OAKCREEK WISCONSIN

Meeting Date: January 14, 2025

Item No. 4

PLAN COMMISSION REPORT

Proposal:	Conditional Use Permit with Conditions and Restrictions
Description:	Review a request for a Conditional Use Permit Amendment along with conditions and restrictions for conversion of operations from coal to LNG and construction of related equipment/facilities at the We Energies Elm Road generating station.
Applicant(s):	Allie Witkowski, We Energies
Address(es):	4431, 4451, 4503, 4513, 4541, 4541, 4651, 4751, and 4801 E. Oakwood Rd., 4401 E. Elm Rd., 10640,10770, 10800, 10900,10920, 10940, 11002, 11002 R, 11050, 11050R, 11060 S. Chicago Rd. (4th Aldermanic District)
Suggested Motion:	That the Plan Commission recommends that the Common Council approves a Conditional Use Permit Amendment for conversion of operations from coal to LNG and construction of related equipment/facilities at the We Energies Elm Road generating station located at 4431, 4451, 4503, 4513, 4541, 4541, 4651, 4751, and 4801 E. Oakwood Rd., 4401 E. Elm Rd., 10640, 10770, 10800, 10900, 10920, 10940, 11002, 11002R, 11050, 11050R, 11060 S. Chicago Rd., submitted by Allie Witkowski, We Energies, after a public hearing and subject to Conditions and Restrictions.

Owner(s):	Wisconsin Electric Power Co.		
Tax Key(s):	963-9001-000, 963-9002-000, 963-9003-000, 963-9995-001, 963-9997-001, 963-9998-001, 963-9998-002, 963-9999-003, 963-9999-004, 964-9999-001, 965-9999-001, 966-9997-000, 966-9998-001, 966-9999-002, 967-9000-001, 967-9989-002, 967-9990-001, 967-9990-002, 967-9992-001, 967-9993-000, and 967-9999-003		
Lot Size(s):	577.258 acres		
Current Zoning District(s):	M-1, Manufacturing	FW, Floodway	
Overlay District(s):	N/A		
Wetlands:	☒ Yes ☐ No	Floodplain:	☐ Yes ☒ No
Comprehensive Plan:	Parks and Open Space		

Background: We Energies last went through a Conditional Use Permit process in 2003 (Common Council approval June 3, 2003) for "power generation, transmission and distribution." As has been publicly announced, We Energies will be transitioning from a coal plant to a liquefied natural gas (LNG) plant in the near future, and they have applied for a Conditional Use Permit amendment to do so. The City's Zoning Code has changed significantly since 2003. The entire 577-acre campus is zoned M-1 Manufacturing District and the Conditional Use Permit category is now "major utility."

We Energies has provided a narrative that summarizes the project:

Introduction – Wisconsin Electric's generation reshaping plan:

As the region continues to see significant growth and economic development, We Energies is investing in the infrastructure that will power communities with affordable, reliable and clean energy for many years to come. We Energies is doing this with a goal of net carbon neutral electric generation by 2050.

The five-year plan calls for investing in renewable and low-carbon energy to replace less efficient, fossil-fueled generation; modernizing our electric and gas delivery infrastructure to enhance reliability and resilience; and expanding our regulated infrastructure to meet growing customer demand. Details of the plan include:

- Investing in 3,800 megawatts (MW) of new regulated solar, wind and battery storage between 2024 and 2028 — more than quadrupling carbon-free generation for customers.
- Constructing new natural gas-fueled electric generating facilities to meet customers' electric demand when renewable energy is unable to meet demand.
- Building liquefied natural gas storage facilities to enhance reliability and support the generation and distribution system.
- Converting the existing Oak Creek Expansion Plant units 1 and 2 to natural gas by the end of 2032.
- Retiring Oak Creek coal units 7 and 8 by the end of 2025. Oak Creek coal units 5 and 6 were retired on May 31, 2024.

The natural gas facilities for which We Energies is seeking an amendment of Ordinance 2251, are proposed for approval by the Public Service Commission of Wisconsin for construction at the Oak Creek Generating Site to include the following:

- Oak Creek Combustion Turbine Plant
- Oak Creek Liquefied Natural Gas Plant

Facility Description:

The Oak Creek Combustion Turbine (CT) Plant will include the construction of five (5) natural gas fired advanced F-Class CT units with an approximate output of 220 MW each for an approximate combined facility output of 1,100 MW. The facility will be fueled with natural gas. The facility will be cooled by a closed-loop cooling water system that uses air-cooled heat exchangers. The CT plant will be constructed east of the existing administration building. Today, this area is not occupied by anything other than a road and open

field. The turbine stacks will be 90 ft. tall with no lights on top of the stacks. Detailed construction drawings are included in the packet.

The Oak Creek Liquefied Natural Gas (LNG) Facility includes a new LNG storage tank and associated on-site pipelines and supporting equipment to store and provide natural gas service to Wisconsin Electric natural gas customers during peak demand periods. The facility will be capable of pre-treating, liquefying, storing and vaporizing natural gas. The LNG tank will be constructed where the main coal pile exists today. The tank will be 161 ft. tall and 206 ft. wide. Equipment on top of the tank will add an additional nine (9) feet, totaling 170 ft.

The facilities will be located on the Oak Creek Generating Site (OCGS), a 1,000-acre parcel of land owned by Wisconsin Electric, 15 miles south of Milwaukee in the City of Oak Creek, Milwaukee County. The CT and LNG facilities will require approximately 40 acres and will be located west of the existing Elm Road Generating Station (ERGS) within OCGS property. Access to the facilities will be from the existing driveway and gate for ERGS.

Oak Creek Combustion Turbine (CT) Plant Design:

The CT Plant will include five (5) new GE 7FA.05 CT generators. Each CT generator will have a capacity of 220 MW. The plant will be designed for continuous service; however, Wisconsin Electric anticipates it primarily will be available at all times of the year for peaking service.

Each CT will generate a nominal capacity of 220 MW consisting of an F-Class combustion turbine driven electric generator fueled by natural gas with capabilities for hydrogen blending. Dry low NOx ("DLN") combustion technology will be used when firing on natural gas. The combustion turbine's drive shaft turns the attached electric generator to produce electricity. The 60 hertz (Hz) generators will be hydrogen cooled.

The CTs will be installed outdoors. Combustion air will pass through an inlet hood with air filters and may include an evaporative cooler to increase air density during warm weather. The exhaust gas will pass through a silencer and exhaust stack. The CT lubrication oil and generator will be cooled by a closed loop system with a mixture of propylene glycol and water with an outdoor air-cooled fin-fan cooler. Attached is a preliminary general arrangement of the facility.

The facility will include natural gas-fired Emergency Generator(s) ("EGs"). The EGs will auto-start and pick up facility loads if the facility loses power.

Oak Creek Liquefied Natural Gas (LNG) Plant Design:

The Oak Creek LNG Plant will include a new 2 BCF storage tank, natural gas pre-treatment equipment, liquefaction equipment and vaporization equipment.

The liquefaction equipment will cool the natural gas until it changes to liquid form and send the LNG to the onsite storage tank.

When needed to support Wisconsin Electric's customer natural gas demand, the stored LNG is warmed by the vaporizer equipment and sent to the distribution system.

Lighting

The Oak Creek CT and LNG facilities may require night lighting for safety and security during construction. During potential extensions of working hours, temporary lighting may be used in the construction and laydown areas. Lights will be turned to focus on work activities, so as not to shine on neighboring property. Construction lighting impacts will be mitigated by scheduling the majority of construction activities during daylight hours.

During operation, outdoor light fixtures will be fully shielded and directed downward to minimize light visible from adjacent properties and to reduce glare in the area. Any floodlights required for the operation of the Project will be directed inward towards the Project and will have top and side shields. To the extent permissible and practicable, lighting for security purposes will be turned on either by a local switch, as needed, or by motion sensors that will be triggered by movement.

Light trespass due to new project fixtures is expected to be at or near 0.0 footcandles at a distance of approximately 100 feet from the outer most installed light fixture at both CT and LNG facilities. These fixtures are approximately 1000' and 1700' to the nearest property line from the CT and LNG facilities, respectively. Outdoor lighting trespass will comply with the requirements of Section 17.0509.(b).(1).a of the Municipal Code.

Sound

The Oak Creek CTs and the LNG facilities will include sound mitigation equipment; and the noise emissions associated with operations on the Property, measured at monitoring location No.1, will be designed for less than or equal to 50 dBA (10 min Leq) and 72 dBC (10 min Leq).

Employment

Approximately 20 full-time permanent employees are expected to be employed for the CT and LNG plants. In addition, the project will create up to 800 jobs during peak construction activity.

Conclusion

To summarize, the main coal pile will be eliminated and replaced with the construction of the LNG tank and accommodating facility buildings; and to the north, east of the administration building, five (5) natural gas fired combustion turbines (CTs) will be constructed. These new facilities will be constructed near the center of the We Energies campus with minimal visibility from outside of the campus due to existing privacy berms. We Energies has provided renderings of the vantage point from various locations (entrance on Hwy 32, Haas Park, and the dead end of E. Elm Rd.). Construction is anticipated to begin summer 2025. Commercial operation of all the CTs is anticipated to be in summer 2028. Detailed site, landscaping, architectural and lighting plans of the new facilities will be reviewed by the Plan Commission after the public hearing. The public hearing is anticipated to be scheduled for February 17, 2024.

If the Commission determines the proposed Conditional Use meets the requirements per Statute and the Municipal Code, a motion for recommendation of approval by the Common Council has been provided above. Staff has prepared Conditions and Restrictions for review.

Options/Alternatives: The Plan Commission has the discretion to recommend or not recommend Common Council approval of the Conditional Use Permit request. Should the request not be recommended for Council approval, Plan Commissioners must provide the Code Sections upon which the denial is based, and the Applicant may choose to request Council approval without recommendation. In that case, the Council would have the authority to approve the request, and remand the proposal back to the Plan Commission for Conditions and Restrictions.

Respectfully submitted & approved by:

Kristi Laine
Community Development Director

Attachments:

Location Map

Narrative (5 pages)

Exhibit A (site map - 1 page)

Exhibit B (facility plans & drawings - 19 pages)

Exhibit C (safety regulations & overview - 15 pages)

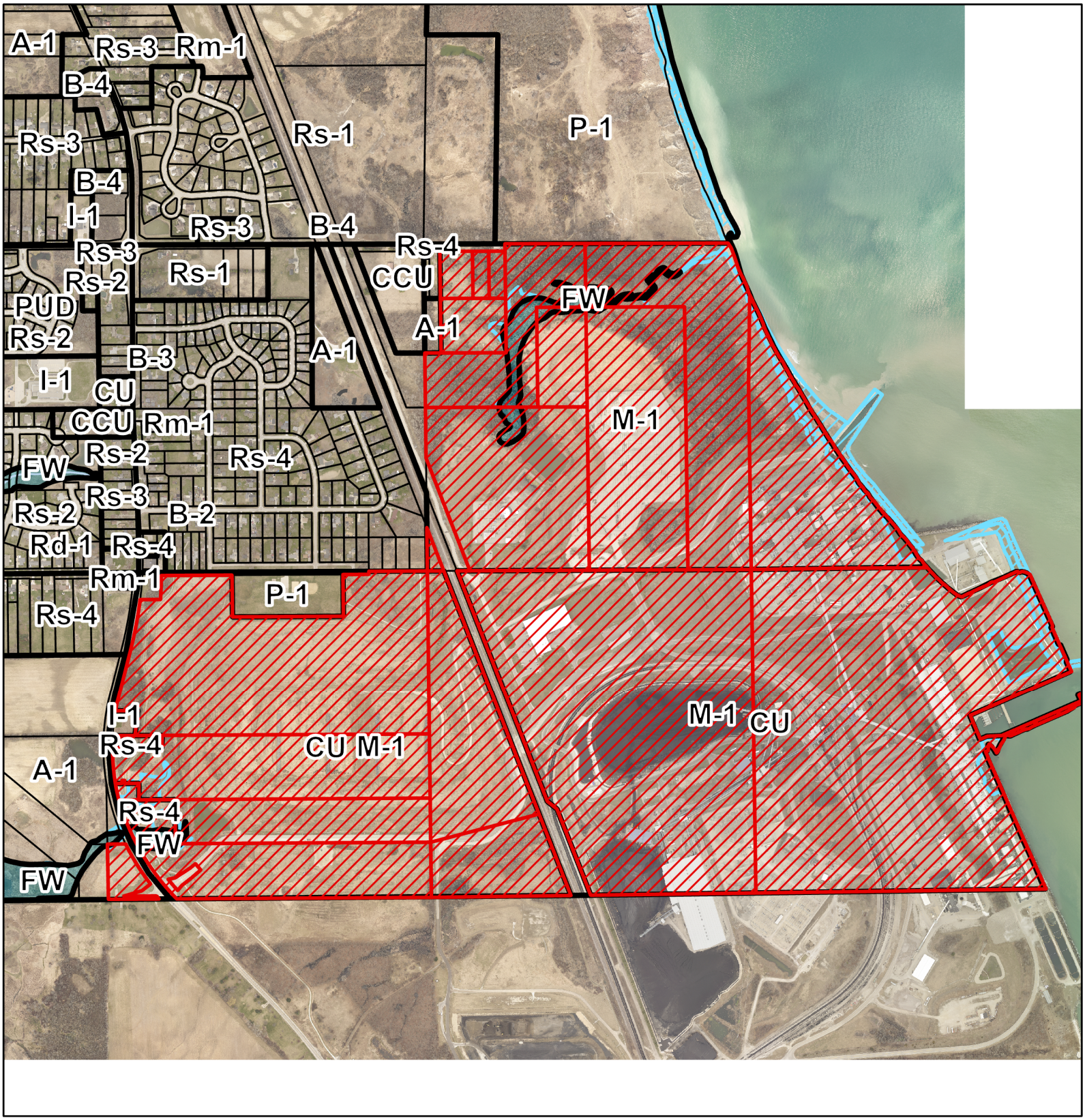
Exhibit D (intentionally left out – abutting ownership info)

