

December 13, 2024 12:15 p.m.<sup>1</sup> James Branch Cabell Library 901 Park Avenue – Room 303 Richmond, VA

#### **MINUTES**

**DRAFT** 

#### **BOARD MEMBERS PRESENT**

Hon. Todd P. Haymore, Rector

Mr. Andy Florance, Vice Rector

Mr. Anthony Bedell - departed at 2 p.m.

Ms. Rooz Dadabhoy

Mr. Steven DeLuca

Dr. Siobhan Dunnavant - in-person then transitioned to virtual at 1:35 p.m. pursuant to Code Section 2.2-3708.3(B)(4) personal matter where the member was unable to attend the meeting due to a personal matter - Henrico, VA

Hon. Peter Farrell

Ms. Ellen Fitzsimmons - arrived at 2:18 p.m., virtual pursuant to Code Section 2.2-3708.3(B)(3) where the member's principal residence is over 60 miles from the meeting location – Walland, TN

Dr. Dale Jones

Dr. Kenneth Lipstock

Mr. Tyrone Nelson - arrived at 2:21 p.m. and departed at 3:40 p.m.

Dr. Clifton Peay

Mr. Randolph Reynolds, Jr.

Mr. C.J. Sailor - arrived at 1:30 p.m. and departed at 2 p.m., virtual pursuant to Code Section 2.2-3708.3(B)(4) personal matter where the member was unable to attend the meeting due to previous commitment—Washington D.C.

Mr. P2 Sandhu

#### **BOARD MEMBERS ABSENT**

Mr. Ed McCoy

#### **OTHERS PRESENT**

Dr. Michael Rao, President

<sup>&</sup>lt;sup>1</sup> The start time for the Board of Visitors meeting is approximate only. The meeting may begin either before or after the listed approximate start time as Board members are ready to proceed.

Ms. Chelsea Gray, Executive Director of Board and Executive Operations
Ms. Stephanie Hamlett, University Counsel
Ms. Suzanne Milton, Chief Audit and Compliance Executive
Presidential Cabinet of VCU
VCU students, faculty and staff
Members of the Media

#### **CALL TO ORDER**

Rector Todd Haymore called the meeting to order at 12:16 p.m. The public was able to view the open session of the meeting via livestream at <a href="https://mssvideo.vcu.edu/BOV">https://mssvideo.vcu.edu/BOV</a>.

#### PUBLIC COMMENT PERIOD

Ms. Chelsea Gray, Executive Director for Board and Executive Operations, mentioned that per board procedures a notice was shared allowing for a public comment period and written public comment.

The board heard from all of those who signed up to speak and received written materials that were provided during the meeting. A copy of the written materials can be found as *Exhibit A* to these minutes.

#### **RECTOR'S REMARKS**

The Rector began his remarks by welcoming everyone and providing an overview of recent activities, including the board retreat in late October and the special joint meeting with the Board of Directors in November. He noted that the biggest takeaway from the recent meetings has been the board's strategic and collaborative approach to addressing issues, focusing on the long-term success of the university and its students.

He reminded the members of the time that was spent with Dr. Paul Friga from the Association of Governing Boards, who led a discussion on board governance, strategic vision, and fiduciary responsibilities at the fall retreat. Rector Haymore emphasized that successful boards define and reinforce boundaries, ensuring clear governance and management roles. He highlighted his role at the recent new board member orientation, hosted by SCHEV, where he served on a panel to discuss best practices in board governance. He stated that he was proud to represent VCU on the panel, and was pleased to engage in follow-up discussions with colleagues across the Commonwealth afterwards.

Next, Rector Haymore reiterated his support for the board's interest in adopting a Code of Ethics and Expectations for members. He thanked the Vice Rector, as chair of the Governance & Compensation Committee, for the work the committee will complete, with the aim to finalize a Code of Ethics and Expectations for BOV members at the March meeting.

He also discussed the joint meeting with the VCU Health System Board of Directors, emphasizing the permanent appointment of Dr. Marlon Levy as CEO for the VCU Health System and Senior Vice President for VCU Health Sciences. In particular, he pointed out that in order to do so, both the health system board of directors and the university board of visitors worked together effectively to reach the decision.

Rector Haymore mentioned the upcoming fall commencement ceremony, which celebrates the achievements of thousands of graduates. He spoke about the VCU men's and women's basketball programs and advocated for the board's continued support for them, highlighting their current records and recent achievements. He recognized the support shown to the women's basketball team for the *Support Her* game, which saw a record attendance of over 6,000 fans.

He then spoke briefly about the Athletic Village, mentioning that the groundbreaking for the new Athletic Village took place earlier in the fall and will enhance the student-athlete experience and positively impact the Richmond community.

In closing, the Rector extended thanks to the team responsible for organizing and managing the meeting, and reminded members of the next meeting which is scheduled for March. He then gave remarks and provided a special recognition of Bill Ginther, a dedicated leader and former Rector of the Board of Visitors, who recently passed away.

#### PRESIDENT'S REPORT

President Rao began by sharing reflections about Bill Ginther. Through his service on various university and health system related boards and foundations, as well as his terms as a member of the Board of Visitors and his time as Rector, Mr. Ginther honored VCU and contributed significantly to its growth. His contributions to VCU and the community were honored with a moment of silence.

President Rao then provided reflections on 2024 and an outlook for 2025. He echoed the Rector's recognition of athletics highlighting the significance of collegiate athletics as a window into the institution and its impact on the community. He continued by giving a progress update on the CoStar Center for Arts and Innovation and expressed gratitude to Andy Florence and the Commonwealth of Virginia for their support. He recognized the importance of the center's role in enhancing creativity and innovation at VCU. He highlighted the need for improved infrastructure to support research and other university activities on both campuses. President Rao expressed appreciation for the contributions of staff and faculty, noting the central role of faculty in driving the university's mission.

President Rao then highlighted the university's achievements with enrollment and retention efforts, noting the record-breaking freshman class in 2024, and VCU achieving its highest retention rate in five years. He expressed appreciation for the efforts of faculty and staff in attracting and retaining students. He pointed to the increase in first-generation and Pell students, highlighting the institution's commitment to diversity and inclusion, and recognized the work ethic and motivation of these students as a driving force for the future.

He discussed student success initiatives, noting the progress that is being made through targeted interventions in courses with high rates of DFWs to prevent stop-outs. He noted improvements that have resulted from strengthening academic advising and transitioning to student financial management to better support VCU students.

Next, President Rao mentioned the work that is underway to unify communications and IT initiatives across the institution to better serve students, noting the development of a single app to consolidate information and resources for students.

President Rao continued focusing on post-graduation outcomes, emphasizing the importance of tracking graduates' employment, particularly in their fields of study and with adequate compensation. He noted the increased focus on internships and professional experiences, with efforts to connect students with employers of all sizes and support entrepreneurship. He restated the importance of internships in reducing underemployment among graduates and reiterated VCU's commitment to organizing targeted efforts with employers to provide more professional opportunities for students.

President Rao thanked the legislature and the Governor for their continued financial support that the university has received, which is essential for VCU to achieve its mission. He also noted the significance of financial aid and appropriate faculty and staff compensation.

President Rao enthusiastically announced VCU's full re-accreditation with no recommendations from the accrediting body, SACSCOC. He emphasized the unique distinction of receiving "no recommendations" from the accrediting body and expressed gratitude to Senior Vice President for Academic Affairs and Provost Sotiropoulos and the entire university community for their work to make the visit a success.

#### **CONSENT AGENDA ACTION ITEMS**

Rector Haymore reminded the board that they were provided all action item materials in advance of the meeting. Rector Haymore moved that the Board of Visitors of Virginia Commonwealth University approve the following:

- a. September 13, 2024 meeting minutes
- b. October 24, 2024 Retreat minutes
- c. November 11, 2024 Joint BOV/BOD meeting minutes
- d. Audit, Integrity and Compliance Committee Action Items:
  - i. Proposed Audit and Compliance Services Department Charter
  - ii. Proposed Audit, Integrity and Compliance Committee Charter
  - iii. Proposed Audit, Integrity and Compliance Committee Meeting Planner
- e. Academic and Health Affairs Committee Action Items:
  - i. Proposal to create a Master of Science in Chaplaincy in the College of Health Professions
  - ii. Proposal to create a Bachelor of Science in Health Research in the College of Humanities and Sciences
- f. Facilities, Real Estate, and Administration Committee Action Items:
  - i. Comprehensive Emergency Management Plan Approval
  - ii. Approval of Project Plans, Athletic Village Phase I

- iii. Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project and Approval of Project Plans, 901 West Franklin Street Renovation
- iv. Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project and Approval of Project Plans, Gladding Residence Center III HVAC Replacement
- v. Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project and Approval of Project Plans, Massey Building Shared Lab Renovation
- g. Finance and University Resources Committee Action Items:
  - i. Professional Services Contract, VCU Dentistry Center
  - ii. Subscription Services Contract, Elsevier B.V.

Following President Rao's remarks, the Rector requested a motion to approve all of the consent agenda items. The motion was seconded and was approved unanimously.

The minutes are posted at <a href="https://bov.vcu.edu/meetings/minutes/">https://bov.vcu.edu/meetings/minutes/</a>. A copy of the action items is attached hereto as *Attachment A* and is made a part hereof.

#### VCU STATE OF RESEARCH

Dr. P. Srirama Rao, Vice President for Research and Innovation, began his presentation by noting the record-breaking funding that VCU has achieved, marking a significant milestone by surpassing the \$500 million mark in sponsored research funding. He noted that this amount represents an 86% increase in funding over the past six years. The university also maintained its position in the top 50 for public university research expenditures, noting that VCU is among the top tier of research institutions nationwide.

Next, Dr. Rao provided updates on several strategic research initiatives including efforts to support sustainable energy and environments, achieving a just and equitable society, enriching the human experience, and optimizing health outcomes. Rao then discussed the impactful research and innovative work that occurred over the last cycle, highlighting that VCU has filed over 1,600 patents in the last ten years and launched over 60 companies. He noted that thousands of VCU students are actively involved in research, contributing to groundbreaking discoveries. More than 5,500 undergraduate students and 2,250 graduate students are currently engaged in research at VCU. Dr. Rao remarked that VCU's research is gaining international recognition, as evidenced by increased media coverage and collaborations with leading institutions worldwide.

Looking ahead, he noted that VCU is poised for continued growth and impact, driven by its strong research foundation and strategic initiatives. VCU will continue to foster interdisciplinary collaboration to address complex challenges and drive innovative solutions. VCU is committed to conducting research that benefits society and improves human lives. He then engaged in a discussion with board members about the financial investment that is needed to support continued advancements in the university's research efforts, emphasizing the importance of accountability and collaboration, and clarifying the role of the Institutional Review Board (IRB)

as an ethics board, and the importance of continuing to pursue with vigor when it comes to continued prioritization of the VCU research enterprise.

A copy of Dr. Rao's presentation is attached hereto as *Attachment B* and is made a part hereof.

#### PROJECT GABRIEL

Dr. Faye Belgrave, Vice President for Inclusive Excellence and Chief Diversity Officer provided an update on progress related to Project Gabriel. She began by introducing Dr. Stephanie Rizzi, the inaugural Director for Project Gabriel. Dr. Belgrave continued by providing background that Project Gabriel was initiated in response to a legislative mandate for Virginia's oldest universities to research their historical connections with enslavement and establish a scholarship and memorialization fund.

She noted that the Project Gabriel Commission, established in 2023, made three major recommendations - to identify and memorialize enslaved individuals at MCV; to establish the Project Gabriel Scholarships; and to develop community-based economic development programs.

Dr. Belgrave noted VCU's participation in enslavement consortiums with other universities, and noted that VCU is in the planning stages for the Project Gabriel Scholars program. She also noted the recruitment of an advisory board for the Gabriel Scholars program, including community representatives, and that the Commission is in the process of identifying resources to support the program, which is slated to start in fall 2025, without using state funds or tuition dollars.

Next, Dr. Belgrave provided an update on fundraising efforts for both the scholarship program and memorialization, noting re-engagement with the community through events and the appointment of a community liaison and advisory council. She also mentioned the collaboration with the East Marshall Street Well Project for community engagement.

She continued by sharing the work that is being done to identify a memorialization site, noting the exploration of using the original First African Baptist Church (now Randolph Minor Hall) as an educational space and memorialization site. She reported that a feasibility study is underway to determine the use of the space, chosen for its symbolic and historical significance to the Black community.

Lastly, Dr. Belgrave engaged in a dialogue with board members regarding background, progress and future plans of Project Gabriel.

A copy of Dr. Belgrave's presentation is attached hereto as *Attachment C* and is made a part hereof.

#### **VCU HEALTH SYSTEM UPDATE**

Dr. Marlon Levy, Senior Vice President for Health Sciences and CEO of the VCU Health System provided a high-level report of VCU Health's operations. Dr. Levy focused his report on quality, safety, and service as the VCU Health System aims to become the safest health system in America, noting that VCU's Tappahannock Hospital and the downtown Academic Medical Center received an 'A' grade from the LeapFrog Group for safety. He mentioned the challenges

of treating all patients due to capacity constraints, and noted the record numbers of hospital discharges (47,000) and outpatient visits (1.2 million) during the current calendar year.

Next, Dr. Levy provided an overview of the *Hospital at Home* program, which allows patients to continue their recovery at home with close medical supervision. The program saw an enrollment of 514 patients and 4,000 patient days treated through this program.

Dr. Levy then provided a report on the strong financial performance of the health system for the fiscal year that ended in June, and remarked that the current fiscal year is tracking well against the budget, with significant reinvestments planned for upgrading facilities and modernizing beds.

Lastly, Dr. Levy proudly showcased a unique creative collaborative project with the School of the Arts, featuring a mural painted by a cancer survivor in the Adult Outpatient Pavilion. The mural will serve as an affirmation of the journey and a reminder of the mission of the health system.

A copy of Dr. Levy's presentation is attached hereto as *Attachment D* and is made a part hereof.

#### **CONSTITUENT REPORTS**

Rector Haymore welcomed Ms. Tobi Ojo and Ms. Guleer Shahab, the BOV undergraduate and graduate student representatives. A copy of Ms. Ojo's presentation is attached hereto as *Attachment E* and is made a part hereof. A copy of Ms. Shahab's presentation is attached hereto as *Attachment F* and is made a part hereof. The board asked that the administration follow up with both students on their presentations.

He then welcomed Dr. Valerie Robnolt, faculty senate representative to provide her report as the faculty representative. A copy of Dr. Robnolt's presentation is attached hereto as *Attachment G* and is made a part hereof.

Lastly, staff representative Ms. Maya Rogers presented the staff representative report. A copy of Ms. Rogers' presentation is attached hereto as *Attachment H* and is made a part hereof.

#### **CLOSED SESSION**

Rector Haymore made the motion, that the Board of Visitors of Virginia Commonwealth University convene a closed session under Section 2.2-3711 (A)(1) of the Virginia Freedom of Information Act for the discussion of personnel matters, more specifically relating to the performance evaluation of various staff members; faculty tenure appointments and changes in status; and under Section 2.2-3711(A)(1), for the discussion of assignment, appointment, promotion, performance, demotion, salaries, disciplining, or resignation of specific public officers, appointees, or employees of any public body, more specifically relating to an audit involving hiring, promotion and salaries and an audit of the expense reporting of one individual; under Section 2.2-3711 (A)(3), to discuss the potential acquisition of certain real property to further educational purposes and research opportunities of the university where discussion in open session would adversely affect the university's bargaining position and negotiating strategy; and Section 2.2-3711(A)(3), to discuss both the potential acquisition and disposition of certain real property to further the mission of the University, more specifically the acquisition of property needed for research, academics and athletics and infrastructure related thereto and the

disposition of certain property not needed to further the University's mission, where discussion in open session would adversely affect the university's bargaining position and negotiating strategy; and under Section 2.2-3711 (A)(7) and (8), for the discussion of matters requiring the provision of legal advice by counsel, specifically relating to an update on potential and current litigation in state and federal courts and other legal matters relating to pending investigations; and Section 2.2-3711 (A)(9) for the discussion of gifts, bequests and fund-raising activities of the University, namely the Named Funds and Spaces Report, and the Approved Named Funds over \$50,000 Report; and under Section 2.2-3711 (A)(19), for discussion of specific cybersecurity vulnerabilities and briefing by staff concerning actions taken to respond to such matters, specifically relating to audit reports involving data security and certain IT processes; and Section 2.2-3711 (A)(23) to discuss operational strategies where disclosure of such strategies would adversely affect the competitive position of the Authority, specifically the finance trends and governance and operational strategies of the Authority and governance matters and related strategy.

The motion was seconded and was approved unanimously.

Following the closed session, the public was invited to return to the meeting. Rector Haymore called the meeting to order. On a motion duly made and seconded the following resolution of certification was approved by a roll call vote:

#### **Resolution of Certification**

**BE IT RESOLVED**, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

| <u>Vote</u>                    | <u>Ayes</u> | <u>Nays</u> | <b>Other</b> |
|--------------------------------|-------------|-------------|--------------|
| Mr. Todd Haymore, Rector       | X           |             |              |
| Mr. Andy Florance, Vice Rector | X           |             |              |
| Ms. Rooz Dadabhoy              | X           |             |              |
| Mr. Steven DeLuca              | X           |             |              |
| Dr. Siobhan Dunnavant          | X           |             |              |
| Hon. Peter Farrell             | X           |             |              |
| Ms. Ellen Fitzsimmons          | X           |             |              |
| Dr. Dale Jones                 | X           |             |              |
| Dr. Ken Lipstock               | X           |             |              |
| Dr. Clifton Peay               | X           |             |              |
| Mr. Randy Reynolds             | X           |             |              |
| Dr. Clifton Peay               | X           |             |              |
| Mr. C.J. Sailor                | X           |             |              |
| Mr. P2 Sandhu                  | X           |             |              |

Mr. Bedell, Rev. Nelson, and Mr. Sailor were absent from the roll call vote.

The Rector reminded members that the personnel matters discussed in closed session are confidential. Sharing confidential personnel information may give rise to a violation of privacy claim against the University. Similarly, the board should treat all other matters discussed in closed session as confidential.

#### **CLOSED SESSION ACTION ITEMS**

Rector Haymore moved to approve the acquisition of two properties; issuing financing for a property acquisition; named funds over \$50,000; faculty tenure appointments, changes in status, and other personnel actions; the appointments of Dr. Gary Cuddeback as Dean of the School of Social Work and Dr. Kelly Feldman as Dean of the School of Education; and special awards.

Mr. Bedell, Rev. Nelson, and Mr. Sailor were absent from the vote. All members present responding affirmatively, the closed session action items were approved.

#### **ADJOURNMENT**

Rector Haymore mentioned that all open session reports were provided in the packets at each seat. He also mentioned that at the Board Retreat the board suggested that at the end of each meeting, members bring forward any topics that they would like to focus on at the next meeting. He recommended that members contact Ms. Gray should they have any recommendations for consideration.

There being no further business, Rector Haymore adjourned the meeting at 3:54 p.m.



#### EXHIBIT A

VCU BOV <bov@vcu.edu>

## Concerns about when recommendations for Project Gabriel and the Easy Marshall Street Well Project will be put into place.

1 message

Nasya Booker To: bov@vcu.edu Tue, Dec 10, 2024 at 8:41 PM

Hello,

My name is Nasya Booker, and I am a freshman at VCU. I have recently conducted research on Project Gabriel and the East Marshall Street Well Project and I was encouraged to discover so many strong recommendations that came out of these committees. Moreover, with the recent federal administration transition, I've been concerned about the likelihood of new measures that could eliminate DEI. I want you to recognize that as a student, it is important to me to express that I agree with the recommendations for both projects, such as providing scholarships for students who have ancestral ties to the individuals that provided labor at VCU, providing additional services for students who have ancestral ties to the individuals that provided labor at VCU so they don't end up in poverty, renaming more buildings and sites named after Confederate or racist leaders around campus, and ensuring that the individuals whose remains were properly mishandled in the past are memorialized by their stories and contributions and receive a proper burial. Furthermore, I feel that these modifications will be the most successful approach to support your minority students and I can't wait to see when they will be put into effect. I appreciate you for taking the time to read my email.

Sincerely, Nasya Booker

Sent from my iPhone

#### **AUDIT AND COMPLIANCE SERVICES CHARTER**

## VIRGINIA COMMONWEALTH UNIVERSITY and VCU HEALTH SYSTEM

Virginia Commonwealth University (university) and VCU Health System Authority (health system) maintain comprehensive and effective internal audit and compliance programs. The objective of Audit and Compliance Services ("department") is to assist members of the Board of Visitors, Board of Directors, and management in the effective performance of their responsibilities. The department fulfills this objective by providing independent and impartial examinations, investigations, evaluations, counsel, and recommendations for the areas and activities reviewed.

#### Scope of Work

The scope of the department's work is to determine whether the university's and health system's risk management, internal control, governance, and compliance processes, as designed and represented by management, are adequate and functioning in a manner to provide reasonable assurance that:

- Risks are appropriately identified and managed
- Control processes are adequate and functioning as intended
- Significant, financial, managerial, and operating information is accurate, reliable, and timely
- An effective university compliance program is maintained to provide guidance and resources, in an oversight role, for all educational, research, and athletic compliance programs to foster an organizational culture that encourages ethical conduct and a commitment to compliance with the law.
- An effective health system compliance program is implemented to further the health system's
  mission, vision, and values by promoting a culture of compliance, and preventing, correcting,
  and investigating issues through education, monitoring, and enforcement
- An effective program of information technology (IT) management and security is maintained by management to ensure health system and university IT and data assets are properly secured, integrity protected, available as needed and kept confidential as required by applicable policies, laws and regulations
- Employees' actions are in compliance with the respective codes of conduct, policies, standards, guidelines, procedures, and applicable laws and regulations
- Resources are used efficiently and are adequately protected
- Program plans and objectives are achieved

 Significant legislative and regulatory issues impacting the university and health system are recognized and appropriately addressed

Opportunities for improving management controls, accountability, fiscal performance and compliance processes, and for protecting organizational reputation will be addressed with the appropriate level of management when identified.

#### **Accountability**

The Executive Director Chief Audit and Compliance Executive of Audit and Compliance Services shall be accountable to the Board of Visitors, through the Audit, Integrity, and Compliance Committee, and the Board of Directors, through the Audit and Compliance Committee, to maintain comprehensive and professional internal audit and compliance programs. In fulfilling those responsibilities, the Chief Audit and Compliance Executive Director -will:

- Establish annual goals and objectives for the department, and report periodically on the status
  of those efforts.
- Execute the annual work plans and initiatives.
- Coordinate efforts with other control and monitoring functions (risk management, financial
  officers, campus police, university counsel and health system general counsel, external
  auditors, government reviewers, etc.).
- Report significant issues related to the department's scope of work, including potential improvements, and continue to provide information about those issues through resolution.
- Provide updates to the respective board committees, the university president, and the chief
  executive officer of the health system on the status of the work plans and initiatives,
  qualifications of staff, and sufficiency of department resources.

#### **Independence and Objectivity**

All work will be conducted in an objective and independent manner. Staff will maintain an impartial attitude in selecting and evaluating information and in reporting results. Independence in fact and appearance enables unbiased judgments that are essential to the proper conduct of the department's scope of work.

To provide an appropriate reporting structure to support independence, the <a href="Chief Audit and Compliance">Chief Audit and Compliance</a> Executive <a href="Director-shall">Director-shall</a> report to the Audit, Integrity, and Compliance Committee of the Board of Directors. The <a href="Chief Audit and Compliance">Chief Audit and Compliance</a> Executive <a href="Director-shall">Director-shall</a> report administratively to the university's President.

#### Responsibility

The department will assist the Board of Visitors, Board of Directors, and management by:

- Maintaining a professional staff with sufficient knowledge, skills, and experience to fulfill the requirements of this charter.
- Developing and executing annual and long-range risk-based work plans and initiatives. The
  plans and initiatives will be submitted to management for review and comment and to the
  respective board committee for approval. The department recognizes that one of the primary
  benefits of these programs is the ability to respond to issues that arise during the normal
  course of business. Accordingly, the annual plans shall include time for management
  requests and special projects.
- Participating in an advisory capacity in the planning, development, implementation, or change
  of significant compliance and control processes or systems. The <a href="Chief Audit and Compliance">Chief Audit and Compliance</a>
  Executive <a href="Director">Director</a> shall ensure that the level of participation in these projects does not affect
  the department's responsibility for future evaluation of these processes or systems nor
  compromise its independence.
- Conducting or assisting in the investigation of any suspected fraudulent activities, misconduct, or non-compliance issues, and notifying management and the respective board committees of the results.
- Issuing periodic reports to management and the respective board committees summarizing the results of the department's activities.
- Considering the scope of work of the external auditors, as appropriate, to provide optimal audit coverage to the university and health system at a reasonable overall cost.
- Reporting at least annually to the Board of Visitors, Board of Directors, and senior management on the department's purpose, authority, responsibility, and performance relative to its plans and initiatives, and on its conformance to standards and best practices. Reporting should also include significant risk exposures and control issues, corporate governance issues, serious misconduct or non-compliance, and other matters needed or requested by the Board and senior management.

#### **Authority**

The department's authority is created through its direct reporting relationship to the respective board committees and is therefore mandated to fulfill its objective. The department and its staff are authorized to:

- Have unrestricted access to all activities, records, property, and personnel. Receive cooperation from all university and health system personnel and affiliates.
- Have full access to the respective board committee.
- Allocate departmental resources, set audit and review frequencies, determine scopes of work, and apply the techniques necessary to accomplish objectives.
- Obtain the necessary assistance of personnel in departments when performing work plans and initiatives, as well as that of other specialists.

The department and its staff are not authorized to:

- Perform operational duties in interim status, or otherwise, unless authorized in advance by the respective board committee.
- Initiate or approve accounting transactions external to the department.

#### **Standards of Practice**

The department will conduct its scope of work in accordance with requirements and best practices as established by relevant authoritative and objective sources from industry and government.

For internal audit functions, this includes both mandatory and recommended guidance from the Institute of Internal Auditors International Professional Practices Framework. The mandatory guidance requires our department to conform with the Core Principles for the Professional Practice of Internal Auditing, Code of Ethics, and International Standards for the Professional Practice of Internal Auditing (Standards). Global Internal Audit Standards (Standards), including the principles of Ethics and Professionalism. Internal auditing is an independent, objective assurance, and consulting activity designed to add value and improve an organization's operations. Our department will help the university and health system accomplish its objectives by bringing a systematic, disciplined, and risk-based approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

For maintaining effective compliance programs, standards of practice are driven by the guidance provided in Chapter 8 of the Federal Sentencing Guidelines as promulgated by the US Sentencing Commission. The main focus of an effective program is to prevent and detect misconduct, remedy harm when identified, self-report where applicable, and maintain due diligence in promoting an organizational culture that encourages ethical conduct and a commitment to compliance with the law.

For the health system compliance program, guidance by the Health Care Compliance Association is also included. This organization sets the standard for professional values and ethics in the health care compliance field.

#### **Quality Assurance and Improvement Program**

The department will maintain a quality assurance and improvement program that covers all aspects of the internal audit activity. This program will be designed to <u>evaluate and ensure</u>:

- evaluate\_internal audit's conformance with the Standards; including and application of the Code of Ethicsprinciples of Ethics and Professionalism;
- <u>assess the efficiency and effectiveness of the department achieves performance objectives</u>; and
- internal audit pursues continuous improvement.identify opportunities for improvement.

The quality program includes both internal and external assessments. Internal assessments will include ongoing monitoring and periodic assessments of internal audit activity. An external assessment will be performed at least once every five years by qualified individuals who are independent of the internal audit function.

## VIRGINIA COMMONWEALTH UNIVERSITY BOARD OF VISITORS

#### **AUDIT, INTEGRITY, AND COMPLIANCE COMMITTEE CHARTER**

#### I. PURPOSE

The primary purpose of the Audit, Integrity, and Compliance Committee is to assist the Board of Visitors in fulfilling its fiduciary responsibilities related to oversight of:

- Soundness of the university's system of internal controls
- Integrity of the university's financial accounting and reporting practices
- Independence and performance of the internal and external audit functions
- Integrity of information technology infrastructure and data governance
- Effectiveness of the university's ethics and compliance program
- University's enterprise risk management program
- Legal matters

The function of the Audit, Integrity, and Compliance Committee is oversight. Audit and Compliance Services assists the Committee by providing the day to day audit, integrity and compliance operations of the University within the established authority under the governance of the Committee.

#### II. COMPOSITION AND INDEPENDENCE

The Audit, Integrity, and Compliance Committee will be comprised of three or more Visitors. Each member must be free from any financial, family or other material personal relationship that, in the opinion of the Board or Audit, Integrity, and Compliance Committee members, would impair their independence from management and the university.

#### III. MEETINGS

The Audit, Integrity, and Compliance Committee will meet at least four times annually. Additional meetings may occur more frequently as circumstances warrant. The Committee Chair should meet with the Chief Audit and Compliance Executive of Audit and Compliance Services as necessary and at least prior to each Committee meeting to finalize the meeting agenda and review the issues to be discussed.

#### IV. RESPONSIBILITIES

In performing its oversight responsibilities, the Audit, Integrity, and Compliance Committee shall:

#### A. General:

- Adopt a formal written charter that specifies the Committee's scope of responsibility. The charter should be reviewed annually and updated as necessary.
- 2. Maintain minutes of meetings.
- 3. Authorize investigations into any matters within the Audit, Integrity, and Compliance Committee's scope of responsibilities.
- 4. Report Committee actions to the Board of Visitors with such recommendations as the Committee may deem appropriate.
- 5. Consistent with state law, the Committee may meet in closed session (with or without members of senior management present, at the Committee's discretion) with the external auditors and/or the Chief Audit and Compliance Executive of Audit and Compliance Services to discuss matters that the Committee or any of these groups believe should be discussed privately.
- 6. Review and approve the Audit and Compliance Services budget and resource plan.
- 7. Approve the Audit and Compliance Services charter. The charter should be reviewed annually and updated as necessary.

#### B. Internal Controls:

- 1. Review and evaluate the university's processes for assessing significant risks and exposures.
- 2. Make inquiries of management concerning the effectiveness of the university's system of internal controls.
- 3. Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system.
- 4. Advise management that they are expected to provide a timely analysis of significant financial reporting issues and practices.

#### C. External Auditors/Financial Statements:

- 1. Meet with the external auditors and university management to review the scope of the external audit for the current year. The auditors should inform the Audit, Integrity, and Compliance Committee of any significant changes in the original audit plan.
- 2. Discuss with the external auditors their processes for identifying and responding to key audit and internal control risks.
- 3. Advise the external auditors that they are expected to provide a timely analysis of significant financial reporting issues and practices
- 4. Review the coordination of internal and external audit procedures to promote an effective use of resources and ensure complete and efficient coverage of the university's risks.
- 5. Meet with the external auditors at the completion of the audit and make inquiries concerning the effectiveness of the university's system of internal controls.

- Consistent with state law, a portion of the meeting may be conducted in closed Session without members of university management present.
- 6. Determine whether the external auditors are satisfied with the disclosure and content of the financial statements, including the nature and extent of any significant changes in accounting principles.

#### D. <u>Internal Auditors</u>:

- 1. Review and approve the annual audit and management services work plan and any significant changes to the plan.
- 2. Require Audit and Compliance Services to perform annual reviews of the President's discretionary accounts and to issue a report thereon to the Committee.
- 3. Review annually the qualifications of the audit and management services staff and the level of staffing.
- 4. Assess the effectiveness of the internal audit function, including its independence and reporting relationships and conformance with The Institute of Internal Auditors' (IIA) Definition of Internal Auditing, Core Principles, the IIA Code of Ethics and the International Global Internal Audit Standards, including the principles of Ethics and Professionalism for Professional Practice of Internal Auditing by inquiring and reviewing the assessment results of the internal and external Quality Assurance and Improvement Program.
- 5. Review completed audit reports and progress reports on executing the approved work plan and inquire of any other matters that require audit resources.
- 6. Review annually the status of previously issued internal audit findings.
- 7. Inquire of the Chief Audit and Compliance Executive of Audit and Compliance Services regarding any difficulties encountered in the course of <a href="hisatheir">hisatheir</a> audits, including any restrictions on the scope of work or access to required information.
- 8. Review 360 feedback and discuss the performance of the Chief Audit and Compliance Executive in consultation with the President. The AICC Chair should communicate the recommended salary compensation and bonus, if any, to the chair of the Governance and Compensation committee in advance of their September meeting.
- 9. Review and approve the appointment, replacement, reassignment, or dismissal of the Chief Audit and Compliance Executive of Audit and Compliance Services.

#### E. Data Integrity:

- 1. Review the adequacy of the university's IT management methodology with regards to internal controls, including applications, systems, and infrastructure. This includes but is not limited to:
  - Physical and virtual security with regards to university servers and storage
  - Network security architecture and operations
  - Reliability and robustness of data center (servers and storage) and network infrastructure environments

- Disaster recovery and business continuity infrastructure and associated processes and procedures.
- 2. Review the adequacy of the university's data management policies and procedures to ensure data security and data integrity in institutional reporting. This includes but is not limited to:
  - Authentication and authorization mechanisms in accessing university data
  - Data Governance structure and policies
  - Data security policies including data access roles and responsibilities

#### F. <u>University Ethics and Compliance Program</u>:

- 1. Review the annual compliance planned initiatives and any significant changes to the plan.
- 2. Review the qualifications of the compliance staff and the level of staffing.
- 3. Assess the effectiveness of the compliance program, including its independence and reporting relationships.
- Review completed compliance reports and progress reports on the status of compliance and integrity related initiatives including process and plans in place to assess conflict of interest management (inclusive of institutional and individual conflicts).
- 5. Require the Integrity and Compliance Office to report on management's processes and procedures that provide assurance that the university's mission, values, codes of conduct, and universitywide policies are properly communicated to all employees.
- 6. Review results of compliance reviews to ensure system and controls are designed to reasonably ensure compliance with laws and regulations, university policies and the code of conduct.
- 7. Inquire of the Chief Audit and Compliance Executive of Audit and Compliance Services whether there have been any restrictions on the scope of work or access to required information in conducting compliance and ethics reviews.

#### G. Enterprise Risk Management

- 1. Provide oversight of the university's Enterprise Risk Management program.
- 2. Review the university's risk appetite.
- 3. Require periodic reporting on the overall program's design and effectiveness, including newly identified risks.
- 4. Monitor progress of program (dashboard).

#### H. Legal:

1. Consult as necessary with University Counsel regarding legal issues concerning the university.

## Virginia Commonwealth University Board of Visitors

#### **Audit, Integrity and Compliance Committee Meeting Planner**

| Q2, Q3, Q4 based on Fiscal Year (July – June)  General  Review and update Audit, Integrity, and Compliance Committee charter and meeting                                            | Α                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Q1</b><br>Sep                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Q2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Q3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Q4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Review and update Audit, Integrity, and<br>Compliance Committee charter and meeting                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Sen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Review and update Audit, Integrity, and<br>Compliance Committee charter and meeting                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ОСР                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | May                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Compliance Committee charter and meeting                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | l                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| planner                                                                                                                                                                             | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Approve minutes of previous meeting                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Maintain minutes of meetings                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Authorize investigations into any matters within the Committee's scope of responsibilities                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Report Committee actions to the Board of Visitors with recommendations deemed appropriate                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Review and approve the Audit and Compliance<br>Services budget and resource plan.                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Review and approve Audit and Compliance<br>Services charter                                                                                                                         | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Internal Controls/Financial Statements                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Review and evaluate university's process for assessing significant risks and exposures                                                                                              | Х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Make inquiries of management concerning the effectiveness of the university's system of internal controls                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Advise management that they are expected to provide a timely analysis of significant current financial reporting issues and practices                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | х                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                     | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  X  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current | Authorize investigations into any matters within the Committee's scope of responsibilities  Report Committee actions to the Board of Visitors with recommendations deemed appropriate  Consistent with state laws, meet in closed session with only the external auditors, Chief Audit and Compliance Executive and named individuals.  Review and approve the Audit and Compliance Services budget and resource plan.  Review and approve Audit and Compliance Services charter  Internal Controls/Financial Statements  Review and evaluate university's process for assessing significant risks and exposures  Make inquiries of management concerning the effectiveness of the university's system of internal controls  Review management's written responses to significant findings and recommendations of the auditors, including the timetable to correct the weaknesses in the internal control system  Advise management that they are expected to provide a timely analysis of significant current |

| A = | Annually; Q = Quarterly; AN = As Necessary                                                                                                                                      | F | reque | ncy |     | Planne | d Timin | g<br>q |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------|-----|-----|--------|---------|--------|
| Q1, | , Q2, Q3, Q4 based on Fiscal Year (July – June)                                                                                                                                 | Α | Q     | AN  | Q1  | Q2     | Q3      | Q4     |
|     |                                                                                                                                                                                 |   |       |     | Sep | Dec    | Mar     | May    |
| C.  | External Auditors                                                                                                                                                               |   |       | _   |     |        | 1       |        |
| 1.  | Meet with external auditors and university management to review the scope of the external audit for the current year                                                            | Х |       |     |     |        |         | X      |
| 2.  | Discuss with the external auditors their processes for identifying and responding to key audit and internal control risks                                                       | х |       |     |     |        |         | Х      |
| 3.  | Advise the external auditors that they are expected to provide a timely analysis of significant financial reporting issues and practices                                        | х |       |     |     |        |         | Х      |
| 4.  | Review the coordination of internal and external audit procedures to promote an effective use of resources and ensure complete and efficient coverage of the university's risks |   |       | х   |     |        |         | х      |
| 5.  | Meet with the external auditors at the completion of<br>the audit and make inquiries concerning the<br>effectiveness of the university's system of internal<br>controls.        | х |       |     |     | X      |         |        |
| 6.  |                                                                                                                                                                                 |   |       |     |     | X      |         |        |
| D.  | Internal Auditors                                                                                                                                                               |   |       |     |     |        |         |        |
| 1.  | Review and approve the annual audit and management services work plan and any significant changes to the plan                                                                   | Х |       |     |     |        |         | X      |
| 2.  | Require Audit and Compliance Services to perform annual reviews of the president's discretionary accounts and to issue a report thereon to the Committee                        | х |       |     |     | Х      |         |        |
| 3.  | Review the qualifications of the audit and management services staff, the adequacy of the staffing level                                                                        | Х |       |     | х   |        |         |        |

| A =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Annually; Q = Quarterly; AN = As Necessary                                                                                                                                                                                                                                                                                     | F | requer | ıcy |     | Plannec | Timin | g   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|-----|-----|---------|-------|-----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)                                                                                                                                                                                                                                                                              |   |        | AN  | Q1  | Q2      | Q3    | Q4  |
| <u></u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                |   |        |     | Sep | Dec     | Mar   | May |
| 4. Assess the effectiveness of the internal audit function, including its independence and reporting relationships and conformance with the Definition of Internal Auditing, Core Principles, the IIA Code of Ethics and the International Standards for Professional Practice of Internal AuditingGlobal Internal Audit Standards, including the principles of Ethics and Professionalism by inquiring and reviewing the assessment results of the internal and external Quality Assurance and Improvement Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                | x |        |     |     | X       |       |     |
| 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Review completed audit reports and progress reports on executing the approved work plan and inquire of any other matters that require audit resources                                                                                                                                                                          |   | Х      |     | Х   | Х       | Х     | Х   |
| 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Review annually the status of previously issued internal audit findings                                                                                                                                                                                                                                                        | Х |        |     | X   |         |       |     |
| 7. Inquire of the Chief Audit and Compliance Executive of Audit and Compliance Services regarding any difficulties encountered in the course of <a href="https://historycommons.org/hist-their">historycommons.org/historycomm</a> |                                                                                                                                                                                                                                                                                                                                |   | x      |     | ×   | Х       | X     | x   |
| 8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Review 360 feedback and discuss the performance of the Chief Audit and Compliance Executive in consultation with the President. The AICC Chair should communicate the recommended salary compensation and bonus, if any, to the chair of the Governance and Compensation committee in advance of their September meeting.      | x |        |     | Х   |         |       |     |
| 9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Review and approve the appointment, replacement, reassignment, or dismissal of the Chief Audit and Compliance Executive of Audit and Compliance Services                                                                                                                                                                       |   |        | Х   |     |         |       |     |
| E.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Data Integrity                                                                                                                                                                                                                                                                                                                 |   |        |     |     |         |       |     |
| 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Review the adequacy of the university's IT management methodology with regards to internal controls, including applications, systems, and infrastructure. This includes but is not limited to:  • Physical and virtual security with regards to university servers and storage  • Network security architecture and operations |   |        | X   | ×   |         | X     |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul> <li>Reliability and robustness of data center (servers and storage) and network infrastructure environments</li> <li>Disaster recovery and business continuity infrastructure and associated processes and procedures</li> </ul>                                                                                          |   |        | ^   | ^   |         | ^     |     |
| <u>.                                    </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                |   |        |     |     |         |       |     |

| A = | Annually; Q = Quarterly; AN = As Necessary                                                                                                                                                                                                                           | Frequency |        |   | Planne   |     |         |     |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|---|----------|-----|---------|-----|
|     |                                                                                                                                                                                                                                                                      | Α         | A Q AN |   | Q1 Q2 Q3 |     | Q4      |     |
|     | D : " ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !                                                                                                                                                                                                                            |           |        |   | Sep      | Dec | Mar     | May |
| 2.  | Review the adequacy of the university's data management policies and procedures to ensure data security and data integrity in institutional reporting. This includes but is not limited to:                                                                          |           |        |   |          |     |         |     |
|     | <ul> <li>Authentication and authorization mechanisms in accessing university data</li> </ul>                                                                                                                                                                         |           |        | Х |          | Χ   |         | Х   |
|     | Data Governance structure and policies                                                                                                                                                                                                                               |           |        |   |          |     |         |     |
|     | <ul> <li>Data security policies including data access roles<br/>and responsibilities</li> </ul>                                                                                                                                                                      |           |        |   |          |     |         |     |
| F.  | University Ethics and Compliance Program                                                                                                                                                                                                                             | •         |        |   |          |     | •       | •   |
| 1.  | Review the annual compliance planned initiatives and any significant changes to the plan                                                                                                                                                                             | Х         |        |   |          |     |         | Х   |
| 2.  | Review the qualifications of the compliance staff and the level of staffing (utilization and effort focus)                                                                                                                                                           | Х         |        |   | х        |     |         |     |
| 3.  | Assess the effectiveness of the compliance program, including its independence and reporting relationships                                                                                                                                                           | X         |        |   | X        |     |         |     |
| 4.  | Review completed compliance reports and progress reports on the status of compliance and integrity related activities including process and plans in place to assess conflict of interest management (inclusive of institutional and individual conflicts)           |           | X      |   | ×        | X   | X       | X   |
| 5.  | Require the Integrity and Compliance Office to report<br>on management's processes and procedures that<br>provide assurance that the university's mission,<br>values, and codes of conduct and universitywide<br>policies are properly communicated to all employees | X         |        |   | X        |     |         | Х   |
| 6.  | Review results of compliance reviews to ensure system and controls are designed to reasonably ensure compliance with laws and regulations, university policies and the code of conduct                                                                               |           |        | x | Х        | Х   | х       | Х   |
| 7.  | Inquire of the Chief Audit and Compliance Executive of Audit and Compliance Services whether there have been any restrictions on the scope of work or access to required information in conducting compliance and ethics reviews                                     |           | X      |   | ×        | Х   | x       | Х   |
| G.  | Enterprise Risk Management                                                                                                                                                                                                                                           |           |        |   |          |     |         | ı   |
| 1.  | Provide oversight of the university's Enterprise Risk Management program                                                                                                                                                                                             |           | Х      |   |          | X   |         | Х   |
|     |                                                                                                                                                                                                                                                                      | <b> </b>  |        | + | 1        |     | <b></b> |     |

| A = Annually; Q = Quarterly; AN = As Necessary                                                                 |   | Frequency |    | Planned Timing |     |     | g   |
|----------------------------------------------------------------------------------------------------------------|---|-----------|----|----------------|-----|-----|-----|
|                                                                                                                | Α | Q         | AN | Q1             | Q2  | Q3  | Q4  |
|                                                                                                                |   |           |    | Sep            | Dec | Mar | May |
| Require periodic reporting on the overall program's design and effectiveness, including newly identified risks |   | X         |    |                | X   |     | Х   |
| 4. Monitor progress of program (dashboard)                                                                     |   | Х         |    | X              | Х   | Х   | Х   |
| H. Legal                                                                                                       |   |           |    |                |     |     |     |
| Consult as necessary with University Counsel regarding legal issues concerning the university                  |   | Х         |    | X              | Х   | Х   | Х   |

#### STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA Program Announcement Form

#### I. Basic Program Information.

| Institution (official name)  | Virginia Commonwealth University |
|------------------------------|----------------------------------|
| Degree Program Designation   | Master of Science (MS)           |
| Degree Program Name          | Chaplaincy                       |
| CIP code                     | 51.1506                          |
| Anticipated Initiation Date  | Fall 2025                        |
| Governing Board Approval     | December 2024 (entisinated)      |
| Date (actual or anticipated) | December 2024 (anticipated)      |

#### II. Curriculum Requirements.

#### Core Coursework: 61 credit hours PATC 525 – Study of Chaplaincy Across the World Religions (3)\* PATC 600 – Theology and Philosophy in Chaplaincy and Spiritual Care (3)\* PATC 601 – Chaplaincy Formation (3)\* PATC 602 – Spiritual Assessment (3)\* PATC 609 – Introduction to Spiritual Care Practice (3)\* PATC 610 – Basic Spiritual Care Theory (3)\* PATC 611 – Theory and Practice of Spiritual Care I (3) PATC 612 – Theory and Practice of Spiritual Care II (3) PATC 613 – Group Process I (1) PATC 614 – Group Process II (1) PATC 615 – Group Process III (1) PATC 616 – Group Process Interdisciplinary Collaboration (2)\* PATC 617 – Theory and Practice of Spiritual Care III (3) PATC 620 – Social Factors in Spiritual Care and Chaplaincy (3)\* PATC 621 – Bereavement, Grief, Loss and Spiritual Care (3) PATC 625 – Spiritual Care and Wellbeing (3)\* PATC 635 – Clinical Ethics (3) PATC 642 – Developing & Presenting Spiritual Care & Chaplaincy Research (3) PATC 646 - Clinical Practicum I (2) PATC 647 – Clinical Practicum II (2) PATC 648 – Clinical Practicum III (2) PATC 649 – Clinical Practicum IV (2)\* PATC 655 – Preparation for Professional Chaplaincy Practice (2)\* PATC 660 – Capstone Project (4)\* **Required Courses: 15 credit hours** PATC 520 – History of Chaplaincy (1)\* PATC 592 – Independent Study in Spiritual Care (2) PATC 639 – Spiritual Care Management (3) PATC 643 – Advanced Spiritual Care Practice in Healthcare Settings (3)\*

PATC 644 – Advanced Spiritual Care Practice in Non-Healthcare Settings (3)\*

PATC 645 – Spiritual Care Over the Lifespan (3)\*

**Total credit hours: 76** 

#### 11

#### II. Description of Educational Outcomes.

**Students of the proposed program will be able to** (based upon Chaplaincy Core Competencies):

- Identify and integrate one's professional strengths and limitations in the provision of spiritual care.
- Practice in a manner that respects the physical, emotional, cultural, and spiritual boundaries of others.
- Apply theories to effectively offer spiritual support that contributes to well-being of the care recipients, their families, and staff.
- Apply theories to effectively offer spiritual care that respects diversity and differences including, but not limited to culture, gender, sexual orientation and spiritual/religious practices.
- Formulate and utilize spiritual assessments, interventions, outcomes, and care plans in order to contribute effectively to the well-being of the person receiving care.
- Understand and function within the chaplain's institutional culture and systems, including utilizing business best practices appropriate to one's role in the organization.
- Integrate the spiritual and emotional dimensions of human development into one's practice of care.
- Integrate a working knowledge of different ethical theories appropriate to one's professional context.
- Articulate how primary research and research literature inform the profession of chaplaincy and one's spiritual care practice.
- Articulate an approach to spiritual care, rooted in one's faith/spiritual tradition that is integrated with a theory of professional practice.
- Articulate a conceptual understanding of group dynamics and organizational behavior.
- Articulate ways in which one's feelings, values, assumptions, culture, and social location affect professional practice.

#### IV. Description of Workplace Competencies/Skills (Chaplaincy Core Competencies).

- Promote, facilitate, and support ethical decision-making in one's workplace. [OL4]
- Advocate for and facilitate ethical decision-making in one's workplace. [OL3]
- Use appropriately one's professional authority as a chaplain. [PIC5]
- Provide effective spiritual support that contributes to the wellbeing of care recipients, including patients (or the relevant analogue in a non-healthcare setting), their families/friends, and staff. [PPS2]
- Facilitate care recipients' own theological/spiritual/ philosophical reflection. [PPS8]
- Document one's spiritual care accurately, cautiously, and usefully and in the appropriate records. [PPS11]
- Provide spiritual care that incorporates a working knowledge of an academic discipline that is not explicitly religious/ spiritual (e.g., psychology, sociology, anthropology, history). [ITP2]
- **V. Duplication.** Provide information for each existing degree program at a Virginia public institution at the same degree level. Use SCHEV's degree/certificate inventory and institutions' websites.

| Institution | Program degree designation, name, and CIP code | Degrees granted (most recent 5-yr average) |
|-------------|------------------------------------------------|--------------------------------------------|
| None        | Not applicable                                 | Not applicable                             |

#### VI. Labor Market Information.

Labor Market Information: Bureau of Labor Statistics, 2022 -2032(10-Yr)

| Occupation           | Base Year  | Projected  | Total % Change | Typical Entry   |
|----------------------|------------|------------|----------------|-----------------|
|                      | Employment | Employment | and #s         | Level Education |
| Substance Abuse,     | 388,200    | 459,600    | 18%            | Master's degree |
| Behavioral Disorder, |            |            | 71,400         |                 |
| and Mental Health    |            |            |                |                 |
| Counselors           |            |            |                |                 |

Labor Market Information: Virginia Employment Commission, 2022 -2032 (10-Yr)

| " | ibol Market Information: Virginia Employment Commission, 2022 2022 (10 11) |            |            |            |          |           |  |  |
|---|----------------------------------------------------------------------------|------------|------------|------------|----------|-----------|--|--|
|   | Occupation                                                                 | Base Year  | Projected  | Total %    | Annual   | Education |  |  |
|   |                                                                            | Employment | Employment | Change and | Change # |           |  |  |
|   |                                                                            |            |            | #s         |          |           |  |  |
|   | Substance Abuse,                                                           | 14,170     | 16,930     | 20%        | 276      | Master's  |  |  |
|   | Behavioral                                                                 |            |            | 2,760      |          | degree    |  |  |
|   | Disorder, and                                                              |            |            |            |          |           |  |  |
|   | Mental Health                                                              |            |            |            |          |           |  |  |
|   | Counselors                                                                 |            |            |            |          |           |  |  |
|   |                                                                            |            |            |            |          |           |  |  |

VII. Projected Resource Needs

|   | Cost and Funding Sources to Initiate and Operate the Program                                            |                                              |                                                       |  |  |  |  |  |
|---|---------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------|--|--|--|--|--|
|   | Informational Category                                                                                  | Program Initiation Year 2025 - 2026          | Program Full Enrollment Year <sup>1</sup> 2027 - 2028 |  |  |  |  |  |
| 1 | Projected Enrollment (Headcount)                                                                        | 7                                            | 14                                                    |  |  |  |  |  |
| 2 | Projected Enrollment (FTE)                                                                              | 7                                            | 14                                                    |  |  |  |  |  |
| 3 | Estimated Tuition and E&G Fees                                                                          | \$17,673 (in-state);<br>\$40,766 (out-state) | \$17,673 (in-state);<br>\$40,766 (out-state)          |  |  |  |  |  |
| 4 | Projected Revenue from Tuition and E&G Fees                                                             | \$ 285,362                                   | \$ 570,724                                            |  |  |  |  |  |
| 5 | Other Funding Sources Dedicated to the Proposed Program (e.g., grant, business entity, private sources) | 0                                            | 0                                                     |  |  |  |  |  |

<sup>&</sup>lt;sup>1</sup> For the "Full Enrollment Year" use: for associate degrees, initiation year plus 1; for baccalaureate degrees, initiation plus 3; for masters degrees, initiation plus 2; for doctoral degrees, initiation plus 3.

#### VIII. Virginia Needs.

The necessity for this program is accentuated by the evolving landscape of healthcare delivery models, where chaplains are increasingly recognized as vital members of interdisciplinary care teams. Notably, nine of the ten largest hospitals in Virginia already incorporate chaplains into their care delivery model. Additionally, the National Consensus Project for Quality Palliative Care mandates the inclusion of chaplains within interdisciplinary teams and Medicare hospice providers are required to offer spiritual care, by trained chaplains, to their patients. Research recommends the integration of spiritual care into the care plan of those with serious illness, the integration of specific training in the area of spirituality for members of the interdisciplinary team caring for patients with serious illness, and to consistently have chaplains (spiritual care provider specialists) as part of the team caring for patients with serious illness. With the demographic trends indicating an aging among professional chaplains' workforce (45% of active professional chaplains being between the ages of 45-64 and 19.1% being 65+), there is an urgency to streamline and broaden educational pathways to ensure an adequate supply of qualified professionals in the field.

In response to findings from our Academic Program Review (APR) Self-Study, which revealed a significant desire among chaplaincy trainees for a centralized and comprehensive educational site, we propose the establishment of a degree program tailored to meet this demand. Our survey, conducted during our APR self-study, indicated that approximately 40% of individuals pursuing chaplaincy expressed a preference for a single location where they could attain their academic degree, clinical training, and clinical practice experience.

### STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA Program Announcement Form

#### **I. Basic Program Information**

| Institution (official name)  | Virginia Commonwealth University            |
|------------------------------|---------------------------------------------|
| Degree Program Designation   | Bachelor of Science (BS) in Health Research |
| Degree Program Name          | Health Research                             |
| CIP code                     | 51.0719                                     |
| Anticipated Initiation Date  | Fall 2025                                   |
| Governing Board Approval     | Santambar 12 2024 (antiginated)             |
| Date (actual or anticipated) | September 13, 2024 (anticipated)            |

#### II. Curriculum Requirements.

#### General Education Requirement: 30 credit hours

#### Core Coursework: 36 credits

EXPH 250: Medical Terminology (1 credit)

HRES 251: Making Research Matter (1 credit) \*

HRES 300: Healthcare Delivery in the United States (3 credits)

HRES 302: Biobehavioral Sciences (3 credits) \*

HRES 350: Principles of Research Ethics (3 credits) \*

HRES 351: Introduction to Regulatory Compliance (3 credits) \*

HRES 353: Disease Trends, Prevention, and Control (3 credits)

HRES 358: Introduction to Epidemiology (3 credits)

HRES 400: Research Administration (3 credits) \*

HRES 401: Research Design and Data Analysis (4 credits) \*

HRES 435: Health and Healthcare Disparities (3 credits)

EXPH 476: Pathophysiology and Pharmacology (3 credits)

#### **Experiential Learning**

HRES 395: Health Research Internship (3 credits)

#### **Other Required Courses 19-27 Credits**

BIOL 101 Biology Concepts (3 credits)

or BIOL 151 Introduction to Biological Sciences (3 credits)

CHEM 101/CHEZ 101 General Chemistry I and Laboratory (4 credits)

Fine Art (1-3 credits)

Foreign Language (0- 6 credits)

HUMS 202 Choices in a Consumer Society (1 credit)

PHIS 206 Human Physiology and Laboratory (4 credits)

STAT 210 Basic Practice of Statistics (3 credits)

SPCH 221 Oral Communication and Presentation (3 credits)

Open electives: 40-48 credits

**Total credit hours: 120** 

#### II. Description of Educational Outcomes.

Upon completing the proposed degree program, students will be able to:

- Describe basic concepts, methods, and best practices in health-related research.
- Apply health related theoretical models and frameworks to develop, implement, assess, and communicate research that addresses critical knowledge gaps necessary to enrich the human experience and optimize health for all.
- Identify and interpret compliance reporting requirements in accordance with federal regulations and/or sponsoring agency policies and procedures.
- Describe various research designs, and apply basic statistical techniques to address health-related research questions and hypotheses.
- Describe various research designs, and apply basic statistical techniques to address health-related research questions and hypotheses.
- Recognize and describe the associations between social and lifestyle factors and pharmacological interventions on health and disease.

#### IV. Description of Workplace Competencies/Skills.

Graduates of the proposed BS in Health Research degree program will be able to:

- Prepare and maintain Institutional Review Board protocols and other regulatory documents.
- Create and review standard operating procedures.
- Recruit, screen, and enroll study participants for health-related research studies
- Collect study data and prepare preliminary reports.
- Administer standard study questionnaires and tests, score test measurements and questionnaires, and code data for computer entry.
- Maintain appropriate study documentation and records.
- Communicate study-related activities with research team members, the institutional review board, and study sponsor representatives.
- **V. Duplication.** Provide information for each existing degree program at a Virginia public institution at the same degree level. Use SCHEV's degree/certificate inventory and institutions' websites.

| Institution | Program degree designation, name, and CIP code | Degrees granted (most recent 5-yr average) |  |
|-------------|------------------------------------------------|--------------------------------------------|--|
| None        | Not applicable                                 | Not applicable                             |  |

#### VI. Labor Market Information.

#### Labor Market Information: Bureau of Labor Statistics, 2022 -2032(10-Yr)

| Occupation         | Base Year  | Projected  | Total % Change | Typical Entry     |
|--------------------|------------|------------|----------------|-------------------|
|                    | Employment | Employment | and #s         | Level Education   |
| Medical and Health | 509,500    | 654,200    | 28%            | Bachelor's degree |
| Services Managers  |            |            | 144,700        | _                 |

Labor Market Information: Virginia Employment Commission, 2020 -2030 (10-Yr)

| Occupation       | Base Year  | Projected  | Total %       | Annual   | Education  |
|------------------|------------|------------|---------------|----------|------------|
|                  | Employment | Employment | Change and #s | Change # |            |
| Health Educators | 8,010      | 10,620     | 33%           | 261      | Bachelor's |
|                  |            |            | 2,610         |          | degree     |

#### VII. Projected Resource Needs

|                        | Cost and Funding Sources to Initiate and Operate the Program                                            |                                             |                                                             |  |
|------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|--|
| Informational Category |                                                                                                         | Program Initiation Year 2025 – 2026         | Program Full<br>Enrollment Year <sup>1</sup><br>2028 - 2029 |  |
| 1                      | Projected Enrollment (Headcount)                                                                        | 250                                         | 450                                                         |  |
| 2                      | Projected Enrollment (FTE)                                                                              | 240                                         | 430                                                         |  |
| 3                      | Estimated Tuition and E&G Fees                                                                          | \$9,989 (in-state);<br>\$35,853 (out-state) | \$9,989 (in-state);<br>\$35,853 (out-state)                 |  |
| 4                      | Projected Revenue from Tuition and E&G Fees                                                             | \$ 2,656,000                                | \$ 4,195,380                                                |  |
| 5                      | Other Funding Sources Dedicated to the Proposed Program (e.g., grant, business entity, private sources) | 0                                           | 0                                                           |  |

#### VIII. Virginia Needs. Briefly indicate state needs for the degree program. (max. 250 words)

The need for this proposed degree program is highlighted by the State's continuous and increased investment in health research. This is demonstrated by the Governor's support of the Commonwealth Health Research Board, an entity tasked with providing financial support for research that "maximizes the human health benefits of the Commonwealth." Additionally, the most recent 2024-2026 biennium budget bills from the State House and Senate include an investment totaling \$7,500,000.00 toward the Virginia Biosciences Health Research Corporation, which comprises many of the state academic institutions, including Virginia Commonwealth University. These funds may be used to perform research in biosciences. In 2023, VCU Massey Comprehensive Cancer Center reported an increase of \$5,000,000.00 from the Governor and General Assembly to a record amount of \$25,000,000.00. A large percentage of these funds have and will continue to go to research. Similar patterns have been reported at other institutions that conduct health research. Given the State's growing investment in health research, there will be a critical need for personnel to facilitate research activities.

Given that this is the first bachelor's degree program of its kind for the institution and for the state, it is difficult to determine a student need. However, all state institutions have focused on undergraduate research, whether through focused centers or training programs. All of the current efforts are ancillary to degree programs. The proposed BS in Health Research will afford students the opportunity to increase their knowledge about research and research practices while conducting health-related research.

<sup>&</sup>lt;sup>1</sup> For the "Full Enrollment Year" use: for associate degrees, initiation year plus 1; for baccalaureate degrees, initiation plus 3; for masters degrees, initiation plus 2; for doctoral degrees, initiation plus 3.

#### **Approval**

VCU Comprehensive Emergency Management Plan

#### **Background**

VCU is committed to an all-hazards approach to emergency planning and management to support the safety of the VCU community. Every year, VCU conducts a review and revision of its Crisis and Emergency Management Plan (CEMP). The CEMP is developed through organization-wide planning and preparedness efforts as well as the identification of resources and assets that support these processes. It identifies potential threats, an incident command structure, phases of emergency, impacts on operations, and operational contingency plans. Every four years, the revised plan must be adopted formally by the VCU Board of Visitors.

The CEMP is structured following guidelines from the National Incident Management System (NIMS) and National Response Framework (NRF) and provides flexibility to adapt to different disruptive events and for interacting with local and state entities to coordinate responses to all types of crises or emergencies. The 2024 CEMP references actual responses and frameworks developed during crises and emergency events over the last four years.

#### **Considerations**

A CEMP is required per the Commonwealth of Virginia code §23.1-804, which states that the governing board of each public institution of higher education shall develop, adopt and keep current a written crisis and emergency management plan. Virginia code also requires readoption by the governing board every four years.

#### Summary of changes (2020-2024)

The 2024 VCU CEMP supersedes and replaces the 2020 VCU CEMP. Significant revisions since 2020 are as follows:

- Comprehensive rewrite of the base plan to better align with the Virginia Department of Emergency Management template as well as incorporate additional guidance in coordination with the City of Richmond Emergency Operations Plan.
- Addition of four separate functional annexes (i.e., sections) to the overall CEMP (Emergency Notification Plan, Emergency Communication Plan, Global Response Plan and Recover Plan).
- Rewrite of Active Threat, Tropical Cyclones, Severe Winter Weather, Hazmat Incident and Infectious Disease Hazard Specific Annexes, and the addition of the Civil Disturbances Hazard Specific Annex.
- Division of University Incident Command Team (ICT) into three separate components: the Incident Assessment Group, Emergency Support Group and the Executive Policy Group.
- Restructure of Emergency Operations Center Organizational Structure/Chart.
- Rewrite of all three Appendices (ICT Representation, Essential Elements of Information and Job Action Sheets) to reflect changes made to ICT since the 2020 CEMP.

#### Recommendation

Approve the 2024 VCU CEMP.

## RESOLUTION OF THE BOARD OF VISITORS VIRGINIA COMMONWEALTH UNIVERSITY

#### CRISIS AND EMERGENCY PREPAREDNESS PLAN ADOPTION

**WHEREAS**, the Board of Visitors of Virginia Commonwealth University is concerned with the health and well-being of its students, faculty and staff, and desires that the best possible emergency services be available to them; and, the President of the University similarly is concerned with the health and well-being of its students, faculty and staff, and desires that the best possible emergency services be available to them; and

WHEREAS, the Code of Virginia, Chapter 8 of Title 23.1, Section 23.1-804, provides that the governing board of each public institution of higher education in Virginia shall develop, adopt and keep current a written crisis and emergency management plan; that every four years, each public institution of higher education shall conduct a comprehensive review and revision of its crisis and emergency management plan to ensure that the plan remains current, and the revised plan shall be adopted formally by the governing board and that such review shall also be certified in writing to the Virginia Department of Emergency Management; and

**WHEREAS**, such a plan has been developed by Virginia Commonwealth University staff, in coordination with the Virginia Department of Emergency Management, and with input from Virginia Commonwealth University Incident Coordination Team Departments and the City of Richmond Office of Emergency Management;

## NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY

**Section 1.** The Board hereby officially adopts the Virginia Commonwealth University Crisis and Emergency Preparedness Plan, to include plans and procedures for both natural and man-made disasters.

**Section 2.** This resolution shall take effect immediately upon its adoption.



# Crisis and Emergency Management Plan

December 2024



#### **Contents**

| Plan Documentation                                   | 4          |
|------------------------------------------------------|------------|
| Promulgation Statement                               | 4          |
| Legal                                                | 5          |
| Preface                                              | 6          |
| Components of the Crisis & Emergency Management Plan | 6          |
| Record of Distribution                               | 8          |
| Record of Changes                                    | 9          |
| Authorities and Standards                            | 10         |
| Policies and Regulations                             | 10         |
| Introduction                                         | 11         |
| Mission                                              | 11         |
| Purpose                                              | 12         |
| Scope                                                | 12         |
| Situation Overview                                   | 13         |
| Threat, Hazard and Risk Assessment Summary           | 14         |
| Planning Assumptions                                 | 15         |
| Emergency Management Phases                          | 17         |
| Concept of Operations                                | 18         |
| General                                              | 18         |
| Direction, Control & Coordination                    | 19         |
| Organization and Assignment of Responsibility        | 20         |
| EOC Activation                                       | 24         |
| Plan Development and Maintenance                     | 27         |
| Training and Exercises                               | 28         |
| Glossary and Acronyms                                | 29         |
| Glossary                                             | 29         |
| Acronyms                                             | 32         |
| ICT Representation                                   | Appendix A |
| Essential Elements of Information                    | Appendix B |
| Job Action Sheets                                    | Appendix C |
| Emergency Notification Plan                          | Annex A    |



| Emergency Communication Plan | Annex B |
|------------------------------|---------|
| Global Response Plan         | Annex C |
| Recovery Annex               | Annex D |
| Active Threat                | Annex 1 |
| Tropical Cyclones            | Annex 2 |
| Severe Winter Weather        | Annex 3 |
| Hazmat Incident              | Annex 4 |
| Infectious Disease           | Annex 5 |
| Civil Disturbances           | Annex 6 |



# **Plan Documentation**

# **Promulgation Statement**

By virtue of the authority vested in me by the Board of Visitors as President of Virginia Commonwealth University (VCU), and as the administrator ultimately responsible for emergency management on campus, I hereby promulgate and issue the VCU Crisis & Emergency Management Plan (CEMP).

This plan provides for VCU's response to emergencies and disasters in order to save lives; to protect public health, safety and property; to restore essential services; and to enable and assist with economic recovery. The plan is consistent with Code of Virginia § 23.1-804 and Title 44, Chapter 3.2, and the National Incident Management System as implemented in the National Response Framework (NRF) adopted October 2019.

Companion documents to the CEMP include, but are not limited to, the VCU Hazard Mitigation Plan (HMP) and the VCU Continuity of Operations Plans (COOP) which are distinct, complementary plans that together provide a sound decision-making foundation with regard to VCU's approach to emergency management. In concert with companion plans, exercises, training and outreach, the CEMP substantially enhances VCU's capabilities to prepare for, respond to, recover from, prevent and mitigate against all hazards. A component of VCU's emergency management program, the CEMP assists in continuing to build a culture of preparedness and resiliency throughout the university community.

I do hereby certify that the foregoing writing is a true, correct copy of a resolution unanimously adopted by the Board of Visitors of VCU at a meeting held on the 13<sup>th</sup> day of December, 2024.

This Promulgation shall be effective upon its signing and shall remain in full force and effect until amended or rescinded by further promulgation.

Michael Rao, Ph.D.
President, Virginia Commonwealth University



# Legal Disclaimer

The information contained in the VCU CEMP has been prepared for use by VCU. The information is guidance for managing an incident, recognizing that individual circumstances or events not anticipated by the CEMP may occur. The experience and judgment of those utilizing the CEMP is an important consideration in how and when the CEMP is used. The content represents the best opinions on the subject in conjunction with current legislative mandates. No warranty, guarantee or representation is made by VCU of the sufficiency of the information contained herein and VCU assumes no responsibility in connection therewith. The CEMP is intended to provide guidelines for safe practices; therefore, it cannot be assumed that all plausible and non-plausible scenarios are contained in this document, or that other or additional information or measures may not be required. Nothing in this plan shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by the elements of the plan.

#### **Confidentiality**

Public disclosure of this document would have a reasonable likelihood of threatening public safety by exposing vulnerabilities. It contains sensitive and confidential information that is not subject to the Freedom of Information Act under Virginia Code §2.2-3705.2. Accordingly, VCU is withholding elements of the CEMP from public disclosure.



# **Preface**

VCU is vulnerable to a broad range of hazards and disruptive events, such as flash flooding, hurricanes, winter storms, tornados, hazardous materials, transportation incidents, infectious disease, active shooters, terrorist attacks, power outages, technology failures or cyber-attacks. To respond effectively to any emergency, it is critical that all members of the VCU community understand their roles and responsibilities during these types of incidents. A coordinated and organized response effort could save lives, protect property and ensure an efficient short- term restoration of basic operations.

The VCU CEMP creates a flexible, scalable, all-hazards framework for the coordination of the university's effort in preparing for, mitigating against, responding to and recovering from a disaster on campus. This plan is structured following guidelines from the National Incident Management System (NIMS) and NRF and provides flexibility to adapt to different disruptive events and for interacting with local and state entities to coordinate large-scale, multijurisdictional responses. The succession of events in a disruptive event are not predictable; therefore, this plan serves as a basic framework and may require changes to meet the challenges of each emergency.

Companion documents to the CEMP include, but are not limited to, the VCU Hazard Mitigation Plan, and the VCU COOP which are distinct, complementary plans that together provide a sound foundation with regard to VCU's approach to emergency Management.

# **Components of the Crisis & Emergency Management Plan**

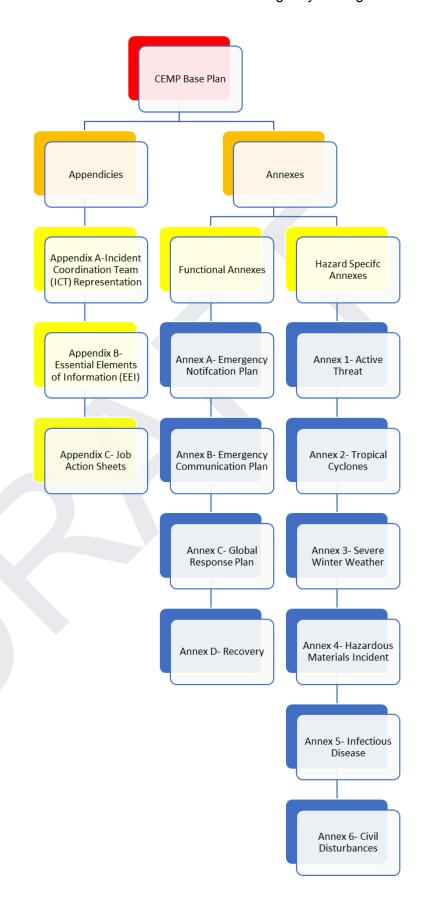
The <u>Basic Plan</u>, utilizing an all-hazards approach, illustrates the overall methodology for how incidents are managed by this institution.

The **Appendices** contain supplemental information relevant to all CEMP elements.

The <u>Annexes</u> are broken into two types: Hazard Annexes and Functional Annexes. The hazard annexes contain procedures for specific incidents such as active threat, infectious disease, or severe weather. The Functional Annexes contain procedures for functions such as emergency notifications, emergency communications, global response and recovery.

See Figure 1 CEMP Graphic Layout for full plan format.







# **Record of Distribution**

It is the intent, based on the sensitivity of information contained within this document, that distribution is limited to those personnel, offices, departments and agencies that have an operational "need to know." The following list is not all inclusive; additional copies may be distributed at the direction of the Director of Emergency Management or designee. All recipients listed below will receive an electronic copy of the CEMP in its entirety, to include all appendices and annexes. Distribution beyond the recipients listed below may not be made without authorization from the Director of Emergency Management or designee. Requests for additional distribution of electronic or hard copies will be submitted to the Director of Emergency Management or designee.

| Tab                            | ole 1. Record of Distribution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agency/Department              | Recipient Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| VCU Incident Coordination Team | Assistant Athletic Director for Event Mgmt & Facility Ops Assistant Director of Fire Safety Associate VP for Capital Assets & Real Estate Associate Dean for Research and Learning Associate Vice President for Health Sciences Associate VP Emergency Services & Public Safety Associate VP for Facilities Management Associate VP for Facilities Management Associate VP for Safety and Risk Management Chief Diversity Officer Chief Human Resource Officer Chief Information Officer Chief of Staff Director of Business Services Director of Operations, GEO Director, Environmental Health and Safety Executive Director for Residential Life & Housing Executive Director of Parking and Transportation MPC & MCV Campus Coordinator Program Mgr Emergency Preparedness, VCU Health Senior Associate VP for Campaign Administration Senior Vice President for Academic Affairs Senior Vice Provost for Academic Admin & Operations University Counsel Vice President for Research & Innovation Vice President for SEMSS Vice President for Student Affairs VP for Government & External Relations VP of Enterprise Marketing & Communications |
| City of Richmond               | Department of Emergency Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Virginia Department of         | All Hazards Planner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Emergency Management           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |



# **Record of Changes**

Submit recommended changes to this document to the Director of Emergency Management.

**Table 2. Record of Changes** 

| Date of Change | Revision<br>Number | Page or Section<br>Changed | Summary of Changes                              |
|----------------|--------------------|----------------------------|-------------------------------------------------|
| 10/1/24        | 1                  | All                        | Comprehensive re-write; review in its entirety. |
|                |                    |                            |                                                 |
|                |                    |                            |                                                 |
|                |                    |                            |                                                 |
|                |                    |                            |                                                 |
|                |                    |                            |                                                 |





# **Authorities and Standards**

# **Policies and Regulations**

VCU's CEMP is authorized and/or guided by provisions in the following authorities:

#### Federal:

- Homeland Security Presidential Directive 5, Management of Domestic Incidents, February 28, 2003
- Homeland Security Presidential Directive 8, National Preparedness, December 17, 2003
- Homeland Security Act of 2002, Public Law 107-296, 116 Stat. 2135
- Robert T. Stafford Relief and Emergency Assistance Act of 1988, as amended, 42 U.S.C., Public
- Law 93-288 as amended by Public Law 100-707
- National Incident Management System, October 2017
- NRF, October 2019
- National Disaster Recovery Framework, June 2016
- Americans with Disabilities Act
- Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act)
- Emergency Planning and Community Right-to-Know Act of 1986 (Public Law 99- 499, October 17, 1986), Title III of the Superfund Amendments and Reauthorizations Act

#### State:

- Commonwealth of Virginia Emergency Services and Disaster Law of 2000, as amended
- The Code of Virginia, Title 23.1
- The Code of Virginia, Title 44
- The Code of Virginia §19.2-11.01
- The Code of Virginia §23.1-804
- Commonwealth of Virginia Governor's Executive Order 102 (2005)
- Commonwealth of Virginia Governor's Executive Order 41 (2019)
- Commonwealth of Virginia Governor's Executive Order 50 (2012)
- The Commonwealth of Virginia Emergency Operations Plan, October 2021, as amended

#### References:

- Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide 101, version 2.0, September 2021
- FEMA Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education, June 2013
- National Fire Protection Association 1600 Standard



# Introduction Mission VCU:

VCU and its academic health sciences center serve as one national urban public research institution dedicated to the success and well-being of our students, patients, faculty, staff and community through:

- Real-world learning that furthers civic engagement, inquiry, discovery and innovation
- Research that expands the boundaries of new knowledge and creative expression and promotes translational applications to improve the quality of human life
- Interdisciplinary collaborations and community partnerships that advance innovation, enhance cultural and economic vitality, and solve society's most complex challenges
- Health sciences that preserve and restore health for all people, seek the cause and cure
  of diseases through groundbreaking research and educate those who serve humanity
- Deeply ingrained core values of diversity, inclusion and equity that provide a safe, trusting and supportive environment to explore, create, learn and serve

#### **VCU Emergency Management:**

Through an all-hazards approach, VCU Emergency Management (EM) strives to provide a safe, secure and resilient learning and working environment by fostering the mission of mitigating against, preparing for, responding to and recovering from any type of emergency and/or disaster. In supporting the university's mission, VCU EM is committed to building a culture of readiness and resilience by fostering seamless inter-agency coordination with both the VCU community and neighboring jurisdictions.

#### **VCU Incident Response Priorities:**

VCU's incident response priorities are:

- Protect life safety
- Secure critical infrastructure and facilities including:
  - o Buildings used by the VCU community
  - o Buildings critical to health and safety
  - o Facilities that sustain the response
  - o Classroom and research buildings
  - o Administrative buildings
- Resume teaching and research programs



#### **Purpose**

The CEMP provides all-hazards guidance for emergency operations in response to any type of incident, disaster or large-scale emergency affecting the VCU community. A disruptive event may occur with little or no warning, thus the CEMP is designed to allow for flexibility and scalability of the response. It assigns duties and responsibilities to departments for disaster mitigation, preparedness, response and recovery. It also provides the framework within which more detailed emergency plans and procedures can be developed and maintained. Activation of this plan reduces the vulnerability of people and property to a disaster and establishes a means to respond effectively to planned or unplanned incidents that have varying degrees of early warning.

This plan is intended to establish organizational structure for responses to emergencies that are of sufficient magnitude to cause a significant disruption of the functioning of all, or portions, of VCU. This plan describes the roles and responsibilities of individual units, departments and personnel during emergency situations.

This plan does not supersede or replace the procedures for safety, hazardous materials response or other procedures that are already in place within VCU. Rather, it supplements those procedures with a crisis management structure that provides for the immediate focus of management on response operations and the early transition to recovery operations.

#### Scope

The CEMP and its contents are applicable to all departments and individuals within the VCU community, each of which may be requested to provide assistance or emergency action when broad coordination is required to save lives, minimize damage or otherwise assist in response. Moreover, this plan also provides the foundation for the organization and coordination of recovery and mitigation functions. It focuses on emergency planning functions at the Monroe Park and MCV campuses, but functions separately from VCU Health System. Other campuses, not located in downtown Richmond, develop site-specific plans, consistent with lines of authority, notification procedures and other policies outlined within this plan.

This plan is modeled in accordance with prevailing practices in the field of emergency management, including incorporation of the NIMS, to facilitate coordination and communication between all responding entities. VCU cooperates and collaborates with local, state and federal emergency management agencies and other stakeholders in the development, implementation and execution of emergency response plans.



# **Situation Overview**

The following situations impact VCU's continuity planning efforts:

- VCU's two primary campuses are located in the urban environment of downtown Richmond, Virginia.
- The institution has 198 acres of campuses with 219 buildings housing both the undergraduate and graduate programs. The 127.5-acre Monroe Park Campus is located in Richmond's Fan District and the 70.5-acre MMCV Campus is adjacent to the State Capitol. There are:
  - o 25,359 employees (including VCU Health System)
  - o 2,457 full-time faculty
  - o 28,594 total students
- Both campuses are located proximate to Interstates 95 and 64 as well as to railroad tracks. Both transportation mechanisms carry hazardous materials.
- Due to the close proximity to the State Capitol, first amendment related activities such as protests and marches are likely.
- Special events frequently occur on and in close proximity to VCU. These events include sporting, entertainment, conference, academic, commemorative and celebrity appearance gatherings. These events increase VCU's campus populations markedly.
- Natural hazards including hurricanes, tropical storms, tornados, winter storms, flash flooding, thunderstorms and windstorms can occur in the Richmond area and impact VCU.
- In addition to the potential of natural disasters, there are a variety of man-made and technological disasters, both accidental and deliberate, that could occur in the vicinity of campus.
- Hazardous materials (chemical, biological, radiological, explosive/incendiary) are found
  in many campus facilities that support research and instruction. The chances of
  small-scale incidents are high, but failures of systems (e.g., ventilation) could contribute
  to a larger and more disruptive incident.
- The western traffic pattern flight path for the Richmond International Airport passes overhead.



# Threat, Hazard, and Risk Assessment Summary

VCU is vulnerable to a wide spectrum of threats and hazards, whether natural, technological or human-caused, all have the potential to disrupt operations, cause damage and create casualties. These hazards can occur independently, simultaneously, or in conjunction with or as a result of a particular hazard. The threats and hazards listed below are not all-inclusive:

**Natural hazards** are hazards related to weather patterns and/or physical characteristics of an area. Often natural hazards occur repeatedly in the same geographical locations. They include extreme heat, hail, flooding, hurricane, lightning, severe wind and winter storms,

**Human-caused hazards** are hazards that rise from deliberate, intentional human actions to threaten or harm the well-being of others. Examples include mass violence, terrorist acts or sabotage.

**Technological hazards** refer to hazards originating from technological or industrial accidents, infrastructure failures, such as dam/levy failures, utility outages, gas leaks and hazardous materials (HazMat) spills.

**Public Health Emergencies** is defined by the World Health Organization (WHO) as an occurrence or imminent threat of an illness or health condition, caused by bio terrorism, epidemic or pandemic disease, or (a) novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human fatalities or incidents or permanent or long-term disability (WHO/CDC, 2001). A public health emergency is a condition that requires the Governor to declare a State of Public Health Emergency.

**Civil Disturbance** refers to activity such as a demonstration, riot or strike that disrupts a community and requires intervention to maintain public safety.

**Terrorism** refers to activities undertaken by terrorist organizations, affiliates or "lone actors" that employ threat or actuality of physical violence to threaten, terrify or intimidate populations to achieve political aims. These can be both domestic and international in nature.

As part of an all-hazards approach, the VCU Hazard Mitigation Planning Committee conducts an annual review of the Hazard Vulnerability Assessments (HVA) for the VCU community, to be incorporated into the HMP. The purpose of the HVA is to identify relative risk for natural, technological and human-caused hazards that may pose a threat to the university infrastructure and the campus community. The HVA accounts for probability of occurrence, impact of occurrence and university's preparedness for each hazard. The results of the HVA provide relative risk rankings for all assessed hazards.



# **Planning Assumptions**

This plan is based on the following assumptions and considerations presented below:

- A disruptive event may occur at any time of the day or night, weekend or holiday with little or no warning.
- The succession of events in a disruptive event is not predictable; therefore, published
  plans, such as this one, serve as a framework and may require improvisation to meet the
  requirements of the emergency.
- VCU may be impacted by an event which occurs in the community adjacent to the campus or at off-site facilities, necessitating resources and personnel being mobilized to respond.
- Disasters affecting the university may affect the surrounding community. Therefore, it is necessary for the university to prepare for and carry out disaster response and short-term recovery operations in conjunction with local resources.
- Based on the event, outside resources may not be immediately available to assist VCU.
- Departments should maintain standard operations plans or guides relevant to their areas and operations and ensure that all personnel are trained and familiar with the plan and are capable of implementing emergency procedures in a timely and effective manner.
- Incidents including major emergencies or catastrophic events will require full coordination of operations and resources, and may:
  - o Involve single or multiple geographic areas.
  - o Require significant resource coordination or assistance.
  - o Result in numerous casualties, fatalities, displaced people, property loss, significant damage to the environment, and disruption of economy and normal life support system such as public services and basic infrastructure.
  - o Communication lines may be disrupted.
  - o People may become stranded at the university if conditions make travel unsafe
  - o Overburden VCU resources and capabilities.
  - o Require extremely short notice asset coordination and response timelines.
  - o Require prolonged, sustained incident management operations and support activities requisite to long-term community recovery and mitigation.
- Incident management activities will be initiated and conducted using the principles contained in the NIMS and with Incident Command Structure (ICS)
- VCU Police are responsible for compliance with 20 U.S.C. § 1092(f) Jeanne Clery
   Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act),
   specifically issuing emergency alerts for situations involving imminent threat or danger to
   the VCU community, and timely warning notifications for reported Clery crimes when
   ongoing risk and danger exist for the community.
- This plan requires that the Department of Criminal Justice Services (DCJS) Victims Crisis Assistance and Response Team and the Virginia Criminal Injuries Compensation Fund will be contacted immediately to deploy when there are victims as defined in the Code of Virginia § 19.2-11.01 Crime Victim and Witness Rights, including, but not limited to victim and witness protection and cases where there are victims of crime in need of financial or advocacy assistance. The current contact information for these agencies appears below:

#### **DCJS**

Julia Fuller-Wilson, Violence Against Women Program Administrator and State Crisis Response Coordinator Victims Services, Division of Programs and Services Virginia Department of Criminal Justice Services 1100 Bank Street, Richmond, VA 23219 (804) 371-0386 F: (804) 786-3414 Crisis Response Emergency Cell: (804) 840-4276 julia.fuller-wilson@dcjs.virginia.gov
Andrew Kinch (alternate to Julia Fuller-Wilson) (804) 801-2622

#### **DCJS Website Information for Reporting Emergencies:**

https://www.dcjs.virginia.gov/victims-services/report-campus-local-emergency

#### Virginia Victim Fund (VVF)/Criminal Injury Compensation Fund

Jessica Buchanan, Mass Casualty Senior Claims Coordinator 333 E Franklin Street
Richmond, VA 23219
(804) 205-3211 (Office) (804) 823-6905 (Fax)
(804) 659-9857 (24/7 Cell Phone Number)
Jessica.Buchanan@virginiavictimsfund.org

# **Emergency Management Phases**

Andrew.kinch@dcis.virginia.gov

VCU Emergency Management is built upon FEMA's four emergency management phases, which facilitate an all-hazards cyclical-based plan (versus strictly event-specific planning). This methodology enables VCU to mitigate, prepare for, respond to and recover from any type of incident.



Figure 2. Emergency Management Cycle



#### **Mitigation**

Includes activities that eliminate or reduce the occurrence or effects of an emergency. VCU's Hazard Mitigation Plan describes in detail the individual natural, man-made and technological hazards that apply to the university and steps to prevent loss. This phase is meant to reduce the loss of life and property by lessening the impact of disasters.

#### **Preparedness**

The process of planning how to respond to an emergency. Preparedness is made up of the actions taken to organize, plan, equip, train and exercise to build and sustain the capabilities necessary to prevent, protect again, mitigate the effects of, respond to and recover from those threats that pose the greatest risk. This includes establishing authorities, procedures, protocols and agreements necessary in the event of an emergency. This also involves a "whole community" approach to assist in preparedness efforts, both internal to the university and with external partners.

#### Response

VCU utilizes the ICS and the NIMS to manage major special events, emergencies and disasters. Response activities are immediate actions to save and sustain lives, protect property and the environment, and meet basic human needs. Response includes public information and warning, law enforcement operations, emergency medical services, firefighting, evacuation, search and rescue, shelter and mass care support, transportation, removing debris, and restoring critical services and functions. Based on the level of incident, response may include integration with the City of Richmond Emergency Operations Plan, and the utilization of a unified command structure.

#### Recovery

When there is no longer a threat to life safety present, the recovery phase can begin, therefore this phase often runs concurrently with the response phase. This phase consists of both short-and long-term recovery operations. Short-term activities seek to restore vital services and provide basic needs to the VCU community. Long-term focuses more on restoring VCU to its normal state of operation. During recovery operations, additional assistance from Ccty, state, federal and volunteer organizations may be required and requested through the Virginia Department of Emergency Management. The Director of Emergency Management or designee will be responsible for requesting these additional resources.

# **Concept of Operations**

#### General

This section describes coordinating structures, processes and protocols employed for incident management by VCU. These coordinating structures and processes are designed to enable execution of the responsibilities of the President through the appropriate departments and to integrate local, state, federal, non-governmental agencies and organizations, and private-sector efforts into a comprehensive approach to emergency management.

VCU has adopted the NIMS as the standard for incident, emergency and event management throughout the institution. The Office of Emergency Management is the single point of contact



responsible for coordinating the ongoing implementation and maintenance of NIMS program activities for VCU. As both a national best practice and a state compliance requirement, NIMS sets common goals across all fundamental incident management components, including a flexible, scalable and modular organization; management of incidents at the lowest operational level possible; unified command wherever possible; Multi-Agency Coordination Systems; common terminology; standardized event and incident action planning; comprehensive resource management; integrated communications systems; and pre-designated facilities.

All disasters begin and end locally. Therefore, this plan was founded upon the concept that emergency operations begin with VCU and that outside assistance from the City of Richmond, and other agencies as needed, will be requested when an emergency or disaster exceeds institutional capabilities. Therefore, this plan identifies the role of the university before, during and after a disaster or major emergency. It establishes the concepts and policies under which all elements of VCU will operate during emergencies.

Additionally, it provides a basis for the preparation of more detailed plans and procedures and for emergency management training programs. Units with primary emergency duties and responsibilities are also expected to develop and maintain separately published and more detailed standard operating procedures.

In the event an incident exceeds VCU's emergency response capabilities, outside assistance may be available, either through mutual support agreements with nearby jurisdictions, other institutions of higher education, or volunteer organizations. VCU resources must be fully committed before assistance is required from the adjacent jurisdictions. Due to VCU's location within the City of Richmond, it is understood that any large-scale incident that happens within Richmond will have effects on both the city and VCU. Therefore, this plan has been coordinated with the city of Richmond and with the city Emergency Operations Plan.

The following general principles apply to all parts of VCU's operation plan:

- On-scene coordination of emergency response will be accomplished within the ICS framework allowing for the incorporation of local, state and federal agencies.
- The EOC is the central location from which off-scene activities and resource management are coordinated.
- All appropriate available forces and resources will be fully committed before requesting assistance.

# Direction, Control & Coordination ICS

VCU utilizes the IICS (a NIMS component) for incident, emergency and event management. ICS is an emergency management system designed to enable effective and efficient management of incidents by integrating a combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure. ICS is widely applicable to organize both short-term and long-term field operations for the full spectrum of emergencies.



#### **Incident Commander (IC)**

The front-line staff in departments such as VCU Police, Facilities Management, Environmental Health and Safety, and others, handle most incidents with response activities primarily conducted at the field level. Once an incident occurs or is imminent, VCU Police establishes an on-scene incident command, including the designation of an Incident Commander (IC). If the incident requires the response of external partners, the IC will set up a Unified Command (UC) structure. The IC/UC provides command and control, which includes planning, accountability and executing a plan to resolve the situation. The IC/UC allocates resources assigned to the incident. Depending on the scope of the incident, resource needs and necessary coordination efforts, the Director of Emergency Management may be contacted, and some or all of the ICT may be activated to provide support.

#### **Unified Command (UC)**

UCs are an application of the ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC to establish their designated ICs at a single Incident Command Post. They afford agencies responding to an incident the ability to collaboratively coordinate, plan and interact effectively without interfering with the responsibility, accountability or authority of other involved agencies. A UC should be formed when an incident involves various jurisdictions, one jurisdiction that has multi agency involvement, and various jurisdictions that have multi agency involvement. The UC is tasked with identifying, establishing and ranking incident-related priorities and objectives. UC serves as the single voice of incident operations.

#### **Emergency Operations Center (EOC)**

In emergency situations that require additional resource and coordination support, the VCU EOC will be used. In some cases, the EOC may also manage direction and control of the incident. Upon activation, communications and coordination will be established between IC and the EOC. Additionally, the EOC will establish communication and coordination with neighboring jurisdiction EOCs and the Commonwealth of Virginia EOC to coordinate response and recovery activities. The EOC organization is discussed in detail below.

# Organization and Assignment of Responsibility Incident Coordination Team (ICT)

The ICT is comprised of representatives from across the university bringing resources and authority to a centrally coordinated team with focus on tactical implementation and strategic decision making for the overall university. The overall mission of the VCU ICT is to centralize coordination of the university's crisis response and recovery efforts using efficient communications, critical decision making and the effective prioritization of university resources. While the ICT may function at any location, or remotely depending on the situation, the primary location for activation is within the EOC located within VCU Police Headquarters.

#### **ICT Components**

The ICT comprises three components, the **Incident Assessment Group (IAG)**, the **Emergency Support Group (ESG)**, and the **Executive Policy Group (EPG)**.



The **Incident Assessment Group (IAG)** is the key group of members that will be initially activated prior to or during an event requiring ICT activation. The IAG provides overall incident management and university coordination as well as determines the scope and impact of the incident. The central role of the IAG is to serve as the primary information center during an incident, disseminating information both through the IC on scene as well as to the VCU community in its entirety. The IAG is responsible for maintaining situational awareness and a common operating picture through the use of situation reports throughout the incident, and ultimately making critical decisions on behalf of the university, to include schedule changes, resource priorities and overall campus operations.

The IAG consists of the following key members:

- ICT leader Senior Vice President for Finance and Administration and CFO
- ICT co-chair Associate Vice President for Emergency Services and Public Safety
- VCU Police
- Emergency Management
- Academic Affairs
- Student Affairs
- Safety and Risk Management
- Enterprise Marketing and Communications
- Facility Management
- Human Resources
- Strategic Enrollment Management and Student Success
- Technology Services
- VCU Health
- Health Sciences

The **Emergency Support Group (ESG)** are key members of VCU that, depending on the type, scale and nature of the incident, will be required by the IAG to provide additional resources, expertise and support to the incident coordination. The ESG will be included in all situational reports, whether activated or not, to allow maintained situational awareness of all incidents occurring on campus and to allow for providing valuable insight regarding their area that may have not been considered by the IAT.

The ESG consists of the following key members:

- Athletics
- Business Services
- Environmental Health
- Finance
- Fire Safety
- Global Education Office
- Libraries
- Parking and Transportation
- Research
- Institute of Contemporary Arts
- Residential Housing
- Campus Coordinators
- Development and Alumni Relations



Government and External Relations

The **Executive Policy Group (EPG)** provides leadership support to emergency operations, addresses the safety and welfare of students, faculty, staff and visitors, and assures, to the extent possible, the continuity and timely resumption of university operations. The EPG are established and organized to make cooperative multi agency decisions. The EPG acts as a policy-level body during incidents, supporting resource prioritization and allocation, and enabling decision making among university leadership and those responsible for managing the incident (e.g., the IC). Additionally, the EPG remains accessible to the IAG for updates and guidance and is responsible for ensuring the President and, as needed, the Board of Visitors is informed.

The EPG consists of the following key members:

- President's Office
- Provost's Office
- University Counsel
- Chief Diversity Officer

#### **ICT Structure**

Utilizing the ICS structure, the ICT is designed with a command staff (ICT leader, ICT co-chair, Public Information Officer, Liaison/Planning Officer and members of the EPG) and a general staff. The general staff is designed under four main pillars: Incident Operations, Institutional Operations, Logistics, and Finance and Administration. Each of these sections has an identified section chief who is ultimately responsible for managing their specific section within the EOC.

Command staff positions perform the following essential duties:

- ICT Leader: Establishes consolidated incident objectives, priorities and strategic guidance; establishes procedures for joint decision making and documentation; holds overall decision-making authority for the ICT; and captures lessons learned and best practices.
- **ICT Co-Chair:** Provides strategic oversight of on-scene operations and acts as ICT leader in their absence.
- Public Information Officer(s): Create and relay incident information to internal and external stakeholders. When necessary, establish and coordinate Joint Information Center operations. This is led by a representative of Enterprise Marketing and Communications.
- Liaison/Planning Officer(s): Coordinates with external groups. Maintains situational awareness; initiates, collects and verifies situational reports; develops Incident Action Plans,; and coordinates staffing. This is usually led by a representative from Emergency Management.

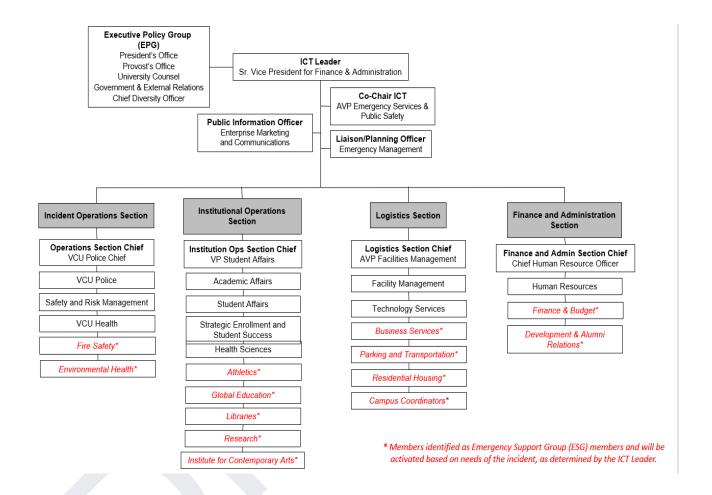
General staff positions perform the following essential duties:

- **Incident Operations Section:** Directs and coordinates all incident operations and receives and implements incident action plans.
- Institutional Operations Section: Directs and coordinates academic mission operations.
- Logistics Section: Obtains and stages resources in support of incident operations.



• **Finance/Administration Section:** Tracks all incident costs and manages the university's claims and reimbursement process.

The following basic EOC organizational chart illustrates the lines of direction, communication and authority present during EOC activation.





# **EOC Activation**

The EOC may be activated by the Director of Emergency Management at the direction of the ICT Leader, the ICT Co-Chair or in proactive readiness for a projected or forecasted event. The EOC will be utilized to manage events that are an imminent threat to public safety or health or as needed to manage an extensive response and coordination to a large emergency or disaster. Additionally, the EOC may also be activated for a planned event.

The EOC has four operating levels:

| Level | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Steady State Operations (Green) – Plans and procedures are developed and maintained. Training and tests/exercises are conducted periodically as required to maintain readiness, personnel rosters are updated, emergency resources are identified (i.e., facilities, equipment, technology, personnel, etc.), mutual aid agreements are developed, etc.                                                                                                                                                                                                                                                                                                                |
| 2     | Increased Readiness (Yellow) – This level references a situation when there is a potential or likelihood of an emergency developing or worsening. ICT staff are decentralized but perform more frequent monitoring. Normal, routine daily activities are occurring but ongoing or forecast events include a potential or actual threat or requirement for coordinated assistance. Severe weather or other events may be occurring, causing damage or effects to power, transportation, communications and other infrastructure sectors requiring some limited form of assistance. Individual departments continue to perform assistance under their normal procedures. |
| 3     | Partial Activation (Orange) – A disruptive event that has a real or potential impact on the overall capability of VCU to fulfill its academic, operational, and research mission but may not necessitate, justify or allow for the full operational phase. This level involves certain key designated departments activating. This activation can occur physically or virtually.                                                                                                                                                                                                                                                                                       |
| 4     | Full Activation (Red) – A large-scale, long-lasting event that has a negative impact on the overall capability of VCU to fulfill its academic, operational and research mission. Add designated EOC personnel, as needed, are staffed on up to a 24-hour rotational basis. While normally occurring in person, this type of activation can also be conducted virtually.                                                                                                                                                                                                                                                                                                |

#### **EOC Deactivation**

The Director of Emergency Management, at the direction of the ICT leader or the ICT co-chair, deactivates EOC staff as circumstances allow and the EOC returns to its normal operations/steady state condition. Deactivation typically occurs when the incident no longer needs the support and coordination functions provided by the EOC staff or those functions can be managed by individual organizations or by steady-state coordination mechanisms. The EOC may phase deactivation depending on mission needs. Deactivation should include the deactivation checklist to track follow-up actions after-action review and improvement planning as part of the deactivation planning process.



#### **External Support**

Due to the integration of VCU into the city of Richmond, incidents are likely to also impact the surrounding community. If this occurs, VCU will make every effort to coordinate and work with local, state and federal officials in their delivery of emergency services. For coordination purposes, the Director of Emergency Management will serve as the point of contact for VCU when resource requests are necessary.

#### **Levels of Assistance**

#### **Local Assistance**

If VCU resources are inadequate to meet the needs of an emergency situation, VCU will request assistance from the City of Richmond and the Commonwealth of Virginia. All external assistance furnished to the university is intended to supplement university resources. VCU works closely with city partners especially due to the close proximity of city and VCU property.

#### **State Assistance**

Requests for assistance to the Commonwealth of Virginia should be made through the Virginia EOC. In essence, state emergency assistance to local governments begins at the local level.

#### **Federal Assistance**

If resources required to control an emergency situation are not available within the city or state, the governor of Virginia may request assistance from other states. In this instance the governor may also request assistance from the federal government through FEMA.

For major emergencies and disasters for which a presidential declaration has been issued, federal agencies may be mobilized to provide assistance to states and local governments. FEMA has the primary responsibility for coordinating federal disaster assistance. No direct federal assistance is authorized prior to a presidential emergency or disaster declaration, but FEMA has limited authority to stage initial response resources near the disaster site and activate command and control structures prior to a declaration, and the Department of Defense has the authority to commit its resources to save lives prior to an emergency or disaster declaration.

#### Non-Governmental Organizations (NGO)

The Virginia Voluntary Organizations Active in Disaster (VA-VOAD) is a statewide consortium of faith-based and non-profit organizations that are active in disaster relief. The VA-VOAD communicates with many voluntary organizations that provide significant capabilities to incident management and response and recovery efforts at all levels. The VCU Office of Emergency Management, in coordination with Development and Alumni Relations, will coordinate VA-VOAD activities to address unmet needs during a declared campus emergency.



