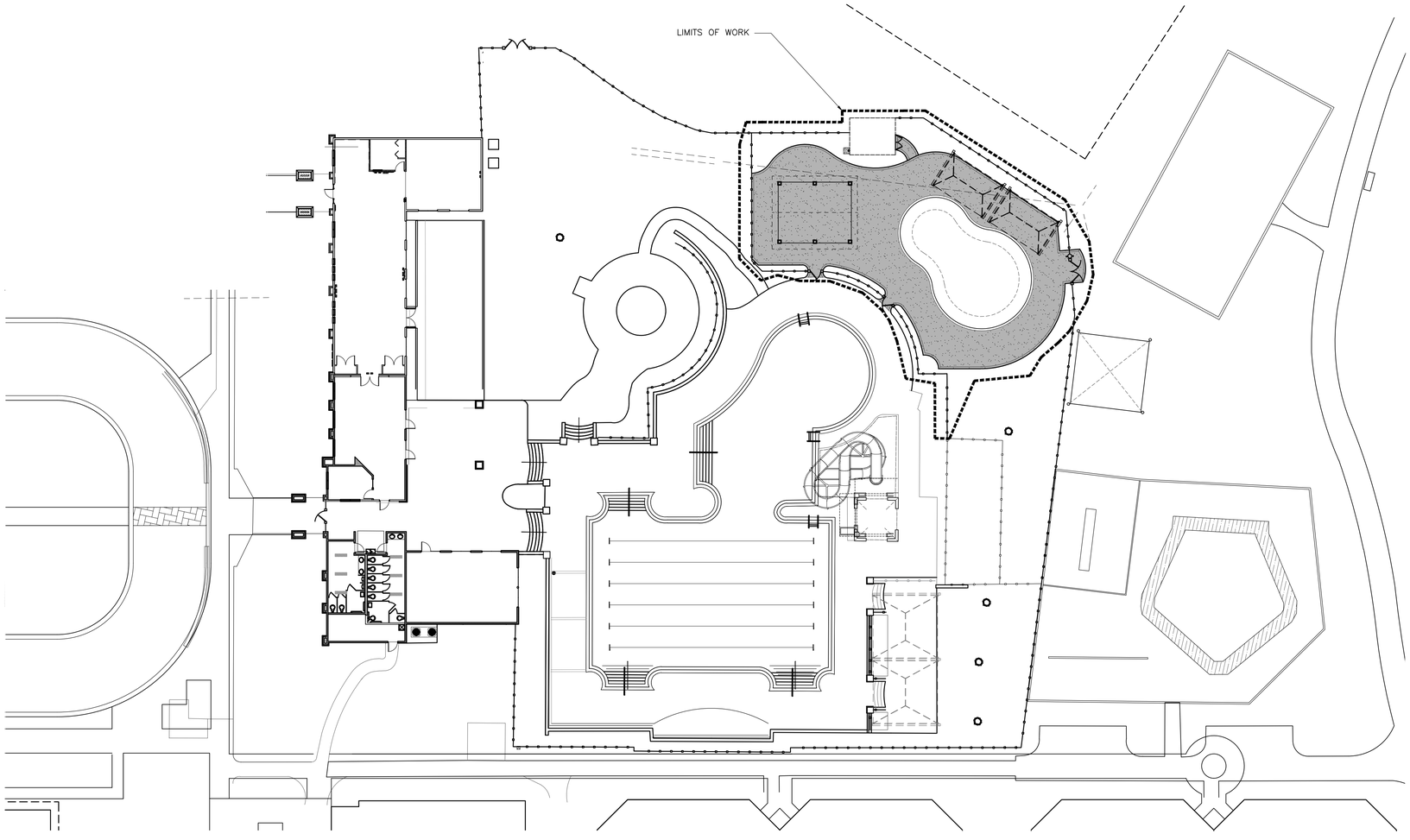
PERMIT ISSUE: DECEMBER 1, 2017

ST. JOHNS GOLF & COUNTRY CLUB

AMENITY IMPROVEMENTS

DEVELOPED BY: SAMPSON CREEK CDD



INDEX OF DRAWINGS

ARCHITECTURAL DESIGN
Basham & Lucas Design Group, Inc.
7645 Gate Parkway Suite 201
Jacksonville, Florida 32256
(904) 731-2323

OWNER
Sampson Creek CDD
475 West Town Place, #114
St. Johns, FL 32092
(904) 264-6553

MECHANICAL & PLUMBING ENGINEER
Gregory Engineering, Inc.
4567 Deep River Place
Jacksonville, Florida 32224
(904) 714-5188

ELECTRICAL ENGINEER
Shaffer Engineering Group
12058 San Jose Blvd, Suite 502
Jacksonville, Florida 32223
(904) 239-3621

CIVIL ENGINEER
Matthews Design Group, Inc.
7 Waldo St. PO Box 3126
St. Augustine, FL 32084
(904) 826-1334
(NOT UNDER ARCH. CONTRACT)

SPLASH PAD
Vortex
328 Avro Street
Pointe-Claire, Quebec Canada
(972) 795-5132
(NOT UNDER ARCH. CONTRACT)

REVISIONS

NO.	DATE	DESCRIPTION	BY
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
COVER SHEET

BASHAM & LUCAS DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MTL
CHECKED BY	MTL
DATE	10-6-2017
JOB NO.	16-39

C1.1

NOTE: THIS PLAN IS FOR GENERAL LAYOUT PURPOSES ONLY. REFER TO CIVIL ENGINEERING DOCUMENTS PREPARED BY CIVIL ENGINEER FOR ACTUAL SITE RELATED IMPROVEMENTS REGARDING CLEARING, GRADING, INFRA-STRUCTURE, UTILITIES, AND DRAINAGE FOR SPECIFIC DETAILS. CONTACT ARCHITECT FOR ANY DISCREPANCIES OF SITE RELATED ISSUES PRIOR TO CONSTRUCTION.

EDGE OF BUILDING

EDGE OF PAVERS

℄ OF BUILDING

88'-4"

8'-9"

62'-3"

23'-6"

15'-0"

9'-2"

18'-7"

11'-8"

EDGE OF COL.

VINYL SCREEN FENCE, RE: 5/H1.2

12'-2"

1'-8"

5'-0"

(PR) 2'-6" GATES

EDGE OF BUILDING

PERIMETER FENCE, NOT IN CONTRACT

14'-7½"

HOSE BIBB, RE: 5/H1.1

EDGE OF COL.

NEW 3' FENCE, RE: 1/H1.1

9
H1.1
SIM.

4'-0"

33°

15'-8"

CANTILEVERED PRE-FIN MET. AND FABRIC SHADE STRUCTURE, 20'X13'-0" (SHADEAMERICA.COM OR APPROVED EQ.) -RE: 7/H1.1

12'-1"

6'-7"

NEW SHOWER: DOUBLE HEAD W/ FOOT WASH BY MOST DEPENDABLE FOUNTAINS, INC., MODEL#575 SMSS, PH: 800-552-6331

RE: 14/H1.1 FOR BASE BID- RE: 13/H1.2 FOR PAVILION ALTERNATE

NEW MAINTENANCE GATES: (PR) 3'-6", RE: 6/H1.1

NEW SPRAY GROUND, RE: DWGS BY VORTEX

NEW PAVERS, RE: 13/H1.3 FOR PAVER PLAN

NEW 3'-6" GATE, RE: 6/H1.1, SIM.

NEW 3' FENCE, RE: 1/H1.1

PERIMETER FENCE, NOT IN CONTRACT

EXISTING TREES TO REMAIN

45'-5½"

DESIGN IS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 5TH ADDITION
ULTIMATE WIND SPEED.....132mph
NOMINAL WIND SPEED.....103mph
WIND EXPOSURE CATEGORY.....C

FOUNDATIONS ARE DESIGNED FOR AN ASSUMED ALLOWABLE BEARING PRESSURE OF 2,000psf

ALL CONCRETE AND CMU GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) OF 3,000psi. WATER TO CEMENT RATIO SHALL NOT EXCEED 0.55.

CMU SHALL HAVE A MINIMUM ASSEMBLY COMPRESSIVE STRENGTH (fm) OF 2,000psi.

ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.

13 OVERALL SITE PLAN
SCALE: 1"=10 '-0"

REVISIONS

NO.	DATE	DESCRIPTION	BY
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

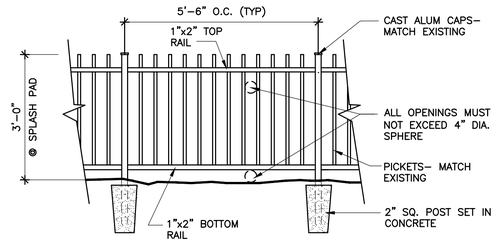
OVERALL SITE PLAN

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	KNG
CHECKED BY	MTL
DATE	10-6-2017
JOB NO.	16-39

SP1.1

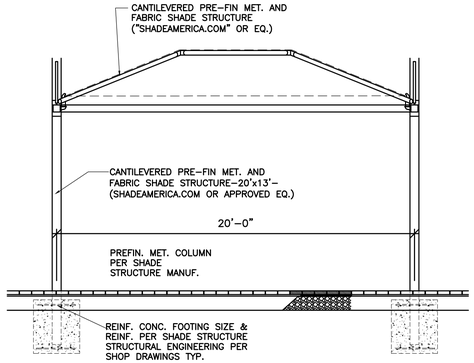
*NOTE: G.C. TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION

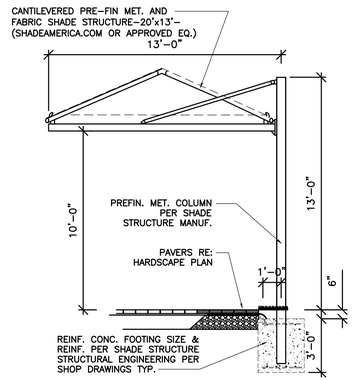


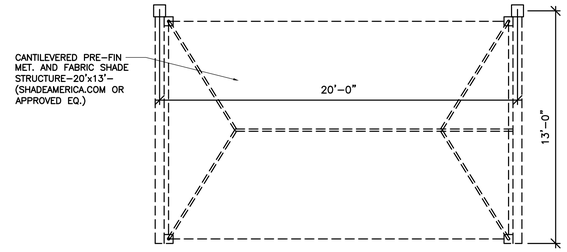
1 GUARDRAIL FENCE DETAIL

SCALE: 1/2"=1'–0"

2 NOT USED

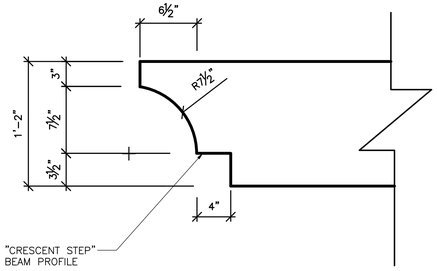






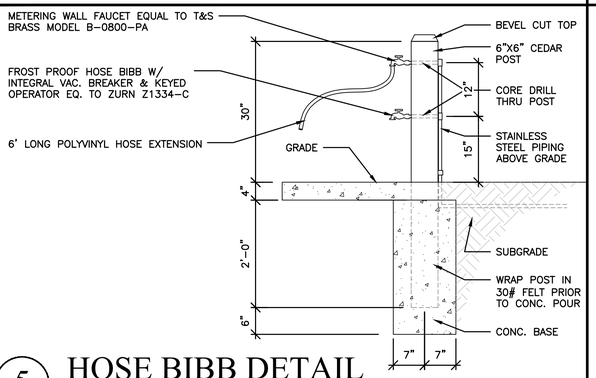
7 SHADE STRUCTURE DETAIL

SCALE: 1/4"=1'–0"



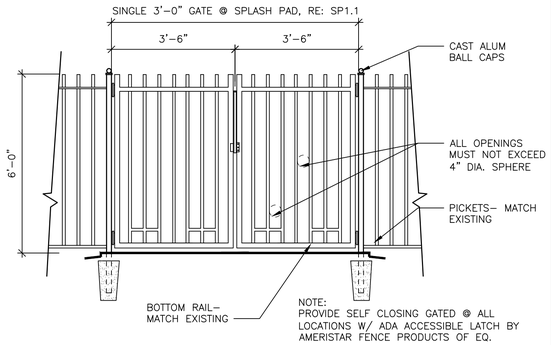
8 BEAM DETAIL

SCALE: 1 1/2"=1'–0"



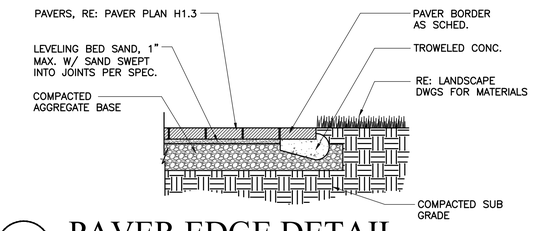
5 HOSE BIBB DETAIL

SCALE: 3/4"=1'–0"



6 MAINTENANCE GATE

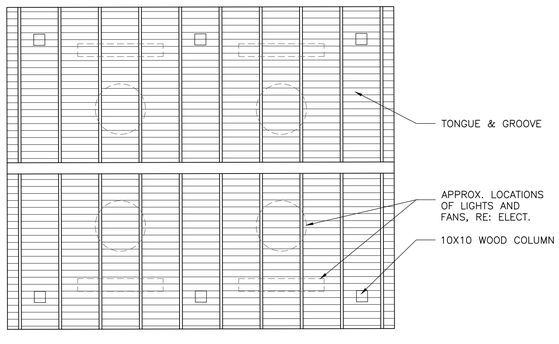
SCALE: 1/2"=1'–0"



9 PAVER EDGE DETAIL

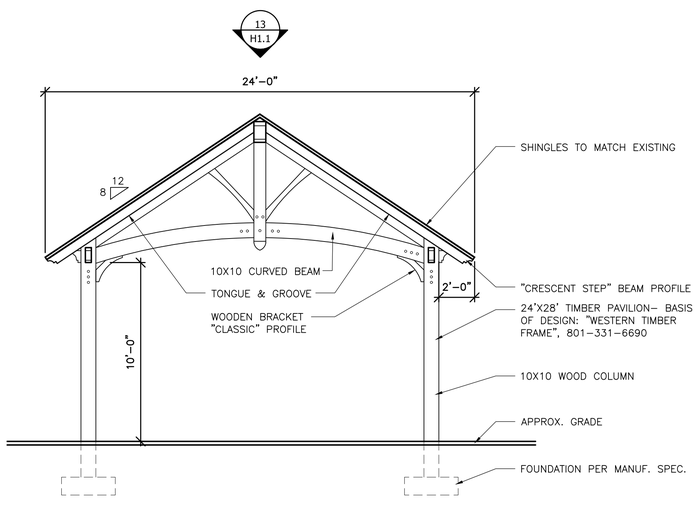
SCALE: 3/4"=1'–0"

