VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
PROCUREMENT DEPARTMENT

ADDENDUM NO. 5

DATE:	June 5, 2026
TO:	All Offerors
FROM:	Kim Widrig, Contracting Officer
TOTAL PAGE(S):	6 pages (not including attachments)
SOLICITATION TITLE:	Improve Center Woods Complex
SOLICITATION NUMBER:	049302624

I. CLARIFICATIONS AND ADDITIONAL INFORMATION

1. **Drawing Updates:**

   Modified sheets included in addendum: C201, E201, E702, E901, E902 (Attached as **Exhibit A**)

   Description of drawing changes:

   Electrical Changes (E)

   E1: Reissued sheet E901 as it was erroneously omitted from Addendum #3.

   E2: Reissued sheet E902 as it was erroneously omitted from Addendum #3.

   E3: Added 120V connections for motorized shades in Meeting 1 103 and Meeting 2 117. Refer to sheets E201 and E702.

II. REQUESTS FOR INFORMATION

1. 123553.13: 2.3A Casework Construction indicates full flush overlay w/ wood fronts. Per the Lab Casework Legend, all casework with tagging that starts w/ #7 is to be *inset* design and door/drawer fronts are to be wood unless 'MF' suffix is shown in tag. There are several areas where inset and wood fronts are indicated. Inset wood fronts is not a configuration we typically see for lab casework and it can be a cost adder per cabinet. With the exception of specialty cabinets (e.g. flammable), please confirm if ALL casework is to be overlay design and if we are to refer to tagging for metal fronts vs. wood fronts.

   Virginia Tech Response: *ALL typical wall/base/tall cabinets to be flush overlay. Specialty cabinets per mnfr standard specifications. Typical Base cabinets and Tall cabinets to be wood fronts with metal body. All wall cabinets to be metal body and front. Disregard schedule finish conflicts.*

2. There is conflicting information between documents as it relates to worksurface material. Please confirm tops are to be Fundermax Phenolic per 123553.13 spec. and not epoxy.

   Virginia Tech Response: *Typical lab worksurfaces to be Phenolic as indicated in specifications; not epoxy. Where indicated, provide stainless steel or wood.*

3. Please confirm (L-05) wall shelving is to be painted steel and not epoxy as noted on Lab Equipment Schedule. If not painted steel, we would phenolic be acceptable in lieu of epoxy to match worksurfaces?

   Virginia Tech Response: *Provide phenolic shelf material (match countertops).*

4. Please confirm (EQ-05) Flammable Cabinets are to be provided by Lab Casework scope per Equipment Schedule and not the Owner as indicated on A102 Architectural Plan Notes.

   Virginia Tech Response: *Flammables Cabinets will be CFCI, as listed in Lab Equipment Schedule. Note on A102 is incorrect.*

5. Please confirm who is to provide the Ice Machine in Shop Fab / A717. Did not see it listed in Equipment Schedule. Additionally, if there is a BOD, please provide that make/model information.

   Virginia Tech Response: *Ice Maker to be CFCI. BOD is* ***Empura E-MCFB350 Air-Cooled Cube-Style with Bin****.*

6. Please provide a model/manufacturer for the L-03 Metal Pegboards.

   Virginia Tech Response: *Provide Steel System by Uline (incl Starter Kit) or similar - design intent is a universal system, easy for owner to provide new parts in the future as needed.*

7. Please confirm if 123553-2.4E: Are these toolbars + accessories required or is this section N/A? None shown on drawings.

   Virginia Tech Response: *Provide as indicated in specifications.*

8. Please confirm the requirements for base cabinets under the fume hoods, or if tables/stands are preferred as the elevation suggests (e.g. E1/A714).

   Virginia Tech Response: *Fume hoods shall be provided with acid storage cabinets underneath.*

9. Confirm standard 22"D base cabinets in lieu of 22.5"D, and standard widths (e.g. 30"W ilo 29"W, 42"W ilo 41"W, etc.) are acceptable adjustments to the dimensions noted on the Equipment Schedule.

   Virginia Tech Response: *Manufacturer standard depths and widths are acceptable.*

10. Smoked Glass windows are listed in the specs for the casework. Please confirm this is required as it is a custom item

    Virginia Tech Response: *Standard clear glass is acceptable.*

11. Regarding site access, will we be able to deliver with 53’ trucks or should we account for short “PUP” trucks.

    Virginia Tech Response: *We do not intend to restrict delivery truck sizes - that will be up to the contractor/vendors. The road was cleaned up some during conversations with the Fire Marshal to ensure fire trucks could use the road, but we did not model semis entering the site and turning around.*

12. Specs list a mockup requirement with specific details, but “as indicated on the shop drawings”. We could not find any mock up details in the shop drawings. Please confirm any mockup requirements we should account for.

    Virginia Tech Response: *No mockups are required for lab casework or fume hoods.*

13. Please confirm who is to provide the D3/A715 & D4/A715 Animal Sink and Base. Assuming Lab Casework would provide galvanized steel base shown in grey and plumbers provide the sink unit its self shown in white with piping?

    Virginia Tech Response: *Sink (S1 on P-500) to be provided by plumbing subcontractor. Support frame was designed as a custom metal fabrication, but can be provided as a custom frame by another trade if it can suitably support the vitreous sink. The purpose of the frame is to prevent heavy loads from causing the sink to pull away from the wall.*

14. Please confirm (L-04) Metal Lockers are by Others/Div10 and not part of Lab Casework Scope of Work.

    Virginia Tech Response: *Confirmed.*

15. Please confirm (L-03) Metal Pegboards w/ Hook Kits are within the Lab Casework Scope of Work. Additionally, if there is a BOD, please provide that make/model information.

    Virginia Tech Response: *L-03 may be provided by Lab Casework supplier or another trade as appropriate. See Line 8 for BOD.*

16. Please confirm if Safety Stations are to be provided by Lab Casework with TMVs and installation by Plumber, or if the Plumber will provide the full assembly.

    Virginia Tech Response: *No preference for which subcontractor will provide and/or install the Safety Stations. This is GC Means and Methods.*

17. Please confirm we are to include (3) shared Overhead Ceiling Panels to accommodate the pre-wired electrical on the T-02A Moveable Benches. Please also confirm that Lab Casework is to provide cutouts only w/ back-boxes, devices, and cover plates by Others/Electrical team.

    Virginia Tech Response: *Benches are powered from the wall, not overhead. Yes - lab casework to provide cutouts only.*

18. Please confirm if Lab Casework scope is responsible for installing the E-03, E-06, E-07, and E-08 OFCI items listed on the Lab Equipment Schedule or if this will be the responsibility of other trades.

    Virginia Tech Response: *The items listed are all OFCI. Installation responsibility is means and methods; up to the Contractor.*

19. Please confirm that the concrete foundation walls will have exposed aggregate at locations called out by note 21 on sheets A201 and A202.

    Virginia Tech Response: *Note 21 on A201/202 is incorrect. Please provide a smooth formwork finish for all exposed foundation wall concrete.*

20. On S111, along grid line 6 three WC-1 columns are called out. WC-1 per S004 is a 12x12 timber column. Sheet A102 calls out the same columns per note 13 as glulam columns. Please clarify material type for the columns.

    Virginia Tech Response: *WC-1 is a 12x12 timber column.*

21. Sheet C201 is referenced in note C4 of Addendum 3 but the revised sheet was not included in the addendum. Please provide revised C201.

    Virginia Tech Response: *Sheet was erroneously omitted from Addendum #3. Sheet C201 is attached herein in **Exhibit A**.*

22. Sheet E901 is referenced in notes E1 and E3 of Addendum 3 but the revised sheet was not included in the addendum. Please provide revised E901.

    Virginia Tech Response: *Sheet was erroneously omitted from Addendum #3. Sheet E901 is attached herein in **Exhibit A**.*

23. Sheet E902 is referenced in note E3 of Addendum 3 but the revised sheet was not included in the addendum. Please provide revised E902.

    Virginia Tech Response: *Sheet was erroneously omitted from Addendum #3. Sheet E902 is attached herein in **Exhibit A**.*

24. Sheet E301 is referenced in note E5 of Addendum 3 but the revised sheet was not included in the addendum. Please provide revised E301.

    Virginia Tech Response: *Sheet was erroneously included Addendum #3 narrative - no change.*

25. Section 2.5D of specification 105143 for the wire mesh storage lockers calls for powder coat finish. Section 2.5A calls for galvanized. Please clarify the finish for the wire mesh storage lockers.

    Virginia Tech Response: *Powder coat finish is acceptable. Provide manufacturer's standard color chart for color selection during submittals.*

26. Please specify the lock that should be used for wire mesh storage lockers. The 3'x3' storage cages can only use a padlock lug per Wirecrafters because these will not have post whereas the other units have multiple options. Please see the following link, https://www.wirecrafters.com/products/components/standard-custom-locks/

    Virginia Tech Response: *Please provide padlock hasps for all doors - end user does not want to manage keys.*

27. In specification 122413, sections 2.2F, 2.3G, and 2.4G specify both front fascia and exposed headbox complete with top and back covers. Is front fascia alone acceptable, or must we include top and back covers?

