STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

REQUEST FOR PROPOSALS
FOR AN
INTEGRATED PROJECT DELIVERY METHOD
UTILIZING
DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

For The

University of Northern Colorado

For The

2015-075M14 Fire Sprinkler Upgrades, Seven Buildings, Phase 3 of 3 – Carter

2017-040M16 McKee Hall Fire Sprinkler System Upgrades

REQUEST FOR PROPOSALS FOR AN INTEGRATED PROJECT DELIVERY METHOD UTILIZING DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

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(Insert ADVERTISEMENT)

University of Northern Colorado
REQUEST FOR PROPOSALS

Notice #: **UNC-RFP-17-05**

Select the RFP Subtype: Design/ Build Guaranteed Maximum Price (GMP) Services
Architectural Services: Yes
Engineering Services: Yes

Project No: 2015-075M14 / 2015-040M16
Project Title: Fire Sprinkler Upgrades, Seven Buildings, Phase 3 of 3 – Carter / McKee Hall Fire Sprinkler System Upgrades

Project Description: The University of Northern Colorado (UNC) is requesting proposals for Design Build Guaranteed Maximum Price (DBGMP) Services for fire protection upgrades of two buildings on campus. The principal representative intends to install new fire sprinkler systems in Carter Hall as phase 3 of project 2015-075M14, and, install new fire sprinkler system in McKee Hall, project 2017-040M16 including all demolition and repair necessary for a complete system.

Minimum Requirements

1. Provided Design/Build or Construction Manager/General Contractor Contracting services within the last three (3) years for at least two (2) projects each in excess of $ One Million, Five Hundred Thousand Dollars ($1,500,000.00) (hard costs), utilizing the expertise present in their Colorado Office; and

2. Demonstrated specific Design/Build or Construction Manager/General Contractor experience in projects of similar scope and complexity; and

3. Demonstrated bonding capability up to $ Two Million Dollars for an individual project coincidentally with current and anticipated workloads; provide letter from surety that affirms this capability.

Scope of Services

RFP for Services of: Design Build Guaranteed Maximum Price (DBGMP) Services

Submission Details

Submission Deadline: May 3, 2017 2:00 PM MT

Submissions Accepted Via: In Person or Mail

Submit to:
University of Northern Colorado
Parsons Hall – Planning and Construction
501 20th Street
Greeley, CO 80639

Comments: A **MANDATORY** Pre-Submittal meeting will be held on April 19th, at 10:30AM in the Training Room in Parsons Hall located at 501 20th St., Greeley, CO 80639.

Point Of Contact

Name: Chris Bowers
Agency: University of Northern Colorado
Phone: 970-351-2725
Email: Christopher.Bowers@unco.edu

Specification Details / Attachments

Comments: See the attachment for the complete RFP. The attachment may viewed at either https://www.bidnetdirect.com/ or http://www.unco.edu/facilities/planning-and-construction/projects/request-for-proposal.aspx

REQUEST FOR PROPOSALS FOR AN INTEGRATED PROJECT DELIVERY METHOD UTILIZING DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

University of Northern Colorado

I. GENERAL INFORMATION

A. INTRODUCTION/DESCRIPTION OF PROJECT

On the University of Northern Colorado Campus in Greeley, CO the principal representative intends to install new fire sprinkler systems in Carter Hall as phase 3 of project 2015-075M14, and, install new fire sprinkler system in McKee Hall, project 2017-040M16.

The Board of Trustees for the University of Northern Colorado intends to select a Design/Build Entity who will design, manage and construct the project as described within. The process to be used in the selection of the firm is comprised of two steps:

STEP I is the Submittal of Prequalification as described in Section II.

STEP II is the Oral Interview/Cost Proposal as described in detail in Section III.

A Jury Panel of individuals who will be involved in the project and/or understand the required services associated with Design/Build Contracting will evaluate responses to this RFP for both STEPS.

Upon completion of the evaluation of the Submittals of Prequalification, a limited number of teams will be invited to the oral interviews.

Sealed cost proposals will be required only from those teams who are interviewed and are to be submitted as indicated in this RFP. Both qualifications and cost will be considered in the final ranking of teams with qualifications given 70% of the value of the weighted criteria and costs in the sealed Cost Proposal given 30%.

Selection and award of this project will be based on a combination of qualifications and costs that represents the best overall value to the State.

B. MINIMUM QUALIFICATIONS

As indicated in the advertisements, Notice is hereby given to all interested parties that all teams will be required to meet minimum requirements to be considered for these projects. To be considered as qualified, interested teams shall have, as a minimum:

- Provided Design/Build or Construction Manager/General Contractor Contracting services within the last three (3) years for at least two (2) projects each in excess of $ One Million, Five Hundred Thousand Dollars ($1,500,000.00) (hard costs), utilizing the expertise present in their Colorado Office; and

- Demonstrated specific Design/Build or Construction Manager/General Contractor experience in projects of similar scope and complexity; and

- Demonstrated bonding capability up to $ Two Million Dollars for an individual project coincidentally with current and anticipated workloads; provide letter from surety that affirms this capability.

C. SCOPE OF SERVICES

The scope of services will include assistance to the State during the process of design, construction, and warranty period. Specific tasks to be performed by the Design/Build Entity (D/B) include those generally performed by the D/B construction community where the Designer is also the Contractor.

II. PREQUALIFICATION SUBMITTALS (STEP I)

A. SCHEDULE

1. The schedule of events for the RFP process and an outline of the schedule for the balance of the project is as follows:

Advertisement	4/3/17
RFP Document Release	4/3/17
Mandatory Pre-submittal Conference and Tour	4/19/17 10:30AM
Date Email Questions (Clarifications) Due	4/26/17
Date Email Responses Issued	4/28/17
Submittals (Prequalification: Step I) Due	5/3/17 2:00 PM
Interview Short List Announced	5/19/17
Sealed Proposal (Evaluation and Award: Step II) Due	At Interview
Oral Interviews	5/29-5/31
Selection Announced	6/1/17
Negotiation of D/B Contract	6/5 – 6/21
Contract Approval (projected)	6/22/17
Anticipated Design Start	July 2017
Anticipated Construction Start/Finish	Oct.2017 – Aug. 2018

2. Four (4) hard copies of the Prequalification submittals are due 5/3/17 and shall be received no later than 2:00 *PM (MD/ST),* at the following address:

   University of Northern Colorado
   Parsons Hall – Planning and Construction
   501 20th Street
   Greeley, CO 80639
   Attn: Chris Bowers
   Phone: (970) 351-2725

3. The above schedule is tentative. Responding teams shall be notified of revisions in a timely manner by email. Respondents may elect to verify times and dates by email, but no earlier than 36 hours before the schedule date and time.

B. MANDATORY PRE-SUBMITTAL CONFERENCE

1. To ensure sufficient information is available to teams preparing submittals, a mandatory pre-submittal conference has been scheduled. The intent of this conference is to tour the site and to have t*he University of Northern Colorado* staff able to discuss

the project. Teams preparing submittals must attend and sign-in in order to have their submittals accepted. The pre-submittal conference will be held at:

University of Northern Colorado
Parsons Hall – Training Room
501 20th Street
Greeley, CO 80639
04/19/2017
10:30 AM

C. CLARIFICATIONS

1. Owner initiated changes to this RFP will be issued under numerically sequenced email addenda. Addenda generally consist of the following items:

   a. Clarifications
   b. Scope Changes
   c. Time and/or Date Changes

   Respondents must acknowledge all issued addenda in their submittal and proposal.

2. Respondent initiated requests for clarification will be received any time prior to *4/26/17* All State responses will be issued by email addenda on or before *4/28/17*.

D. GENERAL INFORMATION

1. All respondents accept the conditions of this RFP, including, but not limited to, the following:

   a. All submittals shall become the property of the State of Colorado and will not be returned.

   b. Late submittals shall not be evaluated. Facsimile submittals shall not be accepted.

   c. Any restriction as to the use of submitted materials must be clearly indicated as proprietary. The requested limitation or prohibition of use or release shall be identified in writing on a cover sheet. Blanket claims of proprietary submittals will not be honored. Cost proposals will be considered proprietary.

   d. The State reserves the right to reject any or all proposals on the basis of being unresponsive to this RFP or for failure to disclose requested information.

   e. The State shall not be liable for any costs incurred by respondents in the preparation of submittals and proposals nor in costs related to any element of the selection and contract negotiation process.

   f. The respondent has reviewed Appendix B and by responding has agreed that the terms and conditions of the sample Design/Build Agreement are expressly workable without reservation.

g. The respondent has reviewed Appendix D and by responding acknowledges the project concept, program and specifications as the initial basis of design.

h. The respondent has reviewed Appendix E and by responding acknowledges the standards for construction as basic standards for design, and the aesthetic guidelines as basic guidelines for design.

2. Appendix F is the estimated budget for the project. The distribution of contract costs is permitted to differ in the Cost Proposal.

E. PREQUALIFICATION SUBMITTALS (STEP I)

1. Respondent must comply with the following items, a through f. The State retains the right to waive any minor irregularity or requirement should it be judged to be in the best interest of the State**. (Note that the primary focus of the Prequalification evaluation will be the firm(s) capabilities).**

   a. Submit four (4) complete copies of all material.

   b. Submittals shall be formatted and tabbed in the exact form and numeric sequence of the Evaluation Form (1 through 5) in Appendix A. A two sided single page cover letter addressed to "University of Northern Colorado / Attn: Chris Bowers" outlining the team qualifications is required at the front of the submittal. (*Not counting the cover letter and required Acknowledgement and Attestation form, the entire submittal is to be no more than 15 doubled sided 8 ½' x 11" sized pages in portrait format, at least 10 font, and stapled, spiral or plastic bound. No loose leaf notebooks or hard bound submittals.*

   c. Submittals shall be evaluated in accordance with criteria as indicated in SECTION IV. A. PREQUALIFICATION SUBMITTAL CRITERIA and ranked on the corresponding Evaluation Form in Appendix A.

   d. Response to all items shall be complete.

   e. All references shall be current and relevant.

   f. Complete and execute the appropriate Acknowledgment and Attestation Form as provided in Section VI and submit at the back of the Prequalification Submittal.

III. ORAL INTERVIEWS/COST PROPOSALS (STEP II)

A. SHORT LIST

From the submittals received, a short list of qualified respondents shall be identified using the scoring indicated on the enclosed Prequalification Evaluation Form, Appendix A.

Teams failing to meet the minimum required qualifications will not receive further consideration.

B. ORAL INTERVIEW

1. Mandatory oral interviews shall be conducted for the short listed team only. Interview times and location, will be arranged by the *University of Northern Colorado* and all

short listed teams will be notified in advance. At the option of the State, a visit to the short listed team managing home office and/or representative field office may be required. **(Note that the primary focus of the Oral Interview evaluation in addition to the Cost Proposal will be the proposed Project Management Team members' capabilities.)**

C. COST PROPOSALS

1. Only those teams short listed for interview are required to submit their sealed proposals. Cost Proposals are due on the scheduled submission date prior to the start of oral interviews. Only one sealed copy is required. Cost Proposals will remain sealed until after the qualitative scoring and will then be opened. The cost amount will then be considered (30 percent) in conjunction with the qualitative score from the response and interview (70 percent).

    a. Submit sealed cost proposal separately. Do <u>not</u> include cost proposal data in the qualifications submittal or the oral interview presentation and handout. Also, do not enclose qualification in sealed cost proposal.

2. Cost Proposals shall be submitted on the form provided in Section VII, without modification. A Cost Proposal shall be accompanied with sufficient detail to clearly identify the cost for design and management services construction and general conditions. Percentage of the cost of work is not an acceptable value. The Cost Proposal should be prepared independently in accordance with the following:

    a. Any specific services requested in the RFP and its appendices that are not included should be clearly identified. Exclusion of any required service may result in the proposal being found non-responsive.

        1) Appendices D and E of this RFP include the project concept, program and specifications; and aesthetic guidelines and construction standards.

    b. Provide a D/B staff schedule with staff by name, position and man-hours (assume 8 hour days) per month estimated on the project.

    c. The State reserves the right to reject any Cost Proposal not prepared in the above manner. Proposals that exceed the available funds may be rejected outright but the State reserves the right to negotiate a reasonable cost for service within the available funds. The D/B contract will be a bonded lump sum contract to encompass all design, management and construction work; some allowances may be included.

3. This Cost Proposal is a binding offer to perform the services associated with the Scope of Services described in this RFP. The State, however, reserves the right to negotiate a cost adjustment based on scope clarification subsequent to selection and prior to contract execution.

D. METHOD OF SELECTION AND AWARD

The Jury Panel shall complete a combined evaluation of qualifications and Cost Proposal in accordance with the criteria as indicated in SECTION IV, B. ORAL INTERVIEWS/COST PROPOSALS/EVALUATION CRITERIA. Numerical ranking and selection of the most qualified firm (including cost) will then occur on the corresponding evaluation forms in Appendix A1.

The final cost amount and scope of services may be negotiated at the State's discretion. Award and contract will be contingent on deliverability of key proposed D/B Staff..

IV. EVALUATION CRITERIA

A. PREQUALIFICATION SUBMITTAL CRITERIA

(Note that the primary focus of the Prequalification evaluation will be the Firm(s) capabilities).

1. QUALIFICATIONS OF THE FIRM(S)

- ☐ Provide a description of the composition and management structure of your team. Identify the firm's roles and responsibilities and relevant experience with projects of similar scope and complexity and similar fast track project delivery methods. Describe how the team's experience will relate to the success of this project.
- ☐ Provide a description and separate graphic organizational chart complete with working titles identifying the lines of authority, responsibility and coordination.
- ☐ Provide a detailed description of the process of how your team selects qualified sub-contractors and manages them effectively on complex multi-phased projects.
- ☐ Provide a detailed description of how your team will maximize the Colorado construction work force on this project.
- ☐ Provide your team's safety record over the last ten years and describe your teams' efforts to retain and support employees.

2. QUALIFICATIONS OF THE MANAGEMENT TEAM MEMBERS

- ☐ Describe the qualifications and relevant experience of the lead design architect/engineer including demonstrated experience working on projects of similar scope and complexity and time commitment for this project.
- ☐ Describe the qualifications and relevant experience of the construction manager/general contractor including demonstrated experience working on projects of similar scope and complexity and time commitment for this project.
- ☐ Describe the qualifications and relevant experience of other key in-house staff and time commitments for this project.
- ☐ Identify all current office locations of the assigned staff and any other resident expertise intended to be provided under this RFP.

3. PROJECT MANAGEMENT APPROACH

- ☐ Provide a strategic project approach summary: Include discussion of your team's approach in providing successful Design/Build services based on prior experience in cost, schedule and quality effectiveness. Include specific examples (1-2 page excerpts) of actual products (estimates, progress reports, schedules, constructability reviews, value engineering studies, forms, general conditions budgets, organizational structures, etc.).
- ☐ Provide a description of design and construction work Project Management Team has capability to self-perform, including qualifications to do such.

4. PRIOR PROJECT EXPERIENCE/SUCCESS

Select your three (3) most relevant projects and provide, at a minimum, the following:

- ☐ The project/contract name
- ☐ Description of services provided
- ☐ Overall design/construction cost of project, as applicable, including initial contract value and change orders including reasons for change orders
- ☐ Organizational structure of service delivery under the contract (include the owner's organization as it interfaced with the respondent's contract)
- ☐ Key assigned in-house staff (name and title)
- ☐ Subcontracts (service) used in the performance of the contract
- ☐ Schedule history
- ☐ Reference(s) for Owner as described in IV.A.3
- ☐ Continuing services, if any

a. Timeliness

In general, Design/Build Contracting work is seen as successful if it is on time, on budget, and of acceptable quality. Timeliness is generally based on completion by the originally published date and is indicated by a Certificate of Occupancy. Please demonstrate for each of the above projects how timely delivery occurred.

b. Budget Considerations

Similar to timeliness, being on budget historically means the work was completed within the originally identified available budget. For purposes of this RFP, the State is interested not only in being within budget but also in the respondent's ability to address and implement the following issues as well:

1. Conceptual estimating
2. Value analysis
3. Alternate solutions
4. Scope reduction that maintains project function
5. Cost/benefit analysis

Demonstrate for the above projects examples of how you accomplished the above cost control services.

c. Quality

Design quality has traditional connotations (coherent, integrated, efficient, flexible, aesthetic, etc.). Construction quality has the obvious traditional connotations (workmanlike, in compliance with the specifications, normal standard of care, etc.). Demonstrate for the above project examples how a high quality of workmanship was achieved.

d. Services Disruption

Demonstrate how your services on the above project examples dealt with issues of disruption at existing facilities, etc.

e. Project Acceptability

Please discuss how your Design/Build or Construction Manager/General Contractor Contracting services helped achieve owner satisfaction with regard to project quality and acceptability on your project examples.

f. Compliance

Provide information on how compliance with industry standards of care, building codes, etc. was achieved.

5. MISCELLANEOUS CONSIDERATIONS

a. Claims/Litigation History of Firm

Provide information on any past, current or anticipated claims (i.e., knowledge of pending claims) on respondent contracts; explain the litigation, the issue, and its outcome or anticipated outcome.

b. Apprenticeship Training Program (Optional for Step I Prequalification)

Where an Apprentice Training Program certified by the Office of Apprenticeship located in the Employment and Training Administration in the United States Department of Labor exists in the State, or a comparable program for the training of apprentices is available in the State:

1. Each submitter shall demonstrate access to the certified program or a comparable alternative (Note that it is the responsibility of the submitter to demonstrate the comparability of a non-certified program) and,
2. Each submitter's subcontractor at any tier with a contract value of two hundred fifty thousand dollars or more ($250,000) shall demonstrate access to the certified program or a comparable alternative.

c. Other

This category is included for other items provided by the respondent. Inclusions may include standard firm promotional literature, testimonials, awards, corporate memberships in professional organizations or sponsorships, additional project/contract histories, etc.

B. <u>ORAL INTERVIEWS/COST PROPOSALS EVALUATION CRITERIA</u>
(Note that the primary focus of the Oral Interview evaluation in addition to the Cost Proposal will be the proposed project Management Team Members' capabilities).

1. QUALIFICATIONS OF THE TEAM

- ☐ Explain the composition and structure of your project management team and how the firm will support their efforts in the field throughout this project.
- ☐ Are the lines of authority, responsibility and coordination clearly identified?

2. QUALIFICATIONS OF THE MANAGEMENT TEAM MEMBERS

- ☐ Explain the prior experience with projects of similar scope and complexity and similar fast track project delivery methods of the lead architect/engineer's project manager and other project team members. Explain their roles and responsibilities and authority and why they are the right team members for this project.
- ☐ Explain the prior experience with projects of similar scope and complexity and similar fast track project delivery methods of the construction manager/general contractor's superintendent and other project team members.
- ☐ Explain anticipated project management team staff current and projected workload.
- ☐ Identify all current office locations and the resident expertise intended to be provided under this RFP. Identify the location of the staff for the performance of this contract, their expertise, and generic equipment that will be located in Colorado and act in support of the anticipated contract.

3. PROJECT MANAGEMENT APPROACH

- ☐ Explain the strategic project approach for this project in summary: Include discussion of your team's approach in providing successful D/B services based on the needs of this specific project utilizing the team's prior past experience including cost, schedule, and quality control.
- ☐ Explain the design and construction work the project management team has the capability to self-perform including qualifications to do such work.
- ☐ Provide a detailed description of how your project management team selects qualified sub-contractors and manage them effectively on this project.

4. PRIOR PROJECT EXPERIENCE/SUCCESS

- ☐ Explain the most relevant projects the lead architect/engineer, superintendent and the team members have completed together and/or separately and what their role was. The University of Northern Colorado may at its discretion contact references and/or conduct independent performance analysis on projects on which the team member has worked).
- ☐ Provide descriptions of other related experience of lead design architect/engineer and superintendent and other project management team members.

5. MISCELLANEOUS CONSIDERATIONS

a. Craft Labor Capabilities

Describe the availability of resources that will be utilized to successfully complete the project.

b. Apprenticeship Training Program (Mandatory for Step II)

Describe access to federal or state-approved apprenticeship programs, as available.

c. Other

This category is included for other items provided by the presenter. Inclusions may include testimonials, awards, corporate memberships in professional organizations or sponsorships, additional project/contract histories, etc, intended to demonstrate why this management team is uniquely qualified for this project.

V. D/B CONTRACT INFORMATION

A. Carefully review the Design/Build Guaranteed Maximum Price (GMP) Agreement sample (Appendix B) before initiating your response submittal. Any exceptions to the contract must be communicated formally in accordance with the written questions schedule in II.A.

1. Appendix C of this RFP is the Certification and Affidavit Regarding Illegal Immigrants, a mandatory portion of the contract agreement.

2. Appendix D of this RFP includes the project concept, program and specifications that apply to this project and are incorporated by reference into the contract agreement as required initial design criteria. Deviation from the project concept, program and specifications must be justified in writing and approved the (insert Agency/Institution) Representative before incorporation into the project.

3. Appendix E of this RFP includes mandatory construction standards and aesthetic guidelines that are incorporated by reference into the contract agreement. Deviation from the University of Northern Colorado's standards must be justified in writing and approved by the University of Northern Colorado's Representative before incorporation into the project. The design of building and site is required to respond to the aesthetic guidelines. Formal presentation of the proposed design to a review committee for approval may be required.

B. The State reserves the right to make non-material changes to the appended model agreement, including additions and /or modifications that may be necessary to more completely describe the services defined or implied herein.

C. Any and all products, systems, methods, and procedures developed, as a result of this agreement shall remain the exclusive property of the State.

VI. ACKNOWLEDGEMENT AND ATTESTATION FORM

A. Several versions of the Acknowledgment and Attestation Form follow this section. Proper completion of the appropriate form is a mandatory requirement for a respondent to be considered responsive to this RFP Prequalification Submittal.

B. Qualifications made by a respondent in executing this form may render a submittal non-responsive as determined by the State.

VII. COST PROPOSAL FORM

A. Immediately following the Acknowledgement and Attestation Form is a Cost Proposal Form to be utilized to summarize the cost proposal for the services. Only those teams short-listed will be required to submit cost proposals as directed by the University of Northern Colorado.

B. This RFP document, its appendices, and any written addenda issued prior to the submittal of cost proposals, and written clarifications prior to the interview shall serve as the only basis for cost proposals.

C. The respondent, by submitting this proposal, does hereby accept that minor changes by the State to the exhibited contract and its exhibits, which do not adversely affect the respondent, shall not be cause for withdrawal or modification of the amounts submitted herein. Exceptions to the RFP documents and/or modification of the proposal may render the proposal non-responsive.

D. Upon due consideration and review of this document along with its appendices, written addenda, and written clarifications prior to the interview, the respondent does hereby submit the following proposal for Design/Build Guaranteed Maximum Price (GMP) Contracting services, consistent with the schedules provided in the Statement of Work. Respondents are hereby advised that it is the State's desire to accelerate design and construction schedules where reasonably possible, without adverse cost impact.

E. Respondent should complete the Cost Proposal Form by filling in all blanks on the form that follows.

F. Appendix F is the estimated budget for the project. The distribution of contract costs is permitted to differ in the Cost Proposal.

ACKNOWLEDGEMENT AND ATTESTATION FORM
(Partnership Format)

Date: _____

By responding to this RFP, the respondent(s) certify that he/she has reviewed the Design/Build sample contract, and its exhibits contained herein, and is familiar with their terms and conditions and finds them expressly workable without change or modification.

We certify and declare that the foregoing is true and correct.

Subscribed on _____ at _____
Date City

_____, State of _____
County State

1)_____
Partner Signature

Typed Name:_____

2)_____
Partner Signature

Typed Name:_____

Notary:_____ _____
Date

Commission Expires:_____

Note: Add additional signature if there are more than two partners.

ACKNOWLEDGEMENT AND ATTESTATION FORM
(Joint Venture Format)

Date: _____

By responding to this RFP, the respondent(s) certify that he/she has reviewed the Construction Manager/General Contractor sample contract, and its exhibits contained herein, and is familiar with their terms and conditions and finds them expressly workable without change or modification.

We certify and declare that the foregoing is true and correct.

Subscribed on _____ at _____,
Date City

_____, State of _____.
County State

1)_____ _____ _____
Venture Partner Binding Signature Date

_____ Typed Name: _____
Type of Business Title: _____

_____ _____
Witness Date

Typed Name: _____

2)_____ _____ _____
Venture Partner Binding Signature Date

_____ Typed Name: _____
Type of Business Title: _____

_____ _____
Witness Date

Typed Name: _____

Note:
1. Add additional venture partners as necessary.
2. Witnesses of venture partners shall be corporate secretary for corporations, partners for partnerships, and notaries for sole proprietorships.
3. Attach venture agreement
4. Type of business shall identify the venture partner as a corporation, venture, partnership, sole proprietorship, or other legal entity.

ACKNOWLEDGEMENT AND ATTESTATION FORM
(CORPORATE FORMAT)

Date: _____

By responding to this RFP, the respondent(s) certify that he/she has reviewed the Design/Build sample contract, and its exhibits contained herein, and is familiar with their terms and conditions and finds them expressly workable without change or modification.

We certify and declare that the foregoing is true and correct.

Subscribed on _____ at _____,
Date City

_____, State of _____.
County State

_____ _____
Corporate Officer Signature Date

_____ _____
Secretary Date

Note: Use full corporate name and attach corporate seal here.

(SEAL)

ACKNOWLEDGEMENT AND ATTESTATION FORM
(Sole Proprietorship Format)

Date: _____

By responding to this RFP, the respondent(s) certify that he/she has reviewed the Design/Build Guaranteed Maximum Price (GMP) sample contract, and its exhibits contained herein, and is familiar with their terms and conditions and finds them expressly workable without change or modification.

We certify and declare that the foregoing is true and correct.

Subscribed on _____ at _____,
Date City

_____, State of _____.
County State

_____ _____
Respondent Date

Typed Name: _____

Notary: _____ _____
Date

Commission Expires: _____

COST PROPOSAL FORM
DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

Date:_____

Project Title:
2015-075M14 Fire Sprinkler Upgrades, Seven Buildings, Phase 3 of 3 – Carter
2017-040M16 McKee Hall Fire Sprinkler System Upgrades

Design Build Entity's Architect/Engineer Basic Services Fee

.1 Pre-Design Phase (If Applicable)	$_____
.2 Schematic Design Phase	$_____
.3 Design Development Phase	$_____
.4 Construction Document Phase	$_____
.5 Construction Administration Phase	$_____
.6 Post Construction Phase (If Applicable)	$_____
.7 Reimbursable Expenses (Not to Exceed)	$_____
.8 Total Design Build Entity's Architect/Engineer's Fee	$_____

CM/GC Fee

.9 Pre-Construction Phase Fee	$_____
.10 Construction Phase Fee	$_____
.11 General conditions Direct Personal Expenses of On-Site D/B staff (Not to Exceed)	$_____
.12 Other Reimbursable General Conditions (Not to Exceed per 6.1.3 of the Agreement SC-9.0)	$_____
.13 Total CM/GC Fee	$_____

Design Build Entity Fee (.8 + .13) $_____

Please provide a detailed breakdown to adequately describe the D/B staff provided, term of their services, and associated costs so as to demonstrate as complete an understanding as possible of the services provided.

The cost shall include preconstruction services, construction costs, general conditions, profit, overhead, home office staff, home office expenses, accounting and/or legal fees, insurance and any other costs or expenses.

Acknowledge receipt of Addendum Nos. _____

Anticipates Services outside the United States or Colorado ☐ Yes ☐ No

If the respondent anticipates services under the contract or any subcontracts will be performed outside the United States or Colorado, the respondent shall provide in a written statement which must include, but need not be limited to the type of services that will be performed at a location outside the United States or Colorado and the reason why it is necessary or advantageous to go outside the United States or Colorado to perform such services. (Does not apply to any project that receives federal moneys)

Will comply with 80% Colorado Labor ☐ Yes ☐ No

For State Public Works project per C.R.S. 8-17-101, Colorado labor shall be employed to perform at least 80% of the work. Colorado Labor means any person who is a resident of the state of

Colorado at the time of the Public Works project. Respondents indicating that their bid proposal will not comply with the 80% Colorado Labor requirement are required to submit written justification along with the bid submission. (Does not apply to any project that receives federal moneys)

Bidder is a Service-Disabled Veteran Owned Small Business ☐ Yes ☐ No

A Service-Disabled Veteran Owned Small Business (SDVOSB) per C.R.S. 24-103-211, means a business that is incorporated or organized in Colorado or maintains a place of business or has an office in Colorado and is officially registered and verified by the Center for Veteran Enterprise within the U.S. Department of Veteran Affairs. Attach proof of certification along with the proposal submission.

_____

Applicant or Corporate Officer Signature

_____

Title

Appendix A

STATE BUILDINGS PROGRAM
PREQUALIFICATION SUBMITTAL/EVALUATION FORM
DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

Name of Team:_____
Name of Project:_____
Evaluator No:_____ Date:_____

RFP REFERENCE
MINIMUM REQUIREMENTS Y ____ N ____

If the minimum requirements (including letter from surety) have not been met, specify the reason(s):

_____
_____

Acknowledgement and Attestation included: Y _____ N _____

SCORE

	Weight[2]	x	Rating[3]	=	Score
1. QUALIFICATIONS OF THE FIRM(S)[1]					
☐ Qualifications of the team	_____	x	_____	=	_____
☐ Organizational structure/lines of authority	_____	x	_____	=	_____
☐ Subcontractor selection and management	_____	x	_____	=	_____
☐ Colorado workforce	_____	x	_____	=	_____
☐ Safety/Employee support	_____	x	_____	=	_____
2. QUALIFICATIONS OF THE MANAGEMENT TEAM MEMBERS[1]					
☐ Qualifications and relevant experience of the architect/engineer	_____	x	_____	=	_____
☐ Qualifications and relevant experience of the construction manager/general contractor	_____	x	_____	=	_____
☐ Qualifications and relevant experience of in-house staff	_____	x	_____	=	_____
☐ Location/Access	_____	x	_____	=	_____
3. PROJECT MANAGEMENT APPROACH[1]					
☐ Approach to successful D/B or CM/GC Services					
a. Cost effectiveness	_____	x	_____	=	_____
b. Schedule effectiveness	_____	x	_____	=	_____
c. Quality effectiveness	_____	x	_____	=	_____
☐ Competitively Bid/Self Performed Work	_____	x	_____	=	_____

4. PRIOR PROJECT EXPERIENCE/SUCCESS[1]

☐	Project #1		_____	x	_____	= _____
	a. Timeliness	d. Disruption				
	b. Budget Considerations	e. Acceptability				
	c. Quality	f. Compliance				
☐	Project #2		_____	x	_____	= _____
	a. Timeliness	d. Disruption				
	b. Budget Considerations	e. Acceptability				
	c. Quality	f. Compliance				
☐	Project #3		_____	x	_____	= _____
	a. Timeliness	d. Disruption				
	b. Budget Considerations	e. Acceptability				
	c. Quality	f. Compliance				
☐	Related experience of the team		_____	x	_____	= _____

5. MISCELLANEOUS[1]

☐	Claims/litigation history	_____	x	_____	= _____
☐	Apprenticeship Training Program	_____	x	_____	= _____
☐	Other	_____	x	_____	= _____

TOTAL SCORE: _____ [4]

NOTES:

1. **Criteria**: Agencies/Institutions are encouraged to include additional criteria that reflect unique characteristics of the project under each category to help determine the submitter's overall qualifications.
2. **Weights**: Agency/Institutions to assign weights, using whole numbers, to all criteria on evaluation forms for inclusion into RFQ document and prior to evaluations.
3. **Ratings**: Evaluator to assess the strength of each firms qualifications and assign a numerical rating of 1 to 5 with 5 being the highest rating. (Use whole numbers)
4. **Total Score**: Includes the sum of all criteria. Note: a passing score (as a percentage of the total points available) is optional and should be assigned by the agency/institution prior to evaluation.

Appendix A1

STATE BUILDINGS PROGRAM
ORAL INTERVIEWS/COST PROPOSALS EVALUATION FORM
DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) SERVICES

Name of Team:_____
Name of Project:_____
Evaluator No:_____ Date:_____

SCORE

	Weight[2]	x	Rating[3]	= Score
1. QUALIFICATIONS OF THE TEAM[1]	_____	x	_____	= _____
2. QUALIFICATIONS OF THE MANAGEMENT TEAM MEMBERS[1]	_____	x	_____	= _____
3. PROJECT MANAGEMENT APPROACH[1]	_____	x	_____	= _____
4. PRIOR PROJECT EXPERIENCE/SUCCESS[1]	_____	x	_____	= _____
5. MISCELLANEOUS[1]				
☐ Craft Labor Capabilities	_____	x	_____	= _____
☐ Apprenticeship Training Program	_____	x	_____	= _____
☐ Other	_____	x	_____	= _____

TOTAL SCORE: _____ [4]

NOTES:

1. **Criteria**: Agencies/Institutions are encouraged to include additional criteria that reflect unique characteristics of the project under each category to help determine the submitter's overall qualifications.
2. **Weights**: Agency/Institutions to assign weights, using whole numbers, to all criteria on evaluation forms for inclusion into RFQ document and prior to evaluations.
3. **Ratings**: Evaluator to assess the strength of each firms qualifications and assign a numerical rating of 1 to 5 with 5 being the highest rating. (Use whole numbers)
4. **Total Score**: Includes the sum of all criteria. Note: a passing score (as a percentage of the total points available) is optional and should be assigned by the agency/institution prior to evaluation.

Appendix A2

STATE BUILDINGS PROGRAM
SUBMITTAL AND ORAL INTERVIEW RANKING MATRIX

QUALIFICATIONS 70%/COST 30% (Optional 80%/20%)

TEAM	QUALIFICATIONS[1]						AVERAGE QUALS[2]	QUALS SCORE[3]	COST SCORE[4]	QUALS & COST SCORE[5]	RANK[6]
	EVAL #1	EVAL #2	EVAL #3	EVAL #4	EVAL #5	EVAL #6					

NOTES:

1. Insert total score from each evaluator's ORAL INTERVIEW/ COST PROPOSALS/EVALUATION FORMS. (Note that the use of the Matrix for the PREQUALIFICATION SUBMITTAL EVALUATION does not consider cost proposals only qualifications). DO NOT combine the scores of the two evaluation forms.

2. Add all evaluators' total scores and divide by the number of evaluators to determine the average score for each team's qualifications.

3. The highest score for qualifications on the evaluation form is to receive 70 points and the other team scores are to be determined as a percentage of the 70 points. To score each average qualification score, use the example formula.

   Assume the highest score is 700.

   SCORING OF QUALIFICATIONS

   FIRM B: $\frac{700}{700} \times 70 \text{ points} = 70 \text{ points}$

   FIRM C: $\frac{600}{700} \times 70 \text{ points} = 60 \text{ points}$

   FIRM A: $\frac{500}{700} \times 70 \text{ points} = 50 \text{ points}$

4. Determine score for each team's sealed cost proposal with the lowest cost being equivalent to a score of 30 points. To score each cost, use the example formula.

   Assume the lowest cost was $100,000.

   SCORING OF COSTS

   FIRM A: $\frac{\$100,000}{\$100,000} \times 30 \text{ points} = 30 \text{ points}$

   FIRM B: $\frac{\$100,000}{\$125,000} \times 30 \text{ points} = 24 \text{ points}$

   FIRM C: $\frac{\$100,000}{\$150,000} \times 30 \text{ points} = 20 \text{ points}$

5. Add the average qualification score to the cost score to determine cumulative qualifications and cost score.

6. Numerically rank all teams with the highest scoring team being the most qualified.

Appendix B

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT (SC-8.0)
(Sample)

THE GENERAL CONDITIONS OF THE DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT (SC-8.1)
(Sample)

The General Conditions of the Design/ Build Guaranteed Maximum Price (GMP) Agreement (SC-8.1) can be viewed at the link below.

https://drive.google.com/file/d/0ByG39KP3LPlCZEI3NXhQYW42ams/view

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

DEPARTMENT ID:	GKA
CONTRACT ID#:	UNC-RFP-17-05
PROJECT #:	2015-075M14 & 2017-040M16
PROJECT NAME:	Fire Sprinkler Upgrades, Seven Buildings, Phase 3 of 3 – Carter & McKee Hall Fire Sprinkler System Upgrades

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

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EXHIBITS:

A. – K. (As described in ARTICLE 2. EXHIBITS TO THE AGREEMENT)
L. Request for Proposal
M. Design/Build Entity's Fee Proposal
N. Sales and Use Tax Forms
O. Building Code Compliance Policy: Code Compliance Plan Review Procedures and Building Inspections

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

Department ID: _____ Contract ID #: _____ Project #: _____

PARTIES. THIS AGREEMENT is entered into by and between the STATE OF COLORADO, acting by and through the *(agency)*, hereinafter referred to as the State or Principal Representative, and *(vendor name)* having its offices at *(vendor address)* engaged to serve as Design/Build Entity, hereinafter referred to as the Design/Build Entity.

EFFECTIVE DATE AND NOTICE OF NONLIABILITY. This Agreement shall not be effective or enforceable until it is approved and signed by the State Controller or its designee (hereinafter called the "Effective Date"), but shall be effective and enforceable thereafter in accordance with its provisions. The State shall not be liable to pay or reimburse Design/Build Entity for any performance hereunder or be bound by any provision hereof prior to the Effective Date.

RECITALS:

WHEREAS, the Principal Representative intends to engage the services of the Design/Build Entity to design and construct the following: *(project name)* hereinafter called the Project; and

WHEREAS, authority exists in the Law and Funds have been budgeted, appropriated, and otherwise made available, and a sufficient unencumbered balance thereof remains available for payment In Fund Number _____, Account Number _____; and

WHEREAS, the State of Colorado has appropriated and the Principal Representative has been authorized to expend the total sum of _____Dollars ($_____) for this Project including all professional services, construction management/general contractor services, construction/improvements, Project contingencies, reimbursables, furnishings, movable equipment, and miscellaneous expenses;

***WHEREAS**, funds are available for only a portion of the services defined herein, as more fully described in the funding Condition Precedent clause in 6.5 hereof;*

***WHEREAS*,** the Design/Build Entity Fee consists of the Design Build Entity's Architect/Engineer's Fee and the Design/Build Entity's Fee;

WHEREAS, the Principal Representative has established the **Fixed Limit of Design & Construction Cost** in the amount of _____Dollars ($_____);

WHEREAS, the Design/Build Entity shall establish a **Guaranteed Maximum Price (GMP)** that is within the Fixed Limit of Design & Construction Cost as established by the Principal Representative at the completion of the Design Development Phase; and

WHEREAS, in accordance with Article 6 Compensation the Design/Build Entity's Fee for the Project is _____Dollars ($_____); and

WHEREAS, the Design Build Entity's Architect/Engineer for the project is _____; and

WHEREAS, the Design/Build Entity acknowledges the statutory authority and responsibility of the Principal Representative within the State of Colorado;

WHEREAS, the Design/Build Entity was selected after a determination that its proposal was the most advantageous to the Principal Representative pursuant to a request for proposal issued and awarded on _____; and

WHEREAS, the Design/Build Entity and the Principal Representative have finalized the terms of this Agreement pursuant to Section 24-103-203, C.R.S., as amended.