*RE: 13/H1.2 FOR PAVILION ALTERNATE

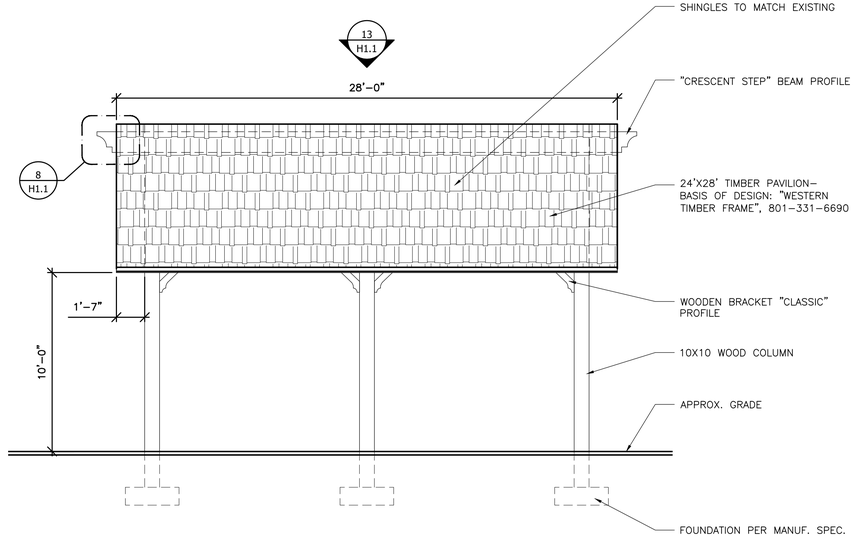


13 PAVILION RCP- BASE BID

SCALE: 3/16"=1'–0"



*RE: 13/H1.2 FOR PAVILION ALTERNATE



14 PAVILION ELEVATION- BASE BID

SCALE: 1/4"=1'–0"

REVISIONS

NO.	DATE	DESCRIPTION	BY
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

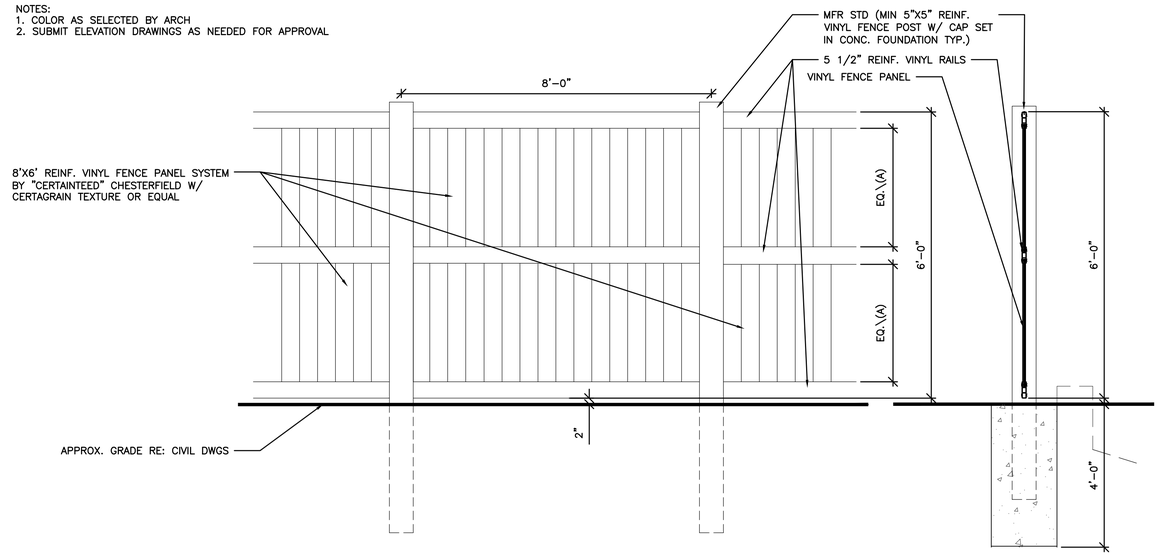
HARDSCAPE DETAILS

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MTL
CHECKED BY	MTL
DATE	10-6-2017
JOB NO.	16-39

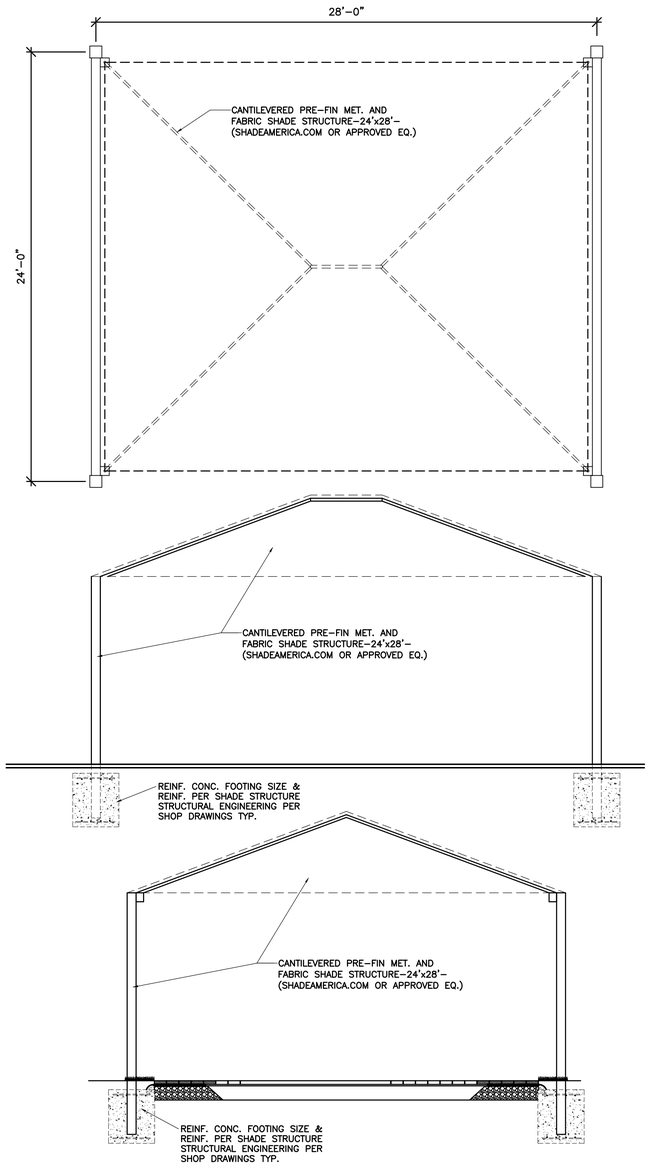
H1.1

NOTES:
1. COLOR AS SELECTED BY ARCH
2. SUBMIT ELEVATION DRAWINGS AS NEEDED FOR APPROVAL



5 POOL EQUIPMENT ENCLOSURE DETAIL

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



13 PAVILION- ALTERNATE

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

REVISIONS

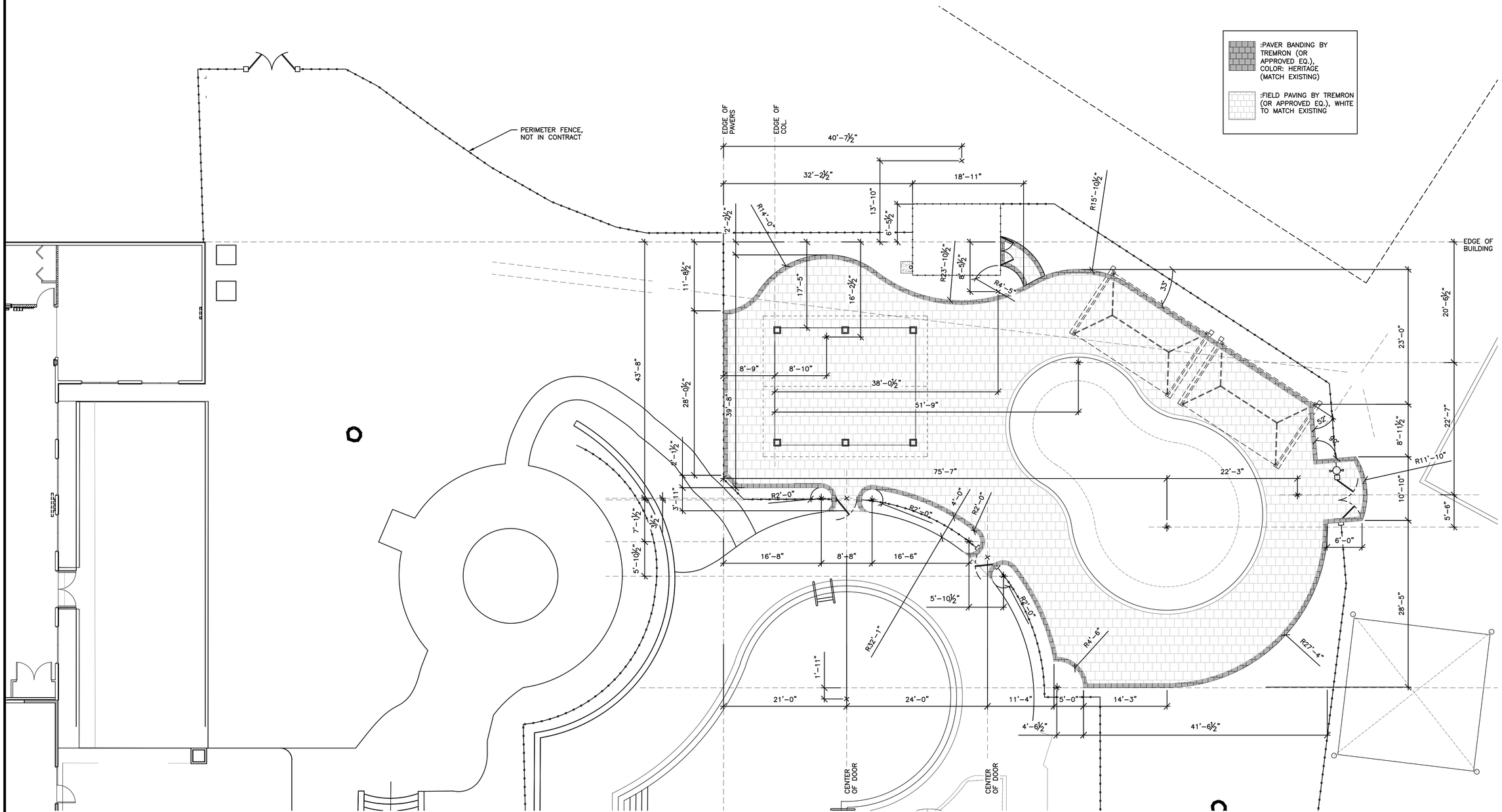
NO.	DATE	DESCRIPTION	BY
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
HARDSCAPE DETAILS

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MTL
CHECKED BY	MTL
DATE	10-6-2017
JOB NO.	16-39

H1.2



13 PAVER PLAN

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

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	8-18-2017	ADDENDUM #2	KNG
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

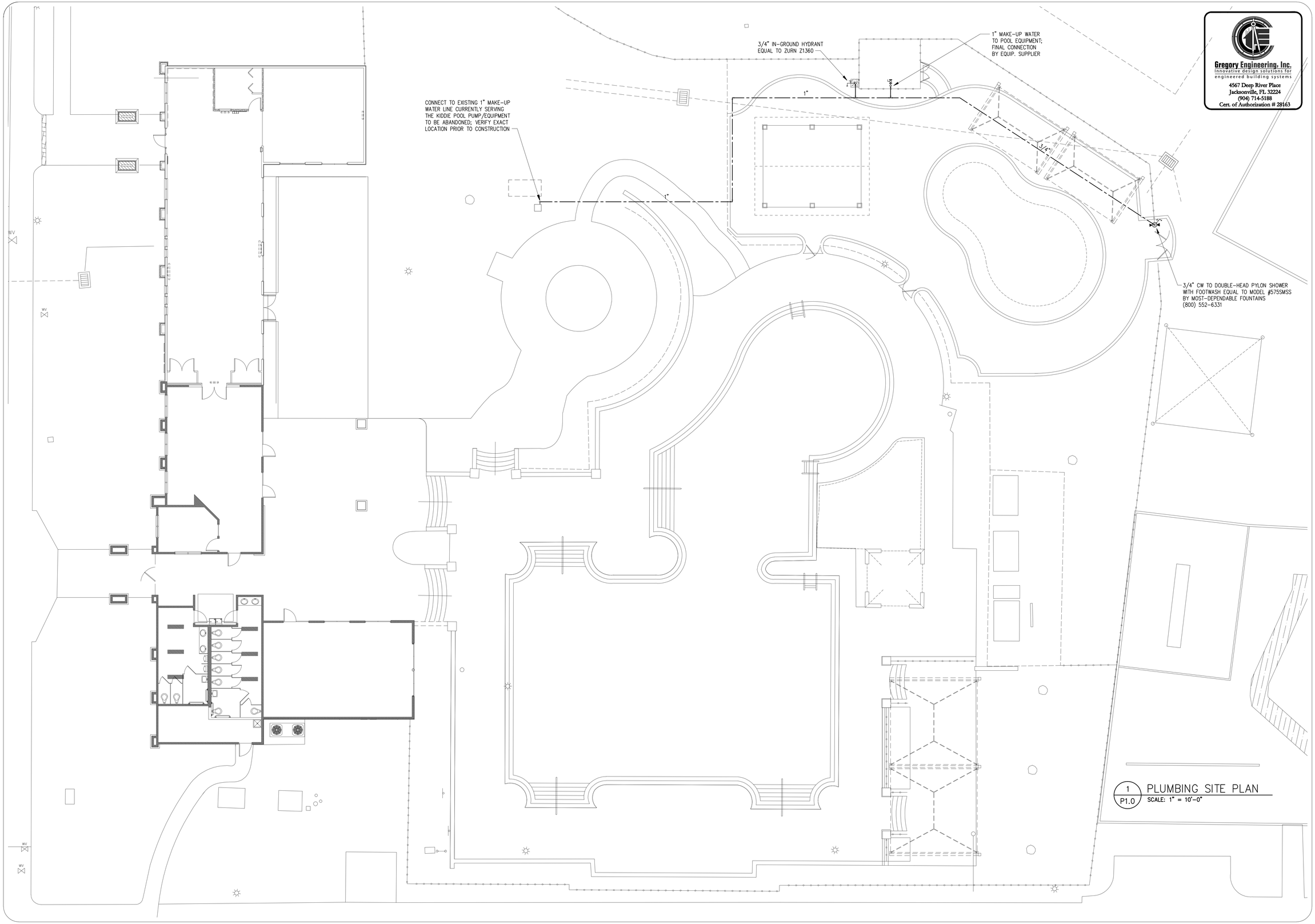
AMENITY UPGRADES

PAVER PLAN

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MTL
CHECKED BY	MTL
DATE	10-6-2017
JOB NO.	16-39