# **Campus Community Roles and Responsibilities**

#### **Students**

#### **General Responsibilities**

Students should be aware of their surroundings and familiar with building evacuation routes, exits and assembly points. Students should also be enrolled in VCU Alerts and have a personal emergency kit.

#### Role During an Incident

Students involved in an incident should assess the situation quickly and thoroughly and employ common sense when determining how to respond. If directly involved in an incident, students should call (804) 828-1234 as soon as possible, direct responders to where the incident occurred if possible, and cooperate with first responders.

#### **Faculty and Staff**

#### **General Responsibilities**

University faculty and staff are seen as leaders by students and should be prepared to provide leadership during an incident. Faculty and staff should understand departmental Emergency Action Plans (EAPs) and building evacuation procedures in areas where they work and teach. Faculty and staff may likely be the first person to arrive at an incident. They should familiarize themselves with the basic concepts for personal and departmental incident response as outlined in the campus EAP and other outreach materials provided within SafeHub and the VCU Alert notifications page.

#### Role During an Incident

Faculty and staff involved in an incident should assess a situation quickly and as thoroughly as possible and use common sense when determining how to respond. Emergencies should be reported by calling (804) 828-1234 If evacuation of a building is necessary, faculty and staff are expected to evacuate immediately.

#### **Building Managers**

#### **General Responsibilities**

Building managers serve as the point of contact to receive and disseminate safety and emergency preparedness information. They coordinate the development of building EAP and act as an informational conduit for the Office of Emergency Management and other first responders.

#### **Role During an Incident**

Building managers involved in an incident serve as the primary point of contact between first responders and building occupants. As necessary, they may assist in providing building emergency information and coordinating building evacuation procedures.



#### **Media Relations**

VCU Public Information Officers (PIOs) coordinate press releases with the IC, UC and the ICT. They are also responsible for the activation, operation and demobilization of the Joint Information Center, as needed. During any incident affecting campus operations, the PIOs will update and maintain the VCU Alert page at <a href="https://www.alert.vcu.edu">www.alert.vcu.edu</a> as information becomes available.

#### **Succession of Authority**

Succession of decision-making authority, as related to critical incident management, is outlined in the COOP.

# **Plan Development and Maintenance**

The Director of Emergency Management is responsible for coordinating the preparation and updating of the CEMP, as required. The Director of Emergency Management will collaborate as needed with internal and external partners. The Director of Emergency Management will coordinate the annual review of the CEMP by the Chief Executive Officer and document the process per Code of Virginia §23.1-804. In addition, every four years the Director of Emergency Management will oversee a comprehensive review of the CEMP and secure its formal adoption by the governing board.

#### **Board of Visitors**

In accordance with Code of Virginia §23.1-804, the governing board shall develop, adopt and keep current a written crisis and emergency management plan. The plan shall include a provision that the DCJS and the Virginia Criminal Injuries Compensation Fund shall be contacted immediately to deploy assistance in the event of an emergency as defined in the emergency response plan when there are victims as defined in the Code of Virginia § 19.2-11.01. The DCJSand the Virginia Criminal Injuries Compensation Fund shall be the lead coordinating agencies for those individuals determined to be victims and the plan shall also contain current contact information for both agencies.

#### **University President**

The role of the university president is to provide overall support for VCU's Emergency Management program. They may authorize temporary suspension of university operations and activities. They provide leadership and play a key role in communicating to the public and in helping faculty, staff and students cope with the consequences of any type of incident impacting the institution. Furthermore, they oversee the coordination of VCU's Senior Administration and communicate with the Board of Visitors, Mayor of the City of Richmond, Board of Supervisors of Hanover or Charles City counties, and Governor should the disaster event dictate.

#### **Senior Vice President for Finance and Administration**

Serving in the capacity as ICT Leader and Chief Executive Officer, in accordance with Code of Virginia §23.1-804, the Senior VP for Finance and Administration shall annually review the CEMP, certify in writing that the plan has been reviewed and make recommendations to the institution for appropriate changes to the plan.



### Training and Exercises

Trained and knowledgeable personnel are essential for the prompt and proper execution of VCU's CEMP, EAPs and COOP. The Director of Emergency Management is responsible for the development, administration and maintenance of a comprehensive training and exercise program. Members of the ICT should also participate in training and exercises to ensure the plan may be implemented in accordance with recommended procedures and guidelines.

Training will be based on federal and state guidance as well as professional best practices. Training needs will be identified and records maintained for all personnel assigned emergency response duties in a disaster.

The Director of Emergency Management will conduct no less than one exercise of the plan each year to improve the overall emergency response organization and capability of the university. The exercise will test not only this plan but also train the appropriate officials, emergency response personnel and VCU employees. When appropriate, local response organizations, private partners and NGOs will be encouraged to participate. City of Richmond emergency services personnel from fire, police and emergency services personnel will also be invited to ensure interoperability and efficient response during shared events. The annual Hazard Vulnerability Assessment will be taken into consideration when planning for each exercise.

#### After Action Review

Post incident and exercise evaluation results bring about improvement opportunities within the university's response capabilities. One of the most effective ways of summarizing an incident and capturing lessons learned is the After-Action Review (AAR) process. During an AAR, prior incident/exercise actions are appraised by participants, observers and evaluators. Their comments are incorporated into a verbal or written report summarizing strengths and opportunities for improvement, which then may be incorporated into VCU's emergency management program and associated plans and procedures. Furthermore, improvement plans will be tracked for follow-up actions.

# **Glossary and Acronyms**

# **Glossary**

**All-Hazards:** A classification encompassing all conditions, environmental, technological or human-caused that have the potential to cause injury, illness or death; damage to or loss of equipment, infrastructure services or property; or alternatively causing functional degradation to social, economic or environmental aspects. These include accidents, technological events, natural disasters, domestic and foreign-sponsored terrorist attacks, weapons of mass destruction, and chemical, biological (including pandemic), radiological, nuclear, or explosive events.

**After Action Report:** A report that summarizes and analyzes performance in both exercises and actual events. The report includes strengths, areas for improvement and corrective actions. The reports for exercises may also evaluate achievement of the selected exercise objectives and demonstration of the overall capabilities being exercised.



**Campus Community:** Refers to students, faculty, staff, visitors, vendors and contractors on or in VCU campus property.

**Continuity of Operations Plan:** A plan of action to continue essential business functions of a department/unit/organization during and after an incident that disrupts normal operations.

**Crisis and Emergency Management Plan:** An all-hazards incident management document that is developed to ensure appropriate response to and recovery on and around campus. It provides guidance on what to do immediately before or during an emergency to preserve life, protect property and contain an incident or emergency.

**Emergency:** An incident that overwhelms or nearly overwhelms day to day resources, plans and personnel in place to manage them, while causing a significant disruption of normal business in all or a portion of the campus.

**Emergency Management:** The process of coordinating available resources to effectively manage emergencies or disasters that threaten the entity or institution, thereby saving lives, avoiding injuries and minimizing economic loss. This involves four phases: mitigation, preparedness, response and recovery.

**Emergency Action Plan:** A department/area/unit specific set of guidelines and procedures for use during an imminent life safety event (e.g., building fire, severe weather, hostile intruder, etc.).

**Emergency Operations Center:** A centralized location from which emergency operations can be directed and coordinated with the campus and community.

**Emergency Support Group:** A select group of ICT members closely aligned with representative departments of VCU that will provide additional resources, expertise and support to the incident coordination.

**Executive Policy Group:** A select group of ICT members closely aligned with representative departments of VCU that serve as the policy-level body during incidents, supporting resource prioritization and allocation, and enabling decision making by the ICT.

**Exercise:** A test of plans, protocol and/or procedures intended to validate the planning and training process. Exercises include seminars, workshops, tabletops, drills, games, and functional and full-scale exercises.

**Hazard:** Any source of danger or element of risk to people or property.

**Hazard Mitigation Plan:** A risk management tool used to identify natural and human caused hazards facing the VCU campus.

**Incident:** An occurrence or event, natural or human caused which requires a response to protect life or property.

**Incident Action Plan:** The statement of objectives and priorities for supporting activities during a designated period.

**Incident Assessment Group:** A select group of ICT members closely aligned with representative departments of VCU that will manage incidents and make critical recommendations to the ICT leader on behalf of the university.



**Incident Commander:** The person responsible for all aspects of an emergency response, including quickly developing incident objectives, managing all incident operations, applying resources, and holding responsibility for all persons involved in the response.

**Incident Command System:** A nationally used, standardized, on scene emergency management concept.

**Incident Coordination Team:** Comprising representatives from across the university bringing resources and authority to a centrally coordinated team with focus on tactical implementation and critical strategic decision making and messaging for the overall university.

**Unified Command:** An incident management method employing collaborative decision making between multiple responsible internal and/or external departments/agencies to resolve an incident in a more efficient manner.

**Joint Information Center:** A location where personnel with public information responsibilities perform critical emergency information functions, crisis communications and public affairs functions.

**Liaison Officer:** The EOC position responsible for internal/external coordination with departments/agencies playing a supporting response role during an event.

**National Incident Management System:** The group of principles that are legislated for all entities to assist in coordination national emergency response functions.

**Public Information Officer:** The Emergency Operations Center position responsible for information management during an event.

**Safety Officer:** The Emergency Operations Center position responsible for safety oversight during an event.



# **Acronyms**

**AAR** After Action Review

**CEMP** Crisis and Emergency Management Plan

**COOP** Continuity of Operations Plan

**DCJS** Department of Criminal Justice Services

**EAP** Emergency Action Plan

**ENS** Emergency Notification System

**ESG** Emergency Support Group

**EOC** Emergency Operations Center

**FEMA** Federal Emergency Management Agency

**HMP** Hazard Mitigation Plan

**HVA** Hazard Vulnerability Assessment

IAG Incident Assessment Group

IC Incident Commander

ICS Incident Command System

**ICT** Incident Coordination Team

JIC Joint Information Center

**NIMS** National Incident Management System

**PIO** Public Information Officer

**UC** Unified Command

**VA-VOAD** Virginia Voluntary Organizations Active in Disaster

**VDEM** Virginia Department of Emergency Management

VVF Virginia Victim Fund

#### **Approval of Project Plans**

Athletics Village Phase I: Outdoor Track Facilities and Practice Fields

#### **Background**

VCU seeks Board of Visitors (BOV) design review and approval of the project plans, as required by VCU's management agreement, for Athletic Village Phase I: Outdoor Track Facilities and Practice Fields. The Athletic Village Phase I was included in the 2024-2030 Six-Year Capital Plan and was initiated by BOV approval in May 2023.

This is the first of four phases to be developed for the Athletic Village. This project will replace Sports Backers Stadium, which is located in the Diamond District and is being sold to the City of Richmond as part of its construction of a new baseball stadium. This new facility will hold the events currently being held at Sport Backers Stadium and provide practice fields that will serve VCU athletes.

The new outdoor track facilities and practice fields will consist of a 400-meter outdoor track with a natural turf infield to accommodate an NCAA soccer field. The outdoor track facilities will contain seating for approximately 1,500 spectators as well as locker rooms, athlete meeting space, a press box and media area for events, concession stands, and storage. There will be two NCAA-size practice fields, one artificial and one with natural grass.

Work on the practice fields and outdoor track/soccer field is scheduled to start in January 2025. Construction of the stadium is scheduled to begin in July 2025.

#### Cost and funding

The estimated cost of Phase I: Outdoor Track Facilities and Practice Fields is \$38M and will be funded by the sale of the Sports Backers Stadium property, VCU Athletics funds and private fundraising funds.

#### Recommendation

Approve the project plans for the Athletic Village Phase I: Outdoor Track Facilities and Practice Fields.





# VCU ATHLETIC VILLAGE OUTDOOR TRACK RICHMOND, VA

STATE PROJECT CODE: 236-B2236-060 (PHASE 1)

VCU PROJECT CODE: 2023-02408



|              | INDEX OF DRAWINGS              |
|--------------|--------------------------------|
| Sheet Number | SHEET NAME                     |
|              |                                |
| A0.00        | COVER SHEET                    |
| A0.02        | PROJECT INFO                   |
| A0.11        | BUILDING AREA                  |
| A1.00        | SHEET NAME                     |
| A1.01        | OUTDOOR TRACK COLOR            |
| A1.02        | OUTDOOR TRACK B&W              |
| A1.11        | OUTDOOR TRACK - ATHELTIC FIELD |
| A2.00        | SITE PLAN                      |
| A2.01        | TRACK COLOR FLOORPLAN - LVL 01 |
| A2.02        | TRACK COLOR FLOORPLAN - LVL 02 |
| A2.03        | TRACK COLOR ROOF PLAN          |
| A2.04        | SITE SECTIONS                  |
| A2.11        | TRACK FLOORPLAN - LVL 01       |
| A2.12        | TRACK FLOORPLAN - LVL 02       |
| A2.13        | TRACK FLOORPLAN - LVL 03       |
| A2.14        | CONCESSION BUILDING            |
| A2.15        | PRESSBOX                       |
| A3.00        | INTERIOR INFORMATION & DETAILS |
| A4           | REFLECTED CEILING PLAN         |
| A5.11        | ELEVATIONS                     |
| A6.11        | SECTIONS                       |
| A6.12        | ENLARGED ELEVATIONS            |
| A6.13        | WALL SECTIONS                  |
| A7           | EXTERIOR DETAILS               |
| A8           | VERTICAL TRANSPORTATION        |
| A9           | SPECIFICATIONS                 |
| A9.11        | OUTDOOR TRACK STADIUM - VIEWS  |
| A9.12        | OUTDOOR TRACK STADIUM - VIEWS  |
| ALS.01       | LIFE SAFETY                    |

|           | INDEX OF DRAWINGS              |  |
|-----------|--------------------------------|--|
| et Number | SHEET NAME                     |  |
|           |                                |  |
| 00        | COVER SHEET                    |  |
| )2        | PROJECT INFO                   |  |
| 1         | BUILDING AREA                  |  |
| 00        | SHEET NAME                     |  |
| )1        | OUTDOOR TRACK COLOR            |  |
| )2        | OUTDOOR TRACK B&W              |  |
| 11        | OUTDOOR TRACK - ATHELTIC FIELD |  |
| 00        | SITE PLAN                      |  |
| )1        | TRACK COLOR FLOORPLAN - LVL 01 |  |
| )2        | TRACK COLOR FLOORPLAN - LVL 02 |  |
| )3        | TRACK COLOR ROOF PLAN          |  |
| )4        | SITE SECTIONS                  |  |
| 11        | TRACK FLOORPLAN - LVL 01       |  |
| 12        | TRACK FLOORPLAN - LVL 02       |  |
| 3         | TRACK FLOORPLAN - LVL 03       |  |
| 14        | CONCESSION BUILDING            |  |
| 5         | PRESSBOX                       |  |
| 00        | INTERIOR INFORMATION & DETAILS |  |
|           | REFLECTED CEILING PLAN         |  |
| 11        | ELEVATIONS                     |  |
| 1         | SECTIONS                       |  |
| 2         | ENLARGED ELEVATIONS            |  |
| 3         | WALL SECTIONS                  |  |
|           | EXTERIOR DETAILS               |  |
|           | VERTICAL TRANSPORTATION        |  |
|           | SPECIFICATIONS                 |  |
| 1         | OUTDOOR TRACK STADIUM - VIEWS  |  |
| 2         | OUTDOOR TRACK STADIUM - VIEWS  |  |
| .01       | LIFE SAFETY                    |  |

| HKS INC.<br>2100 E. CARY STREET, SUITE 100<br>RICHMOND, VA 23221                   |
|------------------------------------------------------------------------------------|
| SUSTAINABILITY                                                                     |
| SUSTAINABLE DESIGN CONSULTING<br>1421 LOMBARDY ALLEY, 1ST FL<br>RICHMOND, VA 23219 |
| MEP                                                                                |
| 2RW<br>100 10TH ST. NE, STE 202<br>CHARLOTTESVILLE, VA 22902                       |
| STRUCTURAL                                                                         |
| DUNBAR<br>1025 BOULDERS PKWY, STE 310<br>RICHMOND, VA 23225                        |
|                                                                                    |

TIMMONS GROUP

RICHMOND, VA 23225

**LANDSCAPE** 

207 NORTH FOUSHEE ST RICHMOND, VA 23220

FALL LINE

1001 BOULDERS PKWY, STE 300



**O1** COLOR SITE PLAN 3/64" = 1'-0"

DATE 06/21/23

> SHEET TITLE **OUTDOOR TRACK**

SHEET NO.

100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220 SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219 2RW, INC. 100 10TH ST. NE, STE 202

**ARCHITECT** 

KEi ARCHITECTS

HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223

ASSOCIATE ARCHITECT

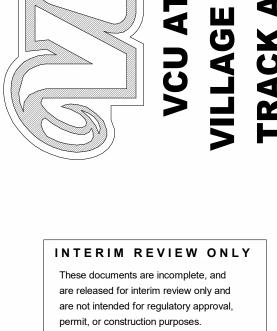
CHARLOTTESVILLE, VA 22902 STRUCTURAL DUNBAR PLLC 1025 BOULDERS PKWY, STE 310 RICHMOND, VA 23225

TIMMONS GROUP, INC. 1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225 **LANDSCAPE** 

FALL LINE, LLC 207 NORTH FOUSHEE ST RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN

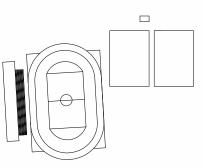
15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001 **ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902

**OWNER** VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



KEY PLAN

Architect: XXXXXX Arch. Reg. No.: XXXX Date: XX/XX/XXXX



REVISION # DESCRIPTION DATE

VCU PROJECT CODE

2023-02408 DEB NUMBER 236-B2236-060

HKS PROJECT NUMBER 26065.000

ISSUE

**COLOR** 

**ARCHITECT** HKS, INC.

2100 E. CARY ST, STE 100 RICHMOND, VA 23223 ASSOCIATE ARCHITECT KEi ARCHITECTS

100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220

SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219

2RW, INC.

100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902 STRUCTURAL

DUNBAR PLLC 1025 BOULDERS PKWY, STE 310 RICHMOND, VA 23225

TIMMONS GROUP, INC.

1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225 LANDSCAPE

FALL LINE, LLC 207 NORTH FOUSHEE ST RICHMOND, VA 23220

LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN

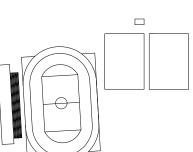
15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001 **ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC.

110 5TH STREET SE CHARLOTTESVILLE, VA 22902 **OWNER** 

VIRGINIA COMMONWEALTH

UNIVERSITY RICHMOND, VA

INTERIM REVIEW ONLY These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.



REVISION

# DESCRIPTION

VCU PROJECT CODE

2023-02408

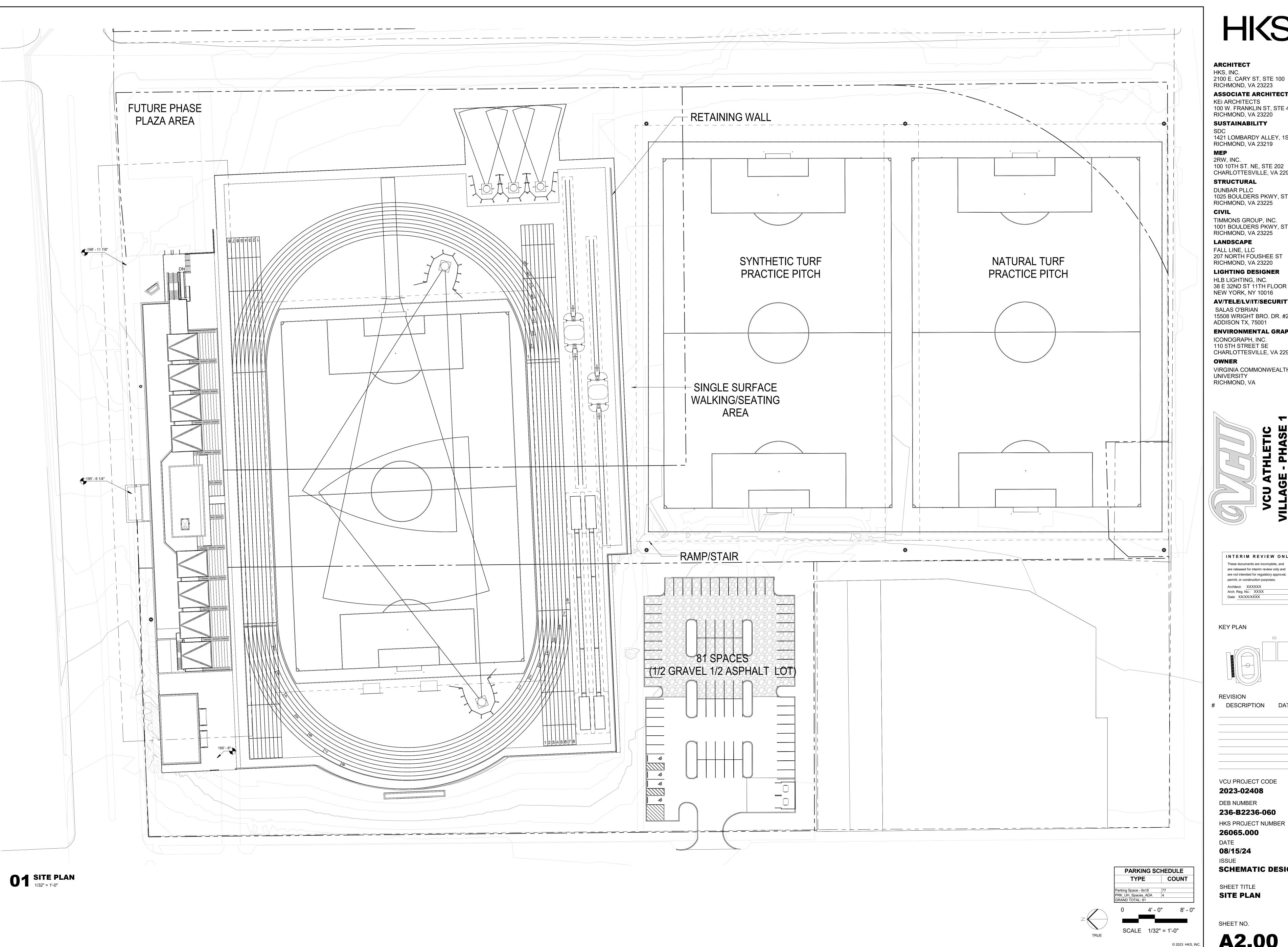
DEB NUMBER 236-B2236-060

HKS PROJECT NUMBER 26065.000

06/22/23 ISSUE

SHEET TITLE **OUTDOOR TRACK -**ATHELTIC FIELD

SHEET NO.





**ARCHITECT** HKS, INC.

2100 E. CARY ST, STE 100 RICHMOND, VA 23223 ASSOCIATE ARCHITECT KEI ARCHITECTS

100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220 SUSTAINABILITY

1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219 2RW, INC.

CHARLOTTESVILLE, VA 22902 STRUCTURAL

DUNBAR PLLC 1025 BOULDERS PKWY, STE 310 RICHMOND, VA 23225

TIMMONS GROUP, INC.

1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225 **LANDSCAPE** 

FALL LINE, LLC 207 NORTH FOUSHEE ST RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY

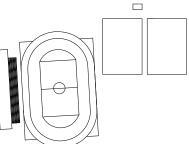
15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001 **ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902

**OWNER** VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



INTERIM REVIEW ONLY These documents are incomplete, and are released for interim review only and permit, or construction purposes. Arch. Reg. No.: XXXX Date: XX/XX/XXXX

KEY PLAN



REVISION # DESCRIPTION

VCU PROJECT CODE 2023-02408

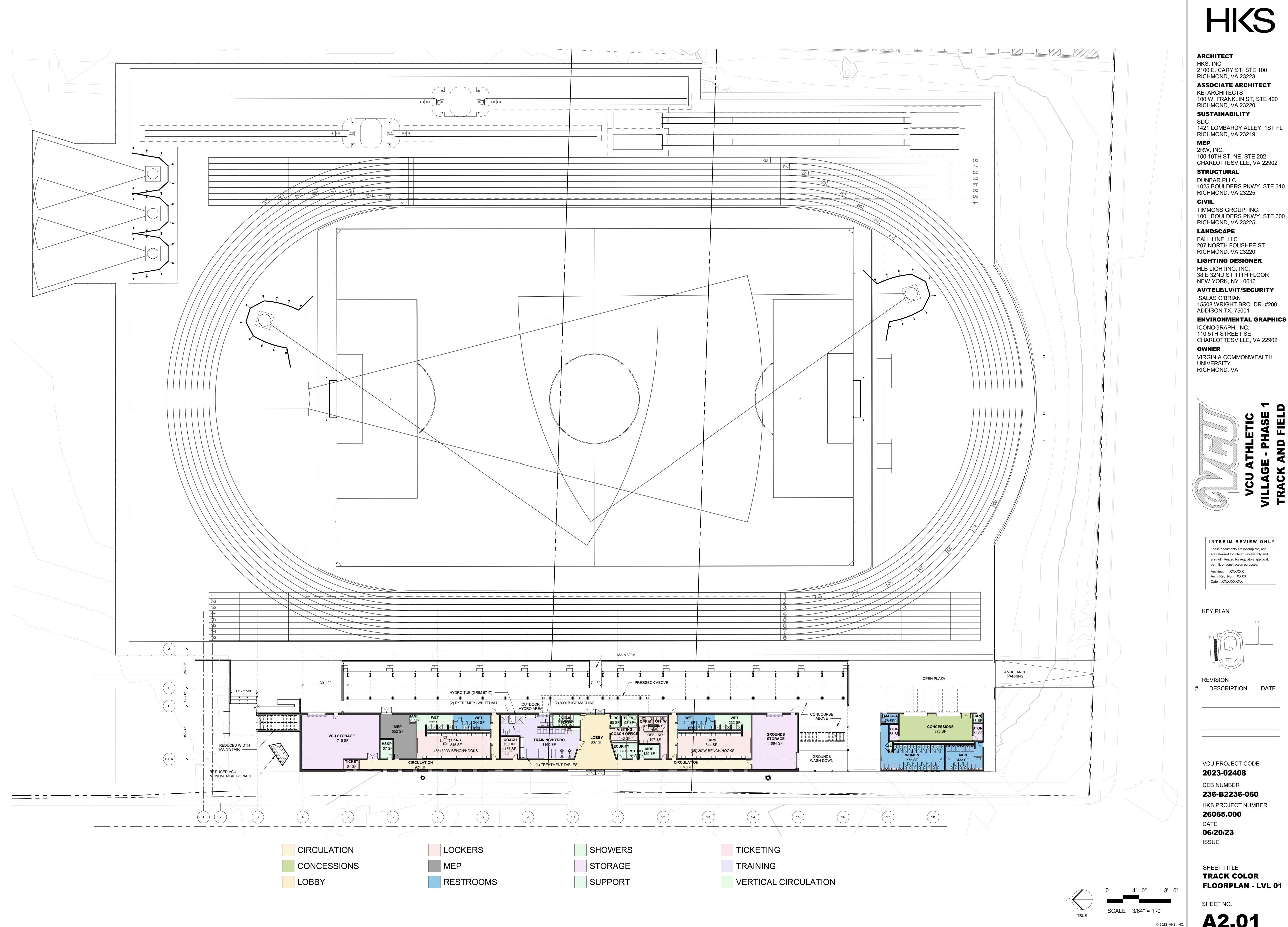
DEB NUMBER 236-B2236-060

HKS PROJECT NUMBER 26065.000

08/15/24 SCHEMATIC DESIGN

SHEET TITLE

SHEET NO.



**ARCHITECT** HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223

ASSOCIATE ARCHITECT KEI ARCHITECTS 100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220

SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219

2RW, INC. 100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902

STRUCTURAL DUNBAR PLLC 1025 BOULDERS PKWY, STE 310

RICHMOND, VA 23225

TIMMONS GROUP, INC. 1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225

**LANDSCAPE** FALL LINE, LLC

207 NORTH FOUSHEE ST RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR

NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN 15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001

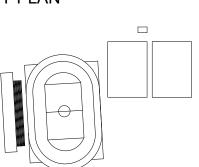
ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902 **OWNER** 

VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



INTERIM REVIEW ONLY These documents are incomplete, and permit, or construction purposes. Arch. Reg. No.: XXXX Date: XX/XX/XXXX

**KEY PLAN** 



REVISION # DESCRIPTION

VCU PROJECT CODE 2023-02408 DEB NUMBER

236-B2236-060 HKS PROJECT NUMBER 26065.000

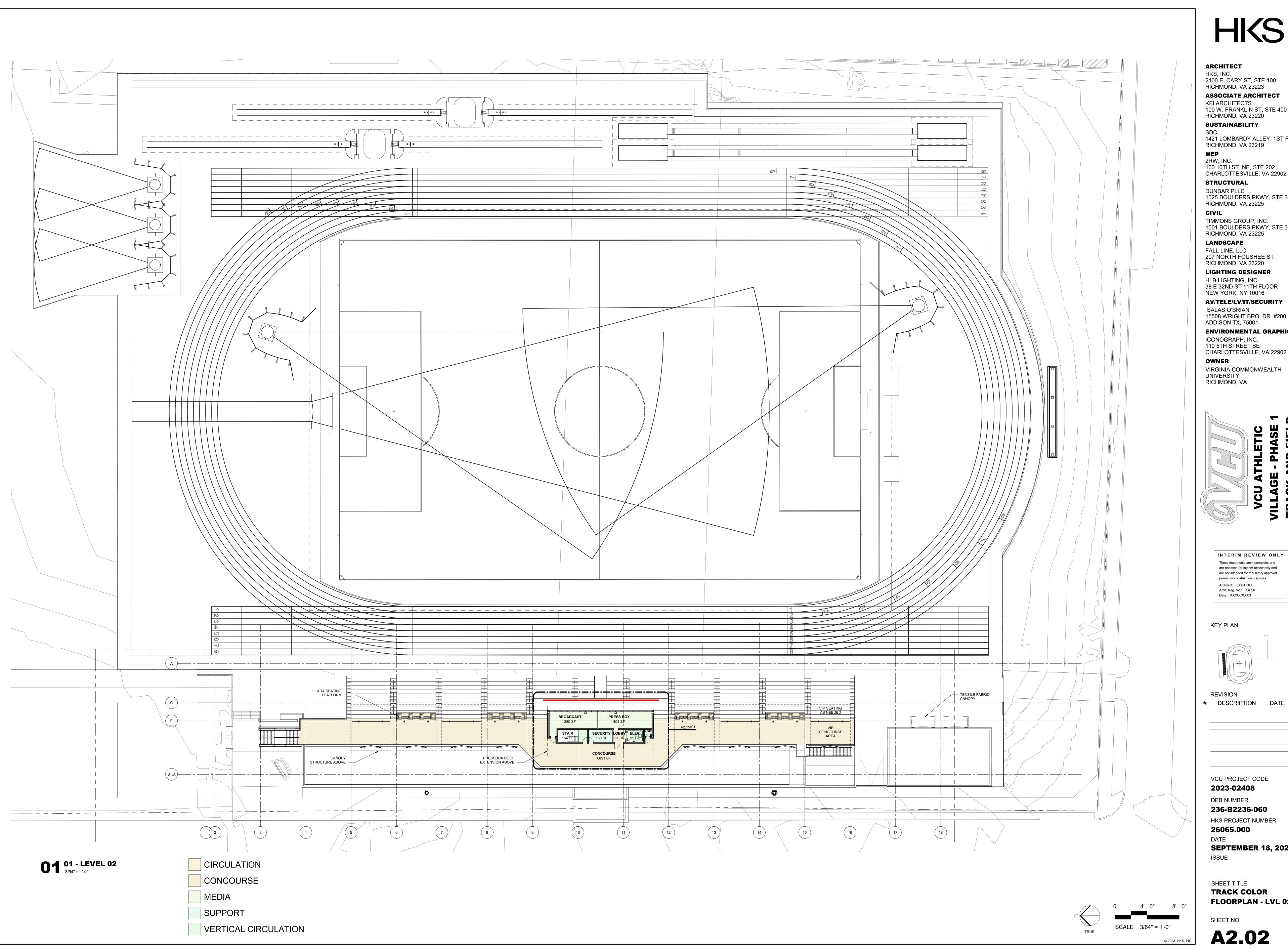
06/20/23

SHEET TITLE

TRACK COLOR **FLOORPLAN - LVL 01** 

SHEET NO.

**A2.01** 



**ARCHITECT** HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223

ASSOCIATE ARCHITECT KEI ARCHITECTS 100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220

SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL

2RW, INC. 100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902

STRUCTURAL DUNBAR PLLC 1025 BOULDERS PKWY, STE 310

RICHMOND, VA 23225

TIMMONS GROUP, INC. 1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225

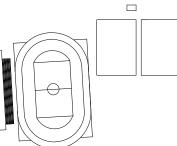
**LANDSCAPE** FALL LINE, LLC 207 NORTH FOUSHEE ST

LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN 15508 WRIGHT BRO. DR. #200

ADDISON TX, 75001 **ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE

**OWNER** VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA

INTERIM REVIEW ONLY These documents are incomplete, and Arch. Reg. No.: XXXX Date: XX/XX/XXXX



REVISION # DESCRIPTION

VCU PROJECT CODE

2023-02408 DEB NUMBER

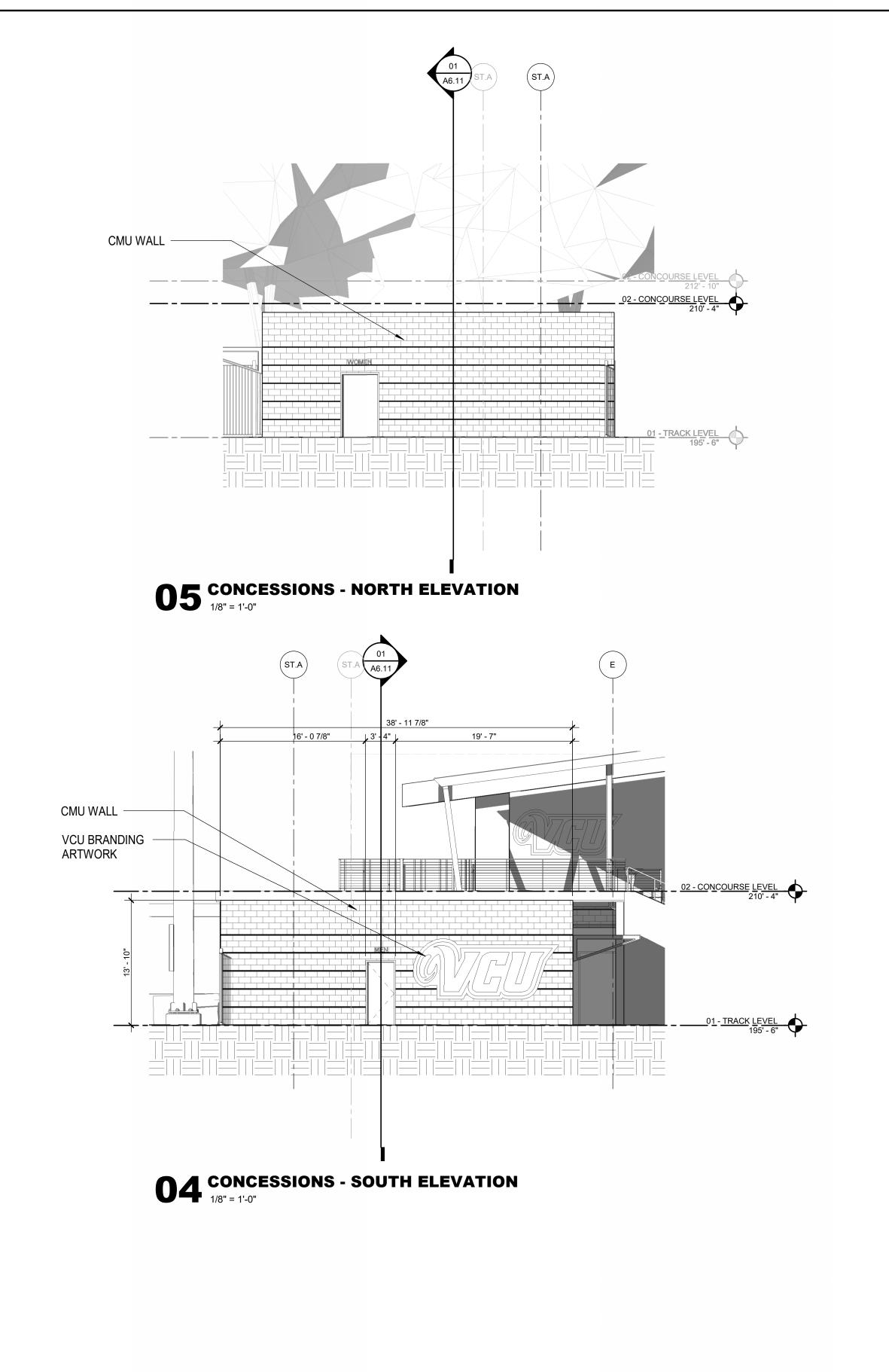
236-B2236-060 HKS PROJECT NUMBER 26065.000

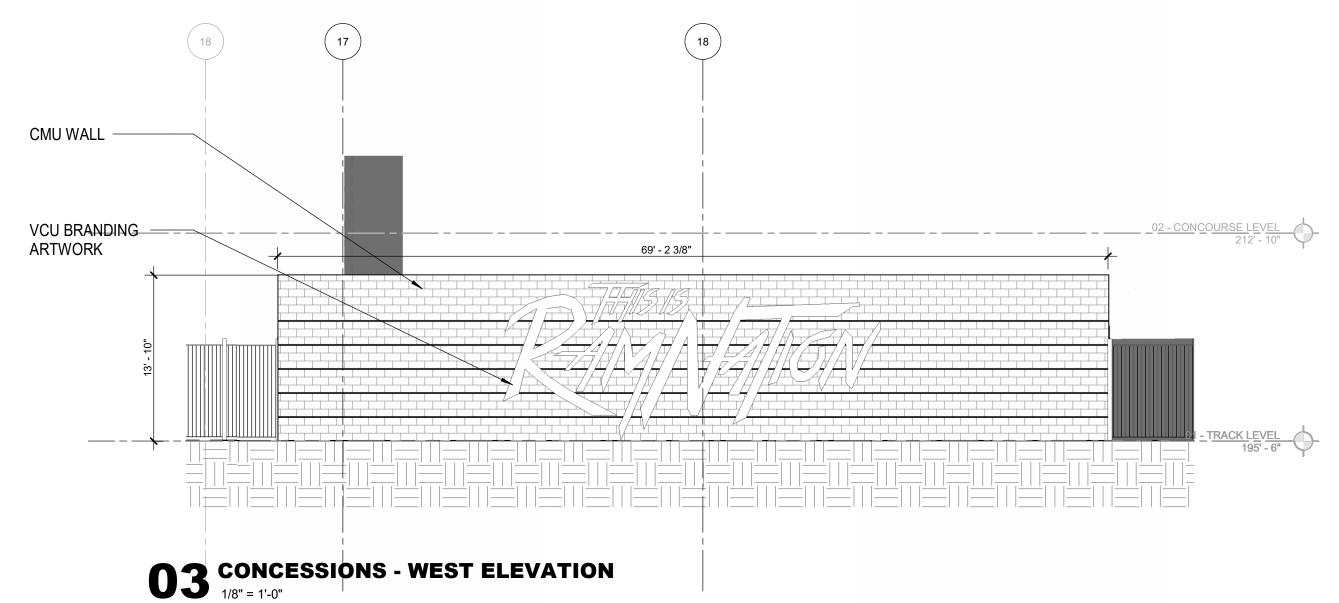
**SEPTEMBER 18, 2023** 

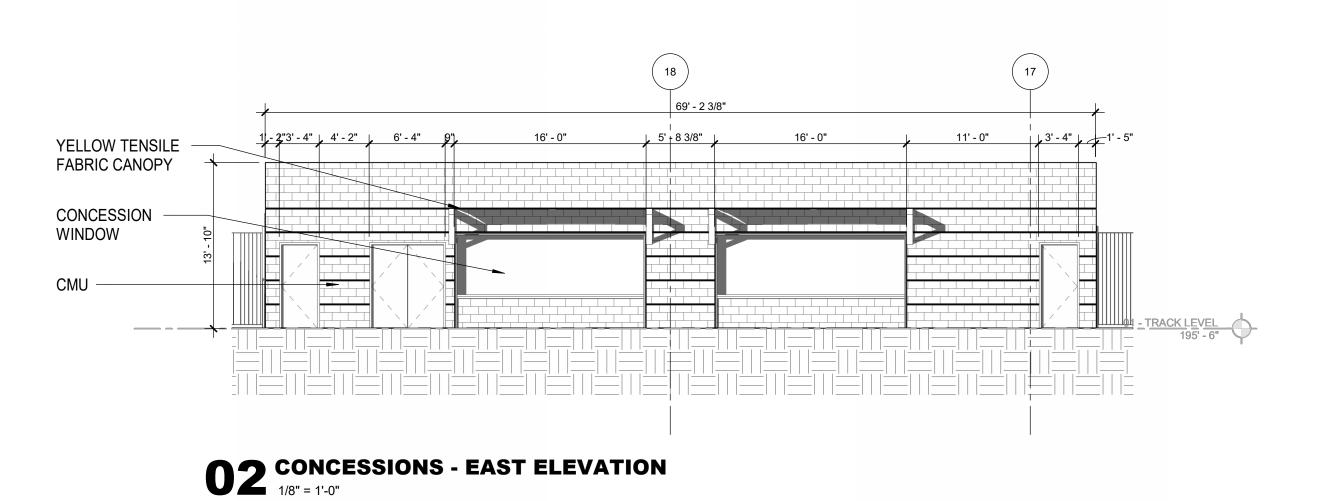
SHEET TITLE TRACK COLOR **FLOORPLAN - LVL 02** 

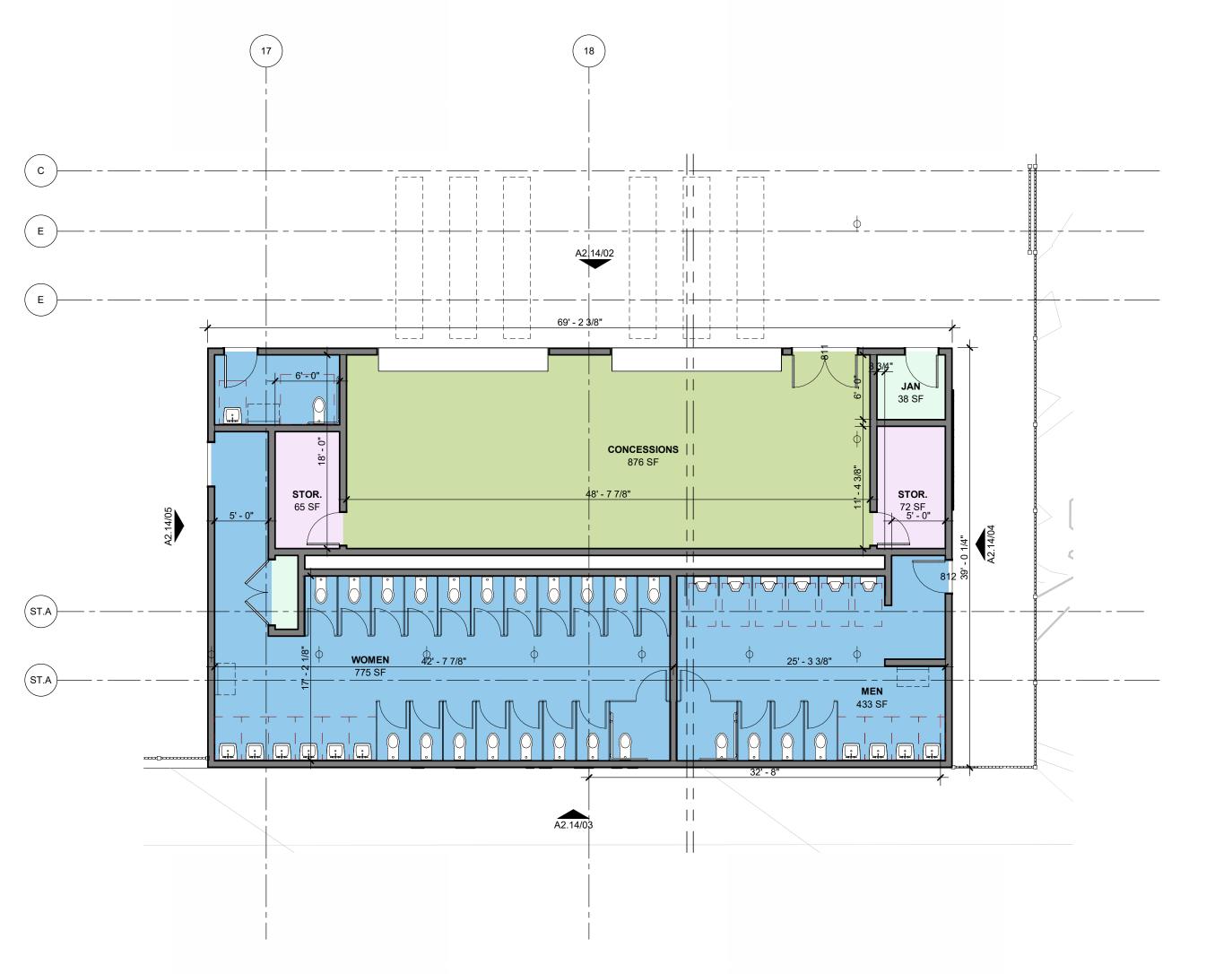
SHEET NO.

**A2.02** 

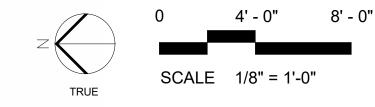








O1 CONCESSIONS/RESTROOM BUILDING - LEVEL 01



**ARCHITECT** HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223 ASSOCIATE ARCHITECT KEI ARCHITECTS 100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220 SUSTAINABILITY

1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219

2RW, INC. 100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902 **STRUCTURAL** 

DUNBAR PLLC 1025 BOULDERS PKWY, STE 310 RICHMOND, VA 23225

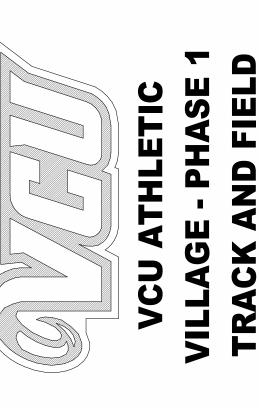
CIVIL TIMMONS GROUP, INC. 1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225

LANDSCAPE FALL LINE, LLC 207 NORTH FOUSHEE ST

RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN 15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001

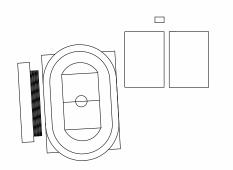
**ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902

**OWNER** VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



INTERIM REVIEW ONLY These documents are incomplete, and permit, or construction purposes. Arch. Reg. No.: XXXX Date: XX/XX/XXXX

KEY PLAN



REVISION # DESCRIPTION

VCU PROJECT CODE 2023-02408 DEB NUMBER

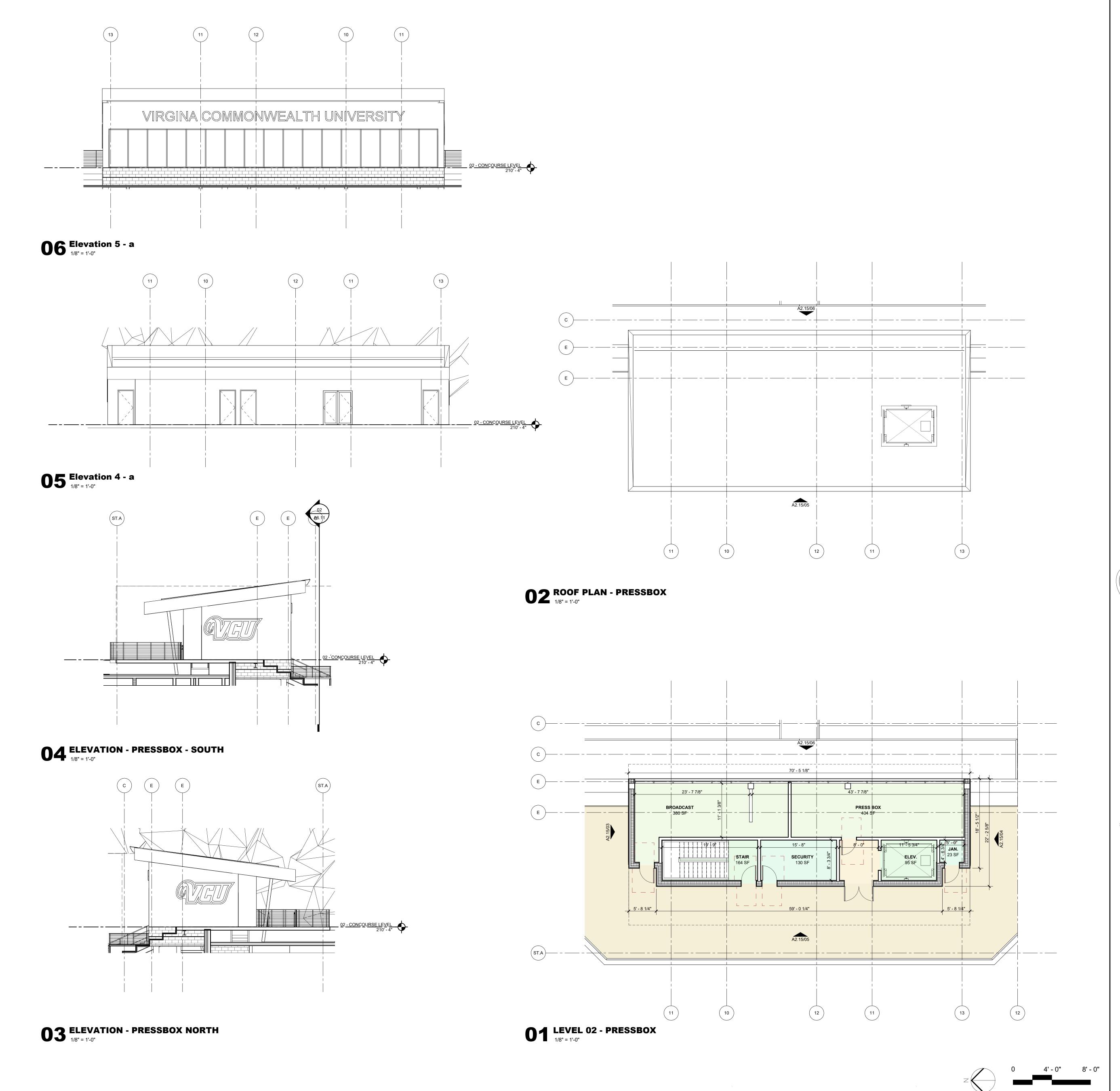
236-B2236-060 HKS PROJECT NUMBER 26065.000

06/27/23 ISSUE

SHEET TITLE CONCESSION

**BUILDING** 

SHEET NO.



**ARCHITECT** HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223

ASSOCIATE ARCHITECT KEI ARCHITECTS 100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220

SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL

RICHMOND, VA 23219 2RW, INC. 100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902

STRUCTURAL DUNBAR PLLC 1025 BOULDERS PKWY, STE 310

RICHMOND, VA 23225 TIMMONS GROUP, INC.

1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225 **LANDSCAPE** 

FALL LINE, LLC 207 NORTH FOUSHEE ST RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR

NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN 15508 WRIGHT BRO. DR. #200 ADDISON TX, 75001

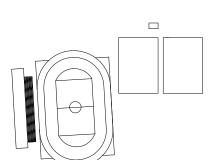
**ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902

**OWNER** VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



INTERIM REVIEW ONLY These documents are incomplete, and Arch. Reg. No.: XXXX Date: XX/XX/XXXX

KEY PLAN



REVISION

# DESCRIPTION

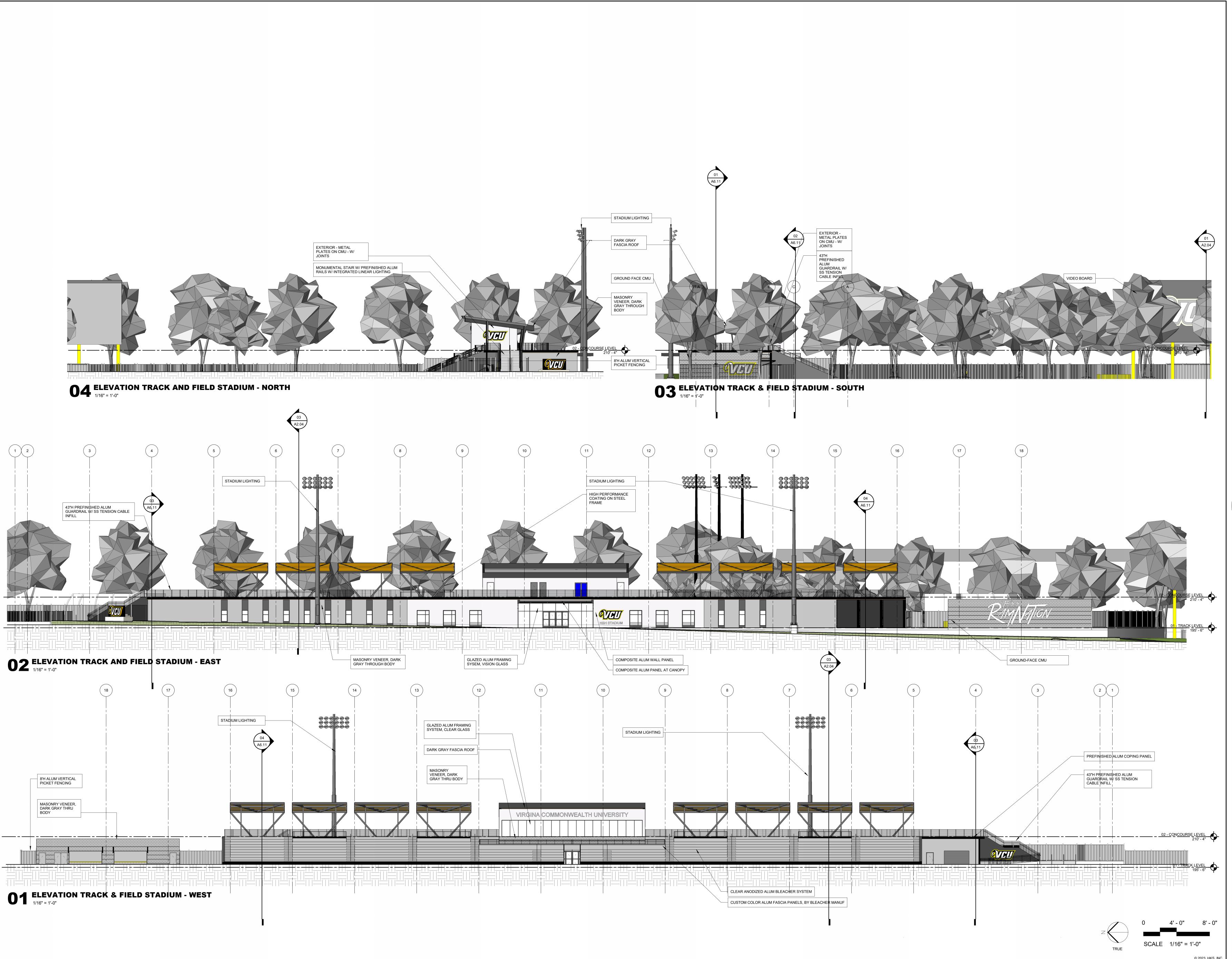
VCU PROJECT CODE 2023-02408 DEB NUMBER

236-B2236-060 HKS PROJECT NUMBER 26065.000

06/27/23 ISSUE

SHEET TITLE **PRESSBOX** 

SHEET NO.



**ARCHITECT** HKS, INC. 2100 E. CARY ST, STE 100 RICHMOND, VA 23223

ASSOCIATE ARCHITECT KEI ARCHITECTS 100 W. FRANKLIN ST, STE 400 RICHMOND, VA 23220

SUSTAINABILITY 1421 LOMBARDY ALLEY, 1ST FL RICHMOND, VA 23219

2RW, INC. 100 10TH ST. NE, STE 202 CHARLOTTESVILLE, VA 22902

DUNBAR PLLC 1025 BOULDERS PKWY, STE 310 RICHMOND, VA 23225

STRUCTURAL

CIVIL TIMMONS GROUP, INC.

1001 BOULDERS PKWY, STE 300 RICHMOND, VA 23225

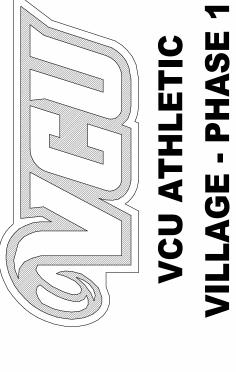
LANDSCAPE FALL LINE, LLC

207 NORTH FOUSHEE ST RICHMOND, VA 23220 LIGHTING DESIGNER HLB LIGHTING, INC. 38 E 32ND ST 11TH FLOOR NEW YORK, NY 10016 AV/TELE/LV/IT/SECURITY SALAS O'BRIAN 15508 WRIGHT BRO. DR. #200

ADDISON TX, 75001 **ENVIRONMENTAL GRAPHICS** ICONOGRAPH, INC. 110 5TH STREET SE CHARLOTTESVILLE, VA 22902

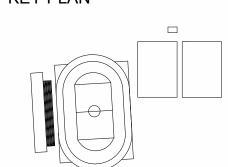
**OWNER** 

VIRGINIA COMMONWEALTH UNIVERSITY RICHMOND, VA



INTERIM REVIEW ONLY These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes. Architect: XXXXXX Arch. Reg. No.: XXXX Date: XX/XX/XXXX

KEY PLAN



REVISION

# DESCRIPTION

VCU PROJECT CODE

2023-02408 DEB NUMBER

236-B2236-060 HKS PROJECT NUMBER 26065.000

06/20/23 ISSUE

SHEET TITLE **ELEVATIONS** 

SHEET NO.

# Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project and Approval of Project Plans

901 West Franklin Street Renovation

#### Background

VCU seeks Board of Visitors (BOV) approval to amend the 2024-2030 Six-Year Capital Plan, authorization to initiate a capital project, and project plan approval, as required by the VCU management agreement, for 901 West Franklin Street.

Located at the corner of Franklin and Shafer streets, the original building was constructed as a home between 1882 and 1892 and is currently used as office space. Additions on the south and west ends of the building were added in the early 20th century. The original building primarily consists of brownstone and brick masonry exterior walls with a steep-sloped roof made of terracotta roof tiles. Later additions include brick masonry walls and mostly low-sloped rubber roofing and partial terracotta roofing.

There have been no significant restorative efforts performed on this facility in recent history. Normal aging and degradation of building materials is contributing to moisture infiltration issues that need to be addressed appropriately.

#### **Considerations**

The necessary building repairs meet the criteria for use of maintenance reserve funds. The Commonwealth of Virginia limits the use of state-appropriated maintenance reserve funds to \$2M or less but provides an exception to the \$2M limit on a case-by-case basis. The university received approval of an exception for this project.

#### Size and scope

This renovation project includes tuckpointing (i.e., repairing the mortar joints between the bricks of the entire building), replacing the roof and adding a fall protection system to the roof. The project is anticipated to begin in 2025 and will take approximately one year to complete.

#### <u>Funding</u>

The total cost for the renovations is estimated to be between \$6M and \$7M and will be funded by state-appropriated maintenance reserve funds.

#### Recommendation

Approve the amendment to the university's 2024-2030 Six-Year Capital Plan, authorize the initiation of a capital project at a cost not to exceed \$7M, and approve the corresponding project plans for the 901 West Franklin Street renovation.

# RESOLUTION OF THE BOARD OF VISITORS VIRGINIA COMMONWEALTH UNIVERSITY

# AUTHORIZATION TO INITIATE A MAJOR CAPITAL PROJECT FOR 901 WEST FRANKLIN STREET RENOVATION

**WHEREAS**, Chapter 6.1, Title 23 of the Code of Virginia of 1950, as amended (the "Virginia Code") establishes a public corporation under the name and style of Virginia Commonwealth University (the "University") which is governed by a Board of Visitors (BOV) (the "Board") vested with the supervision, management and control of the University;

**WHEREAS**, Title 23 of the Virginia Code classifies the University as an educational institution of the Commonwealth of Virginia;

**WHEREAS**, by Chapter 4.10, Title 23 of the Virginia Code, the University entered into that certain Management Agreement with the Commonwealth of Virginia which was enacted as Chapter 594 of the Acts of Assembly of 2008 which, as amended, classifies the University as a public institution of higher education and empowers the University with the authority to undertake and implement capital projects, which include the acquisition of any interest in land, improvements on acquired land, capital leases, new construction, and building improvements and renovations;

**WHEREAS**, the Management Agreement requires the Board of Visitors to authorize the initiation of each Major Capital Project by approving its size, scope, budget and funding;

**WHEREAS**, the 901 West Franklin Street Renovation ("the Project") includes tuckpointing (i.e., repairing the mortar joints between the bricks of the entire building), replacing the roof and adding a fall protection system to the roof.

**WHEREAS**, the total cost for the renovations is estimated to be between \$6M and \$7M and will be funded by state-appropriated maintenance reserve funds.

**WHEREAS**, the Board has determined it is desirable to authorize the initiation of a major capital project for the 901 West Franklin Street Renovation.

**NOW, THEREFORE, BE IT RESOLVED,** that the Board hereby authorizes and approves the Project, including the size, scope, budget and funding of the Project, as described in the materials presented to the Board; and

**RESOLVED FURTHER,** that, upon approval, this action shall take effect immediately.

## **CODES AND APPLICABLE STANDARDS:**

CODE: 2018 VIRGINIA EXISTING BUILDING CODE (PART II OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE), CHAPTER 9 HISTORIC BUILDINGS

USE GROUP:

CONSTRUCTION TYPE: IV (NON-COMBUSTIBLE EXTERIOR WALLS, WITH COMBUSTIBLE FLOORS)

MAX OCCUPANCY: UNCHANGED UNCHANGED BUILDING ARE BY FLOOR: TOTAL BUILDING AREA: UNCHANGED **DESIGN LIVE LOADS:** 

ACCESSIBILITY STANDARDS: 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ASAD) DATED SEPTEMBER 15, 2010

ACCESSIBILITY IS UNCHANGED. MAINTIAIN EXISTING ACCESSIBILITY AND ADA STANDARDS.

#### ADDITIONAL RELAVENT CODES AND STANDARDS

- COMMONWEALTH OF VIRGINIA, CONSTRUCTION AND PROFESSIONAL SERVICES MANUAL, 2024 EDITION, REVISION 0, DATED FEBRUARY 29, 2024
- VCU FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION STANDARDS APRIL 8, 2022 EDITION
- TMS 402/602-16 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"
- ASCE/SEI 7-16 "MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES
- NATIONAL PARK SERVICE PRESERVATION BRIEF 1 "CLEANING AND WATER-REPELLENT TREATMENTS FOR HISTORIC MASONRY BUILDINGS
- NATIONAL PARK SERVICE PRESERVATION BRIEF 2 "REPOINTING MORTAR JOINTS IN HISTORIC MASONRY BUILDINGS"
- NATIONAL PARK SERVICE PRESERVATION BRIEF 4 "ROOFING FOR HISTORIC BUILDINGS"
- NATIONAL PARK SERVICE PRESERVATION BRIEF 7 "THE PRESERVATION OF HISTORIC GLAZED ARCHITECTURAL TERRA-COTTA"
- NATIONAL PARK SERVICE PRESERVATION BRIEF 30 "THE PRESERVATION AND REPAIR OF HISTORIC CLAY TILE ROOFS"
- NATIONAL PARK SERVICE PRESERVATION BRIEF 39 "HOLDING THE LINE: CONTROLLING UNWANTED MOISTURE IN HISTORIC BUILDINGS"

# **DISCLOSURE AND COMPLIANCE STATEMENTS:**

DRAWINGS AND WILL PROVIDE THE DRAWINGS TO THE ARCHITECT

#### LEAD MATERIALS DISCLOSURE STATEMENT

FOR THE CONTRACTOR'S USE AND MAY NOT BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL VIRGINIA OCCUPATIONAL SAFETY AND HEALTH (VOSH) REGULATIONS AS THEY PERTAIN TO EMPLOYEE EXPOSURES TO LEAD. ALL LEAD AND LEAD-COATED BUILDING COMPONENTS SHALL BE RECYCLED TO THE EXTENT POSSIBLE DIG NOTICE:

CONTACT VIRGINIA 811 AT 1-800-552-7001, OR HTTPS://WWW.VA811.COM NO LESS THAN 72 HOURS PRIOR TO EXCAVATION AND DO NOT DISTURB THE SOIL UNTIL DIG TICKET HAS BEEN PROCESSED.

# **DELEGATED DESIGN ITEMS:**

- SCAFFOLDING, ACCESS AND OVERHEAD PROTECTION: SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA IN ACCORDANCE WITH LOCAL AND STATE CODES, OSHA REQUIREMENTS, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, AND AS INDICATED IN THE DOCUMENTS.
- TEMPORARY SHORING: SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED.

# 901 WEST FRANKLIN ROOF AND ENVELOPE REPAIRS

# PERMIT SET

VIRGINIA COMMONWEALTH UNIVERSITY

# RRMM ARCHITECTS, PC

STATE PROJECT NUMBER: 236-B3236-004

# ARCHITECTURE / PLANNING / INTERIORS

(804) 828-9647

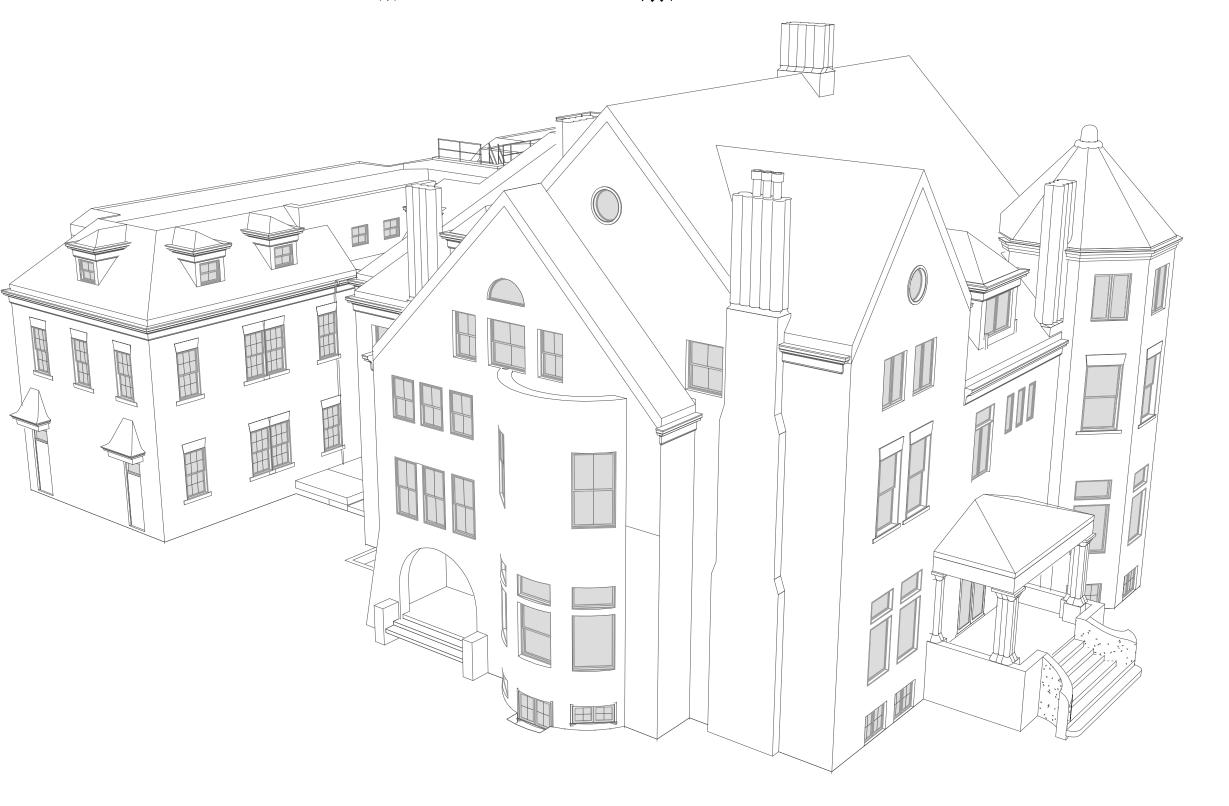
VIRGINIA COMMONWEALTH UNIVERSITY 700 WEST GRACE STREET/BOX 843003 1ST FLOOR, SUITE 1500 RICHMOND. VIRGINIA 23284

RRMM ARCHITECTS 115 SOUTH 15TH STREET, SUITE 202 RICHMOND. VIRGINIA 23219

WDP & ASSOCIATES CONSULTING ENGINEERS, INC. 335 GREENBRIER DRIVE, SUITE 205 CHARLOTTESVILLE, VIRGINIA 22901 (434) 245-6117







# LIST OF DRAWINGS

TITLE SHEET **GENERAL NOTES** SITE PLAN SITE PROTECTION DETAILS **BASEMENT FLOOR PLAN** FIRST FLOOR PLAN SECOND FLOOR PLAN THIRD FLOOR PLAN FOURTH FLOOR PLAN NORTH ELEVATIONS

WEST ELEVATIONS **SOUTH ELEVATIONS** EAST ELEVATIONS WALL SECTIONS

MASONRY DETAILS **BELOW GRADE DETAILS** SLOPED ROOF DETAILS

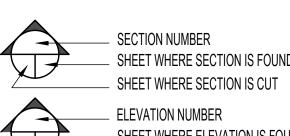
FLAT ROOF DETAILS WINDOW AC UNITS

SLOPED ROOF DETAILS

# **ABBREVIATIONS**

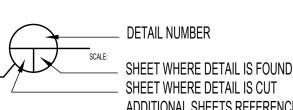
DIAMETER BUILDING MAXIMUM MINIMUM ON CENTER PER SQUARE FEET PER SQUARE INCH STAINLESS STEEL

# **SYMBOLS**



SHEET WHERE ELEVATION IS FOUND SHEET WHERE ELEVATION IS CUT DETAIL NUMBER SHEET WHERE DETAIL IS FOUND

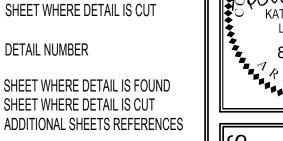
**UNLESS NOTED OTHERWISE** 



(804)277-8987 Lic. No. 014521

& Associate

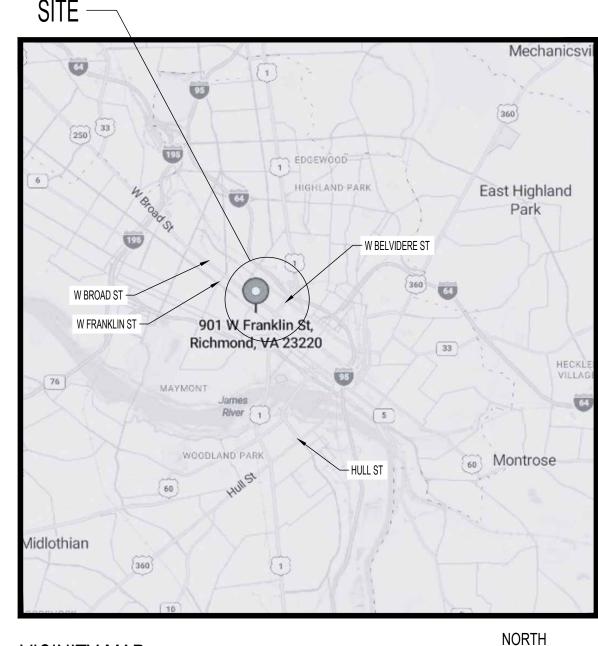
Consulting Engineers



901 WEST FRANKLIN ROOF AND ENVELOP PERMIT SET VIRGINIA COMMONWEALTH UNIVERSITY

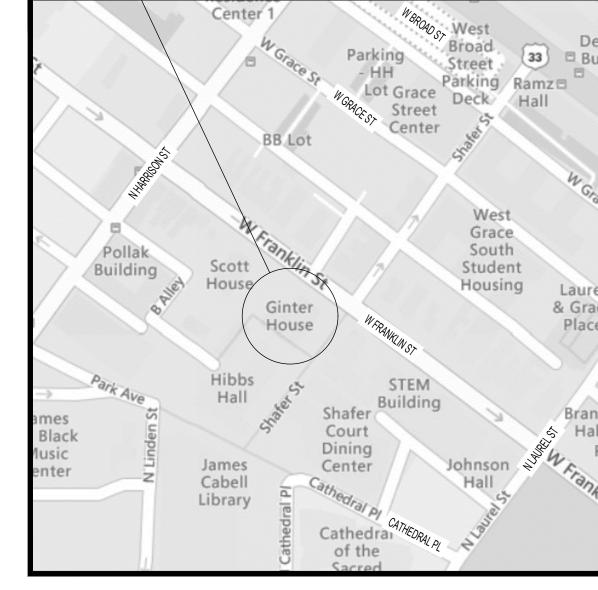
Richmond, Virginia 23219

Г-1.0

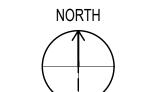


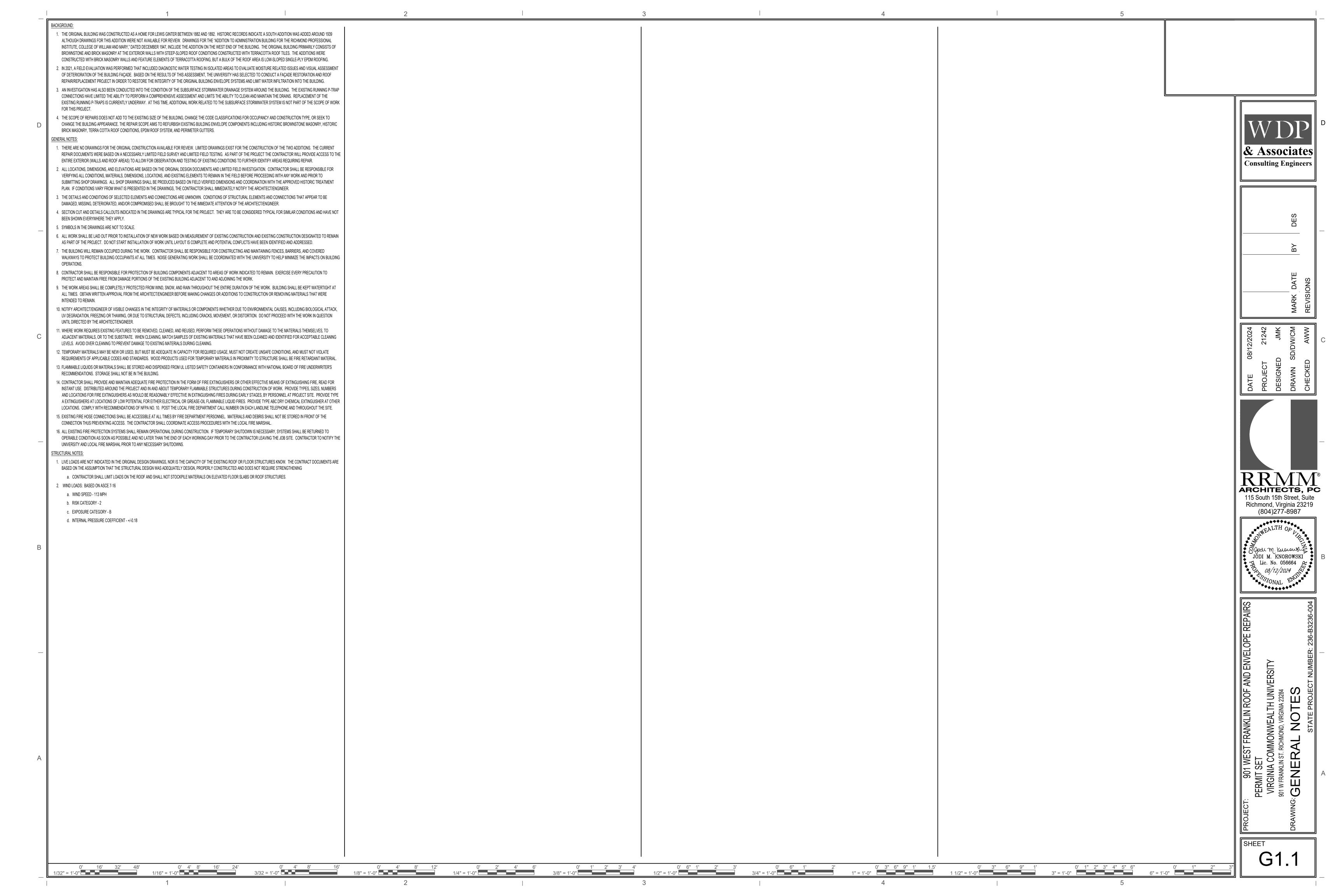


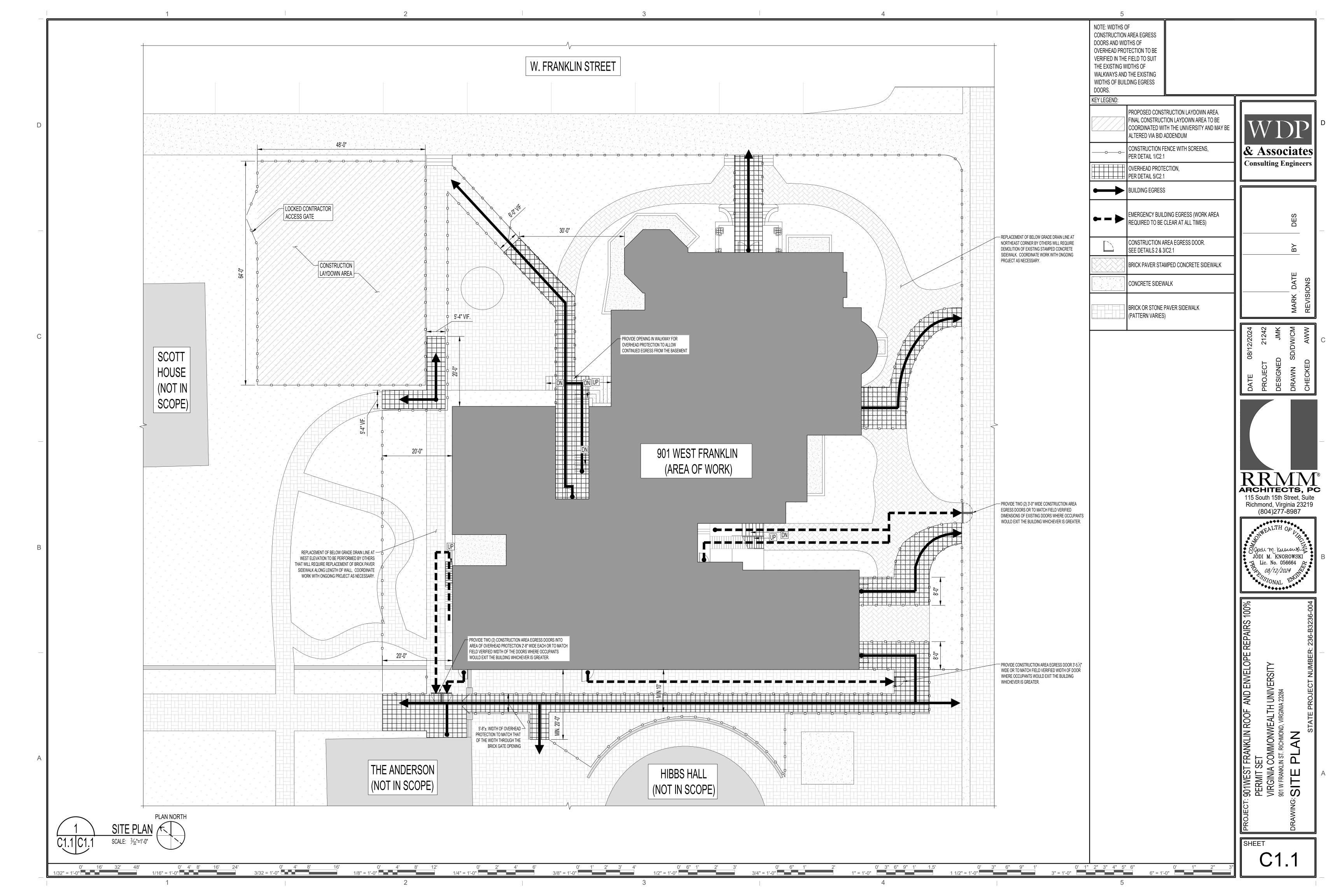
0' 4' 8' 16' 24

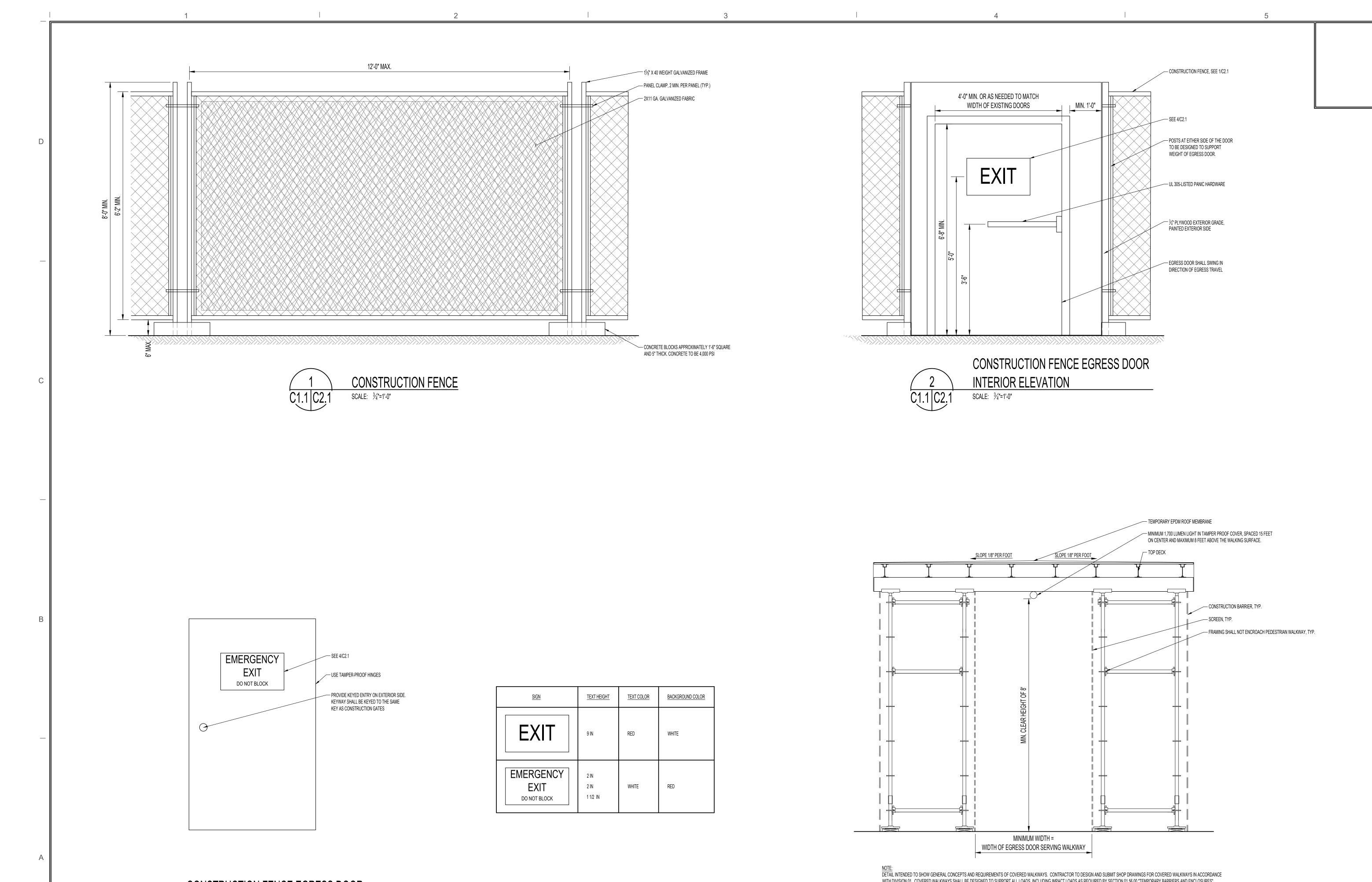


**LOCATION MAP** NOT TO SCALE









SIGNAGE KEY

SCALE: 3/4"=1'-0"

CONSTRUCTION FENCE EGRESS DOOR

EXTERIOR ELEVATION

SCALE: 3/4"=1'-0"

1/16" = 1'-0"

& Associates **Consulting Engineers** 

> 115 South 15th Street, Suite Richmond, Virginia 23219 (804)277-8987 JODI M. KNOROWSKI
>
> Lic. No. 056664
>
> 08/12/2024
>
> STONAL

PROTECTION DE

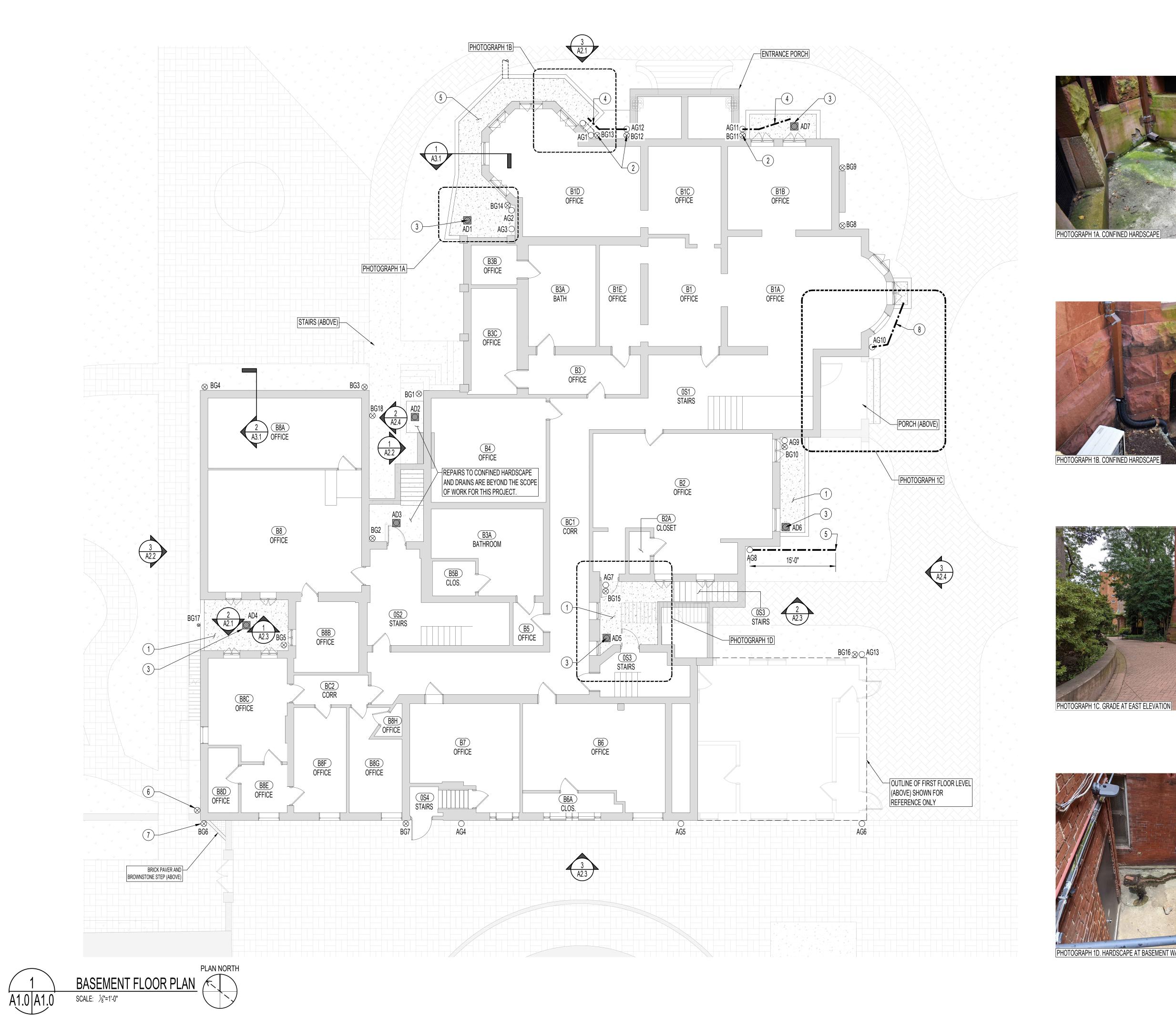
SHEET

WITH DIVISION 01. COVERED WALKWAYS SHALL BE DESIGNED TO SUPPORT ALL LOADS, INCLUDING IMPACT LOADS AS REQUIRED BY SECTION 01 56 00 "TEMPORARY BARRIERS AND ENCLOSURES".

0' 3" 6" 9" 1' 1 1/2" = 1'-0"

**OVERHEAD PROTECTION** 

SCALE: ½"=1'-0"



1/8" = 1'-0"

1/16" = 1'-0" 4' 8' 16' 24'









1" = 1'-0"

KEY LEGEND

CONFINED HARDSCAPE

ABOVE GRADE DOWNSP

BELOW GRADE DOWNSPO

- NEW CORRUGATED DRAIN PIF ANNOTATION LEGEND

INSTALL WATERPROOF COATING AT CONFINED HARDSCAPE. INSTALL FLASHING AT BASE OF WALL BEHIND PARGE COAT OR INTO REGLET AT BRICK MASONRY. INTEGRATE COATING WITH EXISTING AREA DRAIN. SEE DETAILS ON SHEET A5.1.

ABANDONED BELOW GRADE DRAIN PIPE. PROVIDE PERMANENT CAP FOR BELOW GRADE DRAIN WHERE PROTRUDING FROM THE GROUND. EXISTING AREA DRAIN. INTEGRATE

NEW WATERPROOFING MEMBRANE PER DETAIL 3/A5.1 INSTALL NEW CORRUGATED PIPE FROM

BOTTOM OF DOWNSPOUT TO DIRECT WATER INTO ADJACENT CONFINED HARDSCAPE.

INSTALL NEW CORRUGATED PIPE FRO BOTTOM OF DOWNSPOUT AND EXTEND INTO LANDSCAPED AREA ARE INDICATED.

BELOW GRADE DRAIN OUTLET FOR BG6 TO BE RELOCATED BY OTHERS ENGAGED BY THE UNIVERSITY. CONTRACTOR TO MODIFY DOWNSPOUT TO SUIT NEW DRAIN OUTLET LOCATION.

AFTER RELOCATION OF EXISTING BG6, PROVIDE PERMANENT CAP FOR BELOW GRADE DRAIN WHERE PROTRUDING FROM THE GROUND.

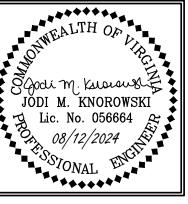
IF NEW BELOW GRADE DRAINAGE IS NOT PROVIDED IN WINDOW WELL AS PART OF CONCURRENT BELOW GRADE DRAINAGE PROJECT PERFORMED BY OTHERS, NOTIFY ENGINEER FOR DIRECTION ON INSTALLATION OF NEW CORRUGATED PIPE.

SHEET NOTES

UNIVERSITY IS UNDERTAKING A SEPARATE BELOW GRADE DRAINAGE PROJECT TO ADDRESS KNOWN ISSUES WITH SEVERAL OF THE BELOW GRADE DRAINS. IT IS COMPLETED PRIOR TO THE START OF THE ROOF AND ENVELOPE REPAIR PROJECT.
WORK SHOWN ON SHEET A1.0 IS BASED ON
THE CURRENT UNDERSTANDING OF THE
WORK TO BE PERFORMED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH CONCURRENT PROJECT AS NECESSARY TO PERFORM WORK SHOWN HEREIN.



