

ENVIRONMENTAL EVALUATION NOTIFICATION FORM

Grantee/Contractor Laboratory: Princeton University/Princeton Plasma Physics Laboratory (PPPL)

Project/Activity Title: Stairway Egress and Safety Improvement

CH NEPA Tracking No.: _____ Type of Funding SC

B&R Code: _____ Total Estimated Cost: \$ 1.148 M

DOE Cognizant Secretarial Officer (CSO): J. Steve Binkley

Contractor Project Manager: _____

Signature: _____

Date: _____

Contractor NEPA Reviewer: Jerry D. Levine

Signature: 

Date: 4/30/18

I. Description of Proposed Action:

This project would correct life safety code egress issues in the C-Site Laboratory (C22), RF (C40), CS (C41) and COB (C42) buildings and stairwells. Seven stairwells have been identified as needing improvements. Stairwells have been identified as Stair A, which is between the Laboratory building and the CS Building. This stair discharges to the lower parking lot. Stair B is on the east side of the Laboratory building near the mechanical equipment room. Stair C is on the west side of the Laboratory building and discharges to the lower parking lot. Stair D is the metal exterior stair discharging on the north side of the L-Wing extension. Stair E is the three story tower coincident with the elevator in the COB Building on the south side of the building. Stair F discharges on the north side of the COB Building where it meets the Shop Building (C32). Stair G is an interior stair that discharges from the second floor of the RF Building on the south side of the building.

Stairwells A, B, and G currently have guardrails but no handrails. Guardrails would be modified or replaced as needed and handrails would be installed. Approximately 1000 lbs. of waste steel would be recycled or disposed of according to current procedure.

Stairwells C and D would have handrails and guardrails modified or installed as needed. These are exit stairwells and lighted signage and emergency pull stations would be installed. Approximately 500 lbs. of waste steel and nominal domestic waste consisting of material packaging, conduit/electrical debris and general sweepings would be recycled or disposed of according to current procedure.

Stairwell E would have handrails and guardrails modified or installed as needed. Signage would be installed. A door and wall would be added at the basement entrance into the CS Building and the wall between Room 238 in the COB building. A smoke barrier would be installed to prevent smoke infiltration into the stair tower from adjacent spaces via ducts or voids in walls. This is required to keep the stair tower tenable as an escape path during a fire. Approximately 1000 lbs. of waste steel and nominal domestic waste consisting of material packaging would be recycled or disposed of according to current procedure.

Stairwell F would have handrails and guardrails modified or installed as needed. Signage would be installed. One-hour fire enclosure barriers would be installed inside the stair tower separating it from room 235 in the C32 Shop Building. As an exit stairwell, utilities

in this stairwell that do not serve the stairwell would be removed or enclosed. A door would be installed at the basement level to provide a fire barrier to isolate it from the CS Building basement for the three story stair tower. Stair towers that span more than two stories must have a fire barrier to limit fire spread.

The external fire escape serving the RF Building would receive new handrails and guardrails as well as signage. The exit would be enclosed with a fire barrier. Approximately 2000 lbs. of steel and bar grating would be removed and recycled or disposed of according to current procedure. Non-slip treads and landings would be installed.

In order to provide an enclosure to prevent exiting through a higher hazard zone which violates code, a new staircase and corridor would be constructed by Stair G. This would create approximately 500 pounds of sheetrock and metal studs waste which would be recycled or disposed of according to current procedure.

Total waste would be approximately 3000 pounds of steel, 1000 pounds of stud and sheetrock, and 500 pounds of general construction debris. These amounts are well within vendor capacities and would not require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities. In all areas, penetrations would be sealed and custom rails would be bolted to avoid any on-site welding. Since they serve areas of close proximity, stairwells A and C would be upgraded independently, as would stairwells B and D. Transite asbestos panels are located in many of these areas but would not be penetrated or otherwise disturbed. Any removal of transite panels would be coordinated through the Environmental Services Division for completion by a qualified contractor.

- II. **Description of Affected Environment:** C-Site Laboratory, RF, CS, and COB buildings and stairwells (see figures 1-3, attached). No environmentally sensitive resources would be affected.

PPPL is located on Princeton University's James Forrestal Campus in Plainsboro Township, Middlesex County (central New Jersey), adjacent to the municipalities of Princeton, Kingston, East and West Windsor, and Cranbury, NJ. It occupies approximately 88.5 acres in the areas known as "C- and D-Sites." PPPL has operated on the current site since 1959. The closest urban centers are New Brunswick, 14 miles (22.5 km) to the northeast, and Trenton, 12 miles (19 km) to the southwest. Within a 50-mile (80 km) radius are the major urban centers of New York City, Philadelphia, and Newark. Princeton University's main campus is approximately three miles west of the site, primarily located within the borough of Princeton.

