

August 1, 2024

MEMORANDUM FOR THE RECORD

From: Mark Liao
NEPA Coordinator
National Institute of Standards and Technology

Subject: Finding of No Significant Impact

Project Title: Missouri University of Science and Technology
Missouri Protoplex Facility

Location: Missouri University of Science and Technology
1700 White Columns Drive
Rolla, MO 65409

The National Environmental Policy Act (NEPA) and associated implementing regulations (40 CFR Parts 1500-1508) require that all major federal actions be reviewed with respect to their environmental consequences. The National Institute of Standards and Technology (NIST) is providing a congressionally directed funding grant for the construction and operation of the Missouri Protoplex Facility at the Missouri University of Science and Technology. Consequently, NEPA and the associated implementing regulations apply to this project.

An Environmental Assessment (EA) was prepared by the grant recipient for this project and provided for public review. The EA (“Environmental Assessment of the Missouri University of Science and Technology, Missouri Protoplex Facility,” Terracon Consultants, Inc., July 29, 2024) is incorporated by reference. This memorandum summarizes the impacts identified and the mitigation proposed in the EA, and documents a finding of no significant environmental impact (FONSI) for the Missouri Protoplex Facility project.

Description of the Action

This action includes the construction and operation of the Missouri Protoplex Facility on the campus of the Missouri University of Science and Technology (Missouri S&T) in Rolla, Missouri.

The purpose of this project is to provide a facility that will foster the growth of a highly skilled, future-ready workforce needed in advanced manufacturing, manufacturing education, research and development, technical assistance outreach, and entrepreneurship. The facility is intended to serve as the anchor for the new Manufacturing Technology and Innovation Campus at Missouri S&T connecting industry manufacturers, state and federal agencies, and colleges and universities to develop new and improve existing processes for manufacturing. The existing facilities at the Missouri S&T campus are at full capacity as the enrollment and offerings at the university increase.

The Protoplex Facility will be located on a previously disturbed portion of the campus at 1700 White Columns Drive. The site previously contained the General Services Building and parking areas. The building footprint and immediate surroundings are vacant as depicted in the EA. The Protoplex Building will be two stories, approximately 117,000 gross square feet, and include development of an approximately 15-acre site. The facility will include high bay laboratories; enclosed lab and shop spaces; storage; offices; meeting and collaboration space; lobby and display space; and general building support. The project includes a new entry drive and ninety parking spaces, a new service drive to the loading dock to support the new facility, and the installation of new utility services for the building.

This project includes the installation of 225 geothermal wells and a new geothermal plant to service the Protoplex Building.

Summary of Impacts and Mitigation

This FONSI is predicated on the implementation of mitigation measures summarized below:

Aesthetics and Visual Resources

The Protoplex Building has been designed to complement the Missouri S&T south campus facilities.

During construction, activities will only occur during daylight hours, 7 am to 7 pm in the summer months and 8 am to 6 pm during winter months and overhead lighting will not be used to minimize the visual impacts of construction.

Permanent exterior lighting will be placed and installed to ensure that lighting does not leave the Protoplex area. Trees will be planted along the northern façade (facing Collegiate Boulevard) and 15 native canopy and ornamental trees will be scattered throughout the native area proposed south of the building.

Noise

Elevated noise levels will be expected during construction of the Protoplex Building and from an emergency generator to be installed. To minimize the impact of the increased noise levels during construction activities, all equipment would be fitted with noise reducing features (e.g., mufflers) and construction activities would be limited to daytime hours (7 am to 7 pm in the summer months and 8 am to 6 pm during winter months). Noise levels from the emergency electric generator to be installed will be mitigated by enclosing the generator and limiting testing to daytime hours (7 am to 7 pm in the summer months and 8am to 6 pm during winter months).

Historic/Cultural Resources

A Phase I Archaeological Survey and a Phase I Archaeological Resources Survey with systematic shovel testing were conducted at the project site. The survey results were provided to the State Historic Preservation Officer (SHPO) along with a request for consultation regarding historic resources. The SHPO concurred with the determination of “No Historic Properties Affected.” See attachment A.

If the project area or scope changes, or if cultural materials are found during construction, appropriate information must be provided to the SHPO for further review.

Tribal Historic Preservation Officers were also contacted to solicit input on the project. No comments were received.

Air Quality

Construction activities for this project will generate temporary and minor amounts of fugitive dust and gaseous emissions from the operation of construction equipment.

To mitigate the short-term impacts, best management practices (BMPs) will be implemented to reduce air emissions during the construction. These BMPs include:

- Using appropriate dust suppression methods during on-site construction activities. Available methods include application of water, dust palliative, or soil stabilizers, use of enclosures, covers, silt fences, wheel washers, and suspension of earth-moving activities during high wind conditions.
- Shutting off equipment when it is not in use.

- Visually monitoring all construction activities regularly and particularly during periods of dry weather and implement dust control measures when needed.

Greenhouse Gas Emissions

Greenhouse Gas emissions are expected to increase due to the power demands for the construction and operation of the Protoplex Building. Implementing BMPs associated with reducing the air emissions during the construction phase of this project, such as properly maintaining engines and limiting idle time will minimize GHG emissions. The Protoplex will utilize a geothermal system for heating and cooling, negating the need for new point sources (such as a boiler). Utilizing a geothermal system for heating and cooling will significantly reduce the GHG emissions related to the operation of the new Protoplex facility. Additionally, the facility will be constructed using energy efficient windows and doors along with LED lighting, reducing the demand for electricity.

