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

January 6, 2025

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 KIRK ROAD SANITARY SEWER IMPROVEMENTS

Reference: Memorandum from M. Clay to R. Hersemann; Subject: National Environmental Policy Act Environmental Evaluation Notification form for Kirk Road Sanitary Sewer Improvements; Dated: December 12, 2024

Dear Mr. Clay:

The Fermi Site Office (FSO) has reviewed the National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for Kirk Road Sanitary Sewer Improvement. Based on the information provided in the EENF, the following categorical exclusion (CX) is approved.

Project Name	Approved	CX
Kirk Road Sanitary Sewer Improvements	12/17/2024	B1.31, B5.4

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: 2025.01.06 11:26:10 -06'00'

Roger E. Snyder
Manager, Fermi Site Office

Enclosure: As Stated

cc:
J. Sawyer, FFDG
M. Michels, FFDG
L. Huntoon, FFDG
S. Panock, FFDG
R. Hersemann, DOE-FSO
J. Scott, DOE-FSO
S. Wallace, 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: Kirk Road Sanitary Sewer Improvements
ES&H Tracking Number: 3-5-201A

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: 2024.12.19 13:59:32-06'00'

I. Description of the Proposed Action and Need

Purpose and Need:
The purpose of this project is to remove and replace approximately 300 feet of obstructed sanitary sewer pipe located along Kirk Road at the site boundary of Fermi National Accelerator Laboratory (Fermilab) in Batavia, IL. There is a need for this project because the existing line contains heavy mineral deposits and therefore is impacting sewer water transport. The pipe conveys wastewater from the Fermilab sanitary sewage system to the City of Batavia's publicly owned treatment works (POTW). A metering manhole also needs to be installed to accurately measure the amount of wastewater discharged from Fermilab to the POTW.

Proposed Action:

The scope of work for this project may include the following:

- The existing sanitary sewer pipe is 8" ductile iron. It will be replaced in-kind with PVC pipe from SMHT 200 to SMHT 201, and from SMHT 201 to SMHT 202, as indicated in the attached drawings. The pipe is to be replaced in same alignment and at same elevations. Existing manholes SMHT 200 and 202 are to remain and are watertight as they have previously been lined with cement. SMHT 201 is to remain and be repaired to eliminate any water infiltration. Unless a new flume-like device is needed to collect the samples, the existing flume in SMHT 201 is to remain.
- The existing autosampler sits on top of the sanitary sewer. The autosampler and hut are to be relocated. The existing concrete pad is to be removed, and a new pad to be poured to a nearby location. The autosampler and hut are to be relocated to the new pad, and sampling tubes to be installed to SMHT 201.
- A new prefabricated metering manhole is to be installed just upstream of SMHT 202. Electric service will be extended to this manhole.

Alternatives Considered:
The "Do Nothing" alternative would leave the current pipeline in its current condition, allowing continuous heavy mineral build-up and potentially significantly interrupting sewer water flow from Fermilab to the POTW. The alternative to install an entirely new pipeline at a new alignment is being considered, but this alternative has not been selected, because the existing pipe would be abandoned in-place and left in the ground.

II. Description of the Affected Environment

The attached drawings illustrate the location of the project and affected environment. Specific environmental effects are presented in Section III.

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.

Clearing or Excavation

Excavation is required for installation of the new pipe, metering manhole, and placement of relocated autosampler. Approximately 300 linear feet of material to be excavated, and to be reused as cover for the new piping. The excavation trench is to be approximately 13 feet deep at upstream end. Any excess soils will be hauled to a stockpile on the Fermilab site. Soil erosion measures include a silt fence and a stabilized construction entrance from Kirk Road. The project is located within prairie area. A native seed mix will be used to restore the area and to try and keep the disturbance to a minimum.

Air emissions
Construction and installation of site improvements may require use of portable generators for powering construction equipment. Construction machinery and bypass equipment may utilize both gas and diesel. Noise may be generated from construction equipment.

Liquid effluents
This project does not involve new releases. There will be the same amount of wastewater discharge, with possible trench dewatering.

Hazardous or other regulated waste (including radioactive or mixed)
Maximum tritium concentrations in the sanitary sewer at this location are below 20-30 picocurie per milliliter (pCi/ml), typically 5-15 pCi/ml, which is well below the occupational level of 100 pCi/ml. Any piping removed will go through the release and clearance process.

New or modified permits
A stormwater pollution prevention plan (SWPPP) is not required as area of disturbance is less than one acre. Illinois Environmental Protection Agency (IEPA) has indicated that a construction permit would not be needed if sewer is replaced in-kind (same alignment), but drawings will be forwarded to IEPA for confirmation.

Public utilities/services
The pipe flows from Fermilab into the POTW. There are no predicted disturbances to public utilities or services. The subcontractor will be responsible to bypass pump the sewage to manhole SMHT 202.

V. NEPA Recommendation

Fermilab staff has evaluated the proposed action and believe that several Categorical Exclusions apply. It is believed that the proposed action meets the description found in DOE's NEPA Implementation Procedures, 10 CFR 1021, Subpart D, as follows.

B 1.31 Installation or relocation of machinery and equipment
Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure.

B 5.4 Repair or replacement of pipelines
Repair, replacement, upgrading, rebuilding, or minor relocation of pipelines within existing rights-of-way, provided that the actions are in accordance with applicable requirements

Fermilab NEPA Program Manager: Samantha Panock
Signature and Date Samantha Panock Digitally signed by Samantha Panock Date: 2024.12.19 13:54:18 -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 Policy 451.1), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

FSO NEPA Compliance Officer: Rick Hersemann
Signature and Date RICK HERSEMANN Digitally signed by RICK HERSEMANN Date: 2024.12.20 09:15:47 -06'00'

VII. Diagrams

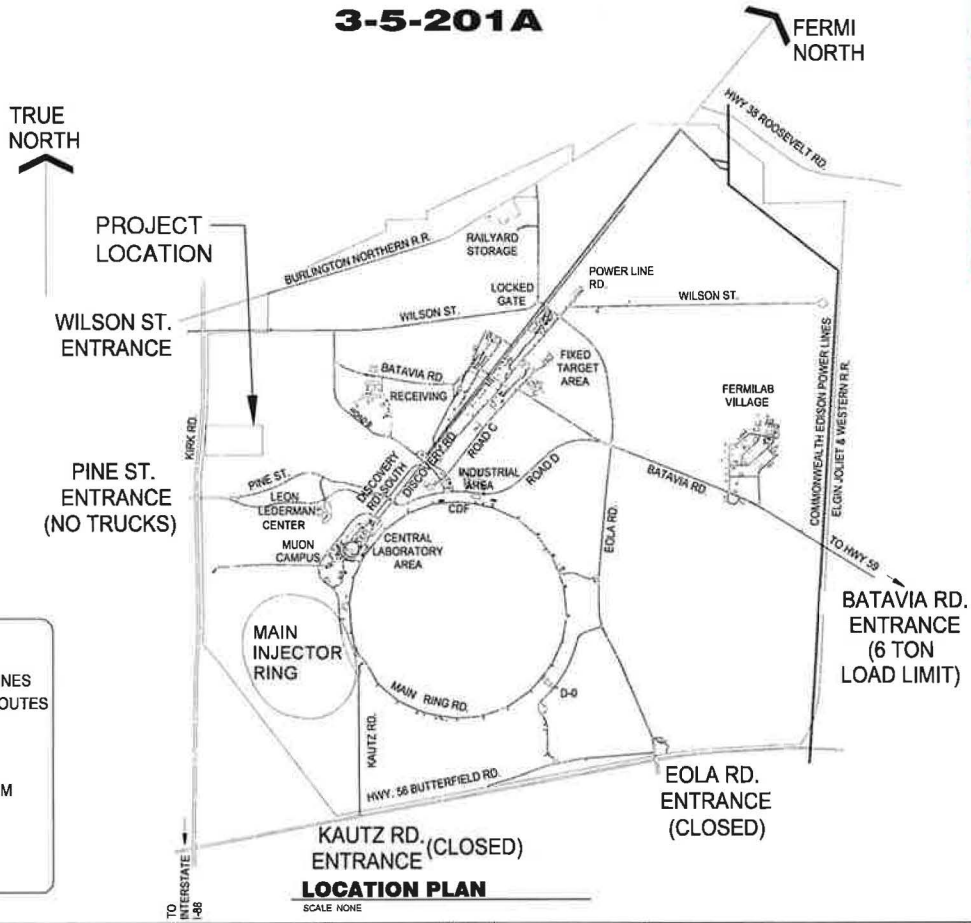
Kirk Road Sanitary Sewer Improvements drawings

KIRK ROAD PRAIRIE
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER
3-5-201A

DRAWING LIST:

G-1	LOCATION PLAN & DRAWING LIST
G-2	GENERAL NOTES
C-1	SITE PLAN & PROFILE
C-2	SITE OVERVIEW & PHOTOS
C-3	DETAILS
C-4	DETAILS
C-5	METERING MANHOLE & EQUIPMENT
C-6	EXISTING DRAWINGS
U-1	ELECTRICAL & COMMUNICATION



LOCATION PLAN
SCALE NONE

LEGEND

— -- — - - — SITE BOUNDARY LINES
○ ○ ○ ○ ○ ○ ○ ON SITE CONST. ROUTES
—****** —

HOURS

WILSON ST.....6 AM TO 3:30 PM
PINE ST.....6 AM TO 8 PM
BATAVIA RD.....6 AM TO 8 PM
EOLA RD.
KAUTZ RD.

