

Kansas State University

Fairchild Hall

Fairchild Hall Feasibility Study Phase I & Phase II

PROGRAM

2024 05 20

Prepared by Clark | Huesemann and Facilities Campus Planning and Project
Management

Table of Contents

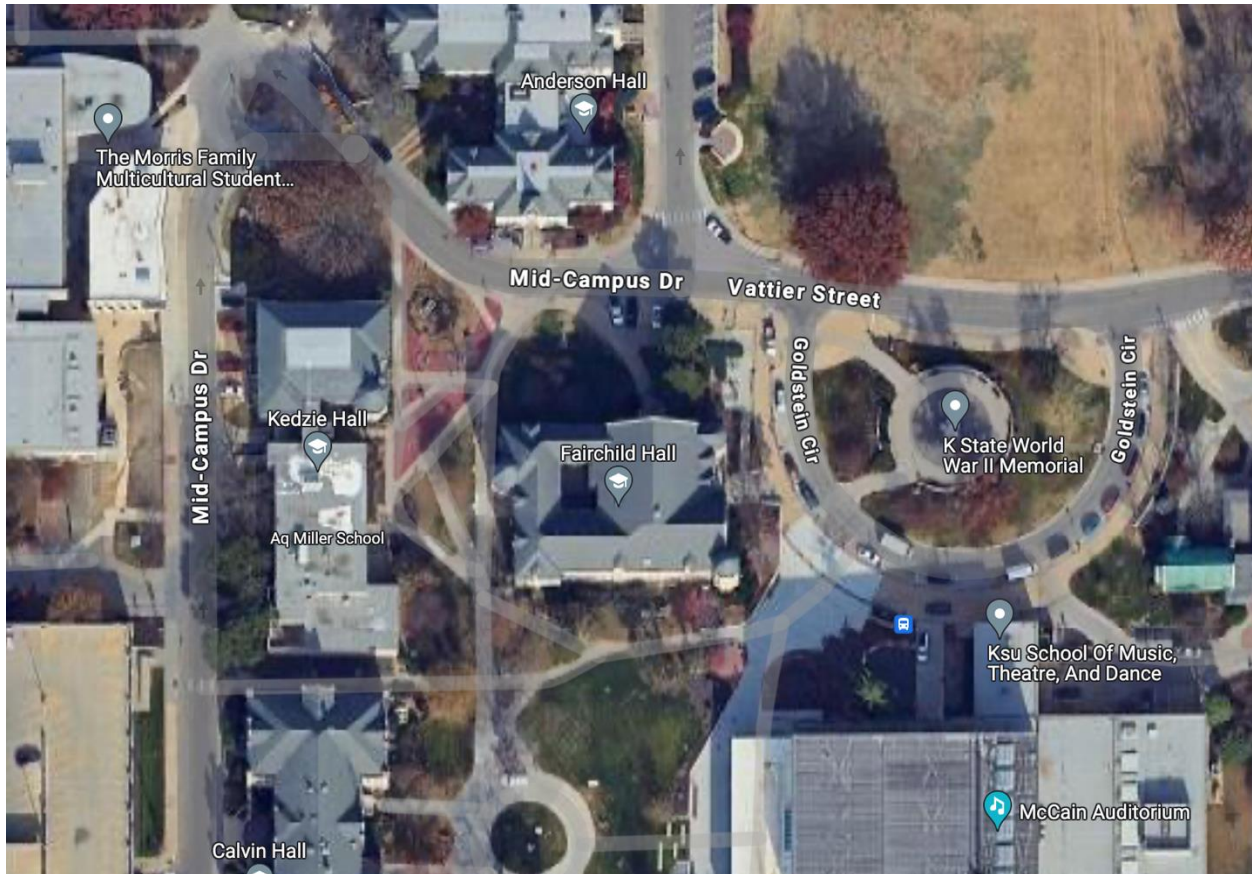


Introduction/Statement of Need	3
Site Location Map	3
Project Description	4
Existing Building Conditions Summary	4
Space Tabulation	11
Budget	12
Operating Costs	12
Schedule	13
Appendix	14
Existing Building Floor Plans	

Introduction/Statement of Need

In order to further support current board initiatives of improved space utilization and consolidation the university is proposing to renovate portions of Fairchild Hall for office uses. Fairchild Hall was originally constructed in 1894 and is currently rated as a D- (FCI of .47) with nearly \$4.6M of deferred maintenance to restore existing conditions to a B level, without considering improvements and modernizations. Renovating the building would allow the university to reduce energy use, reduce the ongoing maintenance burden, extend the life of this building and simply make the building more functional.

Site Map



Project Description

Fairchild Hall will be partially renovated to accommodate new office uses compatible with this location on campus. The overall building layout will remain similar to its current condition. The design for selective renovation will bring all newly renovated areas into code and ADA compliance, address HVAC and exterior envelope improvements.

It is anticipated that approximately 15,000 nsf will be reconfigured as a part of this project. Office uses will be incorporated, and compliant restrooms will be added at each floor level. Other select deferred maintenance items that may be included are new roofing, window replacements, upgrading the fire alarm system, connecting the building to the campus chilled water loop, repairs to masonry, and storm and sanitary sewer improvements.

