 | PL406 | PIPE SUPPORT SCHEDULE DETAIL VIEW
NOT TO SCALE

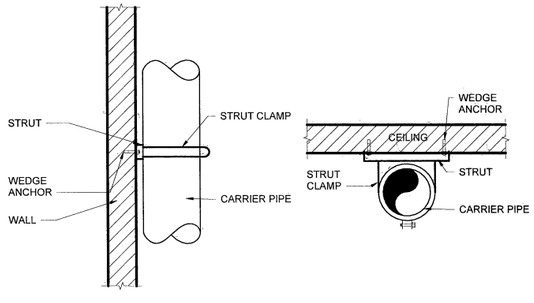
DETAILS ARE TYP THRUST BRACING METHODS, & NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

4 | PL406 | PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



DETAILS ARE TYP THRUST BRACING METHODS, & NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

2 | PL406 | PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



NOTES:
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2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY AND VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINT AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL AND VERTICAL/HORIZONTAL CHANGES IN DIRECTIONS.
4. SEE SECTION 13150 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS AND MATERIALS.
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

7 | PL406 | PIPE SUPPORT DETAIL VIEW
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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL406 - MECHANICAL DETAILS

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

PLAN SCALE: AS NOTED
PROFILE SCALE:
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VERTICAL

DRAWN	Author	10/14/19
DESIGNED	Designer	10/14/19
SURVEY		
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LEAD ENGR.		8/20
FIELD MGR.		8/20
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DESIGN MANAGER	HAS	9-20

APPROVED:
CITY ENGINEER
DATE: 10.02.20

FILE: DRAWING:
ATLAS PAGE NO: 192
SHEET 78 OF 81 SHEETS

POOL MECHANICAL PIPING SCHEMATIC NOTES:

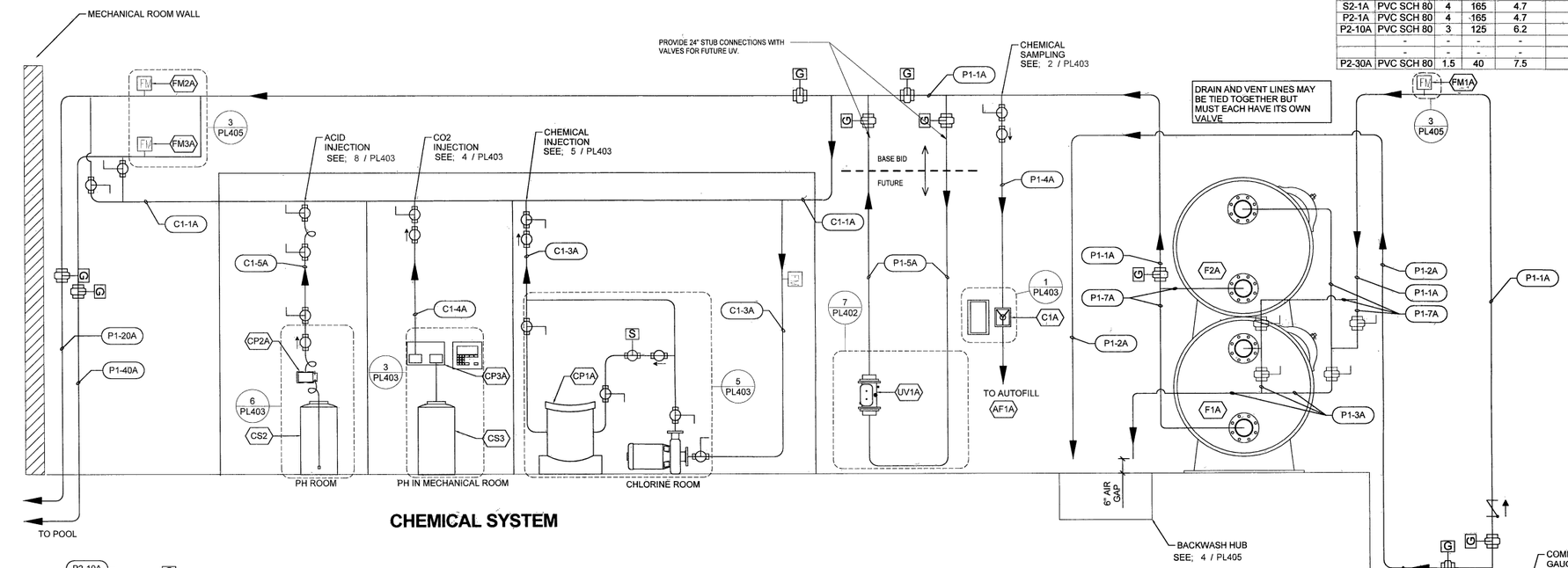
1. SEE PL400 FOR EQUIPMENT LOCATIONS.
2. SUPPORT PIPES PER DETAILS PL406-1 THRU 7.
3. SEE DETAIL PL200-3 FOR REINFORCING AT PENETRATIONS.
4. ARROWS DENOTE DIRECTION OF FLOW.
5. NOTE: THE INTENT OF THIS SCHEMATIC IS NOT TO BE INCLUSIVE OF ALL VALVES OR FITTINGS REQUIRED FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ALL VALVES AND FITTINGS REQUIRED.
6. THIS DRAWING IS FOR SCHEMATIC USE ONLY!

