

**NEPA REVIEW SCREENING FORM 3A**  
**Actions Likely to be Categorically Excluded**

**Document ID #:**  
DOE/CX-00176

**I. Project Title:**

Activity-Specific Categorical Exclusion for Project L-888, "Southern Area Fire Station in the 400 Area of the Hanford Site"

**II. Describe the proposed action, including location, time period over which proposed action will occur, project dimension (e.g., acres displaced/disturbed, excavation length/depth), and area/location/number of buildings. Attach narratives, maps and drawings of proposed action if doing so will assist in DOE's evaluation. Describe existing environmental conditions and potential for environmental impacts from the proposed action. If the proposed action is not a project, describe the action or plan.**

The U.S. Department of Energy (DOE), Richland Operations Office (RL), Security, Emergency Services & Information Management Division (SEI) manages the Hanford Fire Department (HFD) that provides emergency response to hazardous material events, technical rescue incidents, emergency medical situations, fire alarms, and wildfires on the Hanford Site; including mutual aid to surrounding city and county fire departments and districts. Work activities and worker population are changing on the Hanford Site resulting in the need to reposition HFD assets to enable timely and regulatory compliant emergency response.

DOE Order 420.1C, Change 1, "Facility Safety," requires a needs assessment every three years for DOE sites that maintain an active fire department. SEI completed a needs assessment to develop recommendations for fire stations that serve the 100, 200, 300, and 400 Areas of the Hanford Site. The SEI assessment determined the HFD requires two fire stations; one in the northern area (i.e., north of the Wye Barricade) and one in the southern area (i.e., south of the Wye Barricade). Projected worker population, work activities, structures, hazards, and associated risks to the "Standards of Cover" (i.e., allocation and distribution of resources to meet fire protection goals and objectives) were evaluated and SEI determined that a new Southern Area Fire Station strategically positioned in the 400 Area would allow for timely response to emergency events in the 300, 400, 600, and 1100 Areas of the Hanford Site.

The proposed Southern Area Fire Station would allow the "Standards of Cover" to be met, emergency response services to be provided, and serve DOE-RL cleanup sites and operating facilities south of the Wye Barricade including 618-10 Burial Ground, 618-11 Burial Ground, 324 Building, Volpentest Hazardous Material Management and Emergency Response (HAMMER) Training Center, Patrol Training Academy; and non-DOE facilities (i.e., Energy Northwest and the Laser Interferometer Gravitational Wave Observatory). In providing these services, the proposed Southern Area Fire Station would allow HFD emergency response time and deployment goals and objectives to be met while meeting or exceeding all applicable Federal and State mandated standards and requirements, as well as applicable National Fire Protection Association codes and standards. In addition, as a "Critical and Essential Facility," the Southern Area Fire Station would meet the requirements of National Consensus Standards including those established by the International Building Code, American Society of Civil Engineers, Federal Emergency Management Agency, and National Fire Protection Association.

SEI proposes to design, construct, and operate a new 400 Area fire station (Project L-888, Southern Area Fire Station). The existing 400 Area fire station was shut down in FY 2013 because the design life was exceeded and the facility would require refurbishment or replacement to support timely emergency response in areas south of the Wye Barricade.

An active fire station exists in the 300 Area; however, fire, emergency medical services, hazardous materials management, emergency and incident response are proposed for transfer to the City of Richland by 2021. The proposed Southern Area Fire Station in the 400 Area would allow the 300 Area fire station to be shut down and services transferred to the City of Richland. The proposed Southern Area Fire Station would provide services to DOE-RL facilities in the 300 Area (i.e., 324 Building) including facilities managed by the DOE-Pacific Northwest Site Office (i.e., 325 Laboratory, 331 Building, and 350 Building).