WITNESSETH, That the Principal Representative and the Design/Build Entity agree as follows:

ARTICLE 1. PERFORMANCE OF THE WORK

1.1 THE WORK

1.1.1 The Design/Build Entity will design and construct the Project within the Fixed Limit of Design & Construction Cost specified, and the Design/Build Entity will furnish all the services, labor and materials to perform all the Work, including design, for the complete and prompt execution of the Project in accordance with the Contract Documents.

1.1.2 In the performance of the Work under this Agreement, the Design/Build Entity acknowledges that time is critical for Project delivery and that portions of the Work could have their design completed as separate Construction Phase(s) and may be under construction before other portions of the Work are fully designed. It is further recognized that this accelerated approach to construction is defined as "Fast Track Construction" and is a concept that requires maximum cooperation between all parties.

1.1.3 The Principal Representative acknowledges that the Design/Build Entity shall provide ____ (__) Construction Phase (s) to accomplish the Work as may be mutually agreed upon. In the event the Principal Representative for any reason within the Principal Representative's control, requests more than ____ (__) Construction Phase(s) to be furnished by the Design/Build Entity, the Principal Representative shall make arrangement with Design/Build Entity for the additional Construction Phase(s) desired and shall directly compensate the Design/Build Entity for all justifiable fees and cost associated therewith.

1.1.4 The Design/Build Entity agrees to use best efforts, to cooperate fully with the Principal Representative in the design and construction aspects of the Work, and to keep within the Principal Representative's monetary, schedule and quality limitations, as stipulated within this Agreement.

1.1.5 The organization of the Specifications into division, section, and article, and the arrangement of Drawings shall not control the Design/Build Entity in dividing the Work among any level of subcontractors or in establishing the extent of the Work to be performed by any trade.

1.1.6 The Design/Build Entity understands the relationship of trust and confidence established between it and the Principal Representative and accepts those responsibilities as described in this Agreement. The Design/Build Entity covenants with the Principal Representative to furnish its best skill and judgment and to cooperate with the Design Build Entity's Architect/Engineer in furthering the interests of the Principal Representative. The Design/Build Entity agrees to furnish efficient business administration and superintendence and to use its best efforts to complete the Work in an expeditious and economical manner consistent with the interest of the Principal Representative.

1.1.7 The Design/Build Entity shall ensure that the Design Build Entity's Architect/Engineer acknowledges that it is responsible for protecting the Principal Representative's interests throughout the evolution of design and construction. Therefore, the Design Build Entity's Architect/Engineer shall provide the full scope of professional level services related to design performance and construction administration services within the Project in the same manner as it would acting as a 3rd Party entity through a conventional Design/Bid/Build or CM/GC delivery method.

1.2 CONTRACT DOCUMENTS

1.2.1 The Contract Documents as described in Article 1 of the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1) are essential parts of this Agreement and are fully incorporated herein.

ARTICLE 2. EXHIBITS TO THE AGREEMENT.

The following Exhibits are, or will be, attached to this Agreement and are or shall become when approved and accepted, part of the Contract Documents.

2.0 The General Conditions of the Design/Build GMP Contract (State Form SC – 9.1)

2.1 The Drawings released for Construction (Exhibit I.1);

2.2 The Specifications released for Construction (Exhibit I.1);

2.3 **Exhibit A**, Design/Build GMP Designated Services and Method of Payment;

2.4 **Exhibit B**, Design/Build Entity Certification (attached);

2.5 **Exhibit C**, Design/Build Entity's Certificates of Liability Insurance (including Professional Errors and Omissions Liability Insurance);

2.6 **Exhibit D**, Certification and Affidavit Regarding Unauthorized Immigrants (Required at Contract Signing Prior to Commencing Work);

2.7 **Exhibit E,** Not Used;

2.8 **Exhibit F**, List of Pre-Qualified Subcontractors (when approved by the Principal Representative and prior to bidding);

2.9 **Exhibit G**, Schematic Design Estimate Summary and Updated Summaries (when approved by the Principal Representative);

First Amendment (incorporating GMP) Exhibits based on Design Development Documents

2.10 **Exhibit H.1**, GMP Documents, Drawings and Specifications including Addenda and Modifications (when approved by the Principal Representative);

2.11 **Exhibit H.2**, Schedule of Bid Package Descriptions and Issuance Dates (as applicable);

2.12 **Exhibit H.3**, Schedule of Values (prepared at the time of the GMP Amendment);

2.13 **Exhibit H.4**, Allowance Schedule (prepared at the time of the GMP Amendment);

2.14 **Exhibit H.5**, Detailed Critical Path Method Construction Schedule (prepared at the time of the GMP Amendment)

Second and Subsequent Amendments (incorporating Bid Packages) Exhibits

2.15 **Exhibit I.1**, Contract Documents and Specifications (when approved by the Principal Representative);

2.16 **Exhibit I.2**, All Modifications issued after execution of Amendment(s). A Modification to the Agreement includes (1) a written Amendment to this Agreement signed by both parties or (2) a Change Order signed by both parties;

2.17 **Exhibit I.3**, Schedule of Values (consistent with GMP Schedule of Values);

2.18 **Exhibit I.4**, Allowance Schedule (consistent with GMP Allowance Schedule);

2.19 **Exhibit I.5**, Performance Bond (Form SC-6.22);

2.20 **Exhibit I.6**, Labor and Material Payment Bond (Form SC-6.221);

2.21 **Exhibit I.7**, Property Insurance Certificates;

2.22 **Exhibit I.8**, Certification and affidavit regarding unauthorized Immigrants (UI-1);

2.23 **Exhibit I.9**, Notice to Proceed to Commence Construction Phase (Form SC-7.26) (when issued);

2.24 **Exhibit I.10**, Detailed Critical Path Method Construction Schedules (when approved by the Principal Representative);

2.25 **Exhibit I.11**, Notice of Substantial Completion (Form SBP-07);

2.26 **Exhibit I.12**, Notice of Approval of Occupancy/Use (Form SBP-01);

2.27 **Exhibit J**, Notice of Final Acceptance (Form SBP-6.27);

2.28 **Exhibit K**, Notice of Contractor's Settlement (Form SBP-7.3);

2.29 **Exhibit L**, Request for proposal (Dated _____) (Attached);

2.30 **Exhibit M**, Design/Build Entity's Fee Proposal (Dated _____) (Attached);

2.31 **Exhibit N**, Sales and Use Tax Forms;

2.32 **Exhibit O**, Building Code Compliance Policy: Coordination of Approved Building Codes, Plan Reviews, and Building Inspections;

ARTICLE 3. DESIGN/BUILD ENTITY'S SERVICES

The Design/Build Entity shall perform the following services under this Agreement in each of the phases described below:

PRE-CONSTRUCTION SERVICES

3.1 AVAILABLE FUNDS

3.1.1 The Design/Build Entity acknowledges that the Principal Representative is limited in the sum available to design and construct the Project. Should funding of a lesser amount be made available for the Project, it is the obligation of the Principal Representative to revise the Project Scope consistent with the ultimate appropriation.

3.2 CONSULTATION AND VALUE ENGINEERING

3.2.1 The Design/Build Entity shall provide consultation throughout the Design/Preconstruction and Construction Phases including but not limited to the furnishing of Value Engineering Services to identify cost effective changes in the State's specifications that will result in reducing the Contract Price without impairing essential functions or characteristics. The objective of Value Engineering is to achieve optimum value for each construction dollar spent and keep the time of completion and cost of the Work within the time and fiscal constraints set forth throughout the Contract Documents. In cooperation with the Principal Representative, the Design/Build Entity shall:

.1 Formulate and evaluate alternative designs, systems, materials, etc;

.2 Provide cost estimates of the alternatives to be evaluated. Cost estimates shall include industry standard operating and maintenance costs when appropriate to evaluate life-cycle costs of the alternatives. Cost estimates shall take into consideration all cost impacts related to alternatives including but not limited to design and construction costs. The Design/Build Entity shall, at a minimum, review the cost estimate at the completion of the Schematic Design, and Design Development Phases and include an analysis and commentary as to any discrepancies observed in the report referenced in paragraph 3.2.1.4 below;

.3 Evaluate the alternatives on the basis of costs, time schedules, availability of labor and materials, construction feasibility, etc;

.4 Enable the Design/Build Entity's Architect/Engineer to prepare written reports at the end of the Schematic Design and Design Development Phases summarizing the Value Engineering activities accomplished and any recommendations developed within each phase;

.5 If Estimates of Design & Construction and/or bids received for the Work contained in any Bid Package cause the anticipated cost of the Work to exceed the then current Estimate of Design & Construction, the Fixed Limit of Design & Construction Cost, the Guaranteed Maximum Price or Schedule of Values, the Design/Build Entity shall, at no additional cost to the Principal Representative unless caused by an increase in the Design/Build Entity 's Work requested by the Principal Representative, provide additional Value Engineering services in conjunction with any and all appropriate items in the Estimate of Design & Construction, the Fixed Limit of Design & Construction Cost, the Guaranteed Maximum Price, and/or the Schedule of Values for the Work; and

.6 Lead a formal Value Engineering workshop as requested by the Principal Representative, at the end of the Schematic Design, Design Development and Construction Documents Phases review and estimating tasks, bringing multidiscipline cost/construction experts to evaluate alternative designs, systems and materials.

3.2.2 The Principal Representative shall participate in the formulation and evaluation of alternatives in the Value Engineering activity, and shall approve Value Engineering alternatives accepted in each design phase.

3.3 DESIGN AND CONSTRUCTION COSTS

3.3.1 Contingency Management: It is the desire of the Principal Representative to incorporate as many alternate bid items into the Project as reasonable, to maximize the scope for the Fixed Limit of Design & Construction Cost. All parties recognize that although the availability of costs to perform the Work depend, in part, upon favorable market conditions. With thorough and careful planning, cost estimating and cooperation, funds may become available for the alternates through the procurement process at less than the Design/Build Entity's estimated cost therefore. Together with savings through the unexpended portion of the bidding contingency, the Principal Representative may authorize alternates and/or additional scope, all within the Fixed Limit of Design & Construction Cost.

3.3.2 To accomplish the inclusion of alternates and/or increases, the project contingency shall be as follows and included in the GMP:

.1 The design and bidding contingency for all Bid Packages together with the construction of the Work shall be equal to two point five percent (2.5%) of the total Guaranteed Maximum Price, all within the Fixed Limit of Design & Construction Cost.

.2 The construction contingency for the Work shall be equal to three point five percent (3.5%) of the total Guaranteed Maximum Price, all within the Fixed Limit of Design & Construction Cost.

The bidding contingency shall be allocated between the presently anticipated _____ (__) Bid Packages, equally proportionate to the value associated with each Bid Package. The Design/Build Entity shall notify, in writing, the Principal Representative of the allocation of the bidding contingency for each Bid Package.

3.3.3 At the conclusion and award of the Bid Packages, all differences between the Design/Build Entity's estimated cost of the Work contained within the Bid Packages, exclusive of contingency, versus the actual cost thereof as determined by bidding and award (buyouts) shall be promptly calculated and totaled. If the total of all of the buyouts exceed the Design/Build Entity estimated cost therefore, the bidding contingency identified in paragraph 3.4.2.1 shall be applied by the Design/Build Entity, after prior written notice to the Principal Representative, to cover any overrun per Bid Package.

3.3.4 After all of the Bid Packages have been bought out, any and all savings achieved through the buyouts of the Bid Packages together with all unexpended sums remaining in the bidding contingencies shall forthwith accrue to the Principal Representative to be applied by the Principal Representative, in its sole and absolute discretion, to the inclusion of desired alternates into the Work or to otherwise increase the scope of Work to be performed by the Design/Build Entity, and/or to reduce the Guaranteed Maximum Price.

3.3.5 The construction contingency shall only be used to cover costs for labor, materials, equipment and similar costs for items or Work to be furnished during the construction phase of the Project. It is not the intent of this Agreement to use the construction contingency for costs incurred during the Pre-Construction phase or bidding phase or for costs to correct any errors, omissions, mistakes or rejected Work caused by subcontractors. The construction contingency may be used to cover the Design/Build Entity's costs (i) arising from estimating cost overruns in the costs of **Exhibit H.4** Allowance Schedule; (ii) unexpected additional trade coordination costs incurred for Work directly performed by the Design/Build Entity that could not have been reasonably contemplated; (iii) items required and reasonably inferable from the Contract Documents, or items included within the Contract Documents but missed within the subcontractor buy-out which the Design/Build Entity can show were not specifically called out within the estimate or bid documents of the Design/Build Entity or any subcontractor ; (iv) losses or damages to property related to the Work not covered by insurance provided by the Design/Build Entity, but not including any insurance deductible(s); (v) arising from expediting or acceleration of the Project schedule where such cost is not a basis for an increase in the GMP under Article 6; (vi) Bid Package buyout overrun costs for additional Bid Packages that were not part of anticipated Construction Phases defined in 1.1.4, but only if bidding procedures contemplated hereunder were followed and the bidding contingency has been exhausted; or (vii) other costs incurred not reasonably to have been expected that are approved by the Principal Representative in the Principal Representative's sole discretion, so long as those costs are not recovered under any insurance policy provided pursuant to this Agreement and so long as the total costs under this Agreement do not exceed the Guaranteed Maximum Price. No expenditure from the construction contingency for any matters or Work activities shall be made without the prior written approval of the Principal Representative, which approval, with the exception of item (vii) above, shall not be unreasonably withheld. Expenditures from the construction contingency shall be made only by Change Order.

Construction contingency shall include all costs associated with a stated scope including, if applicable design fees, Direct Work, Insurance, Bonds, Fee, and General Conditions (if appropriate).

3.3.6 Design & Construction: When preparing any estimates of Design & Construction and in development of the Schedule of Values, such documents shall include, without duplication:

.1 All labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper

execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work;

.2 Any allowance designated by the Principal Representative;

.3 Any Principal Representative furnished equipment which has been designed, specified, selected or specifically provided for by the Design Build Entity's Architect/Engineer;.

.4 The Design Build Entity's fee and the cost of work provided by the Design/Build Entity;

.5 All bonds, insurance premiums and applicable taxes;

.6 Contingencies for bidding, price escalation, and construction;

.7 Plumbing and electrical building permits from appropriate entities and any other building permits as directed by the Principal Representative; and

.8 Design fees and administrative expenses directly related to the Work.
(Refer to the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1) Article 12.B schedules)

3.3.7 Estimates of Design & Construction shall include the compensation of the Design Build Entity's Architect/Engineer and, the Design Build Entity's Architect/Engineer mechanical, electrical, plumbing, structural, civil, and any other consultants and subconsultants required in the Request For Proposal or any other sums due the Design Build Entity's Architect/Engineer and it's consultants, but shall not include the costs of land, right of way, financing or other costs, which are the responsibility of the Principal Representative. With prior approval of the Principal Representative, the Design/Build Entity shall contract with the Design Build Entity's Architect/Engineer to perform services in connection with the Project.

3.3.8 Estimates of Design & Construction: The Design/Build Entity, in preparing its Estimates of Design & Construction cost and providing the Guaranteed Maximum Price, shall consult with the Design Build Entity's Architect/Engineer to determine what materials, equipment, component systems and types of construction are to be included in the Contract Documents, to make reasonable adjustments in the scope of the Work, and to include in the Contract Documents alternate items, as approved by the Principal Representative in writing, for bid so as to permit the adjustment of the Estimate of Design & Construction.

3.3.9 Estimates of Design & Construction Timing: The Design/Build Entity shall prepare an Estimate of Design & Construction as soon as major Project requirements have been identified and update it periodically. For the Schematic Design Phases, the Design/Build Entity shall prepare a quantity take-off cost estimate based on building systems, assemblies, components, etc., and update periodically. During the Design Development Phase, the Design/Build Entity shall prepare a final cost estimate in preparation for a Guaranteed Maximum Price and update periodically. All Estimates of Design & Construction shall include separate defined allowances for bidding and Construction price escalation. During the Construction Documents Phase, the Design/Build Entity shall continually monitor the cost estimates and develop a cost estimate to help assure that the cost of the Work remains within the applicable portion of the Project Budget, Fixed Limit of Design & Construction Cost and Guaranteed Maximum Price.

3.3.10 Estimates shall be prepared and shall be based on quantitative takeoffs whenever possible and shall be supported in sufficient depth and organization to be used in preparing budgets based on Construction Specifications Institute (CSI) Division, funding sources, sub-trades, combinations of sub-trades, building systems, Bid Packages or combinations thereof. Lump sum estimates are not acceptable.

3.3.11 During the preparations of cost estimates, the Design/Build Entity shall notify the Principal Representative if it appears that the Estimate of Design & Construction will exceed the applicable portion of the Project Budget or Fixed Limit of Design & Construction Cost as may be applicable, satisfactorily demonstrate the accuracy of its estimate in such detail as shall be reasonably required by the Principal Representative, and make reasonable recommendations for corrective action consistent with the Project Budget or Fixed Limit of Design & Construction Cost, as may be applicable. The Design/Build Entity shall submit Estimates of Design & Construction cost to the Principal Representative for review and acceptance at each design milestone and other times as required by the Principal Representative to analyze various building systems and components.

3.3.12 The Principal Representative shall reasonably cooperate with the Design/Build Entity to keep the Work within the applicable portions of the Project Budget or Fixed Limit of Design & Construction Cost, as may be applicable, including but not limited to the giving of appropriate and reasonable consideration to all reasonable recommendations of the Design/Build Entity, approving redesign, only for Principal Representative directed scope changes, deductive alternatives or reductions in Work, requesting additional Value Engineering, making modifications to the Contract Documents or exercising such other rights or remedies as may be available elsewhere under this Agreement including termination for convenience. However, the Principal Representative shall be under no duty to reduce the Work to accommodate for any projected costs over or beyond the Guaranteed Maximum Price that is the responsibility of the Design/Build Entity or allow access to the construction contingency to cover costs to correct errors, omissions, mistakes, rejected Work or warranty Work.

3.4 OTHER PRE-CONSTRUCTION SERVICES

3.4.1 The Design/Build Entity shall perform those items designated as Required Services as set forth in the Design/Build Designated Services and Method of Payment schedule designated as **Exhibit A**. In addition and not in limitation, the Design/Build Entity shall also perform the other Pre-Construction Services designated in this Article 3 together with such other services as are normally and customarily provided by a Design/Build Entity.

3.4.2 The Design/Build Entity shall make recommendations to the Principal Representative regarding the division of Work in the Drawings and Specifications to facilitate the bidding and awarding of subcontracts, allowing for phased construction and funding, if applicable, taking into consideration such factors as time of performance, availability of labor, overlapping trade jurisdictions, provisions for temporary facilities, etc.

3.4.3 The Design/Build Entity shall review Drawings and to (1) eliminate areas of conflict, overlapping trade jurisdictions, and overlapping in the Work to be performed by the various subcontractors, (2) endeavor to confirm that all Work has been included, and (3) allow for phased construction as applicable.

3.4.4 The appropriate representatives of the Principal Representative shall review documents submitted by the Design/Build Entity and shall render decisions pertaining thereto without unreasonable delay.

3.4.5 Meeting Attendance: The Design/Build Entity, including the Design Build Entity's Architect/Engineer, shall attend all regular meetings with the Principal Representative and such additional meetings as the Principal Representative may request. All regular meetings shall be

scheduled with the Design/Build Entity and approval of the Principal Representative. All additional meetings shall be requested by the Principal Representative.

3.4.6 As part of the Schematic Design review and estimating tasks, the Design/Build Entity shall develop a preliminary detailed Critical Path Method (CPM) Project Schedule as described in Article 12 of the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1), that is coordinated with the milestone dates specified in **Exhibit H.2**, the Date of Completion specified in paragraph 5.2.1, the scope of Work described within the Contract Documents, and the Work described within the Schematic Design Documents. The Design/Build Entity shall utilize the Project Management Software as described in paragraph 3.7.4 to develop and manage the schedule.

3.4.7 Principal Representative Purchasing: The Design/Build Entity shall investigate and recommend materials and equipment that could be purchased by the Principal Representative; consider long lead time procurement and mass purchasing power in making such recommendations; recommend a schedule for such purchases after coordination with the schedule for preparation of Contract Documents; and expedite and coordinate delivery of these purchases to facilitate their delivery by the required dates.

3.4.8 The Design/Build Entity shall: prepare necessary bidding information, bidding forms, and pre-qualification criteria for bidders; develop subcontractor interest in the Project; establish bidding schedules; advertise for bids; and conduct pre-bid conferences to familiarize bidders with the bidding documents and management techniques and with any special systems, materials, or methods. As soon as the Design/Build Entity becomes aware prior to any bid date that less than three (3) pre-qualified subcontractors plan to bid any portion of any Bid Package or that anticipated bids from previously approved or pre-qualified subcontractors listed on **Exhibit F**, are likely to exceed the then current Schedule of Values or Estimate of Design & Construction, the Design/Build Entity shall promptly so notify the Principal Representative and Principal Representative shall be entitled to treat the situation as an unforeseeable circumstance pursuant to paragraph 3.5.9.1.

3.4.9 The Design/Build Entity shall receive and open bids when advertised, prepare a bid analysis, conduct pre-award conferences, and notify the Principal Representative concerning which bids shall be accepted. The Principal Representative shall be notified in advance of the time and place of all bid openings and may elect to attend such openings with their representatives. Should the Design/Build Entity submit a proposal for subcontract Work (Work not included in the Design/Build Entity's Construction Phase Fee and/or General Conditions) herein referred to as "Self Perform Work", the proposal conditions shall be the same as for all subcontractor proposals. These Design/Build Entity proposals for subcontract Work shall be submitted to the Principal Representative twenty four (24) hours prior to receipt of other subcontractor proposals and all opened with the other proposals. A proposal to accept other than a low bid shall be justified in writing by the Design/Build Entity and subject to prior written approval by the Principal Representative.

3.4.10 The Design/Build Entity shall provide the requirements and assignment of responsibilities for safety precautions and programs as required for the execution of the Work, temporary project facilities and for equipment, materials and services for common use of subcontractors and verify that all are included in the Contract Documents.

3.4.11 The Design/Build Entity shall provide not later than the first of each month, unless requested otherwise by the Principal Representative, a monthly report utilizing the Project

Management Software described in paragraph 2.6.4 documenting the current status of the project's schedule, costs, requests for information, submittals, manpower, safety, and other pertinent information. The report shall include a narrative discussion of the progress achieved, activities anticipated for the next month, and issues that are affecting the rate of progress. Progress photographs should be attached/included. This monthly report shall be provided in Design and Construction Phases of the project. The schedule status shall include the following minimum items:

a. Cost report showing activity dollar value, dollar value of Work in place to-date and dollar value for current period.
b. Cost report showing activity dollar value, dollar value of Work in place to-date, and dollar value for current period summarizing to schedule of values.
c. Resource report showing man-day allocations by specific trade on each activity.
d. Variance report comparing current dates to target dates.
e. Cash flow report showing monthly projections of expenditures.

A narrative schedule report shall document:

a. Description of the actual Work accomplished during the reporting period.
b. Description of any problem areas.
c. Description of current and anticipated delays with recommended corrective actions to mitigate such delays.
d. A list of proposed modifications, additions, deletions, and changes in logic to the approved schedule.

3.4.12 If the Design/Build Entity, any of its sub-consultants, or any of its subcontractors of any tier participating in the Design Reviews observes that any of the Contract Documents are at variance with applicable laws, statutes, building codes, ordinances, rules or regulations, in any respect the Design/Build Entity shall promptly notify the Principal Representative in writing, noting the applicable drawing or specification, and recommending an appropriate alternative for correcting the design.

3.5 DESIGN SERVICES

3.5.1 Full scope of Design services shall be performed by qualified architects/engineers and other professionals selected and paid by the Design/Build Entity. The professional obligations of such persons shall be undertaken and performed in the interest of the Design/Build Entity. Nothing contained herein shall create any contractual relationship between subcontractors, architects/engineers and/or suppliers with the Principal Representative.

3.5.2 Design/Build Entity shall be responsible to the Principal Representative for acts and omissions of the Design/Build Entity's employees, subcontractors, agents and parties in privity of contract with the Design/Build Entity to perform any portion of the Work, including all design elements of the Project.

3.5.3 The Design/Build Entity may or may not be licensed as an architect or engineer in the State of Colorado and is not authorized by law to perform design services. Accordingly, if the Design/Build Entity is not a licensed architect or engineer, they will not perform design services pursuant to this Agreement, but will furnish and warrant such design services as otherwise herein provided as a consultant or subconsultant. Prior to designating a professional, individual or professional firm to perform any of these services, the Design/Build Entity shall submit the name of the firm if appropriate, together with the name and resume, including education, training and experience of the architect or engineer of record and relevant work of like character and

magnitude for the Project being contemplated, to the Principal Representative, and receive approval in writing therefrom.

3.5.4 The Design Build Entity's Architect/Engineer shall begin design services upon receiving the Notice To Proceed to Commence Design Phase (SBP-8.26) and shall make certain to the best of its knowledge, information and belief, that the drawings and specifications prepared by it are in compliance with the Approved Codes as adopted by State Buildings Program (as a minimum standard) as indicated in **Exhibit O**, Building Code Compliance Policy: Coordination of Approved Building Codes, Plan Reviews and Building Inspections. Other more restrictive standards as specified by the Principal Representative are as indicated in **Exhibit O**. Drawings and specifications are to be reviewed by the State's approved Code Review Agents at the appropriate phases and with the required information as described in **Exhibit O**.

3.5.5 No design consultant or subconsultant, not already approved by the Principal Representative, shall be engaged to perform Work on the Project wherein a conflict of interest exists, such as being connected with the sale or promotion of equipment or material which may be used on the Project, provided, however, that in unusual circumstances and with full disclosure to the Principal Representative of such interest, the Principal Representative may provide a waiver, in writing, in respect to the particular consultant or subconsultant.

3.5.6 The Design/Build Entity shall review with the Principal Representative alternative approaches to design and construction of the improvements. Any alternative approaches must be approved in writing by the Principal Representative prior to implementation by the Design/Build Entity.

3.5.7 The Design/Build Entity shall participate in Project design review sessions at the close of the Schematic Design Phase, Design Development Phase, and as Construction Documents are finalized for each Bid Package. The Project design review sessions shall be attended by the Design Build Entity's Architect/Engineer and representatives of the Principal Representative. The purposes of the Project design review sessions are to (1) assure consistency with the design intent; (2) ensure complete, coordinated, constructible and cost-effective designs for all disciplines (e.g. architectural, structural, mechanical); (3) assure that the design documents are code compliant; (4) endeavor to confirm that all Work has been included and described in sufficient detail to assure complete pricing of Work; and (5) allow for phased construction. The Design Build Entity's Architect/Engineer shall collect all design review comments from the various participants, provide reports to the Principal Representative, and ensure that with the issuance of each progress set of design documents all comments have either been incorporated or resolved to the satisfaction of the Principal Representative. A design phase is not considered complete until all comments from the design review have been incorporated and the design consultants and subconsultants have fully coordinated their design documents. At the completion of each design phase, the Design/Build Entity must confirm that the current status of design remains within the applicable portion of the Project Budget, Fixed Limit of Design and Construction Cost, and Guaranteed Maximum Price.

3.5.8 SCHEMATIC DESIGN PHASE: The Design/Build Entity and its Design Build Entity's Architect/Engineer shall review the design program furnished by the Principal Representative, including the approved Facilities Program Plan, to ascertain the requirements of the Project and shall refine the design program in accordance with **Exhibit L,** reviewing and confirming the understandings of these requirements and other design parameters with the Principal Representative. Based on the mutually agreed upon design program and the Fixed Limit of Design & Construction Cost, the Design/Build Entity shall prepare, for acceptance by the Principal

Representative, Schematic Design Documents consisting of drawings, outline specifications and other documents illustrating the scale and relationship of Project components. Schematic Design Documents shall be prepared in sufficient detail and number to come to an agreement on the basic design of the Project.

3.5.9 At intervals appropriate to the progress of the Schematic Design Phase, the Design/Build Entity shall provide the Principal Representative with copies of all materials, documents, and studies necessary to permit the Principal Representative to monitor, review, provide input to, and any necessary acceptance of, the Schematic Design Phase in progress and completed components thereof. This reviewing process shall be scheduled in a manner that allows the Principal Representative adequate time so as to cause no delay to the Project. The Design/Build Entity shall respond in writing to the Principal Representative's comments resulting from this reviewing process.

3.5.10 At the completion of the Schematic Design Phase, the Design/Build Entity shall:

.1 Provide (____) complete sets and (1 pdf) complete set of drawings, outline specifications and construction materials, and such other documents necessary for the Design/Build Entity to prepare an estimate of the cost of construction. Pdf files must be titled to exactly match paper set;

.2 Prepare and submit to the Principal Representative a design & construction cost estimate which will serve as a Statement of Probable Cost.

.3 Provide Electronic files in an electric media format that conform with the latest requirements of the Principal Representative's drawing standards.

3.5.11 The Design/Build Entity shall also prepare a written report, accompanied by drawings, setting forth the following as a minimum:

.1 Analysis of the structure as it relates to the approved codes as defined in **Exhibit O**, including responses to the State's Code Review Agent;

.2 Recommend site locations and scope of site development;

.3 Correlation of spaces with approved State standards;

.4 Conceptual drawings of floor plans, elevations, section, and site plan;

.5 Conceptual drawings and descriptions of project plumbing, mechanical and electrical systems as necessary;

.6 Area computations, gross square footage and net square footage, and volume;

.7 Outline of proposed construction materials;

.8 Review of time anticipated for the Construction Phase(s);

.9 Written description of the bid packaging strategy and related design schedule.

3.5.12 The above Schematic Design data shall be subject to the acceptance in writing by the Principal Representative, and State Buildings Program.

3.5.13 The Design/Build Entity shall also prepare a written report at the end of the Schematic Design Phase summarizing the Design/Build Entity's value engineering activities. If at the completion of the Schematic Design phase the Estimate of Design & Construction cost exceeds the applicable portion of the Project Budget, Fixed Limit of Design & Construction Cost or Guaranteed Maximum Price, the Design/Build Entity, including the Design Build Entity's Architect and Engineer shall work together to revise the design in a manner that brings the Project back within the applicable portion of the Project Budget, Fixed Limit of Design & Construction Cost or Guaranteed Maximum Price at no additional cost to the Principal Representative.

3.5.14 DESIGN DEVELOPMENT PHASE: Based on the written acceptance of the Schematic Design Documents and any adjustments authorized by the Principal Representative in the design program or the Fixed Limit of Design & Construction Cost, if any, the Design Build Entity shall prepare, for acceptance by the Principal Representative and State Buildings Program the Design Development Documents consisting of drawings, outline specifications, and other documents to fix and describe the size and character of the entire Project as to architectural, structural, mechanical, and electrical systems, materials, and such other elements as may be appropriate. The Design Development Documents shall be developed in sequence replicating the proposed Bidding Packages.

3.5.15 At intervals appropriate to the progress of the Design Development Phase, the Design Build Entity shall provide the Principal Representative with copies of all materials, documents, and studies necessary to permit the Principal Representative to monitor, review, provide input to, and any necessary acceptance of, the Design Development Phase in progress and completed components thereof. This reviewing process shall be scheduled in a manner that allows the Principal Representative adequate time so as to cause no delay to the Project. The Design/Build Entity shall respond in writing to the Principal Representative's comments resulting from this reviewing process.

3.5.16 At the completion of the Design Development Phase, the Design Build Entity shall provide:

.1 (____) complete sets and (1 pdf) complete sets of drawings, outline specifications and construction materials, and such other documents necessary for the Design/Build Entity to prepare an estimate of the cost of design & construction cost. PDF files must be titled to exactly match paper set.

.2 Provide Electronic files in an electric media format that conform with the latest requirements of Principal Representative's drawing standards.

3.5.17 The Design/Build Entity shall prepare a written report and drawings outlining in detail Design Development Documents from the accepted Schematic Design study. The report, when submitted for acceptance by the Principal Representative shall include as a minimum:

.1 Analysis of the structure as it relates to the approved codes defined in **Exhibit O**, including responses to the State's Code Review Agent;

.2 Site development drawings, defining the proposed scope of development including earthwork, surface development, and utility infrastructure;

.3 Plans in one-line format of the proposed structural, mechanical, electrical, and plumbing systems as necessary to define size, location and quality of equipment, materials, and constructions;

.4 Floor plans including proposed movable equipment and furnishings and exterior elevations;

.5 Cut-sheets and/or samples of proposed materials, equipment and system components including all such items normally specified under the Construction Specifications Institute, Specifications Format Divisions;

.6 Proposed architectural finish schedule, HVAC, plumbing and electrical fixture schedules;

.7 Outline specifications, using CSI format, identifying conditions of the contract, materials, and standards;

.8 Review of the time anticipated for the remainder of the Design/Preconstruction and Construction Phase(s).

.9 Provide Electronic files in an electric media format that conform to the latest requirements of the Principal Representative's drawing standards.

These documents shall be of sufficient detail to allow the Design/Build Entity to enter into an agreement for the execution of the construction based on a Guaranteed Maximum Price.

3.5.18 The Design/Build Entity shall make certain that to the best of its knowledge, information, and belief the drawings and specifications prepared by it are in full compliance with applicable codes, regulations, laws and ordinances, including both technical and administrative provisions thereof. Such drawings and specifications shall conform to the list of approved codes as defined in **Exhibit O.** If the Design Build Entity's Architect/Engineer shall deviate from such codes, regulations, law or ordinance, without written authorization to do so from the Principal Representative, then the Design/Build Entity shall, at its own expense, make such corrections in the Construction Documents as may be necessary for compliance.

3.5.19 If at the completion of the Design Development phase the Estimate of Design & Construction cost exceeds the applicable portion of the Project Budget, Fixed Limit of Design & Construction Cost or Guaranteed Maximum Price, the Design/Build Entity, including the Design Build Entity's Architect and Engineer shall work together to revise the design in a manner that brings the Project back within the applicable portion of the Project Budget, Fixed Limit of Design & Construction Cost or Guaranteed Maximum Price at no additional cost to the Principal Representative.

The final Design Development Documents, revised as required by the Design/Build Entity coupled with the approved Guaranteed Maximum Price established within the recited Fixed Limit of Design & Construction Cost, shall be subject to acceptance in writing by the Principal Representative and State Buildings Program.

3.5.20 At the conclusion of the Design Development Phase, the Design/Build Entity shall deliver to the Principal Representative, a Guaranteed Maximum Price proposal which shall agree

to perform all of the Work even though all of the Construction Documents have not all been finalized and released for construction, and guarantee the maximum price to the Principal Representative for the entire cost of the Work, as adjusted by deductive alternates required to maintain the Guaranteed Maximum Price below the Fixed Limit of Design & Construction Cost which have been previously approved by the Principal Representative pursuant to paragraph 3.2. When the Guaranteed Maximum Price is agreed upon and accepted by the Principal Representative, it shall be made a part of the Contract Documents by Amendment, shall supersede updated summaries, and all documents relating to Schedules of Values and Estimates of Design & Construction; and shall be subject to modification for Changes in the Work as provided in Contract General Conditions Article 35.

3.5.21 CONSTRUCTION DOCUMENTS PHASE: Based on the Principal Representative and State Buildings Program accepted Design Development Documents and any further adjustments in the scope or quality of the Project or in the Design/Build Guaranteed Maximum Price, if any, authorized by the Principal Representative, the Design Build Entity's Architect/Engineer shall prepare, for acceptance by the Principal Representative, Construction Documents consisting of drawings and specifications setting forth in detail the requirements for the construction of the Project.

3.5.22 At intervals appropriate to the progress of the Construction Document Phase, the Design/Build Entity shall provide copies of documents for the Principal Representative's review, monitoring and input to the in-progress Construction Document Phase and any completed components thereof. This process shall be scheduled in a manner that allows the Principal Representative adequate time so as to cause no delay to the Project. These intervals shall be no fewer than at 50% and 95% completion of the Construction Documents Phase. The Design/Build Entity shall respond in writing to the Principal Representative's review comments.

3.5.23 These Construction Documents, when each Bid Package is submitted for approval, shall include:

.1 (_____) complete sets and (1 pdf) complete set of architectural, civil, site development, structural, mechanical, plumbing and electrical drawings as appropriate to assist in the definition of the submitted Bid Package. Pdf files must be titled to exactly match paper set. The final drawing set of Construction Documents must also be provided in AutoCAD;

.2 Complete Bidding Documents including architectural, structural, mechanical, plumbing and electrical specifications for that Bid Package. The format for these technical specifications shall be the current edition of *MasterFormat* published by the Construction Specifications Institute;

.3 The title sheet shall contain the International Building Code (I.B.C.) occupancy type, construction type, gross square footage and net square footage, and gross building volume;

.4 Each Bidding Package, as appropriate, shall contain a Code Compliance Plan as per **Exhibit O**, Code Compliance Plan Review Procedures and Building Inspections, that defines area separation, fire and smoke barriers, exits, exit passages, and exit enclosures.

.5 Provide Electronic files in an electric media format that conform with the latest requirements of the Principal Representative's drawing standards.

3.5.24 The Design/Build Entity shall prepare a written report summarizing the Design/Build Entity's Value Engineering activities through the completion of this phase of the Work.

3.5.25 The final Construction Documents shall be subject to the final acceptance by the Principal Representative and State Buildings Program in writing.

3.5.26 Complete Construction Documents shall be required within a Bid Package prior to the Principal Representative releasing the Design/Build Entity for commencement of Construction.

CONSTRUCTION PHASE SERVICES

3.6 CONTROL OF THE WORK

3.6.1 The Design/Build Entity shall supervise and direct the Work of its subcontractors and shall coordinate the Work with the activities and responsibilities of the Principal Representative to complete the Project in accordance with the Principal Representative's objectives of cost, time and quality and subject to the terms and conditions of the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1).