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	*	*
DRAWN	*	*
CHECKED	*	*
APPROVED	*	*
SUBMITTED	*	*

PROJECT NORTH

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS
LOCATION PLAN & DRAWING LIST

DRAWING NO. 3-5-201A G-1 REV. *

23 OCT. 2024

GENERAL CONDITIONS

THE SUBCONTRACTOR SHALL OBTAIN NOTICE TO PROCEED FROM FERMILAB CONSTRUCTION COORDINATOR (FCC) PRIOR TO START OF CONSTRUCTION. THE FOLLOWING HAVE CONSTRUCTION OVERSIGHT OVER THIS PROJECT

- OWNER: FERMILAB - DEPARTMENT OF ENERGY
- ENGINEER: FERMILAB - ISD ENGINEERING
- FERMILAB SECURITY (630) 840-3414
- FERMILAB EMERGENCY (630) 840-3131

APPLICABLE STANDARD SPECIFICATIONS

ALL EARTHWORK, PAVEMENT, CURBING, AND SIDEWALK CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2016 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND WITH ANY SPECIAL PROVISIONS SPECIFIED HEREIN TO SAID STANDARD SPECIFICATIONS.

STANDARD SPECIFICATIONS FOR SANITARY SEWERS, STORM SEWERS AND WATER MAINS

ALL SANITARY SEWER, STORM SEWER, AND WATER MAIN CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS" 7TH EDITION/2014, AND WITH ANY SPECIAL PROVISIONS SPECIFIED HEREIN TO SAID STANDARD SPECIFICATIONS

CONFLICTS

IN THE CASE OF CONFLICTS BETWEEN THE PLANS AND SPECIFICATIONS SHOWN HEREIN AND THE APPLICABLE STANDARD SPECIFICATIONS, THESE PLANS AND SPECIFICATIONS SHOWN HEREIN SHALL TAKE PRECEDENCE. NO SUBSTITUTIONS IN MATERIALS, DETAILS OR ANY OTHER PART OF THE WORK SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. THE TERM ENGINEER USED WITHIN THESE SPECIFICATIONS SHALL DESCRIBE FERMILAB FESS ENGINEERING AND ANY OF THEIR REPRESENTATIVES.

GENERAL CONSTRUCTION

ALL WORK SHALL CONFORM TO THIS DRAWING SET AND THE PROJECT SPECIFICATIONS.

QUANTITIES ON DRAWINGS SHOWN FOR INFORMATION PURPOSES ONLY.

ALL MATERIALS AND WORKMANSHIP SHALL BE CONSTRUCTED BASED ON AND CONFORM TO ALL APPLICABLE CODES AND PRACTICES.

ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL CODES, STANDARDS AND GUIDELINES HAVING LAWFUL JURISDICTION.

THE SUBCONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF ANY WORK AND REPORT ANY DISCREPANCIES TO FERMILAB'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF ANY WORK.

THE SUBCONTRACTOR SHALL NOTIFY THE FERMILAB REPRESENTATIVE IMMEDIATELY IN REGARD TO ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.

THE SUBCONTRACTOR SHALL FAMILIARIZE THEMSELF WITH THE SCOPE OF THE WORK AND SOIL AND WATER CONDITIONS BEFORE PROCEEDING WITH THE WORK.

THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, SAFETY AND CARE OF ADJACENT PROPERTY, ADJACENT CONSTRUCTION AND COMPLIANCE WITH STATE AND LOCAL RULES AND REGULATIONS REGARDING SAFETY IS, AND SHALL REMAIN, THE SOLE RESPONSIBILITY OF THE SUBCONTRACTOR.

THE SUBCONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING MATERIALS, LANDSCAPING, CONSTRUCTION, ETC. DAMAGE DURING CONSTRUCTION DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND SHALL MATCH EXISTING MATERIALS, LANDSCAPING, CONSTRUCTION, ETC. WHICH WAS DAMAGED AT THE SUBCONTRACTOR'S EXPENSE AND AT NO ADDITIONAL COST TO FERMILAB.

THE SUBCONTRACTOR SHALL PATCH AND / OR REPAIR ALL ADJACENT AREAS INDICATED TO REMAIN WHICH ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION ACTIVITIES TO MATCH EXISTING TO THE SATISFACTION OF FERMILAB'S REPRESENTATIVE.

AREAS REQUIRING GRASS RESTORATION SHALL BE REGRADED WITH A MIN. OF 6" TOPSOIL, FERTILIZED AND RESEEDED WITH AN IDOT CL 1 LAWN MIX AS PER SECTION 21-2.05 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. AREAS WITHIN PRAIRIE TO BE SEEDED WITH AN IDOT NATIVE GRASS MIXTURE, AS COORDINATED WITH FERMILAB.

SUBCONTRACTOR SHALL BE RESPONSIBLE FOR USING APPROPRIATE SOIL EROSION CONTROL MEASURES DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING EXISTING DRAINAGE DITCHES AND CULVERTS. SUBCONTRACTOR SHALL SUBMIT A SOIL EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL PRIOR TO START OF CONSTRUCTION.

REALIGNMENT AND INSTALLATION OF PAVEMENT TO BE DONE IN ACCORDANCE WITH LINES AND GRADES AS SHOWN ON THE PLANS. PAVEMENT SUBBASE AND BASE COURSE AGGREGATES SHALL BE INSTALLED IN ACCORDANCE TO SECTIONS 311, "GRANULAR SUBBASE" AND SECTION 1004 "COURSE AGGREGATE" MATERIALS OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. AGGREGATE MATERIALS TO BE USED SHALL BE AS SHOWN IN THE DETAILS.

BITUMINOUS PAVEMENT SHALL BE INSTALLED IN ACCORDANCE TO SECTION 406, "BITUMINOUS CONCRETE BINDER AND SURFACE COURSE CLASS I" OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

PRIOR TO THE PLACEMENT OF BACKFILL, THE INSTALLATION OF ALL UNDERGROUND UTILITY LINES SHALL BE INSPECTED AND APPROVED BY FERMILAB.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO SIMILAR CONDITIONS ELSEWHERE.

INCIDENTAL CONSTRUCTION

THE SUBCONTRACTOR SHALL PERFORM ALL WORK INDICATED OR IMPLIED IN THE CONTRACT DOCUMENTS. ALL WORK NOT SPECIFIED BUT REQUIRED TO COMPLETE THE PROJECT, INCLUDING ACCESSORIES AND APPURTENANCES, SHALL BE PERFORMED BY THE SUBCONTRACTOR, INCIDENTAL TO THE CONTRACT PRICE IN A SATISFACTORY MANNER.

ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE. DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE AND SHALL BE REMOVED ON A REGULAR BASIS. DEBRIS SHALL BE REMOVED FROM THE FERMILAB SITE. CONSTRUCTION / DEMOLITION WASTE MATERIALS SHALL BE DISPOSED OF TO A RECYCLING VENDOR TO THE EXTENT PRACTICABLE. SUBCONTRACTOR SHALL SUBMIT A REPORT AT THE CONCLUSION OF THE JOB OF THE AMOUNT OF WASTE RECYCLED. ALL DUMPSTERS AND MATERIALS TO BE REMOVED SHALL BE SUBJECT TO FERMILAB'S RADITION SAFETY INSPECTION.

ALIGNMENT OF NEW PATH AS SHOWN ON PLANS IS APPROXIMATE. FCC TO CONFIRM FINAL PATH LOCATION IN FIELD WITH SUB-CONTRACTOR.

EXISTING UTILITY LINES

IF NECESSARY, ONSITE UTILITY MARKINGS WILL BE PROVIDED BY FERMILAB. THE SUBCONTRACTOR SHALL PROVIDE LIMITS FOR UTILITY MARKINGS AS WORK PROGRESSES. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO PHYSICALLY LOCATE, PROTECT AND MAINTAIN ALL UTILITY LINES. THE SUBCONTRACTOR SHALL POTHOLE ANY AND ALL EXISTING UTILITIES THAT MAY BE AFFECTED BY HIS WORK. ALL POTHOLING SHALL BE PERFORMED BY HYDROSTATIC EXCAVATION METHOD UNLESS OTHERWISE DIRECTED BY FERMILAB.

THE PLANS SHOW THE LOCATION OF CERTAIN UNDERGROUND AND OVERHEAD UTILITY LINES, WATER MAINS, GAS MAINS, COMMUNICATION LINES, SEWER, ETC., ACCORDING TO THE INFORMATION AVAILABLE RECORDS AND LIMITED FIELD INVESTIGATION. THE DETERMINATION OF THE EXACT LOCATION OF ALL EXISTING FACILITIES AND THE PROPER PROTECTION FROM DAMAGE TO THESE FACILITIES DURING ALL CONSTRUCTION OPERATIONS IS THE EXPRESSED RESPONSIBILITY OF THE SUBCONTRACTOR.