    Virginia Tech Response: *The intent is for exposed shade hardware to be fully enclosed. Contractor shall provide front fascia, top cover, and back cover where required to achieve a complete exposed headbox assembly.*

28. In specification 122413, section 2.3 A3 specifies EcoVeil 6009 which does not exist. Please clarify BOD.

    Virginia Tech Response: *Provide EcoVeil Series - full range of colors. Product # aligns to openness %. See specifications.*

29. In specification 122413, section 2.3 B3 specifies both keyed and toggle switches. Where is each required?

    Virginia Tech Response: *Shade controls in Large Meeting Hall intended to be connected to a wall mounted control panel (by others). Toggles and key switches are not required.*

30. In specification 122413, section 2.3 B3e specifies Sun Sensors. Where is this required?

    Virginia Tech Response: *Disregard. Not in Scope.*

31. In specification 122413, section 2.3 B3g specifies Timer Control. Where is this required?

    Virginia Tech Response: *Disregard. Not in Scope.*

32. In specification 122413, section 2.3 B4 specifies Crank-Operator Overide. This is not offered by most manufacturers. May we exclude?

    Virginia Tech Response: *Yes. Please exclude.*

33. In specification 122413, section 2.3 B6 specifies Interface with AV and "Accepting input from BACS." Is this required? May we include dry contact, and exclude RS232, BACnet, PoE?

    Virginia Tech Response: *Please provide RS232 interface to allow independent control of both layers of shades in the Large Meeting Room only.*

34. In specification 122413, section 2.3.G.4. specifies, "Recessed Shade Pocket." None designated. May we exclude?

    Virginia Tech Response: *Yes. Please exclude.*

35. In specification 122413, sections a. 2.3.G.6.-7., 2.4.G.5.-6. specify, "Side/sill channels." May we exclude side/sill channels with light-filtering shades? May we exclude side/sill channels with light-blocking shades?

    Virginia Tech Response: *Yes, exclude side channels where shades are only light filtering. Where shades include light-blocking, provide channels.*

36. In specification 122413, sections a. 2.5.B.2. specifies, "PVC-coated fiberglass" and "5% openness." "Basis of Design Finish Legend, 122413, EcoVeil" is PVC-free and scheduled as "3% openness." Which fabric "Type" is required? Which "openness" is required?

    Virginia Tech Response: *Please refer to Line 30 for this information.*

37. Details on D6 and E6 on A501, single shades are shown and dual shades are noted. Please clarify intent.

Virginia Tech Response: *Dual shades are required in Large Meeting Hall and each Meeting Room (2ea) - single layer shades are acceptable in all other locations.*

38. The Finish Schedule notes 6 and 7 specify which room receive shades. In those rooms, can we exclude shades at doors, door transoms, door sidelites, and interior glazing?

    Virginia Tech Response: *Provide shades at exterior openings only; no interior doors, glazing etc. require shades.*

39. On E201, <EP46> is not shown at [103, 117]. Please clarify and coordinate to eliminate scope gap.

    Virginia Tech Response: *Connections and associated notes have been added to account for meeting room motorized shades. Sheet E201 is attached herein in* ***Exhibit A****.*

EXHIBIT A
Revised Sheets

MATCHLINE - REFER TO SHEET C202

TAX MAP 256-A-1
PID 070905
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY
INST. NO. 2009011097 (BLA)
INST. NO. 2010003159 (BLA)
VESTING DEED NOT RECOVERED
ZONED: RR-1

LIMITS OF DISTURBANCE 3.50 AC

EXISTING CONCRETE APRON TO REMAIN; CONTRACTOR TO PROTECT DURING CONSTRUCTION AND REPAIR IF DAMAGED

BUILDING TO BE REMOVED (# 0927) ONE-STORY METAL BLDG

(# 6955) ONE-STORY METAL BLDG.

REMOVE EXISTING GRAVEL ROAD AS NEEDED TO INSTALL PROPOSED UTILITIES; REFER TO GENERAL DEMOLITION NOTE #3.

WATER LINE DEMOLITION TO BE PHASED TO AVOID SERVICE DISRUPTION. CONTINUOUS SERVICE TO BE PROVIDED AT ALL TIMES DURING CONSTRUCTION.

EXISTING WATERLINE TO BE CAPPED WITH WATER-TIGHT SEAL. WATERLINE OUTSIDE OF LOD TO BE ABANDONED IN PLACE PER UNIVERSITY STANDARDS. COORDINATE WITH VTES PRIOR TO REMOVAL AND CAPPING OF EXISTING LINE. ⚠1

FENCE TO BE REMOVED (SEE FENCE SEQUENCING NARRATIVE, THIS SHEET FOR ADDITIONAL INFORMATION)

FENCE LINE TYPICAL

EXISTING WATERLINE TO BE CAPPED WITH WATER-TIGHT SEAL. WATERLINE OUTSIDE OF LOD TO BE ABANDONED IN PLACE PER UNIVERSITY STANDARDS. COORDINATE WITH VTES PRIOR TO REMOVAL AND CAPPING OF EXISTING LINE.

EXISTING WATERLINE TO BE CAPPED WITH WATER-TIGHT SEAL. WATERLINE OUTSIDE OF LOD TO BE ABANDONED IN PLACE PER UNIVERSITY STANDARDS. COORDINATE WITH VTES PRIOR TO REMOVAL AND CAPPING OF EXISTING LINE. ⚠1

LIMITS OF DISTURBANCE 3.50 AC

APPROX. LOCATION EX. 100' APPALACHIAN POWER COMPANY ELECTRIC TRANSMISSION LINE ESMT., DB. 323, PG. 226

LIMIT OF SURVEY

APPROXIMATE DEPICTION OF U/G WATERLINE LOCATION UNABLE TO FIELD LOCATE (SHOWN FROM GIS SHEET)

SHED TO BE REMOVED; REFER TO DEMO NOTE #4 NOTE

EXISTING CONCRETE PAD TO REMAIN; CONTRACTOR TO REPAIR IF DAMAGED DURING CONSTRUCTION

REFER TO ARCHITECTURAL PLANS, SHEET D001, FOR SELECTIVE DEMOLITION INFORMATION

AQUA CULTURE BUILDING TO BE REMOVED; REFER TO ARCH. SHEET D001

NOTE: DEMOLITION OF ITEMS WITHIN THIS PORTION OF THE LOD CANNOT BE COMPLETED UNTIL THE CONSTRUCTION OF THE PROPOSED BUILDING IS COMPLETE AND ALL CONTENTS OF THE AQUA CULTURE BUILDING AND CRAB SHACK HAVE BEEN RELOCATED TO THE PROPOSED BUILDING.

CRAB SHACK BUILDING TO BE REMOVED; REFER TO SHEET D001

EXISTING GREENHOUSE BUILDING AND ASSOCIATED FEATURES TO REMAIN

(# 756) ONE-STORY METAL 'CONSERVATION AQUACULTURE & AQUATIC ECOLOGY' LABORATORY BUILDING

(# 758) 'FRESHWATER MOLLUSK CONSERVATION' LABORATORY BUILDING

SHEDS TO BE REMOVED; REFER TO DEMO NOTE #4 NOTE

NATURAL VEGETATION / LOW BRUSH AREA

POND

PASTURE FIELD

FOREST

GRAVEL

GRAVEL DRIVE

INVENTIVE LANE

LAWN

SCALE 1"=20'
0 20' 40'
NAD 83

GENERAL DEMOLITION NOTES:

1. ALL ITEMS SHOWN AS BLACK ON THIS PAGE SHALL BE REMOVED/ ABANDONED.
2. ALL APPLICABLE ESC MEASURES SHALL BE IN PLACE PRIOR TO STARTING DEMOLITION.
3. WHERE PROPOSED UTILITIES CROSS INVENTIVE LANE, CONSTRUCTION TO BE PHASED SUCH THAT ONE LANE REMAINS OPEN AT ALL TIMES. AT NO TIME DURING CONSTRUCTION SHALL INVENTIVE LANE BE CLOSED FOR THROUGH TRAFFIC TO THE BUILDINGS TO THE EAST OF THE SITE. CONTRACTOR TO SUBMIT A PHASING PLAN TO THE UNIVERSITY FOR KEEPING THE ROAD OPEN.
4. SHEDS LOCATED OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING LIGHT EQUIPMENT TO AVOID DISTURBANCE TO THE SURROUNDING LAND. UNDERLYING GROUND TO BE STABILIZED WITH PERMANENT VEGETATION IMMEDIATELY AFTER REMOVAL. REFER TO SHEET C200 FOR SHED DEMOLITION TIMING.
5. CONTRACTOR TO ENSURE A SECURE PERIMETER IS PROVIDED FOR LIVESTOCK GRAZING AREAS AT ALL TIMES. CONTRACTOR TO COORDINATE WITH VIRGINIA TECH TO ENSURE LIVESTOCK ARE SECURELY IN SEPARATE GRAZING AREAS OR SHALL PROVIDE TEMPORARY FENCING IN ORDER TO COMPLETE THE PERIMETER DURING CONSTRUCTION ACTIVITIES.