POOL A - LEISURE PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S1-1A	PVC SCH 80	10	898	4.1	FILTRATION PUMP SUCTION - MAIN DRAIN
S1-10A	PVC SCH 80	10	898	4.1	FILTRATION PUMP SUCTION - SURGE TANK
	-	-	-	-	-
P1-1A	PVC SCH 80	8	898	6.4	FILTRATION SUPPLY
P1-2A	PVC SCH 80	4	300	8.5	POOL DRAIN LINE
P1-3A	PVC SCH 80	6	536	6.7	FILTER BACKWASH
P1-4A	PVC SCH 80	0.75	10	7.8	CHEMICAL SAMPLING
P1-5A	PVC SCH 80	8	898	6.4	UV LOOP
P1-7A	PVC SCH 80	6	449	5.6	FILTER FACE PIPING
	-	-	-	-	-
P1-20A	PVC SCH 80	4	171	4.9	FLOOR INLET SUPPLY (60 MIN TURNOVER)
P1-40A	PVC SCH 80	8	727	5.2	WALL INLET SUPPLY (120 MIN TURNOVER)
	-	-	-	-	-
C1-1A	PVC SCH 80	2.5	80	-	CHEMICAL LOOP
C1-3A	PVC SCH 80	1.5	0	-	CAL HYPO LOOP
C1-4A	PVC SCH 80	N/A	0	-	CO2 INJECTION
C1-5A	PVC SCH 80	0.5	0	-	ACID INJECTION
	-	-	-	-	-
G-3A	PVC SCH 80	4	100	2.8	FILL LINE
G-5A	PVC SCH 80	4	0	-	SURGE TANK OVERFLOW
	-	-	-	-	-
G-10A	PVC SCH 80	10	449	2.0	GUTTER PIPE
G-20A	PVC SCH 80	10	449	2.0	GUTTER PIPE
	-	-	-	-	-
S2-1A	PVC SCH 80	4	165	4.7	ACTIVITY SUCTION
P2-1A	PVC SCH 80	4	165	4.7	ACTIVITY SUPPLY
P2-10A	PVC SCH 80	3	125	6.2	GEYSER SUPPLY
	-	-	-	-	-
	-	-	-	-	-
P2-30A	PVC SCH 80	1.5	40	7.5	WATER SLIDE SUPPLY

MECHANICAL SYMBOL LEGEND

PUMP	
STRAINER	
HIGH RATE SAND FILTER (HORIZONTAL)	
HIGH RATE SAND FILTER (VERTICAL)	
POOL HEATER	
UV UNIT	
CHEMICAL CONTROLLER	
CHEMICAL FEED PUMP	
PULSAR CHLORINE FEEDER	
CO2 FEEDER	
CHEMICAL STORAGE TANK	
CO2 STORAGE TANK	
AUTO FILL	
SURGE TANK VENTILATION FAN	
GEAR OPERATED BUTTERFLY VALVE	G
LEVER OPERATED BUTTERFLY VALVE	
PNEUMATIC BUTTERFLY VALVE	
TRUE UNION BALL VALVE	
TRUE UNION CHECK VALVE	
ELECTRONIC MODULATING VALVE	M
SOLENOID VALVE	S
CHECK VALVE	
WYE STRAINER	
CONCENTRIC REDUCER	
ECCENTRIC REDUCER	
FLANGED BREAK	
COMPOUND GAUGE	
THERMOMETER	
PRESSURE RELIEF VALVE	
FLOW SWITCH	FS
FLOW METER (SENSOR)	FM