The Southern Area Fire Station would be a single-story, pre-engineered, 20,000 square feet steel building (see Figure 1) and would contain double drive through equipment bays, dorm rooms, kitchen, restrooms/showers, locker room, physical training room, personnel protective equipment room, laundry room, medical supply room, rooms for general purpose uses (i.e., training, storage, and offices), and other areas. The building would house up to twelve firefighters (eight firefighters, two captains, two hold-over spaces) on three shifts and eight firefighting vehicles (see HNF-60670, Revision 0, "Functional Requirements Document Hanford Fire Department Southern Area Operations Fire Station Project L-888"; HNF-60756, Revision 0, "Functional Design Criteria,

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Project L-888, Hanford Fire Department, Southern Area Operations Fire Station").

Excavations for the building foundation would be a maximum of 6-feet deep and occur in a former parking lot area. The septic system drain field tie-in trench would measure 128-feet long, by 8-feet wide, by 8-feet deep and occur in an unpaved, undeveloped, previously disturbed area. The water line tie-in trench would measure 820-feet long, by 20-feet wide, by 6-feet deep and occur along a graveled utility right-of-way adjacent to existing roadways. The electrical tie-in trench to an existing transformer would measure 862-feet long, by 6-feet wide, by 6-feet deep and occur in a previously disturbed, graveled area. All staging of equipment and materials would take place in previously disturbed or developed areas.

Three alternative locations in the 400 Area were evaluated for the proposed Southern Area Fire Station including: (1) refurbish, expand, and reactivate the existing 400 Area Fire Station (4704S Building); (2) convert, upgrade, and re-purpose an existing warehouse (4732C Building); and (3) construct a new building at the intersection of Kentucky Boulevard and Alabama Boulevard/Route 40 (see Figure 2). Each location was evaluated with respect to five criteria including: (1) mitigation risk; (2) optimize life-cycle cost; (3) project complexity; (4) maximize schedule effectiveness; and (5) future program flexibility. Each criterion was assigned a weighted factor based on overall project risk. Each location was also evaluated from an ecological and cultural resources perspective to identify impacts of the proposed action, required mitigation measures, and support down selection to a preferred location (MSA-1705478, "Ecological and Cultural Screening L-888 Proposed Fire Station Locations in the 400 Area, Hanford Site, Benton County, Washington," 2017-AAR-002, dated November 14, 2017). Based on technical, economic, and environmental considerations, the SEI proposes to construct a new Southern Area Fire Station in the 400 Area of the Hanford Site at the intersection of Kentucky Boulevard and Alabama Boulevard/Route 40 (see Figure 3).

The proposed action would involve the siting, construction, and operation of fire protection support buildings and support structures within a previously disturbed or developed area where active utilities and currently used roads are readily accessible. The following summarizes the environmental impacts of the proposed action and associated mitigation measures.

**Land/Visual Resources.** The proposed action is located in the 400 Area of the Hanford Site, which is highly industrialized, and has been designated for industrial land use in the "Final Hanford Site Comprehensive Land Use Plan Environmental Impact Statement" (HCP-EIS, DOE/EIS-0222-F). The proposed action would be consistent with the land use maps, designations, policies, and procedures established by the HCP-EIS and Record of Decision.

There would be no significant land or visual resource impacts. The Fast Flux Test Facility (FFTF), Fuels and Materials Examination Facility (FMEF), Maintenance and Storage Facility (MASF), and associated buildings and infrastructure dominate the landscape of the 400 Area. Best management practices would be applied to limit land disturbance by locating new equipment and facilities in close proximity to related activities and using existing disturbed or developed land, infrastructure, and utility rights-of-way.

**Infrastructure.** There would be no significant impacts to site infrastructure. Several physical infrastructure and support systems exist for tie-in including sanitary water, electrical power, sanitary sewer, and access roads. Best management practices would be employed for short-lived demands on utilities (i.e., those typically required during construction activities) and would involve the temporary use of portable generators, work lighting, water and fuel storage vessels, and sanitary facilities. Portable utilities would be located in previously disturbed or developed areas.