LEGEND

- LIMITS OF DISTURBANCE
- WATER LINE REMOVAL
- TREE REMOVAL
- GRAVEL REMOVAL
- STRUCTURE REMOVAL
- HARDSCAPE REMOVAL
- EXISTING GRAVEL

WPA
WORK PROGRAM ARCHITECTS
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Suite 301
Norfolk, VA 23510
wparch.com 757.227.5310

COMMONWEALTH OF VIRGINIA
9/29/2025
JOHNATHAN C. BRODIE
Lic. No. 053540
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

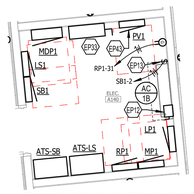
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS

VIRGINIA TECH
IMPROVE CENTER WOODS COMPLEX
697 INVENTIVE LANE, BLACKSBURG, VA. 24061
PERMIT SET

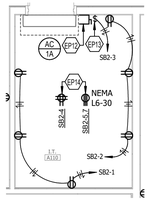
PROJECT # 229 - 18699 - 000
DATE 4/24/2026
REVISIONS:

C201
DEMOLITION PLAN

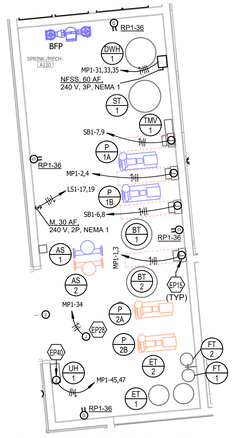
S:\1\229\18104-17_Center_Woods\DWG\Sheet\C201\18104-C200-DEMO.dwg



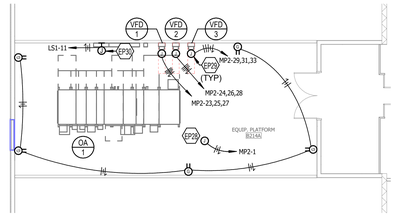
2 E201 E201 **ENLARGED POWER FLOOR PLAN - ELEC A140**
1/4" = 1'-0" 0' 4' 8' 12' **1/4" = 1'-0"**



5 E201 E201 **ENLARGED POWER FLOOR PLAN - I.T. A110**
1/4" = 1'-0" 0' 4' 8' 12' **1/4" = 1'-0"**



3 E201 E201 **ENLARGED POWER FLOOR PLAN - SPRINK./MECH. A120**
1/4" = 1'-0" 0' 4' 8' 12' **1/4" = 1'-0"**



4 E201 **ELECTRICAL POWER FLOOR PLAN - MECHANICAL PLATFORM**
1/8" = 1'-0" 0' 8' 16' 24' **1/8" = 1'-0"**

POWER - GENERAL NOTES

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.

POWER - GENERAL NOTES

D. RECEPTACLES THAT ARE CONTROLLED BY AN AUTOMATIC MEANS SUCH AS OCCUPANCY SENSOR OR ENERGY MANAGEMENT SYSTEM SHALL BE MARKED IN ACCORDANCE WITH NEC 406.3(E).
E. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.

TAGGED NOTES ##

EP01 PROVIDE CEILING-MOUNTED RECEPTACLE FOR SUSPENDED CORD REEL. PROVIDE HUBBELL HBL2512SR220M1 (OR EQUIVALENT) AND MOUNT TO CEILING. COORDINATE FINAL LOCATION PRIOR TO INSTALL.
EP02 PROVIDE 120V CONNECTION FOR CIRCULATION FAN. INSTALL VENDOR-FURNISHED CONTROL STATION AND ROUTE CIRCUIT THROUGH CONTROL STATION TO TERMINATION POINT AT FAN MOTOR. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALL.
EP03 DUPLEX RECEPTACLE INTENDED TO SERVE COPIER. COORDINATE FINAL EQUIPMENT LOCATION PRIOR TO ROUGH-IN.
EP10 PROVIDE 120V CONNECTION FOR HAND DRYER.
EP11 PROVIDE 120V CONNECTION FOR PAPER TOWEL DISPENSER. COORDINATE FINAL CONNECTION REQUIREMENTS WITH EQUIPMENT VENDOR PRIOR TO INSTALL.
EP12 PROVIDE 240V, 30A/2P, NEMA 1 RATED NON-FUSED DISCONNECT SWITCH FOR SPLIT SYSTEM INDOOR UNIT. EXTEND CIRCUIT FROM OUTDOOR SPLIT SYSTEM UNIT THROUGH DISCONNECT TO TERMINATION POINT AT INDOOR UNIT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALL.
EP13 PROVIDE 120V, 20A/1P MOTOR-RATED SWITCH FOR SPLIT SYSTEM CONDENSATE PUMP. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALL.
EP14 PROVIDE RACK-MOUNTED RECEPTACLE; COORDINATE FINAL LOCATION AND MOUNTING HEIGHT PRIOR TO INSTALL.
EP15 EXTEND CIRCUIT FOR HYDRONIC PUMP THROUGH ASSOCIATED VFD (PROVIDED BY DIV. 23) TO TERMINATION POINT AT PUMP. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALL.
EP16 PROVIDE 120V CONNECTION TO PROJECTOR SCREEN. PROVIDE SINGLE-GANG ROUGH-IN FOR FUTURE CONTROL STATION AND ROUTE CIRCUIT "THROUGH" CONTROL STATION TO TERMINATION POINT AT SCREEN. PROVIDE (1) 3/4" CONDUIT FROM CONTROL STATION LOCATION TO WALL BOX IN ROOM. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
EP17 PROVIDE CEILING-MOUNTED RECEPTACLE FOR PROJECTOR. COORDINATE FINAL LOCATION PRIOR TO INSTALL.
EP18 DUPLEX RECEPTACLE INTENDED TO SERVE FUME HOOD. COORDINATE FINAL EQUIPMENT LOCATION PRIOR TO ROUGH-IN.

TAGGED NOTES ##

EP19 PROVIDE 120V CONNECTION TO AUTOMATIC FAUCET. COORDINATE FINAL CONNECTION REQUIREMENTS WITH EQUIPMENT VENDOR PRIOR TO INSTALL.
EP20 PROVIDE 208V CONNECTION FOR MOTORIZED COILING DOOR. INSTALL VENDOR-FURNISHED CONTROL STATION AND ROUTE CIRCUIT THROUGH CONTROL STATION TO TERMINATION POINT AT DOOR MOTOR. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
EP25 PROVIDE (1) #12 GROUND IN 3/4" FROM PANEL 'WET LAB' AND CONNECT TO GROUNDING LUG/SCREW AT FLAMMABLES CABINET. COORDINATE FINAL CONNECTION REQUIREMENTS WITH EQUIPMENT VENDOR PRIOR TO INSTALL.
EP27 CONNECT CIRCUIT TO INTEGRAL DISCONNECT AT FAN COIL UNIT. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR.
EP28 PROVIDE 120V CONNECTION TO STEP-DOWN TRANSFORMER FOR CAV/VAV BOXES. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
EP29 EXTEND CIRCUIT FOR DOAS UNIT THROUGH ASSOCIATED VFD (PROVIDED BY DIV. 23) TO TERMINATION POINT AT UNIT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALL.
EP30 PROVIDE 120V CONNECTION TO BAS PANEL. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR.
EP31 COORDINATE FINAL LOCATION AND ORIENTATION OF FLOOR BOX WITH ARCHITECT'S FINAL FURNITURE PLAN BEFORE ROUGH-IN.
EP33 PROVIDE 240V, 600A/3P, NEMA 1, FUSIBLE, SERVICE ENTRANCE RATED DISCONNECT SWITCH FOR PV SYSTEM. PROVIDE WITH 600A FUSES.
EP40 CONNECT CIRCUIT TO INTEGRAL DISCONNECT AT UNIT HEATER. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR.
EP41 PROVIDE 120V CONNECTION FOR FIRE ALARM CONTROL PANEL. CONFIRM FINAL LOCATION OF FACP PRIOR TO ROUGH-IN.
EP42 PROVIDE 120V CONNECTION TO DOOR FOR ELECTRONIC HARDWARE.
EP43 PROVIDE (4) 2" CONDUITS FROM PV PANEL UP TO ROOF AND CAP FOR FUTURE USE.
EP44 TERMINATE CIRCUIT IN ABOVE-CEILING JUNCTION BOX FOR FUTURE PROJECTOR CONNECTION.
EP45 PROVIDE 120V CONNECTION TO SNORKEL HOOD. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR.
EP46 PROVIDE 120V CONNECTION TO MOTORIZED SHADES. EXTEND CIRCUIT TO MULTIPLE MOTORS AS REQUIRED. COORDINATE INSTALL WITH SHADE VENDOR.
EP49 PROVIDE LEGRAND 520GB306TRGFI6 3FT SELF TEST GFCI 5-OUTLET PLUGMOLD (OR EQUIVALENT) AND INSTALL AT INDICATED MOUNTING HEIGHT. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALL.
EP50 PROVIDE LEGRAND PM48TC 4FT 5-OUTLET PLUGMOLD (OR EQUIVALENT) AND INSTALL AT INDICATED MOUNTING HEIGHT. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALL.