1 PL500 POOL A - P&ID DETAIL VIEW
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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
7/24/2020

REVISION	BY	DATE

PL500 - MECHANICAL SCHEMATIC

PROJECT NO. SP19-1

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4233 S Yukon Ave, Tulsa, OK 74107

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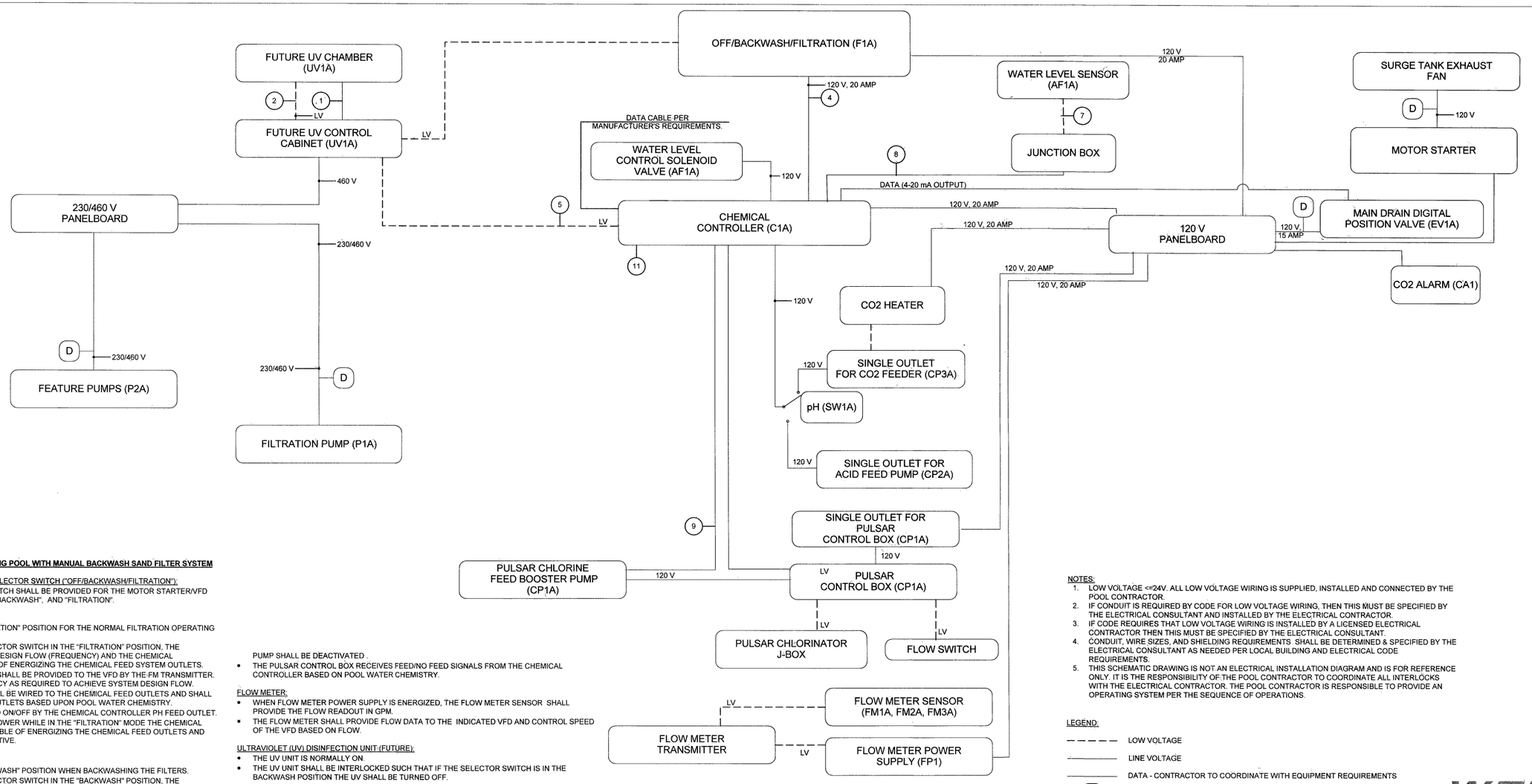