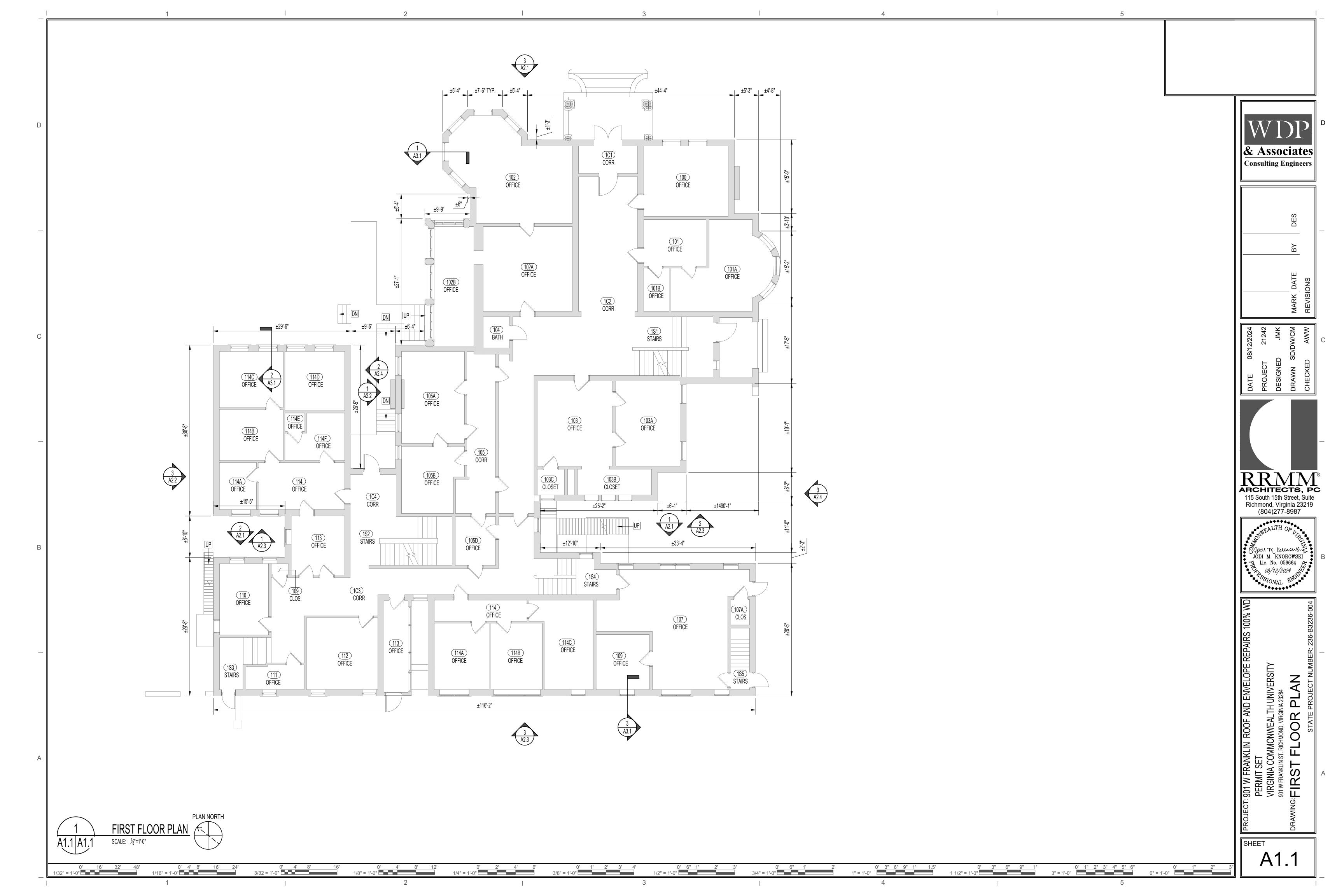
115 South 15th Street, Suite Richmond, Virginia 23219 (804)277-8987

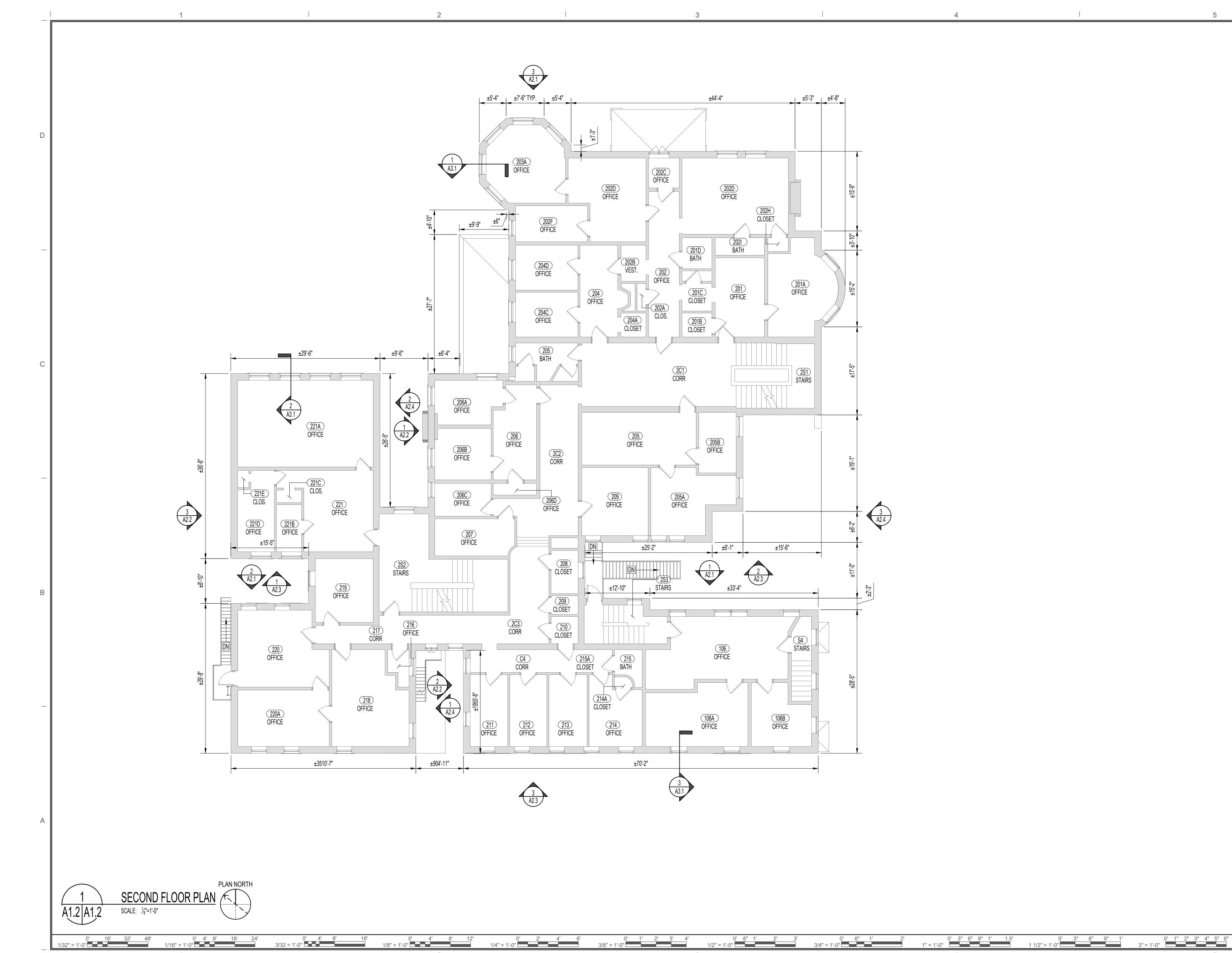


901 WEST FRANKLIN ROOF AND ENVELOPE REPAPERMIT SET
VIRGINIA COMMONWEALTH UNIVERSITY
901 W FRANKLIN ST. RICHMOND, VIRGINIA 23284 AN

FLOOR

SHEET

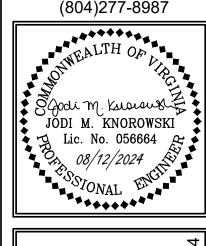




& Associates **Consulting Engineers** 

ВҮ



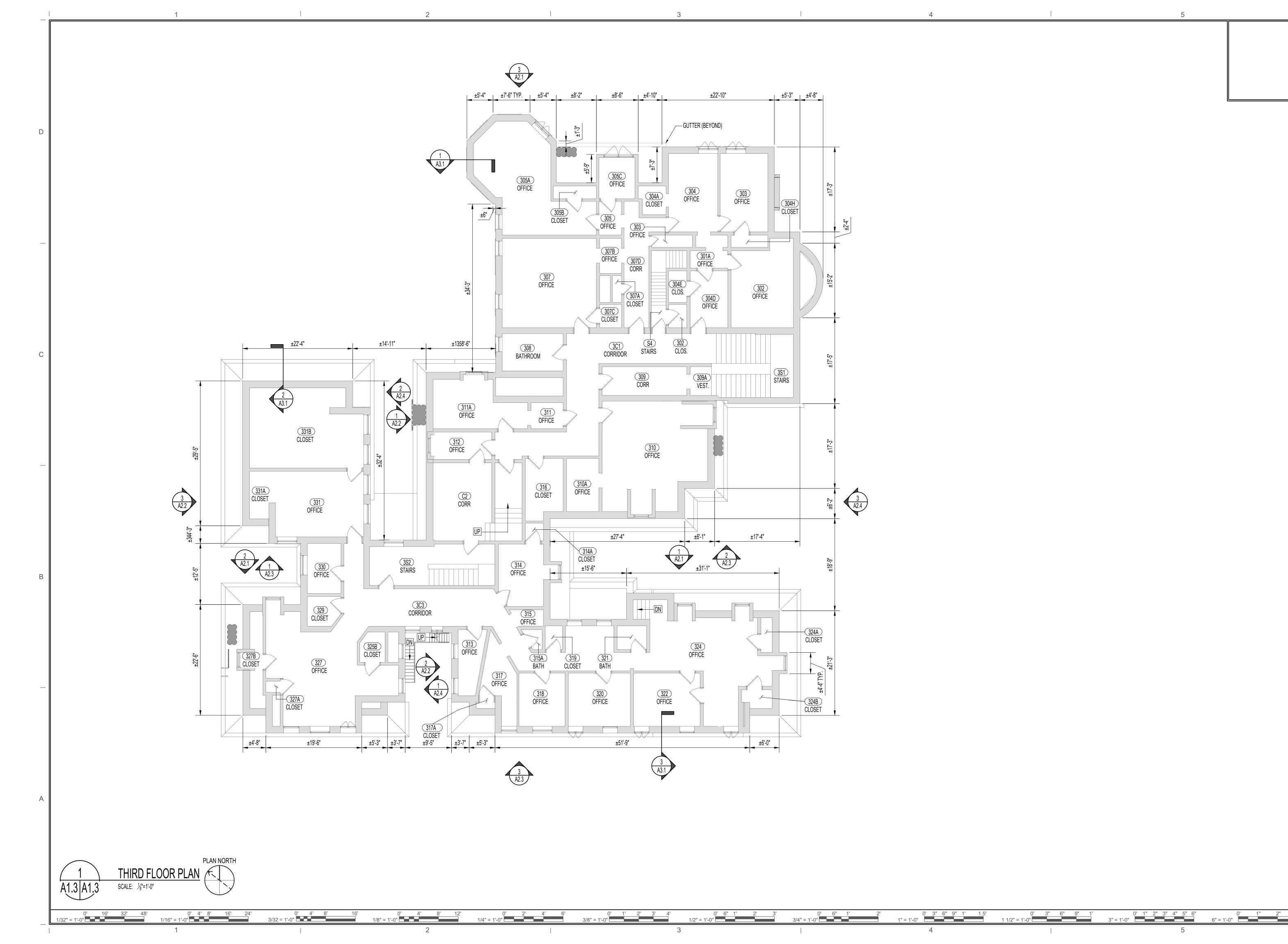


CT: 901 WEST FRANKLIN ROOF AND ENVELOPE REPAIRS
PERMIT SET
VIRGINIA COMMONWEALTH UNIVERSITY
901 W FRANKLIN ST. RICHMOND, VIRGINIA 23284
NG: SECOND FLOOR PLAN

SHEET

A1.2

6" = 1'-0"



& Associates **Consulting Engineers** 

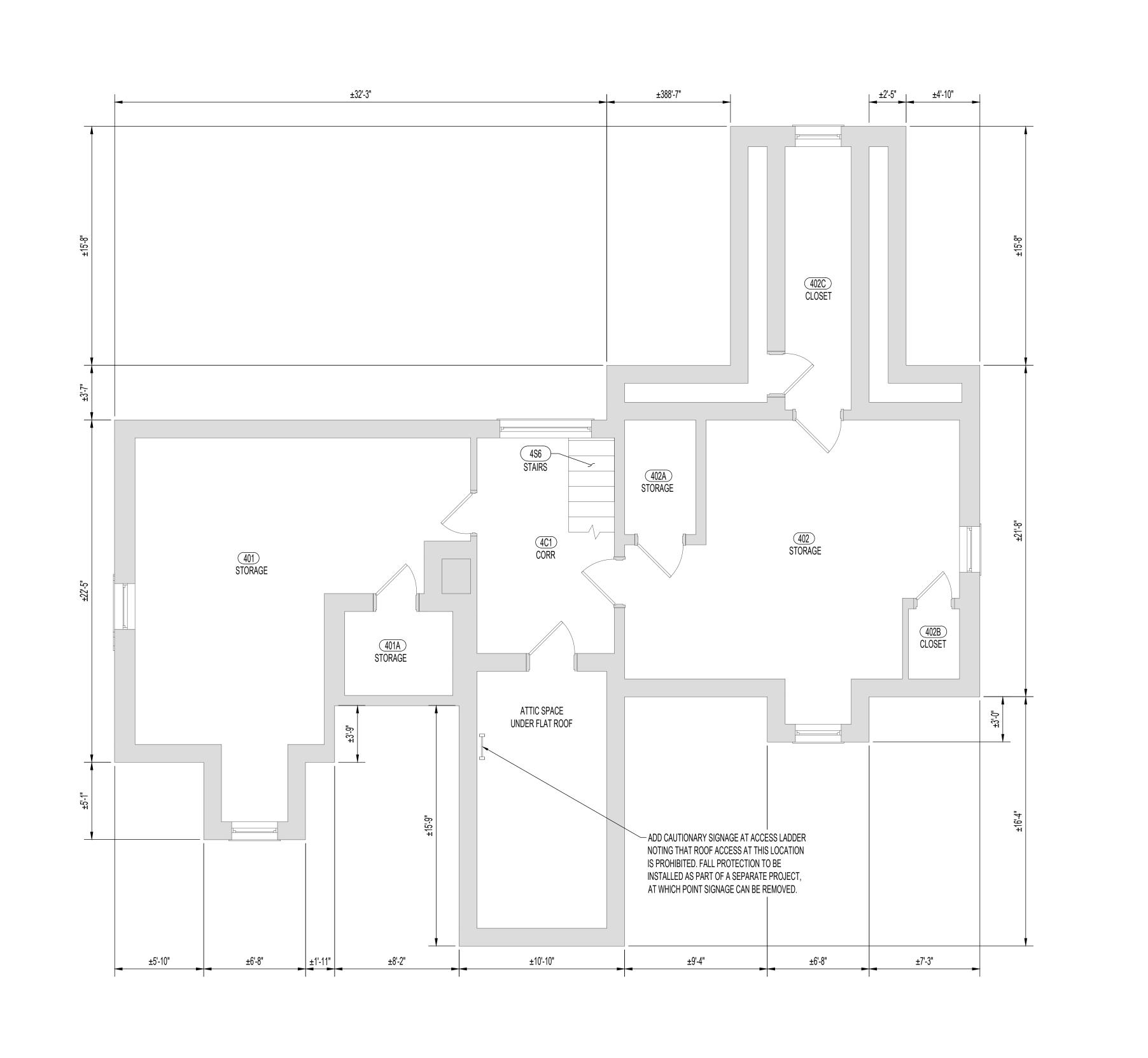
RRMM®
ARCHITECTS, PC
115 South 15th Street, Suite
Richmond, Virginia 23219
(804)277-8987

JODI M. KNOROWSKI

JODI M. KNORO

ROJECT: 901 WEST FRANKLIN ROOF AND ENVELOPE REPAIRS
PERMIT SET
VIRGINIA COMMONWEALTH UNIVERSITY
901 W FRANKLIN ST. RICHMOND, VIRGINIA 23284
RAWING: THIRD FLOOR PLAN

SHEET A1.3



1/4" = 1'-0"

1/8" = 1'-0" 4' 8' 12'

3/8" = 1'-0"

1/2" = 1'-0"

3/4" = 1'-0"

& Associates **Consulting Engineers** 

ARCHITECTS, PC 115 South 15th Street, Suite Richmond, Virginia 23219 (804)277-8987 JODI M. KNOROWSKI
JODI M. KNOROWSKI
JOBIN 1. No. 056664 A. 08/12/2024
SSJONAL

ROJECT: 901 WEST FRANKLIN ROOF AND ENVELOPE REPAIRS
PERMIT SET
VIRGINIA COMMONWEALTH UNIVERSITY
901 W FRANKLIN ST. RICHMOND, VIRGINIA 23284

RAWING: FOURTH FLOOR PLAN

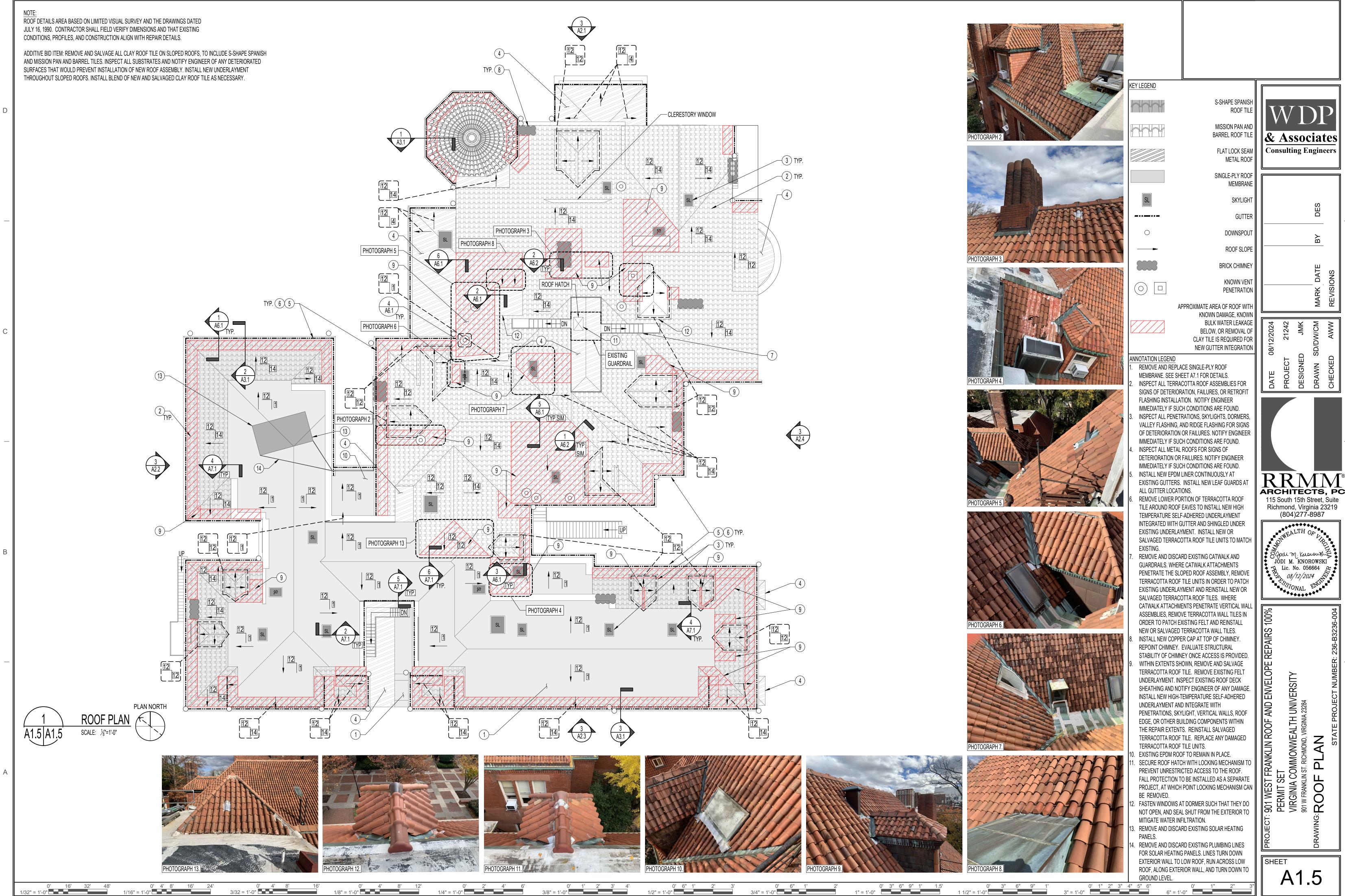
SHEET A1.4

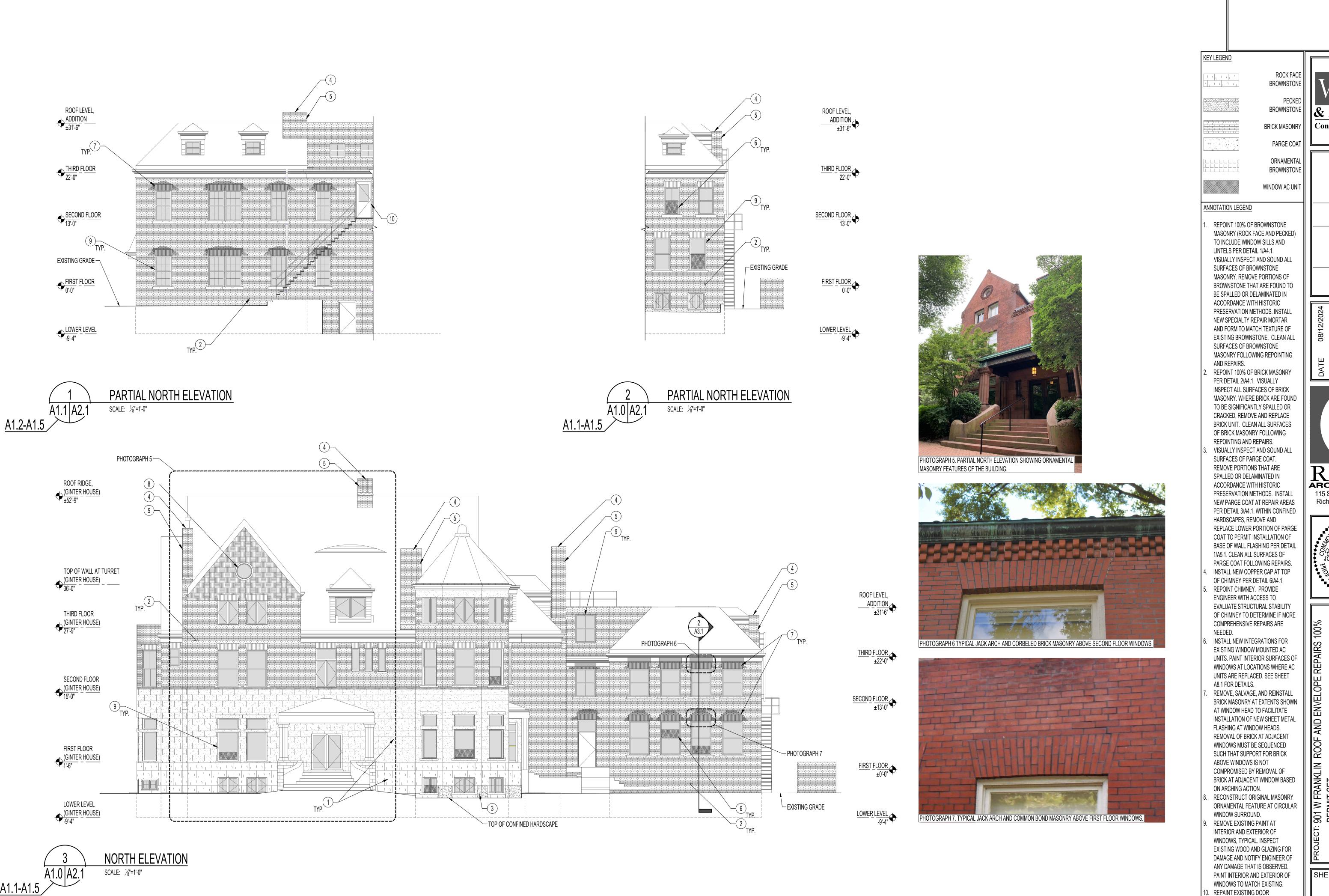
3" = 1'-0"

PLAN NORTH FOURTH FLOOR PLAN SCALE: 1/4"=1'-0"

1/16" = 1'-0"

0' 4' 8' 16 3/32 = 1'-0" 4' 8'





0' 3" 6" 9" 1' 1.5'

1 1/2" = 1'-0"

0' 4' 8' 16' 24' 1/16" = 1'-0"

1/8" = 1'-0"

& Associates **Consulting Engineers** 

DAT

DES

ВҮ

115 South 15th Street, Suite Richmond, Virginia 23219 (804)277-8987

JODI M. KNOROWSKI
Lic. No. 056664 A

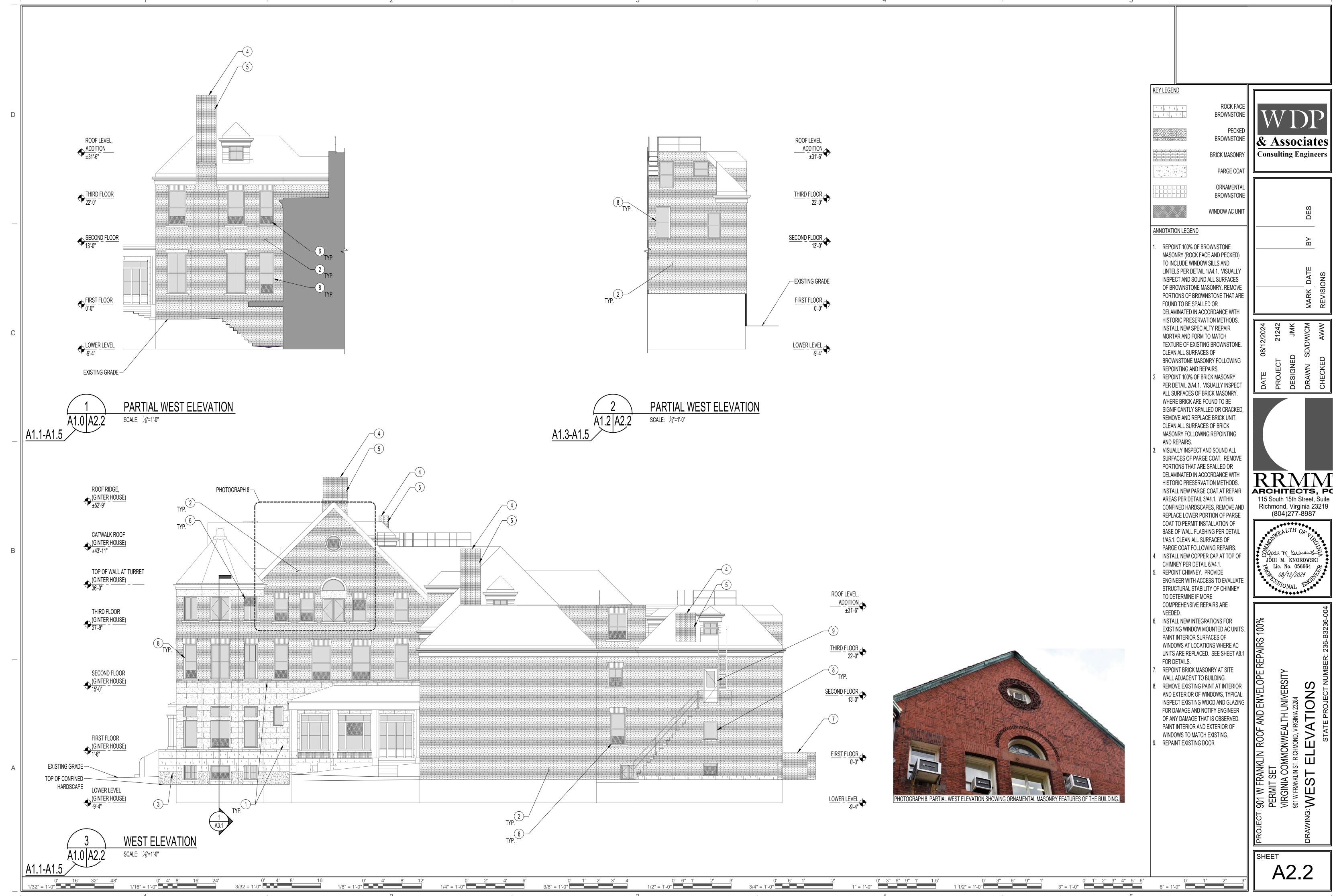
08/12/2024

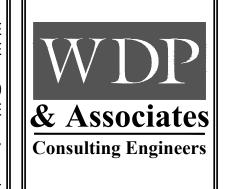
VATIONS

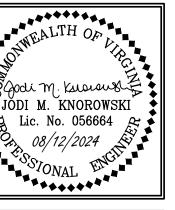
NORTH

SHEET

A2.





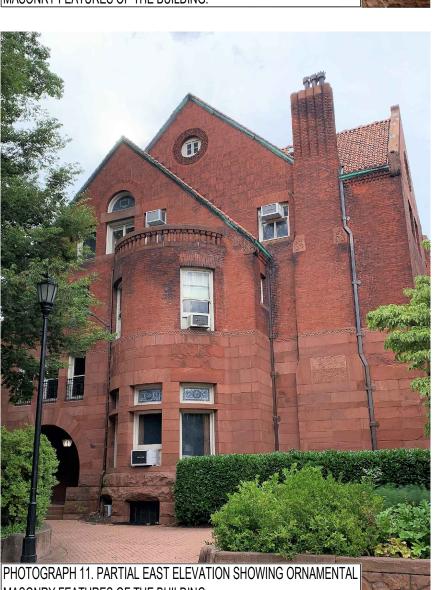






1/16" = 1'-0"





1 1/2" = 1'-0"

3/4" = 1'-0"

1" = 1'-0"

KEY LEGEND

PARGE COAT ORNAMENTAL BROWNSTONE

WINDOW AC UNIT

ANNOTATION LEGEND

REPOINT 100% OF BROWNSTONE MASONRY (ROCK FACE AND PECKED) TO INCLUDE WINDOW SILLS AND LINTELS PER DETAIL 1/A4.1. VISUALLY INSPECT AND SOUND ALL SURFACES OF BROWNSTONE MASONRY. REMOVE PORTIONS OF BROWNSTONE THAT ARE FOUND TO BE SPALLED OR DELAMINATED IN ACCORDANCE WITH HISTORIC PRESERVATION METHODS. INSTALL NEW SPECIALTY REPAIR MORTAR AND FORM TO MATCH TEXTURE OF EXISTING BROWNSTONE CLEAN ALL SURFACES OF BROWNSTONE MASONRY FOLLOWING

- REPOINTING AND REPAIRS. REPOINT 100% OF BRICK MASONRY PER DETAIL 2/A4.1. VISUALLY INSPECT ALL SURFACES OF BRICK MASONRY. WHERE BRICK ARE FOUND TO BE SIGNIFICANTLY SPALLED OR CRACKED, REMOVE AND REPLACE BRICK UNIT. CLEAN ALL SURFACES OF BRICK MASONRY FOLLOWING REPOINTING AND REPAIRS.
- REMOVE, SALVAGE, AND REINSTALL BRICK MASONRY AT EXTENTS SHOWN AT WINDOW HEAD TO FACILITATE INSTALLATION OF NEW SHEET METAL FLASHING AT WINDOW HEADS. REMOVAL OF BRICK AT ADJACENT WINDOWS MUST BE SEQUENCED SU THAT SUPPORT FOR BRICK ABOVE WINDOWS IS NOT COMPROMISED BY REMOVAL OF BRICK AT ADJACENT WINDOW BASED ON ARCHING ACTION. INSTALL NEW COPPER CAP AT TOP OF
- CHIMNEY PER DETAIL 6/A4.1. REPOINT CHIMNEY. PROVIDE ENGINEER WITH ACCESS TO EVALUATE STRUCTURAL STABILITY OF CHIMNEY TO DETERMINE IF MORE COMPREHENSIVE REPAIRS ARE NEEDED.
- INSTALL NEW INTEGRATIONS FOR EXISTING WINDOW MOUNTED AC UNITS. PAINT INTERIOR SURFACES OF WINDOWS AT LOCATIONS WHERE AC UNITS ARE REPLACED. SEE SHEET A8.1 FOR DETAILS.
- REMOVE AND DISCARD EXISTING CATWALK AND GUARDRAILS. WHERE CATWALK ATTACHMENTS PENETRATE THE SLOPED ROOF ASSEMBLY, REMOVE TERRACOTTA ROOF TILE UNITS IN ORDER TO PATCH EXISTING UNDERLAYMENT AND REINSTALL NEW OR SALVAGED TERRACOTTA ROOF TILES. WHERE CATWALK ATTACHMENTS PENETRATE VERTICAL WALL ASSEMBLIES, REMOVE TERRACOTTA WALL TILES IN ORDER T PATCH EXISTING FELT AND REINSTALL NEW OR SALVAGED TERRACOTTA WALL
- REPOINT BRICK MASONRY AT SITE WALL ADJACENT TO BUILDING. REMOVE EXISTING PAINT AT INTERIOR AND EXTERIOR OF WINDOWS, TYPICAL. INSPECT EXISTING WOOD AND GLAZING FOR DAMAGE AND NOTIFY ENGINEER OF ANY DAMAGE THAT IS OBSERVED. PAINT INTERIOR AND EXTERIOR OF WINDOWS TO MATCH EXISTING.

6" = 1'-0"



DES

ВҮ

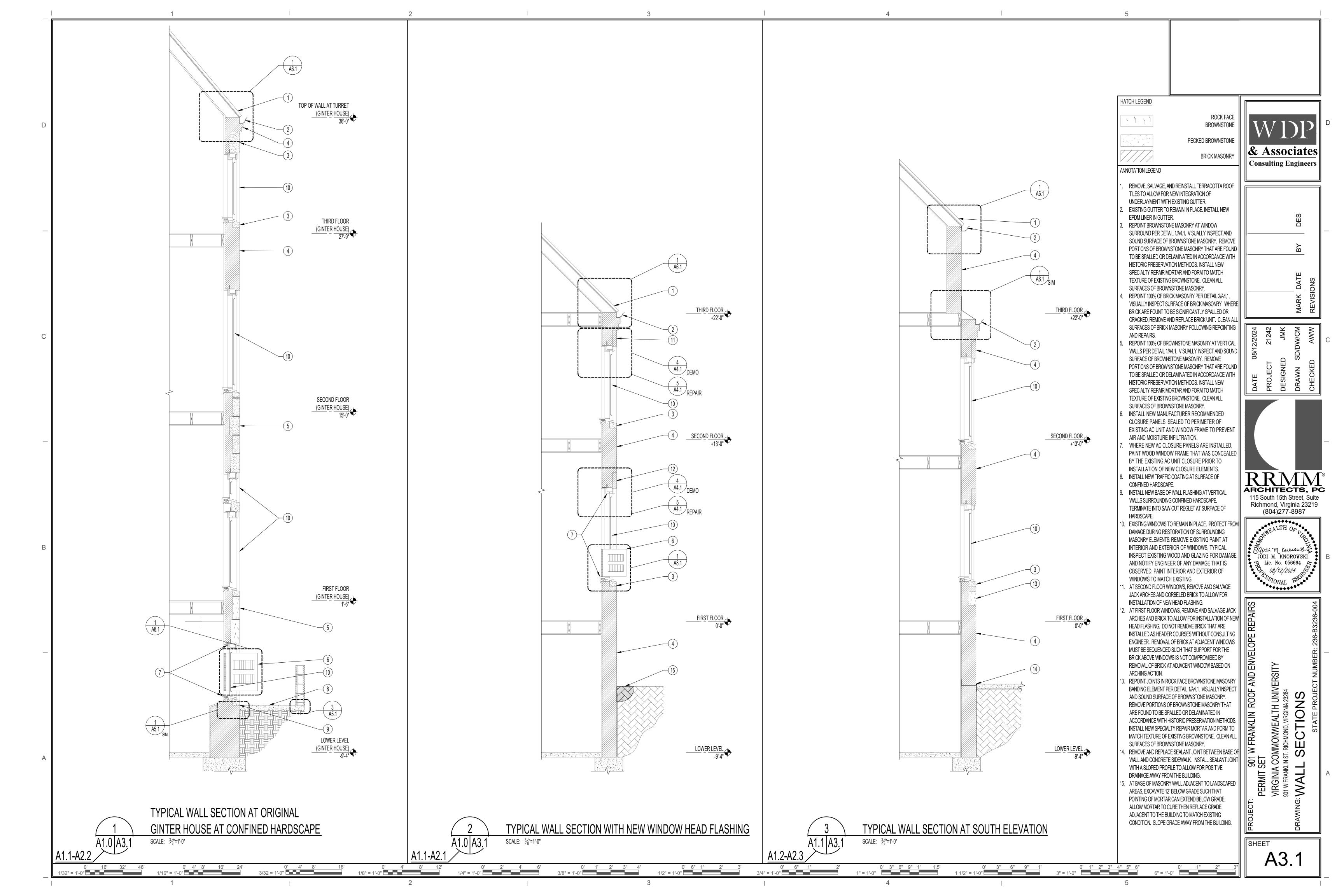


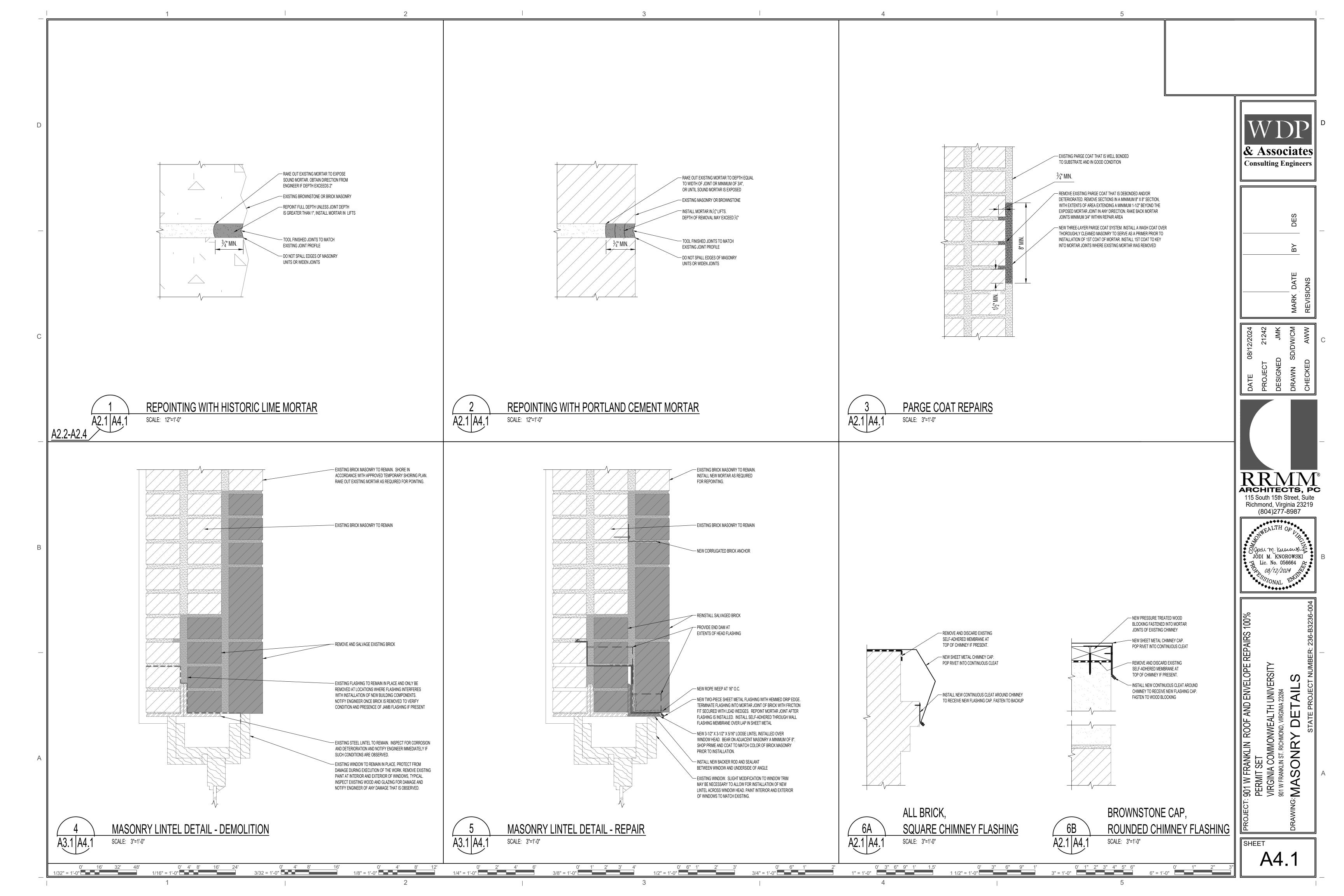
SGOdi M. Kulawalis JODI M. KNOROWSKI 08/12/2024 ONAL EN

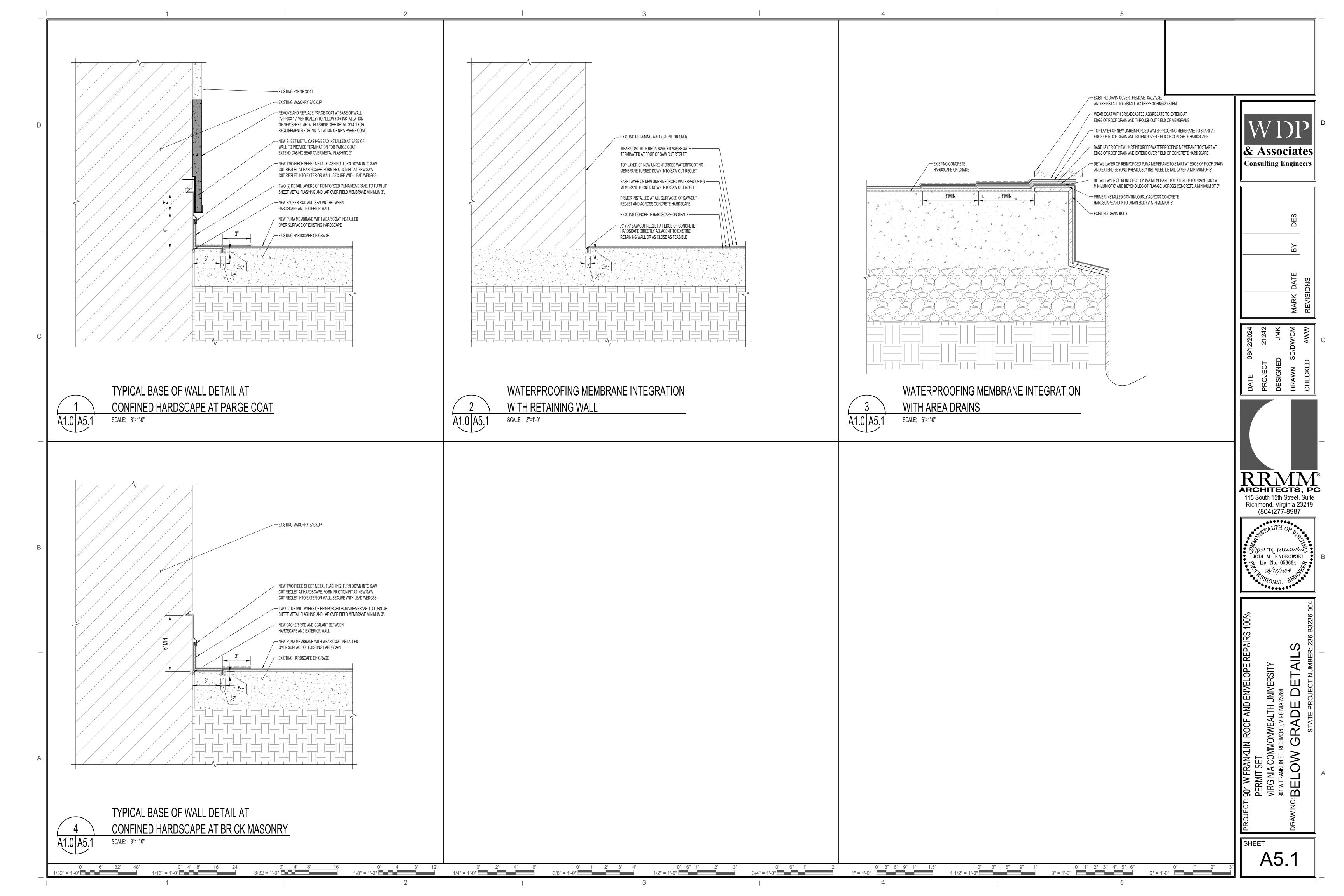
ELEVATIONS

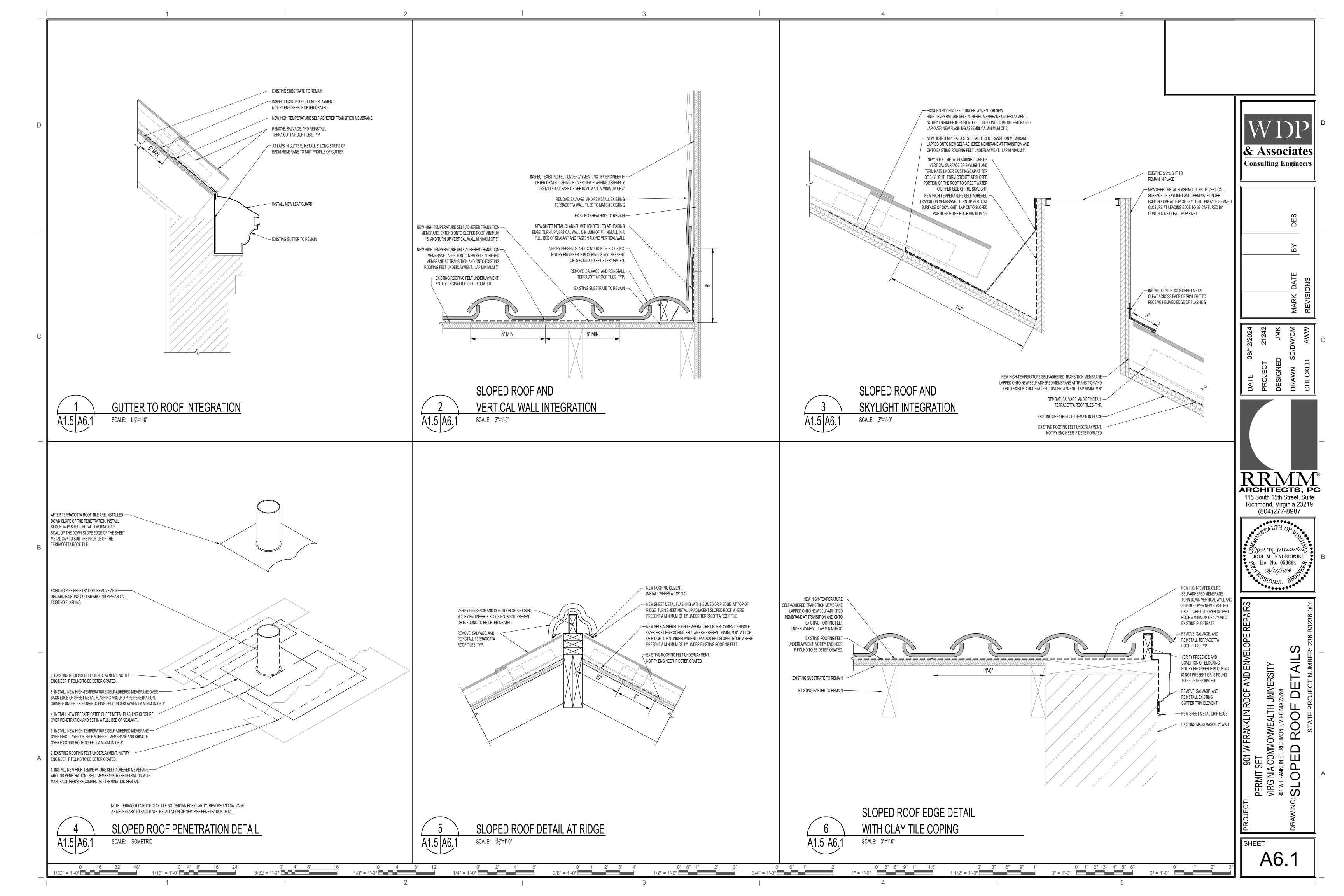
SHEET

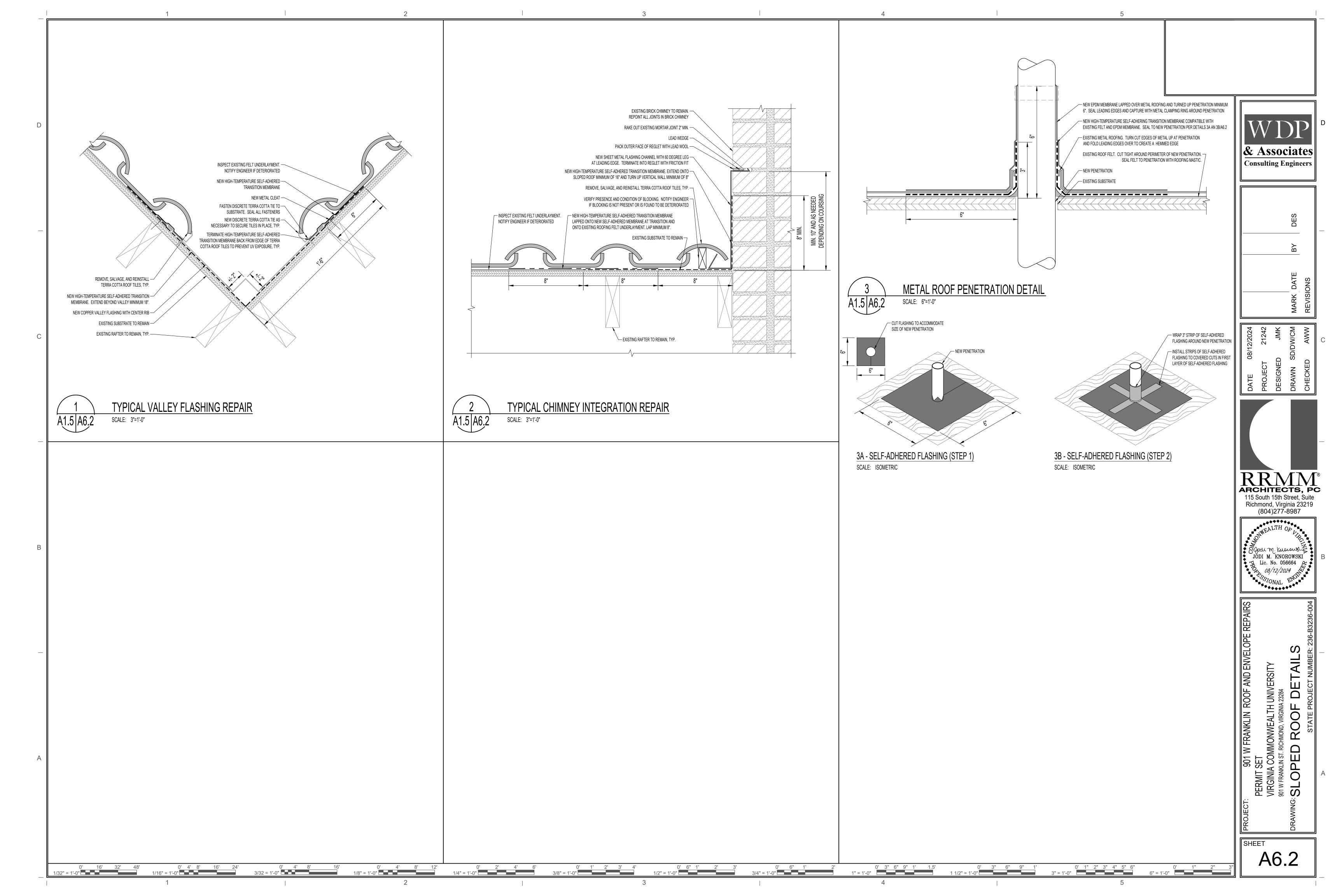
A2.4

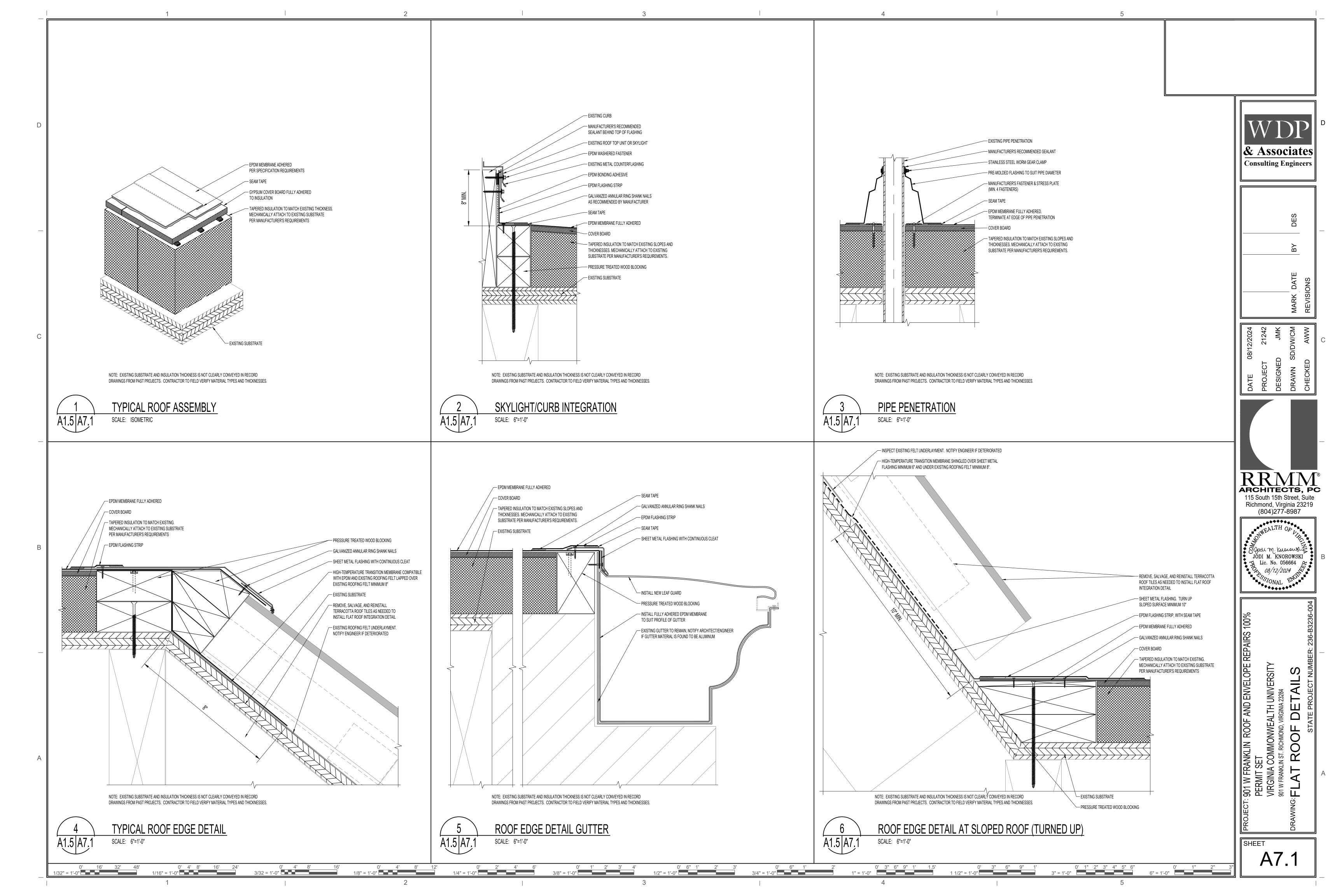


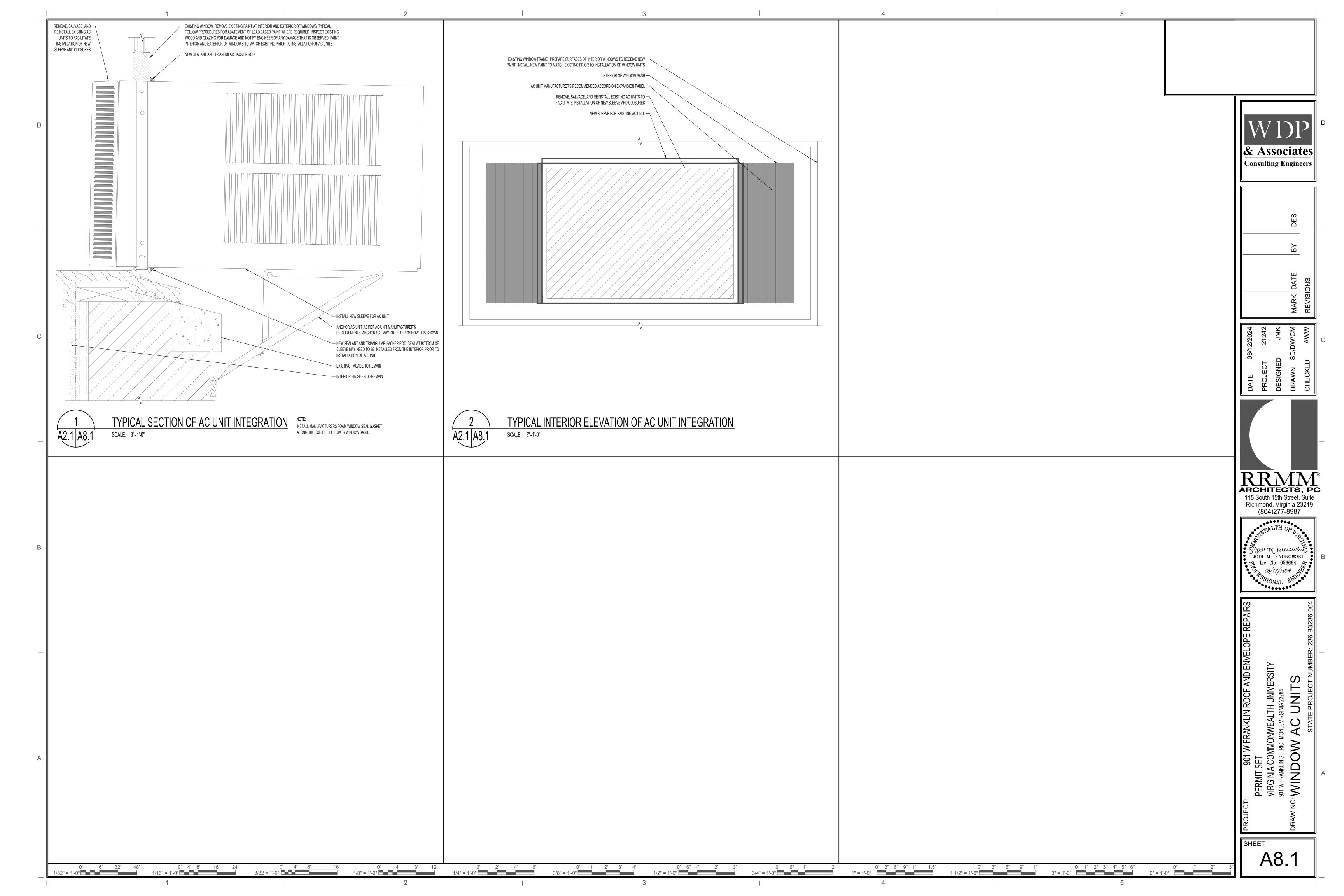












# Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project and Approval of Project Plans

Gladding Residence Center III (GRC) Heating, Ventilation and Air Conditioning (HVAC) System Replacement

#### **Background**

VCU seeks Board of Visitors (BOV) approval to amend the 2024-2030 Six-Year Capital Plan, authorization to initiate a capital project, and project plan approval, as required by the VCU management agreement, for the replacement of the GRC III HVAC system.

GRC III is located at 711 West Main Street on VCU's Monroe Park Campus. It is a five-level masonry residence hall constructed in 1979 that currently houses first-year students. The existing HVAC system is at the end of its useful life and requires replacement. VCU will utilize a term contract vendor, Colonial Webb, to complete the work.

#### **Considerations**

This work requires the building to be unoccupied during construction. VCU Residential Life and Housing will take the residence hall offline for summer 2025 so construction can be performed between May 12 to August 1, 2025. In order to meet this schedule, the contract to purchase equipment and materials needs to be executed no later than January 6, 2025. Project plans were submitted to the Virginia Division of Engineering and Buildings for permitting and approval was received on October 15, 2024.

#### Size and scope

The project scope includes full HVAC replacement and installation, including condensing units located on each of GRC's two roof sections and air handlers in each room.

#### **Cost and funding**

The total cost for the HVAC is estimated to be \$3.4M and will be funded using auxiliary housing funds.

#### Recommendation

Approve the amendment to the university's 2024-2030 Six-Year Capital Plan, authorize the initiation of a capital project at a cost not to exceed \$3.4M, and approve the corresponding project plans for the GRC III HVAC system replacement.

# RESOLUTION OF THE BOARD OF VISITORS VIRGINIA COMMONWEALTH UNIVERSITY

# AUTHORIZATION TO INITIATE A MAJOR CAPITAL PROJECT FOR GLADDING RESIDENCE CENTER III HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEM REPLACEMENT

**WHEREAS**, Chapter 6.1, Title 23 of the Code of Virginia of 1950, as amended (the "Virginia Code") establishes a public corporation under the name and style of Virginia Commonwealth University (the "University") which is governed by a Board of Visitors (BOV) (the "Board") vested with the supervision, management and control of the University;

**WHEREAS**, Title 23 of the Virginia Code classifies the University as an educational institution of the Commonwealth of Virginia;

WHEREAS, by Chapter 4.10, Title 23 of the Virginia Code, the University entered into that certain Management Agreement with the Commonwealth of Virginia which was enacted as Chapter 594 of the Acts of Assembly of 2008 which, as amended, classifies the University as a public institution of higher education and empowers the University with the authority to undertake and implement capital projects, which include the acquisition of any interest in land, improvements on acquired land, capital leases, new construction, and building improvements and renovations;

**WHEREAS**, the Management Agreement requires the Board of Visitors to authorize the initiation of each Major Capital Project by approving its size, scope, budget and funding;

**WHEREAS**, the Gladding Residence Center III HVAC System Replacement ("the Project") includes the replacement of both the roof units and air handlers in each room along with the necessary electrical and mechanical work needed for the installation;

**WHEREAS**, the total cost for the HVAC is estimated to be \$3.4M and will be funded using auxiliary housing funds;

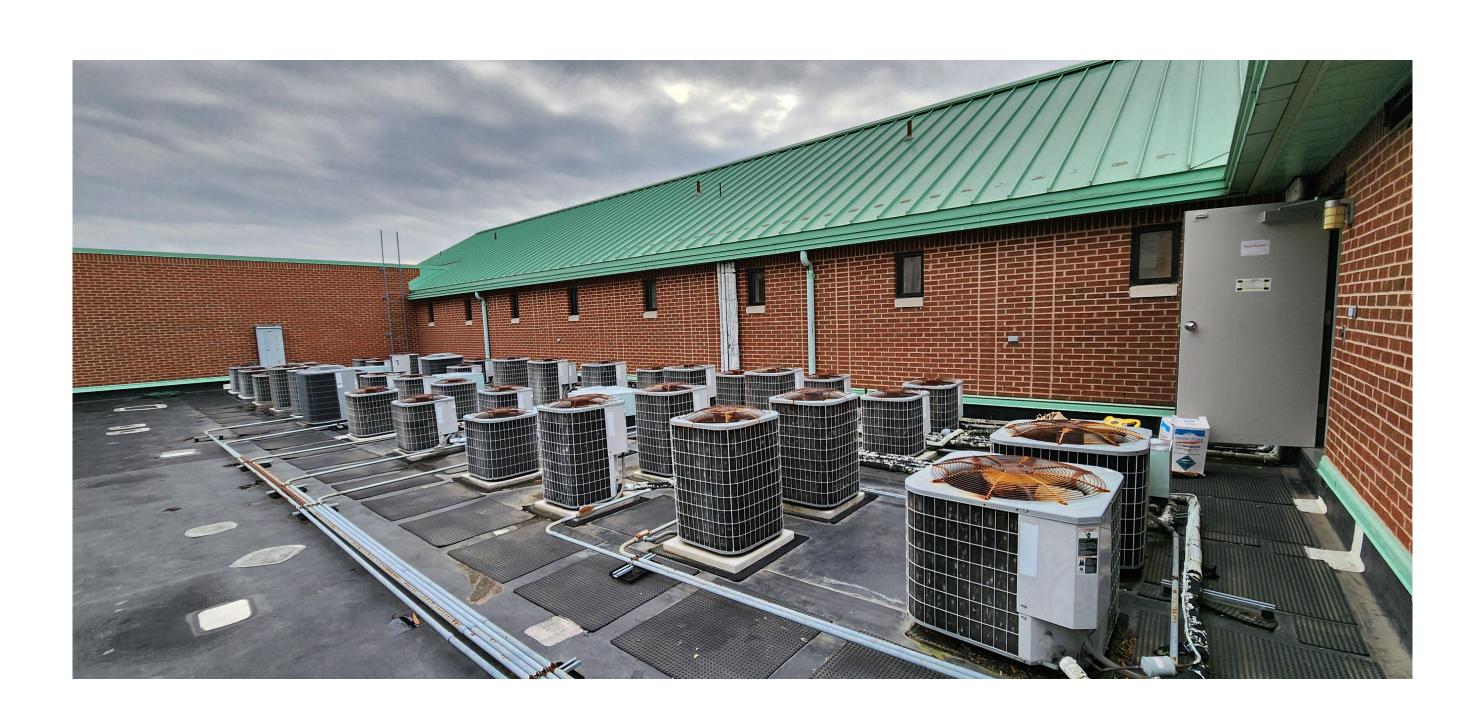
**WHEREAS**, the Board has determined it is desirable to authorize the initiation of a major capital project for the Gladding Residence Center III HVAC System Replacement;

**NOW, THEREFORE, BE IT RESOLVED,** that the Board hereby authorizes and approves the Project, including the size, scope, budget and funding of the Project, as described in the materials presented to the Board; and

**RESOLVED FURTHER,** that, upon approval, this action shall take effect immediately.

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA 23220 100% WORKING DRAWINGS



| SHEET LI | ST                                             |  |  |
|----------|------------------------------------------------|--|--|
| SHEET    | 0.1                                            |  |  |
| NUMBER   |                                                |  |  |
| G-001    | COVER SHEET                                    |  |  |
| G-002    | GENERAL INFORMATION                            |  |  |
| AD101    | 1ST FLOOR PLAN - DEMOLITION                    |  |  |
| AD102    | TYP. 2ND, 3RD, AND 4TH FLOOR PLAN - DEMOLITION |  |  |
| AD103    | 5TH FLOOR AND PARTIAL ROOF PLAN - DEMOLITION   |  |  |
| A-101    | 5TH FLOOR AND ROOF PLAN - NEW WORK             |  |  |
| A-102    | 1ST FLOOR RCP                                  |  |  |
| A-103    | TYP. 2ND - 4TH FLOOR RCP                       |  |  |
| A-104    | 5TH FLOOR RCP                                  |  |  |
| A-401    | ENLARGED ROOF PLANS - NEW WORK                 |  |  |
| A-501    | ROOF AND FLASHING DETAILS                      |  |  |
| A-502    | ROOF AND FLASHING DETAILS                      |  |  |
| M-001    | MECHANICAL COVER SHEET                         |  |  |
| MD101    | 1ST FLOOR MECHANICAL DEMOLITION PLAN           |  |  |
| MD102    | 2ND-4TH FLOOR MECHANICAL DEMOLITION PLAN       |  |  |
| MD103    | 5TH FLOOR MECHANICAL DEMOLITION PLAN           |  |  |
| MD401    | MECHANICAL DEMOLITION PLAN - NORTH ROOF        |  |  |
| MD402    | MECHANICAL DEMOLITION PLAN - SOUTH ROOF PLAN   |  |  |
| M-101    | 1ST FLOOR MECHANICAL NEW WORK PLAN             |  |  |
| M-102    | 2ND-4TH FLOOR MECHANICAL NEW WORK PLAN         |  |  |
| M-103    | 5TH FLOOR MECHANICAL NEW WORK PLAN             |  |  |
| M-301    | MECHANICAL ROOF SECTIONS                       |  |  |
| M-302    | MECHANICAL ROOF SECTIONS                       |  |  |
| M-401    | MECHANICAL ENLARGED NORTH ROOF PLAN            |  |  |
| M-402    | MECHANICAL ENLARGED SOUTH ROOF PLAN            |  |  |
| M-501    | MECHANICAL DETAILS                             |  |  |
| M-502    | MECHANICAL DETAILS                             |  |  |
| M-601    | MECHANICAL SCHEDULES                           |  |  |
| M-801    | MECHANICAL CONTROLS                            |  |  |
| M-901    | MECHANICAL 3D VIEW - NORTH ROOF                |  |  |
| M-902    | MECHANICAL 3D VIEW - SOUTH ROOF                |  |  |

| SHEET<br>NUMBER | SHEET NAME                                       |
|-----------------|--------------------------------------------------|
| E-001           | ELECTRICAL LEGEND, ABBREVIATIONS, AND NOTES      |
| ED101           | 1ST FLOOR ELECTRICAL POWER PLAN - DEMOLITION     |
| ED101           | 2ND-4TH FLOOR ELECTRICAL POWER PLAN - DEMOLITION |
|                 |                                                  |
| ED103           | 5TH FLOOR ELECTRICAL POWER PLAN - DEMOLITION     |
| ED401           | ELECTRICAL DEMOLITION PLAN - NORTH ROOF          |
| ED402           | ELECTRICAL DEMOLITION PLAN - SOUTH ROOF          |
| E-101           | 1ST FLOOR ELECTRICAL POWER PLAN - NEW WORK       |
| E-102           | 2ND-4TH FLOOR ELECTRICAL POWER PLAN - NEW WORK   |
| E-103           | 5TH FLOOR ELECTRICAL POWER PLAN - NEW WORK       |
| E-401           | ELECTRICAL ENLARGED NORTH ROOF PLAN              |
| E-402           | ELECTRICAL ENLARGED SOUTH ROOF PLAN              |
| E-501           | ELECTRICAL DETAILS                               |
| E-502           | ELECTRICAL DETAILS                               |
| E-601           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-602           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-603           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-604           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-605           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-606           | ELECTRICAL PANELBOARD SCHEDULES                  |
| E-801           | ELECTRICAL EXISTING RISER DIAGRAM                |

# CONTACTS

CLIEN

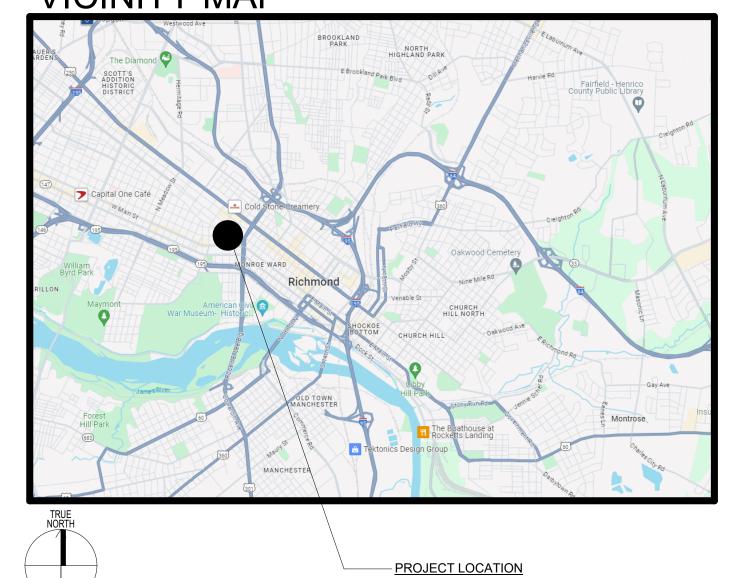
VIRGINIA COMMONWEALTH UNIVERSITY FACILITIES MANAGEMENT, PLANNING, AND DESIGN 700 WEST GRACE ST, SUITE 1500 RICHMOND, VA 23284

KAREN NICELY
PROJECT MANAGER
FACILITIES MANAGEMENT
504.828.7080
NICELYK2@VCU.EDU

ENGINEERS/ARCHITECTS

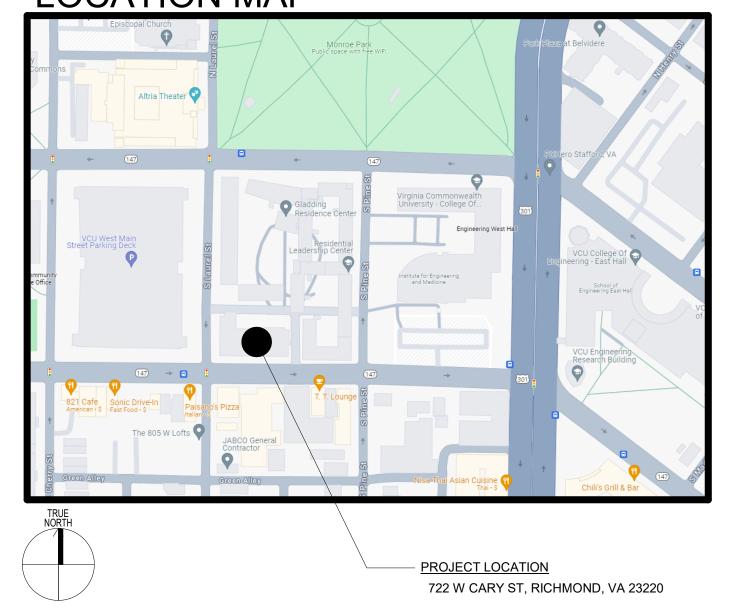
DJG, INC. 449 McLAWS CIRCLE WILLIAMSBURG, VA 23185 MATTHEW WILSON, PE PROJECT MANAGER 757.253.0673 MWILSON@DJGINC.COM

# VICINITY MAP



722 W CARY ST, RICHMOND, VA 23220

# **LOCATION MAP**





Design like YOU mean it!

20 HILLSBOROUGH STREET SUITE 100

....



100% WORKING DRAWINGS

GLADDING
RESIDENCE HALI
3 - HVAC AND
ROOF
REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS
# DATE DESCRIPTION

commission number 2240290

DESIGNED: JCO
DRAWN: MAL
CHECKED: DFB
DATE: 6/3/2024

JOHN C. OZMORE Lic.No.014303

SHEET TITLE

COVER SHEET

SHEET NUMBER G-001

**SHEET #** 1 **OF** 51

) Autodesk Docs://VCU Gladding Hall Roof/2240290 - R23 - VCU GLADDING HALL ROOF - AR

EMER EMERGENCY

EQPT EQUIPMENT

EW EACH WAY

EXT EXTERIOR

EWC ELECTRIC WATER COOLER

EXP EXPANSION, EXPOSED

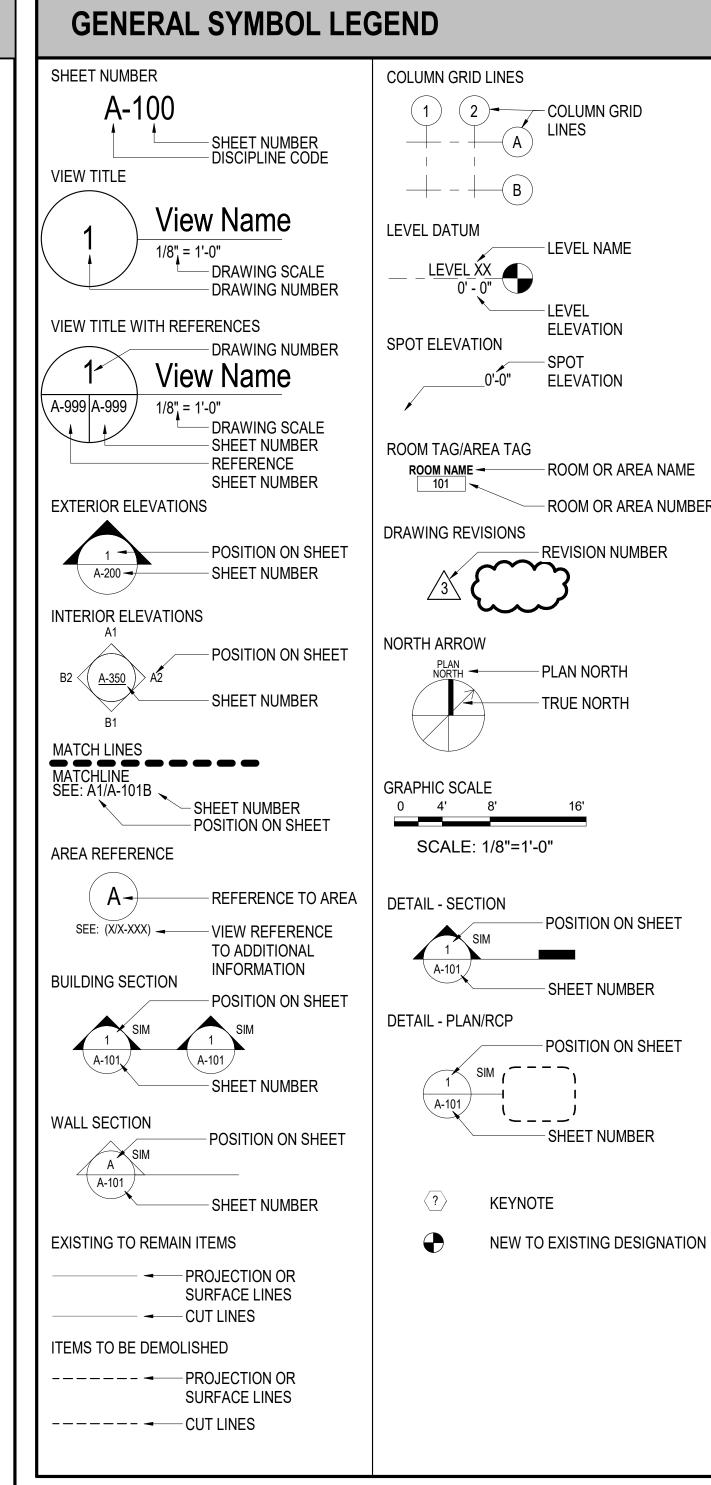
EQ EQUAL

**ABBREVIATIONS** ANCHOR BOLT, AUGER BORING SOUTH GROUND, GAS LINE, GRAM SC SOLID CORE AC ASBESTOS CEMENT. ACRES GALV GALVANIZED A/C ASPHALTIC CONCRETE GLAZED COATING, GENERAL CONTRACTOR SCH SCHEDULE ACST ACOUSTIC GLASS, GLAZING STATIC DISSIPATIVE TILE GR GRADE SE SOUTHEAST ACT ACOUSTIC CEILING TILE AREA DRAIN, ACCESS DOOR GFS GROSS SQUARE FEET SQUARE FOOT GLASS SHELF, SHELVING ADJUSTABLE GRADE SHT SHEET AFF ABOVE FINISHED FLOOR GROUND SIM SIMILAR AIR HANDLING UNIT ALTERNATE GLAZED STRUCTURAL UNIT SL SLOPE AL ALUMINUM GW GROUND WATER SPEC SPECIFICATION ACOUSTIC MATERIAL GWB GYPSUM WALL BOARD SQ SQUARE ACCESS PANEL, APPROX APPROXIMATE SOLID SURFACING, STAINLESS STEEL GYP GYPSUM STREET ARCH ARCHITECTURAL HEIGHT STD STANDARD ASPH ASPHALT HOSE BIBB STL STEEL BASELINE HANDICAPPED, HOLLOW CORE STR STRUCTURAL BOARD HDR HEADER SUP SUPPORT BRICK EXPANSION JOINT HDW HARDWARE SUSP SUSPENDED BELOW HOLLOW METAL SV SHEET VINYL BET BETWEEN HOR HORIZONTAL BFG BELOW FINISHED GRADE HIGH POINT THRSLD THRESHOLD BIT BITUMINOUS HOUR TO TOP OF TOF TOP OF FOOTING BLDG BUILDING INSIDE DIAMETER, INSIDE DIMENSION TOS TOP OF SLAB BLK BLOCK INVERT ELEVATION TOW TOP OF WAL BLKG BLOCKING INCL INCLUDE BOT BOTTOM TS TOP OF STEEL INSUL INSULATION, INSULATED BOS BOTTOM OF SLAB TV TELEVISION INT INTERIOR. INTERMEDIATE BRG BEARING TOP OF WALL INV INVERT BS BOTH SIDES TYP TYPICAL BSMT BASEMENT JANITOR CLOSET UCR UNDER COUNTER REFRIGERATOR BUR BUILT-UP ROOFING JUNCTION UH UNIT HEATER BW BOTH WAYS JOINT UNO UNLESS NOTED OTHERWISE C&G CURB AND GUTTER JOIST VAC VACUUM CAB CABINET VASB VINYL ASBESTOS KITCHEN CAP CAPACITY VB VAPOR BARRIER KNOCK OUT CEM CEMENT VC VARNISH CAMBRIC, VITRIFIED CLAY CER CERAMIC LOUVER, LENGTH, LENGTH OF CURVE VCT VINYL COMPOSITION TILE CF CUBIC FOOT LAV LAVATORY VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION LC LEAD COVERED CFCI CONTRACTOR-FURNISHED CONTRACTOR INSTALLED VENT VENTILATING LT LIGHT CORNER GUARD VERT VERTICAL CJ CONTROL JOINT LTG LIGHTING VEST VESTIBULE LAV LAVATORY VERTICAL CKT CIRCUIT VS VENT STACK LVT LUXURY VINYL TILE CLG CEILING VTR VENT THRU ROOF CLR CLEAR VWC VINYL WALL COVERING MAS MASONRY CMU CONCRETE MASONRY UNITS MATL MATERIAL W WIDTH COL COLUMN MAX MAXIMUM COMM COMMUNICATION W/ WITH MCJ MASONRY CONTROL JOINT CONC CONCRETE, SEALED CONCRETE W/O WITHOUT MDF MEDIUM-DENSITY FIBERBOARD CONSTRUCTION WC WATER CLOSE MDO MEDIUM-DENSITY OVERLAY CONT CONTINUOUS, CONTINUE WD WOOD MECH MECHANICAL CP NON-REINFORCED CONCRETE PIPE WH WATER HEATER MFR MANUFACTUREF CPT CARPET WM WATER METER MIN MINIMUM, MINUTE CR CHAIR, CRASH RAIL WO WHERE OCCURS MISC MISCELLANEOUS CRS COURSE(S) WOM WALK OFF MATT MO MASONRY OPENING CONCRETE SEALER/SURFACE WP WATERPROOF, WEATHERPROOF MTL METAL CT CERAMIC TILE. CURRENT TRANSFORMER, COOLING TOWER WT WEIGHT MMP MEMBRANE WATERPROOFING WWF WELDED WIRE FABRIO DEPTH, DEEP, DEGREE OF CURVATURE MULL MULLION DEMO DEMOLITION. DEMOLISH DIAMETER DET DETAIL NORTH DF DRINKING FOUNTAIN NOT APPLICABLE DH DRILL HOLE. DOUBLE HUNG NON CORROSIVE DIA DIAMETER NORTHEAST DIAG DIAGONAL NDC NOSE DOWN CURB DIM DIMENSION NIC NOT IN CONTRACT DIST DISTANCE NLB NON LOAD BEARING DN DOWN NO NUMBER DS DOWNSPOUT, STORM DRAINAGE STRUCTURE NOM NOMINAL DWG DRAWING NTS NOT TO SCALE DWR DRAWER NW NORTHWEST FIRE, FUSE, FILTER OC ON CENTER FBO FURNISHED BY OTHERS OD OUTSIDE DIAMETER FD FLOOR DRAIN. FIRE DAMPER OFCI OWNER-FURNISHED CONTRACTOR-INSTALLED FDN FOUNDATION OFOI OWNER-FURNISHED OWNER-INSTALLED FE FIRE EXTINGUISHER OFRD OVERFLOW ROOF DRAIN FEC FIRE EXTINGUISHER CABINET OH OVERHEAD FFE FINISHED FLOOR ELEVATION OPNG OPENING FH FIRE HYDRANT OPP OPPOSITE (HAND) FIG FIGURE OSB ORIENTED STRAND BOARD FIN FINISH(ED) QUARRY TILE FELT JOINT, FINGER JOINT, FLOOR JOIST FL FLASHING, FLOW LINE PASCALES FLR FLOOR PIPE, POLE, PAINT FNDN FOUNDATION PB PULL BOX FOC FACE OF CONCRETE PEJ PERIMETER EXPANSION JOINT FOF FACE OF FINISH PLASTIC LAMINATE FOM FACE OF MASONRY PJF PREFORMED JOINT FILLER FOS FACE OF STUD PL PLATE, PROPERTY LINE FRT FIRE-RETARDANT TREATED PLAM PLASTIC LAMINATE FPH FROST PROOF HYDRANT PNL PANEL FR FRAME PNT PAINT FS FULL SIZE, FLOOR SINK RADIUS, RISER, RUBBER SHEATH FTG FOOTING RESILIENT VINYL BASE, RUBBER BASE FXTR FIXTURE RBTR RUBBER TREAD/RISER COMBINATION EXISTING RCP REFELECTED CEILING PLAN EAST RD ROOF DRAIN RED REDUCING EACH REG REGULATOR **EXPANSION JOINT** EL ELEVATION REINF REINFORCEMENT ELEC ELECTRIC(AL) REQ'D REQUIRED ELEV ELEVATOR, ELEVATION REV REVISION EOS EDGE OF SLAB RM ROOM

RO ROUGH OPENING

RVT RESILIENT VINYL TILE

RM ROOM



NOTE: SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST REQUIRED BY THE CONTRACT

**IMPORTANT**: THE EXISTING FLOOR AND ROOF DECK IS HOLLOW CORE PLANK CONSTRUCTION. NO NEW PENETRATIONS MAY BE CREATED WITHOUT THE LOCATION AND SIZE BEING REVIEWED AND APPROVED BY THE A/E OF RECORD.

THE SCHEDULED EQUIPMENT IS INTENDED ONLY TO SHOW THE GENERAL SIZE, CONFIGURATION LOCATION, CONNECTIONS AND/OR SUPPORT FOR **EQUIPMENT OR SYSTEMS SPECIFIED WITH** RELATION TO THE OTHER BUILDING SYSTEMS. SEE SPECIFICATIONS FOR TECHNICAL REQUIREMENTS PERTAINING TO THE PRODUCT.

## PROJECT SUMMARY

HVAC AND LIMITED LOW-SLOPE ROOF REPLACEMENT WITHIN THE EXISTING 5-STORY DORMITORY. THE HVAC EQUIPMENT WILL BE A ONE FOR ONE REPLACEMENT TO BE IN ACCORDANCE WITH THE VIRGINIA EXISTING BUILDING CODE AS A LEVEL 1 ALTERATION. LEVEL 2 ALTERATIONS INCLUDE THE ADDITION OF HVAC UNITS IN THE CORRIDOR. THE EXISTING EPDM ROOF SYSTEM WILL BE COMPLETELY REMOVED DOWN TO THE EXISTING CONCRETE ROOF DECK AND REPLACED WITH A FULLY ADHERED PVC 60-MIL MEMBRANE, 1/2" COVERBOARD, AND POLY-ISO RIGID INSULATION WITH A THICKNESS TO OBTAIN AN AVERAGE R-VALUE OF 30. THE METAL COPING, PIPING ENCLOSURES, ROOF DRAINS, OVERFLOW SCUPPERS, AND ALL FLASHING SHALL BE REMOVED AND REPLACED. NEW SAFETY GUARDRAILS FOR FALL PROTECTION SHALL BE INSTALLED WITH THIS PROJECT.

TOTAL ROOF AREA: 2,544 SQ. FT. TOTAL BUILDING AREA: 53.005 SQ. FT. WIND SPEED: 115 MPH EXPOSURE CATEGORY: RISK CATEGORY: ROOF LIVE LOAD: GROUND SNOW LOAD: 20 PSF CONSTRUCTION TYPE: 2-B (EXISTING NOT BEING ALTERED) OCCUPANCY GROUPS: R-2 DORMITORY (EXISTING NOT BEING ALTERED)

#### APPLICABLE BUILDING CODES AND REGULATIONS

FULLY SUPPRESSED: YES

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND BUILDING CODES GOVERNING THIS PROJECT. SUCH COMPLIANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, THE LATEST ADOPTED VERSIONS OF:

2024 CONSTRUCTION AND PROFESSIONAL SERVICES MANUAL (CPSM), REV (0) 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, PART I, VIRGINIA CONSTRUCTION CODE (VCC) 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, PART II, EXISTING BUILDINGS (VEBC) 2021 VIRGINIA MECHANICAL CODE 2021 VIRGINIA PLUMBING CODE 2023 NATIONAL ELECTRICAL CODE (NFPA 70) 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ASAD)

WHERE LAWS AND CODES ARE IN DIRECT CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL

IN ACCORD WITH THE HIGH PERFORMANCE BUILDINGS ACT. THE BUILDING IS EXEMPT FROM COMPLIANCE BECAUSE THE COST OF THE RENOVATIONS DOES NOT EXCEED 50% OF THE VALUE OF THE BUILDING

IN ACCORDANCE WITH THE VIRGINIA ENERGY CONSERVATION CODE (VECC), THE BUILDING SHALL COMPLY WITH ASHRAE 90.1-2016

SECTIONS 5, 6, 7, 8, 9, & 10. a. SECTION 5 BUILDING ENVELOPE COMPLIANCE WILL BE VIA SECTION 5.5 - PRESCRIPTIVE BUILDING ENVELOPE OPTION

b. SECTION 6 HVAC COMPLIANCE WILL BE VIA SECTION 6.4 - MANADATORY PROVISIONS AND 6.5 - PRESCRIPTIVE PATH.

c. SECTION 9 LIGHTING COMPLIANCE IS NOT APPLICABLE AS THE EXISTING LIGHTING IS NOT PART OF THIS PROJECT

THE BUILDING WILL BE UNOCCUPIED DURING THE CONSTRUCTION OF THIS PROJECT.

### VIRGINIA EXISTING BUILDING CODE (VEBC) COMPLIANCE PATH:

LEVEL 1 ALTERATION FOR REPLACING THE ROOF, FIRE DOORS, AND EXISTING HVAC EQUIPMENT LEVEL 2 ALTERATION FOR INSTALLATION OF ADDITIONAL HVAC UNITS. ADDITIONAL HVAC UNIT IN CORRIDORS AND THEIR ASSOCIATED CONDENSING UNITS.

#### ASBESTOS AND LEAD MATERIALS DISCLOSURE STATEMENTS

AN ASBESTOS INSPECTION WAS NOT PERFORMED BECAUSE ALL PORTIONS OF THE EXISTING BUILDING THAT MAY BE AFFECTED BY THE WORK WERE ORIGINALLY CONSTRUCTED AFTER JANUARY 1, 1985

AN INSPECTION TO IDENTIFY LEAD CONTAINING OR COATED BUILDING COMPONENTS HAS NOT BEEN CONDUCTED BECAUSE THE BUILDING WAS CONSTRUCTED AFTER JANUARY 1, 1985 AND THE OWNER HAS NO KNOWLEDGE OF LEAD CONTAINING OR COATED BUILDING COMPONENTS IN THE BUILDING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL VIRGINIA OCCUPATIONAL SAFETY AND HEALTH (VOSH) REGULATIONS AS THEY PERTAIN TO EMPLOYEE EXPOSURES TO LEAD. ALL LEAD AND LEAD-COATED BUILDING COMPONENTS SHALL BE RECYCLED TO THE EXTENT POSSIBLE

# **GENERAL NOTES**

- . CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN FIELD PRIOR TO STARTING DEMOLITION. DEMOLITION INDICATED ON THE DRAWINGS IS CONCEPTUAL AND NOT INTENDED TO CONVEY FULL EXTENT. DEMOLISH EXISTING
- CONSTRUCTION WITHIN DEMOLITION LIMITS TO FULL EXTENT, TO FULLY ACCEPT NEW WORK WITH CLEAN, FLUSH, AND NEAT TRANSITIONS. PATCH EXISTING WORK TO PRODUCE FLUSH AND SMOOTH SURFACES SUCH THAT OLD AND NEW CONSTRUCTION IS
- 3. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IF, AFTER DEMOLITION, HE FINDS CONDITIONS WHICH MAY BE DAMAGED OF CODE DEVIANT. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD PRIOR TO CONSTRUCTION. VARIANCES SHALI BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER IN WRITING PRIOR TO COMMENCING WORK OR ORDERING MATERIALS FOR THAT AREA
- 4. CARE SHALL BE EXERCISED DURING DEMOLITION, REMOVAL AND NEW CONSTRUCTION WORK TO PROTECT EXISTING AREAS NOT IN CONTRACT BUT ADJACENT TO WORK.
- . THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK PERFORMED ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AS INTENDED AND INTERPRETED BY THE ARCHITECT/ENGINEER. THE OWNER WILL HIRE AN INDEPENDENT, FULL-TIME INSPECTOR TO BE ON SITE BEGINNING AT THE POINT JUST PRIOR TO ROOF SYSTEM APPLICATION. THE INSPECTOR WILL PREPARE DAILY FIELD REPORTS AND DISTRIBUTE TO THE CONTRACTOR, OWNER, AND ARCHITECT/ENGINEER.
- 6. WHERE DISSIMILAR METALS ARE IN DIRECT PHYSICAL CONTACT, PROVIDE ADEQUATE SEPARATION TO PREVENT GALVANIC ACTION.
- 7. PROVIDE 4'-0" x 4'-0" x 1/2" DEEP SUMP, SLOPED TO DRAIN, TYP @ PRIMARY ROOF DRAINS. 8. REMOVE (E) ROOF SYSTEMS AND INSULATION, COMPLETE, DOWN TO THE (E) CONCRETE ROOF DECKS. INSPECT CONCRETE DECKS FOR
- 9. THE CONTRACTOR SHALL VERIFY THAT ALL (E) PRIMARY ROOF DRAIN PIPING FLOWS FREELY AND, IF (E) PIPING IS FOUND TO BE
- CLOGGED OR SLOW RUNNING, THE CONTRACTOR SHALL CLEAR ALL DRAIN PIPE DEBRIS.
- 10.ALL VALLEYS SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT, TYPICAL 11. CONTRACTOR TO COORDINATE MATERIALS LAY-DOWN AREA WITH OWNER.
- 12.THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING AREAS OF THE SITE TO THEIR ORIGINAL CONDITION THAT ARE DISTURBED DURING THE PERFORMANCE OF THE WORK. TURF SHALL BE RE-GRADED WITH NEW TOPSOIL, SEEDED, AND COVERED WITH STRAW.
- 13.THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN SAFE BUILDING EGRESS INCLUDING MEANS OF EGRESS, EXITS, AND EXIT DISCHARGE DURING THE PERFORMANCE OF THIS PROJECT. CONTRACTOR'S PERSONNEL, MATERIALS, AND EQUIPMENT SHALL NOT IMPEDE EGRESS. PROVIDE OVERHEAD PROTECTION WHEN WORK IS PERFORMED OVER OR DIRECTLY ADJACENT TO A FUNCTIONING BUILDING ENTRANCE/EXIT. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE, BUT IS NOT LIMITED TO, EMERGENCY EGRESS SIGNAGE, FLAGGING, SAFETY BARRIERS, AND OVERHEAD PROTECTION TO MAINTAIN SAFE OPERATION FOR THE BUILDING'S OCCUPANTS DURING CONSTRUCTION ACTIVITIES.
- 14.WHEN CEILINGS ARE REMOVED, THE CONTRACTOR SHALL TURN THE SPRINKLER HEADS UP UNTIL THE CEILINGS ARE REINSTALLED.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.diginc.com



100% WORKING **DRAWINGS** 

**GLADDING** RESIDENCE HAL 3 - HVAC AND

REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | REVISIONS |             |  |  |
|---|-----------|-------------|--|--|
| # | DATE      | DESCRIPTION |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |

COMMISSION NUMBER 2240290

As indicated DESIGNED: JCO DRAWN: MAL

CHECKED: DFB DATE: 6/3/2024 NEALTH OA



SHEET TITLE **GENERAL** INFORMATION

> SHEET NUMBER G-002

**SHEET #** 2 **OF** 51

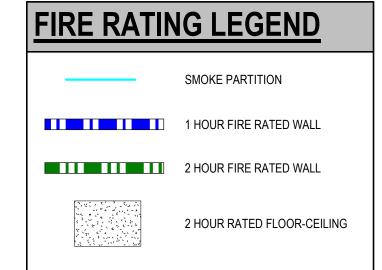
**DEMOLITION KEYNOTE LEGEND** 

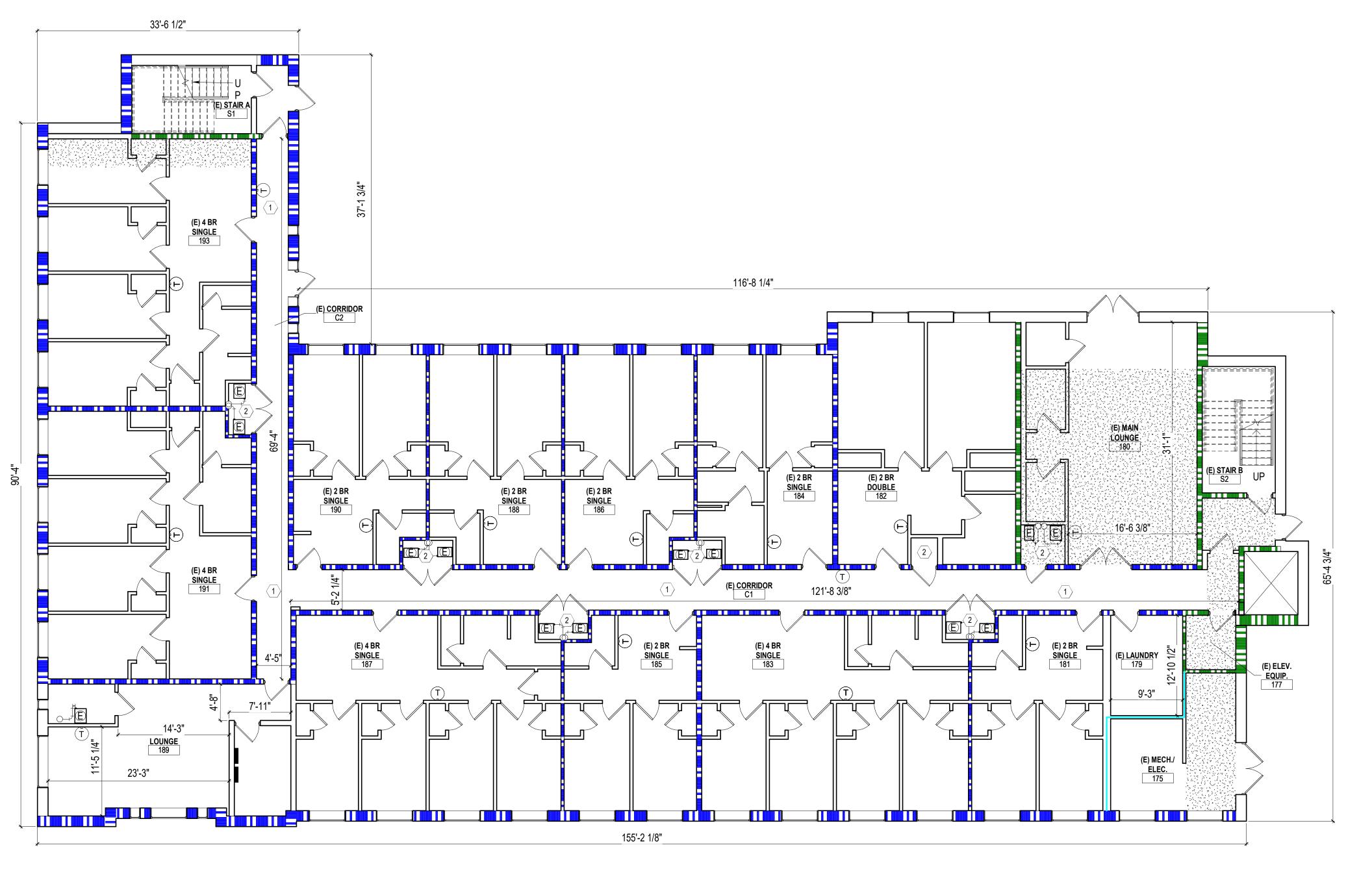
KEYNOTE

DESCRIPTION

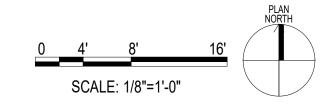
REMOVE (E) SUSPENDED ACOUSTICAL TILE CEILINGS IN CORRIDORS AND STORE FOR REINSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED

DEMO (E) DOOR AND HARDWARE, COMPLETE. PREPARE FRAME FOR NEW DOOR AND HARDWARE











449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

|   | REVISIONS |             |  |  |
|---|-----------|-------------|--|--|
| # | DATE      | DESCRIPTION |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |

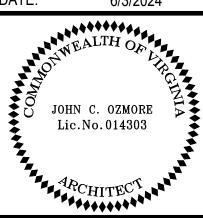
COMMISSION NUMBER 2240290

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

DESIGNED: JCO

DRAWN: MAL

CHECKED: DFB



SHEET TITLE

1ST FLOOR
PLAN DEMOLITION

SHEET NUMBER
AD101

**SHEET #** 3 **OF** 51

**DEMOLITION KEYNOTE LEGEND** 

KEYNOTE

DESCRIPTION

REMOVE (E) SUSPENDED ACOUSTICAL TILE CEILINGS IN CORRIDORS AND STORE FOR REINSTALLATION.
WHEN CEILINGS ARE REMOVED TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN

WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED

DEMO (E) DOOR AND HARDWARE, COMPLETE. PREPARE FRAME FOR NEW DOOR AND HARDWARE

DEMO (E) GYPSUM WALL BOARD CEILING, 4TH FLOOR ONLY, TO ACCESS PIPING AND MECHANICAL EQUIPMENT ABOVE

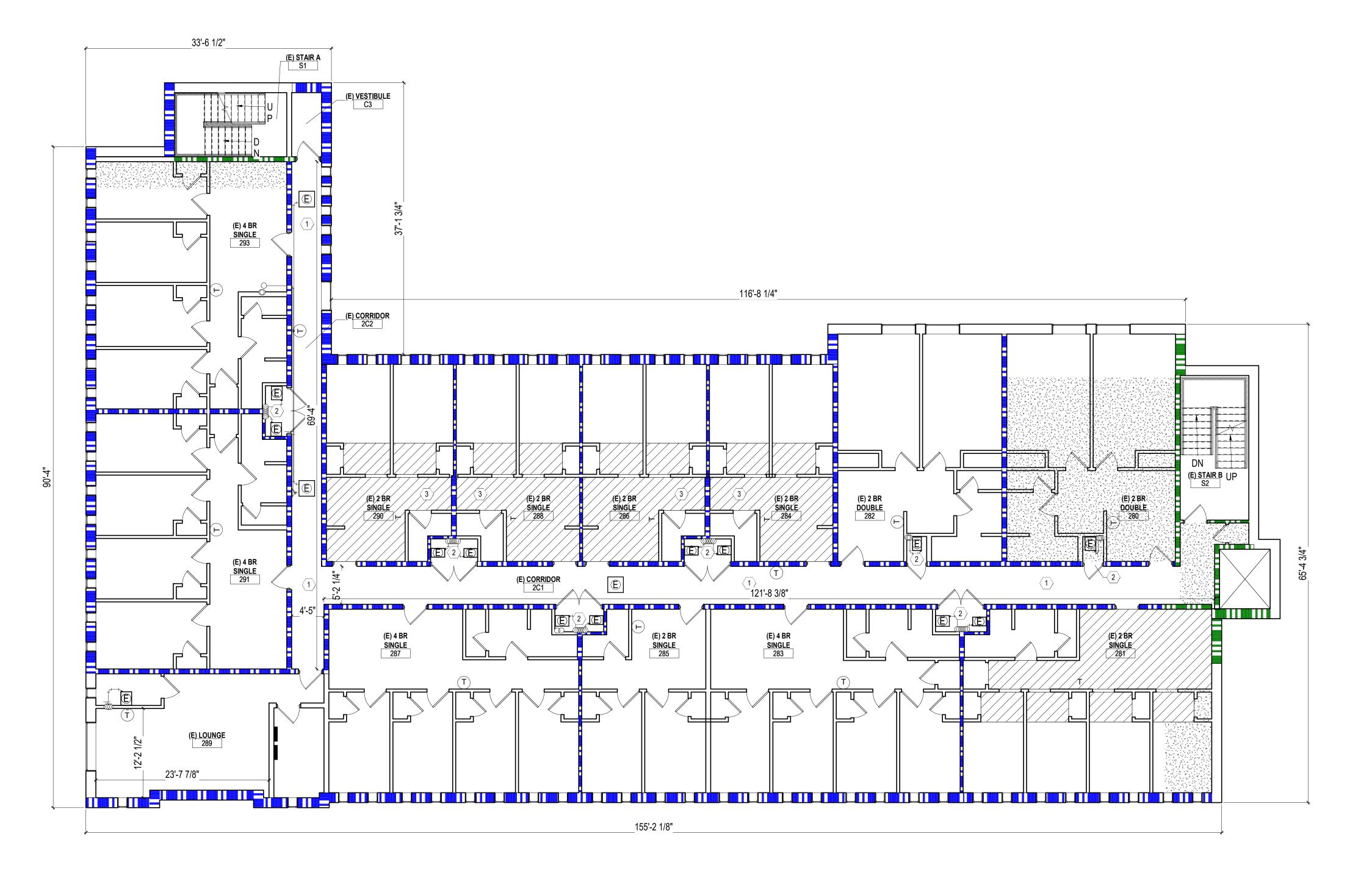
SMOKE PARTITION

1 HOUR FIRE RATED WALL

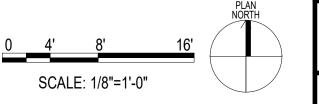
2 HOUR FIRE RATED WALL

2 HOUR RATED FLOOR-CEILING

FIRE RATING LEGEND









1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALI 3 - HVAC AND ROOF REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

|   | REVISIONS |             |  |
|---|-----------|-------------|--|
| # | DATE      | DESCRIPTION |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |

commission number 2240290

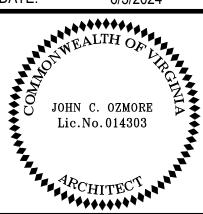
SCALE: 1/8" = 1'-0"

DESIGNED: JCO

DRAWN: MAL

CHECKED: DFB

DATE: 6/3/2024



TYP. 2ND, 3RD,
AND 4TH FLOOR
PLAN DEMOLITION

SHEET NUMBER AD102

**SHEET #** 4 **OF** 51

**DEMOLITION KEYNOTE LEGEND** DEMO (E) MEMBRANE ROOF SYSTEM DOWN TO (E) CONCRETE DECKING COMPLETE. PATCH AND REPAIR (E) CONCRETE DECKING WHERE DAMAGED, PREPARE SURFACE FOR NEW ROOF SYSTEM REMOVE (E) CONCRETE EQUIPMENT PAD COMPLETE REMOVE (E) SUSPENDED ACOUSTICAL TILE CEILINGS IN CORRIDORS AND STORE FOR REINSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED DEMO (E) DOOR AND HARDWARE, COMPLETE. PREPARE FRAME FOR NEW DOOR AND HARDWARE PREPARE (E) PIPE VENT FOR NEW ROOF FLASHING DEMO (E) PIPING ENCLOSURE, COMPLETE DEMO (E) ROOF DRAIN, PREPARE PIPING AND ROOF DECK FOR NEW DRAIN DEMO (E) ROOF SCUPPER, COMPLETE, PREPARE PARAPET FOR NEW SCUPPER DEMO (E) COPING CAP, COMPLETE, PREPARE PARAPET FOR NEW COPING CAP (E) STONE COPING CAP TO REMAIN AS AT PRESENT, REMOVE ALL CAULK AT ALL JOINTS AND PREPARE FOR RESEALING REMOVE (E) DOWNSPOUT, STORE FOR REUSE, TYP. OF 2

FIRE RATING LEGEND SMOKE PARTITION 1 HOUR FIRE RATED WALL 2 HOUR FIRE RATED WALL 2 HOUR RATED FLOOR-CEILING

> **ROOF LEGEND** TOTAL THICKNESS OF /--- +X" **ROOF INSULATION** VENT THROUGH ROOF DIRECTION OF ROOF SLOPE ROOF CRICKET SLOPE (1/4" PER FOOT UNO.) ROOF DRAIN **ROOF WALK PAD**



**ENGINEERS** 

**ARCHITECTS** 

**PLANNERS** 

100% WORKING DRAWINGS

GLADDING RESIDENCE HALI 3 - HVAC AND ROOF REPLACEMENT

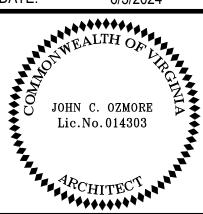
PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | REVISIONS         |             |  |
|---|-------------------|-------------|--|
| # | DATE              | DESCRIPTION |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
|   |                   |             |  |
| - |                   |             |  |
|   | COMMISSION NUMBER |             |  |

2240290

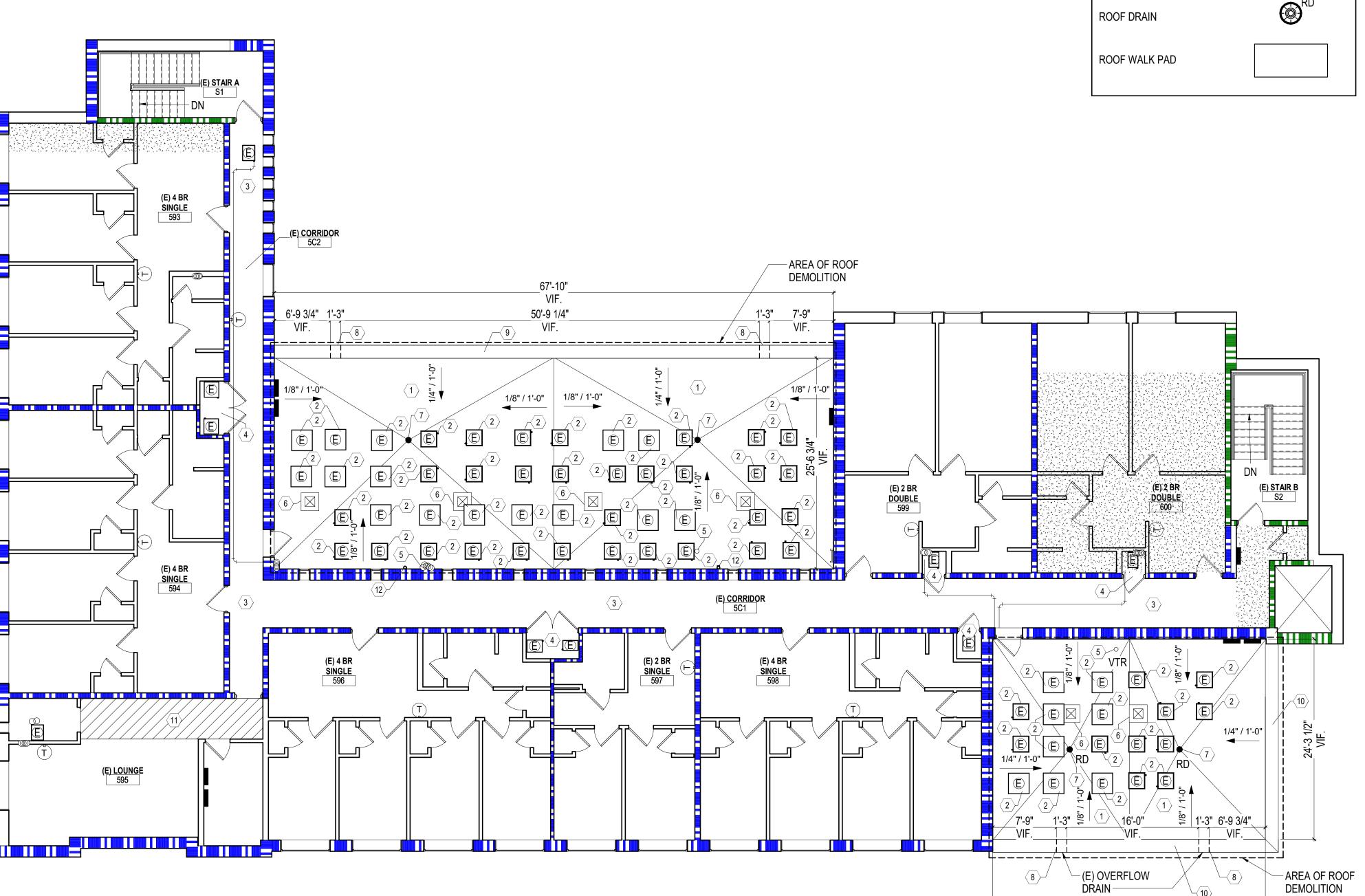
As indicated DESIGNED: DRAWN: DFB CHECKED: 6/3/2024



SHEET TITLE **5TH FLOOR AND** PARTIAL ROOF PLAN -**DEMOLITION** 

SHEET NUMBER

**SHEET #** 5 **OF** 51





33'-0 3/4"\_ VIF.