The estimated resident population within 10 miles (16 km) of PPPL is approximately 500,000. The total estimated population within a 50-mile radius (80km) of PPPL is approximately 17,735,164.

Surrounding the site are lands of preserved and undisturbed areas including upland forest, wetlands, open grassy areas, and a minor stream, Bee Brook, which flows along PPPL's

eastern boundary. These areas are designated as open space in the James Forrestal Campus (JFC) site development plan.

The climate of central New Jersey is classified as mid-latitude, rainy climate with mild winters, hot summers, and no dry season. Temperatures may range from below zero to above 100 degrees Fahrenheit (°F) (-17.8° Celsius (C) to 37.8° C); extreme temperatures typically occur once every five years. Approximately half the year, from late April until mid-October, the days are freeze-free. Normally the climate is moderately humid with a total average precipitation of about 46 inches (116 cm) evenly distributed throughout the year.

III. **Potential Environmental Effects:** (Attach explanation for each "yes" response, and "no" responses if additional information is available and could be significant in the decision making process.)

A. Sensitive Resources: Will the proposed action result in changes and/or disturbances to any of the following resources?

	<u>Yes/No</u>
1. Threatened/Endangered Species and/or Critical Habitats	1. No
2. Other Protected Species (e.g. Burros, Migratory Birds)	2. No
3. Wetlands	3. No
4. Archaeological/Historic Resources	4. No
5. Prime, Unique or Important Farmland	5. No
6. Non-Attainment Areas	6. No
7. Class I Air Quality Control Region	7. No
8. Special Sources of Groundwater (e.g. Sole Source Aquifer)	8. No
9. Navigable Air Space	9. No
10. Coastal Zones	10. No
11. Areas w/ Special National Designation (e.g. National Forests, Parks, Trails)	11. No
12. Floodplain	12. No

B. Regulated Substances/Activities: Will the proposed action involve any of the following regulated substances or activities?

	<u>Yes/No</u>
13. Clearing or Excavation (indicate if greater than 1 acre; if more than 5,000 sq. ft., a Soil Erosion / Sediment Control Permit may be required from Freehold Soil Conservation District.) <i>Note: Soil disturbance includes clearing, grading, excavation, storage, and filling. Soil erosion and sediment control permits required if ≥ 5,000 sq. ft.</i> <i>Note: Excavations expected to encounter ground water may require a permit.</i>	13. No
14. Dredge or Fill (under Clean Water Act section 404; indicate if greater than 1 acre)	14. No
15. Noise (in excess of regulations)	15. No
16. Asbestos Removal	16. No

If it becomes necessary to remove transite asbestos panels, removal would be completed by certified contractors.

- | | |
|---|---------|
| 17. PCBs | 17. No |
| 18. Import, Manufacture or Processing of Toxic Substances | 18. No |
| 19. Chemical Storage/Use | 19. Yes |
| <i>Sealants may be used to finish fire barriers.</i> | |
| 20. Pesticide Use | 20. No |
| 21. Hazardous, Toxic, or Criteria Pollutant Air Emissions | 21. No |
| 22. Liquid Effluent | 22. No |
| 23. Underground Injection | 23. No |
| 24. Hazardous Waste | 24. No |
| 25. Underground Storage Tanks | 25. No |
| 26. Radioactive (AEA) Mixed Waste | 26. No |
| 27. Radioactive Waste | 27. No |
| 28. Radiation Exposures | 28. No |

C. Other Relevant Disclosures. Will the proposed action involve the following?

- | | <u>Yes/No</u> |
|---|---------------|
| 29. A threatened violation of ES&H regulations/permit requirements | 29. No |
| <i>The requirements of 10CFR851(as implemented under the DOE-approved PPPL Worker Safety and Health Program) would be applied to work at PPPL under this proposed action.</i> | |
| 30. Siting/Construction/Major Modification of Waste Recovery, or TSD Facilities | 30. No |
| 31. Disturbance of Pre-existing Contamination | 31. No |
| <i>Note: Excavations that encounter contaminated ground water require a permit.</i> | |
| 32. New or Modified Federal/State Permits | 32. No |
| 33. Public controversy | 33. No |
| 34. Action/involvement of Another Federal Agency (e.g. license, funding, approval) | 34. No |
| 35. Action of a State Agency in a State with NEPA-type law. (Does the State Environmental Quality Review Act Apply?) | 35. No |
| 36. Public Utilities/Services | 36. No |
| 37. Depletion of a Non-Renewable Resource | 37. No |

IV. **Section D Determination:** Is the project/activity appropriate for a determination under Subpart D of the DOE NEPA Regulations for compliance with NEPA?