ANY EXISTING PIPELINES OR UTILITY LINES THAT MAY BE IN CONFLICT WITH THE PROPOSED WORK OR WHICH LOCATIONS ARE CRITICAL TO THE PLACEMENT OF PROPOSED FACILITIES SHALL BE EXPOSED PRIOR TO COMMENCING TRENCHING EXCAVATION IN ORDER TO DETERMINE IF ANY ADJUSTMENT IS NEEDED. THE COST FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONTRACT WITH NO ADDITIONAL PAYMENT. WHENEVER EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WITH CONFLICT IN LOCATION AND POSITION WITH PROPOSED FACILITIES UNDER CONSTRUCTION, THE SUBCONTRACTOR SHALL NOTIFY FERMILAB OF THE UTILITY AND ARRANGE FOR THE REMOVAL OR RELOCATION OF THE CONFLICT. THE SUBCONTRACTOR SHALL BE REQUIRED, HOWEVER, TO PROPERLY SUPPORT, PROTECT, REPLACE, OR SHORT TUNNEL EXISTING UTILITIES ENCOUNTERED IN THE WORK EVEN THOUGH THESE UTILITIES MAY NOT BE IN DIRECT CONFLICT WITH THE NEW CONSTRUCTION. ANY DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONSTRUCTION OF THESE PROPOSED FACILITIES SHALL BE CORRECTED AT NO ADDITIONAL COST TO FERMILAB.

ALL COST NOT BORNE BY A CONFLICTING UTILITY OWNER SHALL BE BORNE BY THE SUBCONTRACTOR. NO SEPARATE PAYMENT WILL BE MADE FOR ANY WORK PERFORMED AS HEREIN DESCRIBED OR FOR ANY COSTS IN CONNECTION THERETO WHICH THE WORK PERTAINS.

ACCESS TO SITE

FERMILAB AND THEIR REPRESENTATIVES SHALL BE ALLOWED ACCESS TO THE SITE AT ALL TIMES. THE SUBCONTRACTOR WILL TAKE WHATEVER STEPS NECESSARY TO ASSURE ONSITE SAFETY, ACCESSIBILITY AND FULL COOPERATION WITH FERMILAB'S REPRESENTATIVES. THE SUBCONTRACTOR SHALL APPOINT A REPRESENTATIVE, PREFERABLY THE PROJECT SUPERINTENDENT TO MAKE DAILY SITE VISITATIONS AND REPORT IN WRITING TO FERMILAB ALL WORK PROGRESS, TEST RESULTS, PROBLEMS AND / OR DELAYS.

SAFETY AND PROTECTION

THE SUBCONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL TRAFFIC CONTROL SHALL BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND LOCAL CODES. SIGNAGE AND BARRIERS SHALL BE APPROVED BY THE FCC.

THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH HIS WORK. THE SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO ALL EMPLOYEES ON THE WORKSITE AND OTHER PERSONS AND ORGANIZATIONS WHO MAY BE AFFECTED THEREBY. ALL OF THE WORK AND MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFFSITE, AND OTHER PROPERTY AT THE SITE OR ADJACENT THERE TO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES, UTILITIES, AND UNDERGROUND FACILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.

THE SUBCONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND FERMILAB REGULATIONS FOR THE SAFETY OF PERSONS OR PROPERTY TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS, AND SHALL ERECT AND MAINTAIN ALL NECESSARY SAFEGUARDS FOR SUCH SAFETY AND PROTECTION. THE SUBCONTRACTOR SHALL DESIGNATE A COMPETENT REPRESENTATIVE AT THE SITE WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS. THIS PERSON SHALL BE EXPERIENCED IN CONFINED SPACE SAFETY AND IS SUBJECT TO APPROVAL BY FERMILAB.

THE SUBCONTRACTOR SHALL NOTIFY FERMILAB'S REPRESENTATIVE 48 HOURS IN ADVANCE OF UNDERGROUND FACILITIES THAT MAY BE AFFECTED BY THE PERFORMANCE OF HIS WORK. THE SUBCONTRACTOR SHALL COOPERATE WITH FERMILAB IN THE PROTECTION, REMOVAL, RELOCATION OR REPLACEMENT OF SUCH FACILITIES. ALL DAMAGE, INJURY, OR LOSS TO ANY PROPERTY CAUSED, DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, BY THE SUBCONTRACTOR, ANY SUB-TIER CONTRACTORS, SUPPLIER OR ANY OTHER PERSON OR ORGANIZATION DIRECTLY OR INDIRECTLY EMPLOYED BY THE SUBCONTRATOR TO PERFORM OR FURNISH ANY OF THE WORK, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY SUBCONTRACTOR AT NO ADDITIONAL COST TO FERMILAB.

THE SUBCONTRACTOR'S DUTIES AND RESPONSIBILITIES FOR THE SAFETY AND PROTECTION OF THE WORK SHALL CONTINUE UNTIL SUCH TIME AS ALL THE WORK IS COMPLETED AND FERMILAB HAS ISSUED NOTICE THAT THE WORK IS ACCEPTABLE.

CLEANUP AND DISPOSAL

THE SUBCONTRACTOR SHALL MAINTAIN THE SITE IN A CLEAN AND ORDERLY MANNER AT ALL TIMES. DEBRIS AND SURPLUS MATERIAL REMOVAL AND SITE RESTORATION SHALL PROCEED AS THE WORK PROCEEDS. IF FERMILAB SO DIRECTS, THE SUBCONTRACTOR SHALL STOP ALL WORK AND CONCENTRATE ON CLEAN-UP AND / OR RESTORATION. DEBRIS AND SURPLUS MATERIAL SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE SUBCONTRACTOR AS DIRECTED BY FERMILAB.

HORIZONTAL AND VERTICAL CONTROL

ALL COORDINATES AND ELEVATIONS ARE BASED ON FERMILAB DATUM AND BENCHMARKS PROVIDED BY FERMILAB OR AS OTHERWISE SPECIFIED ON THESE PLANS.

EARTH EXCAVATION AND BACKFILLING

GENERAL

EARTH EXCAVATION, IN OPEN CUT, INCLUDES THE LOOSENING, REMOVING, TRANSPORTING, STORAGE AND DISPOSAL OF ALL MATERIALS CLASSIFIED AS "EARTH" NECESSARY TO BE REMOVED FOR THE CONSTRUCTION AND COMPLETION OF ALL WORK INCLUDED IN THE PLANS AND SPECIFICATIONS. EARTH EXCAVATIONS SHALL BE MADE TO THE WIDTHS AND DEPTHS SHOWN ON THE PLANS, OR AS OTHERWISE SPECIFIED OR DIRECTED BY THE FERMILAB AND THE ENGINEER. THE TERM "EXCAVATION" AND THE TERM "TRENCHING" WHERE USED SHALL BE DEEMED AND UNDERSTOOD TO COVER THE FOLLOWING DESCRIBED WORK, AND THE PRICE BID FOR ANY AND ALL ITEMS INCLUDING "EXCAVATION" OR "TRENCHING" SHALL BE DEEMED TO INCLUDE AND COVER ALL OF THE SEVERAL FOLLOWING DETAILED OPERATIONS.

GRUBBING, REMOVING, STORING AND REHANDLING OF ALL PAVING MATERIALS OF EVERY NAME AND NATURE NECESSARY TO BE REMOVED FOR ALL PURPOSES INCIDENTAL TO THE CONSTRUCTION AND COMPLETION OFALL THE WORK INCLUDED IN THE PLANS AND SPECIFICATIONS.

ALL SHEETING, SHEETPILING, BRACING AND SHORING, AND THE PLACING, DRIVING, CUTTING OFF AND REMOVING OF THE SAME.

ALL DIKING, DITCHING, FLUMING, COFFERDAMMING, PUMPING, BAILING AND DRAINING OR OTHERWISE DISPOSING OF WATER.

THE REFILLING OF TRENCHES AND PITS AND THE FURNISHING AND PLACING OF MATERIAL OVER TRENCHES AND PITS TO THE LINE OF FILLING INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE COMPACTING OF ALL MATERIALS USED IN FILLING OR REFILLING BY ROLLING, RAMMING, WATERING, PUDDLING, JETTING, OR MECHANICALLY TAMPING BACKFILL AS MAY BE REQUIRED TO PREVENT LATER SETTLING.

THE REMOVING AND DISPOSING OF ALL SURPLUS MATERIALS FROM THE EXCAVATIONS IN THE MANNER SPECIFIED.

THE MAINTENANCE, ACCOMMODATION AND PROTECTION OF TRAVEL.

THE SUPPORTING AND PROTECTING OF ALL TRACKS, RAILS, BUILDINGS, CURBS, SIDEWALKS, PAVEMENTS, OVERHEAD WIRES, POLES, TREES, VINES, SHRUBBERY, PIPES, SEWERS, CONDUITS OR OTHER STRUCTURES OR
PROPERTY IN THE VICINITY OF THE WORK, WHETHER OVER OR UNDERGROUND OR WHICH APPEAR WITHIN THE EXCAVATIONS, AND THE RESTORATION OF THE SAME IN THE CASE OF SETTLEMENT OR OTHER INJURY.

ALL TEMPORARY BRIDGING AND FENCING AND THE REMOVING OF SAME. THE TEMPORARY PAVING OF HIGHWAYS, ROADS, DRIVEWAYS, AND THE PERMANENT REPAIRING OR REPLACING AND RELAYING OF PAVEMENTS, ROADS, CURBS, GUTTERS AND SIDEWALKS REMOVED, DISTURBED, OR INJURED. THE REMOVING AND CLEARING AWAY OF ALL CONSTRUCTION RUBBISH, REFUSE, UNUSED MATERIALS, PAINT, AND TOOLS FROM THE SITE OF THE WORK.

THE DRESSING, SODDING OR SEEDING OF ALL UNPAVED AREAS AS MAY BE NECESSARY TO LEAVE THE SURFACE IN AS GOOD CONDITION AS IT WAS PREVIOUS TO THE COMMENCEMENT OF THE WORK OR AS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.