3.6.2 The Design/Build Entity shall establish on-site organization and lines of authority in order to carry out the overall plans of the Construction Team.

3.6.3 The Design/Build Entity shall schedule and conduct weekly progress meetings at which the Principal Representative, Design/Build Entity including the Design Build Entity's Architect/Engineer, Design Build Entity's Architect/Engineer's Consultants, can discuss jointly such matters as procedures, progress, schedule, costs, quality control and problems. The Design/Build Entity shall record and distribute minutes of all construction meetings within 48 hours of the meeting.

3.6.4 A contract-control/project-management software (hereafter "Project Management Software") approved by the Principal Representative, shall be used as a primary tool for project control, communication and documentation control by all the project participants, to include the Principal Representative, the Design/Build Entity and the Design Build Entity's Architect/Engineer. The Design/Build Entity shall utilize the Project Management Software to implement a cost forecasting, monitoring, control and reporting system for the Project. The Project Management Software shall be maintained throughout the project, both during the pre-construction and construction phases. Cost analyses shall be based upon data analyses as developed/described within Section 3.3 and shall include analyses of all trades and Project components making a significant contribution for total Project costs. The Project Management Software shall provide for development of a Project cost model, monitoring the design process and periodic reviews of the cost estimates/forecasts to identify variances from the cost model. Additionally, the Project Management Software shall identify variances between actual and budgeted or estimated costs or the Fixed Limit of Design & Construction Cost and the Lump Sum Contract Price.

The Design/Build Entity shall use the Project Management Software for the major contract administration processes to include, but not limited to:

.1 Submittals:

a. Design/Build Entity shall create a Submittal log and Submittal schedule.
b. Submittals shall be directly submitted to the Design Build Entity's Architect/Engineer and Principal Representative and directly returned from the Design Build Entity's Architect/Engineer.

.2 Requests for Information:
a. Design/Build Entity shall submit requests for information using the Project Management Software.
b. Design Build Entity's Architect/Engineer shall answer requests for information via the Project Management Software. Requests for Information responses that have cost impact will have corresponding Change Order Bulletin (Form SC 6.311) issued by the Architect/ Engineer.

.3 Change Management: Entire change management process including Notices, and Change Orders shall be managed using the Project Management Software and utilizing Contract Amendment (Form SC 6.0), Change order(Form SC 6.31), Change Order Bulletin (Form SC 6.311), Change Order Proposal (Form SC 6.312) and Change Order Log.

.4 Pay Applications: Design/Build Entity shall be responsible for creating and distributing pay application in the Project Management Software using an earned-value calculation through the CPM Schedule & utilizing Application and Certificate for Contractor's Payment (SBP7.2)**.**

.6 Meeting Minutes: Design/Build Entity shall be responsible for creating and distributing construction-meeting minutes in the Project Management Software.

.7 Reports: Design/Build Entity shall be responsible to prepare and distribute reports in the Project Management Software.

.8 Insurance Certificate: Design/Build Entity shall responsible for storing all the insurance related information of subcontractors in the Project Management Software.

.9 Punchlist: Design/Build Entity shall be responsible to update the Substantial Completion Punchlist status using the Project Management Software.

.10 Construction Schedule: Critical Path Method as described in Article 12 of the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1).

.11 All project correspondence with Principal Representative shall be in the Project Management Software.

3.6.5 The Design/Build Entity shall propose and implement an approved procedure for coordinating and tracking all required Code Compliance Building Inspections as indicated on the Building Inspection Record (BIR) as provided by the State Buildings Program approved Code Review Agent at the appropriate Construction Phase(s) as described in the attached **Exhibit O**.

3.7 SCHEDULE AND COORDINATION

3.7.1 The Design/Build Entity shall begin the construction Work upon receiving the Notice To Proceed to Commence Construction Phase (SBP-7.26), in accordance with Article 5.1. The Design/Build Entity shall schedule and coordinate the Work of all of its subcontractors on the Project including their use of the site. The Design/Build Entity shall keep the subcontractors informed of the Project construction schedule to enable the subcontractors to plan and perform the Work properly. The Design/Build Entity shall carry the Work forward expeditiously with adequate forces and shall achieve Completion of the Work prior to the Contract Completion Date specified in Article 5.2, as adjusted by Change Orders and Amendments.

3.7.2 Schedule Management

.1 Schedule Modifications: If, as a result of the monthly schedule update the Project Schedule no longer represents the actual / logical progression of the Work or the Design/Build Entity's plan for prosecution and progress of the Work, the Principal Representative shall require the Design/Build Entity to submit a revision to the Project Schedule. Such revisions to the Schedule shall not alter any of the Project Milestone dates.

.2 Schedule Impacts, Schedule Delays, Time Extensions: During the course of the Project, it may be appropriate to revise the Schedule to incorporate impacts or delay issues into the Project Schedule. If the Design/Build Entity determines it has encountered schedule impacts that may warrant a time extension, the Design/Build Entity shall present an Impacted Schedule in accordance with the Contract General Conditions, to the Principal Representative supporting its claim.

.3 Recovery Schedule: In the event progress falls behind schedule dates, the Design/Build Entity shall prepare a recovery schedule indicating its revised plan to assure the timely completion of the Work. The recovery schedule shall be subject to the Principal Representative's approval.

3.8 AMENDMENTS AND CHANGE ORDERS

3.8.1 The Design/Build Entity shall assist in developing and implementing a system for the preparation, processing and tracking of Amendments and Change Orders using the Project Management Software as described in paragraph 3.6.4 and recommend necessary or desirable changes to the Principal Representative. Fully executed and approved Change Orders shall constitute obligations of the Principal Representative to pay as part of the Contract Sum the amounts identified by such modifications so long as such amounts do not exceed the Guaranteed Maximum Price, however, only those portions of the Contract Sum that are incorporated by Amendment shall be immediately payable. Change Orders, other than Change Orders allocating contingency amounts already incorporated by an Amendment which modify the Guaranteed Maximum Price, shall be payable only after having been incorporated into the Contract by Amendment. The Design/Build Entity shall provide the Principal Representative with Amendments from time to time aggregating and incorporating Change Orders that do not allocate contingency amounts already incorporated by an Amendment in order to expedite payment of approved Change Order work when performed and payable.

3.9 PRINCIPAL REPRESENTATIVE CONSULTANTS

3.9.1 If required, the Design/Build Entity shall assist the Principal Representative in selecting and retaining the professional services including but not limited to a surveyor, geotechnical, testing and inspection and other special consultants, and coordinate these services, without assuming any responsibility or liability of or for these consultants.

3.10 START UP

3.10.1 The Design/Build Entity, with the Principal Representative's maintenance staff and/or consultant, shall direct the checkout of utilities, operations, systems and equipment for readiness

and assist in their initial start up and testing/commissioning as required in the Scope Narrative with the subcontractors of all tiers.

3.10.2 Prior to the Date of Completion of the Work or earlier date for phased occupation of the Work as requested by the Principal Representative, the Design/Build Entity shall schedule and conduct with the Principal Representative and Design Build Entity's Architect/Engineer a complete review, commissioning, demonstration, start-up and operational testing of all equipment and mechanical and electrical systems installed by the Design/Build Entity or its subcontractors on the Project, and shall also review the operation and maintenance of such systems with the Principal Representative's maintenance personnel.

3.10.3 Subsequent to this review, the Design/Build Entity, with reasonable promptness and at no cost to the Principal Representative shall make all adjustments or corrections required by the Principal Representative or Design Build Entity's Architect/Engineer and shall balance all systems in order to make all equipment and systems perform as required by the Contract Documents and to reflect the actual use and occupancy of the Project. If necessary or requested by the Design Build Entity's Architect/Engineer or Principal Representative, the Design/Build Entity shall require the subcontractor, supplier of material supplier to make adjustments, corrections or balancing required by this process, at no additional cost to the Principal Representative.

ARTICLE 4. OWNERSHIP OF DOCUMENT

4.1 INSTRUMENTS OF SERVICE

4.1.1 Drawings, specifications and other documents, including those in electronic form, prepared by the Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineer's consultants are Instruments of Service for use solely with respect to this Project. The Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineer's consultants shall be deemed the authors and owners of their respective Instruments of Service and shall retain all common law, statutory and other reserved rights, including copyrights.

4.1.2 Upon execution of this Agreement and the contract between the Design/Build Entity, the Design Build Entity's Architect/Engineer shall grant to the State a perpetual nonexclusive license to reproduce and use, and permit others to reproduce and use for the State, the Design Build Entity's Architect/Engineer's Instruments of Service solely for the purposes of constructing, using and maintaining the Project for future alterations or additions to the Project. The Design Build Entity's Architect/Engineer shall obtain similar nonexclusive licenses from the Design Build Entity's Architect/Engineer's consultants consistent with this Agreement. If and upon the date the Design Build Entity's Architect/Engineer is adjudged in default, the foregoing license shall be deemed terminated and replaced by a second, nonexclusive license permitting the State to authorize other similarly credentialed design professionals to reproduce and, where permitted by law, to make changes, corrections and additions to the Instruments of Service solely for the purposes of completing, using and maintaining the Project for future alterations or additions to the Project.

4.1.3 Any unilateral use by the State of the Instruments of Service for completing, using, maintaining, adding to or altering the Project or facilities shall be at the State's sole risk and without liability to the Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineers consultants; provided, however, that if the State's unilateral use occurs for

completing, using or maintaining the Project as a result of the Design Build Entity's Architect/Engineer's default, nothing in this Article shall be deemed to relieve the Design Build Entity's Architect/Engineer of liability for its own acts or omissions or default.

4.2 AS-BUILT DRAWINGS/RECORD DRAWINGS

4.2.1 The Design Build Entity's Architect/Engineer and its consultants shall, upon completion of the Construction Phase, receive redline As-Built Drawings from the Design/Build Entity. These redline changes shall describe the built condition of the Project. This information and all of the incorporated changes directed by Bidding Addenda, Change Order/Amendment or Design Build Entity's Architect/Engineer's Supplementary Instructions shall be incorporated by the Design Build Entity's Architect/Engineer and its consultants into a Record Drawings document provided to the Principal Representative in the form of an electro-media format (one (1) set in AutoCAD and one (1) set in Pdf format) and one (1) hard bound paper copy as agreed between the parties. The Design/Build Entity shall also provide the Principal Representative with the original As-Built Drawings. Final payment to the Design/Build Entity shall be withheld until all Record Drawings have been submitted and approved by the Principal Representative.

ARTICLE 5. TIME OF COMMENCEMENT AND COMPLETION

5.1 COMMENCEMENT

5.1.1 The Contract Time shall commence on the Effective Date of this Agreement but no Work shall be performed prior to the Principal Representative issuing a Notice To Proceed to Commence Design Phase (SBP-7.26) contingent upon the delivery of all bonds, and insurance certificates and the Certification and Affidavit Regarding Unauthorized Immigrants as required to be furnished by the Design/Build Entity as described on the Notice of Award.

5.1.2 The Construction Phase shall commence on the date the first Bid Package is added to this Agreement by Amendment unless there is an Early Release Bid Package as approved by the Owner in accordance with Article 1.1.4 of this Agreement.

5.1.3 The commencement of the Construction Phase is expressly conditioned upon and shall not commence until:

.1 The Guaranteed Maximum Price and Schedule of Values shall have been timely submitted (or such timeliness shall have been waived in writing by the Principal Representative and the director of State Buildings Program) and shall have been approved and accepted by the Principal Representative;

.2 The date for Completion of the Work has been approved and accepted by the Principal Representative;

.3 All required Performance and Labor and Material Payment Bonds and insurance certificates have been approved and accepted by State Buildings Program; and

.4 **Exhibit I.9**, Notice To Proceed to Commence Construction Phase (SBP-7.26) has been issued by the Principal Representative and made a part of the Contract Documents.

If any of the preceding material conditions to be performed by the Design/Build Entity have not been fully satisfied by reason of any act or omission on the part of the Design/Build Entity through no fault of the Principal Representative, the Principal Representative shall give the Design/Build Entity written notice of any and all such deficiencies and allow ten (10) days from the date of such notice to correct and cure such deficiency or deficiencies, and in the event the deficiency or deficiencies are not fully corrected and cured within the ten (10) day period, the Principal Representative may declare the Design/Build Entity to be in default of this Agreement.

5.2 COMPLETION

5.2.1. The Design/Build Entity agrees to Substantially Complete the Project within ____ calendar days from the date of the Notice to Proceed to Commence Design Phase (SBP-8.26), in addition, the Design/Build Entity agrees to finally complete the Project from Substantial Completion to Final Acceptance within ____ calendar days for a total time of completion of the entire Project of ____ calendar days

The Design/Build Entity shall perform the Work with due diligence to completion.

ARTICLE 6. COMPENSATION

6.1 DESIGN BUILD ENTITY'S FEE

6.1.1 Subject to the provisions of this Agreement and of the General Conditions of the Design/Build Guaranteed Maximum Price Agreement (SC-9.1), and in consideration of the performance of this Agreement, the Principal Representative shall pay the Design/Build Entity in current funds as compensation for its services as listed below:

Design Build Entity's Architect/Engineer Basic Services Fee

.1	Pre-Design Phase (If Applicable)	$_____
.2	Schematic Design Phase	$_____
.3	Design Development Phase	$_____
.4	Construction Document Phase	$_____
.5	Construction Administration Phase	$_____
.6	Post Construction Phase (If Applicable)	$_____
.7	Reimbursable Expenses (NTE)	$_____
.8	Total Design Build Entity's Architect/Engineering Fee	$_____

CM/GC Fee

.9	Pre-Construction Phase Fee	$_____
.10	Construction Phase Fee	$_____
.11	General Conditions Direct Personal Expenses of On-Site D/B Staff (Not to Exceed)	$_____
.12	Other Reimbursable General Conditions (Not to Exceed per paragraph 6.1.3)	$_____
.13	Total CM/GC Fee	$_____

Design Build Entity Fee (.8 + .13)

6.1.2 The Design/Build Entity's Fee shall include all job indirect costs, and General Conditions costs as defined in **Exhibit A**, Design/Build Entity Designated Services and Method of Payment, home office overhead, and profit, included but not limited to the following:

.1 Salaries or other compensation of the Design/Build Entity's employees at the principal office and branch offices;

.2 General operating expenses of the Design/Build Entity's principal and branch offices other than the field office;

.3 Any part of the Design/Build Entity's capital expenses, including interest on the Design/Build Entity 's capital employed for the Project;

.4 Overhead or general expenses of any kind;

.5 Salaries of the Design/Build Entity's employees engaged on the road in expediting the production or transportation of materials and equipment;

.6 Cost of all employee benefits and taxes for such items as unemployment compensation and social security, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the Design/Build Entity and included in the fee under paragraphs 6.1.2.1 through 6.1.2.5;

.7 All transportation, traveling, moving, and hotel expenses of the Design/Build Entity or its officers or employees incurred in discharge of duties connected with the Work;

.8 Costs, including transportation and maintenance, of all materials, supplies, equipment, temporary facilities, and hand tools not owned by the workmen, which are employed or consumed in the performance of the Work;

.9 Cost of the premium for all insurance which the Design/Build Entity is required to procure by this Agreement or is deemed necessary by the Design/Build Entity;

.10 Minor expenses such as facsimile messages, telegrams, long distance telephone call telephone service at the site, express mail, and similar petty cash items in connection with the Work;

.11 All other items set forth in **Exhibit A**, Design/Build Entity Designated Services and Method of Payment that are specifically designated as Pre-Construction Services Fee, Construction Services Fee or General Conditions. All Items listed in the columns designated Direct Cost of Work shall be included in the separate Bid Packages.

.12 Except as expressly provided to the contrary elsewhere in this Agreement, approved costs in excess of the Guaranteed Maximum Price.

6.1.3 General conditions items, as set forth in paragraph 6.1.2, shall generally include the cost of Construction Phase on-site construction management staff and those temporary facilities, services and equipment to support the Work of construction subcontractors. General conditions items are more fully identified in **Exhibit A**, Designated Services and Methods of Payment, and shall be reimbursed at cost, without mark-up, based upon pre-approved not-to-exceed budgets. General conditions (exclusive of the Design/Build Entity's staff) provided directly by the Design/Build Entity must be at market competitive rates. Each monthly request for progress payment shall be justified with reasonable support for expenses to include:

.1 Invoice or receipt for any vendors or suppliers for material, rented equipment, etc.

.2 Labor/timesheet reports (by task number) for direct labor, provide bare labor rate & itemized breakdown of labor burden prior to initial billing.

.3 Owned equipment shall be compensated per pre-negotiated rates established in accordance with the Colorado Procurement Code Article 107 – Cost Principle. In no case shall cumulative/total cost of owned equipment exceed the value of the equipment minus salvage value. The Principal Representative shall approve all rental rates and salvage values in writing prior to initial billing.

.4 Labor, material and equipment cost may be audited by the Principal Representative.

6.2 ADJUSTMENTS IN FEE

6.2.1 Adjustments in the Construction Phase Fee shall be made as follows: If, after the total Guaranteed Maximum Price is accepted, in writing, by the Principal Representative, the Principal Representative directs additions to or other changes made in the Work, the Design/Build Entity's fee shall be adjusted as follows:

.1 If the changes in the aggregate increase the total Guaranteed Maximum Price the Construction Manager's fee for any and all other changes in the Work shall be calculated at the rate of FOUR percent (4%) (plus appropriate General Condition costs) of the estimated cost of such work and shall be agreed upon between the Design/Build Entity and the Principal Representative as a fixed fee for the effect of the change (or changes), prior to starting the changed Work. The adjustments stated above shall only be deemed valid after the Principal Representative accepts the adjustments in writing and, are the only adjustments to the fee that shall be granted for changes authorized to the GMP. Adjustments to these fees beyond these values shall not be granted. However, General Condition costs directly attributable to time extensions may be charged in accordance with the provisions of the General Conditions.

.2 The Design/Build Entity's Architect/Engineer's fee may be adjusted to accommodate additional design associated with the Principal Representative's addition to or other changes made in the Work.

6.2.2 The Design/Build Entity shall also be paid an additional fee at the rate as set forth in paragraph 6.2.1.2 if the Design/Build Entity is placed in charge of the reconstruction of any insured loss.

6.2.3 If there is a material reduction in the scope of Work greater than fifteen percent (15%) of the Fixed Limit of Design & Construction Cost, the Design/Build Entity's Fees shall be reduced proportionally after the fifteen percent (15%).

6.3 GUARANTEED MAXIMUM PRICE

6.3.1 At the conclusion of the Design Development Phase, the Design/Build Entity shall deliver to the Principal Representative, a Guaranteed Maximum Price proposal which shall agree

to perform all of the Work even though all of the Construction Documents have not all been finalized and released for construction, and guarantee the maximum price to the Principal Representative for the entire cost of the Work, as adjusted by deductive alternates required to maintain the Guaranteed Maximum Price below the Fixed Limit of Design & Construction Cost which have been previously approved by the Principal Representative pursuant to paragraph 3.1.1.

6.3.2 The Guaranteed Maximum Price shall include all of the Design/Build Entity's obligations to be performed pursuant to the terms of the Contract Documents and may include, but not be limited to, the total of the following:

.1 The total of all prices already received for all items bid before the establishment of the Guaranteed Maximum Price;

.2 The Design/Build Entity's estimate of the cost of all other Work to be performed but not yet bid, excluding the approved deductive alternates unless said Work can be incorporated into the Contract Documents by application of the contingency per the provisions of paragraphs 3.3.1 through 3.3.5, with the consent of the Design/Build Entity which consent shall not be unreasonably withheld;

.3 The installation cost of items to be procured by the Principal Representative and assigned to the Design/Build Entity for installation, as defined in the Contract Documents;

.4 The estimated maximum cost of all Work to be performed by the Design/Build Entity;

.5 Design/Build Entity's Fee as provided under this Agreement;

.6 The cost of all Performance and Labor and Material Payment Bonds furnished by the Design/Build Entity pursuant to the Contract General Conditions, Article 16;

.7 The premiums for insurance to protect the Project pursuant to the Contract General Conditions, Article 25; and

.8 Authorized adjustments as set forth elsewhere in this Agreement, to include but may not be limited to: taxes; fees for licenses, and royalties; special conditions, commissioning, start-up services, and warranty support; and contingencies.

6.3.3 The Guaranteed Maximum Price proposal as set forth in paragraph 6.3.1 shall:

.1 Set forth a stated not to exceed dollar amount;

.2 Set forth the Schedule of Values therefore which shall be consistent with previously approved Schedules of Values, as adjusted as required pursuant to Design Development cost estimating;

.3 Contain no conditions or exceptions;

.4 Not exceed the Fixed Limit of Design & Construction Cost;

.5 Contain no allowances except for those set forth in **Exhibit H.4**, Allowance Schedule of which all allowances are to be a not-to-exceed dollar amount; and

.6 Be substantiated with complete supporting documentation acceptable to the Principal Representative, to clearly define the anticipated Work to be performed by the Design/Build Entity and facilitate a determination thereafter when final drawings and specifications are released for construction, as to whether there has been an increase in the Work required of the Design/Build Entity in the documents released for construction from the Design Development documents on which the Guaranteed Maximum Price was based. If at any time thereafter, any Claim is asserted by the Design/Build Entity for an increase to the Contract Sum or Guaranteed Maximum Price and/or extension of the Contract Time because of an alleged increase in the Work to be performed by the Design/Build Entity as contained in the drawings or specifications released for construction, the Design/ Build Entity shall be required to satisfactorily demonstrate the increase in the Work; otherwise the Design/Build Entity shall be entitled to no increase in the Contract Sum, Guaranteed Maximum Price or extension of the Contract Time.

6.3.4 If, through no fault on the part of the Design/Build Entity, and after receiving reasonable cooperation by the Principal Representative, the Design/Build Entity submits a Guaranteed Maximum Price proposal contrary to the provisions of paragraph 6.3.2 and 6.3.3, the proposal may be rejected by the Principal Representative; the Principal Representative shall be under no obligation to award subsequent Bid Packages; the Principal Representative may declare the Design/Build Entity to be in default; and payment may be withheld from the Design/Build Entity, excepting the Design/Build Entity's reasonable costs incurred, up and until a Guaranteed Maximum Price is furnished in accordance with the foregoing.

6.3.5 If, in developing a Guaranteed Maximum Price, the Design/Build Entity believes any documentation or information, consistent with the Design Development level of documentation, is not sufficiently complete to clearly define the anticipated Work, the Design/Build Entity shall be responsible for making all necessary inquires and requests to establish the same.

6.3.6 When the Guaranteed Maximum Price is agreed upon and accepted by the Principal Representative, it shall be made a part of the Contract Documents by Amendment, shall supersede updated summaries, and all documents relating to Schedules of Values and Estimates of Design & Construction; and shall be subject to modification for Changes in the Work as provided in the General Conditions Article 35. If the Design/Build Entity, in good faith, furnishes the Principal Representative with a Guaranteed Maximum Price proposal which meets the criteria of paragraphs 6.3.1, 6.3.2, and 6.3.3 and the parties fail to mutually agree to that number as set forth above, the parties expressly agree that default termination of the Design/Build Entity shall not be a remedy therefore under this Agreement, and, the Principal Representative shall be entitled to proceed with the Project and Work as set forth elsewhere in this Agreement.

6.3.7 When the Design/Build Entity provides a Guaranteed Maximum Price, the trade contracts for the Work shall either be with the Design/Build Entity or shall contain the necessary provisions to allow the Design/Build Entity to control the performance of the Work. The Principal Representative shall also authorize the Design/Build Entity to take all steps necessary in the name of the Principal Representative to assure that any separate contractors, having separate contracts with the Principal Representative for the Project, perform their contracts in accordance with their terms.

6.4 CONTRACT SUM

6.4.1 Subject to the provisions of Article 3, Article 6 and Contract General Conditions Article 50, the Contract Sum shall equal the total of:

.1 The Design & Construction Costs as set forth in 3.4.6 and 3.4.7.

.2 Authorized adjustments as set forth elsewhere in this Agreement;

and shall be the total amount payable by the Principal Representative to the Design/Build Entity for the performance of all Work under the Contract Documents.

6.5 CONDITION PRECEDENT

6.5.1 Financial obligations of the Principal Representative payable after the current fiscal year are contingent upon funds for the purpose being appropriated, budgeted, and otherwise made available.

6.5.2 Condition Precedent: At the time of the execution of this Agreement, there are sufficient funds budgeted and appropriated to compensate the Design/Build Entity only for performance of the Work through and including _____. Therefore, it shall be a Condition Precedent to the Design/Build Entity's performance of the remaining Work specified in _____ and the State's liability to pay for such performance, sufficient funding must be made available to the Principal Representative for the Project prior to _____ and, as a further Condition Precedent, a written Amendment to this Agreement is entered into in accordance with the State of Colorado Fiscal Rules, stating that additional funds are lawfully available for the Project. If either Condition Precedent is not satisfied by _____, the Design/Build Entity's obligation to perform Work for _____ and the State obligation to pay for such Work is discharged without liability to each other. If funding is eventually made available after _____, the Design/Build Entity has no right to perform the Work under _____ of this Agreement and the State has no right to require the Design/Build Entity to perform said Work.

ARTICLE 7. OPTIONAL PROVISIONS AND ELECTIONS

The provisions of this Article alter the preceding Articles or enlarge upon them as indicated (The General Conditions of the Design/Build Guaranteed Maximum Price (GMP) Agreement SC-9.1): The Principal Representative and or the State Buildings Program shall mark boxes and initial where applicable.

7.1 MODIFICATION OF ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION

If the box below is marked the six month guarantee inspection is not required.

☐ _____ Principal Representative initial

7.2 MODIFICATION OF ARTICLE 27. LABOR AND WAGES

If the box is marked the Federal Davis-Bacon Act shall be applicable to the Project. The minimum wage rates to be paid on the Project shall be furnished by the Principal Representative and included in the Contract Documents.

☐ _____ Principal Representative initial

7.3 MODIFICATION OF ARTICLE 39. NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS

If the box is marked, and initialed by the State as noted, the requirement to participate in facilitated negotiations shall be deleted from this Contract. Article 39, Non-Binding Dispute Resolution – Facilitated Negotiations, shall be deleted in its entirety and all references to the right to the same where ever they appear in the contract shall be similarly deleted. The box may be marked only for projects with an estimated value of less than $500,000.

☐ _____ Principal Representative initial

7.4 MODIFICATION OF ARTICLE 46. TIME OF COMPLETION AND LIQUIDATED DAMAGES

If an amount is indicated immediately below, liquidated damages shall be applicable to this Project as, and to, the extent shown below. Where an amount is indicated below, liquidated damages shall be assessed in accordance with and pursuant to the terms of Article 46, Time Of Completion and Liquidated Damages, in the amounts and as here indicated. The election of liquidated damages shall limit and control the parties right to damages only to the extent noted.

1. For the inability to use the Project, for each day after the number of calendar days specified in the Design/Build Entity's proposal for the Project and the Agreement for achievement of Substantial Completion, until the day that the Project has achieved Substantial Completion and the Notice of Substantial Completion is issued, the Design/Build Entity agrees that an amount equal to _____ ($) shall be assessed against Design/Build Entity from amounts due and payable to the Design/Build Entity under the Contract, or the Design/Build Entity and the Design/Build Entity's Surety shall pay to the Principal Representative such sum for any deficiency, if amounts on account thereof are deducted from remaining amounts due, but amounts remaining are insufficient to cover the entire assessment.
2. For damages related to or arising from additional administrative, technical, supervisory and professional expenses related to and arising from the extended closeout period, for each day in excess of the number of calendar days specified in the Design/Build Entity's proposal for the Project and the Agreement to finally complete the Project as defined by the issuance of the Notice of Final Acceptance) after the issuance of the final Notice of Substantial Completion, the Design/Build Entity agrees that an amount equal to _____ ($) shall be assessed against Design/Build Entity from amounts due and payable to the Design/Build Entity under the Contract, or the Design/Build Entity and the Design/Build Entity's Surety shall pay to the Principal Representative such sum for any deficiency, if amounts on account thereof are deducted from remaining amounts due but amounts remaining are insufficient to cover the entire assessment.

7.5 NOTICE IDENTIFICATION

All Notices pertaining to General Conditions or otherwise required to be given shall be transmitted in writing, to the individuals at the addresses listed below, and shall be deemed duly given when received by the parties at their addresses below or any subsequent persons or addresses provided to the other party in writing.

Notice to Principal Representative:

With copies to (State Buildings Program (or Delegate) State of Colorado):

Notice to Design/Build Entity:

With copies to:

SIGNATURE APPROVALS:

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

*Persons signing for Design/Build Entity hereby swear and affirm that they are authorized to act on Design/Build Entity's behalf and acknowledge that the State is relying on their representations to that effect. **Principal is not a recognized title and will not be accepted.**

THE DESIGN/BUILD ENTITY:

Legal Name of Contracting Entity

*Signature

By: _____
Name (print) Title

Date: _____

STATE OF COLORADO, acting by and through:
(Insert Name & Title of Agency or IHE)

By: _____
Michelle Quinn, Senior Vice President and Chief Financial Officer

Date: _____

APPROVED
DEPARTMENT OF PERSONNEL & ADMINISTRATION
STATE BUILDINGS PROGRAM
State Architect (or authorized Delegate)

By: _____
Kirk Leichliter, Assistant Vice President, Facilities Management

Date: _____

APPROVED
DEPARTMENT OF LAW
Attorney General (or authorized Delegate)

By: _____
Dan Satriana, Jr., Vice President, General Counsel

Date: _____

ALL CONTRACTS MUST BE APPROVED BY THE STATE CONTROLLER:

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Design/Build Entity is not authorized to begin performance until such time. If Design/Build Entity begins performing prior thereto, the State of Colorado is not obligated to pay Design/Build Entity for such performance or for any goods and/or services provided hereunder.

APPROVED:
STATE OF COLORADO
STATE CONTROLLER'S OFFICE
State Controller (or authorized Delegate)

By: _____
Lacey Snyder, State Controller Delegate

Date: _____

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT A

DESIGN-BUILD ENTITY DESIGNATED SERVICES AND METHOD OF PAYMENT
(Attached)

EXHIBIT A **Project Number: _____**

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	REQUIRED OF DESIGN/BUILD ENTITY					REQUIRED OF OWNER
PHASE: PRECONSTRUCTION	**PRE-CONST SVCS FEE**	**CONST SRVS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
D/B & ARCHITECTURAL SELECTION						X
CIVIL, STRUCTURAL, MECHANICAL, PLUMBING,ELECTRICAL AND OTHER SUB-CONSULTANTS AS APPLICABLE					1	2
SPECIAL CONSULTANT SELECTION						X
~~SURVEYOR SELECTION~~						~~X~~
~~SITE SELECTION RECOMMENDATIONS~~					~~2~~	~~1~~
REVIEW DESIGN CONCEPTS	X					
DEVELOP BID PACKAGES/SUB-CONTRACTING STRATEGY	1				2	
SITE USE RECOMMENDATIONS	2				1	
MATERIAL SELECTION RECOMMENDATIONS	2				1	
BUILDINGS SYSTEMS RECOMMENDATONS	2				1	
BUILDING EQUIPMENT RECOMMENDATIONS (MOVEABLE)	2				2	1
BUILDING EQUIPMENT RECOMMENDATIONS (FIXED)	2	2			1	
CONSTRUCTION FEASIBILITY RECOMMENDATIONS	1				2	
PROJECT MASTER SCHEDULING	X					
BID PACKAGE RECOMMENDATIONS	1				2	
LIFE CYCLE COSTING ANALYSIS	2				1	
INFORMAL AND FORMAL VALUE ENGINEERING	X				2	
ENERGY USE ANALYSIS AND RECOMMENDATIONS	2				1	
PRELIMINARY TOTAL COST FEASIBILITY REVIEW	1				2	
LABOR AVAILABILITY REVIEW (SUBCONTRACTORS)	X					
MATERIAL EQUIPMENT AND CONTRACTOR AVAILABILITY	X					

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: PROJECT BUDGETING AND COST CONTROL	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
TOTAL PROJECT COST BUDGET						X
DESIGN & CONSTRUCTION COST BUDGET	X					
CONSTRUCTION COST BUDGET ESTIMATES	X					
PRELIMINARY COST MODEL	X					
SCHEMATIC DESIGN PHASE ESTIMATES	X					
DESIGN DEVELOPMENT PHASE ESTIMATES	X					
BID PACKAGE/SUBCONTRACT ESTIMATES	X					
CASH FLOW PROJECTIONS	X					
PHASE FUNDING MODELING	X					
MATERIAL SURVEYS	X					
TRADE CONTRACTOR ESTIMATES	X					
CHANGE ORDER ESTIMATES			X			
SET-UP COST ACCOUNTING			X			
SET-UP REPORTING METHODS			X			
SET-UP PAYMENT PROCEDURES			2			1
SET-UP CHANGE ORDER PROCEDURES			1		2	1
CONTINUAL PROJECT COST MONITORING			1		2	1

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: SUB-CONTRACTING SELECTION AND PURCHASING	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
SET PRE-QUALIFICATION CRITERIA	1					2
RECOMMEND SUBCONTRACTOR SELECTION METHODS	X					
RECOMMEND SUBCONTRACTOR AWARD SELECTION METHODS	X					
DEVELOP CONTRACTOR INTEREST	X					
PREPARE BIDDING SCHEDULES	X					
CONDUCT PRE-BID CONFERENCE AND ISSUE PLANS	X					
RECEIVE BIDS	1					2
ANALYZE BIDS	1					2
RECOMMEND AWARD	1				2	2
VERIFY UNIT COSTS	X					
NEGOTIATE UNION RATES AND MANPOWER COSTS REQUIRED	X					
CONDUCT PRE-AWARD CONFERENCES			X			
PREPARE CONTRACTS	X					
SUPPLIER AND SUBCONTRACTOR REVIEW	X					
ORIGINATE RFI'S AFTER SCREENING			X			
PREPARE CHANGE ORDERS			1		2	
VERIFY CORRECTNESS OF QUANTITIES AND PRICES OF CHANGE ORDERS			1		2	
COORDINATE OWNER-SUPPLIED FIXED EQUIPMENT			2		1	1

Responsibility:

x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: CONTRACT DOCUMENTS COORDINATION	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
FEASIBILITY REVIEW AND RECOMMENDATIONS	X					
CONSTRUCTIBILITY REVIEW AND RECOMMENDATIONS	X					
SUBCONTRACTOR WORK SCOPING	X					
RESPONSIBILITY FOR: SAFETY PRECAUTIONS			X			
SAFETY PROGRAMS			X			
TEMPORARY FACILITIES			X			
COMMON USE EQUIPMENT			X			
COMMON USE SERVICES			X			
REVIEW FOR: JURISDICTIONAL OVERLAP	X					
INCLUSION OF ALL WORK	X					
PHASE CONSTRUCTION COORD.	X					
IDENTIFY LONG LEAD ITEMS	X					
OBTAIN AGENCY APPROVALS					2	1
ASSIST IN OBTAINING PERMITS (AS NEEDED)			X			

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: CONSTRUCTION PHASE STAFF	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
PROJECT MANAGER/ASSISTANT PROJECT MANAGER (AS REQUIRED)			X			
PROJECT SUPERINTENDENT (AS REQUIRED)			X			
ASSISTANT PROJECT SUPERINTENDENT			X			
MECHANICAL COORDINATOR (AS REQUIRED)			X			
ELECTRICAL COORDINATOR (AS REQUIRED)			X			
OFFICE ENGINEER (AS REQUIRED)			X			
ENGINEERING AND LAYOUT (AS REQUIRED)				X		
FIELD ENGINEER-LINE AND GRADE (AS REQUIRED)				X		
DRAWING CHECKER (AS REQUIRED)			X			
RODMAN AND HELPERS (AS REQUIRED)				X		
TIME KEEPER/CHECKER (AS REQUIRED)			X			
SCHEDULING ENGINEER (AS REQUIRED)			X			
PROJECT COORDINATOR			X			
COST ENGINEER (AS REQUIRED)			X			
CLERK-TYPIST (AS REQUIRED)			X			
SAFETY ENGINEER (AS REQUIRED)			X			

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: TRAVEL AND LODGING	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
STAFF TRAVEL COST		X				
STAFF TRANSPORTATION		X				
PROJECT STAFF MOVING EXPENSES		X				
PROJECT STAFF SUBSISTENCE COSTS			X			
PHASE: TEMPORARY FACILITIES						
SAFETY EQUIPMENT AND FIRST AID SUPPLIES			X			
HANDRAILS AND TOE BOARDS			X			
OPENING PROTECTION			X			
FIRE EXTINGUISHERS			X			
WATCHMAN SERVICE				X		
OFFICE OR TRAILER RENTAL			X			
WATERBOY CUPS			X			
TEMPORARY STAIRS			X			
PROJECT SIGNS			X			
BULLETIN BOARDS			X			
CONSTRUCTION FENCING			X			
BARRICADES AND COVERED WALKWAYS (AS REQUIRED)				X		
SAFETY NETS (AS REQUIRED)				X		
~~A/E TEMPORARY OFFICE (AS REQUIRED)~~			~~X~~			
TEMPORARY TOILETS			X			

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: ON-SITE UTILITIES AND SERVICES	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
TEMPORARY TELEPHONE INSTALLATION AND EXPENSE ~~(INCLUDING LOCAL A/E)~~			X			
TEMPORARY POWER SERVICE			X			
~~POWER SERVICE~~			~~X~~			
TEMPORARY WATER AND HEATING SERVICE			X			
~~HEATING ENERGY CHARGES~~			~~X~~			
TEMPORARY WIRING				X		
LIGHT BULBS				X		
DAILY CLEAN-UP			1	2		
WEEKLY TRASH-REMOVAL			1	2		
FINAL CLEAN-UP			1	2		
DUMP PERMITS AND FEES				X		
DEBRIS HAULING/REMOVAL				X		
FLAGMAN/TRAFFIC CONTROL (AS REQUIRED)				X		
FUELS FOR INITIAL TANK FILLING				X		
TEMPORARY ROADS				X		
ROADWAY MAINTENANCE				X		
DUST CONTROLS				X		
TEMPORARY EROSION CONTROL				X		
TEMP. WATER /SEWER EXPENSE & WATER EXPENSES - SITE GRADING & COMPACTION				X		
TWO-WAY RADIO EQUIPMENT (AS REQUIRED)			X			
TRASH CHUTE AND HOPPERS (AS REQUIRED)				X		

