

LYNN BENNET EARLY
CHILDHOOD
EDUCATION CENTER
(EXISTING)

ROD LEE BIGELOW HEALTH SCIENCES
BUILDING (EXISTING)

JUANITA GREER WHITE LIFE SCIENCES
BUILDING (EXISTING)

NORTH MALL
(EXISTING)

AREA OF WORK

NEW VIVARIUM
BUILDING

AVOID HITTING OVERHEAD
POWER LINES- IT'S COSTLY

**CALL BEFORE
YOU CRANE**

1-702-227-2929

Call before you Dig
Avoid cutting underground
utility lines. It's costly.

**Call
811**

1-800-227-2600
1-702-455-7544

AVOID HITTING UNDERGROUND
TRAFFIC SIGNALS AND STREET
LIGHT SYSTEMS. IT'S COSTLY

**Call
before you
UnderGround**

1-702-455-7511
1-702-229-6611

SITE ELECTRICAL PLAN - VIVARIUM

SCALE: 1" = 20'-0"

1



GENERAL NOTES

1. INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - a. YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - b. ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - c. THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com

Professional Engineer
GEORGE T. FOSTER, JR.
Exp. 6/30/17
ELECTRICAL
No. 13078
06/17/2016

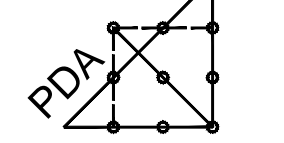
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS 624.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

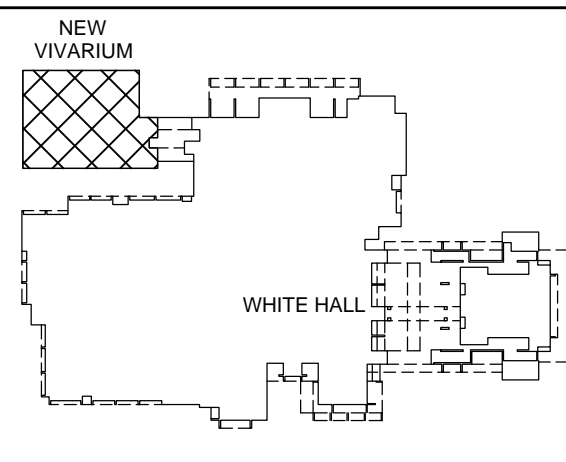
SITE ELECTRICAL
PLAN- VIVARIUM

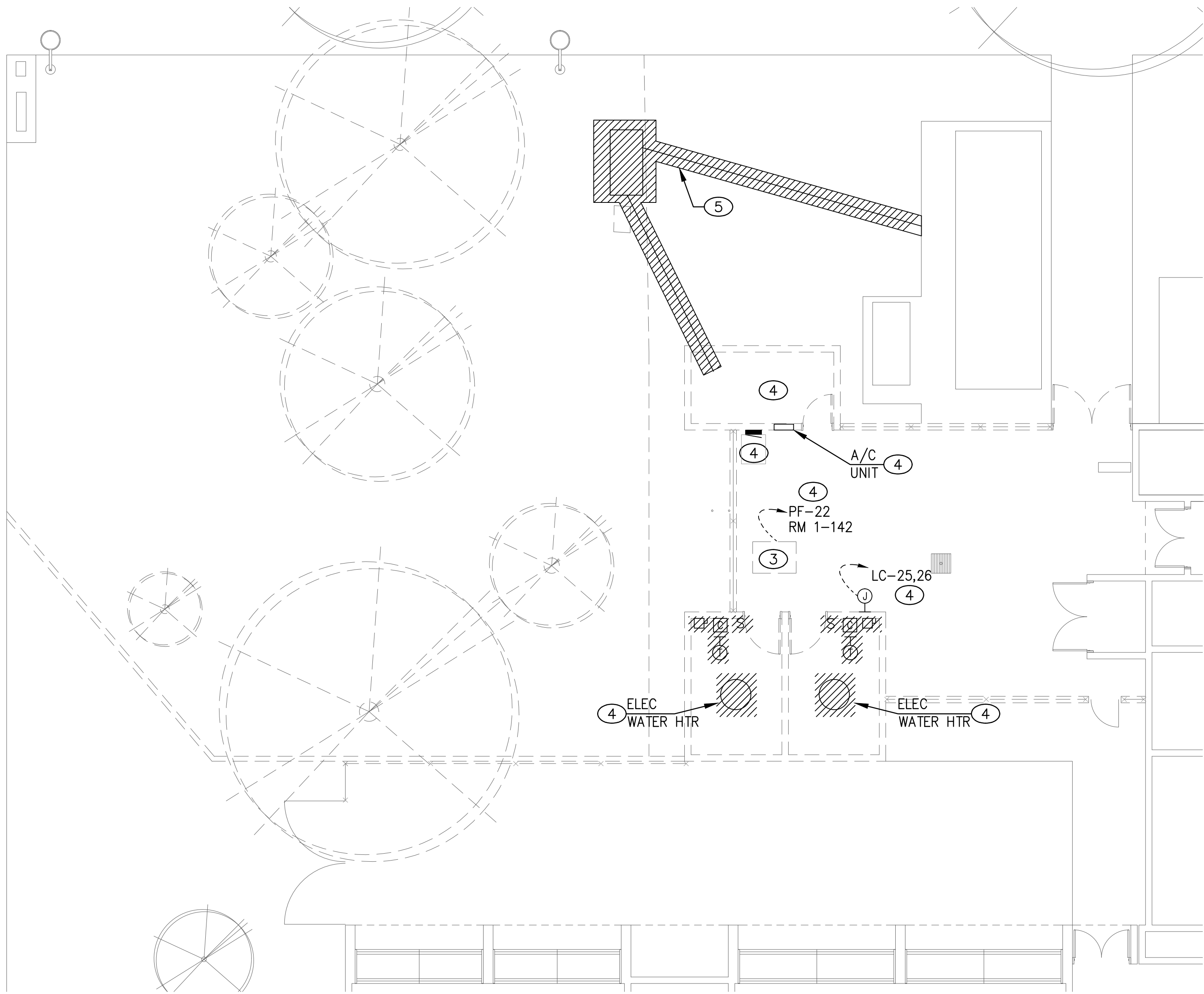
Date: 06/17/2016

Sheet No:

ES1.01

KEYPLAN

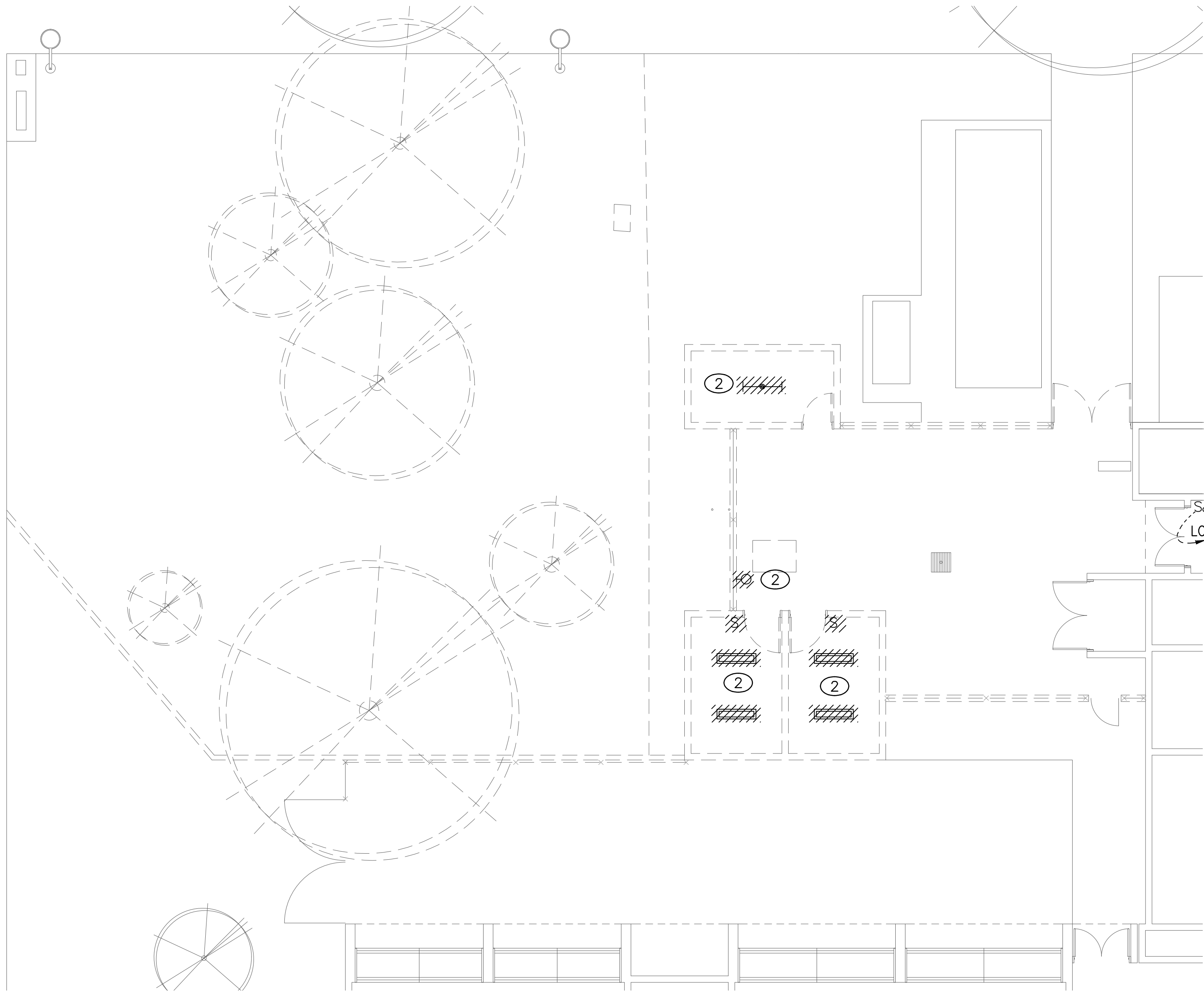




POWER REMOVAL PLAN - VIVARIUM

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

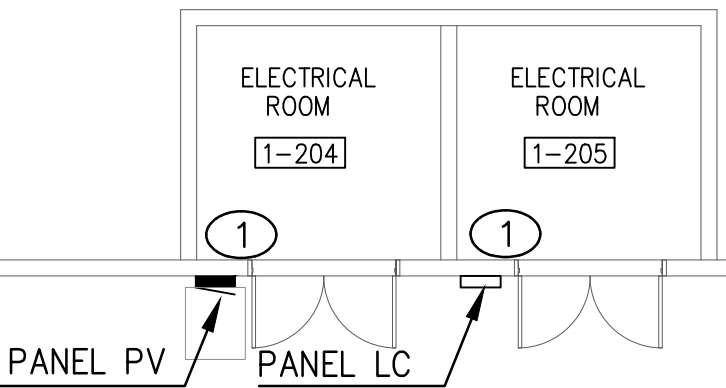
1



LIGHTING REMOVAL PLAN - VIVARIUM

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

1

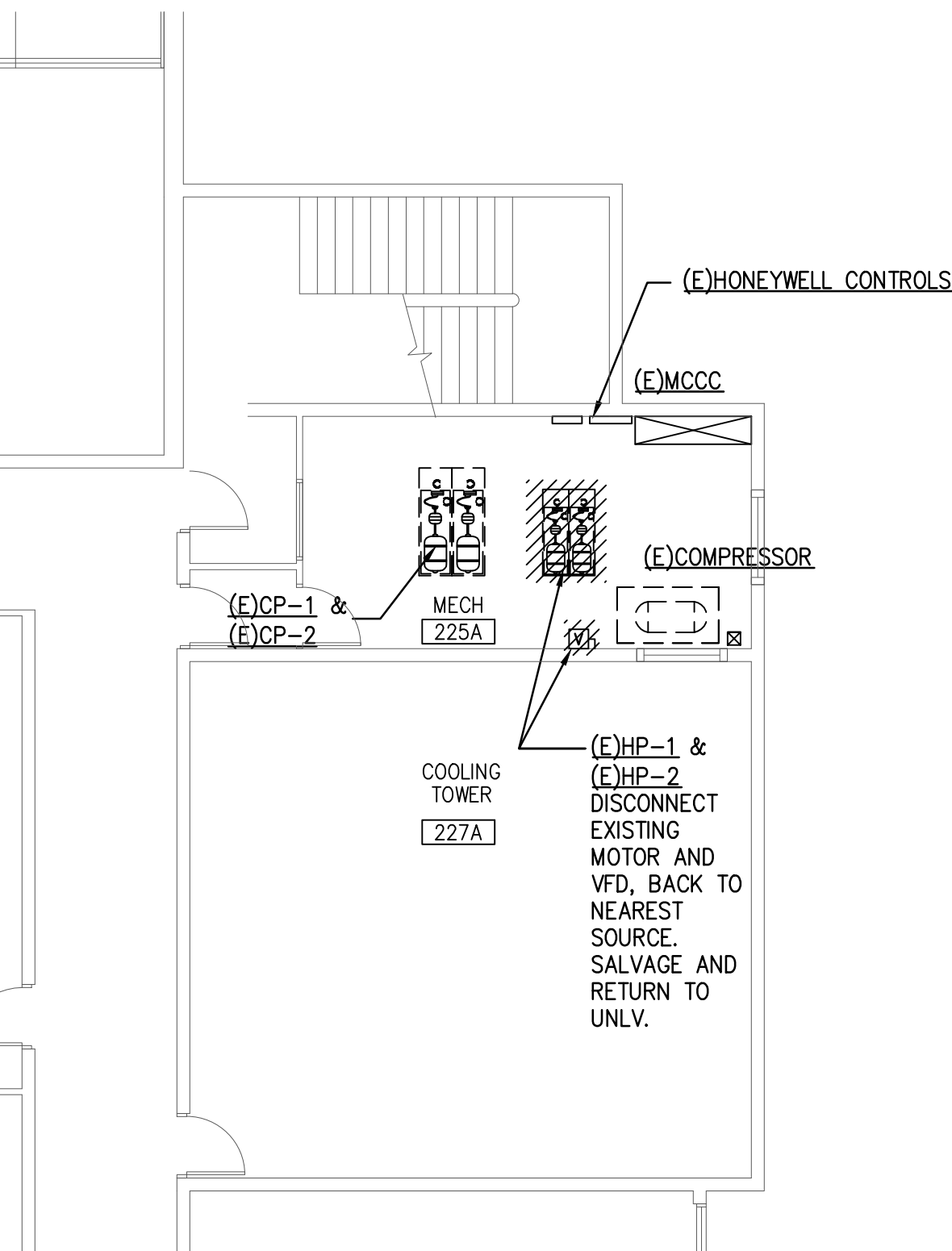


ELECTRICAL REMOVAL PLAN - VIVARIUM

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

MECHANICAL ROOM 225

3



REFER TO SHEET E2.01 FOR NEW WORK

GENERAL NOTES

- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
- ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VARMIN PROOF
- EXISTING TO REMAIN U.N.O.

KEYNOTES

- APPROXIMATE LOCATION OF ELECTRICAL PANELS. FIELD VERIFY EXACT LOCATION.
- REMOVE LIGHT FIXTURES AND ASSOCIATED CIRCUITRY BACK TO NEAREST SOURCE.
- INCINERATOR.
- DISCONNECT EXISTING ELECTRICAL AND EQUIPMENT AND ASSOCIATED CIRCUITRY BACK TO NEAREST SOURCE.
- REFER TO ESO.01 FOR ADDITIONAL INFORMATION ON HATCHED AREA.

KEYPLAN

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions

From Outside the Box

© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of Nevada law.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

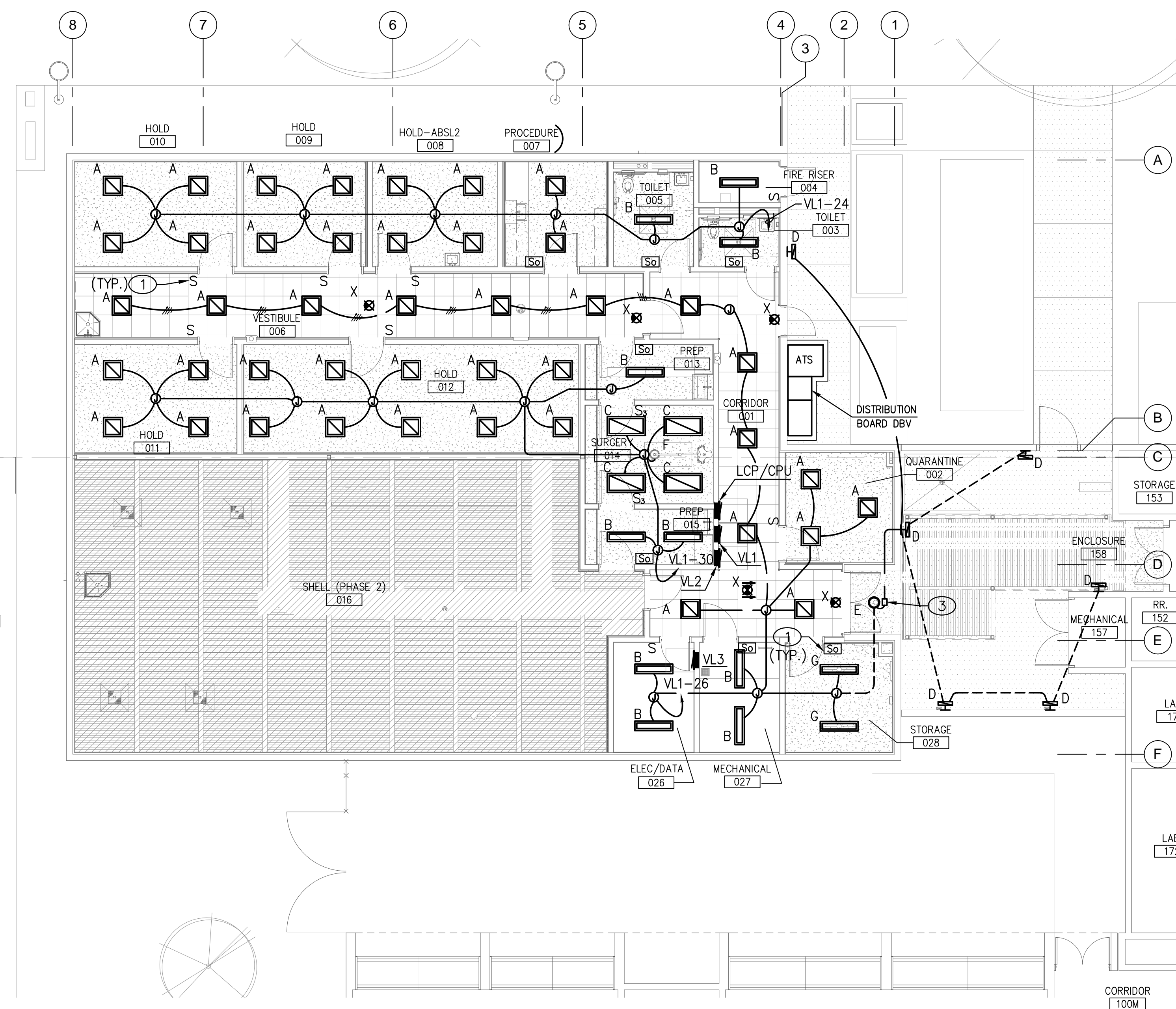
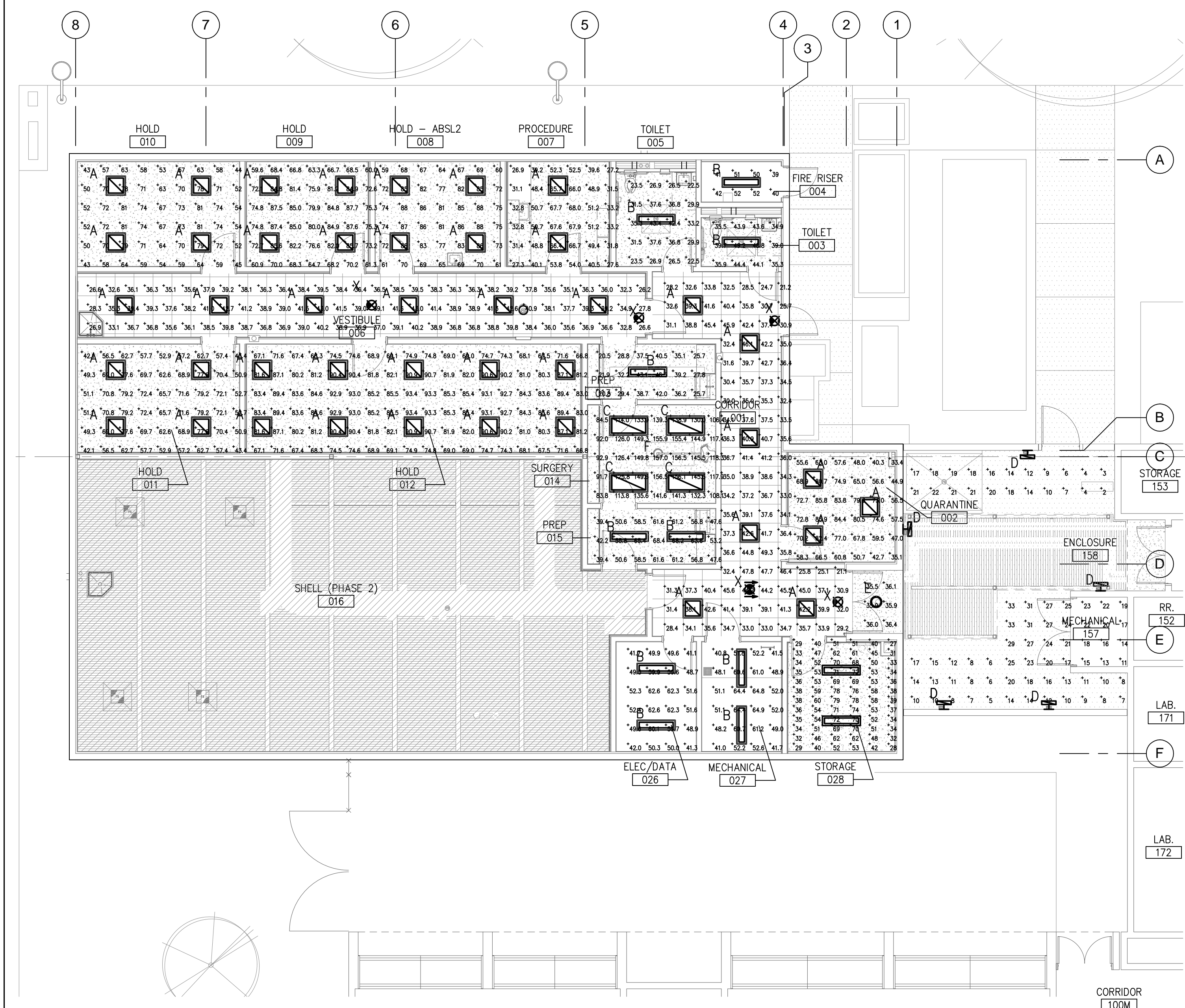
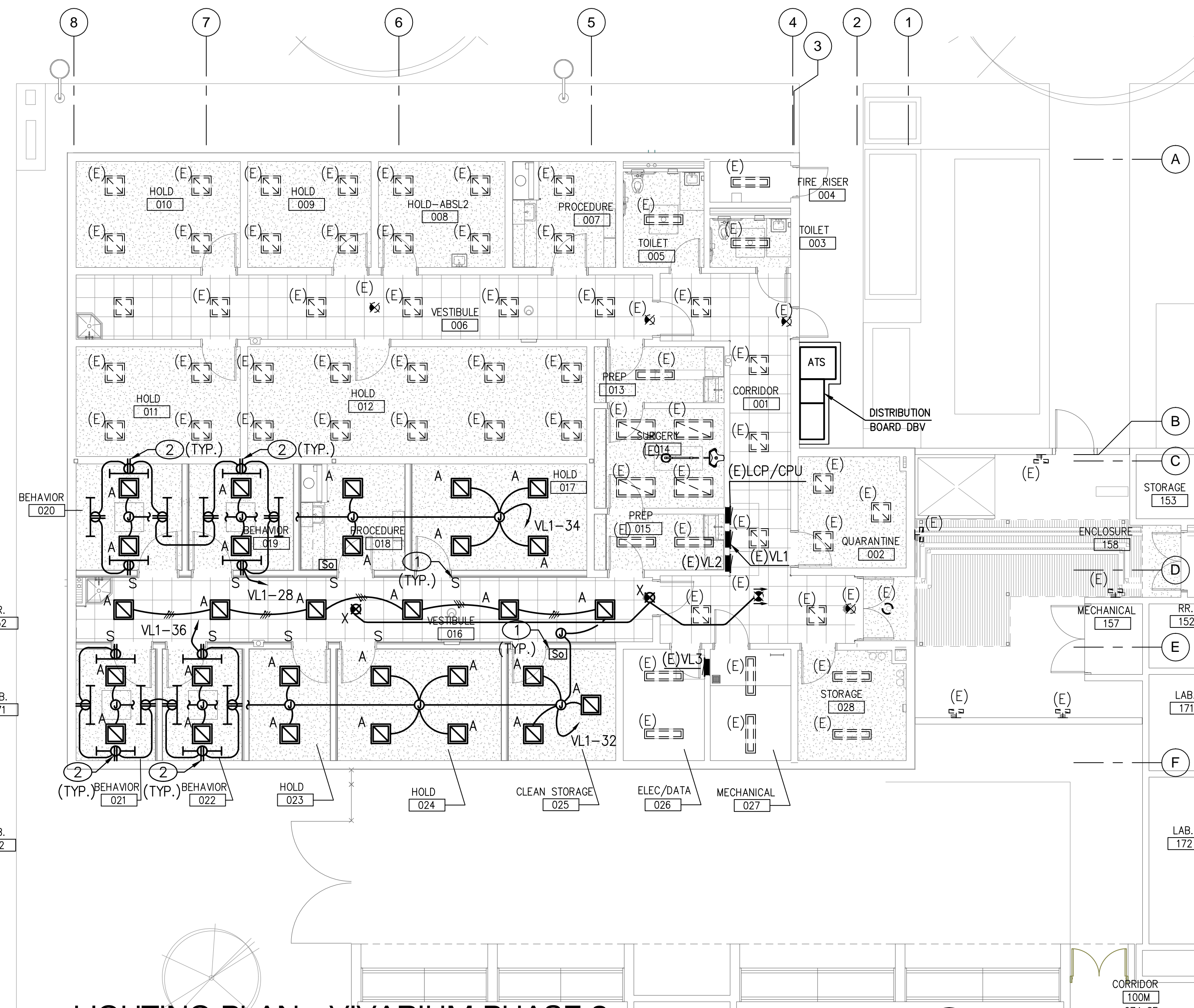
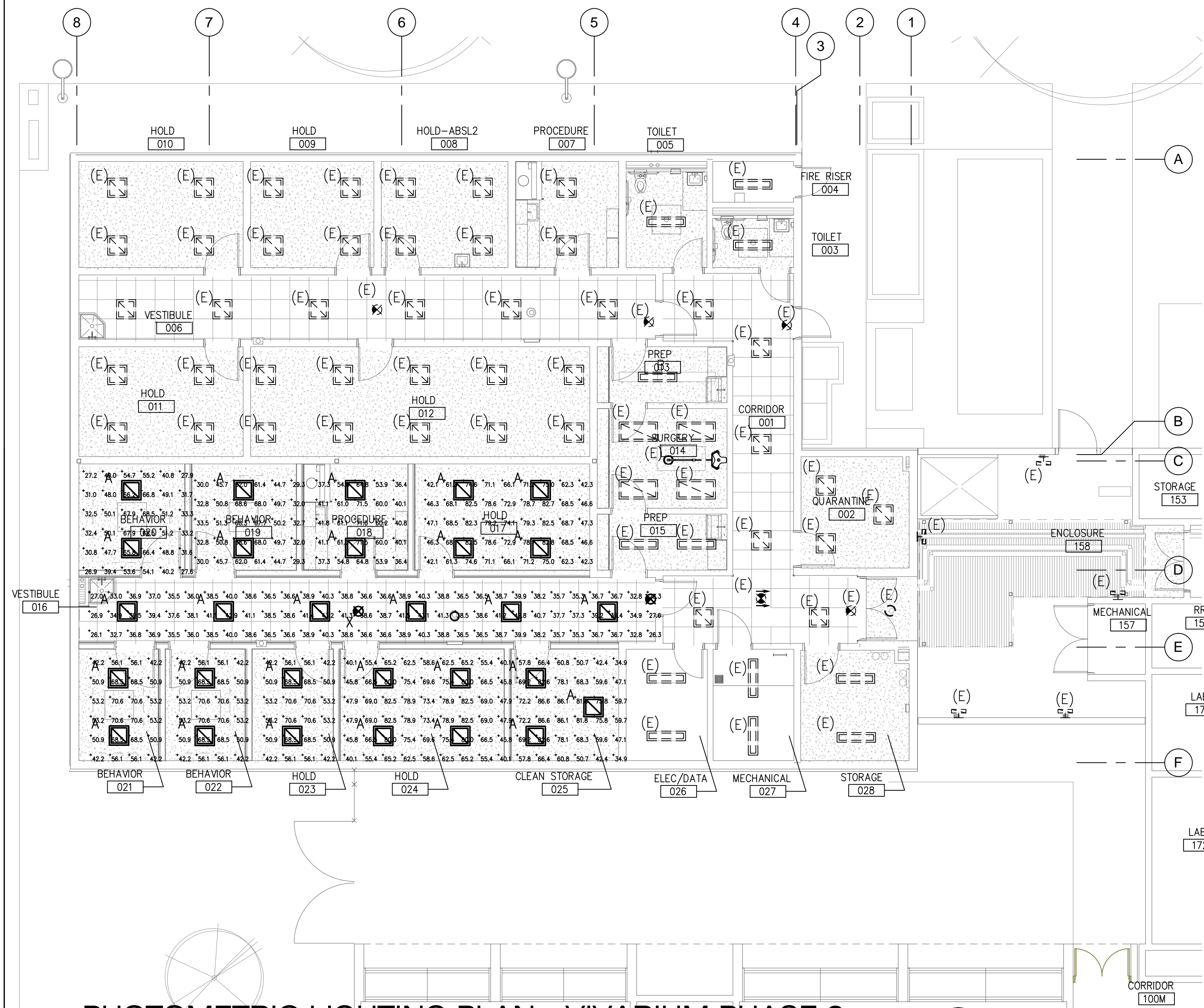
Sheet Title