1 E201 **ELECTRICAL POWER FLOOR PLAN - FIRST FLOOR**
1/8" = 1'-0" 0' 8' 16' 24' **1/8" = 1'-0"**

400 Granby Street
Suite 301
Norfolk, VA 23510
wparch.com 757.227.5310
WPA
WORK PROGRAM ARCHITECTS

COMMONWEALTH OF VIRGINIA
NATHAN P. CARNEY
Lic. No. 0402070177
04/24/2026
PROFESSIONAL ENGINEER

VIRGINIA TECH
IMPROVE CENTER WOODS COMPLEX
697 INVENTIVE LANE, BLACKSBURG, VA. 24061
PERMIT SET

PROJECT #	229 - 18699 - 000
DATE	04/24/2026

REVISIONS:

#	DESCRIPTION	DATE
2	Addendum No. 4	6/5/26

E201

ELECTRICAL POWER FLOOR PLANS

PANELBOARD AND WIRING SCHEDULE

PANEL: MDP1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** Yes — **LOCATION:** ELEC. A140
AMPERES: 1200 A — **MOUNTING:** SURFACE — **SUPPLY FROM:**

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
						1	14.5	9.4		2						
	0.32%	RP1	3-#1, 1-#1, 1-#6	125	3	3		12.9	11.4	4	3	125	3-#3/0, 1-#3/0, 1-#2	RP2	1.03%	
						5			15.3	10.2	6					
	0.23%	MP1	2 runs of 3-#3/0, 1-#3/0, 1-#3	400	3	7	42.9	9.5		8						
						9		41.7	9.8		10	3	125	3-#2/0, 1-#2/0, 1-#4	MP2	1.14%
						11			37.2	8.4	12					
	0.18%	LP1	3-#6, 1-#6, 1-#10	50	3	13	2.7	1.4		14						
						15		1.5	1.5		16	3	30	3-#6, 1-#6, 1-#6	LP2	0.90%
						17				0.5	0.6	18				
	1.13%	WET LAB	3-#4, 1-#4, 1-#6	50	3	19	2.9	0.8		20						
						21		4.0	1.9		22	3	50	3-#6, 1-#6, 1-#10	SHOP FAB	1.09%
						23				2.6	0.0	24				
	0.76%	CLEAN FAB	3-#6, 1-#6, 1-#10	50	3	25	1.3	13.6		26						
						27		0.7	9.4		28	3	125	3-#1/0, 1-#1/0, 1-#6	ATS-SB	0.20%
						29			0.4	8.5	30					
	0.19%	ATS-LS	3-#6, 1-#6, 1-#10	50	3	31	2.9				32					
						33		2.7			34					
						35			1.7		36					
						37					38					
						39					40					
						41					42					
							101.9 kVA	97.5 kVA	85.3 kVA							
							865 A	828 A	711 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	50640 VA	100.00%	50640 VA	TOTAL CONNECTED LOAD:	285 kVA
HVAC	153294 VA	100.00%	153294 VA	TOTAL ESTIMATED DEMAND:	258 kVA
LTNG	12044 VA	125.00%	15055 VA	TOTAL CONNECTED CURRENT:	790 A
REC	68780 VA	57.27%	39390 VA	TOTAL ESTIMATED DEMAND CURRENT:	717 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: LP2 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** EQUIPMENT STORAGE A 145
AMPERES: 50 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** MDP1

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	2.72%	STOR, GARAGE & SHOP...	1-#10, 1-#10, 1-#10	20	1	1	1.1	0.4		2	1	20	1-#12, 1-#12, 1-#12	STOR & CLEAN FAB LTNG	0.77%	
	1.91%	CORR & ANI LAB LTNG	1-#12, 1-#12, 1-#12	20	1	3			0.8	0.7	4	1	20	1-#12, 1-#12, 1-#12	ANI LAB/SUPPORT & LA...	1.87%
	0.43%	EQUIP PLATFORM LTNG	1-#12, 1-#12, 1-#12	20	1	5				0.1	0.5	6	1	20	1-#12, 1-#12, 1-#12	CORR & STORAGE LTNG	1.98%
	0.00%	SPARE	--	20	1	7	0.0	0.0				8	1	20	--	SPARE	0.00%
	0.00%	SPARE	--	20	1	9			0.0	0.0		10	1	20	--	SPARE	0.00%
	0.00%	SPARE	--	20	1	11				0.0	0.0	12	1	20	--	SPARE	0.00%
	0.00%	SPARE	--	20	1	13	0.0	0.0				14	1	20	--	SPARE	0.00%
	0.00%	SPARE	--	20	1	15			0.0	--		16	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	17					--	18	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	19	--	--				20	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	21			--	--		22	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	23					--	24	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	25	--	--				26	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	27			--	--		28	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	29					--	30	1	--	--	SPACE	0.00%
							1.4 kVA	1.5 kVA	0.6 kVA							
							13 A	14 A	5 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LTNG	3562 VA	125.00%	4453 VA	TOTAL CONNECTED LOAD:	4 kVA
				TOTAL ESTIMATED DEMAND:	4 kVA
				TOTAL CONNECTED CURRENT:	10 A
				TOTAL ESTIMATED DEMAND CURRENT:	12 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: PV1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** ELEC. A140
AMPERES: 600 A — **MOUNTING:** SURFACE — **SUPPLY FROM:**

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
						1				2						
						3				4						
						5				6						
						7				8						
						9				10						
						11				12						
						13				14						
						15				16						
						17				18						
						19				20						
						21				22						
						23				24						
						25				26						
						27				28						
						29				30						
							0.0 kVA	0.0 kVA	0.0 kVA							
							0 A	0 A	0 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
				TOTAL CONNECTED LOAD:	0 kVA
				TOTAL ESTIMATED DEMAND:	0 kVA
				TOTAL CONNECTED CURRENT:	0 A
				TOTAL ESTIMATED DEMAND CURRENT:	0 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: LS1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** Yes — **LOCATION:** ELEC. A140
AMPERES: 50 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** ATS-LS

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	3.21%	CORRIDOR, RR & I.T. E...	1-#10, 1-#10, 1-#10	20	1	1	0.9			2						
	2.22%	BOH, LG MTG, ENTRY & ...	1-#8, 1-#8, 1-#8	20	1	3		1.0	0.1	4	1	20	1-#12, 1-#12, 1-#12	NORTH EXTERIOR LTNG	0.38%	
	2.31%	CORR, EQUIP...	1-#10, 1-#10, 1-#10	20	1	5			0.5	0.2	6	1	20	1-#12, 1-#12, 1-#12	EAST EXTERIOR LTNG	1.31%	
	2.38%	SHOP & CLEAN FAB &...	1-#12, 1-#12, 1-#12	20	1	7	0.3	0.1		8	1	20	1-#12, 1-#12, 1-#12	SOUTH EXTERIOR LTNG	1.25%	
	2.04%	WET&ANI LAB, MTG AN...	1-#12, 1-#12, 1-#12	20	1	9		0.2	0.3	10	1	20	1-#12, 1-#12, 1-#12	CORRIDOR & ANI. LAB E...	2.39%	
	1.04%	BAS PANEL 200	1-#12, 1-#12, 1-#12	20	1	11			0.2	0.2	12	1	20	1-#10, 1-#10, 1-#10	MTG, WRITE UP & WET...	0.81%	
	1.01%	FACP A100	1-#12, 1-#12, 1-#12	20	1	13	0.5	0.5		14	1	20	1-#10, 1-#10, 1-#10	DOOR HARDWARE, SE...	2.59%	
	1.89%	DOOR HARDWARE, NE...	1-#12, 1-#12, 1-#12	20	1	15		0.3	0.8	16	1	20	1-#12, 1-#12, 1-#12	DOOR HARDWARE, NW...	1.89%	
	0.33%	FP AIR COMPRESSOR A120	2-#12, 1-#12, 1-#12	20	2	17			0.6	0.0	18	1	20	--	SPARE	0.00%	
						19	0.6	0.0		20	1	20	--	SPARE	0.00%	
	0.00%	SPACE	--	--	1	21		--	0.0	22	1	20	--	SPARE	0.00%	
	0.00%	SPACE	--	--	1	23			--	24	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	25	--	--		26	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	27		--	--	28	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	29			--	30	1	--	--	SPACE	0.00%	
							2.9 kVA	2.7 kVA	1.7 kVA							
							25 A	23 A	14 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	3400 VA	100.00%	3400 VA	TOTAL CONNECTED LOAD:	7 kVA
LTNG	3803 VA	125.00%	4754 VA	TOTAL ESTIMATED DEMAND:	8 kVA
				TOTAL CONNECTED CURRENT:	20 A
				TOTAL ESTIMATED DEMAND CURRENT:	23 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: MP1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** ELEC. A140
AMPERES: 400 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** MDP1

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	1.42%	P-2B A120	2-#12, 1-#12, 1-#12	20	2	1	3.0	3.0		2						
						3		3.0	3.0	4	2	20	2-#12, 1-#12, 1-#12	P-1B A120	1.19%	
						5			14.5	14.5	6					
	0.41%	HPC	3-#2/0, 1-#2/0, 1-#6	175	3	7	14.5	14.5		8	3	175	3-#2/0, 1-#2/0, 1-#6	HPC	0.39%	
						9		14.5	14.5	10						
	0.70%	FCU-10 100B	2-#12, 1-#12, 1-#12	15	2	11			1.1	0.6	12	2	20	2-#12, 1-#12, 1-#12	EF-1	0.97%	
						13	1.1	0.6		14						
	0.04%	FCU-1 110G	2-#12, 1-#12, 1-#12	15	2	15		0.0	0.6	16	2	20	2-#12, 1-#12, 1-#12	EF-2	1.13%	
						17			0.0	0.6	18					
	0.03%	FCU-1 110C	2-#12, 1-#12, 1-#12	15	2	19	0.0	0.0		20	2	15	2-#12, 1-#12, 1-#12	FCU-1 110H	0.05%	
						21		0.0	0.0	22						
	0.04%	FCU-1 110E	2-#12, 1-#12, 1-#12	15	2	23			0.0	0.2	24	2	15	2-#12, 1-#12, 1-#12	FCU-2 A100	0.15%	
						25	0.0	0.2		26						
	0.04%	FCU-1 110F	2-#12, 1-#12, 1-#12	15	2	27		0.0	0.0	28	2	15	2-#12, 1-#12, 1-#12	FCU-1 110D	0.03%	
						29			0.0	0.0	30					
	0.20%	DWH-1 A120	3-#6, 1-#6, 1-#10	50	3	31	4.1	0.2		32	1	20	1-#12, 1-#12, 1-#12	HPC CONTROL PANEL	0.43%	
						33		4.1	0.2	34	1	20	1-#12, 1-#12, 1-#12	VAV/CAV CONNECTION...	0.22%	
						35			4.1	0.0	36	2	15	2-#12, 1-#12, 1-#12	FCU-1 105	0.04%	
	0.26%	FCU-11 103	2-#12, 1-#12, 1-#12	15	2	37	0.2	0.0		38						
						39		0.2	0.0	40	2	15	2-#12, 1-#12, 1-#12	FCU-1 105	0.04%	
	0.69%	FCU-8 101	2-#12, 1-#12, 1-#12	20	2	41			0.8	0.0	42					
						43	0.8	0.8		44	2	15	2-#12, 1-#12, 1-#12	FCU-8 101	0.90%	
	0.52%	UH-1 A120	2-#12, 1-#12, 1-#12	20	2	45		0.8	0.8	46						
						47			0.8	--	48	1	--	--	SPACE	0.00%
	0.00%	SPACE	--	--	1	49	--	--		50	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	51		--	--	52	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	53			--	--	54	1	--	--	SPACE	0.00%	
							42.9 kVA	41.7 kVA	37.2 kVA							
							363 A	354 A	310 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	12600 VA	100.00%	12600 VA	TOTAL CONNECTED LOAD:	122 kVA
HVAC	109206 VA	100.00%	109206 VA	TOTAL ESTIMATED DEMAND:	122 kVA
				TOTAL CONNECTED CURRENT:	338 A
				TOTAL ESTIMATED DEMAND CURRENT:	338 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: RP1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** ELEC. A140
AMPERES: 125 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** MDP1