SEQUENCE OF OPERATIONS - SWIMMING POOL WITH MANUAL BACKWASH SAND FILTER SYSTEM

FILTRATION PUMP MOTOR STARTER SELECTOR SWITCH ("OFF/BACKWASH/FILTRATION"):

- A THREE POSITION SELECTOR SWITCH SHALL BE PROVIDED FOR THE MOTOR STARTER/VFD WITH POSITIONS LABELED "OFF", "BACKWASH", AND "FILTRATION".

"FILTRATION" POSITION:

- PLACE THE SWITCH IN THE "FILTRATION" POSITION FOR THE NORMAL FILTRATION OPERATING MODE OF THE SYSTEM.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "FILTRATION" POSITION, THE FILTRATION PUMP SHALL RUN AT DESIGN FLOW (FREQUENCY) AND THE CHEMICAL CONTROLLER SHALL BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS.
- THE ACTUAL FLOW INFORMATION SHALL BE PROVIDED TO THE VFD BY THE FM TRANSMITTER. THE VFD SHALL ADJUST FREQUENCY AS REQUIRED TO ACHIEVE SYSTEM DESIGN FLOW.
- THE CHEMICAL CONTROLLER SHALL BE WIRED TO THE CHEMICAL FEED OUTLETS AND SHALL ENERGIZE/DE-ENERGIZE THESE OUTLETS BASED UPON POOL WATER CHEMISTRY.
- THE ACID FEED PUMP IS POWERED ON/OFF BY THE CHEMICAL CONTROLLER PH FEED OUTLET.
- IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

"BACKWASH" POSITION:

- PLACE THE SWITCH IN THE "BACKWASH" POSITION WHEN BACKWASHING THE FILTERS.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "BACKWASH" POSITION, THE FILTRATION PUMP SHALL RUN, BUT THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

"OFF" POSITION:

- PLACE THE SWITCH IN THE "OFF" POSITION TO TURN THE PUMP AND FILTRATION SYSTEM OFF.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "OFF" POSITION, THE FILTRATION PUMP SHALL BE OFF AND THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

CHEMICAL CONTROLLER & CHEMICAL FEED OUTLETS:

- THE CHEMICAL CONTROLLER CPU SHALL BE POWERED AT ALL TIMES.
- THE CHEMICAL FEED OUTLETS SHALL BE INTERLOCKED SUCH THAT IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE, THE IN-LINE FLOW SWITCH IS NOT MADE OR THE SELECTOR SWITCH IS IN THE OFF OR BACKWASH POSITIONS; THE FEED OUTLETS ARE INACTIVE.
- CHEMICAL CONTROLLER FEED OUTLETS ENERGIZES / DE-ENERGIZES SANITIZER AND pH FEED BASED UPON POOL WATER CHEMISTRY.
- SWITCH BETWEEN ACID OUTLET AND CO2 OUTLET IS ACCOMPLISHED MANUALLY BY OPERATOR. LABEL OUTLETS AND SWITCH AS CO2 AND ACID, RESPECTIVELY.
- CHEMICAL CONTROLLER FEED OUTLETS ENERGIZES / DE-ENERGIZES ENZYME FEED BASED UPON TIMED DELIVERY.

CHEMICAL FEED PUMPS

- THE CHEMICAL FEED PUMPS ARE ENERGIZED BY THE CHEMICAL FEED OUTLETS.

CO2 FEED SOLENOID

- THE CO2 FEED SOLENOID IS ACTIVATED BY THE CHEMICAL FEED OUTLETS.

