

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

SECTION A. Project Title: Idaho National Laboratory (INL) Research and Education Campus (REC) Integrated Priorities List

SECTION B. Project Description and Purpose:

Idaho National Laboratory (INL) maintains numerous office, laboratory, and support buildings at the Research and Education Campus (REC) in Idaho Falls. These facilities provide office and laboratory space, cafeteria, mail room, copy center, and document storage, and they contain electrical and mechanical rooms. Support, administrative, and engineering personnel are based in the REC facilities. Table 1 lists facilities that form the REC in Idaho Falls. Potable water, firewater, fire alarm notification and reporting, natural gas, electrical power, and city sewer are provided to these facilities. INL uses an integrated and coordinated facility health management process to identify, evaluate, monitor, maintain, repair, and upgrade structures, systems and components (SSCs) needed for safe and reliable operations at the REC. The Integrated Priorities List (IPL) prioritizes deferred maintenance and long range maintenance planning activities based on necessity and risk.

Table 1. REC Building List

BLDG. NO.	ACRONYM	BUILDING NAME	BLDG. ADDRESS
IF-601	RESO	Radiological & Environmental Services Offices	2251 N. Boulevard
IF-602	IRC-O	INL Research Office Building	2351 N. Boulevard
IF-603	IRC-L	INL Research Lab Building	2353 N. Boulevard
IF-605	ESTL	Energy Storage Technologies Lab	2151 N. Boulevard
IF-610	LSB	Landlord Storage Building	2373 N. Boulevard
IF-611	NSL	National Security Laboratory	2275 N. Boulevard
IF-627	SAF	Systems Analysis Facility	2271 N. Boulevard
IF-635	IRC-F	IRC Fire Water Pumphouse	2361 N. Boulevard
IF-638	IRC-P	IRC Physics Lab	2253 N. Boulevard
IF-655	IRC-CSF	IRC Chemical Storage Facility	2355 N. Boulevard
IF-657	IEDF	Interim Engineering Demonstration Fac.	2255 N. Boulevard
IF-663	RSF	Records Storage Facility	2159 N. Boulevard
IF-670	BCTC	Bonneville County Technology Center	101 Technology Drive
IF-683	RESL	Radiological & Environmental Services Laboratory	2249 N. Boulevard
IF-689	DOELAP	DOE Laboratory Accreditation Program	2157 N. Boulevard
IF-731	SFPH	South Firewater Pumphouse	2147 N. Boulevard
IF-732	NFPH	North Firewater Pumphouse	2365 N. Boulevard
IF-606	IAB	INL Administration Bldg	785 DOE Place
IF-639	NYCL	N. Yellowstone Lab	1405 N. Yellowstone
IF-675	MPPL	Majestic Park PINS Laboratory	2752 E. 14th N.
IF-680	HSIB	Homeland Security Integration Building (UB-1)	535 University Blvd
IF-681	CSI	Cyber Security and Intelligence (UB-2)	655 University Blvd
IF-682	SSL	Security Systems Lab (UB-3)	625 University Blvd
IF-684	CIPR	Critical Infrastructure Protection & Resilience (UB-4)	595 University Blvd
IF-616	WCB	Willow Creek Building	1955 Fremont Ave.
IF-617	WCMB	Willow Creek Mechanical Bldg.	1955 Fremont Ave.
IF-688	EIL	Energy Innovation Laboratory	775 University Blvd
IF-608	IORC	Information Operations Research Center	1155 Foote Drive
IF-665	CAES	Center for Advanced Energy Studies	995 University Blvd
IF-685	ESL	Energy Systems Laboratory	750 University Blvd
IF-654	EROB	Engineering Research Office Bldg.	2525 E. Fremont
IF-687	BDB	Bus Dispatch Building	1747 N. Yellowstone
NA	BUS LOTS	Various	Various

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The deferred maintenance activities on the current IPL fall into the following general categories:

- Maintenance, repairs, renovations, and facility upgrades
- Facility and equipment instrumentation installation and upgrades
- Heating, ventilation and air conditioning (HVAC) systems and component replacements and repairs
- Health and safety improvements and upgrades.