C. THE INTERNATIONAL BUILDING CODE (IBC); 2021 EDITION AS AMENDED BY THE VUSBC.
D. ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS

2. DESIGN LOADS: A. BUILDING RISK CATEGORY

HANDRAILS AND GUARDRAILS.

3. THE CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO FABRICATION OF MEMBERS AND COMMENCING WORK.

..50PLF

200LBS

4. FOR SHOP DRAWING & PRODUCT SUBMITTALS, CONTRACTOR SHALL SUBMIT ONE (1) ELECTRONIC (PDF) SET OF SHOP DRAWINGS & PRODUCT SUBMITTALS. REPRODUCTIONS OR CONTRACT DOCUMENTS ARE NOT TO BE SUBMITTED AS SHOP DRAWINGS.

5. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES, EQUIPMENT, ADJACENT GROUNDS AND PLANTS DURING ALL PHASES OF CONTRUCTION. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT NO ADDITIONAL COSTS TO THE OWNER, ANY ITEMS DAMAGED DURING CONSTRUCTION.

#### **DEMOLITION:**

- 6. IN GENERAL SELECTIVE STRUCTURAL DEMOLITION IS TO BE PERFORMED WITH PHYSICAL CUTTING ACTION (I.E. SAWING AND GRINDING INSTEAD OF HAMMERING AND CHOPPING). DO NOT USE JACKHAMMERS ON STRUCTURALLY SUPPORTED MEMBERS.
- 7. CONTRACTOR SHALL VERIFY THAT EXISTING CONSTRUCTION CORRESPONDS TO THAT SHOWN ON THE DRAWINGS. DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

#### STRUCTURAL STEEL

- 8. ALL STRUCTURAL STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF A.I.S.C. "MANUAL OF STEEL CONSTRUCTION". ALL STRUCTURAL STEEL PIPES SHALL BE ASTM A53. ALL STUCTURAL STEEL PLATE SHALL BE ASTM A36. ALL STAINLESS STEEL SHALL BE GRADE 316.
- 9. ALL STRUCTURAL STEEL SHOP WORK TO BE WELDED WITH E70XXX ELECTRODES. UNLESS NOTED OTHERWISE, FIELD WORK CONNECTIONS TO BE BOLTED WITH 3/4" HIGH STRENGTH A325X BOLTS OR WELDED WITH E70XXX ELECTRODES. PRE-DRILL HOLES IN STEEL MEMBERS AS REQUIRED FOR FASTENING, BLOCKING, ETC.

#### MISCELLANEOUS NOTES

10.INSTALLATION OF POST INSTALLED ANCHORS INCLUDING BUT NOT LIMITED TO ADHESIVE ANCHORS, EXPANSION ANCHORS, AND LOW VELOCITY FASTENERS SHALL FOLLOW ALL MANUFACTURER REQUIREMENTS LISTED IN THE ASSOCIATED CODE EVALUATION REPORTS INCLUDING INSTALLATION INSPECTION REQUIREMENTS.

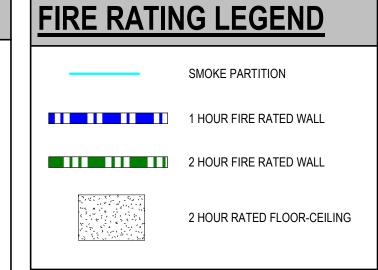
# NEW WORK KEYNOTE LEGEND KEYNOTE DESCRIPTION (E) LADDER TO REMAIN. CUT BOTTOM OF LADDER TO 4" ABOVE FINISHED ROOF SYSTEM, GRIND SMOOTH, PRIME AND PAINT (E) ELECTRICAL PANEL TO REMAIN AS AT PRESENT PROVIDE NEW 20-MIN. FIRE RATED DOOR AND HARDWARE, SEE SPECS. MECHANICAL ROOFTOP UNITS MECHANICALLY FASTENED TO METAIL SUPPORT RAIL SYSTEM, REFER TO DETAILS, AND MECHANCIAL DRAWINGS FOR ADDITIONAL INFORMATION, TYP. MECHANICAL ROOFTOP UNIT PIPING, REFER TO MECHANCIAL DRAWIGNS FOR ADDITIONAL INFORMATION AND COORDINATION, TYP. MECHANICAL ROOFTOP UNITS, WALL MOUNTED, REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION, TYP. RE-INSTALL (E) DOWNSPOUT, MODIFY LENGTH TO ACCOMMODATE ROOF HEIGHT.

PROVIDE PVC ROOF WALKPAD AT DISCHARGE. DIRECT DISCHARGE FLOW

TOWARDS ROOF DRAINS

| ROOF LEGEND                                                           |              |
|-----------------------------------------------------------------------|--------------|
| TOTAL THICKNESS OF ROOF INSULATION                                    | +X"          |
| VENT THROUGH ROOF                                                     | <b>o</b> VTR |
| DIRECTION OF ROOF SLOPE<br>ROOF CRICKET SLOPE<br>(1/4" PER FOOT UNO.) | <b>→</b>     |
| ROOF DRAIN                                                            | RD           |
| ROOF WALK PAD                                                         |              |

2 A-401



ENGINEERS ARCHITECTS PLANNERS

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

> GLADDING RESIDENCE HALL 3 - HVAC AND ROOF

> > PC# 236-B4236-004

REPLACEMENT

722 W CARY ST, RICHMOND, VA

# DATE DESCRIPTION

commission number 2240290

SCALE: As indicated
DESIGNED: JCO
DRAWN: MAL
CHECKED: DFB
DATE: 6/3/2024

JOHN C. OZMORE Lic.No.014303

SHEET TITLE

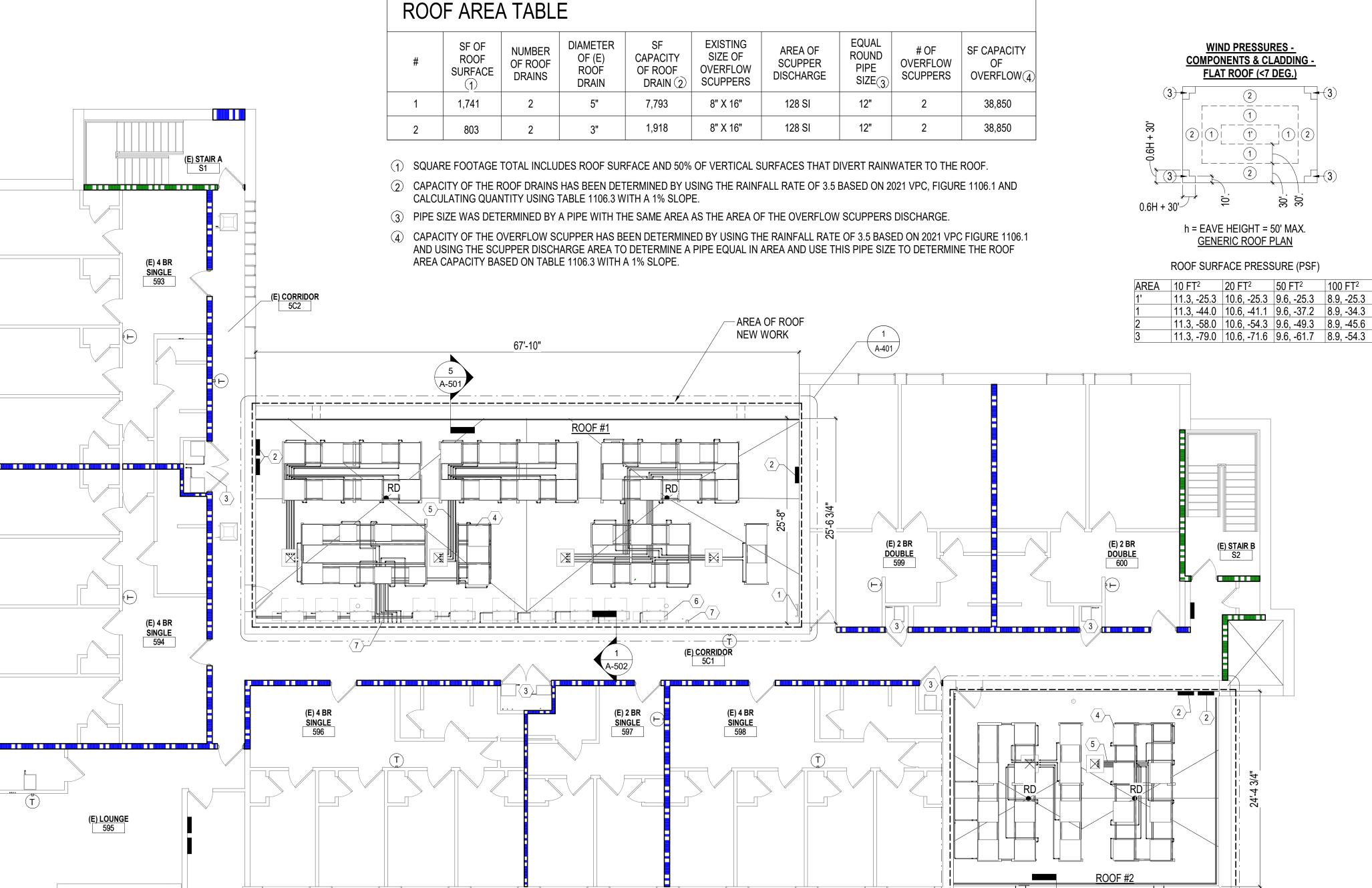
5TH FLOOR AND
ROOF PLAN NEW WORK

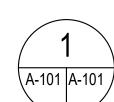
- AREA OF ROOF NEW WORK

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

SHEET NUMBER

**SHEET #** 6 **OF** 51





5TH FLOOR AND ROOF PLAN - NEW WORK

1/8" = 1'-0"

3/3/2024 4:42:2

3/2024 4:42:25 M

RCP LEGEND 2'X2' SUSPENDED ACOUSTICAL TILE CEILING, SEE DETAIL 3/A-104. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS. SUSPENDED GYPSUM WALLBOARD CEILING, SEE DETAIL 2/A-104. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS. PAINT GWB CEILINGS AND BULKHEADS. RECESSED OR SUSPENDED LIGHT FIXTURES, SEE 0 0 ELEC DRAWINGS ⊗H **⊗**H EXIT LIGHTS SMOKE DETECTOR, SEE ELEC DWGS (VERIFY HEAD IS CENTERED ON TILE) **EMERGENCY LIGHT** OCCUPANCY SENSOR (VERIFY HEAD IS CENTERED ON TILE) HVAC AIR TERMINALS, SEE MECH DWGS SPRINKLER HEAD (VERIFY HEAD IS CENTERED ON TILE) EMERGENCY LIGHT (VERIFY HEAD IS CENTERED ON TILE) DE-MOUNTABLE PARTITIONS ===== FIRE ALARM SPEAKER STROBE

RCP KEYNOTE LEGEND

KEYNOTE

DESCRIPTION

REMOVE, STORE, AND REINSTALL ACOUSTIC CEILING TILE AND GRID AS NECESSARY TO FACILITATE MECHANICAL AND ELECTRICAL INSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED

# RCP GENERAL NOTES

1. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS.

ENGINEERS
ARCHITECTS
PLANNERS
Design like YOU mean it!

449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185 (757) 253-0673 1620 HILLSBOROUGH STREET

SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALI 3 - HVAC AND ROOF REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

REVISIONS
# DATE DESCRIPTION

commission number 2240290

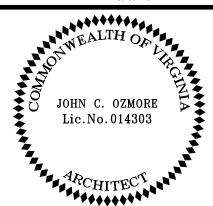
SCALE: 1/8" = 1'-0"

DESIGNED: JCO

DRAWN: MAL

CHECKED: DFB

DATE: 6/3/2024



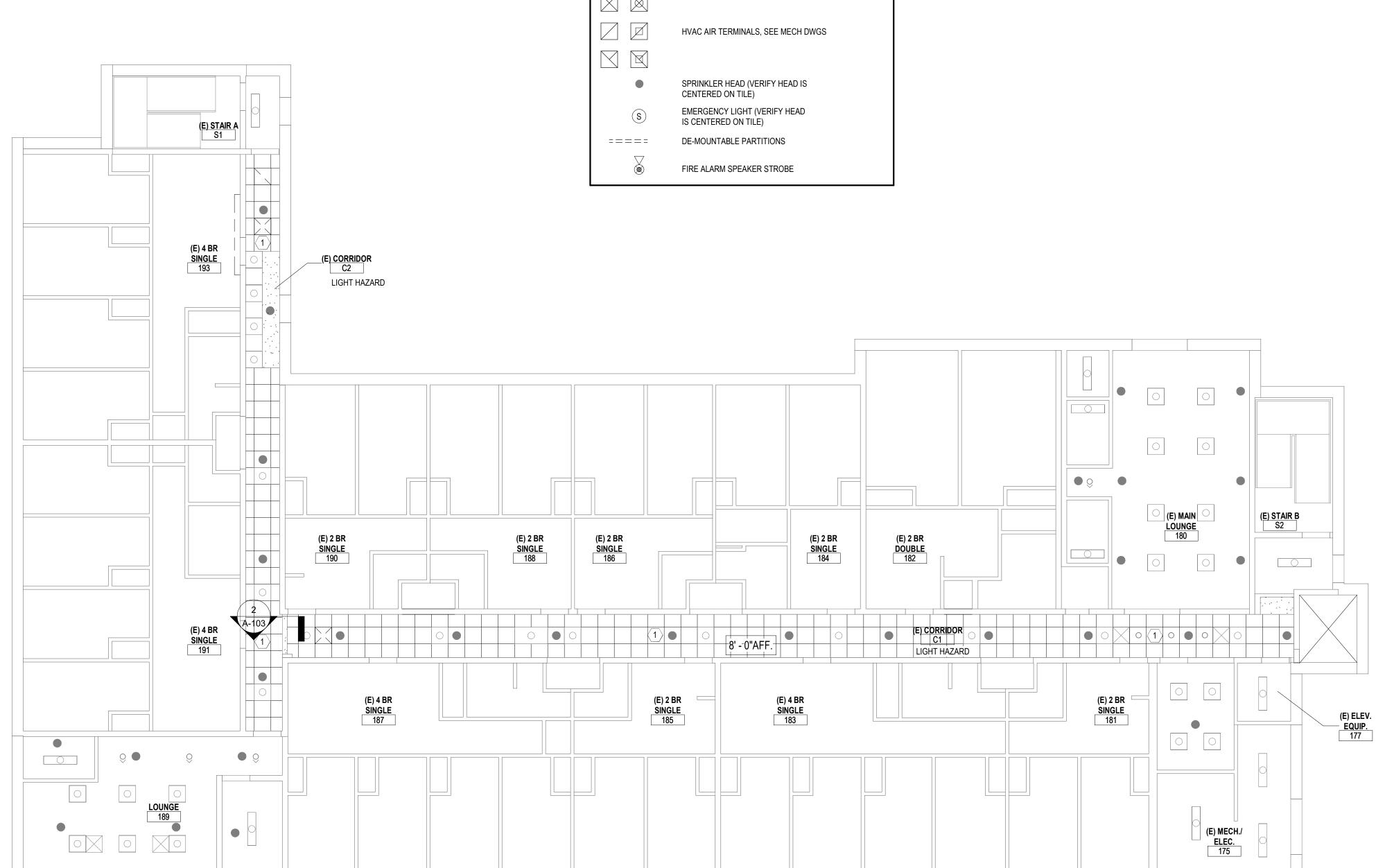
SHEET TITLE

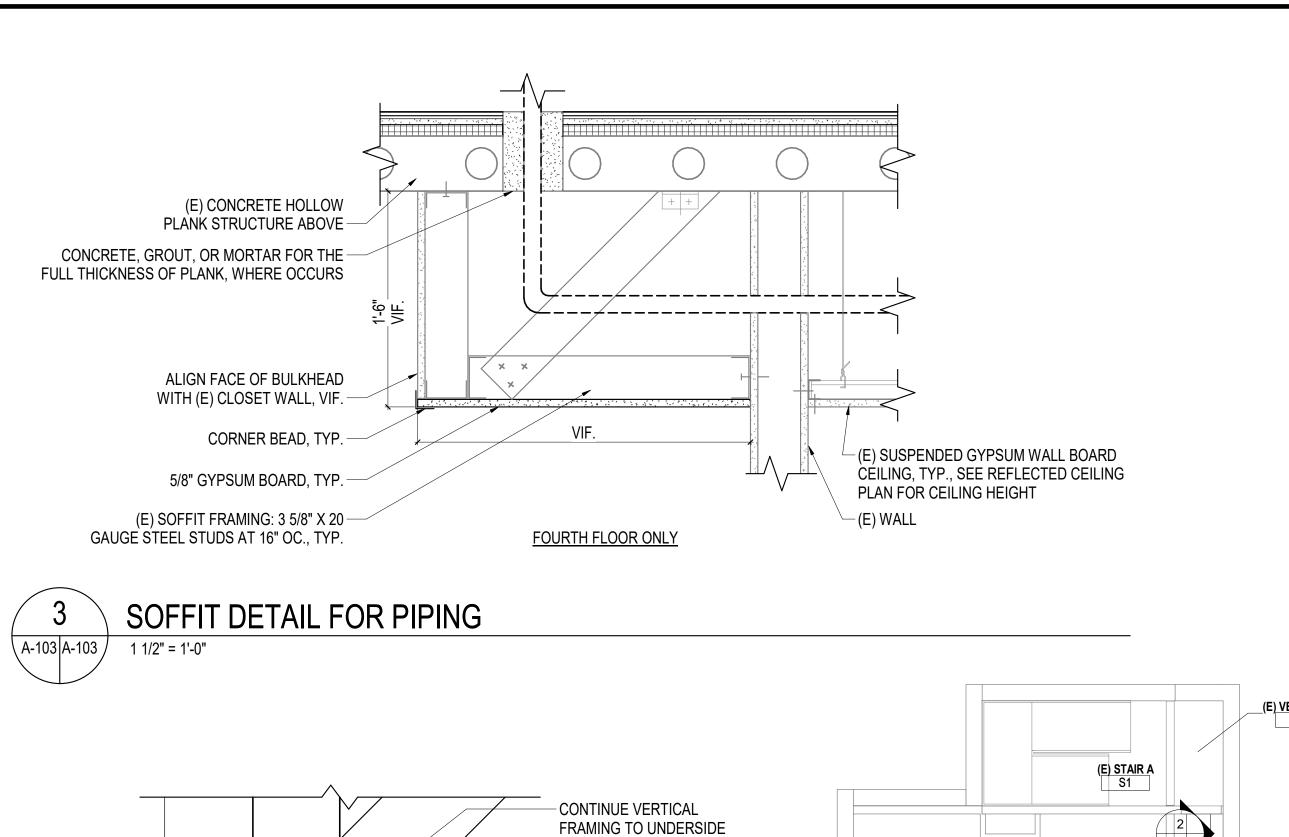
1ST FLOOR RCP

SHEET NUMBER
A-102

**SHEET #** 7 **OF** 51

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





OF STRUCTURE ABOVE

BULKHEAD FRAMING

16" OC., TYP.

-5/8" GYPSUM WALLBOARD, TYP.

CEILING

BULKHEAD DETAIL AT UNEQUAL HEIGHT CEILINGS

- 3 5/8" METAL STUD BRACING AT 48" OC., TYP. ATTACH TO

BULKHEAD FRAMING: 3 5/8" 20 GAUGE STEEL STUDS AT

SUSPENDED LAY-IN TILE

2'X2' SUSPENDED ACOUSTICAL TILE CEILING, SEE DETAIL 3/A-104. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS. SUSPENDED GYPSUM WALLBOARD CEILING, SEE DETAIL 2/A-104. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS. PAINT GWB CEILINGS AND BULKHEADS.  $\longmapsto$ O 0 RECESSED OR SUSPENDED LIGHT FIXTURES, SEE 00 **ELEC DRAWINGS** ⊗H **&**H EXIT LIGHTS SMOKE DETECTOR, SEE ELEC DWGS (VERIFY HEAD IS CENTERED ON TILE) EMERGENCY LIGHT OCCUPANCY SENSOR (VERIFY HEAD IS CENTERED ON TILE) HVAC AIR TERMINALS, SEE MECH DWGS SPRINKLER HEAD (VERIFY HEAD IS CENTERED ON TILE) EMERGENCY LIGHT (VERIFY HEAD IS CENTERED ON TILE) DE-MOUNTABLE PARTITIONS FIRE ALARM SPEAKER STROBE

RCP LEGEND

RCP KEYNOTE LEGEND KEYNOTE DESCRIPTION REMOVE, STORE, AND REINSTALL ACOUSTIC CEILING TILE AND GRID AS NECESSARY TO FACILITATE MECHANICAL AND ELECTRICAL INSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED PROVIDE NEW GYPSUM WALL BOARD CEILING WHERE SHOWN HATCHED, 4TH FLOOR ONLY, ONCE ALL PIPING AND MECHANICAL EQUIPMENT IS

# RCP GENERAL NOTES

1. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS.

**ENGINEERS ARCHITECTS PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALI 3 - HVAC AND REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

> COMMISSION NUMBER 2240290

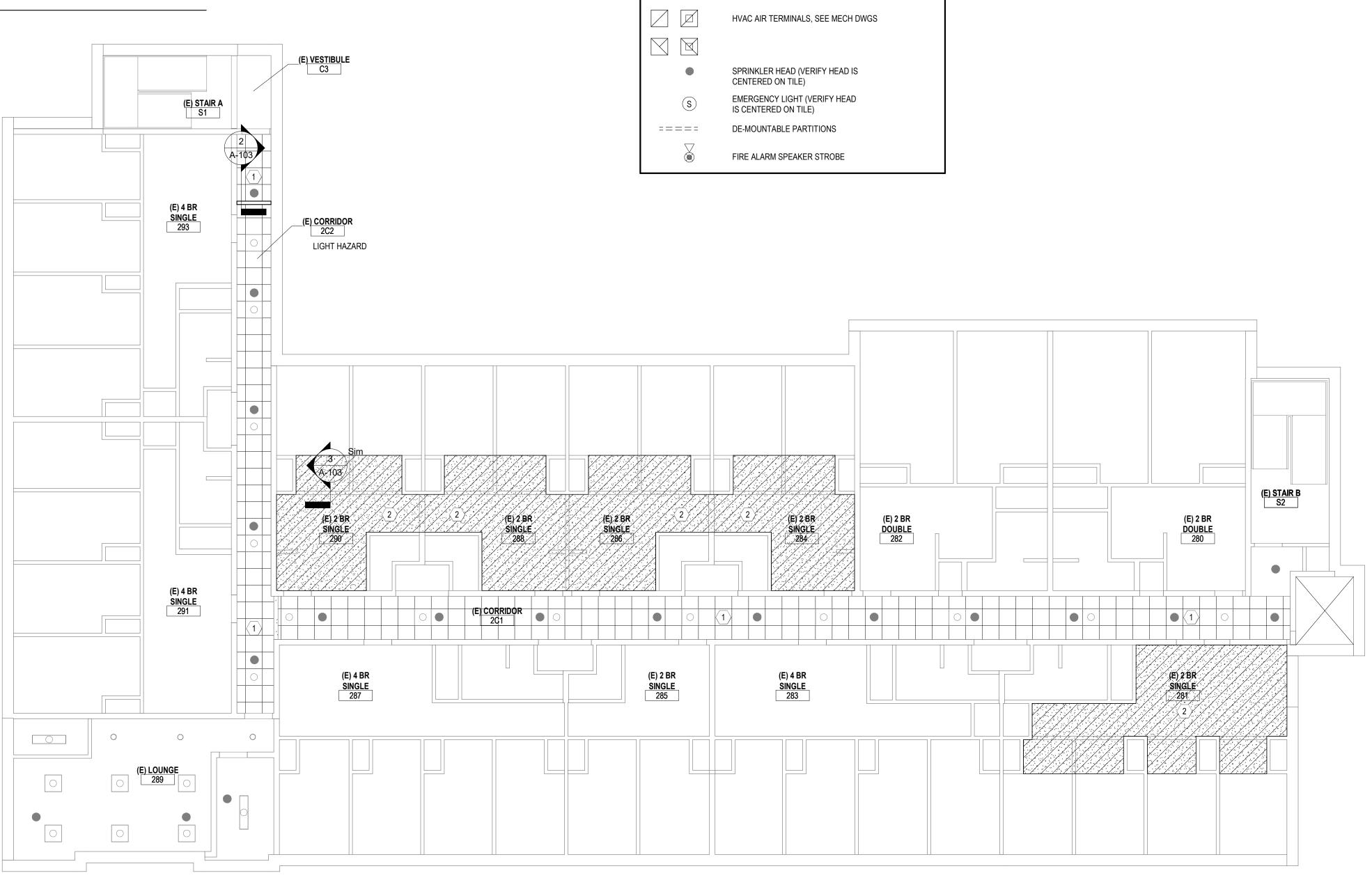
As indicated DESIGNED: JCO DRAWN: CHECKED: DFB DATE: 6/3/2024

JOHN C. OZMORE Lic.No.014303

TYP. 2ND - 4TH FLOOR RCP

> SHEET NUMBER A-103

**SHEET #** 8 **OF** 51



A-103 A-103

TYP. 2ND THROUGH 4TH FLOOR RCP

1/8" = 1'-0"

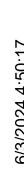
SCALE: 3" = 1'-0"

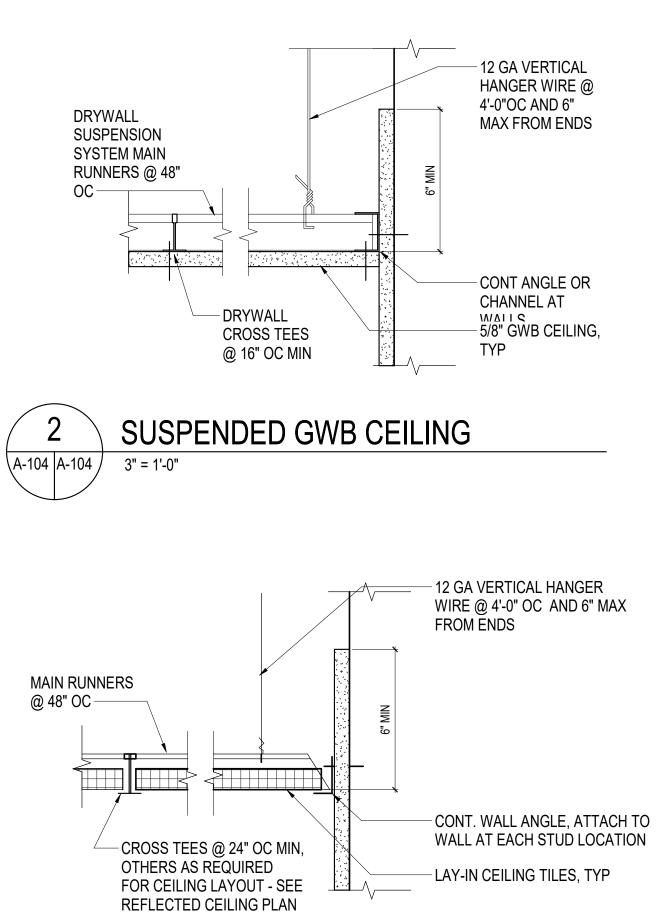
SCALE: 1 1/2" = 1'-0"

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

A-102 A-103

A-104 A-104 / 3" = 1'-0"



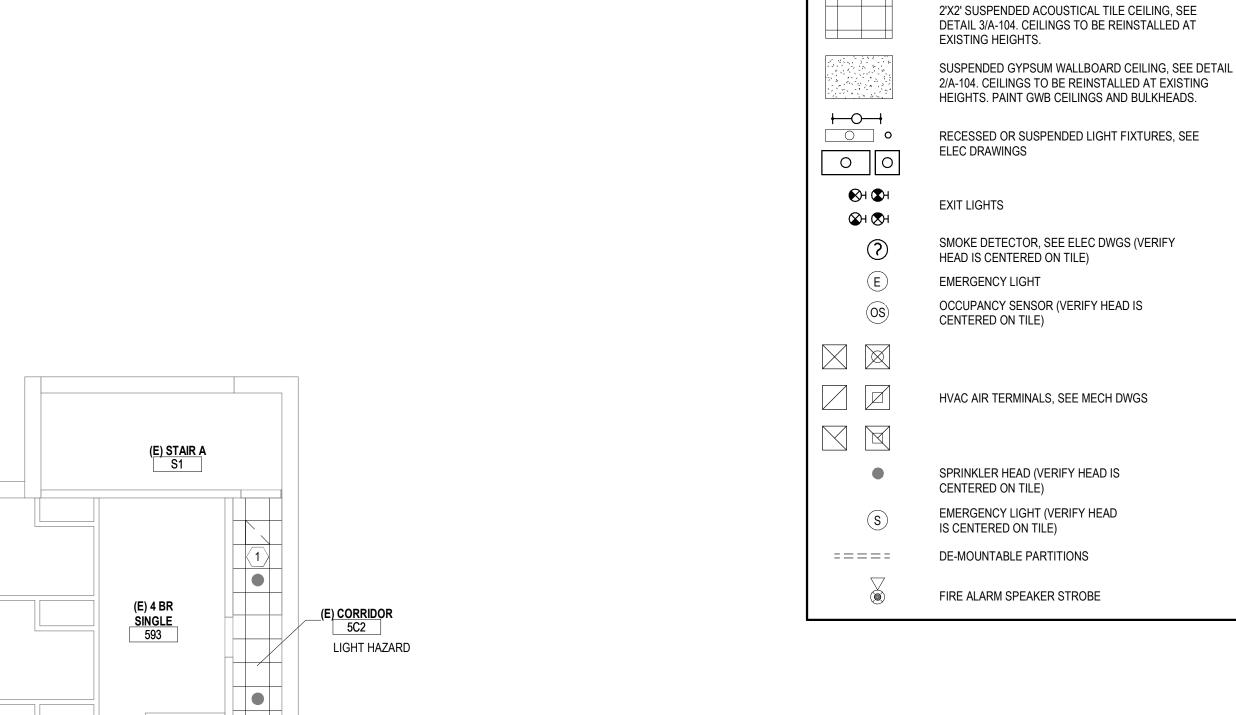


SUSPENDED LAY-IN TILE DETAIL

5TH FLOOR RCP

1/8" = 1'-0"

(A-104 A-104 )





KEYNOTE

DESCRIPTION

REMOVE, STORE, AND REINSTALL ACOUSTIC CEILING TILE AND GRID AS NECESSARY TO FACILITATE MECHANICAL AND ELECTRICAL INSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS UNTIL CEILING IS REINSTALLED. TURN SPRINKLER HEADS BACK DOWN ONCE CEILINGS ARE REINSTALLED

DEMOLISH (E) GYPSUM CEILING COMPLETE TO FACILITATE MECHANICAL AND ELECTRICAL INSTALLATION. WHEN CEILINGS ARE REMOVED, TURN UP SPRINKLER HEADS. TURN SPRINKLER HEADS BACK DOWN ONCE NEW CEILINGS ARE INSTALLED. SEE DETAIL 2 ON SHEET A-104.

# RCP GENERAL NOTES

1. CEILINGS TO BE REINSTALLED AT EXISTING HEIGHTS.

(757) 253-0673

1620 HILLSBOROUGH STREET
SUITE 100
RALEIGH, NC 27605
(984) 288-1300

www.djginc.com

**ENGINEERS** 

**ARCHITECTS** 

**PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185

VIRGINIA COMMONWEALTH UNIVERSITY

100% WORKING DRAWINGS

GLADDING RESIDENCE HALI 3 - HVAC AND ROOF REPLACEMENT

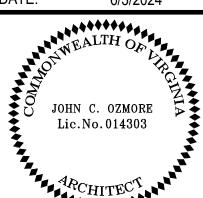
PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS
# DATE DESCRIPTION

COMMISSION NUMBER 2240290

SCALE: As indicated
DESIGNED: JCO
DRAWN: MAL
CHECKED: DFB
DATE: 6/3/2024

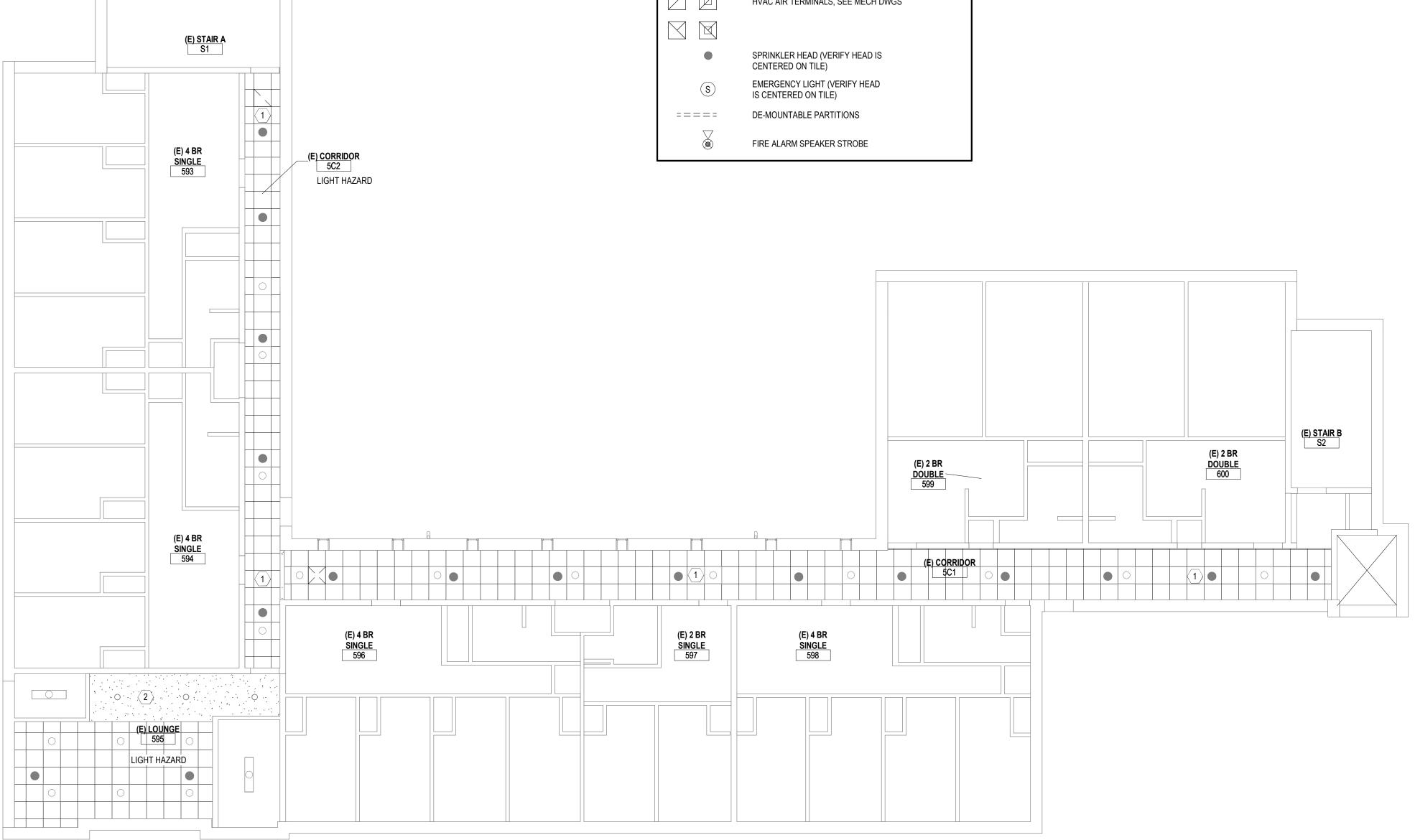


SHEET TITLE

5TH FLOOR RCP

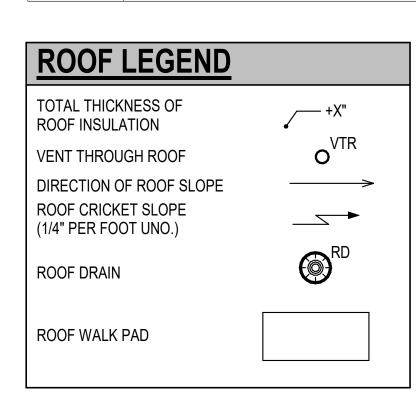
sheet number A-104

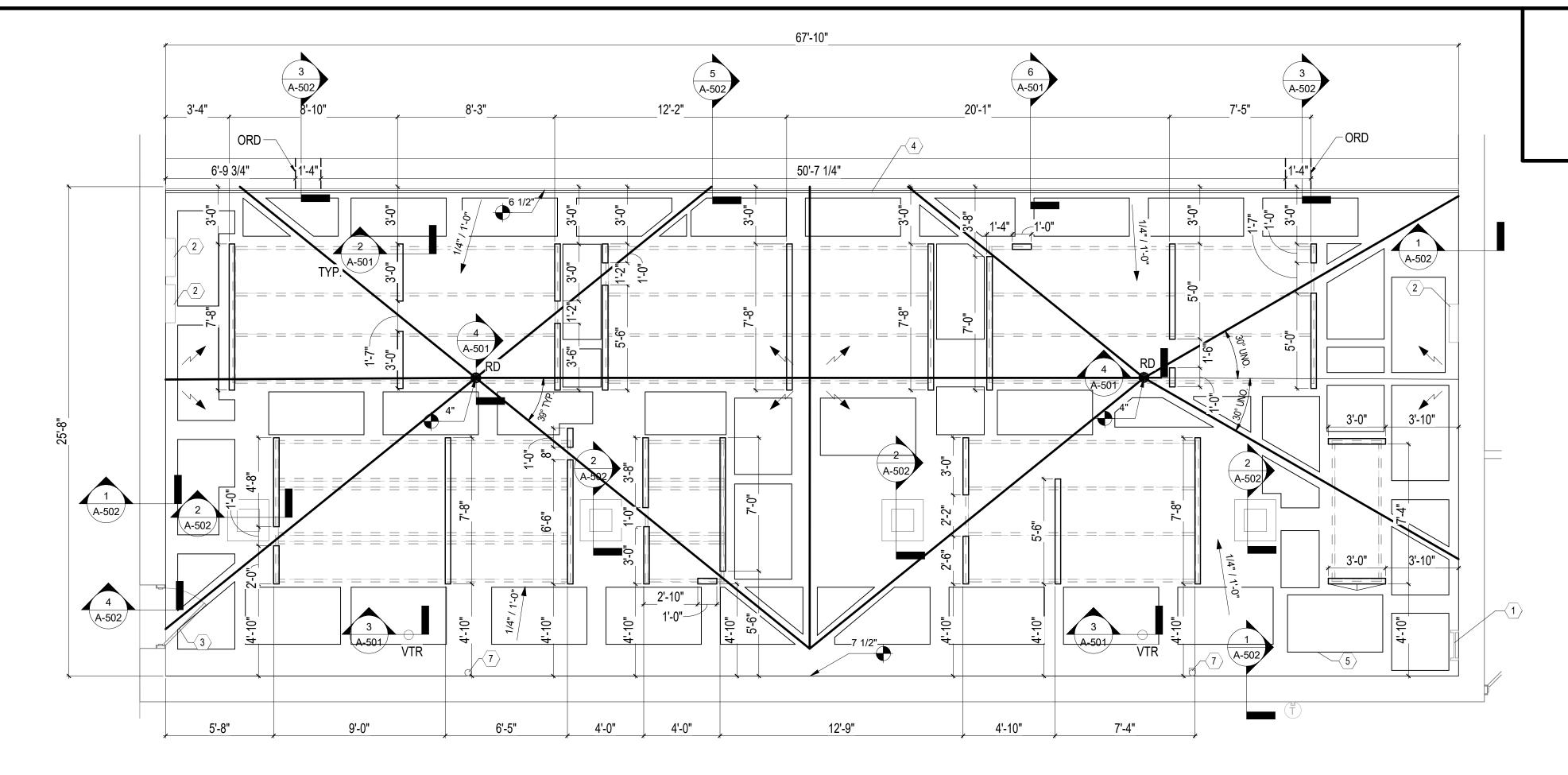
**SHEET #** 9 **OF** 51

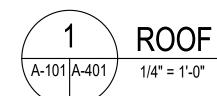


RCP LEGEND

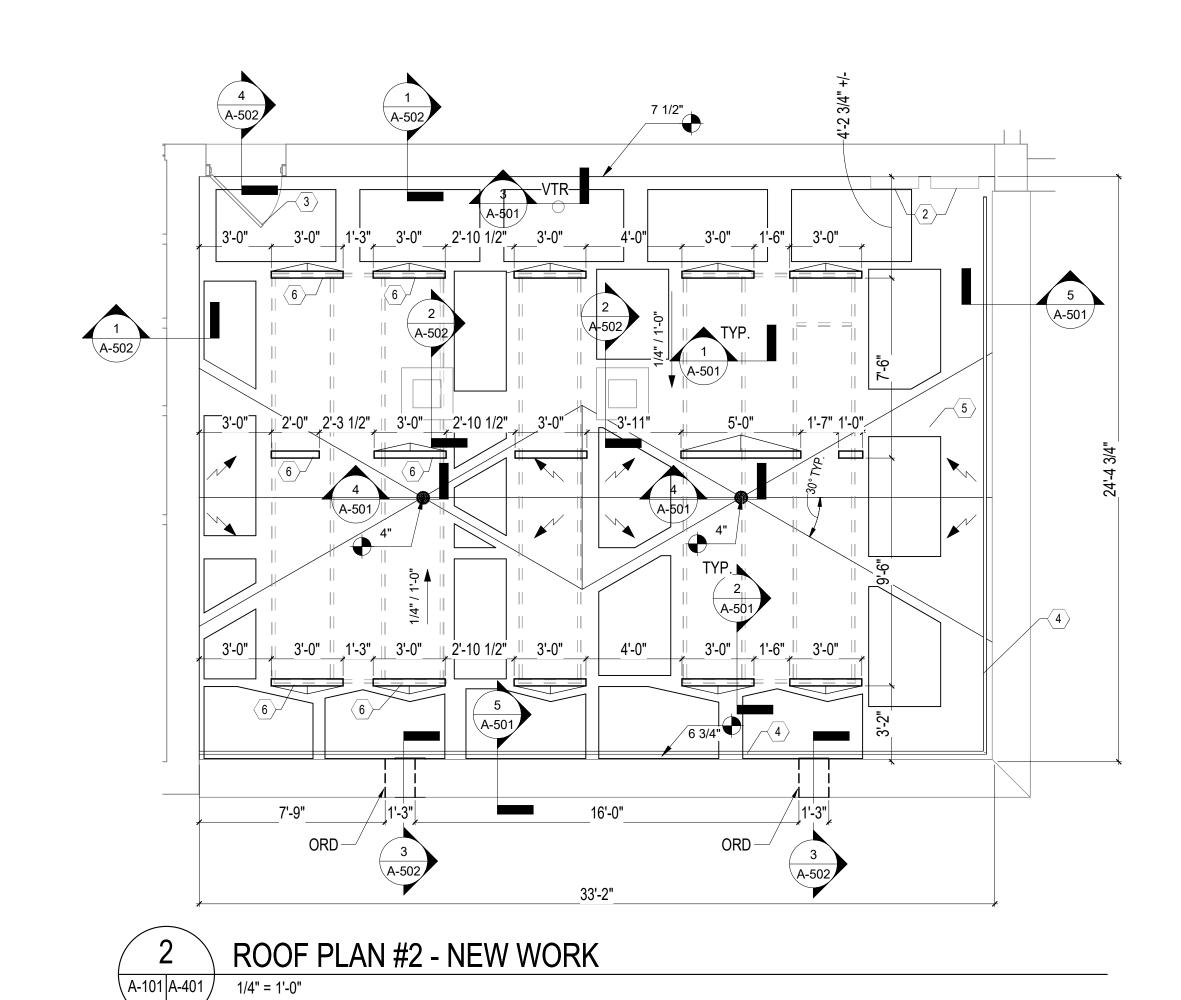
| NEW WORK KEYNOTE LEGEND |                                                                                                                                                                |  |  |  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| KEYNOTE                 | DESCRIPTION                                                                                                                                                    |  |  |  |
| 1                       | (E) LADDER TO REMAIN. CUT BOTTOM OF LADDER TO 4" ABOVE FINISHED ROOF SYSTEM, GRIND SMOOTH, PRIME AND PAINT                                                     |  |  |  |
| 2                       | (E) ELECTRICAL PANEL TO REMAIN AS AT PRESENT                                                                                                                   |  |  |  |
| 3                       | PROVIDE NEW 20-MIN. FIRE RATED DOOR AND HARDWARE, SEE SPECS.                                                                                                   |  |  |  |
| 4                       | PROVIDE 1 1/2" DIA. HOT DIPPED GALVANIZED STEEL GUARDRAIL                                                                                                      |  |  |  |
| 5                       | PROVIDE PVC ROOF WALK PADS. TYPICAL SIZE 3'x5'. ADJUST SIZE TO ACCOMODATE CLEAR WALKING AREA AROUND ROOFTOP EQUIPMENT AND CLEAR FLOW OF WATER AT VALLEYS, TYP. |  |  |  |
| 6                       | ROOF CURB HEIGHT AT 4'-0" MINIMUM TO CLEAR PIPING ENCLOSURE                                                                                                    |  |  |  |
| 7                       | RE-INSTALL (E) DOWNSPOUT, MODIFY LENGTH TO ACCOMMODATE ROOF HEIGHT. PROVIDE PVC ROOF WALKPAD AT DISCHARGE. DIRECT DISCHARGE FLOW TOWARDS ROOF DRAINS           |  |  |  |

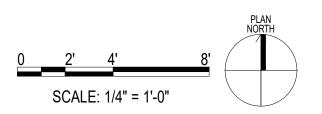






ROOF PLAN #1 - NEW WORK







Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

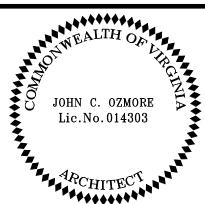
PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |
|-----------|------|-------------|--|
| #         | DATE | DESCRIPTION |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |

COMMISSION NUMBER 2240290

As indicated DESIGNED: JCO DRAWN: MAL CHECKED: DFB DATE: 6/3/2024



**ENLARGED ROOF PLANS -NEW WORK** 

SHEET NUMBER A-401

**SHEET #** 10 **OF** 51

BRICK ON MTL. STUDS, BEYOND - 1 1/2" DIA. GALVANIZED STEEL PIPE RAILING EQUALLY SPACED, 5'-0" OC. PROVIDE 1/2" PICKETS AT 4" OC. METAL FLASHING AND COUNTERFLASHING AT WALL BEYOND, EXTEND INTO BRICK 3"-ALUMINUM COPING OVER TOP OF CMU AND SEAL EACH SIDE - PARAPET AND SEAL AT ANCHORS - METAL COPING - (E) 8" BOND BEAM WITH (2) #5 BARS CONTINUOUS GROUTED SOLID - CONTINUOUS CLEAT, FASTEN TO BLOCKING CONT CLEAT, FASTEN TO BLOCKING -+/- 1'-3 3/4" DRIP EDGE -- 1/2" GALVANIZED STEEL PIPE -GALVANIZED STEEL PLATE ELEVATION - (4) 1/2" DIA. TAP CON. BOLTS -- 7" X 8" X 1/2" GALVANIZED STEEL PLATE -SEALANT -1/4" HIGH-DENSITY POLY-ISO COVERBOARD MECHANICALLY FASTENED TO EXISTING PARAPET WD BLOCKING, ANCHOR TO CMU PVC FLASHING, EXTEND OVER TOP OF PARAPET - PVC ROOFING, TURN UP ONTO PARAPET, SEE DETAIL 1 ON THIS SHEET (E) VERTICAL REBAR 5TH FLOOR F.F.E. BEYOND -NOTE: CONTRACTOR SHALL VERIFY AS-**BUILT CONDITION OF PARAPET IS GROUTED** 

(E) PRE-CAST CONCRETE HOLLOW

PLANK ROOF DECK

SOLID WITH VERTICAL REBAR PLACEMENT.

COPING CAP AT (E) PARAPET

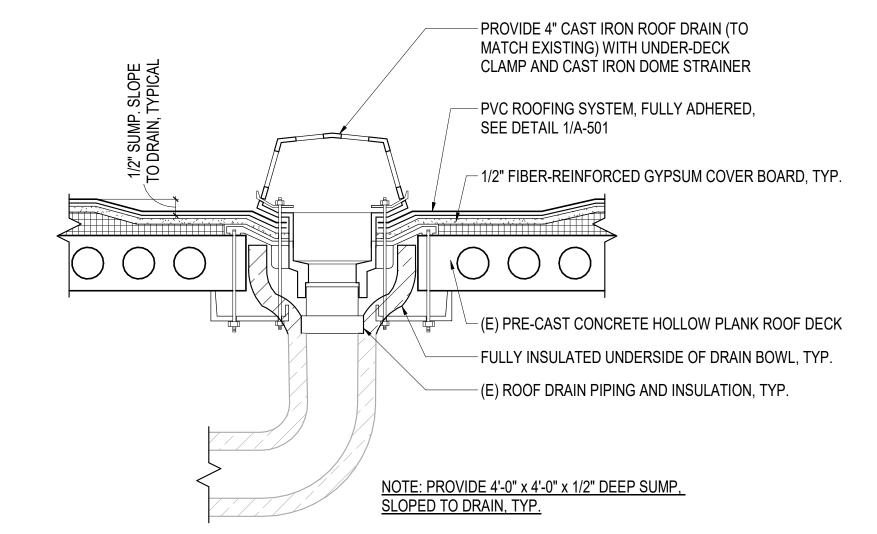
NOTIFY ARCHITECT IF CONDITION IS

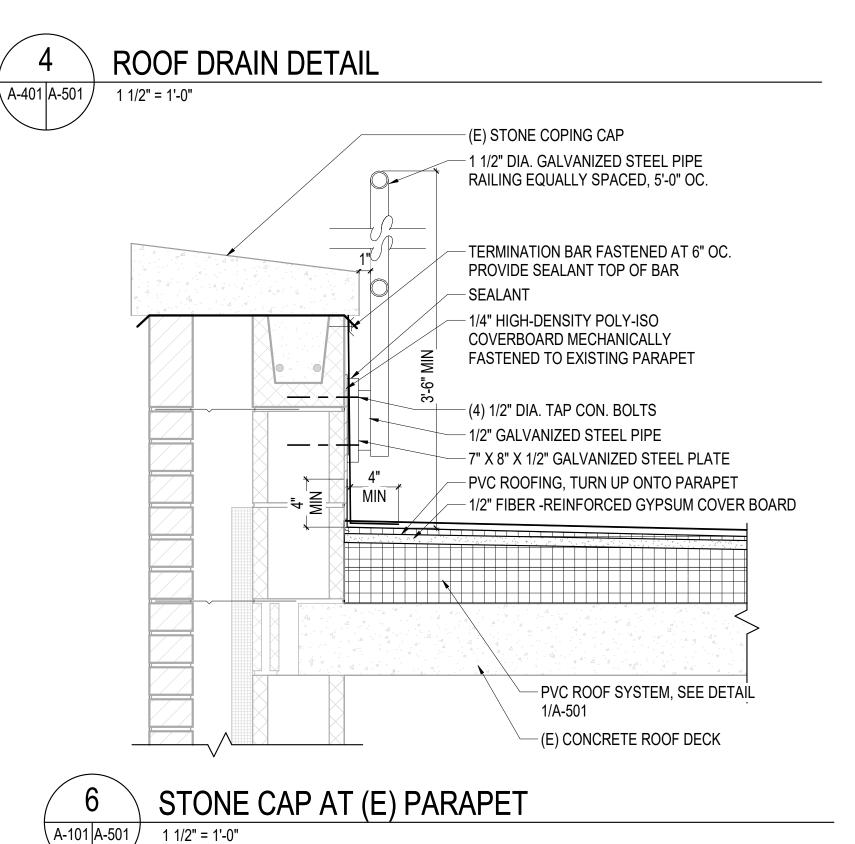
**DIFFERENT THAN SHOWN.** 

A-101 A-501 / 1 1/2" = 1'-0"

SEALANT AT PERIMETER - STAINLESS STEEL DRAWBAND - PVC VENT THROUGH ROOF BOOT, HEAT WELD TO TOP OF PVC ROOF MEMBRANE - PVC ROOFING SYSTEM, SEE DETAIL 1/A-501 MIN SECURE (E) PIPING TO NEW PIPING (WHERE PRESSURE TREATED WOOD BLOCKING, MATCH INSULATION THICKNESS, FASTEN TO (E) DECK OCCURS) USING NO HUB COUPLING WITH (2) STAINLESS STEEL DRAWBANDS. MODIFY HEIGHT - (E) CONCRETE ROOF DECK OF (E) PIPING AS REQUIRED FOR COUPLING TO - FILL VOID WITH ROCK WOOL, FULL DEPTH OCCUR WITHIN THE THICKNESS OF INSULATION (E) VENT-THROUGH-ROOF, SIZE VARIES

3 VTR FLASHING DETAIL
1 1/2" = 1'-0"







Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HAL 3 - HVAC AND ROOF REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

# DATE DESCRIPTION

COMMISSION NUMBER 2240290

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

 DESIGNED:
 JCO

 DRAWN:
 MAL

 CHECKED:
 DFB

 DATE:
 6/3/2024

JOHN C. OZMORE Lic.No.014303

SHEET TITLE
ROOF AND
FLASHING
DETAILS

SHEET NUMBER
A-501

**SHEET #** 11 **OF** 51

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

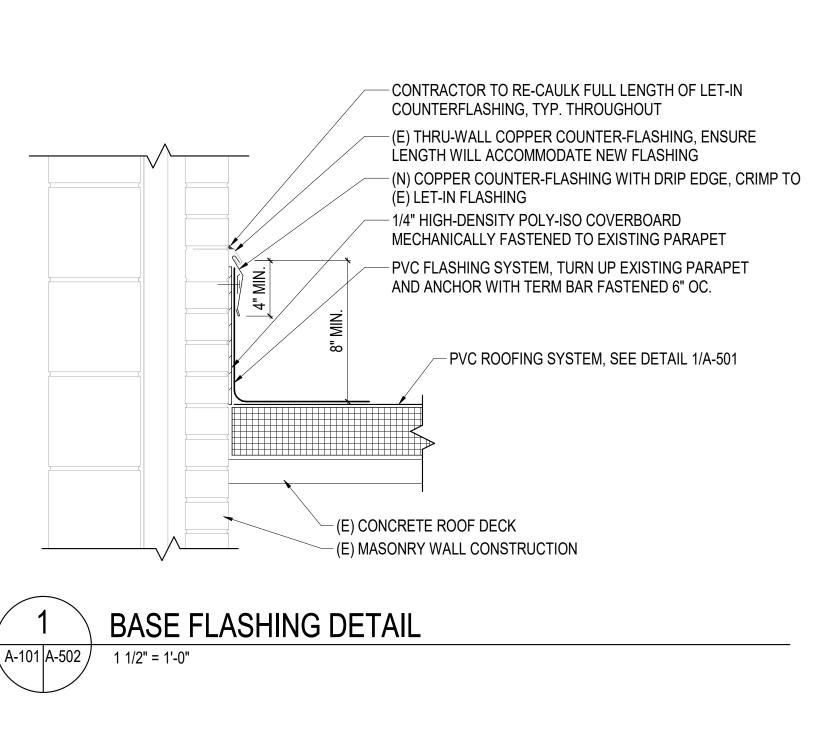
2

6/3/2024 4:42:42

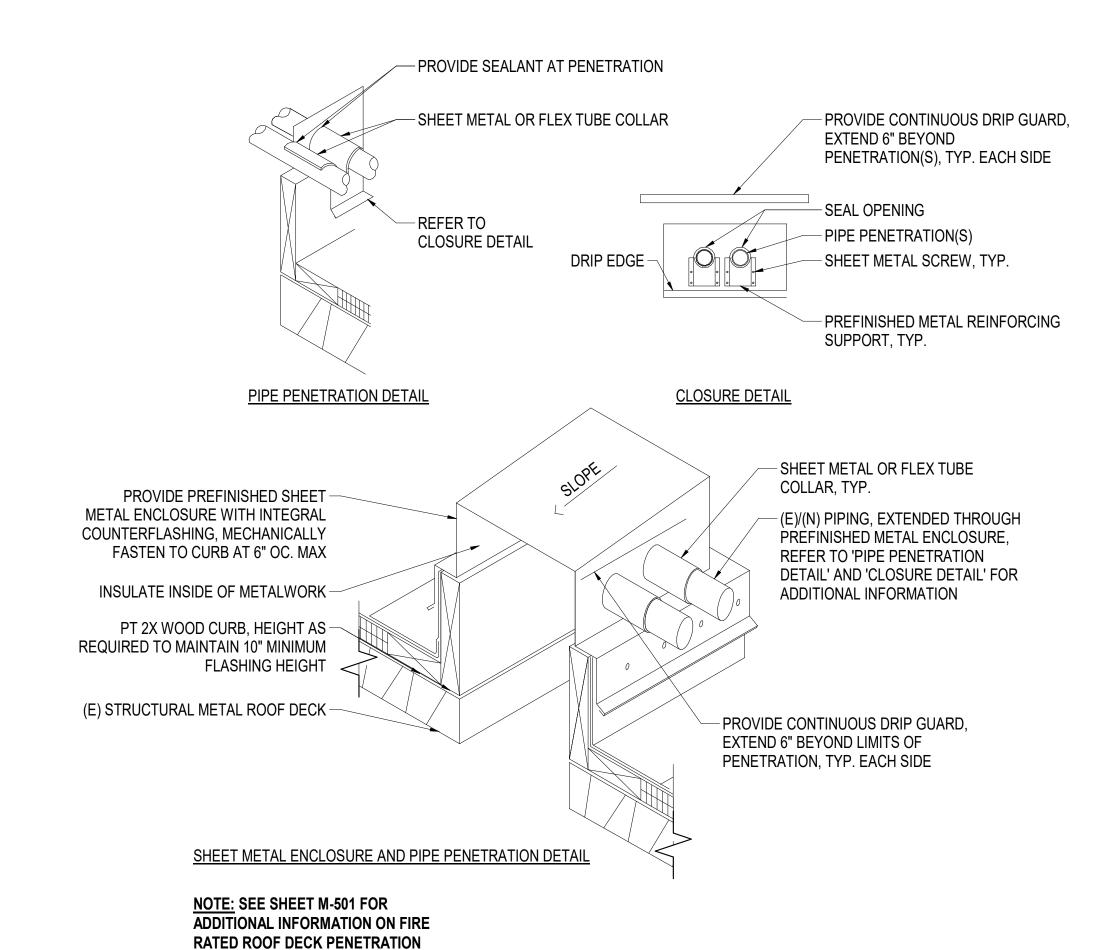
DOOR SILL DETAIL

1 1/2" = 1'-0"

A-101 A-502 /

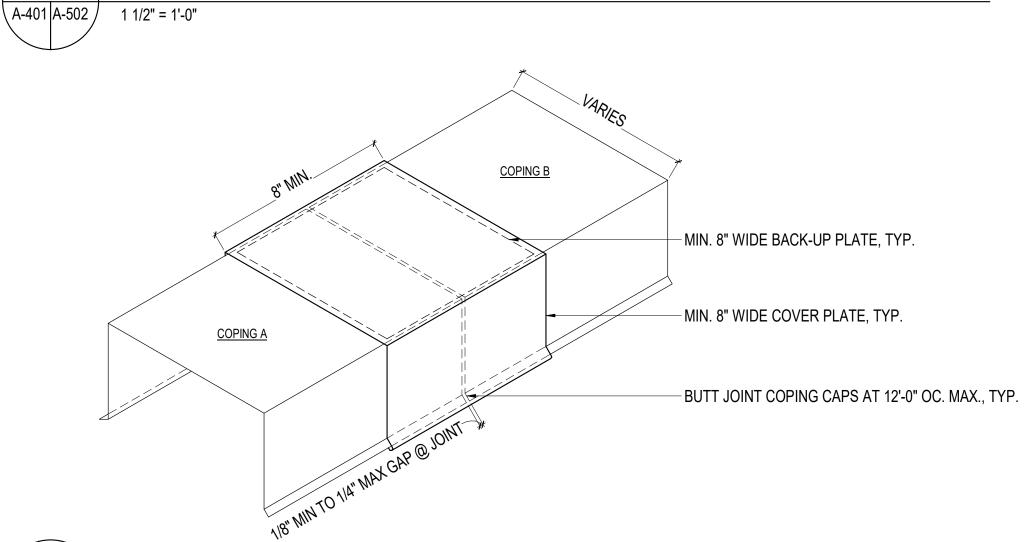


- SEALANT

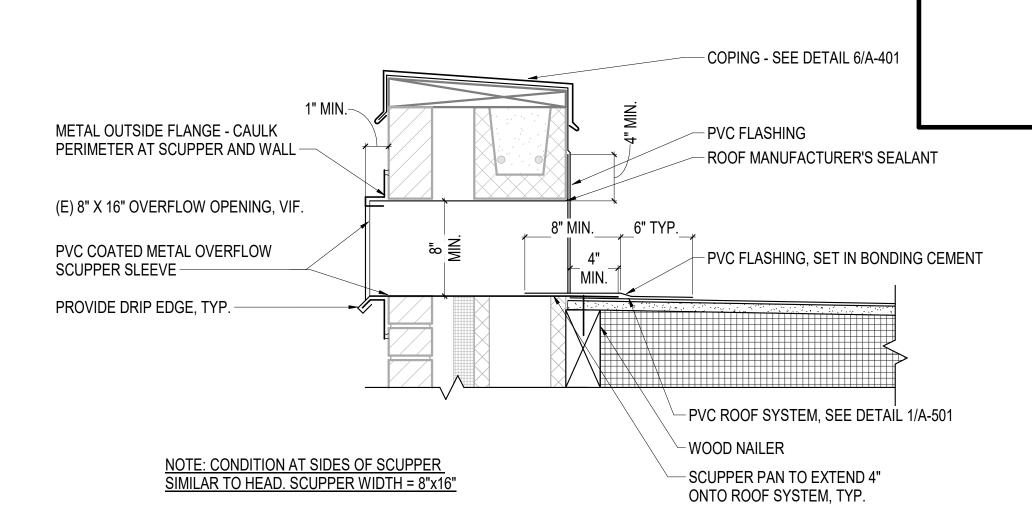


NOTE: A PREMANUFACTURERED PIPE HOUSING FROM ALTA PRODUCTS AT WWW.ALTAPRODUCTSLLC.COM OR RPH ADVANCED BUILDING SOLUTIONS AT WWW.RPHPRODUCTS.COM OR APPROVED EQUAL ARE ACCEPTABLE ALTERNATIVES TO THE CUSTOM BUILDING HOUSING DETAILED.

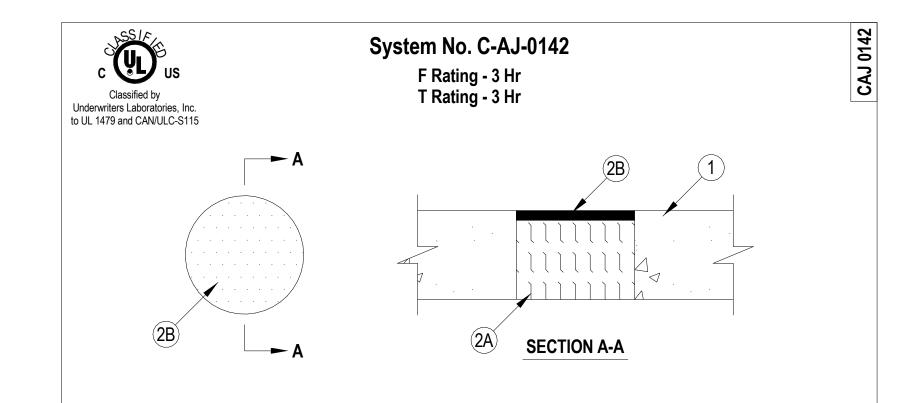
DETAIL AT PIPING ENCLOSURE



DETAIL AT COPING CAP A-101 A-502 1 1/2" = 1'-0"



**DETAIL AT SCUPPER** A-101 A-502 1 1/2" = 1'-0"



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete floor or min 5 in. (127 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks\*. Floor may also be constructed of min 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units\*. Max diam of opening is 6

See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers. 2. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a

permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall to accommodate the required thickness of fill material. In precast concrete unit floors, packing material to be installed flush with bottom surface of floor. B. Fill, Void or Cavity Material\* — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with

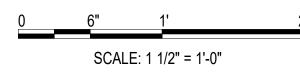
both surfaces of wall assembly.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-S SIL GG or CFS-S SIL SL (floors only) \*Bearing the UL Classification Mark



Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. July 19, 2013

ROOF PENETRATION INFILL DETAIL A-101 A-502 NTS





Design like YOU mean it! 449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185 (757) 253-0673 1620 HILLSBOROUGH STREET

SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING **DRAWINGS** 

GLADDING RESIDENCE HALI 3 - HVAC AND ROOF REPLACEMENT

PC# 236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

> COMMISSION NUMBER 2240290

SCALE: As indicated DESIGNED: JCO DRAWN: MAL CHECKED: DFB DATE:

6/3/2024 JOHN C. OZMORE Lic.No.014303 ARCHITECT

> **ROOF AND FLASHING DETAILS**

SHEET NUMBER A-502

**SHEET #** 12 **OF** 51

MECH ABBREVIATIONS

DEMOLISH

**DESCRIPTION** 

ABBREV

**MECH ABBREVIATI** 

**ABBREV** 

RAD

RLA

RM

RO

SA

SCHED

SENS

SP

SPD

SPEC

TEMP

TYP

VFD

VTR

W.C.

W/O

WG

WMS

| CH ABBREVIATIONS                 | MECHANICAL SYMBOLS AND ABBREVIATIONS |                                                  |              |                                                            |
|----------------------------------|--------------------------------------|--------------------------------------------------|--------------|------------------------------------------------------------|
| DESCRIPTION                      | ABBR.                                | SYMBOL                                           |              | REMARKS                                                    |
| POUNDS PER SQUARE FOOT           |                                      | D1                                               |              | LIODIZONTALI V MOLINTED CLIDDI V AID                       |
| POUNDS PER SQUARE INCH           |                                      |                                                  | D1<br>CFM    | HORIZONTALLY MOUNTED SUPPLY AIR DIFFUSER/REGISTER/GRILLE   |
| POINT, PRESSURE TRANSMITTER      |                                      |                                                  |              |                                                            |
| RETURN AIR                       |                                      |                                                  | R1<br>CFM    | HORIZONTALLY MOUNTED RETURN/EXHAUST<br>AIR REGISTER/GRILLE |
| RADIUS                           |                                      | DOWN                                             | UP           | AUCTACONTENT                                               |
| SUPPLY AIR                       |                                      |                                                  |              | RECTANGULAR DUCTWORK                                       |
| ROOF DRAIN                       |                                      | <b>\$</b>                                        | <b>\$</b> \  | SUPPLY/OUTSIDE AIR ELBOW                                   |
| RUNNING LOAD AMPS                |                                      | <del>-                                    </del> | <u></u>      | ROUND DUCTWORK<br>SUPPLY/OUTSIDE AIR ELBOW                 |
| ROOM                             |                                      | <b>₹</b> □♡                                      | <b>₹</b> □⊗  |                                                            |
| REVERSE OSMOSIS                  |                                      | <del>/    </del>                                 | <u> </u>     | RECTANGULAR DUCTWORK                                       |
| REVOLUTIONS PER MINUTE           |                                      |                                                  |              | RETURN AIR ELBOW                                           |
| SUPPLY AIR                       |                                      | <del>-                                    </del> | <del></del>  | ROUND DUCTWORK                                             |
| SCHEDULE                         |                                      |                                                  | <b>₹</b> □Ø  | RETURN AIR ELBOW                                           |
| SEASONAL ENERGY EFFICIENCY RATIO |                                      |                                                  |              | RECTANGULAR DUCTWORK                                       |
| SENSIBLE HEAT                    |                                      |                                                  | <b>FID</b>   | EXHAUST/RELIEF AIR ELBOW                                   |
| SUPPLY FAN                       |                                      |                                                  |              | DOLIND DUOTINODIC                                          |
| STATIC PRESSURE<br>SPEED         |                                      | <b>\$</b>                                        | <b>₹</b> □∅  | ROUND DUCTWORK EXHAUST/RELIEF AIR ELBOW                    |
| SPECIFICATION                    |                                      | ,<br>                                            | ,            |                                                            |
| TEMPERATURE                      | FD                                   | <del> </del>                                     | <b></b>      | FIRE DAMPER                                                |
| TEMPERATURE                      | 10                                   |                                                  |              | I INC DAIVIF LIX                                           |
| THICKNESS                        | VD                                   |                                                  |              | VOLUME DAMPER                                              |
| TOTAL STATIC PRESSURE            |                                      | <u> </u>                                         |              | VOLONIE DAMI EIX                                           |
| TYPICAL                          |                                      |                                                  |              |                                                            |
| UNDERCUT                         | SA                                   | <del>\</del> *:                                  | SA 🗲         | SUPPLY AIR (* DUCT SIZE)                                   |
| VOLT(AGE)                        |                                      | <del> </del>                                     | <del> </del> | ,                                                          |
| VARIABLE FREQUENCY DRIVE         | RA                                   | J*                                               | RA 孝         | RETURN AIR (* DUCT SIZE)                                   |
| VENT THROUGH ROOF                | IVA                                  | 7                                                | <u> </u>     | RETORIVAIR ( BOOT SIZE)                                    |
| WIDTH, WIDE, WATT                |                                      | <del>                                     </del> |              | EVALUATION AID (# DUOT CITE)                               |
| WATER COLUMN                     | EA                                   | <u> </u>                                         | EA 🗲         | EXHAUST AIR (* DUCT SIZE)                                  |
| WITH                             |                                      |                                                  |              |                                                            |
| WITHOUT                          | OA                                   | <del>*</del> (                                   | DA 🗲         | OUTSIDE AIR (* DUCT SIZE)                                  |
| WET BULB                         |                                      | ,                                                | 7            |                                                            |
| WATER GAUGE                      | REL A                                | <i>\_</i> * R                                    | ELA 🕏        | RELIEF AIR (* DUCT SIZE)                                   |
| WIRE MESH SCREEN                 |                                      | <del> </del>                                     | <del> </del> | ,                                                          |
| WATERPROOF, WEATHERPROOF         |                                      |                                                  |              | RECTANGULAR DUCT SIZE,                                     |
| WATER RESISTANT, WEATHER         |                                      | 24                                               | x12          | FIRST NUMBER INDICATES SIZE FOR SIDE SHOWN                 |
| RESISTANT                        |                                      |                                                  | 411          | DOLINID DUOT OLTE                                          |
| DEGREES                          |                                      | 2                                                | 4"           | ROUND DUCT SIZE                                            |
| DIAMETER                         |                                      |                                                  | *            | DETAIL OR SECTION DESIGNATION                              |
|                                  |                                      | *                                                | *            | (* DETAIL OR SECTION REFERENCE)                            |
|                                  |                                      |                                                  |              | (* * SHEET NUMBER DETAIL OR SECTION DRAWN ON)              |
|                                  |                                      |                                                  | <b>1</b>     | NEW TO EVICTING REGIONATION                                |
|                                  |                                      |                                                  | Ð            | NEW TO EXISTING DESIGNATION                                |
|                                  |                                      |                                                  | *\           | REFERENCE DESIGNATION                                      |
|                                  |                                      | (                                                | *            | REFERENCE DESIGNATION (* NOTE NUMBER)                      |
|                                  |                                      | (                                                | $\Theta$     | HUMIDISTAT OR HUMIDITY SENSOR                              |
|                                  |                                      |                                                  | D            | THERMOSTAT OR TEMPERATURE SENSOR                           |
|                                  |                                      |                                                  |              |                                                            |

|       | MECHANIC                         | AL SYMBOL                              | LS AND ABBREVIATIONS                                       |
|-------|----------------------------------|----------------------------------------|------------------------------------------------------------|
| ABBR. | 2-LINE SYMBOL TOP VIEW SIDE VIEW | 1-LINE SYMBOL                          | REMARKS                                                    |
| ISV   |                                  |                                        | ISOLATION VALVE (BALL/BUTTERFLY/GATE - SEE SPECIFICATIONS) |
| BLV   |                                  |                                        | BALL VALVE                                                 |
| BTV   |                                  | <del></del> 0                          | BUTTERFLY VALVE                                            |
| GTV   |                                  | N                                      | GATE VALVE                                                 |
| GLV   |                                  |                                        | GLOBE VALVE                                                |
| PLV   |                                  | <del></del>                            | PLUG VALVE                                                 |
| CHV   |                                  |                                        | CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)            |
|       |                                  | VB                                     | VACUUM BREAKER (ARROW INDICATES DIRECTION OF FLOW)         |
|       |                                  | -[                                     | HOSE END CONNECTION                                        |
|       |                                  | <del></del> Ø                          | MANUAL BALANCING VALVE                                     |
| PRV   |                                  |                                        | PRESSURE REDUCING VALVE                                    |
|       |                                  |                                        | FLOW MEASURING DEVICE                                      |
|       |                                  | <del></del>                            | (FLANGED/SCREWED) PIPE UNION OR FLANGE                     |
|       |                                  |                                        | STRAINER                                                   |
|       |                                  | <u>~~~~</u>                            | RELIEF & PRESSURE RELIEF VALVE                             |
|       |                                  |                                        | THERMOMETER                                                |
|       |                                  | <u> </u>                               | PRESSURE GAGE WITH GAGE COCK                               |
|       |                                  |                                        | ARROW INDICATES DOWNWARD PITCH OF PIPE                     |
|       |                                  |                                        | ARROW INDICATES DIRECTION OF FLOW                          |
|       |                                  |                                        | PIPE ECCENTRIC REDUCER                                     |
|       |                                  | <del></del>                            | PIPE CONCENTRIC REDUCER                                    |
|       |                                  | <del></del>                            | CAPPED END                                                 |
|       |                                  |                                        | PIPE ELBOW UP                                              |
|       |                                  | <del></del>                            | PIPE ELBOW DOWN                                            |
|       |                                  | <del></del>                            | PIPE TEE UP                                                |
|       |                                  |                                        | PIPE TEE DOWN                                              |
|       |                                  | <del></del>                            | FLEXIBLE CONNECTOR                                         |
|       |                                  | EJ                                     | EXPANSION JOINT                                            |
|       |                                  | <del></del>                            | AUTOMATIC FLOW CONTROL VALVE                               |
|       |                                  | <u></u> ———  □                         | THERMOSTATIC EXPANSION VALVE                               |
|       |                                  | <b>_</b>                               | WATER HAMMER ARRESTOR                                      |
|       |                                  | <u></u>                                | AUTOMATIC AIR VENT                                         |
|       |                                  | <u></u>                                | MANUAL AIR VENT                                            |
|       |                                  | Т                                      | TEST PORT                                                  |
|       |                                  | —————————————————————————————————————— | AUTOMATIC TWO-WAY VALVE                                    |
|       |                                  | <del></del>                            | AUTOMATIC THREE-WAY VALVE                                  |
|       |                                  | <u> </u>                               | SOLENOID VALVE                                             |
|       |                                  | <del></del>                            | STEAM TRAP                                                 |
|       |                                  |                                        | PIPE ALIGNMENT GUIDE                                       |
|       |                                  | <del></del>                            | PIPE ANCHOR                                                |
| CO    |                                  | ————   C                               | CLEAN-OUT                                                  |
| CO    |                                  | ©c                                     | FLOOR CLEAN-OUT                                            |
| OS&Y  |                                  | ——───────────────────────────────────  | OUTSIDE SCREW AND YOKE VALVE                               |
|       |                                  | F                                      | WATER FLOW DETECTOR                                        |
|       |                                  |                                        | TAMPER DETECTOR                                            |
|       |                                  | M                                      | WATER METER                                                |
|       |                                  |                                        | BALL CHECK OR DRIP VALVE                                   |
|       |                                  | •                                      | PENDANT SPRINKLER HEAD                                     |
| RD    |                                  | ◎ *RD-*                                | ROOF DRAIN - ( * SIZE ) RD- ( * TYPE )                     |
|       |                                  |                                        | 1 FIRE HOUR RATED WALL                                     |
|       |                                  |                                        | 2 FIRE HOUR RATED WALL                                     |
|       |                                  |                                        |                                                            |
|       |                                  |                                        |                                                            |

### MECHANICAL GENERAL SUMMARY

THIS PROJECT INCLUDES A DIRECT REPLACEMENT OF EXISTING RESIDENTIAL STYLE AIR HANDLERS IN A DORMITORY HALL WITH NEW. TO SUPPLEMENT THE AIR CONDITIONING IN THE CORRIDORS CEILING CASSETTE UNITS ARE BEING ADDED TO EVERY MAIN CORRIDOR ON ALL FLOORS. DUE TO LIMITED CEILING HEIGHT IN THE CORRIDORS THE EXISTING HORIZONTAL AIR HANDLERS ARE TO BE CEILING CASSETTE UNITS. OUTDOOR CONDENSING UNITS ARE TO BE RASIED OFF THE ROOF ON TO STRUCTURAL SUPPORTS.

### **WARNING NOTE:**

**EXISTING STRUCTURE IS HOLLOW CORE PLANK** CONSTRUCTION. ALL NEW PENETRATIONS SHALL BE THROUGH THE CORES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL CORE LOCATIONS PRIOR TO DRILLING OR CUTTING INTO CONCRETE PLANKS.

### **CODES AND STANDARDS**

2021 VIRGINIA CONSTRUCTION CODE

2021 VIRGINIA STATEWIDE FIRE PREVENTION CODE

2021 VIRGINIA ENERGY CONSERVATION CODE REFER TO G-002

2021 VIRGINIA MECHANICAL CODE

2021 VIRGINIA FUEL GAS CODE 2021 VIRGINIA PLUMBING CODE

2021 VIRGINIA EXISTING BUILDING CODE REFER TO G-002 NFPA 70-2020: NATIONAL ELECTRICAL CODE

NFPA 72-2019: NATIONAL FIRE ALARM AND SIGNALING CODE NFPA 101-2018: LIFE SAFETY CODE

ASHRAE-90.1-2016

### MECHANICAL GENERAL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE CODES AND STANDARDS INDICATED.

2. CONTRACTOR IS ENCOURAGED TO VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH THE PROJECT AND EXISTING CONDITIONS.

3. DRAWINGS HAVE BEEN GENERATED BASED ON ORIGINAL CONSTRUCTION DOCUMENTS AND WHAT IS VISIBLE ON THE SITE

4. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT SHOW ALL TRANSITIONS, OFFSETS, OR FITTINGS. CONTRACTOR SHALL PROVIDE ALL MATERIAL TO PROVIDE FOR A COMPLETE AND FUNCTIONAL SYSTEM.

COORDINATE LOCATION OF ALL DUCTWORK, SUPPLY AND RETURN DEVICES, EXHAUST FANS, THERMOSTATS, AND OTHER WALL AND CEILING MOUNTED EQUIPMENT WITH LIGHT FIXTURES. SPRINKLER SYSTEM AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT. FOR SOME ELEMENTS, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS.

ARRANGE PIPING AND DUCTWORK ABOVE CEILING AND IN EXPOSED AREAS AS REQUIRED TO CLEAR STRUCTURE, CONDUIT, LIGHTS, SPRINKLER SYSTEM, ETC., ALLOWING SPACE FOR HANGERS, SUPPORTS, INSULATION, ETC.

'. ALL ITEMS NECESSARY FOR THE COMPLETION OF THE WORK AND THE SUCCESSFUL OPERATION OF A PRODUCT SHALL BE PROVIDED EVEN THOUGH NOT FULLY SPECIFIED OR INDICATED ON THE DRAWINGS.

8. CONTRACTOR SHALL MOUNT ALL WALL MOUNTED DEVICES AVAILABLE FOR PUBLIC ACCESS AT 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE IN ARCHITECTURAL DRAWINGS. ALL OTHER SENSORS / DEVICES SHALL BE MOUNTED AT 60" AFF UNLESS NOTED OTHERWISE IN ARCHITECTURAL DRAWINGS.

9. INSTALL ALL EQUIPMENT SO THAT CODE REQUIRED AND MANUFACTURER RECOMMENDED CLEARANCES ARE PROVIDED. UNLESS OTHERWISE DIRECTED. EQUIPMENT SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION.

10. MATERIAL SHALL BE THE BEST OF THEIR RESPECTIVE KINDS. MATERIALS SHALL BE NEW UNLESS EXPLICITLY INDICATED OTHERWISE.

11. ALL WORK IN THIS DIVISION SHALL BE CAREFULLY INTERFACED WITH THE WORK OF OTHER DIVISIONS TO ASSURE A COMPLETE, FUNCTIONING SYSTEM(S).

12. MATERIAL FURNISHED UNDER THIS DIVISION SHALL BE STANDARD CATALOGUED PRODUCTS OF RECOGNIZED MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH MATERIALS AND SHALL BE OF THE LATEST DESIGN.

13. PROVIDE MATERIAL AND LABOR TO PERFORM START-UP OF EACH RESPECTIVE ITEM OF EQUIPMENT AND SYSTEM PRIOR TO THE BEGINNING OF TEST, ADJUST, AND BALANCE PROCEDURES.

14. COMPLY STRICTLY WITH MANUFACTURER'S RECOMMENDED PROCEDURES IN STARTING OF MECHANICAL SYSTEMS.

15. WHERE APPLICABLE, FURNISH MANUFACTURER'S WRITTEN WARRANTY FOR MATERIALS AND EQUIPMENT.

16. DUCT SIZES INDICATED ARE INTERNAL CLEAR DIMENSIONS, NOT INCLUDING INSULATION OR LINER.

17. NON-FIRE RATED SEALANTS SHALL BE CLEAR OR WHITE OR OTHER COLOR

SELECTED BY THE ARCHITECT. FIREPROOFING SEALANTS SHALL BE RED. 18. TEST AND BALANCE ALL EFFECTED SYSTEMS IN ACCORDANCE WITH ASHRAE

111. ALL BALANCED AIRFLOW AND WATER FLOWS SHALL BE WITHIN +/-5% OF

19. DASHED LINES ON MD SERIES SHEETS INDICATE ITEAMS TO BE REMOVED UNDER THIS CONTRACT. DASHED LINES ON M100 THRU M400 SERIES SHEETS INDICATE CONTROL WIRING CIRCUITS. DARKER LINE WEIGHTS INDICATE NEW

| HVAC DESIGN CONDITIONS |              |              |
|------------------------|--------------|--------------|
| CONDITION              | TEMP DB (°F) | TEMP WB (°F) |
| AMBIENT HEATING        | 17           | -            |
| AMBIENT COOLING        | 95           | 76           |

WORK. LIGHTER LINE WEIGHTS INDICATE EXISTING TO REMAIN.

THE INDICATED VALUES.

| BUILDING DESIGN LOAD (MBH) |         |         |             |
|----------------------------|---------|---------|-------------|
| LOAD                       | COOLING | HEATING | VENTILATION |
| EXISTING HVAC              | 1524    | 1075    | 216         |
| REPLACED HVAC              | 1554    | 1615    | -           |
| NEW HVAC (ADDITIONAL)      | 180     | 197     | 60          |

**ENGINEERS ARCHITECTS PLANNERS** Design like YOU mean it!

449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

www.djginc.com

(984) 288-1300



100% WORKING **DRAWINGS** 

**GLADDING** RESIDENCE HALL 3 - HVAC AND

REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

**COMMISSION NUMBER** 22240290

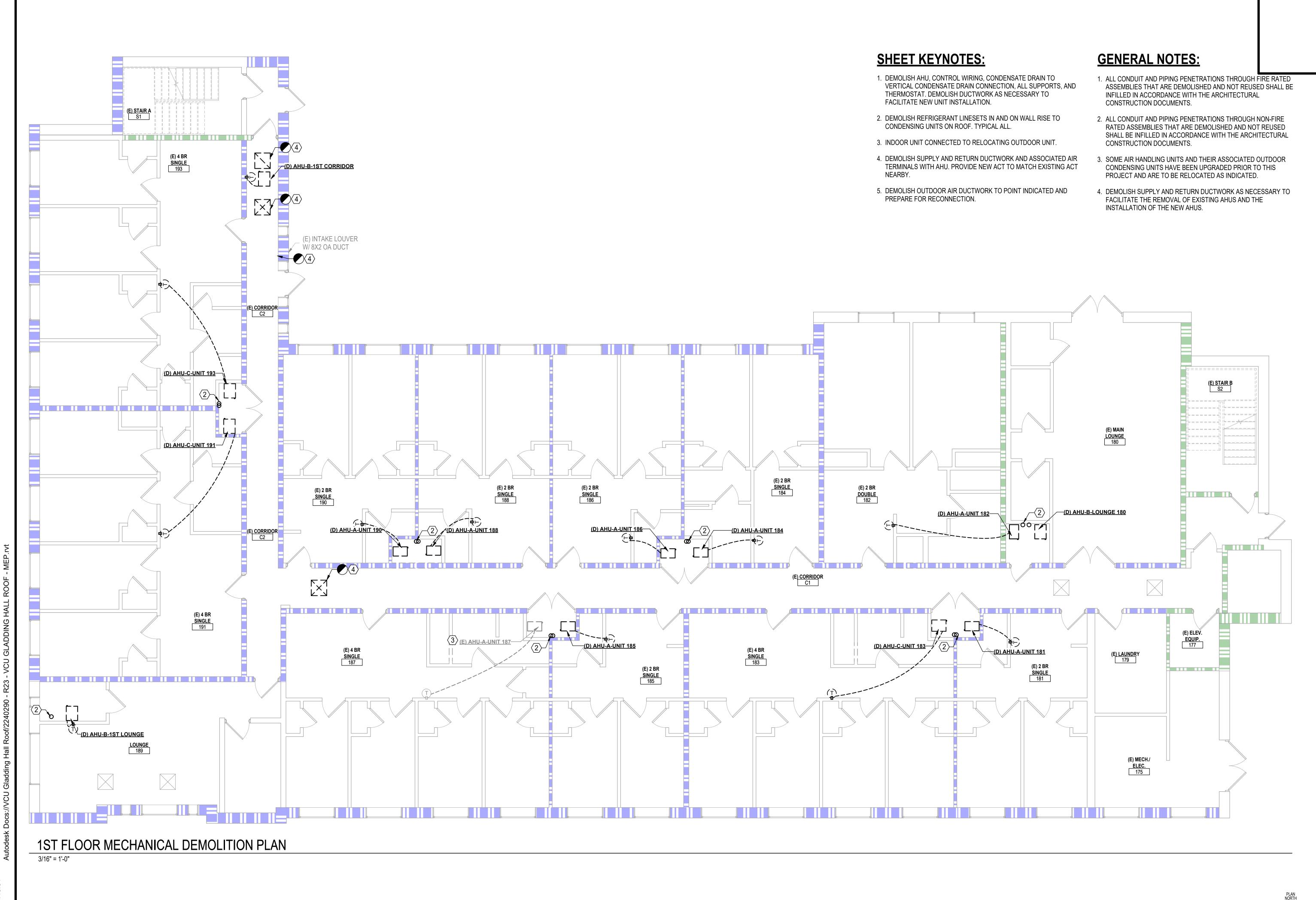
1/8" = 1'-0" DESIGNED: MAW DRAWN: KNF CHECKED: DFB DATE: 06/03/2024

Matthew A. Wilson Lic. No. 0402049270 06/03/2024

SHEET TITLE **MECHANICAL COVER SHEET** 

> SHEET NUMBER M-001

**SHEET #** 13 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

www.djginc.com

(984) 288-1300



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

COMMISSION NUMBER

SCALE: 3/16" = 1'-0"

DESIGNED: MAW

DRAWN: KNF

CHECKED: DFB

DATE: 06/03/2024

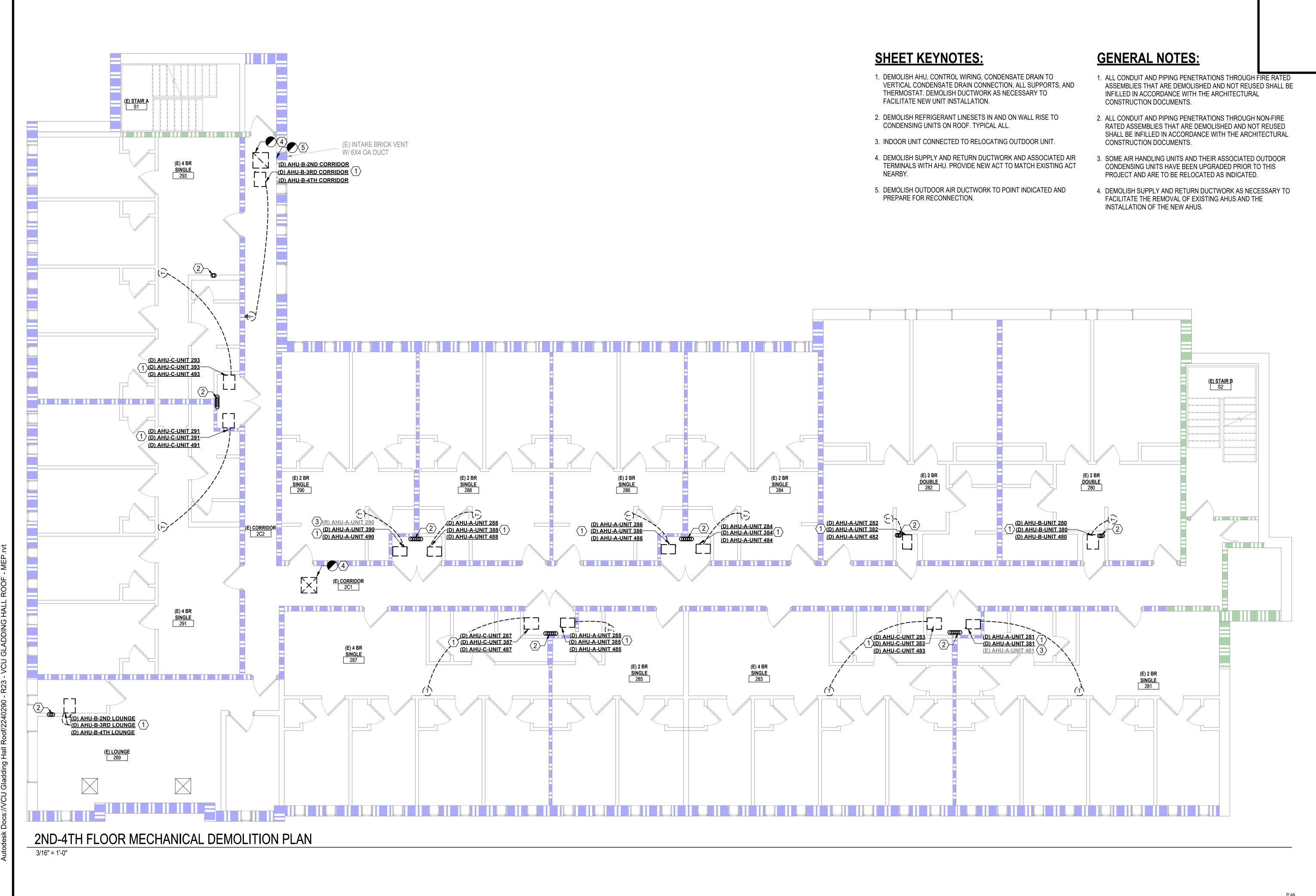


SHEET TITLE

1ST FLOOR
MECHANICAL
DEMOLITION
PLAN

SHEET NUMBER
MD101

**SHEET #** 14 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

commission number 22240290

 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 MAW

 DRAWN:
 KNF

 CHECKED:
 DFB

 DATE:
 06/03/2024



SHEET TITLE

2ND-4TH FLOOR

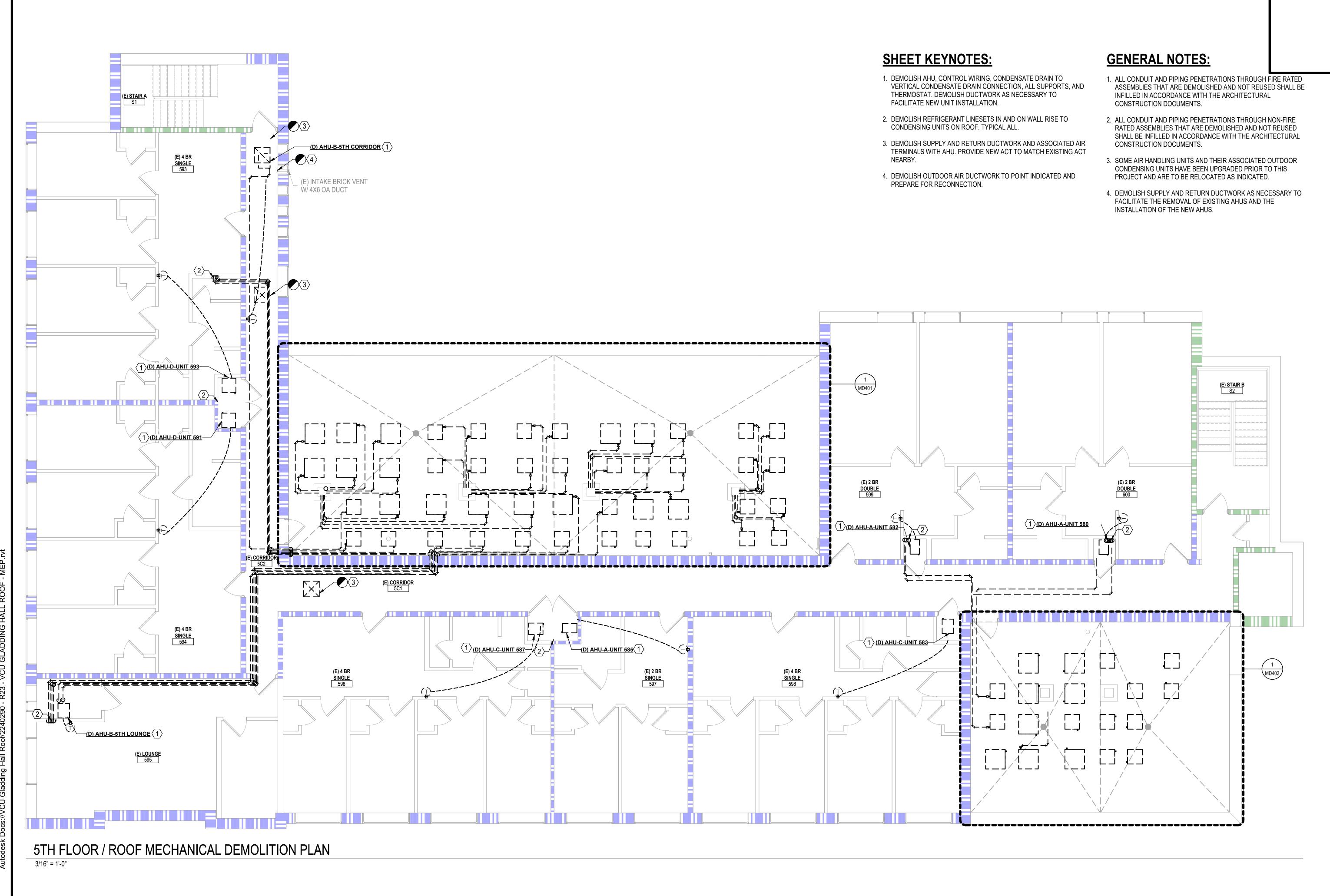
MECHANICAL

DEMOLITION

PLAN

SHEET NUMBER MD102

**SHEET #** 15 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

www.djginc.com

(984) 288-1300



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

COMMISSION NUMBER 22240290

 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 MAW

 DRAWN:
 KNF

 CHECKED:
 DFB

 DATE:
 06/03/2024

Matthew A. Wilson Lic. No. 0402049270

80 06/03/2024

80 06/03/2024

SHEET TITLE

5TH FLOOR
MECHANICAL
DEMOLITION
PLAN

SHEET NUMBER MD103

**SHEET #** 16 **OF** 51

### **SHEET KEYNOTES:**

- 1. DEMOLISH HEAT PUMP, CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 2. HEAT PUMP TO BE RELOCATED. DEMOLISH CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.