SAWCUT JOINTS

ALL EXISTING PAVED AREAS SUBJECT TO REMOVAL & REPLACEMENT SHALL BE SAWCUT PRIOR TO EXCAVATING TRENCHES FOR CONSTRUCTION OF NEW BARRIER CURBS, STORM SEWERS AND LIGHTING CABLES.

ALL NEW PAVEMENT SHALL INTERFACE WITH EXISTING PAVEMENT VIA A SAWCUT EDGE. SUBCONTRACTOR SHALL RE-SAW ANY AND ALL EDGES AS FIELD CONDITIONS DICTATE AND / OR AS DIRECTED BY THE FERMILAB REPRESENTATIVE. ANY PAVEMENT DAMAGED BY THE SUBCONTRACTOR, THAT IS NOT SHOWN ON THE PLANS TO BE REMOVED AND REPLACED, SHALL BE SAWCUT, REMOVED AND REPLACED BY THE SUBCONTRACTOR AT HIS EXPENSE. ALL AREAS OF MISCELLANEOUS PAVEMENT REPAIR SHALL CONFORM TO TYPICAL SECTIONS AND SPECIFICATIONS.

SEWER CONSTRUCTION

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PVC PIPE FOR CONSTRUCTION OF GRAVITY TYPE SEWER SYSTEMS AT THE LOCATIONS, PROFILES AND DETAILS SHOWN ON THE PLANS.

THE WORK INCLUDED UNDER THIS ITEM GENERALLY COMPRISES THE FOLLOWING

- CLEARING
- TOPSOIL STRIPPING AND STOCKPILING
- TRENCH EXCAVATION
- TRENCH DEWATERING
- SHEETING, SHORING, AND/OR BRACING
- FURNISHING & INSTALLING PIPE
- BACKFILL AND COMPACTION
- CONNECTIONS TO STRUCTURES & PIPES
- GRANULAR PIPE BEDDING & CRADLE TO SPRING LINE OF PIPE
- SPOILS REMOVAL
- CLEAN-UP

PIPE MATERIAL

PIPE SHALL BE PVC SDR 26 SEWER PIPE,
CONFORMING TO A.S.T.M. D3034 SPECIFICATIONS.

PRECAST SANITARY STRUCTURES

HEADWALL SHALL BE MADE OF PRECAST CONCRETE CONSTRUCTION ACCORDING TO ASTM C-478. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH APPLICABLE PROVISION OF SECTION 602 OF THE STANDARD SPECIFICATIONS.

SANITARY SEWER MANHOLES SHALL BE PRECAST REINFORCED CONCRETE SECTIONS CONFORMING TO THE REQUIREMENTS OF ASTM C-478.

SEWER PIPE BEDDING AND COVER

ALL SEWER PIPE INCLUDING SERVICE LINES SHALL BE BEDDED AND CRADLED TO THE CENTERLINE OF THE PIPE IN CA-6 CRUSHED LIMESTONE IN ACCORDANCE WITH ASTM D-2321 (CLASS 1). FROM THE CENTERLINE OF THE PIPE TO 6 INCHES OVER THE TOP OF THE PIPE, CA-6 CRUSHED LIMESTONE SHALL BE HAND PLACED AND COMPACTED ACCORDING TO THE DETAILS SHOWN ON THE PLANS.

GRANULAR TRENCH BACKFILL

ALL TRENCHES WITHIN PAVED AREAS SHALL BE BACKFILLED WITH IDOT CA-6 CRUSHED LIMESTONE. CRUSHED STONE TRENCH BACKFILL SHALL BE PLACED AT ONE FOOT INTERVALS AND MECHANICALLY COMPACTED TO ACHIEVE 95% STANDARD PROCTOR BENEATH BITIMINOUS PAVEMENTS AND 5 FT. BEYOND EDGES AND 90% AT HARDSTAND. CRUSHED STONE TRENCH BACKFILL SHALL BE PLACED AT ONE FOOT INTERVALS AND MECHANICALLY COMPACTED TO ACHIEVE 90% STANDARD PROCTOR BENEATH GRAVEL HARDSTANDS.

EXCAVATED MATERIALS FROM TRENCHING OPERATIONS MAY NOT BE USED FOR BACKFILL WITHOUT PRIOR APPROVAL OF FERMILAB.

KANE COUNTY DIVISION OF TRANSPORTATION (KDOT) NOTES

ACCESS TO THE PROJECT SITE TO BE PROVIDED VIA A KDOT TEMPORARY CONSTRUCTION ACCESS PERMIT. SITE ACCESS LOCATED AT THE EMERGENCY PULL-OFF ON THE EAST SIDE OF KDOT'S KIRK ROAD, IMMEDIATELY WEST OF THE PROJECT SITE, AS IDENTIFIED IN THE DRAWINGS.

SUBCONTRACTOR MUST ABIDE BY ALL REQUIREMENTS SET FORTH IN THE KDOT TEMPORARY CONSTRUCTION ACCESS PERMIT. FERMILAB TO APPLY FOR AND OBTAIN PERMIT. SUBCONTRACTOR TO BE NAMED ON PERMIT, AND MUST PROVIDE CERTIFICATE OF INSURANCE (COI) PER KANE COUNTY REQUIREMENTS. FERMILAB TO PROVIDE COPY OF PERMIT AND KDOT COI REQUIREMENTS.

SUBCONTRACTOR TO INSTALL STABILIZED CONSTRUCTION ACCESS, PER DRAWINGS.

SITE ACCESS MUST OPERATE AS RIGHT-IN/RIGHT-OUT, ENTERING ONLY FROM NORTHBOUND KIRK ROAD AND EXITING ONLY TO NORTHBOUND KIRK ROAD. TEMPORARY BOLLARDS SHALL BE INSTALLED ALONG THE CENTERLINE OF KIRK ROAD FOR 400' CENTERED ON THE EMERGENCY PULL-OFF, PER DETAIL. BOLLARDS SHALL BE FLEXIBLE DELINEATORS: SAFE-HIT TUBE STYLE SURFACE MOUNT/TWIST AND LOCK 36", PART #SHJ36SMA-WS. A TEMPORARY STOP-SIGN AND NO-LEFT-TURN SIGNS SHALL BE INSTALLED PER DETAIL. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TRAFFIC CONTROL FOR THE DURATION OF THE PROJECT.

IDOT TRAFFIC CONTROL & PROTECTION STANDARDS SHALL BE REQUIRED WHILE WORKING IN THE KIRK ROAD RIGHT-OF-WAY.

"TRUCKS ENTERING HIGHWAY" SIGNAGE SHALL BE PLACED A MINIMUM 500 FEET IN THE NORTHBOUND DIRECTION IN ADVANCE OF THE TEMPORARY ACCESS LOCATION NOTIFYING THE MOTORING PUBLIC, PER DRAWINGS.

WHEN THE USE OF THE TEMPORARY CONSTRUCTION ACCESS IS COMPLETE, THE KDOT RIGHT-OF-WAY SHALL BE RESTORED WITH PULVERIZED BLACK DIRT AND AN IDOT APPROVED SALT TOLERANT SEED & BLANKET. ANY DAMAGE TO THE EMERGENCY PULL-OFF SHALL BE REPAIRED IN-KIND.

AT NO TIME SHALL THE SUBCONTRACTOR TRACK MUD ONTO THE COUNTY HIGHWAY. IF MUD IS FOUND ON THE HIGHWAY, THE SUBCONTRACTOR SHALL CLEAN THE HIGHWAY VIA A MECHANICAL BRUSH SYSTEM. SCRAPING OF THE HIGHWAY IS PROHIBITED.

VEHICLES ARE NOT PERMITTED TO PARK WITHIN THE EMERGENCY PULL-OFF AREA.

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	*	*
DRAWN	*	*
CHECKED	*	*
APPROVED	*	*
SUBMITTED	*	*