Based on INL priorities, some activities in this EC will not be completed or funded and other activities could be added to the IPL. Activities proposed beyond FY 2019 are included because priorities and estimated dates for completion have the potential to change. Individual projects will be reviewed by the Program Environmental Lead (PEL) and/or the National Environmental Policy Act (NEPA) Technical Lead to verify scope is covered by this NEPA analysis. In addition, the IPL is typically updated on an annual basis. This EC will be reviewed and revised with updates consistent with the annual IPL. Table 2 lists activities identified for inclusion on the current FY 2018-2022 IPL for the REC.

The nine buildings proposed for fire alarm system upgrades in Table 2 are IF-602, IF-603, IF-611, IF-627, IF-638, IF-657, IF-655, IF-731, and IF-732.

Table 2. FY 2018-2022 REC IPL

Building	Description	FY18 Cost	FY19 Cost	FY20 Cost	FY21 Cost	FY22 Cost
Bus Lots	Asphalt Yellowstone Bus Lot	50,000.00	50,000.00	50,000.00		
Bus Lots	Install Storm Drains for Shelley-New Sweden Bus Lot	250,000.00				
Bus Lots	Pave, Gravel, and Grade New Shelley-Sweden Bus Lot	250,000.00				
Bus Lots	Repair Calvary Lot Asphalt		15,000.00			
Bus Lots	Repair Rigby Lot	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
EIL IF-688	Install De-ice Equipment for Roof Top AHUs		100,000.00			
EIL IF-688	Install Lab Exhaust Silencers		120,000.00			
EIL IF-688	Install Metal Stairs to Dock Area		125,000.00			
EIL IF-688	Remodel Basement Area for Craft Office Relocation		150,000.00			
EIL IF-688	Repair and Replace Entry Vestibule & Breezeway	70,000.00				
EIL IF-688	Replace Front-end Controls		60,000.00			
EIL IF-688	Replace Specialty Gas Lines	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00
EIL IF-688	Test Breaker		100,000.00			
EIL IF-688	Upgrade HVAC and Controls	250,000.00	250,000.00			
EIL IF-688	Crack Seal and Repair Parking Lot		150,000.00			
EROB IF-654	Enhance Power Usage Monitoring Graphic	185,000.00				
EROB IF-654	Install Mechanical Building Ultrasonic Flow Meter	35,000.00				
EROB IF-654	Re-distribute Power in the Data Centers		60,000.00			
EROB IF-654	Replace Building Cooling Towers		400,000.00			
EROB IF-654	Replace Generac Generator		25,000.00			
EROB IF-654	Replace Roof		1,000,000.00			
EROB IF-654	Upgrade Controls	250,000.00	250,000.00			
EROB IF-654	Upgrade Fire Alarm Panel					250,000.00
ESL IF-685	Install and Replace Guard Rail		19,000.00			
ESL IF-685	Install Cooling for Battery Lab Remote Terminal Unit		200,000.00			
ESL IF-685	Repair Parking Lot			120,000.00		
ESL IF-685	Test Breaker	300,000.00				
ESL IF-685	Upgrade South Side Boiler Room Insulation & Ventilation		30,000.00			
IAB IF-606	Re-size CORE HVAC unit		40,000.00			
IAB IF-606	Test Breaker					100,000.00
IAB IF-606	Upgrade Controls				75,000.00	75,000.00
IRC	Add Shop Space			250,000.00		