ELECTRICAL
REMOVAL
PLANS- VIVARIUM

Date: 06/17/2016

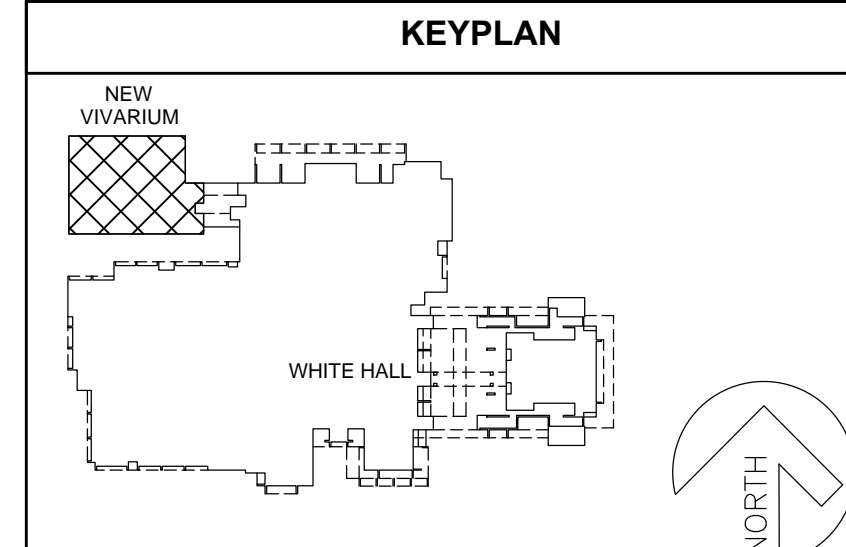
Sheet No:

E0.01



- GENERAL NOTES**
- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
 - ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VARMIN PROOF.
 - REFER TO SHEET E4.01 FOR SEQUENCE OF OPERATION.

- KEYNOTES**
- CONNECT TO LUTRON CONTROL PANEL. REFER TO LUTRON CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
 - CEILING MOUNT RECEPTACLE FOR LIGHT BAR ADJACENT TO RECESSED STEEL STRUT.
 - CEILING FLUSH MOUNTED PHOTOCELL FOR TYPE-E FIXTURE.



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions

From Outside the Box

© 2016 TSK or use these documents for this, or any other projects, by anyone other than the original owner, is a violation of NRS 633.010.

#16001

PLEASE RECYCLE

Project
UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061
Owner
**UNIVERSITY OF
NEVADA, LAS VEGAS**

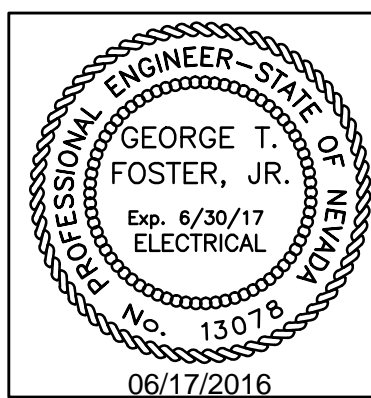
PERMIT SET

REV	DATE	REVISIONS	DESCRIPTION

Sheet Title
**PHASED LIGHTING
PLANS - VIVARIUM**

Date: 06/17/2016
Sheet No:

E1.01



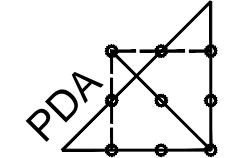
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2015 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS 653.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

Sheet Title

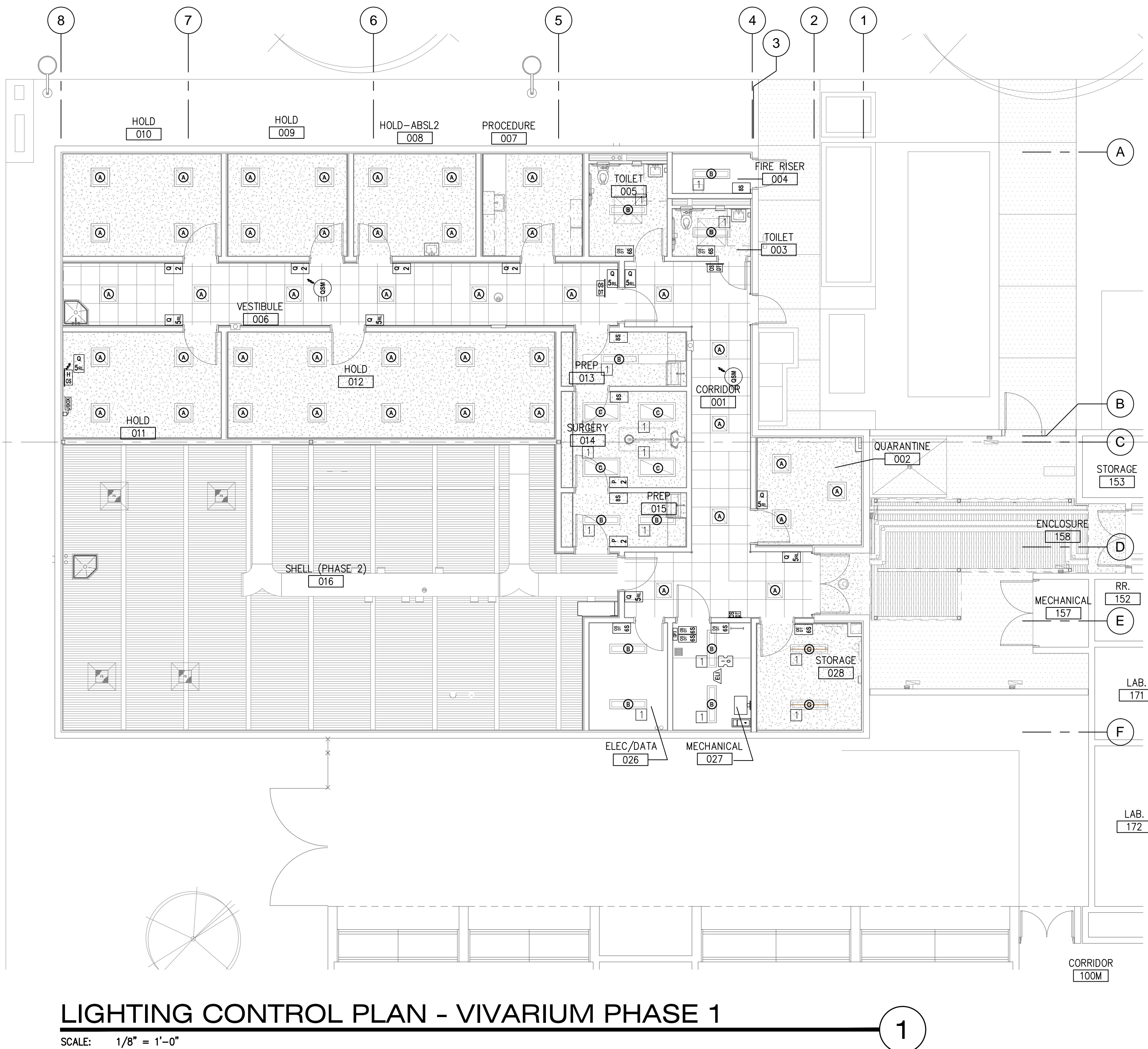
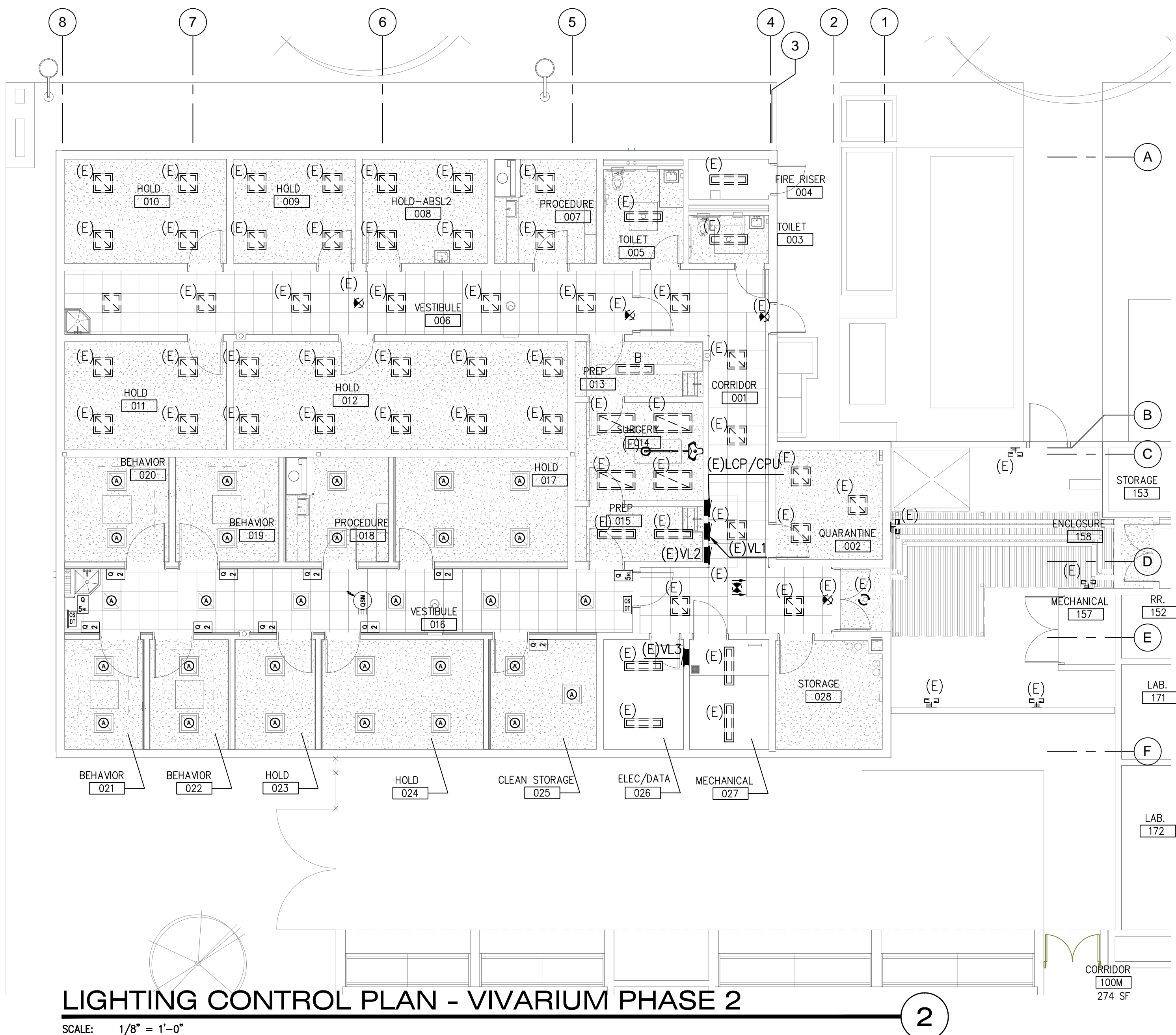
PHASED LIGHTING
CONTROL PLANS -
VIVARIUM

Date: 06/17/2016

Sheet No:

E1.02

LEGEND	
(A)	E1.01>MECHANICAL 027.HUB 001.LINKA.ESN Eco#1>LOOP 1 (64 of 64)
(B)	E1.01>MECHANICAL 027.HUB 001.LINKA.ESN Eco#1>LOOP 2 (22 of 64)
(C)	E1.01>MECHANICAL 027.HUB 001.LINKA.ESN Eco#2>LOOP 2 (58 of 64)
QS-A-CMP-LBO-0 (1)	
QS-A-CMP-SBO-0 (1)	
QP3-1PL-100-240 (1)	
QSN-2ECO-S (2)	
QSM-2-4W-C (3)	
MS-A102-WH (5)	
PJ2-2B-GWH-L01 (CW-1-WH) (2)	
QSW2-BI-WH (16)	
QSW2-5BRLI-WH (7)	
LOS-WDT-WH (6)	
LUT-ELI-3PH (PP-120H) (1)	
QSE-IO (1)	
MRF-2-8S-DV-WH (4)	
QSPS-J-1-50 (1)	



NOTES ON WIRING

QS CONTROL LINK

THE QS CONTROL LINK HAS A FREE WIRING TOPOLOGY (DAISY CHAIN, T-TAP, ETC). THE SYSTEM WIRING ILLUSTRATED BY THIS DRAWING HAS BEEN LAID OUT TO ENSURE APPROPRIATE POWER TO EACH DEVICE. IF FOR ANY REASON THE SYSTEM IS TO BE WIRED DIFFERENTLY THAN WHAT IS SHOWN, PLEASE CONFIRM ALL DEVICE POWER REQUIREMENTS ARE MET (PLEASE REFER TO 'QS LINK POWER REQUIREMENTS' FOR INDIVIDUAL DEVICE POWER REQUIREMENTS).

FOR QS CONTROL WIRE LENGTHS TOTALING LESS THAN 500FT (153M), USE LUTRON CABLE GRX-CBL-346S (4 CONDUCTOR NON-PLENUM) OR GRX-PCBL-346S (4 CONDUCTOR PLENUM). OTHERWISE USE 2 #18 AWG (1.0 SQ MM) + 2 #22 AWG (0.5 SQ MM) TWISTED AND SHIELDED OR EQUIVALENT (BELDEN #9461). FOR QS CONTROL WIRE LENGTHS TOTALING UP TO 2,000FT, USE GRX-CBL-46L. TOTAL QS CONTROL WIRE LENGTH MUST NOT EXCEED 2,000FT (600M).

PANEL LINK RULES

PANELS ARE DAISY CHAINED ON ONE OF THE CONFIGURABLE LINKS PER LUTRON'S DRAWING, HOWEVER THEY DO NOT HAVE TO BE IN THE ORDER SHOWN. DO NOT HOME-RUN OR T-TAP THIS WIRING LINK. ALL CIRCUITS NEED TO BE LANDED IN THESE PANELS PER LUTRON'S PANEL SCHEDULES. THE MAXIMUM WIRE LENGTH OF A PANEL LINK IS 2,000FT (600M). AN MX-RPTR IS USED TO EXTEND THE LENGTH OF A LINK BY ANOTHER 2,000FT (600M). A MAXIMUM OF 3 MX-RPTRS MAY BE USED PER LINK FOR A MAXIMUM LENGTH OF 8,000FT (2,438 M) PER LINK. IF A PANEL IS MOVED TO ANOTHER LINK, OR THE LOADS ARE NOT WIRED AS SHOWN IN LUTRON'S PANEL SCHEDULES, LUTRON MUST BE NOTIFIED AS THIS INFORMATION IS IMPORTANT FOR PROGRAMMING THE SYSTEM. LT-1 LINK TERMINATORS ARE NEEDED ON EACH END OF THE LINK.

USE LUTRON CABLE GRX-CBL-46L (5 CONDUCTOR NON-PLENUM) OR GRX-PCBL-46L (5 CONDUCTOR PLENUM RATED). OTHERWISE, USE 2 #12 AWG (4 SQ MM) + 2 #22 AWG (0.5 SQ MM) TWISTED AND SHIELDED AND BETWEEN THE PANELS ADD 1 #18 AWG (1.0 SQ MM) FOR EMERGENCY SENSING CABLE BY OTHERS.

DMX CABLE

DMX LINK WIRING REQUIRES ONE BELDON #9729 (NON-PLENUM) OR ONE BELDON #9729 (PLENUM) OR DURA FLEX 224 WA CABLE.

ECOSYSTEM BUS/LOOP*

THIS IS A TOPOLOGY-FREE AND POLARITY-FREE WIRING (DAISY-CHAIN, T-TAP, HOME-RUN ETC.). KEEP ALL THE BALLASTS/MODULES IN ONE ROOM ON THE SAME LOOP WHENEVER POSSIBLE. ECOSYSTEM LOOPS ARE SHOWN ON THE LIGHTING PLANS. IF THERE IS A DISCREPANCY, AND IF ROOMS ARE WIRED ON A DIFFERENT LOOP THAN THE ONE SHOWN, LUTRON NEEDS TO BE NOTIFIED AS THIS INFORMATION IS IMPORTANT FOR PROGRAMMING THE SYSTEM.

USE LUTRON CABLE C-CBL-216-GR1 (2 #16 CONDUCTOR NON-PLENUM) OR C-PCBL-216-CL-1 (2 #16 CONDUCTOR PLENUM RATED). OTHERWISE USE 2 #16 AWG (1.5 SQ MM) BY OTHERS.

LOOP LENGTH IS LIMITED BY THE WIRE GAUGE USED FOR E1 AND E2 AS FOLLOWS:

WIRE GAUGE	MAX LOOP LENGTH
#18 AWG (1.0 SQ MM)	550 FT (167M)
#16 AWG (1.5 SQ MM)	900 FT (274M)
#14 AWG (2.5 SQ MM)	1,400 FT (426 M)
#12 AWG (4 SQ MM)	2,200 FT (670M)

NOTES FOR LED APPLICATIONS

FOR ANY FORWARD/REVERSE PHASE, 3-WIRE, 0-10V AND SWITCHING LED DRIVERS, PLEASE VERIFY THE NUMBER OF DRIVERS SUPPORTED ON EACH DEVICE. FOR MORE INFORMATION, PLEASE VISIT LUTRON'S LED CENTER OF EXCELLENCE (WWW.LUTRON.COM/LED).