Exhibit E (architectural plans - 4 pages)

Exhibit F (lighting fixture plans – 6 pages)

Draft Conditions and Restrictions (3 pages)

Location Map
WE Energies Elm Rd. Generating Station



This map is not a survey of the actual boundary of the property this map depicts

Legend

- Zoning
- Official Street Map
- Parcels
- OCGIS.GIS.FloodFringe2024
- OCGIS.GIS.Floodway2024
- WE Energies Elm Rd. Generating Station

OAKCREEK WISCONSIN

Community Development

0 0.15 0.3 Miles

N

November 8, 2024

Amendment to Ordinance No. 2251 Relating to the Conditional Use Permit for New Electric and Natural Gas Facilities at the Oak Creek Power Plant Site

Table of Contents

1. ***Introduction-Wisconsin Electric's generation reshaping plan:***

As our region continues to see significant growth and economic development, we are investing in the infrastructure that will power our communities with affordable, reliable and clean energy for many years to come. And, we are doing this with a goal of net carbon neutral electric generation by 2050.

Our five-year plan calls for investing in renewable and low-carbon energy to replace less efficient, fossil-fueled generation; modernizing our electric and gas delivery infrastructure to enhance reliability and resilience; and expanding our regulated infrastructure to meet growing customer demand. Details of the plan include:

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The natural gas facilities for which we are seeking an amendment of Ordinance 2251 and are proposed for approval by the Public Service Commission of Wisconsin for construction at the Oak Creek Generating Site include the following:

- Oak Creek Combustion Turbine Plant
- Oak Creek Liquefied Natural Gas Plant

2. ***Applicant/Owner***

Wisconsin Electric Power Company (Wisconsin Electric)
231 W. Michigan Street
Milwaukee, Wisconsin 53203

3. ***Architect / Professional Engineer / Contractor:***

Burns & McDonnell Engineering Company, Inc.
9400 Ward Parkway
Kansas City, MO 64114

4. ***Project Location:***

Oak Creek Generating Site
11060 S Chicago Road
Oak Creek, WI 53154

5. ***Facility Description:***

The Oak Creek Combustion Turbine (CT) Plant includes five (5) natural gas fired advanced F-Class CT units with an approximate output of 220 MW each for an approximate combined facility output of 1,100 MW. The facility will be fueled with natural gas. The facility will be cooled by a closed-loop cooling water system that uses air-cooled heat exchangers.

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e. Employment

Approximately 20 full-time permanent employees are expected to be employed for the CT and LNG plants. In addition, the project will create up to 800 jobs during peak construction activity.

f. Zoning

The site is currently zoned as M1-Industrial. No rezoning is necessary.

g. Site Map

An updated conditional use permit site map is provided in exhibit A.

h. Facility Plans and Drawings

The facility plans and drawings are included in exhibit B.

i. Safety Regulations and Overview

An overview of the safety regulations for the OC-LNG facility is included in exhibit C.

j. *Opposite and Abutting Property Owners*

The opposite and abutting property owners are included in exhibit D.

k. Architectural Building and Equipment Enclosure Drawings

The Architectural Building and Equipment Enclosure Drawings are included in exhibit E.

I. Light Fixture Data Sheets

Representative Light Fixture Data Sheets are included in exhibit F.

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Exhibit A

City of Oak Creek
Conditional Use Permit
for Wisconsin Energy Corp.
Power Plant Proposal

Notes:

1. Proposed site features provided by WE Power, LLC Draft Site Plan Dated April 2024
2. Site Plan Layout subject to approval by the PSC and the DNR
3. Other site grading will occur in Caledonia and is not shown on this Exhibit

LOCATION OF OAKWOOD ACCESS ROAD
Oakwood Road
FISHING PIER ROAD
NORTH ASH LANDFILL (CONSTRUCTION PARKING & LAYDOWN)
FISHING PIER PARKING
ERGS UNITS 1 & 2
EXISTING LNG FACILITIES
STATION 1
STATION 2
Elm Road
Haas Park
Route 32
PROPOSED CT SITE
PROPOSED LNG SITE
SOUTH ASH LANDFILL
CONSTRUCTION PARKING & LAYDOWN
Milwaukee County
Racine County

N

0 600' 1200'
SCALE IN FEET

LEGEND

- CONSTRUCTION SETBACK LINE A
- CONSTRUCTION SETBACK LINE B
- CONSTRUCTION SETBACK LINE C
- SETBACK LINE
- PROPERTY LINE
- COUNTY LINE
- NOISE MONITORING (APPROXIMATE LOCATION)

Oak Creek – Conditional Use Permit Amendment

Combustion Turbine and Liquefied Natural Gas Facilities

Exhibit B - Facility Plans and Drawings

Exhibit B1

Artist Rendering

Exhibit B2

Combustion Turbine (CT) and Liquefied Natural Gas (LNG) Project Site

Exhibit B3

Combustion Turbine (CT) Project Overview

- Project will include:
  - Five General Electric CT generators
    - Simple-cycle electric generation
  - Approximately 1,100 MW of total capacity
  - Expected maximum capacity factor of 20%
  - Natural gas line and compressor station
  - Interconnection to ATC Substations
  - Cost estimate $1.2 billion
  - If approved, construction is anticipated to begin in 2025 with in-service 2027–2028