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IRC	Upgrade Fire Pump	150,000.00	150,000.00			
IRC	Upgrade Variable Frequency Drive	20,000.00				
IRC	Upgrade IRC Fire Alarm Systems in 9 Buildings	100,000.00	100,000.00	100,000.00	100,000.00	50,000.00
IRC	Upgrade IRC Fire Suppression System	200,000.00				
IRC IF-601	Upgrade Controls		200,000.00			
IRC IF-602	Remodel 3rd Floor		1,600,000.00			
IRC IF-602	Renovate Facility	1,000,000.00				
IRC IF-602	Replace Hot Water Generator	215,000.00				
IRC IF-602	Replace Roof		700,000.00			
IRC IF-602	Test Controls Performance		50,000.00			
IRC IF-603	Extend North Gravel Parking Lot around 225,000 Gal Water Storage	100,000.00				
IRC IF-603	Install 4" GEOWEB & Gravel on 225,000 Gal Water Storage			50,000.00		
IRC IF-603	Install Staircase to Roof		40,000.00			
IRC IF-603	Replace Chiller Plant Valve		300,000.00			
IRC IF-603	Replace Generator	300,000.00				
IRC IF-603	Upgrade Controls			2,000,000.00		
IRC IF-603	Upgrade Machine Shop Cooling System	65,000.00				
IRC IF-657	Upgrade Controls		75,000.00			
IRC IF-657	Upgrade Cooling System	500,000.00				
IRC IF-603	Replace Elevator	565,000.00				
IRC IF-603	Replace Roof	4,000,000.00				
IRC IF-611	Upgrade AHU	75,000.00				
IRC IF-611	Upgrade Controls		100,000.00			
IRC IF-638	Replace AHUs 1-4	250,000.00				
NHL IF-639	Upgrade HVAC Gundrill System				60,000.00	
NHL IF-639	Upgrade Machine Shop			5,000,000.00	5,000,000.00	5,000,000.00
REC	Replace Concrete at Multiple Facilities	300,000.00	250,000.00	250,000.00	250,000.00	250,000.00
UB IF-684	Install Stairway to Roof	50,000.00				
WCB IF-616	Relocate Motor Pool Vehicles				75,000.00	
WCB IF-616	Repair and Seal Parking Lot			150,000.00		
WCB IF-616	Replace Parking Lot Lights	300,000.00				
WCB IF-616	Replace Post Indicator Valves and Add Sectional Valve	300,000.00				
WCB IF-616	Replace Roof			1,000,000.00		
WCB IF-616	Replace the Lean-To			250,000.00		
WCB IF-616	Seal Atrium Skylights	150,000.00				
WCB IF-616	Upgrade Bathrooms			200,000.00		
WCB IF-616	Upgrade Building Lamps		80,000.00			
WCB IF-616	Upgrade Fire Panel	250,000.00				
WCB IF-616	Upgrade Security Area Variable Air Volume Controls and T Stats		50,000.00			
WCB IF-616	Test Breaker		300,000.00			
WCB IF-616	Upgrade Controls	500,000.00				
WCBM IF-617	Move Craft Shop to IF-688		300,000.00			

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The majority of activities included on the IPL are associated with the following types of actions:

Air Handling Units (AHUs) and Heating, Ventilation, and Air Conditioning (HVAC) Installation and Modifications

The scope of work covers replacing outdated AHUs in IF-603, IF-611, and IF-638. Deicing equipment is also installed on the AHU at IF-688. INL will also install, repair, and upgrade air conditioning systems as listed in Table 2, and the HVAC system at the NHL will be upgraded. Ductwork, electrical connections, and other utility systems (e.g. water) will be modified to support installation of new equipment. Thermostats and controllers will be compatible with building HVAC monitoring and management systems. Project activities include changing electrical connections and running associated wire and conduit. Instrumentation and controls for AHUs and HVAC systems will also be updated.

Once removed, equipment will be excessed or disposed.

Concrete Replacement

Project activities include repairing or replacing cracked or broken sidewalks and other concrete structures (i.e. stairs, slabs, ramps, and associated railing, etc.) to slow or halt deterioration caused from normal conditions. Concrete replacement activities at INL usually occur as funding becomes available each year, which makes it difficult to estimate the annual amount of concrete and sidewalk replacement projects that could occur. For 2018, about 13,000 ft² of concrete sidewalk, patios, and building entryways at the REC are proposed to be replaced at EROB, ESL, EIL, IRC, and along University Boulevard. Concrete replacement work involves the following general activities:

- Remove concrete ramps, stairs and slabs, sidewalks and railings
- Acquire aggregate
- Excavate materials as needed to replace concrete
- Backfill excavations for footings and foundations
- Backfill excavation for slabs and sidewalks
- Backfill pit run gravel and leveling course base for paving
- Compact all backfill and subgrade
- Grade for surface drainage
- Test soils and compaction.

