



Department of Energy
Office of Science
Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

December 10, 2024

Mr. Marc Clay
Chief Safety Officer, Interim
Fermilab
P.O. Box 500
Batavia, IL 60510

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT DETERMINATION
AT FERMI NATIONAL ACCELERATOR LABORATORY
KAUTZ ROAD CONSTRUCTION ENTRANCE

Reference: Memorandum from M. Clay to R. Hersemann; Subject: National
Environmental Policy Act Environmental Evaluation Notification Form
for Kautz Road Construction Entrance; Dated November 22, 2024

Dear Mr. Clay:

The Fermi Site Office (FSO) has reviewed the National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for Kautz Road Construction Entrance. Based on the information provided in the EENF the potential environmental impacts from the proposed action are bounded by the analyses conducted in the 2015 LBNF/DUNE Environmental Assessment (DOE/EA-1943).

<u>Project Name</u>	<u>Approved</u>	<u>EA</u>
Kautz Road Construction Entrance	11/26/2024	DOE/EA-1943

Enclosed is a signed copy of the EENF for your records. No further NEPA review is required. This project falls under categorical exclusions provided in 40 *CFR* 1021, as amended in November 2011.

If you have any questions, please contact Rick Hersemann, of my staff, at (630) 840-4122 or by email at rick.hersemann@science.doe.gov.

Sincerely,

**ROGER
SNYDER**

Digitally signed by
ROGER SNYDER
Date: 2024.12.10
10:11:47 -06'00'

Roger E. Snyder
Manager, Fermi Site Office

Enclosure: As Stated

cc:

J. Sawyer, FRA

M. Michels, FRA

L. Huntoon, FRA

S. Panock, FRA

R. Hersemann, DOE-FSO

J. Scott, DOE-FSO

**FERMILAB ENVIRONMENTAL EVALUATION NOTIFICATION FORM
(EENF) for documenting compliance with the National Environmental Policy
Act (NEPA), Department of Energy (DOE) NEPA Implementing
Regulations, and the DOE NEPA Compliance Program of DOE Policy
451.1**

Project/Activity Title: Kautz Road Construction Entrance
ES&H Tracking Number: 03-02-213

I hereby verify, via my signature, the accuracy of information in the area of my contribution for this document and that every effort would be made throughout this action to comply with the commitments made in this document and to pursue cost-effective pollution prevention opportunities. Pollution prevention (source reduction and other practices that eliminate or reduce the creation of pollutants) is recognized as a good business practice which would enhance site operations thereby enabling Fermilab to accomplish its mission, achieve environmental compliance, reduce risks to health and the environment, and prevent or minimize future Department of Energy (DOE) legacy wastes.

Fermilab Action Owner: Ryan Johnson
Signature and Date

Ryan Johnson

Digitally signed by Ryan Johnson
DN: C=US, E=ryanj@fnal.gov, O=Fermilab,
OU=FESS Engineering, CN=Ryan Johnson
Date: 2024.11.22 14:24:19-06'00'

I. Description of the Proposed Action and Need

Purpose and Need:

The purpose of the proposed action is to provide a safe, secure, and efficient entrance and roadway for construction vehicles accessing Fermi National Accelerator Laboratory (Fermilab) in Batavia, IL, through the Kautz Road entrance along the south edge of campus from IL-56.

The need for the proposed action is to support Fermilab's growth and expansion to further its scientific endeavors. Fermilab is planning major site expansion with the addition of new facilities and utility improvements that will be constructed over the next several years and anticipated through 2030. These additions and improvements support Fermilab's major activities such as the Long-Baseline Neutrino Facility/ Deep Underground Neutrino Experiment (LBNF/DUNE). The construction of these projects will add heavy construction traffic to the site including construction workers, material delivery, and movement of materials. A 2022 Construction Route Assessment Report and Transportation Impact Study estimated that over 1,600 construction-related vehicles per day could be accessing the site during the peak of these projects. These construction-related activities will put significant loads on the current routes available for construction traffic. The security and access requirements for handling this large number of material deliveries create the need for a "holding area" where site escorts can be assigned and staged for the deliveries to be routed to locations internal to the operational perimeter. There is a gap between the availability of this hardstand infrastructure located at a security-patrolled access point and the infrastructure of the access points existing at the Laboratory. This proposed activity addresses the safety, security, and efficiency of access to the site for all Fermilab construction projects, filling gaps in the infrastructure available currently at other access locations and preserving the existing internal roadway network during a period of heavy construction.