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

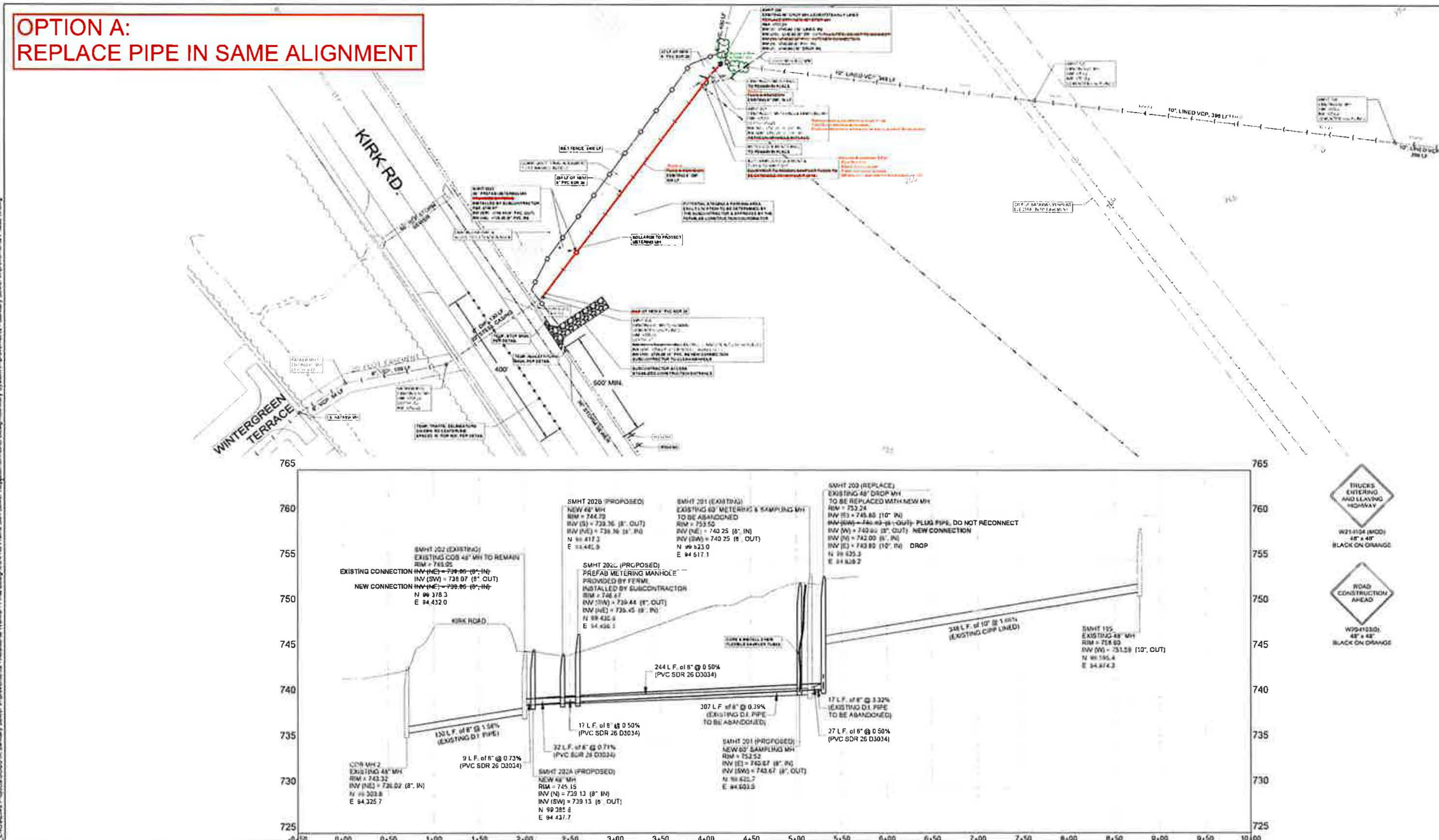
SANITARY SEWER IMPROVEMENTS

GENERAL NOTES

DRAWING NO 3-5-201A G-2 REV. *

23 OCT. 2024

OPTION A:
REPLACE PIPE IN SAME ALIGNMENT


KIRK RD.
WINTERGREEN TERRACE
10" LINED VCP, 398 LF
400'
500' MIN.
SMHT 202B (PROPOSED)
NEW 48" MH
SMHT 201 (EXISTING)
EXISTING 60" METERING & SAMPLING MH
TO BE ABANDONED
INV (NE) = 740.25 (8", IN)
INV (SW) = 740.25 (8", OUT)
N 99 623.0
E 94 617.1
SMHT 202 (EXISTING)
EXISTING COB 48" MH TO REMAIN
EXISTING CONNECTION
INV (SW) = 738.07 (8", OUT)
NEW CONNECTION
N 99 378.3
E 94 432.0
SMHT 202C (PROPOSED)
PREFAB METERING MANHOLE
PROVIDED BY FERMI
INSTALLED BY SUBCONTRACTOR
KIRK ROAD
SMHT 203 (REPLACE)
EXISTING 48" DROP MH
TO BE REPLACED WITH NEW MH
PLUG PIPE, DO NOT RECONNECT
NEW CONNECTION
DROP
244 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
307 L.F. of 8" @ 0.39%
(EXISTING D.I. PIPE
TO BE ABANDONED)
17 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
9 L.F. of 8" @ 0.73%
(PVC SDR 26 D3034)
27 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
SMHT 202A (PROPOSED)
NEW 48" MH
RIM = 745.15
INV (N) = 739.13 (8" IN)
INV (SW) = 739.13 (8", OUT)
N 99 385.8
E 94 437.7
SMHT 201 (PROPOSED)
NEW 60" SAMPLING MH
COR MH 2
EXISTING 48" MH
RIM = 743.32
E 94 325.7
SMHT 195
EXISTING 48" MH
INV (W) = 751.59 (10", OUT)
765
760
755
750
745
740
735
730
725
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
7+00
7+50
8+00
8+50
9+00
9+50
10+00
TRUCKS ENTERING AND LEAVING HIGHWAY
ROAD CONSTRUCTION AHEAD
BLACK ON ORANGE

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	•	•
DRAWN	•	•
CHECKED	•	•
APPROVED	•	•
SUBMITTED	•	•

PROJECT NORTH

SCALE:

1" = 50'-0"