H1.3



1 P1.0 PLUMBING SITE PLAN
SCALE: 1" = 10'-0"

Gregory Engineering, Inc.
innovative design solutions for engineered building systems
4567 Deep River Place
Jacksonville, FL 32224
(904) 714-5188
Cert. of Authorization # 28163

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

PLUMBING SITE PLAN

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

Project Engineer

W. Michael Gregory, PE
Florida PE #46607

DRAWN BY	WMG
CHECKED BY	WMG
DATE	10-6-2017
JOB NO.	16-39

P1.0

LIGHTING FIXTURE SCHEDULE							
TYPE	MANUFACTURER	CATALOG NUMBER	LAMP		VOLTS	MTG. HEIGHT	NOTES
			SIZE	QUAN.			
SP1	PHILLIPS HADCO	V2S-A-B5-G-150H-F-SOLID ROOF PANELS-BALL FINIAL-291-16-BR2-3	150W PSMH	1	208	18' A.F.G.-NOTE 1	MH POLE LIGHT-NOTE 2
SP9	ORGATECH	1400-4-LH30-U-ND-A-SW -BL-G	30W LED 3000K	NA	120-277	BEAM-NOTE 2	PAVILION UPLIGHTS
SPF	HUNTER	SEA AIR-52"	NA	NA	120	CEILING-NOTE 3	FAN

LIGHTING FIXTURE SCHEDULE NOTES:

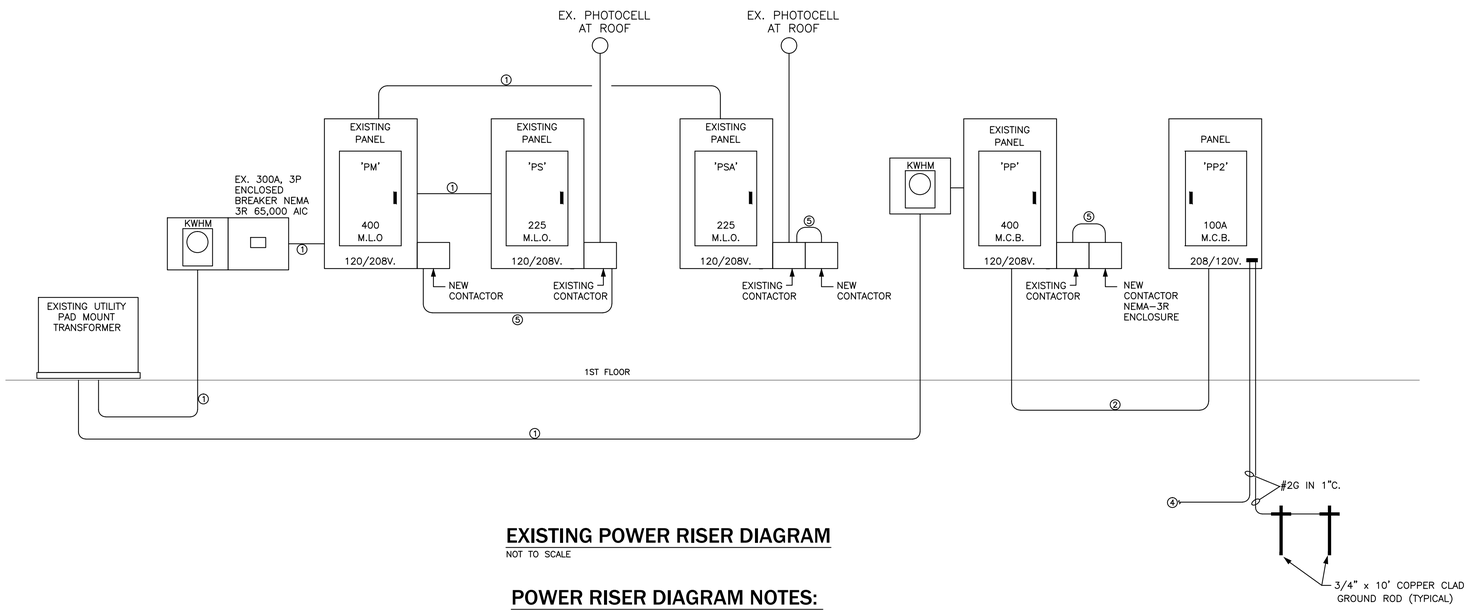
1. FIXTURE TO BE INSTALLED ON A 5" DIAMETER DIRECT BURIED, FLUTED POLE WITH 42" BASE TO MATCH EXISTING POOL AREA POLES. FINAL MOUNTING HEIGHT TO MATCH EXISTING POLES.
2. SEE HARDSCAPE/LANDSCAPE PLANS FOR EXACT INSTALLATION LOCATION AND ELEVATION.
3. PROVIDE DOWN ROD LENGTH AS DIRECTED BY ARCHITECT.

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FIXTURE LOCATIONS AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
2. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
3. SEPARATE GREEN GROUND CONDUCTOR SHALL BE ROUTED IN ALL CONDUITS WITH ALL PHASE CONDUCTORS.
4. ALL MECHANICAL EQUIPMENT SHALL BE COMPLETELY CONNECTED BY ELECTRICAL CONTRACTOR INCLUDING BOTH POWER AND CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTION OF INTERLOCKING AND CONTROLS OF MECHANICAL UNITS AND THERMOSTAT LOCATIONS.
5. BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS FOR CLARITY ONLY. ELECTRICAL CONTRACTOR MAY GROUP SINGLE POLE BRANCH CIRCUITS IN MULTIPLE CIRCUITS HOME RUNS. (2 CIRCUITS MAX @ 120/240V. 1ø OR 3 CIRCUITS MAX @ 120/208V. 3ø). A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL POWER, RECEPTACLE, AND LIGHTING CONDUITS.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE AT EACH PANELBOARD A TYPED CIRCUIT DIRECTORY WITH PROTECTIVE PLASTIC SLEEVE.
7. ALL CONDUITS SHALL BE CONCEALED IN WALL SPACE, CEILING SPACE OR UNDER FLOOR, NO EXPOSED CONDUITS PERMITTED.
8. COMPLETE SYSTEM SHALL BE GROUNDED PER N.E.C ARTICLE 250.
9. ALL BRANCH CIRCUIT WIRE SIZE SHALL BE MINIMUM #12 AWG COPPER. PULL EQUIPMENT GROUND IN ALL RACEWAYS, PER N.E.C. ELECTRICAL CONTRACTOR SHALL PROVIDE PROPER NUMBER AND SIZE CONDUCTOR PER N.E.C..

ELECTRICAL LEGEND

	POLE MOUNTED PARKING LOT OR SITE LIGHTING FIXTURE.
	FLOOD LIGHT.
	PL FLUORESCENT, LED OR GAS LIGHTING FIXTURE – SURFACE OR WALL MOUNTED.
	PENDANT MOUNTED PADDLE FAN COMPLETE WITH PENDANT & CEILING MOUNTED CANOPY–MOUNTING HEIGHT AS INDICATED BY INTERIOR DESIGNER.
$	TOGGLE SWITCH – SINGLE POLE – QUIET TYPE 20 AMP, 120/277 VOLT, HUBBELL NO. HBL1221I WITH NO. P1 COVERPLATE – 46" MOUNTING HEIGHT, U.N.O.
$M	TOGGLE SWITCH – SINGLE POLE, 20 AMP, 120/277V, MOTOR RATED, GROUNDING TYPE, MOUNT AT EQUIPMENT HOUSING.
	OCCUPANCY SENSOR WALL SWITCH – WATTSTOPPER #DW–100–I. 46" MOUNTING HEIGHT, U.N.O.
$T	TIMED SWITCH – INTERMATIC # EI205, 46" MOUNTING HEIGHT, U.N.O.
$F	FAN SPEED CONTROLLER – FLUSH WALL MOUNTED, 46" MOUNTING HEIGHT, U.N.O.
	DUPLEX RECEPTACLE – 20 AMP, 120 VOLT, 3 WIRE GROUNDING, HUBBELL NO. 5352I WITH NO. P8 COVERPLATE, 18" MOUNTING HEIGHT, U.N.O.
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER, 20 AMP, 120 VOLT, 3 WIRE GROUNDING. HUBBELL NO. GFTR20I WITH NO. HPS1I COVERPLATE, 42" MOUNTING HEIGHT, U.N.O. EXTERIOR LOCATIONS SHALL BE 18".
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER, 20 AMP, 120 VOLT, 3 WIRE GROUNDING. HUBBELL NO. GFTR20I, 12" MOUNTING HEIGHT, INSTALL W/ B–K LIGHTING #C1204–20 RECEPTACLE POST.
T	TRANSFORMER
J	JUNCTION BOX SIZE PER NEC.
	MOTOR, FAN, PUMP OR AIR CONDITIONING UNIT CONNECTION PER NEC.
	LIGHTING AND/OR POWER PANELBOARD.
— — —	WIRING IN CONDUIT, RUN CONCEALED IN SLAB OR UNDERGROUND.
	WIRING IN CONDUIT, RUN CONCEALED ABOVE CEILING OR IN WALLS.
	HOMERUN TO PANELBOARD – NUMBER OF ARROWS DENOTES QUANTITY OF CIRCUITS. CROSSMARKS INDICATE QUANTITY OF NO. 12 CONDUCTORS. RUNS VOID OF CROSSMARKS ARE 1/2 INCH CONDUIT, 3 NO. 12, U.N.O. DO NOT COMBINE HOMERUNS EXCEPT AS SPECIFICALLY INDICATED ON THE PLAN.
2 60/0	DISCONNECT SWITCH, "2 60/0" DENOTES 2 POLE, 60 AMP, NON–FUSED.
WP	DENOTES WEATHERPROOF WHILE–IN–USE – MOUNT RECEPTACLE VERTICALLY AND PROVIDE TAYMAC MX4280S COVERPLATE, FOR SWITCHES PROVIDE TAYMAC MX4280S COVERPLATE.
U.N.O.	UNLESS NOTED OTHERWISE.
AFF	ABOVE FINISHED FLOOR.
GG	GREEN GROUND CONDUCTOR.
E.C.	EMPTY CONDUIT WITH PULL WIRE/CORD.
AC	ABOVE COUNTER



EXISTING POWER RISER DIAGRAM

NOT TO SCALE

POWER RISER DIAGRAM NOTES:

⊗ REFERENCE NOTE ON DRAWING

1. EXISTING WIRES & CONDUITS TO REMAIN.
2. SEE PANEL SCHEDULE FOR WIRE AND CONDUIT SIZES.
3. ALL CONDUCTOR SIZES BASED ON COPPER CONDUCTORS.
4. CONNECT GROUND TO BUILDING FOUNDATION REBAR, BUILDING STEEL, AND METAL WATER SERVICE PIPE.
5. CONNECT TO EXISTING EXTERIOR LIGHTING CONTACTOR WITH (3) #12, 1/2"C.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
ELECTRICAL LEGEND, NOTES AND SCHEDULES

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

Project Engineer

J. Bryan Shaffer, PE
Florida PE 58168

DRAWN BY	HJH
CHECKED BY	JBS
DATE	10-6-2017
JOB NO.	16-39

E1.1

SHAFFER ENGINEERING GROUP, LLC
12058 San Jose Blvd, Suite 502
Jacksonville, FL 32223 www.shaffereg.com
PH (904) 239-3621, FX (904) 239-3623
Certificate of Authorization # : 28265

EX.PANEL PP

MOUNTING: SURFACE
STYLE: SQ. D NQOD
ENCLOSURE TYPE: NEMA 3R

VOLTS & PHASE: 208/120V, 3 PHASE, 4 WIRE
AMPS: 400
M.C.B. OR M.L.O: MCB
AIC RATING 22,000A

CIR NUM	DESCRIPTION	WIRE/CONDUIT	BREAKER SIZE	BREAKER POLE	LOAD KVA	PHASE A	PHASE B	PHASE C	LOAD KVA	BREAKER POLE	BREAKER SIZE	WIRE/CONDUIT	DESCRIPTION	CIR NUM	
1	EXISTING CIRCUIT		100	3		X							SPACE	2	
3	)						X						SPACE	4	
5	)							X	0.5	2	20	#12, #12G, 1"	LANDSCAPE/POLE LTG	6	②③
7	SPACE					X			0.5				)	8	
9	SPACE						X		0.4	1	20	#10, #10G, 1"	PAVILION FANS	10	②③
11	EXISTING CIRCUIT		20	2				X					SPACE	12	
13	)					X							SPACE	14	
15	SPACE						X						SPACE	16	
③ 17	PANEL PP2	(4)#2,#6G,1 1/2"	100	3	4.2			X					SPACE	18	
19	)				5.6	X							SPACE	20	
21	)				4.2		X			1	20		EXISTING CIRCUIT	22	
23	SPACE							X		1	20		EXISTING CIRCUIT	24	
25	SPACE					X				3	100		EXISTING CIRCUIT	26	
27	EXISTING CIRCUIT		60	2			X						)	28	
29	)							X					)	30	
31						X								32	
33							X							34	
35								X						36	
37						X								38	
39							X							40	
41								X						42	

PANEL LOAD	KVA	AMPS		NOTES:
PHASE A	6.1	50		1
PHASE B	4.6	38		
PHASE C	4.7	39		
TOTAL	15.4	42	@ 208V, 3 PHASE	

PANEL PP2

MOUNTING: SURFACE
STYLE: SQ. D NQOD
ENCLOSURE TYPE: NEMA 3R

VOLTS & PHASE: 208/120V, 3 PHASE, 4 WIRE
AMPS: 100
M.C.B. OR M.L.O: MCB
AIC RATING 10,000A

CIR NUM	DESCRIPTION	WIRE/CONDUIT	BREAKER SIZE	BREAKER POLE	LOAD KVA	PHASE A	PHASE B	PHASE C	LOAD KVA	BREAKER POLE	BREAKER SIZE	WIRE/CONDUIT	DESCRIPTION	CIR NUM	
④ 1	PUMP SYSTEM	(4)#10,#10G,3/4"	25	3	2.4	X			1	1	20	#12, #12G, 1/2"	CONTROLLER	2	④
3	)				2.4		X			1	20		SPARE	4	
5	)				2.4			X		1	20		SPARE	6	
7	SPACE					X			0.4	1	20	#12, #12G, 1/2"	RECEPTACLE	8	
9	SPACE						X			1	20		SPARE	10	
11	SPACE							X		1	20		SPARE	12	
13	SPACE					X				1	20		SPARE	14	
15	SPACE						X			1	20		SPARE	16	
17	SPACE							X		1	20		SPARE	18	
19	SPACE					X							SPACE	20	
21	SPACE						X						SPACE	22	
23	SPACE							X					SPACE	24	
25						X								26	
27							X							28	
29								X						30	
31						X								32	
33							X							34	
35								X						36	
37						X								38	
39							X							40	
41								X						42	

PANEL LOAD	KVA	AMPS		NOTES:
PHASE A	3.8	31		1
PHASE B	2.4	20		
PHASE C	2.4	20		
TOTAL	8.6	23	@ 208V, 3 PHASE	

LOAD CALCULATION - POOL PANEL

MAX EX. DEMAND	38 KVA
+ 25%	9.5 KVA
NEW LOAD	16.6 KVA
TOTAL	64.1 KVA
AMPS @ 208V., 3ø	178 AMPS
EXISTING SERVICE SIZE	400 AMPS

PANEL SCHEDULE NOTES:

ⓧ REFERENCE NOTE ON DRAWING

1. CIRCUITS MAY BE GANGED TOGETHER WITH THE WIRE SIZES INDICATED FOR UP TO THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT. WHEN THE NUMBER OF CURRENT CARRYING CONDUCTORS EXCEEDS THREE, WIRES SHALL BE UPSIZED AND DERATED IN ACCORDANCE WITH NEC TABLE 310.15(B)(2)(a). CONDUIT SIZES SHALL BE ADJUSTED TO COMPLY WITH NEC TABLES FOR CONDUCTOR FILL BASED ON CONDUIT TYPE.
2. ROUTE CIRCUIT THROUGH CONTACTOR. PROVIDE NEW CONTACTOR AND CONNECT TO EXISTING CONTROLS. NEW CONTACTORS SHALL BE NEMA 1 FOR INDOORS AND NEMA 3R FOR OUTDOORS.
3. INSTALL NEW BREAKER IN PANEL. MAINTAIN AIC RATING OF PANEL.
4. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH FINAL POOL EQUIPMENT DESIGN.