### **GENERAL NOTES:**

- 1. ALL CONDUIT AND PIPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH THE ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 2. ALL CONDUIT AND PIPING PENETRATIONS THROUGH NON-FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH THE ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. SOME AIR HANDLING UNITS AND THEIR ASSOCIATED OUTDOOR CONDENSING UNITS HAVE BEEN UPGRADED PRIOR TO THIS PROJECT AND ARE TO BE RELOCATED AS INDICATED.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |             |  |
|-----------|-------------|--|
| DATE      | DESCRIPTION |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |
|           |             |  |

COMMISSION NUMBER 22240290

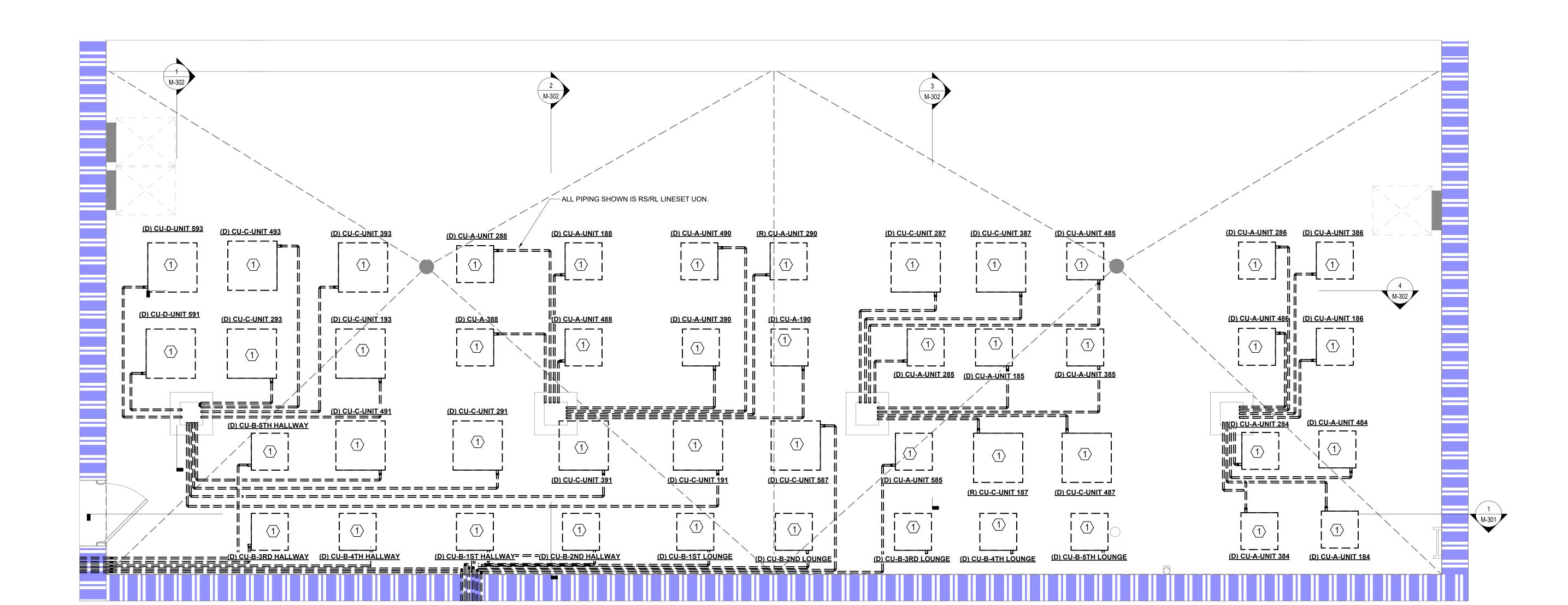
3/8" = 1'-0" DESIGNED: DRAWN: KNF CHECKED: DFB DATE: 06/03/2024



SHEET TITLE **MECHANICAL DEMOLITION** PLAN - NORTH ROOF

> SHEET NUMBER MD401

**SHEET #** 17 **OF** 51



 $MD103 MD401 \sqrt{3/8" = 1'-0"}$ 

# **SHEET KEYNOTES:**

- DEMOLISH HEAT PUMP, CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 2. HEAT PUMP TO BE RELOCATED. DEMOLISH CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.

### **GENERAL NOTES:**

- ALL CONDUIT AND PIPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH THE ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 2. ALL CONDUIT AND PIPING PENETRATIONS THROUGH NON-FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH THE ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. SOME AIR HANDLING UNITS AND THEIR ASSOCIATED OUTDOOR CONDENSING UNITS HAVE BEEN UPGRADED PRIOR TO THIS PROJECT AND ARE TO BE RELOCATED AS INDICATED.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

COMMISSION NUMBER 22240290

| 00, (11.  | 0/0 1 0    |
|-----------|------------|
| DESIGNED: | MAW        |
| DRAWN:    | KNF        |
| CHECKED:  | DFB        |
| DATE:     | 06/03/2024 |
|           | ~~~~       |



SHEET TITLE

MECHANICAL

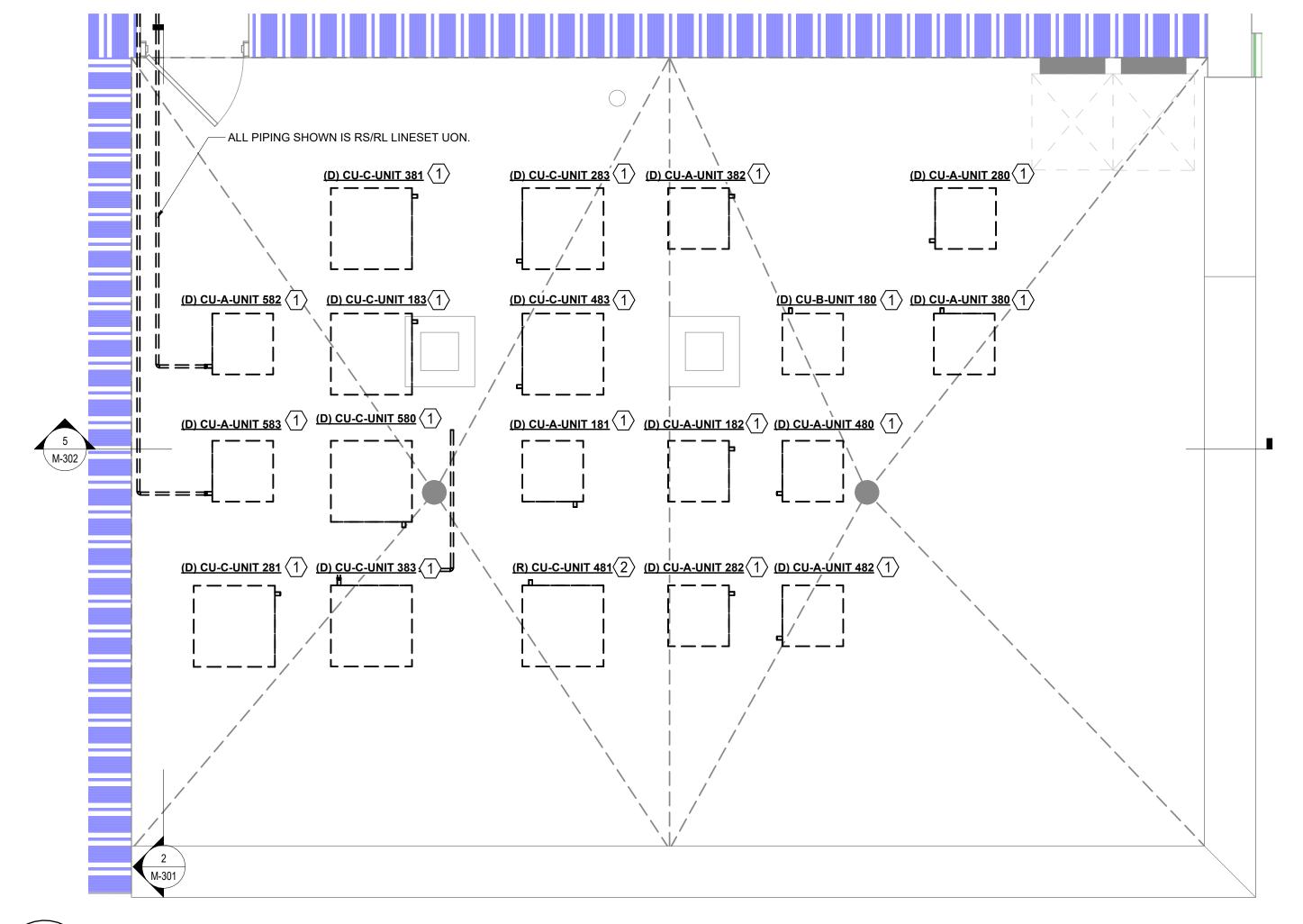
DEMOLITION

PLAN - SOUTH

ROOF PLAN

SHEET NUMBER MD402

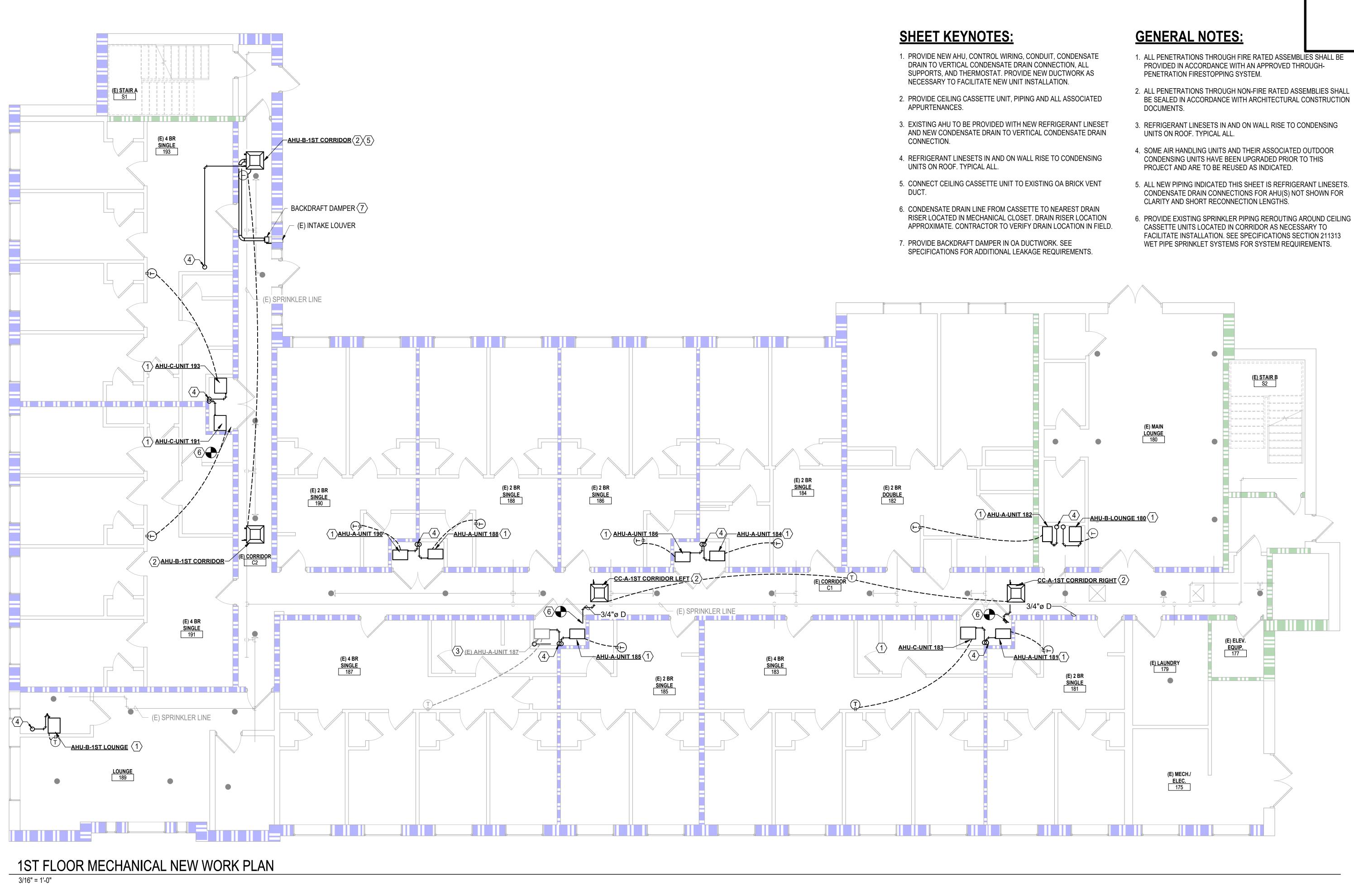
**SHEET #** 18 **OF** 51



5TH FLOOR / ROOF MECHANICAL DEMOLITION PLAN - SOUTH ROOF

MD103 MD402 3/8" = 1'-0"

3/2024 4:43:55



- BE SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION

SCALE: 3/16" = 1'-0"

**ENGINEERS ARCHITECTS PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING

DRAWINGS GLADDING RESIDENCE HALL 3 - HVAC AND

ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

> COMMISSION NUMBER 22240290

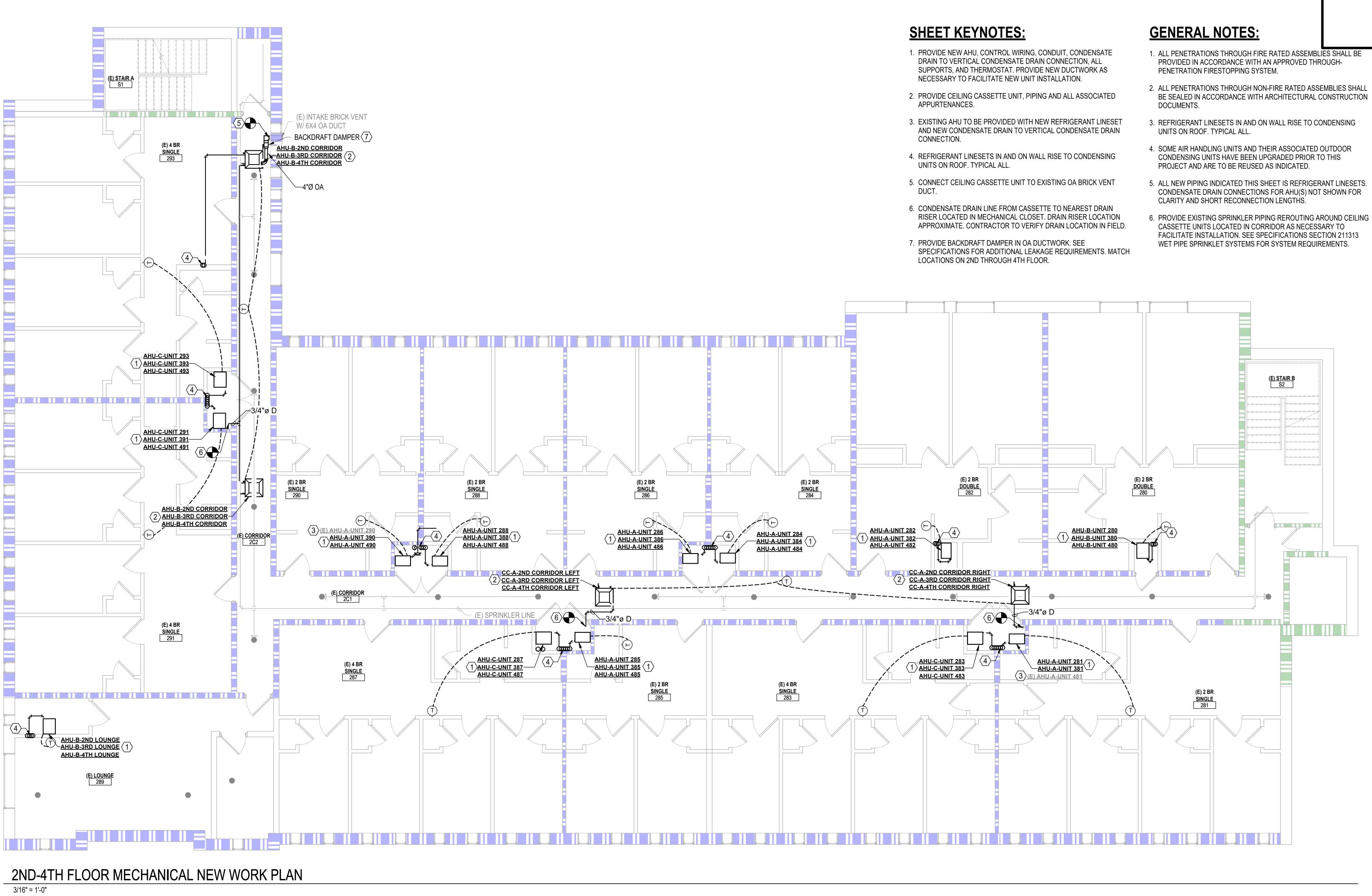
3/16" = 1'-0" DESIGNED: DRAWN: DFB CHECKED: DATE: 06/03/2024

Lic. No. 0402049270

SHEET TITLE 1ST FLOOR **MECHANICAL NEW WORK** PLAN

> SHEET NUMBER M-101

**SHEET #** 19 **OF** 51



- BE SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION
- CONDENSATE DRAIN CONNECTIONS FOR AHU(S) NOT SHOWN FOR
- FACILITATE INSTALLATION. SEE SPECIFICATIONS SECTION 211313

SCALE: 3/16" = 1'-0"

**ENGINEERS ARCHITECTS PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING **DRAWINGS** 

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | REVISIONS |             |  |  |
|---|-----------|-------------|--|--|
| # | DATE      | DESCRIPTION |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   |           |             |  |  |
|   | 1         |             |  |  |

**COMMISSION NUMBER** 22240290

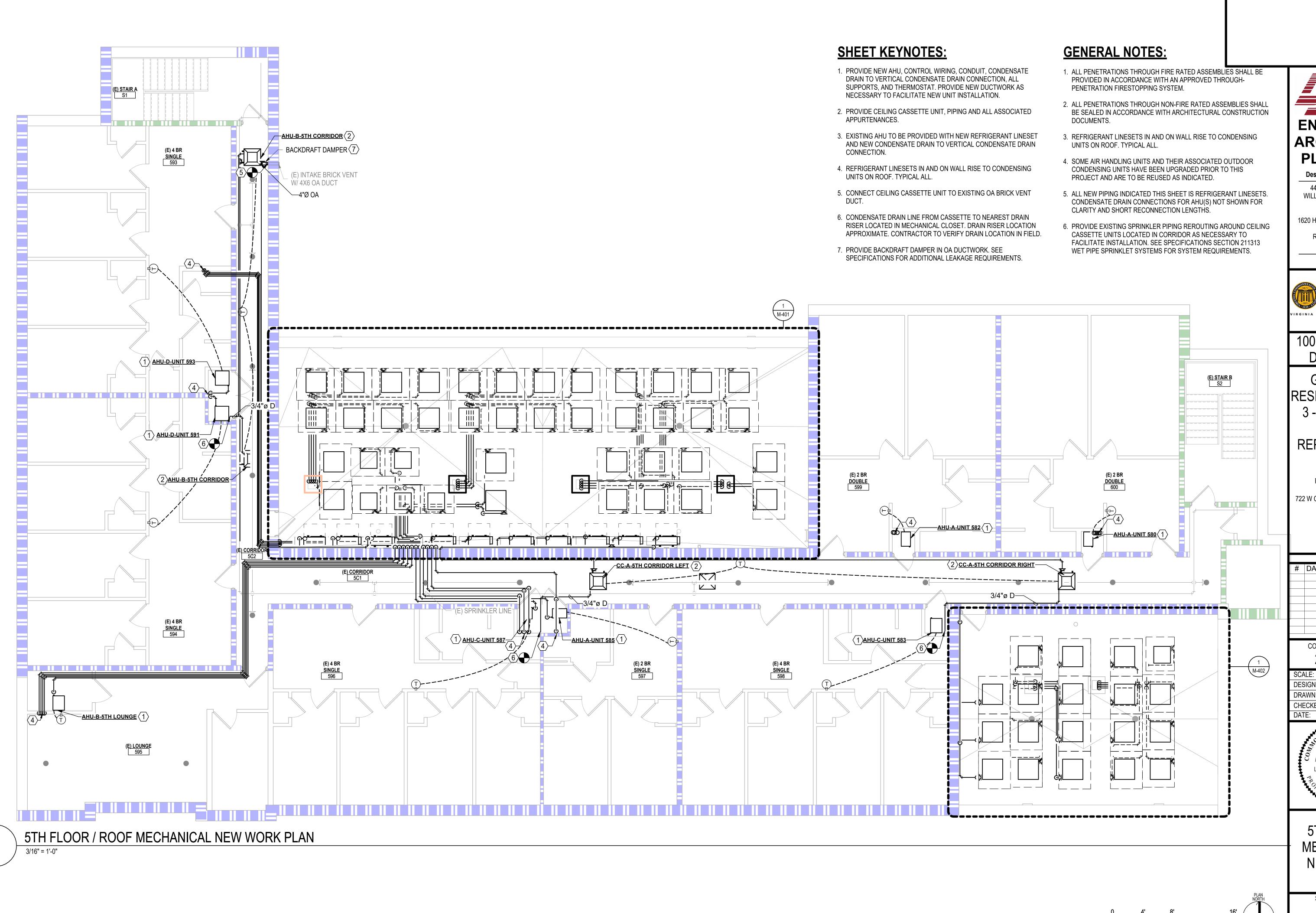
SCALE: 3/16" = 1'-0" DESIGNED: MAW DRAWN: KNF CHECKED: DFB DATE: 06/03/2024

> Matthew A. Wilson Lic. No. 0402049270

SHEET TITLE 2ND-4TH FLOOR **MECHANICAL NEW WORK PLAN** 

> SHEET NUMBER M-102

**SHEET #** 20 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com

VIRGINIA COMMONWEALTH UNIVERSITY

100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF

REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

# DATE DESCRIPTION

REVISIONS

COMMISSION NUMBER 22240290

 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 MAW

 DRAWN:
 KNF

 CHECKED:
 DFB

 DATE:
 06/03/2024

Matthew A. Wilson
Lic. No. 0402049270

6 06/03/2024

6 SIONAL ENGINEER

SHEET TITLE

5TH FLOOR

MECHANICAL

NEW WORK

PLAN

SHEET NUMBER
M-103

**SHEET #** 21 **OF** 51

# **SHEET KEYNOTES:**

1. PROVIDE NEW HEAT PUMP, CONTROL WIRING, CONDUIT, ALL SUPPORTS, AND ASSOCIATED APPURTENANCES.

# **GENERAL NOTES:**

- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED THROUGH-PENETRATION FIRESTOPPING SYSTEM.
- 2. ALL PENETRATIONS THROUGH NON-FIRE RATED ASSEMBLIES SHALL BE SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

COMMISSION NUMBER 22240290

| DATE:     | 06/03/2024   |
|-----------|--------------|
| CHECKED:  | DFB          |
| DRAWN:    | KNF          |
| DESIGNED: | MAW          |
| SCALE:    | 3/8" = 1'-0' |



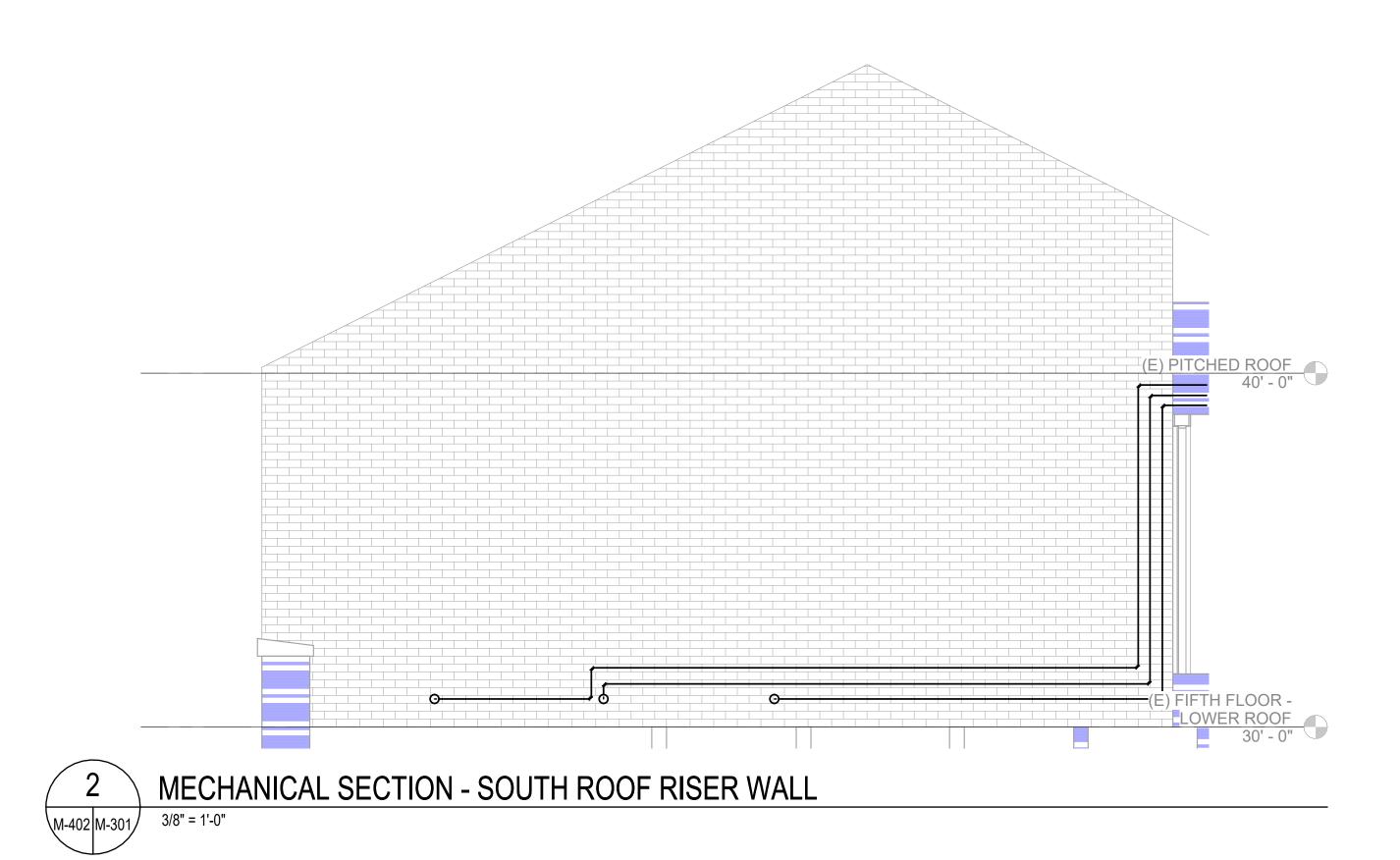
SHEET TITLE

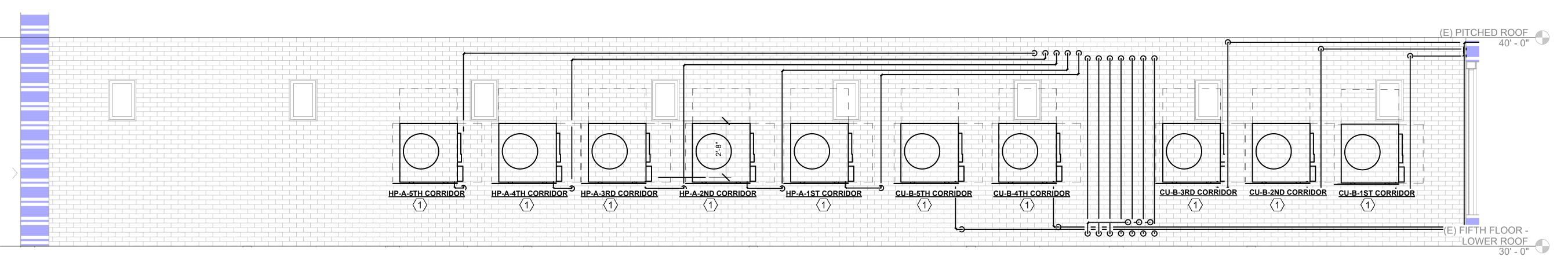
MECHANICAL

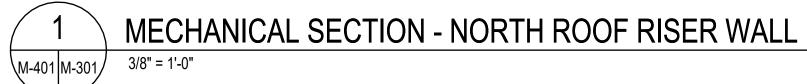
ROOF SECTIONS

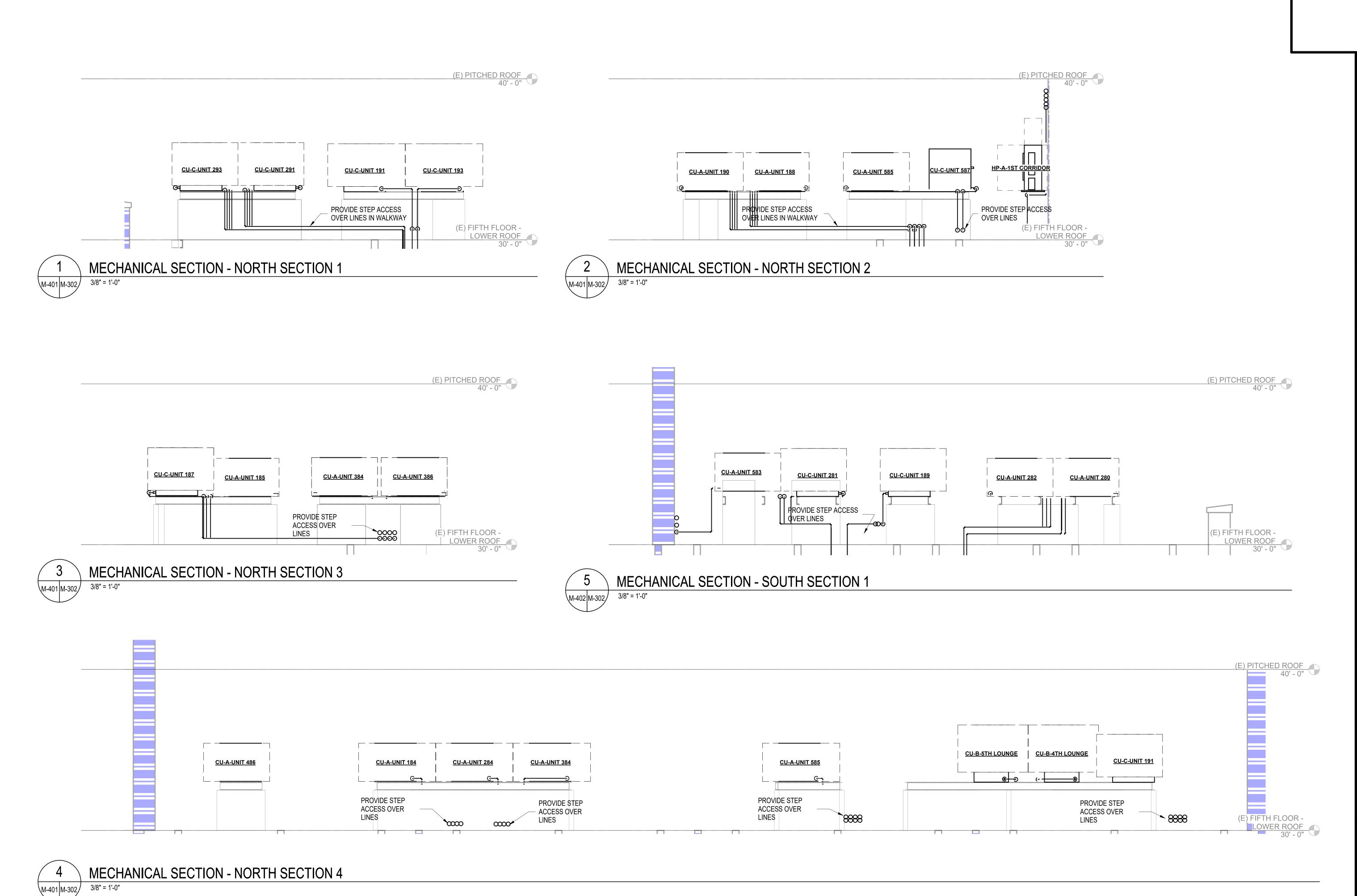
SHEET NUMBER
M-301

**SHEET #** 22 **OF** 51









ENGINEERS
ARCHITECTS
PLANNERS
Design like YOU mean it!

Design like YOU mean it!

449 MCLAWS CIRCLE
WILLIAMSBURG, VA 23185

(757) 253-0673 1620 HILLSBOROUGH STREET SUITE 100

RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |  |  |  |  |  |
|-----------|------|-------------|--|--|--|--|--|--|--|
| #         | DATE | DESCRIPTION |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |

commission number 22240290

 SCALE:
 3/8" = 1'-0"

 DESIGNED:
 MAW

 DRAWN:
 KNF

 CHECKED:
 DFB

 DATE:
 06/03/2024



MECHANICAL ROOF SECTIONS

SHEET NUMBER
M-302

**SHEET#** 23 **OF** 51

M-103 M-401 3/8" = 1'-0"

### **SHEET KEYNOTES:**

- 1. PROVIDE NEW HEAT PUMP, CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 2. HEAT PUMP TO BE RELOCATED. PROVIDE NEW CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 3. PROVIDE WALL MOUNTED HEAT PUMP, PIPING, SUPPORTS AND ALL SUPPORTS IN THEIR ENTIRETY.
- 4. PIPING PORTAL LOCATION.
- 5. STACKED REFRIGERANT (RS/RL) LINESETS.

### **GENERAL NOTES:**

- 1. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED THROUGH-PENETRATION FIRESTOPPING SYSTEM.
- 2. ALL PENETRATIONS THROUGH NON-FIRE RATED ASSEMBLIES SHALL BE SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. SOME AIR HANDLING UNITS AND THEIR ASSOCIATED OUTDOOR CONDENSING UNITS HAVE BEEN UPGRADED PRIOR TO THIS PROJECT AND ARE TO BE REUSED AS INDICATED.
- 4. DRAWINGS OF THE STRUCTURAL ALUMINUM CHANNEL SUPPORT FRAME SYSTEMS SHALL BE COORDINATED WITH PURCHASED EQUIPMENT SUBMITTED FOR APPROVAL AFTER THE HEAT PUMP SUBMITTAL IS APPROVED. ALL HEAT PUMPS SHALL HAVE A MINIMUM OF 4 POINTS OF MECHANICAL ATTACHMENT (BOLTING) DIRECTLY TO THE STRUCTURAL MEMBERS. SUPPORT METHOD SUBSTITUTIONS WILL NOT BE PERMITTED (WOOD, NON-STRUCTURAL CHANNEL SHAPES, RUBBER ROOF BLOCKS, ETC). CONDUIT AND REFRIGERANT PIPING MAY BE SUPPORTED BY 1-5/8"X1-5/8" ALUMINUM PRE-FABRICATED CHANNELS BOLTED TO THE STRUCTURAL ALUMINUM FRAME (SPACING TO COMPLY WITH NEC AND 2021 VIRGINIA MECHANICAL CODE). SEE ARCHITECTURAL DETAILS FOR FRAME INFORMATION.
- 5. A MINIMUM CLEARANCE OF 3' SHALL BE PROVIDED BETWEEN EACH EQUIPMENT PLATFORM TO THE OTHER PLATFORMS, PARAPHET OF HANDRAILS, ELECTRICAL PANELS AND WALL MOUNTED UNITS. DISTANCE BETWEEN PLATFORM MOUNTED UNITS SHALL BE AS REQUIRED BY MANUFACTURER'S INSTRUCTION.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

www.djginc.com

(984) 288-1300



100% WORKING **DRAWINGS** 

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

# DATE DESCRIPTION

REVISIONS

**COMMISSION NUMBER** 22240290

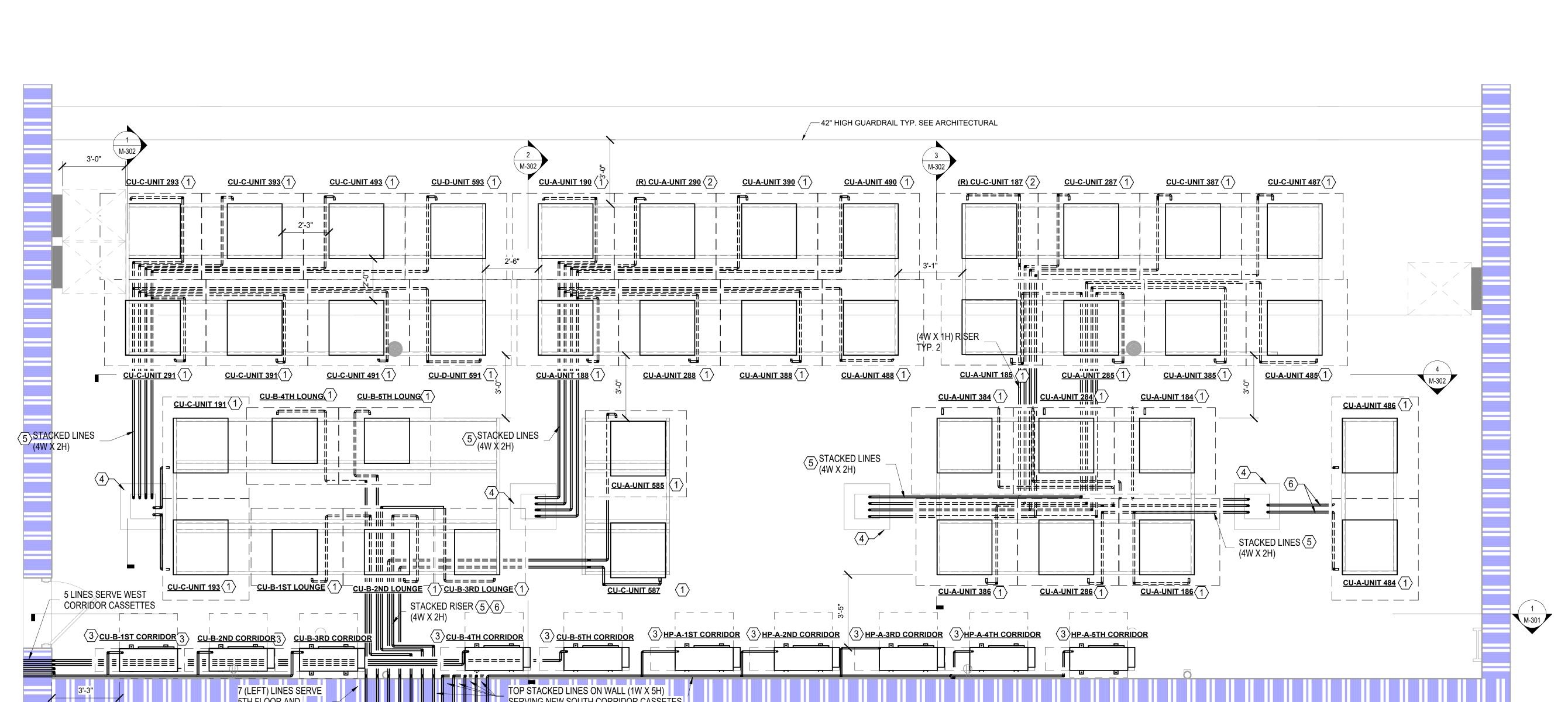
SCALE: 3/8" = 1'-0" DESIGNED: DRAWN: KNF CHECKED: DFB DATE: 06/03/2024

> Matthew A. Wilson Lic. No. 0402049270 06/03/2024

SHEET TITLE **MECHANICAL ENLARGED** NORTH ROOF **PLAN** 

> SHEET NUMBER M-401

**SHEET #** 24 **OF** 51



5TH FLOOR / ROOF MECHANICAL ENLARGED NEW WORK PLAN - NORTH ROOF

### **SHEET KEYNOTES:**

- 1. PROVIDE NEW HEAT PUMP, CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 2. HEAT PUMP TO BE RELOCATED. PROVIDE NEW CONTROL WIRING, REFRIGERANT PIPING, AND ALL SUPPORTS IN THEIR ENTIRETY.
- 3. PIPING PORTAL LOCATION.
- 4. STACKED REFRIGERANT (RS/RL) LINESETS.

### **GENERAL NOTES:**

- 1. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED THROUGH-PENETRATION FIRESTOPPING SYSTEM.
- 2. ALL PENETRATIONS THROUGH NON-FIRE RATED ASSEMBLIES SHALL BE SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. SOME AIR HANDLING UNITS AND THEIR ASSOCIATED OUTDOOR CONDENSING UNITS HAVE BEEN UPGRADED PRIOR TO THIS PROJECT AND ARE TO BE REUSED AS INDICATED.
- 4. DRAWINGS OF THE STRUCTURAL ALUMINUM CHANNEL SUPPORT FRAME SYSTEMS SHALL BE COORDINATED WITH PURCHASED EQUIPMENT SUBMITTED FOR APPROVAL AFTER THE HEAT PUMP SUBMITTAL IS APPROVED. ALL HEAT PUMPS SHALL HAVE A MINIMUM OF 4 POINTS OF MECHANICAL ATTACHMENT (BOLTING) DIRECTLY TO THE STRUCTURAL MEMBERS. SUPPORT METHOD SUBSTITUTIONS WILL NOT BE PERMITTED (WOOD, NON-STRUCTURAL CHANNEL SHAPES, RUBBER ROOF BLOCKS, ETC). CONDUIT AND REFRIGERANT PIPING MAY BE SUPPORTED BY 1-5/8"X1-5/8" ALUMINUM PRE-FABRICATED CHANNELS BOLTED TO THE STRUCTURAL ALUMINUM FRAME (SPACING TO COMPLY WITH NEC AND 2021 VIRGINIA MECHANICAL CODE). SEE ARCHITECTURAL DETAILS FOR FRAME INSTALLATION.
- 5. A MINIMUM CLEARANCE OF 3' SHALL BE PROVIDED BETWEEN EACH EQUIPMENT PLATFORM TO THE OTHER PLATFORMS, PARAPHET OF HANDRAILS, ELECTRICAL PANELS AND WALL MOUNTED UNITS. DISTANCE BETWEEN PLATFORM MOUNTED UNITS SHALL BE AS REQUIRED BY MANUFACTURER'S INSTRUCTION.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

www.djginc.com

(984) 288-1300



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| # | DATE | DESCRIPTION |
|---|------|-------------|
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

REVISIONS

**COMMISSION NUMBER** 22240290

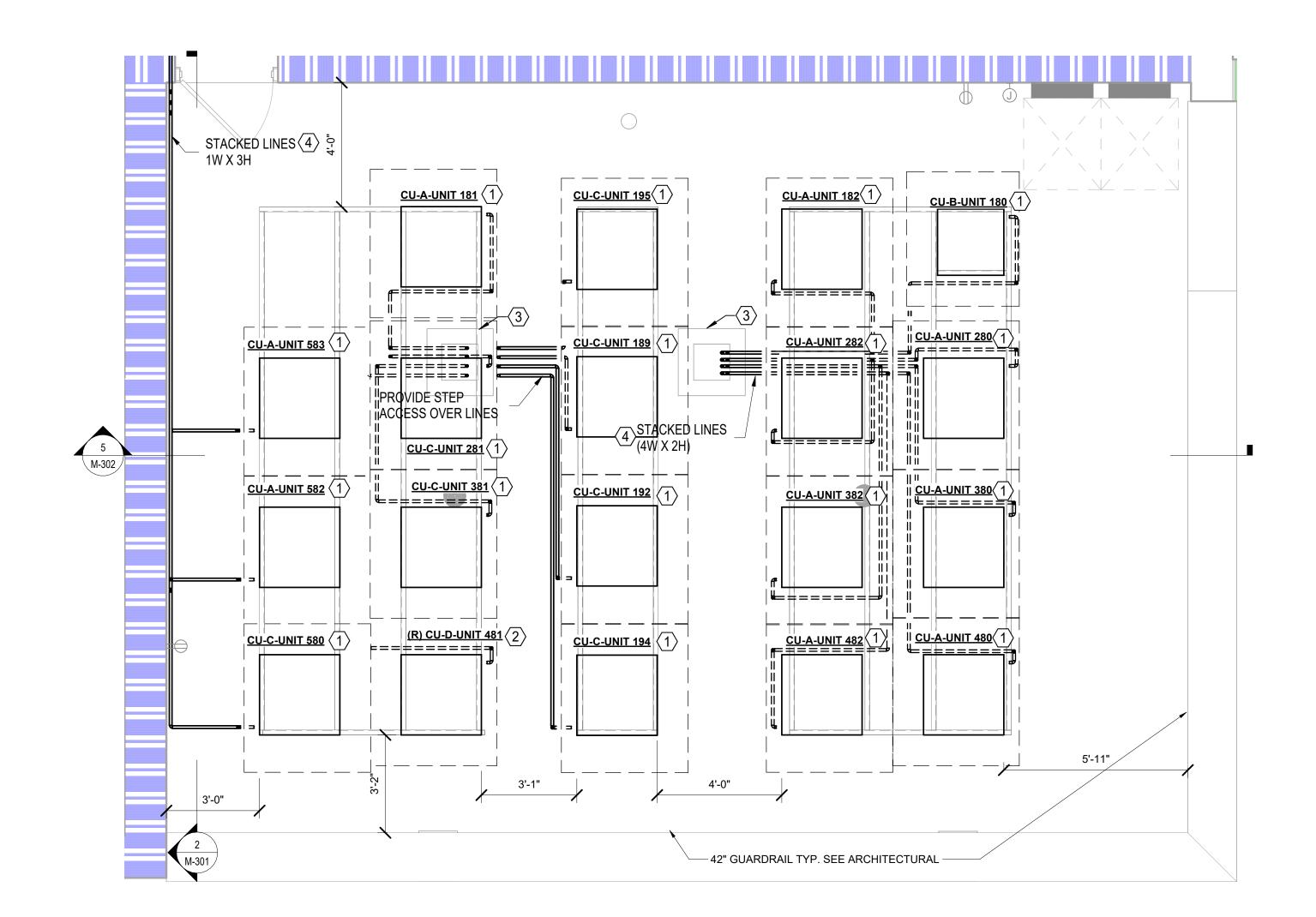
|           | 80000AA    |
|-----------|------------|
| DATE:     | 06/03/2024 |
| CHECKED:  | DFB        |
| DRAWN:    | KNF        |
| DESIGNED: | MAW        |
| OOKLL.    | 3/0 - 1-0  |

Matthew A. Wilson

**MECHANICAL ENLARGED** SOUTH ROOF PLAN

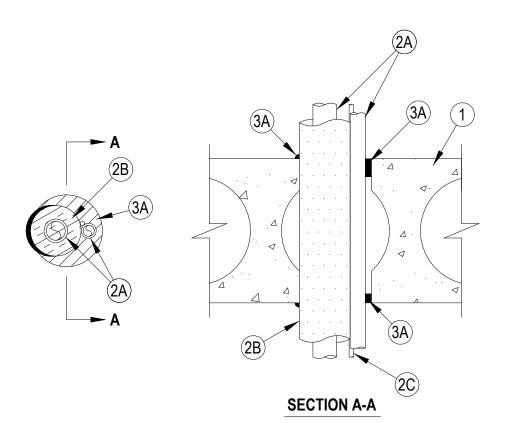
> SHEET NUMBER M-402

**SHEET #** 25 **OF** 51



5TH FLOOR / ROOF MECHANICAL ENLARGED NEW WORK PLAN - SOUTH ROOF 3/8" = 1'-0" M-103 M-402

FTH Rating — 1 Hr



System No. C-BJ-8027

1. Floor or Wall Assembly — Min 8 in. (203 mm) thick floor or wall made from reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor assembly may also be constructed of any 8 in. (203 mm) thick UL Classified hollow-core Precast Concrete Units\*. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diameter of opening is 4 in. (102 mm). See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) category in the Fire Resistance Directory for names of manufacturers.

2. Air Conditioning (AC) Line Set — One tightly bundled AC line set installed within opening. AC line set consists of two metallic penetrants (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The annular space between the AC line set and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). The AC line set shall be rigidly supported on both sides of the floor or wall

2A. Metallic Penetrants — A max of two pipes, tubes or conduit to be installed in the AC line set. Of the two pipes, tubes or conduits, only one may have a nom diam greater than 1/2 in. (13 mm). The following types and sizes of through penetrants may be used:

A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe. B. Conduit — Nom 1 in. (25 mm) diam (or smaller) steel electrical metallic tubing or nom 1 in. (25 mm) diam (or smaller) steel conduit.

C. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.

D. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe. E. Copper Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube. 2B. Tube Insulation - Plastics — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the

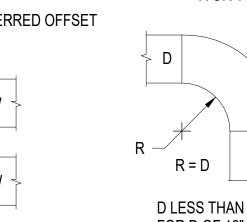
form of tubing. The tube insulation may be installed on one max 1 in. (25 mm) diam pipe or tube in the AC line set. See Plastics (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component

tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 945VA may be used. 2C. Cable — One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with the AC line set.

3. Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Materials\*- Sealant — In floors, min 1 in. (25 mm) thickness of fill material applied within annulus flush with top surface of floor and min 1/2 in. (13 mm) thickness of fill material applied within annulus flush with bottom surface of floor. In walls, min 1 in. (25 mm) thickness of fill material applied within annulus flush with both surfaces of wall. In addition, min 1/4 in. (6 mm) bead of fill material applied at all point contact locations at penetrants/concrete interface, on both sides of floor or wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC—FS-ONE Sealant or FS-ONE MAX Intumescent Sealant. \* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

R1 = (X+Y)/2MITRERED ELBOW W/ TURNING VANES R2 = X+YX OR Y LESS THAN 12" PREFERRED OFFSET

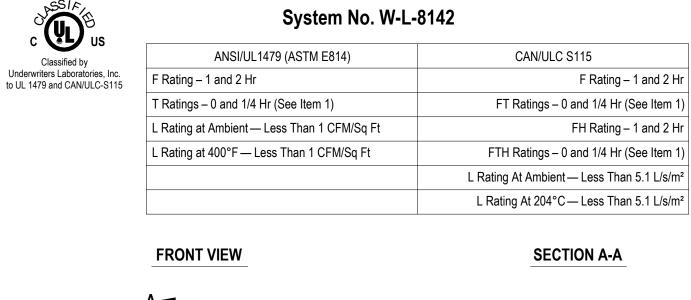


D LESS THAN 12" USE RADIUS; FOR D OF 12" OR MORE USE RECTANGULAR VANED ELBOW

90° RADIUS ELBOWS

# FIRE RATED PENETRATION - HVAC LINESET THROUGH HOLLOW CORE FLOOR

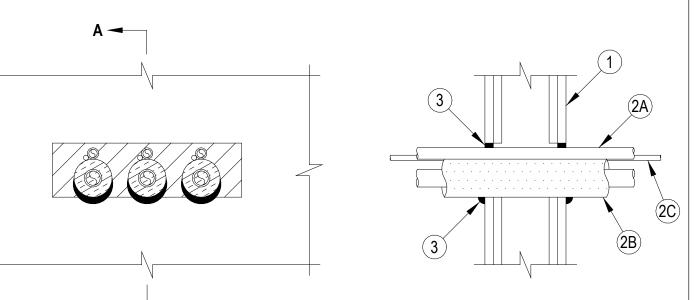
**Hilti Firestop Systems** 



Reproduced by HILTI, Inc. Courtesy of

Underwriters Laboratories, Inc.

January 16, 2015



System No. W-L-8142

Reproduced by HILTI, Inc. Courtesy of

Underwriters Laboratories, Inc.

January 16, 2015

I. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following

A. Studs —Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC. B. Gypsum Board\* — The gypsum board type, thickness number of layers, fastener type and sheet orientation shall be specified in the

individual Wall and Partition Design in the UL Fire Resistance Directory. Max opening size is 10 in. (254 mm) by 3 in. (76 mm). The T, FT and FTH Ratings are 0 and 1/4 hr for 1 and 2 hr rated assemblies, respectively. 2. Air Conditioning (AC) Line Set—One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be min 1/2 in. (13 mm) to max 3/4 in. (19 mm). The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max

2A. Through Penetrants — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. (13 mm) Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may

1. Copper Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube.

1-1/2 in. (38 mm) to one side of opening.

Page: 1 of 2 Hilti Firestop Systems

2. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe. 2B. Tube Insulation — Plastics+ — Max 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. (13 mm) diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 3/4 in. (19 mm). The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).

See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used. 2C. Cables — Max of one 4 pair No. 18 AWG (or smaller) cable with PVC insulation and jacket materials.

3. Fill, Void or Cavity Material - Sealant\*—Min 5/8 in. (16 mm) thickness of fill material applied within annulus between penetrants and gypsum board, flush with both surfaces of wall. At point contact, a 1/2 in. (5 mm) bead of fill material shall be applied at the penetrant/gypsum board interface on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC— FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

Reproduced by HILTI, Inc. Courtesy of

Underwriters Laboratories, Inc.

October 3, 2022

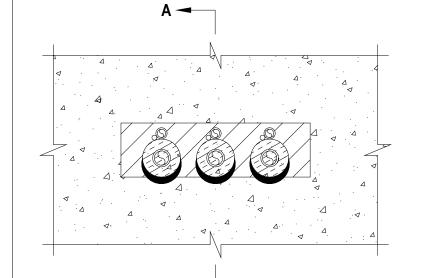
# **DUCT CONNECTION DETAIL**

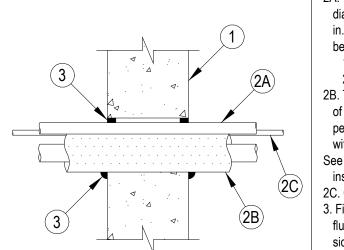
<u>OFFSETS</u>

Page: 2 of 2

|                                                     | System No. W-J-81                           | 102                                        |  |  |  |
|-----------------------------------------------------|---------------------------------------------|--------------------------------------------|--|--|--|
| C US Classified by                                  | ANSI/UL1479 (ASTM E814)                     | CAN/ULC S115                               |  |  |  |
| writers Laboratories, Inc.<br>1479 and CAN/ULC-S115 | F Rating – 1 and 2 Hr (See Item 1)          | F Rating – 1 and 2 Hr (See Item 1          |  |  |  |
|                                                     | T Ratings – 1/4 Hr                          | FT Ratings – 1/4 Hr                        |  |  |  |
|                                                     | L Rating at Ambient — Less Than 1 CFM/Sq Ft | FH Rating – 1 or 2 Hr (See Item 1)         |  |  |  |
|                                                     | L Rating at 400°F — Less Than 1 CFM/Sq Ft   | FTH Ratings – 1/4 Hr                       |  |  |  |
|                                                     |                                             | L Rating At Ambient — Less Than 5.1 L/s/m² |  |  |  |
|                                                     |                                             | L Rating At 204°C — Less Than 5.1 L/s/m²   |  |  |  |

FRONT VIEW





**SECTION A-A** 

1. Wall Assembly — Min 4-7/8 in. (124 mm) and 6-1/8 in. (156 mm) thick normal weight or lightweight (100-150 pcf or 1600-2400 kg/m3) concrete for 1 and 2 hour rated assemblies, respectively. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max opening size is 10 in.

System No. W-J-8102

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

F and FH ratings are 1 and 2 hour for 1 and 2 hour rated assemblies, respectively. 2. Air Conditioning (AC) Line Set—One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be min 1/2 in. (13 mm) to max 3/4 in. (19 mm). The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max

2A. Through Penetrant — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. (13 mm) Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may

1. Copper Tube —Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube.

Page: 1 of 2 | Hilti Firestop Systems

2. Copper Pipe —Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe. 2B. Tube Insulation – Plastics+ — Max 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. (13 mm) diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 3/4 in. (19 mm). The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).

See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used. 2C. Cables — Max of one 4 pair No. 18 AWG (or smaller) cable with PVC insulation and jacket materials.

3. Fill, Void or Cavity Material - Sealant\*—Min 5/8 in. (16 mm) thickness of fill material applied within annulus between penetrants and concrete, flush with both surfaces of wall. At point contact, a 1/2 in. (5 mm) bead of fill material shall be applied at the penetrant/concrete interface on both

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC-FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.

October 3, 2022

CHECKED: DFB DATE: 06/03/2024 Matthew A. Wilson Lic. No. 0402049270 06/03/2024

**ENGINEERS** 

**ARCHITECTS** 

**PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185

(757) 253-0673

1620 HILLSBOROUGH STREET

SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com

100% WORKING

**DRAWINGS** 

**GLADDING** 

RESIDENCE HALL

3 - HVAC AND

REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS

# DATE DESCRIPTION

COMMISSION NUMBER

22240290

DESIGNED:

DRAWN:

12" = 1'-0"

MAW

KNF

**MECHANICAL** DETAILS

SHEET NUMBER M-501

**SHEET #** 26 **OF** 51

FIRE RATED PENETRATION - HVAC LINESET THROUGH GYPSUM WALL

Reproduced by HILTI, Inc. Courtesy of

Underwriters Laboratories, Inc.

October 3, 2022

FIRE RATED PENETRATION - HVAC LINESET THROUGH CONCRETE WALL

Reproduced by HILTI, Inc. Courtesy of

Underwriters Laboratories, Inc.

Page: 2 of 2

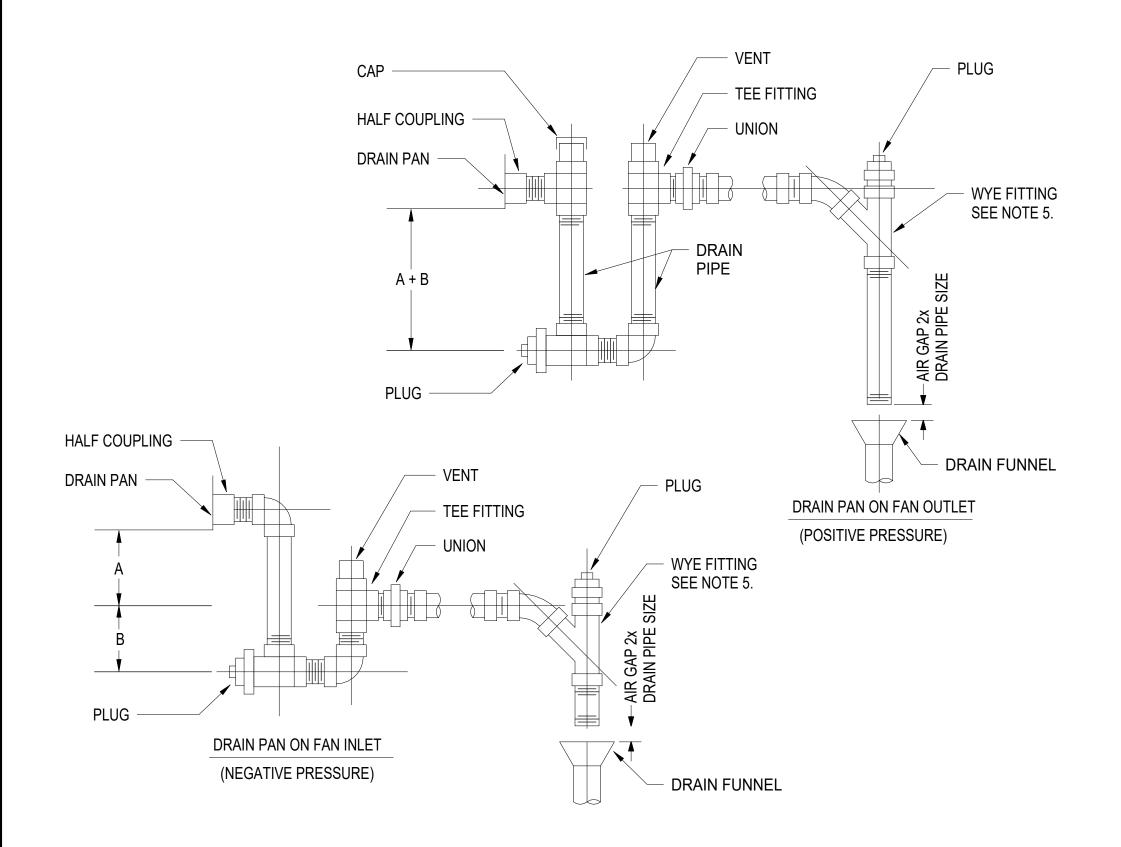
**Hilti Firestop Systems** 

Hilti Firestop Systems

Page: 2 of 2

Page: 1 of 2 Hilti Firestop Systems





- NOTES:

  1. DRAIN PIPE TO BE SAME SIZE AS UNIT OUTLET, BUT NO LESS THAN 3/4" PIPE SIZE.
- 2. "A" = SYSTEM STATIC PRESSURE IN INCHES AT DRAIN POINT.
- 3. "B" = 1/2 SYSTEM STATIC PRESSURE IN INCHES AT DRAIN POINT.
- 4. TRAP TO BE INSTALLED PARALLEL TO AIR HANDLING UNIT BASE.
- 5. ALL CONDENSATE FITTINGS TO BE DWV (DRAIN WASTE VENT) FITTINGS.
- 6. INSTALL CLEAN OUT AT EVERY CHANGE IN DIRECTION, MAX. 20'-0" BETWEEN CLEANOUTS.

# AHU DRAIN DETAILS

**ENGINEERS** ARCHITECTS **PLANNERS** 

Design like YOU mean it! 449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |  |  |  |  |  |  |  |
|-----------|------|-------------|--|--|--|--|--|--|--|--|--|
| #         | DATE | DESCRIPTION |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |  |
|           | •    |             |  |  |  |  |  |  |  |  |  |

COMMISSION NUMBER 22240290 SCALE: 12" = 1'-0"

| DESIGNED: | MAW        |
|-----------|------------|
| DRAWN:    | KNF        |
| CHECKED:  | DFB        |
| DATE:     | 06/03/2024 |
|           |            |

Matthew A. Wilson Lic. No. 0402049270

SHEET TITLE MECHANICAL **DETAILS** 

> SHEET NUMBER M-502

**SHEET #** 27 **OF** 51

### DUCTED SPLIT-SYSTEM HEAT PUMP SCHEDULE

APPROVED ALTERNATIVE MANUFACTURERS: TRANE #TEM4, YORK #LX

|       |                             |                   | INDOOR UNIT DATA OUTDOOR UNIT DATA |                      |                 |                  |                         |                  |                    |                    | UNIT ELECTRIC DATA |            |            |                 |                |             | SELECTION BASED ON |         |             |        |               |          |           |              |           |              |          |                 |
|-------|-----------------------------|-------------------|------------------------------------|----------------------|-----------------|------------------|-------------------------|------------------|--------------------|--------------------|--------------------|------------|------------|-----------------|----------------|-------------|--------------------|---------|-------------|--------|---------------|----------|-----------|--------------|-----------|--------------|----------|-----------------|
|       | OUTDOOR<br>UNIT SIZE<br>TAG | SUPPLY<br>AIRFLOW | TOTAL<br>CAPACITY                  | SENSIBLE<br>CAPACITY | ENTERING AIR    | LEAVING AIR TEMP | ELECTRIC<br>HEATER      | UNIT<br>, WEIGHT | AMBIENT<br>COOLING | AMBIENT<br>HEATING | REFRIGERANT        | EFFICIENCY | EFFICIENCY | MAX REFRIGERANT | UNIT<br>WEIGHT |             | VOLT/PH            |         | INDOOR COIL | INDOOR | . INDOOR UNIT | OUTDOOR  | OUTDOOR   | MANUFACTURER |           | MODEL        |          | REMARKS         |
| .,,,  |                             | (CFM)             | (MBH)                              | (MBH)                | (°F DB / °F WB) |                  | CAPACITY (KW<br>@240V)) | (LBS)            | DESIGN<br>(°F)     | DESIGN<br>(°F)     | REFRIGERANI        | (EER2)     | (SEER2)    | CHARGE (LBS)    | (LBS)          | INDOOR COIL | INDOOR<br>HEATER   | OUTDOOR | UNITELA     | FLA    | MOCP          | UNIT MCA | UNIT MOCP | MANUFACTURER | INDOOR    | HEATER       | OUTDOOR  |                 |
| AHU-A | CU-A                        | 500               | 18                                 | 12                   | 75 / 64         | 55 / 54          | 5                       | 94               | 95                 | 15                 | R-410A             | 11.3       | 13.3       | 28              | 136            | 208/1       | 208/1              | 208/1   | 1.6         | 18.1   | 35            | 12       | 20        | CARRIER      | FB4ANF018 | KFAEH1301C05 | 25HCE418 | SEE NOTES: #1 - |
| HU-B  | CU-B                        | 650               | 24                                 | 14                   | 75 / 64         | 55 / 54          | 5                       | 98               | 95                 | 15                 | R-410A             | 11.1       | 13.3       | 27              | 144            | 208/1       | 208/1              | 208/1   | 2           | 18.1   | 40            | 14       | 25        | CARRIER      | FB4ANF024 | KFAEH1301C05 | 25HCE424 | SEE NOTES: #1 - |
| HU-C  | CU-C                        | 1000              | 30                                 | 20                   | 75 / 64         | 55 / 54          | 5                       | 126              | 95                 | 15                 | R-410A             | 11.3       | 13.3       | 28              | 158            | 208/1       | 208/1              | 208/1   | 2.4         | 18.1   | 40            | 18       | 30        | CARRIER      | FB4ANF030 | KFAEH1301C05 | 25HCE430 | SEE NOTES: #1   |
| HU-D  | CU-D                        | 1200              | 36                                 | 22                   | 75 / 64         | 55 / 54          | 5                       | 128              | 95                 | 15                 | R-410A             | 11.3       | 13.3       | 21              | 170            | 208/1       | 208/1              | 208/1   | 3.2         | 18.1   | 40            | 20       | 30        | CARRIER      | FB4ANF036 | KFAEH1301C05 | 25HCE436 | SEE NOTES: #1 - |

**DUCTED SPLIT-SYSTEM HEAT PUMP SCHEDULE NOTES:** 

1. INDOOR UNIT NAMING FOR AIR HANDLING UNITS (AHUS) TO MATCH FORMAT LISTED BELOW.

A. AHU - UNIT SIZE - UNIT NUMBER ON FLOOR

- a. (i.e. AHU-D-UNIT 185 FOR A D SIZE UNIT SERVING ROOM 185)
- 2. OUTDOOR UNIT NAMING FOR HEAT PUMPS (CU) TO MATCH FORMAT LISTED BELOW.
  - A. CU FLOOR NUMBER UNIT SIZE UNIT NUMBER ON FLOOR
  - (i.e. CU-D-UNIT 185 FOR A D SIZE UNIT SERVING ROOM 185)
- PROVIDE 410 STAINLESS STEEL DRAIN PAN AND INTEGRAL TRAP FLOAT SWITCH INTERLOCKED TO SHUTDOWN UNIT UPON DETECTION OF WATER IN THE DRAIN PAN.
- PROVICE UNITS WITH ACCESSORY ELECTRIC HEATER TO MATCH LISTED ELECTRIC HEATER CAPACITY SCHEDULED.
- PROVIDE INDOOR UNITS WITH 1" PLEATED MERV 8 FILTERS.
- CHARGE SYSTEM WITH REFRIGERANT PER THE MANUFACTURER'S INSTRUCTIONS. MAX REFRIGERANT CHARGE IDENTIFIED IS THE MAXIMUM CHARGE ALLOWABLE FOR OCCUPANT SAFETY.
- ACCESSORY HEATER AND INDOOR COIL UNIT TO HAVE SINGLE POINT POWER WIRING CONNECTION.

### **DUCTLESS SPLIT-SYSTEM HEAT PUMP SCHEDULE**

APPROVED ALTERNATIVE MANUFACTURERS: TRANE #4MXC, PIONEER #CYB3 **INDOOR UNIT DATA OUTDOOR UNIT DATA UNIT ELECTRIC DATA** SELECTION BASED ON **AMBIENT** MODEL INDOOR UNIT TAG REMARKS OUTDOOR UNIT TAG CAPACITY AT | CAPACITY AT | WEIGHT CAPACITY **CAPACITY** MANUFACTURER DESIGN (°F DB / °F WB) | (°F DB / °F WB) INDOOR OUTDOOR (°F) (°F) AHU-B-1ST CORRIDOR CU-B-1ST CORRIDOR 75 / 64 55 / 54 12.9 R-410A 271 INVERTER-SCROLL 208/1 0.86 MITSUBISHI SLZ-KF18NA MXZ-SM36NAM2 SEE NOTES: #1 - #5 31 650 75 / 64 19.7 12.9 AHU-B-1ST CORRIDOR CU-B-1ST CORRIDOR 18 12 55 / 54 AHU-B-2ND CORRIDOR CU-B-2ND CORRIDOR 90 75 / 64 19.7 12.9 31 55 / 54 **INVERTER-SCROLL** R-410A 271 MITSUBISHI 208/3 0.86 45 SLZ-KF18NA MXZ-SM36NAM2 SEE NOTES: #1 - #5 AHU-B-2ND CORRIDOR 650 18 12 75 / 64 19.7 12.9 31 CU-B-2ND CORRIDOR 55 / 54 AHU-B-3RD CORRIDOR CU-B-3RD CORRIDOR 650 90 18 12 75 / 64 19.7 12.9 31 R-410A 271 208/5 MITSUBISHI INVERTER-SCROLL 45 SLZ-KF18NA MXZ-SM36NAM2 SEE NOTES: #1 - #5 31 AHU-B-3RD CORRIDOR **CU-B-3RD CORRIDOR** 650 18 12 75 / 64 55 / 54 19.7 12.9 AHU-B-4TH CORRIDOR CU-B-4TH CORRIDOR 650 90 18 12 75 / 64 55 / 54 19.7 12.9 31 **INVERTER-SCROLL** 271 208/7 MITSUBISHI SEE NOTES: #1 - #5 R-410A SLZ-KF18NA MXZ-SM36NAM2 **CU-B-4TH CORRIDOR** 650 75 / 64 19.7 12.9 31 AHU-B-4TH CORRIDOR 12 55 / 54 AHU-B-5TH CORRIDOR CU-B-5TH CORRIDOR 90 18 12 75 / 64 55 / 54 19.7 12.9 31 INVERTER-SCROLL R-410A 271 208/9 MITSUBISHI SLZ-KF18NA MXZ-SM36NAM2 SEE NOTES: #1 - #5 45 31 **CU-B-5TH CORRIDOR** 75 / 64 19.7 12.9 AHU-B-5TH CORRIDOR 55 / 54 INVERTER-SCROLL R-410A 15 23 271 208/1 MITSUBISHI SLZ-KF18NA MXZ-SM36NAM2 SEE NOTES: #1 - #7 45

### DUCTLESS SPLIT-SYSTEM AIR COOLED HEAT PUMP CASSETTE SCHEDULE NOTES:

- PROVIDE INDOOR UNITS WITH A 208V/1Ø CONDENSATE PUMP WITH A MINIMUM 10 FT HD LIFT RATING.

THE SCHEDULED EQUIPMENT IS INTENDED ONLY

TO SHOW THE GENERAL SIZE, CONFIGURATION,

LOCATION, CONNECTIONS AND/OR SUPPORT

FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH

REQUIREMENTS PERTAINING TO THE PRODUCT.

RELATION TO THE OTHER BUILDING SYSTEMS.

- A. HP FLOOR NUMBER UNIT NUMBER ON FLOOR
- a. (i.e. HP-A-UNIT 185 FOR AN A SIZE UNIT SERVING ROOM 185)

SEE SPECIFICATION FOR TECHNICAL

### REFRIGERANT RS/RL **EQUIPMENT DRAIN**

SYSTEM

PIPING AND PIPING INSULATION SCHEDULE

**ABBREVIATION** 

PIPING AND PIPING INSULATION SCHEDULE NOTES ALL PIPING EXPOSED TO OUTDOORS SHALL BE PROTECTED WITH 0.040" STUCCO ALUMINUM JACKET.

NOMINAL OPERATING

TEMPERATURE (°F)

35-220

40-60

**PRESSURE** 

(PSIG)

120-410

LOCATION

OUTDOOR

INDOOR

**DUCTWORK SCHEDULE** SYSTEM **ABBREVIATION** LOCATION SUPPLY AIR SA/OA **INDOOR** RA RETURN AIR

PIPING INSULATION THROUGH FIRESTOP PENETRATIONS SHALL MATCH THE MATERIALS LISTED IN THE FIRESTOPPING LISTING.

PRESSURE **SEAL CLASS** (IN WC) +/-2 **INDOOR** +/-2

PIPE SIZES

ALL

ALL

ALL

**DUCT MATERIAL** 

**G90 GALVANIZED STEEL** G90 GALVANIZED STEEL

**PIPING MATERIAL** 

COPPER TYPE ACR

COPPER TYPE ACR

SOLID CORE SCH 40 W/ DWV FITTINGS

**DUCT INSULATION** 

JOINT TYPE

**BRAZED** 

**BRAZED** 

SOLVENT CEMENT

225", 0.75 PSF, FIBERGLASS WRAP INSULATION W/ FSK FACE

PIPE INSULATION

1" ELASTOMERIC

2" ELASTOMERIC

1" ELASTOMERIC

SEE NOTES #1 - #2 SEE NOTES #1 - #2

**INSULATION** 

**JACKET** 

ALUMINUM

REMARKS

SEE NOTES: #1 - #2

SEE NOTES: #1 - #2

SEE NOTES: #1 - #2

REMARKS

SHEET NUMBER M-601

**ENGINEERS** 

**ARCHITECTS** 

**PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100

RALEIGH, NC 27605

(984) 288-1300

www.djginc.com

100% WORKING

**DRAWINGS** 

**GLADDING** 

RESIDENCE HALL

3 - HVAC AND

REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS

# DATE DESCRIPTION

**COMMISSION NUMBER** 

22240290

MAW

DFB

Matthew A. Wilson

Lic. No. 0402049270

06/03/2024

SHEET TITLE

**MECHANICAL** 

SCHEDULES

06/03/2024

SCALE:

DRAWN:

DATE:

DESIGNED:

CHECKED:

**SHEET #** 28 **OF** 51

HP-1 420 18 12 75 / 64 19.7 12.9 31 95 15 PROVIDE MANUFACTURER'S WALL-MOUNTING SUPPORT FOR HEAT PUMP.

INDOOR UNIT SHALL BE POWER FED FROM OUTDOOR UNIT.

INDOOR UNITS TO BE PROVIDED NOMINAL 1" DEFLECTION SPRING ISOLATORS. SEE SPECIFICATIONS.

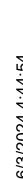
INDOOR UNIT NAMING TO MATCH FORMAT LISTED BELOW.

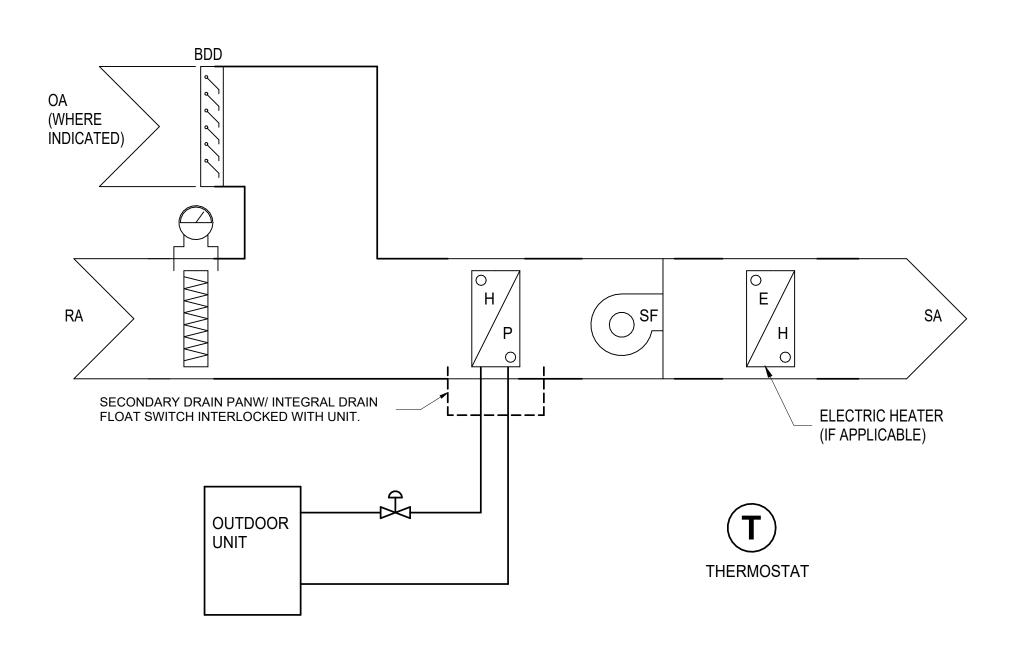
EACH PAIRED CASSETTE SHALL BE CONTROLLED BY A SINGLE THERMOSTAT

A. CC - FLOOR NUMBER - UNIT NUMBER ON FLOOR

a. (i.e. CC-A-UNIT 185 FOR AN A SIZE UNIT SERVING ROOM 185)

7. OUTDOOR UNIT NAMING TO MATCH FORMAT LISTED BELOW.





# SPLIT SYSTEM DX/HEAT PUMP SEQUENCE OF OPERATION:

**RUN CONDITIONS:** 

SYSTEMS SHALL RUN AS COMMANDED BY MANUFACTURER'S THERMOSTATS. INITIALLY PROGRAMMED SETPOINTS SHALL BE 75°F IN COOLING MODE AND 70°F IN HEATING MODE.

WHERE MULTIPLE HEAT PUMPS ARE LOCATED IN A SINGLE SPACE, A SINGLE THERMOSTAT SHALL CONTROL BOTH HEAT PUMPS.

FAN CONTROL: SUPPLY FANS AND CONDENSER FANS FOR ALL UNITS SHALL CYCLE WITH HEATING OR COOLING LOADS.

MODE CONTROL:
EACH SYSTEM SHALL BE CAPABLE OF AUTOMATIC CHANGEOVER BETWEEN HEATING AND COOLING MODES.

UPON A RISE IN SPACE TEMPERATURE ABOVE COOLING SETPOINT, THE EQUIPMENT CONTROLLER SHALL STAGE COOLING TO MAINTAIN SETPOINT TEMPERATURE.

UPON A DROP IN SPACE TEMPERATURE BELOW HEATING SETPOINT, THE EQUIPMENT CONTROLLER SHALL STAGE HEATING TO MAINTAIN SETPOINT TEMPERATURE. WHEN OUTDOOR TEMPERATURE IS BELOW 40°F, UNIT SHALL DISENGAGE HEAT PUMP AND CYCLE ELECTRIC AUXILIARY HEAT (IF APPLICABLE) TO MAINTAIN SETPOINT.

HEAT PUMP CONTROL DIAGRAM AND SEQUENCE OF OPERATION

# **ENGINEERS** ARCHITECTS **PLANNERS**

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |  |  |  |  |  |  |  |  |
|-----------|------|-------------|--|--|--|--|--|--|--|--|
| #         | DATE | DESCRIPTION |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |
|           |      |             |  |  |  |  |  |  |  |  |

COMMISSION NUMBER 22240290

| SCALE:    | 12" = 1'-0" |
|-----------|-------------|
| DESIGNED: | MAW         |
| DRAWN:    | KNF         |
| CHECKED:  | DFB         |
| DATE:     | 06/03/2024  |

Matthew A. Wilson Lic. No. 0402049270

SHEET TITLE MECHANICAL CONTROLS

> SHEET NUMBER M-801

**SHEET #** 29 **OF** 51

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

|   | KEVISIONS |             |  |  |  |  |  |  |  |
|---|-----------|-------------|--|--|--|--|--|--|--|
| # | DATE      | DESCRIPTION |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |
|   |           |             |  |  |  |  |  |  |  |

COMMISSION NUMBER 22240290

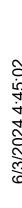
| DATE:     | 06/03/2024 |
|-----------|------------|
| CHECKED:  | DFB        |
| DRAWN:    | KNF        |
| DESIGNED: | MAW        |
| SCALE:    |            |
|           |            |

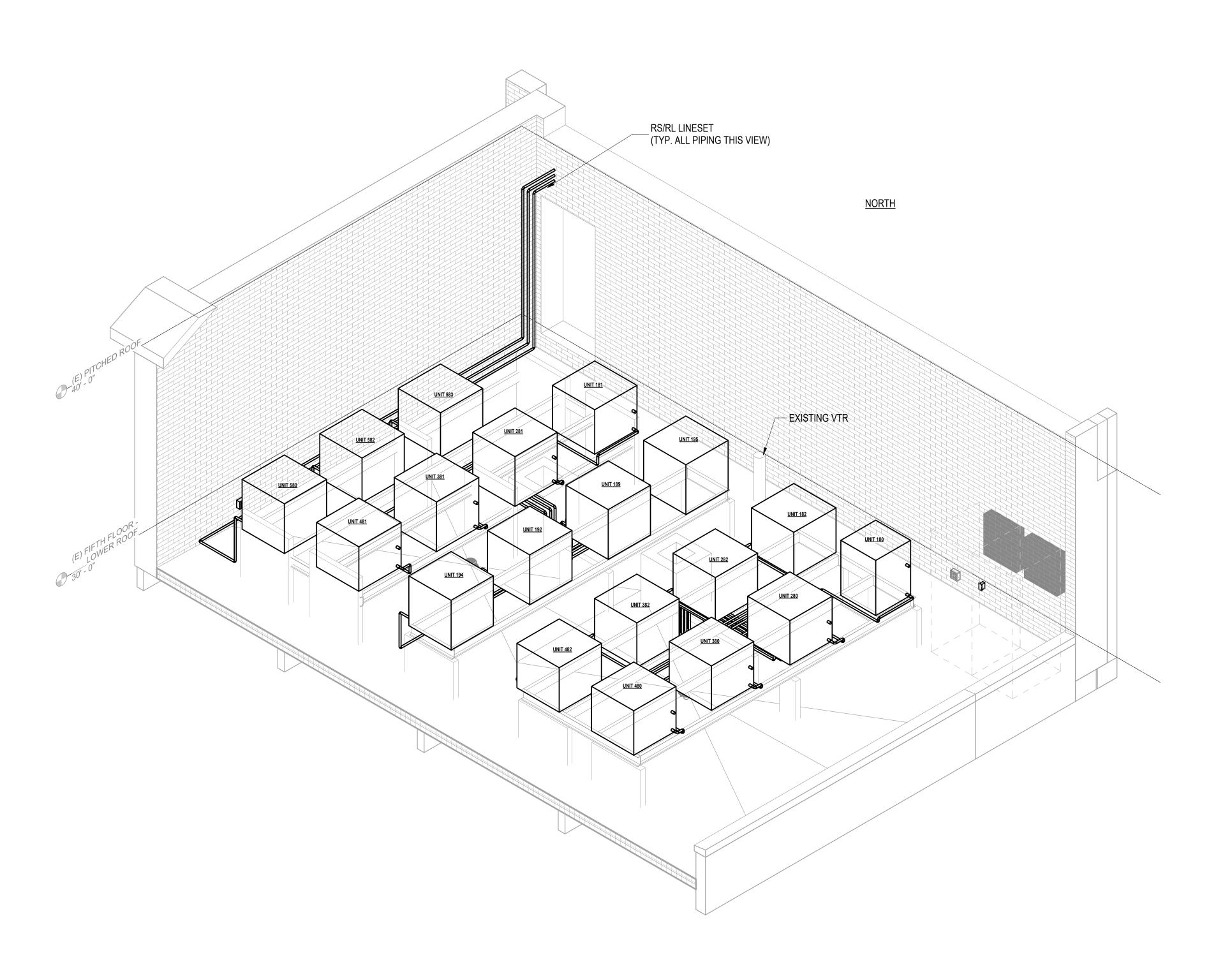
SHEET TITLE MECHANICAL 3D VIEW - NORTH ROOF

SHEET NUMBER M-901

**SHEET #** 30 **OF** 51

NORTH ROOF RISER





Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |
|-----------|------|-------------|
| #         | DATE | DESCRIPTION |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           | #    |             |

COMMISSION NUMBER 22240290

| 00, (22)  |             |
|-----------|-------------|
| DESIGNED: | MAW         |
| DRAWN:    | KNF         |
| CHECKED:  | DFB         |
| DATE:     | 06/03/2024  |
|           | V V V V V V |

Matthew A. Wilson
Lic. No. 0402049270

PORTSONAL ENGINEER

SHEET TITLE
MECHANICAL 3D
VIEW - SOUTH
ROOF

sheet number M-902

**SHEET #** 31 **OF** 51

SOUTH ROOF RISER

CONTROL CURRENT TRANSFORMER CONDENSING UNIT DEMOLISH

DOWN EXISTING

ETR

EMPTY CONDUIT WITH PULL WIRE OR TAP ENCLOSED CIRCUIT BREAKER EMT ELECTRICAL METALLIC TUBING EQ **EQUIPMENT** 

EXISTING TO REMAIN

FLA FULL LOAD AMPS GEC GROUNDING ELECTRODE CONDUCTOR GFCI GROUND FAULT CIRCUIT INTERRUPT GROUND FAULT EQUIPMENT PROTECTION GRC GALVANIZED RIGID STEEL CONDUIT

GND GROUND **HORSEPOWER** IN ACCORDANCE WITH IAW

kAIC ONE-THOUSAND AMPERE INTERRUPTING CAPACITY

kW KILOWATT kVA KILOVOLT-AMPERES

LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT FLNC

LTS LIGHTS **METER** 

MCB MAIN CIRCUIT BREAKER MIN MINIMUM

MLO MAIN LUGS ONLY NEUTRAL (N) NEW NOT APPLICABLE

NEC 2020 NATIONAL ELECTRICAL CODE **NECA** NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION

NFPA NATIONAL FIRE PROTECTION ASSOCIATION NIC NOT IN CONTRACT

NO NUMBER ELECTRICAL PHASE RECPT(S) RECEPTACLE(S)

ROOM RMS, RGS GALVANIZED RIGID METAL CONDUIT SURFACE MOUNT

TOTAL CONNECTED LOAD TYP TYPICAL UNLESS OTHERWISE NOTED UON

VOLTAGE, VOLTS VIRGINIA UNIFORM STATEWIDE BUILDING CODE

WIRE OR WATTS WITH WYE CONNECTION DELTA CONNECTION **ELECTRICAL PHASE** INCH AND A HALF

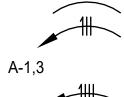
### **GENERAL NOTES**

- LAY OUT WORK IN ADVANCE. EXERCISE CARE WHERE CUTTING, CHANNELING, CHASING, OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILING, OR OTHER SURFACES IS NECESSARY FOR PROPER INSTALLATION, SUPPORT OR ANCHORAGE OF CONDUIT, RACEWAYS, OR OTHER ELECTRICAL WORK. REPAIR DAMAGE TO BUILDINGS, PIPING, AND EQUIPMENT USING SKILLED CRAFTSMEN OF TRADES INVOLVED.
- 2. COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES IN FIELD PRIOR TO BEGINNING ANY ROUGH-IN WORK. COORDINATE ALL ELECTRICAL WORK, WITH MECHANICAL AND ARCHITECTURAL DRAWINGS PRIOR TO ROUGH IN.
- REMOVAL OF EXISTING ELECTRICAL DEVICES AND EQUIPMENT INCLUDES EQUIPMENT'S ASSOCIATED WIRING, INCLUDING CONDUCTORS, CABLES, EXPOSED CONDUIT, SURFACE METAL RACEWAYS, BOXES, AND FITTINGS, BACK TO EQUIPMENT'S POWER SOURCE AS
- 4. MAINTAIN CONTINUITY OF EXISTING CIRCUITS OF EQUIPMENT TO REMAIN. MAINTAIN EXISTING CIRCUITS OF EQUIPMENT ENERGIZED. RESTORE CIRCUITS WIRING AND POWER WHICH ARE TO REMAIN BUT WERE DISTURBED DURING DEMOLITION BACK TO ORIGINAL CONDITION.
- EXISTING CONCEALED WIRING TO BE REMOVED SHALL BE DISCONNECTED FROM ITS SOURCE. REMOVE CONDUCTORS; CUT CONDUIT FLUSH WITH FLOOR, UNDERSIDE OF FLOOR, AND THROUGH WALLS; AND SEAL OPENINGS.
- DISCONNECT AND REMOVE ALL UNUSED BOXES, CONDUIT, AND WIRE. EXISTING CONDUIT RUN CONCEALED IN WALLS, ABOVE ACCESSIBLE CEILINGS, OR IN FLOORS MAY BE ABANDONED IN PLACE OR REUSED. UNUSED BOXES MOUNTED FLUSH IN WALLS MAY REMAIN: PROVIDE BLANK METAL COVER PLATE. IF WIRING PASSES THROUGH BOX LABEL COVER PLATE TO INDICATE CIRCUIT(S) PRESENT.
- PROPERLY SEAL ALL NEW AND EXISTING FLOOR, CEILING, AND WALL PENETRATIONS IN ACCORDANCE WITH VCC.
- FURNISH NEW UPDATED PANELBOARD SCHEDULES FOR EXISTING PANELS AFFECTED BY THIS WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING AND NEW BRANCH CIRCUITS.
- AT THE CONTRACTOR'S OPTION, HOMERUNS MAY BE COMBINED IN A SINGLE RACEWAY TO A MAXIMUM OF THREE DIFFERENT PHASES. CONTRACTOR SHALL DERATE THE CIRCUIT CONDUCTOR'S AMPACITY AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS AS NECESSARY. SHARED NEUTRALS ARE NOT ALLOWED.
- 10. ALL NEW WIRING SHALL BE CONCEALED WHERE POSSIBLE. FLEXIBLE CONDUIT MAY BE FISHED DOWN EXISTING WALLS IN ACCORDANCE WITH THE NEC. SURFACE MOUNTED METAL RACEWAY MAYBE UTILIZED WHERE WIRING CANNOT BE CONCEALED.
- 11. ELECTRICAL EQUIPMENT AND CIRCUITS SHALL BE MARKED AND LABELED FOR IDENTIFICATION PURPOSES IN ACCORDANCE WITH THE NEC. MECHANICALLY FASTENED LAMINATED NAMEPLATES SHALL BE PROVIDED ON THE EXTERIOR SURFACES OF ALL ELECTRICAL EQUIPMENT. JUNCTION AND PULL BOXES MAY BE LABELED USING A BLACK INDELIBLE MARKER. ALL SWITCH COVERS AND OUTLET BOX COVERS SHALL BE LABELED WITH CLEAR SELF ADHESIVE TAPE WITH BLACK LETTERS/NUMBERS. LABELS SHALL INDICATE PANEL DESIGNATION AND BREAKER NUMBER, PLACE LABEL ON THE BACK OF THE COVER PLATE.
- 12. DASHED LINES INDICATE ITEAMS TO BE REMOVED UNDER THIS CONTRACT. DARKER LINE WIEGHTS INDICATE NEW WORK. LIGHTER LINE WEIGHTS INDICATE EXISTING TO REMAIN.
- CONTRACTOR MAY REUSE EXISTING HEAT PUMP WIRING.

### **ELECTRICAL LEGEND**

ELECTRICAL EQUIPMENT CONNECTION

20A. 125V DUPLEX RECEPTACLE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUTING PROTECTION; "WP" INDICATES WEATHERPROOF ENCLOSURE; MOUNT 24"AFF, UON



BRANCH CIRCUIT OR FEEDER WIRING IN CONDUIT, NO TICK MARKS INDICATE 2#12 CONDUCTORS AND 1#12 GROUND IN 1/2" CONDUIT UON. TICK MARKS, WHEN SHOWN, INDICATE NUMBER OF #12 CONDUCTORS IF OTHER THAN THREE: (1) INDICATES GROUND. CONDUIT LARGER THAN 1/2" AND WIRE LARGER THAN #12. SHALL BE AS

HOMERUNS TO PANEL. PANEL AND CIRCUIT DESIGNATIONS AS INDICATED

SURFACE MOUNTED PANELBOARD, 208Y/120V, 3Ø, 4W UON SURFACE MOUNTED PANELBOARD, 480Y/277V, 3Ø, 4W UON

ELECTRICAL KEYNOTE

1 FIRE HOUR RATED WALL 2 FIRE HOUR RATED WALL

### CODES AND STANDARDS

ASHRAE-90.1-2016

2021 VIRGINIA CONSTRUCTION CODE 2021 VIRGINIA STATEWIDE FIRE PREVENTION CODE 2021 VIRGINIA ENERGY CONSERVATION CODE REFER TO G-002 2021 VIRGINIA MECHANICAL CODE 2021 VIRGINIA FUEL GAS CODE 2021 VIRGINIA PLUMBING CODE 2021 VIRGINIA EXISTING BUILDING CODE REFER TO G-002 NFPA 70-2020: NATIONAL ELECTRICAL CODE NFPA 72-2019: NATIONAL FIRE ALARM AND SIGNALING CODE NFPA 101-2018: LIFE SAFETY CODE



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING **DRAWINGS** 

GLADDING RESIDENCE HALL 3 - HVAC AND REPLACEMENT

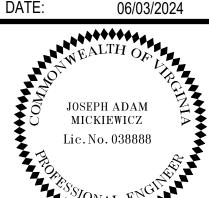
PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |
|-----------|------|-------------|
| #         | DATE | DESCRIPTION |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |

**COMMISSION NUMBER** 22240290

As indicated CHECKED:



**ELECTRICAL** LEGEND, ABBREVIATIONS,

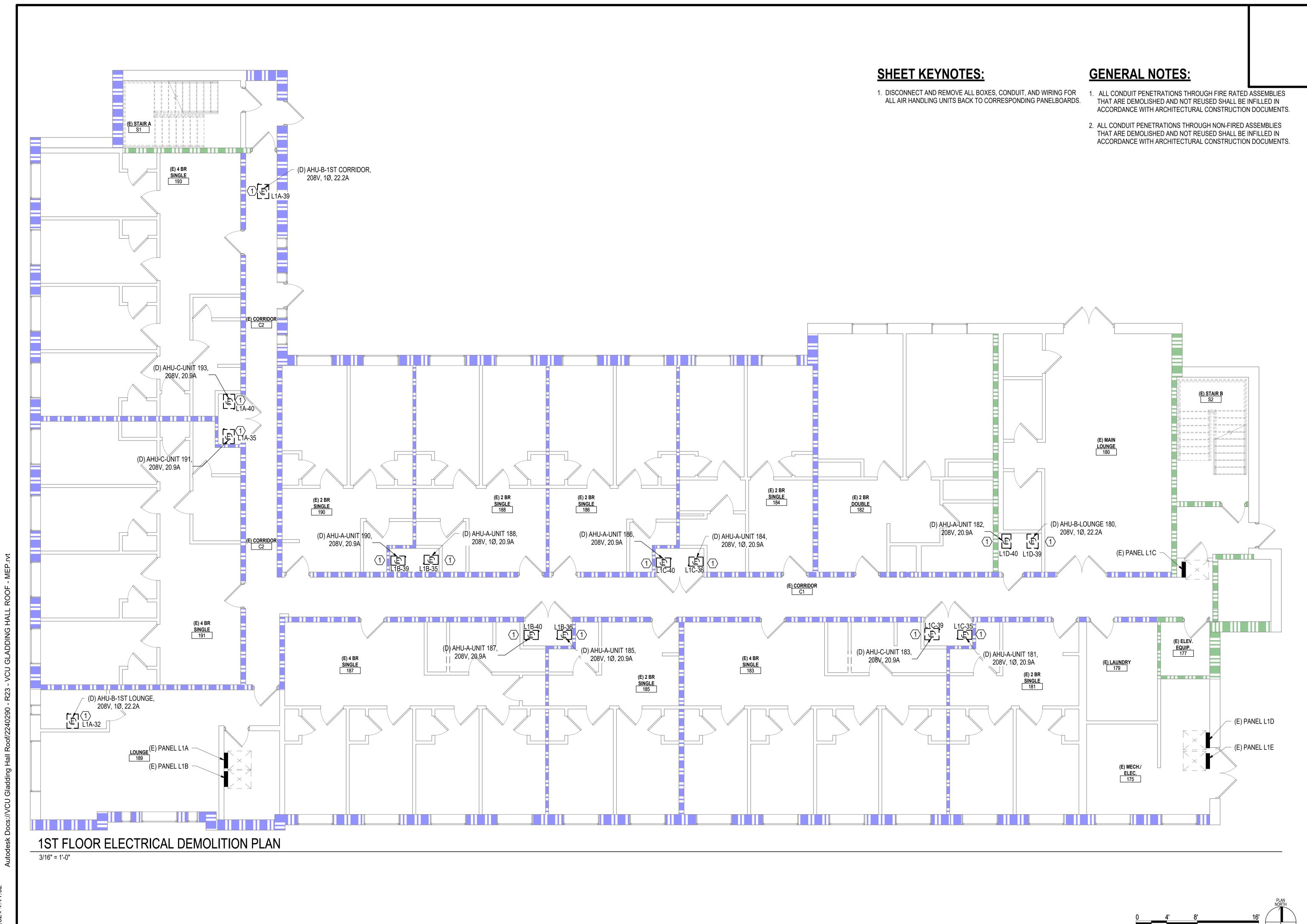
AND NOTES

SHEET NUMBER E-001

**SHEET #** 32 **OF** 51

**WARNING NOTE:** 

**EXISTING STRUCTURE IS HOLLOW CORE PLANK** CONSTRUCTION. ALL NEW PENETRATIONS SHALL BE THROUGH THE CORES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL CORE LOCATIONS PRIOR TO DRILLING OR CUTTING INTO CONCRETE PLANKS.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |
|-----------|------|-------------|--|
| #         | DATE | DESCRIPTION |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |

COMMISSION NUMBER 22240290

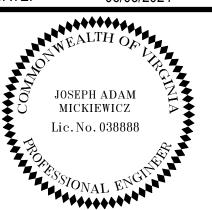
 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

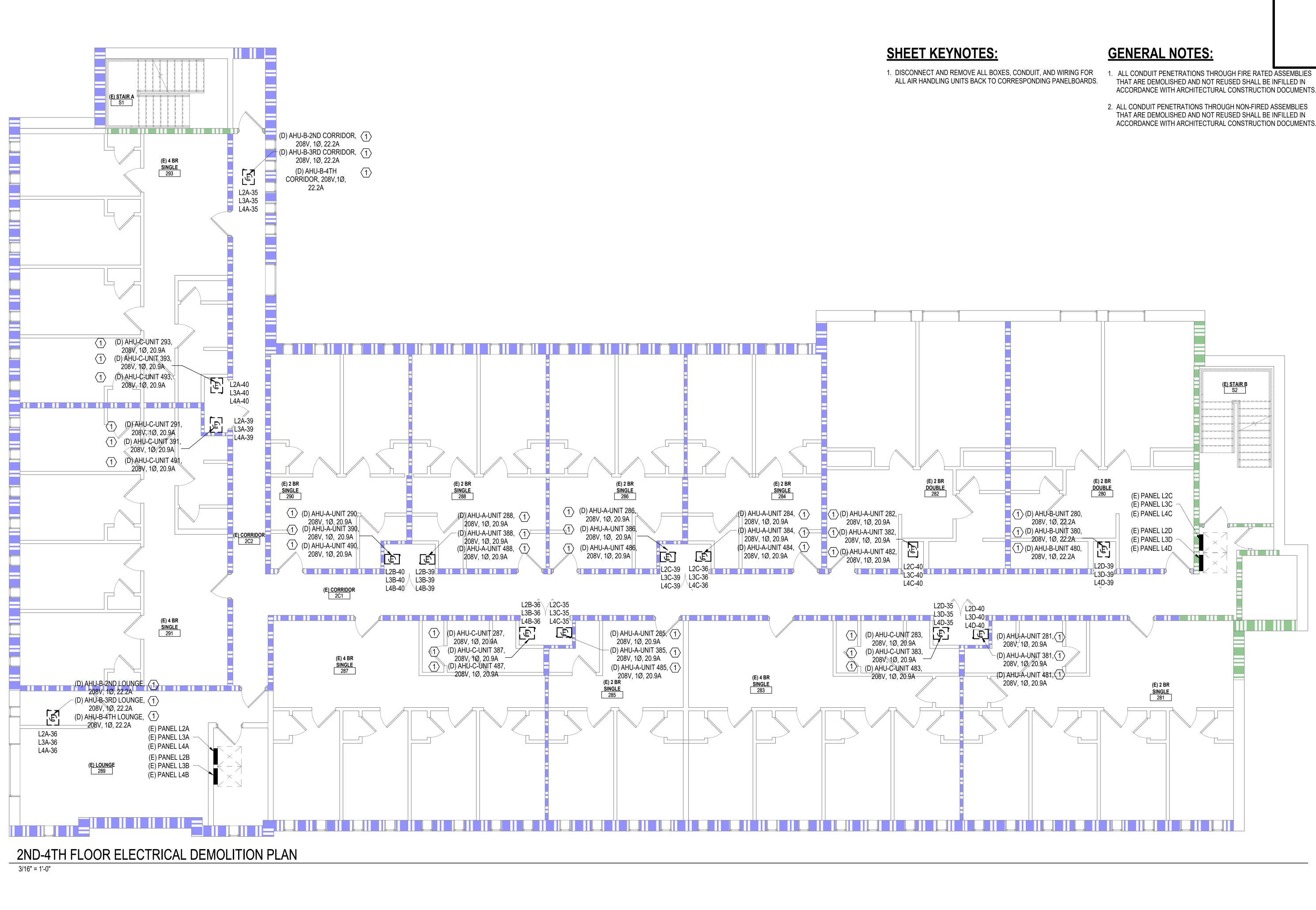
 DATE:
 06/03/2024



1ST FLOOR
ELECTRICAL
POWER PLAN DEMOLITION

SHEET NUMBER
ED101

**SHEET #** 33 **OF** 51



Design like YOU mean it! 449 MCLAWS CIRCLE

WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

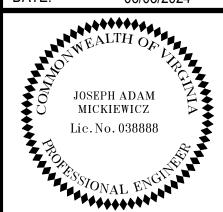
PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |  |
|-----------|------|-------------|--|
| #         | DATE | DESCRIPTION |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |

**COMMISSION NUMBER** 22240290

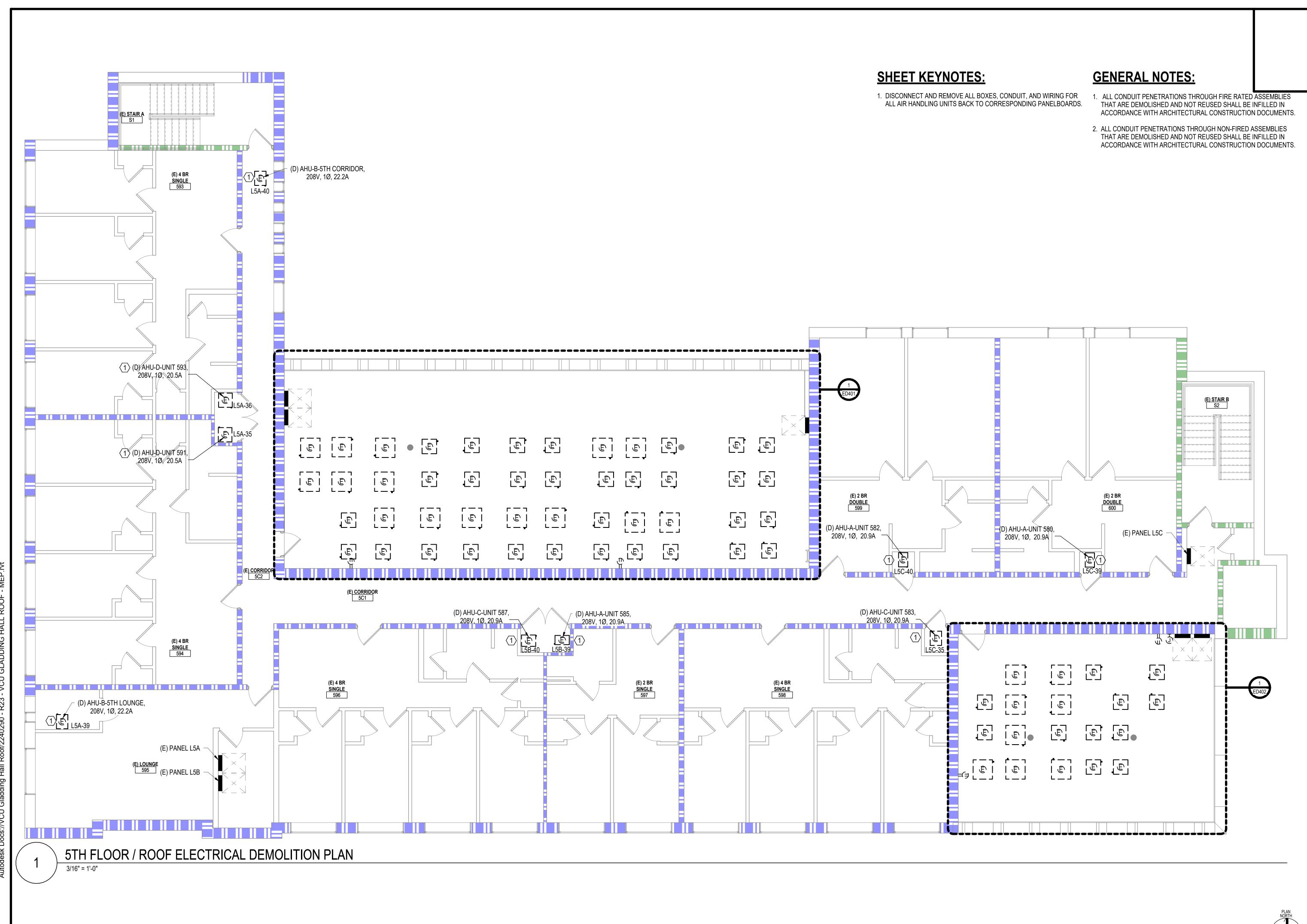
SCALE: 3/16" = 1'-0" DESIGNED: JAM DRAWN: VT CHECKED: MAW DATE: 06/03/2024



SHEET TITLE 2ND-4TH FLOOR **ELECTRICAL** POWER PLAN -**DEMOLITION** 

> SHEET NUMBER ED102

**SHEET #** 34 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING
RESIDENCE HALL
3 - HVAC AND
ROOF
REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | REVISIONS |             |  |  |  |
|---|-----------|-------------|--|--|--|
| # | DATE      | DESCRIPTION |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |
|   |           |             |  |  |  |

COMMISSION NUMBER
22240290

ALE: 3/16" = 1'-0"

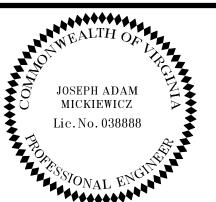
 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

 DATE:
 06/03/2024



SHEET TITLE

5TH FLOOR
ELECTRICAL
POWER PLAN DEMOLITION

SHEET NUMBER ED103

**SHEET #** 35 **OF** 51

# ED103 ED401

# **SHEET KEYNOTES:**

- 1. DISCONNECT AND REMOVE ALL BOXES, CONDUIT, AND WIRING ON THE ROOF TOP BACK TO THE CORRESPONDING PANELBOARD.
- 2. DISCONNECT AND REMOVE WEATHERPROOF RECEPTACLES LOCATED ON THE ROOF TOP.
- 3. UNIT SHALL BE RELOCATED. DISCONNECT AND REMOVE ALL BOXES, CONDUIT, AND WIRING ON THE ROOF TOP BACK TO THE CORRESPONDING PANELBOARD.