Hazardous Materials

Previous operations (hydraulic systems, compressors, underground storage tanks and a fill area) at or near the project site were suspected to have left contaminants in the soil. A Phase 1 Environmental Site Assessment and a Limited Site Investigation were conducted. Low levels of petroleum related soil contamination were found in a portion of the project site. A Media Management Plan was developed and will be implemented during construction of this project. The Media Management Plan will mitigate impacts related to the disturbance of existing soil contamination during construction operations, and to mitigate the impacts of potential soil and ground water contamination that could be found during construction. The MMP includes the following:

- A description of suspected contaminants at the project site,
- Hazard recognition procedures,
- Hazard response procedures,
- A description of methods to be used to segregate impacted soil from unimpacted soil at the project site and to facilitate the proper disposition of contaminated soils removed from the project site,
- A description of the site safety responsibilities and contingency actions to be implemented, if necessary, and
- A description of management practices for impacted groundwater or storm water that require treatment or disposal.

Hazardous waste generated by the operation of the new building will be properly disposed of off-site by licensed haulers/disposal facilities in accordance with State and Federal regulations.

Stormwater

Because the area of disturbed soil will exceed one acre, authorization under an NPDES Permit for Construction Site Activities is required along with the implementation of a stormwater pollution prevention plan (SWPPP). The contractor will implement Best Management Procedures (BMPs) to ensure that during rain events, sediment and debris do not leave the site and increase sediment loading and pollutants entering the stormwater conveyance. BMPs to be utilized may include but are not limited to:

- Managing stockpiled materials to minimize the time between delivery and use;
- Covering stockpiled materials with tarps;
- Installing silt fences around material stockpiles, storm water drainage routes, culverts, and drains;
- Installing hay or fabric filters, netting, and mulching around material stockpiles, storm water drainage routes, culverts, and drains;
- Watering disturbed areas to control windblown dust;
- Installing track-out protection to minimize sediment being tracked onto pavement from vehicles exiting the work site;
- Suspending work during rainy conditions;
- Planning and conducting earthwork in a manner that minimizes the duration of exposure of unprotected soils;
- Maintaining temporary erosion control measures, such as berms, dikes, drains, sedimentation basins;
- Seeding, and mulching, until permanent drainage and erosion control facilities are completed and operative; and
- Employing good housekeeping measures to minimize exposure of materials stored on site to stormwater.

This project will result in increased impervious area at the project site. The increase in stormwater runoff will be mitigated by the payment of an in-lieu-of fee to the City of Rolla.

Floodplains

The project site is not located in a 100 or 500-year floodplain. No areas of localized flooding are known to exist in the project area. Existing flood zones related to local streams are at least 1/2 mile from the project site. No flood hazards are expected for the Protoplex project and no impacts to flood zones are expected.

Conclusion

NIST hereby adopts the EA prepared by the award recipient for the Missouri Protoplex Facility on the campus of the Missouri University of Science and Technology. After reviewing the EA

and the supporting materials, NIST finds that the EA properly documents the project's environmental impact. NIST has determined, with the mitigation measures described above, that the proposed action will have no significant impact on the quality of the human environment. With this FONSI, an environmental impact statement will not be prepared.

Mark Liao
NIST NEPA Coordinator

Date

Robert C. Vaughn
NIST Chief Facilities Management Officer

Date

Attachment A
Missouri Historic Preservation Officer Letter

April 10, 2024

Burns & McDonnell
Attn: Douglas Shaver
9400 Ward Parkway
Kansas City, MO 64114

Re: **SHPO Project Number: 004-PH-24** – Missouri University of Science and Technology
Protoplex Project – Building Demolition, 1001 Collegiate Boulevard, Rolla, Phelps County,
Missouri (DOC)

Dear Douglas Shaver:

Thank you for submitting information to the State Historic Preservation Office (SHPO) regarding the above-referenced project for review pursuant to Section 106 of the National Historic Preservation Act, P.L. 89-665, as amended (NHPA), and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which require identification and evaluation of historic properties.

We have reviewed the information regarding the above-referenced project and have included our comments on the following page(s). Please retain this documentation as evidence of consultation with the Missouri SHPO under Section 106 of the NHPA. SHPO concurrence does not complete the Section 106 process as federal agencies will need to conduct consultation with all interested parties. **Please be advised that, if the current project area or scope of work changes, such as a borrow area being added, or cultural materials are encountered during construction, appropriate information must be provided to this office for further review and comment.**

If you have questions please contact the SHPO at (573) 751-7858 or call/email Amy Rubingh, (573) 751-4589, amy.rubingh@dnr.mo.gov. If additional information is required please submit the information via email to MOSection106@dnr.mo.gov.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE



Brian Stith
Deputy Director Division of State Parks and
Deputy Missouri State Historic Preservation Officer

c: Patricia Litty, Missouri University of Science & Tech
Phillip Neuberg, NIST

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Douglas Shaver
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SHPO Project Number: 004-PH-24 – Missouri University of Science and Technology Protoplex
Project – Building Demolition, 1001 Collegiate Boulevard, Rolla, Phelps County, Missouri
(DOC)

COMMENTS:

Adequate documentation has been provided as outlined in 36 CFR Section 800.11. After review of the initial submission, the project area has no known historic properties present and a low potential for the occurrence of cultural resources. SHPO concurs with your determination of **No Historic Properties Affected**.