SHAFFER ENGINEERING GROUP, LLC
12068 San Jose Blvd, Suite 502
Jacksonville, FL 32223 www.shaffereg.com
PH (904) 239-3621, FX (904) 239-3623
Certificate of Authorization # : 26205

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
ELECTRICAL PANEL SCHEDULES

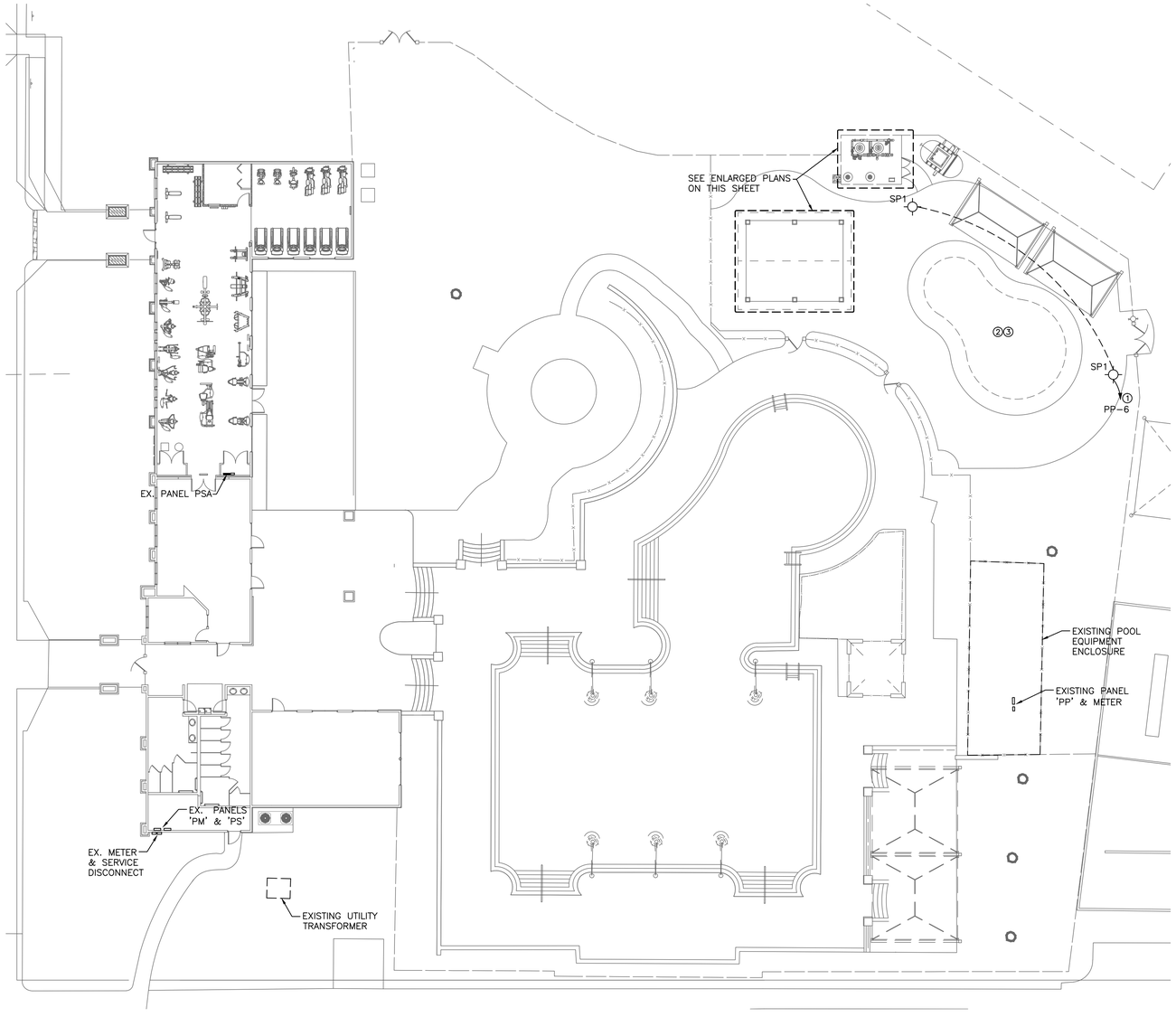
BASHAM & LUCAS DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

Project Engineer

J. Bryan Shaffer, PE
Florida PE 58168

DRAWN BY	HJH
CHECKED BY	JBS
DATE	10-6-2017
JOB NO.	16-39

E1.2



N

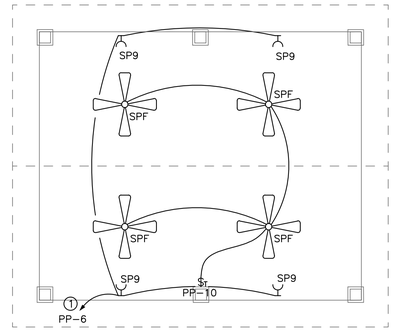
ELECTRICAL SITE PLAN

SCALE 1/16"=1'-0"

PLAN NOTES:

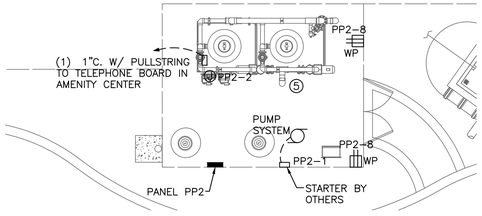
- ⊗ REFERENCE NOTE ON DRAWING
1. ROUTE CIRCUIT THROUGH CONTACTOR.
2. ALL UNDERGROUND ELECTRICAL AND ELECTRICAL DEVICES OVER 24 VOLTS SHALL MAINTAIN 5' CLEARANCE FROM THE EDGE OF THE POOL.
3. ALL POOL ELECTRICAL AND ELECTRICAL WITHIN THE VICINITY OF THE POOL SHALL COMPLY WITH NEC ARTICLE 680.
4. FIELD LOCATE ALL SITE LIGHTING FIXTURES/RECEPTACLES AT DIRECTION OF LANDSCAPE ARCHITECT.
5. COORDINATE FINAL ELECTRICAL REQUIREMENTS AND CONNECTION LOCATIONS WITH FINAL EQUIPMENT DESIGN AND POOL CONTRACTOR PRIOR TO INSTALLATION.

PRIOR TO FINAL UNDERGROUND CONDUIT ROUTING AND INSTALLATION, CONTRACTOR SHALL COORDINATE ALL SITE LIGHTING FIXTURES, AND OTHER ELECTRICAL EQUIPMENT LOCATIONS WITH LANDSCAPE ARCHITECT AND LANDSCAPE/HARDSCAPE DRAWINGS.



ENLARGED ELECTRICAL PLAN –NORTH PAVILION

SCALE 3/16"=1'-0"



ENLARGED ELECTRICAL PLAN –POOL EQUIP. AREA

SCALE 3/16"=1'-0"

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

ELECTRICAL SITE PLAN

BASHAM & LUCAS DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

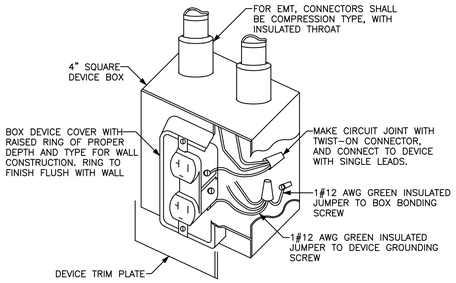
Project Engineer

J. Bryan Shaffer, PE
Florida PE 58168

DRAWN BY	HJH
CHECKED BY	JBS
DATE	10-6-2017
JOB NO.	16-39

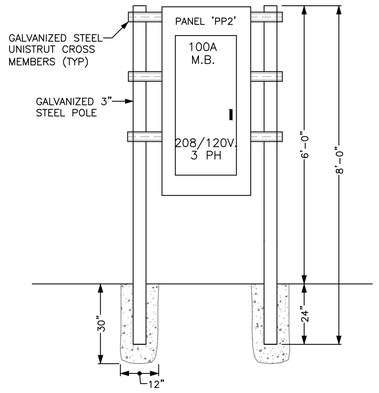
E2.1

SHAFFER ENGINEERING GROUP, LLC
12068 San Jose Blvd, Suite 502
Jacksonville, FL 32223 www.shaffereg.com
PH (904) 239-3621, FX (904) 239-3623
Certificate of Authorization # : 28265



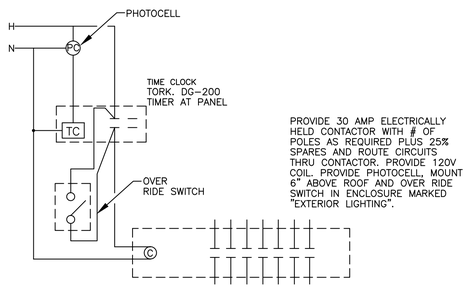
TYPICAL DUPLEX RECEPTACLE INSTALLATION

NOT TO SCALE



PANEL SUPPPORT DETAIL

NOT TO SCALE

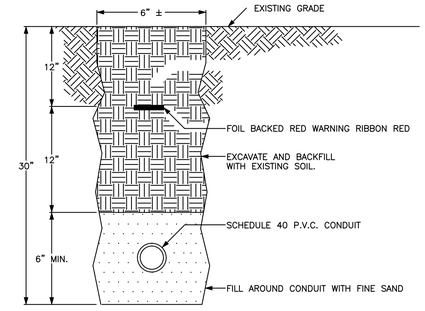


EXTERIOR LIGHTING CONTROL DIAGRAM

NOT TO SCALE

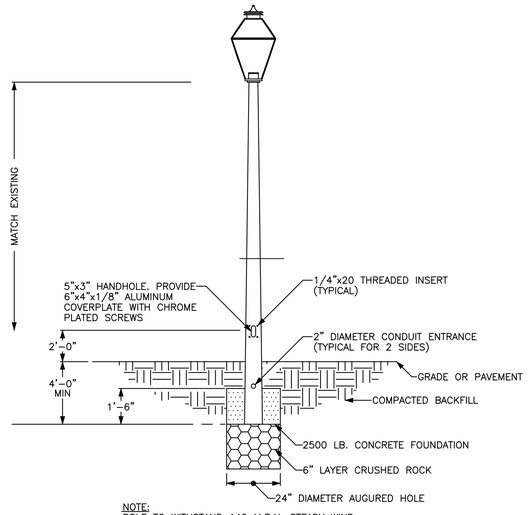
NOTES:

1. PROVIDE NEMA 1 ENCLOSURE FOR INTERIOR LOCATIONS AND NEMA 3R ENCLOSURE FOR EXTERIOR LOCATIONS.



DIRECT BURIED CONDUIT DETAIL

NOT TO SCALE



NOTE:
POLE TO WITHSTAND 140 M.P.H. STEADY WIND.

POLE BASE DETAIL - TYPE 'SP1'

NOT TO SCALE

NOTE: POLE AND BASE TO MATCH EXISTING. ADJUST MOUNTING HEIGHT AS REQUIRED, TO MATCH FIELD CONDITIONS.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

ELECTRICAL DETAILS

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

Project Engineer

J. Bryan Shaffer, PE
Florida PE 58168

DRAWN BY	HJH
CHECKED BY	JBS
DATE	10-6-2017
JOB NO.	16-39

E3.1

SHAFFER ENGINEERING GROUP, LLC
12006 San Jose Blvd, Suite 502
Jacksonville, FL 32223 www.shafferegg.com
PH (904) 239-3621, FX (904) 239-3623
Certificate of Authorization # : 28265

ELECTRICAL SPECIFICATIONS

SECTION 16050

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.1 SUMMARY
- A. GROUNDING AND BONDING.
- B. CONNECTION OF UTILIZATION EQUIPMENT.
- C. SUPPORTS.
- D. IDENTIFICATION.

1.2 SUBMITTALS
- A. PRODUCT DATA: FOR REVIEW; PROVIDE CATALOG DATA FOR GROUNDING AND BONDING DEVICES.

1.3 REGULATORY REQUIREMENTS
- A. CONFORM TO REQUIREMENTS OF NFPA 70.
- B. FURNISH PRODUCTS LISTED BY UL OR OTHER TESTING FIRM ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
- C. FLORIDA BUILDING CODE

1.4 PROJECT CONDITIONS
- A. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON DRAWINGS.

PART 2 PRODUCTS

2.1 GROUNDING MATERIALS
- A. GROUND ROD: COPPER-CLAD STEEL 3/4-INCH DIAMETER 10 FEET LENGTH.
- B. MECHANICAL CONNECTORS: BRONZE. ABOVE GRADE ONLY.
- C. EXOTHERMIC WELDS: BELOW GRADE CONNECTORS.

2.2 BASIC MATERIALS
- A. STEEL CHANNEL: GALVANIZED
- B. MISCELLANEOUS HARDWARE: TREAT FOR CORROSION RESISTANCE.
- C. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, BLACK LETTERS ON WHITE BACKGROUND.
- D. WIRE AND CABLE MARKERS: CLOTH MARKERS, SPLIT SLEEVE OR TUBING TYPE.