PULSAR CHLORINE FEEDER:

- THE PULSAR CONTROL BOX SHALL BE POWERED AT ALL TIMES.
- THE PULSAR FLOW SWITCH IS USED TO PROVE FLOW TO THE PULSAR CONTROL BOX. IF NO FLOW IS DETECTED, THE CHLORINATOR AND PULSAR CHLORINE FEED BOOSTER PUMP WILL BE DEACTIVATED.
- THE FILTRATION PUMP AND PULSAR CHLORINE FEED BOOSTER PUMP SHALL BE INTERLOCKED SUCH THAT IF THE FILTRATION PUMP IS NOT RUNNING, THE PULSAR CHLORINE FEED BOOSTER PUMP SHALL BE DEACTIVATED .
- THE PULSAR CONTROL BOX RECEIVES FEED/NO FEED SIGNALS FROM THE CHEMICAL CONTROLLER BASED ON POOL WATER CHEMISTRY.

FLOW METER:

- WHEN FLOW METER POWER SUPPLY IS ENERGIZED, THE FLOW METER SENSOR SHALL PROVIDE THE FLOW READOUT IN GPM.
- THE FLOW METER SHALL PROVIDE FLOW DATA TO THE INDICATED VFD AND CONTROL SPEED OF THE VFD BASED ON FLOW.

ULTRAVIOLET (UV) DISINFECTION UNIT (FUTURE):

- THE UV UNIT IS NORMALLY ON.
- THE UV UNIT SHALL BE INTERLOCKED SUCH THAT IF THE SELECTOR SWITCH IS IN THE BACKWASH POSITION THE UV SHALL BE TURNED OFF.
- THE UV NORMALLY RUNS IN VARIABLE POWER MODE.
- COMBINED CHLORINE UV CONTROL: WITH FREE AND TOTAL CHLORINE SENSORS, THE CONTROLLER SHALL PROVIDE UV BOOST CONTROL OF A UV SYSTEM BASED UPON THE COMBINED CHLORINE SET POINT. WHEN COMBINED CHLORINE IS ABOVE THE SET POINT THE UV SYSTEM SHALL BOOST TO 100% TO INCREASE THE CHLORAMINE DESTRUCTION RATE. THE UV SHALL RETURN TO VARIABLE POWER MODE ONCE COMBINED CHLORINE DROPS BELOW THE SET POINT.

POOL EQUIPMENT OPERATING MODES

FILTRATION SELECTOR SWITCH POSITION	FILTRATION PUMP	CHEMICAL CONTROLLER	CHLORINE FEED	ACID FEED	HEATER	UV (FUTURE)
OFF	O	X	O	O	O	O
BACKWASH	X	X	O	O	O	O
FILTRATION	X	X	X	X	X	X

"X" INDICATES THE EQUIPMENT IS ENERGIZED/RUNNING.
"O" INDICATES THE EQUIPMENT IS NOT ENERGIZED.

KEYNOTES: (#)

1. WIRING (LAMP POWER CORD) FURNISHED WITH UV UNIT AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FINAL CONNECTIONS TO UV CHAMBER AND CONTROL CABINET BY POOL CONTRACTOR
2. FURNISHED WITH UV UNIT AND INSTALLED BY POOL CONTRACTOR
3. NOT USED.
4. POWER FOR THE CHEMICAL FEEDERS . WHEN FILTER SELECTOR SWITCH POSITION IS OFF, BACKWASH, OR THE FILTRATION PUMP LOSES POWER WHILE IN FILTRATION MODE, THIS CONNECTION SHALL INACTIVE CHEMICAL FEED TO THE SYSTEM.
5. UV BOOST SIGNAL BASED ON COMBINED CHLORINE.
6. ORP OUTPUT FROM CHEMICAL CONTROLLER. EXTENSION CABLE NOT PROVIDED BY EQUIPMENT SUPPLIER.
7. SENSOR CABLE FROM WATER LEVEL SENSOR. FURNISHED WITH WATER LEVEL SENSOR AND INSTALLED BY POOL CONTRACTOR.
8. CONDUCTOR CABLE CONTAINS POWER AND SIGNAL CABLES. COORDINATE REQUIREMENTS WITH WATER LEVEL SENSOR AND CHEMICAL CONTROLLER MANUFACTURERS.
9. WHEN FILTER SELECTOR SWITCH POSITION IS OFF, BACKWASH MODE OR THE FILTRATION PUMP LOSES POWER WHILE IN FILTRATION MODE, THIS CONNECTION SHALL INACTIVE PULSAR CHLORINE FEED BOOSTER PUMP.
10. NOT USED.
11. A FLOW CELL WITH SHUT-OFF SWITCH SHALL COME PREASSEMBLED AND WIRED TO THE CHEMICAL CONTROLLER. POOL CONTRACTOR SHALL ASSURE CHEMICAL CONTROLLER FLOW CELL ASSEMBLY IS WORKING PROPERLY AND DEACTIVATES CHEMICAL FEED UNDER A NO FLOW CONDITION.