50 0 50 100
SCALE FEET

FERMI NATIONAL ACCELERATOR LABORATORY

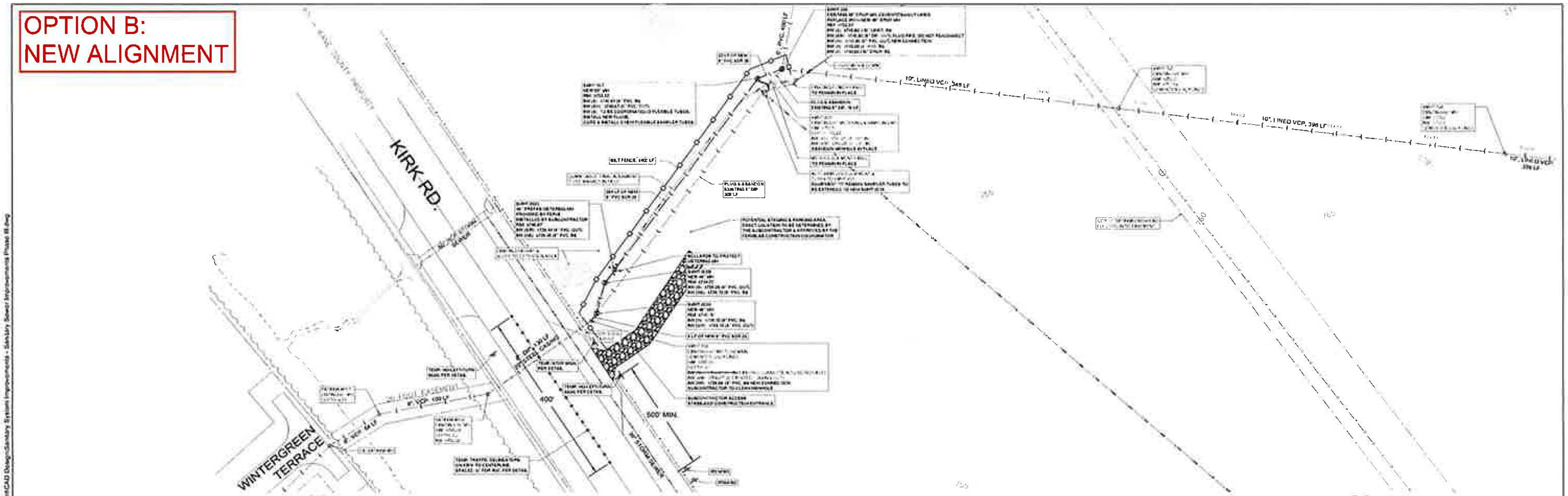
UNITED STATES DEPARTMENT OF ENERGY

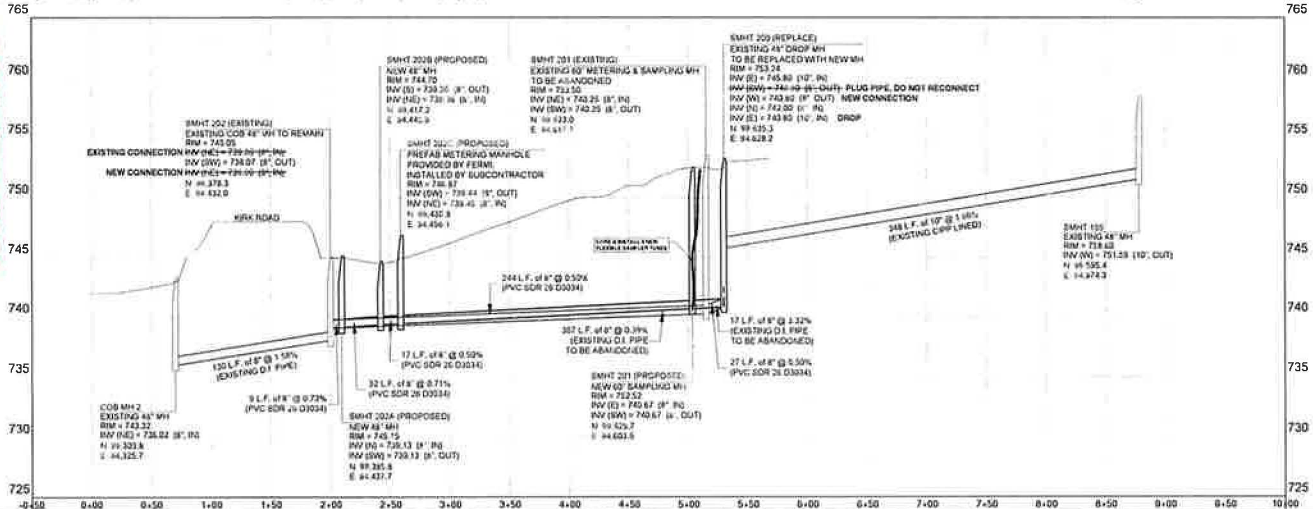
SANITARY SEWER REPLACEMENT

PLAN & PROFILE

DRAWING NO. **3-5-201A** **C-1** REV. •

23 OCT. 2024




SMHT 202 (EXISTING)
EXISTING COB 48" MH TO REMAIN
RIM = 745.05
EXISTING CONNECTION
INV (SW) = 736.07 (8", OUT)
NEW CONNECTION
SMHT 202B (PROPOSED)
NEW 48" MH
RIM = 744.70
SMHT 202C (PROPOSED)
PREFAB METERING MANHOLE
PROVIDED BY FERMI,
INSTALLED BY SUBCONTRACTOR
SMHT 201 (EXISTING)
EXISTING 60" METERING & SAMPLING MH
TO BE ABANDONED
RIM = 753.50
INV (NE) = 740.25 (8", IN)
INV (SW) = 740.25 (8", OUT)
SMHT 200 (REPLACE)
EXISTING 48" DROP MH
TO BE REPLACED WITH NEW MH
RIM = 753.24
INV (E) = 745.80 (10", IN)
PLUG PIPE, DO NOT RECONNECT
INV (W) = 743.80 (8" OUT) NEW CONNECTION
INV (N) = 742.00 (6" IN)
INV (E) = 743.80 (10", IN) DROP
N 99,635.3
E 94,628.2
KIRK ROAD
CORE & INSTALL 3 NEW FLEXIBLE SAMPLER TUBES
244 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
348 L.F. of 10" @ 1.60%
(EXISTING CIPP LINED)
SMHT 199
EXISTING 48" MH
RIM = 758.60
INV (W) = 751.58 (10", OUT)
130 L.F. of 8" @ 1.58%
(EXISTING D.I. PIPE)
17 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
32 L.F. of 8" @ 0.71%
(PVC SDR 26 D3034)
9 L.F. of 8" @ 0.73%
(PVC SDR 26 D3034)
307 L.F. of 8" @ 0.39%
(EXISTING D.I. PIPE
TO BE ABANDONED)
17 L.F. of 8" @ 3.32%
(EXISTING D.I. PIPE
TO BE ABANDONED)
27 L.F. of 8" @ 0.50%
(PVC SDR 26 D3034)
COB MH 2
EXISTING 48" MH
RIM = 743.32
INV (NE) = 736.02 (8", IN)
E 94,325.7
SMHT 202A (PROPOSED)
NEW 48" MH
RIM = 745.15
INV (N) = 739.13 (8", IN)
INV (SW) = 739.13 (8", OUT)
E 94,437.7
SMHT 201 (PROPOSED)
NEW 60" SAMPLING MH
RIM = 752.52
INV (E) = 740.67 (8", IN)
INV (SW) = 740.67 (8", OUT)
765
760
755
750
745
740
735
730
725
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
7+00
7+50
8+00
8+50
9+00
9+50
10+00

NOTES:

1. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO BYPASS FLOW, AS NECESSARY, FROM MANHOLES SMHT195 & SMHT199, DOWNSTREAM TO MANHOLE SMHT202. SUBCONTRACTOR RESPONSIBLE TO DETERMINE AMOUNT OF FLOW TO BYPASS.
2. SAMPLING AND METERING EQUIPMENT REMAINING IN SMHT 201 TO BE CONFIRMED DECOMMISSIONED, AND ABANDONED IN PLACE WITH MANHOLE.
3. SAMPLING TUBE AND FLUME INSTALL TO BE COORDINATED WITH FCC. 3 FLEXIBLE SAMPLING TUBES TO BE CORED AND INSTALLED IN NEW SMHT 201 AT A POSITIVE SLOPE TOWARDS MANHOLE.
4. UTILITY ELEVATIONS PROVIDED ARE APPROXIMATE FROM RECORD DRAWINGS. SUBCONTRACTOR TO CONFIRM ALL ELEVATIONS ON SITE PRIOR TO THE START OF CONSTRUCTION AND ORDERING OF MATERIALS.

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	*	*
DRAWN	*	*
CHECKED	*	*
APPROVED	*	*
SUBMITTED	*	*

PROJECT NORTH

W E S

SCALE:

1" = 50'-0"

50 0 50 100
SCALE FEET

FERMI NATIONAL ACCELERATOR LABORATORY

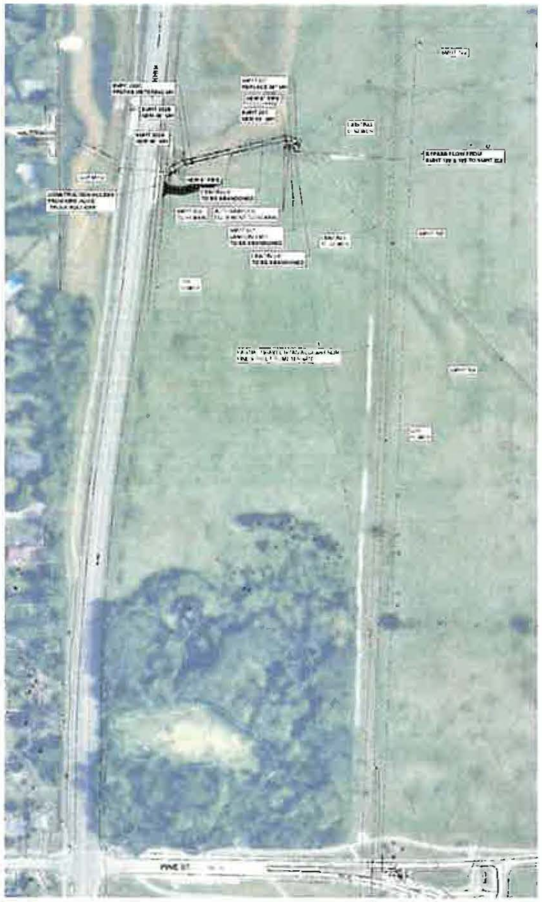
UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

SITE PLAN & PROFILE

DRAWING NO **3-5-201A** **C-1** REV. *

23 OCT. 2024



PIPE REPLACEMENT PLAN

SCALE 1" = 150'-0

SMHT 202

EXISTING CONDITIONS, LOOKING NORTH - N.T.S.

SITE ACCESS

EXISTING CONDITIONS, LOOKING EAST FROM KIRK RD. - N.T.S.

EXISTING SMHT 200 & 201

EXISTING CONDITIONS, LOOKING WEST - N.T.S.

EXISTING SMHT 201

EXISTING CONDITIONS - N.T.S.

SITE OVERVIEW

EXISTING CONDITIONS - N.T.S.

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		

SCALE:

1" = 150'-0"

150 0 150 300 SCALE FEET

FERMI NATIONAL ACCELERATOR LABORATORY

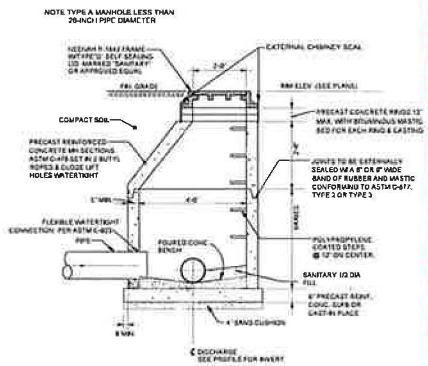
UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

SITE OVERVIEW & PHOTOS

DRAWING NO. **3-5-201A** **C-2** REV. -

23 OCT. 2024



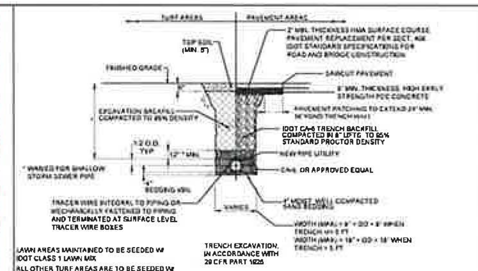
NOTES
1. REFERENCE SECTION 32 FOR SANITARY SEWER MANHOLE OF THE STANDARD SPECIFICATIONS FOR WATER & SEWER CONSTRUCTION IN ILLINOIS
2. EXTERNAL CHIMNEY SEALS SHALL BE INSTALLED ON ALL SANITARY SEWER MANHOLES AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. EXTERNAL CHIMNEY SEALS SHALL BE MANUFACTURED BY MAH MAC CONSTRUCTION (SUN-SEAL), CHETER SPECIALTY PRODUCTS (CLASSIC SEAL), SEALING SYSTEMS, INC. (INFI-SHIELD) OR FERMI APPROVED EQUAL.
3. OUTSIDE DROP CONNECTION IS REQUIRED FOR INVERT VERTICAL SEPARATION OF 2' OR MORE.
4. BACKFILL TO BE COMPACTED TO 95% DENSITY.