### **GENERAL NOTES:**

- 1. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS
- 2. ALL CONDUIT PENETRATIONS THROUGH NON-FIRED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. EXISTING LIGHT FIXTURE ON ROOF TO REMAIN.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

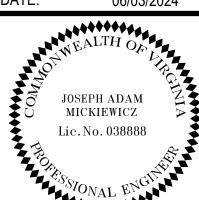
722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

|  | COMMI     | SSION NUMBER  |  |
|--|-----------|---------------|--|
|  | 22        | 240290        |  |
|  | <b>ZZ</b> | <b>240230</b> |  |

3/8" = 1'-0"

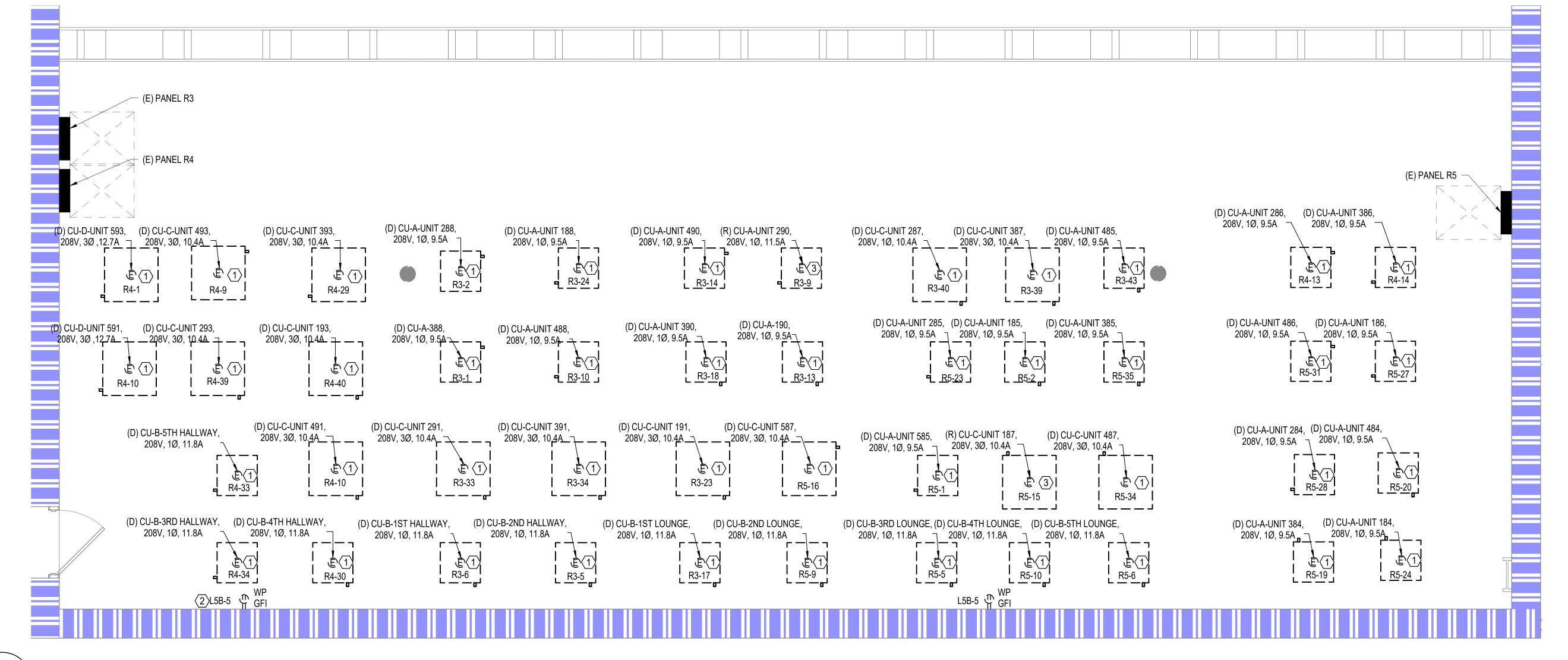
DESIGNED: JAM DRAWN: VT CHECKED: MAW DATE: 06/03/2024



SHEET TITLE **ELECTRICAL DEMOLITION** PLAN - NORTH ROOF

> SHEET NUMBER ED401

**SHEET #** 36 **OF** 51



5TH FLOOR / ROOF ELECTICAL DEMOLITION PLAN - NORTH ROOF

### **SHEET KEYNOTES:**

- 1. DISCONNECT AND REMOVE ALL BOXES, CONDUIT, AND WIRING ON THE ROOF TOP BACK TO THE CORRESPONDING PANELBOARD.
- 2. REMOVE AND RELOCATE LOW WALL MOUNTED JUCTION BOX TO

NEW ROOF TOP AFTER ARCHITECTURAL NEW WORK IS COMPLETED.

- 3. DEMOLISH WEATHERPROOF RECEPTACLES LOCATED ON THE ROOF TOP, RETAIN EXISTING WIRING.
- 4. UNIT SHALL BE RELOCATED. DISCONNECT AND REMOVE ALL BOXES, CONDUIT, AND WIRING ON THE ROOF TOP BACK TO THE CORRESPONDING PANELBOARD.

### **GENERAL NOTES:**

- 1. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS
- 2. ALL CONDUIT PENETRATIONS THROUGH NON-FIRED ASSEMBLIES THAT ARE DEMOLISHED AND NOT REUSED SHALL BE INFILLED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. EXISTING LIGHT FIXTURE ON ROOF TO REMAIN.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

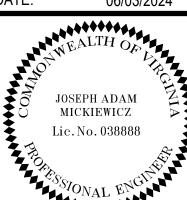
GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004 722 W CARY ST, RICHMOND, VA

| REVISIONS |      |             |
|-----------|------|-------------|
| #         | DATE | DESCRIPTION |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |
|           |      |             |

**COMMISSION NUMBER** 22240290

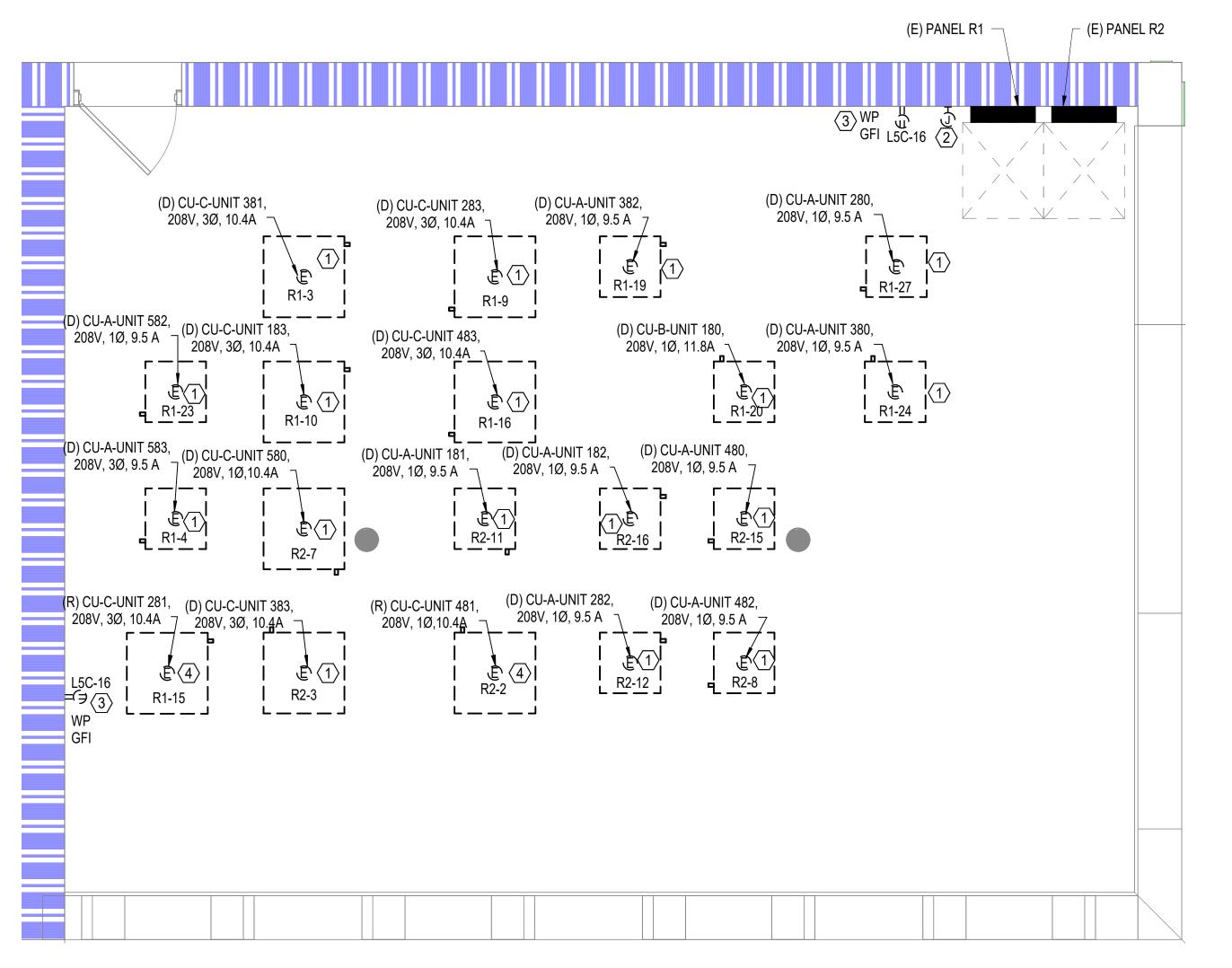
3/8" = 1'-0" DESIGNED: JAM DRAWN: CHECKED: MAW DATE: 06/03/2024



**ELECTRICAL DEMOLITION** PLAN - SOUTH ROOF

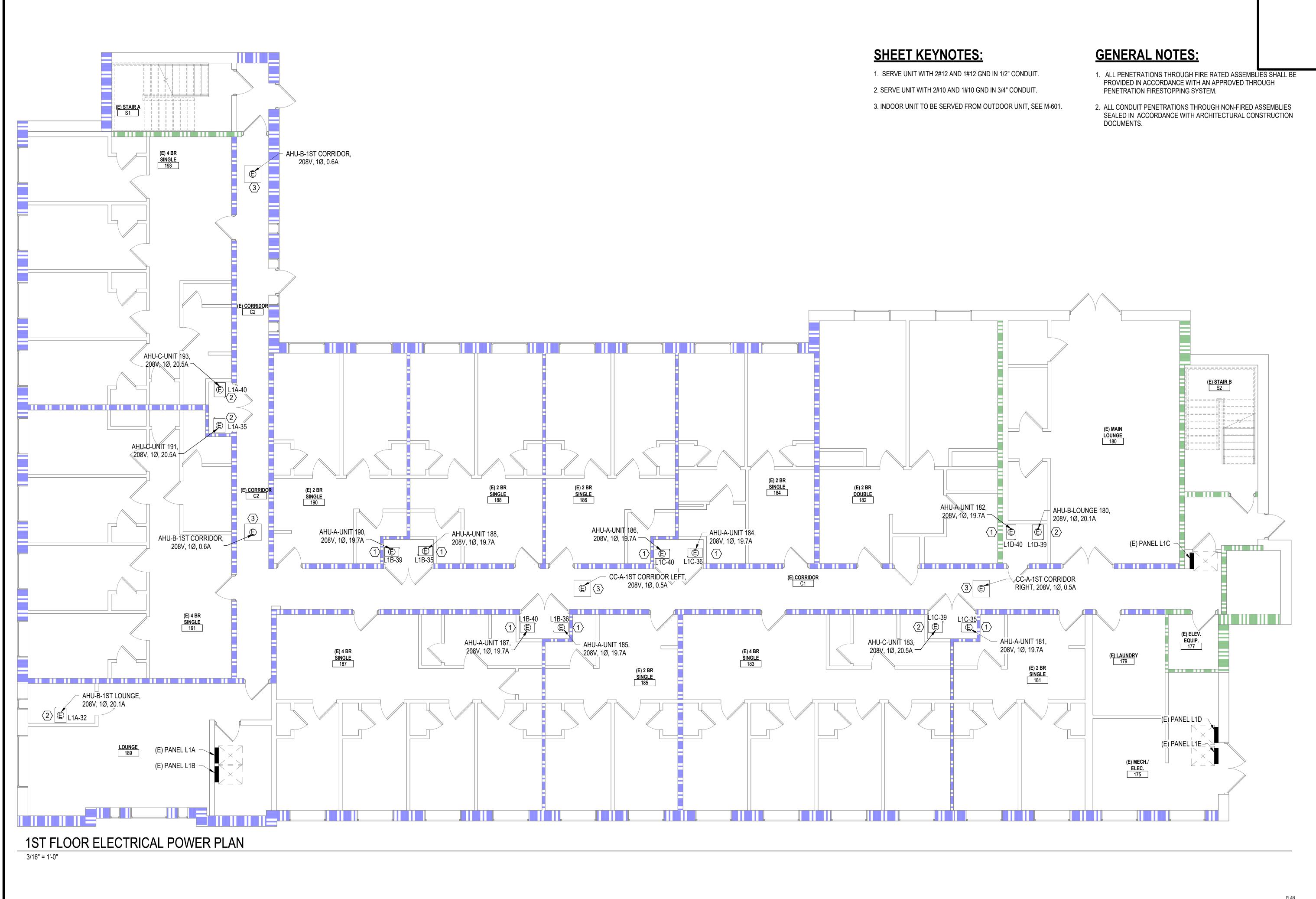
> SHEET NUMBER ED402

**SHEET #** 37 **OF** 51



5TH FLOOR / ROOF ELECTICAL DEMOLITION PLAN - SOUTH ROOF

ED103 ED402 3/8" = 1'-0"



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |
|-----------|------|-------------|--|
| #         | DATE | DESCRIPTION |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |
|           |      |             |  |

COMMISSION NUMBER 22240290

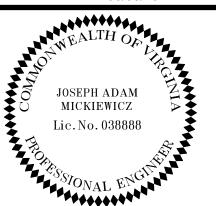
 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

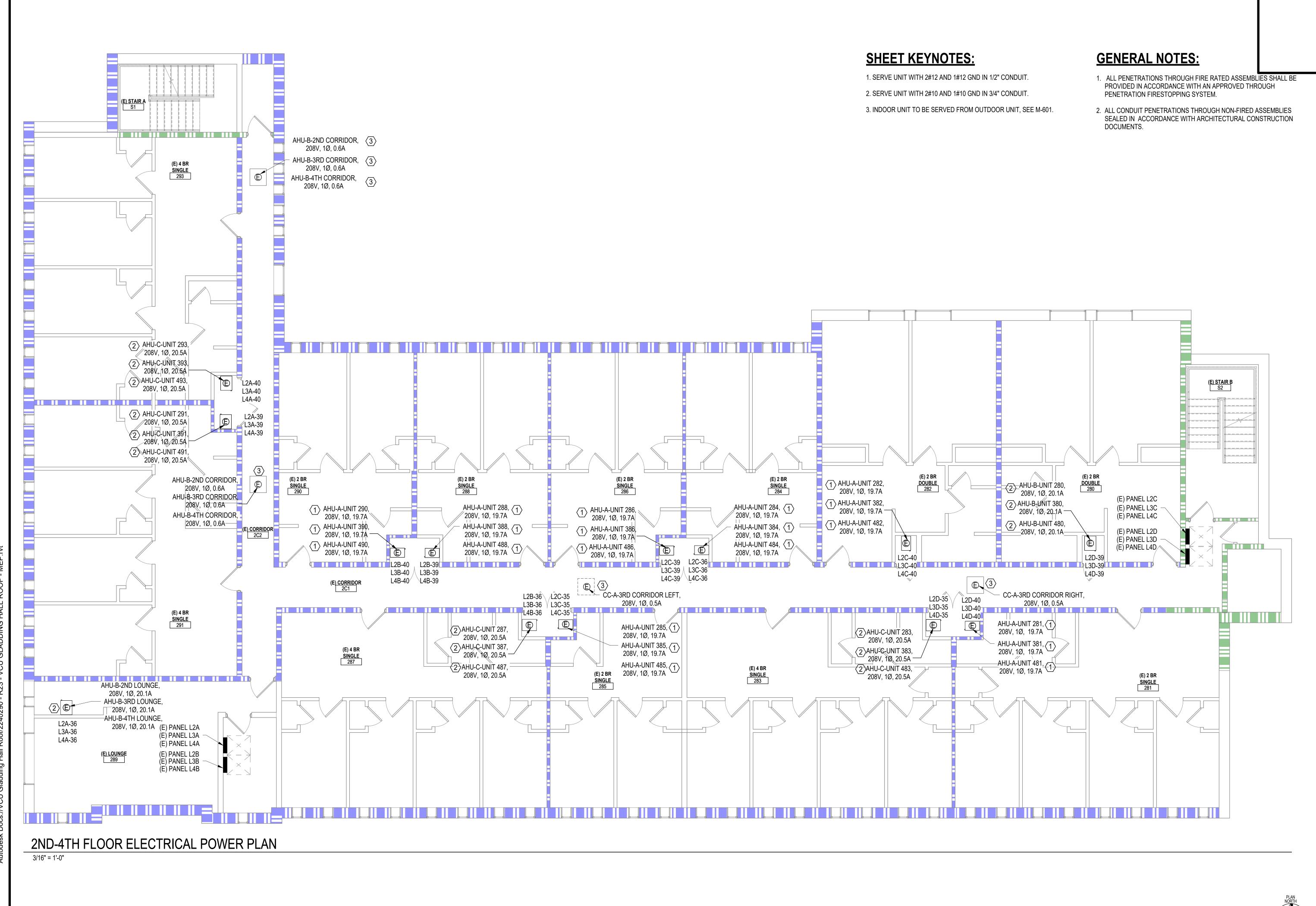
 DATE:
 06/03/2024



1ST FLOOR
ELECTRICAL
POWER PLAN NEW WORK

SHEET NUMBER
E-101

**SHEET #** 38 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

COMMISSION NUMBER 22240290

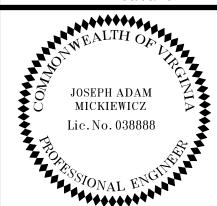
 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

 DATE:
 06/03/2024



SHEET TITLE

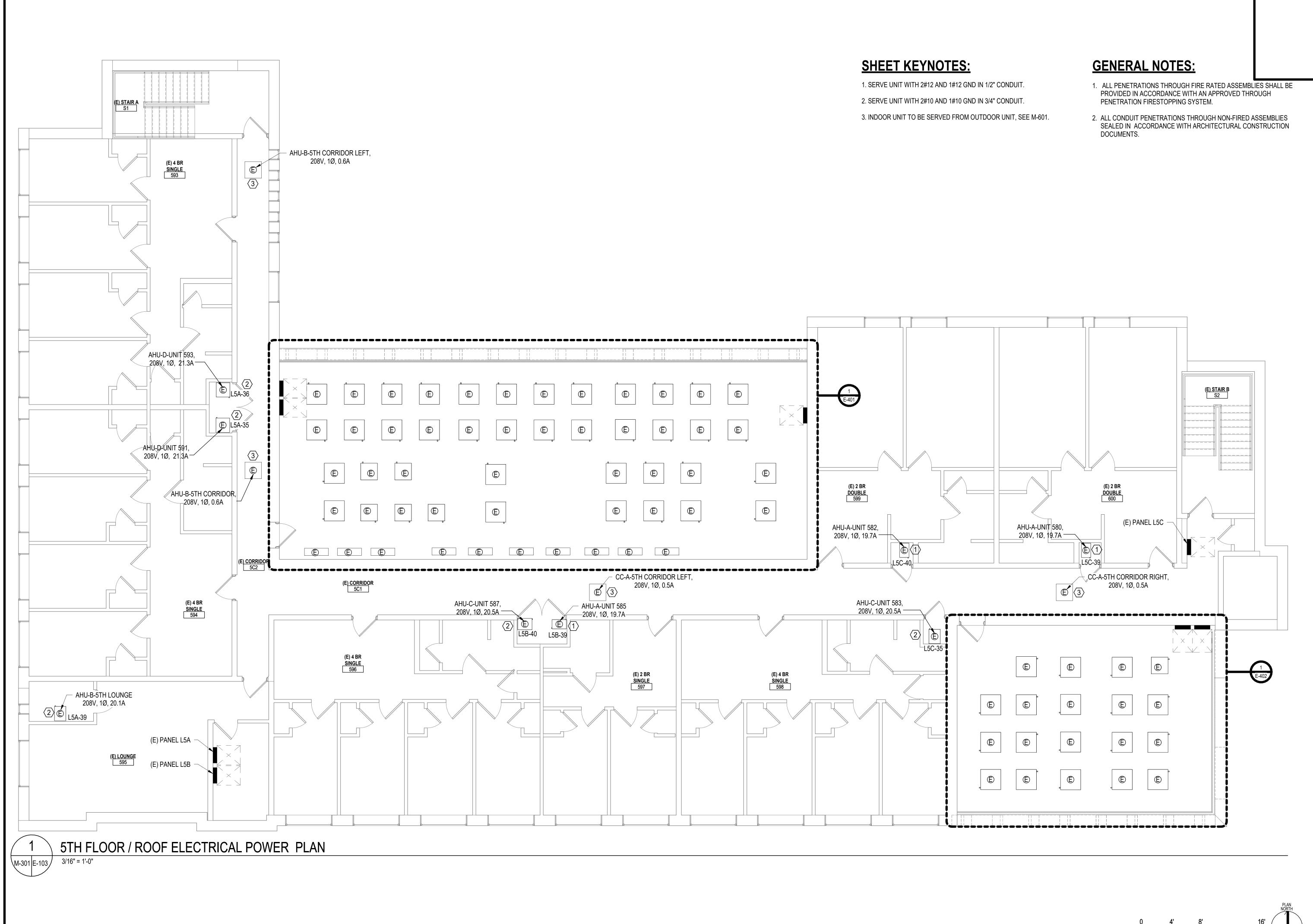
2ND-4TH FLOOR

ELECTRICAL

POWER PLAN 
NEW WORK

SHEET NUMBER
E-102

**SHEET #** 39 **OF** 51



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

| REVISIONS |      |             |  |  |
|-----------|------|-------------|--|--|
| #         | DATE | DESCRIPTION |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |
|           |      |             |  |  |

commission number 22240290

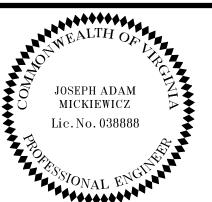
 SCALE:
 3/16" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

 DATE:
 06/03/2024



SHEET TITLE

5TH FLOOR
ELECTRICAL
POWER PLAN NEW WORK

SHEET NUMBER
E-103

SCALE: 3/16" = 1'-0"

E-103

SHEET # 40 OF 51

3. PROVIDE AND WIRE NEW WEATHERPROOF RECEPTACLES.

4. PROVIDE NEW WALL MOUNTED HEAT PUMPS WITH NEW WIRING, CONDUIT, AND SUPPORTS TO CORRESPONDING PANELBOARDS.

5. RELOCATE EXISTING HEAT PUMP CONDENSER.

6. OUTDOOR UNITS TO SERVE INDOOR UNITS. SEE M-601 FOR MORE INFORMATION.

### **GENERAL NOTES:**

- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED THROUGH PENETRATION FIRESTOPPING SYSTEM.
- ALL CONDUIT PENETRATIONS THROUGH NON-FIRED ASSEMBLIES SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. EXISTING LIGHT FIXTURE ON ROOF TO REMAIN.

ENGINEERS ARCHITECTS PLANNERS

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING
RESIDENCE HALL
3 - HVAC AND
ROOF
REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS

# DATE DESCRIPTION

COMMISSION NUMBER 22240290

 SCALE:
 3/8" = 1'-0"

 DESIGNED:
 JAM

 DRAWN:
 VT

 CHECKED:
 MAW

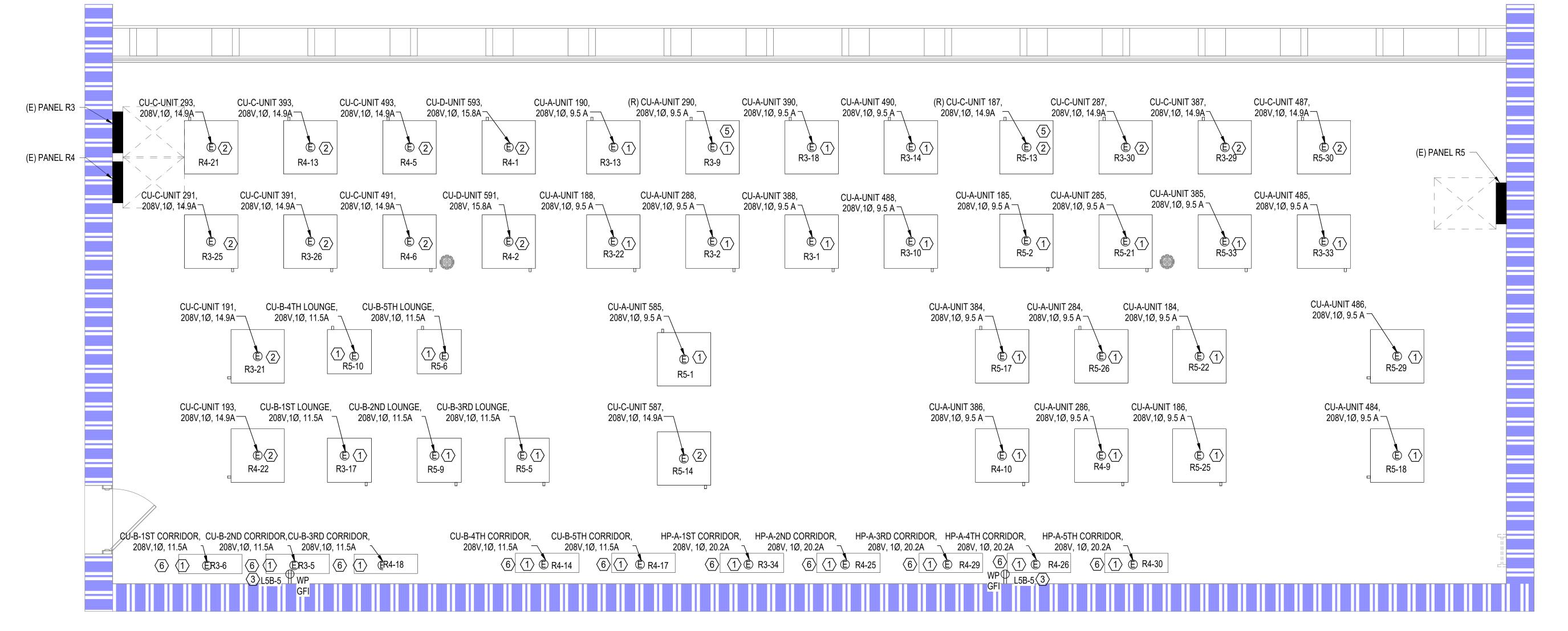
 DATE:
 06/03/2024

JOSEPH ADAM
O MICKIEWICZ
Lic. No. 038888

SHEET TITLE
ELECTRICAL
ENLARGED
NORTH ROOF
PLAN

SHEET NUMBER
E-401

**SHEET #** 41 **OF** 51



1 5TH FLOOR / ROOF ELECTRICAL ENLARGED NEW WORK PLAN - NORTH ROOF

E-103 E-401 3/8" = 1'-0"

SCALE: 3/8" = 1'-0"

3/8" = 1'-0"

# **SHEET KEYNOTES:**

- 1. SERVE HEAT PUMP UNITS WITH 2#12 AND 1#12 GND IN 1/2"C.
- 2. SERVE HEAT PUMP UNIT WITH 2#10 AND 1#10 GND IN 3/4" C.
- 3. RELOCATE EXISTING HEAT PUMP CONDENSER.
- 4. PROVIDE AND WIRE NEW WEATHERPROOF RECETACLES.
- 5. REINSTALL, RECONNECT AND MOUNT JUNCTION BOX ON WALL A MINIMUM OF 18" AFF AFTER NEW ROOF TOP WORK.

### **GENERAL NOTES:**

- 1. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED THROUGH PENETRATION FIRESTOPPING SYSTEM.
- 2. ALL CONDUIT PENETRATIONS THROUGH NON-FIRED ASSEMBLIES SEALED IN ACCORDANCE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- 3. EXISTING LIGHT FIXTURE ON ROOF TO REMAIN.



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

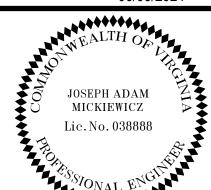
PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | REVISIONS |             |  |
|---|-----------|-------------|--|
| # | DATE      | DESCRIPTION |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |
|   |           |             |  |

**COMMISSION NUMBER** 22240290

| 007 (22.  | 0/0 1 0    |  |
|-----------|------------|--|
| DESIGNED: | JAM        |  |
| DRAWN:    | VT         |  |
| CHECKED:  | MAW        |  |
| DATE.     | 06/03/2024 |  |

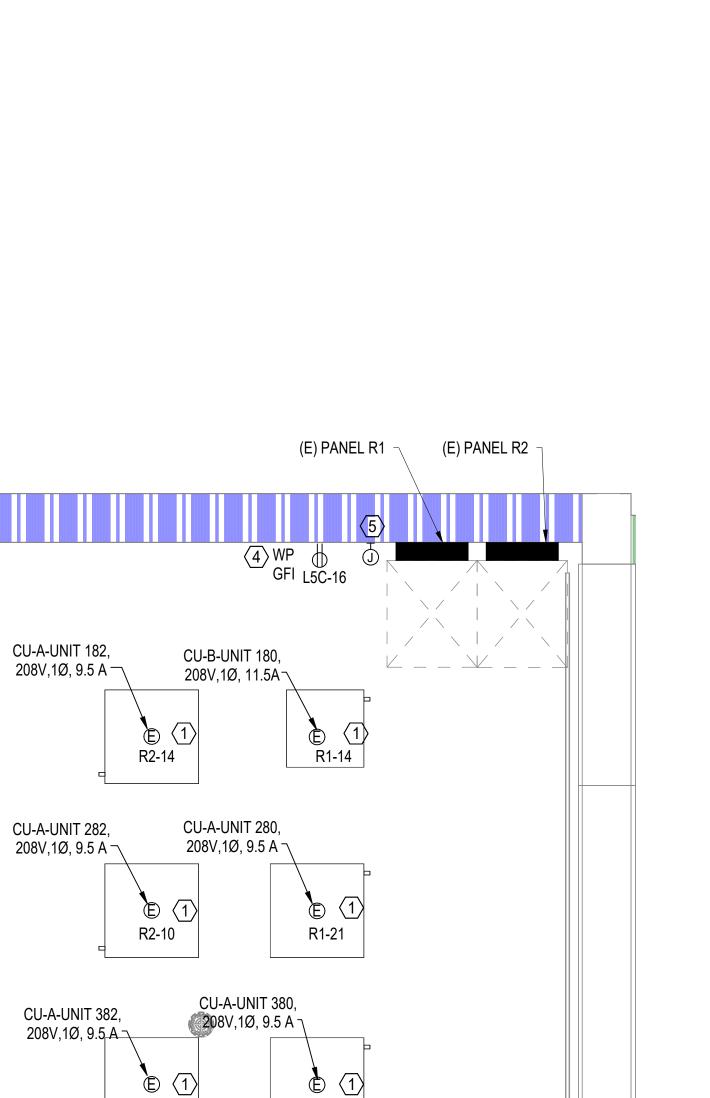


SHEET TITLE **ELECTRICAL ENLARGED** SOUTH ROOF PLAN

> SHEET NUMBER E-402

**SHEET #** 42 **OF** 51

SCALE: 3/8" = 1'-0"



5TH FLOOR / ROOF ELECTRICAL ENLARGED NEW WORK PLAN - SOUTH ROOF

E-103 E-402 3/8" = 1'-0"

CU-A-UNIT 181,

CU-C-UNIT 281,

208V, 1Ø, 14.9A∖

CU-C-UNIT 381, \_\_208V, 1Ø, 1<u>4.9</u>A¬

(R) CU-D-UNIT 481,

<sup>208V</sup>, 15.8A

(2)

R2-9(3)

CU-A-UNIT 583,

208V,1Ø, 9.5 A ¬

CU-A-UNIT 582, 208V,1Ø, 9.5<sub>-</sub>A-\(\sigma\)

CU-C-UNIT 580,

208V, 1Ø, 14.9A¬

R2-5

208V, 10 4 — L5C-16

208V,1Ø, 9.5 A √

R2-2

CU-C-UNIT 195,

208V, 1Ø, 14.9A¬

CU-C-UNIT 189, 208V, 1Ø, 14.9A

CU-C-UNIT 192,

208V, 1Ø, 14.9A

CU-C-UNIT 194, 208V, 1Ø, 14.9A~

R1-6

R1-5

(E) (2)

R2-1

R1-10

R1-13

Ē

R2-6

CU-A-UNIT 482, 208V,1Ø, 9.5 A √

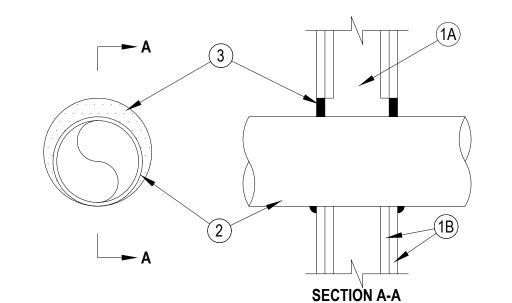
R1-18

R2-13

CU-A-UNIT 480, 208V,1Ø, 9.5 A ⁊

# System No. W-L-1054

| ANSI/UL1479 (ASTM E814)                                          | CAN/ULC S115                               |
|------------------------------------------------------------------|--------------------------------------------|
| F Ratings —1 and 2 Hr (See Items 1 and 3)                        | F Ratings — 1 and 2 Hr (See Items 1 and 3) |
| T Rating — 0 Hr                                                  | FT Rating — 0 Hr                           |
| L Rating (Without Movement) at Ambient— Less<br>Than 1 CFM/sq ft | FH Ratings —1 and 2 Hr (See Items 1 and 3) |
| L Rating (Without Movement) at 400°F— Less<br>Than 1 CFM/sq ft   | FTH Rating — 0 Hr                          |
| M Rating (Movement) — See Table 1                                | FTH Rating — 0 Hr                          |
|                                                                  | L Rating at Ambient — Less Than 5.1 L/s/m2 |
|                                                                  | L Rating at 204°C — Less Than 5.1 L/s/m2   |



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. For M Rating, steel studs to be min 3-5/8 in. (92 mm) wide. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.

B. Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls. The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly. The M Rating is applicable only to 1 hr rated walls.

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 21, 2020

| Page: 1 of 2 | Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 21, 2020

Classified by

Underwriters Laboratories, Inc.

cables may be used:

to UL 1479 and CAN/ULC-S115

Page: 2 of 2

ANSI/UL1479 (ASTM E814)

T Rating — 0 and 2 Hr (See Item 3C)

F Rating — 2 Hr

any UL Classified Concrete Blocks\*. Max diam of opening is 4 in. (102 mm).

A. Steel Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

C. Conduit — Nom 2 in. (51 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.

D. Copper Tubing — Nom 1/4 in. (6 mm) diam (or smaller) Type L (or heavier) copper tubing.

E. Copper Pipe — Nom 1/4 in. (6 mm) diam (or smaller) Regular (or heavier) copper pipe.

B. Iron Pipe — Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.

F. Cables — Max 7/C No. 12 AWG cable with polyvinyl chloride (PVC) jacket.

System No. C-BJ-8020

CAN/ULC S115

FT Rating — 0 and 2 Hr (See Item 3C)

FTH Rating — 0 and 2 Hr (See Item 3C)

**SECTION A-A** 

F Rating — 2 Hr

FH Rating — 2 Hr

System No. W-L-1054

2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used: A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe. C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) . diam steel conduit.

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

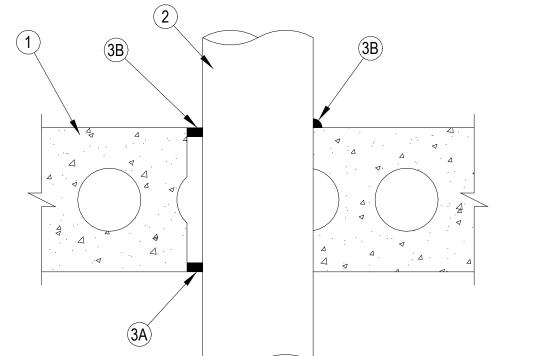
3. Fill, Void or Cavity Material\* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC-FS-ONE MAX Intumescent Sealant

| Movement<br>Direction | Penetrant<br>Item | Nominal<br>Penetrant<br>Diameter | Annular<br>Space | Movement | Sealant Depth | F-Rating | L Rating with Movement |
|-----------------------|-------------------|----------------------------------|------------------|----------|---------------|----------|------------------------|
| Y                     | 2A, 2C*           | 2 in.                            | Max 2-1/4 in.    | 5%       | 5/8 in.       | 1 hr     | N/A                    |
| Z                     | 2A, 2C*           | 2 in.                            | 2-1/4 in.        | 0.25 in. | 5/8 in.       | 1 hr     | N/A                    |

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

System No. C-BJ-1045 CAN/ULC S115 F Rating — 2 Hr FT Rating — 1/4 Hr FH Rating — 2 Hr FTH Rating — 1/4 Hr



1. Floor Assembly — Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor assembly may also be constructed of any 8 in. (203 mm) thick UL Classified hollow-core Precast Concrete Units\*. Max diameter of opening is 7 in. (178

See Precast Concrete Units CFTV) category in the Fire Resistance Directory for names of manufacturers. 2. Through Penetrants — One metallic pipe or conduit to be installed concentrically or eccentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be min 0 in. (point contact) to max 7/8 in. (22 mm). Pipe to be rigidly supported on both sides of

floor-ceiling assembly. The following types and sizes of metallic pipes or conduits may be used: A. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe. B. Iron Pipe — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

ANSI/UL1479 (ASTM E814)

Classified by

to UL 1479 and CAN/ULC-S115

Jnderwriters Laboratories, Inc. F Rating — 2 Hr

T Rating — 1/4 Hr

C. Conduit — Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.

D. Conduit — Nom 4 in. (104 mm) diam (or smaller) steel electrical metallic conduit. E. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

F. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Materials\* - Putty — Min 1/2 in. (13 mm) thickness fill material applied within annulus, flush with bottom surface of floor. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 618 Firestop Putty Stic

B. Fill, Void or Cavity Materials\* - Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor. An additional 1/2 in. (13 mm) bead shall be installed at penetrant/concrete interface on top surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant tindicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),



Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 14, 2015

3. Firestop System — The firestop system shall consist of the following:

with both surfaces of wall.

factory-applied self-sealing lap tape.

a Smoke Developed value of 50 or less may be used.

Page: 1 of 1

FIRE RATED PENETRATION - CONDUIT THROUGH CONCRETE HOLLOW FLOOR

System No. C-BJ-8020

A. Packing Material — Min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Min 5-3/4 in. (146

mm) thickness of packing material required in floors. Min 5-1/2 in. (140 mm) thickness of packing material required in walls. Packing

material to be recessed from top surface of floor or from both surfaces of wall to accommodate the required thickness of fill material. B. Fill, Void or Cavity Materials\* - Sealant — Min 1/4 in. (6 mm) thickness of fill material within the annulus, flush with top surface of floor or

C. Pipe Covering Materials\* — (Optional) - Min 12 in. (305 mm) length of nom 1 in. (25 mm) thick hollow cylindrical heavy density (min 3.5

of pipe covering material to be sized to max diam of grouped penetrants. One end of pipe covering material to abut the surface of the

sealant (Item 3B). Pipe covering is jacketed on the outside with an all service jacket. Longitudinal joint sealed with metal fasteners or

pcf or 56 kg/m3) glass fiber unit installed around grouping of penetrants on top surface of floor or on both surfaces of wall. Inside diameter

See Pipe and Equipment Covering - Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread value of 25 or less and

D. Fill, Void or Cavity Materials\* - Sealant— When Pipe Covering Material (Item 3C) is used, min 1/2 in. (13 mm) thickness of fill material applied within the annulus between the grouping of penetrants and the pipe covering material, flush with end of pipe covering material

Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

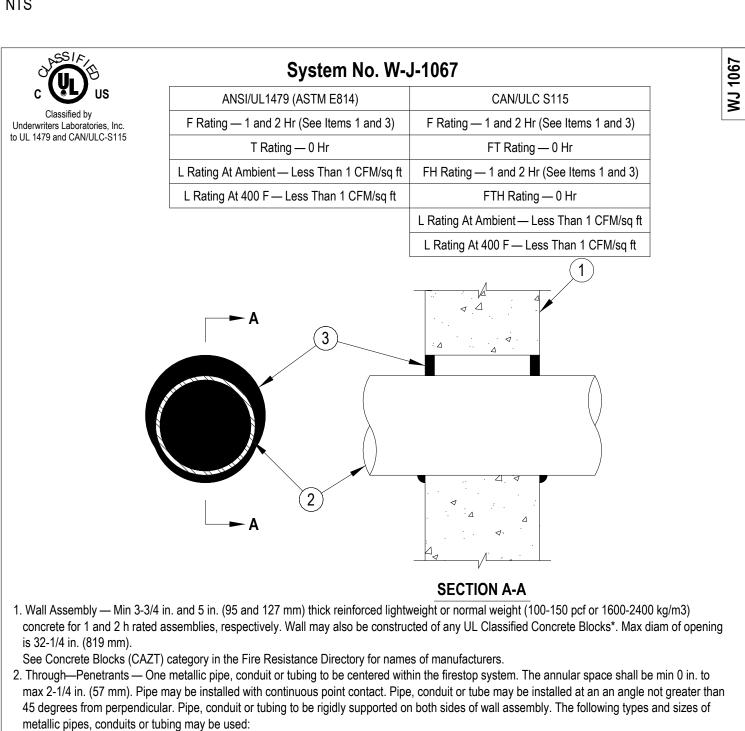
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.

The T Rating is 0 hr except that when the pipe covering material is used, the T Rating is 2 hr.

NTS

# FIRE RATED PENETRATION - CONDUIT THROUGH GYPSUM WALL



A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe. B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe. C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) diam (or smaller) steel conduit.

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material\* — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe-wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),



Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.

Page: 1 of 1

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.

1. Floor or Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) structural

concrete. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified Precast Concrete Units\*. Wall may also be constructed of

See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the UL Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — One grouping of any combination of the following pipes, tubing, conduit and cables to be installed within the opening. A maximum of two penetrants shall be copper pipes or tubes. A maximum of one metallic penetrant within the grouping shall have a diam

exceeding 1 in. (25 mm). A maximum of three cables shall be included within the grouping of penetrants. The penetrants are installed within the

opening such that the annular space between the grouping of penetrants and the periphery of the opening is min 0 in. (point contact) to max 2 in.

(51 mm). Penetrants to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of pipes, conduits, tubing or

Page: 1 of 2 Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.

Page: 2 of 2

FIRE RATED PENETRATION - MULTIPLE CONDUIT THROUGH CONCRETE HOLLOW FLOOR

FIRE RATED PENETRATION - CONDUIT THROUGH CONCRETE WALL

**ARCHITECTS PLANNERS** Design like YOU mean it! 449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673 1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605

**ENGINEERS** 

(984) 288-1300

www.djginc.com

100% WORKING **DRAWINGS** 

**GLADDING** RESIDENCE HALL 3 - HVAC AND REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS # DATE DESCRIPTION

COMMISSION NUMBER 22240290

NOTE FOR MULTIPLE CONDUIT DETAIL

PIPE COVERING IS REQUIRED TO MEE

T-RATING.

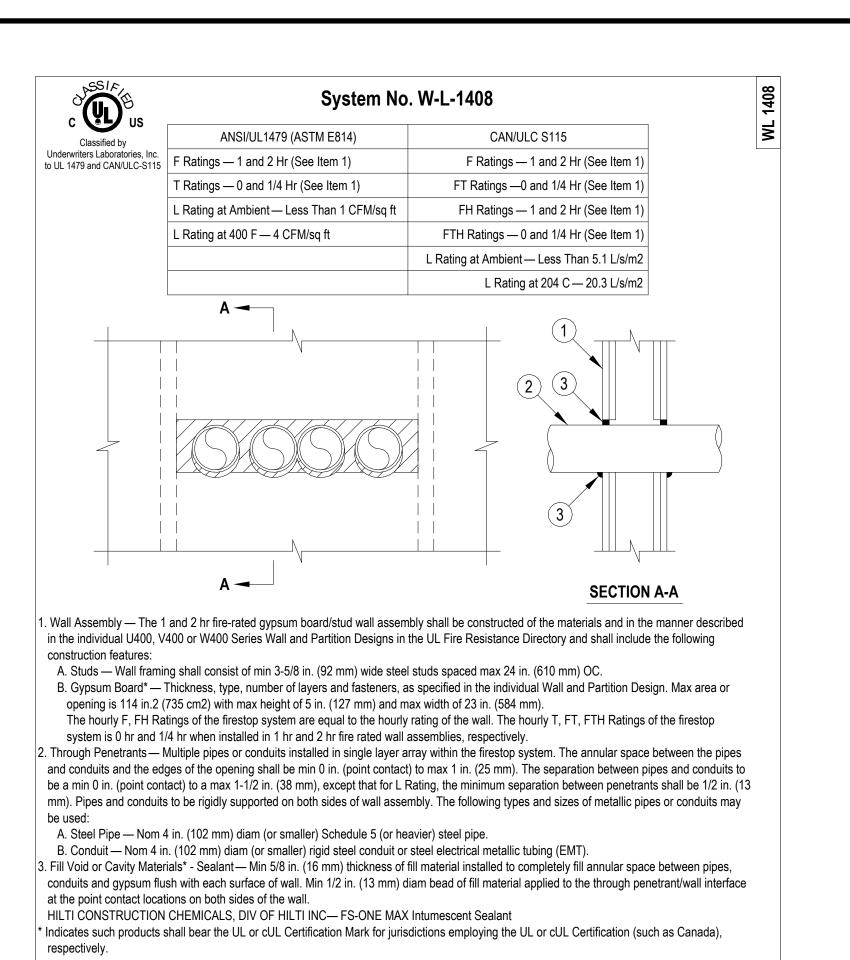
12" = 1'-0" DESIGNED: JAM DRAWN: VT CHECKED: MAW

DATE: 06/03/2024 JOSEPH ADAM MICKIEWICZ

**ELECTRICAL DETAILS** 

SHEET NUMBER E-501

**SHEET #** 43 **OF** 51



Reproduced by HILTI, Inc. Courtesy of

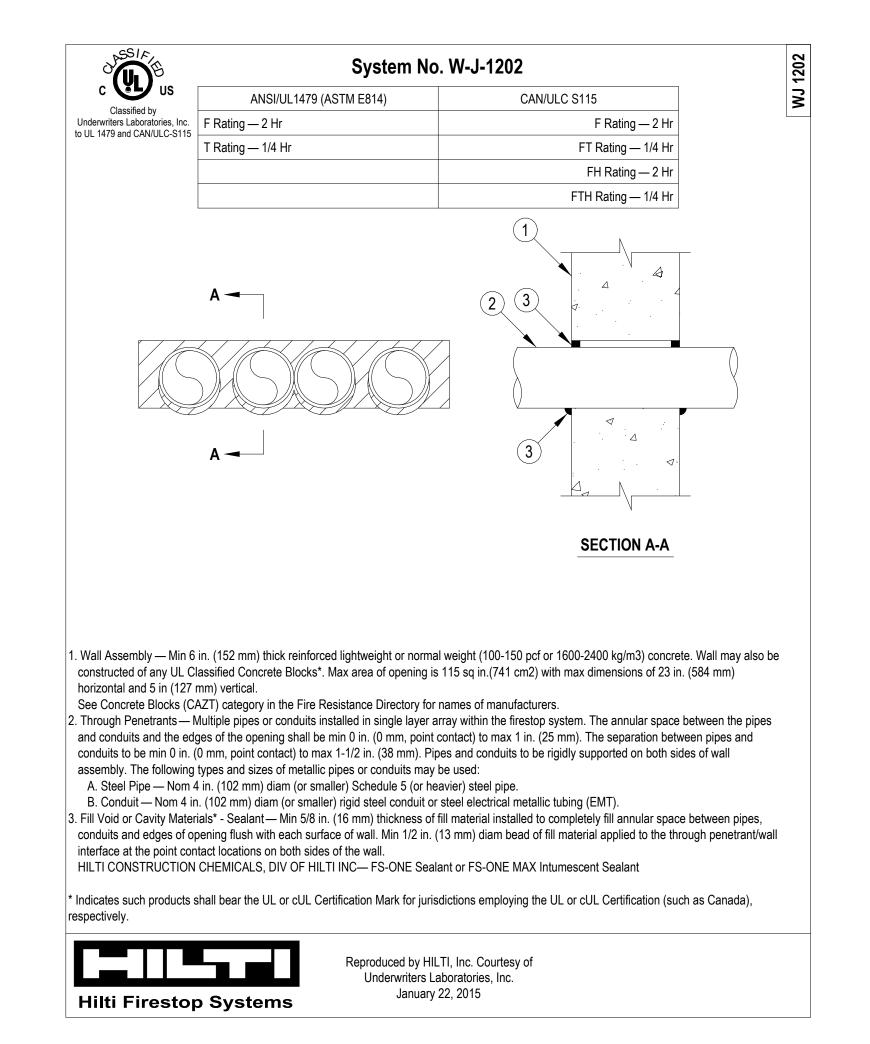
Underwriters Laboratories, Inc.

November 14, 2017

**Hilti Firestop Systems** 

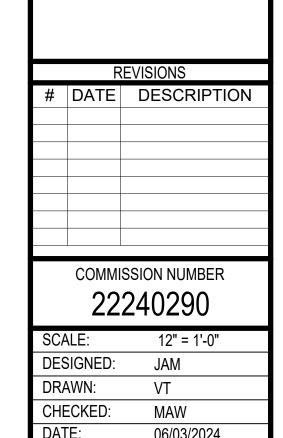
NTS

FIRE RATED PENETRATION - MULTIPLE CONDUIT THROUGH GYPSUM WALL



FIRE RATED PENETRATION - MULTIPLE CONDUIT THROUGH CONCRETE WALL





**ENGINEERS** 

**ARCHITECTS** 

**PLANNERS** 

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET

SUITE 100

RALEIGH, NC 27605

(984) 288-1300

www.djginc.com

100% WORKING

DRAWINGS

GLADDING

RESIDENCE HALL

3 - HVAC AND

REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

**ELECTRICAL DETAILS** 

> SHEET NUMBER E-502

**SHEET #** 44 **OF** 51

# **GENERAL ELECTRICAL NOTE:**

- PANELBOARD SCHEDULES WITH STRIKE THROUGHTS AND (X) INDICATE TO DISCONNECT AND REMOVE.
   UPDATED PANELBOARD SCHEDULE INDICATE NEW
- CIRCUIT BREAKERS, LOADS SERVED, AND WIRING.

PANELBOARD LOAD CALCULATION:

REMOVED LOAD
PHASE A=43.1A
PHASE B=65.3A
PHASE C=64.0A
PHASE C=41.0A

|                           | P               | A١              | ۱E              | L             | В               | 0             | A     | R                        | R D                                               | ) ;             | S    | C ł             | <b>H</b> E       |               | ) U             | L               | Ε               | WITH FEED THROUGH<br>LUG FEEDING L1B |
|---------------------------|-----------------|-----------------|-----------------|---------------|-----------------|---------------|-------|--------------------------|---------------------------------------------------|-----------------|------|-----------------|------------------|---------------|-----------------|-----------------|-----------------|--------------------------------------|
| PANEL "L                  | 1A'             | 11              |                 |               | 40              | 00A MI        | LO, 2 | :08Y/1                   | 120V,                                             | 3Ø, 4\          | ·    |                 |                  |               | •               | ROUND           | BUS,            | 10 KAIC                              |
| LOAD SERVED               | LO/             | AD (AM          | PS)             | CKT           | BKR             | WIRE          | CKT   |                          | PHAS                                              | E               | СКТ  | WIRE            | CKT              | BKR           | LOA             | AD (AM          | PS)             | LOAD SERVED                          |
| LOAD SERVED               | Α               | В               | С               | KAIC          | TRIP            | SIZE          | NO.   | /                        | ΑВ                                                | С               | NO.  | SIZE            | TRIP             | KAIC          | Α               | В               | С               | LOAD SERVED                          |
| LOUNGE/HALL LIGHTS        | 13.7            |                 |                 | 10            | 20              | 12            | 1     | $\vdash \sim$            | <del>                                      </del> | $\overline{}$   | 2    | 12              | 20               | 10            | 4.4             |                 |                 | 191 LIGHTS                           |
| EXTERIOR LIGHTS           |                 |                 |                 | 10            | 20              | 12            | 3     | $\vdash \smallfrown$     | +                                                 | $+ \sim$        | 4    | 12              | 20               | 10            |                 | 4.7             |                 | 193 LIGHTS                           |
| TELECOM REC.              |                 |                 | 6.0             | 10            | 20              | 12            | 5     | <u>-</u> ~               |                                                   | $+ \sim$        | - 6  | 12              | 20               | 10            |                 |                 | 7.5             | REC. 191A                            |
| LOUNGE/HALL REC.          | 9.9             |                 |                 | 10            | 20              | 12            | 7     | $\vdash \smallfrown$     | +                                                 | $+ \sim$        | - 8  | 12              | 20               | 10            | 7.5             |                 |                 | REC. 191B                            |
| REC. 193A                 |                 | 7.5             |                 | 10            | 20              | 12            | 9     | $\vdash \smallfrown$     | +                                                 | $+ \sim$        | 10   | 12              | 20               | 10            |                 | 7.5             |                 | REC. 191C                            |
| REC. 193B                 |                 |                 | 7.5             | 10            | 20              | 12            | 11    | <u>-</u> ~               |                                                   | $+ \sim$        | 12   | 12              | 20               | 10            |                 |                 | 7.5             | REC. 191D                            |
| REC. 193C                 | 7.5             |                 |                 | 10            | 20              | 12            | 13    | <u>-</u> ~               | +                                                 | $+ \sim$        | 14   | 12              | 20               | 10            | 8.4             |                 |                 | REFRIGERATOR 191                     |
| REC. 193D                 |                 | 7.5             |                 | 10            | 20              | 12            | 15    | <u>-</u> ~               | +                                                 | $+ \sim$        | 16   | 12              | 20               | 10            |                 | 3.0             |                 | COUNTER 191                          |
| REFRIGERATOR 193          |                 |                 | 8.4             | 10            | 20              | 12            | 17    | <u></u>                  |                                                   | $+ \sim$        | 18   | 12              | 20               | 10            |                 |                 | 7.5             | HALL REC. 191                        |
| COUNTER                   | 4.5             |                 |                 | 10            | 20              | 12            | 19    | <u></u>                  | +                                                 | $+ \sim$        | 20   | 12              | 20               | 10            | 6.0             |                 |                 | LOUNGE REC. 191                      |
| HALL REC. 193             |                 | 6.0             |                 | 10            | 20              | 12            | 21    | <u>├</u> ~               | +                                                 | $+ \sim$        | - 22 | 12              | 20               | 10            |                 | 3.0             |                 | BATH GFI 191                         |
| LOUNGE REC. 193           |                 |                 | 6.0             | 10            | 20              | 12            | 23    | <u></u>                  |                                                   | $+ \sim$        | 24   | 12              | 20               | 10            |                 |                 | 0.6             | EF-3                                 |
| BATH REC. 193             | 3.0             |                 |                 | 10            | 20              | 12            | 25    | <u></u>                  | +                                                 | $+ \smallfrown$ | 26   | 8               | 50               | 10            | 33.4            |                 |                 | RANGE                                |
| KITCHEN COUNTER REC.      |                 | 6.0             |                 | 10            | 20              | 12            | 27    | ├^-                      | +                                                 | $+ \wedge$      |      |                 |                  |               |                 | 33.4            |                 |                                      |
| KITCHEN REC. REFRIGERATOR |                 |                 | 8.4             | 10            | 20              | 12            | 29    | ├~-                      |                                                   | $+ \sim$        | 30   | 12              | 20               | 10            |                 |                 | 3.4             | DOOR OPENER CIRCUIT                  |
| UH-1                      | 12.5            |                 |                 | 10            | 20              | 12            | 31    | $\vdash \uparrow \vdash$ | <del>†    </del>                                  | +-�-            | - 32 | <del>-10-</del> | <del>-25-</del>  | <del>10</del> | <del>22.2</del> |                 |                 | 1ST LOUNGE AIRHANDLER                |
|                           |                 | 12.5            |                 |               |                 |               |       | $\vdash \smallfrown$     | +                                                 | $+ \smallfrown$ | 1    |                 |                  |               |                 | <del>22.2</del> |                 |                                      |
| AIR HANDLER 191           |                 |                 | <del>20.9</del> | <del>10</del> | <del>-25-</del> | <del>10</del> | 35    | <del> </del>             |                                                   | $+ \sim$        | - 36 | 12              | 20               | 10            |                 |                 | 1.5             | DATA REC.                            |
|                           | <del>20.9</del> |                 |                 |               |                 |               |       | $\vdash \smallfrown$     | +                                                 | $+ \sim$        | - 38 | 12              | 20               | 10            | 1.5             |                 |                 | DATA REC.                            |
| AIR HANDLER               |                 | <del>22.2</del> |                 | <del>10</del> | <del>-25-</del> | <del>10</del> | 39    | <del> </del>             | +                                                 | ┼╬╌             | 40   | <del>-10-</del> | <del>-25</del> - | <del>10</del> |                 | <del>20.9</del> |                 | AIR HANDLER 193                      |
| 1ST CORRIDOR              |                 |                 | <del>22.2</del> |               |                 |               |       | ightharpoons             |                                                   | +               | 1    |                 |                  |               |                 |                 | <del>20.9</del> |                                      |
| TOTAL                     | 72.0            | 61.7            | 93.8            |               |                 |               |       |                          |                                                   |                 |      |                 |                  |               | 83.4            | 94.7            | 51.9            | TOTAL                                |
|                           |                 |                 | L1/             | A TO          | TAL C           | ONNE          | ECTE  | D AM                     | IPS A                                             | \=155.          | 4 B  | =156.4          | C=               | 145.7         | ,               |                 |                 |                                      |

L1B TOTAL CONNECTED AMPS A=109.8 B=103.0 C=142.4 FEEDER TOTAL CONNECTED AMPS A=265.2 B=259.4 C=288.1

### PANELBOARD LOAD CALCULATION:

REMOVED LOAD
PHASE A=41.8A
PHASE B=41.8A
PHASE C=83.6A
PHASE C=78.8A

### PANEL L1A AND L1B FEEDER LOAD CALCULATION:

| REMOVED LOAD    | ADDED LOAD      | NET CHANGE      |
|-----------------|-----------------|-----------------|
| PHASE A: 84.9A  | PHASE A= 80.0A  | PHASE A= -4.9A  |
| PHASE B: 107.1A | PHASE B= 80.0A  | PHASE B= -27.1/ |
| PHASE C: 147.6A | PHASE C= 199.8A | PHASE C= -27.8/ |

ALL CONNECTED LOAD ON PHASES HAVE BEEN DECREASED. THE EXISTING 300A FEEDER IS SATISFACTORY.

| PANEL "I                   | L1B             | •               |                 |                 | 40              | 00A MI          | LO, 2 | :08Y/1               | 20V,                                             | 3Ø, 4\     | W, SL    | JRFAC           | E MC           | UNT            | ED, GF          | ROUND            | BUS,            | 10 KAIC          |
|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|----------------------|--------------------------------------------------|------------|----------|-----------------|----------------|----------------|-----------------|------------------|-----------------|------------------|
| LOAD SERVED                | LOA             | AD (AM          |                 |                 |                 | WIRE            |       |                      | PHAS                                             | SE.        | CKT      | WIRE            | CKT            | BKR            | LOA             | AD (AM           | PS)             | LOAD SERVED      |
| LOAD SERVED                | Α               | В               | С               | KAIC            | TRIP            | SIZE            | NO.   |                      | ΑВ                                               | С          | NO.      | SIZE            | TRIP           | KAIC           | Α               | В                | О               | LOAD SERVED      |
| HALL LIGHTS                | 3.4             |                 |                 | 10              | 20              | 12              | 1     | 7                    | <del>-</del>                                     | 7          | 2        | 12              | 20             | 10             | 5.7             |                  |                 | 190/188 LIGHTS   |
| HALL REC.                  | 9               | 3.0             |                 | 10              | 20              | 12              | 3     | ├~-                  |                                                  | $+ \sim$   | 4        | 12              | 20             | 10             |                 | 5.7              |                 | 186/184 LIGHTS   |
| REC. 187A                  |                 | 0.0             | 7.5             | 10              | 20              | 12              | 5     | ├~-                  |                                                  | $+ \sim$   | - 6      | 12              | 20             | 10             |                 | 0.1              | 7.5             | 187/184 LIGHTS   |
| REC. 187B                  | 7.5             |                 |                 | 10              | 20              | 12              | 7     | ├~-                  | <del>     </del>                                 | $+ \sim$   | - 8      | 12              | 20             | 10             | 7.5             |                  |                 | REC. 190A        |
| REC. 187C                  |                 | 7.5             |                 | 10              | 20              | 12              | 9     | ├~-                  | +                                                | $+ \sim$   | 10       | 12              | 20             | 10             |                 | 7.5              |                 | REC. 190B        |
| REC. 187D                  |                 |                 | 7.5             | 10              | 20              | 12              | 11    | }-^-                 |                                                  | $+ \sim$   | - 12     | 12              | 20             | 10             |                 |                  | 8.4             | REFRIGERATOR 190 |
| REFRIGERATOR 187           | 8.4             |                 |                 | 10              | 20              | 12              | 13    | }-^-                 | +                                                | $+ \sim$   | - 14     | 12              | 20             | 10             | 3.0             |                  |                 | COUNTER 190      |
| COUNTER 187                |                 | 4.5             |                 | 10              | 20              | 12              | 15    |                      | +                                                | $+ \sim$   | 16       | 12              | 20             | 10             |                 | 7.5              |                 | LOUNGE REC. 190  |
| HALL REC. 187              |                 |                 | 6.0             | 10              | 20              | 12              | 17    | <u> </u>             |                                                  | $+ \sim$   | - 18     | 12              | 20             | 10             |                 |                  | 1.5             | BATH REC. 190    |
| LOUNGE 187                 | 6.0             |                 |                 | 10              | 20              | 12              | 19    |                      | +                                                | $+ \sim$   | 20       | 12              | 20             | 10             | 7.5             |                  |                 | REC. 188A        |
| BATH 187 REC.              |                 | 3.0             |                 | 10              | 20              | 12              | 21    | <u> </u>             | +                                                | $+ \sim$   | - 22     | 12              | 20             | 10             |                 | 7.5              |                 | REC. 188B        |
| REC. 186A                  |                 |                 | 7.5             | 10              | 20              | 12              | 23    | $\vdash \smallfrown$ |                                                  | $+ \sim$   | 24       | 12              | 20             | 10             |                 |                  | 8.4             | REFRIGERATOR 188 |
| REC.186B                   | 8.4             |                 |                 | 10              | 20              | 12              | 25    | ├~-                  | +                                                | $+ \sim$   | 26       | 12              | 20             | 10             | 3.0             |                  |                 | COUNTER 188      |
| REFRIGERATOR 186           |                 | 7.5             |                 | 10              | 20              | 12              | 27    | ├^-                  | +                                                | $+ \sim$   | - 28     | 12              | 20             | 10             |                 | 7.5              |                 | LOUNGE 188       |
| COUNTER 186                |                 |                 | 3.0             | 10              | 20              | 12              | 29    | $\vdash \uparrow$    |                                                  | $+ \sim$   | 30       | 12              | 20             | 10             |                 |                  | 1.5             | BATH REC. 188    |
| LOUNGE 186                 | 7.5             |                 |                 | 10              | 20              | 12              | 31    | <u> </u>             |                                                  | $+ \sim$   | - 32     | 12              | 20             | 10             | 0.09            |                  |                 | FIRE ALARM       |
| BATH 186 REC.              |                 |                 |                 | 10              | 20              | 12              | 33    | ├^-                  | +                                                | $+ \sim$   | - 34     | 12              | 20             | 10             |                 |                  |                 | MAGNETIC LOCK    |
| AIR HANDLER 188            |                 |                 | <del>20.9</del> | <del>10</del>   | <del>-25-</del> | <del>10</del>   | 35    | <del> </del>         |                                                  | +-�        | - 36     | <del>10</del>   | <del>-25</del> | <del>-10</del> |                 |                  | <del>20.9</del> | AIR HANDLER 185  |
|                            | <del>20.9</del> |                 |                 |                 |                 |                 |       | $\vdash \smallfrown$ | <del>                                     </del> | $+ \wedge$ | <u> </u> |                 |                |                | <del>20.9</del> |                  |                 |                  |
| <del>AIR HANDLER 190</del> |                 | <del>20.9</del> |                 | <del>-10-</del> | <del>-25-</del> | <del>-10-</del> | 39    | <b>├</b> ंक्रे-      | +                                                | +-�-       | 40       | <del>-10-</del> | 40             | <del>-10</del> |                 | <del>-20.9</del> |                 | AIR HANDLER 187  |
|                            |                 |                 | <del>20.9</del> |                 |                 |                 |       | $\vdash \triangle$   |                                                  | +          | 1        |                 |                |                |                 |                  | <del>20.9</del> |                  |
| TOTAL                      | 62.1            | 46.4            | 73.3            |                 |                 |                 |       |                      |                                                  |            |          |                 |                |                | 47.7            | 56.6             | 69.1            | TOTAL            |

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD PHASE A=41.8A PHASE B=41.8A PHASE C=83.64 | ADDED LOAD PHASE A=39.4A PHASE B=40.2A PHASE C=79.64 | NET CHANGE PHASE A= -2.44 PHASE B= -1.64 |
|--------------------------------------------------------|------------------------------------------------------|------------------------------------------|
| PHASE C=83.6A                                          | PHASE C=79.6A                                        | PHASE C= -4.0                            |
| PHASE U-03.0A                                          | PHASE C=19.0A                                        | PHASE C= -2                              |

PANELBOARD L1C LOAD HAS DECREASED. THE EXISITING 150A FEEDER AND PANELBOARD IS SATISFACTORY.

| PANEL "L'                 | 1C'             | •               |                   |               | 22            | 25A MI        | LO, 2 | 208Y/1                              | 20V, 3        | 8∅, 4\          | V, SL    | JRFAC           | E MC            | UNT           | ED, GF          | ROUND           | BUS, 1           | 10 KAIC          |
|---------------------------|-----------------|-----------------|-------------------|---------------|---------------|---------------|-------|-------------------------------------|---------------|-----------------|----------|-----------------|-----------------|---------------|-----------------|-----------------|------------------|------------------|
| LOAD SERVED               | LOA             | AD (AM          | PS)               |               |               | WIRE          |       |                                     | PHASE         |                 |          | WIRE            | CKT             | BKR           | LOA             | AD (AM          | PS)              | LOAD SERVED      |
| LOAD SERVED               | Α               | В               | С                 | KAIC          | TRIP          | SIZE          | NO.   | Α                                   | . В (         | 2               | NO.      | SIZE            | TRIP            | KAIC          | Α               | В               | С                | LOAD SERVED      |
| KEY WATCH VAULT           |                 |                 |                   | 10            | 20            |               | 1     | $\sim$                              |               | _               | 2        | 12              | 20              | 10            | 7.5             |                 |                  | 183/181 LIGHTS   |
| MAIN LOUNGE/ HALL LIGHTS  |                 |                 |                   | 10            | 20            |               | 3     | $\vdash \frown \vdash$              | +             | _~_             | 4        | 12              | 20              | 10            |                 | 2.9             |                  | 182 LIGHTS       |
| EXTERIOR LIGHTS           |                 |                 | 1.5               | 10            | 20            | 12            | 5     | $\vdash \smallfrown \vdash$         |               | _~_             | 6        | 10              | 20              | 10            |                 |                 | 12.0             | IRRIGATION       |
| REC. DESK SECURITY        | 7.5             |                 |                   | 10            | 20            | 12            | 7     | <b>-</b> ~-                         |               | _~_             | 8        | 12              | 20              | 10            | 7.5             |                 |                  | REC. 183A        |
| REC. 184A AND 184B        |                 | 7.5             |                   | 10            | 20            | 12            | 9     | $\vdash \frown \vdash$              | +             | _~_             | 10       | 12              | 20              | 10            |                 | 7.5             |                  | REC. 183B        |
| REFRIGERATOR 184          |                 |                 | 8.4               | 10            | 20            | 12            | 11    | $\vdash \frown \vdash$              | <del></del>   | _~_             | 12       | 12              | 20              | 10            |                 |                 | 7.5              | REC. 183C        |
| COUNTER 184               | 3.0             |                 |                   | 10            | 20            | 12            | 13    | <u>-</u> ~-                         |               | _~_             | 14       | 12              | 20              | 10            | 7.5             |                 |                  | REC. 183D        |
| OUNGE REC. 184            |                 | 7.5             |                   | 10            | 20            | 12            | 15    | $\vdash \frown \vdash$              | +             | _~              | 16       | 12              | 20              | 10            |                 | 8.4             |                  | REFRIGERATOR 183 |
| BATH REC. 184             |                 |                 | 1.5               | 10            | 20            | 12            | 17    | $\vdash \frown \vdash$              | <del></del>   | _~_             | 18       | 12              | 20              | 10            |                 |                 | 4.5              | COUNTER 183      |
| REC. 185A                 | 7.5             |                 |                   | 10            | 20            | 12            | 19    |                                     |               | _~_             | 20       | 12              | 20              | 10            | 6.0             |                 |                  | HALL REC. 183    |
| REC. 185B                 |                 | 7.5             |                   | 10            | 20            | 12            | 21    | $\vdash \frown \vdash$              | +             | _~              | 22       | 12              | 20              | 10            |                 | 6.0             |                  | LOUNGE REC. 183  |
| REFRIGERATOR 185          |                 |                 | 8.4               | 10            | 20            | 12            | 23    | $\vdash \frown \vdash$              | -             | _~              | 24       | 12              | 20              | 10            |                 |                 | 3.0              | BATH REC. 183    |
| COUNTER 185               | 3.0             |                 |                   | 10            | 20            | 12            | 25    | $\vdash \smallfrown \vdash$         |               | _~_             | 26       | 12              | 20              | 10            | 7.5             |                 |                  | REC. 182A        |
| LOUNGE 185                |                 | 6.0             |                   | 10            | 20            | 12            | 27    | $\vdash \cap \vdash$                | $\dashv$      | _~              | 28       | 12              | 20              | 10            |                 | 7.5             |                  | REC. 182B        |
| SPARE                     |                 |                 |                   |               | 20            | 12            | 29    | $\vdash \frown \vdash$              | <del></del>   | -~-             | 30       | 12              | 20              | 10            |                 |                 | 8.4              | REFRIGERATOR 182 |
| SPARE                     |                 |                 |                   |               | 20            | 12            | 31    | $\vdash \cap \vdash$                |               | _~              | 32       | 12              | 20              | 10            | 3.0             |                 |                  | COUNTER 182      |
| DOOR 180A/AUTO DOOR POWER |                 |                 |                   | 10            | 20            | 12            | 33    | $\vdash \cap \vdash$                | $\rightarrow$ |                 | 34       | 12              | 20              | 10            |                 | 6.0             |                  | LOUNGE 182       |
| AIR HANDLER 181           |                 |                 | <del>20.9</del>   | <del>10</del> | <del>25</del> | <del>10</del> | 35    | H                                   | <del></del>   | <del>-</del>    | 36       | <del>-10-</del> | <del>-25-</del> | <del>10</del> |                 |                 | <del>20.9</del>  | AIR HANDLER 184  |
|                           | <del>20.9</del> |                 |                   |               |               |               |       | $\vdash ^{ } \downarrow \downarrow$ |               | $\vdash \wedge$ | <u> </u> |                 |                 |               | <del>20.9</del> |                 |                  |                  |
| AIR HANDLER 183           |                 | <del>20.9</del> |                   | <del>10</del> | <del>25</del> | <del>10</del> | 39    | <b> </b>                            | $\dashv$      | <del> </del>    | 40       | <del>-10-</del> | <del>-25-</del> | <del>10</del> |                 | <del>20.9</del> |                  | AIR HANDLER 186  |
|                           |                 |                 | <del>-20.9-</del> |               |               |               |       | $\vdash \frown$                     |               | <u> </u>        |          |                 |                 |               |                 |                 | <del>-20.9</del> |                  |
| TOTAL                     | 41.9            | 49.4            | 61.6              |               |               |               |       |                                     |               |                 |          |                 |                 |               | 59.9            | 59.2            | 77.2             | TOTAL            |

# UPDATED PANELBOARD SCHEDULE

| LOAD CEDVED               | LOA  | AD (AM | PS)  | CKT | BKR | WIRE | CKT |                        | PHASI                                            | E                | CKT | WIRE | CKT | BKR | LOA  | AD (AM | PS)  | LOAD CEDVED         |
|---------------------------|------|--------|------|-----|-----|------|-----|------------------------|--------------------------------------------------|------------------|-----|------|-----|-----|------|--------|------|---------------------|
| LOAD SERVED               | Α    | В      |      |     |     | SIZE |     |                        | 4 B (                                            |                  |     | SIZE |     |     |      | В      | Ċ    | LOAD SERVED         |
| LOUNGE/HALL LIGHTS        | 13.7 |        |      | 10  | 20  | 12   | 1   | _                      |                                                  | $\overline{}$    | 2   | 12   | 20  | 10  | 4.4  |        |      | 191 LIGHTS          |
| EXTERIOR LIGHTS           |      |        |      | 10  | 20  | 12   | 3   | <u> </u>               | <del>                                     </del> | ├~-              | 4   | 12   | 20  | 10  |      | 4.7    |      | 193 LIGHTS          |
| TELECOM REC.              |      |        | 6.0  | 10  | 20  | 12   | 5   | ├~-                    |                                                  | <b>├</b> ^-      | 6   | 12   | 20  | 10  |      |        | 7.5  | REC. 191A           |
| LOUNGE/HALL REC.          | 9.9  |        |      | 10  | 20  | 12   | 7   | ├~-                    | $\vdash$                                         | ├~-              | 8   | 12   | 20  | 10  | 7.5  |        |      | REC. 191B           |
| REC. 193A                 |      | 7.5    |      | 10  | 20  | 12   | 9   | $\vdash \smallfrown$   | $\vdash$                                         | <del>-</del> ~-  | 10  | 12   | 20  | 10  |      | 7.5    |      | REC. 191C           |
| REC. 193B                 |      |        | 7.5  | 10  | 20  | 12   | 11  | ├~-                    |                                                  | <b>├</b> へ-      | 12  | 12   | 20  | 10  |      |        | 7.5  | REC. 191D           |
| REC. 193C                 | 7.5  |        |      | 10  | 20  | 12   | 13  | ├~-                    | <del>                                     </del> | $+ \sim$         | 14  | 12   | 20  | 10  | 8.4  |        |      | REFRIGERATOR 191    |
| REC. 193D                 |      | 7.5    |      | 10  | 20  | 12   | 15  | ├~-                    | -                                                | <del>-</del> ~-  | 16  | 12   | 20  | 10  |      | 3.0    |      | COUNTER 191         |
| REFRIGERATOR 193          |      |        | 8.4  | 10  | 20  | 12   | 17  | ├~-                    |                                                  | <b>├</b> へ-      | 18  | 12   | 20  | 10  |      |        | 7.5  | HALL REC. 191       |
| COUNTER                   | 4.5  |        |      | 10  | 20  | 12   | 19  | ├~-                    | <del>                                     </del> | ┼~-              | 20  | 12   | 20  | 10  | 6.0  |        |      | LOUNGE REC. 191     |
| HALL REC. 193             |      | 6.0    |      | 10  | 20  | 12   | 21  | ├~-                    | <del>                                     </del> | $+ \sim$         | 22  | 12   | 20  | 10  |      | 3.0    |      | BATH GFI 191        |
| LOUNGE REC. 193           |      |        | 6.0  | 10  | 20  | 12   | 23  | ├~-                    |                                                  | <b>├</b> ^-      | 24  | 12   | 20  | 10  |      |        | 0.6  | EF-3                |
| BATH REC. 193             | 3.0  |        |      | 10  | 20  | 12   | 25  | ├~-                    | <del>                                     </del> | <del>-</del> -^- | 26  | 8    | 50  | 10  | 33.4 |        |      | RANGE               |
| KITCHEN COUNTER REC.      |      | 6.0    |      | 10  | 20  | 12   | 27  | ├~-                    | <del>                                     </del> | $+ \wedge -$     |     |      |     |     |      | 33.4   |      |                     |
| KITCHEN REC. REFRIGERATOR |      |        | 8.4  | 10  | 20  | 12   | 29  | ├~-                    | $\vdash$                                         | <b>├</b> ^-      | 30  | 12   | 20  | 10  |      |        | 3.4  | DOOR OPENER CIRCUIT |
| UH-1                      | 12.5 |        |      | 10  | 20  | 12   | 31  | $\vdash \smallfrown$   |                                                  | <del>-</del> ↑-  | 32  | 10   | 40  | 10  | 20.1 |        |      | AHU-B-1ST LOUNGE    |
|                           |      | 12.5   |      |     |     |      |     | <del> -</del> ^-       | <del>                                     </del> | $+ \wedge -$     |     |      |     |     |      | 20.1   |      |                     |
| AHU-C-UNIT 191            |      |        | 20.5 | 10  | 40  | 10   | 35  | ├┰╴                    |                                                  | <b>├</b> ^-      | 36  | 12   | 20  | 10  |      |        | 1.5  | DATA REC.           |
|                           | 20.5 |        |      |     |     |      |     | $\vdash \wedge \vdash$ | <del>                                     </del> | $+ \sim$         | 38  | 12   | 20  | 10  | 1.5  |        |      | DATA REC.           |
| SPACE ONLY                |      |        |      |     |     |      | 39  | ├~-                    | <del>                                     </del> | ┼┰╴              | 40  | 10   | 40  | 10  |      | 20.5   |      | AHU-C-UNIT 193      |
| SPACE ONLY                |      |        |      |     |     |      | 41  | $\vdash \sim$          |                                                  | <u> </u>         |     |      |     |     |      |        | 20.5 |                     |
| TOTAL                     | 71.6 | 39.5   | 56.8 |     |     |      |     |                        |                                                  |                  |     |      |     |     | 81.3 | 92.2   | 48.5 | TOTAL               |

L1B TOTAL CONNECTED AMPS A=106.7 B=100.6 C=137.6 FEEDER TOTAL CONNECTED AMPS A=259.6 B=232.3 C=242.9

| UPDATED PANELBOARD SCHEDULE |
|-----------------------------|
|-----------------------------|

| LOAD CEDVED      | LOA  | AD (AM | PS)  | CKT BK  | RWIRE | CKT | ·                        | PHASE           | СКТ  | WIRE | CKT  | BKR  | LO   | AD (AM | PS)  | LOAD SERVED      |
|------------------|------|--------|------|---------|-------|-----|--------------------------|-----------------|------|------|------|------|------|--------|------|------------------|
| LOAD SERVED      | Α    | В      | Ċ    | KAICTRI | PSIZE | NO. | P                        | ВС              | NO.  | SIZE | TRIP | KAIC | Α    | B      | Ċ    | LOAD SERVED      |
| HALL LIGHTS      | 3.4  |        |      | 10 20   | 12    | 1   | <u> </u>                 | <del></del>     | 2    | 12   | 20   | 10   | 5.7  |        |      | 190/188 LIGHTS   |
| HALL REC.        |      | 3.0    |      | 10 20   |       | 3   | <u> </u>                 | +               | 4    | 12   | 20   | 10   |      | 5.7    |      | 186/184 LIGHTS   |
| REC. 187A        |      |        | 7.5  | 10 20   |       | 5   | <u> </u>                 | ++              | - 6  | 12   | 20   | 10   |      |        | 7.5  | 187/184 LIGHTS   |
| REC. 187B        | 7.5  |        |      | 10 20   |       | 7   | <u> </u>                 | $++ \sim$       | - 8  | 12   | 20   | 10   | 7.5  |        |      | REC. 190A        |
| REC. 187C        |      | 7.5    |      | 10 20   |       | 9   | <u> </u>                 | ++              | 10   | 12   | 20   | 10   |      | 7.5    |      | REC. 190B        |
| REC. 187D        |      |        | 7.5  | 10 20   | 12    | 11  |                          | +               | 12   | 12   | 20   | 10   |      |        | 8.4  | REFRIGERATOR 190 |
| REFRIGERATOR 187 | 8.4  |        |      | 10 20   |       | 13  | $\vdash \frown$          | $++ \sim$       | 14   | 12   | 20   | 10   | 3.0  |        |      | COUNTER 190      |
| COUNTER 187      |      | 4.5    |      | 10 20   |       | 15  |                          | ++              | 16   | 12   | 20   | 10   |      | 7.5    |      | LOUNGE REC. 190  |
| HALL REC. 187    |      |        | 6.0  | 10 20   | 12    | 17  |                          | +               | 18   | 12   | 20   | 10   |      |        | 1.5  | BATH REC. 190    |
| LOUNGE 187       | 6.0  |        |      | 10 20   |       | 19  | $\vdash \frown$          | $++ \sim$       | _ 20 | 12   | 20   | 10   | 7.5  |        |      | REC. 188A        |
| BATH 187 REC.    |      | 3.0    |      | 10 20   |       | 21  | _~_                      | ++              | _ 22 | 12   | 20   | 10   |      | 7.5    |      | REC. 188B        |
| REC. 186A        |      |        | 7.5  | 10 20   |       | 23  |                          | +               | _ 24 | 12   | 20   | 10   |      |        | 8.4  | REFRIGERATOR 188 |
| REC. 186B        | 8.4  |        |      | 10 20   |       | 25  | _~_                      | ++              | _ 26 | 12   | 20   | 10   | 3.0  |        |      | COUNTER 188      |
| REFRIGERATOR 186 |      | 7.5    |      | 10 20   |       | 27  |                          | +               | - 28 | 12   | 20   | 10   |      | 7.5    |      | LOUNGE 188       |
| COUNTER 186      |      |        | 3.0  | 10 20   |       | 29  | $\vdash \smallfrown$     | +               | - 30 | 12   | 20   | 10   |      |        | 1.5  | BATH REC. 188    |
| LOUNGE 186       | 7.5  |        |      | 10 20   |       | 31  | $\vdash \land \dashv$    | $++ \sim$       | - 32 | 12   | 20   | 10   | 0.09 |        |      | FIRE ALARM       |
| BATH 186 REC.    |      |        |      | 10 20   | 12    | 33  |                          | ++              | - 34 | 12   | 20   | 10   |      |        |      | MAGNETIC LOCK    |
| AHU-A- UNIT 188  |      |        | 19.7 | 10 35   | 12    | 35  | <u>-</u> -               | $++$ $\uparrow$ | 36   | 12   | 35   | 10   |      |        | 19.7 | AHU-A- UNIT 185  |
|                  | 19.7 |        |      |         |       |     | $\vdash \land \neg$      | $++$ ^ $-$      |      |      |      |      | 19.7 |        |      |                  |
| AHU-A- UNIT 190  |      | 19.7   |      | 10 35   | 12    | 39  | $\vdash \uparrow \vdash$ | $++$ $\uparrow$ | 40   | 12   | 35   | 10   |      | 19.7   |      | AHU-A-UNIT 187   |
|                  |      |        | 19.7 |         |       |     | $\vdash \wedge$          | <u> </u>        | _    |      |      |      |      |        | 19.7 |                  |
| TOTAL            | 60.9 | 45.2   | 70.9 |         |       |     |                          |                 |      |      |      |      | 45.8 | 55.4   | 66.7 | TOTAL            |

| UPDA                      | <b>\</b> T | Ε      | D    | P    | Α    | N     | Ε      | L                        | В           | 0 /               | 4        | R I  | D    | S    | С      | ΗI     | ΕD     | ULE              |
|---------------------------|------------|--------|------|------|------|-------|--------|--------------------------|-------------|-------------------|----------|------|------|------|--------|--------|--------|------------------|
| PANEL "L                  | 1C'        | •      |      |      | 2    | 25A M | ILO, i | 208/12                   | 20V,        | 3Ø, 4V            | I, SU    | RFAC | Е МО | UNTE | ED, GR | OUND   | BUS, 1 | 0 KAIC           |
| LOAD CEDVED               | LOA        | AD (AM | PS)  | CKT  | BKR  | WIRE  | СКТ    |                          | PHAS        | SE                | СКТ      | WIRE | CKT  | BKR  | LO     | AD (AM | PS)    | LOAD CEDVED      |
| LOAD SERVED               | Α          | В      |      |      |      | SIZE  |        |                          | A B         | С                 | NO.      |      | TRIP |      |        | В      | C      | LOAD SERVED      |
| KEY WATCH VAULT           |            |        |      | 10   | 20   |       | 1      | _                        | <del></del> | $\overline{}$     | 2        | 12   | 20   | 10   | 7.5    |        |        | 183/181 LIGHTS   |
| MAIN LOUNGE/ HALL LIGHTS  |            |        |      | 10   | 20   |       | 3      | <u> </u>                 |             | $+ \sim$          | 4        | 12   | 20   | 10   | 7.0    | 2.9    |        | 182 LIGHTS       |
| EXTERIOR LIGHTS           |            |        | 1.5  | 10   | 20   | 12    | 5      |                          |             | $\downarrow \sim$ | 6        | 10   | 20   | 10   |        |        | 12.0   | IRRIGATION       |
| REC. DESK SECURITY        | 7.5        |        | 1.0  | 10   | 20   | 12    | 7      | ├~-                      | $\vdash$    | $+ \sim$          | 8        | 12   | 20   | 10   | 7.5    |        | 12.0   | REC. 183A        |
| REC. 184A AND 184B        |            | 7.5    |      | 10   | 20   | 12    | 9      | ├~-                      | $\vdash$    | $+ \sim$          | 10       | 12   | 20   | 10   |        | 7.5    |        | REC. 183B        |
| REFRIGERATOR 184          |            |        | 8.4  | 10   | 20   | 12    | 11     | <b>├</b> ~-              |             | $+ \sim$          | 12       | 12   | 20   | 10   |        |        | 7.5    | REC. 183C        |
| COUNTER 184               | 3.0        |        |      | 10   | 20   | 12    | 13     | ├~-                      | +           | $+ \sim$          | 14       | 12   | 20   | 10   | 7.5    |        |        | REC. 183D        |
| LOUNGE REC. 184           |            | 7.5    |      | 10   | 20   | 12    | 15     | ├~-                      | -           | $+ \sim$          | 16       | 12   | 20   | 10   |        | 8.4    |        | REFRIGERATOR 183 |
| BATH REC. 184             |            |        | 1.5  | 10   | 20   | 12    | 17     | ├~-                      |             | $+ \sim$          | 18       | 12   | 20   | 10   |        |        | 4.5    | COUNTER 183      |
| REC. 185A                 | 7.5        |        |      | 10   | 20   | 12    | 19     | ├~-                      | +           | $+ \sim$          | 20       | 12   | 20   | 10   | 6.0    |        |        | HALL REC. 183    |
| REC. 185B                 |            | 7.5    |      | 10   | 20   | 12    | 21     | ├~-                      | +           | $+ \sim$          | 22       | 12   | 20   | 10   |        | 6.0    |        | LOUNGE REC. 183  |
| REFRIGERATOR 185          |            |        | 8.4  | 10   | 20   | 12    | 23     | ├~-                      |             | $+ \sim$          | 24       | 12   | 20   | 10   |        |        | 3.0    | BATH REC. 183    |
| COUNTER 185               | 3.0        |        |      | 10   | 20   | 12    | 25     | ├~-                      | +           | $+ \sim$          | 26       | 12   | 20   | 10   | 7.5    |        |        | REC. 182A        |
| LOUNGE 185                |            | 6.0    |      | 10   | 20   | 12    | 27     | ├~-                      | +           | $+ \sim$          | 28       | 12   | 20   | 10   |        | 7.5    |        | REC. 182B        |
| SPARE                     |            |        |      | 10   | 20   | 12    | 29     | ├~-                      |             | $+ \sim$          | 30       | 12   | 20   | 10   |        |        | 8.4    | REFRIGERATOR 182 |
| SPARE                     |            |        |      | 10   | 20   | 12    | 31     | $\vdash \smallfrown$     | +           | $+ \sim$          | 32       | 12   | 20   | 10   | 3.0    |        |        | COUNTER 182      |
| DOOR 180A/AUTO DOOR POWER |            |        |      | 10   | 20   | 12    | 33     | $\vdash \smallfrown$     | +           | $+ \sim$          | 34       | 12   | 20   | 10   |        | 6.0    |        | LOUNGE 182       |
| AHU-A-UNIT 181            |            |        | 19.7 | 10   | 35   | 12    | 35     | $\vdash \uparrow \vdash$ |             | $+ \uparrow$      | 36       | 12   | 35   | 10   |        |        | 19.7   | AHU-A-UNIT 184   |
|                           | 19.7       |        |      |      |      |       |        | $\vdash \wedge$          | +           | $+ \dot{\sim}$    | <u> </u> |      |      |      | 19.7   |        |        |                  |
| AHU-C- UNIT 183           |            | 20.5   |      | 10   | 40   | 10    | 39     | $\vdash \uparrow \vdash$ | +           | $+ \uparrow$      | 40       | 12   | 35   | 10   |        | 19.7   |        | AHU-A- UNIT 186  |
|                           |            |        | 20.5 |      |      |       |        | $\vdash \triangle$       |             | +                 |          |      |      |      |        |        | 19.7   |                  |
| TOTAL                     | 40.7       | 49.0   | 60.0 |      |      |       |        |                          |             |                   |          |      |      |      | 58.7   | 58.0   | 74.8   | TOTAL            |
|                           |            |        |      | TOTA | L CC | NNEC  | CTED   | AMP                      | S A=        | 99.4              | B=10     | 07.0 | C=13 | 4.8  |        |        |        |                  |



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | F    | REVISIONS   |
|---|------|-------------|
| # | DATE | DESCRIPTION |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

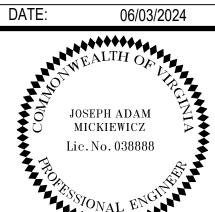
COMMISSION NUMBER 22240290

SCALE:

DESIGNED: JAM

DRAWN: VT

CHECKED: MAW



ELECTRICAL PANELBOARD SCHEDULES

SHEET NUMBER
E-601

**SHEET #** 45 **OF** 51

CIRCUIT BREAKERS, LOADS SERVED, AND WIRING.