Exhibit B4

Combustion Turbine Project – Equipment Layout

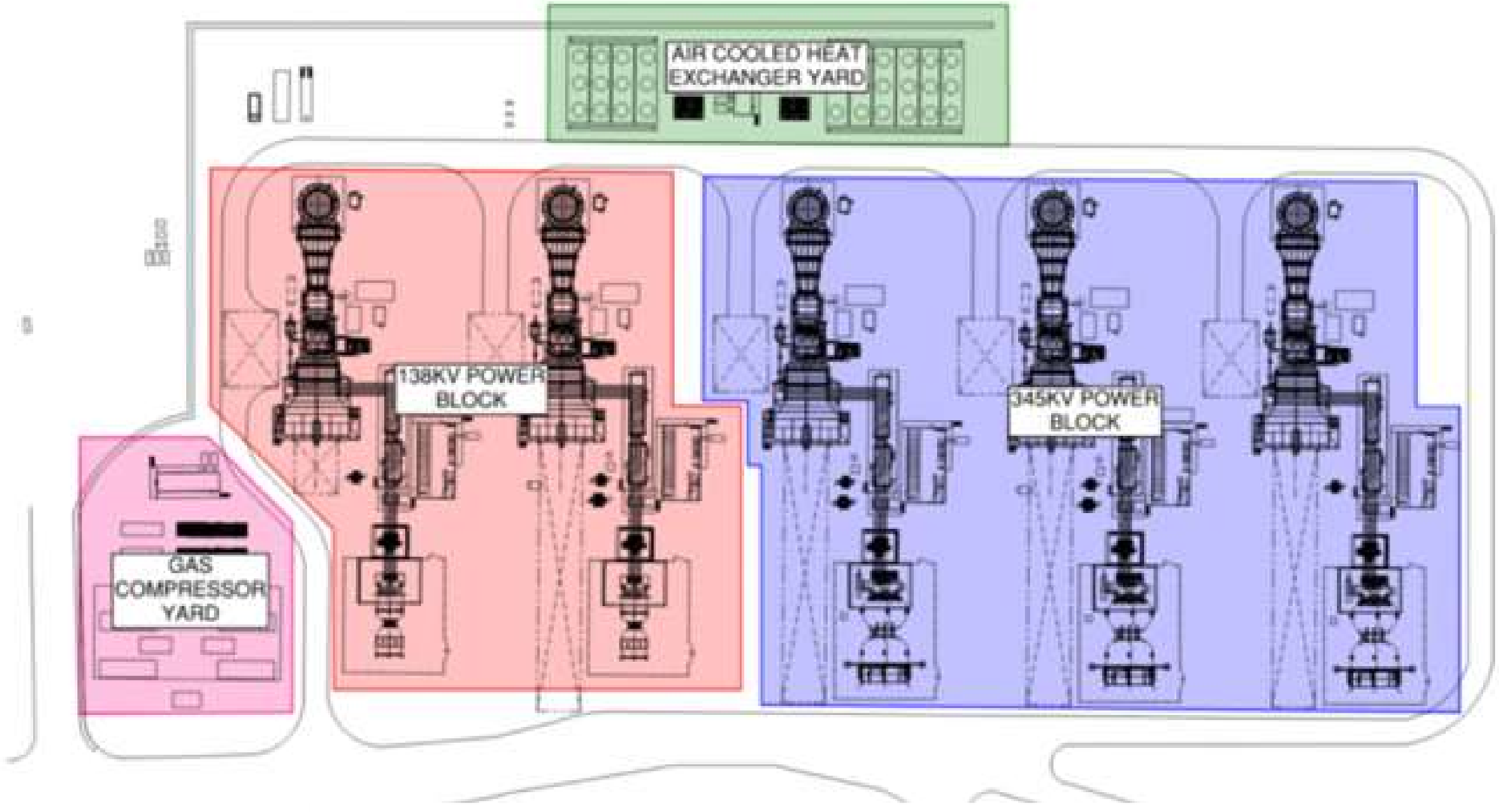

Exhibit B5

Combustion Turbine – Plot Plan and Lighting Plan

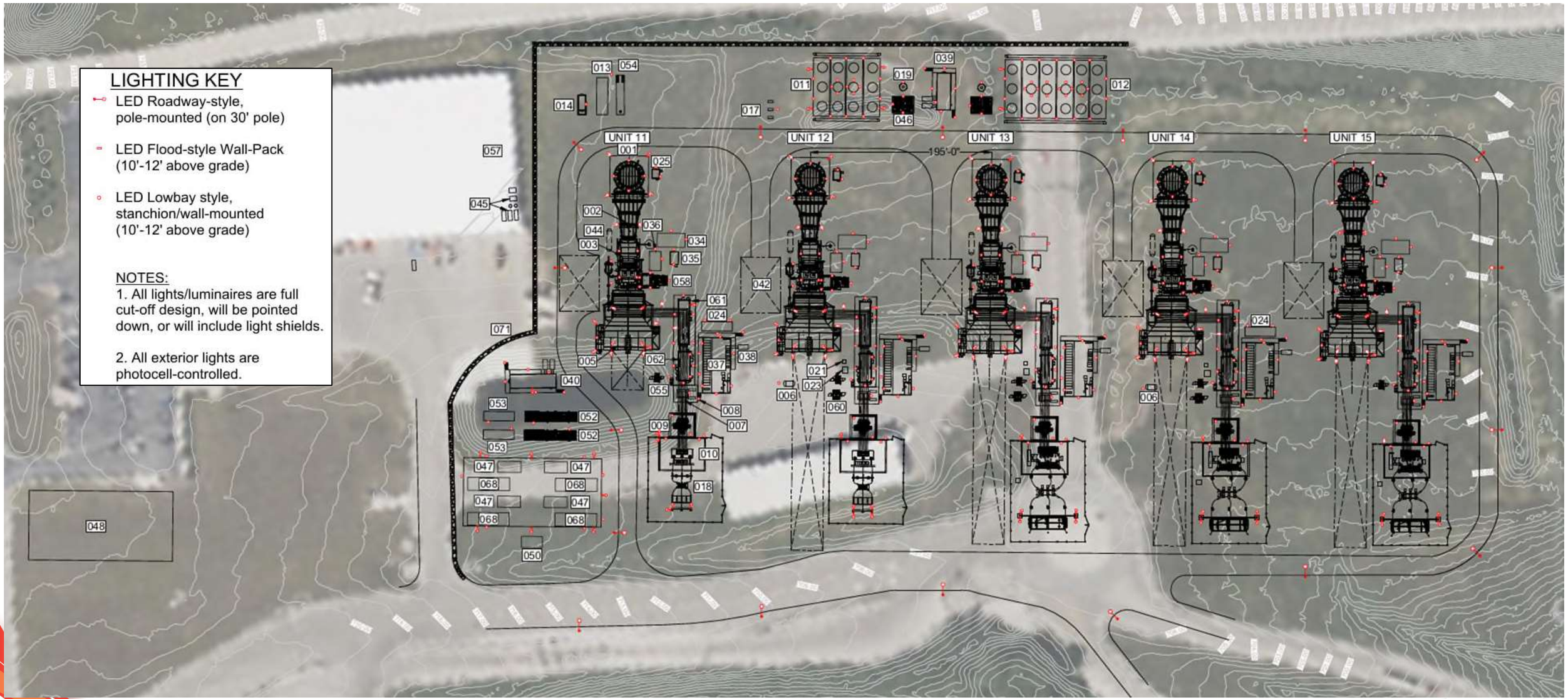

Exhibit B6

Combustion Turbine Plant – Elevation View

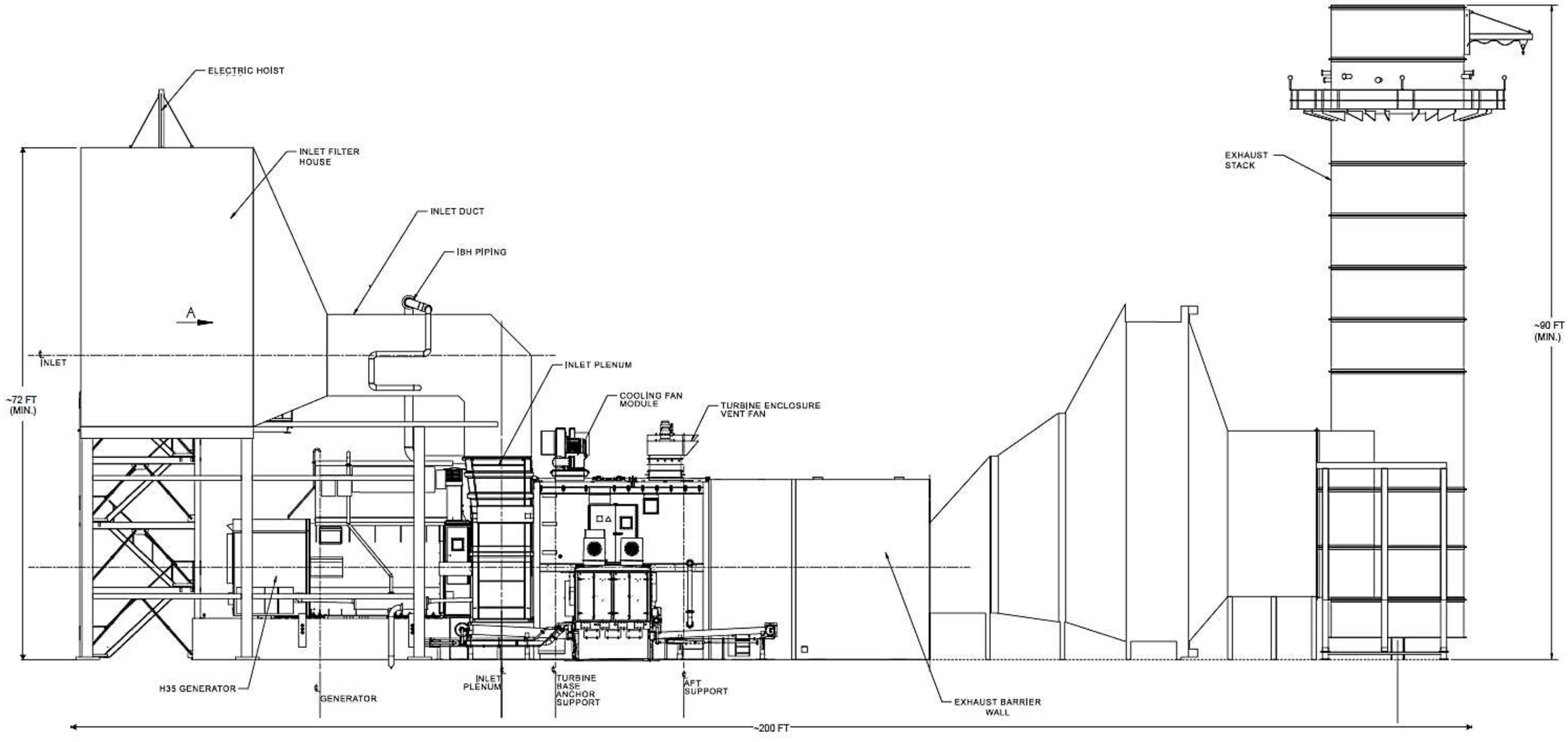

Exhibit B7

Liquefied Natural Gas (LNG) Project Overview

- Project will include:
  - 2 BCF LNG storage tank
  - Liquefaction equipment
    - Converts natural gas into a liquid for storage
  - Vaporization equipment
    - Converts LNG back into natural gas for use by customers
  - Cost estimate $456 million
  - If approved, construction is anticipated to begin in 2025 with in-service 2027

Exhibit B8

Liquefied Natural Gas Process Flow Diagram

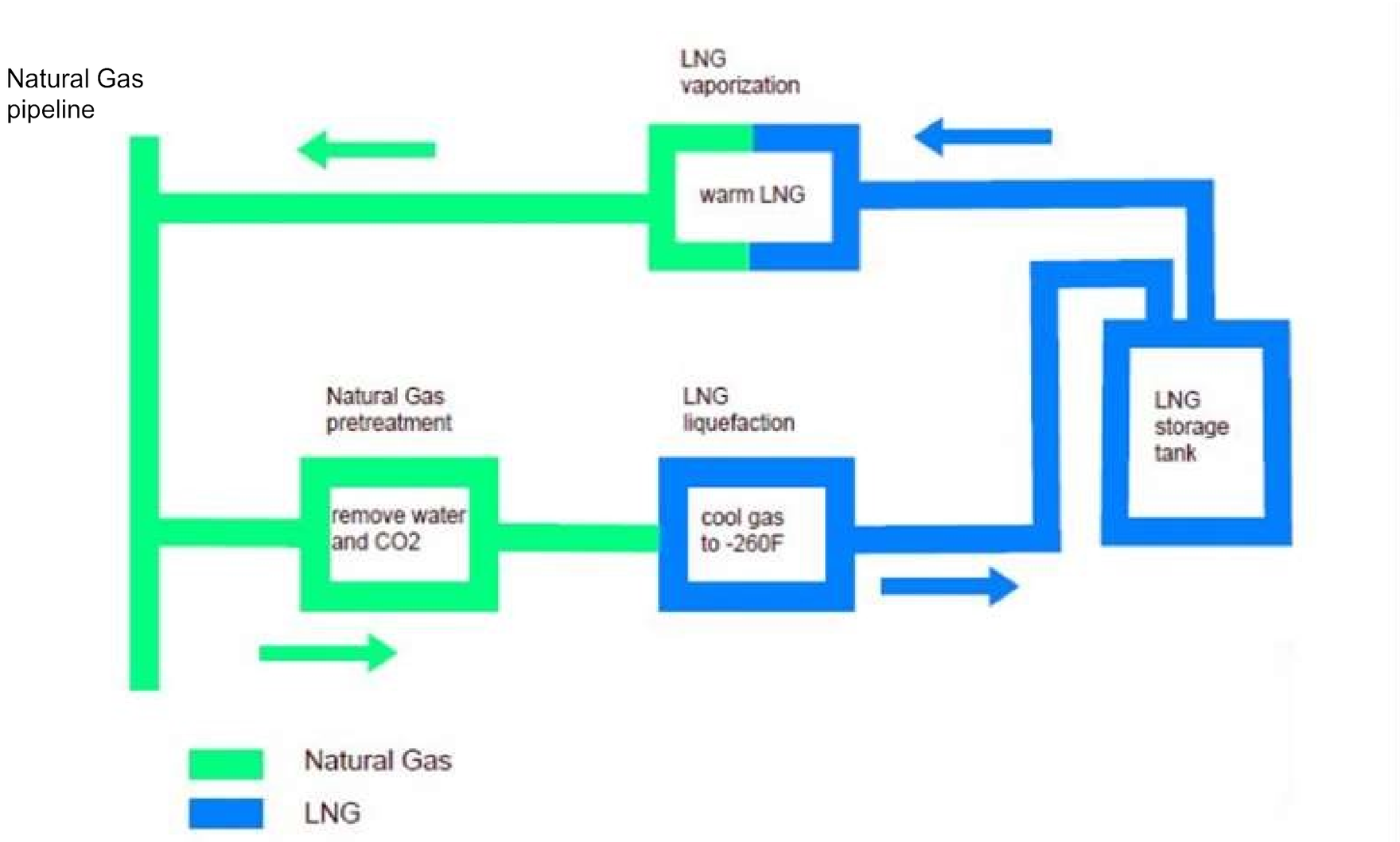

Exhibit B9

Liquefied Natural Gas Facility Arrangement

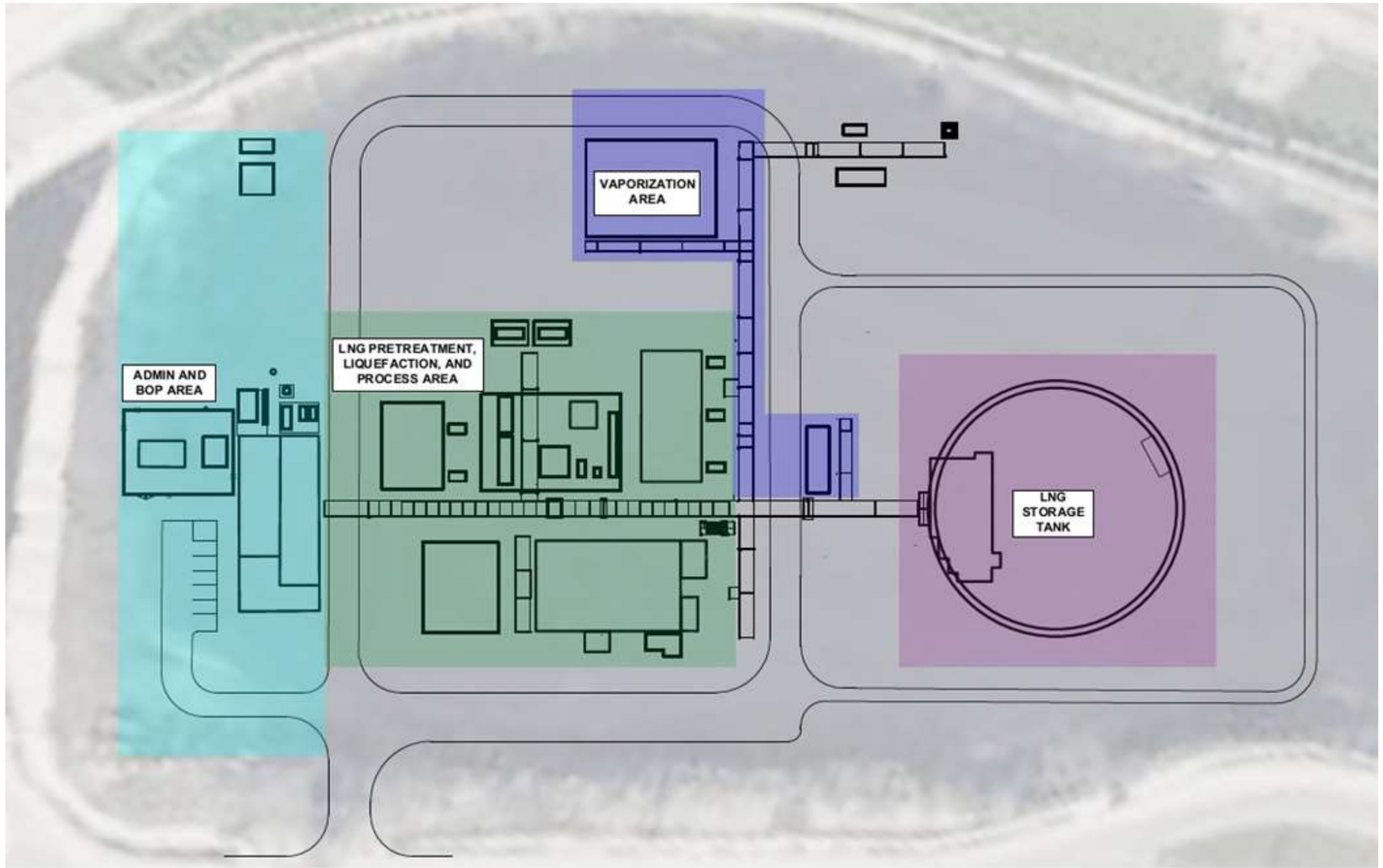

Exhibit B10

Liquefied Natural Gas Facility – Plot Plan and Lighting Plan

LIGHTING KEY

- LED Roadway-style, pole-mounted (on 30' pole)
- LED Flood-style Wall-Pack (10'-12' above grade)
- LED Lowbay style, stanchion/wall-mounted (10'-12' above grade)

NOTES:

1. All lights/luminaires are full cut-off design, will be pointed down, or will include light shields.
2. All exterior lights are photocell-controlled.