SANITARY MANHOLE

NTS

EXTERIOR DROP MANHOLE

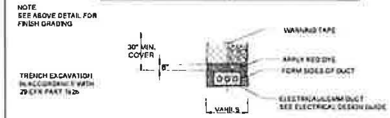
NTS



LAWN AREAS MAINTAINED TO BE SEEDED W/ IDOT CLASS 1 LAWN MIX
ALL OTHER TURF AREAS ARE TO BE SEEDED W/ IDOT CLASS 2 ROADSIDE MIX

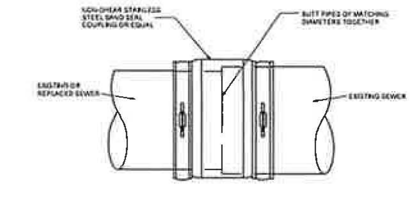
*TYPE OF UTILITY	MINIMUM DEPTH OF COVER
NATURAL GAS	3'-0"
DIRECT BURIED COMMUNICATION	2'-6"
DIRECT BURIED POWER	3'-6"
DWS / ICW, CHILLED WATER	5'-6" / 6'-0"
STORM/SANITARY FORCE MAIN	5'-6"
STORM/SANITARY GRAVITY	1'-0" STORM / 3'-0" SANITARY
STORM RCP / CMP, ADS N12	×1' - 2' / ×2

NOTE
SEE ABOVE DETAIL FOR FINISH GRADING



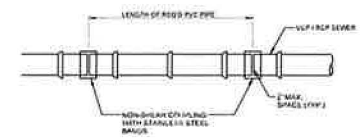
TYPICAL TRENCH SECTION

NTS



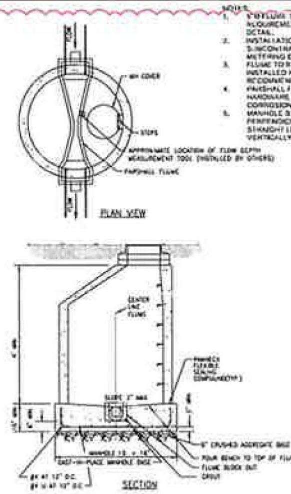
PIPE COUPLING

NTS



CONNECTING SEWER PIPES OF DISSIMILAR MATERIAL

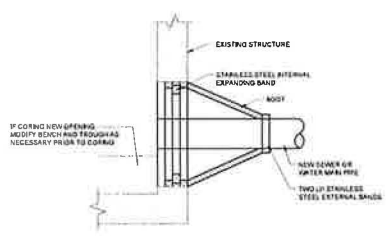
NTS



NOTES
1. 5' Ø FLUME STRUCTURE TO MEET REQUIREMENTS OF SANITARY MANHOLE DETAIL.
2. INSTALLATION OF FLUME BY SUBCONTRACTOR. INSTALLATION OF METERING EQUIPMENT BY OTHERS.
3. FLUME TO BE APPROPRIATELY SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.
4. PARSHALL FLUME AND ALL MOUNTING HARDWARE TO BE STAINLESS STEEL OR CORROSION PROTECTED METAL.
5. MANHOLE STEPS SHALL BE PERPENDICULAR TO THE FLOW IN A STRAIGHT LINE, 12" ON CENTER VERTICALLY.

FLUME MANHOLE

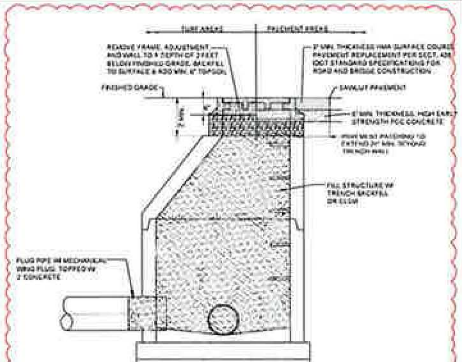
NTS



NOTES
1. IF CORING NEW OPENING, CORE-DRILL CIRCULAR OPENING IN MANHOLE WALL OF DIAMETER TO FIT THE [illegible] BOOT SIZE.
2. KOR-N-SEAL FLEXIBLE RUBBER BOOT (MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC., OR AS APPROVED BY FERMILAB) SHALL BE USED FOR WATERTIGHT CONNECTION.
3. CUT, SHAPE & SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM NEW STORM SEWER CONNECTION.
4. CLEAN EXISTING MANHOLE OF ANY DIRT, CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
5. CONNECTION SHALL CONFORM TO ASTM C-923.

PIPE CONNECTION TO EX. STRUCTURE

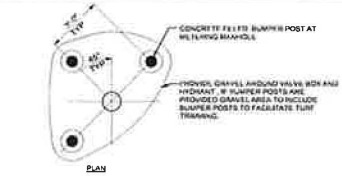
NTS

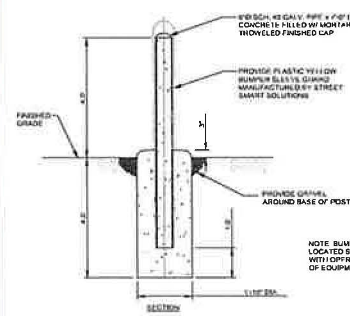


NOTES
1. ABANDONED SEWERS, FORCEMAIN AND STRUCTURES ARE TO BE PLUGGED AT THE PIPE, STRUCTURES TO BE FILLED AND FRAME REMOVED.
2. SEWER PIPES TO BE ABANDONED SHALL BE PLUGGED WITH MECHANICAL WING PLUGS OF THE SPECIFIED DIAMETER AND TOPPED WITH CONCRETE PLUG. BRICK AND MORTAR PLUGS WILL NOT BE ACCEPTABLE IN LIEU OF CONCRETE.
3. THE MINIMUM THICKNESS OF THE CONCRETE TO THE PLUG SHALL BE TWO PIPE DIAMETERS UP TO 24 INCHES.
4. SUBCONTRACTOR SHALL REMOVE FRAME, COVER, AND ADJUSTMENT RINGS OF THE MANHOLE STRUCTURES, AND CONE/FLAT-TOP/WALL TO A MINIMUM OF TWO (2) FEET BELOW FINISHED GRADE.
5. REMAINDER OF THE STRUCTURE IS TO BE FILLED WITH TRENCH BACKFILL WHICH WILL BE CONSIDERED INCIDENTAL TO THIS ITEM.
6. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR SALVAGING ALL MANHOLE FRAMES AND COVERS FOR FERMILAB RECYCLING AND PLACED IN DUMPSTER AS DIRECTED BY THE FCC.

MANHOLE ABANDONMENT

NTS





NOTE: BUMPER POSTS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH OPERATION AND MAINTENANCE OF EQUIPMENT.

BUMPER POSTS

NTS

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	•	•
DRAWN	•	•
CHECKED	•	•
APPROVED	•	•
SUBMITTED	•	•

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

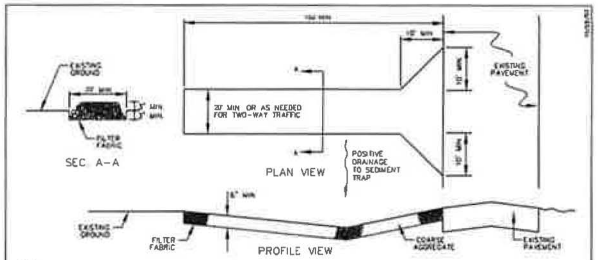
UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

DETAILS

DRAWING NO. **3-5-201A** **C-3** REV. •

23 OCT. 2024



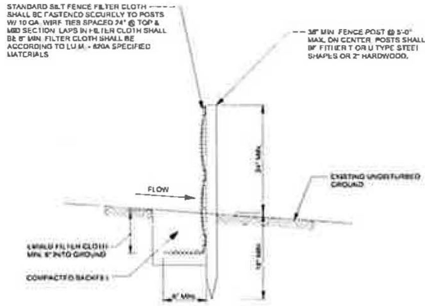
NOTES:

1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I, II, OR IV AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACING OF ROCK
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4 AND BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 25 ROCKFILL USING PLACEMENT METHOD 1 AND CLASS III COMPACTION
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS
4. IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS
5. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND-OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY
7. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN

KANE COUNTY
DIVISION OF TRANSPORTATION
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE

NTS

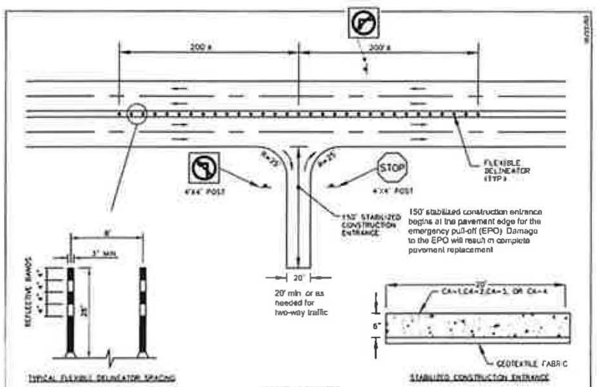

STANDARD SILT FENCE FILTER CLOTH SHALL BE FASTENED SECURELY TO POSTS W/ 10 GA. WIRE TIES SPACED 24" @ TOP & MID SECTION. LAPS IN FILTER CLOTH SHALL BE 6" MIN. FILTER CLOTH SHALL BE ACCORDING TO I.D.M. - 620A SPECIFIED MATERIALS
36" MIN. FENCE POST @ 5'-0" MAX. ON CENTER. POSTS SHALL BE EITHER T OR U TYPE STEEL SHAPES OR 2" HARDWOOD.
FLOW
EXISTING UNDISTURBED GROUND
COMPACTED BACKFILL

NOTES

1. AN APPROVED SILT FENCE IS GEOFAB ENVIROFENCE.
2. REPAIR OR REPLACE SILT FENCE WHEN "BULGES" DEVELOP IN FENCE.
3. FENCE POSTS SHALL BE STANDARD STEEL POST OR WOOD POST WITH A MIN. CROSS-SECTIONAL AREA OF 3.0 SQ. IN.