The newly renovated areas will include new walls, doors, ceilings, lighting, and flooring that are consistent with KSU campus standards for new construction.

This project will be structured into two phases with Phase I scope to include the Interior Renovations and Systems Upgrade and Phase II scope to include the Exterior Renovations. Each phase will be bid independently based upon availability of funding.

Existing Building Conditions Summary

Overall Assessment

Fairchild Hall contains just under 60,000 gsf, that is distributed relatively equally between four floor levels, basement through third. The building has not been renovated since the integration of an elevator and restrooms on the first floor, in 1990. Main electrical systems were upgraded in 2011. The building is not fire-sprinkled, nor is it connected to the campus chilled water loop, as cooling is delivered mostly by window air conditioners.

In addition to the lack of conditioned air to the building as a whole, the most significant area of concern is the lack of access to, and the storm drainage issues at the interior light well. This lightwell is open-air but covered with a fabric bird screen. The exterior walls inside this lightwell are a combination of masonry and wood siding. The wood siding is in poor condition. There are several different roof levels within the base of the light well, creating additional wall/roof flashing conditions and drainage paths that are currently in need of repair. There is no access into the light well for maintenance.

The interiors are a mixture of original and renovated conditions, with some historic character remaining in portions of the building. The existing elevator is at an age where replacement is likely necessary due to the age of the controllers and components. A full assessment of the elevator was not conducted with this study but is recommended prior to the renovation.

PHASE I

INTERIOR ASSESSMENT

Public Space Finishes:

Generally, the building's public spaces and corridors have multiple examples of exposed utilities, steam piping, electrical panels, fire alarm panels and associated conduit.

Interior Doors: Throughout the building there are multiple door styles ranging from five panel wood doors, half lite doors, and flush wood doors. Door finishes are not consistent, there are multiple examples of stained and painted doors. Generally, the condition of all doors is poor to fair, with many examples of worn surfaces and minor damage.

North Entry Vestibule:

- Ceiling: Original plaster ceiling is exposed with painted finish in good condition.
- Walls: Painted surfaces appear in good condition. Stained wood trim and wainscot appears to be in good condition.
- Floor: Existing carpet finish appears worn along the traffic path.

West Stair Tower Entry:

- Walls: Painted surfaces are visibly aged and peeling. Stained woodwork and trim appear in fair condition.
- Floor: Existing white VCT appears to be in good condition and matches the current KSU standard.

Basement Corridors:

- Ceiling: Acoustic ceiling tile (2x4) system is present. General condition of ACT system is poor, surface of tiles is stained and many edges are poorly seated or chipped.
- Walls: Painted surfaces appear in poor to fair condition. All wood trim and wainscot are painted and is in poor to fair condition with multiple examples of surface damage.
- Floor: Majority of corridor floor finish is a tan VCT that historically may have been installed with mastic containing asbestos materials. The entry area outside of the restrooms is a quarry tile which is in fair condition.

First Floor Corridors:

- Ceilings: Original plaster ceiling is exposed with painted finish in good condition.
- Walls: Painted surfaces appear in good condition. Stained wood trim and wainscot appears to be in good condition.
- Floors: Existing white VCT appears to be in good condition and matches the current KSU standard.

Second Floor Corridors:

- Ceilings: Original plaster ceiling is exposed with painted finish in fair condition.
- Walls: Painted surfaces appear in poor condition. All wood trim and wainscot are painted and is in poor to fair condition with multiple examples of surface damage.
- Floors: Majority of corridor floor finish is a tan VCT that historically may have been installed with mastic containing asbestos materials. Condition is poor to fair: multiple areas of floor that have been patched with various VCT colors; multiple examples of damaged floor tile.

Third Floor Corridors:

- Ceilings: Acoustic ceiling tile (2x2) system is present. General condition of ACT system is good.
- Walls: Painted surfaces appear in fair condition. All wood trim is painted and is in fair condition with examples of surface damage.
- Floors: Majority of corridor floor finish is a tan VCT that historically may have been installed with mastic containing asbestos materials. VCT condition is fair. Landing area outside of the elevator is quarry tile which is in fair condition.

Code Compliance and Accessibility:

With all existing uses identified as B-occupancy, the current plumbing fixture counts do not appear to meet code requirements, but the quantity is close. The building total occupant count of 584 occupants would require 6 water closets for men, and 6 for women; 4 lavatories for women, and 4 for men; 3 drinking fountains; and one service sink. There are 7 water closets for women, and 5 for men; 4 lavatories for women, and 3 for men. These fixtures are not distributed throughout the building in a code compliant fashion, and some are lacking clearance requirements and are deteriorated. In addition, the building does not provide any single-user restrooms or private wellness rooms containing a lavatory.

South Stair:

- Generally, the 1990 stair layout, handrail height, and guardrail height appear compliant with current code requirements. However, the existing layout of the guardrail's vertical pickets (6" o.c.) and location of the horizontal bottom rail, create openings that exceed the current code requirements for allowable opening sizes within a guardrail.
- Existing south stair exit path is an existing non-conforming condition noted in the 2010 code footprint plans as having compensatory measures in place.