**Noise and Vibration.** Increased noise, vibration, and traffic would occur as a result of construction activities; however, there would be no significant impacts when compared to the Hanford Site baseline and distance to the Hanford Site boundary. Best management practices would be applied to control noise and vibration by limiting construction to day-light hours, maintaining equipment mufflers in accordance with manufacturer's service recommendations, restricting

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excessive use of horns, using broadband/non-tonal reversing alarms, using appropriately sized heavy equipment, and planning equipment routes and timing of traffic.

Once the Southern Area Fire Station begins operations, noise would increase significantly for short periods of time as firefighters respond to emergency situations; however, the impact would be negligible given the distance to the Hanford Site boundary.

**Air Quality.** Heavy equipment operations and construction activities would create vehicle emissions (e.g., hydrocarbons, sulfur dioxide, nitrogen oxide, carbon monoxide, and particulate matter [PM-2.5 micrometers and PM-10 micrometers]) and fugitive dust. Maximum concentrations of toxic air pollutant emissions would remain below Washington State's acceptable source impact levels (e.g., WAC 173-460, "Controls for New Sources of Toxic Air Pollutants") by limiting vehicle idling, using ultra-low sulfur diesel fuel (15 ppm maximum) or alternative fuel equipment (e.g., biodiesel blends), and maintaining equipment in accordance with manufacturer's service recommendations. Fugitive dust would be controlled (e.g., WAC 173-400-040(9), "General Standards for Maximum Emissions") by applying best management practices including water or chemical dust suppressants, restricting maximum vehicle speeds, using low material dump heights, installing wind screens, limiting the amount of land disturbed, and revegetating disturbed areas.

**Water Resources.** Site clearing, grading, and excavation would expose soils, sediments, and pollutants (e.g., spilled/leaked oil, diesel fuel, gasoline, or hydraulic fluids) to erosion by heavy rain or storm water runoff; however, low annual precipitation rates, granular soils, and high evaporation rates would limit runoff. There would be no direct discharge of effluents to surface water or groundwater. Water would be required during construction activities and dust suppression; however, peak water demands would be substantially less than the production capacity of the groundwater wells that provide the water supply for the 400 Area. There would be no impacts on water resources. Fire trucks are maintained in a state of readiness and are always full. Water would be available from several locations including the existing fire hydrant #14 at the 4702 Building on the south side of the east guard shack in the 400 Area. Best management practices would be used for spill/leak prevention, spill/leak control, and storm water management. Water conservation practices would also be implemented.

The 400 Area is covered by a permit (ID# 41947-0) from the Washington State Department of Health, allowing DOE to operate the drinking water system that is supplied by three groundwater wells (499-S0-7, 499-S0-8, and 499-S1-8J). The permit has a "Blue" category indicating the system is adequate for existing uses, but not adequate for growth. Water demand resulting from the proposed action would replace usage by the old fire station with no net increase. Also, several 400 Area facilities have been shut down and relocated to 200 East Area, including the 4734-C Vehicle Maintenance Shop, increasing the available water supply.

A tritium plume originating in 200 East Area and extending under the 400 Area has historically affected tritium concentrations in the 400 Area drinking water supply wells; however, the plume continues to diminish due to groundwater movement and radioactive decay (i.e., tritium has a half-life of 12.3 years). All 400 Area drinking water samples analyzed since 2012 have been below Federal and State dose-based standards of 4 mrem per year based on a maximum tritium concentration of 20,000 picocuries per liter (pCi/L) and tritium does not pose a significant risk to human health and safety. While the Southern Area Fire Station septic system would discharge water to a drain field, such discharges would not have an adverse impact on the tritium plume due to the depth to groundwater, tritium concentrations being below Federal and State drinking water standards, and continued radioactive decay of tritium.