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: ON-SITE EQUIPMENT	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
AUTOMOBILE AND FUEL (AS REQUIRED)			X			
PICK-UP TRUCK AND FUEL (AS REQUIRED)			X			
FLATBED TRUCK AND FUEL (AS REQUIRED)			X			
WATER TRUCK (AS REQUIRED)				X		
AIR COMPRESSOR AND FUEL (AS REQUIRED)				X		
DEWATERING EQUIPMENT AND FUEL (AS REQUIRED)				X		
TEMPORARY GENERATOR AND FUEL (AS REQUIRED)			X			
DEBRIS REMOVAL/HAULING EQUIPMENT (AS REQUIRED)				X		
SNOW REMOVAL (AS REQUIRED)			X			
TIRES AND MAINTENANCE COST (AS REQUIRED)			X			
FORKLIFT OPERATOR				X		
MATERIAL HOIST OPERATOR			X			
PERSONNEL OPERATOR			X			
FIXED CRANE OPERATOR				X		
TRAVEL CRANE OPERATOR				X		

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: TEMPORARY HEATING	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
REMOVE SNOW AND ICE (AS REQUIRED)			X			
TEMPORARY ENCLOSURES (AS REQUIRED)				X		
PIPING COST IN BUILDING (AS REQUIRED)			X			
FUEL COST FOR HEATING (AS REQUIRED)			X			
POWER COST FOR HEATING (AS REQUIRED)			X			
FURNACE RENTAL (AS REQUIRED)			X			
HEATER RENTAL (AS REQUIRED)			X			
BOILER RENTAL (AS REQUIRED)			X			
OPERATOR - TEMPORARY SYSTEMS (AS REQUIRED)			X			
OPERATION FIRE WATCH (AS REQUIRED)				X		
CLEANING COST (AS REQUIRED)				X		
MAINTENANCE COST (AS REQUIRED)				X		
EXTENDED WARRANTY COST (AS REQUIRED)				X		
FILTER CHANGE (AS REQUIRED)				X		
TEMPORARY OFFICE HEATING (AS REQUIRED)			X			
TEMP WEATHER PROECTION & HEATING FOR SUBCONTRACTORS (AS REQ'D)				X		

Responsibility:

x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: REPRODUCTION/PRINTING AND DATA PROCESSING	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
COST STUDY DOCUMENTS					X	
SYSTEMS STUDY DOCUMENTS					X	
BID PACKAGE SETS (SEE PARAGRAPH 3.5.9)	X					
BIDDING INSTRUCTIONS	X					
CONSTRUCTION DOCUMENTS ORIGINAL					X	
POSTAGE AND EXPRESS COSTS (CM/GC ISSUES PLANS)			X			
AS-BUILT SUB-DOCUMENTS				X		
AS-BUILT DOCUMENTS			X			
ACCOUNTING FORMS		X				
FIELD REPORTING FORMS			X			
SUBCONTRACT AGREEMENT FORMS	X					
SCHEDULE REPORT FORMS			X			
ESTIMATING FORMS	X					
COST REPORTING FORMS	X					
VALUE ANALYSIS STUDIES PRINTING	X					
DATA PROCESSING (MAIN OFFICE)		X				
REFERENCE MATERIALS			X			
SHOP DRAWING PRINTING				X		
ON-SITE FAX AND COPIER			X			
DATA PROCESSING (ON-SITE)			X			
MAINTENANCE MANUALS (FROM SUBS) AND OPERATIONS MANUALS (FROM SUBS)				X		

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	REQUIRED OF DESIGN/BUILD ENTITY					REQUIRED OF OWNER
PHASE: QUALITY CONTROL	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
FIELD INSPECTOR (AS REQUIRED)			X			
INSPECTORS' OFFICE (AS REQUIRED)			X			
INSPECTORS' TRANSPORTATION (AS REQUIRED)			X			
INSPECTORS' EQUIPMENT (AS REQUIRED)			X			
SPECIAL INSPECTION CONSULTANTS						X
SPECIAL TESTING CONSULTANTS						X
CONCRETE SUBSTRUCTURE-OBSERVATIONS						X
CONCRETE TESTING						X
MASONRY TESTING						X
COMPACTION TESTING						X
WELDING TESTING						X
PIER INSPECTION/TESTING						X
SOILS INVESTIGATION						X
SPECIAL TESTING SERVICES (EXCEPT AS NOTED)						X
PROJECT PHOTOGRAPHS			X			
WARRANTY INSPECTIONS / REWORK		1			2	
AIR AND WATER BALANCING				X		
OPERATOR ON-SITE TRAINING			X			
PREPARE OPERATION/MAINTENANCE MANUALS			2	1		

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	REQUIRED OF DESIGN/BUILD ENTITY					REQUIRED OF OWNER
PHASE: PERMITS AND SPECIAL FEES	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
STORAGE YARD RENTAL				X		
PARKING LOT RENTALS AND SHUTTLE EXPENSES (AS REQUIRED)				2		1
FIELD OFFICE STAFF PARKING FEES			X			
SIGN PERMITS			X			
STREET/CURB PERMIT				X		
BUILDING PERMITS						X
PLAN CHECK FEES						X
WATER SYSTEM DEV. FEE						X
SEWER USE & DRAINAGE PERMIT/DEV. FEE						X
STORM CONNECTION FEE						X
GAS AND POWER SERVICE CHARGE (PERMANENT)						X
GAS AND POWER SERVICE CHARGE (TEMPORARY)			X			
STEAM SERVICE CHARGE						X
CHILLER WATER SERVICE CHARGE						X
SPECIAL TAP FEES						X
CONTRACTORS LICENSES		X				
CONSTRUCTION EQUIPMENT LICENSES		X				
CONSTRUCTION EQUIPMENT PERMITS				X		

Responsibility:
x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: INSURANCE AND BONDS	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
BUILDERS RISK INSURANCE			~~X~~			X
GENERAL LIABILITY, INCLUDING AUTOMOBILE			X			
PRODUCT LIABILITY			X			
EXCESS LIABILITY COVERAGE			X			
WORKERS COMPENSATION (FIELD OFFICE STAFF)			X			
FICA INSURANCE (FIELD OFFICE STAFF)			X			
FEDERAL UNEMPLOYMENT (FIELD OFFICE STAFF)			X			
STATE UNEMPLOYMENT (FIELD OFFICE STAFF)			X			
CONSTRUCTION MANAGER'S PAYMENT BOND			X			
CONSTRUCTION MANAGER'S PERFORMANCE BOND			X			
STATE/LOCAL BONDS				X		
* SUBCONTRACTOR BONDS				X		

Responsibility:
x = Total 1 = Primary 2 = Secondary

* ONLY AS MUTUALLY AGREED UPON BETWEEN THE PRINCIPAL REPRESENTATIVE AND THE DESIGN/BUILD ENTITY.

EXHIBIT A **Project Number: _____**

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	REQUIRED OF DESIGN/BUILD ENTITY					REQUIRED OF OWNER
PHASE: **OTHER COSTS**	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
CONSTRUCTION EQUIPMENT				X		
CONSTRUCTION SERVICES LABOR				X		
CONSTRUCTION MATERIALS				X		
COST OF DESIGN AND ENGINEERING					X	
A/E FAST TRACK COST EXTRAS					X	
PRELIMINARY SOILS INVESTIGATION						X
TITLE/DEVELOPMENT COST						X
BUILDING OPERATION AFTER MOVE-IN						X
BUILDING MAINTENANCE AFTER MOVE-IN						X
MOVING COORDINATION				1		2
MOVING COSTS				1		2
COSTS OF EMERGENCY WORK				X		
DESIGN/BUILD ENTITY GENERAL OVERHEAD COST		X				
DESIGN/BUILD ENTITY PROFIT MARGIN		X				
GMP FINANCIAL RESPONSIBILITIES		X				
STATE REQUIRED INSPECTIONS						X

Responsibility:

x = Total 1 = Primary 2 = Secondary

Designated Services and Method of Payment

DESIGN / BUILD SERVICES	**REQUIRED OF DESIGN/BUILD ENTITY**					**REQUIRED OF OWNER**
PHASE: OFF-SITE SERVICES	**PRE-CONST SVCS FEE**	**CONST SVCS FEE**	**GEN CONDS.**	**DIRECT COST OF WORK**	**REQUIRED OF D/B ARCH**	
CORPORATE EXECUTIVES (AS REQUIRED)	X	X				
PRINCIPAL IN CHARGE (AS REQUIRED)	X	X				
PROJECT EXECUTIVE (AS REQUIRED)	X	X				
LEGAL - BASIC SERVICES (AS REQUIRED)	X	X				
ACCOUNTING (AS REQUIRED)		X				
PURCHASING (AS REQUIRED)	X					
SAFETY OFFICER (AS REQUIRED)		X				
EEO OFFICER (AS REQUIRED)	X	X				
SECRETARIAL AND CLERK-TYPIST (AS REQUIRED)	X	X				
BENEFITS AND VACATIONS FOR ABOVE	X	X				
STAFF BONUSES		X				

Responsibility:
x = Total 1 = Primary 2 = Secondary

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT B

DESIGN BUILD ENTITY'S CERTIFICATION

I hereby certify:

a. That I am the _____ and duly authorized representative of the firm of:
_____**;**
and

b. That the wage rates and other factual unit costs supporting the compensation to be paid by the State for these professional services and other services are accurate, complete, and current; and

c. That I understand the original contract price and any additions shall be adjusted to exclude any significant sums by which the State determines the contract price had been increased due to inaccurate, incomplete, or non-current wage rates and other factual unit costs; and

d. That all such contract adjustments shall be made within one year following the end of this contract.

DESIGN BUILD ENTITY

_____
Signature

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT C

DESIGN/BUILD ENTITY 'S CERTIFICATE OF LIABILITY INSURANCE
(attached)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT D

CERTIFICATION AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS
(required at contract signing prior to commencing Work)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT E

(Not Used)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT F

LIST OF PRE-QUALIFIED SUBCONTRACTORS
(when approved by the Principal Representative and prior to bidding)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT G

SCHEMATIC DESIGN ESTIMATE SUMMARY AND UPDATED SUMMARIES
(when approved by the Principal Representative)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT H

FIRST AMENDMENT (INCORPORATING GMP) EXHIBITS

H.1 Guaranteed Maximum Price Documents, Drawings, and Specifications including Addenda and Modifications (when approved by the Principal Representative)

H.2 Schedule of Bid Package Descriptions and Issuance Dates

H.2 Schedule of Values

H.4 Allowance Schedule

H.5 CPM Construction Schedule

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT I

SECOND AND SUBSEQUENT AMENDMENT (INCORPORATING BID PACKAGES) EXHIBITS

I.1 Contract Document Drawings and Specifications (when approved by the Principal Representative)

I.2 All Addenda and Modifications

I.3 Schedule of Values (consistent with GMP Schedule of Values)

I.4 Allowance Schedule (consistent with GMP Allowance Schedule)

I.5 Performance Bond

I.6 Labor and Material Payment Bond

I.7 Property Insurance Certificate

I.8 Certification and affidavit regarding unauthorized Immigrants (UI-1)

I.9 Notice to Proceed to Commence Construction Phase (Form SC 7.26)

I.10 Detailed Construction Schedules (when approved by the Principal Representative).

I.11**.** Notice of Substantial Completion (Form SBP-07).

I.12**.** Notice of Approval of Occupancy/Use (Form SBP-01).

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT J

NOTICE OF ACCEPTANCE
(attach when executed)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT K

NOTICE OF CONTRACTOR'S SETTLEMENT
(attach when executed)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT L

REQUEST FOR PROPOSAL (DATED _____)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT M

DESIGN BUILD ENTITY'S FEE PROPOSAL

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT N

SALES AND USE TAX FORMS

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

DESIGN/BUILD GUARANTEED MAXIMUM PRICE (GMP) AGREEMENT
(STATE FORM SC-9.0)

EXHIBIT O

BUILDING CODE COMPLIANCE POLICY: COORDINATION OF APPROVED BUILDING CODES, PLAN REVIEWS AND BUILDING INSPECTIONS

https://www.colorado.gov/pacific/osa/formscont

OSA Menu – State Buildings – Project Management Policies/Guidelines – Click on Contract Forms – Click on Code Compliance

Appendix C

CERTIFICATION AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS (FORM UI-1)

STATE OF COLORADO
OFFICE OF THE STATE ARCHITECT
STATE BUILDINGS PROGRAM

CERTIFICATION AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS

Institution/Agency: _____

Project No./Name: _____

A. CERTIFICATION STATEMENT CRS 8-17.5-101 & 102 (HB 06-1343, SB 08-193)

The Vendor, whose name and signature appear below, certifies and agrees as follows:

1. The Vendor shall comply with the provisions of CRS 8-17.5-101 et seq. The Vendor shall not knowingly employ or contract with an unauthorized immigrant to perform work for the State or enter into a contract with a subcontractor that knowingly employs or contracts with an unauthorized immigrant.

2. The Vendor certifies that it does not now knowing employ or contract with and unauthorized immigrant who will perform work under this contract, and that it will participate in either (i) the "E-Verify Program", jointly administered by the United States Department of Homeland Security and the Social Security Administration, or (ii) the "Department Program" administered by the Colorado Department of Labor and Employment in order to confirm the employment eligibility of all employees who are newly hired to perform work under this contract.

3. The Vendor shall comply with all reasonable requests made in the course of an investigation under CRS 8-17.5-102 by the Colorado Department of Labor and Employment. If the Vendor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the State may terminate work for breach and the Vendor shall be liable for damages to the State.

B. AFFIDAVIT CRS 24-76.5-101 (HB 06S-1023)

4. If the Vendor is a sole proprietor, the undersigned hereby swears or affirms under penalty of perjury under the laws of the State of Colorado that (check one):

   ☐ I am a United States citizen, or

   ☐ I am a Permanent Resident of the United States, or

   ☐ I am lawfully present in the United States pursuant to Federal law.

   I understand that this sworn statement is required by law because I am a sole proprietor entering into a contract to perform work for the State of Colorado. I understand that state law requires me to provide proof that I am lawfully present in the United States prior to starting work for the State. I further acknowledge that I will comply with the requirements of CRS 24-76.5-101 et seq. and will produce the required form of identification prior to starting work. I acknowledge that making a false, fictitious, or fraudulent statement or representation in this sworn affidavit is punishable under the criminal laws of Colorado as perjury in the second degree under CRS 18-8-503 and it shall constitute a separate criminal offense each time a public benefit is fraudulently received.

CERTIFIED and AGREED to this _____ day of _____, 20___.

VENDOR:

_____
Vendor Full Legal Name

BY: _____ _____
Signature of Authorized Representative Title

Appendix D

PROJECT CONCEPT, PROGRAM AND SPECIFICATIONS

University of Northern Colorado
Fire Sprinkler Upgrades – Request For Proposal
Design-Build Scope of Work
Carter Hall
CRA #2014-292
January 3, 2017

CODES APPLICABLE TO THIS PROJECT:

The 2015 edition of the International Building Code (IBC)

The 2015 edition of the International Mechanical Code (IMC)

The 2015 edition of the International Energy Conservation Code (IECC)

The 2014 edition of the National Electrical Code (NEC)

The 2015 edition of the International Plumbing Code (IPC)

The National Fire Protection Association Standards (NFPA):

13 (2013), 14 (2013), 25 (2014), 72 (2013)

The 2007 edition of ASME A17.1 Safety Code for Elevators and Escalators

The 2010 edition of ASME A17.3 Safety Code for Existing Elevators and Escalators

GENERAL

The purpose of this is to document the existing conditions and broadly establish the Scope of Work required to upgrade Carter Hall to being protected throughout by an Automatic Fire Sprinkler and Standpipe System. It is the intent of this document to establish the parameters for a successful Design-Build team to fully investigate, design, and construct an Automatic Fire Sprinkler and Standpipe System. All final decisions and designs are the responsibility of the Design Build team's registered design professionals.

This narrative is not intended as an extensive code analysis, but certain code concerns are noted. The Scope of this Work does not anticipate addressing the existing code deficiencies, other than as inherently affected by the addition of the Automatic Fire Sprinkler and Standpipe system. It is the responsibility of the Design-Build team to address any issues that the Authorities Having Jurisdiction or UNC's insurance carrier may require, or preferably, to confirm that the extent of this work does not trigger larger code upgrade requirements.

BUILDING CONDITIONS

Carter Hall is a building of unique design and aesthetic appeal. There is no official historic property designation, but it should be recognized that the aesthetic properties are a feature that should be preserve to the greatest extent possible. The building is constructed primarily of cast-in-place reinforced concrete with unprotected steel joist and beams. Portions of the roof deck and structure were observed to be wood construction. It is not clear if this condition exists for all roof deck construction.

The building is approximately 78,500 gross square feet with 5 stories or levels. Each floor plate is unique, with mezzanines, high ceiling spaces, short floor-to-floor spaces and an occupiable cupola.

There are multiple stairways. There is no single enclosed stair to provide egress from all floors. Except for L0 and L1, egress must transfer between offset stairs through other occupied spaces. This arrangement means that levels L1, L2, and L3 are open to each other. Compliance with travel distance requirements and the use of "egress access" stairs has not been verified as part of this narrative.

On L4, there is standard single pane glass overlooking L3 on two sides. Since L3 is open to L2 and L1, this level is essentially unprotected from L1, L2, and L3.

There are several light shafts extending from various levels to skylights at the roof. Several of these were observed to have discontinuities in the wall construction, and may not provide adequate vertical floor opening protection.

The building contains a mixture of lay-in tile ceilings and substantial areas of lath and plaster ceilings with arches and coves. There is an area on the South portion with a large opening between L2 and L3, with a vaulted corridor passing through on L2 and a skylight above.

Planned Upgrades and Challenges:

The scope of this project is to install an Automatic Fire Sprinkler and Standpipe System throughout the building. This will greatly reduce if not eliminate any significant life safety concerns of the current building. However, the extent of construction activities may trigger the Authorities Having Jurisdiction to require the Design Build team to address the existing issues. It will be the responsibility of the Design Build team to work with these authorities to satisfy their concerns while minimizing additional project scope. In particular, upgrading the various areas of unprotected vertical openings to full new construction compliance is not a prime goal of this project. However, the Design Build team shall investigate options for justifying the existing conditions (once sprinklered), as well as mitigating the vertical openings with solutions such minor fire resistive construction, draft curtains and closely spaces sprinklers, or sprinklered glass.

The installation of piping will require cutting and patching of building elements, constructing chases, and providing above ceiling access and repairing ceilings afterwards. Most of spaces have lay-in tile ceilings. It is not anticipated to upgrade ceilings, lighting, or HVAC systems, so those shall be protected during pipe installation, and restored to existing conditions. This kind of work will likely

result in some tile damage or loss, so the Design Build team is encouraged to establish a ceiling tile harvesting scheme that results in rooms with consistent types and age of tiles rather than a patch work.

The building contains hazardous materials including lead and asbestos containing materials. A list of know asbestos containing materials is provided at the end of this scope. This is not intended to be a comprehensive list.

It is highly desired to avoid permanently affecting plaster wall and ceiling finishes. There will be areas where to avoid plaster work, additional piping would be required. The Design Build team should address the pros and cons of more pipe work vs less plaster work or vice-versa. In some cases, specialty sprinkler solutions, such as sidewall sprinklers and/or extended coverage pendant sprinklers will be most appropriate. See the plans attached to this RFP for specific areas where concealed pipe and/or sprinklers are required. It is recommended that a specialty plaster subcontractor be part of the Design Build team.

A new fire resistance rated room, with either direct access to the exterior or a protected route from the exterior will be required for a Fire Pump to meet NFPA 20 requirements. The Design Build team shall work with the AHJs and UNC's insurance carrier to confirm what if any accommodations can be granted given the existing arrangement of the building.

This building is an administrative building, and does not see the drastic reduction in occupancy during the summer that a classroom building would, but does have peak occupancy and critical functions that occur around the beginning and end of each semester. There will likely be a steady population at all times. The Data Center is required to be operational at all times. Scheduling of work around occupants, protection of occupied spaces, and minimization of occupant disruption will be a challenge to be met by the Design Build team.

FIRE SPRINKLER

Existing Conditions:

The North half of L0 is partially protected with an Automatic Fire Sprinkler System. Most of the spaces in this area have sprinklers, however there are several small storage closets off the corridor without sprinklers, at least one sprinkler too far recessed above the ceiling, and a few sprinklers in the mechanical rooms and elsewhere may not in be accordance with the obstruction rules of NFPA 13.

There is a Clean Agent fire suppression system for the large server room and ancillary spaces in L0. This area has no water based Fire Protection.

There is a Standpipe system consisting of 1½" hose valve outlets fed from 2" and 2½" mains and risers. These are far from obvious with several located within private offices. Placement does not appear to meet the travel distance required for a Class II standpipe.

The water entry for the fire sprinkler and hose outlets is from the West, and enters the building via a 3" galvanized steel combined domestic water and fire line in the West L0 Mechanical room. This line comes from the tunnel, but leaves the tunnel towards the South about 30' west of the building wall. Static pressure was observed to be approximately 50 psi at the pressure gauge upstream of the backflow preventer.

There is one 2-inlet Fire Department Connection on the West side of the building. There is one fire hydrant approximately 150' East of the building, one fire hydrant approximately 250' Northeast of the building, and one fire hydrant approximately 400' West of the building.

The elevator equipment room is in a small room on L0. This is a hydraulic elevator. The equipment room is provided with a sprinkler but there is no obvious branch into the hoistway.

Upgrades and Challenges:

The scope for this project is to install an automatic fire sprinkler system. It is desired to meet NFPA 13, 14, and 20 requirements to the greatest extent possible. It is anticipated this will trigger other work directly related to this project including, electrical and fire alarm work, new space requirements, selective demolition, restoration of finishes, and possibly a new water service. It is the responsibility of the Design Build Team to identify and perform all ancillary work directly associated with the automatic sprinkler and standpipe system. It is also the responsibility of the Design Build Team to work with the Authorities Having Jurisdiction and the UNC's Insurance carrier to minimize work outside of this limited scope that may be triggered by new construction work in this building.

- Water Entry and Utility Main:

It is anticipated that the existing water service will not be adequate to serve the sprinkler flow and pressure demand, and is certainly not the standpipe flow and pressure. Further, the existing 3" water line is galvanized steel from the tunnel wall to the point of the domestic water distribution and is showing signs of corrosion. The Design Build Team shall address the need for a new fire protection water service, and provide any utility work required. Address the possibility to concurrently provide a new or combined domestic water service. Note that the fire hydrant Southeast of Carter Hall, installed in 2015 for the Kepner Hall work, is fed from a dedicated 6" branch off of a 10" main South Kepner and Carter, where 18th street would cross the campus.

- Fire Department Connection:

The current location of the FDC is about 400' away from the fire hydrant on the West side, and is not convenient to the nearest fire hydrant off the Southeast corner of the building. Greeley Fire Department apparatus access was coordinated for the hydrant to the east for Kepner Hall. It may be most appropriate to locate a new FDC, sized for the standpipe demand, near the Southeast corner of Carter Hall to take advantage of this Fire Hydrant.

- Standpipe System

This building is over 30' to the highest occupiable floor, and therefore a Class I standpipe is required. However, the arrangement of the several unenclosed, offset stairways does not lend itself to a typical standpipe layout. The Design Build Team shall coordinate with the Authorities Having Jurisdiction (AHJ) to establish a standpipe layout that accommodates the anticipated fire response plan. The Design Build Team shall also determine whether the AHJ's will allow a Manual Wet Standpipe vs an Automatic Wet Standpipe, and the resulting effect on a fire pump.

The existing standpipes with 1½" hose valves are inadequate for firefighter response, and the original purpose of a Class II standpipe (occupant response) is inappropriate. The standpipes are difficult to find, with several located within a private office. This system should be removed.

- Fire Pump

The pressure gauge on the inlet side of the fire protection backflow preventer was observed to read approximately 50 psi. It is unlikely this will be sufficient to meet the sprinkler flow and pressure demand. It may be possible to meet the sprinkler demand if a new 4"-6" water main is installed and interior pipe is kept fairly large. The new 6" line installed in 2015 for the Kepner Hall sprinkler upgrade may support the sprinkler demand. If the sprinkler demand cannot be met by conservative main and internal pipe sizing, a fire pump will be required.

The standpipe flow and pressure demand will either have to be met with a fire pump, or approval from the AHJs and UNC's insurance carrier will need to be obtained by the Design Build Team for a Manual Wet Standpipe system. Making the FDC easily accessible from the new fire hydrant to the south east of Carter Hall will likely facilitate that approval.

NFPA 20 requires that the fire pump location be pre-planned with the Fire Department, and either direct access to the exterior or access via a fire resistive stair and horizontal passageway. Fully compliant access will be a challenge. It is the responsibility of the Design Build Team to obtain approvals from the AHJs and UNC's insurance carrier.

Determination of the standpipes as Automatic Wet vs Manual Wet will greatly affect the pump size and power supply requirements.

- Sprinkler Pipe Installation:

Routing pipe though he building will be a challenge due to above ceiling space and architecturally significant plaster finishes. See the attached drawing indicating where exposed pipe or sprinkler heads is acceptable, all other places plaster walls and ceilings requiring access shall be repaired and restored to current conditions. It is encouraged to layout the piping to avoid plaster repairs to the greatest extent possible, even where additional piping would be required.

There are locations where occupied levels are directly above other occupied levels, resulting in about 2" - 3" of clearance below structural elements, making pipe routing and keeping sprinklers recessed

a challenge. There are other areas with no occupied level above, resulting in 10' or more above the ceiling, making setting upper attachments a challenge.

Due to the inconsistent floor plates between levels, and open areas between floors, it will be difficult to develop a logical sprinkler zone layout. There will be areas where, for instance, sprinklers at the L3 ceiling serve both L3 and L2. The Design Build Team shall work with the AHJs and UNC's insurance carrier to develop an acceptable sprinkler zone concept.

As discussed above, the standpipe layout is less than straightforward. A more typical layout would allow for a combination standpipe/sprinkler riser. However, the main stairs at the east and west entries are open to view, and therefore it will not be acceptable for the pipe and fittings needed for a sprinkler zone control assembly to be located in that area. It is likely separate sprinkler risers will be needed.

CPVC piping has been used for other sprinkler projects on the UNC campus. The use of CPVC piping will allowed in concealed locations. This can assist in pipe installation in tight and minimally accessible locations.

- Sprinkler placement:

Much of the building has smooth flat suspended ceilings. There are a few vaulted and coved ceilings. The main challenge is in routing piping to sprinklers without damaging plaster finishes. The use of sidewall sprinklers and extended coverage sprinklers is encouraged to minimize effects on architecturally significant finishes. There are several areas of concern:

  - One area of wood deck construction was observed. There may be others. This will trigger sprinklers for concealed combustible spaces. Provide coverage to meet NFPA 13 or as required by the AHJs and UNC's insurance carrier.
  - There are several skylights and light shafts. Provide coverage as required. The integrity of floor-to-floor separations is suspect in these light shafts. Confirm with AHJs and UNC's insurance carrier whether the sprinkler work in these light shafts will trigger upgrading the shaft construction.
  - A sprinkler will be added to the elevator hoistway within 24" of the bottom.
  - The various areas with unprotected vertical openings may trigger a sprinkler based solution, such as closely spaced sprinklers and draftstops or sprinklered glass.

- Data Center

The Data Center is currently protected by a clean agent fire suppression system, but no water based sprinklers. A fully sprinklered building is required to have all areas covered with a water based sprinkler system, with any clean agent system being supplemental only. It is desired to avoid water based sprinklers in the Data Center if possible. The Design Build Team shall work with the AHJs and UNC's insurance carrier to avoid sprinklers in the Data Center while still obtaining the desired

benefits of considering the building to be fully sprinklered. If water base sprinklers cannot be avoided, coordinate costs and benefits of a pre-action system with UNC. If a pre-action system is to be used, provide a nitrogen generator for the supervisory pressure rather than an air compressor for corrosion mitigation purposes.

- Existing Sprinklered Areas

The existing sprinkler coverage in sprinklered portions of L0 appears to be generally adequate, however there are several locations that do not meet the current obstruction requirements, are missing sprinkler protection cages in storage and MEP rooms, or where small storage rooms are not covered. The Design Build Team shall investigate the existing sprinkler coverage and modify to be compliant with current requirements.

Perform all testing and inspection requirements of NFPA 25. Notify UNC of any impairments or deficiencies and recommend corrections. Re-establish the baseline for the main drain tests. Review the age of the existing sprinklers and propose to the UNC replacement of standard response sprinklers over 30 years old and quick response sprinklers over 10 years old. This is to provide a buffer between completion of this project and the NFPA required sprinkler replacement/testing schedule. Replace all gauges. Thoroughly flush the existing piping.

Cages shall be added to sprinklers in Storage and MEP rooms.

- Occupancy Hazard Levels

The NFPA 13 Occupancy Hazard Level is predominately Light Hazard. The, mechanical/electrical rooms, and general storage may reach the level of Ordinary Hazard 1 or 2. The Design Build Team shall establish Occupancy Hazard Levels.

FIRE ALARM and ELECTRICAL

The Design Build team shall investigate the existing Fire Alarm and Electrical distribution system, and provide the required support for the addition of the Automatic Fire Sprinkler and Standpipe system.

The existing Fire Alarm system will need to be modified to accommodate new Automatic Fire Sprinkler system supervisory and initiation components. The challenges of sprinkler zoning can be mitigated with clear descriptions of the monitored devices and graphic maps.

It is possible that by making this a fully sprinklered building, some existing fire alarm initiating devices may be reduced.

A means of disconnecting power from the elevator prior to activation of sprinkler water is required for the elevator. It is not clear if this is present, the Design Build team shall investigate and provide as required.

If a fire pump is required, it will need to be powered in accordance with NFPA 20. The Design Build team shall review the existing capacity and arrangement of the electrical distribution system and provide the appropriate sizing and protection of electrical feeders. The AHJs and UNC's insurance carrier shall be consulted to determine if the utility power supply is considered "reliable enough" for this building to avoid an emergency power supply.

MVJ/ef
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Carter Hall Asbestos Containing Material Log

BuildingName	AsbestosRoomID	Asbestos Present	Material Description	Remaining Quantity	Units	EPA Category	Friability
Carter Hall	CRH 0002A	Yes	“Aircell” Pipe Insulation	6	Linear Feet	Friable	Friable
Carter Hall	CRH 0002A	Yes	Mudded Pipe Elbows Insulation	2	Each	Friable	Friable
Carter Hall	CRH 0007	Yes	Brown With Black Streaks Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0008	Yes	Brown With Black Streaks Floor Tile And Adhesive	792	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0010	Yes	9” x 9” Off-White With Streaks Floor Tile And Adhesive	2030	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0010A	Yes	9” x 9” Off-White With Streaks Floor Tile And Adhesive	196	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0011	Yes	Black Floor Tile Adhesive	144	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0014	Yes	Brown With Black Streaks Floor Tile And Adhesive	264	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0014A	Yes	Brown With Black Streaks Floor Tile And Adhesive	252	Square Feet	Non-Friable	Category I
Carter Hall	CRH 0016	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	28	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 1001	Yes	Green Floor Tile And Adhesive	286	Square Feet	Non-Friable	Category I
Carter Hall	CRH 1003	Yes	Green Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
Carter Hall	CRH 1007	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	8	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2008	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	104	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2008A	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	88	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2008B	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	88	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009A	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	30	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009A	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	108	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009A	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	108	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009C	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	6	Square Feet	Non-Friable	OSHA Regulated

Carter Hall	CRH 2009C	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009C	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009E	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	11	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009E	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	77	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009E	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	77	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009G	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	30	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009G	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	102	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009G	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	102	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009H	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	55	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009H	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	55	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009I	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	3	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009I	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	7.5	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009I	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	7.5	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009J	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	9	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009J	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	76.5	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009J	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	76.5	Square Feet	Non-Friable	Category I

Carter Hall	CRH 2009K	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	30	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009K	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	114	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009K	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	114	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009L	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	9	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009L	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009L	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009M	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	9	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009M	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009M	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	36	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2009N	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	70	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2009N	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
Carter Hall	CRH 2010	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	25	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2010	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	175	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2012B	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	144	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2012C	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	144	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2012C	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	144	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 2014	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	78	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 3001	Yes	Green Floor Tile And Adhesive	286	Square Feet	Non-Friable	Category I

Carter Hall	CRH 3002C	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	130	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 3002D	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	160	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 3002E	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	99	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 3002F	Trace	1’ x 2’ Dark Brown With Streaks Floor Tile And Adhesive (Perimeter)	76	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 3002F	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	960	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH 5000	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	400	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C0000	Yes	“Aircell” Pipe Insulation	2	Linear Feet	Friable	Friable
Carter Hall	CRH C0000	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	60	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C0000	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	30	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C0000	Yes	Mudded Pipe Elbows Insulation	1	Each	Friable	Friable
Carter Hall	CRH C0009	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	16	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C0016	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	150	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C0016	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	40	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C1001	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	2100	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C1001	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	2100	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C1005	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	72	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C1005	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	72	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C2015	Trace	9” x 9” Dark Brown With Streaks Floor Tile And Adhesive	110	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C2015	Yes	9” x 9” Maroon With Orange (Tan) Streaks Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
Carter Hall	CRH C2017	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	280	Square Feet	Non-Friable	OSHA Regulated

Carter Hall	CRH C3000	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	1740	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH C3000	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	1740	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH ELEV	Yes	12” x 12” Tannish/Yellow With Chip Pattern Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
Carter Hall	CRH EXT	Yes	Gray 3/4” Thick Wall Covering (Transite)	520	Square Feet	Non-Friable	Category II
Carter Hall	CRH EXT	Trace	Gray Exterior Window Misc Caulking Material	2100	Linear Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH EXT	Trace	White Exterior Stucco	4800	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH EXT	Trace	White Window Glazing	400	Linear Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH R2003	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	77	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH R2003	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	77	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH R3003	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	84	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH R3003	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	84	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH S0011	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	150	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH S0011	Trace	12” x 12” Red With Cream Streaks Floor Tile And Adhesive	40	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH S5004	Trace	12” x 12” Off-white With Streaks Floor Tile And Adhesive	42	Square Feet	Non-Friable	OSHA Regulated
Carter Hall	CRH TUN A	Yes	“Aircell” Pipe Insulation	45	Linear Feet	Friable	Friable
Carter Hall	CRH TUN A	Yes	Gray “Aircell” Pipe Insulation	40	Linear Feet	Friable	Friable
Carter Hall	CRH TUN A	Yes	Mudded Pipe Elbows Insulation	8	Each	Friable	Friable
Carter Hall	CRH TUN A	Yes	White Hard Pack Pipe Fittings And Pipe Elbows	15	Each	Friable	Friable
Carter Hall	CRH TUN B	Yes	“Aircell” Pipe Insulation	434	Linear Feet	Friable	Friable
Carter Hall	CRH TUN B	Yes	Gray “Aircell” Pipe Insulation	20	Linear Feet	Friable	Friable
Carter Hall	CRH TUN B	Yes	Mudded Pipe Elbows Insulation	54	Each	Friable	Friable
Carter Hall	CRH TUN B	Yes	White Hard Pack Pipe Fittings And Pipe Elbows	6	Each	Friable	Friable
Carter Hall	CRH TUN C	Yes	Gray “Aircell” Pipe Insulation	80	Linear Feet	Friable	Friable

Carter Hall	CRH TUN C	Yes	White Hard Pack Pipe Fittings And Pipe Elbows	20	Each	Friable	Friable
Carter Hall	CRH TUN D	Yes	“Aircell” Pipe Insulation	48	Linear Feet	Friable	Friable
Carter Hall	CRH TUN D	Yes (assumed)	Asbestos Contaminated Soil	450	Square Feet	Friable	
Carter Hall	CRH TUN D	Yes	Gray “Aircell” Pipe Insulation	150	Linear Feet	Friable	Friable
Carter Hall	CRH TUN D	Yes	Mudded Pipe Elbows Insulation	6	Each	Friable	Friable
Carter Hall	CRH TUN D	Yes	White Hard Pack Pipe Fittings And Pipe Elbows	50	Each	Friable	Friable

University of Northern Colorado
Fire Sprinkler Upgrades – Request For Proposal
Design-Build Scope of Work
McKee Hall
CRA #2014-292
January 3, 2017

CODES APPLICABLE TO THIS PROJECT:

The 2015 edition of the International Building Code (IBC)

The 2015 edition of the International Mechanical Code (IMC)

The 2015 edition of the International Energy Conservation Code (IECC)

The 2014 edition of the National Electrical Code (NEC)

The 2015 edition of the International Plumbing Code (IPC)

The National Fire Protection Association Standards (NFPA):

13 (2013), 14 (2013), 25 (2014), 72 (2013)

The 2007 edition of ASME A17.1 Safety Code for Elevators and Escalators

The 2010 edition of ASME A17.3 Safety Code for Existing Elevators and Escalators

GENERAL

The purpose of this is to document the existing conditions and broadly establish the Scope of Work required to upgrade McKee Hall to being protected throughout by an Automatic Fire Sprinkler and Standpipe System. It is the intent of this document to establish the parameters for a successful Design-Build team to fully investigate, design, and construct an Automatic Fire Sprinkler and Standpipe System. All final decisions and designs are the responsibility of the Design Build team's Registered Design Professionals.

This narrative is not intended as an extensive code analysis, but certain code concerns are noted. The Scope of this Work does not anticipate addressing the existing code deficiencies, other than as inherently affected by the addition of the Automatic Fire Sprinkler and Standpipe system. It is the responsibility of the Design-Build team to address any issues that the Authorities Having Jurisdiction (AHJs) or UNC's insurance carrier may require, or preferably, to confirm that the extent of this work does not trigger larger code upgrade requirements.

BUILDING CONDITIONS

McKee Hall is approximately 130,000 gross square feet with 6 occupied stories or levels plus a penthouse level, and is constructed primarily of cast-in-place reinforced concrete. The building consists 3 basic "blocks": a high ceiling space lecture hall with an approximately 10,000 sf floorplate on L1 with minimal support space below; a separate 3 level (L0, L1, L2) classroom/office block with an approximately 23,000 sf floor plate on L0 and L1 and 33,000 sf at L2; and a 3 story plus penthouse (L3, L4, L5, PH) classroom/office block spanning the gap between the lecture hall and L0/L1/L2 blocks.