Fermilab currently has one designated construction access point which is the Wilson Street entrance from Kirk Road on the north-west boundary of the Laboratory. This access is shared with all deliveries but does not include significant hardstand for escorting unbadged drivers. The projected construction traffic will impose significant loads to the existing roadway network as the entrance is not proximate to any of the upcoming major construction projects and traffic would have to travel through the core-campus to access the construction sites.

Efficiency, safety, and security will be maintained if the currently out-of-service entrance is re-opened for construction-related vehicles to accommodate the proposed increase in construction traffic in the coming

years. This entrance is located closer to the major construction sites to limit traffic density within the main campus and mitigate congestion at the Wilson Street entrance, which is also an employee and delivery entrance.

The entrance to be improved and reopened is referred to as the Kautz Road entrance and is located along the south boundary of the Laboratory at IL-56/Butterfield Road. It has been closed since it was used as the constriction entrance for the Main Injector in the 1990's. The current paving requires significant maintenance and rehabilitation, in addition to multiple alterations and upgrades to security components necessary to bring it to present-day DOE safety and security standards. A permanent guardhouse concrete pad equipped with electric and communication lines exists on Kautz Road but was not located optimally for the volume of traffic to be checked under current security protocols and does not include adequate hardstand for staging and a turnaround for vehicles rejected by security. This project will move the access control point north to allow for proper queuing and construction of the needed hardstand.

Additional portions of roadway within the site and along construction routes also require maintenance improvements to safely serve construction vehicles.

Proposed Action:

- Installation of a new secure access control point including a truck queuing area and a turn-around lane.
- Alterations to the guard station including a new guard house, utilities, lighting & miscellaneous security equipment.
- Improvements to the IL-56/Kautz Road entrance within the Illinois Department of Transportation (IDOT) right-of-way, including widening and the installation of a new dedicated right turn-in lane to the westbound lane of IL-56.
- Updates to the Kautz Road roadway to a safe industry standard width of 28-feet of pavement, striped for (2) 12-foot lanes with 2-foot paved shoulders. The current typical section is a pavement width of 19 to 20-feet, therefore rehabilitation will include widening of the approximately 2,900 linear feet (LF) of existing Kautz Road from the IDOT/IL-56 right-of-way to Indian Creek Road. With the access control point spanning approximately 625 LF of this 2,900 LF total, the scope of the Kautz Road improvements will be broken down to two portions totaling 2,275 LF. The north portion is approximately 1,600 LF from the access control point to Indian Creek Road, and the south portion is approximately 675 LF from the IDOT R.O.W. to the access control point. With the widening of the pavement, the eastern roadway ditch will be regraded and extended east. The new Kautz Road pavement section will consist of 4-inches of asphalt binder and 2.25-inches of asphalt surface.
- Mill/overlay 2-1/4" of approximately 2,000 LF of 22' width roadway on Indian Creek Road from Kautz Road to MI-40 and patch pavement where necessary.

Alternatives Considered:

Four alternatives were considered to accommodate the imminent surplus of construction traffic:

- 1) Do not open a new entrance for construction vehicles and continue to utilize the Wilson Street entrance for all construction traffic. At peak activity, it is estimated that over 1,600 construction-related vehicles will be accessing the campus per day. This would overwhelm the Wilson Street entrance and congest the main campus area as construction traffic competes for access with ongoing daily traffic into the Laboratory. This congested vehicular density intrinsically increases the likelihood of vehicle accidents. Additionally, Wilson Street is the only entrance currently configured for heavy vehicle traffic, meaning in the event of a closure it represents a single point failure and a significant risk to the progress of major projects.

For the reasons listed above, utilizing Wilson Street as a construction entrance is not a viable alternative.

- 2) Re-open the Eola Road entrance. There is an existing Laboratory access point at Eola Road and Butterfield Road that is closed for general access and no longer has a security gate. Constraints leading to the nonelection of this alternative are as follows:

- a) Eola Road is located further from the areas where construction will be occurring than Kautz Road, increasing the time on-site for vehicles entering Fermilab, drawing out schedules and increasing costs as knock-on effects. Lengthened ingress/egress turnaround time will require additional escorting to maintain continuous material flow.
- b) Using this entrance/exit requires vehicles to transit the Main Ring, unnecessarily increasing the time drivers will need to remain in regulated areas.
- c) To open this access point as a construction entrance, many improvements would be needed to provide adequate infrastructure to support construction traffic. Eola Road and the IL-56 entrance would need to be widened and improved and would require usage of the Main Ring Road which has mostly failed.
- d) Eola Road is in an area being evaluated for reduced usage as part of an effort to consolidate industrial functions at the Laboratory and eliminate unnecessary colocation of these with housing functions. Eola Road is the only route that accesses current Fermilab housing, forcing mixed vehicle usage (personal and official) if reopened for construction traffic.