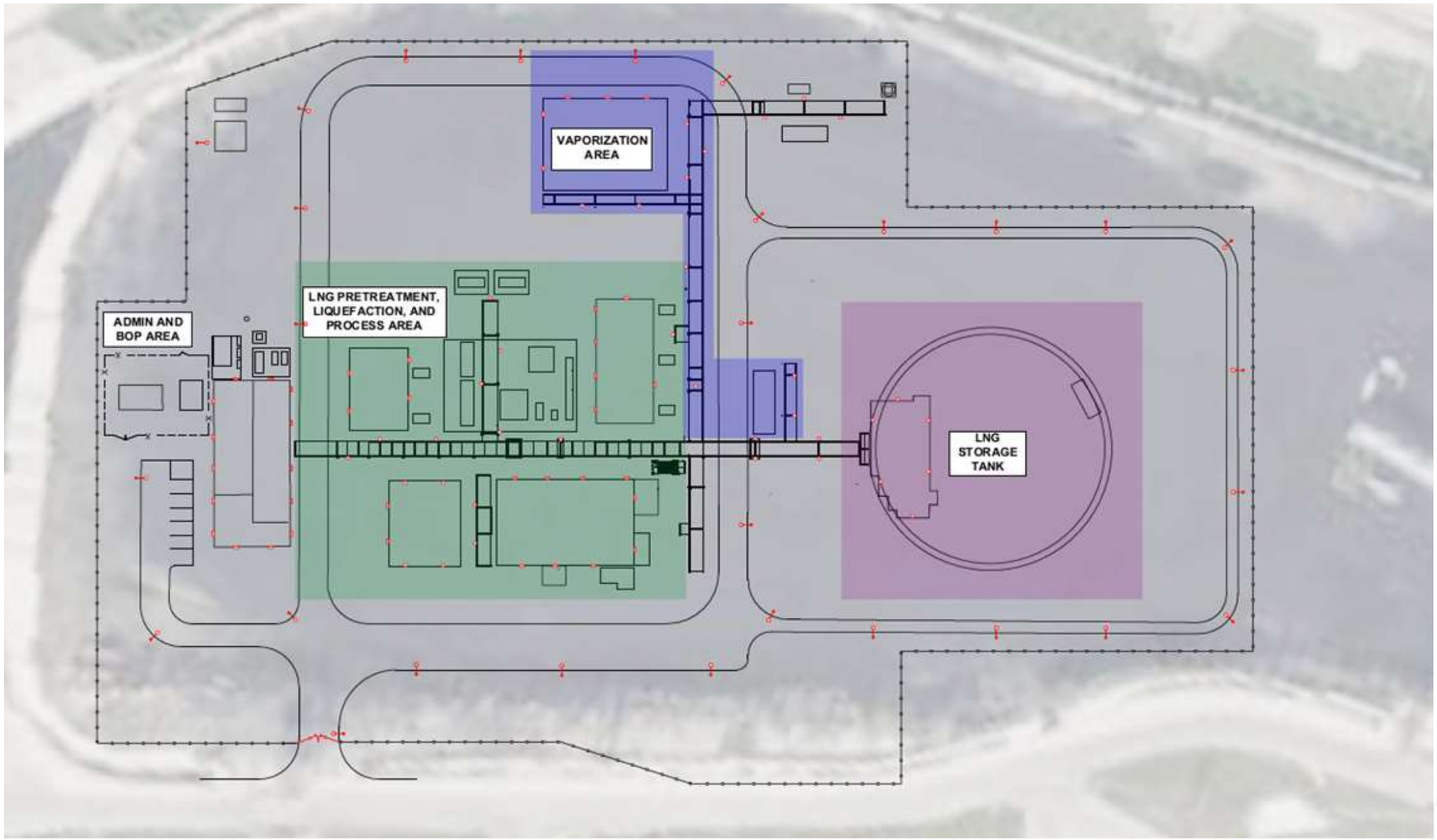

Exhibit B11

Liquefied Natural Gas Facility – Elevation View

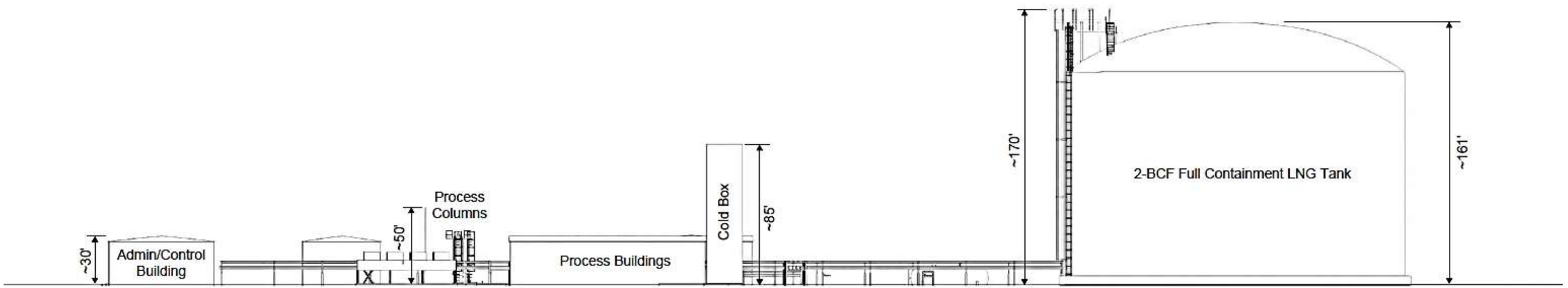

Exhibit B12

Liquefied Natural Gas Facility – Tank Elevation

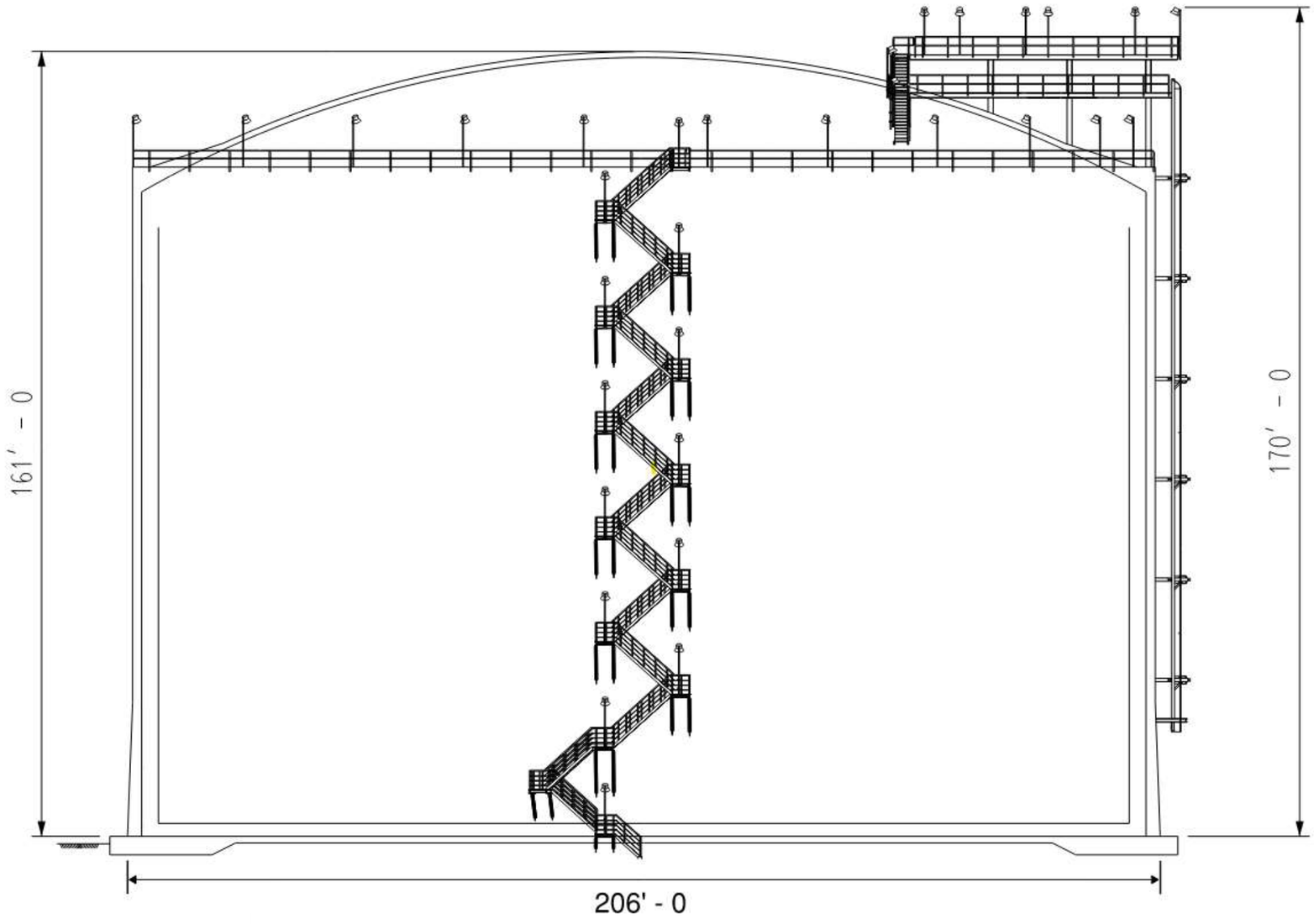

Exhibit B13

CT and LNG Anticipated Project Schedule

- Spring 2024: applications filed with PSCW and WDNR for approval
- Summer 2025: anticipated PSCW and WDNR approvals
- Summer 2025: start construction of facilities
- May 2026: first combustion turbine delivered
- January 2027: last (5th) combustion turbine delivered
- Fall 2027: first combustion turbine connected to grid
- Fall 2027: LNG tank constructed and start of tank filling
- Summer 2028: commercial operation of all combustion turbines