There are 4 egress stairways. The two North stairs, serve the lower classroom/office block. These are open from L0 to L2, and discharge to grade between L1 and L0. There is what appears to be a drop-down door to separate L0 from L1 and L2, but it is unlikely this meets the rating listing or operation via the fire alarm system as required by current code. The Middle Stair connects all levels L0 through PH. It is enclosed, however at L1 and L2 the enclosure encompasses part of the corridor system with separation achieved with doors on magnetic hold-opens, and the enclosure discharges to the corridor on L1. The enclosure/corridor at L1 and L2 have the potential to accumulate combustible materials such as recycle bins, newspaper containers, and decorations. The South stair serves L3, L4, and L5, with an express flight from L3 to the exterior in the lecture hall block with no connection to the lecture hall itself. This south stair appears to be an atmospheric smoke protected stair with a vestibule at each floor vented to the exterior via a roof vent at the PH level. Compliance with Means of Egress and Egress Discharge requirements has not been confirmed as part of this narrative.

The lecture hall block includes the main electrical room with a mezzanine that contains the emergency generator and emergency switchgear.

Along the perimeter of the building and above the gap between the lecture hall and lower office/classroom blocks is an overhang with occupied space above. This overhang is the exposed cast-in-place waffle slab of the floor structure above.

The ceilings in this building are predominately lay-in tile with MEP and Storage rooms having no ceiling.

<u>Planned Upgrades and Challenges:</u>

The scope of this project is to install an Automatic Fire Sprinkler and Standpipe System throughout the building. This will greatly reduce if not eliminate any significant life safety concerns of the current building. However, the extent of construction activities may trigger the Authorities Having Jurisdiction to require the Design Build team to address the existing issues. It will be the responsibility of the Design Build team to work with these authorities to satisfy their concerns while minimizing additional project scope. These issues do not appear critical, and it is likely that the upgrade to fully sprinklered will mitigate them.

If a fire pump is required (not anticipated, but possible), a new fire resistance rated room, with either direct access to the exterior or a protected route from the exterior will be required to meet NFPA 20 requirements. The Design Build team shall work with the AHjs and UNC's insurance carrier to confirm what if any accommodations can be granted given the existing arrangement of the building.

The installation of piping will require cutting and patching of building elements, constructing chases, and providing above ceiling access and repairing ceilings afterwards. The building contains hazardous materials including lead and asbestos containing materials. A list of know asbestos containing materials is provided at the end of this scope. This is not intended to be a comprehensive list.

The majority of spaces will be lay-in tile ceilings. It is not anticipated to upgrade ceilings, lighting, or HVAC systems, so those shall be protected during pipe installation, and restored to existing conditions. This kind of work will likely result in some tile damage or loss, so the Design Build team is encouraged to establish a ceiling tile harvesting scheme that results in rooms with consistent types and age of tiles rather than a patch work.

This building is a combination of academic office and classrooms. Occupancy drops off dramatically between semesters, and it is highly desired to avoid any work that would disrupt occupants during the Fall/Winter/Spring sessions. It is likely that intensive work over the summer in a mostly to completely unoccupied building will be required. The Design Build team is responsible for building a schedule that meets UNC's requirements regarding occupant disruption and timely completion.

FIRE SPRINKLER

Existing Conditions:

L0 is currently protected with an Automatic Fire Sprinkler System, with the exception of the area below the lecture hall. Most of the spaces in this area have sprinklers, however there may be miscellaneous storage or IT closets without sprinklers, a few spaces that have been remodeled over the years without proper sprinkler placement, and a few sprinklers in the mechanical rooms and elsewhere may not in be accordance with the obstruction rules of NFPA 13. These sprinklers are a mixture of bulb and fusible element, and may include both standard response and quick response sprinklers.

There is a Clean Agent fire suppression system in a small server room in L0, with the fire alarm manual release panels in the adjacent room. This area has no water based Fire Protection.

The corridor loop of L1 has sprinklers, but there are no sprinklers elsewhere on L1 or upper floors. There are no sprinklers in the lecture hall block.

There is a wet standpipe system consisting of 1½" hose valve outlets fed from 2" and 2½" mains and risers. These are in fire valve cabinets accessible from corridors, with 4 fire valves on each of L0, L1, and L3 in the large office/classroom block, and 1 fire hose valve on the north side of L3, L4, and L5 of the upper office/classroom block.

There is a manual dry standpipe system starting from a 4-inlet FDC on the North wall of the Lecture Hall, with a 4" riser serving hose valve cabinets with 1½" and 2½" hose valves on L3, L4, and L5 in the south corridor of the upper classroom/office block. It is assumed (to be confirmed by the Design Build team) that this dry standpipe is not connected to the other standpipes. The FDC for the dry standpipe is approximately 100' from the nearest fire hydrant.

The water entry for the fire sprinkler and wet standpipe hose outlets is from the North, and enters the building via a 6" ductile iron combined domestic water and fire line under the Northeast stair Static pressure was observed to be approximately 100 psi at the pressure gauge upstream of the backflow preventer. The FDC for the wet systems is located near the Northeast corner of the lower office/classroom block and is approximately 200' from the nearest fire hydrant.

The elevator equipment room is in one of the penthouses on the PH level. This is a traction elevator. There is no sprinkler protection for the hoistway or the machine room.

Upgrades and Challenges:

The scope for this project is to install an automatic fire sprinkler system. It is desired to meet NFPA 13, 14, and 20 requirements to the greatest extent possible. It is anticipated this will trigger other work directly related to this project including, electrical and fire alarm work, potentially new space requirements, selective demolition, and restoration of finishes. It is the responsibility of the Design Build Team to identify and perform all ancillary work directly associated with the automatic sprinkler and standpipe system. It is also the responsibility of the Design Build Team to work with the Authorities Having Jurisdiction and the UNC's Insurance carrier to minimize work outside of this limited scope that may be triggered by new construction work in this building.

- Water Entry and Utility Main:

It is anticipated that the existing water service will be adequate to serve the sprinkler flow and pressure demand, but not the flow and pressure for an automatic wet Class I standpipe. The piping arrangement may need to be reconfigured to establish a 6" feed main in order to minimize pressure drop to the most remote area served.

- Fire Department Connection:

The existing 4-way dry standpipe FDC is adequate for the upgrade to fully sprinklered building with Class I standpipes, but the existing 2-way wet system FDC is not. However, the existing 4-way FDC is under the footprint of the building and may not be an appropriate location. Confirm with the Greeley Fire Department the preferred location in relation to their anticipated response plan, and re-use (and retable) existing or provide a new FDC as required..

- Standpipe System

This building is over 30' to the highest occupiable floor, and therefore a Class I standpipe is required.

The two North stairs are unenclosed, and while hose valve outlets are not specifically required in an unenclosed stair, it is unlikely that all areas of the lower office/classroom block would be within a 200' hose lay length from the middle stairs. Either provide a new standpipe in one or both of the North stairs, or the existing hose valve cabinets, upgraded to 2½" valves, can be used for this purpose, as determined by the Design Build team and confirmed with the AHJs and Owner's Insurance Carrier.

Once the building is fully sprinklered, the Class II standpipe hose valves in the corridors will no longer be required and should be removed with the cabinets used only for extinguishers or removed and the wall patched. The Manual Dry standpipe on the South side of the upper office/classroom block is not in the South stair, but rather just outside the stair, across the corridor. The Design Build team shall determine if the AHJs will allow that to remain, or will require a standpipe in the stair enclosure. Note that the South stair is atmospherically separated from the building by a vestibule vented to the exterior, and therefore the south stair may experience freezing conditions during extreme cold outside temperatures. The Design Build Team shall also determine whether the AHJ's will allow a Manual Wet Standpipe vs an Automatic Wet Standpipe, and the resulting effect of requiring a fire pump.

- Fire Pump

The pressure gauge on the inlet side of the fire protection backflow preventer was observed to read approximately 100 psi. It is likely this will be sufficient to meet the sprinkler flow and pressure demand with appropriate pipe sizing.

The standpipe flow and pressure demand will either have to be met with a fire pump, or approval from the AHJs and UNC's insurance carrier will need to be obtained by the Design Build Team for a Manual Wet Standpipe system.

NFPA 20 requires that the fire pump location be pre-planned with the Fire Department, and either direct access to the exterior or access via a fire resistive stair and horizontal passageway. Fully compliant access will be a challenge. It is the responsibility of the Design Build Team to obtain approvals from the AHJs and UNC's insurance carrier.

- Sprinkler Pipe Installation:

Routing pipe though the building should be fairly straightforward, except to bridge the gap between the lower office/classroom block and the lecture hall block. The Lecture Hall block will need to be served from a feed main either at the basement level or the third floor level. See the attached drawing indicating where exposed pipe or sprinkler heads is acceptable.

Sprinkler system zoning should follow a floor by floor basis, plus a separate zone for the lecture hall. Confirm with the AHJs and UNC's insurance carrier.

CPVC piping has been used for other sprinkler projects on the UNC campus, but typically only in tight and minimally accessible concealed locations. The Design Build team may propose CPVC piping if

there is a substantial cost and time savings, but it is preferred that all piping will be steel unless specifically approved by UNC.

- Sprinkler placement:

In general, sprinkler placement will not be particularly difficult. Much of the building has smooth flat suspended ceilings. There are a few gypsum ceilings. There are a few areas of concern:

  - The lecture hall has sloped and stepped ceilings, and a highly raked seating area. This will affect sprinkler layout and position and require high-bay installation techniques.
  - The occupied building footprint overhangs exterior spaces at the upper office/classroom block and where L2 of the lower office/classroom block is larger than the L1. This can trigger a requirement to provide sprinkler coverage below these overhangs. However, all exposed surfaces are concrete and therefore non-combustible, and all areas are very open and public which discourages unintended accumulation of combustibles. The Design Build team shall proactively discuss with the AHJs and UNC's insurance carrier the desire to avoid providing sprinkler coverage below these overhangs. If sprinkler coverage is required, the system shall be a dry pipe with nitrogen supervisory gas to minimize corrosion. Piping shall be positively sloped, with upright sprinklers or dry pendants on armovers to avoid draining each sprinkler for freeze prevention.
  - The elevator is a traction type, with the machine room at the penthouse level, so it is appears that under the 2013 and later versions of NFPA 13, sprinkler coverage is not required. However, this is an area in the codes that has evolved over the last several cycles, so it is the responsibility of the Design Build team to confirm the requirements with the AHJs and UNC's insurance carrier.
  - The main electrical room includes the emergency generator as well as the main switchgear. The generator room is ventilated from the outside, and therefore has the potential to freeze any piping exposed to the cold airstream. The Design Build team shall assure a wet pipe system will not freeze, or provide a dry pipe system. Discuss with UNC the costs and benefits of a pre-action system to also minimize inadvertent discharge of water on this critical electrical gear. Use a nitrogen generator rather than compressed air for supervision to minimize corrosion. Piping shall be positively sloped, with upright sprinklers or dry pendants on armovers to avoid draining each sprinkler for freeze prevention.
  - The Design Build team shall review the current code requirements for the unenclosed North stairs as Egress Access stairs. It is not desired to enclose these stairs, but the addition of a draft stop and closely spaced sprinklers at the openings may provide practical code and life safety benefits.
  - Given that the building is primarily constructed of cast-in-place concrete, it is unlikely that there are any combustible concealed spaces requiring sprinklers. However, there is an area under the lecture hall indicated on the simple floor plan maps that is not obviously

accessible. Further investigation is required to confirm sprinklers are or are not required in this area.

- Existing Sprinklers

The existing sprinkler coverage in sprinklered portions of L0 appears to be generally adequate, however there are several locations that do not meet the current obstruction requirements, are missing sprinkler protection cages in storage and MEP rooms, are recessed too far in the ceiling, where remodels moved walls but did not relocate sprinklers, or where small electrical/IT/storage closets are not covered. There is a mixture of glass bulb and fusible link, standard response and quick response. The Design Build Team shall investigate the existing sprinklers and modify to, as a minimum, be compliant with current requirements.

Perform all testing and inspection requirements of NFPA 25. Notify UNC of any impairments or deficiencies and recommend corrections. Re-establish the baseline for the main drain tests. Review the age of the original sprinklers and propose to UNC replacement of standard response sprinklers over 30 years old and quick response sprinklers over 10 years old. This is to provide a buffer between completion of this project and the NFPA required sprinkler replacement/testing schedule. Replace all gauges. Thoroughly flush the existing piping.

Cages shall be added to sprinklers in Storage and MEP rooms.

- Server Room

The Server Room is currently protected by a clean agent fire suppression system, but no water based sprinklers. A fully sprinklered building is required to have all areas covered with a water based sprinkler system, with any clean agent system being supplemental only. It is desired to avoid water based sprinklers in the Server Room if possible. The Design Build Team shall work with the AHJs and UNC's insurance carrier to avoid sprinklers in the Server Room while still obtaining the desired benefits of considering the building to be fully sprinklered. If water base sprinklers cannot be avoided, coordinate costs and benefits of a pre-action system with UNC. If a pre-action system is to be used, provide a nitrogen generator or compressed nitrogen cylinders for the supervisory pressure rather than an air compressor for corrosion mitigation purposes.

- Occupancy Hazard Levels

The NFPA 13 Occupancy Hazard Level is predominately Light Hazard. Mechanical/electrical rooms, general storage, and the generator room may reach the level of Ordinary Hazard 1 or 2. The Design Build Team shall establish Occupancy Hazard Levels to meet the requirements of the AHJs and UNC's insurance carrier.

FIRE ALARM and ELECTRICAL

The Design Build team shall investigate the existing Fire Alarm and Electrical distribution system, and provide the required support for the addition of the Automatic Fire Sprinkler and Standpipe system.

The existing Fire Alarm system will need to be modified to accommodate new Automatic Fire Sprinkler system supervisory and initiation components.

It is possible that by making this a fully sprinklered building, some existing fire alarm initiating devices may be reduced.

If the elevator machine room is to be sprinklered, a means of disconnecting power from the elevator prior to activation of sprinkler water is required.

If a fire pump is required (unlikely but possible), it will need to be powered in accordance with NFPA 20. The Design Build team shall review the existing capacity and arrangement of the electrical distribution system and provide the appropriate sizing and protection of electrical feeders. The AHJs and UNC's insurance carrier shall be consulted to determine if the utility power supply is considered "reliable enough" for this building to avoid an emergency power supply.

MVJ/ef
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McKee Asbestos Containing Material Log

BuildingName	AsbestosRoomID	Asbestos Present	Material Description	Remaining Quantity	Units	EPA Category	Friability
McKee Hall	MCKE 005	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 005	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE 005	Trace	White Sponged On Wall Texturing Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 006	Trace	Orange Peel Wall Texturing Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 006	Trace	Original Tape, Drywall And Joint Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 007	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 007	Trace	White Sponged On Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 008	Trace	Orange Peel Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 008	Trace	Original Tape, Drywall And Joint Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 009	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 009	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 010	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 010	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014	Trace	Orange Peel Wall Texturing Compound	1200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014	Trace	Original Tape, Drywall And Joint Compound	1200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	3	Each	Friable	Friable
McKee Hall	MCKE 014A	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014A	Trace	White Sponged On Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014C	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 014C	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014D	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014D	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014E	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014E	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014F	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014F	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014G	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014G	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014H	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014H	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014I	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014I	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014J	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014J	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014K	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014K	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014L	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014L	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014M	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 014M	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014N	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014N	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014P	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014P	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014R	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014R	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014S	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014S	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014T	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014T	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014U	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014U	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014V	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014V	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014W	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014W	Trace	White Sponged On Wall Texturing Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014X	Trace	Original Tape, Drywall And Joint Compound	592	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 014X	Trace	White Sponged On Wall Texturing Compound	592	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 015A	Trace	Orange Peel Wall Texturing Compound	0	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 015A	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 015C	Trace	Original Tape, Drywall And Joint Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 015C	Trace	White Sponged On Wall Texturing Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 015D	Trace	Original Tape, Drywall And Joint Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 015D	Trace	White Sponged On Wall Texturing Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016A	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016A	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 016A	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016B	Trace	Original Tape, Drywall And Joint Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016B	Trace	White Sponged On Wall Texturing Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016C	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016C	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016D	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 016D	Trace	White Sponged On Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 017	Yes	9” x 9” Beige With White And Brown Streaks Floor Tile And Adhesive	150	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 017	Trace	Original Tape, Drywall And Joint Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 017	Trace	White Sponged On Wall Texturing Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 017A	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 017A	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 019	Trace	Original Tape, Drywall And Joint Compound	960	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 019	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	13	Each	Friable	Friable
McKee Hall	MCKE 019	Trace	White Sponged On Wall Texturing Compound	960	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 019A	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE 020	Trace	Original Tape, Drywall And Joint Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 020	Trace	White Sponged On Wall Texturing Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022	Trace	Original Tape, Drywall And Joint Compound	920	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 022	Trace	White Sponged On Wall Texturing Compound	920	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022A	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022A	Trace	White Sponged On Wall Texturing Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022B	Trace	Original Tape, Drywall And Joint Compound	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022B	Trace	White Sponged On Wall Texturing Compound	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 022C	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029	Trace	Orange Peel Wall Texturing Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029	Trace	Original Tape, Drywall And Joint Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029A	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029A	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029B	Trace	Orange Peel Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029B	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 029C	Trace	Orange Peel Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029C	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029D	Trace	Original Tape, Drywall And Joint Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 029D	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	6	Each	Friable	Friable
McKee Hall	MCKE 029D	Trace	White Sponged On Wall Texturing Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 030	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 030	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 031	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 031	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 032	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 032	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 033	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 033	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 034	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 034	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 035	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 035	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 036	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 036	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 037	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 037	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 038	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 038	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 039	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 039	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 040	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 040	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 042	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 042	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 043	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 043	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044A	Trace	Orange Peel Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044A	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044B	Trace	Orange Peel Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044B	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044C	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044C	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044D	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044D	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044E	Trace	Orange Peel Wall Texturing Compound	736	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 044E	Trace	Original Tape, Drywall And Joint Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044F	Trace	Orange Peel Wall Texturing Compound	192	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 044F	Trace	Original Tape, Drywall And Joint Compound	192	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 046	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 047	Trace	Original Tape, Drywall And Joint Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 051	Yes	9” x 9” Tan Floor Tile And Adhesive	180	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 051	Trace	Original Tape, Drywall And Joint Compound	360	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 052	Yes	9” x 9” Tan Floor Tile And Adhesive	180	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 052	Trace	Original Tape, Drywall And Joint Compound	360	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 054	Trace	Original Tape, Drywall And Joint Compound	750	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 054A	Trace	Original Tape, Drywall And Joint Compound	840	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 054A	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	7	Each	Friable	Friable
McKee Hall	MCKE 054A	Trace	White Sponged On Wall Texturing Compound	840	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 056	Trace	Original Tape, Drywall And Joint Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 057	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 058	Trace	Orange Peel Wall Texturing Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 058	Trace	Original Tape, Drywall And Joint Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 059	Trace	Orange Peel Wall Texturing Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 059	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 059A	Trace	Orange Peel Wall Texturing Compound	240	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 059A	Trace	Original Tape, Drywall And Joint Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 060	Trace	Orange Peel Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 060	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 061	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 061	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 062	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 062	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 063	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 063	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE 063	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 064	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 064	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 065	Trace	Orange Peel Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 065	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 066	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 066	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 067	Trace	Orange Peel Wall Texturing Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 067	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 067	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 068	Trace	Orange Peel Wall Texturing Compound	464	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 068	Trace	Original Tape, Drywall And Joint Compound	464	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 069	Trace	Orange Peel Wall Texturing Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 069	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 069	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 070	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 070	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 071	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 071	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 072	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 072	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 073	Trace	Orange Peel Wall Texturing Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 073	Trace	Original Tape, Drywall And Joint Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 073	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 074	Trace	Orange Peel Wall Texturing Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 074	Trace	Original Tape, Drywall And Joint Compound	304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 101	Trace	Original Tape, Drywall And Joint Compound	2400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 101	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE 101	Trace	White Sponged On Wall Texturing Compound	2400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 102	Trace	Original Tape, Drywall And Joint Compound	760	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 103	Trace	Original Tape, Drywall And Joint Compound	1280	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 103	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE 103	Trace	White Sponged On Wall Texturing Compound	1280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 113	Trace	Original Tape, Drywall And Joint Compound	520	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 114	Yes (assumed)	Fire Door Material	1	Each	Non-Friable	Category II
McKee Hall	MCKE 114	Trace	Original Tape, Drywall And Joint Compound	1280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 115	Yes	9” x 9” Cream Floor Tile And Adhesive	42	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 115	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 115	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	6	Each	Friable	Friable
McKee Hall	MCKE 117	Yes	9” x 9” Tan Floor Tile And Adhesive	240	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 117	Trace	Original Tape, Drywall And Joint Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 117	Trace	White Sponged On Wall Texturing Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 118	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 118	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 118	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 119	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 119	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 119	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 120	Yes	9” x 9” Tan Floor Tile And Adhesive	216	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 120	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 120	Trace	White Sponged On Wall Texturing Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 121	Yes	9” x 9” Cream Floor Tile And Adhesive	12	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 121	Trace	Original Tape, Drywall And Joint Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 123	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 123	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 123	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 124	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 124	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 124	Trace	White Sponged On Wall Texturing Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 126	Yes	9” x 9” Cream Floor Tile And Adhesive	748	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 126	Trace	Original Tape, Drywall And Joint Compound	900	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 126	Trace	White Sponged On Wall Texturing Compound	900	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 127	Yes	9” x 9” Cream Floor Tile And Adhesive	360	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 127	Trace	Original Tape, Drywall And Joint Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 127	Trace	White Sponged On Wall Texturing Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 129	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 129	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 129	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 130	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 130	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 130	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 131	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 131	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 131	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 134	Yes	9” x 9” Cream Floor Tile And Adhesive	12	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 134	Trace	Original Tape, Drywall And Joint Compound	160	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 135	Yes	9” x 9” Cream Floor Tile And Adhesive	780	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 135	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 135	Trace	White Sponged On Wall Texturing Compound	1120	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 136	Yes	9” x 9” Cream Floor Tile And Adhesive	520	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 136	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 136	Trace	White Sponged On Wall Texturing Compound	920	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 137	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 137	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 137	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 138	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 138	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 138	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 139	Yes	9” x 9” Blue Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 139	Yes	9” x 9” Cream Floor Tile And Adhesive	520	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 139	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 139	Trace	White Sponged On Wall Texturing Compound	920	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 140	Yes	9” x 9” Brown Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 140	Yes	9” x 9” Cream Floor Tile And Adhesive	780	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 140	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 140	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 140	Trace	White Sponged On Wall Texturing Compound	1120	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 141	Yes	9” x 9” Cream Floor Tile And Adhesive	600	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 141	Trace	9” x 9” Orange Floor Tile And Adhesive	100	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 141	Trace	Original Tape, Drywall And Joint Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 141	Trace	White Sponged On Wall Texturing Compound	980	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 143	Yes	9” x 9” Cream Floor Tile And Adhesive	1248	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 143	Yes	9” x 9” Mustard Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 143	Trace	9” x 9” Orange Floor Tile And Adhesive	100	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 143	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 143	Trace	White Sponged On Wall Texturing Compound	1480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 144	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 144	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 144	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 145	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 145	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 145	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 146	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 146	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 146	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 147	Yes	9” x 9” Cream Floor Tile And Adhesive	624	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 147	Trace	Original Tape, Drywall And Joint Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 147	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 148	Trace	Original Tape, Drywall And Joint Compound	300	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 148	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	45	Each	Friable	Friable
McKee Hall	MCKE 149	Trace	Original Tape, Drywall And Joint Compound	200	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 149	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	16	Each	Friable	Friable
McKee Hall	MCKE 150	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 150	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE 150	Yes	White Popcorn Spray Applied Acoustical Ceiling Material	9025	Square Feet	Friable	Friable
McKee Hall	MCKE 150	Trace	White Sponged On Wall Texturing Compound	6080	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 151	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 151	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE 151	Yes	White Popcorn Spray Applied Acoustical Ceiling Material	9025	Square Feet	Friable	Friable
McKee Hall	MCKE 151	Trace	White Sponged On Wall Texturing Compound	6080	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 152	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 152	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE 152	Yes	White Popcorn Spray Applied Acoustical Ceiling Material	9025	Square Feet	Friable	Friable
McKee Hall	MCKE 152	Trace	White Sponged On Wall Texturing Compound	6080	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 157	Yes	9” x 9” Tan Floor Tile And Adhesive	60	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 157	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	12	Each	Friable	Friable
McKee Hall	MCKE 157	Trace	White Sponged On Wall Texturing Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 158	Yes	9” x 9” Tan Floor Tile And Adhesive	60	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 158	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	10	Each	Friable	Friable
McKee Hall	MCKE 158	Trace	White Sponged On Wall Texturing Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 159	Yes	9” x 9” Tan Floor Tile And Adhesive	60	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 159	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	10	Each	Friable	Friable
McKee Hall	MCKE 159	Trace	White Sponged On Wall Texturing Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 160	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 160	Trace	White Sponged On Wall Texturing Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 161	Yes	9” x 9” Tan Floor Tile And Adhesive	60	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 161	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	12	Each	Friable	Friable
McKee Hall	MCKE 161	Trace	White Sponged On Wall Texturing Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 200A	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 200A	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 200A	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 201	Yes	9” x 9” Blue Floor Tile And Adhesive	80	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 201	Yes	9” x 9” Cream Floor Tile And Adhesive	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 201	Trace	Original Tape, Drywall And Joint Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 201	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	3	Each	Friable	Friable
McKee Hall	MCKE 201	Trace	White Sponged On Wall Texturing Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 201A	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 201A	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 201A	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 202A	Yes	9” x 9” Cream Floor Tile And Adhesive	140	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 202A	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 202A	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE 202A	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 203	Yes	9” x 9” Cream Floor Tile And Adhesive	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 203	Trace	Original Tape, Drywall And Joint Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 203	Trace	White Sponged On Wall Texturing Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 204	Yes	9” x 9” Blue Floor Tile And Adhesive	80	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 204	Yes	9” x 9” Cream Floor Tile And Adhesive	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 204	Trace	Original Tape, Drywall And Joint Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 204	Trace	White Sponged On Wall Texturing Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 204A	Yes	9” x 9” Cream Floor Tile And Adhesive	40	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 204A	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 205	Yes	9” x 9” Cream Floor Tile And Adhesive	440	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 205	Trace	Original Tape, Drywall And Joint Compound	840	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 205	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 205	Trace	White Sponged On Wall Texturing Compound	840	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 206	Yes	9” x 9” Tan Floor Tile And Adhesive	288	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 206	Trace	Original Tape, Drywall And Joint Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 206	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE 206	Trace	White Sponged On Wall Texturing Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 207	Yes	9” x 9” Cream Floor Tile And Adhesive	80	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 207	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 207	Trace	White Sponged On Wall Texturing Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 208	Yes	9” x 9” Cream Floor Tile And Adhesive	140	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 208	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 208	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 209	Yes	9” x 9” Cream Floor Tile And Adhesive	140	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 209	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 209	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 210	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 210	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 210	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 211	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 211	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 211	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 212	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 212	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 212	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213A	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213A	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213A	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213B	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213B	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213B	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213C	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213C	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213C	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 213D	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213D	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213D	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213E	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213E	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213E	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213F	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213F	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213F	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213G	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213G	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213G	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213H	Yes	9” x 9” Cream Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213H	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213H	Trace	White Sponged On Wall Texturing Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213I	Yes	9” x 9” Cream Floor Tile And Adhesive	336	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213I	Trace	Original Tape, Drywall And Joint Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213I	Trace	White Sponged On Wall Texturing Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213J	Yes	9” x 9” Cream Floor Tile And Adhesive	168	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 213J	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 213J	Trace	White Sponged On Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 216	Yes	9” x 9” Cream Floor Tile And Adhesive	640	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 216	Trace	Original Tape, Drywall And Joint Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 216	Trace	White Sponged On Wall Texturing Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 217	Yes	9” x 9” Cream Floor Tile And Adhesive	432	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 217	Trace	Original Tape, Drywall And Joint Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 217	Trace	White Sponged On Wall Texturing Compound	672	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 219	Yes	Black Floor - Mastic	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 219	Trace	Original Tape, Drywall And Joint Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 219	Trace	White Sponged On Wall Texturing Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 220	Yes	Black Floor - Mastic	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 220	Trace	Original Tape, Drywall And Joint Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 220	Trace	White Sponged On Wall Texturing Compound	880	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 221	Yes	Black Floor - Mastic	960	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 221	Trace	Original Tape, Drywall And Joint Compound	1280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 221	Trace	White Sponged On Wall Texturing Compound	1280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 223	Yes	9” x 9” Cream Floor Tile And Adhesive	1152	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 223	Trace	Original Tape, Drywall And Joint Compound	1440	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 223	Trace	White Sponged On Wall Texturing Compound	1440	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 225	Yes	Black Floor - Mastic	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 225	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 225	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 226	Yes	Black Floor - Mastic	96	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 226	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 226	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 227	Yes	Black Floor - Mastic	384	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 227	Trace	Original Tape, Drywall And Joint Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 227	Trace	White Sponged On Wall Texturing Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 228	Yes	9” x 9” Cream Floor Tile And Adhesive	1152	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 228	Trace	9” x 9” Orange Floor Tile And Adhesive	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 228	Trace	Original Tape, Drywall And Joint Compound	1440	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 228	Trace	White Sponged On Wall Texturing Compound	1440	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 230	Trace	Original Tape, Drywall And Joint Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 230	Trace	White Sponged On Wall Texturing Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 231	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 231	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 231	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 232	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 232	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 232	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 233	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 233	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 233	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 234	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 234	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 234	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 235	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 235	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 235	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 236	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 236	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 236	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 237	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 237	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 237	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 238	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 238	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 238	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 239	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 239	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 239	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 240	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 240	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 240	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 241	Yes	9” x 9” Cream Floor Tile And Adhesive	70	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 241	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 241	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 242	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 242	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 243	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 243	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 244	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 244	Trace	White Sponged On Wall Texturing Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 245	Trace	Original Tape, Drywall And Joint Compound	960	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 245	Trace	White Sponged On Wall Texturing Compound	960	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 246	Yes	9” x 9” Cream Floor Tile And Adhesive	240	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 246	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 246	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE 247	Yes	9” x 9” Cream Floor Tile And Adhesive	280	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 247	Trace	Original Tape, Drywall And Joint Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 247	Trace	White Sponged On Wall Texturing Compound	608	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 248	Yes	Black Floor - Mastic	480	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 248	Trace	Original Tape, Drywall And Joint Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 248	Trace	White Sponged On Wall Texturing Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 249	Yes	Black Floor - Mastic	150	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 249	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 249	Trace	White Sponged On Wall Texturing Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 250	Yes	Black Floor - Mastic	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 250	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 250	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 251	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 251	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 251	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 252	Yes	9” x 9” Cream Floor Tile And Adhesive	676	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 252	Trace	Original Tape, Drywall And Joint Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 252	Trace	White Sponged On Wall Texturing Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 253	Yes	9” x 9” Cream Floor Tile And Adhesive	676	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 253	Yes	9” x 9” Mustard Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 253	Trace	Original Tape, Drywall And Joint Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 253	Trace	White Sponged On Wall Texturing Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 254	Trace	Original Tape, Drywall And Joint Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 254	Trace	White Sponged On Wall Texturing Compound	832	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 255	Yes	9” x 9” Cream Floor Tile And Adhesive	128	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 255	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 255	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 256	Yes	9” x 9” Cream Floor Tile And Adhesive	130	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 256	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 256	Trace	White Sponged On Wall Texturing Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 257	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 257	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 257	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 258	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 258	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 258	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 259	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 259	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 259	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 260	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 260	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 260	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 261	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 261	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 261	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 262	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 262	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 262	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 263	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 263	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 263	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 264	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 264	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 264	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 265	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 265	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 265	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 266	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 266	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 266	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 267	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 267	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 267	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 268	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 268	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 268	Trace	White Sponged On Wall Texturing Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 269	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 269	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 269	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 270	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 270	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 270	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 271	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 271	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 271	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 272	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 272	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 272	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 273	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 273	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 273	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 274	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 274	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 274	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 275	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 275	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 275	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 276	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 276	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 276	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 277	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 277	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 277	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 278	Yes	9” x 9” Cream Floor Tile And Adhesive	256	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 278	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 278	Trace	White Sponged On Wall Texturing Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 279	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 279	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 279	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 280	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 280	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 280	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 281	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 281	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 281	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 282	Yes	9” x 9” Cream Floor Tile And Adhesive	1120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 282	Trace	Original Tape, Drywall And Joint Compound	1216	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 282	Trace	White Sponged On Wall Texturing Compound	1216	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 282A	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 282A	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 282A	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 283	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 283	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 283	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 284	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 284	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 284	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 285	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 285	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 285	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 286	Yes	9” x 9” Cream Floor Tile And Adhesive	256	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 286	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 286	Trace	White Sponged On Wall Texturing Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 287	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 287	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 287	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 288	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 288	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 288	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 289	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 289	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 289	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 290	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 290	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 290	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 291	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 291	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 291	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 292	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 292	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 292	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 293	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 293	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 293	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 294	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 294	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 294	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 295	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 295	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 295	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 296	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 296	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 296	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 297	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 297	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 297	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 298	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 298	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 298	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 299	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 299	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 299	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 301	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 301	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 301	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 302	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 302	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 302	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 303	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 303	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 303	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 304	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 304	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 304	Trace	White Sponged On Wall Texturing Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 305	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 305	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 305	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 306	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 306	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 306	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 307	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 307	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 307	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 308	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 308	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 308	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 309	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 309	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 309	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 310	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 310	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 310	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 311	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 311	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 311	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 312	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 312	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 312	Trace	White Sponged On Wall Texturing Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 313	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 313	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 313	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 314	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 314	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 314	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 315	Yes	9” x 9” Cream Floor Tile And Adhesive	64	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 315	Trace	Original Tape, Drywall And Joint Compound	60	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 316	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 316	Trace	Original Tape, Drywall And Joint Compound	130	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 318	Yes	9” x 9” Cream Floor Tile And Adhesive	264	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 318	Trace	Original Tape, Drywall And Joint Compound	544	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 318	Trace	White Sponged On Wall Texturing Compound	544	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 319	Yes	9” x 9” Cream Floor Tile And Adhesive	216	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 319	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 319	Trace	White Sponged On Wall Texturing Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 320	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 320	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 320	Trace	White Sponged On Wall Texturing Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 321	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 321	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 321	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 322	Yes	9” x 9” Cream Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 322	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 322	Trace	White Sponged On Wall Texturing Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 323	Yes	9” x 9” Cream Floor Tile And Adhesive	210	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 323	Trace	Original Tape, Drywall And Joint Compound	496	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 323	Trace	White Sponged On Wall Texturing Compound	496	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 324	Yes	9” x 9” Cream Floor Tile And Adhesive	168	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 324	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 324	Trace	White Sponged On Wall Texturing Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 325	Yes	9” x 9” Cream Floor Tile And Adhesive	182	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 325	Trace	Original Tape, Drywall And Joint Compound	528	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 325	Trace	White Sponged On Wall Texturing Compound	528	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 327	Yes	9” x 9” Cream Floor Tile And Adhesive	484	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 327	Trace	Original Tape, Drywall And Joint Compound	704	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 327	Trace	White Sponged On Wall Texturing Compound	704	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 328	Yes	Black Floor - Mastic	264	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 328	Trace	Original Tape, Drywall And Joint Compound	544	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 328	Trace	White Sponged On Wall Texturing Compound	554	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 329	Yes	Black Floor - Mastic	30	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 329	Trace	Original Tape, Drywall And Joint Compound	140	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 330	Yes	9” x 9” Cream Floor Tile And Adhesive	16	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 330	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 332	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 332	Trace	Original Tape, Drywall And Joint Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 332	Trace	White Sponged On Wall Texturing Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 333	Yes	9” x 9” Cream Floor Tile And Adhesive	768	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 333	Trace	Original Tape, Drywall And Joint Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 333	Trace	White Sponged On Wall Texturing Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 335	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 335	Trace	Original Tape, Drywall And Joint Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 335	Trace	White Sponged On Wall Texturing Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 336	Yes	9” x 9” Cream Floor Tile And Adhesive	1008	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 336	Trace	Original Tape, Drywall And Joint Compound	1536	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 336	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	12	Each	Friable	Friable
McKee Hall	MCKE 336	Trace	White Sponged On Wall Texturing Compound	1536	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 337	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 337	Trace	Original Tape, Drywall And Joint Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 337	Trace	White Sponged On Wall Texturing Compound	160	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 339	Yes	9” x 9” Cream Floor Tile And Adhesive	768	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 339	Trace	Original Tape, Drywall And Joint Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 339	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 339	Trace	White Sponged On Wall Texturing Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 340	Yes	9” x 9” Cream Floor Tile And Adhesive	16	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 340	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 340	Trace	White Sponged On Wall Texturing Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 341	Yes	9” x 9” Tan Floor Tile And Adhesive	8	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 341	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 401	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 401	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 402	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 402	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 403	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 403	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 404	Yes	9” x 9” Tan Floor Tile And Adhesive	160	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 404	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 405	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 405	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 406	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 406	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 407	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 407	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 408	Yes	9” x 9” Blue Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 408	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 409	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 409	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 410	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 410	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 411	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 411	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 412	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 412	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 413	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 413	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 414	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 414	Yes	9” x 9” Turquoise Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 414	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 415	Yes	12” x 12” Offwhite With Green Specks Floor Tile And Adhesive	5	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 415	Yes	9” x 9” Cream Floor Tile And Adhesive	64	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 415	Trace	Original Tape, Drywall And Joint Compound	256	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 415	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE 416	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 416	Trace	Original Tape, Drywall And Joint Compound	5	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 417	Yes	9” x 9” Cream Floor Tile And Adhesive	18	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 417	Trace	Original Tape, Drywall And Joint Compound	144	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 418	Yes	Black Floor - Mastic	704	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 418	Trace	Original Tape, Drywall And Joint Compound	864	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 418A	Yes	Black Floor - Mastic	168	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 418A	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 418B	Yes	Black Floor - Mastic	168	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 418B	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 419	Yes	Black Floor - Mastic	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 419	Trace	Original Tape, Drywall And Joint Compound	320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 420	Yes	Black Floor - Mastic	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 420	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 421A	Yes	Black Floor - Mastic	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 421A	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 421B	Yes	Black Floor - Mastic	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 421B	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 421C DNE	Yes	Black Floor - Mastic	90	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 421C DNE	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 421C DNE	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE 422	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 422	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 423	Yes	9” x 9” Cream Floor Tile And Adhesive	528	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 423	Trace	Original Tape, Drywall And Joint Compound	736	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 423	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	6	Each	Friable	Friable
McKee Hall	MCKE 424	Yes	9” x 9” Cream Floor Tile And Adhesive	832	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 424	Trace	Original Tape, Drywall And Joint Compound	928	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 425	Yes	9” x 9” Cream Floor Tile And Adhesive	780	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 425	Trace	Original Tape, Drywall And Joint Compound	896	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 426	Yes	9” x 9” Cream Floor Tile And Adhesive	1200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 426	Trace	Original Tape, Drywall And Joint Compound	1280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 427	Yes	9” x 9” Cream Floor Tile And Adhesive	32	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 427	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 429	Yes	9” x 9” Cream Floor Tile And Adhesive	32	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 429	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 431	Yes	9” x 9” Cream Floor Tile And Adhesive	28	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 431	Trace	Original Tape, Drywall And Joint Compound	256	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 432	Yes	9” x 9” Cream Floor Tile And Adhesive	6	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 432	Trace	Original Tape, Drywall And Joint Compound	80	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 501	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 501	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 502	Yes	9” x 9” Tan Floor Tile And Adhesive	120	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 502	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 503	Trace	9” x 9” Orange Floor Tile And Adhesive	120	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE 503	Trace	Original Tape, Drywall And Joint Compound	352	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 504	Yes	9” x 9” Tan Floor Tile And Adhesive	176	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 504	Trace	Original Tape, Drywall And Joint Compound	432	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 505	Yes	9” x 9” Tan Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 505	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 506	Yes	9” x 9” Brown Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 506	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 507	Yes	9” x 9” Tan Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 507	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 508	Yes	9” x 9” Tan Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 508	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 509	Yes	9” x 9” Tan Floor Tile And Adhesive	110	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 509	Trace	Original Tape, Drywall And Joint Compound	336	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 510	Yes	9” x 9” Tan Floor Tile And Adhesive	198	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 510	Trace	Original Tape, Drywall And Joint Compound	464	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 511	Yes	9” x 9” Tan Floor Tile And Adhesive	198	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 511	Trace	Original Tape, Drywall And Joint Compound	464	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 512	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 512	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 513	Yes	9” x 9” Tan Floor Tile And Adhesive	240	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 513	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 515	Yes	9” x 9” Cream Floor Tile And Adhesive	64	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 515	Trace	Original Tape, Drywall And Joint Compound	256	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 516	Yes	9” x 9” Cream Floor Tile And Adhesive	18	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 516	Trace	Original Tape, Drywall And Joint Compound	144	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 517	Yes	9” x 9” Cream Floor Tile And Adhesive	24	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 517	Trace	Original Tape, Drywall And Joint Compound	176	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 518	Yes	9” x 9” Tan Floor Tile And Adhesive	380	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 518	Trace	Original Tape, Drywall And Joint Compound	768	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 519	Yes	9” x 9” Tan Floor Tile And Adhesive	264	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 519	Trace	Original Tape, Drywall And Joint Compound	544	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 520	Yes	9” x 9” Tan Floor Tile And Adhesive	168	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 520	Trace	Original Tape, Drywall And Joint Compound	416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 521	Yes	9” x 9” Tan Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 521	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 522	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 522	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 523	Yes	9” x 9” Tan Floor Tile And Adhesive	192	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 523	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 524	Yes	9” x 9” Tan Floor Tile And Adhesive	180	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 524	Trace	Original Tape, Drywall And Joint Compound	448	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 525	Yes	9” x 9” Mustard Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 525	Yes	9” x 9” Tan Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 525	Trace	Original Tape, Drywall And Joint Compound	480	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 526	Yes	9” x 9” Tan Floor Tile And Adhesive	132	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 526	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 527	Yes	9” x 9” Tan Floor Tile And Adhesive	132	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 527	Trace	Original Tape, Drywall And Joint Compound	368	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 528	Yes	9” x 9” Tan Floor Tile And Adhesive	72	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 528	Trace	Original Tape, Drywall And Joint Compound	272	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 529	Yes	9” x 9” Cream Floor Tile And Adhesive	320	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 529	Trace	Original Tape, Drywall And Joint Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 529A	Yes	9” x 9” Cream Floor Tile And Adhesive	252	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 529A	Trace	Original Tape, Drywall And Joint Compound	640	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 529B	Yes	9” x 9” Cream Floor Tile And Adhesive	180	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 529B	Trace	Original Tape, Drywall And Joint Compound	560	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 530	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 530	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 531	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 531	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 532	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 532	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 533	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 533	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 534	Yes	9” x 9” Cream Floor Tile And Adhesive	48	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 534	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 535	Trace	Original Tape, Drywall And Joint Compound	288	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 536	Trace	Original Tape, Drywall And Joint Compound	592	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 536	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE 537	Yes	9” x 9” Cream Floor Tile And Adhesive	640	Square Feet	Non-Friable	Category I