NOTES:

1. LOW VOLTAGE <=24V. ALL LOW VOLTAGE WIRING IS SUPPLIED, INSTALLED AND CONNECTED BY THE POOL CONTRACTOR.
2. IF CONDUIT IS REQUIRED BY CODE FOR LOW VOLTAGE WIRING, THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. IF CODE REQUIRES THAT LOW VOLTAGE WIRING IS INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT.
4. CONDUIT, WIRE SIZES, AND SHIELDING REQUIREMENTS SHALL BE DETERMINED & SPECIFIED BY THE ELECTRICAL CONSULTANT AS NEEDED PER LOCAL BUILDING AND ELECTRICAL CODE REQUIREMENTS.
5. THIS SCHEMATIC DRAWING IS NOT AN ELECTRICAL INSTALLATION DIAGRAM AND IS FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE POOL CONTRACTOR TO COORDINATE ALL INTERLOCKS WITH THE ELECTRICAL CONTRACTOR. THE POOL CONTRACTOR IS RESPONSIBLE TO PROVIDE AN OPERATING SYSTEM PER THE SEQUENCE OF OPERATIONS.

LEGEND:

- LOW VOLTAGE
- LINE VOLTAGE
- DATA - CONTRACTOR TO COORDINATE WITH EQUIPMENT REQUIREMENTS
- (D) DISCONNECT - LOCATE AT EQUIPMENT PER CODE REQUIREMENTS

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18270
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LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
OKLAHOMA
7/24/2020

PL501 - ELECTRICAL SCHEMATIC

PROJECT NO. SP19-1

REED PARK POOL AND WATER PLAYGROUND RECONSTRUCTION
4233 S Yukon Ave, Tulsa, OK 74107

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
WATER TECHNOLOGY, INC

REVISION	BY	DATE

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PROFILE SCALE:
HORIZONTAL:
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DRAWN	Author	10/14/19
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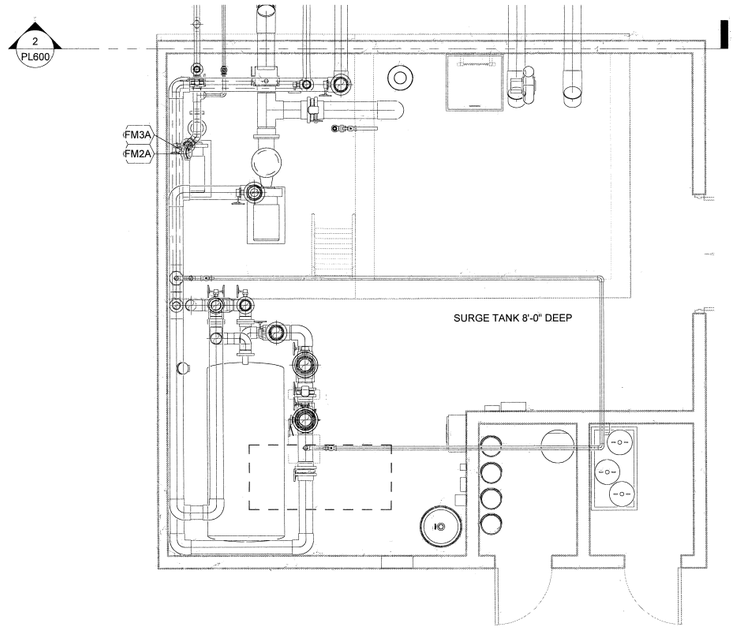
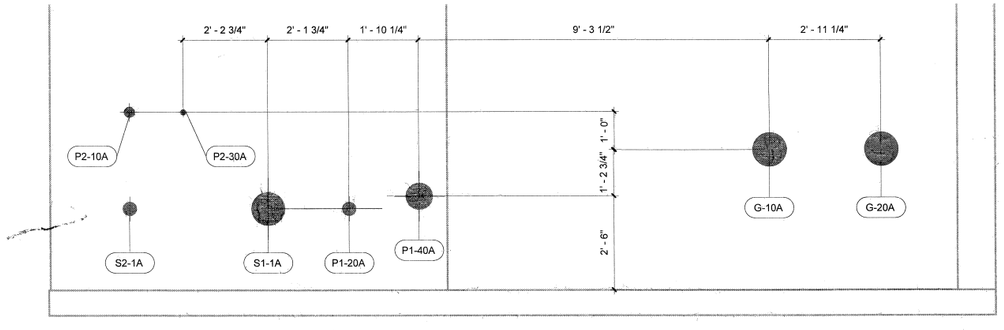