**Geology and Soils.** Site excavation work, grading, roadways, parking areas, and laydown areas would have an impact on geology and soils. The demand for mineral resources (i.e., sand and gravel) would be small and not deplete Hanford reserves since these materials are widely available from eleven active borrow pits on the Hanford Site that are approved for expansion (DOE/EA-1934). Geology and soil impacts would be mitigated by using existing active borrow pits, dust control techniques, and restoring/recontouring disturbed borrow pit areas following their use.

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**Ecological Resources Review (ECR-2017-402).** A field survey of the project area was performed on February 7, 2018. The project area is located primarily in a highly disturbed industrial area consisting of buildings, paved and graveled roads, asphalt parking lots, and graveled areas that are designated as Level 0 habitat in the "Hanford Biological Resources Management Plan" (BRMP; DOE/ RL-96-32, Revision 2). The septic system drain field would be installed in a previously disturbed area that is dominated by weedy plant species and is designated as a BRMP Level 1 habitat. No compensatory mitigation would be required for the proposed action. While areas adjacent to the project area include BRMP Level 2 and 3 habitat (see Figure 4), no impacts to these resources are anticipated. Any vegetated areas disturbed by the proposed action that are not needed for continued use would be replanted using locally derived, native plant species in accordance with the "Hanford Site Revegetation Manual" (DOE/RL-2011-116, Revision 1).

No plant or animal species protected under the Endangered Species Act, candidates for such protection, or species listed by the Washington State government as threatened or endangered were observed in the vicinity of the project area. Birds can nest in the project area on the ground, on buildings, or on equipment during the nesting season (mid-March to mid-July). A nesting bird survey would be performed prior to ground disturbing activities. Personnel working on the project would be directed by project management staff to watch for nesting birds. If any nesting birds are encountered or suspected, or bird defensive behaviors are observed within the project area, project management staff would contact DOE-RL Environmental Compliance to evaluate the situation and take necessary action.

**Cultural Resources Review (HCRC-2017-400-001).** A Cultural Resources Review of the proposed project area was conducted by the DOE-RL Cultural and Historic Resources Program and an "Area of Potential Effect" (APE) notification was sent to the Washington State Historic Preservation Office (SHPO) and regional Tribes on November 30, 2017. A cultural resources field survey was conducted on December 19, 2017. No cultural resources were observed within the APE. A Cultural Resources Review (CRR), with a finding of "No Historic Properties Affected," was prepared and submitted to the SHPO and regional Tribes for a 30-day comment period on January 9, 2018. The SHPO concurred with the finding of the CRR on February 9, 2018. DOE-RL provided a notice of compliance with Section 106 of the National Historic Preservation Act for the proposed action on February 15, 2018.

No impacts to cultural resources are anticipated; however, all workers would be directed by project management staff to watch for cultural materials (e.g., bones, stone tools, mussel shells, cans, and bottles) during all work activities. If any cultural materials are encountered, work in the vicinity of the discovery would stop until a DOE-RL Archaeologist has been notified, the significance of the find assessed, appropriate Tribes notified, and if necessary, arrangements made for mitigation of the find.

**Waste Management.** The proposed action would generate small amounts of non-radioactive hazardous waste, solid waste, and construction debris. The volume of waste would be mitigated by implementing best management practices for pollution prevention and waste minimization involving source reduction or material substitution; reuse of waste materials to minimize disposal; and recycling of waste materials that cannot be minimized or eliminated. Hazardous waste, solid waste, and construction debris would be managed in accordance with WAC 173-303, "Dangerous Waste Regulations"; WAC 173-350, "Solid Waste Handling Standards"; WAC 173-350-410, "Inert Waste Landfills"; and other regulations, as applicable.

**Permits and Licenses.** The proposed action would require permits and licenses for construction activities and operation of the facility to ensure environmental protection and pollution control. Project management staff would obtain required permits and licenses including, but not limited to, excavation permits, air permits, underground injection control well permits, onsite sewage permits, and other permits and licenses, as applicable. Project management staff would ensure the preparation of a State Environmental Policy Act (SEPA) Checklist (WAC 197-11, SEPA Rules), as requested by the State of Washington Department of Ecology, for submittal in conjunction with permit and license applications.