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    | NET CHANGE     |
|---------------|---------------|----------------|
| PHASE A=0A    | PHASE A=0A    | PHASE A= 0A    |
| PHASE B=43.1A | PHASE B=39.8A | PHASE B= -3.3A |
| PHASE C=43.1A | PHASE C=39.8A | PHASE C= -3.3A |
|               |               |                |

PANELBOARD L1D LOAD HAS DECREASED. THE EXISITING 150A FEEDER AND PANELBOARD IS SATISFACTORY.

|                              | P    | <b>A</b> N | 1 E              | EL            | . B             | 0             | Δ     | R                     | D                                                | ) (             | S    | C ł           | 1 6             | Ξ [           | ) U  | J L             | Ε                 |                                 |
|------------------------------|------|------------|------------------|---------------|-----------------|---------------|-------|-----------------------|--------------------------------------------------|-----------------|------|---------------|-----------------|---------------|------|-----------------|-------------------|---------------------------------|
| PANEL "L                     | 1D'  | ·•         |                  |               | 2:              | 25A M         | LO, 2 | 208Y1                 | 20V, 3                                           | ,               | •    |               |                 |               | ,    | ROUND           | BUS, 1            | 10 KAIC                         |
| LOAD SERVED                  | LO/  | AD (AM     | PS)              |               |                 | WIRE          |       |                       | PHAS                                             | SE              | CKT  | ΓWIRE         | CKT             | BKR           | LO   | AD (AM          | IPS)              | LOAD SERVED                     |
| LOAD SERVED                  | Α    | В          | С                | KAIC          | TRIP            | SIZE          | NO.   | /                     | A B                                              | С               | NO.  | SIZE          | TRIP            | KAIC          | Α    | В               | С                 | LOAD SERVED                     |
| STACK DRYER                  | 11.4 |            |                  | 10            | 30              | 10            | 1     |                       | <del></del>                                      | _               | 2    | 12            | 20              | 10            | 1.5  |                 |                   | WASHER                          |
| O I NOIC BICIER              |      | 11.4       |                  |               |                 |               |       | $\vdash \wedge$       | -                                                | $+ \sim$        | 4    | 12            | 20              | 10            |      | 1.5             |                   | WASHER                          |
| HALLWAY REC.                 |      |            |                  | 10            | 20              |               | 5     | ├~-                   |                                                  | $+ \sim$        | 6    | 12            | 20              | 10            |      |                 | 1.5               | WASHER                          |
| WATER HEATER                 | 1.5  |            |                  | 10            | 20              | 12            | 7     | ├~-                   | +                                                | $+ \sim$        | 8    | 12            | 20              | 10            | 8.4  |                 |                   | ELEVATOR LTS.                   |
| LAUNDRY CARD READER          |      |            |                  | 10            | 20              | 12            | 9     | ├~-                   | -                                                | $+ \sim$        | 10   | 12            | 20              | 10            |      | 1.5             |                   | ELEVATOR PITS. REC.             |
| ELEVATOR RM. REC.            |      |            | 1.5              | 10            | 20              | 12            | 11    | ├~-                   |                                                  | $+ \sim$        | 12   | 12            | 20              | 10            |      |                 |                   | REC.                            |
| MAIN LOUNGE REC.             |      |            |                  | 10            | 20              | 12            | 13    | ├~-                   | +                                                | $+ \sim$        | 14   | 12            | 20              | 10            |      |                 |                   | EF4 LAUNDRY                     |
| MAIN LOUNGE WOMENS/ BATH GFI |      |            |                  | 10            | 20              | 12            | 15    | ├~-                   | <del>                                     </del> | $+ \sim$        | 16   | 12            | 20              | 10            |      | 5.8             |                   | FIRE PAC                        |
| MECHANICAL RM. LTS.          |      |            | 10.0             | 10            | 20              | 12            | 17    | <u> </u>              |                                                  | $+ \sim$        | 18   | 12            | 20              | 10            |      |                 | 8.3               | FIRE ALARM PNL                  |
| MECHANICAL RM. REC.          | 0.5  |            |                  | 10            | 20              | 12            | 19    | <u> </u>              |                                                  | $+ \sim$        | 20   | 12            | 20              | 10            | 8.3  |                 |                   | UH-3 CEILING/UNIT MECH. EXHAUST |
| RECIRC. PUMP                 |      | 2.5        |                  | 10            | 15              | 12            | 21    | <u>-</u> ~            | <del>                                     </del> | $+ \sim$        | - 22 | 12            | 20              | 10            |      | 0.4             |                   | ELEV. PREACT CAB.               |
| STACK DRYER                  |      |            | 11.4             | 10            | 30              | 10            | 23    | <del>-</del> -        |                                                  | $+ \sim$        | 24   | 12            | 20              | 10            |      |                 | 0.8               | EMERGENCY TELE.                 |
|                              | 11.4 |            |                  |               |                 |               |       | $\bot \land \bot$     | +                                                | $+ \wedge$      | -    |               |                 | 10            |      |                 |                   |                                 |
| GATE CIR.                    |      |            |                  | 10            | 20              | 12            | 27    | <u>-</u> ~            |                                                  | $+ \uparrow -$  | 28   |               | 100             | 10            |      |                 |                   | SUB PNL L1E                     |
| HEATER MEZH. RM.             |      |            |                  | 10            | 20              | 12            | 29    | <del> -</del>         |                                                  | $+ \wedge$      | 1    |               |                 | 10            |      |                 |                   |                                 |
|                              |      |            |                  |               |                 |               |       | $\vdash \land \vdash$ | +                                                | $+ \wedge$      | 32   | 12            | 20              | 10            | 7.2  |                 |                   | UH-2                            |
| SPARE                        |      |            |                  | 10            | 20              |               | 33    | <u></u> ├~-           | +                                                | $+ \wedge$      |      |               |                 | 10            |      | 7.2             |                   |                                 |
| SPARE                        |      |            |                  | 10            | 20              |               | 35    | <b>├</b> ~-           |                                                  | $+ \smallfrown$ | 36   | 12            | 15              | 10            |      |                 | 1.5               | TWHP-1                          |
| SPARE                        |      |            |                  | 10            | 20              |               |       | <u> </u>              | +                                                | $+ \wedge$      | ┨    |               |                 | 10            | 1.5  |                 |                   |                                 |
| AIR HANDLER 180              |      | 22.2       | <del>-22.2</del> | <del>10</del> | <del>-25-</del> | <del>10</del> | 39    |                       |                                                  |                 | 40   | <del>10</del> | <del>-25-</del> | <del>10</del> |      | <del>20.9</del> | <del>-20.9-</del> | -AIR HANDLER 182-               |
| TOTAL                        | 24.8 | 36.1       | 45.1             |               |                 |               |       |                       |                                                  |                 |      |               |                 |               | 26.9 | 37.3            | 33.0              | TOTAL                           |
|                              |      |            |                  | TO            | TAL C           | ONNE          | СТЕ   | .D AM                 | PS A                                             | =51.7           | B=   | 73.4          | C=78            | .1            |      | _               | _                 |                                 |

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    |
|---------------|---------------|
| PHASE A=44.4A | PHASE A=20.1A |
| PHASE B=41.8A | PHASE B=41.0A |
| PHASE C=86.2A | PHASE C=40.6A |

|                       | P               | <b>A</b> 1      | N E             | EL            | B               | 0               | A     | R                      |     | D                                                | S        | 3 (   | CH              | 1 6              | Ξ [             | ) U    | J L             | E               | WITH FEED THROUGH<br>LUG FEEDING L2B |
|-----------------------|-----------------|-----------------|-----------------|---------------|-----------------|-----------------|-------|------------------------|-----|--------------------------------------------------|----------|-------|-----------------|------------------|-----------------|--------|-----------------|-----------------|--------------------------------------|
| PANEL "L              | 2A'             | •               |                 |               | 22              | 25A MI          | LO, 2 | 208Y/1                 | 20\ | √, 3Ø,                                           | 4W       | I, SL | JRFAC           | E MC             | UNT             | ED, GF | ROUND           | BUS,            | 10 KAIC                              |
| LOAD SERVED           | LOA             | AD (AM          | IPS)            | CKT           | BKR             | WIRE            | СКТ   | F                      | PH/ | ASE                                              |          | CKT   | WIRE            | CKT              | BKR             | LO     | AD (AM          | IPS)            | LOAD SERVED                          |
| LOAD SERVED           | Α               | В               | С               | KAIC          | TRIP            | SIZE            | NO.   | P                      | \ E | 3 C                                              |          | NO.   | SIZE            |                  | KAIC            |        | В               | С               | LOAD SERVED                          |
| LOUNGE HALL LIGHTS    | 12.4            |                 |                 | 10            | 20              | 12              | 1     |                        |     |                                                  | $\prod$  | 2     | 12              | 20               | 10              | 4.7    |                 |                 | LIGHTS 291/293                       |
| REC. 293A             |                 | 7.5             |                 | 10            | 20              | 12              | 3     | $\vdash \frown \vdash$ | _   |                                                  | 닉        | 4     | 12              | 20               | 10              |        | 11.4            |                 | LOUNGE/HALL REC.                     |
| REC. 293B             |                 |                 | 7.5             | 10            | 20              | 12              | 5     | <del>-</del>           |     | <b></b> -                                        | $\dashv$ | 6     | 12              | 20               | 10              |        |                 | 6.0             | DATA REC.                            |
| REC. 293C             | 7.5             |                 |                 | 10            | 20              | 12              | 7     | $\vdash \frown \dashv$ | -   |                                                  | $\dashv$ | 8     | 12              | 20               | 10              | 7.5    |                 |                 | REC. 291A                            |
| REC. 293D             |                 | 7.5             |                 | 10            | 20              | 12              | 9     | $\vdash \frown \vdash$ | _   | <del></del>                                      | $\dashv$ | 10    | 12              | 20               | 10              |        | 7.5             |                 | REC. 291B                            |
| REFRIGERATOR 293      |                 |                 | 8.4             | 10            | 20              | 12              | 11    | _~_                    |     |                                                  | $\dashv$ | 12    | 12              | 20               | 10              |        |                 | 7.5             | REC. 291C                            |
| COUNTER 293           | 4.5             |                 |                 | 10            | 20              | 12              | 13    | $\vdash \frown \dashv$ | -   |                                                  | $\dashv$ | 14    | 12              | 20               | 10              | 7.5    |                 |                 | REC. 291D                            |
| HALL REC. 293         |                 | 6.0             |                 | 10            | 20              | 12              | 15    | $\vdash \frown \vdash$ | _   |                                                  | $\dashv$ | 16    | 12              | 20               | 10              |        | 8.4             |                 | REFRIGERATOR 291                     |
| BATH GFI 293          |                 |                 | 6.0             | 10            | 20              | 12              | 17    | $\vdash \frown \vdash$ |     | <b></b>                                          | Ч        | 18    | 12              | 20               | 10              |        |                 | 4.5             | COUNTER 291                          |
| REC. 285B             | 3.0             |                 |                 | 10            | 20              | 12              | 19    | _~-                    | -   | <del></del>                                      | 닉        | 20    | 12              | 20               | 10              | 6.0    |                 |                 | HALL REC. 291                        |
| TELECOM EXHAUST FAN   |                 | 0.6             |                 | 10            | 20              | 12              | 21    | _~_                    | _   |                                                  | 닉        | 22    | 12              | 20               | 10              |        | 6.0             |                 | LOUNGE REC. 291                      |
| DATA REC.             |                 |                 | 1.5             | 10            | 20              | 12              | 23    | $\vdash \frown \vdash$ |     | <b></b>                                          | 닉        | 24    | 12              | 20               | 10              |        |                 | 3.0             | BATH GFI 291                         |
| DATA REC.             | 1.5             |                 |                 | 10            | 20              | 12              | 25    | $\vdash \frown \vdash$ |     |                                                  | 닉        | 26    | 12              | 20               | 10              | 6.0    |                 |                 | KITCHEN COUNTER                      |
| SPARE                 |                 |                 |                 |               | 20              |                 | 27    | $\vdash \frown \vdash$ | _   | <del></del>                                      | 닉        | 28    | 12              | 20               | 10              |        | 8.4             |                 | KITCHEN REFRIG                       |
| SPARE                 |                 |                 |                 |               | 20              |                 | 29    | $\vdash \frown \vdash$ |     | <del></del>                                      | 닉        | 30    | 12              | 20               | 10              |        |                 |                 | SPARE                                |
| STAIRWAY              |                 |                 |                 | 10            | 20              |                 | 31    |                        |     | $\vdash$                                         | $\dashv$ | 32    | 8               | 50               | 10              | 33.4   |                 |                 | RANGE                                |
| HEATER                |                 |                 |                 |               |                 |                 |       | $\vdash \frown \vdash$ |     | <del>                                     </del> | 닉        |       |                 |                  |                 |        | 33.4            |                 |                                      |
| AIR HANDLER 2ND FLOOR |                 |                 | 22.2            | <del>10</del> | <del>-25-</del> | <del>-10-</del> | 35    | <del>-</del>           |     | <del></del>                                      | $\vdash$ | 36    | <del>10-</del>  | <del>-25-</del>  | <del>-10-</del> |        |                 | 22.2            | AIR HANDLER 2ND FLOO                 |
| CORRIDOR              | <del>22.2</del> |                 |                 |               |                 |                 |       | $\vdash \frown \dashv$ |     |                                                  | 닉        |       |                 |                  |                 | 22.2   |                 |                 | <del>LOUNGE</del>                    |
| AIR HANDLER 291       |                 | <del>20.9</del> |                 | 10            | <del>-25-</del> | <del>-10-</del> | 39    | <b>F</b>               |     | lacksquare                                       | $\vdash$ | 40    | <del>-10-</del> | <del>-25</del> - | <del>-10-</del> |        | <del>20.9</del> |                 | AIR HANDLER 293                      |
|                       |                 |                 | <del>20.9</del> |               |                 | <u> </u>        |       | $\Gamma$               |     |                                                  | $\vdash$ |       |                 |                  |                 |        |                 | <del>20.9</del> |                                      |
| TOTAL                 | 51.1            | 42.5            | 66.5            |               |                 |                 |       |                        |     |                                                  |          |       |                 |                  |                 | 87.3   | 96.0            | 64.1            | TOTAL                                |
|                       |                 |                 | L2              | A TO          | TAL C           | CONNE           | ECTE  | D AM                   | PS  | A=13                                             | 8.4      | B=    | =138.5          | C=               | 130.6           | 6      |                 |                 |                                      |

L2B TOTAL CONNECTED AMPS A=77.4 B=92.2 C=109.8 FEEDER TOTAL CONNECTED AMPS A=215.8 B=230.7 C=240.4

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    |
|---------------|---------------|
| PHASE A=20.9A | PHASE A=19.7  |
| PHASE B=41.8A | PHASE B=39.4A |
| PHASE C=62.7A | PHASE C=59.1/ |

### PANEL L2A AND L2B FEEDER LOAD CALCULATION:

| PHASE B: 83.6A PHASE B= 80.4A PHASE B= -3.2A   | REMOVED LOAD                                        | ADDED LOAD | NET CHANGE                                           |
|------------------------------------------------|-----------------------------------------------------|------------|------------------------------------------------------|
| PHASE C: 148.9A PHASE C= 99.7A PHASE C= -49.2A | PHASE A: 65.3A<br>PHASE B: 83.6A<br>PHASE C: 148.9A |            | PHASE A= -25.5A<br>PHASE B= -3.2A<br>PHASE C= -49.2A |

ALL CONNECTED LOAD ON PHASES HAVE BEEN DECREASED. THE EXISTING 225A FEEDER IS SATISFACTORY.

| DANIE! !!!                  |      |        |                   |                |                 |                 |       |                             |                             |        |               |                 |                 |                 |                 |                 |                  |
|-----------------------------|------|--------|-------------------|----------------|-----------------|-----------------|-------|-----------------------------|-----------------------------|--------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| PANEL "                     | L2B  | • •    |                   |                | 22              | 25A MI          | LO, 2 | 208Y/120\                   | V, 3Ø, 4                    | ₽W, SU | JRFA(         | CE MC           | UNT             | ED, GR          | ROUND           | BUS,            | 10 KAIC          |
| LOAD SERVED                 | LO   | AD (AM |                   |                |                 | WIRE            |       |                             | ASE                         |        | WIRE          |                 |                 |                 | AD (AM          | PS)             | LOAD SERVED      |
| LOND GERVED                 | A    | В      | С                 | KAIC           | TRIP            | SIZE            | NO.   | A E                         | 3 C                         | NO.    | SIZE          | TRIP            | KAIC            | Α               | В               | С               | EOND GENVED      |
| HALL LIGHTS                 | 3.4  |        |                   | 10             | 20              | 12              | 1     |                             |                             | 2      | 12            | 20              | 10              | 5.7             |                 |                 | LIGHTS 290/288   |
| HALL REC.                   |      | 3.0    |                   | 10             | 20              | 12              | 3     | <u> </u>                    | +                           | 4      | 12            | 20              | 10              |                 | 7.5             |                 | LIGHTS 287/285   |
| REC. 287A                   |      |        | 7.5               | 10             | 20              | 12              | 5     | <u> </u>                    | +                           | 6      | 12            | 20              | 10              |                 |                 | 5.7             | LIGHTS 286/284   |
| REC. 287B                   | 7.5  |        |                   | 10             | 20              | 12              | 7     | <u> </u>                    | +                           | - 8    | 12            | 20              | 10              | 7.5             |                 |                 | REC. 290B        |
| REC. 287C                   |      | 7.5    |                   | 10             | 20              | 12              | 9     | <u> </u>                    | +                           | 10     | 12            | 20              | 10              |                 | 7.5             |                 | REC. 290A        |
| REC. 287D                   |      |        | 7.5               | 10             | 20              | 12              | 11    | <u> </u>                    | +                           | 12     | 12            | 20              | 10              |                 |                 | 8.4             | REFRIGERATOR 290 |
| REFRIGERATOR 287            | 8.4  |        |                   | 10             | 20              | 12              | 13    | <u> </u>                    | +-                          | 14     | 12            | 20              | 10              | 3.0             |                 |                 | COUNTER 290      |
| COUNTER REC. 287            |      | 4.5    |                   | 10             | 20              | 12              | 15    | <u> </u>                    | +                           | 16     | 12            | 20              | 10              |                 | 7.5             |                 | LOUNGE REC. 290  |
| HALL REC. 287               |      |        | 6.0               | 10             | 20              | 12              | 17    | $\vdash \smallfrown \vdash$ | +                           | 18     | 12            | 20              | 10              |                 |                 | 1.5             | BATH GFI 290     |
| LOUNGE REC. 287             | 6.0  |        |                   | 10             | 20              | 12              | 19    | <u> </u>                    | $\vdash \vdash \smallfrown$ | 20     |               | 20              | 10              |                 |                 |                 | SPARE            |
| BATH GFI 287                |      | 3.0    |                   | 10             | 20              | 12              | 21    | $\vdash \smallfrown \vdash$ | +                           | _ 22   |               | 20              | 10              |                 |                 |                 | SPARE            |
| REC. 288B                   |      |        | 7.5               | 10             | 20              | 12              | 23    | $\vdash \smallfrown \vdash$ | +                           | 24     |               | 20              | 10              |                 |                 |                 | SPARE            |
| REC. 288A                   | 7.5  |        |                   | 10             | 20              | 12              | 25    | <u> </u>                    | +-                          | 26     |               | 20              | 10              |                 |                 |                 | SPARE            |
| REFRIGERATOR 288            |      | 8.4    |                   | 10             | 20              | 12              | 27    | $\vdash \smallfrown \vdash$ | +                           | 28     |               | 20              | 10              |                 |                 |                 | SPARE            |
| COUNTER REC. 288            |      |        | 3.0               | 10             | 20              | 12              | 29    |                             | +                           | 30     |               | 20              | 10              |                 |                 |                 | SPARE            |
| _OUNGE REC. 288             | 7.5  |        |                   | 10             | 20              | 12              | 31    |                             | +                           | 32     |               | 20              | 10              |                 |                 |                 | SPARE            |
| BATH GFI 288                |      | 1.5    |                   | 10             | 20              | 12              | 33    | $\vdash \smallfrown \vdash$ | $\vdash$                    | 34     |               | 20              | 10              |                 |                 |                 | SPARE            |
| SPARE                       |      |        |                   | 10             | 20              |                 | 35    | $\vdash \frown \vdash$      | +                           | 36     | <del>10</del> | <del>-25-</del> | <del>10</del>   |                 |                 | <del>20.9</del> | AIR HANDLER 287  |
| SPARE                       |      |        |                   | 10             | 20              |                 | 37    | <u> </u>                    | $\vdash\vdash$              |        |               |                 |                 | <del>20.9</del> |                 |                 |                  |
| <del>NR HANDLER 288 -</del> |      | 20.9   |                   | <del>10-</del> | <del>-25-</del> | <del>-10-</del> | 39    | HT-                         | +                           | 40     | <del>10</del> | <del>-25-</del> | <del>-10-</del> |                 | <del>20.9</del> |                 | AIR HANDLER 290  |
|                             |      |        | <del>-20.9-</del> |                |                 |                 |       |                             |                             |        |               |                 |                 |                 |                 | <del>20.9</del> |                  |
| TOTAL                       | 40.3 | 48.8   | 52.4              |                |                 |                 |       |                             | _                           |        |               |                 |                 | 37.1            | 43.4            | 57.4            | TOTAL            |

| UPDA                                                                         | 1    |        | <u> </u> |      |      | 17   |     |                          | ט                        |             |                   | <b>~</b>    |      | <u> </u>     | <u> </u> | <u> </u> |        | _ U  | O L L                          |
|------------------------------------------------------------------------------|------|--------|----------|------|------|------|-----|--------------------------|--------------------------|-------------|-------------------|-------------|------|--------------|----------|----------|--------|------|--------------------------------|
| PANEL "L1D" 225A MLO, 208/120V, 3Ø, 4W, SURFACE MOUNTED, GROUND BUS, 10 KAIC |      |        |          |      |      |      |     |                          |                          |             |                   |             |      |              |          |          |        |      |                                |
| LOAD SERVED                                                                  | LOA  | AD (AM |          |      |      | WIRE |     |                          | PHA                      | SE          |                   | CKT         | WIRE | CKT          | BKR      | LO       | AD (AM | PS)  | LOAD SERVED                    |
| LOAD SERVED                                                                  | Α    | В      | С        | KAIC | TRIP | SIZE | NO. | ,                        | A B                      | С           |                   |             | SIZE |              |          | Α        | В      | С    | LOAD SERVED                    |
| STACK DRYER                                                                  | 11.4 |        |          | 10   | 30   | 10   | 1   | _                        | <b>—</b>                 | -           |                   | 2           | 12   | 20           | 10       | 1.5      |        |      | WASHER                         |
| THOR BITTER                                                                  |      | 11.4   |          |      |      | 10   |     | $\vdash \wedge$          | $\downarrow \rightarrow$ |             | $\sim \downarrow$ | 4           | 12   | 20           | 10       |          | 1.5    |      | WASHER                         |
| HALLWAY REC.                                                                 |      |        |          | 10   | 20   |      | 5   | $\vdash \smallfrown$     |                          | <del></del> | $\sim \downarrow$ | 6           | 12   | 20           | 10       |          |        | 1.5  | WASHER                         |
| VATER HEATER                                                                 | 1.5  |        |          | 10   | 20   | 12   | 7   | ├~-                      | $\downarrow$             | $\dashv$    | $\sim 1$          | 8           | 12   | 20           | 10       | 8.4      |        |      | ELEVATOR LTS.                  |
| AUNDRY CARD READER                                                           |      |        |          | 10   | 20   | 12   | 9   | <u> </u>                 | +                        | $\dashv$    | $\sim \downarrow$ | 10          | 12   | 20           | 10       |          | 1.5    |      | ELEVATOR PITS. REC.            |
| ELEVATOR RM. REC.                                                            |      |        | 1.5      | 10   | 20   | 12   | 11  | $\vdash \smallfrown$     |                          | <del></del> | $\sim \downarrow$ | 12          | 12   | 20           | 10       |          |        |      | REC.                           |
| MAIN LOUNGE REC.                                                             |      |        |          | 10   | 20   | 12   | 13  | $\vdash \smallfrown$     | +                        | +           | $\sim \downarrow$ | 14          | 12   | 20           | 10       |          |        |      | EF4 LAUNDRY                    |
| MAIN LOUNGE WOMENS/ BATH GFI                                                 |      |        |          | 10   | 20   | 12   | 15  | <u> </u>                 | ++                       | +           | $\sim \downarrow$ | 16          | 12   | 20           | 10       |          | 5.8    |      | FIRE PAC                       |
| MECHANICAL RM. LTS.                                                          |      |        | 10.0     | 10   | 20   | 12   | 17  | <u> </u>                 |                          | +           | $\sim \downarrow$ | 18          | 12   | 20           | 10       |          |        | 8.3  | FIRE ALARM PNL                 |
| MECHANICAL RM. REC.                                                          | 0.5  |        |          | 10   | 20   | 12   | 19  | <u> </u>                 |                          | +           | $\sim \downarrow$ | 20          | 12   | 20           | 10       | 8.3      |        |      | UH-3 CEILING/UNIT MECH. EXHAUS |
| RECIRC. PUMP                                                                 |      | 2.5    |          | 10   | 15   | 12   | 21  |                          | +                        | $\dashv$    | $\sim \downarrow$ | 22          | 12   | 20           | 10       |          | 0.4    |      | ELEV. PREACT CAB.              |
| STACK DRYER                                                                  |      |        | 11.4     | 10   | 30   | 10   | 23  | $\vdash \uparrow$        |                          | $\dashv$    | $\sim \downarrow$ | 24          | 12   | 20           | 10       |          |        | 0.8  | EMERGENCY TELE.                |
|                                                                              | 11.4 |        |          |      |      |      |     | $\vdash \wedge$          | +                        | +           | $\cap$            |             |      |              | 10       |          |        |      |                                |
| GATE CIR.                                                                    |      |        |          | 10   | 20   | 12   | 27  |                          | +                        | +           | $\cap$            | 28          |      | 100          |          |          |        |      | SUB PNL L1E                    |
| HEATER MEZH. RM.                                                             |      |        |          | 10   | 20   | 12   | 29  | $\vdash \uparrow$        |                          | +           | $\sim$            |             |      |              | 10       |          |        |      |                                |
|                                                                              |      |        |          |      |      |      |     | $\vdash \smallfrown$     | +-                       | +           | $ m \cap H$       | 32          | 12   | 20           | 10       | 7.2      |        |      | UH-2                           |
| SPARE                                                                        |      |        |          | 10   | 20   |      | 33  | $\vdash \frown$          | +                        | +           | $\sim \downarrow$ | •           |      |              | 10       |          | 7.2    |      |                                |
| SPARE                                                                        |      |        |          | 10   | 20   |      | 35  | $\vdash \smallfrown$     |                          | +           | $\uparrow \dashv$ | 36          | 12   | 15           | 10       |          |        | 1.5  | TWHP-1                         |
| SPARE                                                                        |      |        |          | 10   | 20   |      |     | $\vdash \smallfrown$     |                          | +           | $\cap$            | 4.0         |      |              | 10       | 1.5      |        |      |                                |
| AHU-B-180                                                                    |      | 20.1   |          | 10   | 40   | 10   | 39  | $\vdash \uparrow \vdash$ | +                        | $\dashv$    | $ ho\dashv$       | 40          | 10   | 35           | 10       |          | 19.7   |      | AHU-A-182                      |
|                                                                              |      |        | 20.1     |      |      |      |     | $\subseteq$              |                          | +           | $\overline{}$     |             |      |              |          |          |        | 19.7 |                                |
| TOTAL                                                                        | 24.8 | 34.0   | 43.0     |      |      |      |     |                          |                          |             |                   |             |      |              |          | 26.9     | 36.1   | 31.8 | TOTAL                          |
|                                                                              |      |        |          | TOT  | AL C | ONNE | CTE | D AM                     | IPS                      | A=5′        | 1.7               | B= <b>7</b> | 0.1  | C= <b>74</b> | .8       |          |        |      |                                |

| PANEL "L            | 2A'  | 11     |      |      | 22   | 25A MI | LO, 2 | 208Y/12                         | 20V, 3 | 8∅, 4\                 | V, SL | IRFAC | E MC | UNT  | ED, GF | ROUND  | BUS, | 10 KAIC           |
|---------------------|------|--------|------|------|------|--------|-------|---------------------------------|--------|------------------------|-------|-------|------|------|--------|--------|------|-------------------|
| LOAD SERVED         | LOA  | AD (AM | PS)  | CKT  | BKR  | WIRE   | СКТ   | Р                               | HASI   | E                      | CKT   | WIRE  | CKT  | BKR  | LOA    | AD (AM | PS)  | LOAD SERVED       |
| LOAD SLIVED         | Α    | В      | C    | KAIC | TRIP | SIZE   | NO.   | Α                               | В (    | 0                      | NO.   | SIZE  | TRIP | KAIC | Α      | В      | С    | LOAD SLIVED       |
| LOUNGE HALL LIGHTS  | 12.4 |        |      | 10   | 20   | 12     | 1     | $\overline{}$                   |        | _                      | 2     | 12    | 20   | 10   | 4.7    |        |      | LIGHTS 291/293    |
| REC. 293A           |      | 7.5    |      | 10   | 20   | 12     | 3     | $\vdash \frown \vdash$          | +      | _~_                    | 4     | 12    | 20   | 10   |        | 11.4   |      | LOUNGE/HALL REC.  |
| REC. 293B           |      |        | 7.5  | 10   | 20   | 12     | 5     | $\vdash \smallfrown \downarrow$ |        | -~-                    | 6     | 12    | 20   | 10   |        |        | 6.0  | DATA REC.         |
| REC. 293C           | 7.5  |        |      | 10   | 20   | 12     | 7     | <b>├</b> ~→                     |        | _~_                    | 8     | 12    | 20   | 10   | 7.5    |        |      | REC. 291A         |
| REC. 293D           |      | 7.5    |      | 10   | 20   | 12     | 9     | $\vdash \frown \vdash$          | +      | _~_                    | 10    | 12    | 20   | 10   |        | 7.5    |      | REC. 291B         |
| REFRIGERATOR 293    |      |        | 8.4  | 10   | 20   | 12     | 11    | $\vdash \smallfrown \downarrow$ |        | -~-                    | 12    | 12    | 20   | 10   |        |        | 7.5  | REC. 291C         |
| COUNTER 293         | 4.5  |        |      | 10   | 20   | 12     | 13    | $\vdash \smallfrown \downarrow$ |        | _~_                    | 14    | 12    | 20   | 10   | 7.5    |        |      | REC. 291D         |
| HALL REC. 293       |      | 6.0    |      | 10   | 20   | 12     | 15    | $\vdash \smallfrown \downarrow$ | _      | _~_                    | 16    | 12    | 20   | 10   |        | 8.4    |      | REFRIGERATOR 291  |
| BATH GFI 293        |      |        | 6.0  | 10   | 20   | 12     | 17    | $\vdash \smallfrown \downarrow$ |        | -~-                    | 18    | 12    | 20   | 10   |        |        | 4.5  | COUNTER 291       |
| REC. 285B           | 3.0  |        |      | 10   | 20   | 12     | 19    | }-^-                            |        | _~_                    | 20    | 12    | 20   | 10   | 6.0    |        |      | HALL REC. 291     |
| TELECOM EXHAUST FAN |      | 0.6    |      | 10   | 20   | 12     | 21    | $\vdash \smallfrown \downarrow$ | _      | _~_                    | 22    | 12    | 20   | 10   |        | 6.0    |      | LOUNGE REC. 291   |
| DATA REC.           |      |        | 1.5  | 10   | 20   | 12     | 23    | $\vdash \frown \downarrow$      |        | -~-                    | 24    | 12    | 20   | 10   |        |        | 3.0  | BATH GFI 291      |
| DATA REC.           | 1.5  |        |      | 10   | 20   | 12     | 25    | <del> -</del> ^-                |        | _~_                    | 26    | 12    | 20   | 10   | 6.0    |        |      | KITCHEN COUNTER   |
| SPARE               |      |        |      |      | 20   |        | 27    | $\vdash \smallfrown \downarrow$ | +      | <del>-</del> ~-        | 28    | 12    | 20   | 10   |        | 8.4    |      | KITCHEN REFRIG    |
| SPARE               |      |        |      |      | 20   |        | 29    | $\vdash \smallfrown \downarrow$ | -      | -~-                    | 30    | 12    | 20   | 10   |        |        |      | SPARE             |
| STAIRWAY            |      |        |      | 10   | 20   |        | 31    | $\vdash \uparrow \vdash$        |        | <del> </del> -↑-       | 32    | 8     | 50   | 10   | 33.4   |        |      | RANGE             |
| HEATER              |      |        |      |      |      |        |       | $\vdash \land \dashv$           | +      | $\vdash \wedge \vdash$ |       |       |      |      |        | 33.4   |      |                   |
| SPACE ONLY          |      |        |      |      |      |        | 35    |                                 |        | <del>-</del>           | 36    | 10    | 40   | 10   |        |        | 20.1 | AHU-B- 2ND LOUNGE |
| SPACE ONLY          |      |        |      |      |      |        | 37    |                                 |        | $+$ $\wedge$ $-$       |       |       |      |      | 20.1   |        |      |                   |
| AHU-C-UNIT 291      |      | 20.5   |      | 10   | 40   | 10     | 39    | $\vdash \uparrow \vdash$        | +      | <del>-</del> ↑-        | 40    | 10    | 40   | 10   |        | 20.5   |      | AHU-C-UNIT 293    |
|                     |      |        | 20.5 |      |      |        |       | $\vdash \wedge \vdash$          |        |                        |       |       |      |      |        |        | 20.5 |                   |
| TOTAL               | 28.9 | 42.1   | 43.9 |      |      |        |       |                                 |        |                        |       |       |      |      | 85.2   | 95.6   | 61.6 | TOTAL             |

L2B TOTAL CONNECTED AMPS A=**76.2** B=**86.8** C=**106.2** FEEDER TOTAL CONNECTED AMPS A=190.3 B=224.4 C=211.7

|                  |      |        |      |    | <u> </u> | 14     |       |                            | י כ      |                 | <b>~</b> ' |       |      |      | <u> </u> |        |      | ULE              |
|------------------|------|--------|------|----|----------|--------|-------|----------------------------|----------|-----------------|------------|-------|------|------|----------|--------|------|------------------|
| PANEL "L         | _2B  | •      |      |    | 22       | 25A MI | LO, 2 | 208Y/1                     | 20V, 3   | 3Ø, 4V          | V, SL      | JRFAC | E MO | UNTI | ED, GF   | ROUND  | BUS, | 10 KAIC          |
| LOAD SERVED      |      | AD (AM |      |    |          | WIRE   |       |                            | PHAS     |                 |            | WIRE  |      |      |          | AD (AM |      | LOAD SERVED      |
|                  | A    | В      | С    |    |          | SIZE   | INO.  | P                          | В        | <u>C</u>        |            | SIZE  |      |      | Α        | В      | С    |                  |
| HALL LIGHTS      | 3.4  |        |      | 10 | 20       | 12     | 1     | $\vdash \cap \dashv$       |          | $+ \sim$        | 2          | 12    | 20   | 10   | 5.7      |        |      | LIGHTS 290/288   |
| HALL REC.        |      | 3.0    |      | 10 | 20       | 12     | 3     | $\vdash \cap \dashv$       | +        | $+ \sim$        | 4          | 12    | 20   | 10   |          | 7.5    |      | LIGHTS 287/285   |
| REC. 287A        |      |        | 7.5  | 10 | 20       | 12     | 5     | $\vdash \cap \dashv$       |          | $+ \sim$        | 6          | 12    | 20   | 10   |          |        | 5.7  | LIGHTS 286/284   |
| REC. 287B        | 7.5  |        |      | 10 | 20       | 12     | 7     | $\vdash \cap \dashv$       |          | $+ \sim$        | 8          | 12    | 20   | 10   | 7.5      |        |      | REC. 290B        |
| REC. 287C        |      | 7.5    |      | 10 | 20       | 12     | 9     | $\vdash \cap \vdash$       | +        | $+ \sim$        | 10         | 12    | 20   | 10   |          | 7.5    |      | REC. 290A        |
| REC. 287D        |      |        | 7.5  | 10 | 20       | 12     | 11    | $\vdash \frown \vdash$     | _        | <b>├</b> ^-     | 12         | 12    | 20   | 10   |          |        | 8.4  | REFRIGERATOR 290 |
| REFRIGERATOR 287 | 8.4  |        |      | 10 | 20       | 12     | 13    | $\vdash \frown \vdash$     | _        | $+ \sim$        | 14         | 12    | 20   | 10   | 3.0      |        |      | COUNTER 290      |
| COUNTER REC. 287 |      | 4.5    |      | 10 | 20       | 12     | 15    | $\vdash \frown \vdash$     | $\dashv$ | $+ \sim$        | 16         | 12    | 20   | 10   |          | 7.5    |      | LOUNGE REC. 290  |
| HALL REC. 287    |      |        | 6.0  | 10 | 20       | 12     | 17    | $\vdash \frown \vdash$     |          | <b>├</b> へ-     | 18         | 12    | 20   | 10   |          |        | 1.5  | BATH GFI 290     |
| LOUNGE REC. 287  | 6.0  |        |      | 10 | 20       | 12     | 19    | <del> -</del> ~-           |          | $+ \sim$        | 20         |       | 20   | 10   |          |        |      | SPARE            |
| BATH GFI 287     |      | 3.0    |      | 10 | 20       | 12     | 21    | $\vdash \frown \vdash$     | +        | $+ \sim$        | 22         |       | 20   | 10   |          |        |      | SPARE            |
| REC. 288B        |      |        | 7.5  | 10 | 20       | 12     | 23    | $\vdash \frown \downarrow$ |          | <b>├</b> へ-     | 24         |       | 20   | 10   |          |        |      | SPARE            |
| REC. 288A        | 7.5  |        |      | 10 | 20       | 12     | 25    | $\vdash \frown \downarrow$ |          | $+ \sim$        | 26         |       | 20   | 10   |          |        |      | SPARE            |
| REFRIGERATOR 288 |      | 8.4    |      | 10 | 20       | 12     | 27    | $\vdash \frown \dashv$     | +        | $+ \sim$        | 28         |       | 20   | 10   |          |        |      | SPARE            |
| COUNTER REC. 288 |      | 1      | 3.0  | 10 | 20       | 12     | 29    | $\vdash \frown \vdash$     |          | <b>├</b> へ-     | 30         |       | 20   | 10   |          |        |      | SPARE            |
| LOUNGE REC. 288  | 7.5  |        |      | 10 | 20       | 12     | 31    | $\vdash \frown \dashv$     |          | $+ \sim$        | 32         |       | 20   | 10   |          |        |      | SPARE            |
| BATH GFI 288     |      | 1.5    |      | 10 | 20       | 12     | 33    | $\vdash \frown \vdash$     | _        | $+ \sim$        | 34         |       | 20   | 10   |          |        |      | SPARE            |
| SPARE            |      |        |      | 10 | 20       |        | 35    | $\vdash \land \dashv$      |          | <del>-</del> ↑- | 36         | 12    | 35   | 10   |          |        | 19.7 | AHU-A-287        |
| SPARE            |      |        |      | 10 | 20       |        | 37    | $\vdash \frown \downarrow$ |          | ᄉ               | 4          |       |      |      | 19.7     |        |      |                  |
| AHU-A-288        |      | 19.7   |      | 10 | 35       | 12     | 39    | $\vdash \land \vdash$      | _        | <del>-</del> ≁- | 40         | 12    | 35   | 10   |          | 19.7   |      | AHU-A-290        |
|                  |      | 1011   | 19.7 |    |          |        |       | $\vdash \land \vdash$      |          | ᄉ               |            |       |      |      |          |        | 19.7 |                  |
| TOTAL            | 40.3 | 44.6   | 51.2 |    |          |        |       |                            |          |                 |            |       |      |      | 35.9     | 42.2   | 55.0 | TOTAL            |

(757) 253-0673



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | R    | EVISIONS    |
|---|------|-------------|
| # | DATE | DESCRIPTION |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

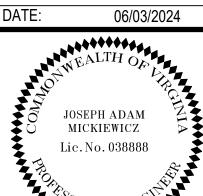
COMMISSION NUMBER

SCALE:

DESIGNED: JAM

DRAWN: VT

CHECKED: MAW



SHEET TITLE
ELECTRICAL
PANELBOARD
SCHEDULES

SHEET NUMBER
E-602

**SHEET#** 46 **OF** 51

#### NOTES:

PANEL "L2B" IS TYPICAL OF PANELS "L3B" AND "L4B".
PANEL "L2C" IS TYPICAL OF PANELS "L3C" AND "L4C".
PANEL "L2D" IS TYPICAL OF PANELS "L3D" AND "L4D".

PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    |
|---------------|---------------|
| PHASE A=41.8A | PHASE A=39.4  |
| PHASE B=41.8A | PHASE B=39.4/ |
| PHASE C=83.6A | PHASE C=78.8  |
|               |               |

PANELBOARD LOAD CALCULATION:

REMOVED LOAD
PHASE A=20.9A
PHASE B=41.8A
PHASE C=62.7A

PHASE C=59.9A

PANEL L2C AND L2D FEEDER LOAD CALCULATION:

| ADDED LOAD      | <b>NET CHANGE</b>                |
|-----------------|----------------------------------|
| PHASE A= 59.9A  | PHASE A= -2.8A                   |
| PHASE B= 78.8A  | PHASE B= -4.8A                   |
| PHASE C= 138.7A | PHASE C= -7.6A                   |
|                 | PHASE A= 59.9A<br>PHASE B= 78.8A |

ALL CONNECTED LOAD ON PHASES HAVE BEEN DECREASED. THE EXISTING 225A FEEDER IS SATISFACTORY.

PANELBOARD LOAD CALCULATION:

REMOVED LOAD
PHASE A=41.0A
PHASE B=44.4A
PHASE C=85.4A
PHASE C=62.7A

|                                                                                     | P               | 1 A             | N E             | L               | В               | 0               | A   | R                                             | D   |                  | 5 (  | CH              | 1 E             | Ξ               | ) U             | L               | Ε               |                  |
|-------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----|-----------------------------------------------|-----|------------------|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| PANEL "L2C" 225A MLO, 208/Y120V, 3Ø, 4W, SURFACE MOUNTED, GROUND BUS, 25 KAIC PRL2A |                 |                 |                 |                 |                 |                 |     |                                               |     |                  |      |                 |                 |                 |                 |                 |                 |                  |
| LOAD SERVED                                                                         | LOA             | AD (AM          |                 |                 |                 | WIRE            |     | Р                                             | HAS | Ε                | CKT  | WIRE            | CKT             | BKR             | LOA             | AD (AM          | PS)             | LOAD SERVED      |
| LOAD SERVED                                                                         | Α               | В               | С               | KAIC            | TRIP            | SIZE            | NO. | Α                                             | В   | С                | NO.  | SIZE            | TRIP            | KAIC            | Α               | В               | С               | LOAD SERVED      |
| HALL LIGHTS                                                                         | 4.9             |                 |                 | 25              | 20              | 12              | 1   | $\sim$                                        |     |                  | 2    | 12              | 20              | 25              | 9.4             |                 |                 | LIGHTS 283/281   |
| HALL REC.                                                                           |                 | 3.0             |                 | 25              | 20              | 12              | 3   | $\vdash \smallfrown \downarrow$               | _   | $+ \sim$         | 4    | 12              | 20              | 25              |                 | 6.8             |                 | LIGHTS 282/280   |
| REFRIGERATOR 286                                                                    |                 |                 | 8.4             | 25              | 20              | 12              | 5   | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | - 6  | 12              | 20              | 25              |                 |                 | 8.4             | REFRIGERATOR 284 |
| REC. 286B                                                                           | 7.5             |                 |                 | 25              | 20              | 12              | 7   | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | - 8  | 12              | 20              | 25              | 7.5             |                 |                 | REC. 284B        |
| REC. 286A                                                                           |                 | 3.0             |                 | 25              | 20              | 12              | 9   | $\vdash \smallfrown \vdash$                   | +   | $+ \sim$         | 10   | 12              | 20              | 25              |                 | 7.5             |                 | REC. 284A        |
| BATH GFI 286                                                                        |                 |                 | 3.0             | 25              | 20              | 12              | 11  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | 12   | 12              | 20              | 25              |                 |                 | 3.0             | BATH GFI 284     |
| COUNTER 286 REC.                                                                    | 7.5             |                 |                 | 25              | 20              | 12              | 13  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | 14   | 12              | 20              | 25              | 7.5             |                 |                 | COUNTER 284 REC. |
| LOUNGE REC. 286                                                                     |                 | 1.5             |                 | 25              | 20              | 12              | 15  | $\vdash \smallfrown \vdash$                   | +   | $+ \sim$         | 16   | 12              | 20              | 25              |                 | 1.5             |                 | LOUNGE REC. 284  |
| REC. 285A                                                                           |                 |                 | 7.5             | 25              | 20              | 12              | 17  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | - 18 | 12              | 20              | 25              |                 |                 | 8.4             | REFRIGERATOR 282 |
| REC. 285B                                                                           | 7.5             |                 |                 | 25              | 20              | 12              | 19  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | 20   | 12              | 20              | 25              | 7.5             |                 |                 | REC. 282B        |
| REFRIGERATOR 285                                                                    |                 | 8.4             |                 | 25              | 20              | 12              | 21  | $\vdash \smallfrown \vdash$                   | +   | $+ \sim$         | - 22 | 12              | 20              | 25              |                 | 7.5             |                 | REC. 282A        |
| COUNTER 285                                                                         |                 |                 | 7.5             | 25              | 20              | 12              | 23  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | 24   | 12              | 20              | 25              |                 |                 | 3.0             | BATH GFI 282     |
| LOUNGE REC. 285                                                                     | 7.5             |                 |                 | 25              | 20              | 12              | 25  | $\vdash \smallfrown \downarrow$               |     | $+ \sim$         | 26   | 12              | 20              | 25              | 7.5             |                 |                 | COUNTER REC. 282 |
| BATH GFI 285                                                                        |                 | 1.5             |                 | 25              | 20              | 12              | 27  | $\vdash \smallfrown \vdash$                   | +   | $+ \sim$         | 28   | 12              | 20              | 25              |                 | 3.0             |                 | LOUNGE REC. 282  |
| SPARE                                                                               |                 |                 |                 | 25              | 20              |                 | 29  | $\vdash \smallfrown \vdash$                   |     | $+ \sim$         | 30   |                 | 20              | 25              |                 |                 |                 | SPARE            |
| SPARE                                                                               |                 |                 |                 | 25              | 20              |                 | 31  | $\vdash \smallfrown$                          |     | $+ \sim$         | 32   |                 | 20              | 25              |                 |                 |                 | SPARE            |
| SPARE                                                                               |                 |                 |                 | 25              | 20              |                 | 33  | $\vdash \smallfrown \vdash$                   | +   | $+ \sim$         | 34   |                 | 20              | 25              |                 |                 |                 | SPARE            |
| AIR HANDLER 285                                                                     |                 |                 | <del>20.9</del> | <del>-25-</del> | <del>-25</del>  | <del>-10-</del> | 35  | $\vdash x \dashv$                             |     | <del>-</del> ₽-  | 36   | <del>-10-</del> | <del>-25-</del> | <del>-25-</del> |                 |                 | <del>20.9</del> | AIR HANDLER 284  |
|                                                                                     | <del>20.9</del> |                 |                 |                 |                 |                 |     | $\vdash \stackrel{\wedge}{\wedge} \downarrow$ |     | +-~-             |      |                 | 25              |                 | <del>20.9</del> |                 |                 |                  |
| AIR HANDLER 286                                                                     |                 | <del>20.9</del> |                 | <del>-25-</del> | <del>- 25</del> | <del>-10</del>  | 39  | $\vdash \mathfrak{x} \dashv$                  | +   | <del> </del> -₽- | 40   | <del>-10-</del> | <del>-25-</del> | <del>-25-</del> |                 | <del>20.9</del> |                 | AIR HANDLER 282  |
|                                                                                     |                 |                 | <del>20.9</del> |                 |                 |                 |     | $\vdash \stackrel{\wedge}{\wedge} \vdash$     |     | <del>↓</del> △̈– | -    |                 | 25              |                 |                 |                 | <del>20.9</del> |                  |
| TOTAL                                                                               | 55.8            | 38.3            | 68.2            |                 |                 |                 |     |                                               |     |                  |      |                 |                 |                 | 60.3            | 47.2            | 64.6            | TOTAL            |

L2C TOTAL CONNECTED AMPS A=116.1 B=85.5 C=132.8

L2D TOTAL CONNECTED AMPS A=73.4 B=100.6 C=102.5

FEEDER TOTAL CONNECTED AMPS A=189.5 B=186.1 C=235.3

| LOAD SERVED  REC. 280B REC. 280A | LO <i>A</i>     | AD (AM          | PS)             | PANEL "L2D"  225A MLO, 208Y/120V, 3Ø, 4W, SURFACE MOUNTED, GROUND BUS, 25 KAIC PRL2A  LOAD SERVED  LOAD (AMPS)   CKT BKR WIRE CKT   PHASE   CKT WIRE CKT BKR   LOAD (AMPS)   LOAD SERVED |                 |                |      |                            |          |                 |            |                 |                |               |     |             |                 |                  |
|----------------------------------|-----------------|-----------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|------|----------------------------|----------|-----------------|------------|-----------------|----------------|---------------|-----|-------------|-----------------|------------------|
|                                  | A               | IВ              |                 |                                                                                                                                                                                          |                 | WIRE<br>SIZE   |      |                            | HAS<br>B |                 | CKT<br>NO. | WIRE<br>SIZE    |                |               |     | AD (AM<br>B | PS)<br>C        | LOAD SERVED      |
|                                  |                 | Ь               | U               |                                                                                                                                                                                          |                 |                | INO. | A                          | <u> </u> | <u> </u>        |            |                 | _              |               |     | D           | U               |                  |
| DEC 2004                         | 7.5             |                 |                 | 25                                                                                                                                                                                       | 20              | 12             | 1    | <u> </u>                   | +        | $+ \sim$        | 2          | 12              | 20             | 25            | 7.5 |             |                 | REC. 281D        |
| (EU. 280A                        |                 | 7.5             |                 | 25                                                                                                                                                                                       | 20              | 12             | 3    | $\vdash \frown \vdash$     | +        | $+ \smallfrown$ | 4          | 12              | 20             | 25            |     | 7.5         |                 | REFRIGERATOR 281 |
| REFRIGERATOR 280                 |                 |                 | 8.3             | 25                                                                                                                                                                                       | 20              | 12             | 5    | $\vdash \cap \vdash$       |          | $+ \sim$        | 6          | 12              | 20             | 25            |     |             | 7.5             | COUNTER REC. 281 |
| OUNGE REC. 280                   | 3.0             |                 |                 | 25                                                                                                                                                                                       | 20              | 12             | 7    | <b>├</b> ^→                | +        | $+ \smallfrown$ | - 8        | 12              | 20             | 25            | 7.5 |             |                 | HALL REC. 281    |
| SATH GFI 280                     |                 | 7.5             |                 | 25                                                                                                                                                                                       | 20              | 12             | 9    | $\vdash \cap \vdash$       | +        | $+ \smallfrown$ | 10         | 12              | 20             | 25            |     | 8.4         |                 | LOUNGE REC. 281  |
| OUNTER 280                       |                 |                 | 1.5             | 25                                                                                                                                                                                       | 20              | 12             | 11   | <b>├</b> ^┤                | +        | $+ \sim$        | 12         | 12              | 20             | 25            |     |             | 4.5             | BATH GFI 281     |
| REC. 283A                        | 7.5             |                 |                 | 25                                                                                                                                                                                       | 20              | 12             | 13   | <b>├</b> ^→                |          | $+ \sim$        | 14         | 12              | 20             | 25            | 6.0 |             |                 | REC. 281A        |
| REC. 283B                        |                 | 7.5             |                 | 25                                                                                                                                                                                       | 20              | 12             | 15   | <b>├</b> ^┤                | +        | $+ \smallfrown$ | 16         | 12              | 20             | 25            |     | 6.0         |                 | REC. 281B        |
| REC. 283C                        |                 |                 | 7.5             | 25                                                                                                                                                                                       | 20              | 12             | 17   | $\vdash \frown \vdash$     |          | $+ \sim$        | 18         | 12              | 20             | 25            |     |             | 3.0             | REC. 281C        |
| REC. 283D                        | 7.5             |                 |                 | 25                                                                                                                                                                                       | 20              | 12             | 19   | $\vdash \cap \downarrow$   | +        | $+ \sim$        | 20         |                 | 20             | 25            |     |             |                 | SPARE            |
| REFRIGERATOR 283                 |                 | 8.4             |                 | 25                                                                                                                                                                                       | 20              | 12             | 21   | $\vdash \cap \vdash$       | +        | $+ \sim$        | - 22       |                 | 20             | 25            |     |             |                 | SPARE            |
| OUNTER 283                       |                 |                 | 4.5             | 25                                                                                                                                                                                       | 20              | 12             | 23   | $\vdash \frown \vdash$     | +        | $+ \sim$        | 24         |                 | 20             | 25            |     |             |                 | SPARE            |
| IALL REC. 283                    | 6.0             |                 |                 | 25                                                                                                                                                                                       | 20              | 12             | 25   | $\vdash \uparrow$          | +        | +               | 26         |                 | 20             | 25            |     |             |                 | SPARE            |
| OUNGE REC. 283                   |                 | 6.0             |                 | 25                                                                                                                                                                                       | 20              | 12             | 27   | <u> </u>                   | $\vdash$ | +               | 28         |                 | 20             | 25            |     |             |                 | SPARE            |
| BATH GFI 283                     |                 |                 | 3.0             | 25                                                                                                                                                                                       | 20              | 12             | 29   |                            | +        | $+ \sim$        | 30         |                 | 20             | 25            |     |             |                 | SPARE            |
| PARE                             |                 |                 |                 | 25                                                                                                                                                                                       | 20              |                | 31   | <u> </u>                   | +        | +               | 32         |                 | 20             | 25            |     |             |                 | SPARE            |
| SPARE                            |                 |                 |                 | 25                                                                                                                                                                                       | 20              |                | 33   | $\vdash \frown \downarrow$ | $\dashv$ | $+ \sim$        | 34         |                 | 20             | 25            |     |             |                 | SPARE            |
| AIR HANDLER 283                  |                 |                 | <del>20.9</del> | <del>-25-</del>                                                                                                                                                                          | <del>-25-</del> | <del>-10</del> | 35   | <del> </del>               | +        | $+ \sim$        | 36         |                 | 20             | 25            |     |             |                 | SPARE            |
|                                  | <del>20.9</del> |                 |                 |                                                                                                                                                                                          |                 |                |      | $\vdash \uparrow$          | +        | +               | 38         |                 | 20             |               |     |             |                 | SPARE            |
| AIR HANDLER 280                  |                 | <del>20.9</del> | 00.0            | <del>-25</del>                                                                                                                                                                           | <del>-25</del>  | <del>-10</del> | 39   |                            | +        | <del> </del>    | 40         | <del>-10-</del> | <del>-25</del> | <del>25</del> |     | 20.9        | 00.0            | AIR HANDLER 281  |
|                                  |                 |                 | <del>20.9</del> |                                                                                                                                                                                          |                 |                |      | $\vdash$                   | -        | ┿╸┕             | 1          | 1               | 1              | 1             |     |             | <del>20.9</del> |                  |

|                                          | P               | <b>A</b> 1      | ١E               | L             | В              | 0               | Δ        | R      | D         | 5      | 3 (        | CH            | 1 E             | Ξ                   | ) U             | J L         | E               | WITH FEED THROUGH<br>LUG FEEDING L5B |
|------------------------------------------|-----------------|-----------------|------------------|---------------|----------------|-----------------|----------|--------|-----------|--------|------------|---------------|-----------------|---------------------|-----------------|-------------|-----------------|--------------------------------------|
| PANEL "L                                 | 5A'             | •               |                  |               | 22             | 25A MI          | LO, 2    | .08Y/1 | 20V, 3    | 3∅, 4V | V, SL      | JRFAC         | E MC            | UNT                 | ED, GF          | ROUND       | BUS, 1          | 10 KAIC                              |
| LOAD SERVED                              | LO/<br>A        | AD (AM<br>B     | PS)<br>C         |               | BKR<br>TRIP    | WIRE<br>SIZE    |          |        | PHAS<br>B |        | CKT<br>NO. | WIRE<br>SIZE  |                 |                     | LO/<br>A        | AD (AM<br>B | PS)             | LOAD SERVED                          |
| LIGHTS HALL/LOUNGE<br>REC. 593A          | 13.3            | 7.5             |                  | 10<br>10      | 20<br>20       | 12<br>12        | 1        | }      | T         |        | 2          | 12<br>12      | 20<br>20        | 10<br>10            | 4.7             | 4.4         |                 | LIGHTS 593<br>LIGHTS 591             |
| REC. 593B                                |                 | 7.0             | 7.5              | 10            | 20             | 12              | 5        |        |           |        | 6          | 12            | 20              | 10                  |                 | 4.4         | 7.5             | REC. 591A                            |
| REC. 593C<br>REC. 593D                   | 7.5             | 7.5             |                  | 10            | 20             | 12              | 7        |        |           |        | 8<br>10    | 12<br>12      | 20              | 10                  | 7.5             | 7.5         |                 | REC. 591B<br>REC. 591C               |
| REFRIGERATOR 593                         |                 | 7.0             | 8.3              | 10            | 20             | 12              | 11       |        |           |        | 12         | 12            | 20              | 10                  |                 | 1.5         | 7.5             | COUNTER 591                          |
| COUNTER 593<br>HALL REC. 593             | 4.5             | 6.0             |                  | 10            | 20             | 12              | 13<br>15 |        |           |        | 14<br>16   | 12<br>12      | 20              | 10                  | 8.3             | 3.0         |                 | REFRIGERATOR 591<br>REC. 591D        |
| LIVING AREA 593                          | 2.0             |                 | 6.0              | 10            | 20             | 12              | 17<br>19 |        |           |        | 18<br>20   | 12            | 20              | 10                  | 0.0             | 0.0         | 7.5             | HALL REC. 591                        |
| BATH GFI 593<br>MAIN HALLWAY REC. BY 593 | 3.0             | 9.8             |                  | 10            | 20             | 12<br>12        | 21       |        |           |        | 22         | 12<br>12      | 20              | 10                  | 6.0             | 3.0         |                 | LIVING AREA 591<br>BATH GFI 591      |
| KITCHEN COUNTER                          | 8.3             |                 | 6.0              | 10<br>10      | 20             | 12              | 23<br>25 |        |           |        | 24<br>26   | 12<br>12      | 20              | 10                  | 7.2             |             | 6.0             | DATA RM. REC.                        |
| KITCHEN REFRIG.<br>RANGE                 | 0.5             | 19.3            |                  | 10            | 50             | 10              | 27       |        | +         |        |            |               |                 |                     | 1.2             | 7.2         |                 | STAIRWAY HEATER                      |
| CDADE                                    |                 |                 | 19.3             | 10            | 20             |                 | 31       |        |           |        | 30<br>32   | 12            | 20              | 10                  | 1.5             |             | 1.5             | DATA RM. REC                         |
| SPARE<br>EXHAUST FAN                     |                 | 0.5             |                  | 10            | 20             | 12              | 33       |        | _         |        | 34         | 12            | 20              | 10                  | 1.5             |             |                 | DATA RM. REC.<br>SPARE               |
| AIR HANDLER 591                          | <del>20.5</del> |                 | <del>20.5</del>  | <del>10</del> | <del>-30</del> | <del>-10-</del> | 35       | *      |           | *      | 36         | <del>10</del> | <del>30</del> - | <del>10</del><br>10 | <del>20.5</del> |             | <del>20.5</del> | AIR HANDLER 593                      |
| AIR HANDLER 5TH-                         |                 | <del>22.2</del> | <del>-22.2</del> | <del>10</del> | <del>-25</del> | <del>10</del>   | 39       |        |           |        | 40         | <del>10</del> | <del>25</del>   | <del>10</del><br>10 | 20.0            | 22.2        | 22.2            | AIR HANDLER 5TH CORRIDOR             |
| TOTAL                                    | 57.1            | 72.8            | 89.8             |               |                |                 |          |        |           | I      |            | 1             | ı               |                     | 55.7            | 47.3        | 72.7            | TOTAL                                |
|                                          |                 |                 | L5/              | 4 TO          | TAL (          | CONNE           | ECTE     | D AM   | PS A      | =112.8 | B=         | =120.1        | C=              | 162.5               |                 |             |                 |                                      |

L5B TOTAL CONNECTED AMPS A=48.4 B=81.1 C=75.1

FEEDER TOTAL CONNECTED AMPS A=161.2 B=201.2 C=237.6

| UPD              | A T  | Έ      | D    | P    | A    | N     | E     | LE                          | 3 (   | 0 /                                              | <b>4</b> | R [   | )    | S     | C      | H      | ΞD     | ULE              |
|------------------|------|--------|------|------|------|-------|-------|-----------------------------|-------|--------------------------------------------------|----------|-------|------|-------|--------|--------|--------|------------------|
| PANEL "L         | .2C  | •      |      |      | 22   | 25A M | LO, 2 | .08Y/12                     | 0V, 3 | 3Ø, 4\                                           | W, SL    | IRFAC | E MC | DUNTI | ED, GF | ROUND  | BUS, 2 | 25 KAIC PRL2A    |
| LOAD SERVED      | LO   | AD (AM | IPS) |      |      | WIRE  |       |                             | HAS   | E                                                | CKT      | WIRE  | CKT  | BKR   | LOA    | AD (AM | PS)    | LOAD SERVED      |
| LOAD SERVED      | Α    | В      | С    | KAIC | TRIP | SIZE  | NO.   | Α                           | В     | С                                                | NO.      | SIZE  | TRIP | KAIC  | Α      | В      | С      | LOAD SERVED      |
| HALL LIGHTS      | 4.9  |        |      | 25   | 20   | 12    | 1     | -^-                         |       | _                                                | 2        | 12    | 20   | 25    | 9.4    |        |        | LIGHTS 283/281   |
| HALL REC.        |      | 3.0    |      | 25   | 20   | 12    | 3     | <u> </u>                    | +     | $+ \sim$                                         | 4        | 12    | 20   | 25    |        | 6.8    |        | LIGHTS 282/280   |
| REFRIGERATOR 286 |      |        | 8.4  | 25   | 20   | 12    | 5     | <u> </u>                    |       | $+ \sim$                                         | 6        | 12    | 20   | 25    |        |        | 8.4    | REFRIGERATOR 284 |
| REC. 286B        | 7.5  |        |      | 25   | 20   | 12    | 7     | $\vdash \smallfrown \vdash$ |       | $+ \sim$                                         | 8        | 12    | 20   | 25    | 7.5    |        |        | REC. 284B        |
| REC. 286A        |      | 3.0    |      | 25   | 20   | 12    | 9     | $\vdash \cap \vdash$        | +     | $+ \sim$                                         | 10       | 12    | 20   | 25    |        | 7.5    |        | REC. 284A        |
| BATH GFI 286     |      |        | 3.0  | 25   | 20   | 12    | 11    |                             |       | $+ \sim$                                         | 12       | 12    | 20   | 25    |        |        | 3.0    | BATH GFI 284     |
| COUNTER 286 REC. | 7.5  |        |      | 25   | 20   | 12    | 13    | <u> </u>                    |       | $+ \sim$                                         | 14       | 12    | 20   | 25    | 7.5    |        |        | COUNTER 284 REC. |
| LOUNGE REC. 286  |      | 1.5    |      | 25   | 20   | 12    | 15    |                             | +     | $+ \sim$                                         | 16       | 12    | 20   | 25    |        | 1.5    |        | LOUNGE REC. 284  |
| REC. 285A        |      |        | 7.5  | 25   | 20   | 12    | 17    | $\vdash \smallfrown \vdash$ |       | $+ \sim$                                         | 18       | 12    | 20   | 25    |        |        | 8.4    | REFRIGERATOR 282 |
| REC. 285B        | 7.5  |        |      | 25   | 20   | 12    | 19    | $\vdash \smallfrown \vdash$ |       | $+ \sim$                                         | 20       | 12    | 20   | 25    | 7.5    |        |        | REC. 282B        |
| REFRIGERATOR 285 |      | 8.4    |      | 25   | 20   | 12    | 21    | <u> </u>                    | +     | $+ \sim$                                         | 22       | 12    | 20   | 25    |        | 7.5    |        | REC. 282A        |
| COUNTER 285      |      |        | 7.5  | 25   | 20   | 12    | 23    | $\vdash \frown \vdash$      |       | $+ \sim$                                         | 24       | 12    | 20   | 25    |        |        | 3.0    | BATH GFI 282     |
| LOUNGE REC. 285  | 7.5  |        |      | 25   | 20   | 12    | 25    | $\vdash \smallfrown \vdash$ |       | $+ \sim$                                         | 26       | 12    | 20   | 25    | 7.5    |        |        | COUNTER REC. 282 |
| BATH GFI 285     |      | 1.5    |      | 25   | 20   | 12    | 27    | $\vdash \frown \vdash$      | +     | $+ \sim$                                         | 28       | 12    | 20   | 25    |        | 3.0    |        | LOUNGE REC. 282  |
| SPARE            |      |        |      | 25   | 20   |       | 29    | <u> </u>                    |       | $+ \sim$                                         | 30       |       | 20   | 25    |        |        |        | SPARE            |
| SPARE            |      |        |      | 25   | 20   |       | 31    | <u> </u>                    |       | $+ \smallfrown$                                  | 32       |       | 20   | 25    |        |        |        | SPARE            |
| SPARE            |      |        |      | 25   | 20   |       | 33    | <u> </u>                    | +     | $+ \sim$                                         | 34       |       | 20   | 25    |        |        |        | SPARE            |
| AHU-A-285        |      |        | 19.7 | 25   | 35   | 12    | 35    | $+ \uparrow \uparrow$       |       | $+$ $\uparrow$ -                                 | 36       | 12    | 35   | 25    |        |        | 19.7   | AHU-A-284        |
|                  | 19.7 |        |      |      |      |       | 00    | <u>  ^</u> +                |       | +                                                | 1        |       |      |       | 19.7   |        |        |                  |
| AHU-A-286        |      | 19.7   |      | 25   | 35   | 12    | 39    | $\Box$                      | +     | $\top \Upsilon$                                  | 40       | 12    | 35   | 25    |        | 19.7   |        | AHU-A-282        |
|                  |      |        | 19.7 |      |      |       |       | $\perp \perp$               |       | <del>                                     </del> | 1        |       |      |       |        |        | 19.7   |                  |

L2D TOTAL CONNECTED AMPS A=73.4 B=98.2 C=99.7 FEEDER TOTAL CONNECTED AMPS A=187.1 B=181.3 C=227.7

L2C TOTAL CONNECTED AMPS A=113.7 B=83.1 C=128.0

59.1 46.0 62.2

TOTAL

54.6 37.1 65.8

| PANEL "L         | .2D' | •      |      |      | 22   | 25A MI | _0, 2 | 08Y/120                     | V, 39 | Ø, 4V           | V, SU | IRFAC | E MC  | UNT  | ED, GR | OUND  | BUS, 2 | 25 KAIC PRL2A    |
|------------------|------|--------|------|------|------|--------|-------|-----------------------------|-------|-----------------|-------|-------|-------|------|--------|-------|--------|------------------|
| LOAD SERVED      |      | AD (AM |      |      |      | WIRE   |       |                             | ASE   |                 |       | WIRE  |       |      |        | D (AM |        | LOAD SERVED      |
|                  | A    | В      | С    | KAIC | IKIP | SIZE   | NO.   | A                           | ВС    |                 |       | SIZE  | IIKIP | KAIC | А      | В     | С      |                  |
| REC. 280B        | 7.5  |        |      | 25   | 20   | 12     | 1     | $\vdash \smallfrown \vdash$ | ++    | $\sim$          | 2     | 12    | 20    | 25   | 7.5    |       |        | REC. 281D        |
| REC. 280A        |      | 7.5    |      | 25   | 20   | 12     | 3     | $\vdash \smallfrown \vdash$ | + +   | $\overline{\ }$ | 4     | 12    | 20    | 25   |        | 7.5   |        | REFRIGERATOR 281 |
| REFRIGERATOR 280 |      |        | 8.3  | 25   | 20   | 12     | 5     | $\vdash \smallfrown \vdash$ | ++    | $\overline{\ }$ | 6     | 12    | 20    | 25   |        |       | 7.5    | COUNTER REC. 281 |
| OUNGE REC. 280   | 3.0  |        |      | 25   | 20   | 12     | 7     | $\vdash \smallfrown \vdash$ | ++    | $\sim$          | 8     | 12    | 20    | 25   | 7.5    |       |        | HALL REC. 281    |
| BATH GFI 280     |      | 7.5    |      | 25   | 20   | 12     | 9     | $\vdash \smallfrown \vdash$ | + +   | $\sim$          | 10    | 12    | 20    | 25   |        | 8.4   |        | LOUNGE REC. 281  |
| COUNTER 280      |      |        | 1.5  | 25   | 20   | 12     | 11    | $\vdash \smallfrown \vdash$ | ++    | $\overline{\ }$ | 12    | 12    | 20    | 25   |        |       | 4.5    | BATH GFI 281     |
| REC. 283A        | 7.5  |        |      | 25   | 20   | 12     | 13    | $\vdash \smallfrown \vdash$ | ++    | $\overline{\ }$ | 14    | 12    | 20    | 25   | 6.0    |       |        | REC. 281A        |
| REC. 283B        |      | 7.5    |      | 25   | 20   | 12     | 15    | $\vdash \smallfrown \vdash$ | + +   | $\langle$       | 16    | 12    | 20    | 25   |        | 6.0   |        | REC. 281B        |
| REC. 283C        |      |        | 7.5  | 25   | 20   | 12     | 17    | $\vdash \smallfrown \vdash$ | ++    | <u> </u>        | 18    | 12    | 20    | 25   |        |       | 3.0    | REC. 281C        |
| REC. 283D        | 7.5  |        |      | 25   | 20   | 12     | 19    | $\vdash \smallfrown \vdash$ | ++    | $\sim$          | 20    |       | 20    | 25   |        |       |        | SPARE            |
| REFRIGERATOR 283 |      | 8.4    |      | 25   | 20   | 12     | 21    | $\vdash \smallfrown \vdash$ | +     | $\sim$          | 22    |       | 20    | 25   |        |       |        | SPARE            |
| COUNTER 283      |      |        | 4.5  | 25   | 20   | 12     | 23    | $\vdash \smallfrown \vdash$ | +     | $\sim$          | 24    |       | 20    | 25   |        |       |        | SPARE            |
| HALL REC. 283    | 6.0  |        |      | 25   | 20   | 12     | 25    | $\vdash \smallfrown \vdash$ | ++    | $\sim$          | 26    |       | 20    | 25   |        |       |        | SPARE            |
| OUNGE REC. 283   |      | 6.0    |      | 25   | 20   | 12     | 27    | $\vdash \smallfrown \vdash$ | + +   | $\langle$       | 28    |       | 20    | 25   |        |       |        | SPARE            |
| BATH GFI 283     |      |        | 3.0  | 25   | 20   | 12     | 29    | $\vdash \smallfrown \vdash$ | ++    | $\sim$          | 30    |       | 20    | 25   |        |       |        | SPARE            |
| SPARE            |      |        |      | 25   | 20   |        | 31    | $\vdash \smallfrown \vdash$ | ++    | <u> </u>        | 32    |       | 20    | 25   |        |       |        | SPARE            |
| SPARE            |      |        |      | 25   | 20   |        | 33    | $\vdash \smallfrown \vdash$ | +     | $\sim$          | 34    |       | 20    | 25   |        |       |        | SPARE            |
| AHU-C-283        |      |        | 20.5 | 25   | 40   | 10     | 35    | $\vdash \uparrow \vdash$    | ++    | $\sim$          | 36    |       | 20    | 25   |        |       |        | SPARE            |
|                  | 20.5 |        |      |      |      |        |       | $\vdash \land \dotplus$     | ++    | $\sim$          | 38    |       | 20    | 25   |        |       |        | SPARE            |
| \HU-A-280        |      | 19.7   |      | 25   | 35   | 12     | 39    | $\vdash \uparrow \vdash$    | +     | ┰┤              | 40    | 12    | 35    | 25   |        | 19.7  |        | AHU-A-281        |
|                  |      |        | 19.7 |      |      |        |       | $\vdash \land \vdash$       |       | 人               |       |       |       |      |        |       | 19.7   |                  |
| TOTAL            | 52.4 | 56.6   | 65.0 |      |      |        |       |                             |       |                 |       |       |       |      | 21.0   | 41.6  | 34.7   | TOTAL            |

| PANEL "L                 | 5Δ'  | •           |      |      | 22 | 25A MI       | 0 2 | 08Y/²                                                             | 120\/      | 30/4           | N SI        | IRFAC        | E MO | IINIT | FD GF | SOLIND      | BUS 1    | 10 KAIC          |
|--------------------------|------|-------------|------|------|----|--------------|-----|-------------------------------------------------------------------|------------|----------------|-------------|--------------|------|-------|-------|-------------|----------|------------------|
| I ANLL L                 |      |             | DO)  | OLIT |    |              |     |                                                                   |            | <i>,</i> ,     |             |              |      |       |       |             |          |                  |
| LOAD SERVED              | A A  | AD (AM<br>B |      |      |    | WIRE<br>SIZE |     |                                                                   | PHA<br>A B |                | ICKT<br>NO. | WIRE<br>SIZE |      |       |       | AD (AM<br>B | PS)<br>C | LOAD SERVED      |
| LIGHTS HALL/LOUNGE       | 13.3 |             |      | 10   | 20 | 12           | 1   | _                                                                 | 1          |                | 2           | 12           | 20   | 10    | 4.7   |             |          | LIGHTS 593       |
| REC. 593A                |      | 7.5         |      | 10   | 20 | 12           | 3   | ├~-                                                               | +          | $+ \sim$       | 4           | 12           | 20   | 10    |       | 44          |          | LIGHTS 591       |
| REC. 593B                |      |             | 7.5  | 10   | 20 | 12           | 5   | $\vdash \smallfrown$                                              | ++         | $+ \sim$       | - 6         | 12           | 20   | 10    |       |             | 7.5      | REC. 591A        |
| REC. 593C                | 7.5  |             |      | 10   | 20 | 12           | 7   | $\vdash \sim$                                                     | +          | $+ \sim$       | 8           | 12           | 20   | 10    | 7.5   |             |          | REC. 591B        |
| REC. 593D                |      | 7.5         |      | 10   | 20 | 12           | 9   | ├~-                                                               | +          | $+ \sim$       | 10          | 12           | 20   | 10    |       | 7.5         |          | REC. 591C        |
| REFRIGERATOR 593         |      |             | 8.3  | 10   | 20 | 12           | 11  | $\vdash \smallfrown$                                              | ++         | $+ \sim$       | 12          | 12           | 20   | 10    |       |             | 7.5      | COUNTER 591      |
| COUNTER 593              | 4.5  |             |      | 10   | 20 | 12           | 13  | $\vdash \sim$                                                     | +          | $+ \sim$       | 14          | 12           | 20   | 10    | 8.3   |             |          | REFRIGERATOR 591 |
| HALL REC. 593            |      | 6.0         |      | 10   | 20 | 12           | 15  | $\vdash \smallfrown$                                              | ++         | $+ \sim$       | 16          | 12           | 20   | 10    |       | 3.0         |          | REC. 591D        |
| LIVING AREA 593          |      |             | 6.0  | 10   | 20 | 12           | 17  | $\vdash \smallfrown$                                              | ++         | $+ \sim$       | 18          | 12           | 20   | 10    |       |             | 7.5      | HALL REC. 591    |
| BATH GFI 593             | 3.0  |             |      | 10   | 20 | 12           | 19  | $\vdash \smallfrown$                                              | +          | $+ \sim$       | 20          | 12           | 20   | 10    | 6.0   |             |          | LIVING AREA 591  |
| MAIN HALLWAY REC. BY 593 |      | 9.8         |      | 10   | 20 | 12           | 21  | $\vdash \smallfrown$                                              | +          | $+ \sim$       | 22          | 12           | 20   | 10    |       | 3.0         |          | BATH GFI 591     |
| KITCHEN COUNTER          |      |             | 6.0  | 10   | 20 | 12           | 23  | $\vdash \smallfrown$                                              | +          | $+ \sim$       | 24          | 12           | 20   | 10    |       |             | 6.0      | DATA RM. REC.    |
| KITCHEN REFRIG.          | 8.3  |             |      | 10   | 20 | 12           | 25  | $\vdash \smallfrown$                                              | + +        | $+ \wedge$     | 26          | 12           | 20   | 10    | 7.2   |             |          | STAIRWAY HEATER  |
| RANGE                    |      | 19.3        |      | 10   | 50 | 10           | 27  | $\vdash \uparrow \vdash$                                          | ++         | $+ \wedge$     | -           |              |      |       |       | 7.2         |          |                  |
|                          |      |             | 19.3 |      |    |              |     | $\vdash \wedge$                                                   | + +        | $+ \sim$       | 30          | 12           | 20   | 10    |       |             | 1.5      | DATA RM. REC     |
| SPARE                    |      |             |      | 10   | 20 |              | 31  | $\vdash \smallfrown$                                              | + +        | $+ \sim$       | 32          | 12           | 20   | 10    | 1.5   |             |          | DATA RM. REC.    |
| EXHAUST FAN              |      | 0.5         |      | 10   | 20 | 12           | 33  | $\vdash \smallfrown$                                              | +          | $+ \sim$       | 34          |              | 20   | 10    |       |             |          | SPARE            |
| AHU-D-591                |      |             | 21.3 | 10   | 40 | 10           | 35  | $\vdash \uparrow \vdash$                                          | ++         | $+ \uparrow$   | 36          | 10           | 40   | 10    |       |             | 21.3     | AHU-D-593        |
|                          | 21.3 |             |      |      |    |              |     | $\vdash \wedge$                                                   | + +        | $+ \wedge$     | <u> </u>    |              |      |       | 21.3  |             |          |                  |
| AHU-B-5TH LOUNGE         |      | 20.1        |      | 10   | 40 | 10           | 39  | $\vdash \uparrow \vdash$                                          | ++         | $+ \uparrow -$ | 40          |              |      |       |       |             |          | SPACE ONLY       |
|                          |      |             | 20.1 |      |    |              |     | $\vdash \!\! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $ |            | $+ \wedge$     | 42          |              |      |       |       |             |          | SPACE ONLY       |
| TOTAL                    | 57.9 | 70.7        | 88.5 |      |    |              |     |                                                                   |            |                |             |              |      |       | 46.4  | 25.1        | 51.3     | TOTAL            |

L5B TOTAL CONNECTED AMPS A=48.4 B=**79.5** C=**73.5** FEEDER TOTAL CONNECTED AMPS A=152.7 B=175.3 C=213.3

ENGINEERS
ARCHITECTS
PLANNERS
Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING
RESIDENCE HALL
3 - HVAC AND
ROOF
REPLACEMENT

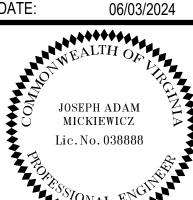
PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | F    | REVISIONS   |
|---|------|-------------|
| # | DATE | DESCRIPTION |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

COMMISSION NUMBER

SCALE:
DESIGNED: JAM
DRAWN: VT
CHECKED: MAW



SHEET TITLE
ELECTRICAL
PANELBOARD
SCHEDULES

SHEET NUMBER
E-603

**SHEET #** 47 **OF** 51

 PANELBOARD SCHEDULES WITH STRIKE THROUGHTS AND (X) INDICATE TO DISCONNECT AND REMOVE.
 UPDATED PANELBOARD SCHEDULE INDICATE NEW CIRCUIT BREAKERS, LOADS SERVED, AND WIRING.

### PANELBOARD LOAD CALCULATION:

| <b>REMOVED LOAD</b> | ADDED LOAD    |
|---------------------|---------------|
| PHASE A=0A          | PHASE A=0A    |
| PHASE B=41.8A       | PHASE B=40.2A |
| PHASE C=44.8A       | PHASE C=43.2A |
|                     |               |

### PANEL L5A AND L5B FEEDER LOAD CALCULATION:

| REMOVED LOAD    | ADDED LOAD      | NET CHANGE      |
|-----------------|-----------------|-----------------|
| PHASE A: 41.0A  | PHASE A= 42.6A  | PHASE A= +1.6A  |
| PHASE B: 86.2A  | PHASE B= 60.3A  | PHASE B= -52.1A |
| PHASE C: 130.2A | PHASE C= 105.9A | PHASE C= -24.2A |

PHASE A INCREASED BY 1.6A. HOWEVER PHASE A CONNECTED LOAD IS 152.7A. THE HIGHEST LOAD IS PHASE C (213.3A), WHICH IS BEING DECREASE. THEREFORE, THE EXISTING 225A FEEDER IS SATISFACTORY.

| PANEL       | BOARD                   | SCHE               | DULE              |
|-------------|-------------------------|--------------------|-------------------|
| PANEL "L5B" | 225A MLO, 208Y/120V, 3Ø | , 4W, SURFACE MOUN | ITED, GROUND BUS, |

| PANEL "L                  | 5B'  | ı               |                 |                 | 22              | 25A MI          | _0, 2 | 08Y/1                | 20V,     | 3Ø, 4V      | V, SL | JRFAC           | E MO            | UNTE          | ED, GR | OUND            | BUS, 1          | 10 KAIC                 |
|---------------------------|------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|----------------------|----------|-------------|-------|-----------------|-----------------|---------------|--------|-----------------|-----------------|-------------------------|
| LOAD CEDVED               | LOA  | D (AM           | PS)             | CKT             | BKR             | WIRE            | CKT   | I                    | PHAS     | SE          | CKT   | WIRE            | CKT             | BKR           | LOA    | D (AM           | PS)             | LOAD CEDVED             |
| LOAD SERVED               | Α    | B               |                 |                 |                 | SIZE            |       |                      | ۹Β       |             |       | SIZE            |                 |               | Α      | B               | Ć               | LOAD SERVED             |
| LIGHTS HALLWAY            | 3.4  |                 |                 | 10              | 20              | 12              | 1     |                      |          | _           | 2     | 12              | 20              | 10            | 7.5    |                 |                 | LIGHTS 583              |
| HALLWAY REC.              |      | 3.0             |                 | 10              | 20              | 12              | 3     | <del> -</del> ^-     | +        | $+ \sim$    | 4     | 12              | 20              | 10            |        | 4.7             |                 | LIGHTS 587/585          |
| <del>-ROOF TOP REC.</del> |      |                 | <del>3.0</del>  | 10              | 20              | <del>-12-</del> | 5     | ├~-                  |          | $+ \sim$    | 6     | 12              | 20              | 10            |        |                 | 7.5             | REC. 585A               |
| REC. 587A                 | 7.5  |                 |                 | 10              | 20              | 12              | 7     | <del> -</del> ~-     |          | $+ \sim$    | 8     | 12              | 20              | 10            | 7.5    |                 |                 | REC. 585B               |
| REC. 587C                 |      | 7.5             |                 | 10              | 20              | 12              | 9     | ├~-                  | +        | $+ \sim$    | 10    | 12              | 20              | 10            |        | 8.3             |                 | REFRIGERATOR 585        |
| REC. 587B                 |      |                 | 7.5             | 10              | 20              | 12              | 11    | ├~-                  |          | $+ \sim$    | 12    | 12              | 20              | 10            |        |                 | 3.0             | LIVING AREA 585         |
| REC. 587D                 | 7.5  |                 |                 | 10              | 20              | 12              | 13    | <u> </u> -~-         |          | $+ \sim$    | 14    | 12              | 20              | 10            | 7.5    |                 |                 | BATH GFI 585            |
| REFRIGERATOR 587          |      | 8.3             |                 | 10              | 20              | 12              | 15    | ├~-                  | +        | $+ \sim$    | 16    | 12              | 20              | 10            |        | 1.5             |                 | COUNTER 585             |
| COUNTER 587               |      |                 | 3.0             | 10              | 20              | 12              | 17    | ├~-                  |          | $+ \sim$    | 18    | 12              | 20              | 10            |        |                 | 3.3             | ACCESSIBLE DOOR OPENERS |
| HALLWAY REC. 587          | 7.5  |                 |                 | 10              | 20              | 12              | 19    | <u>-</u> ~-          |          | $+ \sim$    | 20    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| LIVING AREA 587           |      | 6.0             |                 | 10              | 20              | 12              | 21    | ├~-                  | <b>-</b> | $+ \sim$    | 22    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| BATH GFI 587              |      |                 | 3.0             | 10              | 20              | 12              | 23    | <u> </u>             |          | $+ \sim$    | 24    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 25    | $\vdash \frown$      |          | $+ \sim$    | 26    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 27    | ├^-                  | +        | $+ \sim$    | 28    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 29    | <del> -</del> ~-     |          | $+ \sim$    | 30    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 31    | $\vdash \smallfrown$ |          | $+ \sim$    | 32    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 33    | ├^-                  | +        | $+ \sim$    | 34    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 35    | ├~-                  |          | $+ \sim$    | 36    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| SPARE                     |      |                 |                 | 10              | 20              |                 | 37    | $\vdash \frown$      |          | $+ \sim$    | 38    |                 | 20              | 10            |        |                 |                 | SPARE                   |
| -AIR HANDLER 585          |      | <del>20.9</del> |                 | <del>-10-</del> | <del>-25-</del> | <del>10</del>   | 39    | <del> </del>         | +        | $+$ $\Re$ - | 40    | <del>-10-</del> | <del>-25-</del> | <del>10</del> |        | <del>20.9</del> |                 | -AIR HANDLER 587        |
|                           |      |                 | <del>20.9</del> |                 |                 |                 |       | $\vdash {\sim}$      |          | $+ \wedge$  |       |                 |                 |               |        |                 | <del>20.9</del> |                         |
| TOTAL                     | 25.9 | 45.7            | 40.4            |                 |                 |                 |       |                      |          |             |       |                 |                 |               | 22.5   | 35.4            | 34.7            | TOTAL                   |

TOTAL CONNECTED AMPS A=48.4 B=81.1 C=75.1

#### UPDATED PANELBOARD SCHEDULE PANEL "L5B" 225A MLO, 208Y/120V, 3Ø, 4W, SURFACE MOUNTED, GROUND BUS, 10 KAIC LOAD (AMPS) CKT BKR WIRE CKT PHASE CKT WIRE CKT BKR LOAD (AMPS) A B C KAICTRIP SIZE NO. A B C NO. SIZE TRIPKAIC A B C LOAD SERVED 10 20 12 1 2 12 20 10 7.5 LIGHTS HALLWAY 10 20 12 3 10 20 12 3 3.0 10 20 12 5 6 12 20 10 HALLWAY REC. **3.0** 10 20 **12** 5 ROOF TOP REC. REC. 587A REC. 587C 3.0 LIVING AREA 585 REC. 587B 10 20 12 13 14 12 20 10 7.5 REC. 587D BATH GFI 585 15 16 12 20 10 1.5 COUNTER 585 3.3 ACCESSIBLE DOOR OPENERS **REFRIGERATOR 587** COUNTER 587 HALLWAY REC. 587 LIVING AREA 587 SPARE BATH GFI 587 SPARE 10 20 SPARE 10 35 AHU-A-585 \_\_\_ AHU-C-587 25.9 **44.5 39.2** TOTAL 22.5 **35.0 34.3** TOTAL

TOTAL CONNECTED AMPS A=48.4 B=79.5 C=73.5

UPDATED PANELBOARD SCHEDULE

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    | NET CHANGE     |
|---------------|---------------|----------------|
| PHASE A=20.9A | PHASE A=20.5A | PHASE A= -0.4A |
| PHASE B=44.8A | PHASE B=42.4A | PHASE B= -2.4A |
| PHASE C=62.7A | PHASE C=59.9A | PHASE C= -2.8A |

THE CONNECTED LOAD INCREASE IS NOT OVERLOADING THE EXISTING 150A PANEL L5C FEEDER. THE EXISTING 150A PANEL L5C IS SATISFACTORY.

|                  | P               | ΙΑ              | N E             | L                | В               | O               | Δ     | R                          | D             |                 | 5 (   | C               | <b>H</b> E      | Ξ               | ) U    | L               | Ε                 |                  |
|------------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-------|----------------------------|---------------|-----------------|-------|-----------------|-----------------|-----------------|--------|-----------------|-------------------|------------------|
| PANEL "L         | _5C'            | 11              |                 |                  | 22              | 25A M           | LO, 2 | 208Y/12                    | 20V, 3        | 3Ø, 4V          | V, Sl | JRFAC           | CE MC           | UNT             | ED, GF | ROUND           | BUS,              | 10 KAIC          |
| LOAD SERVED      | -               | AD (AM          |                 | CKT              |                 |                 |       |                            | HAS           |                 |       | WIRE            |                 |                 |        | AD (AM          | <del></del>       | LOAD SERVED      |
|                  | A               | В               | С               | KAICT            | TRIP            | SIZE            | NO.   | I A                        | В             | C               | NO.   | SIZE            | TRIP            | KAIC            | Α      | В               | С                 | 201.5 02.11.25   |
| HALL LIGHTS      | 5.8             |                 |                 | 10               | 20              | 12              | 1     | $\overline{}$              |               | $\overline{}$   | 2     | 12              | 20              | 10              | 6.8    |                 |                   | LIGHTS 582/580   |
| HALL REC.        |                 | 3.0             |                 | 10               | 20              | 12              | 3     | }~~                        | +             | $+ \sim$        | 4     | 12              | 20              | 10              |        | 7.5             |                   | REC. 580A        |
| REC. 582B        |                 |                 | 7.5             | 10               | 20              | 12              | 5     | }~~                        | +             | $+ \sim$        | - 6   | 12              | 20              | 10              |        |                 | 7.5               | REC. 580B        |
| REC. 582A        | 7.5             |                 |                 | 10               | 20              | 12              | 7     | <u> </u>                   | +             | $+ \sim$        | 8     | 12              | 20              | 10              | 8.3    |                 |                   | REFRIGERATOR 580 |
| REFRIGERATOR 582 |                 | 8.3             |                 |                  | 20              | 12              | 9     | <u> </u>                   | $\rightarrow$ | $+ \sim$        | 10    | 12              | 20              | 10              |        | 3.0             |                   | COUNTER 580      |
| COUNTER 582      |                 |                 | 3.0             | 10               | 20              | 12              | 11    | <u> </u> -^-               | +             | $+ \sim$        | 12    | 12              | 20              | 10              |        |                 | 7.5               | LIVING AREA 580  |
| LIVING AREA 582  | 7.5             |                 |                 |                  | 20              | 12              | 13    | <u> </u>                   |               | $+ \sim$        | 14    | 12              | 20              | 10              | 3.0    |                 |                   | BATH GFI 580     |
| BATH GFI 582     |                 | 3.0             |                 |                  | 20              | 12              | 15    | <u> </u> -^-               | +             | $+ \sim$        | 16    | <del>12</del>   | 20              | 10              |        | <del>-3.0</del> |                   | ROOF TOP GFI     |
| REC. 583A        |                 |                 | 7.5             |                  | 20              | 12              | 17    | <u> </u>                   | +             | $+ \sim$        | 18    |                 | 20              | 10              |        |                 |                   | SPARE            |
| REC. 583B        | 7.5             |                 |                 |                  | 20              | 12              | 19    | <u> </u>                   | -             | $+ \sim$        | 20    |                 | 20              | 10              |        |                 |                   | SPARE            |
| REC. 583C        |                 | 7.5             |                 |                  | 20              | 12              | 21    | $\vdash \frown \vdash$     | +             | $+ \sim$        | 22    |                 | 20              | 10              |        |                 |                   | SPARE            |
| HALLWAY 583      |                 |                 | 7.5             | -                | 20              | 12              | 23    | <u> </u>                   |               | $+ \sim$        | 24    |                 | 20              | 10              |        |                 |                   | SPARE            |
| LIVING AREA 583  | 4.5             |                 |                 |                  | 20              | 12              | 25    | <u> </u>                   |               | $+ \sim$        | 26    |                 | 20              | 10              |        |                 |                   | SPARE            |
| BATH GFI 583     |                 | 6.0             |                 |                  | 20              | 12              | 27    | $\vdash \frown \downarrow$ | $\dashv$      | $+ \smallfrown$ | 28    |                 | 20              | 10              |        |                 |                   | SPARE            |
| REC. 583D        |                 |                 | 6.0             | -                | 20              | 12              | 29    | <u> </u>                   | +             | $+ \sim$        | 30    |                 | 20              | 10              |        |                 |                   | SPARE            |
| REFRIGERATOR 583 | 8.3             |                 |                 | -                | 20              | 12              | 31    | <u> </u>                   | +             | $+ \sim$        | 32    |                 | 20              | 10              |        |                 |                   | SPARE            |
| COUNTER 583      |                 | 3.0             |                 |                  | 20              | 12              | 33    | $\vdash \frown \vdash$     | +             | $+ \sim$        | 34    |                 | 20              | 10              |        |                 |                   | SPARE            |
| AIR HANDLER 583  | <del>20.9</del> |                 | 20.9            | <del>10</del> -  | <del>-25-</del> | <del>-10-</del> | 35    |                            |               | $+\uparrow$     | 36    | 12              | 20              | 10              | 7.2    |                 | 7.2               | STAIRWAY HEATER  |
| AIR HANDLER 580  | 20.9            | <del>20.9</del> |                 | <del>-10</del> - | <del>25</del>   | <del>-10-</del> | 39    |                            |               | <del> </del>    | 40    | <del>-10-</del> | <del>-25-</del> | <del>-10-</del> | 1.4    | <del>20.9</del> |                   | AIR HANDLER 582  |
| ,                |                 |                 | <del>20.9</del> |                  |                 |                 |       | ${\vdash}^{\hat{\wedge}}$  |               | <del> </del>    |       |                 |                 |                 |        |                 | <del>-20.9-</del> | ,                |
| TOTAL            | 57.5            | 51.7            | 73.3            |                  |                 |                 |       |                            |               |                 |       |                 |                 |                 | 25.3   | 34.4            | 43.4              | TOTAL            |

TOTAL CONNECTED AMPS A=82.8 B=86.1 C=116.7

| HALL LIGHTS  5.8  10  20  12  1  10  20  12  1  10  20  12  1  10  20  12  1  10  20  12  1  10  20  12  1  10  20  12  1  10  20  12  10  10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | LOAD SERVED      | LO  | AD (AN |     | CKT BKR WIRE CKT |      |      |     |                      |          |          | CKT WIRE CKT BKR |      |      |      | AD (AM | PS) | LOAD SERVED |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|--------|-----|------------------|------|------|-----|----------------------|----------|----------|------------------|------|------|------|--------|-----|-------------|------------------|
| HALL REC.    3.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | LOAD SLIVED      | A   | В      | С   | KAIC             | TRIP | SIZE | NO. | /                    | <u> </u> | С        | NO.              | SIZE | TRIP | KAIC | Α      | В   | С           | LOAD SERVED      |
| REC. 582B 7.5 10 20 12 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | HALL LIGHTS      | 5.8 |        |     | 10               | 20   |      | 1   | _                    | -        |          | 2                | 12   | 20   | 10   | 6.8    |     |             | LIGHTS 582/580   |
| REC. 582A 7.5 10 20 12 7 REFRIGERATOR 582 8.3 10 20 12 11 1 11 12 20 10 3.0 COUNTER 580 COUNTER 582 10 20 12 13 14 12 20 10 3.0 BATH GFI 580 BATH GFI 582 7.5 10 20 12 17 18 20 10 3.0 ROOF TOP GF REC. 583A 7.5 10 20 12 17 17 18 20 10 SPARE REC. 583C 7.5 10 20 12 21 19 19 19 10 SPARE REC. 583C 7.5 10 20 12 21 10 SPARE REC. 583C 7.5 10 20 12 21 10 SPARE REC. 583D 7.5 10 20 12 21 10 SPARE REC. 583D 6.0 10 20 12 27 REC. 583D 8.3 10 20 12 29 REFRIGERATOR 583 8.3 10 20 10 SPARE REC. 583D REFRIGERATOR 583 8.3 10 20 12 31 SPARE REC. 583D REFRIGERATOR 583 8.3 10 20 12 29 REFRIGERATOR 583 8.3 10 20 12 29 REFRIGERATOR 583 8.3 10 20 10 SPARE REFRIGERATOR 583 8.3 10 20 10 SPARE REC. 583D REFRIGERATOR 583 8.3 10 20 12 31 SPARE REFRIGERATOR 583 8.3 10 20 12 31 SPARE REFRIGERATOR 583 8.3 10 20 12 31 SPARE REFRIGERATOR 583 8.3 SPARE REFRIGERATOR 583 8.3 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HALL REC.        |     | 3.0    |     | 10               | 20   |      | 3   | <u> </u> -^-         | +        | $+ \sim$ | 4                | 12   | 20   | 10   |        | 7.5 |             | REC. 580A        |
| REFRIGERATOR 582  COUNTER 582  LIVING AREA 582  BATH GFI 582  REC. 583A  REC. 583B  REC. 583C  HALLWAY 583  LIVING AREA 583  BATH GFI 583  REC. 583D  REC. 583D  REC. 583D  REC. 583C  REC. 583D  REC. 583D  REC. 583D  REC. 583C  REC. 583D  REC. 583C  REC. 583D  REC. 583D  REC. 583C  REC. 583D  REC. 583C  REC. 583D  REC. 583D  REC. 583D  REC. 583D  REC. 583C  REC. 583D  REC. 583C  REC. 583D  REC. 583D  REC. 583D  REC. 583D  REC. 583C  REC. 583D  REC. 583C  REC. 583D  REC. 583C   | REC. 582B        |     |        | 7.5 | 10               | 20   |      | 5   | <u> </u> -^-         |          | $+ \sim$ | 6                | 12   | 20   | 10   |        |     | 7.5         | REC. 580B        |
| COUNTER 582    3.0   10   20   12   11   12   20   10   3.0   BATH GFI 580                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | REC. 582A        | 7.5 |        |     | 10               | 20   |      | 7   | <u> </u> -^-         | +        | $+ \sim$ | 8                | 12   | 20   | 10   | 8.3    |     |             | REFRIGERATOR 580 |
| Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | REFRIGERATOR 582 |     | 8.3    |     | 10               | 20   |      |     | <u> </u> -^-         | +        | $+ \sim$ | 10               | 12   | 20   | 10   |        | 3.0 |             | COUNTER 580      |
| BATH GFI 582  3.0  10  20  12  15  REC. 583A  REC. 583B  7.5  10  20  12  17  REC. 583C  HALLWAY 583  LIVING AREA 583  BATH GFI 583  BATH GFI 583  BATH GFI 583  BATH GFI 583  REC. 583D  REC. 583D  REC. 583D  REC. 583C  REC. 583D  R | COUNTER 582      |     |        | 3.0 | 10               | 20   |      |     | <u> </u>             |          | $+ \sim$ | 12               | 12   | 20   | 10   |        |     | 7.5         | LIVING AREA 580  |
| REC. 583A 7.5 10 20 12 17 REC. 583B 7.5 10 20 12 19 REC. 583C 7.5 10 20 12 21 RALLWAY 583 7.5 10 20 12 23 RALLWAY 583 4.5 10 20 12 25 RATH GFI 583 6.0 10 20 12 27 REC. 583D 6.0 10 20 12 29 REC. 583D 8.3 10 20 12 31 REC. 583A 7.5 10 20 12 31 REC. 583A 7.5 10 20 12 19 REC. 583B 7.5 10 20 12 21 REC. 583B 7.5 10 20 12 23 REC. 583B 7.5 10 20 12 25 REC. 583B 7.5 10 20 12 25 REC. 583B 7.5 10 20 12 25 REC. 583B 7.5 10 20 12 27 REC. 583B 7.5 10 20 12 29 REC. 583B 7.5 10 20 10 20 12 29 REC. 583B 7.5 10 20 10 20 12 29 REC. 583B 7.5 10 20 10 20 12 20 10 20 10 20 12 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10  | LIVING AREA 582  | 7.5 |        |     | 10               | 20   |      | 13  | $\vdash \smallfrown$ | +        | $+ \sim$ | 14               | 12   | 20   | 10   | 3.0    |     |             | BATH GFI 580     |
| REC. 583B 7.5 10 20 12 19 REC. 583C 7.5 10 20 12 21 HALLWAY 583 7.5 10 20 12 23 HALLWAY 583 4.5 10 20 12 25 BATH GFI 583 6.0 10 20 12 27 REC. 583D 6.0 10 20 12 29 REFRIGERATOR 583 8.3 10 20 12 31 REFRIGERATOR 583 8.3 50 10 20 12 31 REFRIGERATOR 583 8.3 50 10 20 12 31 REC. 583B 7.5 10 20 12 19 REC. 583B 7.5 10 20 12 21 REC. 583B 7.5 10 20 12 25 REFRIGERATOR 583 8.3 50 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 31 REC. 583B 7.5 10 20 10 20 12 20 10 20 10 20 12 31 20 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20  | BATH GFI 582     |     | 3.0    |     | 10               | 20   | 12   |     | ├~-                  | +        | $+ \sim$ | 16               | 12   | 20   |      |        | 3.0 |             | ROOF TOP GFI     |
| REC. 583C 7.5 10 20 12 21 22 20 10 SPARE  HALLWAY 583 4.5 10 20 12 25 26 20 10 SPARE  BATH GFI 583 6.0 10 20 12 27  REC. 583D 6.0 10 20 12 29  REFRIGERATOR 583 8.3 10 20 12 31 SPARE  REFRIGERATOR 583 8.3 5 10 20 12 31 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REC. 583A        |     |        | 7.5 | 10               | 20   |      |     | <u> </u>             |          | $+ \sim$ |                  |      |      | 10   |        |     |             | SPARE            |
| HALLWAY 583                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REC. 583B        | 7.5 |        |     | 10               | 20   |      |     | $\vdash \smallfrown$ | +        | $+ \sim$ |                  |      | 20   | 10   |        |     |             | SPARE            |
| LIVING AREA 583                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REC. 583C        |     | 7.5    |     | 10               | 20   |      |     | <u> </u>             | +        | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| BATH GFI 583 6.0 10 20 12 27 28 20 10 SPARE REC. 583D 6.0 10 20 12 29 30 20 10 SPARE REFRIGERATOR 583 8.3 10 20 12 31 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | HALLWAY 583      |     |        | 7.5 | 10               |      |      |     | <u> </u>             |          | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| REC. 583D 6.0 10 20 12 29 30 20 10 SPARE REFRIGERATOR 583 8.3 10 20 12 31 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LIVING AREA 583  | 4.5 |        |     | 10               | 20   |      | 1   | <u> </u>             | +-       | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| REFRIGERATOR 583 8.3 10 20 12 31 32 20 10 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BATH GFI 583     |     | 6.0    |     | 10               | 20   |      |     | ├~-                  | +        | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| INCLINIOLINATOR 300 C.0 STAINE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | REC. 583D        |     |        | 6.0 | 10               |      |      |     | <u> </u>             |          | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| 20111750500 $20$ $10$ $20$ $12$ $23$ $0$ $0$ $34$ $20$ $10$ $0$ $0$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | REFRIGERATOR 583 | 8.3 |        |     | 10               | 20   |      | -   | $\vdash \smallfrown$ | +        | $+ \sim$ |                  |      |      |      |        |     |             | SPARE            |
| COUNTER 583 3.0 10 20 12 33 34 20 10 SPARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | COUNTER 583      |     | 3.0    |     | 10               | 20   | 12   | 33  | ├~-                  | +        | $+ \sim$ | 34               |      | 20   | 10   |        |     |             | SPARE            |

19.7 10 35 12 39 40 12 35 10 19.7 AHU-A-582

25.3 **33.2 42.2** 

AHU-C-583

AHU-A-580

TOTAL

57.1 50.5 72.1

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD   | ADDED LOAD  |
|----------------|-------------|
| PHASE A=102.7A | PHASE A=94. |
| PHASE B=92.5A  | PHASE B=84. |
| PHASE C=90.2A  | PHASE C=88. |

| ILTER HAMMER PRL1/   | P               | 1 A             | N E             | L               | В               | 0             | Α     | R                                               | D             | ) ;                  | S     | CH              | 1 E            |                 | ) U             | L               | E               | WITH FEED THRI<br>LUGS FEEDING I |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------|-------------------------------------------------|---------------|----------------------|-------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------------------------|
| PANEL "              | R1"             |                 |                 |                 | 22              | 25A M         | LO, 2 | 08Y/12                                          | :0V,          | 3Ø, 4\               | N, SL | JRFAC           | E MC           | UNTI            | ED, GF          | ROUND           | BUS,            | 10 KAIC NEMA 3F                  |
| LOAD CEDVED          | LO              | AD (AM          | IPS)            | CKT             | BKR             | WIRE          | СКТ   | Р                                               | HAS           | SE.                  | СКТ   | WIRE            | CKT            | BKR             | LOA             | AD (AM          | PS)             | LOAD CEDVE                       |
| LOAD SERVED          | Α               | В               | C               | KAIC            | TRIP            | SIZE          | NO.   | Α                                               | В             |                      |       | SIZE            |                |                 |                 | B               | C               | LOAD SERVED                      |
|                      | 10.4            |                 |                 |                 |                 |               |       | <b>1</b>                                        |               | +\$-                 |       |                 |                |                 | <del>10.4</del> |                 |                 |                                  |
| — UNIT 381—          |                 | 10.4            |                 | <del>10</del>   | <del>-15</del>  | <del>12</del> | 3     | $+$ $\hat{\chi}+$                               | +             | <del> </del> -∳-     | 4     | <del>12</del>   | <del>15</del>  | <del>-10-</del> |                 | <del>10.4</del> |                 | <del> UNIT 583</del>             |
| 01111 001            |                 |                 | <del>10.4</del> |                 |                 |               |       | $\vdash \stackrel{\sim}{\leftarrow} \downarrow$ |               | $+\ddot{\wedge}$     | -     |                 |                |                 |                 |                 | <del>10.4</del> |                                  |
|                      | <del>10.4</del> |                 |                 |                 |                 |               |       | ┝┰┿                                             |               | +-�                  |       |                 |                |                 | 10.4            |                 |                 |                                  |
| <del> UNIT 283</del> |                 | <del>10.4</del> |                 | <del>10</del>   | <del>-15</del>  | <del>12</del> | 9     | $\vdash \updownarrow \vdash$                    | +             | +-\$-                | 10    | <del>-12-</del> | <del>15</del>  | <del>-10-</del> |                 | <del>10.4</del> |                 | <del>- UNIT 183 -</del>          |
|                      |                 |                 | <del>10.4</del> |                 |                 |               |       | $\vdash \land \vdash$                           |               | $+ \wedge$           |       |                 |                |                 |                 | 10.4            |                 |                                  |
|                      | <del>10.4</del> |                 |                 |                 |                 |               |       | ┢┰╅                                             |               | $+$ $\updownarrow$ - | 1,    |                 |                |                 | 10.4            |                 |                 |                                  |
| <del> UNIT 281</del> |                 | <del>10.4</del> |                 | <del>-10-</del> | <del>-15</del>  | <del>12</del> | 15    | <b> </b>                                        | +             | $+$ $\Re$ -          | 16    | <del>12</del>   | <del>15</del>  | <del>-10-</del> |                 | <del>10.4</del> |                 | <del>UNIT 483 -</del>            |
|                      | 0.5             |                 | <del>10.4</del> | 40              | 45              | 40            | 40    |                                                 |               | + $$                 |       | 40              | 00             | 40              | 44.0            |                 | <del>10.4</del> | 1 IN II T 400                    |
| <del>UNIT 382</del>  | 9.5             | 0.5             |                 | <del>-10-</del> | <del>-15</del>  | <del>12</del> | 19    |                                                 |               | + $x$ $-$            | 20    | <del>12</del>   | <del>20</del>  | <del>-10-</del> | 11.8            | 44.0            |                 | <del>- UNIT 180 -</del>          |
| LINIT 500            |                 | 9.5             | 0.5             | <del>10</del>   | <del>15</del>   | <del>12</del> | 23    |                                                 |               | $\top$               | 24    | <del>-12</del>  | <del>-15</del> | <del>-10-</del> |                 | <del>11.8</del> | 0.5             | LINIT 200                        |
| <del>UNIT 582</del>  | 9.5             |                 | 9.5             | 10              | 10              | 12            | 23    |                                                 |               | <b>*</b>             | 1 24  | <del>-12</del>  | <del>10</del>  | <del>-10</del>  | 9.5             |                 | 9.5             | <del>-UNIT 380</del>             |
| — UNIT 280           | 9.0             | 8.8             |                 | <del>10</del>   | <del>-15-</del> | <del>12</del> | 27    |                                                 | ightharpoonup | $\Box \sim$          | 28    |                 |                |                 | 9.5             |                 |                 | SPACE ONLY                       |
| UNIT 200             |                 | 0.0             | 8.8             | 10              | 10              | 12            |       | <u> </u> *+                                     |               | $+ \sim$             | 30    |                 |                |                 |                 |                 |                 | SPACE ONLY                       |
| TOTAL                | 50.2            | 49.5            | 49.5            |                 |                 |               | •     | <u> </u>                                        | <u>'</u>      | <u>'</u>             |       | •               |                |                 | 52.5            | 43.0            | 40.7            | TOTAL                            |

R2 TOTAL CONNECTED AMPS A=63.3 B=63.3 C=47.5 FEEDER TOTAL CONNECTED AMPS A=166.0 B=155.8 C=137.7

| UPD              | A T         | E      | D    | P    | A    | N      | E     | L                    | В            | 0               | 4              | R [   |      | S    | C      | ΗI     | E D    | ULE               |
|------------------|-------------|--------|------|------|------|--------|-------|----------------------|--------------|-----------------|----------------|-------|------|------|--------|--------|--------|-------------------|
| PANEL "F         | <b>R1</b> " |        |      |      | 22   | 25A MI | _0, 2 | :08Y/                | 120V,        | 3Ø, 4\          | N, SL          | JRFAC | E MC | DUNT | ED, GF | ROUND  | BUS, 1 | 0 KAIC NEMA 3R    |
| LOAD SERVED      | LOA         | AD (AM | IPS) | CKT  | BKR  | WIRE   | CKT   |                      | PHA          | SE              | CKT            | WIRE  | CKT  | BKR  | LOA    | AD (AM | PS)    | LOAD SERVED       |
| LOAD SERVED      | Α           | В      | С    | KAIC | TRIP | SIZE   | NO.   |                      | A B          | С               | NO.            | SIZE  | TRIP | KAIC | Α      | В      | С      | LOAD SERVED       |
| CU-C-381 ON ROOF | 14.9        |        |      | 10   | 30   | 10     | 1     | $\vdash \uparrow$    | + -          | $+ \uparrow$    | 2              | 12    | 20   | 10   | 9.5    |        |        | CU-A-583 ON ROOF  |
|                  |             | 14.9   |      |      |      |        |       | $\vdash \wedge$      | ++           | $+ \wedge$      | _              |       |      |      |        | 9.5    |        |                   |
| CU-C-283 ON ROOF |             |        | 14.9 | 10   | 30   | 10     | 5     | 广                    |              | $+ \uparrow$    | 6              | 10    | 30   | 10   | 440    |        | 14.9   | CU-C-183 ON ROOF  |
|                  | 14.9        | 440    |      |      |      |        | _     | $\prod$              | 1            | $+ \sim$        | 1              |       |      | 1.0  | 14.9   | 440    |        | 011 0 400 0N D00F |
| CU-C-281 ON ROOF |             | 14.9   | 440  | 10   | 30   | 10     | 9     | LT,                  |              |                 | 10             | 10    | 30   | 10   |        | 14.9   | 14.9   | CU-C-483 ON ROOF  |
|                  | 9.5         |        | 14.9 | 10   | 20   | 12     | 13    | $\Box$               |              | $\Box_{\wedge}$ | 14             | 12    | 25   | 10   | 11.5   |        | 14.5   | CU-B-180 ON ROOF  |
| CU-A-382 ON ROOF | 9.5         | 9.5    |      | 10   | 20   | 14     | 10    | ot                   | $\downarrow$ | $\bot \lambda$  | <b>↓</b> ' ' ' | 14    | 25   | 10   | 11.0   | 11.5   |        | CO-D-100 ON 1COO  |
| CU-A-582 ON ROOF |             | 0.0    | 9.5  | 10   | 20   | 12     | 17    | ┢                    |              | $+$ $\wedge$    | 18             | 12    | 20   | 10   |        |        | 9.5    | CU-A-380 ON ROOF  |
| CU-A-302 ON ROOI | 9.5         |        | 0.0  |      | -    |        |       | ┝ᠰ                   | +            | $+$ $\wedge$    | -              |       |      | 1    | 9.5    |        |        |                   |
| CU-A-280 ON ROOF |             | 9.5    |      | 10   | 20   | 12     | 21    | $\vdash \uparrow$    | ++           | $+ \sim$        | - 22           |       |      |      |        |        |        | SPACE ONLY        |
|                  |             |        | 9.5  |      |      |        |       | $\vdash \wedge$      |              | $+ \sim$        | 24             |       |      |      |        |        |        | SPACE ONLY        |
| SPACE ONLY       |             |        |      |      |      |        | 25    | $\vdash \smallfrown$ | +            | +               | 26             |       |      |      |        |        |        | SPACE ONLY        |
| SPACE ONLY       |             |        |      |      |      |        | 27    | $\vdash \cap$        | + +          | +               | 28             |       |      |      |        |        |        | SPACE ONLY        |
| SPACE ONLY       |             |        |      |      |      |        | 29    | $\vdash \cap$        |              | +               | 30             |       |      |      |        |        |        | SPACE ONLY        |
| TOTAL            | 48.8        | 48.8   | 48.8 |      |      |        |       |                      |              |                 |                |       |      |      | 45.4   | 35.9   | 39.3   | TOTAL             |

R2 TOTAL CONNECTED AMPS A=67.8 B=67.8 C=48.8

FEEDER TOTAL CONNECTED AMPS A=162.0 B=152.5 C=136.9

TOTAL CONNECTED AMPS A=82.4 B=83.7 C=114.3

ENGINEERS ARCHITECTS PLANNERS

Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com

100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

REVISIONS
# DATE DESCRIPTION

COMMISSION NUMBER

SCALE:

DESIGNED: JAM

DRAWN: VT

CHECKED: MAW

DATE: 06/03/2024

DATE: 06/03/2024

DATE: 06/03/2024

DATE: 06/03/2024

SHEET TITLE

ELECTRICAL

PANELBOARD

SCHEDULES

SHEET NUMBER E-604

**SHEET #** 48 **OF** 51

# **GENERAL ELECTRICAL NOTE:**

1. PANELBOARD SCHEDULES WITH STRIKE THROUGHTS AND (X) INDICATE TO DISCONNECT AND REMOVE. 2. UPDATED PANELBOARD SCHEDULE INDICATE NEW

CIRCUIT BREAKERS, LOADS SERVED, AND WIRING.