McKee Hall	MCKE 537	Trace	Original Tape, Drywall And Joint Compound	1040	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 537	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE 538	Yes	9” x 9” Cream Floor Tile And Adhesive	576	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 538	Trace	Original Tape, Drywall And Joint Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 539	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 539	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 539A	Yes	9” x 9” Cream Floor Tile And Adhesive	100	Square Feet	Non-Friable	Category I
McKee Hall	MCKE 539A	Trace	Original Tape, Drywall And Joint Compound	400	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 8118 DNE	Trace	Original Tape, Drywall And Joint Compound	300	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE 8118 DNE	Trace	White Sponged On Wall Texturing Compound	300	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C001	Trace	Orange Peel Wall Texturing Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C001	Trace	Original Tape, Drywall And Joint Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C001	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	35	Each	Friable	Friable
McKee Hall	MCKE C002	Trace	Orange Peel Wall Texturing Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C002	Trace	Original Tape, Drywall And Joint Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C002	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	35	Each	Friable	Friable
McKee Hall	MCKE C005	Trace	Orange Peel Wall Texturing Compound	3072	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C005	Trace	Original Tape, Drywall And Joint Compound	3072	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C005	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE C007	Trace	Orange Peel Wall Texturing Compound	1584	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C007	Trace	Original Tape, Drywall And Joint Compound	1584	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE C011	Trace	Orange Peel Wall Texturing Compound	2496	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C011	Trace	Original Tape, Drywall And Joint Compound	2496	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C019	Trace	Orange Peel Wall Texturing Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C019	Trace	Original Tape, Drywall And Joint Compound	5248	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C019	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	35	Each	Friable	Friable
McKee Hall	MCKE C101	Yes	12” x 12” Mustard Floor Tile And Adhesive	250	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C101	Yes	9” x 9” Blue Floor Tile And Adhesive	90	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C101	Yes	9” x 9” Brown Floor Tile And Adhesive	90	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C101	Yes	9” x 9” Cream Floor Tile And Adhesive	4000	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C101	Yes	9” x 9” Mustard Floor Tile And Adhesive	90	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C101	Trace	9” x 9” Orange Floor Tile And Adhesive	90	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C101	Trace	Original Tape, Drywall And Joint Compound	8128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C101	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	25	Each	Friable	Friable
McKee Hall	MCKE C101	Trace	White Sponged On Wall Texturing Compound	800	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C103	Yes	9” x 9” Cream Floor Tile And Adhesive		Square Feet	Non-Friable	Category I
McKee Hall	MCKE C103	Yes	9” x 9” Tan Floor Tile And Adhesive		Square Feet	Non-Friable	Category I
McKee Hall	MCKE C103	Trace	Original Tape, Drywall And Joint Compound		Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C103	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation		Each	Friable	Friable
McKee Hall	MCKE C103	Trace	White Sponged On Wall Texturing Compound		Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C203	Yes	9” x 9” Cream Floor Tile And Adhesive	1128	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C203	Yes	9” x 9” Tan Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C203	Trace	Original Tape, Drywall And Joint Compound	4576	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE C203	Trace	White Sponged On Wall Texturing Compound	4576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C205	Yes	9” x 9” Cream Floor Tile And Adhesive	1088	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C205	Yes	9” x 9” Tan Floor Tile And Adhesive	200	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C205	Trace	Original Tape, Drywall And Joint Compound	4416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C205	Trace	White Sponged On Wall Texturing Compound	4416	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C206	Yes	9” x 9” Cream Floor Tile And Adhesive	4000	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C206	Yes	9” x 9” Mustard Floor Tile And Adhesive	80	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C206	Trace	9” x 9” Orange Floor Tile And Adhesive	80	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C206	Trace	Original Tape, Drywall And Joint Compound	8128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C206	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	12	Each	Friable	Friable
McKee Hall	MCKE C212	Yes	9” x 9” Cream Floor Tile And Adhesive	448	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C212	Trace	Original Tape, Drywall And Joint Compound	1856	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C212	Trace	White Sponged On Wall Texturing Compound	928	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C213	Yes	9” x 9” Cream Floor Tile And Adhesive	448	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C213	Trace	Original Tape, Drywall And Joint Compound	1856	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C213	Trace	White Sponged On Wall Texturing Compound	928	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C300	Yes	9” x 9” Cream Floor Tile And Adhesive	1325	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C300	Trace	Original Tape, Drywall And Joint Compound	4320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C300	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	5	Each	Friable	Friable
McKee Hall	MCKE C400	Yes	9” x 9” Blue Floor Tile And Adhesive	40	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C400	Yes	9” x 9” Cream Floor Tile And Adhesive	1060	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C400	Yes	9” x 9” Turquoise Floor Tile And Adhesive	40	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C400	Trace	Original Tape, Drywall And Joint Compound	4304	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE C400	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	10	Each	Friable	Friable
McKee Hall	MCKE C500	Yes	9” x 9” Brown Floor Tile And Adhesive	45	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C500	Yes	9” x 9” Cream Floor Tile And Adhesive	1060	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C500	Yes	9” x 9” Mustard Floor Tile And Adhesive	45	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C500	Trace	9” x 9” Orange Floor Tile And Adhesive	45	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C500	Trace	Original Tape, Drywall And Joint Compound	4304	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE C529	Yes	9” x 9” Cream Floor Tile And Adhesive	48	Square Feet	Non-Friable	Category I
McKee Hall	MCKE C529	Trace	Original Tape, Drywall And Joint Compound	256	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE E603	Yes (assumed)	Fire Door Material	1	Each	Non-Friable	Category II
McKee Hall	MCKE E603	Trace	Original Tape, Drywall And Joint Compound	56	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J018	Trace	Orange Peel Wall Texturing Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J018	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J045	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J045	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE J128	Yes	9” x 9” Cream Floor Tile And Adhesive	48	Square Feet	Non-Friable	Category I
McKee Hall	MCKE J128	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J128	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	1	Each	Friable	Friable
McKee Hall	MCKE J203	Yes	9” x 9” Cream Floor Tile And Adhesive	48	Square Feet	Non-Friable	Category I
McKee Hall	MCKE J203	Trace	Original Tape, Drywall And Joint Compound	140	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J218	Yes	9” x 9” Cream Floor Tile And Adhesive	16	Square Feet	Non-Friable	Category I
McKee Hall	MCKE J218	Trace	Original Tape, Drywall And Joint Compound	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE J540	Yes	9” x 9” Cream Floor Tile And Adhesive	8	Square Feet	Non-Friable	Category I
McKee Hall	MCKE J540	Trace	Original Tape, Drywall And Joint Compound	96	Square Feet	Non-Friable	OSHA Regulated

McKee Hall	MCKE L300	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE L400	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE L400	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE L500	Yes	9” x 9” Cream Floor Tile And Adhesive	144	Square Feet	Non-Friable	Category I
McKee Hall	MCKE L500	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M048	Trace	Original Tape, Drywall And Joint Compound	1320	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M048	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	13	Each	Friable	Friable
McKee Hall	MCKE M049	Trace	Original Tape, Drywall And Joint Compound	1000	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M049	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	104	Each	Friable	Friable
McKee Hall	MCKE M049	Yes	White Tank Insulation	150	Square Feet	Friable	Friable
McKee Hall	MCKE M050	Trace	Original Tape, Drywall And Joint Compound	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M053	Trace	Original Tape, Drywall And Joint Compound	450	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M053	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	28	Each	Friable	Friable
McKee Hall	MCKE M055	Trace	Original Tape, Drywall And Joint Compound	500	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M055	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	14	Each	Friable	Friable
McKee Hall	MCKE M200	Yes	9” x 9” Cream Floor Tile And Adhesive	20	Square Feet	Non-Friable	Category I
McKee Hall	MCKE M200	Trace	Original Tape, Drywall And Joint Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M2015	Yes	9” x 9” Cream Floor Tile And Adhesive	16	Square Feet	Non-Friable	Category I
McKee Hall	MCKE M2015	Trace	Original Tape, Drywall And Joint Compound	200	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M343	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	60	Each	Friable	Friable
McKee Hall	MCKE M601	Yes (assumed)	Fire Door Material	2	Each	Non-Friable	Category II
McKee Hall	MCKE M601	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	60	Each	Friable	Friable
McKee Hall	MCKE M602	Yes (assumed)	Fire Door Material	3	Each	Non-Friable	Category II

McKee Hall	MCKE M602	Trace	Original Tape, Drywall And Joint Compound	300	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE M602	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	40	Each	Friable	Friable
McKee Hall	MCKE M604	Yes (assumed)	Fire Door Material	1	Each	Non-Friable	Category II
McKee Hall	MCKE M604	Trace	Original Tape, Drywall And Joint Compound	72	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE NORTH ROOF	Yes (assumed)	Black Composite Roofing Material	33750	Square Feet	Non-Friable	Category I
McKee Hall	MCKE R002	Yes	12” x 12” Tan Floor Tile And Adhesive	48	Square Feet	Non-Friable	Category I
McKee Hall	MCKE R002	Trace	Orange Peel Wall Texturing Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R002	Trace	Original Tape, Drywall And Joint Compound	224	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R002	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE R003	Yes	12” x 12” Tan Floor Tile And Adhesive	54	Square Feet	Non-Friable	Category I
McKee Hall	MCKE R003	Trace	Orange Peel Wall Texturing Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R003	Trace	Original Tape, Drywall And Joint Compound	240	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R003	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	4	Each	Friable	Friable
McKee Hall	MCKE R010	Trace	Original Tape, Drywall And Joint Compound	680	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R010	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE R011	Trace	Original Tape, Drywall And Joint Compound	680	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R011	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE R100	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R100	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE R101	Trace	Original Tape, Drywall And Joint Compound	512	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R101	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable

McKee Hall	MCKE R162	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	15	Each	Friable	Friable
McKee Hall	MCKE R163	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	15	Each	Friable	Friable
McKee Hall	MCKE R200	Trace	Original Tape, Drywall And Joint Compound	732	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R200	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE R201	Trace	Original Tape, Drywall And Joint Compound	732	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R201	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	30	Each	Friable	Friable
McKee Hall	MCKE R247	Yes	9” x 9” Cream Floor Tile And Adhesive	20	Square Feet	Non-Friable	Category I
McKee Hall	MCKE R247	Trace	Original Tape, Drywall And Joint Compound	144	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R247	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	2	Each	Friable	Friable
McKee Hall	MCKE R247	Trace	White Sponged On Wall Texturing Compound	144	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R301	Trace	Original Tape, Drywall And Joint Compound	528	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R301	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE R302	Trace	Original Tape, Drywall And Joint Compound	528	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R302	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE R400	Trace	Original Tape, Drywall And Joint Compound	528	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R400	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE R401	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R401	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE R500	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R500	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable

McKee Hall	MCKE R501	Trace	Original Tape, Drywall And Joint Compound	384	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE R501	Yes	White Pipe Fitting/ Pipe Elbows /Collar Insulation	8	Each	Friable	Friable
McKee Hall	MCKE S017	Trace	Original Tape, Drywall And Joint Compound	3280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S018	Trace	Original Tape, Drywall And Joint Compound	3280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S019	Trace	Original Tape, Drywall And Joint Compound	750	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S100	Trace	Original Tape, Drywall And Joint Compound	1110	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S102	Trace	Original Tape, Drywall And Joint Compound	1110	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S105	Trace	Original Tape, Drywall And Joint Compound	750	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S200	Trace	Original Tape, Drywall And Joint Compound	720	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S201	Trace	Original Tape, Drywall And Joint Compound	3280	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S202	Trace	Original Tape, Drywall And Joint Compound	720	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S300	Trace	Original Tape, Drywall And Joint Compound	3360	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE S501	Trace	Original Tape, Drywall And Joint Compound	300	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE SOUTH ROOF	Yes (assumed)	Black Composite Roofing Material	10000	Square Feet	Non-Friable	Category I
McKee Hall	MCKE UPPER ROOF	Yes (assumed)	Black Composite Roofing Material	9118	Square Feet	Non-Friable	Category I
McKee Hall	MCKE UPPER ROOF	Yes	Gray Transite Panel	680	Square Feet	Non-Friable	Category II
McKee Hall	MCKE V016	Trace	Original Tape, Drywall And Joint Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE V016	Trace	White Sponged On Wall Texturing Compound	576	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE V401	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated
McKee Hall	MCKE V501	Trace	Original Tape, Drywall And Joint Compound	128	Square Feet	Non-Friable	OSHA Regulated

SECTION 211000 – WATER BASED FIRE PROTECTION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK:

A. Provide a complete Automatic Fire Sprinkler, Standpipe, and Fire Pump (where required) system in accordance with the currently adopted version of NFPA 13, NFPA 14, and NFPA 20 and as acceptable to the Authority Having Jurisdiction and the Owner's insurance carrier. In addition, comply with the provisions of this section where more restrictive. The scope of the work shall be in accordance with the descriptions in the Request for Proposal narrative and as described below:

B. The work of this section includes engineering by the Contractor. The Contractor shall act as Engineer of Record for all fire protection work.

1.2 DEFINITIONS:

A. Pipe sizes used in this Specification are Nominal Pipe Size (NPS).

B. Other definitions for fire protection systems are listed in NFPA Standards 13, 13R, 14, 20 and 24.

C. Working plans as used in this Section means those documents (including drawings and calculations) prepared pursuant to the requirements contained in NFPA 13 and 14 for obtaining approval of the authority having jurisdiction.

1.3 PROJECT SEISMIC REQUIREMENTS:

A. This project is Seismic Design Category B. No seismic bracing is required.

1.4 SUBMITTALS:

A. Provide a complete set of fire protection shop drawings and hydraulic calculations.

1. Hydraulic calculations and Shop drawings shall be prepared under the direct supervision of and bear the signed stamp of a Professional Engineer registered in the State of Colorado and familiar with this type of installation and with previous similar experience certifying that the fire sprinkler system has been designed and hydraulically calculated in compliance with NFPA and governing codes.

B. Product data for each type sprinkler head, valve, piping and piping specialty, fire protection specialty, fire department connection and any equipment installed in accordance with the Contract Documents.

C. Shop drawings prepared in accordance with, NFPA 13 identified as "working plans," including detailed riser schematics, hanging and bracing details, and site water supply information. Show all ceiling configurations, ductwork, air devices, lighting and electrical panels and other items affecting the fire sprinkler layout.

1. Shop drawings shall indicate compliance with applicable codes and contract drawings and shall be noted as Approved for Construction by the local Authority Having Jurisdiction.

D. If more than two submittals (either for shop drawings or for record drawings) are made by the contractor, the Owner reserves the right to charge the contractor for subsequent reviews by their consultants. Such extra fees shall be deducted from payments by the Owner to the contractor.

E. Welder's qualification certificate.

F. Maintenance data for each type sprinkler head, valve, piping specialty, fire protection specialty, fire department connection and hose valve specified, for inclusion in operating and maintenance manual specified in Division 1 and Section 210500.

G. Test reports and certificates including "Contractor's Material and Test Certificate for Aboveground Piping" and "Contractor's Materials and Test Certificate for Underground Piping" as described in NFPA 13.

1.5 QUALITY ASSURANCE:

A. Installer Qualifications: Installation and alterations of fire protection piping, equipment, specialties, and accessories, and repair and servicing of equipment shall be performed only by qualified installer. The term qualified means experienced in such work (experienced shall mean having a minimum of 5 previous projects similar in size and scope to this project), familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction. The contractor shall be licensed for the design and installation for the specific type of system in the jurisdiction where the work is to be performed and the State of Colorado. Upon request, submit evidence of such qualifications to the Engineer. Refer to Division-1 Section: "Definitions and Standards" for definitions for "Installers."

B. Contractor Training Certificates for Chlorinated Polyvinyl Chloride (CPVC) Fire Sprinkler Systems: Fire Sprinkler Contractor must submit documentation that lists personnel assigned to this project prior to beginning construction who have successfully completed formal CPVC fire sprinkler systems training conducted by an authorized CPVC manufacturer’s representative. The Contractor Training Certificates shall be specific to the manufacturer of the pipe and fittings. Personnel’s training certificates must be current and have been updated within the past two (2) years.

C. Designer Qualifications:

1. The design of the fire protection systems shall be performed by or under the direction and control of an Colorado registered P.E. Said professional shall be experienced in fire protection, thoroughly familiar with and experienced in this type of installation.

D. Regulatory Requirements: Comply with the currently adopted requirements of the following codes:

1. NFPA 13 - Standard for the installation of Sprinkler System, including applicable seismic requirements.
2. NFPA 20 – Standard for the Installation of Stationary Pumps for Fire Protection.
3. NFPA 14 - Standard for the Installation of Standpipe and Hose Systems.
4. NFPA 24 - Installation of Private Fire Service Mains and their applications.
5. NFPA 1963 - Screw Threads and Gaskets for Fire Hose Connections.
6. UL and FM Compliance: All fire protection system materials and components shall be Underwriter's Laboratories and Factory Mutual listed as well as labeled for the application anticipated.
7. National Electrical Code (NEC).
8. Requirements of the local Building Department and Fire Department.

9. Requirements of the Owner's Insurance Company.

E. Reference and standards listed are minimum requirements. Where more stringent requirements are specified or noted on the drawings, this shall be applicable.

1.6 SEQUENCING AND SCHEDULING:

A. Schedule rough-in installations with installations of other building components.

B. Minimum time frame for notice of inspections, tests and meetings is five (5) days and list the persons to be notified.

1.7 EXTRA STOCK:

A. Heads: For each style and temperature range (and length for dry heads) required, furnish additional sprinkler heads per NFPA-13.

1. Obtain receipt from Owner that extra stock has been received.

B. Wrenches: Furnish 2 wrenches for each type and size of valve connection and fire hose coupling. Wrenches for recessed and concealed sprinklers shall be the deep socket type.

PART 2 - PRODUCTS

2.1 MATERIALS AND PRODUCTS:

A. General: Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, temperature ratings, and capacities as indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements. Provide sizes and types matching piping and equipment connections; provide fittings of materials which match pipe materials used in fire protection systems.

B. All equipment used on this project shall be new and UL listed unless noted or specified otherwise.

2.2 MANUFACTURERS:

A. Manufacturer: Subject to compliance with requirements, provide fire protection system products from one of the following:

1. Threadable Thinwall Piping:
   a. Bull Moose Tube
   b. Allied Tube and Conduit
   c. Wheatland Tube

2. Chlorinated Polyvinyl Chloride (CPVC) Fire Sprinkler Systems
   a. Harvel Plastics, Inc.
   b. NIBCO INC
   c. Tyco Fire Suppression & Building
   d. The Viking Corporation

3. Swing Check Valves:
   a. Anvil
   b. Viking

c. Victaulic
d. Tyco

4. Butterfly and Ball Valves:
   a. Anvil
   b. Viking
   c. Victaulic
   d. Tyco

5. Grooved Mechanical Couplings:
   a. Anvil
   b. Viking
   c. Victaulic
   d. Tyco

6. Double Check Valve Assembly:
   a. Ames
   b. Febco
   c. Watts
   d. Conbraco

7. Fire Protection Specialty Valves
   a. Anvil
   b. Viking
   c. Victaulic
   d. Tyco
   e. Potter Roemer

8. Fire Department Connection:
   a. Croker
   b. Potter-Roemer
   c. Elkhart
   d. Grinnell

9. Sprinkler Heads:
   a. Anvil
   b. Viking
   c. Victaulic
   d. Tyco

10. Flexible Sprinkler Head Connectors:
    a. Flexhead Industiries
    b. Viking
    c. Victaullic
    d. Tyco

11. Fire Protection Specialties:
    a. Croker-Standard Div.,; Fire-End & Croker Corp.
    b. Elkhart Brass Mfg. Co., Inc.
    c. Grinnell Fire Protection Systems Co., Inc.
    d. Potter Roemer, Inc.
    e. Anvil
    f. Viking
    g. Victaulic
    h. Tyco

12. Inspector's Test and Drain Module
    a. Anvil
    b. Viking
    c. Victaulic
    d. Tyco

2.3 BASIC IDENTIFICATION:

A. General: Provide identification in accordance with the following listing:

1. Fire Protection Piping: Pipe markers.
2. Fire Protection Valves: Valve tags.
3. Fire Protection Signs: Provide the following signs:

    a. At each sprinkler valve, sign indicating what portion of system valve controls.
    b. At each outside alarm device, sign indicating what authority to call if device is activated.
    c. At door to each sprinkler control valves or at ceiling access points, sign reading "FIRE CONTROL".
        1) Comply with building standard signage, or where no standard for these type of signs exist, provide engraved plastic laminate signs with red face and white lettering.
    d. At each drain or test, sign indicating its purpose.
    e. Attach to the riser an engraved and enameled metal sign indicating the name, address and telephone number of the fire protection contractor and all data required by NFPA 13. Also indicate the date of installation.

B. Pipe Markers:

1. Small Pipes: For external diameters less than 6 inches (including insulation if any), provide full-band pipe markers, extending 360 degrees around pipe at each location, fastened by one of the following methods:

    a. Snap-on application of pre-tensioned semi-rigid plastic pipe marker.
    b. Taped to pipe (or insulation) with color-coded plastic adhesive tape, not less than 3/4inch wide; full circle at both ends of pipe marker, tape lapped 1-1/2inch.

2. Large Pipes: For external diameters of 6inches and larger (including insulation if any), provide either full-band or strip-type pipe markers, but not narrower than 3 times letter height (and of required length), fastened by one of the following methods:

    a. Steel spring or non-metallic fasteners.
    b. Taped to pipe (or insulation) with color-coded plastic adhesive tape, not less than 1-1/2inches wide; full circle at both ends of pipe marker, tape lapped 3inches.
    c. Strapped-to-pipe (or insulation) application of semi- rigid type, with manufacturer's standard stainless steel bands.

C. Brass Valve Tags: Provide 19-gage polished brass valve tags with stamp-engraved piping system abbreviation in 1/4inch high letters and sequenced valve numbers 1/2inch high, and with 5/32inch hole for fastener.

    a. Provide 1-1/2inch diameter tags, except as otherwise indicated.
    b. Fill tag engraving with black enamel.

D. ENGRAVED PLASTIC-LAMINATE SIGNS:

1. General: Provide engraving stock melamine plastic laminate, complying with FS L-P-387, in the sizes and thicknesses indicated, engraved with engraver's standard

letter style of the sizes and wording indicated, black with white core (letter color) except as otherwise indicated, punched for mechanical fastening except where adhesive mounting is necessary because of substrate.

2. Thickness: 1/16 inch, except as otherwise indicated.

3. Fasteners: Self-tapping stainless steel screws, except contact-type permanent adhesive where screws cannot or should not penetrate the substrate.

E. ADHESIVE MARKING TAPE FOR CEILING TAGS:
1. 0.50” inch Kroy tape or Brother labels with 3/8 inch minimum height letters. Tape shall have red letters on clear background for. Embossed labels are not acceptable.

2.4 BASIC SUPPORTS AND ANCHORS:

A. General: Provide supports and anchors complying with Section 210529 and the following:

1. Adjustable steel clevis hangers, adjustable steel band hangers, or adjustable band hangers, for horizontal-piping hangers and supports.

2. Two-bolt riser clamps for vertical piping supports.

3. Steel turnbuckles and malleable iron sockets for hanger- rod attachments.

4. Concrete inserts, top-beam C-clamps, side beam or channel clamps or center beam clamps for building attachments.

5. Concrete inserts and other type hangers penetrating into or through structural members shall be submitted (by the Fire Protection Contractor) to and have the approval of the structural engineer contracted for this project.

6. Powder driven studs shall not be allowed.

7. Hangers (which are acceptable for project) and hanger spacing shall be in accordance with NFPA-13.

2.5 PIPE & FITTINGS (UNDERGROUND):

A. Underground pipe shall be ductile iron, thickness Class 52 unless specified otherwise by local authorities or ANSI/AWWA C150/A21.50-81; 350 psi pressure rating; tar coated outside, cement mortar lined inside in accordance with ANSI/AWWA C104/A21.4-80. Full lengths of pipe shall be utilized to the greatest extent possible.

B. Fittings for ductile iron pipe shall be 250 psi pressure rating in accordance with ANSI/AWWA C110-77, tar coated outside and cement lined inside in accordance with ANSI/AWWA C104/A21.4-80.

C. Joints shall be push-on or mechanical type as per ANSI/AWWA C111/A21.11-80.

2.6 PIPE & FITTINGS (INSIDE, UPSTREAM OF BACKFLOW PREVENTER):

A. Ductile iron water pipe in accordance with AWWA C151/A21.51; AWWA C115/A21, with flanged fittings.

B. Type L hard drawn copper tube with wrought copper or bronze fittings, silver tin alloy soldered joints, or roll grooved mechanical couplings.

C. ASTM A 312; ASTM A 778 Sch 40 or Sch 10 Stainless Steel pipe. Screwed, Flanged, welded, or Mechanical coupling fittings.

2.7 PIPE AND TUBING MATERIALS (INSIDE BUILDING DOWNSTREAM OF BACKFLOW PREVENTER):

A. General: Refer to Part 3 Article "Pipe Applications" for identification of systems where the below specified pipe and fitting materials are used.

B. All black steel piping shall be provided with a antimicrobial coating to minimize Microbiological Influenced Corrosion (MIC)

C. Steel Pipe: ASTM A 53, A795 or A135, black steel pipe, Schedule 40 or Schedule 10 for piping 2 ½" and larger, Schedule 40 for piping 2" and smaller.
1. UL listed and Factory Mutual approved threadable thinwall pipe may be used for piping 2" and smaller only if the Corrosion Resistance Ratio of the pipe is 1.00 or greater, as installed in the system. Documentation shall be presented with product submittal.

D. Chlorinated Polyvinyl Chloride (CPVC) Fire Sprinkler Systems. Where specifically allowed by the owner, CPVC piping may be used:

1. Pipe shall meet or exceed the requirements of ASTM F442 material designation CPVC 4120-06 in standard dimension ratio (SDR) 13.5. Additionally, the pipe must be marked with the following pressure ratings: "320 PSI @ 73° F", "175 PSI @ 150° F" and "100 PSI @ 180° F".
2. Fittings shall meet or exceed the requirements of ASTM F437 (schedule 80 threaded), ASTM F438 (schedule 40 socket) and ASTM F439 (schedule 80 socket).

3. Both pipe and fittings shall be Listed by Underwriters Laboratories for use in wet automatic fire sprinkler systems and shall bear the logo of the Listing Agency.

4. Ancillary products coming into contact with pipe and fittings must be chemically compatible as determined by CPVC pipe and fittings manufacturer or compound manufacturer, and thus Listed on pipe, fittings or compound manufacturer's chemical compatibility program.

5. All socket type joints shall be made up employing solvent cements that meet or exceed the requirements of ASTM F493. The standard practice for safe handling of solvent cements shall be in accordance with ASTM F402. Solvent cement shall be certified by NSF International for use with potable water, and approved by the manufacturers. The solvent cements shall be compatible with their CPVC pipe and fittings.

E. Schedule 5 pipe shall not be allowed.

F. Provide galvanized, schedule 40, piping system for drain risers.

2.8 FITTINGS (INSIDE BUILDING):

A. Cast-Iron Threaded fittings: ANSI B16.4, Class 125 standard pattern, for threaded joints. Threads shall conform to ANSI B1.20.1.

B. Malleable-Iron Threaded Fittings: ANSI B16.3, Class 300, standard pattern, for threaded joints. Threads shall conform to ANSI B1.20.1. Install steel pipe with threaded joints and fittings for 2inches and smaller and where shown on drawings.

C. Steel Fittings: ASTM A234, seamless or welded, for welded joints.

D. Grooved Mechanical Fittings: ASTM A 536, Grade 65-45-12 ductile iron; ASTM A 47 Grade 32510 malleable iron; or ASTM A53, Type F or Types E or S.

E. Grooved Mechanical Couplings: Consist of ductile or malleable iron housing, a synthetic rubber gasket of a central cavity pressure-responsive design; with nuts, bolts, locking pin, locking toggle, or lugs to secure roll- grooved pipe and fittings. Grooved mechanical couplings including gaskets used on dry-pipe systems shall be listed for dry-pipe service.

F. Grooved Mechanical Fittings and Couplings for the entire fire protection system shall be of the same manufacturer as submitted in shop drawing equipment review.

G. Cast-Iron Threaded Flanges: ANSI B16.1, Class 250; raised ground face, bolt spot faced.

H. Cast Bronze Flanges: ANSI B16.24, Class 300; raised ground face, bolt holes spot faced.

I. Plain end, hooker type, or push-on fittings or couplings shall not be allowed.

J. Bushings and reducing couplings shall not be allowed.

K. UL listed and Factory Mutual approved segmentally welded fittings are acceptable. Friction loss and flow data shall accompany hydraulic calculations.

2.9 JOINING MATERIALS:

A. Welding Materials: Comply with Section II, Part C, ASME Boiler and Pressure Vessel Code for welding materials appropriate for the wall thickness and chemical analysis of the pipe being welded.

B. Gasket Materials: Thickness, materials and type suitable for fluid or gas to be handled, and design temperatures and pressures.

2.10 FLEXIBLE SPRINKLER HEAD CONNECTORS:

A. General: UL Listed, FM approved, braided corrugated annealed stainless steel hose with support brackets and inlet/outlet nipples.

B. Length: no longer than 48”.

C. Flexible Tube: 304 Stainless Steel

D. Braid: 304 Stainless Steel

E. Outlet Extension Nipple (Straight): Steel (ASTM A53 A) with yellow zinc plating

F. Inlet Nipple: Steel (ASTM A53 A) with yellow zinc plating

G. Seal: EPDM

2.11 GENERAL DUTY VALVES:

A. Gate Valves - 2 Inch and Smaller: Body and bonnet of cast bronze, 175 pound cold water working pressure - non-shock, threaded ends, solid wedge, outside screw and yoke, rising stem, screw-in bonnet, and malleable iron handwheel. Valves shall be capable of being repacked under pressure, with valve wide open.

B. Gate Valves - 2-1/2 Inch and Larger: Iron body; bronze mounted, 175 pound cold water working pressure - non-shock. Valves shall have solid taper wedge; outside screw and yoke, rising stem; flanged bonnet, with body and bonnet conforming to ASTM A 126 Class B; replaceable bronze wedge facing rings; flanged ends; and a packing assembly consisting f a cast iron gland flange, brass gland, packing, bonnet, and bronze bonnet bushing. Valves shall be capable of being repacked under pressure, with valve wide open.

C. Butterfly Valves: 2-1/2inches to 12inches, grooved, ductile iron body and disc ASTM-536, disc EPDM coated, listed and approved minimum 175 psi service, actuator, self-contained supervisory switch, weatherproof approved for indoor or outdoor use.

D. Ball Valves: 1-1/2inches and smaller shall be threaded, forged brass construction, with Teflon seats and blow out proof stem. Ball shall be full port with chrome plated ball.

E. Ball Valves: 2inches to 3inches shall be listed to 300 p.s.i. with optional internal tamper switch. Body shall be ductile iron with corrosion resistant coating. Ball shall be 316 stainless steel, standard port design.

F. Swing Check Valves: MSS SP-71; Class 175, cast iron body and bolted cap conforming to ASTM A 126, Class B; horizontal swing, with a bronze disc or cast iron disc with bronze disc ring, and flanged ends. Valve shall be capable of being refitted while the valve remains in the line.

G. Double Check Valve Assembly: Double check valve assembly shall be UL listed for fire protection service and USC-CCCF approved. Installation arrangement shall be per manufacturer's recommendations.

1. Provide a detector check assembly where required by the water purveyor.

H. Provide reduced pressure backflow preventer where required by authority having jurisdiction and/or water department having jurisdiction. See Part 2 Products under this Section for acceptable manufacturers and model number.

2.12 SPECIALTY VALVE ASSEMBLIES

A. Dry-Pipe Assembly: Differential type, 175 psig working pressure, and have cast iron, flanged inlet and outlet, bronze seat with "O" ring seals, single hinge pin and latch design. Provide trim sets for air supply, drain, priming level, alarm connections, ball drip valves, pressure gauges, priming chamber attachment and fill line attachment. For low differential valves, a high water level signaling device or automatic drain shall be provided.

B. Single Interlock Pre-action assembly. System shall be FM approved and a UL listed assembly. Trim shall include a mechanical latching device to prevent system from resetting in case of loss of power to the release solenoid. Provide a supervised isolation valve, sufficiently downstream of the pre-action valve and trim, with a sight glass in the intervening piping to allow testing and visual confirmation of flow without flooding the entire piping system. Provide pressure gauges to indicate water supply, priming water and air pressures of the system. Each pressure gauge must be provided with its own isolation valve. Provide all

detectors, notification devices, valves, supervisory pressure switches, auxiliary contacts, air maintenance devices, compressors, nitrogen tanks, nitrogen generators, etc. for a complete installation. Provide manual release as required by NFPA-13. Refer to Division 26 for wiring requirements and Division 28 for Fire Alarm requirements and interfaces.

1. The initiating sequence shall require two detectors in the zone to activate in order to satisfy the fire detection condition.
2. Provide release control panel, complying with UL Standard 864 for Local Control Units for Releasing Service, with compatible detection system and electric solenoid valve. The system shall have an integrated releasing circuit disconnect switch to allow the system to be tested without actuating the fire suppression system as required per NFPA 72. Operation of the Disconnect Switch shall cause a supervisory signal at the releasing service fire alarm control unit. Provide Class B initiating and supervisory circuits of sufficient quantities for the zones to be controlled by each panel, except provide class A circuts where the Fire Alarm system is required by Div. 28 to be Class A. Provide sufficient output relays as required to interface with the overall building Fire Alarm system and remote annunciation. The control panel shall include both an graphic/textual annunciator and a set of lamps identifying alarm, trouble, supervisory and flow conditions. Provide battery back-up for a minimum of 5 minutes of alarm after 24 hours stand-by, or 10 minutes of alarm after 90 hours stand-by where required by Owner's insurance requirements (FM).
3. At contractor's option, the detection system, release panel, and notification devices may be provided as an integral part of the building Fire Alarm. Detection, releasing components, and Pre-Action valving shall be listed and approved to operate together as a complete system, and shall provide all the features indicated above.

