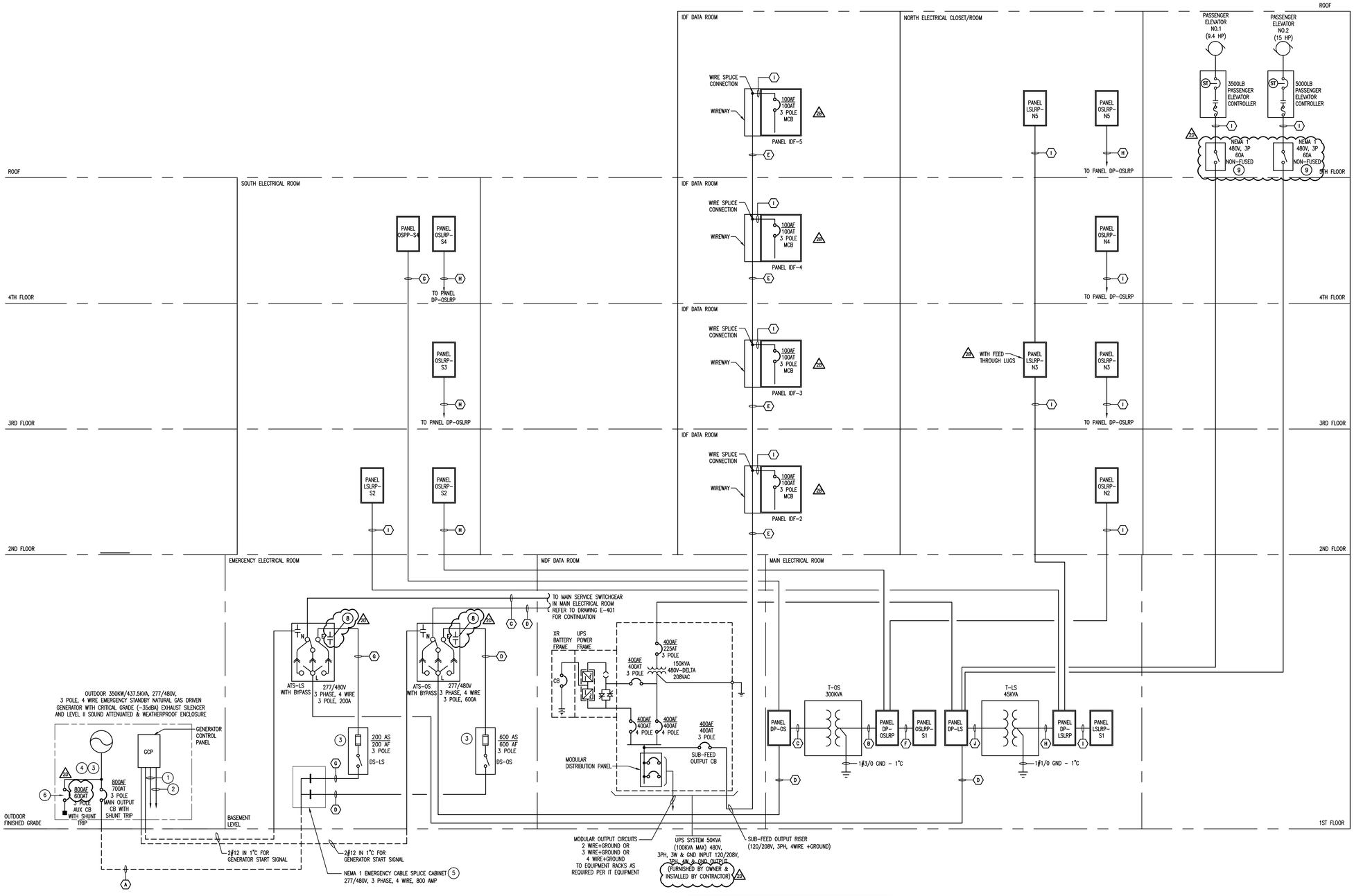

SELECTIVE COORDINATION STUDY, FAULT CURRENT STUDY AND ARC FAULT HAZARD ANALYSIS GENERAL NOTES

1. THIS PROJECT REQUIRES A SELECTIVE COORDINATION STUDY, FAULT CURRENT STUDY AND ARC FAULT HAZARD ANALYSIS TO BE PERFORMED AND SUBMITTED BY THE ELECTRICAL CONTRACTOR OR SYSTEM EQUIPMENT DISTRIBUTOR/SUPPLIER BASED ON THE ELECTRICAL DISTRIBUTION EQUIPMENT TO BE FURNISHED AND INSTALLED.
2. THE ANALYSIS MUST BE PERFORMED BY AND SIGNED AND SEALED BY A LICENSED ELECTRICAL ENGINEER AND SUBMITTED FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER.
3. THE ANALYSIS MUST BE SUBMITTED AS A SHOP DRAWING AT THE SAME TIME AS THE ELECTRICAL DISTRIBUTION SYSTEM EQUIPMENT. FAILURE TO SUBMIT BOTH AT THE SAME TIME FOR REVIEW AND APPROVAL WILL RESULT IN EITHER BEING REJECTED AND SENT BACK FOR RESUBMISSION OR HELD UNTIL THE OTHER SUBMITTAL IS RECEIVED. FAILURE OF EITHER OF THE SUBMITTALS BEING APPROVED WILL RESULT IN THE DELAY OF THE OTHER SUBMITTAL BEING APPROVED. BOTH SUBMITTALS REQUIRE THE PROJECT ENGINEER'S REVIEW AND APPROVAL BEFORE THE ORDERING AND PURCHASING OF ANY DISTRIBUTION SYSTEM EQUIPMENT AND/OR OVERCURRENT PROTECTIVE DEVICES (OPD'S) BY THE CONTRACTOR.
4. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE A COORDINATED SYSTEM AND PROVIDE ALL NECESSARY MODIFICATIONS TO THE NEW DISTRIBUTION EQUIPMENT AND SYSTEM AS REQUIRED. IN ADDITION, THE ELECTRICAL CONTRACTOR SHALL NOT BE REIMBURSED FOR ANY ADDITIONAL COSTS ASSOCIATED WITH MULTIPLE ITERATIONS OF THE STUDY AND SUBMITTALS OF THE STUDY IN ORDER TO PROVIDE THE NECESSARY COORDINATED AND APPROVED STUDY.
5. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE WITH THE UTILITY COMPANY AND VERIFY THE AVAILABLE SHORT CIRCUIT CURRENT AT THE SECONDARY OF THE UTILITY TRANSFORMER. THE CONTRACTOR SHALL PROVIDE A COPY OF THE CORRESPONDENCE FROM THE UTILITY COMPANY INDICATING THE AVAILABLE SHORT CIRCUIT CURRENT WITHIN THE STUDY SUBMITTAL FOR RECORD BY THE PROJECT ENGINEER.

INSTALLATION OF EQUIPMENT ASSOCIATED WITH THE ENTIRE ELECTRICAL SYSTEM REQUIRES SIGNED AND SEALED SHORT/FAULT CURRENT CALCULATIONS, SELECTIVE COORDINATION STUDY* CALCULATIONS OF OVERCURRENT PROTECTIVE DEVICES (OPD'S) AND AN ARC FLASH HAZARD ANALYSIS STUDY BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER AND SUBSEQUENT REVIEW, APPROVAL AND RELEASE BY DCA BEFORE PROCURING ANY DISTRIBUTION EQUIPMENT AND STARTING ANY INSTALLATION WORK.

* NOTE: SELECTIVE COORDINATION STUDY SHALL INCLUDE THE EMERGENCY BRANCH DISTRIBUTION, THE GENERATOR OUTPUT OPD (CIRCUIT BREAKER) AND THE UPSTREAM MOST OPD OF THE OPTIONAL STANDBY BRANCH DISTRIBUTION.

CABLE AND CONDUIT SCHEDULE

DESIGNATION	CABLE AND CONDUIT
A	(3) SETS - 4#600KCM & 1#3/0GND - 4" PVC CONDUIT & (1) 4" PVC CONDUIT SPARE WITH PULL CORD
B	(4) SETS - 4#350KCM & 1#3/0GND - 3"C
C	(2) SETS - 3#350KCM & 1#1GND - 3"C
D	(2) SETS - 4#350KCM & 1#1GND - 3"C
E	(2) SETS - 4#3/0 & 1#3GND - 2"C
F	4#350KCM & 1#4GND - 3"C
G	4#4/0 & 1#4GND - 2-1/2"C
H	4#1/0 & 1#6GND - 2"C
I	4#2 & 1#8GND - 1-1/2"C
J	3#4 & 1#8GND - 1"C