Central Stair:

- The remaining portions of the original historic central stair are noncompliant with current code requirements. Handrails are noncompliant regarding height above the stair nose and bracket mounting details.

West Stair:

- The original historic west stair is noncompliant with current code requirements. Observed deficiencies include noncompliant railing heights/configuration, stair width, and dimensions of landings.

Basement:

- Restrooms: Existing Men's and Women's restrooms generally appear compliant with current code requirements. A deeper review of these spaces and fixtures would be required to confirm either code compliance or determine existing deficiencies.
- Drinking Fountain is not code compliant.
- West Interior Ramp: The ramp configuration and railings appear generally compliant with current code requirements. A deeper review of the existing slopes and clearances would be required to confirm code compliance.
- Corridors: Generally, the basement corridors appear compliant with current codes.

First Floor:

- Restrooms: Existing Women's restroom is noncompliant with current code and ADA requirements. Observed deficiencies include, door clearances, floor changes in level, and fixture heights/clearances. There are no other restrooms on this level of the building.
- Corridors: Generally, the First-floor corridors appear compliant with current codes.

Second Floor:

- Restrooms: Existing Women's restroom is noncompliant with current code and ADA requirements. There are no other restrooms on this level of the building.
- Corridors: Second floor corridors have a few noncompliant deficiencies that include changes in level conditions within the path of egress that exceed allowable height per current codes.

Third Floor:

- Restrooms: Existing Men's restroom is noncompliant with current code. Observed deficiencies include noncompliant fixture heights/clearances. There are no other restrooms on this level of the building.
- Corridors: Third floor corridors have a few noncompliant deficiencies that include floor changes in level as well as noncompliant ramp transitions within the path of egress which exceed heights or slope allowable with current codes.

BUILDING SYSTEMS

HVAC Systems

There is an air handler located in space under the north stair. This area is not a desirable location.

Improper zoning – majority of spaces served by split systems are serving multiple rooms with only one thermostat.

Improper ventilation for current codes – most ventilation brought in through window AC units with some split systems equipped with an outside air intake duct. Facilities indicated some of these may not be in balance any longer some outside air dampers were repaired/replaced after initial test and balance.

Honeywell controls – most of controls are obsolete with equipment replacements.

No humidity control – no known units with dehumidification sequences. Facilities indicated portions of the building get incredibly humid during summer months.

Corridors unconditioned throughout – no ventilation or air conditioning being provided to corridors throughout Fairchild Hall.

The building is not currently served by the campus chilled water loop.

Plumbing Systems

Most domestic water piping is galvanized piping that is reaching end of useful life. Facilities team indicated that galvanized piping has been scaled up and is contributing to loss of flow in domestic water system on upper floors.

Low water pressure/flow on higher floors.

Sewer system having issues going out of building. Facilities indicated they believe sanitary leaving the building is undersized.

Issues with venting systems. Facilities group indicated that some sinks don't drain properly, and that venting system is likely the culprit creating vacuum effect preventing proper drainage from sink.

Storm drainage system in lightwell causing issues by discharging onto roof below. Creating leaks on adjacent windows and in parts of roof.

Electrical Systems

Newer panels placed throughout and back-fed old panels, however, mostly all existing circuits left on older panels and haven't been transitioned over to the new panels.

Most panels in corridors or open spaces, preferred placement would be in closets out of view. However, this is not a code requirement, just best practice to keep out of public access and more aesthetically pleasing.

One of the older panels (Panel 1A) has a larger Arc Flash energy with a boundary of 55in and is out in the corridor.

Fluorescent lighting in spaces that haven't been renovated recently.

PHASE II

Exterior Renovations

Existing Roof Condition:

Existing Asphalt Shingle Roof: Roof condition generally appears to be sound but beyond expected life span. According to the Facilities department it is over 30 years old. There are a few visible examples of damaged shingles or missing tabs.

Dormers: All painted wood trim and siding of the eight dormers show signs of deterioration. For most of these surfaces, the existing paint is extremely faded or is significantly peeling with multiple examples of exposed wood materials.

Metal Flashing and Roof Detail Features:

- Metal valley flashing and vent pipe penetrations appear to be sound and in place.
- Original Copper Gutters: Generally, all existing gutters appear to be in place and adequately attached to roof edge. There is a ±6'-0" section of missing gutter on the south elevation at the location of the removed exterior fire escape stair.
- Copper Bullnose Detail: Generally, the bullnose detail is in place. Observed multiple examples of detachment at seams, deformation of surfaces and/or hail damaged. Along the south roof edge, there were a couple locations where nesting birds were observed entering behind the bullnose details.
- Painted Galvanized Downspouts and Conductor Heads: All nine original downspouts appear to be in place. Most downspouts sections are the original corrugated round profile with only a few sections that have been replaced with plain round profile. Although the paint finish is significantly deteriorated, the exposed metal surfaces appear to be sound without significant damage or deterioration. Connections to the cast iron underground storm sewer piping at grade appear sound, without any broken or misaligned connections.
- Counter Flashing: Counter flashing along the north and east stone gable parapets appear to be in place. The reglet joint below the stone coping is heavily resealed with caulking along the top edge of the counter flashing.
- Copper Pinnacles: Roof pinnacles at the southeast and west towers are in place and appear sound.