Asphalt damaged or disturbed by concrete repair or replacement is patched by removing damaged material and base material to a depth of about 12 inches. About 12 inches of leveling course is then placed and compacted. New asphalt is then placed flush with adjacent asphalt and matched to slope.

All annual concrete removal projects are reviewed by the Program Environmental Lead (PEL) and will be included in annual revisions or updates to this EC or will require preparation of project specific ECs for extensive repairs, replacement, or construction of new walkways. This EC covers in-kind replacement and repair. This EC does not cover construction of new concrete structures or installing concrete on areas not previously paved.

Facility Renovations

Facility renovations identified above include upgrade, remodel, repair, and replacement of facility components. This scope includes the following activities:

- Upgrade telecommunication rooms, including new network equipment racks, fiber optic cable, and network switches to support user applications, allow for faster internet speeds, and improve technology performance.
- Replace and upgrade facility components such as light fixtures, kitchen appliances in break areas, carpet, paint, tile, windows, heaters, air conditioners, water heaters, and audio and visual equipment.
- Reconfigure support areas, including bathrooms, offices, break areas and conference rooms, on a continual basis. Reconfiguration and remodel of these spaces includes reconfiguring walls and cubicles; removing, relocating, and adding electrical outlets, switches, data drops and other electrical upgrades; removing, replacing, and relocating light fixtures; and re-routing heating, ventilation, and air conditioning (HVAC) ducting; and changes to HVAC controls to accommodate reconfiguration and remodeling activities.

Project personnel must contact the PEL to verify that various projects are within the scope of this EC or EC INL-17-101 R1.

Fire Protection Systems

Some facilities at the REC have fire suppression systems (glycol and water) that no longer meet National Fire Protection Association (NFPA) requirements (NFPA 13(2013)). The proposed action includes removing old wet pipe riser and anti-freeze systems, alarms, controls, components, and associated wiring and replaces these systems with new compliant systems.

Upgrade and replacement of fire protection systems in Table 2 involves the following work scope:

- New pipe and sprinklers
- New fire alarm panels
- New air compressors and associated electrical supply
- New wiring
- Connect devices to new fire alarm panels.

Parking Lot Repairs and Resurfacing

This EC documents the proposed parking area work identified in Table 2, and includes asphalt and subsoil removal, regrading with new gravel subbase, and resurfacing with new asphalt. Construction of new parking lots is outside the scope of this EC and requires preparation of new ECs.

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Roof Replacements

The proposed action repairs and replaces roofs listed in Table 2 as funding is available. All roofing material, including insulation, flashing, metal coping, and vapor barrier would be removed. New roofing insulation would be installed to the decking. The replacement roof is then sloped as needed to the roof drains, and pipe boots for all pipe vents and equipment supports is included.

Certain buildings may have asbestos containing material (ACM) in the existing roofing material. For roof replacement projects, INL requires Non-friable category I ACM be removed using non-rotary blade removal methods described in 40 CFR 61, Subpart M, Appendix A, "Interpretive Rule Governing Roof Removal Operations." These methods include using power slicers and manual methods such as spud bars, pry bars, shovels, knives, etc., that do not destroy the structural matrix or integrity of the material. Any Regulated Asbestos Containing Material (RACM) that is discovered will be removed by trained workers using appropriate control methods. Form 450.04 will be filed/approved prior to starting any ACM removal work.

Non-friable Category I asbestos containing roofing material will be generated and disposed at the Central Facilities Area (CFA) Landfill Complex. Non-hazardous industrial waste may be generated in the form of scrap wood, metal, RCRA empty containers, packaging material, etc. Lead flashing may be found at roof penetrations and will be separated for recycle. All waste will be characterized, stored and disposed at the direction of Waste Generator Services (WGS).