DOE-PSO NEPA Compliance Officer (NCO) Review:

Concurrence with Proposed Class of Action Recommended

CX EA EIS

Category B2.5 (Facility safety and environmental improvements)

For Categorical Exclusions (CXs):

A. The proposed action fits within a class of actions that is listed in Appendix A or B to Subpart D.

For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:

- 1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders;
 - 2) Require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities;
 - 3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or
 - 4) Adversely affect environmentally sensitive resources.
- B. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- C. The proposal is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.


V. DOE Recommendation Approval:

PSO Staff: Tracy Estes

Signature: 

Date: 5/18/18

SC GLD: Michael M. McCann

Signature: 

Date: 5/17/18

VI. NEPA Compliance Officer Subpart D CX Determination and Approval:

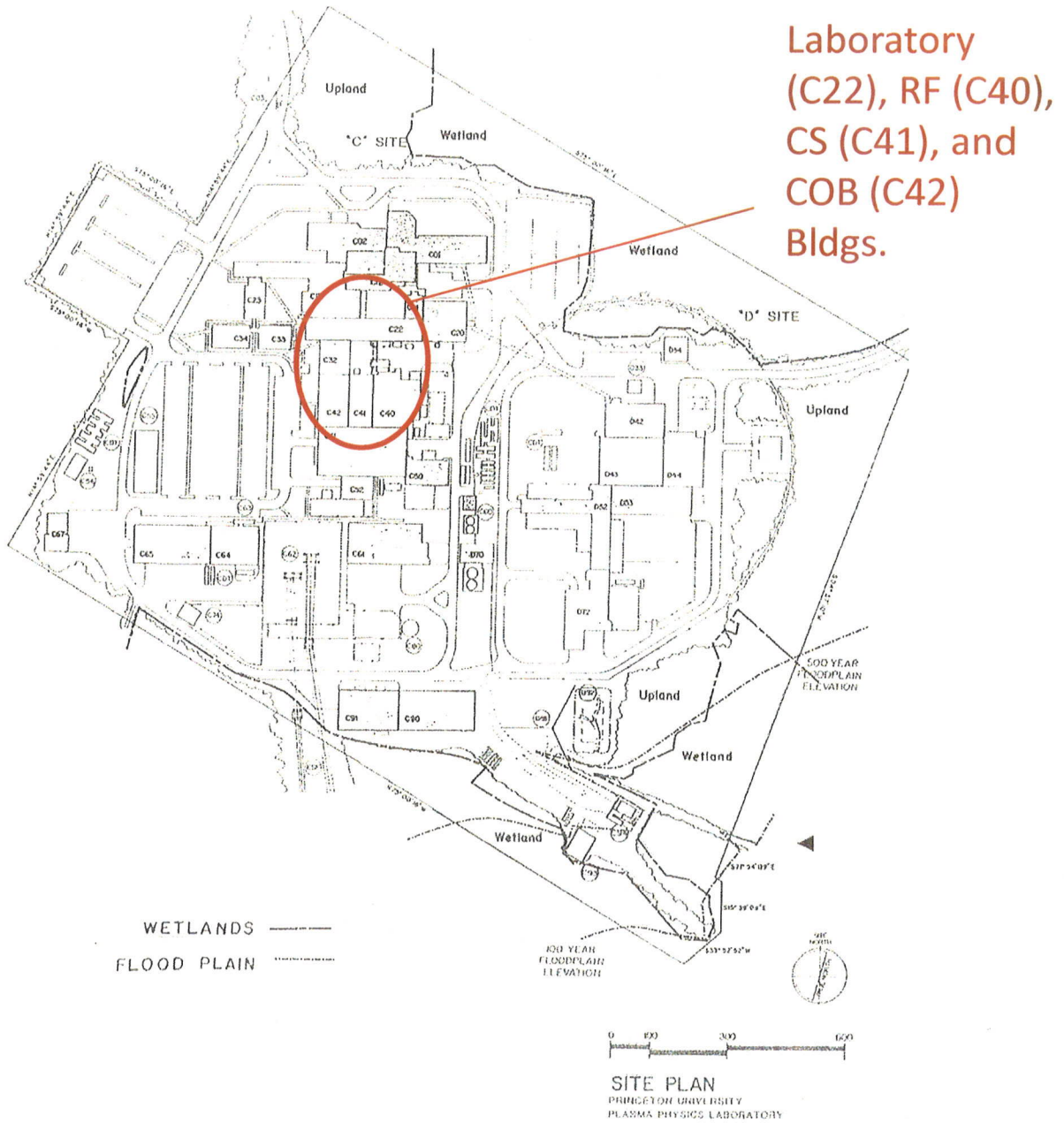
Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer, I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