QS LINK POWER REQUIREMENTS		
DEVICE		PDUS
QS DEVICES THAT SUPPLY PDU		
DIN RAIL POWER SUPPLY		+75
QS PLUG-IN POWER SUPPLY, QS J-BOX POWER SUPPLY		+8
ENERGI SAVR NODE WITH ECOSYSTEM, ENERGI SAVR NODE WITH DALI		+30
ENERGI SAVR NODE FOR 0-10V, ENERGI SAVR NODE WITH SOFTSWTCH, ENERGI SAVR NODE FOR 0-10V (DIN RAIL), ENERGI SAVR NODE WITH SOFTSWTCH (DIN RAIL)		+14
ENERGI SAVR NODE PHASE ADAPTIVE (DIN RAIL), 1A MYROOM DIN RAIL POWER MODULE SWITCHING, 1A MYROOM DIN RAIL POWER MODULE PHASE ADAPTIVE		+4
ENERGI SAVR NODE WITH DALI (DIN RAIL), ENERGI SAVR NODE WITH ECOSYSTEM (DIN RAIL)		+3
QS MOTOR GROUP CONTROLLER (DIN RAIL), HOMEWORKS QS DIN RAIL POWER MODULES		0
GRAFIK EYE QS (ALL MODELS EXCEPT GRAFIK EYE QS DALI WITH KMX), QS TIMECLOCK		+3
QP2 QUANTUM LIGHTING HUB	LINK A : 0 LINKS B,C,D : +33 EACH	
QP3 QUANTUM LIGHTING HUB	LINKS A,B : +33 EACH	
QS DEVICES THAT CONSUME PDU		
QS WALLSTATION (SEETOUGH, ARCHITRAVE, SIGNATURE SERIES, QS PICO, KEYSWITCH, SINGLE COLUMN PALLADIUM), QS SLIDER, GRAFIK T SLIDER, QS INFRARED (IR) EYE, WALLBOX INPUT CLOSURE INTERFACE		-1
QS NETWORK INTERFACE, QS DMX INTERFACE, ENERGI SAVR NODE PROGRAMMING INTERFACE, QS WALLSTATION (DOUBLE COLUMN PALLADIUM)		-2
QS SENSOR MODULE (QSM), NOT INCLUDING ATTACHED WIRED SENSORS (SEE SECTION BELOW FOR MORE INFORMATION), QS CONTACT CLOSURE INTERFACE, PALLADIUM ROOM THERMOSTAT		-3
GUESTROOM CONTROL UNIT		-8
SENSORS & DEVICES THAT CONSUME PDUS WHEN WIRED TO A QSM		
LUTRON DAYLIGHT SENSOR, LUTRON INFRARED (IR) RECEIVER, PICO WIRED CONTROLLER		-0.5
ECOSYSTEM WALLSTATION		-1
LOS C SERIES OCCUPANCY SENSOR, HIGH BAY OCCUPANCY SENSOR		-2

LUTRON SERVICES		
QTY	SERVICE TITLE (MODEL NUMBER)	SERVICE DESCRIPTION
THE QUANTITY OF SERVICES BELOW ARE TO BE INCLUDED AS PART OF THIS PROJECT'S SCOPE OF WORK AND SPECIFIED INTO THE WRITTEN SPEC DOCUMENTS		
PRE-STARTUP SERVICES		
	ONSITE PRE-WIRE VISIT (LSC-PREWIRE)	AN ONSITE VISIT WITH THE ELECTRICAL CONTRACTOR TO DISCUSS LOGISTICAL CONSTRUCTION CONSIDERATIONS INCLUDING THE WIRING AND MOUNTING OF SYSTEM DEVICES, THE CONSTRUCTION SCHEDULE, AND LUTRON DOCUMENTATION. QUANTITY DICTATES THE NUMBER OF VISITS PURCHASED.
	SYSTEM & NETWORK INTEGRATION CONSULTATION (LSC-INT-VISIT)	A CONSULTATIVE VISIT WITH THIRD PARTY INTEGRATORS TO CONFIRM THE SPECIFIED SEQUENCE OF OPERATION AND DISCUSS INTEGRATION PROCEDURES NEEDED IN ORDER TO INTEGRATE WITH THE LUTRON EQUIPMENT. THIS MAY INCLUDE ANY OF THE FOLLOWING THIRD PARTY SYSTEMS: BMS, BAS, IT, NON-LUTRON SHADES, BACKNET, AV, OR ENERGY DASHBOARDS.
	SENSOR LAYOUT & TUNING (LSC-SENS-LT)	LUTRON WILL TAKE RESPONSIBILITY FOR LUTRON-PROVIDED SENSOR PLACEMENT AND PERFORMANCE BY CREATING SENSOR LAYOUTS AND COORDINATING SENSOR PLACEMENT BEFORE AND AFTER INSTALLATION. ONCE THE BUILDING IS OCCUPIED, LUTRON WILL RETURN UP TO TWO TIMES TO PERFORM SENSOR FINE-TUNING.
STARTUP SUPPORT SERVICES		
(THESE SERVICES ARE ADDITIONAL TO YOUR SPECIFIED STARTUP BASED ON YOUR REQUIREMENTS)		
	AFTER HOURS STARTUP (LSC-AH-SU)	STARTUP PROVIDED BETWEEN THE HOURS OF 5:00PM – 7:00AM, MONDAY - FRIDAY. THIS SCOPE OF WORK DOES NOT INCLUDE HOLIDAY OR WEEKEND WORK. ADDITIONAL FEES MAY APPLY FOR WORK TO BE COMPLETED ON WEEKENDS (FRIDAY 5:00PM – MONDAY 7:00AM).
	ONSITE SCENE & LEVEL TUNING (LSC-AF-VISIT)	AN ONSITE VISIT WITH THE SPECIFIER OR CUSTOMER REPRESENTATIVE TO REVIEW THE DESIGN INTENT, FINE-TUNE THE SCENE LEVEL PROGRAMMING, AND MAKE ADJUSTMENTS TO TIMECLOCKS.
	ONSITE PERFORMANCE-VERIFICATION WALKTHROUGH (LSC-WALK)	AN ONSITE WALKTHROUGH WITH FACILITY REPRESENTATIVES OR PROJECT COMMISSIONING AGENTS TO DEMONSTRATE THAT THE SYSTEM FUNCTIONALITY MEETS THE DESIGN INTENT. THIS MAY INCLUDE ANY OF THE FOLLOWING ONSITE ACTIVITIES – CONSULTATION/TRAINING DEMOS, FUNCTIONAL TESTING ASSISTANCE, OR INVENTORY OF LUTRON EQUIPMENT.
	SYSTEM PERFORMANCE-VERIFICATION DOCUMENTATION (LSC-SPV-DOC)	COMPLETION OF DOCUMENTATION WHICH PROVIDES PERFORMANCE VERIFICATION CERTIFYING THE LUTRON EQUIPMENT HAS BEEN THOROUGHLY TESTED. IT SUPPORTS THE DOCUMENTATION REQUIREMENTS OF MANY BUILDING STANDARDS.
	TITLE 24 ACCEPTANCE TEST VISIT (LSC-SPV-DOC-T24)	ACCEPTANCE TESTING BY A LUTRON CERTIFIED LIGHTING CONTROL ACCEPTANCE TEST TECHNICIAN (CLCATT) TO FULFILL THE REQUIRED TITLE 24 INTERIOR LIGHTING CONTROL TESTS.
POST-STARTUP SERVICES		
	CUSTOMER-SITE SOLUTION TRAINING (LSC-TRAINING-SP)	A VISIT TO TEACH SYSTEM USERS HOW TO OPERATE AND MAINTAIN THE LIGHTING CONTROL SYSTEM.
	SYSTEM OPTIMIZATION (LSC-SYSOPT-SP)	AN ONSITE CONSULTATIVE VISIT TO IDENTIFY AND IMPLEMENT LIGHTING CONTROL ADJUSTMENTS TO SAVE ADDITIONAL ENERGY AND CREATE A MORE PRODUCTIVE WORK ENVIRONMENT.
MAINTENANCE & SUPPORT SERVICES		
	SOFTWARE MAINTENANCE AGREEMENT (LSC-SMA-SP)	PROVIDES COMPATIBILITY TESTING RESULTS OF QUANTUM WITH OPERATING SYSTEM PATCHES AND WEB BROWSER UPDATES. INCLUDES AN ELECTIVE FREE SOFTWARE UPGRADE LICENSE.
1	COMMERCIAL SYSTEMS 2-YEAR LIMITED WARRANTY (LSC-B2)	A 2-YEAR SYSTEM WARRANTY PROVIDING 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME.
	ENHANCED SILVER (LSC-E8S)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED GOLD (LSC-E8G)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 72-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED PLATINUM (LSC-E8P)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 24-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	SILVER TECHNOLOGY SUPPORT PLAN (LSC-SILV-IV)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A FIRST-AVAILABLE ONSITE OR REMOTE RESPONSE TIME.
	GOLD TECHNOLOGY SUPPORT PLAN (LSC-GOLD-IV)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON LABOR WITH A 72-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PLATINUM TECHNOLOGY SUPPORT PLAN (LSC-PLAT-IV)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A 24-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PREVENTIVE MAINTENANCE VISIT(S) (LSC-SCH-MAINT)	SCHEDULED MAINTENANCE VISIT TO PERFORM PREVENTIVE MAINTENANCE, MINOR PROGRAMMING, AND CONDUCT SYSTEM TRAININGS. QUANTITY IS IN ADDITION TO ANY YEARLY VISITS SPECIFIED WITH AN ENHANCED WARRANTY OR TECHNOLOGY SUPPORT PLAN.
PLEASE GO TO WWW.LUTRON.COM/SERVICES FOR FURTHER INFORMATION.		

One-Line

Wire Legend

Ⓐ QS Control Link (Connect wires 1, 2, 3 and 4)*

Ⓐ QS Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire 2)*

Ⓐ Panel Control Link (Connect wires 1, 2, 3, 4 and 5)*

Ⓐ Panel Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire #5)*

Ⓐ Panel Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire #5)*

Ⓐ Sivoia Shade Control Link*

Ⓐ Normal Input Power 2 #12 AWG (4 sq mm) + ground

Ⓐ Normal Emergency Input Power 2 #12 AWG (4 sq mm) + ground

Ⓐ 3 Phase 4 wire Input Power, 4 #12 AWG (4 sq mm) + ground

Ⓐ 2 #12 AWG (4 sq mm) + ground

Ⓐ 3 #12 AWG (4 sq mm) + ground

Ⓐ 0-10V Signal: 2#18AWG (1.0 sq mm)

Ⓐ 2#18 AWG (1.0 sq mm)

Ⓐ 3#18 AWG (1.0 sq mm)

Ⓐ EcoSystem Bus/Loop*

Ⓐ DALI Loop

Ⓐ Lutron Sensor Cable C-CBL-522S or use 4#22 AWG (1.0 sq mm)

Ⓐ Lutron Sensor Cable C-CBL-522S or use 4#22 AWG (1.0 sq mm)

Ⓐ DMX Cable*

Ⓐ Ethernet cable, CAT5E or better cable for Lutron Network terminated with RJ45 connectors (to be provided by others), 328 ft (100m) maximum run.

Ⓐ Fiber optic cable for Lutron Network terminated with appropriate fiber optic connectors (to be provided by others). Requires dedicated fiber optic link (single-mode or multi-mode)

Ⓐ RF Connection

Ⓐ Wired Connection

*Please refer to Notes on Wiring for more wiring guidelines.

*Refer to Load Schedule for feed and load information

Project Name: UNLV-Vivarium

Location: Las Vegas, Nevada

Project Number:

Created by: Christian Alderfer

File Name: UNLV-Vivarium.ltd

Document Revision:

June 14, 2016 | Sheet 1 of 3

For detailed definition of product capabilities refer to product specification submittal sheets.

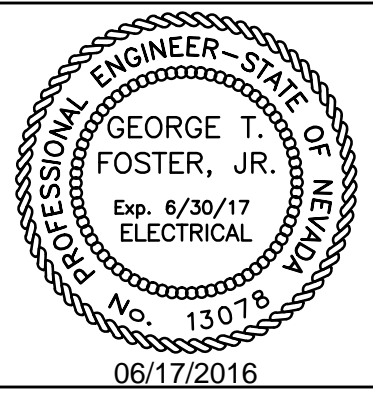
⚠ NOT FOR CONSTRUCTION

LUTRON.

7200 Suter Road
Coopersburg, PA 18036, USA
+1 610.282.3800 | Fax: +1 610.282.1146

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



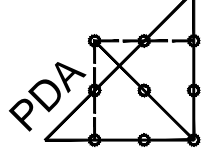
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2015 Do not alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS 663.

#16001

PLEASE RECYCLE

Project
UNLV VIVARIUM

4505 SOUTH MARYLAND PARKWAY LAS VEGAS, NV 89154

Job No: 15-061

Owner
UNIVERSITY OF NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

Sheet Title
LIGHTING CONTROL NOTES - VIVARIUM

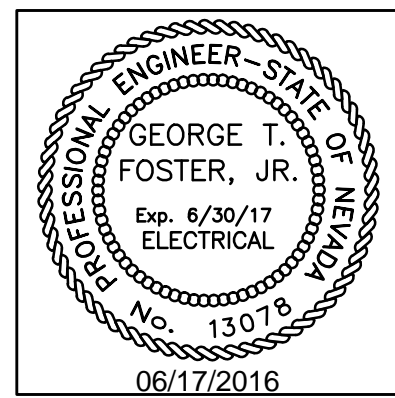
Date: 06/17/2016

Sheet No:

E1.03

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



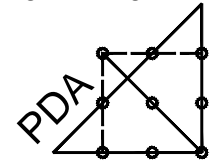
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pdai@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS 633.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

One-Line

Wire Legend

- QS Control Link (Connect wires 1, 2, 3 and 4)*
- QS Control Link (Connect wires 1, 3 and 4. Do not connect wire 2)*
- Panel Control Link (Connect wires 1, 2, 3, 4 and 5)*
- Panel Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire #5)*
- Panel Control Link (Connect wires 1, 3, 4 and 5. Do not connect wire #2)*
- QS Sivoia Shade Control Link*
- Normal Input Power 2 #12 AWG (4 sq mm) + ground
- Normal-Emergency Input Power 2 #12 AWG (4 sq mm) + ground
- 3 Phase 4 wire Input Power, 4 #12 AWG (4 sq mm) + ground
- 2 #12 AWG (4 sq mm) + ground
- 3 #12 AWG (4 sq mm) + ground
- 0-10V Signal: 2#18AWG (1.0 sq mm)
- 2#18 AWG (1.0 sq mm)
- 3#18 AWG (1.0 sq mm)
- EcoSystem BusLoop*
- DALI Loop
- Lutron Sensor Cable C-CBL-522S or use 4922 AWG (1.0 sq mm)
- Lutron Sensor Cable C-CBL-522S or use 3#22 AWG (1.0 sq mm)
- DMX Cable*
- Ethernet cable, CAT5E or better cable for Lutron Network terminated with RJ45 connectors (to be provided by others). 328 ft (100m) maximum run.
- Fiber optic cable for Lutron Network terminated with appropriate fiber optic connectors (to be provided by others). Requires dedicated fiber optic link (single-mode or multi-mode)
- RF Connection
- Wired Connection

*Please refer to Notes on Wiring for more wiring guidelines.
**Refer to Load Schedule for feed and load information

Project Name:

UNLV-Vivarium

Location:

Las Vegas, Nevada

Project Number:

Created by:

Christiaan Alderfer

File Name:

UNLV-Vivarium.lut

Document Revision:

June 14, 2016 | Sheet 2 of 3

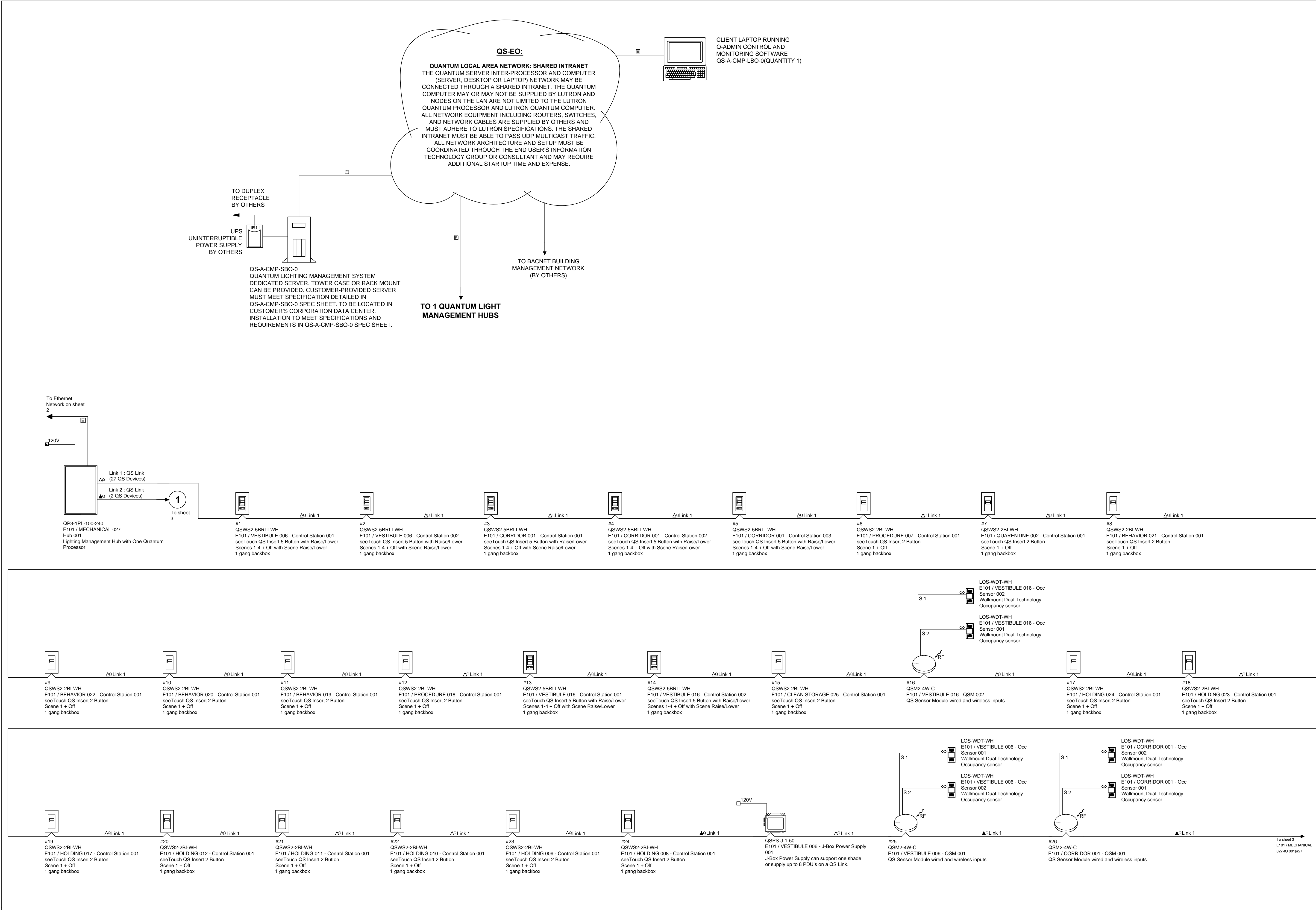
For detailed definition of product capabilities refer to product specification submittal sheets.

There are unpowered devices on the link

NOT FOR CONSTRUCTION



7200 Suter Road
Coopersburg, PA 18036, USA
+1.610.282.3000 | Fax: +1.610.282.1146



Lutron Designer 9.1

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

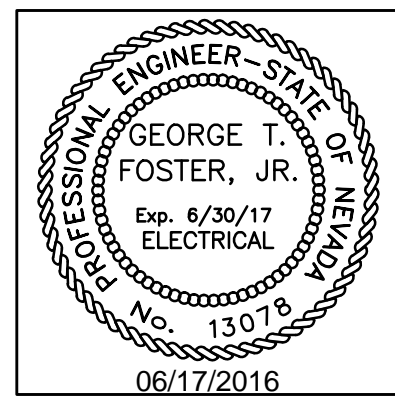
Sheet Title

PHASED LIGHTING
CONTROL DIAGRAMS -
VIVARIUM

Date: 06/17/2016

Sheet No:

E1.04



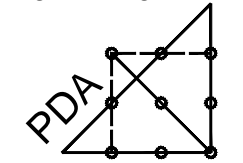
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS 624.010.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

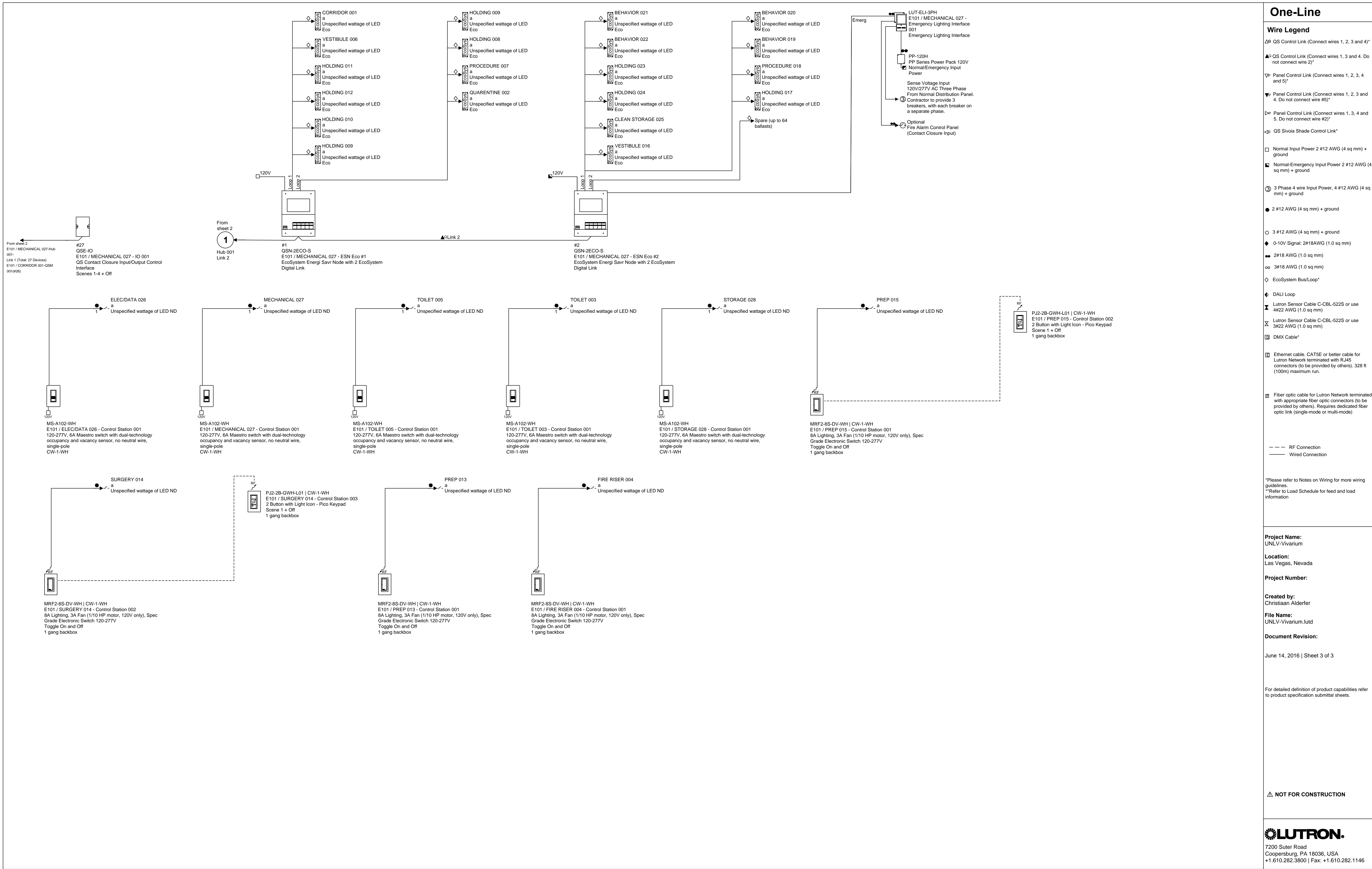
Sheet Title

PHASED LIGHTING
CONTROL DIAGRAMS -
VIVARIUM

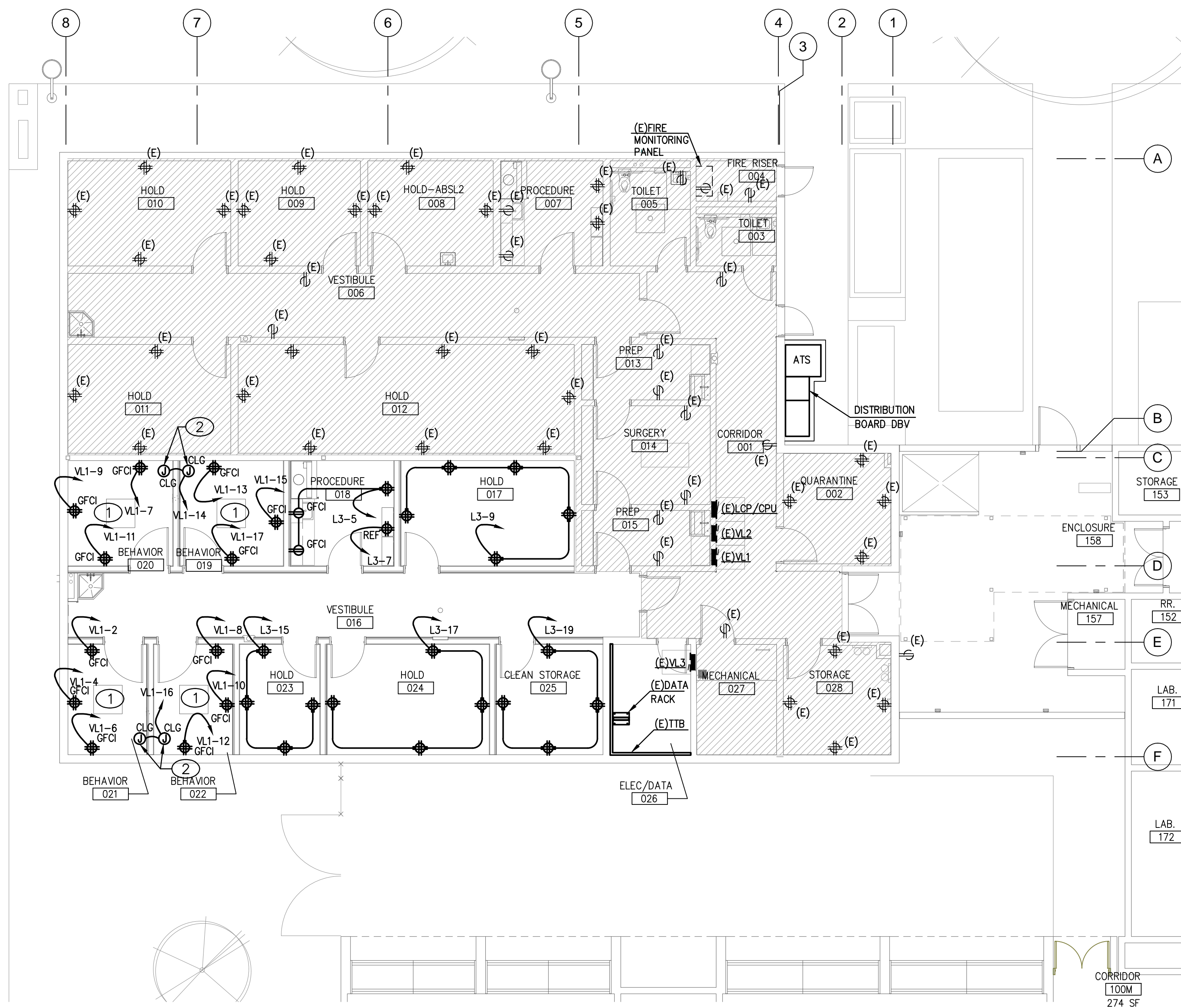
Date: 06/17/2016

Sheet No:

E1.05

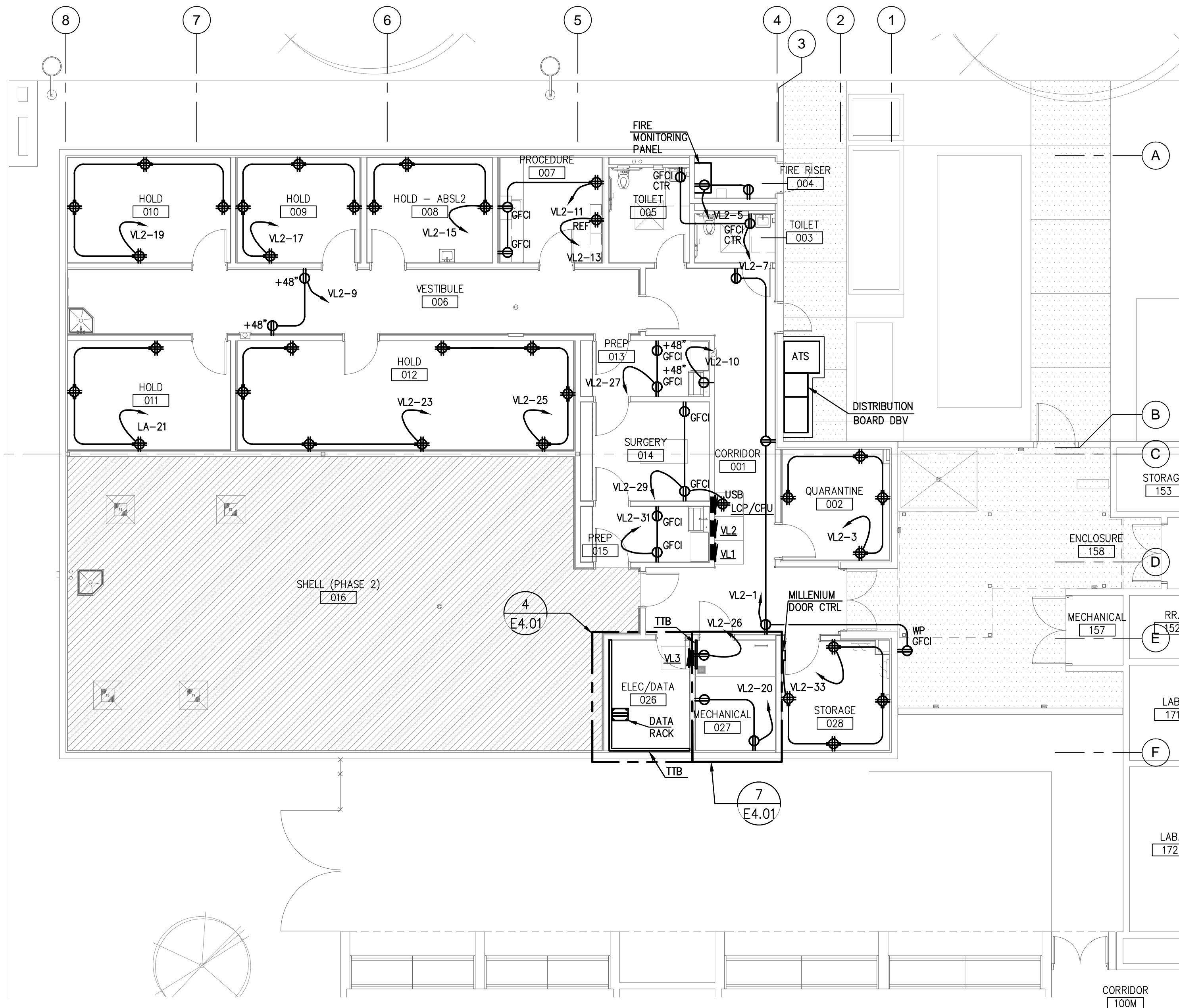


Lutron Designer 9.1



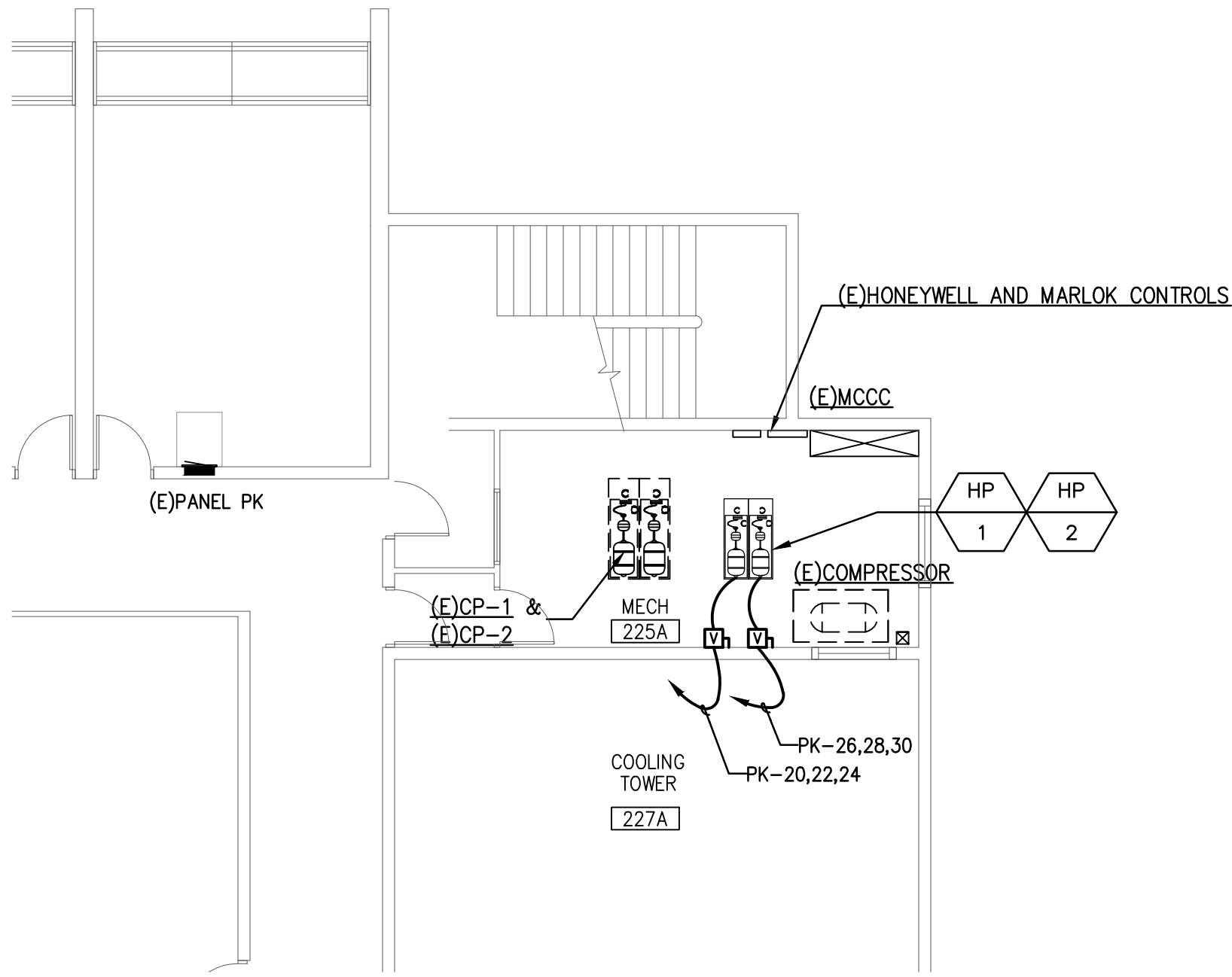
POWER PLAN - VIVARIUM PHASE 2

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



POWER PLAN - VIVARIUM PHASE 1

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



POWER PLAN - VIVARIUM

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

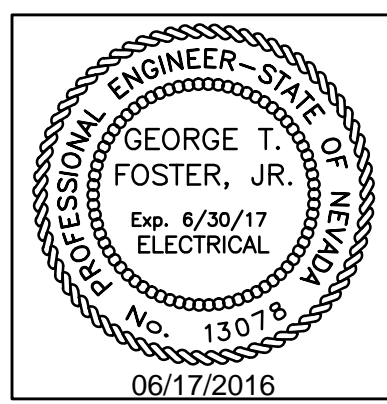
- GENERAL NOTES**
- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS AND SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
 - ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VERMIN PROOF.
 - VERIFY ALL DEVICE MOUNTING HEIGHTS PRIOR TO ROUGHING IN. IN HOLDING, QUARANTINE AND BEHAVIOR ROOMS, MOUNT 120V, 20A, QUADRUPLUX OUTLETS AT WALLS 6'-0" ABOVE FLOOR, UNLESS NOTED OTHERWISE.

- KEYNOTES**
- ALL RECEPTACLES IN THIS ROOM SHALL BE WP, GFCI AND ISOLATED GROUND.
 - CEILING MOUNTED JUNCTION BOX FOR CAMERA. VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



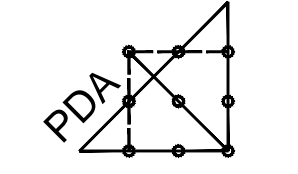
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, to anyone other than the original engineer, is a violation of NRS #16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

**4505 SOUTH MARYLAND PARKWAY
LAS VEGAS, NV 89154**

Job No: 15-061

Owner

UNIVERSITY OF NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

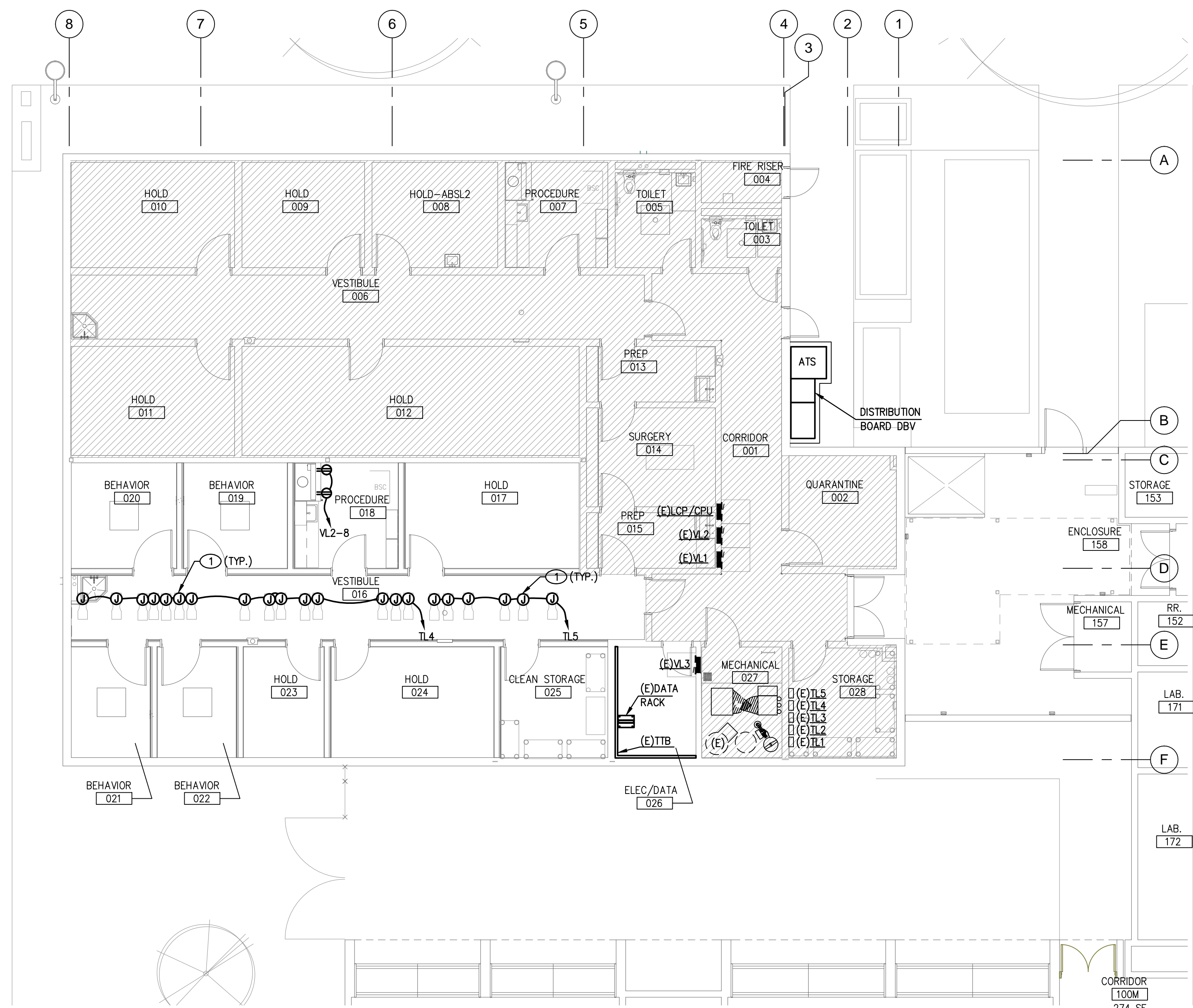
Sheet Title

**PHASED POWER PLANS
- VIVARIUM**

Date: 06/17/2016

Sheet No:

E2.01

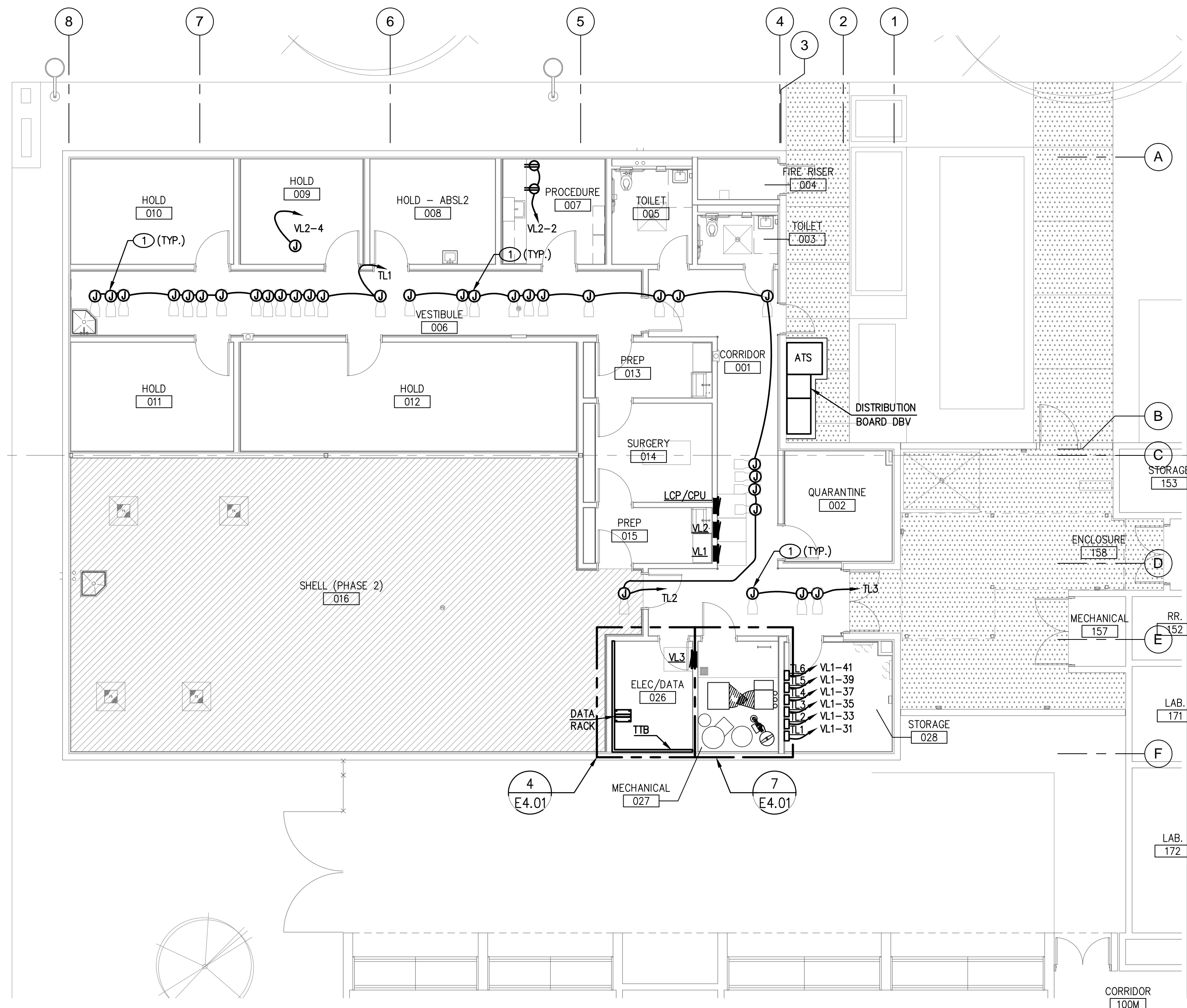


EQUIPMENT POWER PLAN - VIVARIUM PHASE 2

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

EXHAUST AIR SYSTEM

4

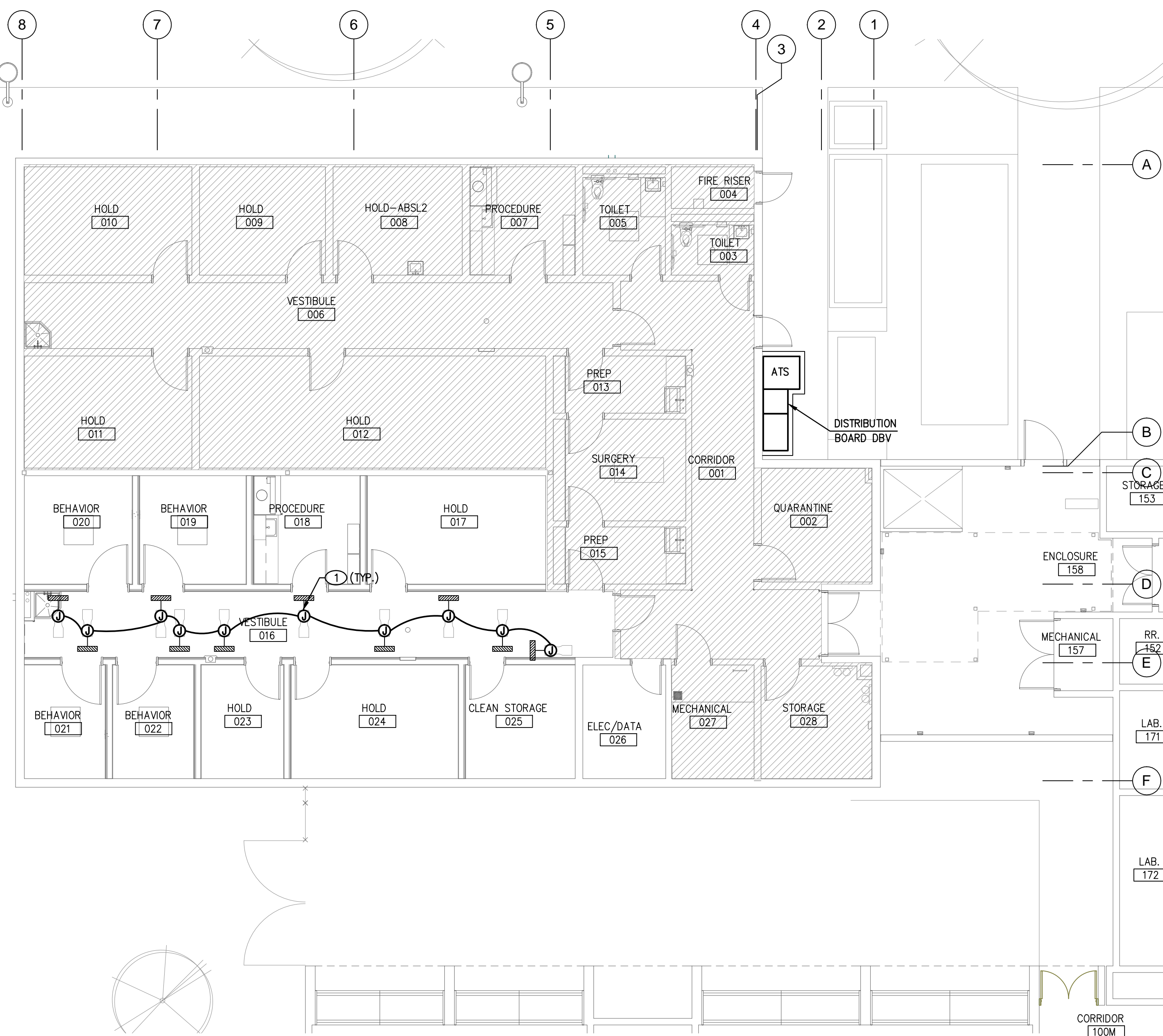


EQUIPMENT POWER PLAN - VIVARIUM PHASE 1

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

EXHAUST AIR SYSTEM

2

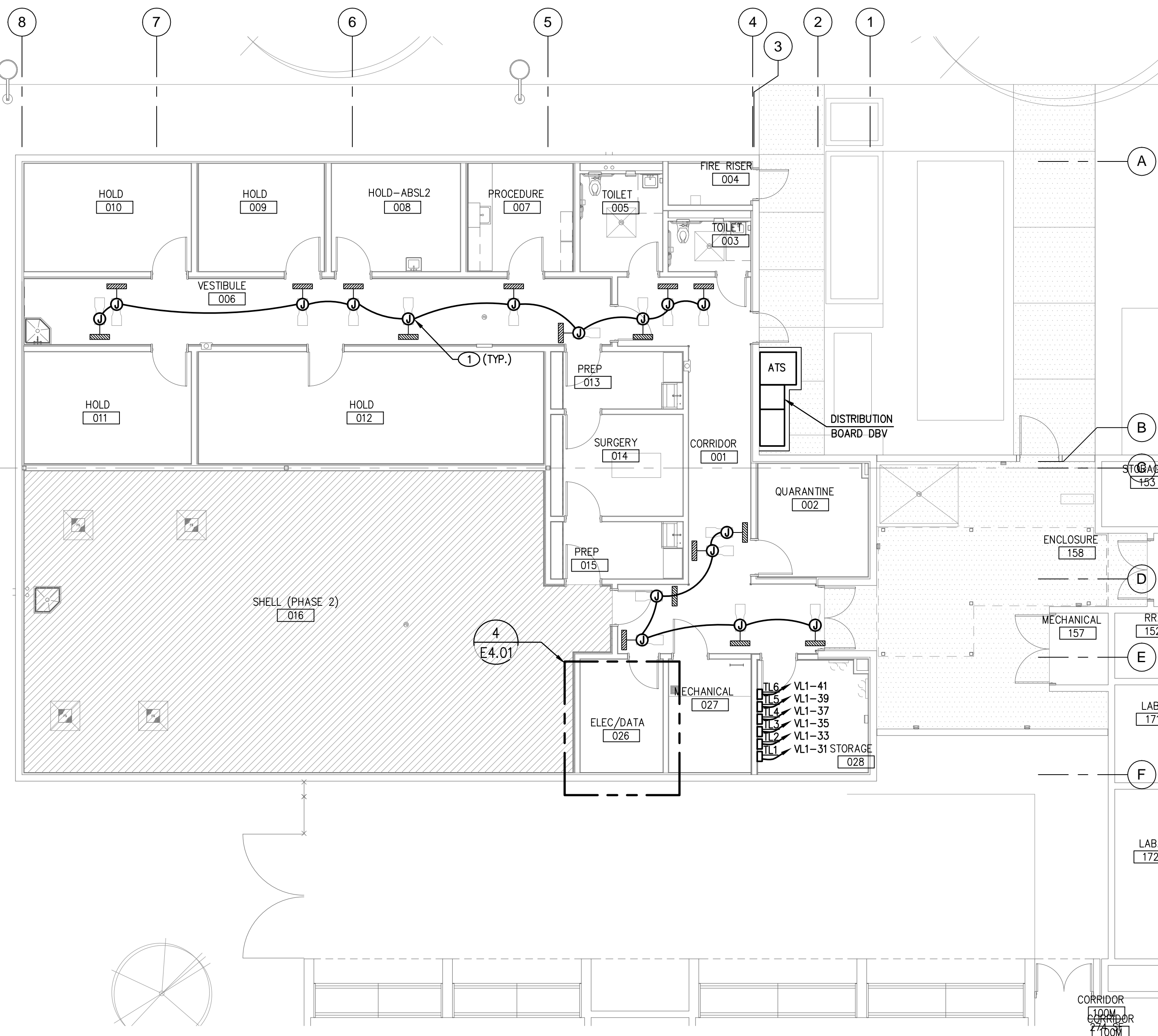


EQUIPMENT POWER PLAN - VIVARIUM PHASE 2

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

SUPPLY AIR SYSTEM

3



EQUIPMENT POWER PLAN - VIVARIUM PHASE 1

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

SUPPLY AIR SYSTEM

1

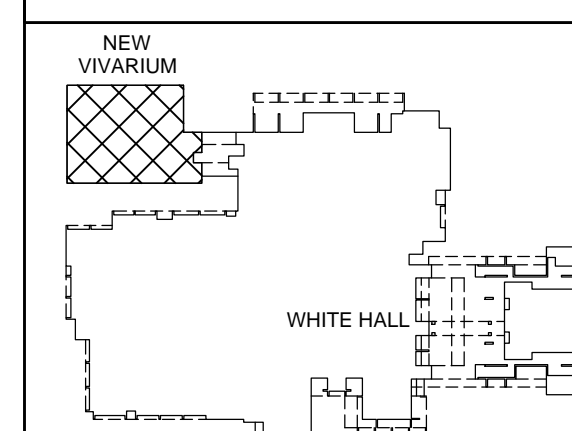
GENERAL NOTES

- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS AND SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
- ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VERMIN PROOF.
- VERIFY ALL DEVICE MOUNTING HEIGHTS PRIOR TO ROUGHING IN. IN HOLDING, QUARANTINE AND BEHAVIOR ROOMS, MOUNT 120V, 20A, QUADRUPLUX OUTLETS AT WALLS 6'-0" ABOVE FLOOR, UNLESS NOTED OTHERWISE.

KEYNOTES

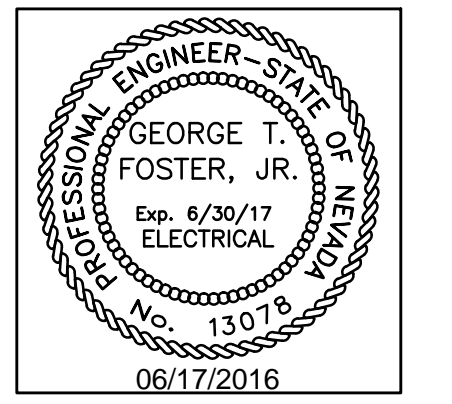
- PROVIDE 24V JUNCTION BOXES FOR CONTROL VALVE. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN. REFER TO TRANSFORMER SCHEDULE E6.02 FOR ADDITIONAL INFORMATION.

KEYPLAN



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tsk.com



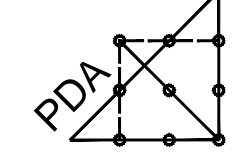
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, is prohibited unless otherwise noted on the original drawing. It is a violation of NRS16001.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

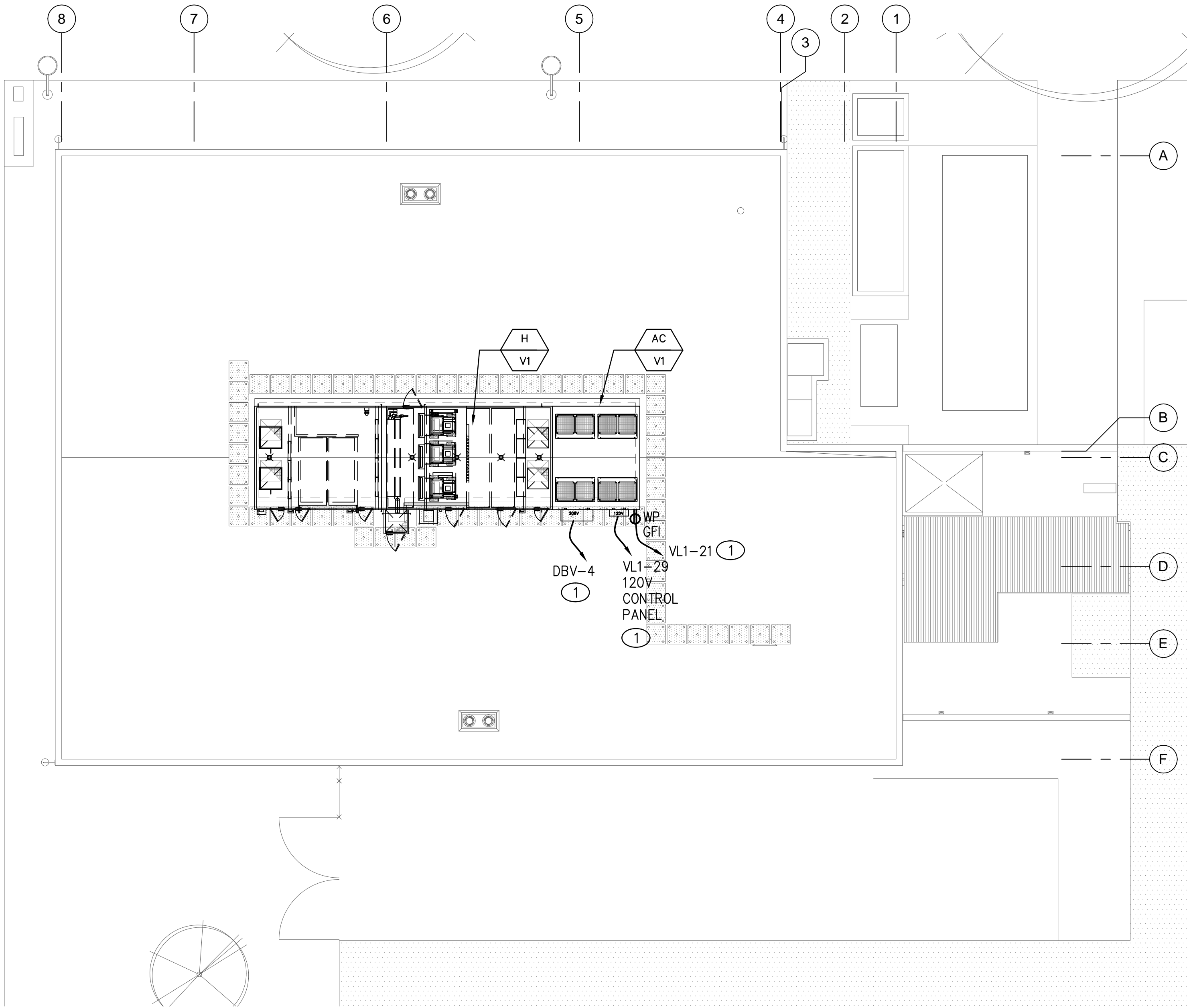
Sheet Title

PHASED EQUIPMENT
POWER PLANS -
VIVARIUM

Date: 06/17/2016

Sheet No:

E2.02



ROOF EQUIPMENT POWER PLAN - VIVARIUM

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

1

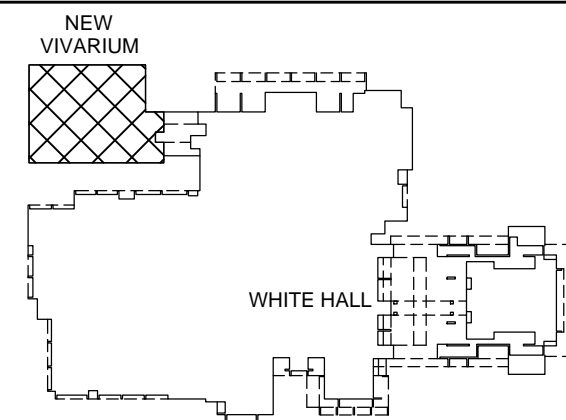
GENERAL NOTES

1. INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - a. YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - b. ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - c. THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
2. ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VARMIN PROOF
3. VERIFY ALL DEVICE MOUNTING HEIGHTS PRIOR TO ROUGHING IN. 115V20A1PH FOURPLEX (QUADRUPLX) OUTLETS AT WALLS 6'-0" ABOVE FLOOR. UNLESS NOTED OTHERWISE.

KEYNOTES

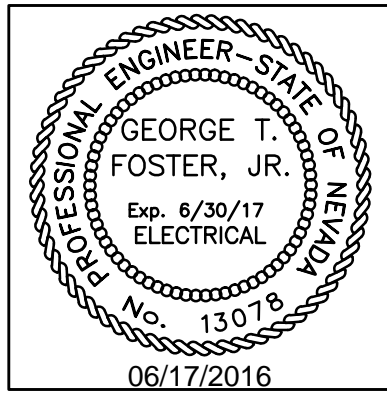
1. ALL CONDUITS SHALL BE ROUTED WITHIN EQUIPMENT CURB.

KEYPLAN



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



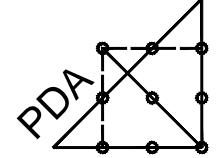
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pdain@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box
© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NCEC rules.
#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

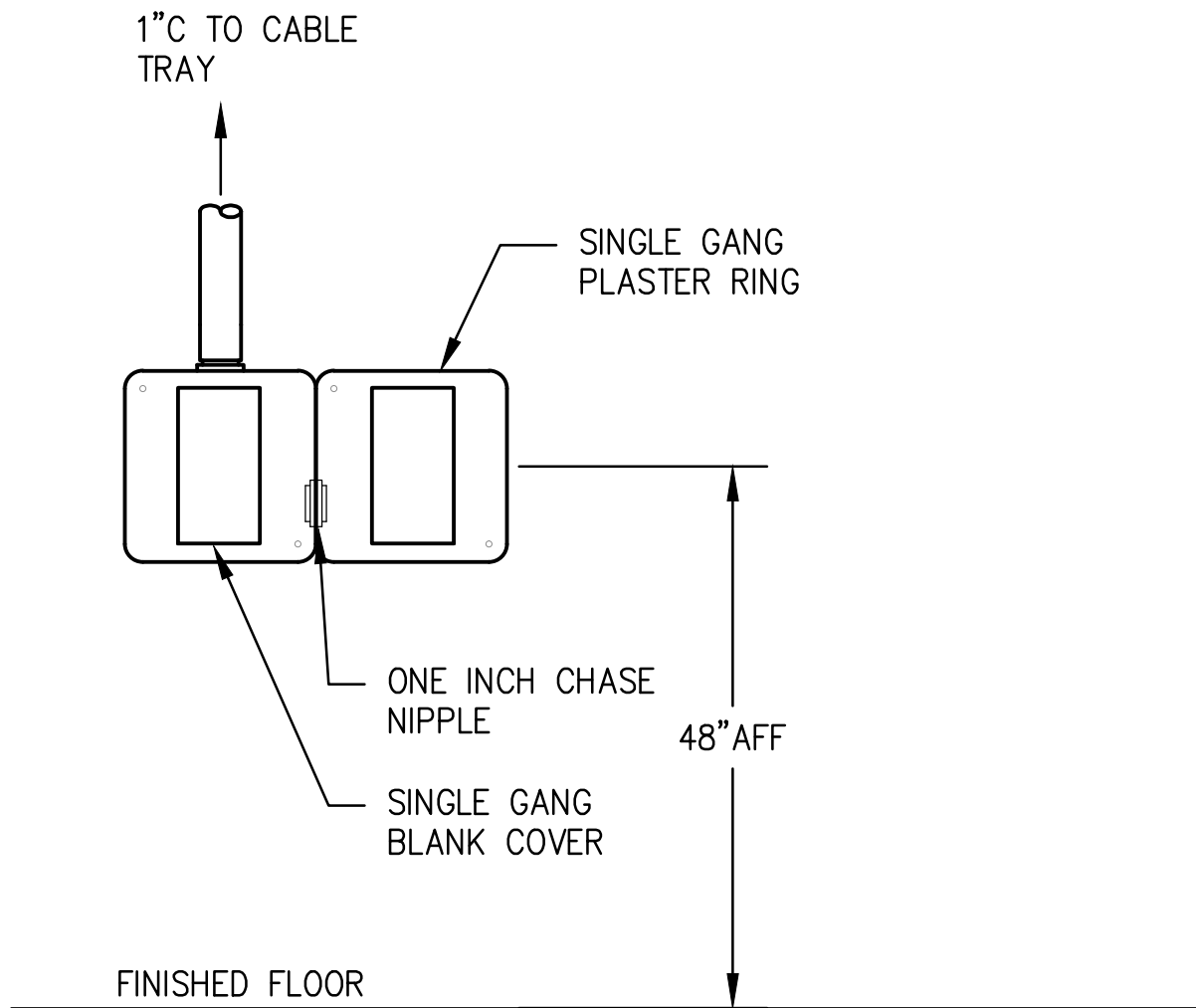
Sheet Title

ROOF EQUIPMENT
POWER PLAN -
VIVARIUM

Date: 06/17/2016

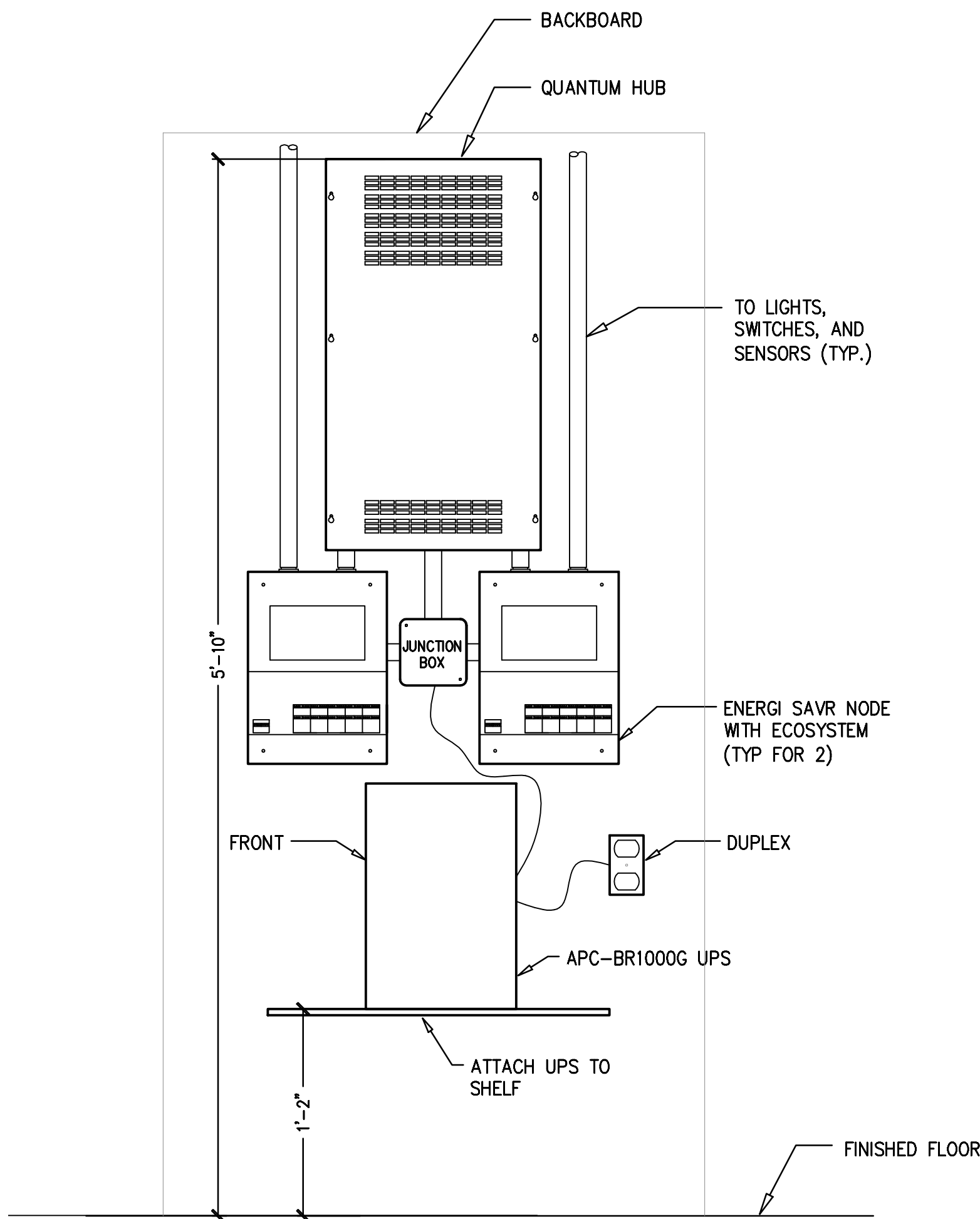
Sheet No:

E2.03



SCADA DROPS (TYPICAL)

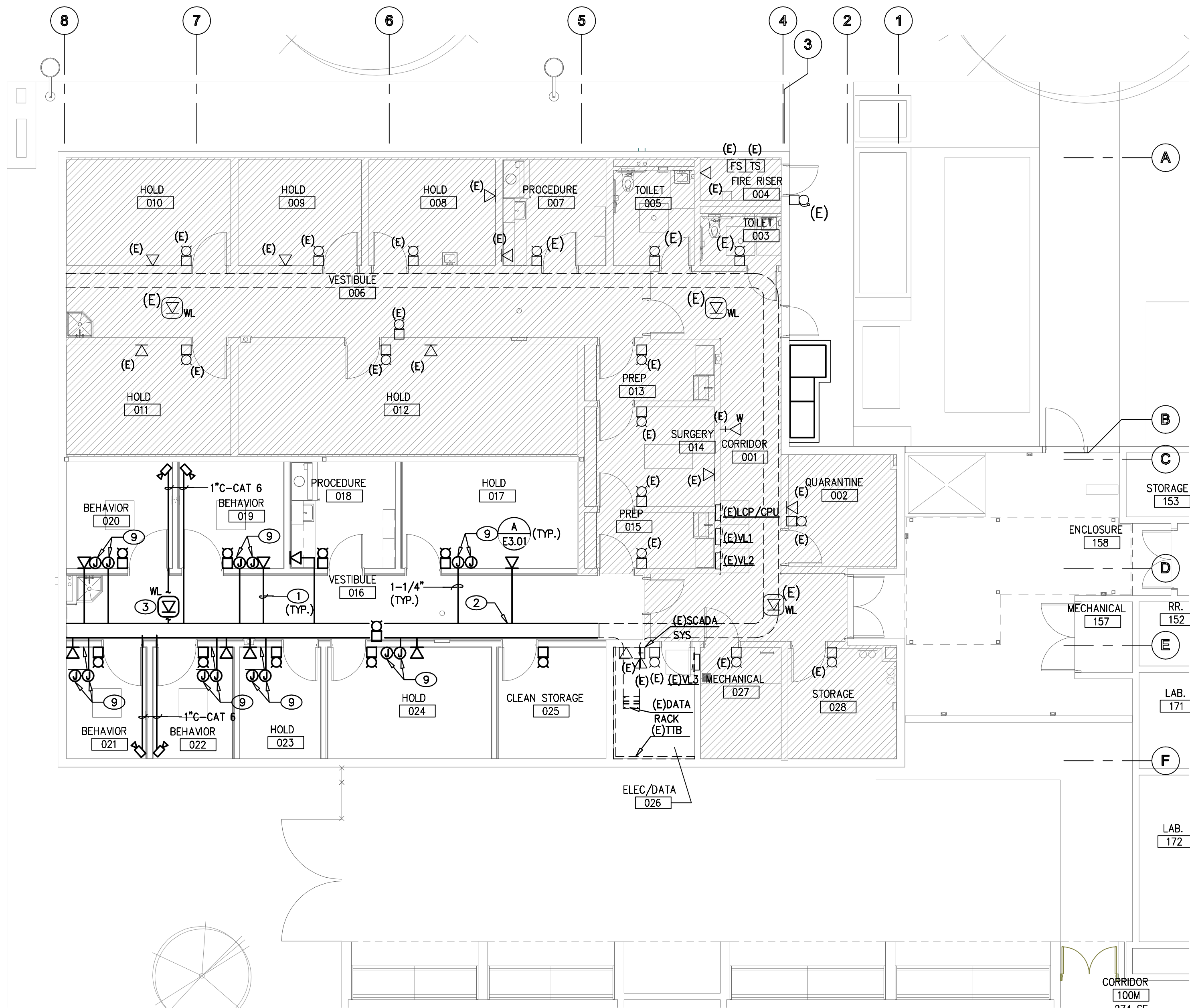
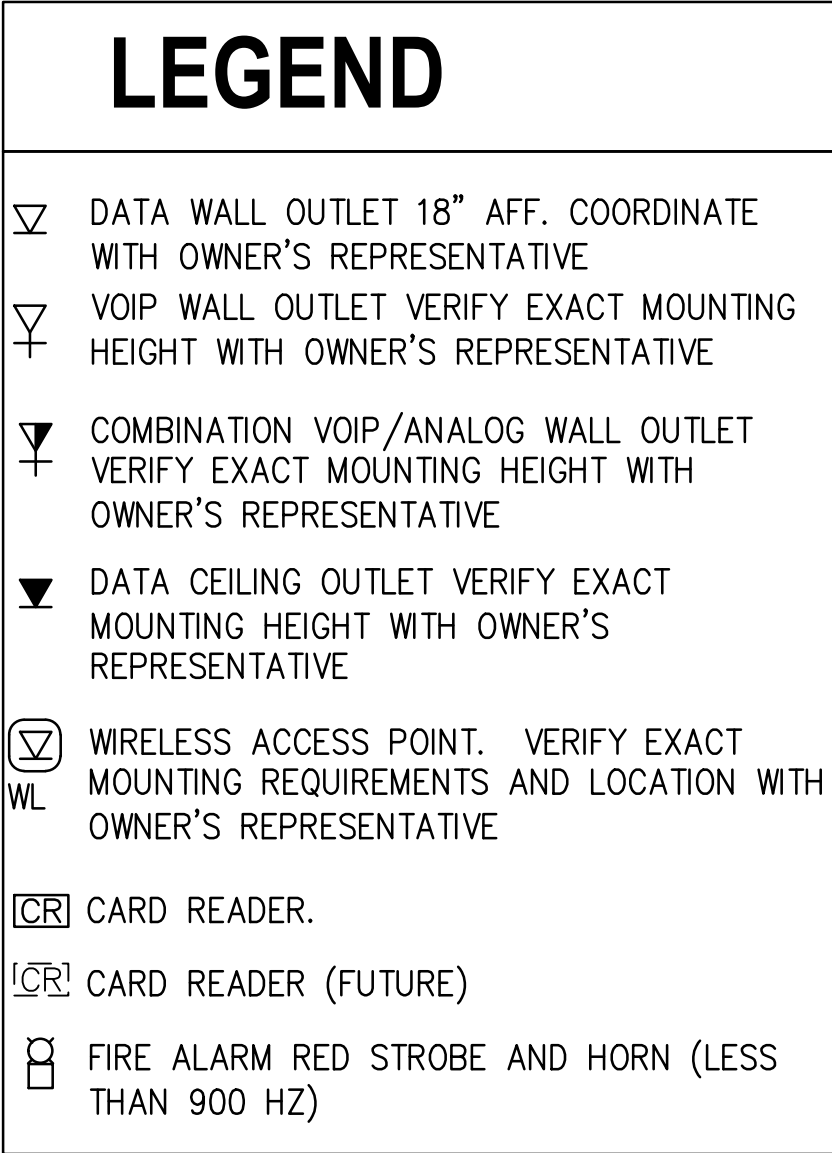
SCALE: NOT TO SCALE