KEY NOTES

1. 20#12 (4 SPARE) IN 1"C FOR GENERATOR REMOTE ANNUNCIATOR IN THE FACILITIES OFFICE.
2. 4#12 (2 SPARE) IN 1"C FOR GENERATOR REMOTE EMERGENCY STOP BUTTON ON BUILDING EXTERIOR WALL.
3. OVERCURRENT PROTECTIVE DEVICE IS REQUIRED TO BE SELECTIVELY COORDINATED. REFER TO SPECIFICATIONS FOR COORDINATION STUDY REQUIREMENTS. REFER TO PANEL SCHEDULES FOR ADDITIONAL DEVICES REQUIRED TO BE SELECTIVELY COORDINATED.
4. OVERCURRENT PROTECTIVE DEVICE SHALL BE ELECTRONIC TRIP TYPE WITH ADJUSTABLE TRIP SETTINGS FOR SELECTIVE COORDINATION PURPOSES.
5. FURNISH AND INSTALL NEW NEMA 12 ENCLOSED (48"HX30"WX20"D) CABLE SPLICE CABINET; HOFFMAN ENCLOSURE CAT. NO. A48J3620LP WITH PANEL A48P36, OR EQUAL WITH INSULATED, MULTI-TAP, DUAL SIDED ENTRY CABLE CONNECTORS OF REQUIRED SIZE AND QUANTITY, ILSCO TYPE PBTD, OR EQUAL.
6. AUXILIARY CIRCUIT BREAKER WITH MECHANICAL CABLE LUGS FOR USE WITH A PORTABLE MAXIMUM 350KW/350KVA RESISTIVE LOAD BANK AND ANNUAL 100% LOAD TESTING. CIRCUIT BREAKER SHALL BE CONTROLLED VIA GENERATOR CONTROL PANEL TO OPEN MAIN OUTPUT CB WHEN CLOSED FOR TESTING AND TO OPEN ALONG WITH CLOSING THE MAIN OUTPUT CB IN THE EVENT A NORMAL POWER FAILURE OCCURS DURING TESTING.L 2B
7. ALL INSULATED POWER FEEDER CABLES AND INSULATED GROUND CABLES SHALL BE STRANDED COPPER.
8. AUXILIARY CONTACT CLOSES UPON LOSS OF NORMAL POWER AND WIRED TO BUILDING MANAGEMENT SYSTEM FOR SEQUENCING OF MECHANICAL LOADS UPON STARTUP OF STANDBY GENERATOR.
9. 480V, 3P, 60A UN-FUSED ELEVATOR CONTROLLER DISCONNECT SWITCHES SHALL BE EQUIPPED WITH AUXILIARY CONTACT FOR CONNECTION TO ELEVATOR CONTROLLER TO DISENGAGE THE ELEVATOR EMERGENCY BATTERY LOWERING MECHANISM WHEN THE DISCONNECT SWITCH IS IN THE OPEN POSITION

1 ELECTRICAL EMERGENCY POWER ONE LINE RISER DIAGRAM (7)
SCALE: NONE

Clarke Caton Hintz
Architecture
Planning
Landscape Architecture
100 Barrack Street Trenton, NJ 08608
tel: (609) 883-8383 fax: (609) 883-4044
www.clarkecatonhintz.com

OWNER:
WILLIAM PATTERSON UNIVERSITY
300 POMPTON RD.
WAYNE, NJ 07470
(973) 720-2000

SITE / CIVIL / GEOTECHNICAL:
LANGAN
300 KIMBALL DRIVE
PARSIPPANY, NJ 07054
(973) 560-4900

STRUCTURAL:
HARRISON & HAMNETT
40 KNOWLES STREET
PENNINGTON, NJ 08534
(609) 818-1808

MECHANICAL/ELECTRICAL/PLUMBING: FIRE PROTECTION
PARTNER ENGINEERING AND SCIENCE, INC.
611 INDUSTRIAL WAY WEST
EATONTOWN, NJ 07724
(732) 380-1700

AV/IT & SECURITY
R.G. VANDERWEIL ENGINEERS, LLP
101 GROVERS MILL ROAD
QUAKERBRIDGE EXECUTIVE CENTER
LAWRENCEVILLE, NJ 08648
(609) 609.786.2727

SUBMISSIONS

NO.	DATE	DESCRIPTION
1	07/14/17	CONSTRUCTION DOCUMENTS
2	08/07/17	FINAL CONSTR DOCUMENTS

REVISIONS

1A	AS NOTED	CONSTR. DOC. REVISIONS
2A	AS NOTED	ADDENDUM 1
2B	08/24/17	ADDENDUM 2
2D	09/08/17	ADDENDUM 6

WILLIAM PATERSON UNIVERSITY NEW RESIDENCE HALL
WAYNE, NEW JERSEY

CONSTRUCTION DOCUMENTS
(ISSUED FOR CONSTRUCTION)

DATE: 2017.08.07
SCALE:
DRAWN BY:
CHECKED BY:

SHEET TITLE:
ELECTRICAL POWER ONE-LINE DIAGRAM

DRAWING NO.:
E-402

CCH PROJECT NO: 1932

Project Manager: CM
Designed By: MJC
Drafted By: JDD
Checked By: MJC

PARTNER
Engineering and Science, Inc.
(a DBA of Partner Assessment Corp, a NJ Engineering firm)
611 Industrial Way West
Eatontown, NJ 07724
Tel.: 732.380.1700
Fax.: 732.380.1701
Certificate of Authorization No. 24GA28222900
WWW.PARTNERESI.COM
John C. Morris III, P.E. NEW JERSEY Professional Engineer 24GE02659900