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD  | ADDED LOAD    |
|---------------|---------------|
| PHASE A=63.3A | PHASE A=67.8A |
| PHASE B=63.3A | PHASE B=67.8A |
| PHASE C=47.5A | PHASE C=48.8A |

TOTAL

29.4 29.4 28.5

### PANEL R1 AND R2 FEEDER LOAD CALCULATION:

| REMOVED LOAD    | ADDED LOAD      | NET CHANGE     |
|-----------------|-----------------|----------------|
| PHASE A: 166.0A | PHASE A= 162.0A | PHASE A= -4.0A |
| PHASE B: 155.8A | PHASE B= 152.5A | PHASE B= -3.3A |
| PHASE C: 137.7A | PHASE C= 136.9A | PHASE C= -1.9A |

THE CONNECTED LOAD INCREASE IS NOT OVERLOADING THE EXISTING 400A PANEL R1 AND R2 FEEDER. THE EXISTING 400A PANEL R1 AND R2 IS SATISFACTORY.

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD   | ADDED LOAD    |
|----------------|---------------|
| PHASE A=153.9A | PHASE A=141.6 |
| PHASE B=120.5A | PHASE B=143.9 |
| PHASE C=127.4A | PHASE C=149.9 |

### PANEL R3 AND R4 FEEDER LOAD CALCULATION:

| REMOVED LOAD    | ADDED LOAD      | NET CHANGE      |
|-----------------|-----------------|-----------------|
| PHASE A: 262.1A | PHASE A= 337.2A | PHASE A= +75.1/ |
| PHASE B: 240.5A | PHASE B= 293.1A | PHASE B= +52.6  |
| PHASE C: 240.2A | PHASE C= 293 9A | PHASE C= +53 4  |

THE CONNECTED LOAD INCREASE IS NOT OVERLOADING THE EXISTING 400A PANEL R3 AND R4 FEEDER. THE EXISTING 400A PANEL R3 AND R4 IS SATISFACTORY.

### PANELBOARD LOAD CALCULATION:

|               | <b>R2</b> "       |                 |                  |               | 22             | 25A MI          | _0, 2 | 08Y/1                       | 20V, 3      | 8Ø, 4V                | V, SL | IRFAC         | E MC            | UNT             | ED, GF          | ROUND             | BUS, 1           | 0 KAIC NEMA 3F |
|---------------|-------------------|-----------------|------------------|---------------|----------------|-----------------|-------|-----------------------------|-------------|-----------------------|-------|---------------|-----------------|-----------------|-----------------|-------------------|------------------|----------------|
| 1.0AD.0ED\/ED | LOA               | AD (AM          | PS)              | СКТ           | BKR            | WIRE            | СКТ   | F                           | PHASE       | <u> </u>              | СКТ   | WIRE          | CKT             | BKR             | LOA             | AD (AM            | PS)              | LOAD OFD\/FD   |
| LOAD SERVED   | А                 | B               | Ć                |               |                | SIZE            |       |                             | . В (       |                       |       | SIZE          |                 |                 |                 | В                 | Ć                | LOAD SERVED    |
|               | 9.5               |                 |                  |               |                |                 |       | <b>X</b>                    |             | <del>-</del>          | 2     | <del>12</del> | <del>-30-</del> | <del>10</del>   | <del>14.9</del> |                   |                  | UNIT 481       |
| UNIT 383      |                   | 9.5             |                  | <del>10</del> | <del>15</del>  | <del>-12-</del> | 3     | $-\hat{x}$                  | +           | <del>-</del> ~-       |       |               |                 |                 |                 | <del>14.9</del>   |                  |                |
|               |                   |                 | <del>-9.5-</del> |               |                |                 |       | $\vdash \land \dashv$       | $\dashv$    |                       | 6     |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| UNIT 580      | <del>10.4</del>   |                 |                  | <del>10</del> | <del>15</del>  | <del>-12-</del> | 7     | ┢╬╅                         |             | <del>-</del> \$-      | 8     | <del>12</del> | <del>-15-</del> | <del>-10-</del> | 9.5             |                   |                  | — UNIT 482     |
|               |                   | <del>10.4</del> |                  |               |                |                 |       | $\vdash \wedge \dashv$      | +           | $\vdash \land \vdash$ |       |               |                 |                 |                 | <del>9.5</del>    |                  |                |
| UNIT 181      |                   |                 | 9.5              | <del>10</del> | <del>-15</del> | <del>-12</del>  | 11    | - $+$ $+$                   | -           | <del>-</del> \$-      | 12    | <del>12</del> | <del>-15-</del> | <del>-10</del>  |                 |                   | <del>-9.5-</del> | — UNIT 282     |
|               | <del>-9.5</del> - |                 |                  |               |                |                 |       | $\vdash \land \dashv$       |             |                       |       |               |                 |                 | <del>9.5</del>  |                   |                  |                |
| UNIT 480      |                   | <del>-9.5</del> |                  | <del>10</del> | <del>-15</del> | <del>-12-</del> | 15    | $ \hat{x}$ $+$              | +           | <del>-</del>          | 16    | <del>12</del> | <del>-15-</del> | <del>-10-</del> |                 | <del>-9.5</del> - |                  | — UNIT 182     |
|               |                   |                 | 9.5              |               |                |                 |       | $\vdash$                    | <del></del> | <b>-</b> ~-           |       |               |                 |                 |                 |                   | <del>-9.5-</del> |                |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 19    | $\vdash \smallfrown$        |             | _~_                   | 20    |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 21    | -                           | +           | _~_                   | 22    |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 23    | -                           |             | _~_                   | 24    |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 25    | $\vdash \smallfrown$        |             | $\vdash \sim$         | 26    |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 27    | $\vdash \smallfrown \dashv$ | +           | _~_                   | 28    |               |                 |                 |                 |                   |                  | SPACE ONLY     |
| SPACE ONLY    |                   |                 |                  |               |                |                 | 29    | $\vdash \smallfrown \vdash$ |             |                       | 30    |               |                 |                 |                 |                   |                  | SPACE ONLY     |

TOTAL CONNECTED AMPS A=63.3 B=63.3 C=47.5

TOTAL

33.9 33.9 19.0

| TER HAMMER PRL1       | P                 | <b>1</b> A        | N E             | L             | В               | 0               | Α     | R                                                |          | ) ;                                               | S        | CH             | 1 E             | Ξ[             | ) U               | L                 | E                | WITH FEED THROUGH<br>LUGS FEEDING R4 |
|-----------------------|-------------------|-------------------|-----------------|---------------|-----------------|-----------------|-------|--------------------------------------------------|----------|---------------------------------------------------|----------|----------------|-----------------|----------------|-------------------|-------------------|------------------|--------------------------------------|
| ANEL "                | R3"               |                   |                 |               | 40              | 00A M           | LO, 2 | 208Y/1                                           | 20V,     | 3Ø, 4\                                            | W, SL    | JRFAC          | E MC            | OUNT           | ED, GF            | ROUNE             | ) BUS, 1         | 0 KAIC NEMA 3R                       |
| LOAD SERVED           | LOA               | AD (AM            |                 | CKT           | BKR             | WIRE            | CKT   | · F                                              | PHAS     | SE.                                               | CKT      | WIRE           | CKT             | BKR            | LOA               | AD (AN            | IPS)             | LOAD SERVED                          |
| LOAD SLIVED           | Α                 | В                 | С               | KAIC          | TRIP            | SIZE            | NO.   | ļ A                                              | 4 B      | С                                                 | NO.      | SIZE           | TRIP            | KAIC           | Α                 | В                 | C                | LOAD OLIVED                          |
| UNIT 388              | 9.5               |                   |                 | <del>10</del> | <del>15</del>   | <del>12</del>   | 1     | <b>-</b>                                         |          | <del>-</del>                                      | 2        | <del>12</del>  | <del>15</del>   | <del>10</del>  | 9.5               |                   |                  | — UNIT 288                           |
|                       | 0.0               | <del>-9.5-</del>  |                 |               |                 |                 |       | <u> </u>                                         | -        | ┼╨-                                               | 1        |                |                 |                |                   | <del>-9.5-</del>  |                  | O1111 200                            |
| 2ND CORRIDOR          |                   |                   | <del>11.8</del> | <del>10</del> | <del>-20-</del> | <del>12</del>   | 5     | <del> </del> -ŵ-                                 |          | <del>-</del> ₽-                                   | 6        | <del>12</del>  | <del>20-</del>  | <del>-10</del> |                   |                   | <del>11.8</del>  | -1ST CORRIDOR                        |
|                       | <del>11.8</del>   |                   |                 |               |                 |                 |       | $\vdash \stackrel{\sim}{\sim}$                   | -        | ┿~                                                | 1        |                |                 |                | <del>11.8</del>   |                   |                  |                                      |
| UNIT 290              |                   | <del>11.5</del>   |                 | <del>10</del> | <del>-15-</del> | <del>12</del>   | 9     | <del></del> ┣┰╴                                  | +        | +-�                                               | 10       | <del>12</del>  | <del>15</del>   | <del>-10</del> |                   | <del>-9.5-</del>  |                  | UNIT 488                             |
|                       |                   |                   | <del>11.5</del> |               |                 |                 |       | <u> </u>                                         |          | $+ \wedge$                                        |          |                |                 |                |                   |                   | <del>-9.5-</del> |                                      |
| <del>UNIT 190 —</del> | <del>-9.5</del> - |                   |                 | <del>10</del> | <del>15</del>   | <del>12</del>   | 13    | <del> </del>                                     | -        | +-�                                               | 14       | <del>12</del>  | <del>15</del>   | <del>10</del>  | <del>-9.5-</del>  |                   |                  | <del> UNIT 490</del>                 |
|                       |                   | <del>-9.5</del> - |                 |               |                 |                 |       | <b>├</b> ^-                                      | +        | $+ \wedge$                                        | <u> </u> |                |                 |                |                   | <del>-9.5</del> - |                  |                                      |
| <del>1ST LOUNGE</del> |                   |                   | <del>11.8</del> | <del>10</del> | <del>20</del>   | <del>12</del>   | 17    | <del>  \</del>                                   |          | +                                                 | 18       | <del>12</del>  | <del>15</del>   | <del>10</del>  |                   |                   | <del>-9.5-</del> | <del> UNIT 390</del>                 |
|                       | <del>-11.8</del>  | 40.4              |                 |               |                 |                 |       | $\vdash \frown$                                  |          | +                                                 |          |                |                 |                | 9.5               |                   |                  |                                      |
| LINUT 404             |                   | <del>10.4</del>   | 40.4            | 40            | 45              | 40              | - 00  | <b> </b>                                         | +        | +                                                 | 22       | 40             | 45              | 40             |                   |                   | 0.5              | SPACE ONLY                           |
| UNIT 191              | 40.4              |                   | <del>10.4</del> | <del>10</del> | <del>-15-</del> | <del>-12</del>  | 23    | <b>F</b>                                         |          | $+$ $\Re$                                         | 24       | <del>12</del>  | <del>15</del>   | <del>10</del>  | 0.5               |                   | 9.5              | <del> UNIT 188</del>                 |
| CDACE ONLY            | 10.4              |                   |                 |               |                 |                 | 27    | +                                                |          | $+ \sim$                                          | 28       |                |                 |                | <del>-9.5</del> - |                   |                  |                                      |
| SPACE ONLY SPACE ONLY |                   |                   |                 |               |                 |                 | 29    | $\lceil \rceil$                                  |          | $\top$                                            | 30       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| SPACE UNLT            | 10.4              |                   |                 |               |                 |                 | 29    |                                                  |          |                                                   | 1 30     |                |                 |                | <del>10.4</del>   |                   |                  | SPACE ONLY                           |
| <del>UNIT 291</del>   | 10.4              | <del>10.4</del>   |                 | <del>10</del> | <del>-15-</del> | <del>-12-</del> | 33    |                                                  |          | $\perp\!\!\!\perp\!\!\!\perp$                     | 34       | <del>12</del>  | <del>15</del> - | <del>10-</del> | 70.4              | <del>10.4</del>   |                  | <del> UNIT 391</del>                 |
| ONIT 201              |                   | 10.4              | <del>10.4</del> | 10            | 10              | 12              | _ 33  | <u>L</u> *_                                      |          | $\perp \!\!\! \stackrel{x}{\leftarrow} \!\!\!\! $ | ٦٠٠      | 12             | 10              | 10             |                   | 10.7              | 10.4             | OINII 391                            |
|                       | 10.4              |                   | 10.1            |               |                 |                 |       | ┸┯┩                                              |          | <u></u>                                           |          |                |                 |                | <del>10.4</del>   |                   | 10.4             |                                      |
| UNIT 387              | 10.4              | <del>10.4</del>   |                 | <del>10</del> | <del>-20-</del> | <del>-12</del>  | 39    | <u> </u>                                         | $\perp$  | ⊥ <b>*</b> _                                      | 40       | <del>-12</del> | <del>20</del>   | <del>10-</del> | 10.7              | <del>10.4</del>   |                  | <del> UNIT 287</del>                 |
|                       |                   |                   | <del>10.4</del> |               |                 | <del>-</del>    | "     | <u> </u>                                         |          | $\downarrow \uparrow$                             |          |                |                 |                |                   | . 511             | 10.4             | 51111 Z01                            |
| UNIT 485              | 9.5               |                   |                 | <del>10</del> | <del>-15-</del> | <del>-12</del>  | 43    | ╆┯╌                                              |          | $+ \sim$                                          | 44       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
|                       |                   | <del>-9.5-</del>  |                 |               |                 |                 |       | <del>                                     </del> | $\vdash$ | $+ \sim$                                          | 46       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| SPACE ONLY            |                   |                   |                 |               |                 |                 | 47    | }~-                                              |          | $+ \sim$                                          | 48       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| SPACE ONLY            |                   |                   |                 |               |                 |                 | 49    | }~~                                              | $\vdash$ | $+ \sim$                                          | 50       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| SPACE ONLY            |                   |                   |                 |               |                 |                 | 51    | _~_                                              | +        | $+ \sim$                                          | - 52     |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| SPACE ONLY            |                   |                   |                 |               |                 |                 | 53    | $\vdash \smallfrown$                             |          | +                                                 | 54       |                |                 |                |                   |                   |                  | SPACE ONLY                           |
| TOTAL                 | 83.3              | 71.2              | 66.3            |               |                 |                 |       |                                                  |          |                                                   |          |                |                 |                | 70.6              | 49.3              | 61.1             | TOTAL                                |

R3 TOTAL CONNECTED AMPS A=153.9 B=120.5 C=127.4 R4 TOTAL CONNECTED AMPS A=108.2 B=120.0 C=112.8 FEEDER TOTAL CONNECTED AMPS A=262.1 B=240.5 C=240.2

|                          | P                | <b>A</b> 1       | ۱E              | L              | . <b>B</b>      | 0             | A        | R                                      | R D         |        | <b>S</b> ( | CH            | 1 E             | Ξ [             | ) U              | J L             | Ε    | CULTER HAMMER PRL1A       |
|--------------------------|------------------|------------------|-----------------|----------------|-----------------|---------------|----------|----------------------------------------|-------------|--------|------------|---------------|-----------------|-----------------|------------------|-----------------|------|---------------------------|
| PANEL "F                 | ₹4"              |                  |                 |                | 40              | )0A MI        | _0, 2    | .08Y/                                  | 120V, 3     | 3Ø, 4\ | V, SU      | IRFAC         | E MC            | UNT             | ED, GF           | ROUND           | BUS, | 10 KAIC NEMA 3R           |
| LOAD SERVED              | LOA<br>A         | AD (AM<br>B      |                 |                |                 | WIRE<br>SIZE  |          | $\overline{}$                          | PHAS<br>A B |        |            | WIRE<br>SIZE  |                 |                 |                  | AD (AM<br>B     | IPS) | LOAD SERVED               |
| — UNIT 593—              | 12.7             | <del>12.7</del>  | <del>12.7</del> | <del>-10</del> | <del>-20</del>  | <del>12</del> | 3        | **                                     |             | *      | 4          | <del>12</del> | <del>-20-</del> | <del>-10-</del> | <del>12.7</del>  | <del>12.7</del> | 12.7 | -UNIT 591                 |
| — UNIT 493—              | 10.4             | 10.4             | 10.4            | <del>-10</del> | <del>15</del>   | <del>12</del> | 9        | ***                                    |             | *      | 10         | <del>12</del> | <del>-15-</del> | <del>-10-</del> | <del>10.4</del>  | <del>10.4</del> | 10.4 | <del>- UNIT 491 -</del>   |
| — UNIT 286—              | <del>-9.5</del>  | <del>-9.5-</del> | 10.4            | <del>-10</del> | <del>-15</del>  | <del>12</del> | 13       | *                                      |             | *      | 14         | <del>12</del> | <del>-15-</del> | <del>-10-</del> | 9.5              | 9.5             | 10.4 | <del>- UNIT 386 -</del>   |
| SPACE ONLY<br>SPACE ONLY |                  |                  |                 |                | _               | _             | 17<br>19 |                                        |             | 1      | 18         |               |                 |                 |                  |                 |      | SPACE ONLY<br>SPACE ONLY  |
| SPACE ONLY<br>SPACE ONLY |                  |                  |                 |                |                 |               | 21<br>23 |                                        |             | +      | 22         |               |                 |                 |                  |                 |      | SPACE ONLY                |
| SPACE ONLY               |                  |                  |                 |                |                 |               | 25       |                                        |             |        | 26         |               |                 |                 |                  |                 |      | SPACE ONLY<br>SPACE ONLY  |
| — UNIT 393               | <del>-10.4</del> | 10.4             | 10.4            | <del>10</del>  | <del>15</del>   | <del>12</del> | 29       | <br>  *<br>  *<br>  *                  |             | *      | 30         | <del>12</del> | <del>-20-</del> | <del>-10-</del> | <del>-11.8</del> |                 | 11.8 | SPACE ONLY  -4TH CORRIDOR |
| — 5TH CORRIDOR           | 10.4             | 11.8             | <del>11.8</del> | <del>10</del>  | <del>-20-</del> | <del>12</del> | 33       |                                        |             | *      | 34         | <del>12</del> | <del>-20-</del> | <del>-10-</del> | 11.0             | 11.8            | 11.8 | -3RD CORRIDOR             |
| — <del>UNIT 293</del> —  | 10.4             | <del>10.4</del>  | 10.4            | <del>10</del>  | <del>15</del>   | <del>12</del> | 39       | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |             | ***    | 40         | <del>12</del> | <del>-15-</del> | <del>-10-</del> | 10.4             | <del>10.4</del> | 10.4 |                           |
| TOTAL                    | 53.4             | 65.2             | 55.7            |                |                 |               |          |                                        |             |        |            |               |                 |                 | 54.8             | 54.8            | 57.1 | TOTAL                     |
|                          |                  |                  | -               | TOTA           | L CO            | NNEC          | TED      | AMP                                    | S A=1       | 108.2  | B=12       | 20.0          | C=11            | 2.8             |                  | •               | •    |                           |

| PANEL "I         | R2"  |        |      |      | 22   | 25A M | LO, 2 | 208Y/                    | 120V      | ′, 3Ø, 4\        | V, SL | JRFAC | CE MC | UNTI | ED, GF | ROUND  | BUS, 1 | 0 KAIC NEMA 3R         |
|------------------|------|--------|------|------|------|-------|-------|--------------------------|-----------|------------------|-------|-------|-------|------|--------|--------|--------|------------------------|
| LOAD SERVED      | LOA  | AD (AM |      |      |      | WIRE  | -     |                          | PHA       | SE               |       | WIRE  | CKT   | BKR  | LO     | AD (AM | PS)    | LOAD SERVED            |
| LOAD SERVED      | Α    | В      | С    | KAIC | TRIP | SIZE  | NO.   |                          | A B       | С                | NO.   | SIZE  | TRIP  | KAIC | Α      | В      | С      | LOAD SERVED            |
| CU-C-383 ON ROOF | 14.9 |        |      | 10   | 30   | 10    | 1     | $\vdash \uparrow \vdash$ |           | <u> </u>         | 2     | 12    | 20    | 10   | 9.5    |        |        | CU-A-181 ON ROO        |
|                  |      | 14.9   |      |      |      |       |       | $\vdash \wedge$          | $\vdash$  | $+ \wedge$       |       |       |       |      |        | 9.5    |        |                        |
| CU-C-580 ON ROOF |      |        | 14.9 | 10   | 30   | 10    | 5     | <del> </del>             |           | $+ \uparrow$     | 6     | 12    | 20    | 10   |        |        | 9.5    | <b>CU-A-482 ON ROO</b> |
|                  | 14.9 |        |      |      |      |       |       | $\vdash \wedge$          | $\dagger$ | $+ \wedge$       |       |       |       |      | 9.5    |        |        |                        |
| CU-C-481 ON ROOF |      | 14.9   |      | 10   | 30   | 10    | 9     | ╀╨                       | +         | $+$ $\uparrow$ - | 10    | 12    | 20    | 10   |        | 9.5    |        | <b>CU-A-282 ON ROO</b> |
|                  |      |        | 14.9 |      |      |       |       | $\vdash \smallfrown$     |           | + $$             |       |       |       |      |        |        | 9.5    |                        |
| CU-A-480 ON ROOF | 9.5  |        |      | 10   | 20   | 12    | 13    | $\Box$                   | 1         | $+ \Upsilon$     | 14    | 12    | 20    | 10   | 9.5    |        |        | CU-A-182 ON ROO        |
|                  |      | 9.5    |      |      |      |       | 47    | 厂_                       | 1         | +                | 40    |       |       |      |        | 9.5    |        |                        |
| SPACE ONLY       |      |        |      |      |      |       | 17    | $\vdash \smallfrown$     | $\Box$    | + $$             | 18    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 19    | $\vdash \smallfrown$     | + +       | $+ \smallfrown$  | 20    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 21    | $\vdash \smallfrown$     | + +       | $+ \sim$         | 22    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 23    | <u></u>                  | +         | $+ \sim$         | 24    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 25    | $\vdash \smallfrown$     | + +       | $+ \sim$         | 26    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 27    | $\vdash \smallfrown$     | + +       | $+ \sim$         | 28    |       |       |      |        |        |        | SPACE ONLY             |
| SPACE ONLY       |      |        |      |      |      |       | 29    | $\vdash \frown$          |           | +                | 30    |       |       |      |        |        |        | SPACE ONLY             |
| TOTAL            | 39.3 | 39.3   | 29.8 |      |      |       |       |                          |           |                  |       |       |       |      | 28.5   | 28.5   | 19.0   | TOTAL                  |

| PANEL "F              |          |             |           |     |          |              |      |                           | )V, 3Ø, 4                                |            |              |    |          | ,                |             |          | 0 KAIC NEMA 3R          |
|-----------------------|----------|-------------|-----------|-----|----------|--------------|------|---------------------------|------------------------------------------|------------|--------------|----|----------|------------------|-------------|----------|-------------------------|
| LOAD SERVED           | LO/<br>A | AD (AM<br>B | IPS)<br>C |     |          | WIRE<br>SIZE |      |                           | IASE<br>B C                              |            | WIRE<br>SIZE |    |          | LO <i>l</i><br>A | AD (AM<br>B | PS)<br>C | LOAD SERVED             |
| CU-A-388 ON ROOF      | 9.5      |             |           | 10  | 20       | 12           | 1    | <b>↑</b>                  | <u> </u>                                 | 2          | 12           | 20 | 10       | 9.5              |             | _        | CU-A-288 ON ROOF        |
|                       | 0.0      | 9.5         |           | 10  | 20       |              | † '  | $\perp \lambda \perp$     | $\downarrow \downarrow \downarrow \land$ | <b>↓</b> ¯ | 12           |    | 10       | J.U              | 9.5         |          | 00 /1 200 011 11001     |
| CU-B-2ND CORRIDOR     |          | 0.0         | 11.5      | 10  | 25       | 12           | 5    | $\perp_{\uparrow}\perp$   | $+$ $\uparrow$ $\uparrow$                | 6          | 12           | 25 | 10       |                  | 0.0         | 11.5     | CU-B-1ST CORRIDOR       |
| ON ROOF               | 11.5     |             |           | 1.0 |          |              | 1    | $\vdash \land \downarrow$ | ++                                       | 4          | 12           |    |          | 11.5             |             | 1110     | ON ROOF                 |
| CU-A-290 ON ROOF      |          | 11.5        |           | 10  | 20       | 12           | 9    | $- \uparrow$              | $+$ $\uparrow$ $\uparrow$                | 10         | 12           | 20 | 10       |                  | 9.5         |          | CU-A-488 ON ROOF        |
| (R)                   |          |             | 11.5      |     |          |              |      | $\vdash \land \bot$       | $\downarrow \downarrow \downarrow \land$ | 4          |              |    |          |                  |             | 9.5      |                         |
| CU-A-190 ON ROOF      | 9.5      |             |           | 10  | 20       | 12           | 13   | $\vdash \uparrow \vdash$  | $++$ $\uparrow$                          | 14         | 12           | 20 | 10       | 9.5              |             |          | CU-A-490 ON ROOF        |
|                       |          | 9.5         |           |     |          |              |      | $\vdash \wedge +$         | +                                        | 4          |              |    |          |                  | 9.5         |          |                         |
| CU-B-1ST LOUNGE       |          |             | 11.5      | 10  | 25       | 12           | 17   | $\vdash \uparrow \vdash$  | +                                        | 18         | 12           | 20 | 10       |                  |             | 9.5      | CU-A-390 ON ROOF        |
| ON ROOF               | 11.5     |             |           |     |          |              |      | $\vdash \land \dotplus$   | $++$ ^                                   | _          |              |    |          | 9.5              |             |          |                         |
| CU-C-191 ON ROOF      |          | 14.9        |           | 10  | 30       | 10           | 21   | $\vdash \uparrow \vdash$  | $++$ $\uparrow$                          | _ 22       | 12           | 20 | 10       |                  | 9.5         |          | <b>CU-A-188 ON ROOF</b> |
|                       |          |             | 14.9      |     |          |              |      | $\vdash \wedge +$         | $++$ ^                                   | ┥          |              |    |          |                  |             | 9.5      |                         |
| CU-C-291 ON ROOF      | 14.9     |             |           | 10  | 30       | 10           | 25   | $\vdash \uparrow \vdash$  | $++\uparrow$                             | _ 26       | 10           | 30 | 10       | 14.9             |             |          | CU-C-391 ON ROOF        |
|                       |          | 14.9        |           |     |          |              |      | $\vdash \uparrow \vdash$  | +                                        | ٦          |              |    |          |                  | 14.9        |          |                         |
| CU-C-387 ON ROOF      |          |             | 14.9      | 10  | 30       | 10           | 29   |                           | $+$ $\uparrow$                           | 30         | 10           | 30 | 10       |                  |             | 14.9     | CU-C-287 ON ROOF        |
|                       | 14.9     |             |           | 40  |          | 40           | 00   |                           | +                                        | 1_4        |              |    |          | 14.9             |             |          | LID A 40T CORRIDOR      |
| CU-A-485 ON ROOF      |          | 9.5         |           | 10  | 20       | 12           | 33   |                           | $\uparrow \uparrow \uparrow \uparrow$    | 34         | 10           | 40 | 10       |                  | 21.2        |          | HP-A-1ST CORRIDOR       |
|                       |          |             | 9.5       |     |          |              | 27   |                           | +                                        | 100        |              |    |          |                  |             | 21.2     | ON ROOF                 |
| SPACE ONLY SPACE ONLY |          |             |           |     |          |              | 37   |                           | +                                        | 38<br>40   |              |    |          |                  |             |          | SPACE ONLY              |
|                       |          |             |           |     |          |              | 39   |                           |                                          | 40         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY            |          |             |           |     |          |              | 41   |                           |                                          | 42         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY            |          |             |           |     |          |              | 45   |                           |                                          | 46         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY            |          |             |           |     |          |              | 47   | $\Gamma_{\alpha} T$       | $\prod_{\alpha}$                         | 48         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY            |          |             |           |     |          |              | 49   | $\Box \Box$               |                                          | 50         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY            |          |             |           |     |          |              | 51   |                           |                                          | 52         |              |    |          |                  |             |          | SPACE ONLY              |
| SPACE ONLY SPACE ONLY |          |             |           |     |          |              | 53   | $\perp \wedge \perp$      | $\downarrow \downarrow \sim$             | 54         |              |    |          |                  |             |          | SPACE ONLY SPACE ONLY   |
|                       |          |             |           |     | <u> </u> |              | 1 00 |                           | 1 [                                      | 101        |              |    | <u> </u> |                  |             |          |                         |
| TOTAL                 | 71.8     | 69.8        | 73.8      |     |          |              |      |                           |                                          |            |              |    |          | 69.8             | 74.1        | 76.1     | TOTAL                   |

TOTAL CONNECTED AMPS A=195.6 B=149.2 C=144.0 FEEDER TOTAL CONNECTED AMPS A=337.2 B=293.1 C=293.9

| UPD                       | A T         | Ε           | D    | P  | A  | N            | E     | L                        | В             | 0                                                                | <b>A</b>   | R     | D     | S    | C        | HI          | E D    | ULE                       |
|---------------------------|-------------|-------------|------|----|----|--------------|-------|--------------------------|---------------|------------------------------------------------------------------|------------|-------|-------|------|----------|-------------|--------|---------------------------|
| PANEL "I                  | <b>R4</b> " |             |      |    | 40 | 00A MI       | LO, 2 | 208Y/1                   | 20V, 3        | 3Ø, 4\                                                           | W, SL      | JRFAC | CE MC | DUNT | ED, GF   | ROUND       | BUS, 1 | 0 KAIC NEMA 3R            |
| LOAD SERVED               | LOA<br>A    | AD (AM<br>B | PS)  |    |    | WIRE<br>SIZE |       |                          | PHAS<br>A B   |                                                                  | CKT<br>NO. | WIRE  |       |      | LO/<br>A | AD (AM<br>B | PS)    | LOAD SERVED               |
| CU-D-593 ON ROOF          | 15.8        |             |      | 10 | 30 | 10           | 1     | <u> </u>                 |               | <u> </u>                                                         | 2          | 10    | 30    | 10   | 15.8     |             |        | CU-D-591 ON ROOF          |
|                           | 10.0        | 15.8        |      |    |    |              |       | $\vdash \land \vdash$    | _             | $\perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$ | 4          |       | "     | 1.0  |          | 15.8        |        |                           |
| CU-C-493 ON ROOF          |             |             | 14.9 | 10 | 30 | 10           | 5     | <u></u> - ↑ -            | _             | <del>-</del> ↑                                                   | 6          | 10    | 30    | 10   |          |             | 14.9   | CU-C-491 ON ROOF          |
|                           | 14.9        |             |      |    |    |              |       | $\vdash \land \dashv$    | -             | $+$ $\wedge$ -                                                   |            |       |       |      | 14.9     |             |        |                           |
| CU-A-286 ON ROOF          |             | 9.5         |      | 10 | 20 | 12           | 9     | $\vdash \uparrow \vdash$ | +             | <del> </del> -↑-                                                 | 10         | 12    | 20    | 10   |          | 9.5         |        | CU-A-386 ON ROOF          |
|                           |             |             | 9.5  |    |    |              |       | $\vdash \wedge \vdash$   |               | ┿┷                                                               |            |       |       |      |          |             | 9.5    |                           |
| CU-C-393 ON ROOF          | 14.9        |             |      | 10 | 30 | 10           | 13    |                          | +             | ┼┰╴                                                              | 14         | 12    | 25    | 10   | 11.5     |             |        | <b>CU-B-4TH CORRIDOR</b>  |
|                           |             | 14.9        |      |    |    |              |       | $\vdash \frown$          | +             | $+ \sim$                                                         | <u> </u>   |       |       |      |          | 11.5        |        | ON ROOF                   |
| CU-B-5TH CORRIDOR         |             |             | 11.5 | 10 | 25 | 12           | 17    |                          |               | $+$ $\uparrow$ -                                                 | 18         | 12    | 25    | 10   |          |             | 11.5   | CU-B-3RD CORRIDOR         |
| ON ROOF                   | 11.5        |             |      |    |    |              | 04    | $\vdash \sim$            | +             | +                                                                | 1          |       |       |      | 11.5     |             |        | ON ROOF                   |
| CU-C-293 ON ROOF          |             | 14.9        | 440  | 10 | 30 | 10           | 21    |                          |               | $\top \uparrow $                                                 | 22         | _10_  | 30    | 10   |          | 14.9        | 440    | CU-C-193 ON ROOF          |
| LID A AND AARDIDAR        | 04.0        |             | 14.9 | 40 | 40 | 40           | 25    | $\perp \downarrow$       |               | +                                                                | 26         | 40    | 40    | 40   | 04.0     |             | 14.9   | LID A ATU CORDIDOR        |
| HP-A-2ND CORRIDOR ON ROOF | 21.2        | 21.2        |      | 10 | 40 | 10           | 23    |                          |               |                                                                  | ] 20       | 10    | 40    | 10   | 21.2     | 21.2        |        | HP-A-4TH CORRIDOR ON ROOF |
| HP-A-3RD CORRIDOR         |             | 21.2        | 21.2 | 10 | 40 | 10           | 29    | ┸┷┸                      |               |                                                                  | 30         | 10    | 40    | 10   |          | 21.2        | 21.2   | HP-A-5TH CORRIDOR         |
| ON ROOF                   | 21.2        |             | 21.2 | 10 | 40 | 10           | 20    |                          |               | $\perp \lambda_{-}$                                              | ] "        | 10    | 40    | 10   | 21.2     |             | 21.2   | ON ROOF                   |
| SPACE ONLY                | 21.2        |             |      |    |    |              | 33    | <u></u>                  | $\rightarrow$ | $\perp \sim$                                                     | 34         |       |       |      | 21.2     |             |        | SPACE ONLY                |
| SPACE ONLY                |             |             |      |    |    |              | 35    | ┸                        | $\perp$       | $\downarrow \sim$                                                | 36         |       |       |      |          |             |        | SPACE ONLY                |
| SPACE ONLY                |             |             |      |    |    |              | 37    | $\vdash \sim \downarrow$ |               | $\downarrow \sim$                                                | 38         |       |       |      |          |             |        | SPACE ONLY                |
| SPACE ONLY                |             |             |      |    |    |              | 39    | }~-                      | $\overline{}$ | $+ \sim$                                                         | 40         |       |       |      |          |             |        | SPACE ONLY                |
| SPACE ONLY                |             |             |      |    |    |              | 41    |                          |               | <u> </u>                                                         | 42         |       |       |      |          |             |        | SPACE ONLY                |
| TOTAL                     | 99.5        | 76.3        | 72.0 |    |    |              |       |                          |               |                                                                  |            |       |       |      | 96.1     | 72.9        | 72.0   | TOTAL                     |



Design like YOU mean it!

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673 1620 HILLSBOROUGH STREET

SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

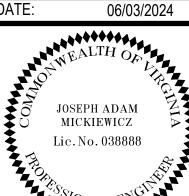
PC#236-B4236-004

722 W CARY ST, RICHMOND, VA

|   | F    | REVISIONS   |
|---|------|-------------|
| # | DATE | DESCRIPTION |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

COMMISSION NUMBER 22240290

SCALE: DESIGNED: JAM DRAWN: VT CHECKED: MAW DATE:



SHEET TITLE ELECTRICAL PANELBOARD SCHEDULES

> SHEET NUMBER E-605

**SHEET #** 49 **OF** 51

CIRCUIT BREAKERS, LOADS SERVED, AND WIRING.

### PANELBOARD LOAD CALCULATION:

| REMOVED LOAD   | ADDED LOAD     | NET CHANGE      |
|----------------|----------------|-----------------|
| PHASE A=135.3A | PHASE A=134.2A | PHASE A= -1.1A  |
| PHASE B=125.8A | PHASE B=119.3A | PHASE B= -6.5A  |
| PHASE C=130.4A | PHASE C=117.9A | PHASE C= -12.5A |

PANELBOARD R5 LOAD HAS DECREASED. THE EXISITING 225A FEEDER AND PANELBOARD IS SATISFACTORY.

|                          | P                 | AN              | 1 E             | L               | В               | 0                | A     | R                                                                                                                                 | D           | S                | (   | ) <b> </b>     | 1 E             |               | U                 | L                 | E                |                                  |
|--------------------------|-------------------|-----------------|-----------------|-----------------|-----------------|------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-----|----------------|-----------------|---------------|-------------------|-------------------|------------------|----------------------------------|
| PANEL "                  | <b>R5</b> "       |                 |                 |                 | 22              | 25A MI           | LO, 2 | 08Y/120                                                                                                                           | V, 3Ø,      | 4W,              | SU  | RFAC           | ЕМО             | UNT           | ED, GF            | ROUND             | BUS, 1           | 0 KAIC NEMA 3R                   |
| LOAD SERVED              | LOA<br>A          | AD (AM<br>B     |                 |                 |                 | WIRE<br>SIZE     |       |                                                                                                                                   | IASE<br>B C | C<br>N           |     | WIRE<br>SIZE   |                 |               | LO <i>l</i>       | AD (AM<br>B       | PS)<br>C         | LOAD SERVED                      |
| UNIT 585                 | 9.5               | 9.5             |                 | <del>10</del>   | <del>15</del>   | <del>-12-</del>  | 1     | *                                                                                                                                 | 3           |                  | 2   | <del>12</del>  | <del>15</del>   | <del>10</del> | 9.5               | 9.5               |                  | <del>UNIT 185</del>              |
| 3RD LOUNGE               | 11.8              | -               | 11.8            | 10-             | <del>20</del>   | <del>-12-</del>  | 5     |                                                                                                                                   | 1           |                  | 3   | <del>12</del>  | <del>20</del>   | <del>10</del> | <del>11.8</del>   |                   | <del>11.8</del>  | <del>5TH LOUNGE</del>            |
| 2ND LOUNGE               |                   | <del>11.8</del> | <del>11.8</del> | <del>10</del>   | <del>20</del> - | <del>-12-</del>  | 9     |                                                                                                                                   | 7           |                  | 0   | <del>-12</del> | <del>20</del> - | <del>10</del> |                   | <del>11.8</del>   | <del>11.8</del>  | <del>4TH LOUNGE</del>            |
| UNIT 187                 | 14.9              | <del>14.9</del> |                 | <del>10</del>   | <del>20</del> - | <del>-12-</del>  | 15    |                                                                                                                                   |             | \<br>\<br>\<br>\ | 6   | <del>12</del>  | <del>15</del>   | <del>10</del> | <del>-10.4</del>  | <del>-10.4</del>  |                  | — UNIT 587                       |
| UNIT 384                 | 9.5               |                 | <del>14.9</del> | <del>10-</del>  | <del>15</del>   | <del>-12-</del>  | 19    | <del>-</del> |             | \                | 0   | <del>-12</del> | <del>15</del>   | <del>10</del> | <del>-9.5</del> - |                   | <del>10.4</del>  | — UNIT 484—                      |
| UNIT 285                 |                   | <del>9.5</del>  | 9.5             | <del>-10-</del> | <del>15</del> - | <del>-12</del> - | 23    | <u> </u>                                                                                                                          | +           | \_<br>\2         | 4   | <del>12</del>  | <del>15</del>   | <del>10</del> |                   | <del>-9.5</del> - | <del>-9.5-</del> | — UNIT 184—                      |
| UNIT 186                 | <del>-9.5</del> - | 9.5             |                 | <del>10</del>   | <del>15</del>   | <del>-12</del>   | 27    | *                                                                                                                                 |             |                  | 8   | <del>-12</del> | <del>15</del>   | <del>10</del> | <del>-9.5</del> - | 9.5               |                  | <del>UNIT 284</del>              |
| UNIT 486                 | <del>-9.5</del>   |                 | 9.5             | 10              | <del>15</del>   | <del>12</del>    | 31    | <b>X</b>                                                                                                                          |             |                  |     | 40             | 45              | 40            | <del>-10.4</del>  | 40.4              | 9.5              |                                  |
| UNIT 385                 | 0.5               | 9.5             | 9.5             | <del>10</del>   | <del>-15</del>  | <del>12</del>    | 35    |                                                                                                                                   |             | Ľ                | 4   | <del>12</del>  | <del>15</del>   | <del>10</del> |                   | <del>10.4</del>   | 10.4             | — UNIT 487                       |
| SPACE ONLY<br>SPACE ONLY | <del>-9.5</del>   |                 |                 |                 |                 |                  | 39    |                                                                                                                                   |             | $\sqrt{4}$       | 0 2 |                |                 |               |                   |                   |                  | SPACE ONLY SPACE ONLY SPACE ONLY |
| TOTAL                    | 74.2              | 64.7            | 67.0            |                 |                 | I                |       |                                                                                                                                   |             |                  |     |                |                 |               | 61.1              | 61.1              | 63.4             | TOTAL                            |
|                          |                   |                 |                 | TOTA            | L CO            | NNEC             | TED   | AMPS A                                                                                                                            | A=135.      | 3 B              | =12 | 5.8            | C=13            | 0.4           |                   |                   |                  |                                  |

| PANEL "I         | <b>R5</b> " |        |      |      | 22   | 25A MI | LO, 2    | .08Y/1                     | 20V, 3                                           | 3Ø, 4\             | W, SL | JRFAC | E MC | UNT  | ED, GF | ROUND  | BUS, 1 | 10 KAIC NEMA 3R         |
|------------------|-------------|--------|------|------|------|--------|----------|----------------------------|--------------------------------------------------|--------------------|-------|-------|------|------|--------|--------|--------|-------------------------|
| LOAD SERVED      | LOA         | AD (AM | PS)  | CKT  | BKR  | WIRE   | CKT      |                            | PHAS                                             | E                  | CKT   | WIRE  | CKT  | BKR  | LO     | AD (AM | PS)    | LOAD SERVED             |
| LOAD SERVED      | Α           | В      | С    | KAIC | TRIP | SIZE   | NO.      | F                          | A B                                              | С                  | NO.   | SIZE  | TRIP | KAIC | Α      | В      | С      | LOAD SERVED             |
| CU-A-585 ON ROOF | 9.5         |        |      | 10   | 20   | 12     | 1        | <u> </u>                   |                                                  | <del>-</del>       | 2     | 12    | 20   | 10   | 9.5    |        |        | CU-A-185 ON ROOF        |
|                  |             | 9.5    |      |      |      |        |          | $\vdash \wedge $           | <del>                                     </del> | $+$ $\wedge$ $-$   | 1     |       |      |      |        | 9.5    |        |                         |
| CU-B-3RD LOUNGE  |             |        | 11.5 | 10   | 25   | 12     | 5        | $\vdash \uparrow \vdash$   |                                                  | <del>├</del> -ू    | 6     | 12    | 25   | 10   |        |        | 11.5   | CU-B-5TH LOUNGE         |
| ON ROOF          | 11.5        |        |      |      |      |        |          | $\vdash \wedge \dashv$     | -                                                | $+ \wedge$         |       |       |      |      | 11.5   |        |        | ON ROOF                 |
| CU-B-2ND LOUNGE  |             | 11.5   |      | 10   | 25   | 12     | 9        | $\vdash \uparrow \vdash$   | +                                                | ┼┰╴                | 10    | 12    | 25   | 10   |        | 11.5   |        | <b>CU-B-4TH LOUNGE</b>  |
| ON ROOF          |             |        | 11.5 |      |      |        |          | $\vdash \wedge \vdash$     |                                                  | $+ \wedge$         |       |       |      |      |        |        | 11.5   | ON ROOF                 |
| CU-C-187 ON ROOF | 14.9        |        |      | 10   | 30   | 10     | 13       | $\vdash \uparrow \vdash$   | $\vdash$                                         | ┼┰╴                | 14    | 10    | 30   | 10   | 14.9   |        |        | CU-C-587 ON ROOF        |
|                  |             | 14.9   |      |      |      |        |          | $\vdash \frown$            | +                                                | $+ \smallfrown$    |       |       |      |      |        | 14.9   |        |                         |
| CU-A-384 ON ROOF |             |        | 9.5  | 10   | 20   | 12     | 17       | $\vdash \uparrow \vdash$   |                                                  | $+$ $\uparrow$ -   | 18    | 12    | 20   | 10   |        |        | 9.5    | CU-A-484 ON ROOF        |
|                  | 9.5         |        |      |      |      |        | 0.4      | $\vdash \frown$            | $\vdash$                                         | +                  |       |       |      |      | 9.5    |        |        |                         |
| CU-A-285 ON ROOF |             | 9.5    |      | 10   | 20   | 12     | 21       | $\vdash \uparrow \vdash$   |                                                  | $+ \uparrow -$     | 22    | 12    | 20   | 10   |        | 9.5    |        | <b>CU-A-184 ON ROOF</b> |
|                  |             |        | 9.5  |      |      |        | 0.5      | $\vdash \widehat{}$        |                                                  | $\uparrow $        | - 00  |       |      |      |        |        | 9.5    |                         |
| CU-A-186 ON ROOF | 9.5         |        |      | 10   | 20   | 12     | 25       | 厂厂                         |                                                  | $+$ $\Upsilon$ $-$ | 26    | 12    | 20   | 10   | 9.5    |        |        | <b>CU-A-284 ON ROOF</b> |
|                  |             | 9.5    | ^-   | 40   |      | 40     | 20       |                            |                                                  |                    | 30    |       |      |      |        | 9.5    |        |                         |
| CU-A-486 ON ROOF |             |        | 9.5  | 10   | 20   | 12     | 29       |                            |                                                  |                    | 30    | 10    | 30   | 10   |        |        | 14.9   | CU-C-487 ON ROOF        |
|                  | 9.5         |        |      | 10   | 20   | 12     | 33       | $\lceil \downarrow \rceil$ |                                                  |                    | 34    |       |      |      | 14.9   |        |        | ODAGE ONLY              |
| CU-A-385 ON ROOF |             | 9.5    | ^ -  | 10   | 20   | 14     | ာ        | $\prod$                    |                                                  | $\Box$             | 36    |       |      |      |        |        |        | SPACE ONLY              |
| SPACE ONLY       |             |        | 9.5  |      |      |        | 37       |                            |                                                  | $\Box$             | 38    |       |      |      |        |        |        | SPACE ONLY              |
| SPACE ONLY       |             |        |      |      |      |        | 39       |                            |                                                  |                    | 40    |       |      |      |        |        |        | SPACE ONLY              |
| SPACE ONLY       |             |        |      |      |      |        | 41       |                            |                                                  |                    | 42    |       |      |      |        |        |        | SPACE ONLY SPACE ONLY   |
|                  |             |        |      |      |      |        | <u> </u> |                            |                                                  |                    | 174   |       |      |      |        |        |        |                         |
| TOTAL            | 64.4        | 64.4   | 61.0 |      |      |        |          |                            |                                                  |                    |       |       |      |      | 69.8   | 54.9   | 56.9   | TOTAL                   |

449 MCLAWS CIRCLE WILLIAMSBURG, VA 23185 (757) 253-0673

1620 HILLSBOROUGH STREET SUITE 100 RALEIGH, NC 27605 (984) 288-1300

www.djginc.com



100% WORKING DRAWINGS

GLADDING RESIDENCE HALL 3 - HVAC AND ROOF REPLACEMENT

PC#236-B4236-004

722 W CARY ST, RICHMOND, VA 23220

|   | F    | REVISIONS   |
|---|------|-------------|
| # | DATE | DESCRIPTION |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |
|   |      |             |

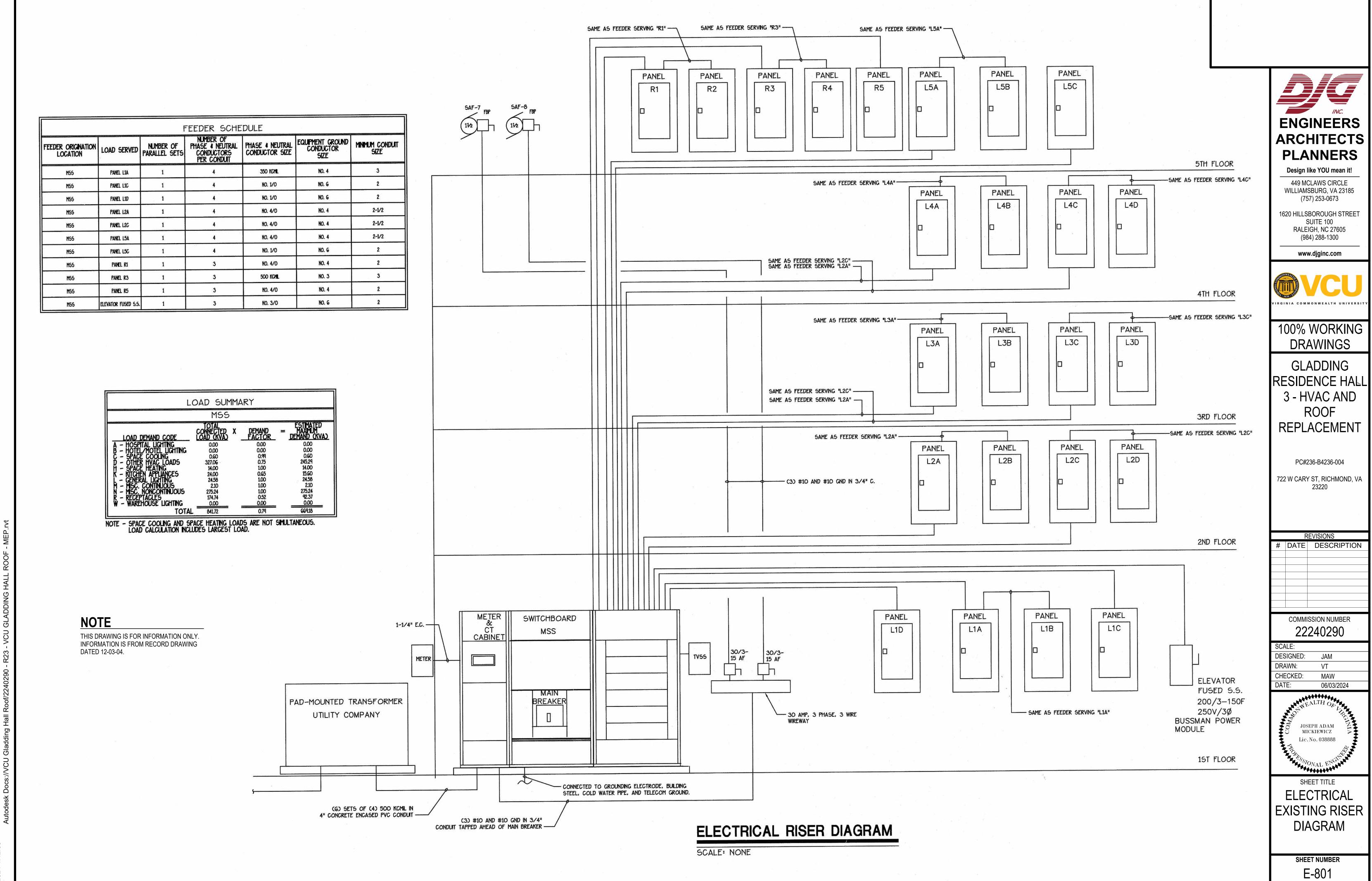
COMMISSION NUMBER 22240290

DESIGNED: JAM DRAWN: CHECKED: DATE:

SHEET TITLE ELECTRICAL PANELBOARD SCHEDULES

> SHEET NUMBER E-606

**SHEET #** 50 **OF** 51



**SHEET #** 51 **OF** 51

### Amendment to the 2024-2030 Six-Year Capital Plan, Authorization to Initiate a Capital Project, and Approval of Project Plans

Massey Building Shared Lab Renovation

#### **Background**

VCU seeks Board of Visitors (BOV) approval to amend the 2024-2030 Six-Year Capital Plan, authorization to initiate a capital project, and project plan approval, as required by the VCU management agreement, for the Massey Building Shared Lab Renovation. This proposed renovation is essential to meet and enhance growing research needs.

#### Considerations

The vivarium currently supports a broad range of critical research projects and users from the Schools of Medicine, Pharmacy and Dentistry.

#### Size and scope

The renovation will focus on the first and ground floors of the Massey Building. The first floor will be converted from wet labs to a 5,415 assignable square foot (ASF) vivarium, expanding vivarium space in the facility, and 1,500 ASF square feet of core labs. The ground floor will be converted from administrative space to 6,245 ASF square feet of wet labs.

#### **Costs and funding**

The total cost is \$33.9M. This includes \$21.3M for construction renovations, \$5M for furnishings, \$4M for design, \$2.5M for construction management and inspection, and \$1.1M for construction contingency. The project will be funded with \$2M from the university, \$500K from the MCV Foundation, and the remainder from Massey.

Upon the review and approval for this capital project and funding plan from the VCU BOV and VCU Health Board of Directors (including required external review), the Massey allocation will be funded through existing funds and the VCU Health annual commitment to support cancer research and operations. If any state or grant support is received to renovate the space, it will be used in lieu of funding from VCU Health.

#### Recommendation

Approve the amendment to the university's 2024-2030 Six-Year Capital Plan, authorize the initiation of a capital project at a cost not to exceed \$33.9M, and approve the corresponding project plans for the Massey Building Shared Lab Renovation.

### RESOLUTION OF THE BOARD OF VISITORS VIRGINIA COMMONWEALTH UNIVERSITY

### AUTHORIZATION TO INITIATE A MAJOR CAPITAL PROJECT FOR THE MASSEY BUILDING SHARED LAB RENOVATION

**WHEREAS**, Chapter 6.1, Title 23 of the Code of Virginia of 1950, as amended (the "Virginia Code") establishes a public corporation under the name and style of Virginia Commonwealth University (the "University") which is governed by a Board of Visitors (BOV) (the "Board") vested with the supervision, management and control of the University;

**WHEREAS**, Title 23 of the Virginia Code classifies the University as an educational institution of the Commonwealth of Virginia;

**WHEREAS**, by Chapter 4.10, Title 23 of the Virginia Code, the University entered into that certain Management Agreement with the Commonwealth of Virginia which was enacted as Chapter 594 of the Acts of Assembly of 2008 which, as amended, classifies the University as a public institution of higher education and empowers the University with the authority to undertake and implement capital projects, which include the acquisition of any interest in land, improvements on acquired land, capital leases, new construction, and building improvements and renovations;

**WHEREAS**, the Management Agreement requires the Board of Visitors to authorize the initiation of each Major Capital Project by approving its size, scope, budget and funding;

**WHEREAS**, the Massey Building Shared Lab Renovation ("the Project") is planned to focus on the first and ground floors of the Massey Building at an estimated cost of \$33.9M. The first floor will be converted from wet labs to a 5,415 assignable square foot (ASF) vivarium, expanding vivarium space in the facility, and 1,500 ASF square feet of core labs. The ground floor will be converted from administrative space to 6,245 ASF square feet of wet labs.

**WHEREAS**, a construction contract and project plans with final, size, scope and cost information will be brought to the Board for approval.

**WHEREAS**, the Board has determined it is desirable to authorize the initiation of a major capital project for the Massey Building Lab Renovation.

**NOW, THEREFORE, BE IT RESOLVED,** that the Board hereby authorizes and approves the Project, including the size, scope, budget and funding of the Project, as described in the materials presented to the Board; and

**RESOLVED FURTHER,** that, upon approval, this action shall take effect immediately.

### **CONCEPTUAL PLANNING**

#### **GROUND FLOOR OPTION 1**



FINAL Vivarium Wet Lab Feasibility Study MCC VCU

### **CONCEPTUAL PLANNING**

#### FIRST FLOOR VIVARIUM OPTION 1



FINAL Vivarium Wet Lab Feasibility Study MCC VCU

#### **Approval to Execute a Contract**

Professional Architectural and Engineering Services, VCU Dentistry Center

#### **Background**

VCU seeks Board of Visitors (BOV) approval to execute a contract for professional architectural and engineering (A/E) services for the design of a new VCU Dentistry Center. In March 2023, the BOV authorized the initiation of this major capital project as well as an amendment to include it in VCU's 2022-2028 Six-Year Capital Plan.

The VCU School of Dentistry is the Commonwealth of Virginia's only dental school and the only dental facility in the state for multidisciplinary care that includes oral surgery, periodontology, oral pain, oral cancer, etc. The Lyons Dental Building (1975) and Dental Building 1 (1954) are beyond their useful life, with more than \$90M in deferred maintenance needs. Additionally, they do not meet current educational or patient care needs and present accessibility concerns.

Based on an initial analysis, a new VCU Dentistry Center will be approximately 314,000 gross square feet, will be co-located with Larrick Student Center, and will provide state-of-the-art education, equipment and technology to serve more than 500 students. Shared spaces include classroom space, simulation and practice laboratories with manikin stations, academic laboratories, general and specialty practice clinics with operatories, and support spaces. The size and scope will be refined through the planning phase and the BOV will be updated throughout the process.

#### Considerations

All agreements in which the value exceeds or can be reasonably expected to exceed \$5M require BOV approval as outlined in VCU's Delegation of Signatory Authority policy. Expenditures on this contract are anticipated to exceed \$5M and therefore require BOV authorization.

#### **Cost and funding**

The A/E firm Hanbury was selected following the request for proposal process. The total cost for all design services is \$37.4M. The contract will be awarded to Hanbury but will be executed in two phases. The first phase is detailed planning, which consists of schematics and preliminary design, at a cost of \$19.5M. This phase will be funded by the School of Dentistry (\$7.5M), university funds (\$6.8M) and the Commonwealth of Virginia (\$5.2M); VCU will request reimbursement from the state for the university funds used for detailed planning. Once the preliminary design drawings are complete, VCU will request funding and authorization from the state to move forward with construction.

Once received, the second phase of the contract for construction drawings for \$17.9M will be executed.

The BOV approved the initiation of a capital project in March 2023 at an estimated cost of \$415M. A revised total project cost will be determined based on this planning and discussed with the BOV.

#### **Recommendation**

Approve the request to execute a professional services contract with Hanbury not to exceed \$37.4M.

#### RESOLUTION OF THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY

#### APPROVAL FOR PURCHASE CONTRACTS EXCEEDING \$5 MILLION

- **WHEREAS**, pursuant to Title § 23.1 of the *Code of Virginia*, the Board of Visitors of Virginia Commonwealth University (the Board) has broad legal authority to make regulations and policies concerning Virginia Commonwealth University (the University);
- **WHEREAS**, the Board has the authority to approve and execute agreements with outside entities that bind the University;
- **WHEREAS**, under the Board's discretion, the Board delegated authority to the University's Office of the President, as outlined in Delegation of Signatory Authority policy, as amended on May 10, 2019, to approve and execute contracts with a total actual or anticipated expenditure value of up to \$5 million;
- **WHEREAS**, the university seeks Board of Visitors approval to execute a contract for design services for the VCU Dentistry Center;
- **WHEREAS**, the University issued a Request for Proposal (RFP) to solicit vendors to design the building; The scope of the RFP is to design an approximately 314,000 gross square foot VCU Dentistry Center;
- **WHEREAS**, the University is negotiating a contract with Hanbury with an estimated cost of \$37.4M (Subject Contract);
- **WHEREAS**, the actual expenditures and additional costs for the proposed services will exceed the President's delegated authority for approval and execution of contracts; and
- NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY, that the Board approves the execution of the Subject Contracts and any required renewals; and
- **BE IT FURTHER RESOLVED**, that the Board authorizes the President or the President's designee to sign any contract amendments or documents necessary to implement the anticipated expenditure, in accordance with the Delegation of Signatory Authority policy; and
- **BE IT FURTHER RESOLVED**, that this Resolution will take effect immediately upon its adoption.

#### **Request for Contract Approval**

Subscription Services, Elsevier B.V.

#### **Background**

VCU seeks Board of Visitors (BOV) approval to execute a new three-year contract with Elsevier B.V. to access electronic journal collections and specified electronic books through VCU Libraries. The current contract term with the existing vendor ends in December 2024.

These peer-reviewed scholarly journals and books are essential to the successful pursuit and completion of undergraduate, graduate and professional degrees. Additionally, the content is necessary for the creation and support of grant applications as well as the successful completion of research studies which span the areas of medicine, health professions, psychology, biomedical sciences, engineering, social sciences and humanities.

#### **Considerations**

All agreements in which the value exceeds or can be reasonably expected to exceed \$5M require BOV approval as outlined in VCU's Delegation of Signatory Authority policy. Expenditures for this contract are anticipated to exceed \$5M and therefore require BOV authorization.

This contract provides value through deep discounts on the ScienceDirect Freedom Collection, the core collections of journals published by Elsevier for all subject areas, and access to 2,271 journal titles. The university will avoid cost increases of 1% to 1.5% as a result of negotiated caps on annual price increases. National peers are experiencing annual price increases of 2.5%.

#### **Cost and funding**

The total cost is anticipated to be \$6.5M and will be funded through a combination of education and general funds (90%) and Operating Service Agreement hospital operation funds (10%).

#### Recommendation

Approve the request to execute a subscription services contract for a term of three years with Elsevier not to exceed \$6.5M.

#### RESOLUTION OF THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY

#### APPROVAL FOR PURCHASE CONTRACTS EXCEEDING \$5 MILLION

**WHEREAS**, pursuant to Title § 23.1 of the *Code of Virginia*, the Board of Visitors of Virginia Commonwealth University (the Board) has broad legal authority to make regulations and policies concerning Virginia Commonwealth University (the University);

**WHEREAS,** the Board has the authority to approve and execute agreements with outside entities that bind the University;

**WHEREAS**, under the Board's discretion, the Board delegated authority to the University's Office of the President, as outlined in VCU's Delegation of Signatory Authority policy, as amended on May 10, 2019, to approve and execute contracts with a total actual or anticipated expenditure value of up to \$5 million;

**WHEREAS**, the University seeks Board of Visitors approval to execute a contract for subscription services for electronic journal collections and specified electronic books through VCU Libraries;

**WHEREAS**, the University is negotiating a three-year contract with Elsevier B.V. for an estimated total cost of \$6.5M ("Subject Contract");

**WHEREAS**, the actual expenditures and additional costs for the proposed services will exceed the President's delegated authority for approval and execution of contracts; and

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY, that the Board approves the execution of the Subject Contracts and any required renewals; and

**BE IT FURTHER RESOLVED,** that the Board authorizes the President or the President's designee to sign any contract amendments or documents necessary to implement the anticipated expenditure, in accordance with the Delegation of Signatory Authority policy; and

**BE IT FURTHER RESOLVED,** that this Resolution will take effect immediately upon its adoption.

### 2024 VCU State of the Research

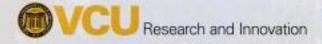
P. Srirama Rao, Ph.D.,
Vice President for Research and Innovation



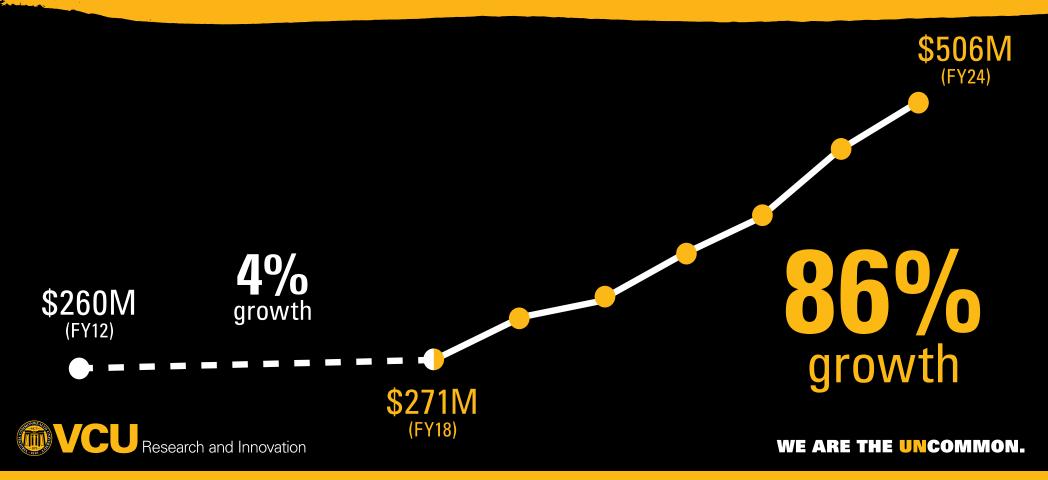
### An historic milestone for VCU research



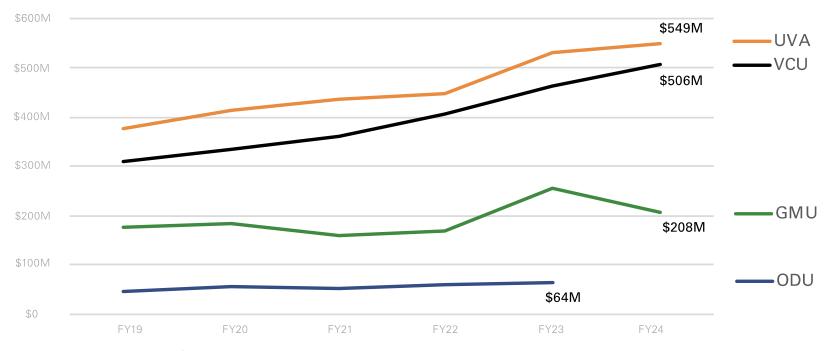
FY24 sponsored research funding



# VCU sponsored funding has grown exponentially



## VCU is a Top 3 Virginia public research university



Virginia Tech sponsored funding numbers not available





### Research on both campuses is driving VCU's sponsored funding



Education - \$44.7M





### **Notable research funding in 2024**







**\$9M** 

Convergence Labs Initiative

(PI: Nibir Dhar, Ph.D.)

**\$7M** 

Phase 3
Sickle Cell Disease gene
therapy clinical trial

(PI: Elizabeth Krieger, M.D.)

**\$6M** 

Clinical and Translational Science Awards (Wright Center)

(PI: Gerry Moeller, M.D., et al.)

**\$6M** 

VCU x CodeRVA Lab School

(PI: Kim McKnight, Ph.D.)

\$5M

Social Security national training and data center

(PI: John Kregel, Ph.D.)

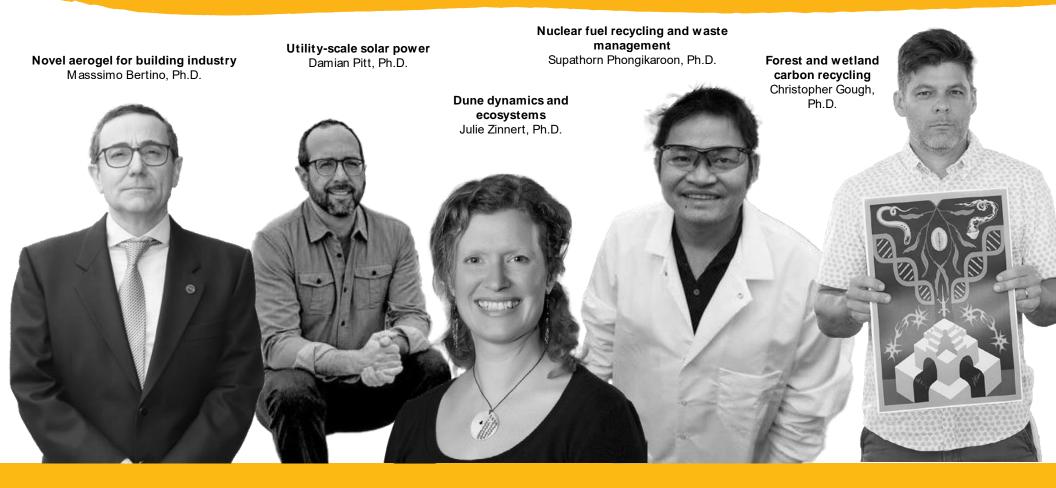


WE ARE THE UNCOMMON.

### QUEST 2028: Impactful research across 4-key strategic initiatives

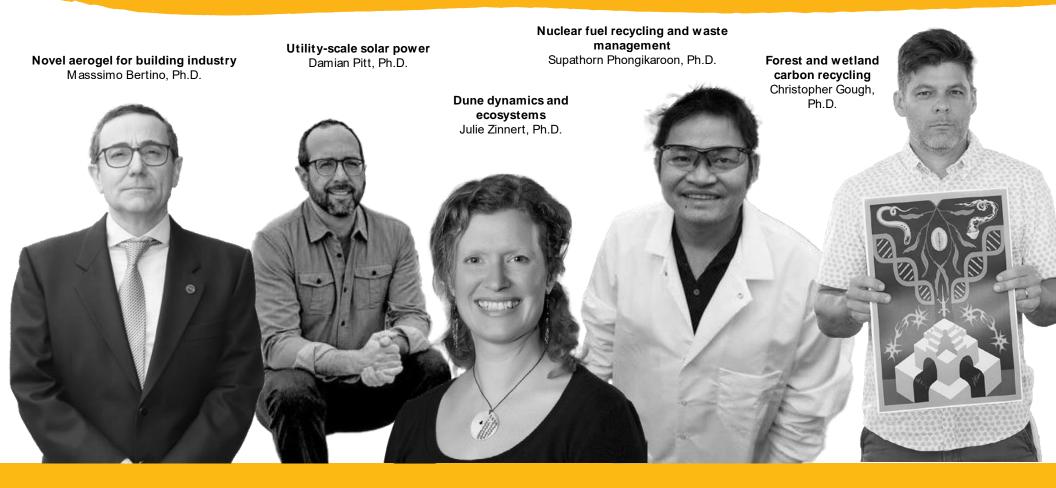


# Supporting sustainable energy and environments





# Supporting sustainable energy and environments



# Achieving a just and equitable society



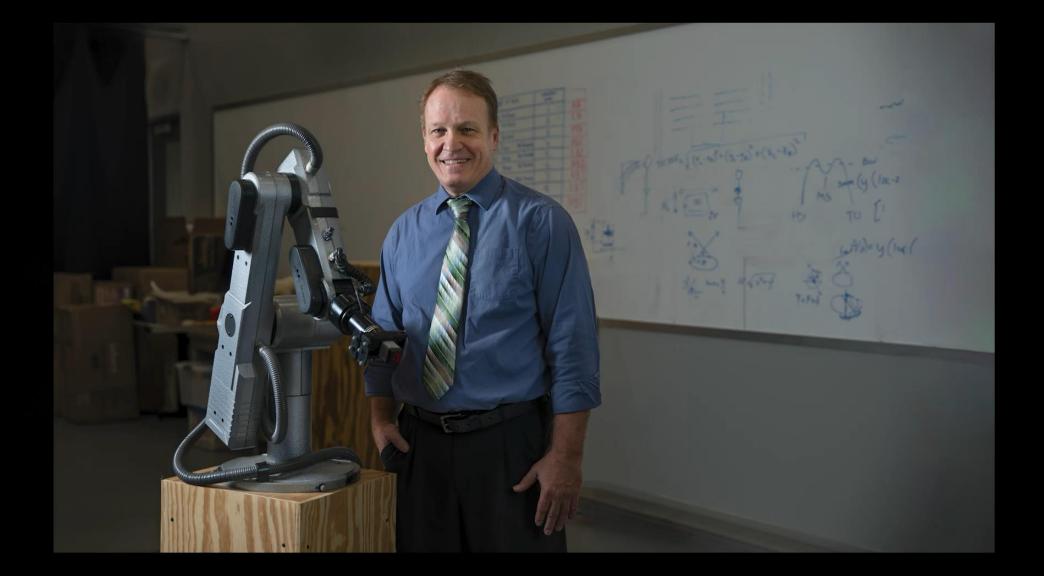


# Achieving a just and equitable society



# **Enriching the human experience**





# **Enriching the human experience**



# **Optimizing health**





# **Optimizing health**



### Advancing human health through clinical research



9,443
participants enrolled in clinical research

1,225
clinical research
studies

691 clinical trials



# Bringing innovation to the marketplace (FY24)

Nerve Tape for sutureless repair of injured nerves. Began use in humans in 2024.

Jonathan E. Isaacs, M.D.



106 invention disclosures

27 patents issued

13
licenses to startups

\$3.7M licensing revenue

### Past 10 years

1,600+ patents filed

**54** products to market

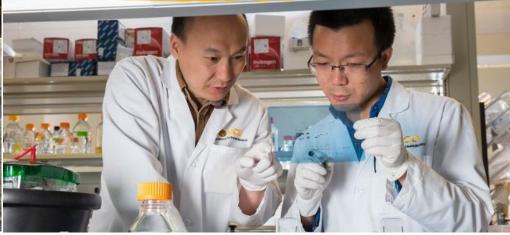
60+ startups

\$100M + startup funding

\$41.2M licensing revenue

### **Experiential learning - students and trainees**





5,500+
undergraduate students

engaged in research

2,250+

graduate students engaged in research

200+

postdoctoral fellows conducting research



WE ARE THE UNCOMMON.

### Addressing the critical needs of the region and beyond



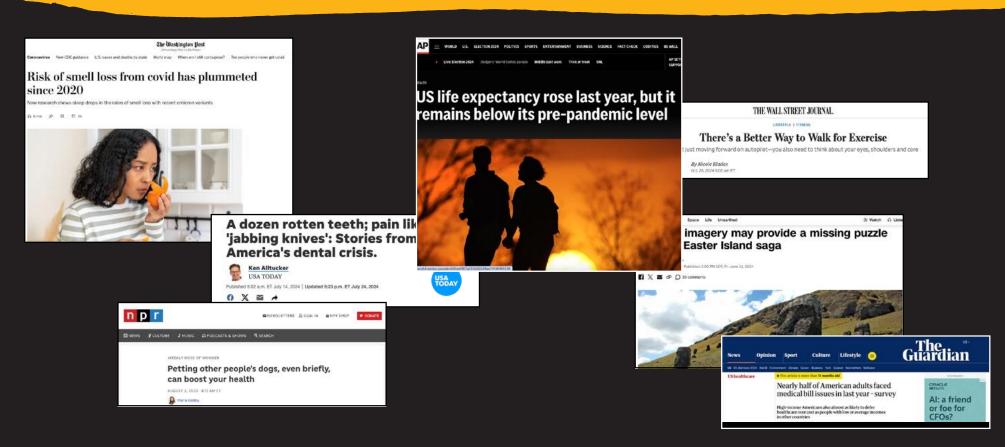


Virginia Opioid
Abatement Efforts

**Commonwealth Center for Advanced Computing** 



### VCU's impactful research is national and globally prominent



VCU research mentions in major publications

### Strategically investing in VCU's rapidly-growing research enterprise







Institutional and operational

Space and infrastructure

Key research initiatives



Drug discovery and development (including NSF Engines)

Enhanced clinical trials and community engagement



# VCU Research and Innovation: Charting the future





Al integration into research

Arts, humanities and social sciences

RIC's and convergence labs (including mental health and sustainability)



# VCU Division of Inclusive Excellence

# **Project Gabriel Update**

**Faye Belgrave and Stephanie Rizzi** 



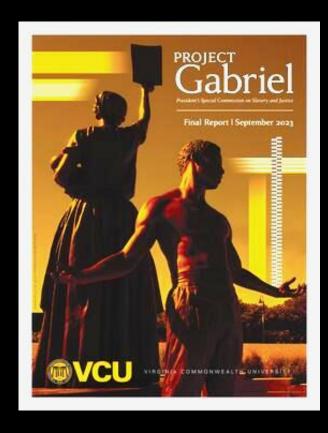
WE ARE THE UNCOMMON.

### Final Recommendations (categories):

- I. Identification and Memorialization
- II. Scholarships
- III. Community-Based Economic Development Programs for Individuals and Communities

### Recommendations:

- Reflect a commitment to community, equity and justice,
- Represent a unique opportunity to make VCU better, expand its mission, and strengthen the university,
- Are both actions and transformative steps,
- Will help VCU grow into a forward-focused, inclusive institution, and
- Acknowledge the organization's history and create tangible, lasting change.





# July 2024 – Present Updates We are now:

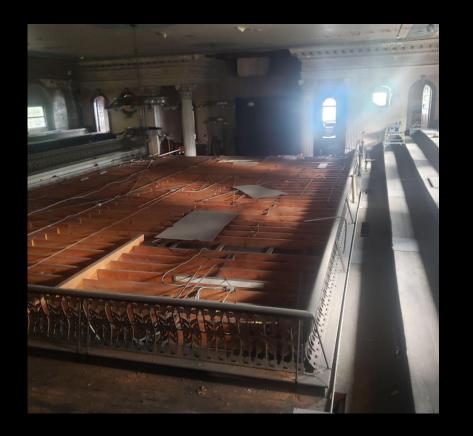
- Engaging and networking with the other universities under the mandate
- In the planning phases of building the Gabriel Scholars (scholarship) program
- Exploring fundraising with DAR
- Implementing a community engagement strategy
- First African Baptist Church site (Randolph Minor Hall) feasibility study for memorization and education













Current interior photos of Randolph Minor Hall (First African Baptist Church) mezzanine level (ca. 1877).

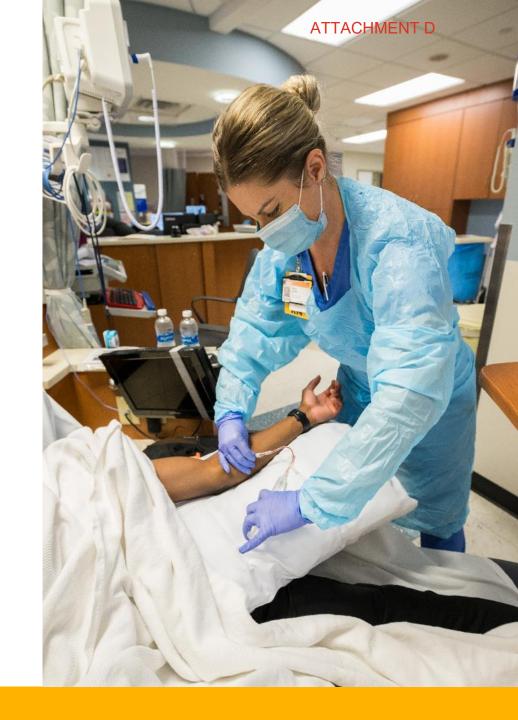




## Report of the CEO

Marlon Levy, M.D., MBA Senior Vice President, VCU Health Sciences Chief Executive Officer, VCU Health System

12/18/2024





# Open Session

### Open Session Topics

Quality, Safety & Service

Improving Access
Hospital at Home

Financial Performance

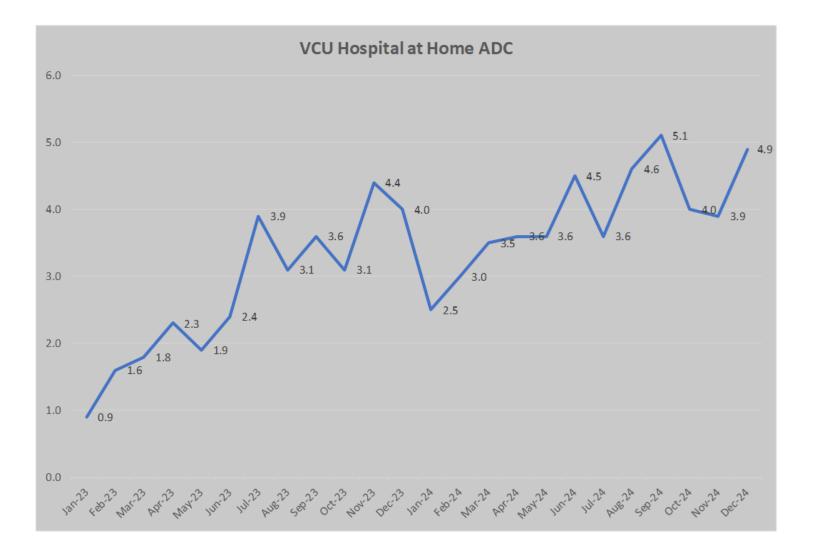
**Mission Moment** 







| Month   | ADC |
|---------|-----|
| Jan-23  | 0.9 |
| Feb-23  | 1.6 |
| Mar-23  | 1.8 |
| Apr-23  | 2.3 |
| May-23  | 1.9 |
| Jun-23  | 2.4 |
| Jul-23  | 3.9 |
| Aug-23  | 3.1 |
| Sep-23  | 3.6 |
| Oct-23  | 3.1 |
| Nov-23  | 4.4 |
| De c-23 | 4.0 |
| Jan-24  | 2.5 |
| Feb-24  | 3.0 |
| Mar-24  | 3.5 |
| Apr-24  | 3.6 |
| May-24  | 3.6 |
| Jun-24  | 4.5 |
| Jul-24  | 3.6 |
| Aug-24  | 4.6 |
| Sep-24  | 5.1 |
| Oct-24  | 4.0 |
| Nov-24  | 3.9 |
| De c-24 | 4.9 |





### Mission Moment

"I think her work will bring hope and joy to others, creating a ripple of positivity that touches both patients and caregivers alike. It is patients like her who fuel our dedication and remind us of the impact that compassion, resilience, and creativity have in the healing journey."

### Amelia Grover, M.D.

Surgical Oncologist VCU Massey Comprehensive Cancer Center



Video









# Discussion



# **Undergraduate Board of Visitors Report**

December 13, 2024

Presented By: Tobi Ojo Undergraduate BOV Representative



WE ARE THE **UNCOMMON**.

# Student Concerns

- > Housing
  - O Planning for Off-Campus Housing
  - Unawareness of new building construction
- Perceptions of Spending
  - Appearance of Sleep Pod
  - O Construction on Advising & Johnson Building



# Transformative Solution

# Implementation of Campus Organizational Chart



# Current Organizational Charts

### Patricia R. Perkins, CPA

Associate Vice President for Finance

prperkins@vcu.edu

(804) 828-5474

### Heather L. Seymour, CPA

Interim controller

hlhelms@vcu.edu

(804) 828-1834

### Brian D. Fowlkes, CPA

Associate controller

bfowlkes2@vcu.edu

(804) 828-8096

### Javeria Kazi, MBA, CRA

Director, grants and contracts accounting

kazij@vcu.edu

(804) 828-2056

#### **Monica Jackson**

Director, financial services mjackson9@vcu.edu

(804) 828-1890

#### Karen Lamb

Business analyst, data reporting

klpearso@vcu.edu

(804) 828-2277

### **Board of Visitors**

#### 2024 - 2025 members

### ➤ Hon. Todd P. Haymore, Rector

Term expires 06/30/25

Appointed by Governor McAuliffe in 2017 Reappointed by Governor Northam in 2021

Managing Director, Global Economic Development, Commerce and Government Relations



# 0

#### Mr. Andy Florance, Vice Rector

Term expires 06/30/25

Appointed by Governor Northam in 2021

Founder, Director, President and CEO CoStar Group

Read more



#### Mr. Anthony Bedell

Term expires 06/30/27

Appointed by Governor Youngkin in 2022 Reappointed by Governor Youngkin in 2023

Senior Corporate and Government Relations Director
Becker's Federal Lobbying Practice





### Ms. Rooz Dadabhoy

Term expires 06/30/27

Appointed by Governor Youngkin in 2023

CEO

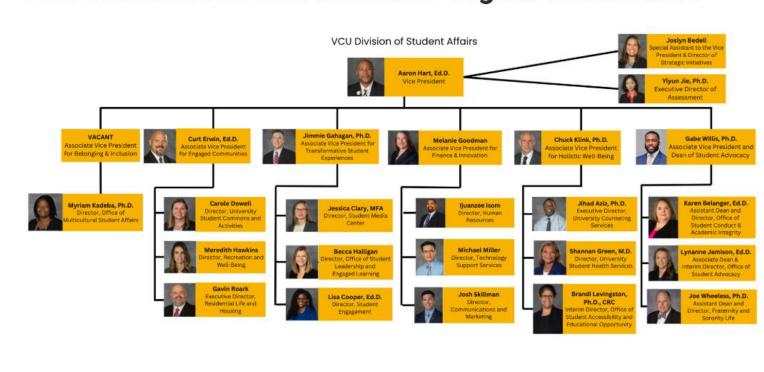
Data Concepts





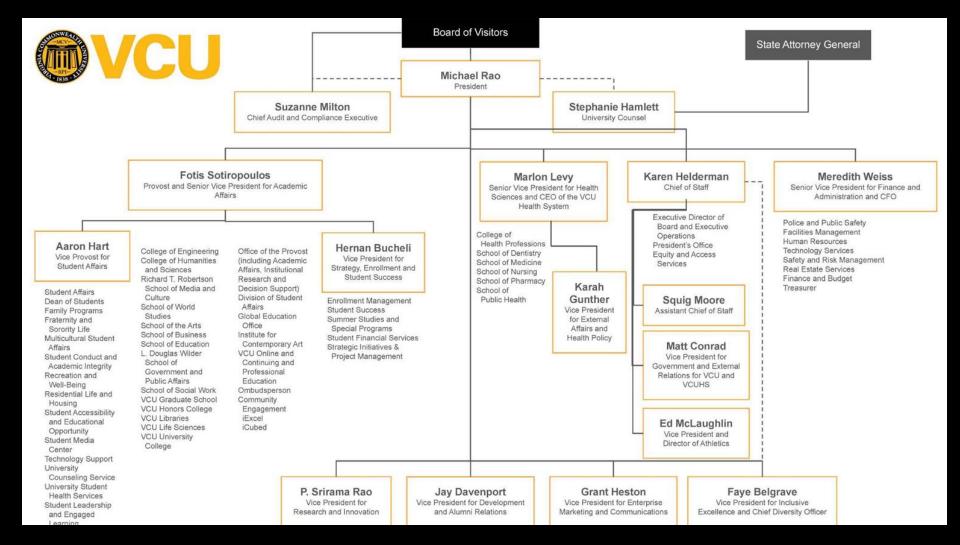
# Bridging a Connection

### **VCU Division of Student Affairs Organization Chart**





# Encapsulating Campus Wide Relationships





# Student Support

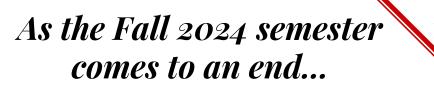
Campus Wide Initiative & Collaboration February 16-22, 2025





### Guleer Shahab, MPH

Board of Visitors Graduate & Professional Student Representative Report out December 13th 2024



### Graduate and Professional students continue to experience financial and housing insecurity

- Current PhD Stipends do not provide a living wage, especially with the rising cost of living
- Pay inequity across PhD programs further exacerbates health inequity among grad workers
- Increasing housing costs in RVA speaks to a need for VCU designated housing options for grad workers

International graduate and professional students are especially impacted by these stressors:

• On top of high housing costs, most housing demand proof of 3x-5x income, guarantors, TIN, or other requirements that incoming international students cannot provide at point of entry

With an exciting 16.1% increase in international student enrollment from 34 different countries this past academic year – so does the need for support for this growing group of graduate workers.

### Proposed Solutions...



### • Shorter term:

- VCU admin should advocate and create systems for the acceptance of admission documents as sufficient proof for renting accommodations near campus.
- Waive additional fees for PhD students so that all stipend dollars are used for living expenses.

### Longer term:

- Provide affordable VCU designated graduate school housing.
- Graduate stipends need to be adjusted to reflect the rising cost of living
  - In April of 2023, our neighbor UVA, standardized and increased PhD stipends by 25% as part of a campaign for graduate excellence, offering all PhD students \$30,600 in living support per year



### Grad workers are the heart of research and innovation at VCU.

Thank you.

# Any questions?



### **VCU Board of Visitors**

### Faculty Report

December 13, 2024

Greetings from the faculty, Rector Haymore, Vice Rector Florance, President Rao and all members of the Board of Visitors. I'm Valerie Robnolt and the faculty representative to the Board of Visitors. It's hard to believe we are winding down the Fall 2024 semester and faculty are busy with grading final exams, projects and papers, getting ready for graduation and writing letters of recommendation for our students who are graduating and applying for jobs, working on our research projects and grant work, representing VCU by presenting our research at our state, national and international conferences, and providing important service to our programs, departments, schools and university, including but not limited to serving on search committees that are hiring deans, department chairs and faculty.

In the past several months, the Faculty Senate's committees have been meeting and working on many initiatives for this academic year.

- The Academic Programs and Research Committee, chaired by Joe Landry of the School
  of Medicine, is working on a survey that will go to all faculty to determine the resources
  that faculty need to do the work, including our research and scholarship, that is
  expected of us.
- The Academic Support Services Committee, chaired by Valerie Robnolt of the School of Education, is investigating AI policies from peer institutions to determine if VCU needs to have its own AI policy.
- The Diversity and Inclusive Excellence Committee, chaired by Sylvia Rozario of the College of Humanities and Sciences, is gathering information about all the DEI resources that are available across the university so that all stakeholders will be able to access this information in one location.
- The Economic Status, Budget and Planning Committee, chaired by Roxanne Spindle of the School of Business, was able to give feedback on the university's budget website last year. This website provides transparency to all stakeholders, so now the committee is

- working on how to best advocate to have more transparency on each school and college's budgets.
- The Faculty Affairs Committee, chaired by Maria Teves of the School of Medicine, generated detailed feedback on the two Promotion and Tenure Task Force reports that will be shared with the Provost Office.
- The Governance Committee, chaired by Nora Alder of the School of Education, has been working on potential revisions to VCU's Shared Governance statement so that when the input that stakeholders provide in the shared governance process isn't followed, there is an explanation about why.
- The State Legislative and Statewide Relations Committee, co-chaired by Carmen Rodriguez and Pat Cummins, both of the College of Humanities and Sciences, are planning the Higher Education Advocacy Day at the General Assembly on Thursday, January 9 that VCU hosts so that faculty and students from across Virginia can meet with legislators and advocate for issues that are important to higher education.
- The Student Affairs Committee, chaired by Chris Saladino of the College of Humanities and Sciences, is working to collaborate with the Student Government Association to determine the best way that faculty can support our students.
- The VCU Health Systems Relations Committee, co-chaired by Lyons Hardy of the School
  of Nursing and Parthasarathy Madurantakam of the School of Dentistry, has been
  working on how communication between VCU and VCU Health can improve. In addition,
  they have added a charge to the committee to improve collaboration between the MCV
  and Monroe Park campuses.

As you can see, there is a wide range of initiatives in which the Faculty Senate is engaged and we are excited about what we will accomplish this year. Thank you for your support of faculty, staff and students. This concludes the faculty report.

Respectfully submitted,

Valerie Robnolt, Ph.D.

Faculty Representative to the Board of Visitors

Maria Rivera, Ph.D., FLS

Faculty Senate President and Alternate Faculty Representative

# VCU Staff Senate



# **2024 Research Administrators Day Winners**



RA of the Year
Kelton Rasmussen
College of Health
Professions



Oustanding
Leadership
Jose Alcaine
School of Education



Behind the Scenes

Dottie Walsh

School of Education



Rookie of the Year
Renata StanleyShanks
Division of Sponsored
Programs



Collaborator of the Year
Ezrah Medina
SVP for Health Sciences

# **Fall Semester Recap**



Fall Carnival/Winter Break Appreciation















# Fall Semester Recap

Leadership Engagment



# **Diversity Award Description**

President & Chief Diversity Officer & the Staff Senate Awards & Recognition Committee

# Welcomed Kristin King, VCUHealth CHRO

Attended the VCUHealth Committee Nov meeting

# Spring Semester Preview

1

2025 Career Development Conference 2

2025 Awards & Recognition Ceremony

3

Leadership Engagement

# Thank you!