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**Conclusion.** The proposed action is addressed by 10 CFR 1021, Subpart D, Appendix B, Categorical Exclusion B1.15, "Support Buildings," and meets the requirements for categorically excluded activities (10 CFR 1021.410) and the conditions that are "integral elements" (10 CFR 1021, Subpart D, Appendix B). This ASCX only applies to the proposed action described herein. Any changes to the proposed action or future requests to construct support buildings would be evaluated and approved by the DOE NEPA Compliance Officer.

**III. Existing Evaluations (Attach them):**

**Ecological Review Report No. and Title:**

MSA-1800873, "ECOLOGICAL AND CULTURAL CLEARANCE FOR L-888 SOUTHERN AREA FIRE STATION IN THE 400 AREA, HANFORD SITE, BENTON COUNTY, WASHINGTON (HCRC-2017-400-001, ECR-2017-402)"

**Cultural Review Report No. and Title:**

MSA-1800873, "ECOLOGICAL AND CULTURAL CLEARANCE FOR L-888 SOUTHERN AREA FIRE STATION IN THE 400 AREA, HANFORD SITE, BENTON COUNTY, WASHINGTON (HCRC-2017-400-001, ECR-2017-402)"

**Maps:**

- Figure 1. Conceptual Elevations and Floor Plan for Proposed Southern Area Fire Station
- Figure 2. Site Map Showing Three Proposed Locations Evaluated for Proposed Southern Area Fire Station
- Figure 3. Site Plan for Proposed Southern Area Fire Station at Preferred Location
- Figure 4. Ecological Resources Adjacent to Proposed Southern Area Fire Station Location

**Other Attachments:**

None

**IV. Other Considerations**

	Yes	No
Does the proposed action fall within one or more of the actions listed in Appendixes A or B to Subpart D of 10 CFR 1021 and is thus categorically excluded (CX)? List applicable CX(s): 10 CFR 1021, Subpart D, Appendix B, Categorical Exclusion B1.15, "Support Buildings"	<input checked="" type="radio"/>	<input type="radio"/>
Are there extraordinary circumstances that may affect the significance of the environmental effects of the proposal, such as those set forth in 10 CFR 1021.410(2)? If yes, describe them. Not Applicable.	<input type="radio"/>	<input checked="" type="radio"/>
Is the proposal connected to other actions with potentially significant impacts, or that could result in cumulatively significant impacts? If yes, describe them. Not Applicable.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action threaten a violation of applicable statutory, regulatory, or permit requirements related to the environment, safety, health, or similar requirements of DOE or Executive Orders?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action disturb hazardous substances, pollutants, contaminants, or natural gas products already in the environment such that there might be uncontrolled or unpermitted releases?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action have the potential to cause significant impacts on environmentally sensitive resources? See examples in Appendix B(4) to Subpart D of 10 CFR 1021.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species?	<input type="radio"/>	<input checked="" type="radio"/>

If 'No' to all questions above, complete Section V and provide this form to DOE NCO for review.  
 If 'Yes' to any of the questions above, contact DOE NCO.

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**V. Responsible Organization's Signatures:**

**Initiator:**

Jerry W. Cammann, MSA-EIS/NEPA SME  
*Print First and Last Name*

*Jerry W. Cammann*  
*Signature*

3/12/2018  
*Date*

**Cognizant Program/Project Representative:**

Chris P. Yaroch, DOE/RL-SEI  
*Print First and Last Name*

*[Signature]*  
*Signature*

3/12/2018  
*Date*

**VI. DOE NEPA Compliance Officer Approval/Determination:**

Based on my review of information conveyed to me concerning the proposed action, the proposed action fits within the specified CX(s):  Yes  No