C. Double Interlock Pre-Action Assembly: System shall be FM approved and a UL listed assembly. Trim shall include a mechanical latching device to prevent system from resetting in case of loss of power to the release solenoid. Provide a supervised isolation valve, sufficiently downstream of the pre-action valve and trim, with a sight glass in the intervening piping to allow testing and visual confirmation of flow without flooding the entire piping system. Provide pressure gauges to indicate water supply, priming water and air pressures of the system. Each pressure gauge must be provided with its own isolation valve. Provide all detectors, notification devices, valves, supervisory pressure switches, auxiliary contacts, air maintenance devices, compressors, nitrogen tanks, nitrogen generators, etc. for a complete installation. Provide manual release as required by NFPA-13. Refer to Division 26 for wiring requirements and Division 28 for Fire Alarm requirements and interfaces.

1. The initiating sequence shall require **//one/two//** detectors in the zone to activate in order to satisfy the fire detection condition.
2. Provide release control panel, complying with UL Standard 864 for Local Control Units for Releasing Service, with compatible detection system and electric solenoid valve. The system shall have an integrated releasing circuit disconnect switch to allow the system to be tested without actuating the fire suppression system as required per NFPA 72. Operation of the Disconnect Switch shall cause a supervisory signal at the releasing service fire alarm control unit. Provide Class B initiating and supervisory circuits of sufficient quantities for the zones to be controlled by each panel, except provide class A circuts where the Fire Alarm system is required by Div. 28 to be Class A. Provide sufficient output relays as required to interface with the overall building Fire Alarm system and remote annunciation. The control panel shall include both an graphic/textual annunciator and a set of lamps identifying alarm, trouble, supervisory and flow conditions. Provide battery back-up for a minimum of 5 minutes of alarm after 24 hours stand-by, or 10 minutes of alarm after 90 hours stand-by where required by Owner's insurance requirements (FM).
3. At contractor's option, the detection system, release panel, and notification devices may be provided as an integral part of the building Fire Alarm system in accordance with Division 28. Detection, releasing components, and Pre-Action valving shall be listed

and approved to operate together as a complete system, and shall provide all the features indicated above.

D. Nitrogen Pressure Maintenance Device, Dry-Pipe and Pre-Action Systems: An automatic device to maintain the correct pressure in a dry-pipe system or deluge system. System shall have shut- off valves to permit servicing without shutting down the sprinkler system, bypass valve for quick system filling, pressure regulator or switch to maintain system pressure, strainer; pressure ratings 175 psig maximum inlet pressure, operating pressure as required by the dry pipe or deluge valve.

1. Nitrogen Pressure System:
   a. Provide a UL Listed and FM approved Nitrogen Generator package. A single nitrogen generator may serve multiple dry/preaction systems in the same building if appropriately sized and valved.
   b. Provide a low pressure supervisory switch to monitor the pressure within the pipe between the Nitrogen Regulating Device and each Pressure Maintenance Device for each dry or preaction system.
   c. For each Dry or preaction system, provide an approved pressure maintenance device to maintain the required supervisory/maintenance pressure. Configure Pressure Maintenance Device as required by manufacture's data sheets.
   d. Provide a low-pressure switch to supervise pressure within the preaction system.
   e. Provide gauge on each Dry or preaction system. Provide second gauge on each Dry or preaction system for water pressure.

2.13 BASIC METERS AND GAUGES:

A. PRESSURE GAUGES:

1. General: Provide pressure gauges of materials, capacities, and ranges indicated, designed and constructed for use in service indicated.

2. Type: General use, 1 percent accuracy, ANSI B40.1 grade A, phospher bronze bourdon type, bottom connection.

3. Case: Drawn steel or brass, glass lens, 4-1/2inch diameter.

4. Connector: Brass with 1/4inch male NPT.

5. Scale: White coated aluminum, with permanently etched markings.

6. Range: 0 - 200 psi.

B. PRESSURE GAUGE COCKS:

1. General: Provide pressure gauge cocks between pressure gauges and gauge tees on piping systems. Gauge cock shall be ¼ inch female NPT on each end ball valve.

2.14 FIRE PROTECTION SPECIALTIES:

A. General: Provide fire protection specialties, UL-listed, in accordance with the listing. Provide sizes and types which mate and match piping and equipment connections.

B. Water Flow Indicators: Vane type water flow detector, rated to 250 psig; designed for horizontal or vertical installation; have 2-SPDT circuit switches to provide isolated alarm and auxiliary contacts, 7 ampere 125 volts AC and 0.25 ampere 24 volts DC; complete with factory-set field-adjustable retard element to prevent false signals, tamper-proof cover which sends a signal when cover is removed, and with activation time retarding capability set at 30 seconds. The setting shall be verified through the inspectors test prior to final inspection.

C. Supervisory Switches: Provide products recommended by manufacturer for use in service indicated. SPST, normally closed contacts, designed to signal valve in other than full open position.

D. Pressure Switch: Indicating low pressure trouble in sprinkler system.

E. Pressure switch: Indicating flow in sprinkler system.

F. Low Air Pressure Horn: Provide low air pressure horn as indicated.

2.15 AUTOMATIC SPRINKLERS:

A. Sprinkler Heads: Frangible bulb type, and style as indicated or required by the application. Unless otherwise indicated, provide heads with nominal ½ inch discharge orifice, for "ordinary" temperature range with a minimum temperature of 155 degrees F. Provide "intermediate" temperature heads in Electrical rooms, where required as noted in NFPA 13, and as required by the Authority having jurisdiction.

B. Sprinkler Head Finishes: Provide heads with the following finishes:

1. Upright, Pendent and Sidewall Styles: Finished Spaces with concealed piping: bright chrome, with bright chrome escutcheon plate. Unfinished spaces and where exposed pipe is allowed: Factory brass, rough bronze finish for heads.

2. Recessed Style: bright chrome, with bright chrome escutcheon plate.

3. Concealed Style: Flush Cover plate color as required to match ceiling finish, white for typical ceiling finish, refer to Architectural drawings for further information.

4. See drawings for additional sprinkler type requirements.

C. Sprinkler Head Cabinet and Wrench: Finished steel cabinet, suitable for wall mounting, with hinged cover and space for spare sprinkler heads plus sprinkler head wrench. Provide amounts of each style per NFPA-13. Locate head cabinet on shop drawing submittal.

D. Plastic fire sprinkler escutcheons are not acceptable.

E. Sprinklers subject to damage and/or located within 7'- 0" of the floor, those protecting electrical/mechanical rooms, and as noted on the drawings shall be provided with approved guards.

2.16 VALVE AND EXTINGUISHER CABINETS:

A. General: Provide cabinets to house hose valves and extinguishers as indicated.

B. Construction: Manufacturer's standard enameled steel box, with trim, frame, door and hardware to suit cabinet type, trim style, and door style indicated. Weld all joints and grind smooth. Miter and weld perimeter door frames.

C. Cabinet Type: Cabinet box (tub) fully recessed in walls of sufficient depth to suit style of trim indicated. Provide Fire Resistive Rated cabinet boxes where installed in Fire Resistive walls.

D. Provide fire valve cabinet of type indicated with full tempered glass panel door,

E. Provide standard equipment ""Potter Roemer" Series 1800 series valve cabinets.

2.17 FIRE DEPARTMENT CONNECTIONS:

A. Wall Type Fire Department Connections: Polished cast brass, 4-way flush wall type, with brass wall plate and having threads compliant with the Local Fire Department requirements, 3" N.P.T. x 2-1/2" pin lug hose thread swivels, pin lug plugs and. Each inlet shall have a clapper valve, and cap and chain. The wall plate shall have the words "Auto Spkr. and Standpipe - Fire Department Connection" in raised letters. Contractor shall verify threads with local fire department.
1. Potter Roemer 5000 series or equivalent.

B. Fire department connections including location shall meet the approval of the fire department having jurisdiction.

2.18 INSPECTOR'S TEST AND DRAIN ASSEMBLY:

A. Provide an alarm test module of a manufacturer listed in paragraph 2.2.

B. Comply with NFPA-14, Section 5-11, for draining and testing of wet standpipe system.

C. Test and drain piping shall be routed to exterior. Location shall meet Owner's approval.

PART 3 - EXECUTION

3.1 LAYOUT DESIGN

A. Provide for all areas except as otherwise noted, an Automatic Wet-Pipe system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by fire. Areas subject to freezing, not otherwise served with a Dry-Pipe or Pre-Action system shall utilize dry barrel sprinklers fed from wet sprinkler piping in a warm location.

B. Where required, provide a Dry Pipe Fire Protection system employing automatic sprinklers attached to a piping system containing nitrogen under pressure, the release of which (as from the opening of a sprinkler) permits the water pressure to open a valve known as a dry-pipe valve. The water then flows into the piping system and out the opened sprinkler.

C. Single Interlock Pre-action System: Where requested by the owner**,** provide a Single Interlock Pre-action System utilizing a detector system and low pressure nitrogen in the sprinkler piping. The system piping is pneumatically pressurized for supervisory purposes only. This feature serves to prevent undetected leaks. The single interlocked pre-action system requires operation of the detection system to trip the deluge valve and fill the system with water. Water will then be discharged on the fire when the sprinklers open. If the system piping or a sprinkler is damaged, the valve will not open, but supervisory pressure is reduced and a "low air" alarm is activated. If the detection system operates, the valve will open but the water will be contained in the sprinkler piping until a sprinkler opens. If the detection system does not operate, the valve will not open. The system shall be supervised.

D. Double Interlock Pre-action System: Where requested by the owner, provide a double Interlock Pre-action System utilizing a detector system and nitrogen **//or air//** under pressure in the sprinkler piping. The system piping is pneumatically pressurized. The double interlock pre-action system requires operation of both the detection system, plus release of the pneumatic pressure through an open sprinkler to trip the deluge valve and fill the system with water. Water will then be discharged on the fire through the open sprinkler(s). If the system piping or a sprinkler is damaged, the valve will not open, but supervisory pressure is reduced and a "low air" alarm is activated. If the detection system operates, but there is no open sprinkler, the valve will not open. If the detection system does not operate, the valve will not open. The system shall be supervised.

E. If allowed by the Authority Having Jurisdiction, provide a Class I, Wet Standpipe and Hose system which is an arrangement of piping, valves, hose connections and allied equipment connected to the water supply system, but where Fire Department Apparatus provides the needed flow and pressure requirement.

F. Where required by the Authority Having Jurisdiction, provide a Class I Automatic Wet Standpipe which is an arrangement of piping, valves, hose connections and allied equipment connected to the water supply system, and a fire pump to provide the needed flow and pressure requirement at the most remote hose outlet immediately upon opening the hose valve.

G. Elevator Shafts and Machine Rooms: Sprinklers shall be installed in elevator machinery rooms, at the top and bottom of hoistways if required by the currently adopted version of NFPA 13, Owners insurance requirements, and local jurisdiction requirements. Determine the type of elevator(s) included in the project scope and provide appropriate protection as required.
   1. The sprinkler heads in the hoistway or elevator machinery room shall be supplied from a separate, independent sprinkler branch line with a readily accessible indicating shut-off valve located outside of the hoistway or machinery room.

   2. Coordinate with the Fire Alarm system and Electrical System to provide at least one heat detector in the same area of each sprinkler head. Coordinate with the Fire Alarm system so temperature rating of the heat detector activates prior to the sprinkler to activate the elevator equipment shunt trip.

3.2 HYDRAULIC DESIGN

A. The Fire Sprinkler System shall be hydraulically calculated by the Contractor to comply with NFPA-13 and the following criteria.

B. Determine the design area via the Density/Area method. The Room Design Method shall not be used except where specifically approved.

C. Classification of Occupancy:

   1. Occupancy classification shall be in accordance with NFPA, the requirements of the Authority Having Jurisdiction.

D. The final fire protection system demand shall be a minimum of 10 PSI below the water supply curve.

E. Velocities in pipes shall be shown on hydraulic calculations. Velocities in overhead piping shall not exceed 32 feet per second. Velocities in underground piping shall not exceed 16 feet per second.

F. Where Flexible Sprinkler Head Connectors are used, they shall be included in the hydraulic calculations as being equivalent to a minimum 50’ of 1” schedule 40 piping at C = 120.

G. Where CPVC pipe and fittings are used, such piping may be hydraulically calculated using a Hazen-Williams C Factor of 150.

H. The Fire Protection Contractor shall provide as many sets of hydraulic calculations as necessary, performed and submitted to prove that the most remote and demanding areas are calculated.

I. Design information shall be permanently affixed to the main riser as described in NFPA 13.

J. Water flow data for bidding purposes only is approximately:

1 McKee Hall:
   a. 95 psi static; 70 psi residual with 1405 gpm flowing
   b. Based on flow report provided by Greeley Water Department, dated May 2016.
2. Carter Hall:
   a. 60 psi static; 40 psi residual with 1030 gpm flowing
   b. Based on flow report provided by Greeley Water Department, dated May 2016.
3. The Fire Protection Contractor shall be responsible for obtaining water flow data from the appropriate water or fire department before hydraulically calculating equipment fire sprinkler system. A copy of the water flow test data from the water department shall accompany the hydraulic calculations.

3.3 EXAMINATION:

A. Examine rough-in for fire hose valves and cabinets to verify actual locations of piping connections prior to installing cabinets.

B. Examine walls for suitable conditions where cabinets are to be installed.

C. Do not proceed until unsatisfactory conditions have been corrected.

3.4 PIPING INSTALLATIONS:

A. Provide a minimum 5feet-0inches cover for all underground pipe installations. Install in accordance with AWWA C600.

B. Locations and Arrangements: Drawings (plans, schematics, and diagrams) indicate the general location and arrangement of piping systems. So far as practical, install piping as indicated. Drawings are diagrammatic in character and do not necessarily indicate every required offset, valve, fitting, etc.

1. Deviations from approved "working plans" for sprinkler piping, require written approval of the authority having jurisdiction. Written approval shall be on file with the Engineer prior to deviating from the approved "working plans."

C. Install sprinkler piping to provide for system drainage in accordance with NFPA 13.

D. Use approved fittings to make all changes in direction, branch takeoffs from mains, and reductions in pipe sizes. Welded outlet branch pipe fittings are acceptable.

E. Install unions in pipe 2 inch and smaller, adjacent to each valve. Unions are not required on flanged devices or in piping installations using grooved mechanical couplings.

F. Install flanges or flange adapters on valves, apparatus, and equipment having 2-1/2 inch and larger connections.

G. For pipe branch outlets cut in straight pipe, all cutouts (coupons) shall be attached to the branch outlet. Where piping is exposed in finished areas, remove coupons after final inspection.

H. Hangers and Supports: Comply with the requirements of NFPA 13. Hanger and support spacing and locations for piping joined with grooved mechanical couplings shall be in accordance with the grooved mechanical coupling manufacturer's written instructions, for rigid systems. Provide protection from damage where subject to earthquake in accordance with NFPA 13.

I. Make connections between underground and above-ground piping using an approved transition piece strapped or fastened to prevent separation.

J. Install mechanical sleeve seal at pipe penetrations in basement and foundation walls.

K. All piping penetrating walls to structure shall be sleeved and sealed.

L. Install test connections sized and located in accordance with NFPA 13 complete with shutoff valve. Test connections may also serve as drain pipes.

M. Install pressure gauge on the riser or feed main at or near each test connection. Provide gauge with a connection not less than 1/4 inch and having a soft metal seated globe valve, arranged for draining pipe between gauge and valve. Install gauges to permit removal, and where they will not be subject to freezing.

N. The fire line entry valves shall have monitoring electrical switches, the wiring from which shall be carried to the fire annunciating panel.

O. The fire protection contractor shall be responsible for the coordination of his installation with all other contractors. .

P. Protect adjacent area where pipe cutting and threading takes place (e.g. floors, ceilings, walls, etc.).

Q. There shall be no fire sprinkler piping in electrical rooms (other than piping serving sprinklers directly in that room) or installed over any electrical panels.

R. Provide spring-loaded check valve at top of drain risers.

S. Install pressure gauges on city and system sides of fire entry valve assembly.

T. Install hangers straight and true and piping parallel to building lines.

U. Chlorinated Polyvinyl Chloride (CPVC) Fire Sprinkler Systems. In addition to the above, Installation practices such as pipe support spacing, bracing, allowance for thermal expansion/contraction, solvent cementing and handling and storage shall be in accordance with the manufacturer’s instructions and the UL Listing which includes installation limitations.
   1. Assure that all materials that could come in contact with the piping are chemically compatible as determined by CPVC pipe and fittings manufacturer or compound

manufacturer, and thus Listed on pipe, fittings or compound manufacturer's chemical compatibility program.

3.5 PIPE JOINT CONSTRUCTION:

A. Welded Joints: AWS D10.9, Level AR-3.

B. Threaded Joints: Conform to ANSI B1.20.1, tapered pipe threads for field cut threads. Join pipe, fittings, and valves as follows:

1. Note the internal length of threads in fittings or valve ends, and proximity of internal seat or wall, to determine how far pipe should be threaded into joint.

2. Align threads at point of assembly.

3. Apply appropriate tape or thread compound to the external pipe threads.

4. Assemble joint to appropriate thread depth. When using a wrench on valves place the wrench on the valve end into which the pipe is being threaded.

5. Damaged Threads: Do not use pipe with threads which are corroded or damaged. If a weld opens during cutting or threading operations, that portion of pipe shall not be used.

C. Flanged Joints: Align flange surfaces parallel. Assemble joints by sequencing bolt tightening to make initial contact of flanges and gaskets as flat and parallel as possible. Use suitable lubricants on bolt threads. Tighten bolts gradually and uniformly to appropriate torque specified by the bolt manufacturer.

D. Mechanical Grooved Joints: For wet pipe systems, roll grooves on pipe ends dimensionally compatible with the couplings. For Dry and Preaction systems, roll grooves shall not be allowed, where grooved couplings are used, provide only cut groove piping

E. End Treatment: After cutting pipe lengths, remove burrs and fins from pipe ends.

3.6 VALVE INSTALLATIONS:

A. General: Install fire protection specialty valves, fittings and specialties in accordance with the manufacturer's written instructions, NFPA 13 and the authority having jurisdiction.

B. Shutoff and isolation Valves: Install electronically supervised-open indicating valves so located to control all sources of water supply except fire department and roof manifolds connections. Where there is more than one control valve, provide permanently marked identification signs indicating the portion of the system controlled by each valve. Valve at water main tap shall be underground gate valve with roadway box.

C. Install approved backflow preventer in each water supply connection.

D. Hose Outlet Valves: Install 2-1/2 inch hose outlet valves at each Class I standpipe outlet for hose connections for use by the fire department.

3.7 INSTALLATION OF DRY AND PRE-ACTION SYSTEMS:

1 Arrange piping for positive drainage to the valve room. Minimize the use of auxiliary drains and drip traps.

2 Where pendant sprinklers are used provide dry barrel sprinklers on arm-overs to avoid trapped moisture in sprinkler branches.

3.8 SPRINKLER HEAD INSTALLATIONS:

A. Install recessed sprinkler heads in areas with dropped ceilings. Install upright brass sprinkler heads near the deck in areas without ceilings. Provide upright sprinklers near deck plus sprinklers below partial ceilings or ceiling “clouds” as required for full coverage for obstructions as required by NFPA 13.

B. Any sprinkler heads with any paint on them shall be replaced. The sprinkler system shall then be hydrostatically tested again at the contractor's expense.

C. Sprinkler heads shall be positioned so as to comply with NFPA-13 for any obstructions. This includes, but is not limited to, soffits, exposed beams, surface mounted lights and indirect lighting arrangements. The Fire Protection Contractor is responsible for identifying these obstructions and designing the system accordingly.

D. Run piping concealed above ceilings wherever possible, unless specifically indicated on the drawings. Prepare pipe for painting where exposed in finished areas.

E. Protect exposed sprinkler heads against mechanical injury with standard guards. Provide sprinkler head guards in all mechanical, electrical or storage rooms as well as exposed pendant heads which are installed less than 8’-0” A.F.F.

F. Provide heads in "pocketed" areas caused by exposed duct, piping or beams.

G. Sprinkler heads shall be located in the center of all 2 foot x 2 foot ceiling tiles and quarter points, along the center line lengthwise of 2 foot x 4 foot ceiling tiles, no closer than 1’ to the edge of any tile.

H. Use proper tools to prevent damage during installations.

I. Install sprinkler piping in a manner such that mechanical equipment, ceiling tiles or lights can be accessed and easily removed. The sprinkler piping shall be installed to provide a minimum of 6 inches above the top of a finished ceiling.

J. Keep sprinklers as far from transformers and/or panels as spacing allows.

3.9 SPRINKLER APPLICATION:

A. Except where prohibited by NFPA 13 or inappropriate for the occupancy hazard, all sprinklers shall be quick response.

B. It shall be the responsibility of the Contractor to determine the placement of all sprinklers in accordance with NFPA 13 unless shown otherwise on the Contract Documents. Notify the Architect and Engineer if Contract Documents indicate a non-compliant sprinkler placement.

C. All sprinklers shall be standard coverage, pendant or upright type except where specifically shown on drawings. Contractor may propose the use of extended coverage sprinklers or sidewall sprinklers by submitting a specific request, indicating the proposed locations, prior to the main fire protection submittal. In general, extended coverage sprinklers will not be allowed unless it is unlikely that the space will ever be reconfigured, and side wall sprinklers will not be allowed unless structural or architectural features make pendant or upright sprinklers

impractical to install.

D. Unless otherwise noted, spaces with gypboard or plaster ceilings shall have concealed pendant, with white coverplates. Lay-in acoustical tile ceilings shall have recessed or concealed sprinklers.

E. Areas without ceilings shall have exposed pendant or upright sprinklers.

F. Provide frangible bulb temperature ratings as allowed in NFPA 13.

G. Where sprinklers are used to provide protection for glazed openings and doors, arrange for complete wetting of all areas of the glass surface. Provide sprinklers specifically tested and listed for window protection unless it can be demonstrated that full wetting can be accomplished with other types of sprinklers. Place sprinklers to avoid obstruction from window/door head, mullions, or window coverings.

3.10 INSTALLATION OF FLEXIBLE SPRINKLER HEAD CONNECTORS:

1. For use in ceilings with medium and heavy load grids (ASTM C635 and C636)

2. Install the bracket assembly onto the main tee bars of the ceiling in accordance with the manufacturer’s listed installation instructions.

3. Install with a minimum bend radius of 6” or greater if required by manufacturer.

3.11 FIRE VALVE CABINET INSTALLATIONS:

A. Install fire hose valve and extinguisher cabinets in locations and at mounting heights indicated, or if not indicated, at heights to comply with applicable regulations of governing authorities.

1. Prepare recesses in walls for cabinets as required by type and size of cabinet and style of trim and to comply with manufacturer's instructions.

2. Securely fasten fire hose valve and cabinets to structure, square and plumb, to comply with manufacturer's instructions.

3. Where exact location of surface-mounted cabinets is not indicated, locate as directed by Architect.

4. Where cabinets are shown to be installed in fire resistant construction, provide cabinets tested and listed as providing an equivalent fire resistance rating to the wall, or provide firestopping materials listed and tested to restore the fire resistance rating of the wall.

B. Identify equipment in cabinet with lettering spelling "Fire Hose Valve" applied to door by. Provide lettering to comply with requirements indicated for letter style, color, size, spacing and location or, if not otherwise indicated, as selected by Architect from manufacturer's standard arrangements.

3.12 FIRE DEPARTMENT CONNECTION INSTALLATIONS:

A. Install automatic drip valves at the check valve on the fire department connection to the mains. Route drain to exterior.

B. Install mechanical sleeve seal at pipe penetration in outside walls.

3.13 INSTALLATION OF BASIC IDENTIFICATION:

A. Install fire protection signs on piping in accordance with NFPA 13 and NFPA 14 requirements.

3.14 FIELD QUALITY CONTROL:

A. Flush, test and inspect sprinkler piping systems in accordance with NFPA 13, Standard for installation of sprinkler systems, Edition 1991 - Chapter 8.

B. The fire sprinkler system shall not be connected to underground piping until the fire service main is tested and approved.

C. The Fire Protection Contractor shall conduct and bear the costs of all necessary tests of the fire protection work, furnish all labor, power and equipment. All piping shall be tested with water as required, the tests witnessed by the authority having jurisdiction.

D. The fire protection piping shall be tested under a hydrostatic pressure of not less than 200 psig, for a duration of not less than 2 hours.

E. Replace piping system components which do not pass the test procedures specified, and retest repaired portion of the system at Fire Protection Contractor's expense.

F. All piping tests (pneumatic and hydrostatic) shall be conducted prior to the application of any painting materials. This will prevent hidden leaks and/or repainting of repaired/altered piping.

3.15 SYSTEM CERTIFICATION:

A. The Contractor shall provide the Owner with written certification prior to final inspection, that all new equipment:

1. Has been visually inspected and functionally tested as required by the Specifications.

2. Is installed entirely in accordance with the manufacturer's recommendations within the limitations of the system's UL listings and NFPA criteria.

3. Is in proper working order.

3.16 FINAL INSPECTION AND TESTING:

A. A representative of must attend the fire sprinkler system testing and inspections. The Fire Protection Contractor is responsible for coordinating the testing schedule with the Authority Having Jurisdiction.

B. The Contractor shall make arrangements with the Owner for final inspection and witnessing of the final acceptance tests. The Fire Protection Contractor, the Alarm System Contractor and the Owner will conduct the final inspection and witness the final acceptance test.

C. All tests and inspections required by the referenced Codes and Standards, and the Owner shall be performed by the Contractor.

D. The inspecting committee as referenced above will visit the job site to inspect the work and witness the final acceptance tests when they have been advised by the Contractor that the work is completed and ready for test. If the work is not complete or the test is unsatisfactory, the Contractor shall be responsible for the Consultant's extra time and expenses for re-

inspection and witnessing the re-testing of the work. Such extra fees shall be deducted from payments by the Owner to the Contractor.

E. After the system has been inspected and tested, a certificate, "Contractor's Material and Test Certificate Sprinkler System - Water Spray System," shall be provided by the contractor and shall be signed by him or his representative, the Owner's representative and by a representative of the fire department if appropriate. Sufficient copies shall be prepared to ensure the Engineer, Owner, all inspecting authorities and the contractor have a copy for their files. The Contractor shall prepare one (1) test report for each inspection performed whether successful or not.

F. The signing of the certificate by the Owner's representative shall in no way prejudice any claim against the contractor for faulty material, poor workmanship, or failure to comply with inspecting authority's requirements or local ordinances.

G. Contractor shall provide at least five (5) working days notice for all tests.

H. All sprinkler supervisory initiating devices shall be functionally tested to verify proper operation.

I. All supervisory functions of each initiating device shall be functionally tested.

J. Receipt of all alarm and trouble signals, initiated during the course of the testing, shall be verified at the fire alarm control panel.

3.17 WORK BY OTHERS:

A. Coordinate wiring of flow and tamper switches and other Fire Alarm related components with Fire Alarm system.

3.18 OPERATION AND MAINTENANCE MANUAL:

A. The Contractor shall provide the Owner with a loose-leaf manual containing:

1. A detailed description of the systems.

2. A detailed description of routine maintenance required or recommended or which would be provided under a maintenance contract including a maintenance schedule and detailed maintenance instructions for each type of device installed.

3. One copy of the latest version of NFPA-25.

4. Manufacturers' data sheets and installation manuals/instructions for all equipment installed.

5. A list of recommended spare parts.

6. Service directory, listing the specific equipment items and where parts can be obtained, with name, address and telephone number.

7. Hydraulic calculations (stamped and signed per section 1.6).

8. Test certificates.

B. Refer to Division 1 and Section 210500 "OPERATING AND MAINTENANCE" for additional requirements.

3.19 RECORD DRAWINGS:

A. The Contractor shall provide and maintain on the site an up-to-date record set of approved shop drawing prints which shall be marked to show each and every change made to the sprinkler system from the original approved shop drawings. This shall not be construed as authorization to deviate from or make changes to the shop drawings approved by the Owner without written instruction from the Owner in each case. This set of drawings shall be used only as a record set.

B. Upon completion of the work, the record set of prints shall be used to prepare complete, accurate final record drawings reflecting any and all changes and deviations made to the sprinkler system.

C. The Owner, at his option and at the Contractor's expense, may require revised hydraulic calculations depending on the extent and nature of field changes.

D. The Record Drawings and Hydraulic Calculations shall have the signed stamp of a professional engineer registered in the State of Idaho certifying the Record Drawings and the Hydraulic Calculations accurately represent the completed fire protection system.

E. Upon completion of the work, two sets of blackline paper record drawings shall be submitted to the Owner for review.

F. Upon review of the blackline record drawings, before final approval, one (1) set of record drawings in electronic .PDF format and one (1) additional set of full size record drawings plotted to bond shall be delivered to the Owner.

3.20 GUARANTEE PERIOD:

A. Guarantee: The Contractor shall guarantee all materials and workmanship for a period of one year beginning with the date of final acceptance by the Owner. The Contractor shall be responsible during the design, installation, testing and guarantee periods for any damage caused by him (or his subcontractors) or by defects in his (or his subcontractors') work, materials, or equipment.

B. Emergency Service: During the installation and warranty period, the Contractor shall provide emergency repair service for the sprinkler system within four hours of a request by the Owner for such service. This service shall be provided on a 24 hour per day, seven days per week basis.

3.21 TRAINING:

A. The Contractor shall conduct two (2) training sessions of four (4) hours each to familiarize the building personnel with the features, operation and maintenance of the sprinkler systems. Training sessions shall be scheduled by the Owner at a time mutually agreeable to the Contractor and the Owner.

3.22 WATER DAMAGE:

A. The Fire Protection Contractor shall be responsible for any damage to the work of others, to building and property/ materials of others caused by leaks in automatic sprinkler equipment, unplugged or disconnected pipes or fittings, and shall pay for necessary replacement or repair

of work or items so damaged during the installation, testing or guarantee periods of the automatic sprinkler work.

END OF SECTION 211000

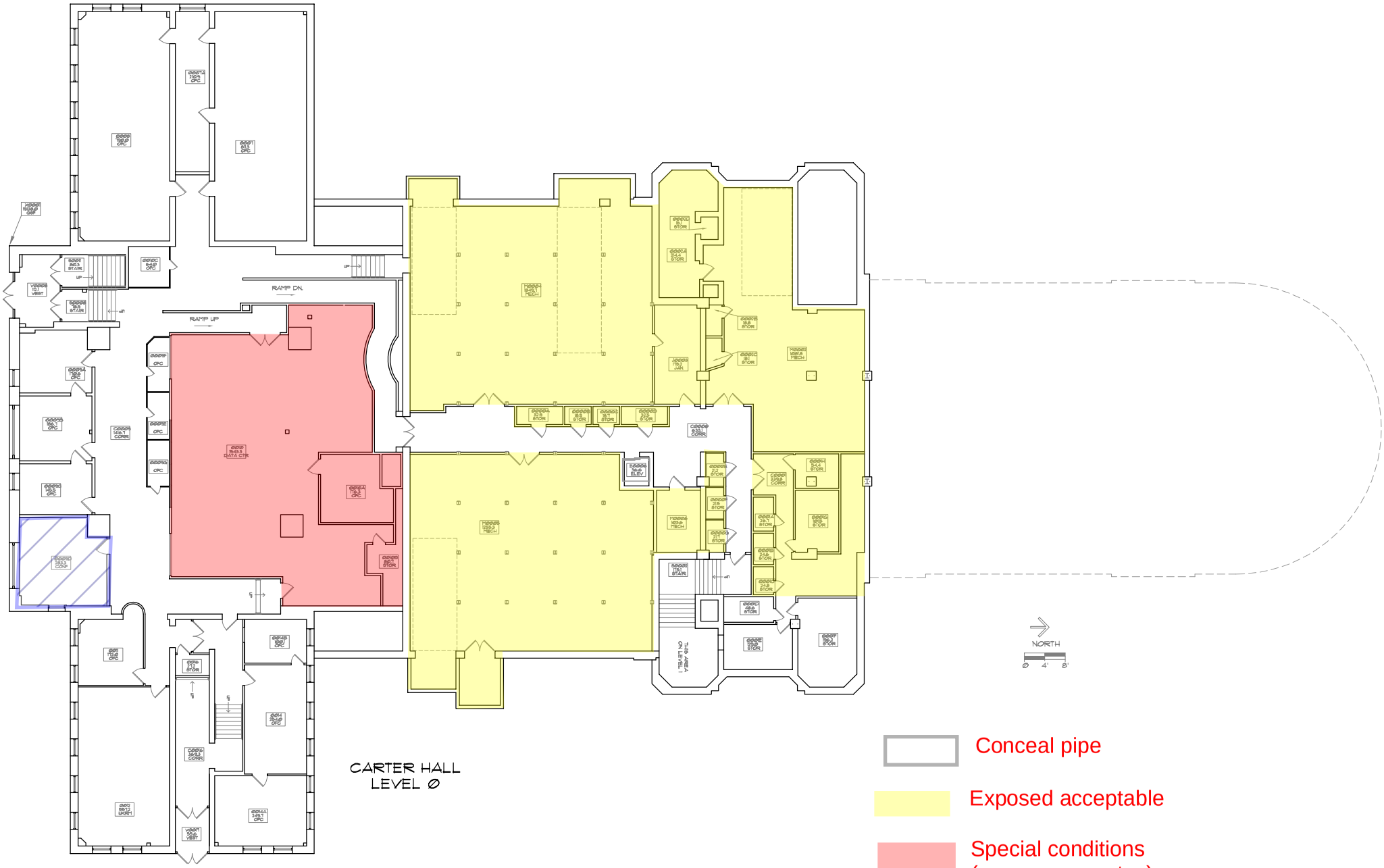
Appendix E

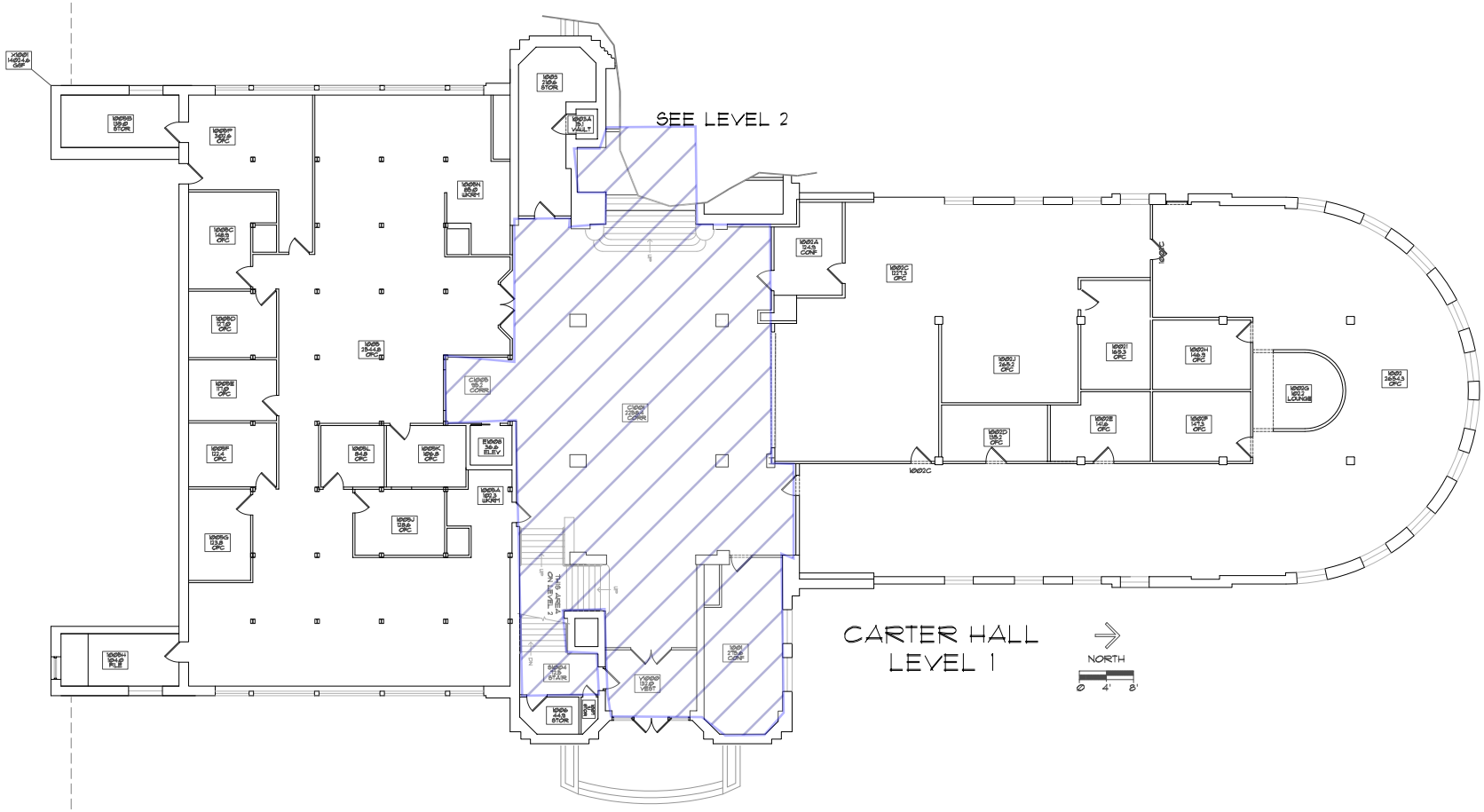
AESTHETIC GUIDELINES AND CONSTRUCTION STANDARDS

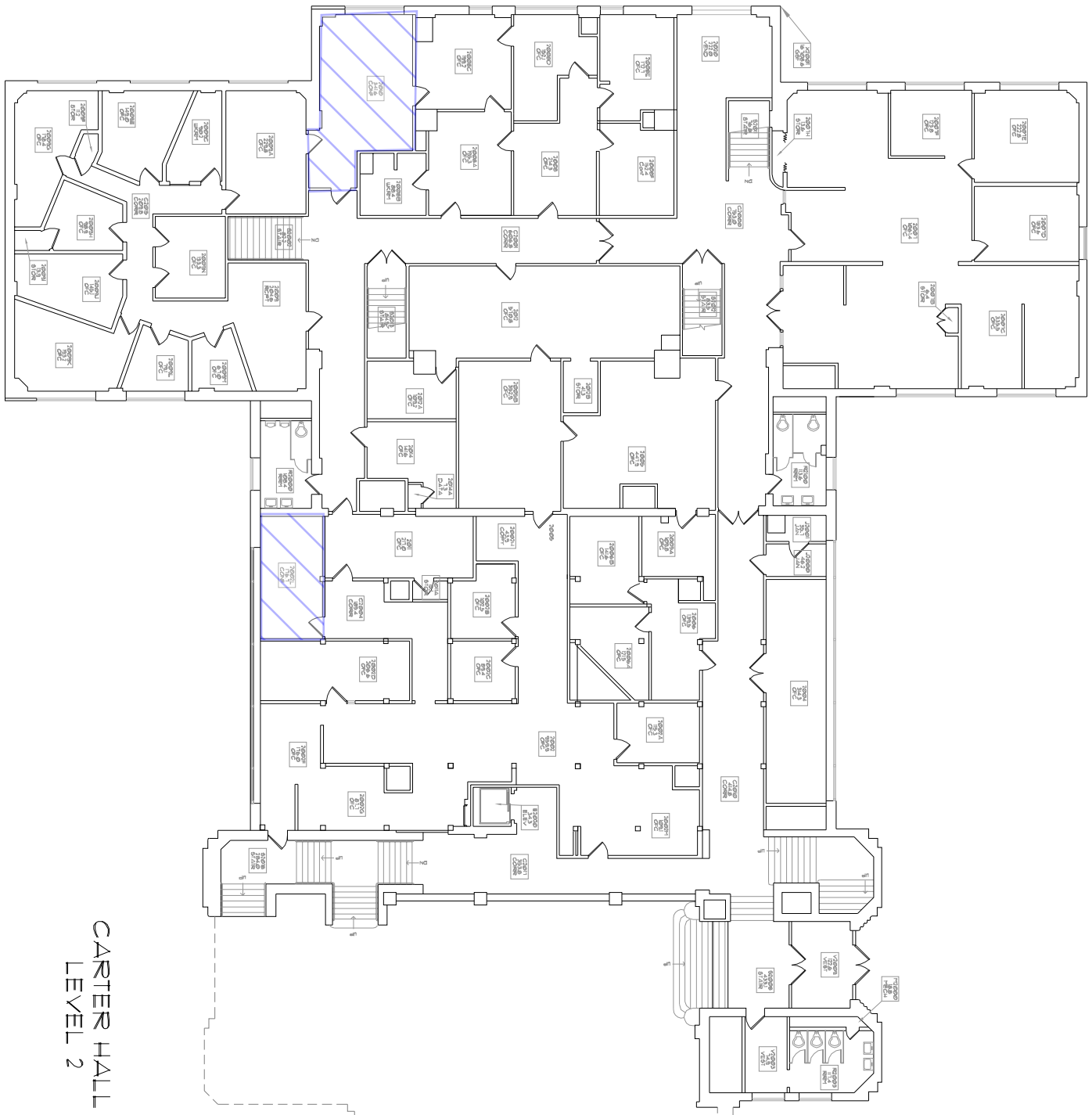
In addition to the standards outlined in Appendix D, all design and material selection shall meet the University's Design Guidelines (link below) unless approved by the Principle Representative.

http://www.unco.edu/facilities/planning-and-construction/guidelines/design-guidelines.aspx

Reference the attached floor plans for direction on the level of concealment expected for each space. This is for reference only and will be finalized during design.


