

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: MFC Fabrication Shop Upgrade

SECTION B. Project Description and Purpose:

The scope of this task is to upgrade MFC-796 (referred to herein as “the facility”) & MFC-782 as a part of the MFC Fabrication Process Improvement

Initiative. This project will expand MFC Fabrication capabilities to support fabrication needs at MFC and enhance delivery and turn-around times on existing commitments.

This project increases the capabilities of MFC Fabrication Shop and increases the capacity for fabrication support across INL. As part of this project, welding aspects of fabrication are relocated to MFC-796 for better workflow of product and MFC-782 can expand and re-configure the layout of the Fabrication Shop to support the workload. The improvements for MFC-796 & MFC-782 in this project improve the ability of the Fabrication and Machine shop at MFC to complete their work requests and alleviate burden on other site shop’s resources.

Unless stated otherwise, the listed functional requirements apply to the MFC-796 building.

Demolition

The existing monorail crane shall be removed.

The existing mezzanine, stairs, and dividing fence shall be removed.

In MFC-782, remove the existing temporary wall and relocate all existing piping on the wall. Conduit, conductors, and panel will be relocated as part of a separate project.

The existing abandoned bulletproof plating on the south wall shall be removed.

The existing reflective siding at the base of the interior wall shall be removed.

Additional demolition shall be performed as required to support the work in this project.

Architectural

The existing facility shall be repaired as appropriate to support the work in this design including, but not limited to repairs to existing insulation, electrical systems, building structure, etc.

A new GFE self-supported bridge crane shall be installed on the existing concrete slab.

New GFE material storage equipment shall be installed on the existing concrete slab.

New GFE modular office shall be installed on the existing concrete slab.

New energy efficient windows shall be installed to match existing window size and location.

Interior walls shall be clad with a non-reflective white metal siding to provide a higher level of cleanliness.

New personnel door thresholds shall be installed, and concrete below overhead doors shall be repaired to reduce air and water infiltration.

After welding equipment is removed from MFC-782, the area shall be cleaned and repaired as necessary to receive new equipment.

In MFC-782, the abandoned utility trench on the east side of the building shall be filled with concrete.

Civil

The existing drainage issue allowing water infiltration at the south end of the building shall be resolved.

Electrical

Sufficient power shall be supplied to the facility to meet all power requirements for equipment (including HVAC) using existing site infrastructure where possible. Additional power shall be supplied from the MFC-773 substation.

The main facility distribution panel shall have power monitoring capabilities to include voltage, current, power, and harmonics and shall also have the ability to tie into the Facility Management Control System.

Route new electrical conductors and conduits as required to supply power to the facility and equipment installations.

Undersized electrical panels/breakers shall be replaced as required to support all equipment.

New LED lighting shall be installed to replace all lighting in the facility.

All existing electrical outlets/attachment points shall be repaired or replaced as required for full functionality

Data lines shall be routed to the facility and network connections shall be installed to support operations.

Installations shall include a cell phone extender.

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In MFC-782, power shall be supplied to all new and/or relocated equipment.

In MFC-782, the power panel on the existing temporary wall will be relocated to the north wall as part of a separate project.

Fire Protection

Fire sprinklers shall be installed in the facility.

A fire alarm system with a fire alarm panel shall be installed in the facility.

A manual fire alarm (pull station) shall be installed on a separate circuit that is not placed "on test" when the detection or sprinkler system is placed on test.

HVAC

An appropriately-sized ducted HVAC system shall be provided for the facility and shall consider make-up air requirements for weld exhaust.

A separate mini-split system shall be installed in the modular office.

The HVAC systems shall be installed with connection to the site-wide FMCS system.

A weld exhaust system shall be installed to vent to the exterior of the facility.

IT

The existing evacuation horn shall be preserved.

Voice paging system shall be fed from the MFC-782 termination block on the northwest side of the building.

New network systems (including fiber routed from MFC-781, room 207) shall be provided and routed as required to support planned operations (including 2 computers, a phone, FMCS systems, etc.)

Piping

Instrument air and facility argon shall be routed from MFC-782 to required hook-up locations in the facility.

Gas piping shall be installed to supply gasses other than instrument air and argon from a gas skid to the new laser table with coordinated hook-ups.

New fire sprinkler supply piping shall be supplied from nearby existing site supply lines on the south side of the building.

A new eye wash station shall be installed in the facility attached to the new fire piping.

In MFC-782, route existing utilities to new equipment as required.

Security

A new 1-inch (minimum) conduit pathway shall be installed from MFC-781 to MFC-796 to prepare for future security camera upgrade.

Structural

The loading from the new GFE bridge crane and proposed equipment shall be verified to not exceed the allowable loading of the existing concrete floor (1,000 psf per dwg 748620).

Unless approved by analysis, the new GFE bridge crane shall not apply new loads to the existing building structure.

HVAC

The HVAC system shall be designed to maintain the building at 75 degrees or below in the summer and 65 degrees or above in the winter.

HVAC equipment startup shall be performed by the equipment vendor/manufacturer.

HVAC equipment shall be controlled by FMCS.

The following equipment will be installed in the facility:

- Overhead Bridge Crane
- 10ft x 160 ton Brake Press/Shear Combo
- Laser Cutting Table
- Wire EDM
- Lathe
- Metal Rolling Machine (sheet)
- Metal Rolling Machine (plate)

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- Weld Table
- Modular Office Space

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project construction activities may involve the use of portable generators and equipment used by subcontractors. In addition, construction activities have the potential to create fugitive dust that may require dust suppression by water or other means. Operations may produce emissions from welding, brazing, and soldering.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

MFC-782 was built in 1967 and MFC-796 was built in 1978. A Cultural Resource Review must be performed was completed. Please see BEA-22-H119.

Generating and Managing Waste

Construction activities may result in the generation of small amounts of hazardous waste in the form of adhesives, paints, solvents, waste concrete, PVC or metal piping scrap, scrap wood, scrap wire, paper waste, packaging material, etc. Polychlorinated biphenyl (PCB) waste could be generated when modifying buildings built before 1982 or working with pre-1982 equipment/materials. Examples include electrical equipment/components, painted surfaces, light fixtures, caulking, joint sealer, ventilation duct gaskets, and insulation. Operations may generate small amounts of hazardous waste in the form of cleaning solvents, solders, metals, and scrap metal (held for recycle whenever appropriate).

Releasing Contaminants

When chemicals are used, there is the potential for chemicals to be spilled it air or soil.

Using, Reusing, and Conserving Natural Resources

Recycled materials will be used to the greatest extent practicable in the selection of materials. All materials will be reused and/or recycled where economically practicable. All applicable waste will 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)).

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References:

10 CFR 1021 Appendix D B1.15, "Support buildings."

Justification:

Project activities identified in this ECP are consistent with B1.15, "Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix."

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

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 06/07/2022