Roof does not have an existing lightning protection system.

Roof does not have existing snow retention system.

Roof access scuttle is with 4'-0" of roof edge and does have any fall safety protection: anchor points or railings.

Roof does not have any fall safety systems: anchor points.

Existing Stone Masonry Condition:

Generally, masonry walls exhibit mild to moderate soiling from biologic growth on most surfaces.

Stone coping at the north and east gable parapets are heavily soiled from biologic growth.

Water Table Course: Continuous cut stone water table stone course exhibits delamination along the bottom drip edge and at most of the windowsills. Damage to this cut stone course is most pronounced on the south elevations. In addition, there are two outside corner pieces with significant damage.

Mortar Joints: Majority of mortar joints appear to be sound, with approximately 5% in need of repointing and 5% of existing damaged mortar joints having been repointed with Portland cement mortar.

North Entry Stair:

- Stone railing is in poor condition, observed multiple pieces with extensive surface spalling or that are fractured through. Stone coping and bench seats are heavily soiled with biologic growth.

- Landings and railings do not meet current accessible codes. Concrete landing at the entry door level is too narrow, the first exterior stair riser is with $\pm 2'-0"$ from face of door. Intermediate stone landing surfaces are heavily soiled and there is significant surface spalling along the traffic areas.

East Entry Arch:

- Stone retaining walls, concrete stair, and steel handrails are good condition and appear to meet current accessible codes.
- Entry canopy stone coping is heavily soiled with biological growth. This coping aligns with the cut stone water table course.
- Two Entry canopy ornate cut stone scuppers are heavily soiled with biological growth.

South Basement Stair:

- Concrete stair and railings do not meet current accessible codes.

West Entry Stair:

- Concrete stair, landings and railings do not meet current accessible codes. Concrete landing at the entry door level is too narrow, the first exterior stair riser is with $\pm 3'-0"$ from face of door.

South Elevation Fire Escape Anchorage Points:

- Upper Level: Missing portion of the copper gutter and bullnose detail ($\pm 6'-0"$ long).
- Three Intermediate Levels: Surface of stone has been cut back to be recessed. There are exposed steel anchors or drilled holes of removed steel anchors.
- Lower Level: The bottom half of the water table course cut stone has been removed ($\pm 6'-0"$ long).
- There are eight exposed 4" steel pipe columns that were cut $\pm 12"$ above the grade, it is assumed that the concrete foundations remain.

Existing Wood Windows:

There are multiple configurations of historic wood windows. All windows are in poor condition, with peeling paint and damaged frames. Approximately 20% of existing glazing panes have been removed and replaced with either painted plywood, insulated metal faced panels, or louvers.

- There are approximately 250 double-hung windows of various sizes.
- There are approximately 90 fixed transom windows that aligned with double-hung windows below. Fixed transom windows are either arched or square style.

Existing Wall Mounted Fixtures:

Historic Light Fixtures: There are three ornate wall-mounted $\pm 14"$ globe light fixtures at the northeast, southeast, and southwest corners of the building. The northeast fixture is missing the globe shade. All three painted metal bracket arms are in place with surface rust but appear to be restorable.

Space Tabulation

The following table lists the total square footage in Fairchild Hall summarized by space type.

	Space Type	Total	Notes
Basement Level			
	Office Space	7,231	
	Restrooms	416	Men's and Women's
	Hallways/Corridors	2,217	
	Mechanical/Electrical	970	
	Custodial	165	
	Elevator	58	
	Stairs	488	
	SUBTOTAL	11,545	
First Floor			
	Office Space	8,321	
	Restrooms	159	Women's only
	Hallways/Corridors	1,853	Including Vestibule
	Mechanical/Electrical	57	Telecom only
	Custodial	-	
	Elevator	58	
	Stairs	612	
	SUBTOTAL	11,060	
Second Floor - including mezzanine			
	Office Space	10,073	
	Restrooms	36	Women's only
	Hallways/Corridors	1,449	Including Lobbies
	Mechanical/Electrical	57	Telecom only
	Custodial	-	
	Elevator	58	
	Stairs	857	
	SUBTOTAL	12,530	
Third Floor			
	Office Space	8,685	
	Restrooms	75	Men's only
	Hallways/Corridors	845	
	Mechanical/Electrical	225	
	Custodial	257	
	Elevator	58	
	Stairs	593	
	SUBTOTAL	10,738	
SUBTOTALS			
	Basement Level	11,545	
	First Floor	11,060	
	Second Floor - including mezzanine	12,530	
	Third Floor	10,738	
	TOTAL NSF	45,873	
	TOTAL GSF	56,241	includes wall thickness, structure

Phase I Budget

Estimate of Project Costs	
Interior Renovations (Construction Cost, etc.)	\$3,005,000 - \$4,168,000
System Upgrades (Construction Cost, etc.)	\$3,763,000 - \$4,600,000
Design Fees (Architect, Engineer, other Consultants)	\$812,160
FF&E (Furniture, A/V, equipment, etc.)	\$947,520
Contingency (%)	\$1,062,576
Miscellaneous Costs (Administrative fees, internal labor, etc.)	\$409,744
Total	\$10,000,000 - \$12,000,000

Phase II Budget

Estimate of Project Costs	
Exterior Renovations (Construction Cost, etc.)	\$4,702,776 – \$6,202,776
Design Fees (Architect, Engineer, other Consultants)	\$584,040
FF&E (Furniture, A/V, equipment, etc.)	\$681,380
Contingency (%)	\$764,119
Miscellaneous Costs (Administrative fees, internal labor, etc.)	\$267,685
Total	\$7,000,000 – \$8,500,000

Funding

The project will be funded with a combination of SGF deferred maintenance and University Funds.