PSO NCO: Teralyn Murray

Signature: 

Date: 5/21/18

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE	No. ESH-014 Rev 5 Attachment 4
			Map (Floodplains and Wetlands)



PPPL Site Map – Floodplain and Wetlands Boundaries

Figure 1, Stairway Egress and Safety Improvement

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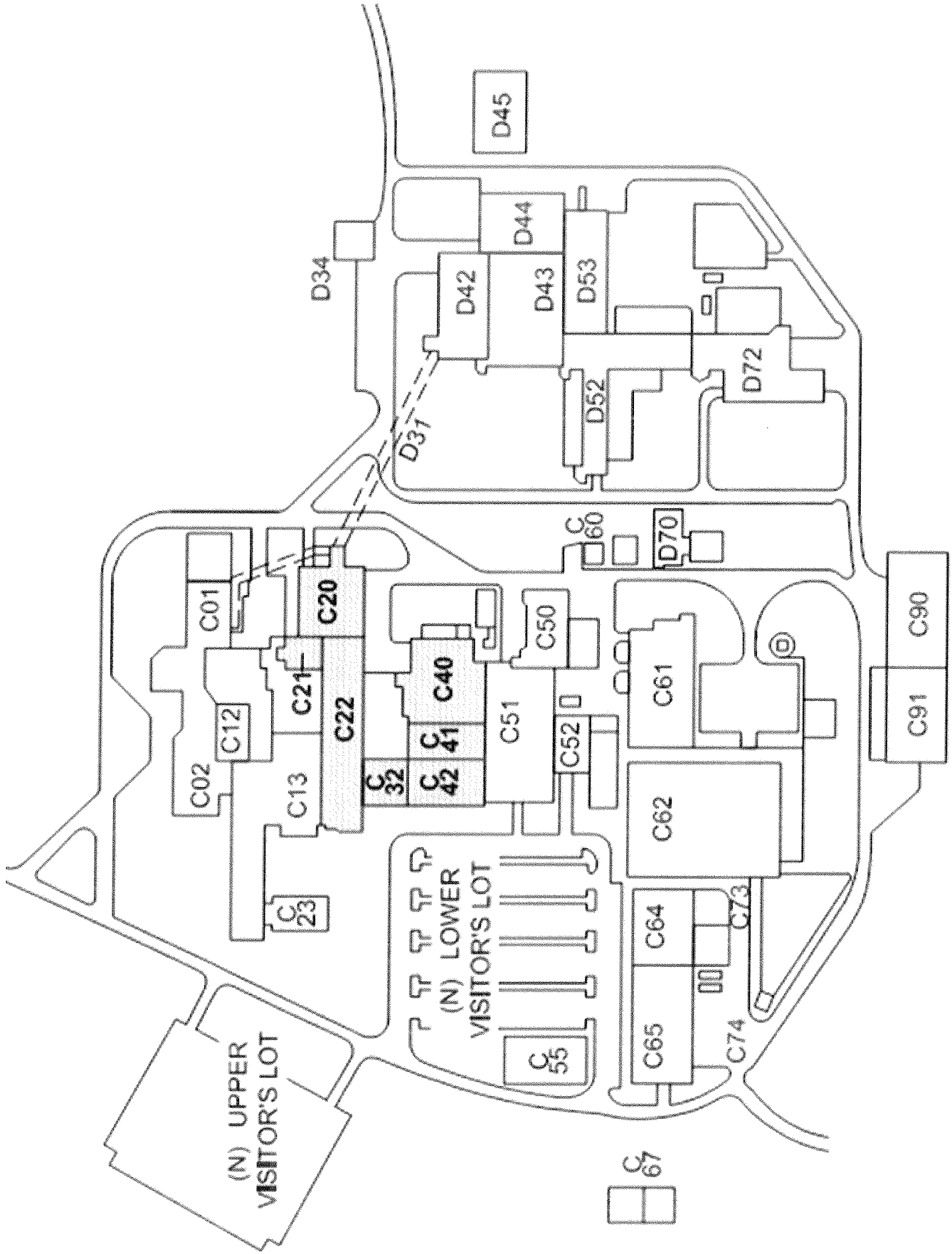