Exhibit B14

CT and LNG Landscaping Plan

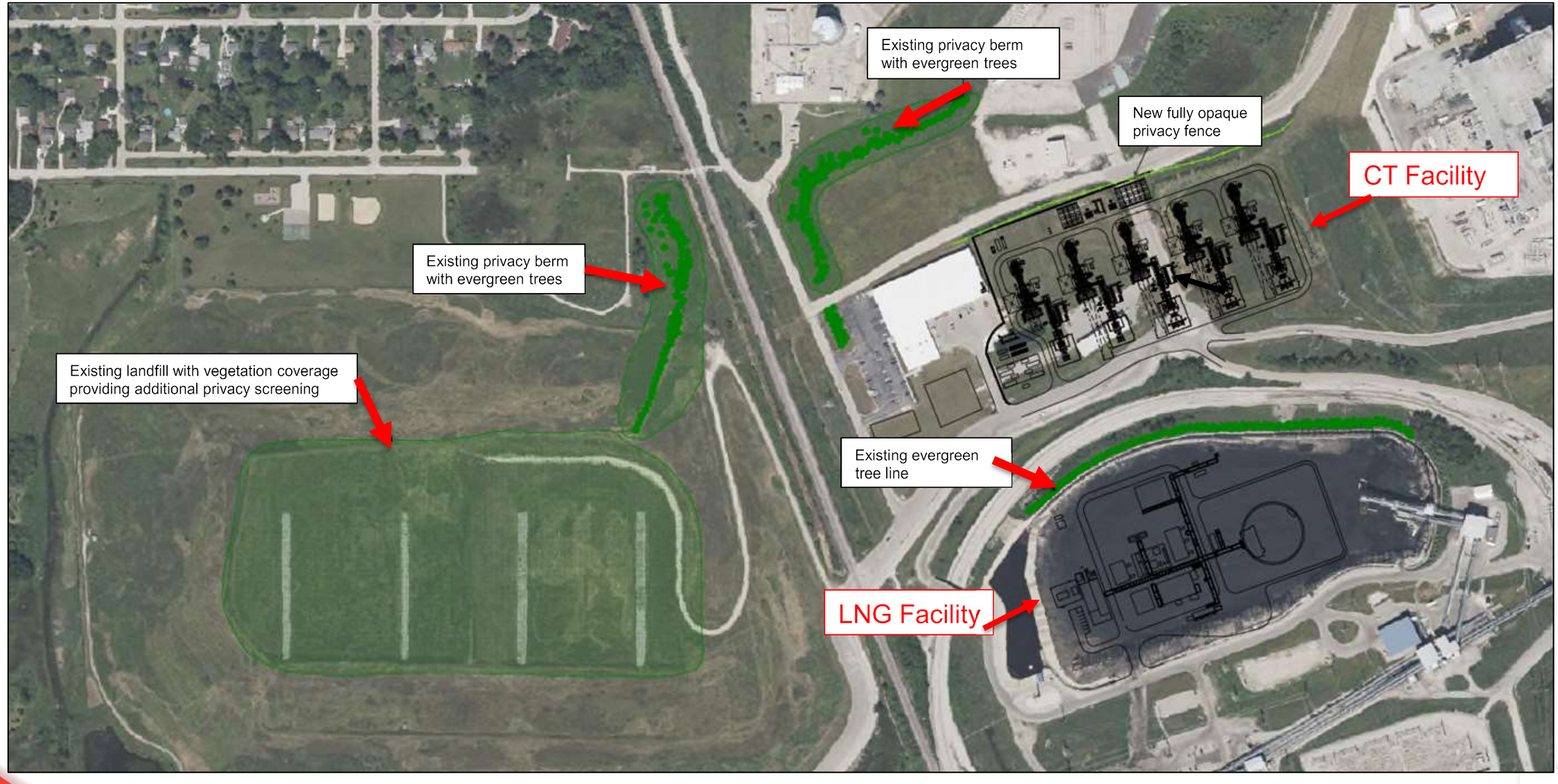

Exhibit B15

Photo Simulations – CT and LNG Site Plan

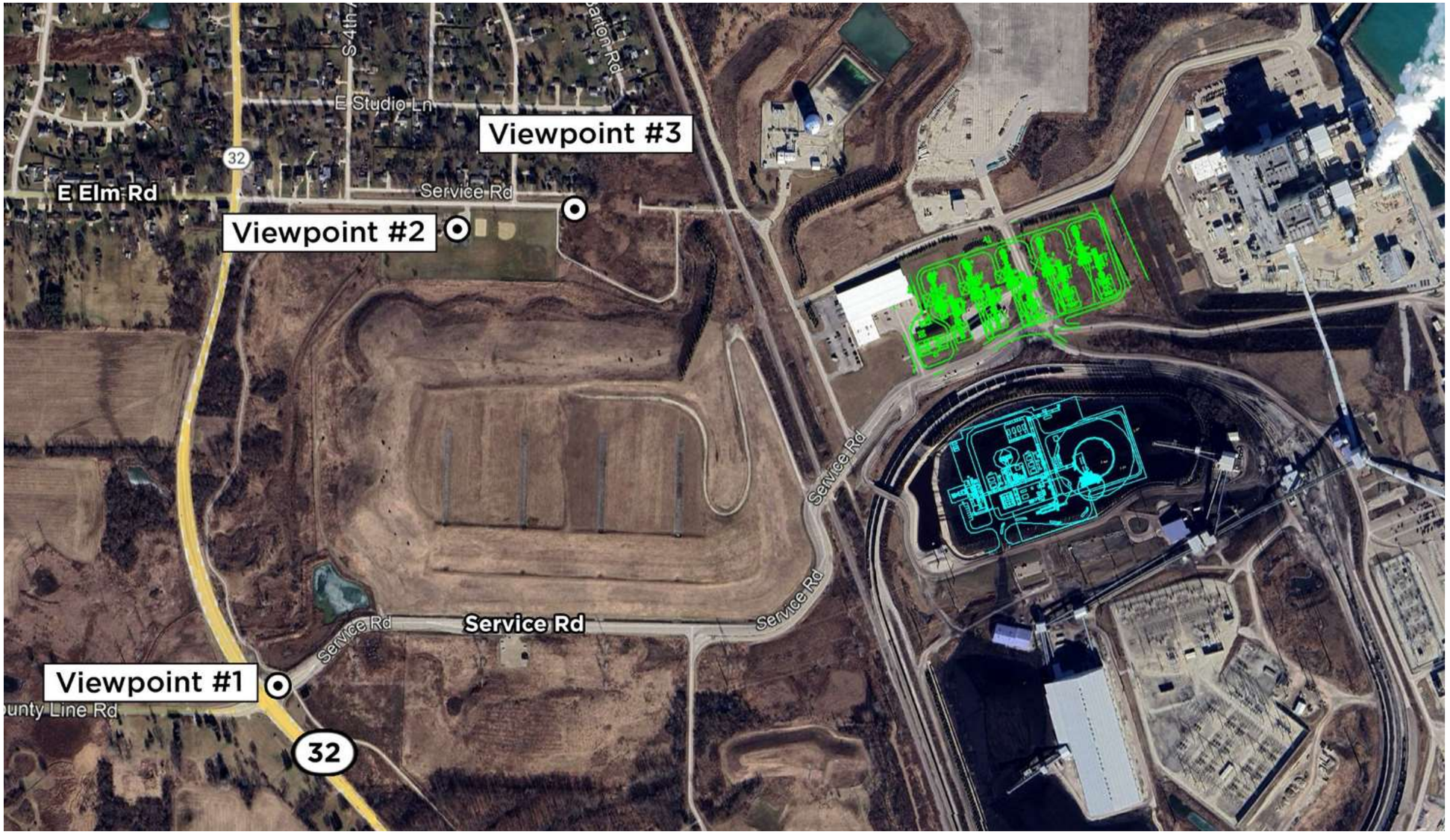

Exhibit B16

Photo Simulations – Viewpoint #1 (entrance on Hwy 32)

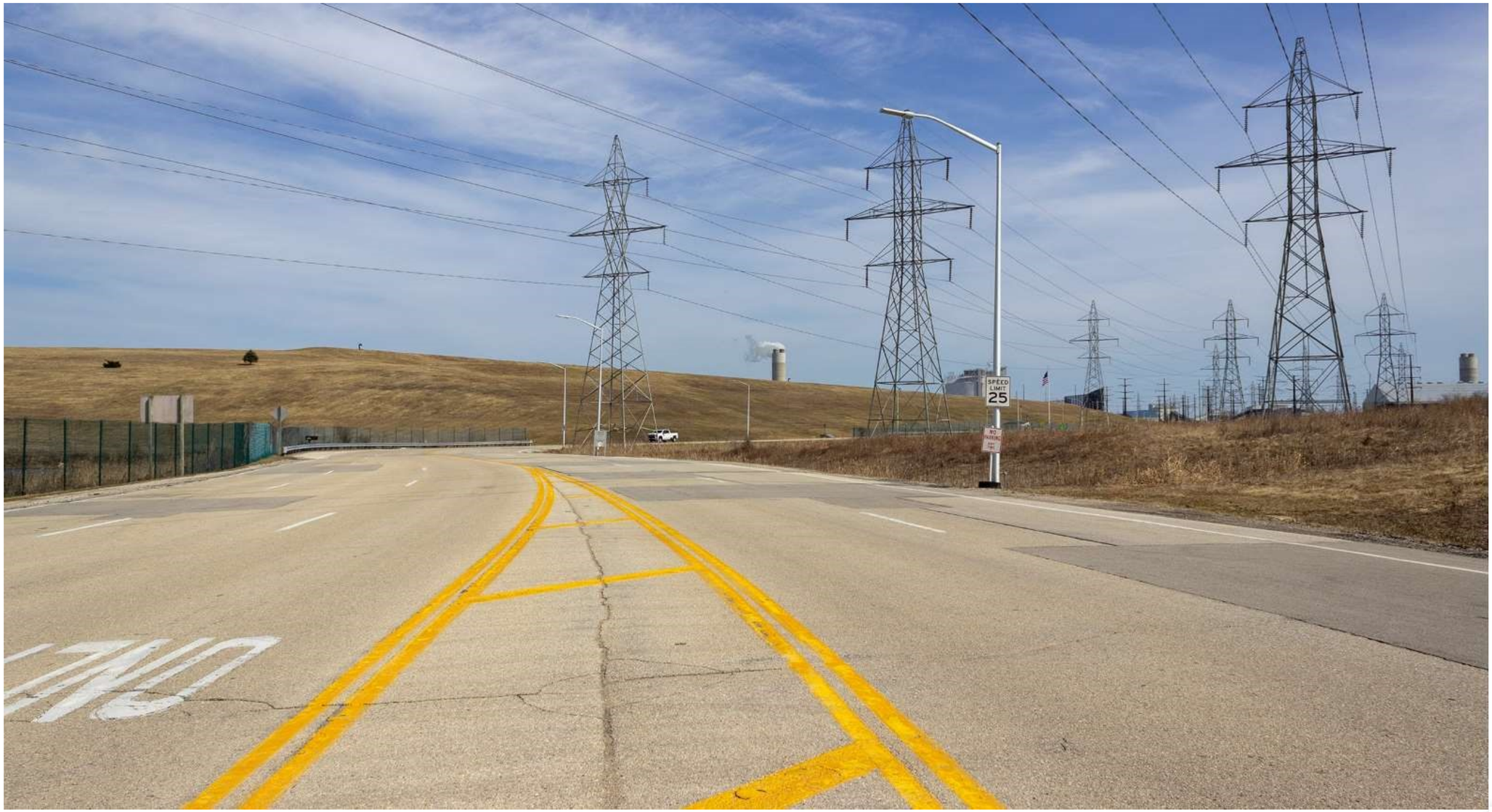

Exhibit B17

Photo Simulations – Viewpoint #2 (Haas Park)

Exhibit B18

Photo Simulations – Viewpoint #3 (east of Haas Park)

LNG Safety Regulations & Overview

We Energies

Oak Creek LNG
Project No. 161880

Revision 1
6/19/2024

LNG Safety Regulations & Overview

prepared for

We Energies
Oak Creek LNG

Project No. 161880

Revision 1
6/19/2024

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri

CERTIFICATION

We Energies
LNG Safety Regulations & Overview
Project No. 161880

Certification

I hereby certify, as a Professional Engineer in the state of Wisconsin, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by We Energies or others without specific verification or adaptation by the Engineer.

Gerald Scholl, P.E., WI, 46101-6

Insert Engineer's Name, P.E., state, & license

Date: 06/19/2024

TABLE OF CONTENTS

Page No.

LIST OF TABLES

Page No.

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
AHJ	Authority Having Jurisdiction
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
Wis DOT	Wisconsin Department of Transportation
BC-LNG	Bluff Creek LNG Facility
ELM-LNG	Elm Road LNG Plant
HAZOP	Hazard and Operability Review
IX-LNG	Ixonia LNG Facility
LNG	Liquefied Natural Gas
LOPA	Layers of Protection Analysis
MLF-LNG	Manlove Field LNG Facility
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PHMSA	Pipeline and Hazardous Material Safety Administration
PSCW	Public Service Commission of Wisconsin
RL-LNG	Rice Lake LNG Facility

1.0 LNG SAFETY REGULATIONS AND OVERVIEW

1.1 Background

We Energies is proposing to install and place in service a new Liquefied Natural Gas (LNG) peaking facility (the Facility). The Facility will include natural gas pretreatment and liquefaction equipment, an LNG storage tank, and vaporization equipment. Natural gas will be liquefied during off-peak gas usage periods, stored in the LNG tank, and vaporized back into the natural gas distribution system during periods of peak natural gas demand (normally, the coldest days of the year).