Maintenance

Annual costs of operations, maintenance and utilities are estimated as follows:

Description	Cost/sqft	Total
Operations and Maintenance	\$3.23 x 56,241 SF	\$181,658.43
Utilities	\$3.50 x 56,241 SF	\$196,843.50
Total Annual Cost		\$378,501.93

Phase I Timeline/Schedule

Board of Regents Program Approval: June 2024

Design Team Selection: September 2024

Design Phase: December 2024 – March 2025

Construction Documents and Project Approval to bid: April 2025 – August 2025

Bidding and Construction: September 2025 – July 2026

Occupancy: August 2026

Phase II Timeline/Schedule

Board of Regents Program Approval: June 2024

Design Team Selection: September 2024

Design Phase: TBD

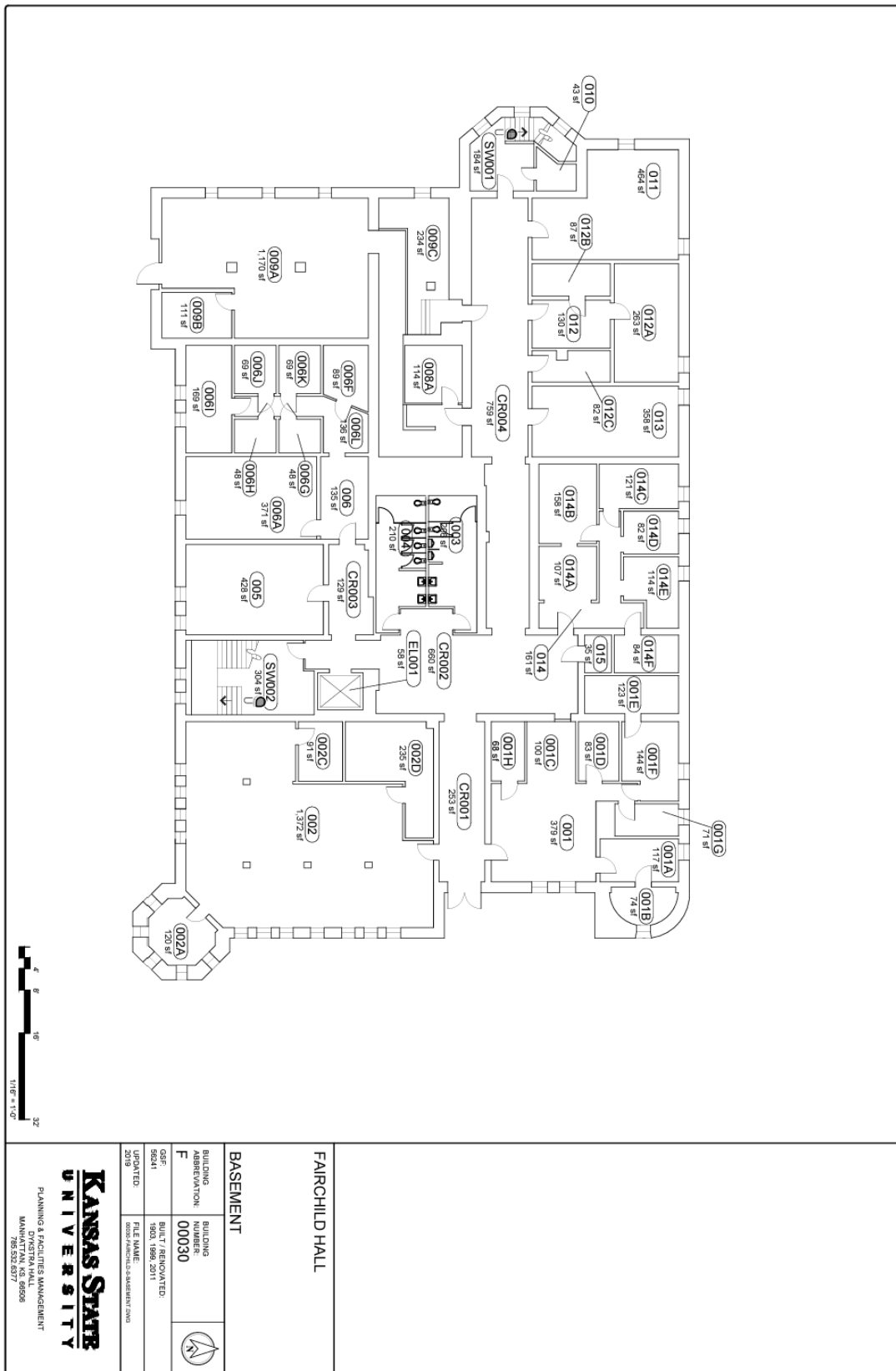
Construction Documents and Project Approval to bid: TBD