PART 3 EXECUTION

3.1 INSTALLATION
- A. INSTALL WORK ACCORDING TO NECA "STANDARD OF 2.5 BUILDING WIRE AND CABLE INSTALLATION."
- B. PROVIDE BONDING TO MEET REGULATORY REQUIREMENTS.
- C. MAKE ELECTRICAL CONNECTIONS TO UTILIZATION EQUIPMENT IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
  1. VERIFY THAT WIRING AND OUTLET ROUGH-IN WORK IS COMPLETE AND THAT UTILIZATION EQUIPMENT IS READY FOR ELECTRICAL CONNECTION, WIRING, AND ENERGIZING.
  2. MAKE WIRING CONNECTIONS IN CONTROL PANEL OR IN WIRING COMPARTMENT OF PRE-WIRED EQUIPMENT. PROVIDE INTERCONNECTING WIRING WHERE INDICATED.
  3. INSTALL AND CONNECT DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES AS INDICATED.
  4. MAKE CONDUIT CONNECTIONS TO EQUIPMENT USING FLEXIBLE CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT IN DAMP OR WET LOCATIONS.
  5. INSTALL PRE-FABRICATED CORD SET WHERE CONNECTION WITH ATTACHMENT PLUG IS INDICATED OR SPECIFIED, OR USE ATTACHMENT PLUG WITH SUITABLE STRAIN-RELIEF CLAMPS.
  6. PROVIDE SUITABLE STRAIN-RELIEF CLAMPS FOR CORD CONNECTIONS TO OUTLET BOXES AND EQUIPMENT CONNECTION BOXES.
- D. INSTALL SUPPORT SYSTEMS SIZED AND FASTENED TO ACCOMMODATE WEIGHT OF EQUIPMENT AND CONDUIT, INCLUDING WIRING, WHICH THEY CARRY.

3.2 EXAMINATION AND PREPARATION
- A. SUPPORTS
  1. FASTEN HANGER RODS, CONDUIT CLAMPS, AND OUTLET AND JUNCTION BOXES TO BUILDINGS STRUCTURE USING PRECAST INSERT SYSTEM BEAM CLAMPS.
  2. USE TOGGLE BOLTS OR HOLLOW WALL FASTENERS IN HOLLOW MASONRY, PLASTER, OR GYPSUM BOARD PARTITIONS AND WALLS; EXPANSION ANCHORS OR PRESET INSERTS IN SOLID MASONRY WALLS; SELF-DRILLING ANCHORS OR EXPANSION ANCHOR ON CONCRETE SURFACES; SHEET METAL SCREWS IN SHEET METAL STUDS; AND WOOD SCREWS IN WOOD CONSTRUCTION.
  3. DO NOT FASTEN SUPPORTS TO PIPING, CEILING SUPPORT WIRES, DUCTWORK, MECHANICAL EQUIPMENT, OR CONDUIT.
  4. DO NOT USE POWER-ACTUATED ANCHORS.
  5. DO NOT DRILL STRUCTURAL STEEL MEMBERS.
  6. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL.
- B. IDENTIFY ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT, AND LOADS SERVED, TO MEET REGULATORY REQUIREMENTS AND AS SCHEDULED.
  1. DEGREASE AND CLEAN SURFACES TO RECEIVE NAMEPLATES AND TAPE LABELS.
  2. SECURE NAMEPLATES TO EQUIPMENT FRONTS USING SCREWS, RIVETS, OR ADHESIVE, WITH EDGES PARALLEL TO EQUIPMENT LINES. SECURE NAMEPLATE TO INSIDE FACE OF RECESSED PANELBOARD DOORS IN FINISHED LOCATIONS.
  3. USE NAMEPLATES WITH 1/8 INCH LETTERING TO IDENTIFY INDIVIDUAL SWITCHES AND CIRCUIT BREAKERS, RECEPTACLE CIRCUITS, AND LOADS SERVED.
  4. USE NAMEPLATES WITH 1/4 INCH TO IDENTIFY DISTRIBUTION AND CONTROL EQUIPMENT.
- C. INSTALL WIRE MARKERS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND AT LOAD CONNECTIONS.
  1. USE BRANCH CIRCUIT OR FEEDER NUMBER TO IDENTIFY POWER AND LIGHTING CIRCUITS.
  2. USE CONTROL WIRE NUMBER AS INDICATED ON FROM FOUNDATION WALL: PLASTIC CONDUIT. PROVIDE EQUIPMENT MANUFACTURER'S SHOP DRAWINGS TO IDENTIFY CONTROL WIRING.

SECTION 16100

WIRING METHODS

PART 1 GENERAL

1.1 REGULATORY REQUIREMENTS
- A. CONFORM TO REQUIREMENTS OF NFPA 70.
- B. FURNISH PRODUCTS LISTED BY UL OR OTHER TESTING FIRM ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.

PART 2 PRODUCTS

2.1 PRODUCT REQUIREMENTS
- A. USE ONLY SPECIFIED RACEWAY IN THE FOLLOWING LOCATIONS UNLESS DIRECTED OTHERWISE ON DRAWINGS:
  1. INSTALLATIONS IN OR UNDER CONCRETE SLAB, OR UNDERGROUND WITHIN 5 FEET FROM FOUNDATION WALL: PVC SCHEDULE 40 CONDUIT.
  2. IN SLAB ABOVE GRADE: PLASTIC CONDUIT.
  3. EXPOSED OUTDOOR LOCATIONS: RIGID STEEL CONDUIT OR ELECTRICAL METALLIC TUBING. USE THREADED OR RAINTIGHT FITTINGS.
  4. WET INTERIOR LOCATIONS: RIGID STEEL CONDUIT OR ELECTRICAL METALLIC TUBING. USE THREADED OR RAINTIGHT FITTINGS FOR METAL CONDUIT.
  5. DRY INTERIOR LOCATIONS: RIGID STEEL CONDUIT OR ELECTRICAL METALLIC TUBING.
- B. USE WIRE AND CABLE IN LOCATIONS AS FOLLOWS:
  1. ALL POWER WIRES AND CABLES SHALL BE IN RACEWAY
- C. USE NO WIRE SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS, AND NO SMALLER THAN 14 AWG FOR CONTROL WIRING. USE 10 AWG CONDUCTOR FOR 20 AMPERE, 120 VOLT BRANCH CIRCUIT HOME RUNS LONGER THAN 75 FEET; AND FOR 20 AMPERE.

2.2 CONDUIT AND FITTINGS
- A. CONDUIT:
  1. METAL CONDUIT AND TUBING: GALVANIZED STEEL.
  2. FLEXIBLE CONDUIT: STEEL
  3. LIQUID TIGHT FLEXIBLE CONDUIT: FLEXIBLE CONDUIT WITH PVC JACKET.
  4. PLASTIC CONDUIT AND TUBING: NEMA TC 2, PVC. USE SCHEDULE 40 CONDUIT.
- B. CONDUIT FITTINGS:
  1. METAL FITTINGS AND CONDUIT BODIES: NEMA FB 1.
  2. PLASTIC FITTINGS AND CONDUIT BODIES: NEMA TC 3.
  3. EMT FITTINGS: STEEL COMPRESSION TYPE FOR WET LOCATION. STEEL SET SCREW FOR DRY LOCATION.
  4. PROVIDE INSULATED CONNECTOR AT TERMINATIONS AND TRANSITIONS TO FLEX CONDUIT.

2.3 ACCESS PANELS
- A. PROVIDE CEILING ACCESS PANELS FOR EQUIPMENT, DEVICES, BOXES AND OTHER LIKE ITEMS REQUIRING ADJUSTMENT, MAINTENANCE OR ACCESSIBILITY IF THEY ARE NOT LOCATED OVER LAY-IN TYPE CEILING OR ARE NOT OTHERWISE ACCESSIBLE. OBTAIN APPROVAL FROM ARCHITECT FOR TYPE AND LOCATION OF ACCESS PANELS.

2.4 ELECTRICAL BOXES
- A. BOXES:
  1. SHEET METAL: NEMA OS 1, GALVANIZED STEEL.
  2. CAST METAL: CAST FERALLOY, DEEP TYPE, GASKETED COVER, THREADED HUBS.

2.5 BUILDING WIRE AND CABLE
- A. FEEDERS AND BRANCH CIRCUITS LARGER THAN 6 AWG: COPPER STRANDED CONDUCTOR, 600 VOLT INSULATION, THHN/THWN AND XHHW.
- B. FEEDERS AND BRANCH CIRCUITS 6 AWG AND SMALLER: COPPER CONDUCTOR, 600 VOLT INSULATION, THHN/THWN, XHHW 6 AND 8 AWG, STRANDED CONDUCTOR; SMALLER THAN 8 AWG, SOLID CONDUCTOR.
- C. CONTROL CIRCUITS: COPPER, STRANDED CONDUCTOR, 600 VOLT INSULATION, THW.

2.6 REMOTE CONTROL AND SIGNAL CABLE
- A. CONTROL CABLE FOR CLASS 1 REMOTE CONTROL AND SIGNAL CIRCUITS: COPPER CONDUCTOR, 600 VOLT INSULATION, RATED 60 DEGREE C, INDIVIDUAL CONDUCTORS TWISTED TOGETHER, SHIELDED, AND COVERED WITH PVC JACKET. (PLENUM RATED)
- B. CONTROL CABLE FOR CLASS 2 OR CLASS 3 REMOTE CONTROL AND SIGNAL CIRCUITS: COPPER CONDUCTOR, 300 VOLT INSULATION, RATED 60 DEGREE C, INDIVIDUAL CONDUCTORS TWISTED TOGETHER, SHIELDED, AND COVERED WITH PVC JACKET; UL LISTED. (PLENUM RATED)

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION
- A. VERIFY THAT INTERIOR OF BUILDING IS PHYSICALLY PROTECTED FROM WEATHER.
- B. VERIFY THAT MECHANICAL WORK THAT IS LIKELY TO DAMAGE CONDUCTORS HAS BEEN COMPLETED.
- C. COMPLETELY AND THOROUGHLY SWAB RACEWAY SYSTEM BEFORE INSTALLING CONDUCTORS.
- D. ELECTRICAL BOXES ARE SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED.
  1. OBTAIN VERIFICATION FROM ENGINEER OF JUNCTION BOX LOCATIONS, AND LOCATIONS OF OUTLETS IN OFFICES AND WORK AREAS, PRIOR TO ROUGH-IN.
  2. IT SHALL BE UNDERSTOOD THAT ANY OUTLET MAY BE RELOCATED A DISTANCE NOT EXCEEDING 5FT FROM THE LOCATION SHOWN ON THE DRAWINGS PRIOR TO OR DURING ROUGH-IN, IF SO DIRECTED BY THE ARCHITECT-ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
  3. LOCAL SWITCHES WHICH ARE SHOWN NEAR DOORS SHALL BE LOCATED AT THE STRIKE SIDE OF THE DOOR AS FINALLY HUNG, REGARDLESS OF SWING ON THE DRAWINGS.