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	3.10%	REC 112, 112-1	1-#12, 1-#12, 1-#12	20	1	1	0.7	1.1		2	1	20	1-#12, 1-#12, 1-#12	PHONE BOOTHS 110B	2.24%	
	1.65%	COPIER 110	1-#12, 1-#12, 1-#12	20	1	3			0.6	0.5	4	1	20	1-#12, 1-#12, 1-#12	REC 110G	2.14%	
	1.93%	REC 110F	1-#12, 1-#12, 1-#12	20	1	5				0.5	0.5	6	1	20	1-#12, 1-#12, 1-#12	REC 110E	1.85%	
	1.63%	REC 110D	1-#12, 1-#12, 1-#12	20	1	7	0.5	0.5				8	1	20	1-#12, 1-#12, 1-#12	REC 110C	1.58%	
	1.67%	REC A100, A101, 110	1-#12, 1-#12, 1-#12	20	1	9		0.7	0.6			10	1	20	1-#12, 1-#12, 1-#12	COFFEE MAKER 110A	1.69%	
1.	2.73%	FRIDGE 110A	1-#12, 1-#12, 1-#12	20	1	11				1.0	1.2	12	1	20	1-#10, 1-#10, 1-#10	DISHWASHER 110A	2.14%	1.
1.	0.43%	WATER FOUNTAIN A101	1-#12, 1-#12, 1-#12	20	1	13	0.2	0.4				14	1	20	1-#12, 1-#12, 1-#12	REC A102, A103	0.93%	
	2.52%	HAND DRYER A103	1-#12, 1-#12, 1-#12	20	1	15		1.0	0.5			16	1	20	1-#12, 1-#12, 1-#12	EQUIP	1.17%	
	2.79%	REC 110A, A109	1-#10, 1-#10, 1-#10	20	1	17				1.3	0.7	18	1	20	1-#12, 1-#12, 1-#12	REC A106, A107	3.04%	
	2.09%	HAND DRYER A105	1-#10, 1-#10, 1-#10	20	1	19	1.0	1.0				20	1	20	1-#12, 1-#12, 1-#12	EQUIP	2.29%	
	2.40%	REC 110H	1-#12, 1-#12, 1-#12	20	1	21			0.5	0.1		22	1	20	1-#12, 1-#12, 1-#12	PAPER TOWEL...	0.18%	
	1.92%	PAPER TOWEL...	1-#12, 1-#12, 1-#12	20	1	23					0.5	0.7	24	1	20	1-#12, 1-#12, 1-#12	REC A100B, A105	1.51%	1
	2.39%	FLOORBOXES 100	1-#12, 1-#12, 1-#12	20	1	25	1.4	1.4				26	1	20	1-#12, 1-#12, 1-#12	FLOORBOXES 100	2.17%	
	1.96%	FLOORBOXES 100	1-#12, 1-#12, 1-#12	20	1	27			1.4	1.4		28	1	20	1-#12, 1-#12, 1-#12	FLOORBOXES 100	2.08%	
1.	0.65%	WATER FOUNTAIN A108	1-#12, 1-#12, 1-#12	20	1	29				0.2	0.9	30	1	20	1-#12, 1-#12, 1-#12	REC 100	1.61%	
	0.14%	REC A140	1-#12, 1-#12, 1-#12	20	1	31	0.2	0.2				32	1	20	1-#12, 1-#12, 1-#12	REC 100A	0.20%	
	0.14%	REC 100A	1-#10, 1-#10, 1-#10	20	1	33			0.2	0.7		34	1	20	1-#12, 1-#12, 1-#12	REC 101	2.48%	
	2.19%	FLOORBOXES 101	1-#10, 1-#10, 1-#10	20	1	35					1.4	0.7	36	1	20	1-#12, 1-#12, 1-#12	REC A120	0.89%	
	0.61%	PROJECTOR SCREEN 103	1-#12, 1-#12, 1-#12	20	1	37	0.2	1.3				38	1	20	1-#10, 1-#10, 1-#10	REC 103	2.35%	
	0.56%	EQUIP MEETING 1 103	1-#12, 1-#12, 1-#12	20	1	39			0.2	1.1		40	1	20	1-#10, 1-#10, 1-#10	REC 105	2.14%	
	2.10%	REC OUTSIDE	1-#10, 1-#10, 1-#10	20	1	41					0.9	0.9	42	1	20	1-#8, 1-#8, 1-#8	REC OUTSIDE	3.16%	
	2.62%	FLOOR BOXES 110B	1-#8, 1-#8, 1-#8	20	1	43	2.2	2.2				44	1	20	1-#8, 1-#8, 1-#8	FLOOR BOXES 110B	3.13%	
	2.39%	FLOOR BOXES 101	1-#10, 1-#10, 1-#10	20	1	45			1.4	1.4		46	1	20	1-#10, 1-#10, 1-#10	FLOOR BOXES 101	2.67%	
	2.07%	FLOOR BOXES 101	1-#10, 1-#10, 1-#10	20	1	47					1.4	1.4	48	1	20	1-#12, 1-#12, 1-#12	FLOOR BOXES 101	2.90%	
	0.68%	PROJECTOR 110A	1-#12, 1-#12, 1-#12	20	1	49	0.2	0.2				50	1	20	1-#12, 1-#12, 1-#12	MOTORIZED SHADES 100	0.37%	
	0.28%	EQUIP LG MEETING 100	1-#12, 1-#12, 1-#12	20	1	51			0.2	0.2		52	1	20	1-#12, 1-#12, 1-#12	PROJECTOR 100	0.23%	
	1.60%	REC A104	1-#12, 1-#12, 1-#12	20	1	53					0.7	0.2	54	1	20	1-#12, 1-#12, 1-#12	MOTORIZED SHADES 103	0.64%	
	0.00%	SPARE	--	20	1	55	0.0	0.0				56	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	57			0.0	0.0		58	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	59					0.0	0.0	60	1	20	--	SPARE	0.00%	
							14.5 kVA	12.9 kVA	15.3 kVA							
							123 A	107 A	130 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	9030 VA	100.00%	9030 VA	TOTAL CONNECTED LOAD:	43 kVA
REC	33660 VA	64.85%	21830 VA	TOTAL ESTIMATED DEMAND:	31 kVA
				TOTAL CONNECTED CURRENT:	118 A
				TOTAL ESTIMATED DEMAND CURRENT:	86 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
1. PROVIDE CIRCUIT WITH GFCI BREAKER.

PANELBOARD AND WIRING SCHEDULE

PANEL: LP1 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** ELEC. A140
AMPERES: 50 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** MDP1

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	3.05%	BOH & LG MTG LTNG	1-#12, 1-#12, 1-#12	20	1	1	1.3	0.6		2	1	20	1-#12, 1-#12, 1-#12	CORR & POST GRAD...	1.90%	
	2.21%	CORR & RR LTNG	1-#10, 1-#10, 1-#10	20	1	3			0.7	0.4	4	1	20	1-#12, 1-#12, 1-#12	OFFICE LTNG	1.71%	
						5					0.5	6	1	20	1-#12, 1-#12, 1-#12	RESEARCH DESKING...	2.14%	
	2.07%	WET LAB LTNG	1-#12, 1-#12, 1-#12	20	1	7	0.4	0.5		8	1	20	1-#12, 1-#12, 1-#12	WET LAB LTNG	2.28%	
	1.42%	MTG, WRITE UP & WET...	1-#12, 1-#12, 1-#12	20	1	9			0.4	0.0	10	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	11					0.0	0.0	12	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	13	0.0	0.0				14	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	15			0.0	0.0		16	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	17					0.0	0.0	18	1	20	--	SPARE	0.00%	
	0.00%	SPARE	--	20	1	19	0.0	--		20	1	20	--	SPARE	0.00%	
	0.00%	SPACE	--	--	1	21		--	--	22	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	23					--	--	24	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	25	--	--		26	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	27		--	--	28	1	--	--	SPACE	0.00%	
	0.00%	SPACE	--	--	1	29			--	--	30	1	--	--	SPACE	0.00%	
							2.7 kVA	1.5 kVA	0.5 kVA							
							24 A	14 A	4 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LTNG	4678 VA	125.00%	5848 VA	TOTAL CONNECTED LOAD:	5 kVA
				TOTAL ESTIMATED DEMAND:	6 kVA
				TOTAL CONNECTED CURRENT:	13 A
				TOTAL ESTIMATED DEMAND CURRENT:	16 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: MP2 — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** 42 KAIC
VOLTAGE: 208Y/120V,3P,4W — **SPD:** No — **LOCATION:** EQUIPMENT STORAGE A 145
AMPERES: 125 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** MDP1