Bidding and Construction: TBD

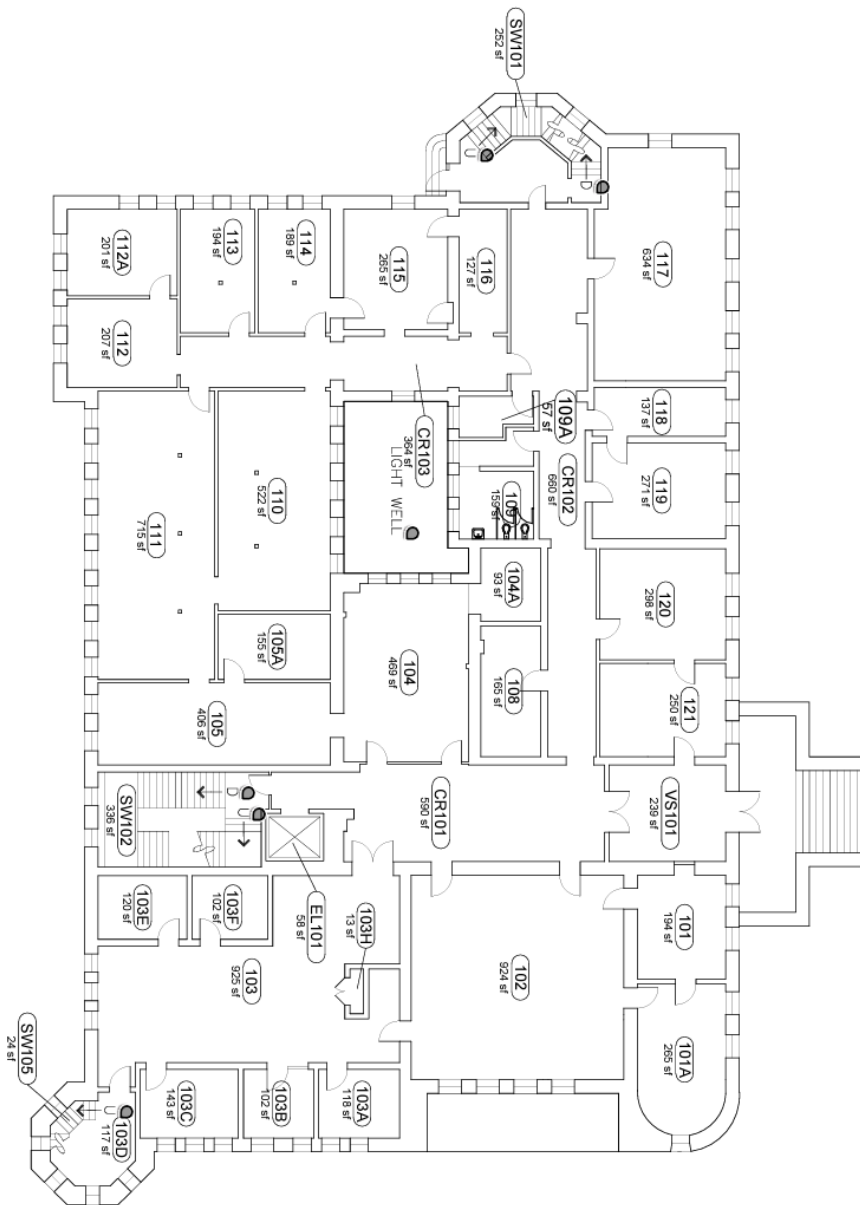
Occupancy: TBD



APPENDIX

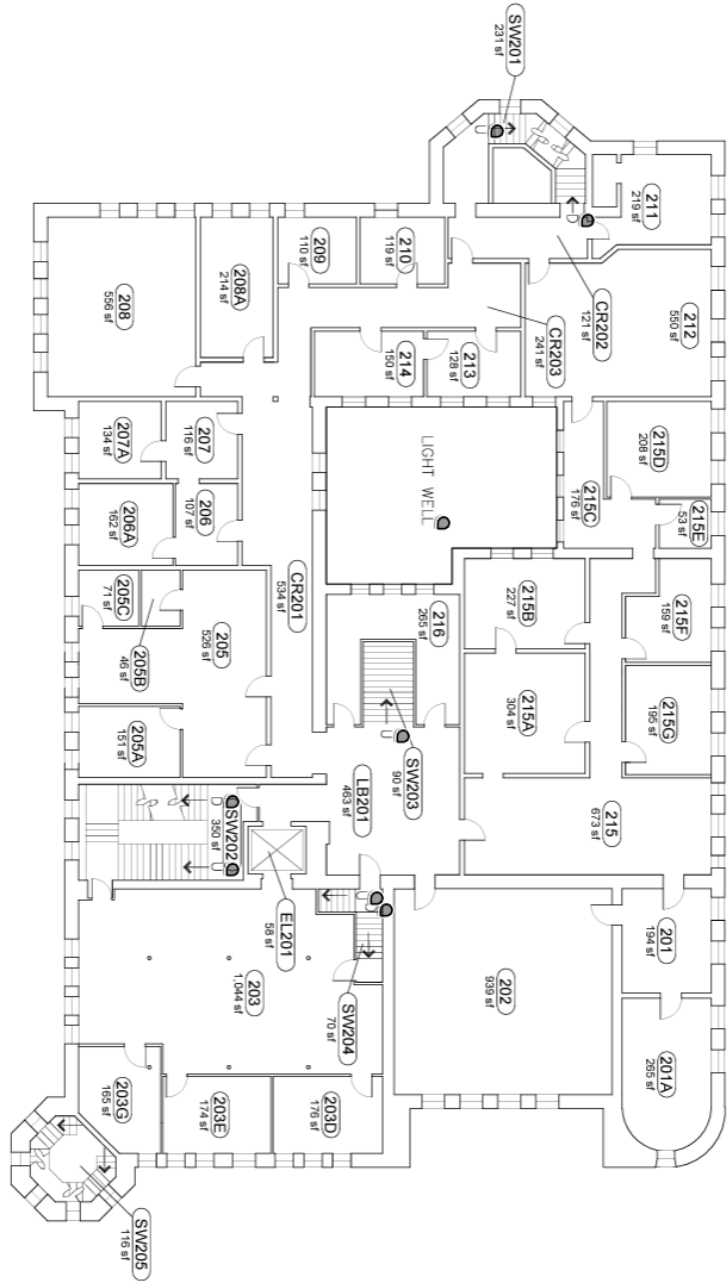
Existing Building Floor Plans



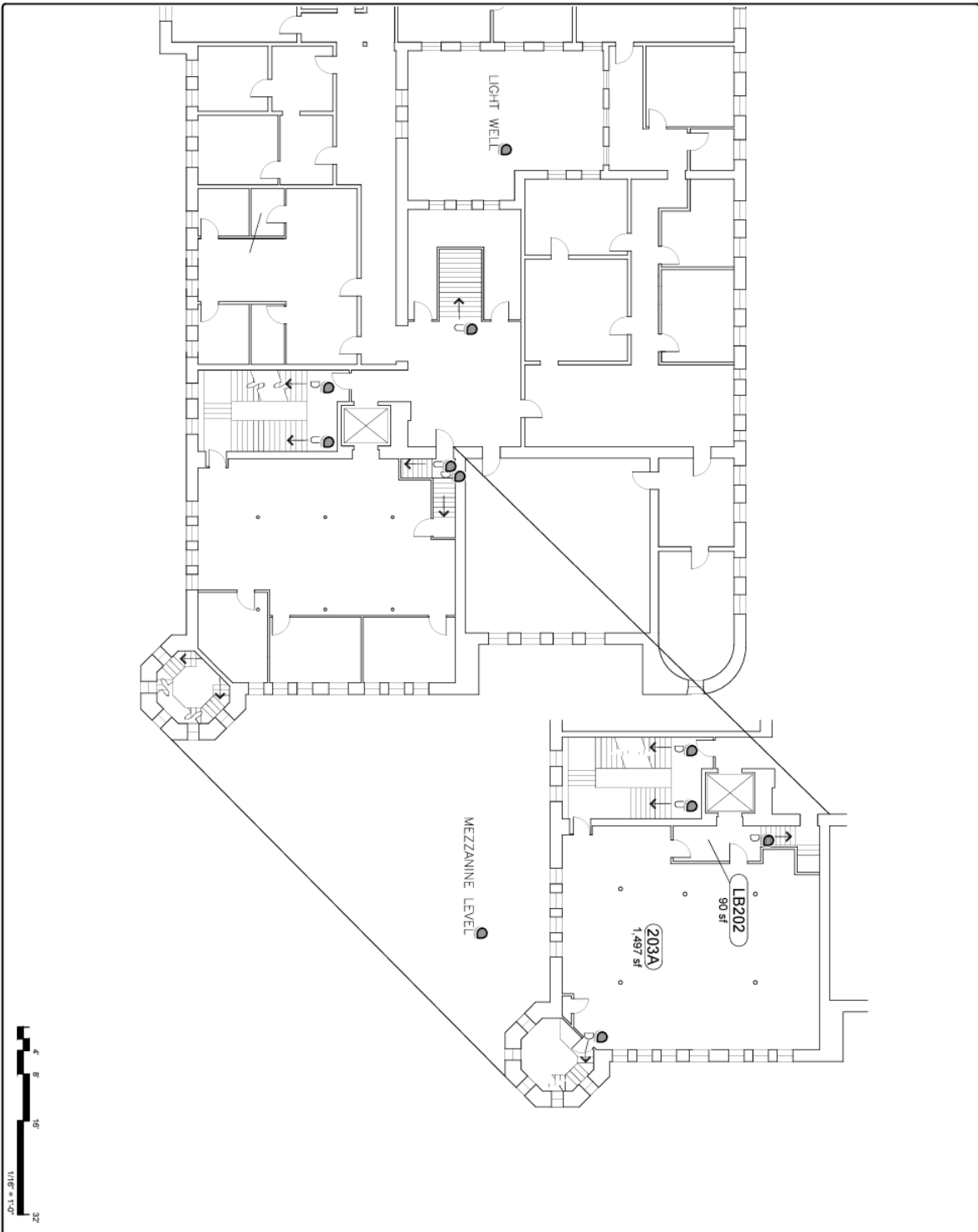
FAIRCHILD HALL	
BASEMENT	
BUILDING ABBREVIATION: F	BUILDING NUMBER: 00030
OSF: 9241	BUILT/RENOVATED: 1963, 1999, 2011
UPDATED: 2/19	FILE NAME: FAIRCHILD_HALL_BASMENT.DWG
KANSAS STATE UNIVERSITY PLANNING & FACILITIES MANAGEMENT WESTERN HALL, SUITE 2050 MANASSAS, VA 20108 703.532.6377	