Figure 2, Stairway Egress and Safety Improvement

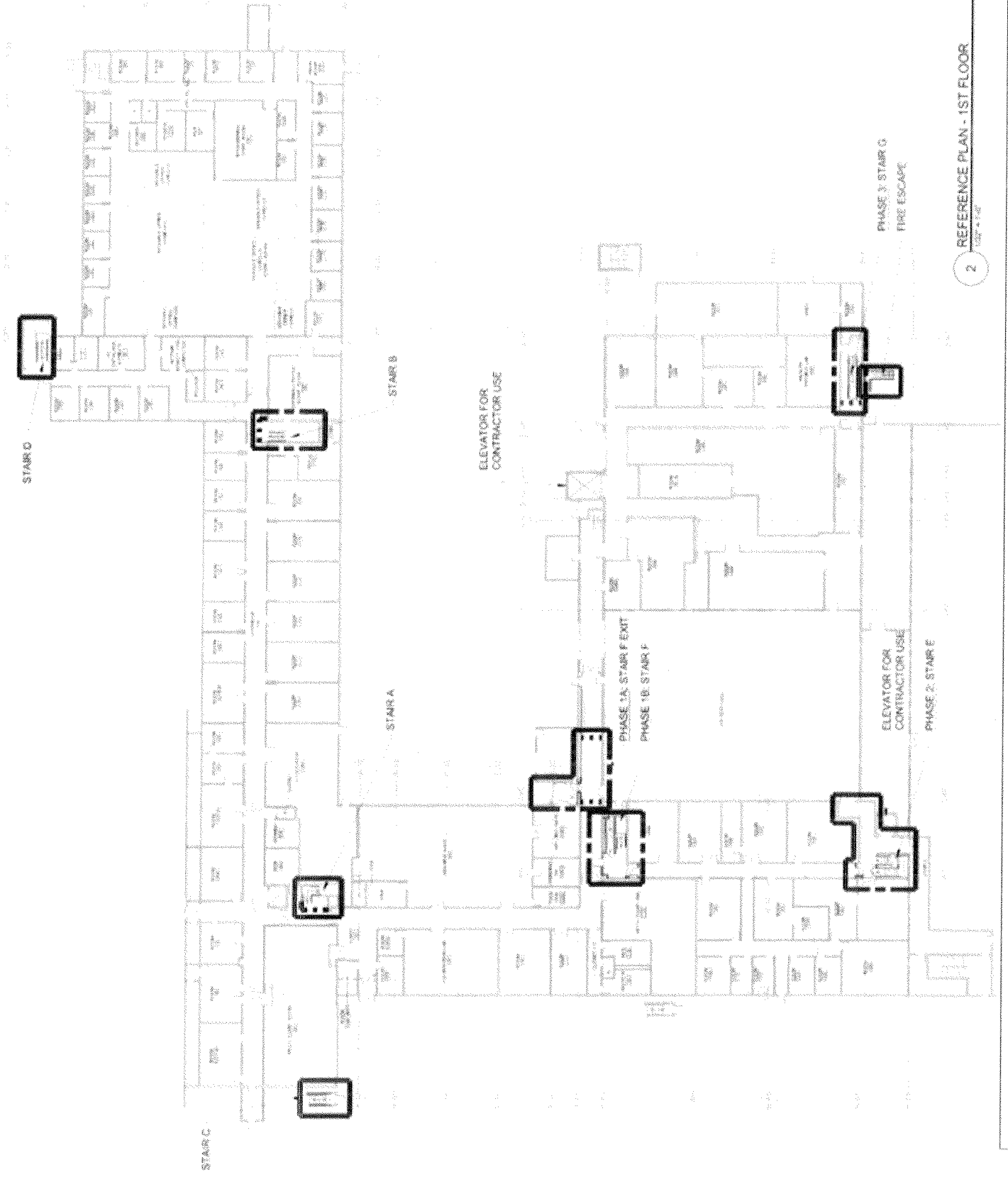


Figure 3, Stairway Egress and Safety Improvement