SILT FENCE

NTS


200'±
200'±
FLEXIBLE DELINEATOR (TYP.)
4"X4" POST
STOP
4"X4" POST
150' STABILIZED CONSTRUCTION ENTRANCE
150' stabilized construction entrance begins at the pavement edge for the emergency pull-off (EPO). Damage to the EPO will result in complete pavement replacement
8'
3" MIN.
REFLECTIVE BANDS
20'
20' min. or as needed for two-way traffic
CA-1,CA-2,CA-3, OR CA-4
6"
GEOTEXTILE FABRIC
TYPICAL FLEXIBLE DELINEATOR SPACING
STABILIZED CONSTRUCTION ENTRANCE

KANE COUNTY
DIVISION OF TRANSPORTATION
TEMPORARY ACCESS FOR
COUNTY DESIGNATED FREEWAYS
NOT TO SCALE

TEMPORARY SITE ACCESS

NTS

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	•	•
DRAWN	•	•
CHECKED	•	•
APPROVED	•	•
SUBMITTED	SANITARY SEWER REPLACEMENT	

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

DETAILS

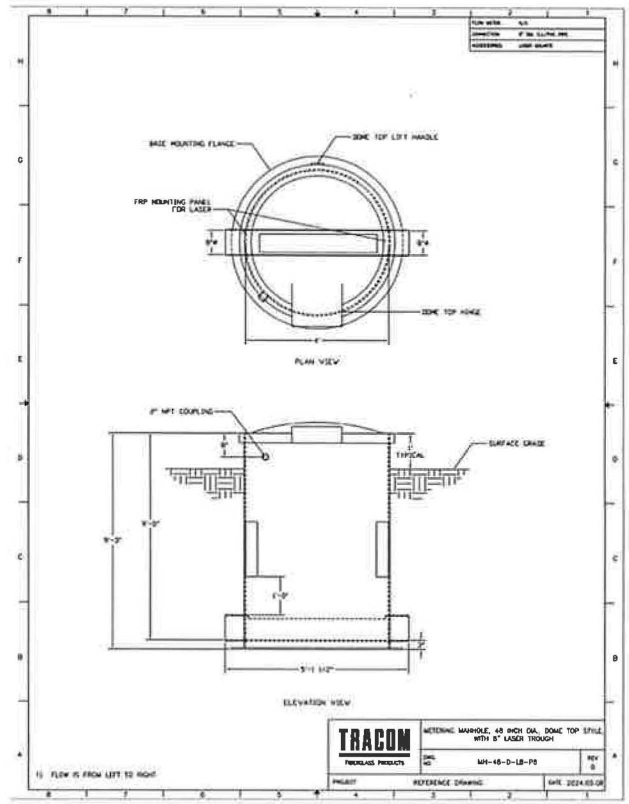
DRAWING NO. **3-5-201A** **C-4** REV. •

23 OCT. 2024

NOTES:

1. FERMILAB TO PROVIDE PREFABRICATED FIBERGLASS METERING MANHOLE AND LASER FLOW METER. SUBCONTRACTOR TO INSTALL EQUIPMENT PER MANUFACTURER'S SPECS AS PROVIDED IN THE CONTRACT DOCUMENTS.
2. VENDOR TO PROVIDE STARTUP & COMMISSIONING. SUBCONTRACTOR TO COORDINATE THIS WORK WITH VENDOR, AND PERFORM ANY ADJUSTMENTS TO PROVIDE A FULLY WORKING SYSTEM.
3. SUBCONTRACTOR TO EXTEND ELECTRIC AND COMMUNICATION SYSTEMS PER SHEET U-1, AND COORDINATE WITH FERMI TO INTEGRATE.
4. THE FOLLOWING EQUIPMENT IS TO BE PROVIDED BY FERMI, AND INSTALLED BY THE SUBCONTRACTOR:

Qty	Description
1	Packaged Dome Top Fiberglass Manhole, 4'-0" , with: -9'-0" deep (inlet invert to grade +12") -Dome Top, 48" , FRP, 1000 PSF, non-traffic area -Piano hinge and Hasp, 304 SS -Hinge block, solid FRP -Support bar, telescoping, with locking pin on chain. Ladder, FRP, 1.5" reinforced rungs, non-slip top surface, S.S. hardware
1	2" NPT fitting / coupling / tap
1	Integral 8" pipe for Laser Flow Metering manhole with: -Mounting plate embedded in-manhole-wall or FRP Unistrut across channel -Open cavity for on-site fill around channel
2	Pipe Stub, 8" x 6" L, Sch 40 PVC. Coupling, concentric, 8" for C.I./PVC, flexible PVC with S.S. clamps
1	The Signature® LaserFlow system uses a non-contact TIENet® laser Doppler sensor to measure liquid velocity. This sensor has an integral non-contact ultrasonic level sensor to measure liquid level. Flow rate and total flow data is then calculated from the measured liquid level and velocity which is then stored in flash memory. Data can be viewed from the 320 by 240 pixel display, or retrieved from the front panel USB port or transmitted via communication options such as an internal cellular modem or Ethernet. Flowlink software (5.10.6 or newer) is recommended if data analysis and advanced reporting is required. Power cord, 8 foot (2.5 m) long, for North America. Includes cord grip fitting.
1	Permanent wall mount for TIENet® 360 LaserFlow™ sensor.
1	Sensor Retrieval Tool
1	TIENet® 308 analog 4-20 mA output option card, two independent channels
1	Battery backup kit for Signature® meter. Includes model 946 lead-acid battery, adapter cable, and mounting hardware



REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED	SANITARY SEWER REPLACEMENT	

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

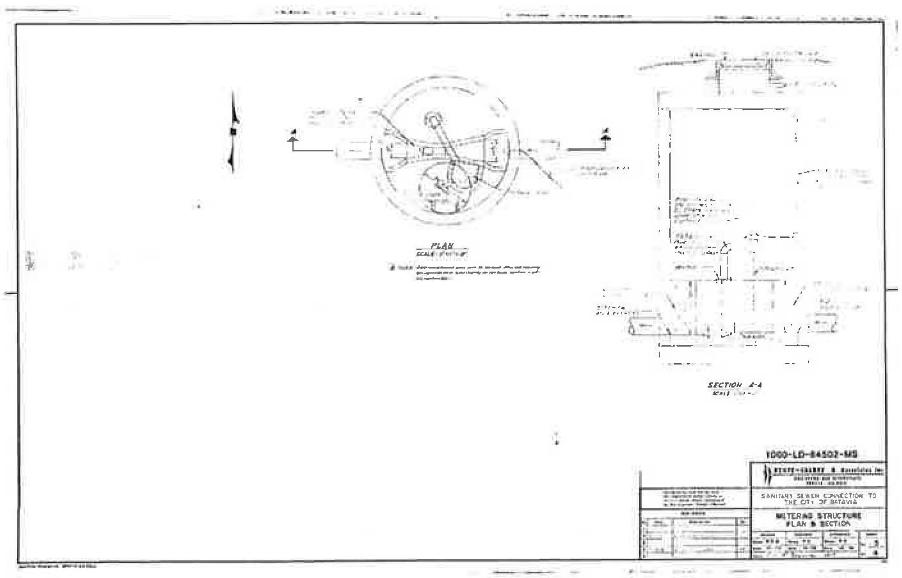
UNITED STATES DEPARTMENT OF ENERGY

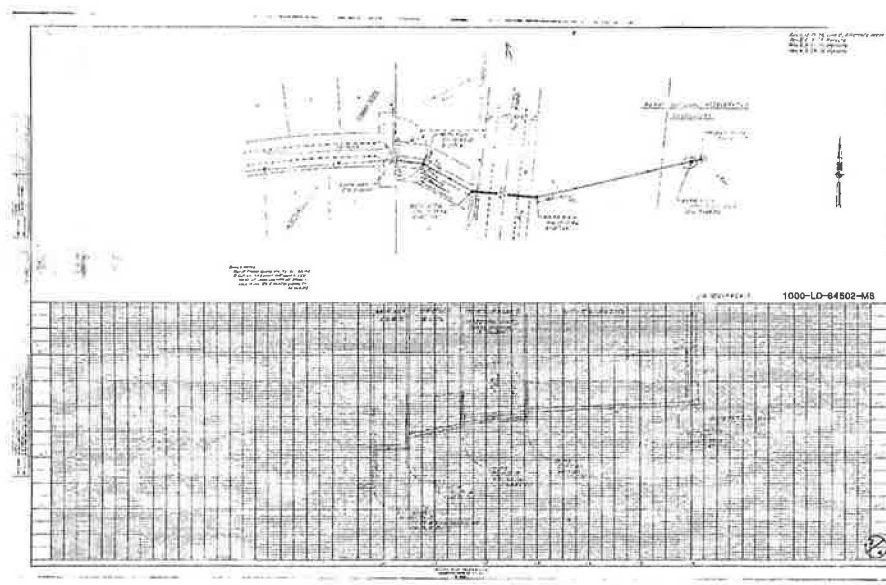
SANITARY SEWER IMPROVEMENTS

METERING MANHOLE & EQUIPMENT

DRAWING NO. **3-5-201A** **C-5** REV. -

23 OCT. 2024





REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	•	•
DRAWN	•	•
CHECKED	•	•
APPROVED	•	•
SUBMITTED	SANITARY SEWER REPLACEMENT	

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

EXISTING DRAWINGS

DRAWING NO. **3-5-201A** **C-6** REV. •

23 OCT. 2024

REV.	DATE	DESCRIPTIONS
		REVISIONS

	NAME	DATE
DESIGNED	-	-
DRAWN	-	-
CHECKED	-	-
APPROVED	-	-
SUBMITTED	SANITARY SEWER REPLACEMENT	

SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

SANITARY SEWER IMPROVEMENTS

ELECTRICAL & COMMUNICATION

DRAWING NO **3-5-201A** **U-1** REV. -

23 OCT. 2024