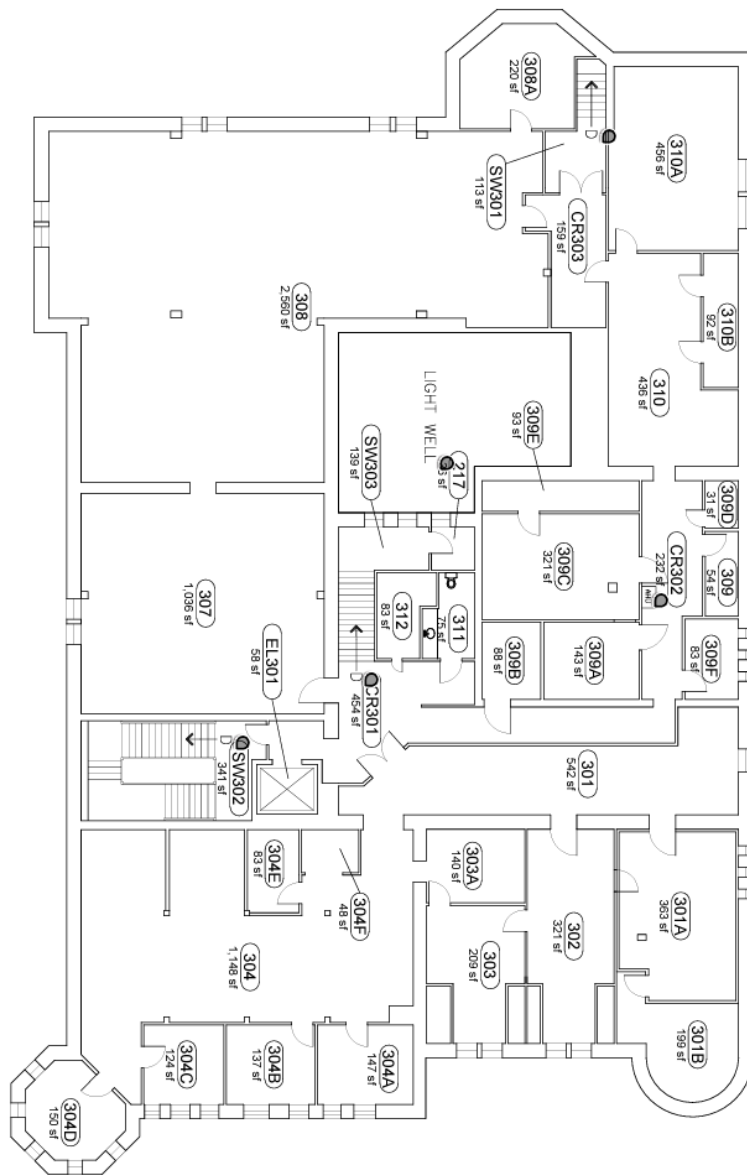
FAIRCHILD HALL	
FIRST	
BUILDING ABBREVIATION: F	BUILDING NUMBER: 00030
GSR# 58241	BUILT / RENOVATED: 1900, 1989, 2011
UPDATED: 2019	FILE NAME: 00030-FAIRCHILD-HALL-DWG
	
	
PLANNING & FACILITIES MANAGEMENT DIVISION HALL MANHATTAN, KS 66506 785.532.6377	




FAIRCHILD HALL	
SECOND	
BUILDING NUMBER	BUILDING NUMBER
F	00030
GSF	BUILT / RENOVATED:
96241	1903, 1998, 2011
UPDATED:	FILE NAME:
2019	00030-FAIRCHILD-2ND.DWG
	
	
PLANNING & FACILITIES MANAGEMENT MANHATTAN, KS 66506 785.532.6377	



FAIRCHILD HALL		2ND MEZZAN	
BUILDING ABBREVIATION	F	BUILDING NUMBER	00030
GSF	56241	BUILT / RENOVATED	1903, 1989, 2011
UPDATED	2019	FILE NAME	00030 FAIRCHILD 2ND ON DWG
			
KANSAS STATE UNIVERSITY PLANNING & FACILITIES MANAGEMENT MANHATTAN, KS 66506 (785) 843-5217			



THIRD		FAIRCHILD HALL	
BUILDING ABBREVIATION:	F	BUILDING NUMBER:	00030
GSF:	56241	BUILT / RENOVATED:	1901, 1999, 2011
UPDATED:	2019	FILE NAME:	0030 FAIRCHILD 3RD DWG
			
KANSAS STATE UNIVERSITY PLANNING & FACILITIES MANAGEMENT MANHATTAN, KS 66508 785.842.5017			