This document discusses the safety requirements for LNG facilities in general as well as safety aspects specific to the We Energies proposed LNG Facility in Oak Creek, Milwaukee County, Wisconsin.

This document has been prepared by Burns & McDonnell. Burns & McDonnell is an engineering firm with over 125 years of engineering and construction experience with annual revenues over $8 billion with over half of that amount in at-risk EPC construction projects associated with oil, gas, and chemical projects across the United States. Burns & McDonnell is well-versed in LNG, crude oil, natural gas, and power markets, including experience with numerous LNG projects that are similar to that being proposed by We Energies.

1.2 LNG Regulations and Controlling Entities

Pipeline and Hazardous Materials Safety Administration (PHMSA) has exclusive authority to establish and enforce safety regulations for onshore LNG facilities. PHMSA LNG safety regulations are codified in 49 CFR Part 193, as adopted by Wisconsin Department of Transportation (Wis DOT) which prescribes safety standards for LNG facilities used in the transportation of gas by pipeline.

The regulations address requirements for siting, design, construction, equipment, operations, personnel qualification and training, fire protection, and security of LNG facilities.

PHMSA or designated local authority(ies) periodically inspects each LNG facility under its jurisdiction for compliance with 49 CFR Part 193. During the inspections, PHMSA reviews operator records to determine if facility equipment has been properly maintained and if the operator has developed and follows operation, maintenance, security, and emergency procedures that ensure the continued safe operation of the facility. PHMSA performs enforcement actions for any violations it finds. Enforcement actions can include civil penalties or orders directing specific remedial action. In addition, if PHMSA finds conditions that are hazardous, it can require expeditious corrections of the conditions through corrective action orders.

1.2 LNG Safety Risks and Mitigation Approach

The potential safety risks anticipated for the proposed LNG Facility are outlined in federal regulations, 49 CFR Part 193, as adopted by Wis DOT and National Fire Protection Association (NFPA) Standard 59A. The potential risks include fires at LNG impoundments, fires at process lines, and vapor dispersion from LNG leaks. Safety studies and analyses are required to document these risks, identify other safety risks at the Facility, define proper procedures to limit the possibility of an emergency occurring, and define emergency response procedures to be implemented if an emergency were to occur.

A description of the safety studies, identified potential safety risks, safety systems, and methods to mitigate these risks are described in Table 1 and discussed in the following text.

Table 1 - LNG Safety Categories and Activities

Category	Required Activities	Codes
Plant Siting Criteria	Thermal Exclusion Zone, Vapor Dispersion Zone	49 CFR 193/ NFPA 59A
Fire Hazard Analysis	Fire Hazard Analysis, Fire Protection Equipment Selection & Definition	NFPA 59A Ch. 16
Process Safety Management	Hazard & Operability Analysis (HAZOP), Layers of Protection Analysis (LOPA)	OSHA 1910
Operations	Operating Procedures, Operating Records, Emergency Procedures -includes coordination with local responders Security Procedures, Maintenance Procedures & Operator Trainings	49 CFR 193/ NFPA 59A

1.2.1 Plant Siting

Thermal radiation and vapor dispersion exclusion distances have been calculated using the PHMSA regulation-prescribed calculation methodology. The calculations are based on the current design and arrangement for the Facility and will be confirmed during the detailed design process using the code-required written plant and site hazard evaluation methodology. These exclusion zones are completely contained within the We Energies property boundary for the site.

The calculated radiant heat flux distance is controlled by the outer concrete container geometry of the LNG tank while also considering the associated radiant heat flux levels of process area spill containment sumps at LNG handling equipment. The calculated vapor dispersion distances are controlled by the single accidental leakage sources as prescribed by PHMSA. This preliminary vapor dispersion analysis is performed using approved 2D and 3D modeling software with preliminary mitigation strategies employed to meet regulatory requirements. These mitigation strategies, e.g. walls, vapor fences, pipe shrouds, pipe trenches, etc. will be further analyzed with more thorough modeling during detailed design to confirm their details and necessity in ensuring compliance with 49 CFR 193.

1.2.2 Fire Hazard Analysis

Fire protection will be provided for the LNG Facility in accordance with NFPA and PHMSA requirements. The extent of such protection was determined by a preliminary evaluation based on fire protection engineering principles, analysis of local conditions, hazards within the Facility, and exposure to or from other property. The fire protection evaluation will be finalized during the detailed design process and the fire protection equipment will be installed before the introduction of natural gas to the Facility. The fire protection evaluation will be reviewed and updated at intervals not exceeding two calendar years. This post-implementation evaluation will include assessments of the following:

1. The type, quantity, and location of equipment necessary for the detection and control of fires, leaks, and spills of LNG.
2. The type, quantity, and location of equipment necessary for the detection and control of potential non-process and electrical fires.

3. The methods necessary for protection of the equipment and structures from the effects of fire exposure.
4. Requirements for fire protection systems.
5. Requirements for fire-extinguishing and other fire control equipment.
6. The equipment and processes to be incorporated within the emergency shutdown (ESD) system, including analysis of subsystems, if any, and the need for depressurizing specific vessels or equipment during a fire emergency or hazardous release.
7. The availability and duties of individual plant personnel and the availability of external response personnel in the unlikely event of an emergency.
8. The personal protective equipment, special training, and qualification needed by individual plant personnel for their respective emergency duties as specified by NFPA 600.

1.2.3 Process Safety Management

During the detailed design phase of the project, a Hazard and Operability (HAZOP) review as outlined in Occupational Health and Safety Administration (OSHA) 1910 regulations will be completed, which entails a detailed review of the process controls, design conditions, shut down systems, pressure relief valves and other safety features to consider the implications of potential off-normal operating scenarios and evaluate if the safeguards included in the design are adequate to mitigate the identified potential risks. The review will result in a report outlining any additional recommended safeguards to be incorporated into the design or operating procedures. The review also looks at the Facility from an operations stand point, including verifying that proper isolation for maintenance activities and adequate alarms and instrumentation for monitoring are included in the design.

After completion of the HAZOP review, a Layer of Protection Analysis (LOPA) will be completed. During this assessment, the instruments that provide specific safety functions will be analyzed to determine the reliability required based on industry standard data. The results of the LOPA will be used during the procurement of the various instruments such that all requirements are met.

Once these reviews are complete, any changes to the design will be documented in a formal change management process which will include additional HAZOP reviews, if and as required.

1.2.4 Operations

Operations, maintenance, emergency procedures, site security, personnel training, and record keeping are all key aspects of operational safety. These items are discussed in the following sections:

1.2.4.1 Operating Procedures Manual

NFPA 59A defines the requirements for operating procedures manuals. The following outlines key aspect of operating procedures that will be developed for the LNG Facility.

The LNG Facility will be operated in accordance with the operating procedures manual.

The operating procedures manual will be accessible to all LNG Facility personnel and will be kept readily available in the operating control center.

The operating manual will be updated when there are changes in equipment or procedures.

The operating manual will include procedures for the startup and shutdown of all components of the LNG Facility, including those for initial startup of the LNG Facility, to ensure that all components operate satisfactorily.

The operating manual will include procedures for purging components, making components inert, and cool down of components.

Procedures will ensure that the cool down of each system subjected to cryogenic temperatures is limited to a rate and distribution pattern that maintains the thermal stresses within the design limits of the system during the cool down period regarding the performance of expansion and contraction devices.

The operating manual will include procedures to ensure that each control system is adjusted to operate within its design limits.

The operating manual will include procedures to maintain the temperatures, levels, pressures, pressure differentials, and flow rates within their design limits for installed equipment, including:

1. Fired heaters and boilers;
2. Pumps, compressors, and expanders;
3. Purification, treatment, and regeneration equipment;
4. Vaporizers, heat exchangers, and cold boxes;
5. Process and storage vessels, tanks, and containers;
6. Transfer equipment; and,
7. Safety-related equipment.

The operating manual will include procedures for the following:

1. Maintaining the vaporization rate, temperature, and pressure so that the resultant gas is within the design tolerance of the vaporizer and the downstream piping;
2. Determining the existence of any abnormal conditions and the response to those conditions in the LNG Facility;
3. The safe transfer of LNG and hazardous fluids, including prevention of overfilling of containers; and,
4. Physical security.

The operations manual will include procedures for monitoring operations.

Written procedures will be kept up to date and available to all personnel engaged in LNG operations. Changes to written procedures will be documented and reviewed after consideration of operability, safety, and security.

1.2.4.2 Emergency Procedures

NFPA 59A defines the requirements for emergency procedures. The following outlines key aspects of emergency procedures that will be developed for the LNG Facility.

The Facility's operations manual will contain emergency procedures. These emergency procedures will include, at a minimum, documented remediation activities for emergencies that are anticipated from an operating malfunction, personnel error, forces of nature, and activities carried on adjacent to the plant.

The emergency procedures will include, but not be limited to, procedures for responding to emergencies, including the following:

1. Notification of personnel;
2. Use of equipment appropriate for handling the emergency;
3. The shutdown or isolation of various portions of the equipment; and,
4. Other steps to ensure that the escape of gas or liquid is promptly cut off or reduced as much as safely possible.

The Facility emergency response plan will include a contingency plan to address potential incidents that can occur in or near the transfer area, including the following:

1. A description of the fire equipment and systems and their operating procedures, including a plan showing the locations of all emergency equipment;
2. LNG release response procedures, including contact information for local response organizations; and,
3. Telephone numbers of authorities having jurisdiction, hospitals, fire departments, and other emergency response agencies.

Emergency procedures and contingency plans will be reviewed annually, and revised as necessary.

The Facility Owner's family of companies own and operate another LNG facility in Oak Creek, Wisconsin (ELM-LNG), an LNG satellite facility in Rice Lake, Wisconsin (RL-LNG), an LNG facility in Whitewater, Wisconsin (BC-LNG), an LNG facility in Ixonia, Wisconsin (IX-LNG), and an LNG facility in central Illinois (MLF-LNG). Like the proposed Facility, these existing facilities have liquefaction, storage, and vaporization equipment. All of the existing facilities have established extensive emergency procedures. Those procedures are reviewed and updated regularly to comply with applicable PHMSA regulations and to coordinate with local emergency responders. Emergency procedures for the proposed Facility will be adapted from these in-place emergency procedures.

The LNG Facility's Owner will modify those existing emergency procedures through a collaborative approach between Facility personnel, the design engineer, equipment providers, and local emergency responders, to tailor them to the Facility, and will include the required information as defined in NFPA 59A.

1.2.4.3 Site Security

NFPA 59A defines the requirements for site security. The following outlines key aspect of site security that will be provided.

A security assessment covering hazards, threats, vulnerabilities, and consequences will be prepared for the LNG Facility. The security assessment will be available to the AHJ on a nonpublic basis.

The LNG Facility will have a security system with controlled access that is designed to prevent entry by unauthorized persons. There will be a protective enclosure, including a peripheral fence, wall, or building wall enclosing major facility components. The protective enclosure and the area around the Facility will be monitored for the presence of unauthorized persons.

The LNG Facility will prepare and follow written procedures to provide security for the LNG plant. The procedures will be available at the plant and any remote monitoring location and include at least the following:

1. A description and schedule of security inspections and patrols performed;
2. A list of security personnel positions or responsibilities utilized at the LNG plant;
3. A brief description of the duties associated with each security personnel position or responsibility;
4. Instructions for actions to be taken, including notification of other appropriate plant personnel and law enforcement officials, when there is any indication of an actual or attempted breach of security;
5. Methods for determining which persons are allowed access to the LNG Facility;
6. Positive identification of all persons entering the plant and on the plant, including methods at least as effective as picture badges; and,
7. Liaison with local law enforcement officials to keep them informed about current security procedures.

The security procedures will be reviewed every two years and revised as necessary. In the event security conditions change, the procedures will be updated more frequently.

1.2.4.4 Personnel Training

NFPA 59A defines the requirements for personnel training. The following outlines the personnel training that will be provided.