NOTES	VD %	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	VD %	NOTES
	0.71%	VAV/CAV CONNECTION...	1-#12, 1-#12, 1-#12	20	1	1	0.2	0.2		2	1	20	1-#12, 1-#12, 1-#12	VAV/CAV CONNECTION...	0.24%	
						3				4						
	1.49%	FCU-6 110B	2-#12, 1-#12, 1-#12	15	2	5		0.8	0.2	6	2	20	2-#12, 1-#12, 1-#12	CF-1 130A	0.16%	
						7	0.2	0.2		8						
	0.21%	FCU-2 112	2-#12, 1-#12, 1-#12	15	2	9			0.2	0.2	10	2	15	2-#12, 1-#12, 1-#12	FCU-2 145	0.15%	
						11				0.2	0.2

SITE - GENERAL NOTES

A. DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS AND COORDINATE WITH CIVIL DRAWINGS AND SURVEYS.
B. REFER ALSO TO ALL OTHER PLANS AND THE SPECIFICATION, BUT ESPECIALLY TO: THE SITE SURVEY, THE ARCHITECTURAL SITE PLAN, THE SITE GRADING PLAN, THE PLANTING PLAN (WHERE AVAILABLE), FOUNDATION PLAN(S), APPROPRIATE MECHANICAL & ELECTRICAL FLOOR PLANS FOR SERVICE CONTINUATIONS, THE SITE UTILITY PLAN - MECHANICAL & ELECTRICAL. WHERE THERE ARE CONFLICTS AMONG THESE PLANS AND/OR RELATED SPECIFICATIONS, ADVISE THESE ENGINEERS AT LEAST TEN DAYS PRIOR TO SUBMISSION OF BIDS.
C. ALL FEES AND ANY OTHER COSTS TO UTILITY COMPANIES, MUNICIPALITIES, INSPECTORS, REVIEWING AGENCIES, ETC. ARE TO BE INCLUDED AS A PART OF THIS CONTRACT.
D. STATE CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.
E. WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICE IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY UP INTO BOTTO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.

SITE - GENERAL NOTES

F. LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS, EXISTING UTILITIES LOCATIONS MAY VARY. CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL STATE, RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS.
G. PROVIDE LONG RADIUS ELBOWS FOR UNDERGROUND CONDUIT BENDS. WHERE SERVING A UTILITY OWNED TRANSFORMER, THE UTILITY STANDARDS SHALL TAKE PRECEDENCE.
H. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE ENGINEER. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID PROPOSAL INDICATES THAT THE CONTRACTOR IS FULLY AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.

SITE - GENERAL NOTES

I. PROVIDE PVC FOR EXTERIOR UNDERGROUND TRANSITIONS TO ABOVE GRADE; EXTEND CONDUIT A MINIMUM OF 6" ABOVE GRADE. GALVANIZED RIGID CONDUIT IS NOT ALLOWED.
J. CONTRACTOR SHALL PERFORM A SMOKE TEST ON ALL CONDUITS INSTALLED ON SITE AND SHALL TAKE ALL NECESSARY CORRECTIVE ACTION IF NOT FOUND IN COMPLIANCE WITH FACILITY STANDARDS.
K. CONTRACTOR SHALL CONTACT ENGINEER FOR INSPECTION OF TRENCHES PRIOR TO INSTALLATION OF CONDUITS OR RACEWAYS. PROVIDE PHOTOS UPON REQUEST.
L. CONTRACTOR SHALL CUT AND PATCH ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR WORK. CONTRACTOR SHALL REPAIR ALL LANDSCAPING THAT IS DAMAGED FOR WORK. FINISH GRADE, SEED AND STRAW ALL DISTURBED GREEN SPACES. ALL PATCH AND REPAIR WORK SHALL BE IN ACCORDANCE WITH BOTH CIVIL AND LANDSCAPE DRAWINGS AND SPECIFICATIONS.
M. COORDINATE UNDERGROUND ELECTRICAL WITH ALL LANDSCAPING AND FENCING, ADJUST ELECTRICAL LINES TO AVOID CONFLICTS. REFER TO LANDSCAPING PLANS FOR FURTHER INFORMATION. AVOID ROUTING UNDERGROUND CONDUITS UNDER ROADWAYS OR PARKING LOTS, CROSS ROADWAYS WITH UNDERGROUND CONDUITS AT 90 ANGLES WHERE POSSIBLE.

SITE - GENERAL NOTES

N. PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY, THE ARCHITECT, AND THE BUILDING OPERATORS AT LEASTE ONE WEEK IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE IN WRITING AND INSURE THAT THEY DO NOT DELAY WORK.
O. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.
P. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE OTHER UTILITY OWNERS.
Q. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE OTHER UTILITIES. THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.

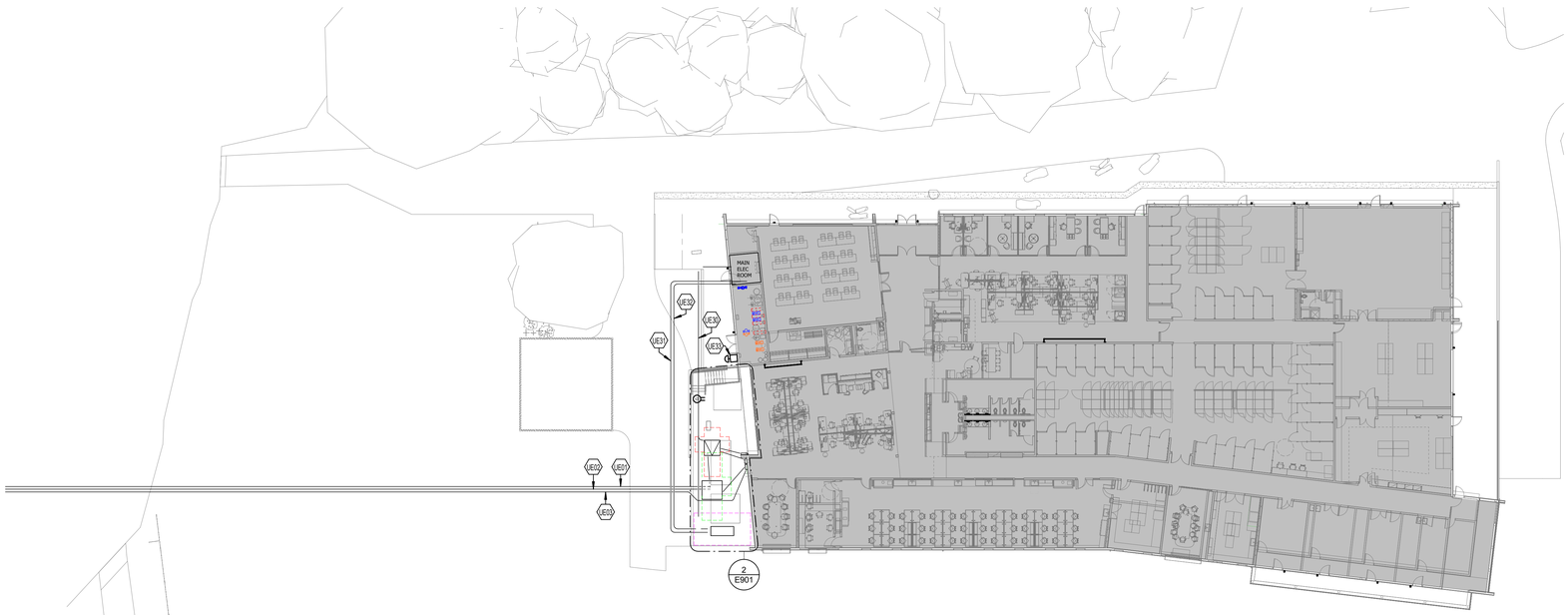
SITE - GENERAL NOTES

R. CONTRACTOR SHALL PAY ALL TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
S. THE UTILITY WILL PROVIDE STAKING DATA INCLUDING NORTHING AND EASTING DATA AS REQUIRED OR SHOWN ON DRAWINGS.
T. REATTACH ALL TAPS AND TRANSFORMERS AS TO MAINTAIN EXISTING PHASE CONNECTIONS.
U. CONTRACTOR RESPONSIBLE FOR MAINTAINING DOWNSTREAM SERVICE FROM REMOVED EQUIPMENT ON SITE. INCLUDING BUT NOT LIMITED TO SITE LIGHTING, TRANSFORMERS, ETC.
V. WHEN DEMOLITION OF AN ELECTRICAL DEVICE (OR CIRCUIT) IS INDICATED ON THE DRAWINGS: THE CONTRACTOR SHALL ENSURE THAT OTHER DEVICES OR EQUIPMENT "UPSTREAM" OR "DOWNSTREAM" ON THE CIRCUITS SHALL REMAIN IN "PRE-DEMOLITION" WORKING ORDER. "LEFT-OVER" CIRCUIT BREAKERS SHALL REMAIN, BE SWITCHED TO OFF POSITION, AND BE LABELED AS SPARES IN THEIR PANELS. PROVIDE NEW TYPEWRITTEN DIRECTORIES FOR ALL PANELS AFFECTED.
W. REMOVE ALL ASSOCIATED BACKBOXES, CONDUIT AND CONDUCTORS FOR DEVICES/FIXTURES/ETC. BEING REMOVED (BACK TO SOURCE), WHETHER INDICATED OR NOT (UON).
X. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH OWNER. TURN OVER ITEMS REMOVED TO OWNER AT THEIR OPTION.
Y. COORDINATE WITH OTHER TRADES FOR THE REMOVAL AND/OR RELOCATION OF ELECTRICAL DEVICES AND CONNECTIONS ASSOCIATED WITH THEIR EQUIPMENT.