3.2 INSTALLATION
- A. PERFORM WORK ACCORDING TO NECA STANDARD OF INSTALLATION.
- B. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT NEAT APPEARANCE.
  1. ROUTE EXPOSED RACEWAY PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING.
  2. MAINTAIN MINIMUM 6-INCH CLEARANCE TO PIPING AND 12" CLEARANCE TO HEAT SURFACES SUCH AS FLUES, STEAM PIPES, AND HEATING APPLIANCES.
  3. MAINTAIN REQUIRED FIRE, ACOUSTIC, AND VAPOR BARRIER RATING WHEN PENETRATING WALLS, FLOORS, AND CEILINGS.
  4. ROUTE CONDUIT THROUGH ROOF OPENINGS FOR PIPING AND DUCTWORK WHERE POSSIBLE; OTHERWISE, ROUTE THROUGH ROOF JACK WITH PITCH POCKET.
  5. GROUP IN PARALLEL RUNS WHERE PRACTICAL. USE RACK CONSTRUCTED OF STEEL CHANNEL. MAINTAIN SPACING BETWEEN RACEWAYS OR DERATE CIRCUIT AMPACITIES TO NFPA 70 REQUIREMENTS.
  6. USE CONDUIT HANGERS AND CLAMPS; DO NOT FASTEN WITH WIRE OR PERFORATED PIPE STRAPS.
  7. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION.
  8. TERMINATE CONDUIT STUBS WITH INSULATED BUSHINGS.
  9. USE SUITABLE CAPS TO PROTECT INSTALLED RACEWAY AGAINST ENTRANCE OF DIRT AND MOISTURE.
  10. PROVIDE NO. 12 AWG INSULATED CONDUCTOR OR SUITABLE PULL STRING IN EMPTY RACEWAYS, EXCEPT SLEEVES AND NIPPLES.
  11. INSTALL EXPANSION JOINTS WHERE RACEWAY CROSSES BUILDING EXPANSION OR SEISMIC JOINTS.
  12. INSTALL PLASTIC CONDUIT AND TUBING ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
  13. USE STEEL COMPRESSION TYPE FITTINGS WITH EMT CONDUITS.
- C. INSTALL ELECTRICAL BOXES AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS AND REGULATORY REQUIREMENTS.
  1. USE CAST OUTLET BOX IN EXTERIOR LOCATIONS EXPOSED TO WEATHER AND WET LOCATIONS.
  2. USE HINGED COVER ENCLOSURE FOR INTERIOR PULL AND JUNCTION BOX LARGER THAN 12 INCHES IN ANY DIMENSION.
  3. LOCATE AND INSTALL ELECTRICAL BOXES TO ALLOW ACCESS. PROVIDE ACCESS PANELS IF REQUIRED.
  4. LOCATE AND INSTALL ELECTRICAL BOXES TO MAINTAIN HEADROOM AND TO PRESENT NEAT MECHANICAL APPEARANCE.
  5. INSTALL PULL BOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS OR IN UNFINISHED AREAS.
  6. PROVIDE KNOCKOUT CLOSURES FOR UNUSED OPENINGS.
  7. ALIGN WALL-MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES.
  8. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS ABOVE COUNTERS AND BACKSPLASHES.
  9. USE RECESSED OUTLET BOXES IN FINISHED AREAS AND WHERE INDICATED.
  10. SECURE BOXES TO INTERIOR WALL AND PARTITION STUDS, ACCURATELY POSITIONING TO ALLOW FOR SURFACE FINISH THICKNESS.
  11. USE STAMPED STEEL STUD BRIDGES FOR FLUSH OUTLETS IN HOLLOW STUD WALL, AND ADJUSTABLE STEEL CHANNEL FASTENERS FOR FLUSH CEILING OUTLET BOXES.
  12. LOCATE BOXES IN MASONRY WALLS TO REQUIRE CUTTING CORNER ONLY. COORDINATE MASONRY CUTTING TO ACHIEVE NEAT OPENINGS FOR BOXES.
  13. DO NOT INSTALL BOXES BACK-TO-BACK IN WALLS; PROVIDE 6 INCHES SEPARATION, MINIMUM, EXCEPT PROVIDE 24 INCHES SEPARATION, MINIMUM IN ACOUSTIC-RATED WALLS.
  14. DO NOT DAMAGE INSULATION.
- D. INSTALL CABLE AND WIRE ACCORDING TO MANUFACTURER'S INSTRUCTIONS
  1. NEATLY TRAIN AND SECURE WIRING INSIDE BOXES, EQUIPMENT, AND PANELBOARDS.
  2. USE WIRE PULLING LUBRICANT FOR PULLING 4 AWG AND LARGER WIRES.
  3. SUPPORT CABLES ABOVE ACCESSIBLE CEILINGS TON KEEP THEM FROM RESTING ON CEILING TILES.
  4. MAKE SPLICES, TAPS, AND TERMINATIONS TO CARRY FULL AMPACITY OF CONDUCTORS WITHOUT PERCEPTIBLE TEMPERATURE RISE.
  5. TERMINATE SPARE CONDUCTORS WITH ELECTRICAL TAPE.
- E. INSTALL WIRING DEVICES ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- F. INSTALL WALL PLATES FLUSH AND LEVEL.
  1. INSTALL PLATES ON SWITCH, RECEPTACLE, AND BLANK OUTLETS IN FINISHED AREAS, USING JUMBO SIZE PLATES FOR OUTLETS INSTALLED IN MASONRY WALLS.
  2. INSTALL GALVANIZED STEEL PLATES ON OUTLET BOXES AND JUNCTION BOXES IN UNFINISHED AREAS, ABOVE ACCESSIBLE CEILINGS, AND ON SURFACE-MOUNTED OUTLETS.
- G. INSTALL SERVICE FITTINGS ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- H. BEFORE INSTALLING RACEWAYS AND PULLING WIRE TO ANY MECHANICAL EQUIPMENT OR PLUMBING EQUIPMENT, VERIFY ELECTRICAL CHARACTERISTICS WITH FINAL SUBMITTAL ON EQUIPMENT TO ASSURE PROPER NUMBER AND AWG OF CONDUCTORS.
- I. UNDERGROUND CABLE AND CONDUIT INSTALLATION SHALL CONFORM TO ANSI C2 AND NEC EXCEPT AS OTHERWISE INDICATED. THE CONTRACTOR SHALL PROMPTLY REPAIR ANY UTILITY LINES OR SYSTEM DAMAGED BY HIS OPERATION. THE TOP OF UNDERGROUND CONDUIT SHALL NOT BE LESS THAN 24 INCHES BELOW GRADE. THE BOTTOM OF CONDUITS TRENCH SHALL BE GRADED SMOOTH, WHERE ROCK AND SHARP EDGED MATERIAL ARE ENCOUNTERED, THE BOTTOM SHALL BE EXCAVATED FOR ADDITIONAL 3 INCHES, FILLED AND TAMPED LEVEL TO THE ORIGINAL BOTTOM WITH SAND OR EARTH FREE FROM ROCKS AND SHARP MATERIALS. PROVIDE MAGNETIC YELLOW WARNING TAPE ABOVE THE ENTIRE LENGTH OF UNDERGROUND CONDUITS TAPE SHALL BE BURIED 12" BELOW GRADE.
- J. SURFACES DISTURBED DURING THE INSTALLATION OF UNDERGROUND CONDUITS SHALL BE RESTORED TO THEIR ORIGINAL CONDITIONS. PROVIDE SOD OF QUALITY EQUAL TO THAT REMOVED, PATCH PAVEMENT, SIDEWALK CURB, ETC. EXCAVATED MATERIAL NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED FROM PROJECT SITE. REMOVE WATER FROM EXCAVATION BY PUMPING OR OTHER APPROVED METHOD. BACKFILL SHALL BE FREE FROM LARGE CLODS OF EARTH OR STONES OVER 1 INCH IN SIZE.

SECTION 16400

SERVICE AND DISTRIBUTION

PART 1 GENERAL

1.1 SUBMITTALS
- A. SHOP DRAWINGS: FOR REVIEW; INDICATE CONSTRUCTION DETAILS FOR THE FOLLOWING:
  1. PANELBOARDS.
- B. PRODUCT DATA: FOR REVIEW; PROVIDE RATINGS AND COMPONENT DETAILS FOR THE FOLLOWING:
  1. ENCLOSED SWITCHES.
  2. FUSES.
  3. CIRCUIT BREAKERS.
- C. TEST REPORTS: FOR INFORMATION.
- D. OPERATING AND MAINTENANCE INSTRUCTIONS: FOR PROJECT CLOSEOUT; INCLUDE THE FOLLOWING:
  1. PANELBOARD: SUBMIT NEMA PB 2.1.

1.2 REGULATORY REQUIREMENTS
- A. CONFORM TO REQUIREMENTS OF NFPA 70.
- B. FURNISH PRODUCTS LISTED BY UL OR OTHER TESTING FIRM ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
- C. CONFORM TO REQUIREMENTS OF UTILITY COMPANY.

PART 2 PRODUCTS

2.1 ENCLOSED SWITCHES
- A. MANUFACTURERS:
  1. SQUARE D
  2. EATON-CUTLER HAMMER
  3. GE
- B. ENCLOSED SWITCH ASSEMBLIES: NEMA KS 1; TYPE HD.
  1. FUSE CLIPS: DESIGNED TO ACCOMMODATE CLASS R OR J FUSES.
- C. ENCLOSURES: TYPE 1 FOR INTERIOR LOCATIONS, TYPE 3R FOR EXTERIOR LOCATIONS

2.2 FUSES
- A. MANUFACTURERS:
  1. FERRAZ-SHAWMUT
  2. BUSSMAN
- B. FUSES 600 AMPERES AND LESS: CURRENT LIMITING, ONE-TIME FUSE, 250 VOLT, UL CLASS RK 1, RK 5 OR J.

2.3 PANELBOARDS
- A. MANUFACTURERS:
  1. EATON-CUTLER HAMMER
  2. SQUARE D
  3. GE
- B. PANELBOARDS: NEMA PB 1; CIRCUIT BREAKER TYPE.
  1. ENCLOSURE: TYPE 1 INDOORS, TYPE 3R OUTDOORS
  2. PROVIDE SURFACE OR FLUSH CABINET FRONT WITH SCREW COVER, HINGED DOOR AND DOOR-IN-DOOR CONSTRUCTION.
  3. BUS: COPPER.
  4. GROUND BUS: COPPER.
  5. VOLTAGE: AS SHOWN
  6. MINIMUM INTEGRATED EQUIPMENT RATING: AS INDICATED ON DRAWINGS.
  7. BREAKERS SHALL BE BOLT-ON TYPE.
  8. MINIMUM INTEGRATED EQUIPMENT RATING: AS INDICATED ON DRAWINGS.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION
- A. MAKE ARRANGEMENTS WITH UTILITY COMPANY TO OBTAIN PERMANENT ELECTRIC SERVICE TO THE PROJECT.
- B. PROVIDE CONCRETE PAD FOR UTILITY TRANSFORMER. PROVIDE PAD DIMENSIONS AND DETAILS TO UTILITY REQUIREMENTS.

3.2 INSTALLATION
- A. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. INSTALL PROPER FUSES IN EACH FUSED SWITCH.
- C. INSTALL PANELBOARDS AND LOAD CENTERS TO NEMA PB 1.1.

3.3 CLEANING
- A. CLEAN EQUIPMENT FINISHES TO REMOVE PAINT AND CONCRETE SPLATTERS.

SECTION 16510

INTERIOR LUMINAIRES

PART 1 GENERAL

1.1 SECTION INCLUDES
- A. INTERIOR LUMINARIES AND ACCESSORIES.
- B. BALLASTS.
- C. LAMPS.
- D. LUMINAIRE ACCESSORIES.

1.2 REFERENCES
- A. ANSI C78.379 - ELECTRIC LAMPS - INCANDESCENT AND HIGH-INTENSITY DISCHARGE REFLECTOR LAMPS- CLASSIFICATION OF BEAM PATTERNS.
- B. MANUFACTURER'S INSTRUCTIONS: AND LIMITATIONS OF USE STIPULATED BY PRODUCT TESTING AGENCY SPECIFIED UNDER REGULATORY REQUIREMENTS.
- C. MANUFACTURER'S INSTRUCTIONS: STORAGE, HANDLING, PROTECTION, EXAMINATION, PREPARATION, AND INSTALLATION OF PRODUCT.

1.3 QUALIFICATIONS
- A. MANUFACTURER: COMPANY SPECIALIZING IN PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

1.4 REGULATORY REQUIREMENTS
- A. CONFORM TO REQUIREMENTS OF ANSI/NFPA 70.
- B. CONFORM TO REQUIREMENTS OF NFPA 101.
- C. FURNISH PRODUCTS LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES, INC. AS SUITABLE FOR PURPOSE SPECIFIED AND SHOWN.

PART 2 PRODUCTS

2.1 LUMINARIES
- A. FURNISH PRODUCTS AS SPECIFIED IN SCHEDULE ON DRAWINGS.
- B. SUBSTITUTIONS: UNDER PROVISIONS OF SECTION 16000.
- C. INSTALL BALLASTS, LAMPS, AND SPECIFIED ACCESSORIES AT FACTORY.
- D. BALLAST: MANUFACTURER'S STANDARD, MATCHED TO LAMP CHARACTERISTICS, RATED 120 VOLTS.

2.2 BALLASTS
- A. FLUORESCENT BALLAST:
  1. DESCRIPTION: ANSI C82.1, ELECTRONIC BALLAST.
  2. PROVIDE BALLAST SUITABLE FOR LAMPS SPECIFIED.
  3. VOLTAGE: 120 VOLTS.
  4. SOURCE QUALITY CONTROL: CERTIFY BALLAST DESIGN AND CONSTRUCTION BY CERTIFIED BALLAST MANUFACTURERS, INC.

2.3 FLANGE MOUNTING FRAME

PROVIDE FLANGE MOUNTING FRAMES TO MOUNT GRID TYPE TROFFERS FIN HARD CEILINGS. FRAME SHALL PERMIT USE OF GRID (NEMAG) FIXTURES IN CEILINGS REQUIRING FLANGES. FRAMES SHALL BE INDIVIDUAL OR CONTINUOUS ROW MODELS. FRAME SHALL BE EXTRUDED ALUMINUM PAINTED WHITE, 1' X 4', 2' X 2' OR 2' X 4' AS REQUIRED. DAY-BRITE FMK OR APPROVED EQUAL

PART 3 EXECUTION

3.1 EXAMINATION
- A. EXAMINE SUBSTRATE AND SUPPORTING GRIDS FOR LUMINARIES.
- B. EXAMINE EACH LUMINAIRE TO DETERMINE SUITABILITY FOR LAMPS SPECIFIED.

3.2 INSTALLATION
- A. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- B. INSTALL SUSPENDED LUMINARIES USING PENDANTS SUPPORTED FROM SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT INDICATED HEIGHT.
- C. INSTALL SURFACE MOUNTED LUMINARIES AND EXIT SIGNS PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND WITH EACH OTHER. SECURE TO PROHIBIT MOVEMENT.
- D. INSTALL WALL MOUNTED LUMINARIES AS SCHEDULED.
- E. INSTALL ACCESSORIES FURNISHED WITH EACH LUMINAIRE.
- F. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE.
- G. BOND PRODUCTS AND METAL ACCESSORIES TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.
- H. INSTALL SPECIFIED LAMPS IN EACH LUMINAIRE, EMERGENCY LIGHTING UNIT AND EXIT SIGN.
- I. EACH RECESSED FIXTURE SHALL HAVE TWO STEEL WIRE SUPPORTS FASTENED TO THE STRUCTURE ABOVE, AT DIAGONALLY OPPOSITE CORNERS OF FIXTURE.
- J. SEE ARCHITECTURAL RCP DRAWING FOR EXACT FIXTURE LOCATION.

3.3 FIELD QUALITY CONTROL
- A. OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR PROPER CONNECTION AND OPERATION.

3.4 ADJUSTING
- A. AIM AND ADJUST LUMINARIES AS DIRECTED.
- B. ADJUST EXIT SIGN DIRECTIONAL ARROWS AS INDICATED.
- C. RELAMP LUMINARIES THAT HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION.