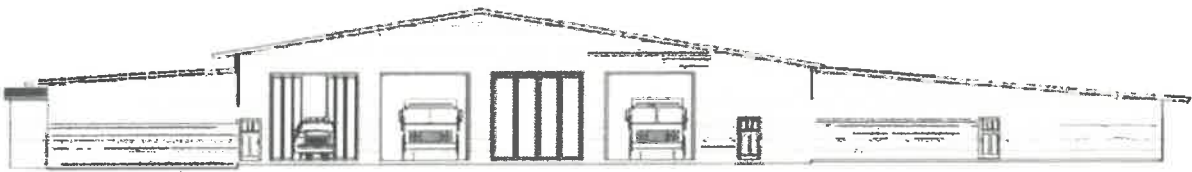
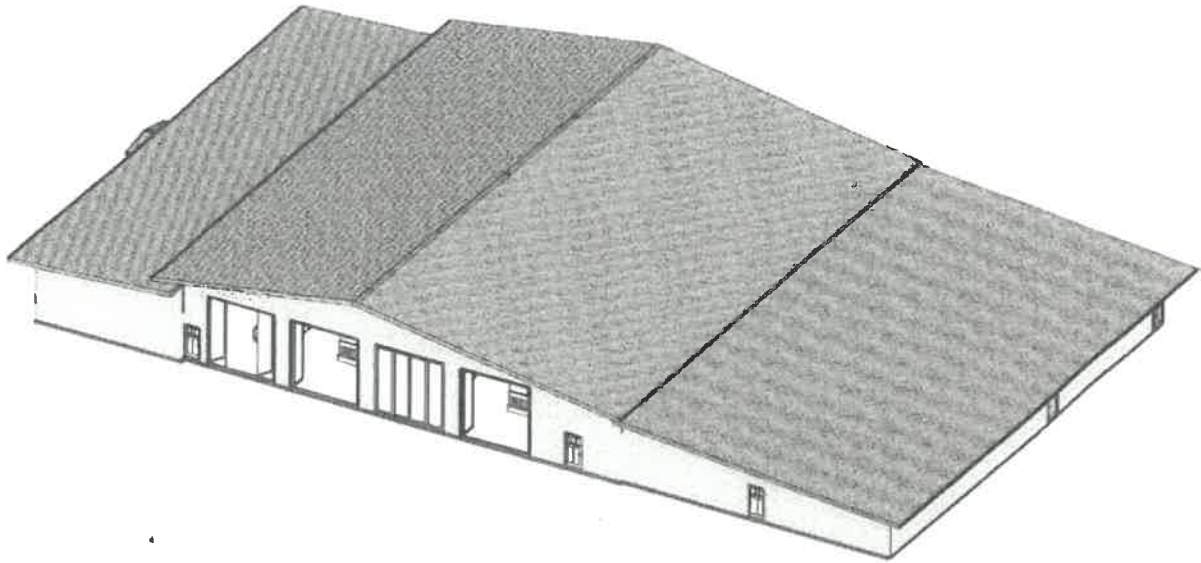
Marla K. Marvin, DOE-NCO  
*Print First and Last Name*

*Marla Marvin*  
*Signature*

3/12/18  
*Date*

NCO Comments:

**Figure 1. Conceptual Elevations and Floor Plan for Proposed Southern Area Fire Station**

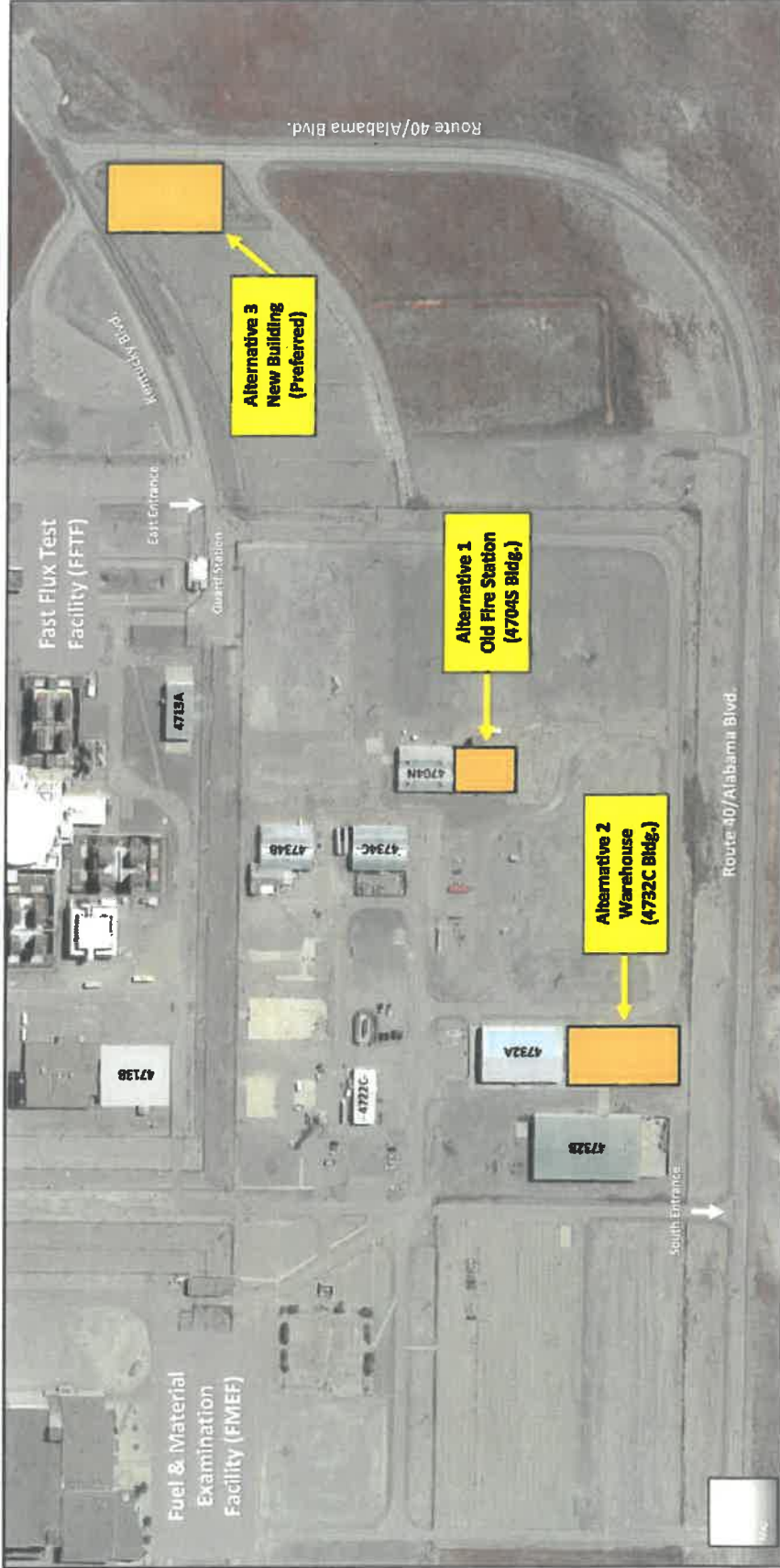


Elevation Front



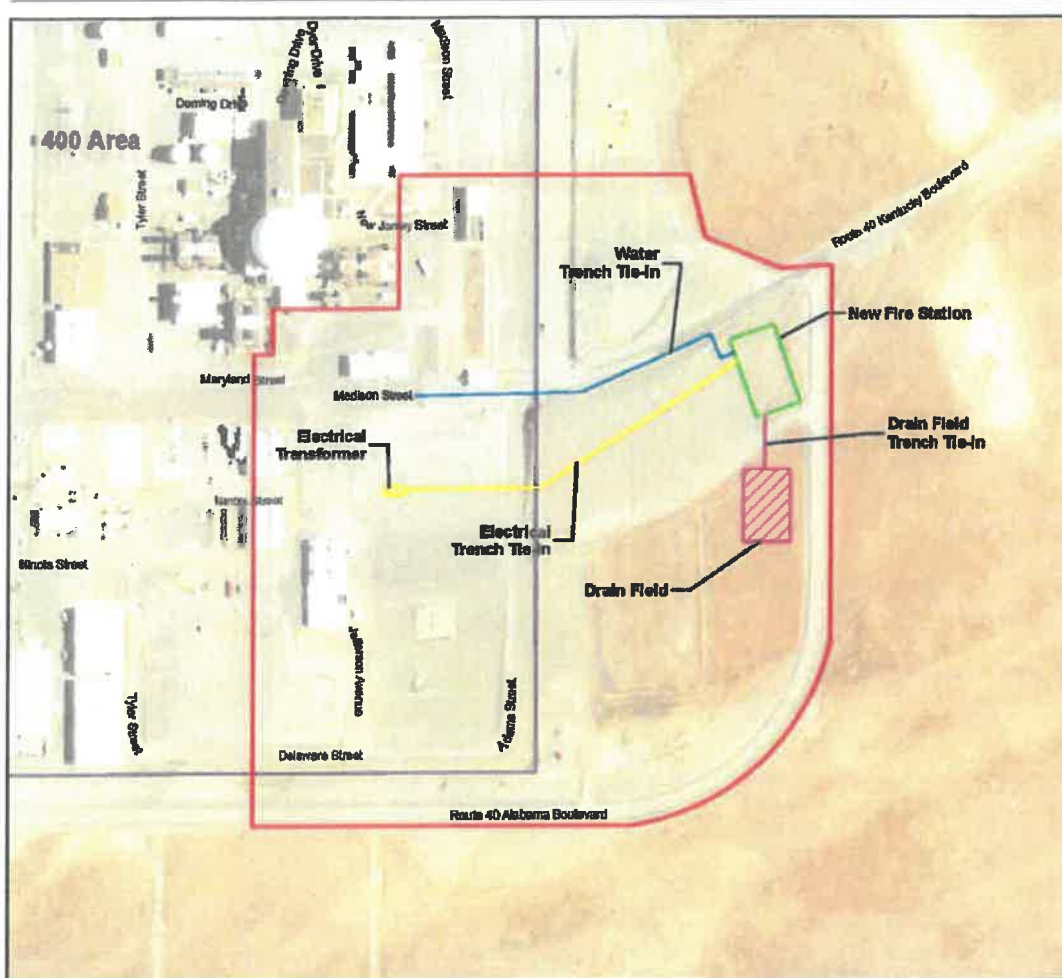
Possible Floor Plan

**Figure 2. Site Map Showing Three Proposed Locations Evaluated for Proposed Southern Area Fire Station**





**Figure 3. Site Plan for Proposed Southern Area Fire Station at Preferred Location**



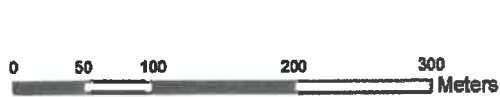
**LEGEND**

- Drain Field Trench Tie-in
- Electrical Line Trench Tie-in
- Water Line Trench Tie-in
- New Fire Station
- Drain Field
- Electrical Transformer
- Area of Potential Effect (APE)
- Hanford Site Areas

NOTES: Aerial Image, 2015, NAIP.



**Detail of Area of Potential Effect (APE)**  
 HCRC#2017-400-001 | ECR-2017-402  
 Hanford Site, Benton County, Washington



**Figure 4. Ecological Resources Adjacent to Proposed Southern Area Fire Station Location**