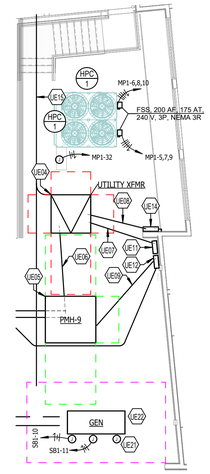
TAGGED NOTES

UE01 VTES TO PROVIDE (2) 4" CONDUIT AND CONDUCTORS FOR A & B PRIMARY FEEDS TO SITE.
UE02 VTES TO PROVIDE (1) 4" SPARE CONDUIT TO SITE.
UE03 VTES TO PROVIDE (1) 2" CONDUIT AND CABLING FOR SCADA FEED TO SITE.
UE04 VTES TO PROVIDE UTILITY TRANSFORMER AND MAKE ALL INTERNAL TERMINATIONS. CONTRACTOR TO INSTALL VTES-FURNISHED FIBERGLASS WELL.
UE05 VTES TO PROVIDE MEDIUM-VOLTAGE SWITCH AND MAKE ALL INTERNAL TERMINATIONS. CONTRACTOR TO INSTALL VTES-FURNISHED FIBERGLASS WELL.
UE06 PROVIDE (1) 4" CONDUIT FROM MEDIUM-VOLTAGE SWITCH TO UTILITY TRANSFORMER. PROVIDE TRANSITIONS FOR CONDUIT TO STUB UP THROUGH CONCRETE PADS AND INSTALL AT A MINIMUM OF 24" BELOW GRADE. VTES TO PROVIDE CONDUCTORS.
UE07 PROVIDE (1) 1" CONDUIT FROM UTILITY TRANSFORMER TO METER BASE. PROVIDE TRANSITIONS FOR CONDUIT TO STUB UP THROUGH CONCRETE PAD OF TRANSFORMER AND UP INTO BOTTOM OF METER BASE. INSTALL AT A MINIMUM OF 24" BELOW GRADE. VTES TO PROVIDE CONDUCTORS.
UE08 PROVIDE 4#3/0, 1#6 GROUND IN 2.5" CONDUIT FROM UTILITY TRANSFORMER TO 200A FUSED DISCONNECT FOR FUTURE SERVICE. PROVIDE TRANSITIONS FOR CONDUIT TO STUB UP THROUGH CONCRETE PAD OF TRANSFORMER AND UP INTO BOTTOM OF DISCONNECT. INSTALL AT A MINIMUM OF 24" BELOW GRADE.
UE09 PROVIDE (1) 2" CONDUIT FROM MEDIUM-VOLTAGE SWITCH TO SCADA ENCLOSURE. PROVIDE TRANSITIONS FOR CONDUIT TO STUB UP THROUGH CONCRETE PAD OF SWITCH AND UP INTO BOTTOM OF ENCLOSURE. INSTALL AT A MINIMUM OF 24" BELOW GRADE. VTES TO PROVIDE CABLING.
UE11 VTES TO PROVIDE METER (WITH BASE) AND MAKE ALL INTERNAL TERMINATIONS.
UE12 VTES TO PROVIDE SCADA ENCLOSURE AND MAKE ALL INTERNAL TERMINATIONS.
UE14 PROVIDE 240V, 200A 3P, NEMA 3R FUSED DISCONNECT FOR FUTURE SERVICE. COORDINATE FINAL LOCATION WITH VTES PRIOR TO INSTALL.
UE15 PROVIDE SECONDARY CONDUITS AND CONDUCTORS FROM UTILITY TRANSFORMER TO SERVICE ENTRANCE; REFER TO ONE-LINE DIAGRAM FOR SIZING INFORMATION. BURY AT A MINIMUM OF 24" BELOW GRADE AND PROVIDE CONCRETE-ENCASED DUCT BANK PER VTES REQUIREMENTS. FIELD COORDINATE EXACT ROUTING.
UE21 PROVIDE 2" "C" CONDUIT FROM GENERATOR TO BAS PANEL LOCATION IN MAIN MECHANICAL ROOM FOR CONTROLS CONNECTIONS. CABLING SHALL BE PROVIDED BY BAS CONTRACTOR.
UE22 THE DESIGN SHOWN IS BASED ON CATERPILLAR D50-GC EQUIPMENT AND IS INTENDED ONLY TO SHOW THE GENERAL SIZE, CONFIGURATION, LOCATION, CONNECTIONS AND SUPPORT FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH RELATION TO THE OTHER BUILDING SYSTEMS. SEE SPECIFICATION SECTION 26 32 00 FOR TECHNICAL REQUIREMENTS PERTAINING TO THE EQUIPMENT.
UE30 PROVIDE CONDUIT FOR UNDERGROUND SECONDARY FROM PAD-MOUNTED TRANSFORMER LOCATION TO MAIN SERVICE GEAR. REFER TO ONE-LINE DIAGRAM FOR CONDUIT SIZING/QUANTITY INFORMATION AND BURY AT 24" BELOW GRADE MINIMUM.
UE31 PROVIDE FEEDER FOR STANDBY BRANCH FROM GENERATOR TO ASSOCIATED ATS IN MAIN ELECTRICAL ROOM. REFER TO ONE-LINE DIAGRAM FOR CONDUIT/CONDUCTOR SIZING INFORMATION AND BURY AT 24" BELOW GRADE MINIMUM.
UE32 PROVIDE FEEDER FOR STANDBY BRANCH FROM GENERATOR TO ASSOCIATED ATS IN MAIN ELECTRICAL ROOM. REFER TO ONE-LINE DIAGRAM FOR CONDUIT/CONDUCTOR SIZING INFORMATION AND BURY AT 24" BELOW GRADE MINIMUM.
UE33 PROVIDE GENERATOR EPO PUSH BUTTON; COORDINATE FINAL LOCATION WITH OWNER.

TEMPORARY POWER NOTE
CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH VTES FOR ALL TEMPORARY POWER MEASURES REQUIRED OVER THE COURSE OF CONSTRUCTION AND FOR PAYING ALL ASSOCIATED COSTS/FEES.