For the reasons listed above, utilizing Eola Road as a construction entrance is not a viable alternative.

- 3) Construct a new Giese Road entrance along Kirk Road near the LBNF site. Extending Giese Road and creating a new construction entrance from Kirk Road was considered as an alternative and a conceptual design was completed. The Kane County Division of Transportation (KDOT) owns Kirk Road (County Highway 77). The following improvements to the site would be required for this alternative:
 - a) Improvements to the existing gravel Giese Road on the Fermilab site from Schwahn Road to its current termination point just east of Kirk Road would include full road reconstruction and widening (from 10-ft to 24-ft, with additional 3-ft shoulders) to approximately 2,250 linear feet of road. A heavy-duty asphalt pavement would need to be installed.
 - b) There would be four areas of culvert improvements; two areas of replacement along the existing road, one area of reconstruction about 600 feet east of the eastern reconstruction limit which is made up of (3)-36" pipes, and an extension of the culvert crossing Kirk Road just south of Giese Road.
 - c) The Nicor gas monitoring station that is located directly in the middle of the new Giese Road entrance would require relocation. This may already be planned for with the construction of LBNF, however, this would need to be completed prior to the construction of the road. The 4" gas line along the north side of existing Giese Road to Central Utilities Building (CUB) would need to be inspected and replaced if necessary. This high-pressure gas line would likely be within the limits of the road if it were to be widened. This line was installed in 1991 and is approximately 36-inches below existing grade.
 - d) The construction of a new entrance road from Kirk Road to the western limits of the existing Giese Road. This new entrance road would be approximately 335 linear feet and 30-ft wide, with 50-ft radius turns.
 - e) The construction of a new secure security perimeter, including a new guardhouse, swing gate/fence, and a semi-truck pull-off lane. Electric and telecommunication cables would need to be extended to this guardhouse, likely from the LBNF site.
 - f) For this alternative, KDOT may require the following improvements to Kirk Road:
 - i) A new right-in deceleration lane to Kirk Road's north-bound lane. This new 12-ft wide lane could be approximately 300-feet, with a 240-foot taper. This would require widening of Kirk Road, and the possible installation of a retaining wall to minimize wetland impact.
 - ii) A new acceleration lane to Kirk Road's north-bound lane. This new 12-foot-wide lane could be approximately 600-feet, with a 240-foot taper. This would require widening of Kirk Road.
 - iii) KDOT may require a "porkchop" island at the entrance (tee shaped) to force only right-in and right-out.
 - iv) In lieu of the right-in and right-out entrance, KDOT may instead require a new left-in turn lane to the south-bound lane of Kirk Road and the installation of traffic signals to all four directions of Kirk and Giese Roads.

- g) The widening of Kirk Road would require the relocation of ComEd utility poles and overhead electric along the east side of Kirk Road, which may also require an additional 10-foot utility easement.

This alternative would provide a more direct route for the forthcoming construction sites, however, there could be many difficulties associated with its selection, including the location of wetlands within this area. Wetland permits would be required from the US Army Corps of Engineers and possibly Kane County Stormwater Management. Current wetlands would be encroached or impacted with the road widening and culvert improvements. In addition to the construction of the roadway and entrance itself, a need for improvements to the adjacent site would be anticipated due to the wetland impact. An additional wetland study would be needed from an A/E firm were this alternative be further pursued. As Kirk Road is a KDOT roadway, permitting through KDOT would be required. In addition to the significant improvements to Kirk Road, there may be concerns of disruption due to traffic, headlights, or noise. KDOT is not obligated to approve of this entrance. Due to the reasons stated above, this alternative may take significantly longer to coordinate, design, and construct in comparison to other alternatives. Also, costs would likely be significantly higher in comparison to other alternatives. For the reasons listed above, utilizing Giese Road as a construction entrance is not a viable alternative.

- 4) Re-open and improve the Kautz Road entrance. Kautz Road was ultimately selected as the best alternative. Taken in consideration against the other possible options, Kautz Road is the chosen option because:
 - a) Logistically, it is in close proximity to future construction sites, minimizing the impact of traffic on the main campus, limiting travel times in areas above background, and minimizing construction impacts to wetland areas.
 - b) The roadway and access from Butterfield Road already exist. The maintenance and improvements necessary to meet expected demand are the least intensive of the alternatives described above. Minimal impacts to the environment are anticipated as the corridor already exists.

II. Description of the Affected Environment

Specific potential environmental effects within the area are presented in Section III and IV. Section VII provides a site location map.