3.5 CLEANING
- A. CLEAN LIGHTING FIXTURES.
- B. CLEAN ELECTRICAL PARTS TO REMOVE CONDUCTIVE AND DELETERIOUS MATERIALS.
- C. REMOVE DIRT AND DEBRIS FROM ENCLOSURE.
- D. CLEAN PHOTOMETRIC CONTROL SURFACES AS RECOMMENDED BY MANUFACTURER.
- E. CLEAN FINISHES AND TOUCH UP DAMAGE.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
ELECTRICAL SPECIFICATIONS

BASHAM & LUCAS DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

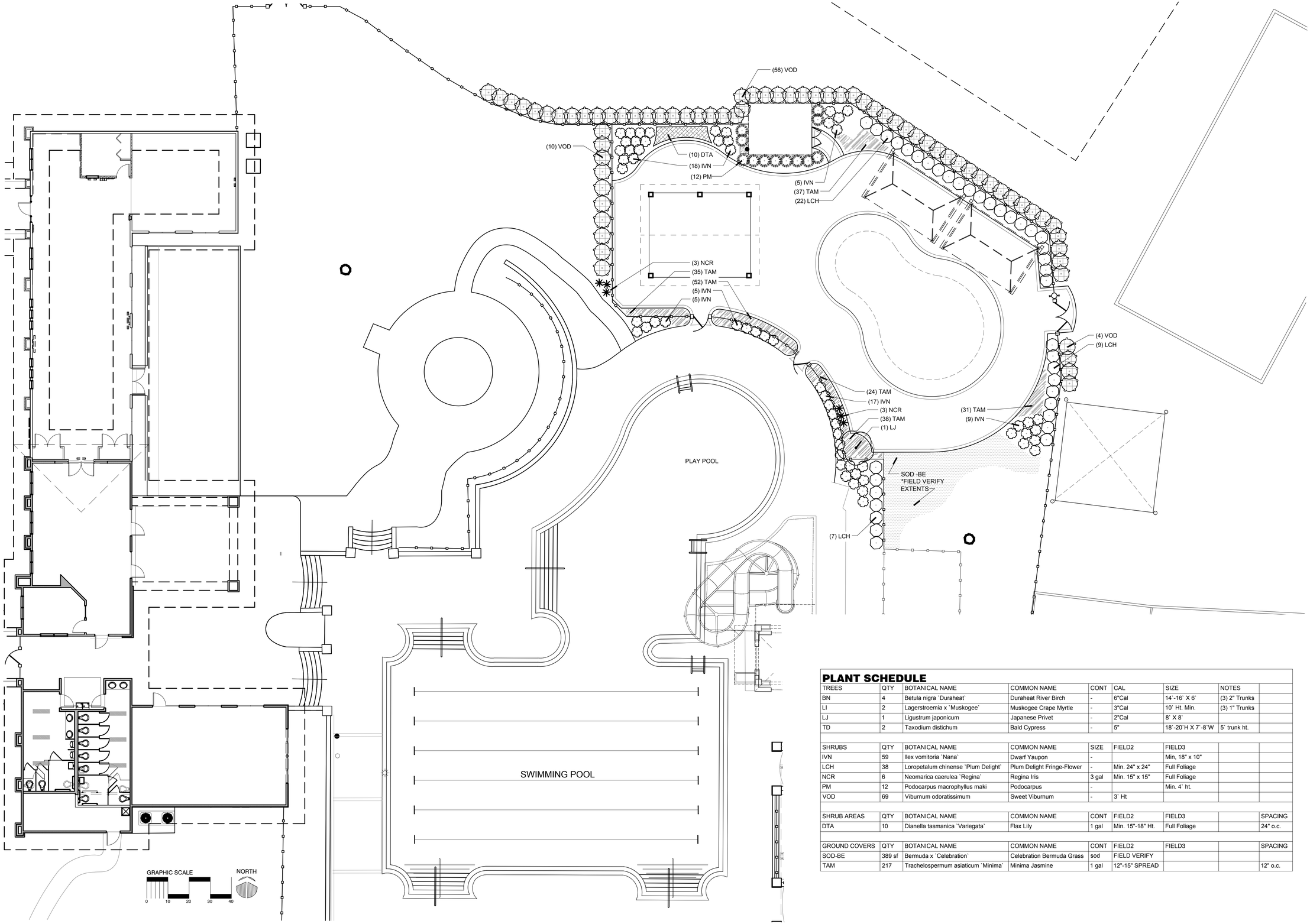
Project Engineer

J. Bryan Shaffer, PE
Florida PE 58168

DRAWN BY	HJH
CHECKED BY	JBS
DATE	10-6-2017
JOB NO.	16-39

E4.1

SHAFFER ENGINEERING GROUP, LLC
12068 San Jose Blvd, Suite 502
Jacksonville, FL 32223 www.shafferg.com
PH (904) 239-3621, FX (904) 239-3623
Certificate of Authorization # 26205



PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	NOTES	
BN	4	Betula nigra `Duraheat`	Duraheat River Birch	-	6"Cal	14`-16` X 6`	(3) 2" Trunks	
LI	2	Lagerstroemia x `Muskogee`	Muskogee Crape Myrtle	-	3"Cal	10` Ht. Min.	(3) 1" Trunks	
LJ	1	Ligustrum japonicum	Japanese Privet	-	2"Cal	8` X 8`		
TD	2	Taxodium distichum	Bald Cypress	-	5"	18`-20`H X 7`-8`W	5` trunk ht.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	FIELD2	FIELD3		
IVN	59	Ilex vomitoria `Nana`	Dwarf Yaupon	-		Min, 18" x 10"		
LCH	38	Loropetalum chinense `Plum Delight`	Plum Delight Fringe-Flower	-	Min. 24" x 24"	Full Foliage		
NCR	6	Neomarica caerulea `Regina`	Regina Iris	3 gal	Min. 15" x 15"	Full Foliage		
PM	12	Podocarpus macrophyllus maki	Podocarpus	-		Min. 4` ht.		
VOD	69	Viburnum odoratissimum	Sweet Viburnum	-	3` Ht			
SHRUB AREAS	QTY	BOTANICAL NAME	COMMON NAME	CONT	FIELD2	FIELD3		SPACING
DTA	10	Dianella tasmanica `Variegata`	Flax Lily	1 gal	Min. 15"-18" Ht.	Full Foliage		24" o.c.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	FIELD2	FIELD3		SPACING
SOD-BE	389 sf	Bermuda x `Celebration`	Celebration Bermuda Grass	sod	FIELD VERIFY			
TAM	217	Trachelospermum asiaticum `Minima`	Minima Jasmine	1 gal	12"-15" SPREAD			12" o.c.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

LANDSCAPE PLAN

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MEG
CHECKED BY	MEG
DATE	10-6-2017
JOB NO.	16-39

L1

CR 210 W

LEO MAGUIRE PKWY

EXISTING POND

NOTES:

1) RETROFIT EXISTING IRRIGATION TO WATER TREES

2) TREE LOCATIONS ARE APPROXIMATE: REVIEW SITE CONDITIONS AND COORDINATE WITH OWNER PRIOR TO INSTALLATION

(1) LI
(1) BN
(1) TD
(1) BN

(1) TD
(1) BN
(1) BN
(1) LI

GRAPHIC SCALE 0 10 20 30 40

NORTH

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB

SAMPSON CREEK CDD
ST. AUGUSTINE, FL

AMENITY UPGRADES

LANDSCAPE PLAN

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
LN: AA26000586 | LC26000508

DRAWN BY	MEG
CHECKED BY	MEG
DATE	10-6-2017
JOB NO.	16-39

L2

Plant Material Notes

TREE MATERIAL

TRUNK STRUCTURE
ALL TREES MUST HAVE A STRAIGHT TRUNK, FULL HEADED & MEET ALL REQUIREMENTS SPECIFIED AS FLORIDA #1 OR BETTER. TRUNKS WHICH BRANCH (FORKS) INTO TWO EQUAL TRUNKS IN THE UPPER 1/2 HALF OF THE TREE SHALL HAVE THE SECONDARY LEADER PRUNED (REMOVED) PRIOR TO TREE BEING DELIVERED TO THE JOB SITE. SINGLE TRUNKS TREES SHALL NOT BOW GREATER THEN 10°, IF SO THE TREE WILL NOT BE ACCEPTABLE. THE TIP OF THE LEADER ON THE MAIN TRUNK MUST BE INTACT AND ITS TERMINAL BUD MUST BE THE HIGHEST PART OF THE TREE. ANY TOPPED TREES WILL BE REJECTED. IF THE TRUNK BRANCHES INTO TWO NEARLY EQUAL TRUNKS ALONG THE LOWER 1/2 OF THE TREE OR BRANCHES INTO THREE OR MORE NEARLY EQUAL DIAMETER TRUNKS IN THE UPPER 1/2 OF THE TREE, OR IF THE TRUNK BRANCHES INTO THREE OR MORE NEARLY EQUAL DIAMETER TRUNKS IN THE LOWER 1/2 OF THE TREE, THE TREE WILL NOT BE ACCEPTABLE. NO TRUNK SHALL HAVE NO OPEN WOUNDS OR OTHER BARK INJURIES OR DAMAGE DUE TO HANDLING, IF SO THE TREE WILL NOT BE ACCEPTABLE. ALL PRUNING SCARS SHALL BE AS DESCRIBED IN THE GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, LATEST EDITION. ANY TREE WITH 'FLUSH CUT' PRUNING SCARS OR OTHER IMPROPER PRUNING WILL NOT BE ACCEPTABLE.

BRANCH ARRANGEMENT
ALL BRANCHES SHALL BE MORE OR LESS EQUALLY DOMINANT OR HAVE SEVERAL DOMINANT BRANCHES GREATER THEN 4" APART. ONE BRANCH IN THE UPPER HALF OF THE TREE CAN BE GREATER THAN 2/3 THE DIAMETER OF THE TRUNK MEASURED DIRECTLY ABOVE THE BRANCH, NO BRANCH TIPS CAN BE TALLER THAN THE TRUNK. IF MOST MAJOR BRANCHES ARE ORIENTED VERTICALLY; AND/OR NEARLY EQUAL-DIAMETER MAJOR BRANCHES ARE LOCATED WITHIN 4" OF EACH OTHER AT TWO OR MORE POSITIONS AND/OR ONE OR MORE BRANCHES IN THE LOWER HALF OF THE TREE ARE LARGER THAN 2/3 THE DIAMETER OF THE TRUCK MEASURED DIRECTLY ABOVE THE BRANCH, THE TREE WILL NOT BE ACCEPTABLE. IF BRANCHES ARE VERTICALLY FORMING NARROW ANGLES WITH THE TRUNK, OR MOST MAJOR BRANCHES GROWING FROM THE SAME POINT ON THE TRUNK, THE TREE WILL NOT BE ACCEPTABLE.

STRUCTURAL UNIFORMITY OF THE CROWN
ONE MAJOR BRANCH MAY BE LOCATED DIRECTLY ABOVE ANOTHER BUT THE OTHERS MUST BE EVENLY DISTURBED AROUND THE TRUNK. THE CROWN A TREE CAN HAVE SOME SMALL VOIDS IN THE CANOPY AND MAY NOT BE COMPLETELY FULL OF FOLIAGE. IF BRANCHES ARE NOT EVENLY DISTRIBUTED AROUND THE TRUNK, OR SEVERAL ARE GROWING FROM THE SAME SIDE WITH TWO OR MORE DIRECTLY ABOVE OTHERS, THE TREE WILL NOT BE ACCEPTABLE. IF THE TREE IS ONE-SIDED OR IS FLAT-SIDED, OR MAJOR BRANCHES ARE GROWING FROM ONLY ONE OR TWO SIDES OF THE TRUNK AND LARGE GAPS ARE IN THE CROWN, THE TREE WILL NOT BE ACCEPTABLE.

ROOT STRUCTURE
THE SIZE OF THE ROOT BALL OR CONTAINER SHALL BE PER THE GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES MATRIX FOR SPECIFIC SPECIES OF TREE. ROOT SYSTEM SHALL BE STURDILY ESTABLISHED IN CONTAINER AND SHALL NOT BE EXCESSIVELY ROOTBOUND. CONTAINER MATERIAL SHALL HAVE NO ROOTS GROWING GREATER THAN 1/5 THE DIAMETER OF THE TRUNK GROWING OUT OF THE CONTAINER. BALL AND BURLAPPED, GROW BAGS, ETC. SHALL HAVE BEEN ROOT PRUNED AND HAVE BEEN CURED PRIOR TO BEING DELIVERED TO THE JOB SITE. TREES WITH GIRDLING ROOTS, 1/10 THE DIAMETER OF THE TRUNK CIRCLING AROUND MORE THAN 1/3 OF THE TRUNK, THE TREE WILL NOT BE ACCEPTABLE.

PALM AND CYCADS MATERIAL

TRUNK SPECIFICATION:
TRUNK CALIPER MUST MEET OR EXCEED THE CALIPER SPECIFICATIONS AS NOTED IN THE PLANS AND/OR AS PER DESCRIBED IN GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. TRUNK SHALL BE WELL FORMED, WITH NO ABRUPT CHANGES IN CALIPER UNLESS TYPICAL OF NORMAL GROWTH OF THE SPECIES. NO HOLES, CAVITIES, GOUGES, DEPRESSED AREAS OR OLD LEAF-BASES SHALL REMAIN, OR PALM WILL BE REJECTED. PETIOLES SHALL BE CUT CLEAN AND SYMMETRICALLY AT THE TRUNK ON ANY OLD LEAF-BASES REMAINING. NO RAGGED OR TORN BOOTS, OR SCARRING OF TRUNK CAUSED BY TEARING OFF BOOTS PREMATURELY, WILL BE ACCEPTED.

FRONDS AND LEAVES:
ALL PALMS TO BE STRAIGHT TRUNK UNLESS OTHERWISE NOTED, WITH HEAVY, DENSE CANOPY WITH ALL PETIOLES IN ASCENDING POSITION. LEAVES SHALL BE NON-CHLOROTIC WITH AT LEAST 75% OF THE LEAVES IN EXCELLENT CONDITION. THE PALM SHALL HAVE NO LIVE INSECTS OR INSECT DAMAGE, ANY SYMPTOMS OF PLANT DISEASE AND NO EXTREME SUCCULENCE.

ROOT BALL:
PALM ROOT BALLS MUST BE WRAPPED OR SECURED TO PRESERVE THE INTEGRITY OF THE ROOT BALL DURING TRANSPORT. IN CONTAINERIZED PALMS, THE ROOT MASS SHALL FILL THE CONTAINER SIZE SPECIFIED. IF CIRCLING ROOTS HAVE DISPLACED MOST OF THE SOIL IN THE CONTAINER, THEN THE CIRCLING ROOT MASS NEEDS TO BE CUT PER GRADES AND STANDARDS FOR NURSERY PLANTS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, RECOMMENDS. THE ROOT BALL SHALL MEET OR EXCEED THE SPECIFICATIONS NOTED IN THE PLANS AND/OR AS PER DESCRIBED IN GRADES AND STANDARDS.

SHRUB MATERIAL

THE SELECTED PLANT SHALL BE HEALTHY, VIGOROUS PLANT WHICH IS WELL-SHAPED, WELL-BRANCHED AND WELL-FOLIATED (SUBJECT TO NATURAL GROWTH OF THE VARIETY).

1. CANES OR TRUNK (S) AND BRANCHES:
A. WELL-FORMED AND STURDY.
B. GOOD BRANCHING, UNIFORMLY DISTRIBUTED TO FORM A WELL-BALANCED PLANT.
C. SCARS SHALL BE FREE OF ROT AND NOT EXCEED IN GREATEST DIMENSION THE DIAMETER OF THE WOOD BENEATH UNLESS CLEAN AND HEALED 75 % OR BETTER (EXCEPT PRUNING SCARS).
D. PRUNING SCARS CLEAN CUT LEAVING LITTLE OR NO PROTRUSION FROM TRUCK OR BRANCH.
E. GRAFT UNION HEALED 75% OR BETTER.
F. NO EXTREME SUCCULENCE.

2. FOLIAGE:
A. WELL SUPPLIED WITH LEAVES OF NORMAL SIZE, SHAPE, COLOR AND TEXTURE (EXCEPT SHRUBS MOVED BARE-ROOT OR DECIDUOUS SHRUBS WHEN DORMANT).
B. NO HOLES, CAVITIES OR DEPRESSED AREAS CAUSED BY BROKEN OR DEAD FOLIAGE.
C. MAXIMUM CHLOROSIS VERY SLIGHT AND NOT MORE THAN 10% OF TOTAL FOLIAGE.
D. PEST OR MECHANICAL DAMAGE CONFINED TO NO MORE THAN 10% OF TOTAL FOLIAGE.
E. FROST OR COLD DAMAGE CONFINED TO NO MORE THAN A SLIGHT TIP BURN ON THE LEAVES COVERING 10% OR LESS OF THE SURFACE AREA.