1 E901 **ELECTRICAL SITE UTILITY PLAN** 1" = 20'
1" = 20'-0" 0' 20' 40' 60'



2 E901 E901 **ENLARGED SITE UTILITY PLAN - SERVICE YARD**
1/8" = 1'-0" 0' 8' 16' 24' **1/8" = 1'-0"**

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WPA WORK PROGRAM ARCHITECTS

COMMONWEALTH OF VIRGINIA
NATHAN P. CARNEY
Lic. No. 0402070177
04/24/2026
PROFESSIONAL ENGINEER

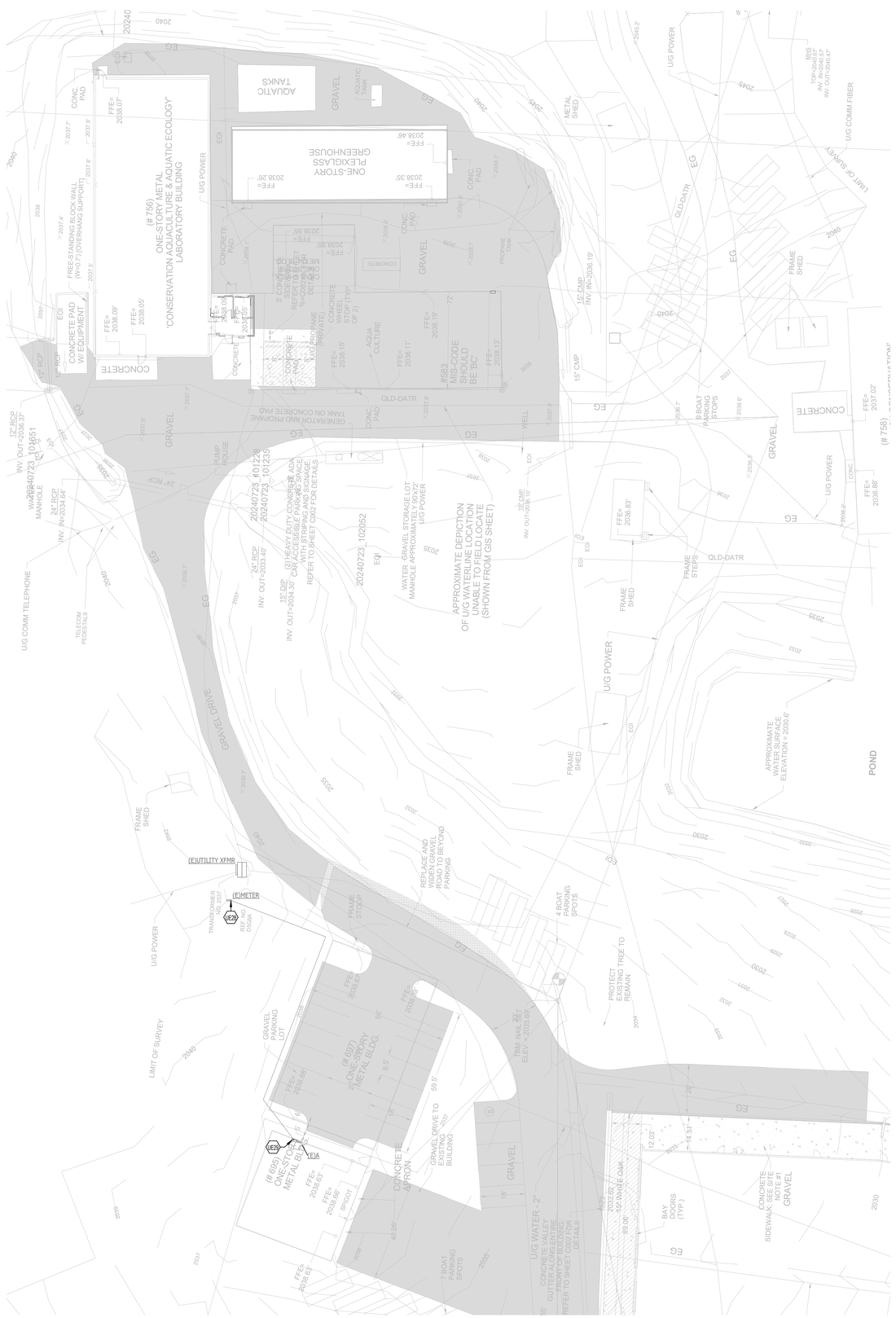
VIRGINIA TECH
IMPROVE CENTER WOODS COMPLEX
697 INVENTIVE LANE, BLACKSBURG, VA, 24061
PERMIT SET

PROJECT #	229 - 18699 - 000
DATE	04/24/2026

REVISIONS:

#	DESCRIPTION	DATE
2	Addendum No. 4	6/5/26

E901
ELECTRICAL SITE UTILITY PLAN



ELECTRICAL SITE UTILITY PLAN - AQUACULTURE RENOVATION - NEW WORK

1 E902

1" = 20'-0"

1" = 20'

0' 20' 40' 60'

SITE - GENERAL NOTES

A. DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS AND COORDINATE WITH CIVIL DRAWINGS AND SURVEYS.

B. REFER ALSO TO ALL OTHER PLANS AND THE SPECIFICATION, BUT ESPECIALLY TO: THE SITE SURVEY, THE ARCHITECTURAL SITE PLAN, THE SITE GRADING PLAN, THE PLANTING PLAN (WHERE AVAILABLE), FOUNDATION PLAN(S), APPROPRIATE MECHANICAL & ELECTRICAL FLOOR PLANS FOR SERVICE CONTINUATIONS, THE SITE UTILITY PLAN - MECHANICAL & ELECTRICAL. WHERE THERE ARE CONFLICTS AMONG THESE PLANS AND/OR RELATED SPECIFICATIONS, ADVISE THESE ENGINEERS AT LEAST TEN DAYS PRIOR TO SUBMISSION OF BIDS.

C. ALL FEES AND ANY OTHER COSTS TO UTILITY COMPANIES, MUNICIPALITIES, INSPECTORS, REVIEWING AGENCIES, ETC. ARE TO BE INCLUDED AS A PART OF THIS CONTRACT.

D. FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.

E. WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICE IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.

F. LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS, EXISTING UTILITIES LOCATIONS MAY VARY. CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS.

G. PROVIDE LONG RADIUS ELBOWS FOR UNDERGROUND CONDUIT BENDS. WHERE SERVING A UTILITY OWNED TRANSFORMER, THE UTILTY STANDARDS SHALL TAKE PRECEDENCE.

H. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE ENGINEER. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID PROPOSAL INDICATES THAT THE CONTRACTOR IS FULLY AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.

I. PROVIDE GALVANIZED RIGID CONDUIT FOR EXTERIOR UNDERGROUND TRANSITIONS TO ABOVE GRADE; EXTEND CONDUIT A MINIMUM OF 6" ABOVE GRADE.

J. CONTRACTOR SHALL PERFORM A SMOKE TEST ON ALL CONDUITS INSTALLED ON SITE AND SHALL TAKE ALL NECESSARY CORRECTIVE ACTION IF NOT FOUND IN COMPLIANCE WITH FACILITY STANDARDS.

K. CONTRACTOR SHALL CONTACT ENGINEER FOR INSPECTION OF TRENCHES PRIOR TO INSTALLATION OF CONDUITS OR RACEWAYS. PROVIDE PHOTOS UPON REQUEST.

L. CONTRACTOR SHALL CUT AND PATCH ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR WORK. CONTRACTOR SHALL REPAIR ALL LANDSCAPING THAT IS DAMAGED FOR WORK. FINISH GRADE, SEED AND STRAW ALL DISTURBED GREEN SPACES. ALL PATCH AND REPAIR WORK SHALL BE IN ACCORDANCE WITH BOTH CIVIL AND LANDSCAPE DRAWINGS AND SPECIFICATIONS.

M. COORDINATE UNDERGROUND ELECTRICAL WITH ALL LANDSCAPING AND FENCING, ADJUST ELECTRICAL LINES TO AVOID CONFLICTS. REFER TO LANDSCAPING PLANS FOR FURTHER INFORMATION. AVOID ROUTING UNDERGROUND CONDUITS UNDER ROADWAYS OR PARKING LOTS, CROSS ROADWAYS WITH UNDERGROUND CONDUITS AT 90 ANGLES WHERE POSSIBLE.

N. PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY, THE ARCHITECT, AND THE BUILDING OPERATORS AT LEASTE ONE WEEK IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE IN WRITING AND INSURE THAT THEY DO NOT DELAY WORK.

O. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.

P. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE OTHER UTILITY OWNERS.

Q. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE OTHER UTILITIES. THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.

R. CONTRACTOR SHALL PAY ALL TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

S. THE UTILITY WILL PROVIDE STAKING DATA INCLUDING NORTHING AND EASTING DATA AS REQUIRED OR SHOWN ON DRAWINGS.

T. REATTACH ALL TAPS AND TRANSFORMERS AS TO MAINTAIN EXISTING PHASE CONNECTIONS.

U. CONTRACTOR RESPONSIBLE FOR MAINTAINING DOWNSTREAM SERVICE FROM REMOVED EQUIPMENT ON SITE. INCLUDING BUT NOT LIMITED TO SITE LIGHTING, TRANSFORMERS, ETC.

V. WHEN DEMOLITION OF AN ELECTRICAL DEVICE (OR CIRCUIT) IS INDICATED ON THE DRAWINGS: THE CONTRACTOR SHALL ENSURE THAT OTHER DEVICES OR EQUIPMENT "UPSTREAM" OR "DOWNSTREAM" ON THE CIRCUITS SHALL REMAIN IN "PRE-DEMOLITION" WORKING ORDER. "LEFT-OVER" CIRCUIT BREAKERS SHALL REMAIN, BE SWITCHED TO OFF POSITION, AND BE LABELED AS SPARES IN THEIR PANELS. PROVIDE NEW TYPEWRITTEN DIRECTORIES FOR ALL PANELS AFFECTED.

W. REMOVE ALL ASSOCIATED BACKBOXES, CONDUIT AND CONDUCTORS FOR DEVICES/FIXTURES/ETC. BEING REMOVED (BACK TO SOURCE), WHETHER INDICATED OR NOT (UON).

X. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH OWNER. TURN OVER ITEMS REMOVED TO OWNER AT THEIR OPTION.

Y. COORDINATE WITH OTHER TRADES FOR THE REMOVAL AND/OR RELOCATION OF ELECTRICAL DEVICES AND CONNECTIONS ASSOCIATED WITH THEIR EQUIPMENT.

TAGGED NOTES

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UE28	COORDINATE WITH VTES FOR RECONNECTION OF NEW FEEDER AT EXISTING METER LOCATION.
UE29	PROVIDE NEW 240V, 100A/2P, NEMA 1, SERVICE-RATED ENCLOSED CIRCUIT BREAKER AS NEW MAIN SERVICE DISCONNECT. EXTEND NEW SERVICE SECONDARY THROUGH ECB AND CONNECT AT EXISTING PANEL "A".

TEMPORARY POWER NOTE

CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH VTES FOR ALL TEMPORARY POWER MEASURES REQUIRED OVER THE COURSE OF CONSTRUCTION AND FOR PAYING ALL ASSOCIATED COSTS/FEES.

WORK PROGRAM ARCHITECTS
400 Granby Street
Suite 301
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Nathan Carney
NATHAN P. CARNEY
Lic. No. 0402070177
04/24/2026

VIRGINIA TECH
IMPROVE CENTER WOODS COMPLEX
697 INVENTIVE LANE, BLACKSBURG, VA, 24061
PERMIT SET

PROJECT # 229 - 18699 - 000
DATE 04/24/2026

REVISIONS:

#	DESCRIPTION	DATE
2	Addendum No. 4	6/5/26

E902

ELECTRICAL SITE UTILITY PLAN - AQUACULTURE RENOVATION - NEW WORK