The LNG Facility will have a written training plan to instruct all LNG Facility personnel. The training plan will include training of permanent maintenance, operating, and supervisory personnel with respect to the following:

1. The basic operations carried out at the LNG Facility;
2. The characteristics and potential hazards of LNG and other hazardous fluids involved in operating and maintaining the LNG plant;
3. Methods of carrying out the duties of maintaining and operating the LNG Facility as set out in the manual of operating and maintenance procedures;
4. Methods of carrying out emergency procedures as they relate to their assigned functions; and,
5. Personnel safety and general construction industry safety-related training as it relates to the assigned functions.

All operating and appropriate supervisory personnel will be trained in the following:

1. Instructions on the facility operations, including controls, functions, and operating procedures;
2. LNG transfer procedures; and,
3. Purging practices and principles.

All personnel involved in operation and maintenance of the LNG Facility, including immediate supervisors, will be trained in the following aspects of fire protection and fire drills:

1. Potential causes and areas of fire;
2. Types, sizes, and predictable consequences of fire;

3. Assigned fire control duties in accordance with the emergency procedures, which includes proper use of fire protection and emergency response equipment; and,
4. Hands-on experience in carrying out duties as listed in the emergency procedures.

Personnel responsible for security as it relates to their assigned functions and described in the required security procedures will be trained to do the following:

1. Recognize security breaches;
2. Carry out security procedures as it relates to their assigned functions;
3. Be familiar with basic facility operations and emergency procedures as necessary to perform their assigned functions; and,
4. Identify situations where it would be necessary to obtain assistance to maintain the security of the LNG Facility.

1.2.4.5 Maintenance Procedures

NFPA 59A defines the requirements for maintenance procedures. The following outlines key aspects of the maintenance procedures that will be developed.

The LNG Facility will have a documented plan that sets out inspection and maintenance program requirements for each component, including fire protection and hazard detection, used in the LNG Facility that is identified as requiring inspection and maintenance.

The maintenance program will be conducted in accordance with its documented plan for LNG facility components identified in the plan as requiring inspection and maintenance.

The LNG Facility's personnel will perform the periodic inspections, tests, or both, on a schedule that is included in the maintenance plan on identified components and its support system identified as requiring inspection and maintenance that is in service at a particular LNG Facility.

The maintenance manual will refer to maintenance procedures, including procedures for the safety of personnel and property while repairs are carried out, regardless of whether the equipment is in operation. The maintenance manual will include the following for LNG facility components:

1. The manner of carrying out and the frequency of inspections and tests;
2. A description of any other action that is necessary to maintain the LNG Facility in accordance with this standard and,
3. All procedures to be followed during repairs on a component that is operating while it is being repaired, to ensure the safety of persons and property at the LNG Facility.

1.2.4.6 Records

The LNG Facility will maintain for a period of not less than 5 years a record of the date and type of each maintenance activity performed on each component of the LNG Facility, including a record of the date that a component is taken out of or placed into service. Records will be made available during business hours upon reasonable notice.

For the life of the LNG Facility, each LNG Facility operator will maintain records of each test, survey, or inspection required by this standard in detail sufficient to demonstrate the adequacy of corrosion control measures.

A record of all training will be maintained for each employee of the LNG Facility, and the records will be maintained for at least 2 years after the date that the employee ceases to be employed at the LNG Facility.

1.3 Coordination with Emergency Responders

The LNG Facility's Owner is committed to working collaboratively with the local community, local officials and first responders to ensure that the LNG Facility is not only operated safely but to have the necessary measures and procedures in place in the unlikely event that there is an emergency. Facility personnel will coordinate emergency response training with local officials, including (a) completing periodic emergency drills, (b) reviewing the communication plan between Facility personnel and local officials and (c) reviewing how emergency responses will be coordinated by the LNG Facility personnel depending on the specific emergency.

Additionally, LNG Facility's Owner will work with those stakeholders to adapt to the proposed Facility its existing emergency procedures that define the initial emergency response approach (system shutdown, valve closures, power shutdown, use of on-site fire/vapor suppression equipment, etc.) and the internal and external communication plan for the identified emergency situation at the Facility.

Practical hands-on training for fire/vapor suppression equipment use, and predictable consequences of an event will be provided to the LNG Facility's Owner personnel and local emergency responders. Training and coordination events with local emergency responders will be hosted annually by the Facility's Owner at the proposed Facility.

The Facility's Owner will provide training to emergency responders on the following topics:

1. Fire and ignition hazards at the Facility;
2. LNG and natural gas isolation systems (automatic valves, emergency shutdown features);
3. Proper fire-fighting approaches for the identified hazards;
4. Exposure protection measures;
5. Site fire/vapor/heat suppression equipment – classroom training and practical instruction;
6. Fire alarm and detection systems, and monitoring of these systems;
7. Site evacuation and assembly areas designated for non-essential personnel;
8. Communication systems and notification of authorities (law enforcement, mutual aid, health-care facilities, authorized communications personnel);
9. Traffic control; and,
10. Emergency Response Procedures.

1.4 Transportation Impacts and Safety

Construction traffic entering the Project site will consist primarily of automobile traffic for construction staff, contractors, and vendors. Deliveries of materials and equipment will be made by trucks and/or heavy haul vehicles. The amount of daily automobile traffic will correspond to the Project workforce numbers onsite at a given time. The daily automobile traffic to the sites will increase in the initial stages of construction to peak construction months, lasting approximately 6-8 months. The traffic will begin to decrease as construction nears completion. Peak manpower on site is expected to be approximately 120 people. Material and equipment deliveries will be required during construction. Large deliveries will be scheduled to avoid peak traffic on local roads whenever possible.

Post construction, operational and security staffing at the operating Facility is expected to require 2-5 personnel per day. During normal operation of the Facility regular truck traffic for deliveries or removal of waste items is not expected.

While the proposed LNG facility site is located immediately adjacent to a rail line, the Facility Owner has no intention to transport LNG by railroad to or from any other facilities.

1.5 Conclusion

At a minimum, the LNG Facility will satisfy all state and federal safety requirements. These state and federal requirements address siting, design, construction, equipment, operations, personnel qualification and training, fire protection, and security of LNG facilities. After operation begins, the Facility Owner will be required to submit annual reports, incident reports, and safety-related condition reports to regulators. In addition, regulators will periodically inspect the LNG Facility for compliance. During the inspections, regulators review operator records to determine if facility equipment has been properly maintained and if the operation, maintenance, security, and emergency procedures are being followed to maintain the continued safe operation of the facility.

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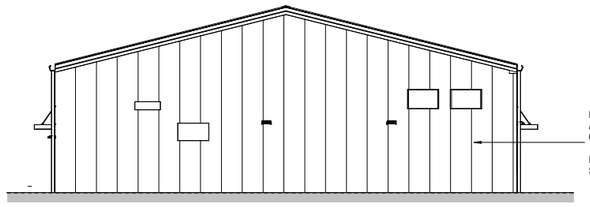


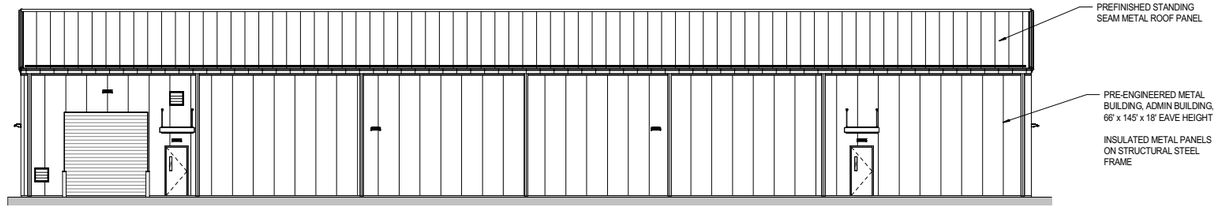
PRE-ENGINEERED METAL BUILDING, ADMIN BUILDING, 66' x 145' x 18' EAVE HEIGHT

INSULATED METAL PANELS ON STRUCTURAL STEEL FRAME

ADMIN BUILDING - NORTH EXTERIOR ELEVATION

0 4' 8' 16'

SCALE IN FEET



PREFINISHED STANDING SEAM METAL ROOF PANEL

PRE-ENGINEERED METAL BUILDING, ADMIN BUILDING, 66' x 145' x 18' EAVE HEIGHT

INSULATED METAL PANELS ON STRUCTURAL STEEL FRAME

ADMIN BUILDING - EAST EXTERIOR ELEVATION

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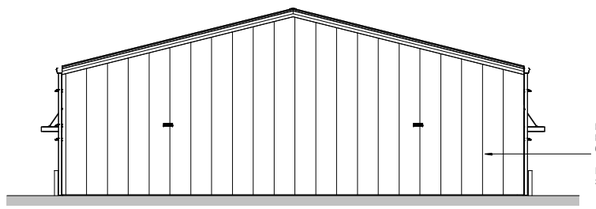
SCALE IN FEET



PRE-ENGINEERED METAL BUILDING, ADMIN BUILDING, 66' x 145' x 18' EAVE HEIGHT

INSULATED METAL PANELS ON STRUCTURAL STEEL FRAME

ADMIN BUILDING - SOUTH EXTERIOR ELEVATION

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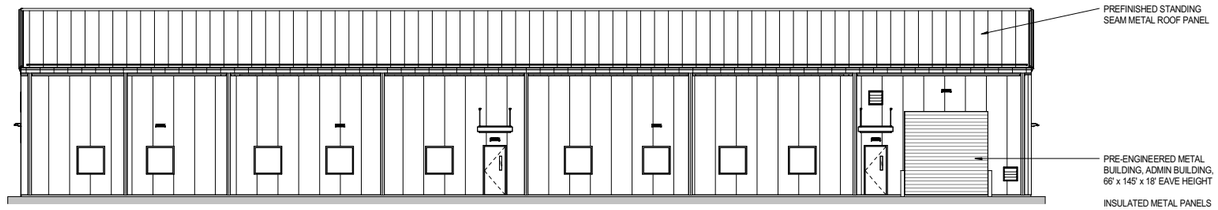

PREFINISHED STANDING SEAM METAL ROOF PANEL

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ADMIN BUILDING - WEST EXTERIOR ELEVATION

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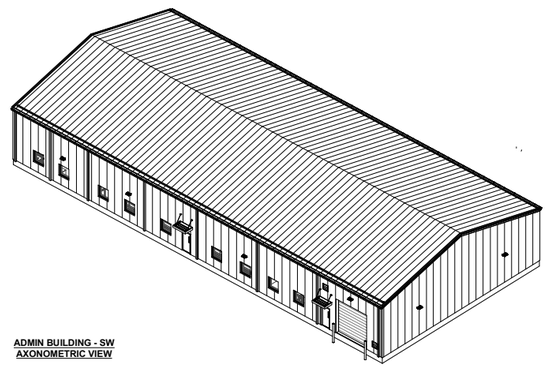
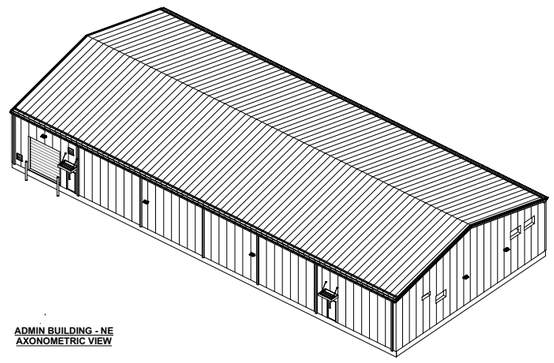


ADMIN BUILDING - SW AXONOMETRIC VIEW



ADMIN BUILDING - NE AXONOMETRIC VIEW

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no.	date	by	ckd	description
A	11/07/24	PB	CJ	PRELIMINARY BUILDING ELEVATIONS FOR CUP