This EC covers the deferred maintenance, mission enabling infrastructure improvements, and procurement, installation, and operation of the items listed above. Activities not listed require program/project specific ECs or revision of this EC.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities have the potential to create fugitive dust. Reasonable precautions (water, dust suppressant chemicals, etc.) will be taken to prevent dust from becoming airborne during construction. The project will record dust control activities in their daily logs in compliance with IDAPA 58.01.01 Rules for the Control of Air Pollution in Idaho.

Project activities have the potential to release hazardous and chemical contaminants into the air. Regulatory requirements will be determined prior to commencing modification of facilities using the APAD process.

Subcontractors may bring mobile generators, welders and compressors on-site during construction. Equipment must meet the visible emissions/opacity requirements or will be shut down and repaired or removed from the facility. These non-road sources will be used at project locations for less than a year.

Work may result in the disturbance or removal of asbestos.

Project activities have the potential to release refrigerants and greenhouse gases.

Discharging to Surface-, Storm-, or Ground Water

Air conditioner (AC) condensers have the potential to discharge water to the ground.

Activities involving drainage/runoff (e.g., parking lots) may result in storm water discharges.

Disturbing Cultural or Biological Resources

A few buildings at the REC are eligible for nomination to the National Register of Historic Places. Removal and/or changes of original features may adversely impact historic properties.

Project activities may involve soil disturbance activities that has the potential to impact cultural and biological resources (e.g., such as arrowheads, bone fragments, or any other cultural artifact). Additionally, project activities may impact historic architectural properties.

Generating and Managing Waste

Industrial waste in the form of concrete, asphalt, grass, scrap wood, scrap metal, packaging material, Resource Conservation and Recovery Act (RCRA) empty chemical containers, rags, insulation, wire, carpet scrap, tile scrap, drywall, pipe scrap, etc., will be generated during the project.

Hazardous waste generation has the potential to be generated from paint waste, adhesive waste, cleaning solvents, and spill material.

Asbestos waste may be generated if work activities disturb asbestos containing materials.

PCB waste may be generated from activities involving pre-1982 paints, wire pulling compound, dielectric fluid, etc.

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All waste generated during the project will be characterized, stored, and disposed at the direction of Waste Generator Services (WGS).

Releasing Contaminants

Typical construction chemicals such as fuels, lubricants, adhesives, paints, concrete, concrete cure, asphalt, refrigerants, etc., will be used and will be submitted to chemical inventory lists with associated Safety Data Sheets (SDS's) for approval in the vendor data system prior to use. The Facility Chemical Coordinator will enter these chemicals into the INL Chemical Management Database. All chemicals will be managed in accordance with laboratory procedures. Although not anticipated, there is a potential for spills when using chemicals or fueling equipment.

In the event of a spill, notify facility PEL. If the PEL cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS.

Potable water systems located in radiological areas must meet the backflow prevention requirements established in INL Technical Interpretation, Environmental Support and Services (ES&S)-Technical Interpretation (TI)-027. This includes safety shower and eye wash stations. ES&S-TI-027 must be made available to the Subcontractors in the specifications during the bidding process. Drinking water design packages must be reviewed and approved by Brad Andersen (Drinking Water Technical Point of Contact [TPOC]) and Dave Morrow (Backflow prevention TPOC).

Using, Reusing, and Conserving Natural Resources

Recycled materials will be used to the greatest extent practicable in the selection of materials. All materials, including asphalt and concrete, will be reused and/or recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill where conditions allow.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

For Categorical Exclusions (CXs), the proposed action must not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not "connected" to other action actions (40 CFR 1508.25(a)(1)) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

References: 10 CFR 1021, Appendix B to subpart D, items B1.3 "Routine maintenance," B1.15 "Support buildings," and B2.5 "Facility safety and environmental improvements."

Justification: The deferred maintenance activities fall within the above classes of actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment (categorical exclusions). There are no extraordinary circumstances related to the proposal that affect the significance of the environmental effects of the proposal. The proposal has not been segmented, is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)).

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on: 5/22/2018