III. Potential Environmental Effects (If the answer to the questions below is “yes”, provide comments for each checked item and where clarification is necessary.)

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

- Threatened or endangered species
- Other protected species
- Wetland/Floodplains
- Archaeological or historical resources
- Non-attainment areas

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

- Clearing or Excavation
- Demolition or decommissioning
- Asbestos removal
- PCBs
- Chemical use or storage
- Pesticides
- Air emissions
- Liquid effluents
- Underground storage tanks

- Hazardous or other regulated waste (including radioactive or mixed)
 - Radioactive exposures or radioactive emissions
 - Radioactivation of soil or groundwater
- C. Other Relevant Disclosures: Would the proposed action involve any of the following actions/disclosures?
- Threatened violation of ES&H permit requirements
 - Siting/construction/major modification of waste recovery or TSD facilities
 - Disturbance of pre-existing contamination
 - New or modified permits
 - Public controversy
 - Action/involvement of another federal agency
 - Public utilities/services
 - Depletion of a non-renewable resource

IV. Comments on checked items in section III.

Wetland/Floodplains

WBK Engineering conducted a wetland delineation of the project area and delineated a few small areas as wetlands. A wetland permit application for the United States Army Corp of Engineers was prepared for DOE Field Site Office. Temporary erosion and sediment control measures will be maintained and remain in place until construction is completed, and site conditions stabilize.

Archaeological or Historical Resources

The proposed area consists of grassland, Fermilab's spoil stockpile, and farmland. There is the potential to find historic artifacts during excavation within the vicinity. If historic artifacts are found during excavation and construction, the Environmental Program Department (EPD) will be notified immediately, and the findings will be assessed. However, this area is not registered under the State Historic and Preservation Office (SHPO) as a historic or culturally significant site. SHPO confirmed that Fermilab's Cultural Resource Management Plan (CRMP) previously assessed the area, and no further surveying is required. There is one groundwater monitoring well located in this area; safe and efficient access to the monitoring well will be maintained.

Clearing or Excavation

There will be approximately 2.32 acres disturbed by excavation. Excess spoils will be properly disposed of to a Fermilab stockpile by the subcontractor. There will be approximately 0.534 acres of tree clearing. A Stormwater Pollution Prevention Plan (SWPPP) has been completed.

Air emissions

Construction and excavation vehicles and equipment may produce minimal air emissions such as particulate matter and volatile organic compounds. Potential for fugitive emissions such as dust is unlikely but will be reported to EPD if observed.

New or modified permits

This proposal requires the following permits and/or documentation:

- IEPA NPDES General Permit. *(As excavation is greater than 1 acre, a SWPPP is required; this has been completed)*
- Environmental Joint Permit:
 - USACE Nationwide Permit (Wetland). *(0.074-acres of wetland impact is below the 0.10-acre threshold, no wetland mitigation is anticipated)*
 - US Fish and Wildlife Service – Federal Threatened and Endangered Species Consultation
 - IDNR State Threatened and Endangered Species Consultation
- Kane-DuPage Soil and Water Conservation District – Soil Erosion and Sediment Control Plan Review
- IDOT Highway Access Permit *(for improvements to IL-56 including the new turn lane and widened entrance)*

Public utilities/services

Construction work will be conducted on Butterfield Road to add a turn lane into Kautz Road for construction vehicles to enter Fermilab. As this may cause congestion or traffic on the public road, work is being conducted in collaboration with IDOT.

V. NEPA Recommendation

Fermilab environmental protection staff with the Fermilab Environmental Program Department have evaluated the proposed action and have determined that the potential environmental impacts from the proposed action are bounded by the analyses conducted in the 2015 LBNF/DUNE EA (DOE/EA-1943).

Fermilab NEPA Program Manager: **Samantha Panock** **Samantha Panock** Digitally signed by Samantha Panock
Signature and Date _____ Date: 2024.11.22 14:15:33 -06'00'