RAMP DN.
RAMP UP
NORTH
0 4' 8'
CARTER HALL
LEVEL 0
Conceal pipe
Exposed acceptable
Special conditions
(server room, etc..)
Concealed heads and
pipe


SEE LEVEL 2
THIS AREA ON LEVEL 2
CARTER HALL
LEVEL 1
NORTH
0 4' 8'



CARTER HALL
LEVEL 2

NORTH

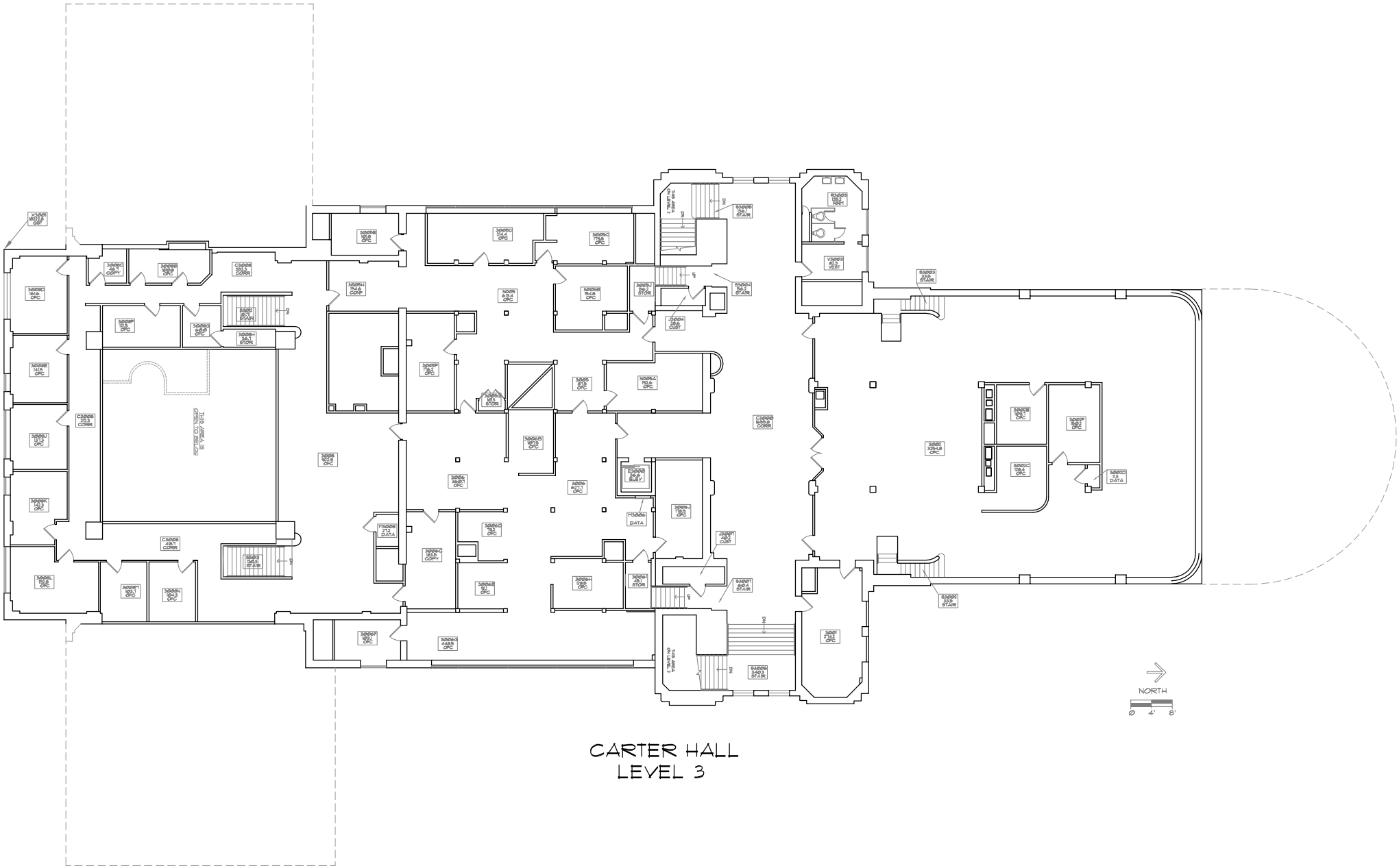
SCALE: n/a

Sheet
3 of 6

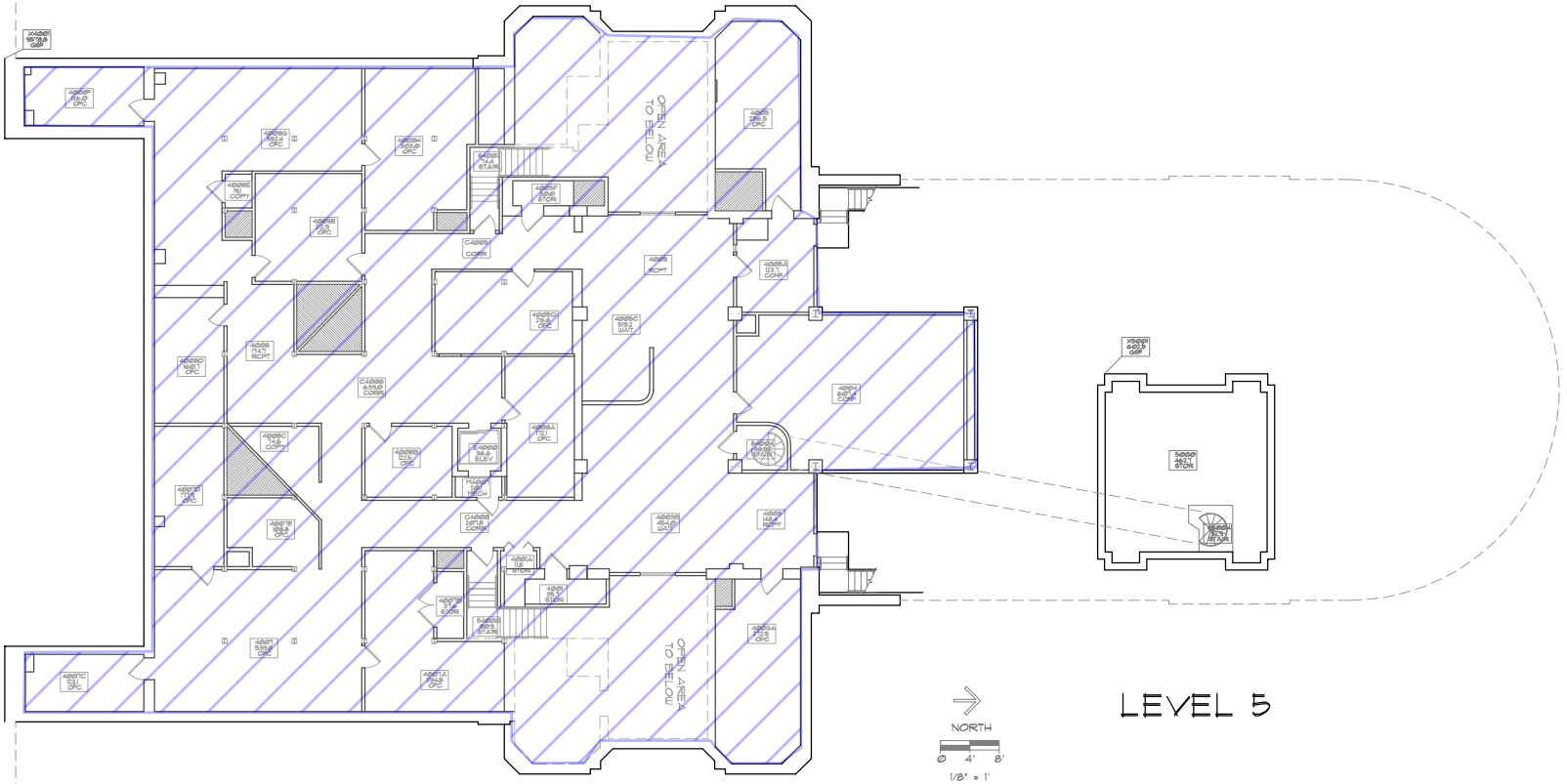
UNC

FACILITY PLANNING & CONSTRUCTION
CARTER HALL BLDG. NO. 002
LEVEL 2

UNIVERSITY of NORTHERN COLORADO
FACILITY PLANNING & CONSTRUCTION

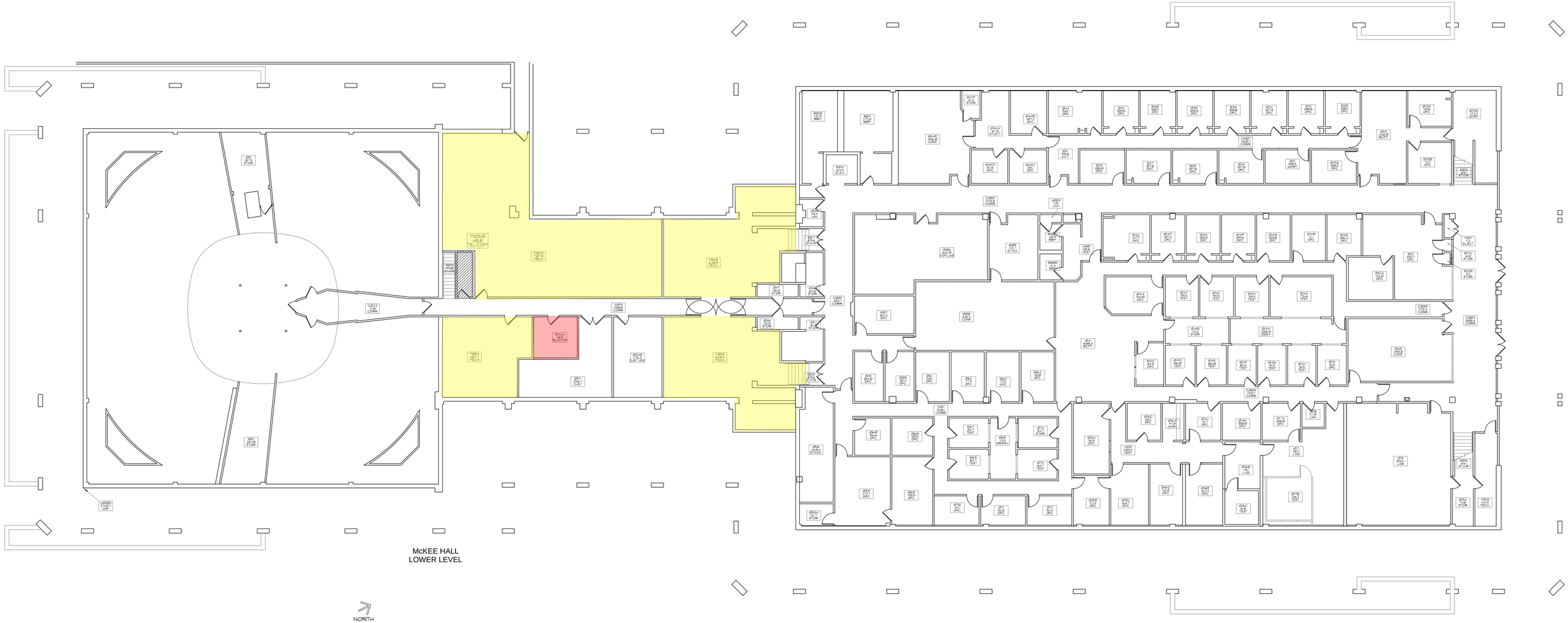


CARTER HALL
LEVEL 3

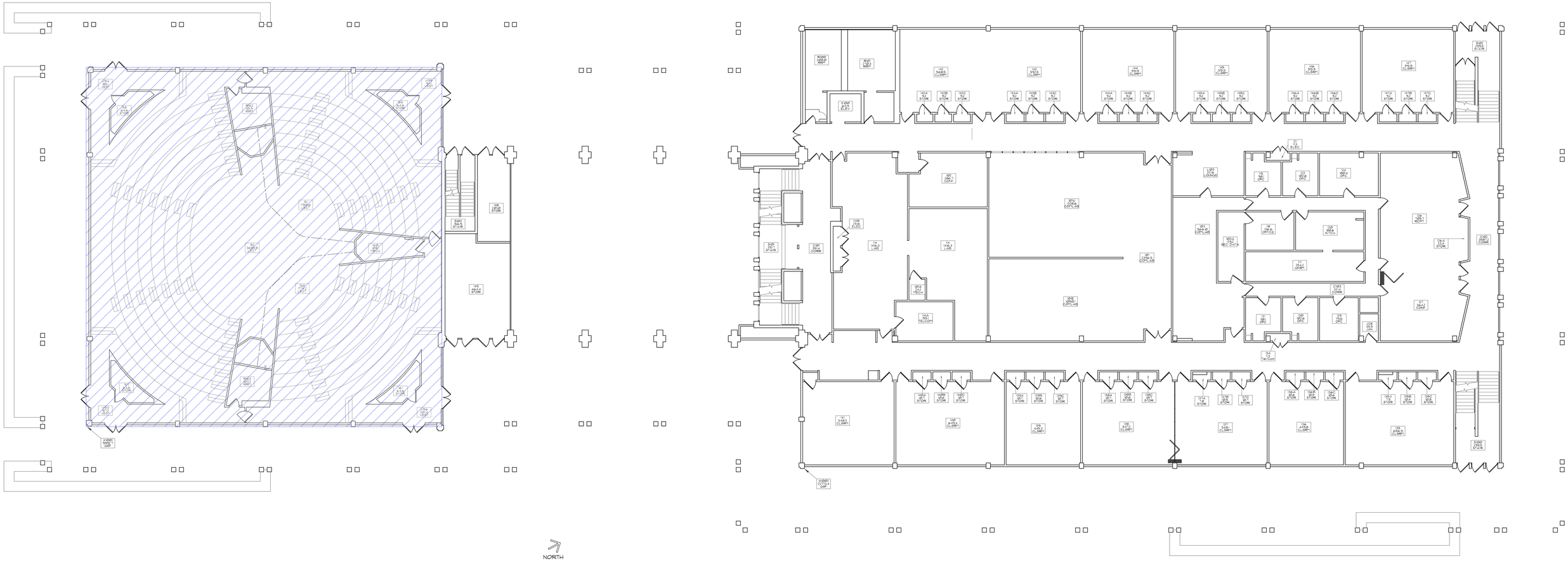


CARTER HALL

LEVEL 4

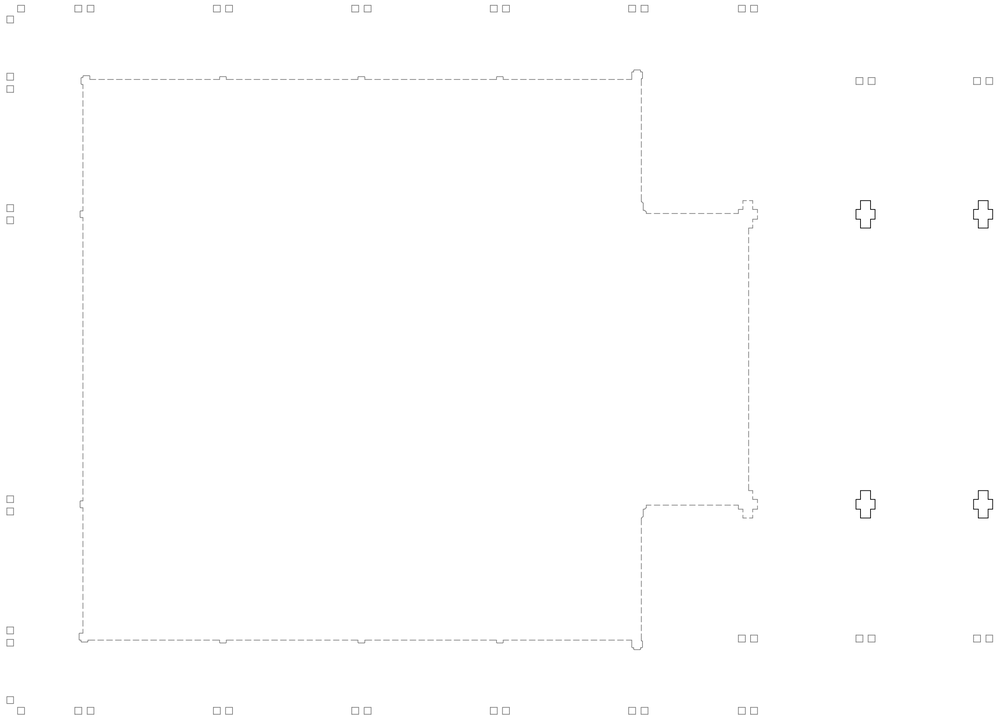


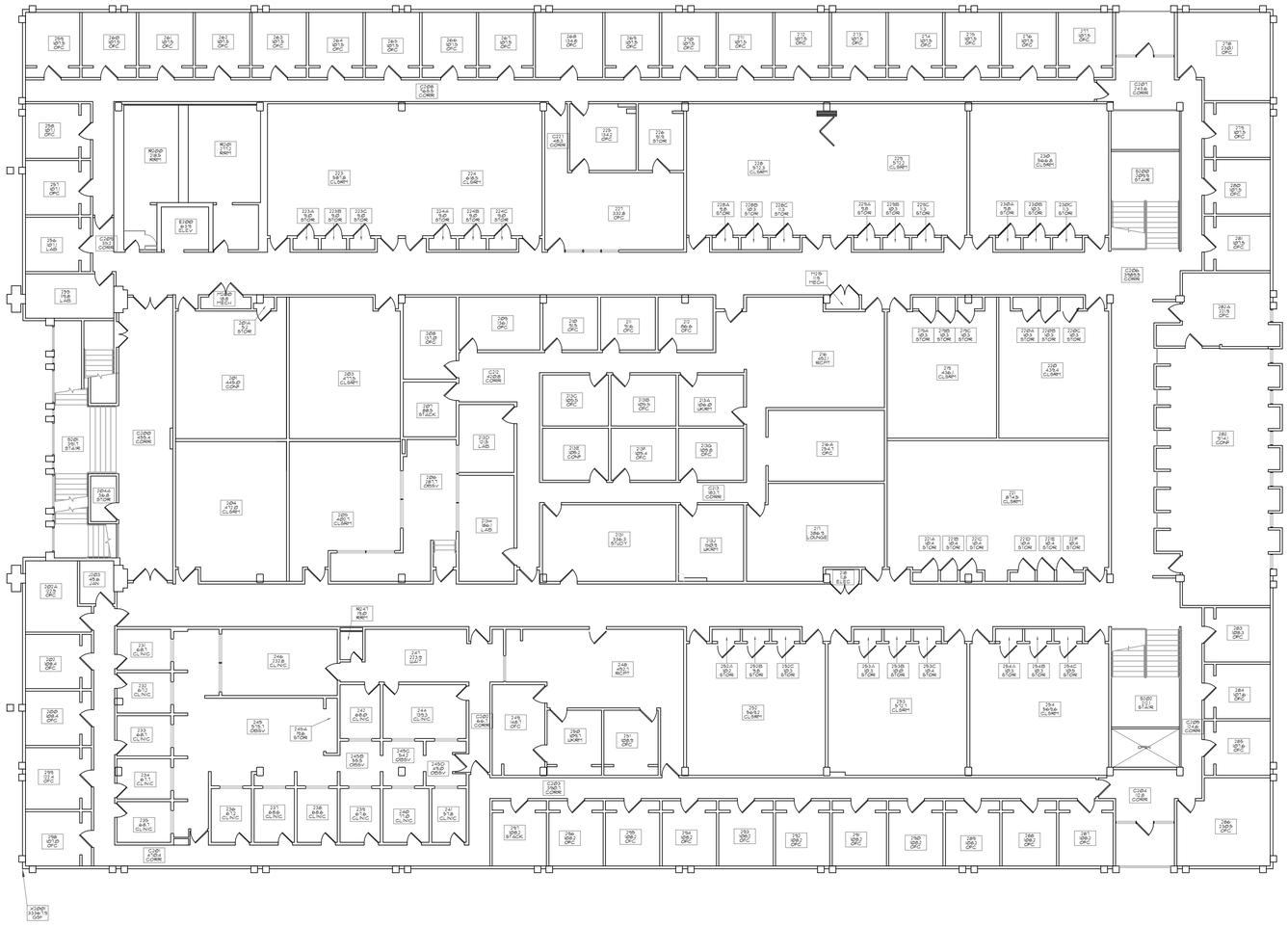
McKEE HALL
LOWER LEVEL



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

McKEE HALL
FIRST FLOOR



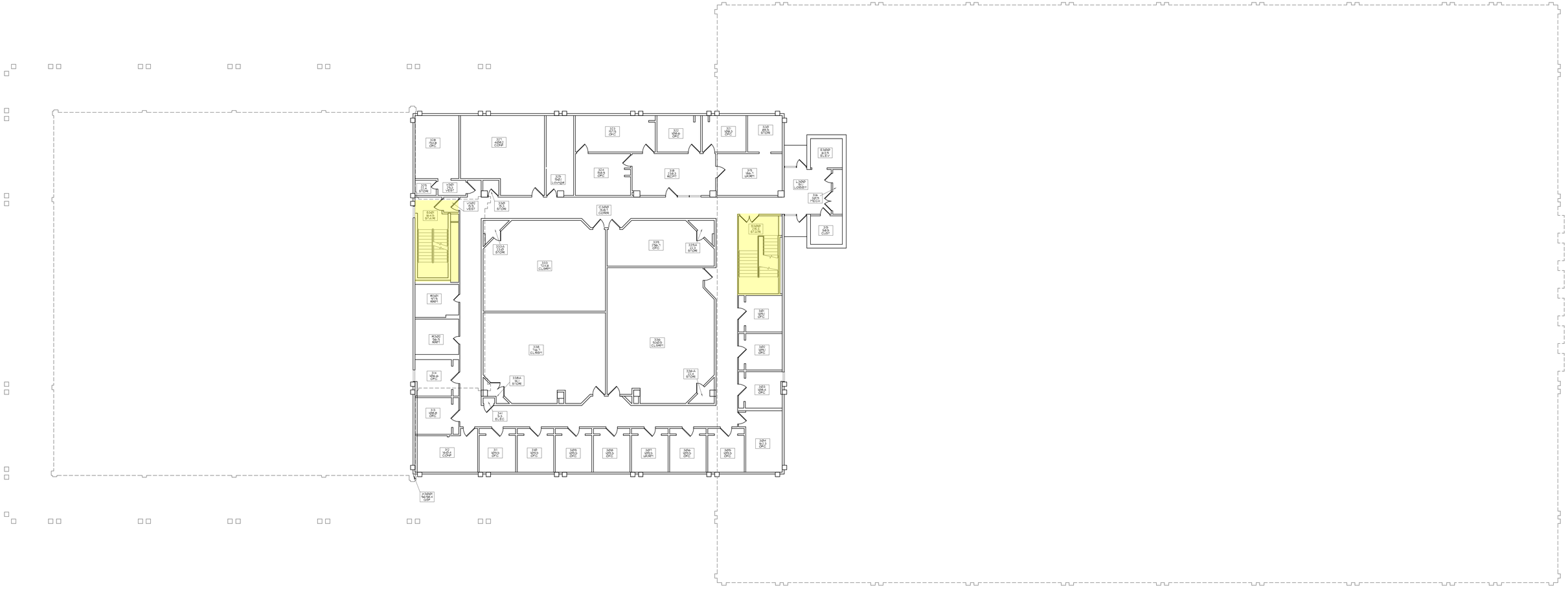


NORTH

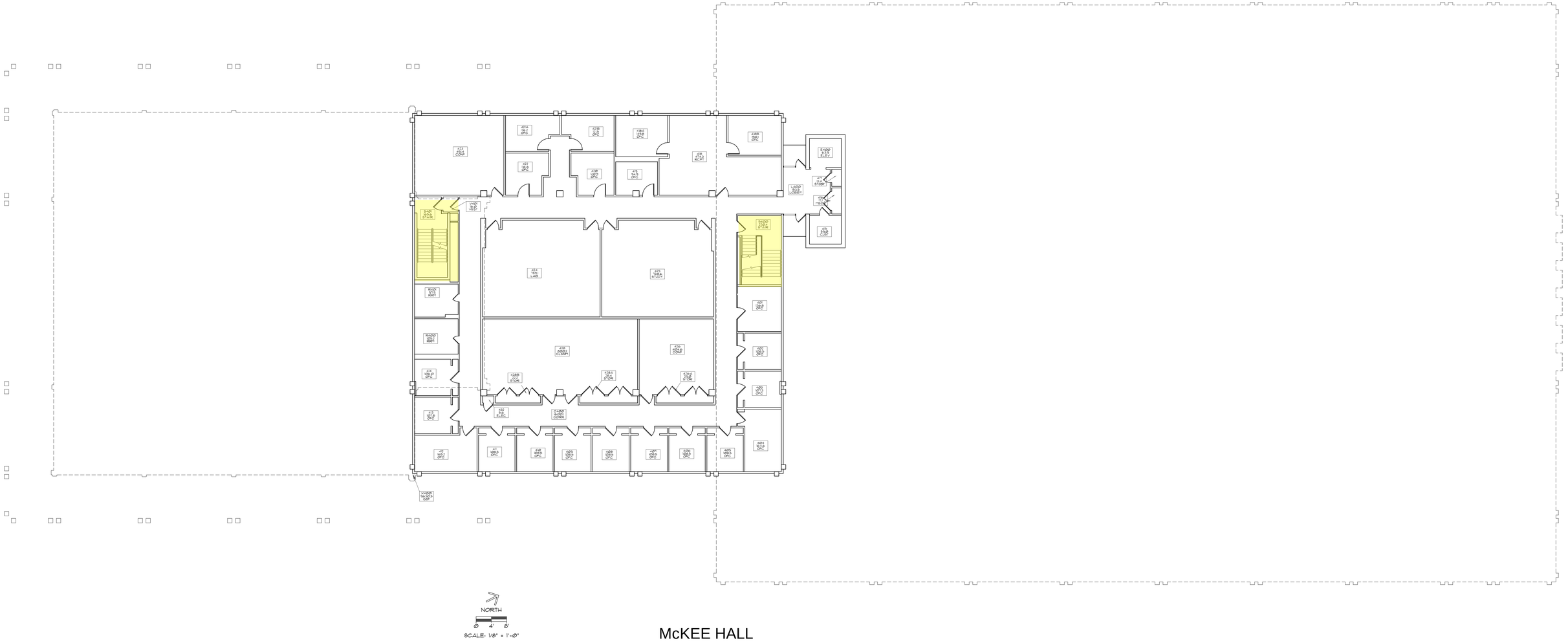
0 4' 8'

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

McKEE HALL
SECOND FLOOR

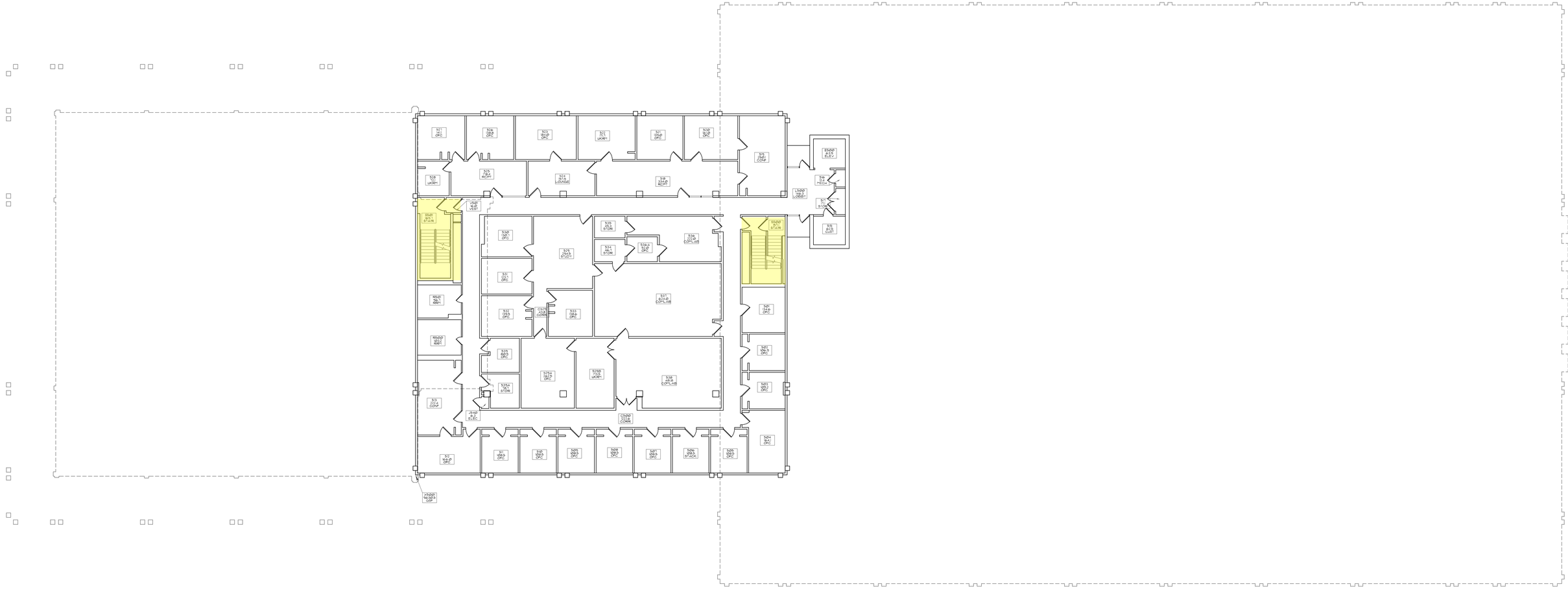


McKEE HALL
THIRD FLOOR

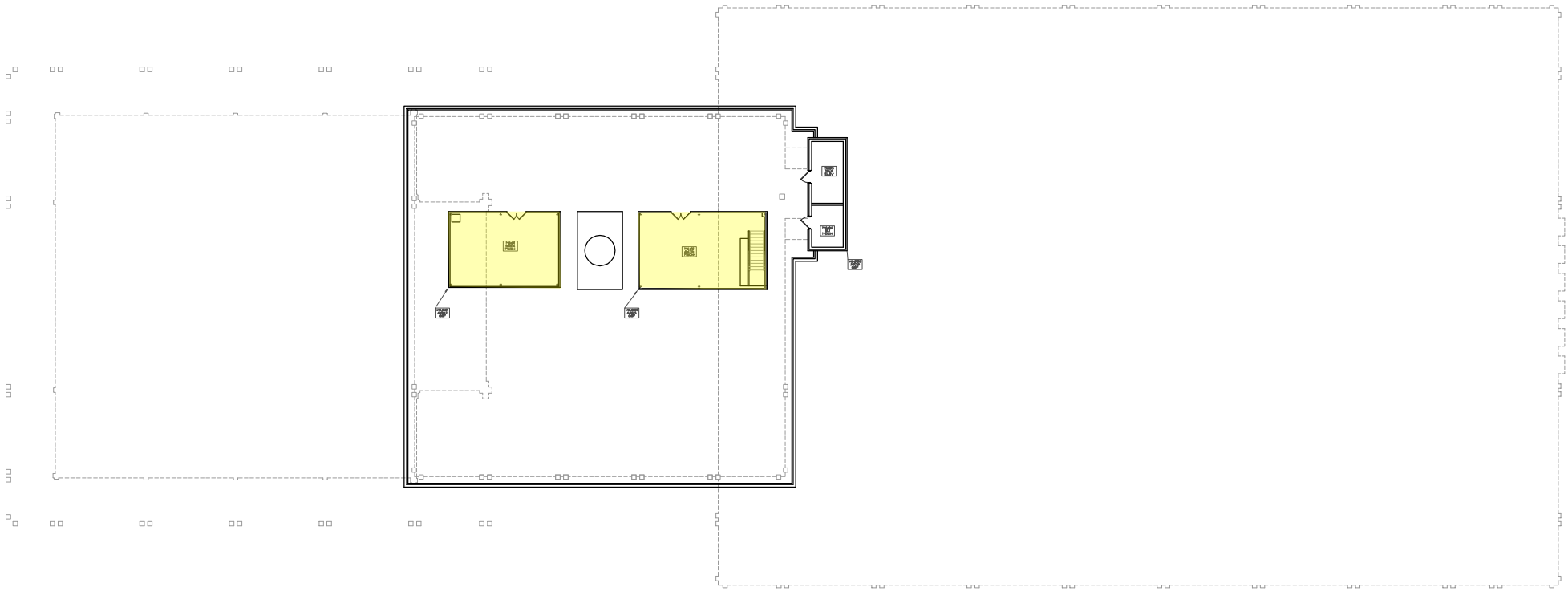


SCALE: 1/8" = 1'-0"

McKEE HALL
FOURTH FLOOR



McKEE HALL
FIFTH FLOOR



McKEE HALL
SIXTH FLOOR

Appendix F

BUDGET

Carter Hall Estimate				
WORK ITEM (Labor/Material/Equipment)	QTY		UNIT COST	EXTENDED COST
Professional Services				
Arch/Eng/Basic Services:	78970	SF	.70	$55,279.00
Infrastructure				
a) Utility Services: new water service	200	LF	145	$29,000.00
Structure/Systems/Components				
Ceiling & wall restoration	78,970	SF	1.50	$118,455.00
Added cost for access issues	78,970	SF	1.00	$78,970.00
Other(explain): Fire alarm upgrades	1	LS	15,000.00	$15,000.00
Fire sprinkler coverage	78,970	SF	4.00	$315,880.00
Fire pump	1	LS	$24,848.00	$24,848.00
Contractor's General Conditions:	10%			$63,743.20
Contractor's Overhead & Profit:	15%			$95,614.80
Contingency	5%			$31,871.60
Total of Construction Improvement Costs:				$828,661.00
5a) Total square feet/lineal feet of Construction Improvement area:				~78,970 SF
5b) Overall cost per square foot/lineal foot of construction Improvement:				$10.49

McKee Hall Estimate				
WORK ITEM (Labor/Material/Equipment)	QTY		UNIT COST	EXTENDED COST
Professional Services				
Arch/Eng/Basic Services:	96,397	SF	.70	$67,477.90
Structure/Systems/Components				
Ceiling & wall restoration	96,397	SF	1.50	$144,595.00
Added cost for schedule constraint	96,397	SF	1.50	$144,595.00
Other(explain): Fire alarm upgrades		LS	19,677.00	$19,677.00
Fire sprinkler coverage	96,397	SF	4.00	$385,588.00
Floor control assemblies	1	LS	2,000.00	$2,000.00
Modify clean agent	1	LS	2,000.00	$2,000.00
Contractor's General Conditions:	10%			$76,643.39
Contractor's Overhead & Profit:	15%			$114,965.09
Contingency	5%			$38,321.70
Total of Construction Improvement Costs:				$996,364.07
5a) Total square feet/lineal feet of Construction Improvement area:				~96,397 SF
5b) Overall cost per square foot/lineal foot of construction Improvement:				$10.34