LUTRON CONTROL PANEL ELEVATION

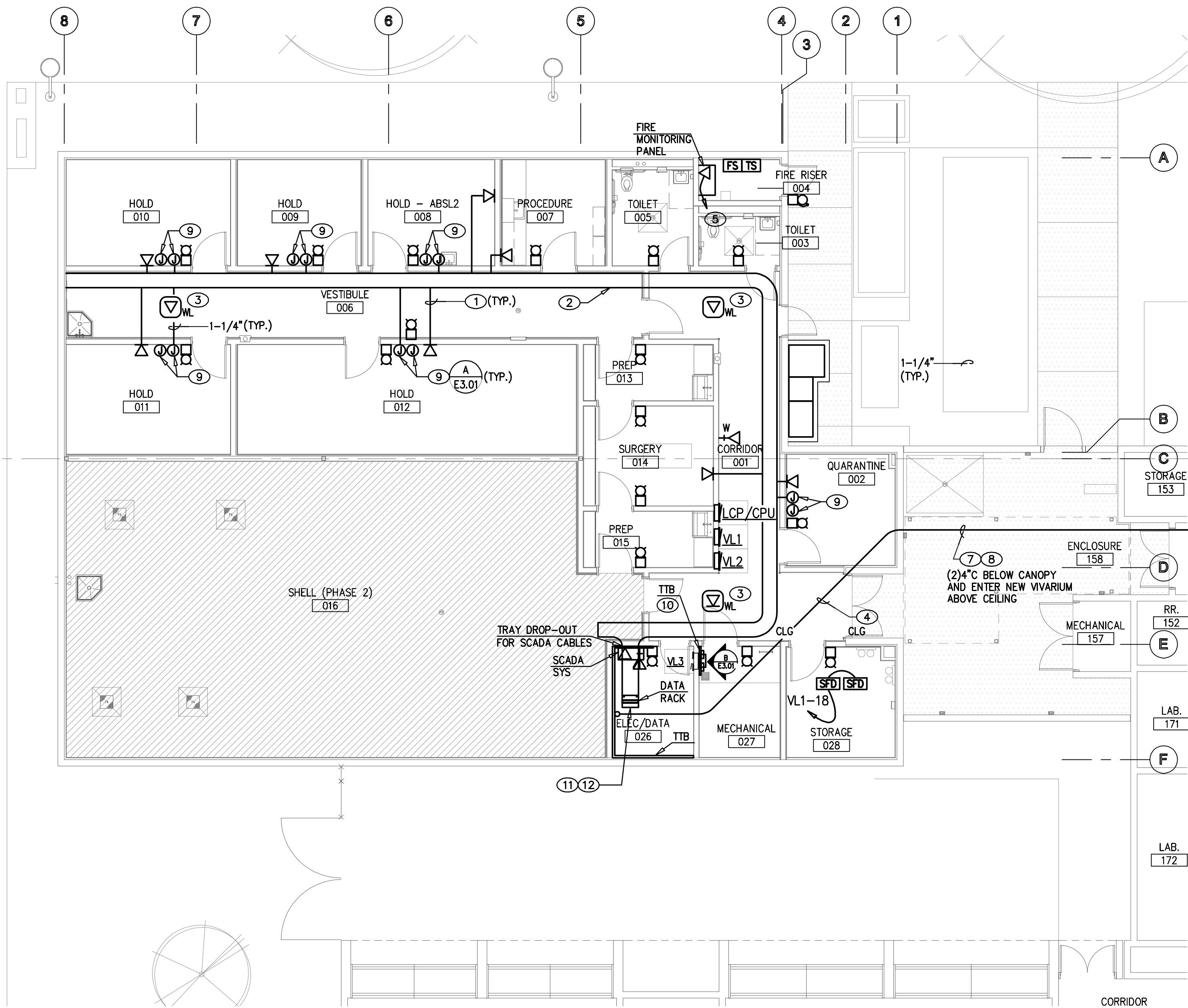
SCALE: NOT TO SCALE

REFER TO SHEET E1.02; E1.03; E1.04; E1.05 AND E4.01 FOR ADDITIONAL INFORMATION



AUXILIARY PLAN - VIVARIUM PHASE 2

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



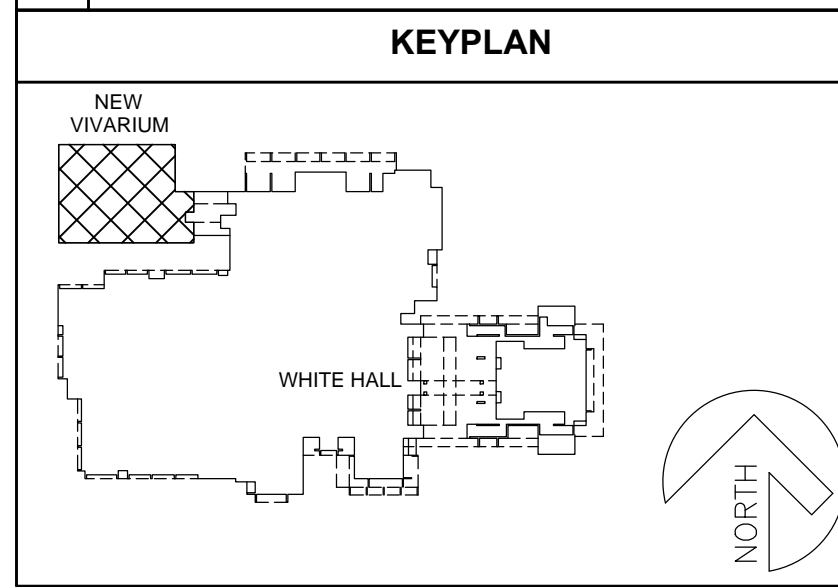
AUXILIARY PLAN - VIVARIUM PHASE 1

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

- #### GENERAL NOTES
- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
 - ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VARMIN PROOF
 - FIRE ALARM CHIME STROBE LESS THAN 900 MEGAHERTZ.
 - VERIFY ALL DEVICE MOUNTING HEIGHTS PRIOR TO ROUGHING IN.
 - ALL DATA OUTLET CABLING SHALL BE CAT-6A.

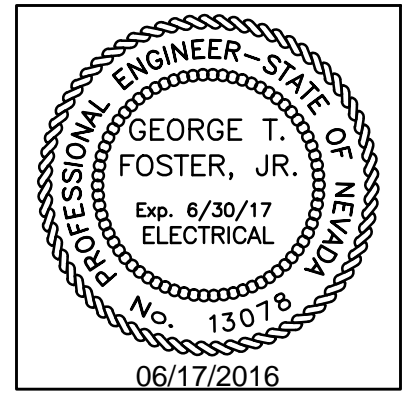
- #### KEYNOTES
- 1" TO CABLE TRAY. PROVIDE CAT-6A CABLE FROM OUTLET TO ROOM 026 DATA RACK. REFER TO DETAIL 2/E4.01 FOR ADDITIONAL INFORMATION.
 - 18"x4" DEEP CENTER SUPPORT OPEN LADDER CABLE TRAY.
 - WIRELESS ACCESS POINT (2)CAT-6A CABLES FROM EACH LOCATION TO DATA RACK IN ROOM 026.
 - DO NOT ROUTE THIS CONDUIT THROUGH FIRE RATED ROOM 028.
 - 3/4" TO CABLE TRAY FOR FIRE MONITORING PANEL.
 - FIRE ALARM STROBES TO FLASH RED.
 - PROVIDE (1) 24 STRANDS OF SINGLE-MODE FIBER FROM ROOM 026 TO WHITE HALL ROOM 181 IN ONE OF TWO 4"CONDUITS.
 - PROVIDE (1)25 PAIR TELEPHONE CABLE FROM ROOM 026 TO WHITE HALL ROOM 181 IN ONE OF TWO 4"CONDUITS.
 - IN EACH BEHAVIOR, HOLDING AND QUARANTINE ROOM, ALONG THE WALL ADJACENT TO THE CORRIDOR, PROVIDE(1)1" CONDUIT FROM TWO INDIVIDUAL 4-S DEEP BOXES (WITH SINGLE GANG RINGS SEPARATED BY 2 INCHES), 48" AFF, UP TO CABLE TRAY FOR SCADA SYSTEM. SEE DETAIL-A/E3.01.
 - 3'x8'x3/4" FIRERATED BACKBOARD.
 - DIV. 16 CONTRACTOR SHALL INSTALL CAT 6A CABLE BETWEEN THE EV VALVE ON ROOF DOWN INTO DATA ROOM. THE CAT 6A CABLE INSTALLATION FOR THE ENERGY VALVE CONTROL MODULE SHALL BE REVIEWED AND APPROVED (CERTIFIED) BY THE UNLV OFFICE OF INFORMATION TECHNOLOGY PRIOR TO CONNECTION TO THE DATA NETWORK.
 - PROVIDE A 750VA RACK-MOUNTED UPS FOR JACE EQUIPMENT.
 - PROVIDE A COMPLETE CODE COMPLIANT DESIGN/BUILD FIRE ALARM SYSTEM THROUGHOUT THE ENTIRE BUILDING. CONNECT ALARM, TROUBLE, AND SUPERVISORY FORM-C CONTACTS FROM THE FAC TO THE BAS/JACE FOR CAMPUS BAS MONITORING.

NOTE:
LOW VOLTAGE INSTALLATION SHALL MEET UNLV CAMPUS WIRING STANDARDS DATED AUGUST 26, 2015



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



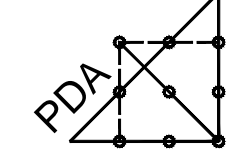
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2015 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of law.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

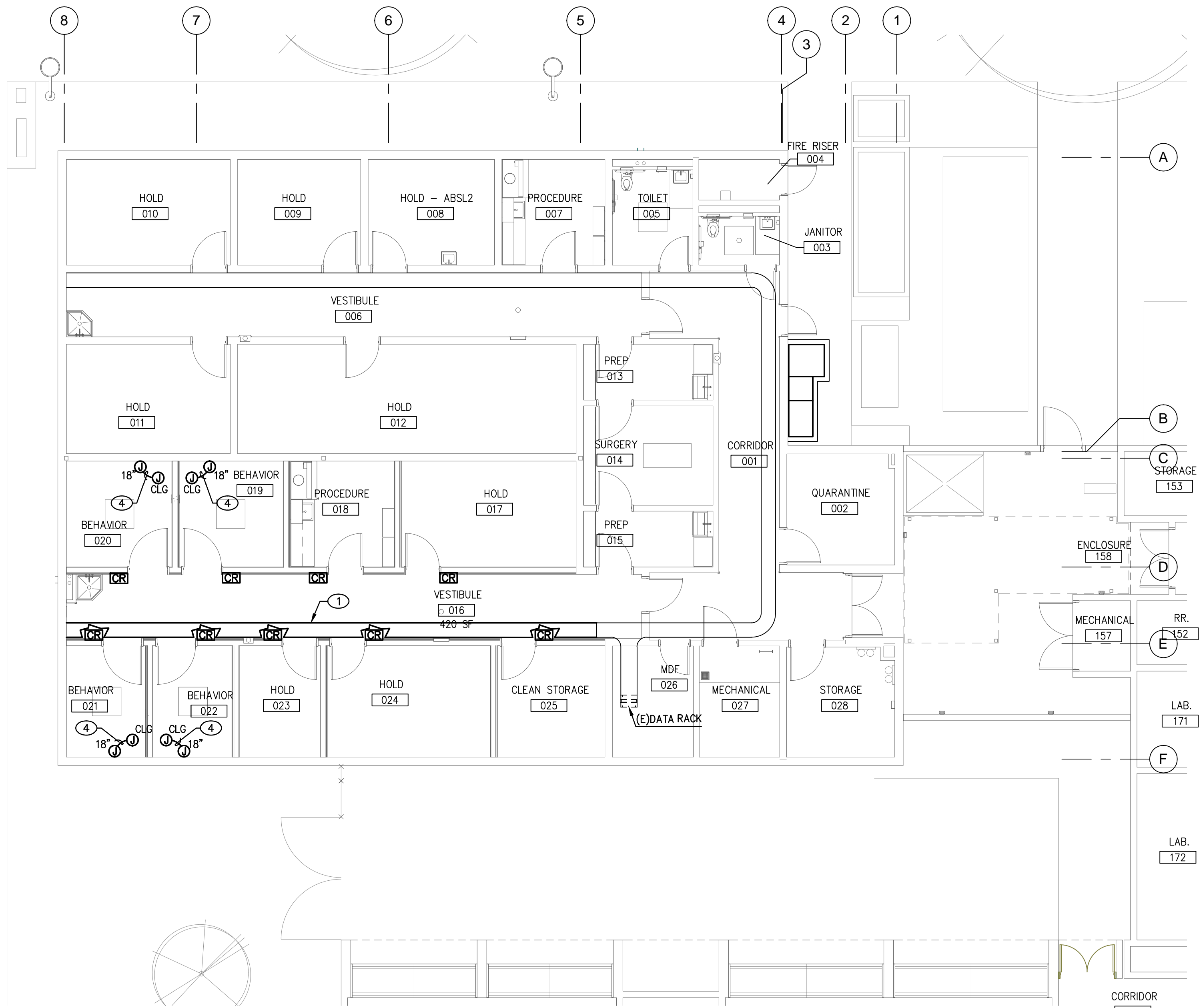
Sheet Title

PHASED AUXILIARY
PLANS - VIVARIUM

Date: 06/17/2016

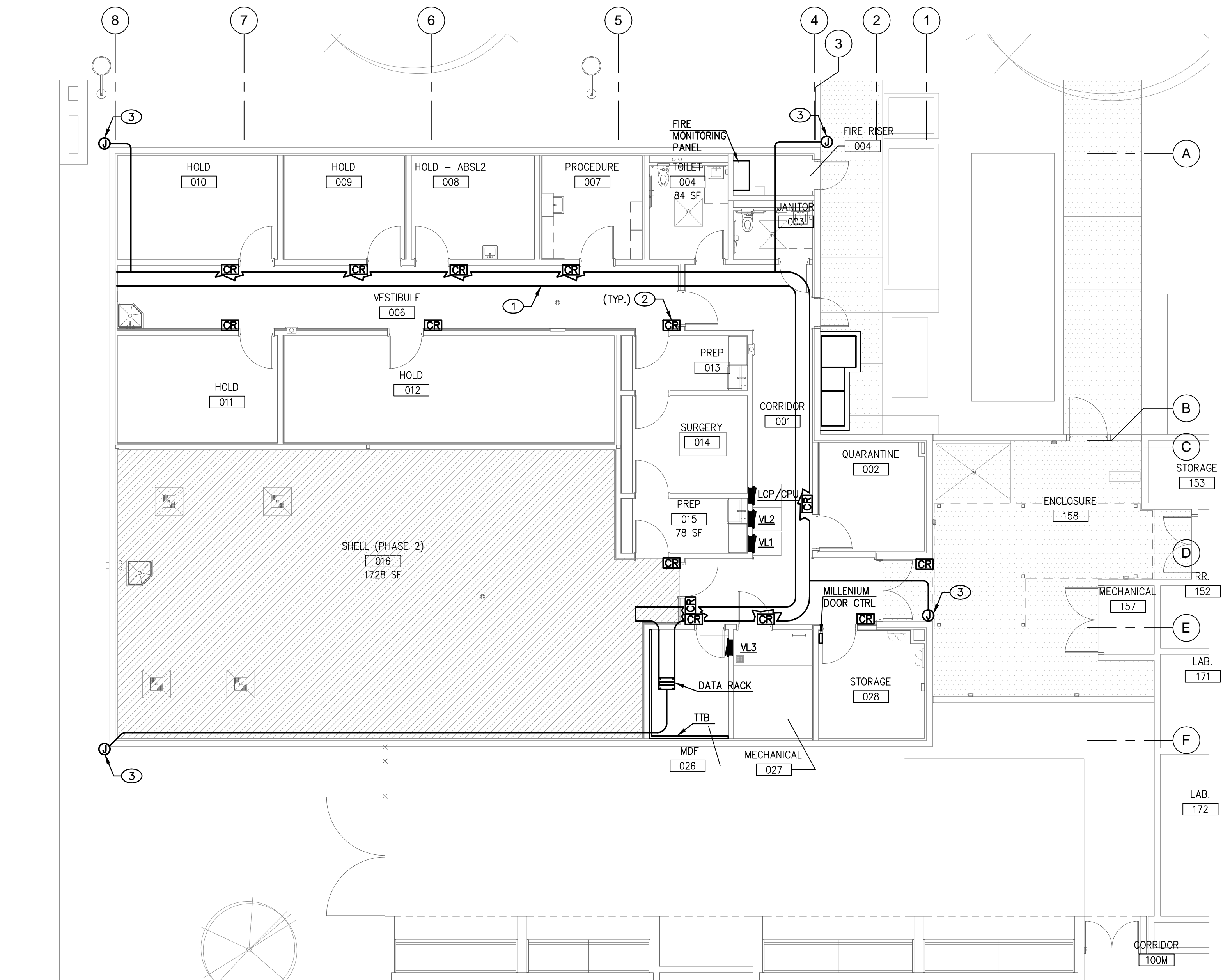
Sheet No:

E3.01



SECURITY PLAN - VIVARIUM PHASE 2

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

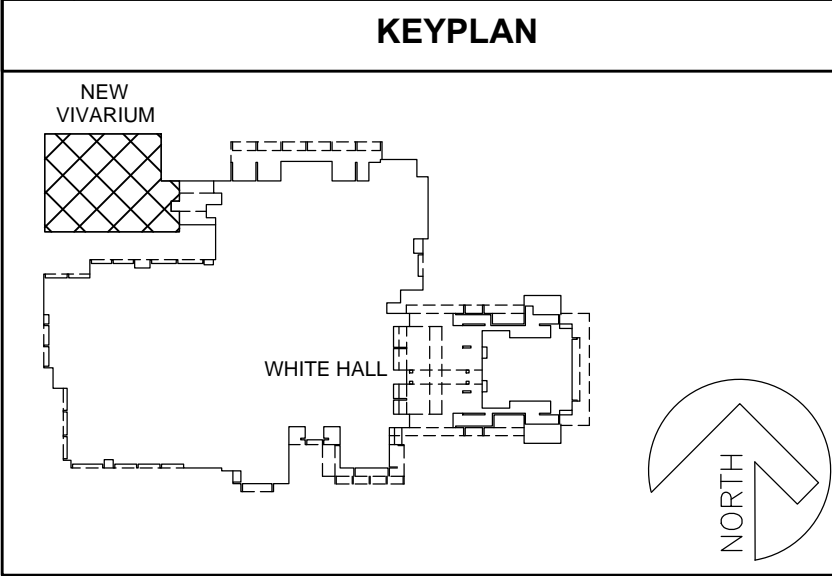


SECURITY PLAN - VIVARIUM PHASE 1

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

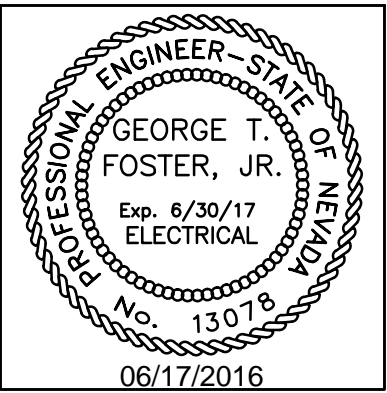
- GENERAL NOTES**
- INFORMATION SHOWN IS BASED ON LIMITED FIELD SURVEYS. CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BID WHICH MAY RESULT IN EXTRA WORK AND BRING SUCH ITEMS TO THE ATTENTION OF THE OWNER AT LEAST TEN DAYS PRIOR TO BID OPENING FOR RESOLUTION. SUBMITTAL OF BIDS FOR THE WORK IDENTIFIED IN THE CONSTRUCTION CONTRACT DOCUMENTS SHALL INDICATE TO THE OWNER THAT:
 - YOUR DETAILED EXAMINATION OF THE DRAWINGS SPECIFICATIONS HAS REVEALED NO AMBIGUITIES WHICH NEED CLARIFICATION,
 - ONLY AUTHORIZED DATA HAVE BEEN USED TO ARRIVE AT YOUR BID FIGURE, AND
 - THE EXPERIENCE AND CAPABILITIES OF YOUR FIRM, YOUR WORKERS, AND SUBCONTRACTORS ARE ADEQUATE AND APPROPRIATE TO PERFORM THE CONSTRUCTION OF THIS TYPE OF PROJECT.
 - ALL CONDUIT PENETRATIONS AND FIXTURES SHALL BE VARMIN PROOF
 - FIRE ALARM CHIME STROBE LESS THAN 900 MEGAHERTZ.
 - VERIFY ALL DEVICE MOUNTING HEIGHTS PRIOR TO ROUGHING IN.
 - ALL DATA OUTLET CABLING SHALL BE CAT-6A.

- KEYNOTES**
- 18"x4" DEEP CENTER SUPPORT OPEN LADDER CABLE TRAY.
 - PROXIMITY BQ CARD READERS AT ALL INTERIOR DOORS (EXCLUDING RESTROOMS). ALL BUILDING ENTRANCES SHALL HAVE CARD READERS PER UNLV SPECIFICATIONS. VERIFY WIRING REQUIREMENTS AND EXACT LOCATIONS AND MOUNTING HEIGHTS WITH LOCK SHOP. DOOR LATCH WILL CLICK AND CARD READER BEEPS.
 - CAMERA MOUNT AT 15 FEET AFF. PROVIDE 2"C W/(2)CAT-6A TO ROOM 026.
 - IN CEILING DATA JUNCTION BOXES SHALL BE 4S DEEP OR 5S AS A MINIMUM FOR PROPRIETARY VIDEO MONITORING. 1-1/2"C FROM CEILING TO 4S DEEP OR 5S AS A MINIMUM JUNCTION BOX ON WALL 18" AFF WITHIN 3 FEET OF DATA DROP.



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com

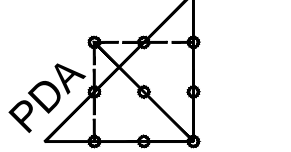


THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant
Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of Nevada law.