1 PL600 MECHANICAL ROOM EQUIPMENT PIPE PENETRATION
PLAN VIEW
1/4" = 1'-0"



2 PL600 PIPE PENETRATIONS
SECTION VIEW
NOT TO SCALE

POOL A PENETRATION SCHEDULE

PIPE ID	DETAIL	NPS (in)	SLEEVE MODEL #	DESCRIPTION
S1-1A		10	CS-14	FILTRATION PUMP SUCTION - MAIN DRAIN
		-	-	-
P1-20A		4	CS-6	FLOOR INLET SUPPLY (60 MIN TURNOVER)
P1-40A		8	CS-12	WALL INLET SUPPLY (120 MIN TURNOVER)
		-	-	-
S2-1A		4	CS-6	ACTIVITY SUCTION
		-	-	-
P2-10A		3	CS-5	GEYSER SUPPLY
P2-20A		#N/A	#N/A	#N/A
P2-30A		1.5	CS-3-1/2	WATER SLIDE SUPPLY
		-	-	-
G-10A		10	CS-14	GUTTER PIPE
G-20A		10	CS-14	GUTTER PIPE

POOL CONTRACTOR PIPE PENETRATION NOTES

THE FOLLOWING NOTES APPLY TO ALL WALL/OR SURGE TANK PENETRATIONS:

1. SEE PENETRATION SCHEDULE FOR ALL PIPE PENETRATIONS SHOWN IN THE ELEVATION DETAILS ON PL600.
2. SEE BUILDING STRUCTURAL DRAWINGS FOR ALL WALL DIMENSIONS AND WALL/REINFORCING STEEL DIMENSIONS AND DETAILS, INCLUDING REINFORCING REQUIREMENTS AROUND ALL PIPE PENETRATIONS.
3. THE POOL CONTRACTOR SHALL FURNISH ALL SLEEVES FOR THE PENETRATIONS SHOWN ON THE POOL DRAWINGS.
4. THE SLEEVES SHALL BE INSTALLED BY THE BUILDING CONTRACTOR DURING THE STEEL AND FORMWORK PLACEMENT. BUILDING CONTRACTOR SHALL COORDINATE WITH THE POOL CONTRACTOR DURING PLACEMENT AND OBTAIN SLEEVE LOCATION APPROVAL FROM THE POOL CONTRACTOR PRIOR TO POURING THE WALLS.
5. THE POOL CONTRACTOR SHALL PROVIDE ALL LINK-SEALS REQUIRED IN THE PIPE PENETRATIONS.
6. ALL PIPE PENETRATION DRAWINGS AND DIMENSIONS ARE SPECIFIC TO THE WTI BASIS OF DESIGN POOL EQUIPMENT AND LAYOUTS AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FINAL PENETRATION LOCATIONS AND SIZES BASED ON ENGINEER APPROVED EQUIPMENT SELECTIONS AND ACTUAL SITE CONDITIONS. REFER TO PL200 FOR REINFORCEMENT AT PIPE PENETRATIONS.
7. ALL SUPPORTS, BRACING, FASTENERS AND HARDWARE IN THE SURGE TANK(S) SHALL BE STAINLESS STEEL.

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OKLAHOMA LICENSED PROFESSIONAL ENGINEER
HALEY A. CONRAD
24356
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PL600 - PIPE PENETRATION

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