3. ROOT SYSTEM:
A. CONTAIN-GROWN STOCK.
(1) STURDILY ESTABLISHED IN CONTAINER.
(2) SHALL NOT BE EXCESSIVELY ROOTBOUND EXCEPT PLANTS DELIBERATELY GROWN ROOTBOUND TO PRODUCE A DWARF PLANT.
(3) NO LARGE ROOTS GROWING OUT OF CONTAINER.

B. BALLED OR BALLED AND BURLAPPED STOCK (B&B).
(1) STURDILY ESTABLISHED IN BALL THAT HAS BEEN TIGHTLY WRAPPED AND SECURELY TIED WITH TWINE OR WIRE, OR PINNED.
(2) PLANTS MUST HAVE BEEN PREVIOUSLY ROOT PRUNED AND/OR CONTAIN SUFFICIENT ROOTS FOR CONTINUED GROWTH WITHOUT RESULTING SHOCK.
(3) MINIMUM BALL SIZE: SEE CHART, PAGE 7.

C. BARE-ROOTSTOCK.
(1) ROOTS HEALTHY AND VIGOROUS, CHARACTERIZED BY VERY GOOD COLOR AND SUCCULENCE.
(2) WELL SUPPLIED WITH MAIN LATERAL ROOTS, UNIFORMLY DISTRIBUTED AROUND CROWN OR TAPROOT.
(3) WELL SUPPLIED THROUGHOUT WITH FIBROUS (FEEDER) ROOTS.
(4) INSECT LESIONS AND OTHER MECHANICAL INJURY WELL CALLOUSED AND NOT TO EXCEED IN GREATEST DIMENSION ¼ THE DIAMETER OF THE ROOT BENEATH UNLESS COMPLETELY HEALED.
(5) RAGGED DIGGING CUTS PRUNED CLEAN.
(6) ROOT SYSTEMS SHALL BE KEPT MOIST, OUT OF DIRECT SUNLIGHT AND DRYING BREEZES AT ALL TIMES.
(7) ROOT SYSTEMS SHALL HAVE A SPREAD AND DEPTH EQUAL TO MINIMUM BALL SIZE WHEN ROOT PRUNED PRIOR TO DIGGING, OR 1/3 GREATER THAN MINIMUM BALL SIZE IF NOT ROOT-PRUNED.

WETLAND PLANT MATERIAL

1. SPECIMENS SHALL BE FREE OF OTHER PLANTS CONSIDERED AS NUISANCE OR EXOTIC SPECIES.

2. NON-CONTAINERIZED SPECIMENS SHALL EXHIBIT A HEALTHY, WELL DISTRIBUTED ROOT STRUCTURE WHICH EXTENSIVELY PENETRATES THE SOIL SUCH THAT AT LEAST 75% OF THE SOIL MASS REMAINS INTACT. THEY SHALL ALSO EXHIBIT SUFFICIENT TOP GROWTH TO ENSURE VIABILITY AT THE SPECIFIED WATER DEPTH AND/OR LOCATION BEING PLANTED.

3. CONTAINERIZED SPECIMENS SHALL EXHIBIT A HEALTHY, WELL DISTRIBUTED ROOT STRUCTURE WHICH EXTENSIVELY PENETRATES THE SOIL SUCH THAT AT LEAST 95% OF THE SOIL MASS REMAINS INTACT. THEY SHALL ALSO EXHIBIT VIGOROUS TOP GROWTH WITH A BASE DIAMETER AT LEAST 50% OF THE DIAMETER OF THE CONTAINER.

Existing Tree Care Notes

A. FLAG ALL TREES AND PALMS TO BE SAVED IN PLACE. PROVIDE BARRICADING IN ACCORDANCE WITH LOCAL STANDARDS AROUND TREES TO BE SAVED. BARRICADING SHALL BE IN PLACE PRIOR TO SITE DEMOLITION.

B. ALL EXISTING TREES TO REMAIN SHALL BE BARRICADED (SEE DETAILS). SUCH BARRICADE SHALL BE IN PLACE PRIOR TO LAND CLEARING OR CONSTRUCTION ACTIVITIES

C. ALL CLEARING, GRUBBING, EXCAVATING AND/OR GRADING UNDER THE DRIP LINE OF TREES TO REMAIN SHALL BE DONE BY HAND. ANY EXCEPTIONS TO THIS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.

D. ANY ACTIVITIES (DRIVING, STORAGE, ETC.) TO OCCUR WITHIN THE TREE PROTECTION BARRICADE AREA SHOULD BE OF TEMPORARY NATURE AND SHALL ONLY OCCUR AFTER A TEMPORARY MATERIAL SUCH A MARINE GRADE PLYWOOD AND PINE BARK MULCH (MIN. 12" DEPTH) HAS BEEN SPREAD IN THE DRIPLINE AREA TO BE AFFECTED.

E. ALL WORK WITHIN THE TREE PROTECTION BARRICADE AREA SHALL BE, IF REQUIRED BY OWNER, UNDERTAKEN IN THE PRESENCE OF A REGISTERED ARBORIST EMPLOYED BY THE LANDSCAPE CONTRACTOR. ALL TREES AND PALMS TO BE SAVED SHALL BE EXAMINED FOR DAMAGE, DISEASE AND INSECT INFESTATION. PARTS OF THE TREE SHOWING THESE CONDITIONS SHALL BE TREATED OR PRUNED IN ACCORDANCE WITH THE ARBORISTS RECOMMENDATIONS. REMOVE ALL DEAD LIMBS AND VINES.

F. ALL TREES TO REMAIN SHALL HAVE ALL DEAD WOOD AND CONFLICTING WOOD REMOVED. ALL TRUNK AND MAJOR LIMB CUTS (OVER TWO [2] INCHES DIAMETER) SHALL BE COATED. COATING USED SHALL BE APPROVED BY CONTRACTOR'S PROJECT ARBORIST.

G. ROOT PRUNE ALL TREES TO BE SAVED PRIOR TO GRADING AROUND TREES. CUT ALONG LINES OFFSET FROM LINES OF DEVELOPMENT SURROUNDING THE TREE (i.e. AT BUILDING FOUNDATIONS, PARKING LOTS, ETC.)

H. TREAT ALL CUTS WITH FUNGICIDAL BARRIER.

I. BACKFILL THE TRENCH, WITHIN 4 HOURS OF DIGGING, WITH A 1:1 MIXTURE OF SITE SOIL AND SAWDUST OR OTHER FINE ORGANIC MATERIAL. DO NOT COMPACT.

J. FERTILIZE THE PLANT AS DIRECTED BY THE CONSULTING ARBORIST.

K. IF REQUIRED BY OWNER, AN ARBORIST SHALL VISIT THE SITE PERIODICALLY TO ASSESS THE HEALTH OF THE TREES AND ISSUE REPORTS ON THE RELATIVE HEALTH OF THE TREE AND MAKE RECOMMENDATIONS FOR FURTHER TREATMENT IF NECESSARY.

GENERAL INSTALLATION NOTES:

1. ALL PLANT MATERIAL SHALL BE FLORIDA #1 OR BETTER ACCORDING TO THE CURRENT NURSERY GRADES AND STANDARDS.

2. ALL PLANTS/TREES MUST MEET GRADES AND STANDARDS WHETHER B&B OR CONTAINER-GROWN. CONTAINER MATERIAL SHALL NOT BE OVER OR UNDER ROOTED.

3. ALL TREES MUST HAVE A STRAIGHT TRUNK, FULL HEADED & MEET ALL REQUIREMENTS SPECIFIED AS FLORIDA #1 OR BETTER.

4. ALL TREES SHALL BE GUYED OR STAKED AS SHOWN IN THE DETAILS. ALL PLANTS SHALL MEET SIZE, CONTAINER, AND SPACING SPECIFICATIONS. ANY MATERIAL NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

5. CONTRACTOR SHALL BE RESPONSIBLE TO RECEIVE THE OWNER/LANDSCAPE ARCHITECT'S APPROVAL OF ALL PLANT BED LAYOUTS AND TREE LOCATIONS PRIOR TO INSTALLATION. IF PLANT MATERIAL IS INSTALLED PRIOR TO OWNER/LANDSCAPE ARCHITECT'S APPROVAL, CONTRACTOR WILL BE SUBJECT TO RELOCATING THE MATERIAL AT THE OWNER'S REQUEST AND THE CONTRACTOR'S OWN EXPENSE.

6. ALL PLANTS & PLANTING AREAS MUST BE MULCHED TO A MINIMUM DEPTH OF 3". REFER TO PLANT LIST FOR SPECIFICS.

7. CONTRACTOR SHALL PERFORM SOIL TESTS PRIOR TO CONSTRUCTION AND AMEND WITH LIME AND SULFUR AS NEEDED.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING. GRADING SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.

9. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

10. CONTRACTOR SHALL SUBMIT UNIT PRICES FOR ALL BID ITEMS. REFER TO SPECS FOR UNIT COST FORM.

11. SOIL SHALL BE FREE FROM LIME ROCK AND CONSTRUCTION DEBRIS.

12. IN THE EVENT OF A CONFLICT BETWEEN QUANTITIES REPRESENTED ON THE PLAN VS. QUANTITIES SHOWN ON THE PLANT LIST, THE PLAN SHALL CONTROL.

13. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN TAKE OFFS AND QUANTITIES. THE QUANTITIES ON THE PLANT LIST SERVE ONLY AS A GUIDE TO THE OWNER AND L.A. THIS INCLUDES SOD AND MULCH QUANTITIES OF WHICH THE CONTRACTOR SHALL BE HELD TO BID QUANTITIES.

14. ALL PLANTS WILL BE REQUIRED TO BE FULL AND HEALTHY. CONTRACTOR SHALL ARRANGE FOR PLANT APPROVAL PRIOR TO DELIVERY. PHOTOS, OR NURSERY VISITS. PHOTOS AND THEIR SOURCE TO BE SUBMITTED FOR THE FOLLOWING SPECIMENS: ITALIAN CYPRESS, MEDJOOL DATE PALMS, 6" CAL. MAGNOLIA'S, 6" CAL. LIVE OAKS.

15. PRIOR TO CONSTRUCTION, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES & SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY & ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCUR AS A RESULT OF THE LANDSCAPE CONSTRUCTION.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR WARRANTY OF HEALTH OF PLANTS IN ON-SITE SOILS. IF DURING DIGGING, CONTRACTOR DISCOVERS WATER-LOGGED, CLAYEY, COMPACTED OR SIMILARLY POORLY DRAINED SOILS, IT SHOULD BE BROUGHT TO THE ATTENTION OF OWNER/LANDSCAPE ARCHITECT FOR REMEDIAL ACTION.

17. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) OF PLANTING AREAS & LAWNS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE LANDSCAPE ARCHITECT/OWNER.

18. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF SUBSTANTIAL COMPLETION. THE LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD (AS DIRECTED BY THE OWNER).

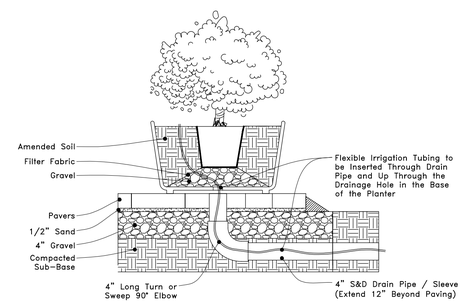
19. THE LANDSCAPE ARCHITECT/OWNER WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.

20. AFTER BEING DUG (IF B&B) , ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.

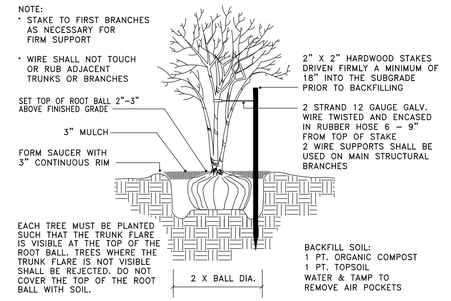
21. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE & REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.

22. LANDSCAPE CONTRACTOR RESPONSIBLE FOR FULL 100% IRRIGATION AND SHALL PROVIDE OWNER WITH AS-BUILTS WHEN JOB IS COMPLETED. LANDSCAPE CONTRACTOR SHALL REPAIR ALL EXISTING IRRIGATION AS NECESSARY.

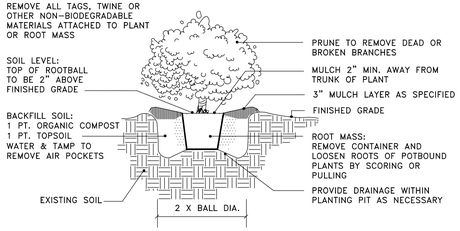
811 Know what's **below.** **Call** before you dig.



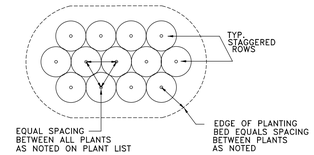
PLANTER IRRIGATION & DRAINAGE DETAIL



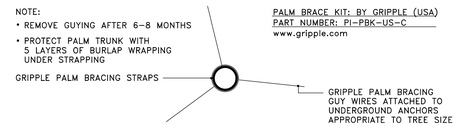
MULTI–TRUNK OR SMALL TREE PLANTING DETAIL



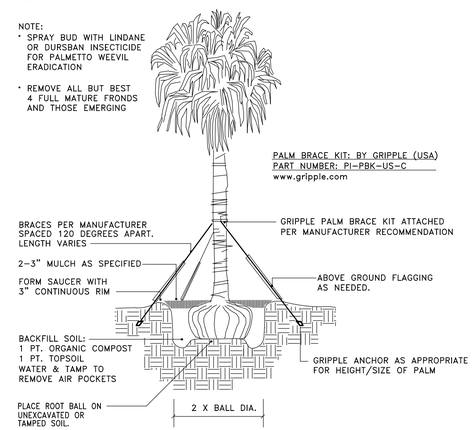
SHRUB PLANTING DETAIL



SHRUB MASS PLANTING LAYOUT



PALM BRACING DETAIL
GRIPPLE PALM BRACE KIT



PALM TREE PLANTING DETAIL
GRIPPLE PALM BRACE KIT

REVISIONS

NO.	DATE	DESCRIPTION	BY

ST. JOHNS GOLF & COUNTRY CLUB
SAMPSON CREEK CDD
ST. AUGUSTINE, FL
AMENITY UPGRADES
LANDSCAPE GENERAL NOTES AND DETAILS

BASHAM & LUCAS
DESIGN GROUP, INC.
7645 GATE PARKWAY SUITE 201
JACKSONVILLE, FLORIDA 32256
(904) 731-2323 • bashamlucas.com
L.N: AA26000586 | LC26000508

DRAWN BY	MEG
CHECKED BY	MEG
DATE	10-6-2017
JOB NO.	16-39

GN1