#16001

PLEASE RECYCLE

Project
UNLV VIVARIUM

**4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154**

Job No: 15-061
Owner
**UNIVERSITY OF
NEVADA, LAS VEGAS**

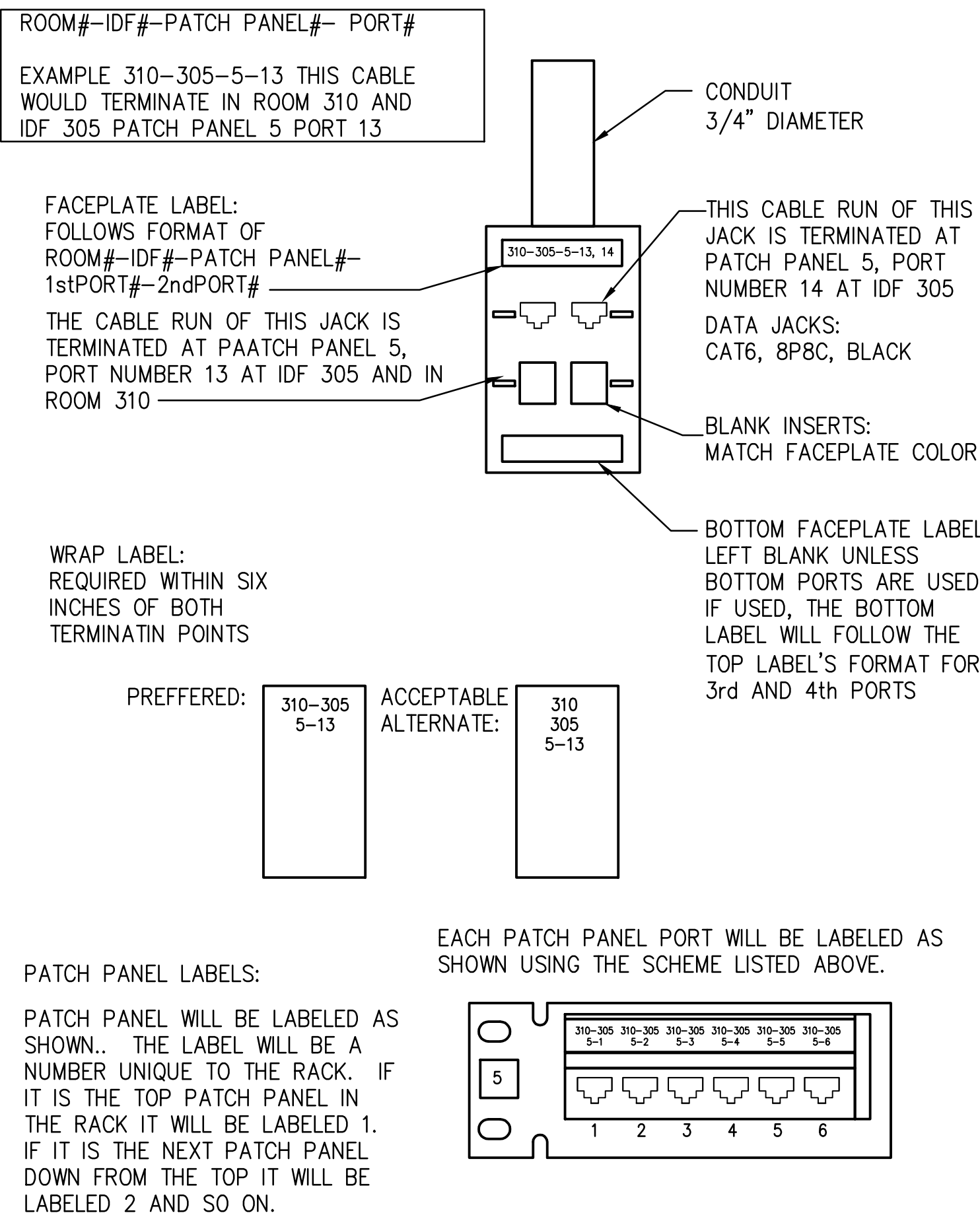
PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title
**PHASED SECURITY
PLANS - VIVARIUM**

Date: 06/17/2016
Sheet No:

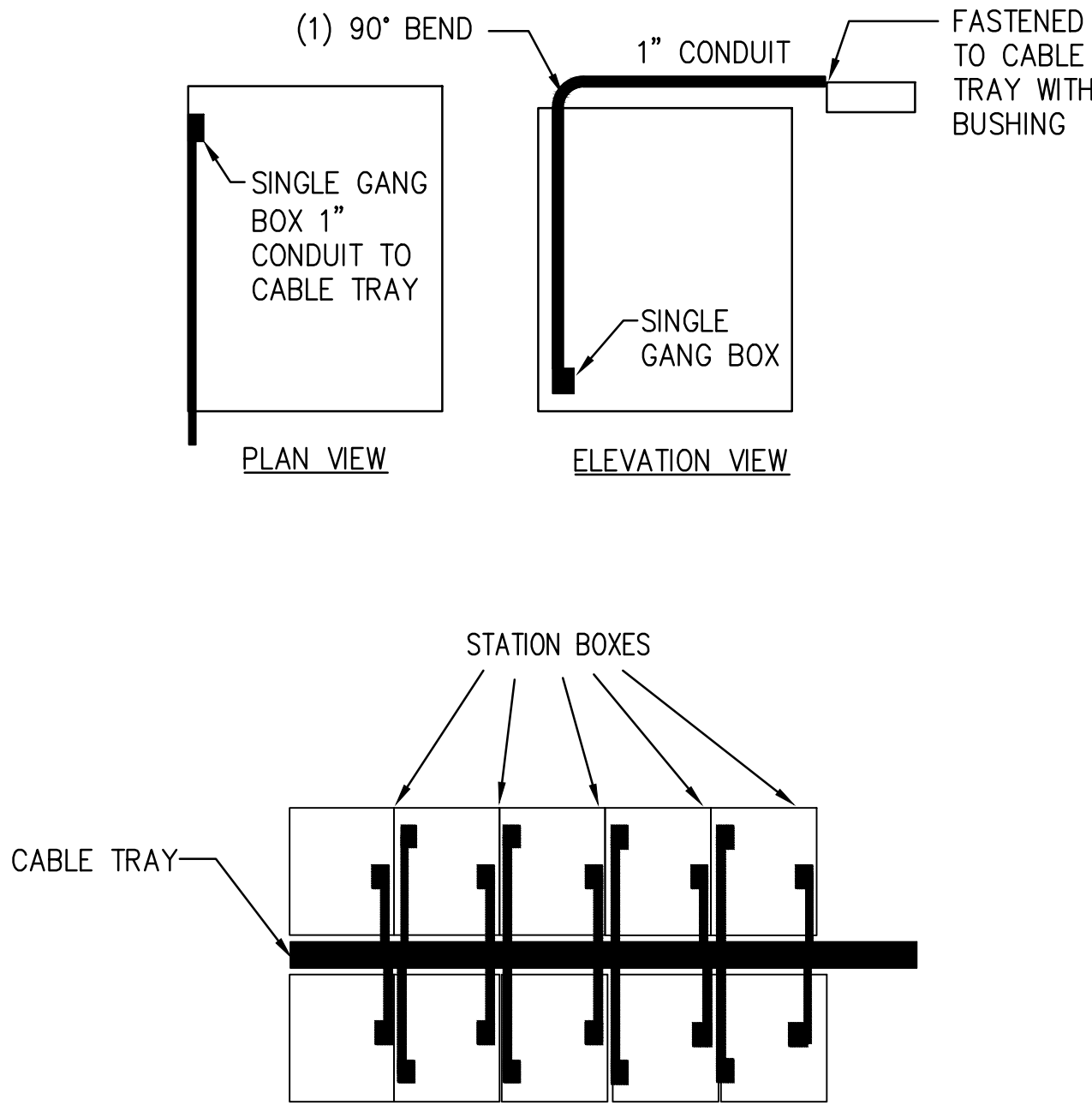
E3.02



STANDARD LABEL SCHEME

SCALE: NOT TO SCALE

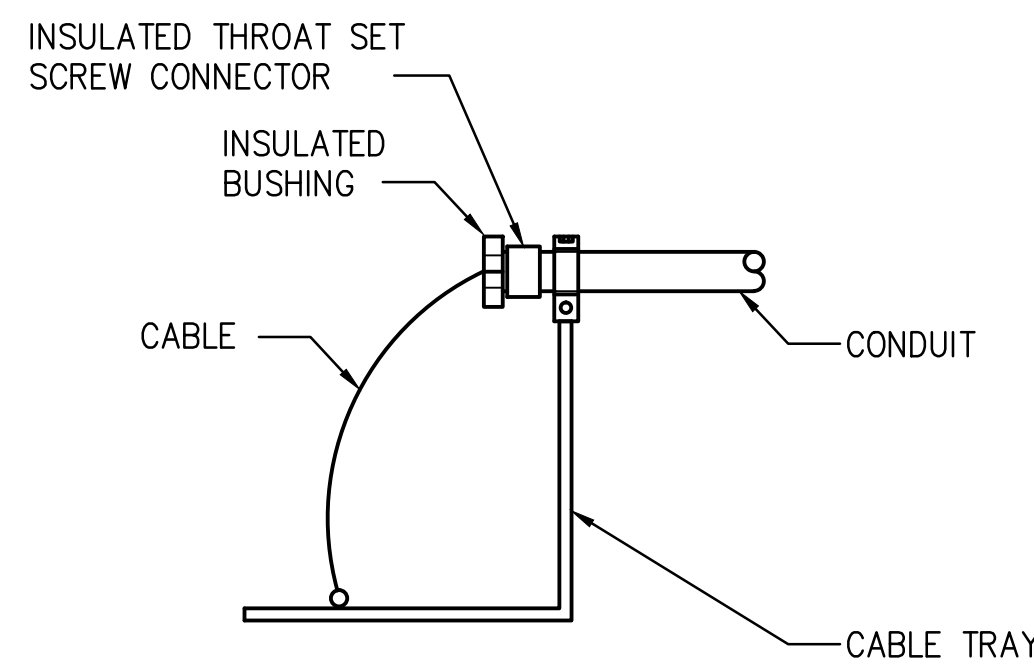
3



STANDARD CONDUIT ROUTING

SCALE: NOT TO SCALE

2



DETAIL-A

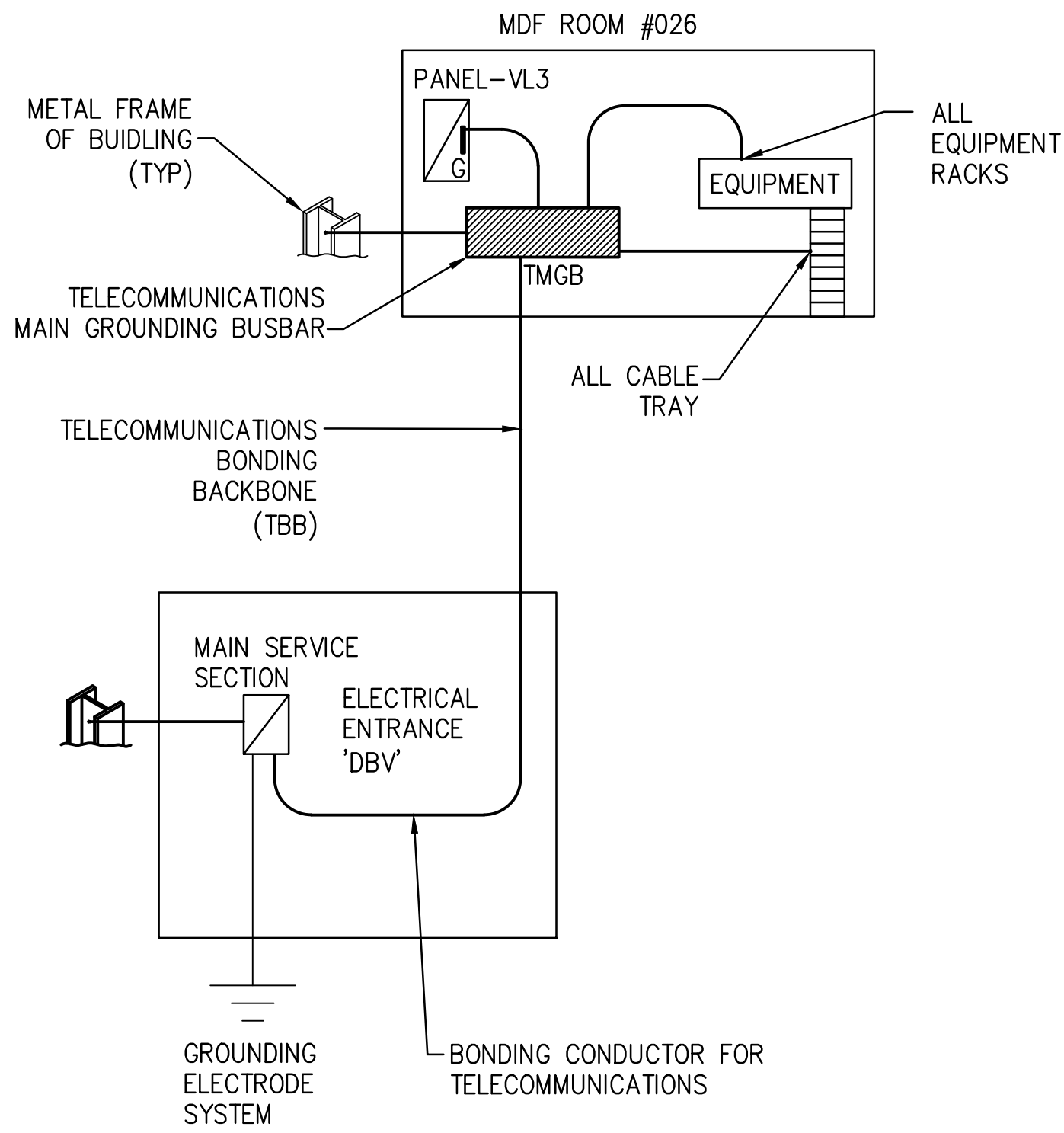
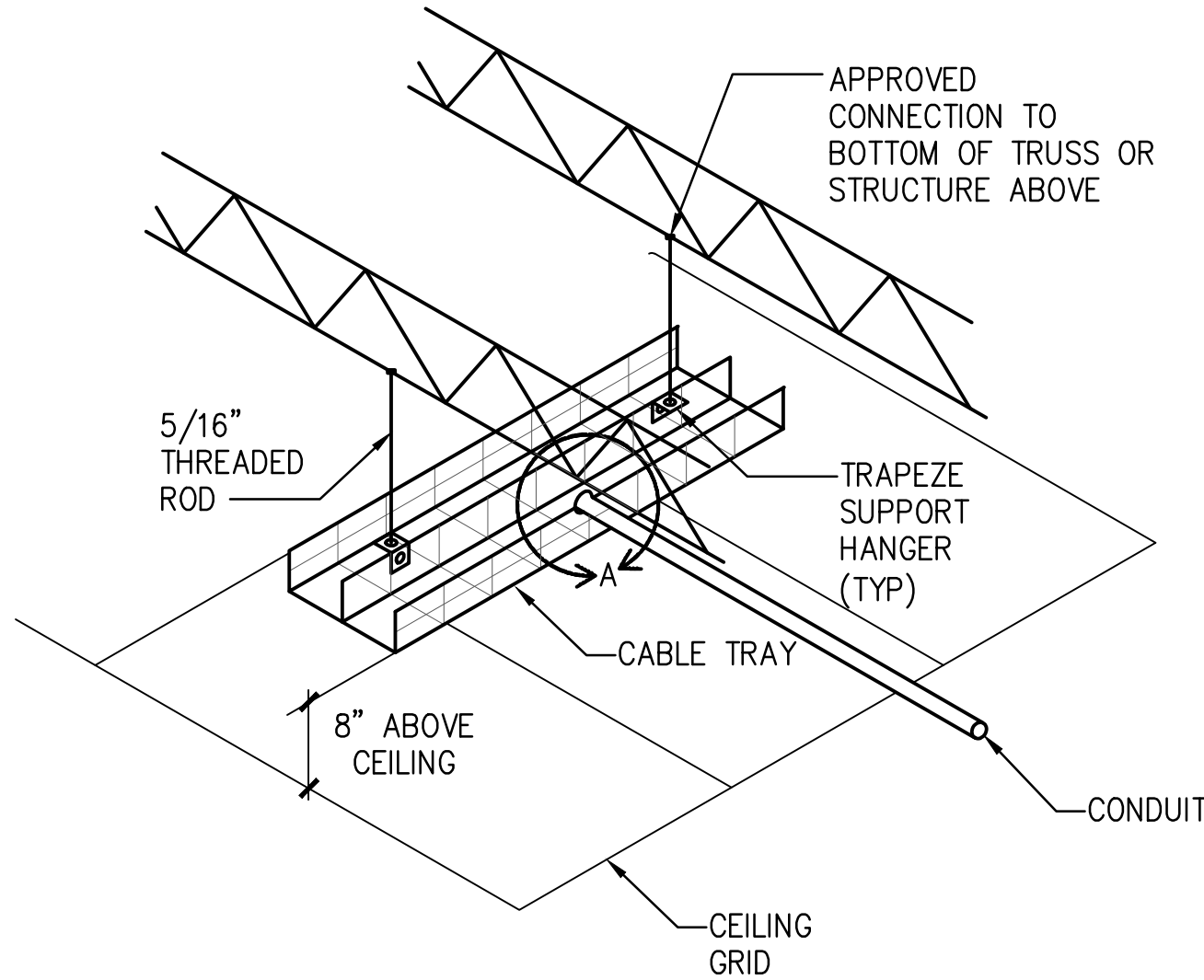
TYPICAL CONDUIT CONNECTION @ CABLE TRAY

CABLE TRAY DETAIL

SCALE: NOT TO SCALE

REFERENCE E3.01

1

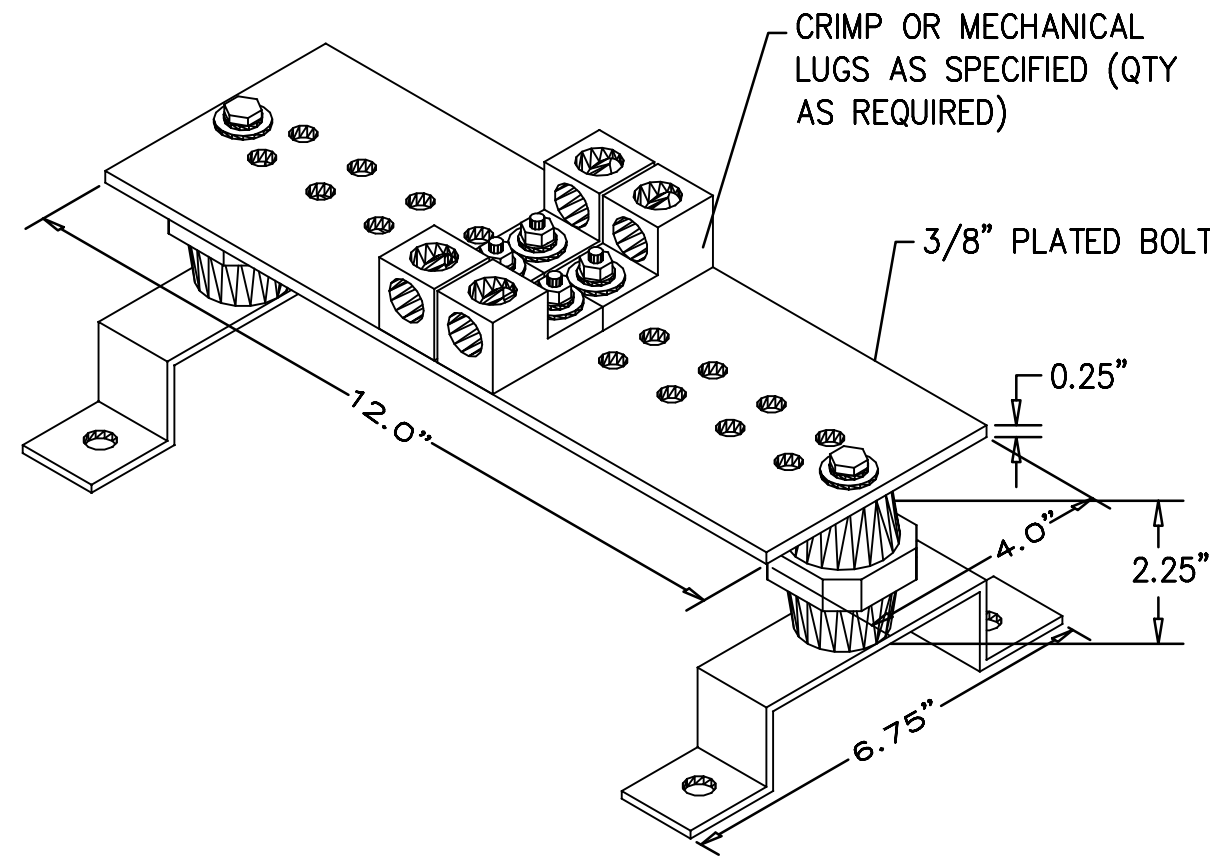


LOW VOLTAGE GROUNDING DETAIL

SCALE: NOT TO SCALE

REFERENCE E3.01

6

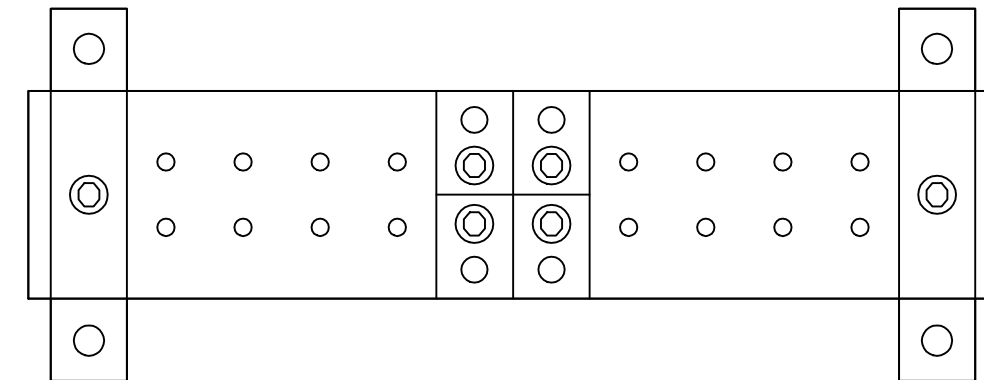


TMGB AND TGB DETAIL

SCALE: NOT TO SCALE

REFERENCE E3.01

5



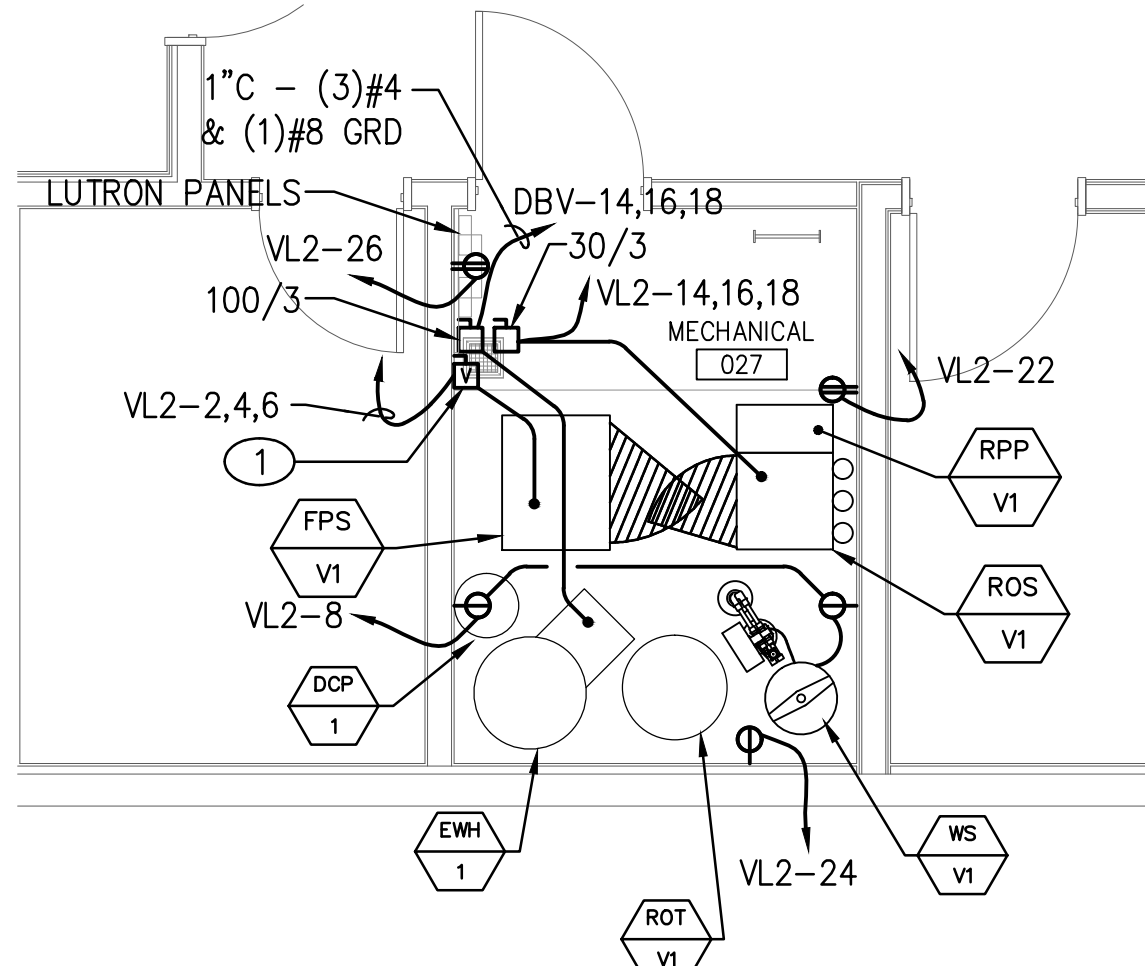
ELEVATION VIEW

ENLARGED ELEC/DATA RM ELECTRICAL PLAN

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

REFERENCE E2.01

4



KEY NOTES

- ① VFD FURNISHED BY MECHANICAL CONTRACTOR, CONNECTIONS BY ELECTRICAL CONTRACTOR.