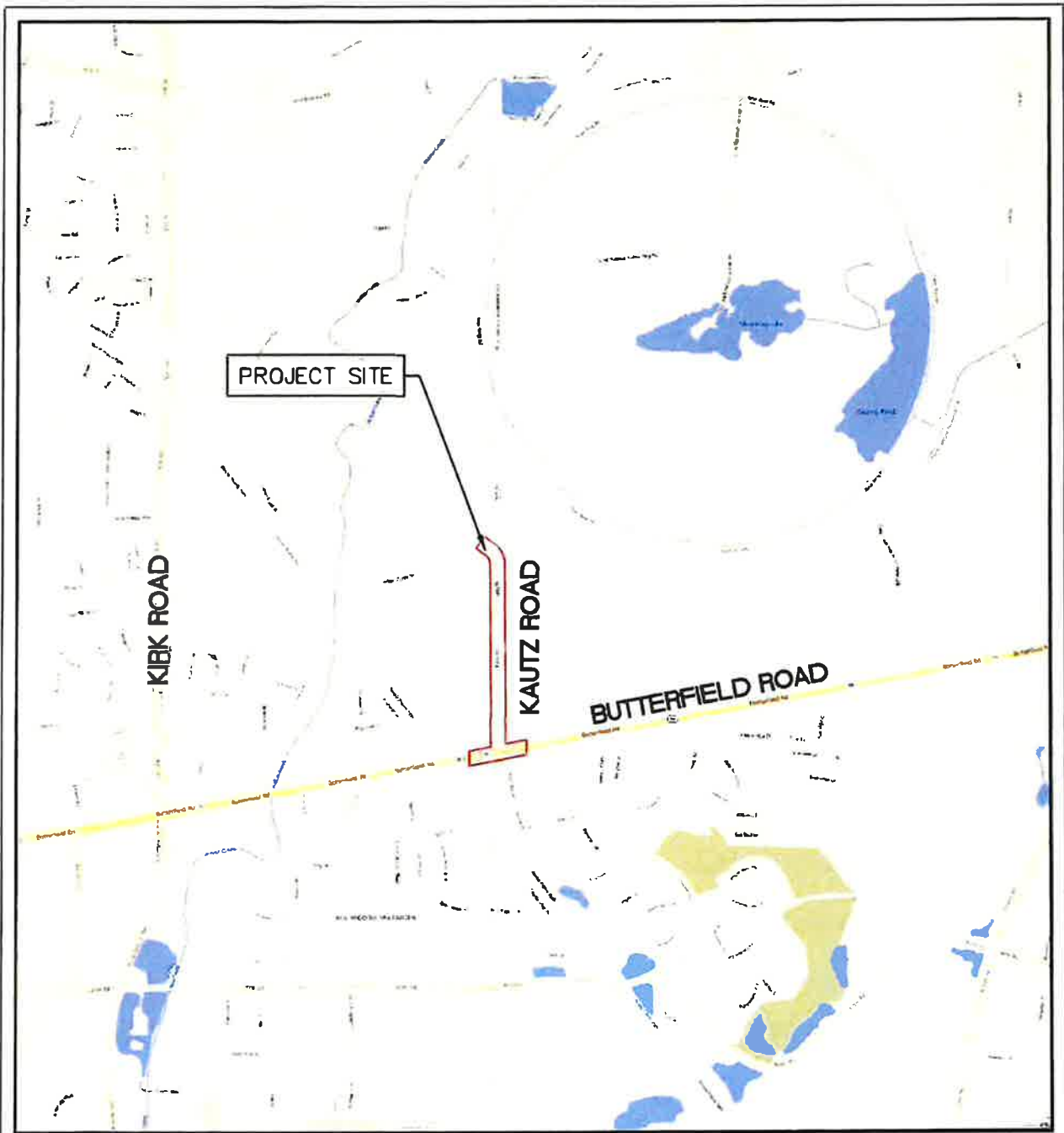
VI. DOE/Fermi Site Office (FSO) NEPA Review

Based upon my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1A), I have determined that the potential environmental impacts from the proposed action are bounded by the 2015 LBNF/DUNE EA (DOE/EA-1943) and no further NEPA analysis and documentation is needed.

FSO NEPA Compliance Officer: **Rick Hersemann** **RICK** Digitally signed by RICK
Signature and Date _____ HERSEMANN Date: 2024.11.26 08:01:03 -06'00'

VII. Diagrams

Kautz Road Location Map





SOURCE: GOOGLE MAPS

SCALE: 1" = 2000'

PLSS DESCRIPTION- SECTION 31, TOWNSHIP 39N, RANGE 9E

LATITUDE: 41.8563287°

LONGITUDE: 88.2044267°

CLIENT FERMI RESEARCH ALLIANCE LLC P.O. BOX 500 BATAVIA IL, 60510 630-840-3000	TITLE KAUTZ ROAD CONSTRUCTION ENTRANCE	DWN.	GMP	CHKD.	NMP
		JOB#			
 WBK ENGINEERING, LLC 116 WEST MAIN STREET, SUITE 201 ST CHARLES, ILLINOIS 60174 (630) 443-7755		LOCATION MAP			
					09/12/2023 EXHIBIT 1