ENLARGED MECH RM ELECTRICAL PLAN

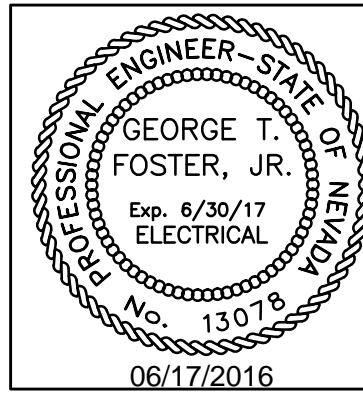
SCALE: 1/4" = 1'-0"

REFERENCE E2.01

7

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



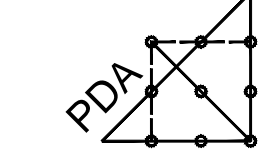
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pdi@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



© 2016 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of NRS.

#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		DESCRIPTION
REV	DATE	

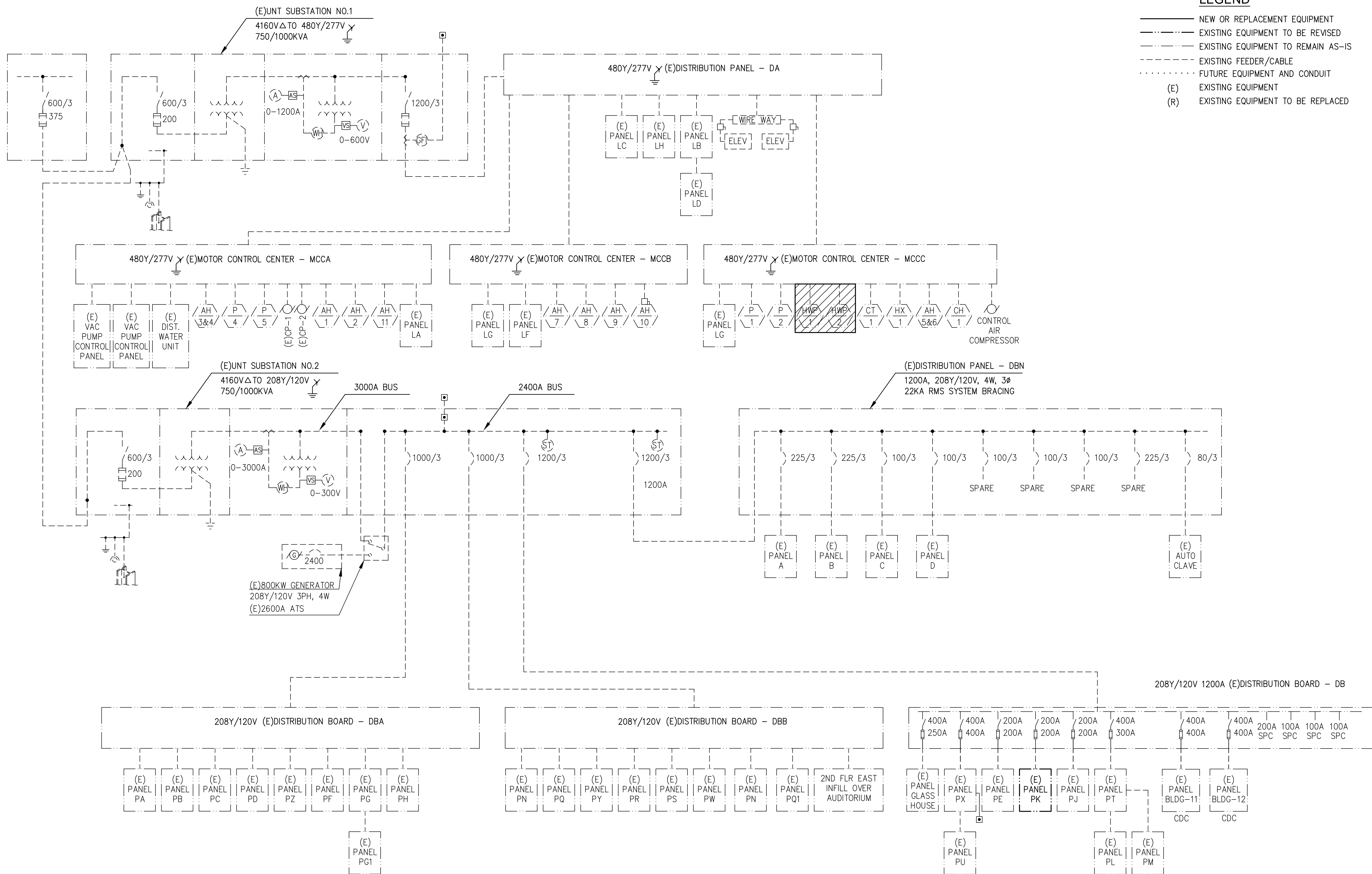
Sheet Title

DETAILS

Date: 06/17/2016

Sheet No:

E4.01



SINGLE LINE DIAGRAM

SCALE: NOT TO SCALE

1

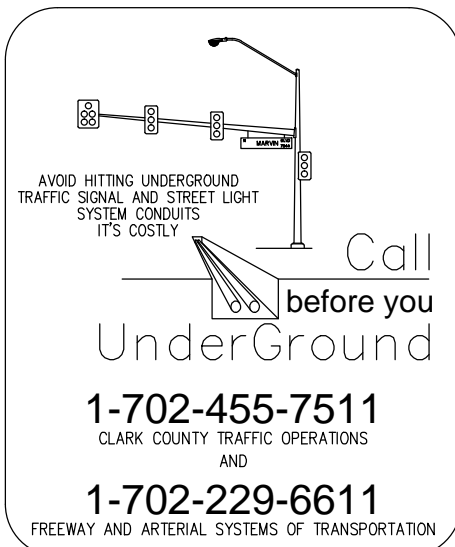
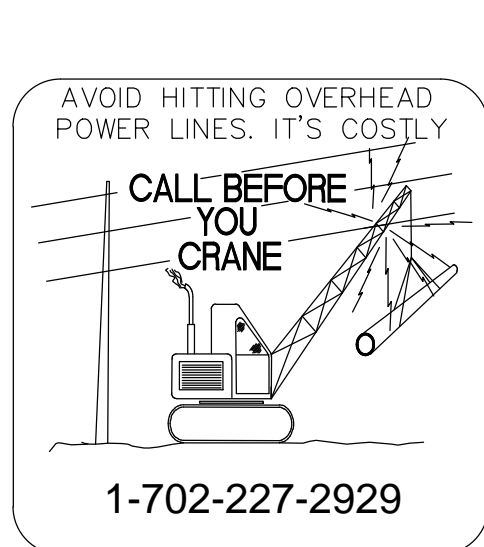
NOTICE:

ALL WIRE SHALL BE COPPER TYPE THWN, WHERE NONMETALLIC CONDUIT IS USED A GROUND WIRE SIZED PER N.E.C. SHALL BE PROVIDED AND INSTALLED PER N.E.C. INCREASE CONDUIT SIZE AS REQUIRED BY N.E.C.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUITS AND FEEDERS COMPLY WITH NEC 210-19(A)(1) FPN No. 4.

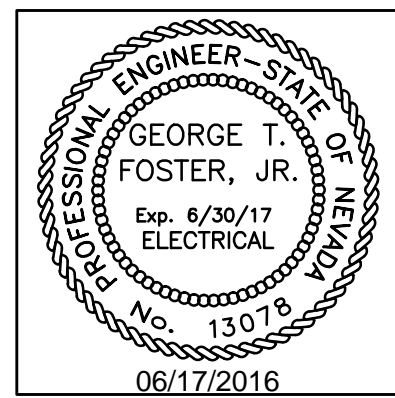
THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS INDICATED FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND ELECTRICAL SYSTEM.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED LOAD CALCULATIONS AND VERIFIES THAT ALL UPSTREAM PANELS AND EQUIPMENT ARE NOT OVERLOADED.



tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tsk.com



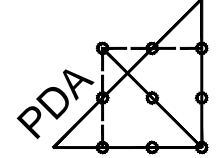
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box
© 2015 To alter or use these documents for this, or any other project, by anyone other than the original engineer, is a violation of Nevada law.
#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

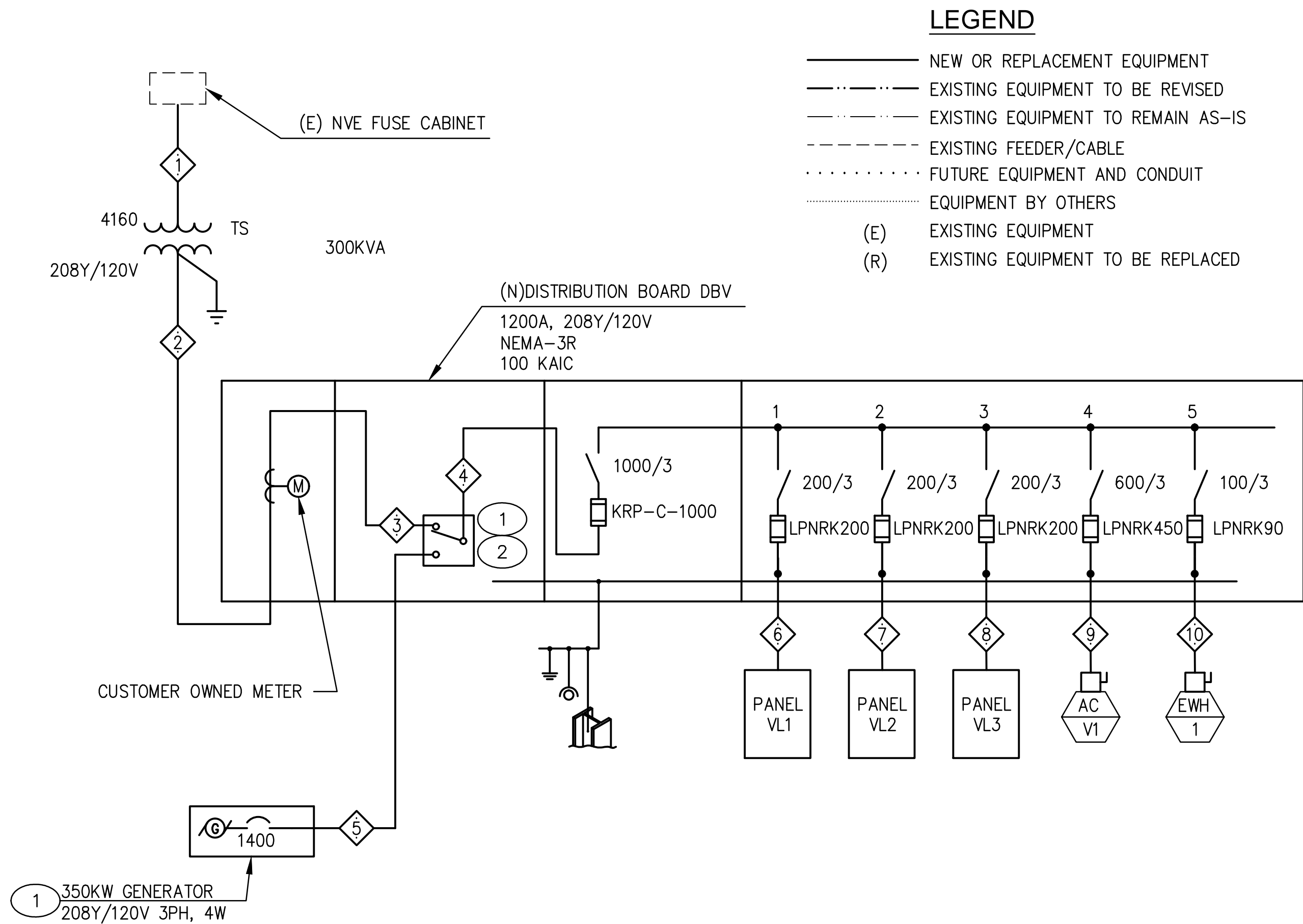
Sheet Title

SINGLE LINE DIAGRAM

Date: 06/17/2016

Sheet No:

E5.01



SINGLE LINE DIAGRAM

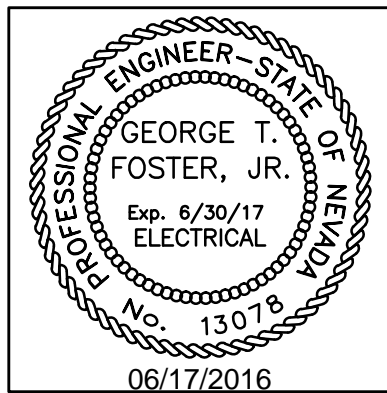
SCALE: NOT TO SCALE

KEY NOTES:

- PROVIDE FORM-C CONTACT FOR EMERGENCY AND NORMAL POWER STATUS TO BAS/JACE CONNECTION TO THE CAMPUS BAS.
- 1600A SERVICE ENTRANCE RATED ATS.

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



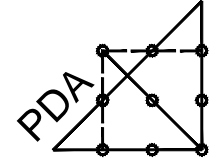
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box
© 2016 To alter or use these documents for this, or any other projects, by anyone other than the original engineer, is a violation of NRS 652.
#16001

PLEASE RECYCLE

Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REV		REVISIONS	
REV	DATE	DESCRIPTION	

Sheet Title

SINGLE LINE DIAGRAM
AND SCHEDULES

Date: 06/17/2016

Sheet No:

E5.02

PROJECT# 16001

Professional Design Associates, Inc.

FEEDER SCHEDULE

PROJECT NAME: UNLV VIVARIUM

16-Jun-16

FEEDER SCHEDULE NOTES:

1. SIZING INFORMATION BASED ON THHN/THWN CONDUCTORS IN METALLIC CONDUIT UNLESS OTHERWISE NOTED, PER 2011 N.E.C.

2. CONDUCTOR SIZES BASED ON 75°C REQUIREMENTS. ALL TERMINATIONS SHALL BE 75°C RATED.

TAG	FEEDER		CONDUCTOR INFORMATION AND SIZES										CONDUIT INFORMATION		REMARKS
	FROM	TO	NEUTRAL CAPACITY	MATERIAL CU OR AL	VOLTS DROP	% DROP	PHASE QUANTITY	SIZE	NEUTRAL QUANTITY	SIZE	GROUND SIZE	MATERIAL	SIZE	QUANTITY	
1	UTILITY	T1	N/A	CU	0.68	0.02	3	#10		N/A	#8	NON-METALLIC	4"	1	BY UTILITY
2	T1	METER	100%	CU	0.55	0.26	3	400 kcmil	1	400 kcmil	N/A	NON-METALLIC	3"	3	PARALLEL FEEDERS
3	METER	ATS	100%	CU	0.28	0.13	3	1200 A	1	1200 A	50%	BUS DUCT	-----	1	BUS
4	ATS	DBV	100%	CU	0.28	0.13	3	1200 A	1	1200 A	50%	BUS DUCT	-----	1	BUS
5	GEN	ATS	100%	CU	0.26	0.12	3	350 kcmil	1	350 kcmil	#30	NON-METALLIC	3"	4	PARALLEL FEEDERS
6	DBV	VL1	100%	CU	0.84	0.40	3	#50	1	#50	#8	NON-METALLIC	2"	1	
7	DBV	VL2	100%	CU	0.84	0.40	3	#50	1	#50	#8	NON-METALLIC	2"	1	
8	DBV	VL3	100%	CU	1.12	0.54	3	#50	1	#50	#8	NON-METALLIC	2"	1	
9	DBV	AC-V1	100%	CU	1.46	0.70	3	250 kcmil	1	250 kcmil	#2	METALLIC	2 1/2"	2	PARALLEL FEEDERS
10	DBV	WH-1	N/A	CU	1.89	0.91	3	#3		N/A	#8	NON-METALLIC	1 1/4"	1	

Project # 16001		Professional Design Associates, Inc.	
SHORT CIRCUIT ANALYSIS REPORT			
Project Name: UNLV VIVARIUM		16-Jun-16	
BRANCH NUMBER	AVAILABLE SCA	AT EQUIPMENT	EQUIPMENT AIC RATING
0	94,573	UTILITY	N/A
1	32,116	DBV	65,000
2	14,170	PNL VL1	22,000
3	13,584	PNL VL2	22,000
4	13,063	PNL VL3	22,000
5	9,542	AC-1	10,000

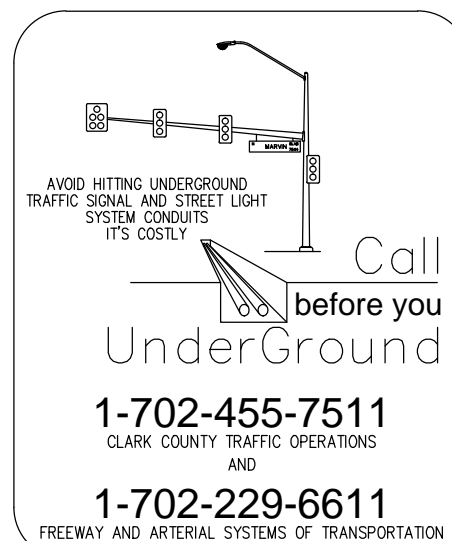
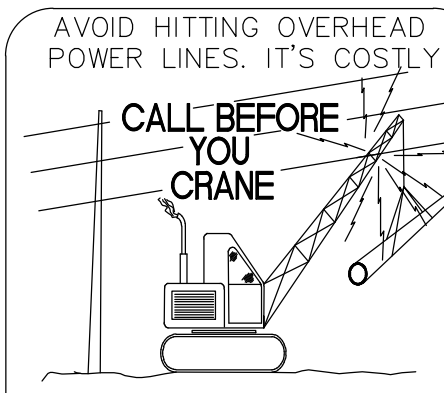
NOTICE:

ALL WIRE SHALL BE COPPER TYPE THWN, WHERE NONMETALLIC CONDUIT IS USED A GROUND WIRE SIZED PER N.E.C. SHALL BE PROVIDED AND INSTALLED PER N.E.C. INCREASE CONDUIT SIZE AS REQUIRED BY N.E.C.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUITS AND FEEDERS COMPLY WITH NEC 210-19(A)(1) FPN No. 4.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS INDICATED FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND ELECTRICAL SYSTEM.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED LOAD CALCULATIONS AND VERIFIES THAT ALL UPSTREAM PANELS AND EQUIPMENT ARE NOT OVERLOADED.





Sheet No

Sheet No



COMcheck Software Version 4.0.3.1
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: UNLV VIVARIUM
Project Type: Addition
Exterior Lighting Zone: 3 (Other)

Construction Site: 4505 SOUTH MARYLAND PARKWAY
LAS VEGAS, NV 89154

Owner/Agent:

Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Main entry	6 ft of door	30	Yes	180
Total Tradable Watts (a) =				180
Total Allowed Watts =				180
Total Allowed Supplemental Watts (b) =				750

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 750 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main entry (6 ft. of door width): Tradable Wattage				
LED 1: D: Other:	1	6	26	156
LED 2: E: Other:	1	1	0	0
Total Tradable Proposed Watts =				156

Exterior Lighting TBD: Invalid fixture wattage

Project Title: UNLV VIVARIUM
Data filename: L:\pda\16001 UNLV Vivarium\Calculations\Energy Code\Vivarium RED.cck
Report date: 06/14/16
Page 2 of 7



COMcheck Software Version 4.0.3.1
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: UNLV VIVARIUM
Project Type: Addition

Construction Site: 4505 SOUTH MARYLAND PARKWAY
LAS VEGAS, NV 89154

Owner/Agent:

Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Common Space Types:Laboratory for medical/industrial/research	5264	1.80	9475
Total Allowed Watts =			9475

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Common Space Types:Laboratory for medical/industrial/research				
LED 1: A: 2x2 23W 5000K: Other:	1	31	23	713
LED 1: B: 1x4 23w 5000K: Other:	1	9	23	207
LED 1: C: 2x4 47W 5000K: Other:	1	4	2	10
LED 6: F: Surgery Light 4300K: Other:	1	1	84	84
LED 7: G: 1x4 45W 5000K: Other:	1	2	46	90
Total Proposed Watts =				1104

Interior Lighting PASSES: Design 88% better than code

Interior Lighting Compliance Statement

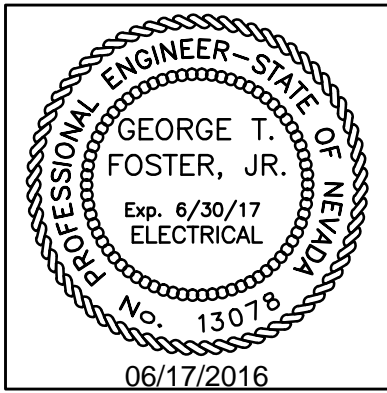
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.0.3.1 and to comply with the mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: UNLV VIVARIUM
Data filename: L:\pda\16001 UNLV Vivarium\Calculations\Energy Code\Vivarium RED.cck
Report date: 06/14/16
Page 1 of 7

tsk

303 South Water Street,
Suite 230
Henderson, NV 89015
phone: 702.456.3000
fax: 702.898.6209
www.tska.com



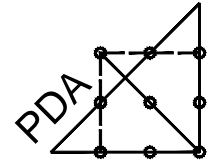
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TATE SNYDER KIMSEY ARCHITECTS AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE ARCHITECTS WRITTEN CONSENT. AS INSTRUMENTS OF SERVICE, THESE DOCUMENTS ARE NOT FINAL AND READY FOR USE, AND THEREFORE NOT VALID, UNLESS THEY ARE SEALED, SIGNED AND DATED.

Copyright, Ltd 2016

Consultant

Professional Design Associates, Inc.
Consulting Engineers
108 Market Street - Henderson, NV 89015
(702) 567-1022 Fax: (702) 567-1025
email: pda@pdacorp.com
website: www.pdacorp.com

Engineering Solutions



From Outside the Box

© 2016 To alter or use these documents for this, or any other project, is a violation of NRS 625.030.

#16001



Project

UNLV VIVARIUM

4505 SOUTH
MARYLAND PARKWAY
LAS VEGAS, NV 89154

Job No: 15-061

Owner

UNIVERSITY OF
NEVADA, LAS VEGAS

PERMIT SET

REVISIONS		
REV	DATE	DESCRIPTION

Sheet Title

IECC LIGHTING REPORT
AND SCHEDULES

Date: 06/17/2016

Sheet No:

E6.02