BURNS McDONNELL
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816-333-9400
Burns & McDonnell Engineering Co, Inc.
Firm Reg. No. 1308-11

designed C. JOHNSON | detailed C. JOHNSON

OAK CREEK FACILITY
OAK CREEK LNG PROJECT
MILWAUKEE COUNTY, WISCONSIN

LNG FACILITY
ADMIN BUILDING - EXTERIOR ELEVATIONS

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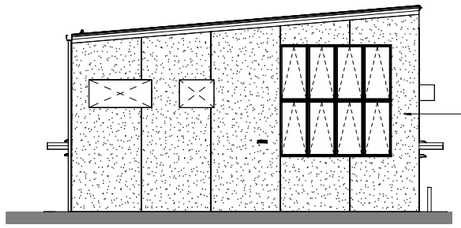
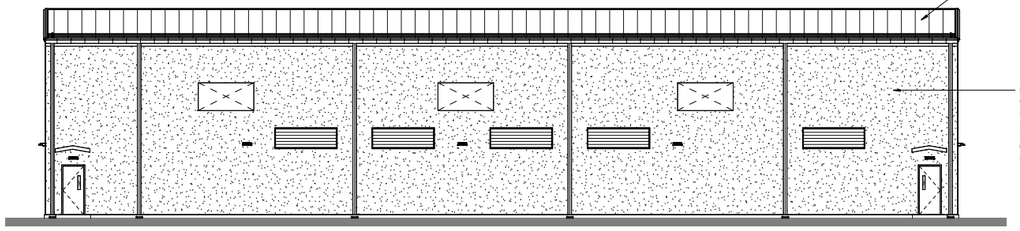


PRECAST CONCRETE BUILDING, GAS COMPRESSOR BUILDING, 50' x 131' x 29' EAVE HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

GAS COMPRESSOR BUILDING - NORTH EXTERIOR ELEVATION

0 4' 8' 16'
SCALE IN FEET



PREFINISHED METAL STANDING SEAM METAL ROOF

PRECAST CONCRETE BUILDING, GAS COMPRESSOR BUILDING, 50' x 131' x 29' EAVE HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

GAS COMPRESSOR BUILDING - EAST EXTERIOR ELEVATION

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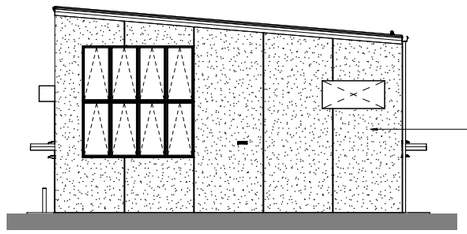

PRECAST CONCRETE BUILDING, GAS COMPRESSOR BUILDING, 50' x 131' x 29' EAVE HEIGHT

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GAS COMPRESSOR BUILDING - SOUTH EXTERIOR ELEVATION

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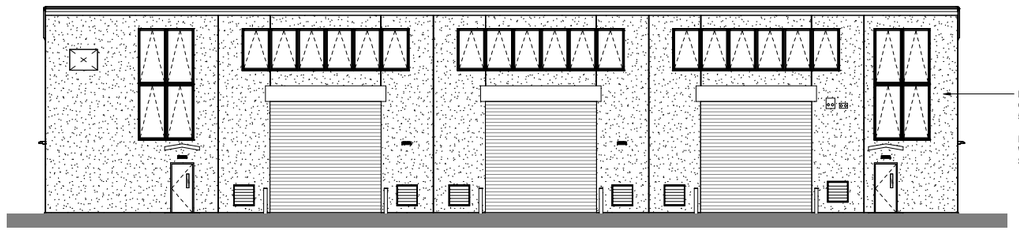

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INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

GAS COMPRESSOR BUILDING - WEST EXTERIOR ELEVATION

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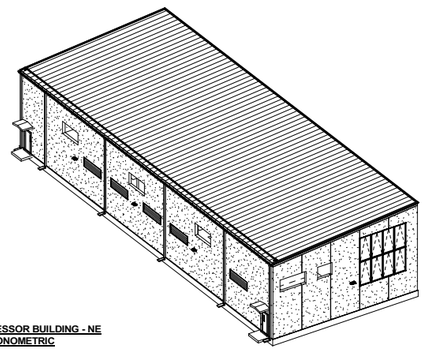
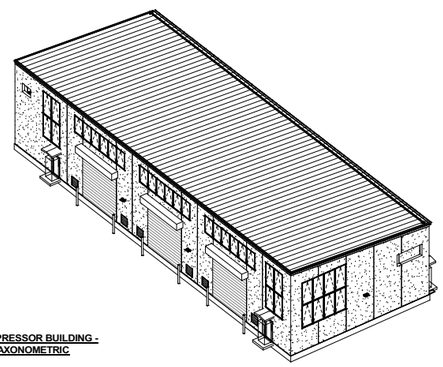


GAS COMPRESSOR BUILDING - NE AXONOMETRIC



GAS COMPRESSOR BUILDING - SW AXONOMETRIC

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GAS COMPRESSOR BUILDING - EXTERIOR ELEVATIONS

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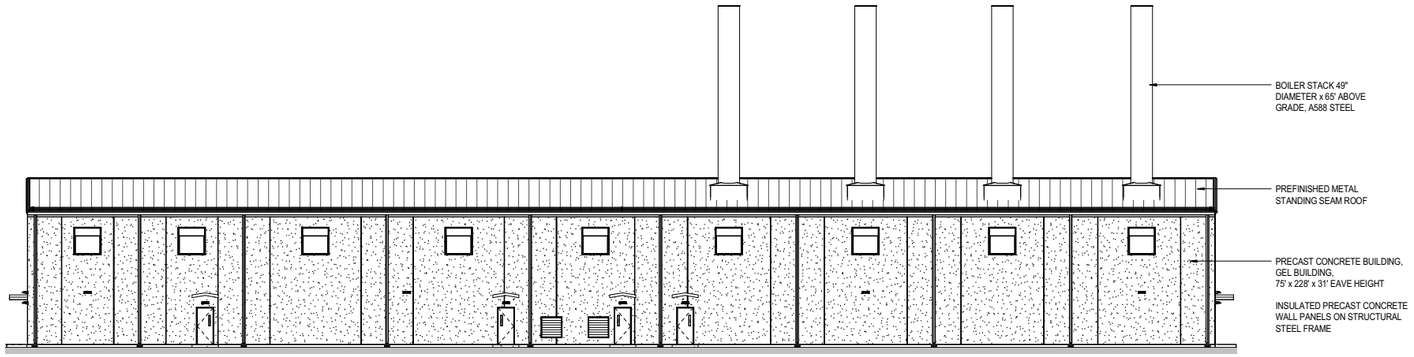

GEL BUILDING - NORTH EXTERIOR ELEVATION

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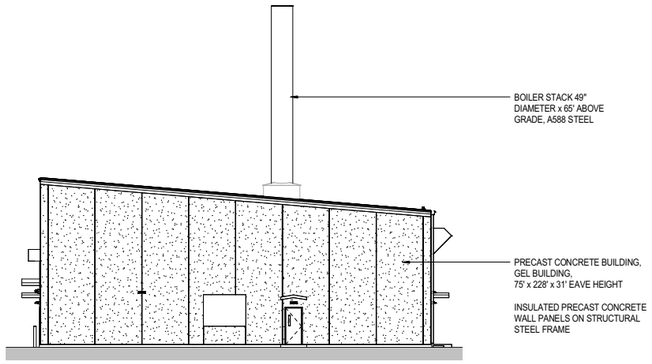

GEL BUILDING - EAST EXTERIOR ELEVATION

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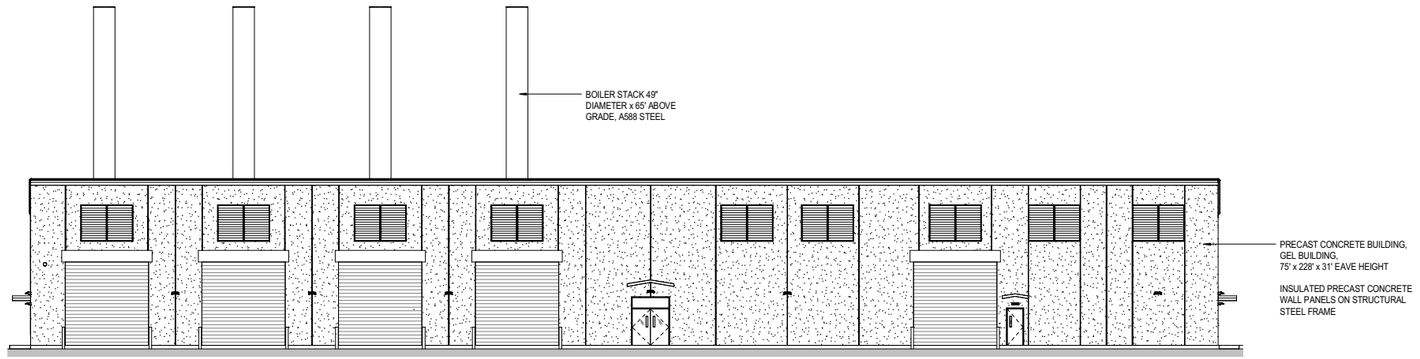

GEL BUILDING - SOUTH EXTERIOR ELEVATION

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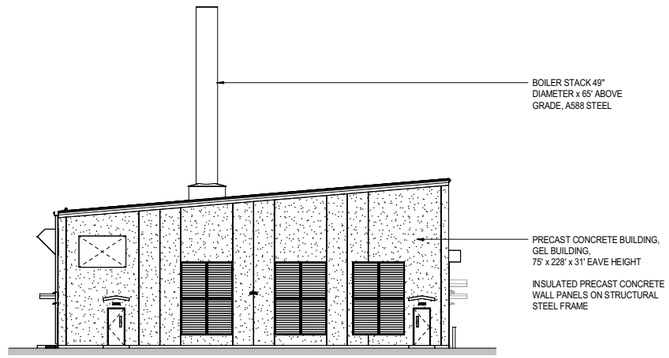
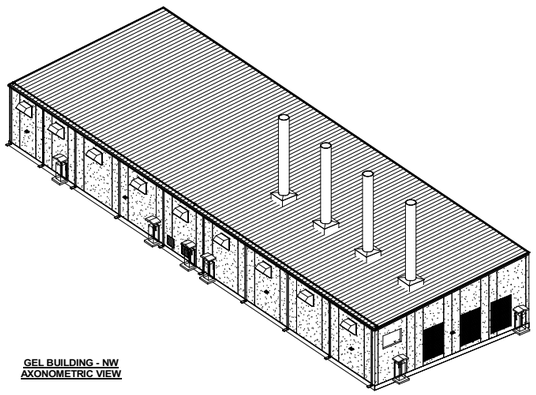
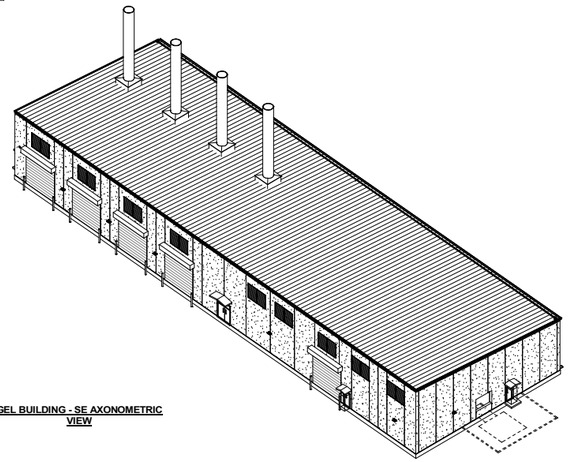


GEL BUILDING - WEST EXTERIOR ELEVATION

0 4' 8' 16'
SCALE IN FEET



GEL BUILDING - NW AXONOMETRIC VIEW



GEL BUILDING - SE AXONOMETRIC VIEW

FOR REVIEW ONLY
-NOT FOR CONSTRUCTION-

no.	date	by	ckd	description
A	11/07/24	PB	CJ	PRELIMINARY BUILDING ELEVATIONS FOR CUP

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
Burns & McDonnell Engineering Co, Inc.
Firm Reg. No. 1308-11

designed C. JOHNSON | detailed C. JOHNSON

OAK CREEK FACILITY
OAK CREEK LNG PROJECT
MILWAUKEE COUNTY, WISCONSIN

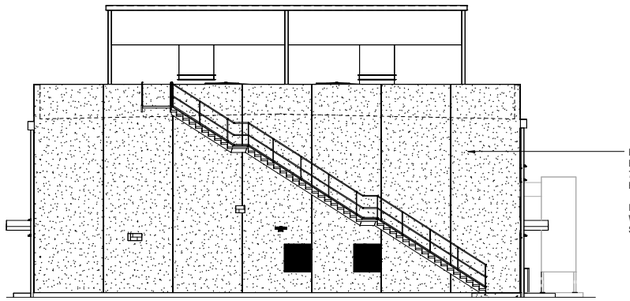
LNG FACILITY
GEL BUILDING - EXTERIOR ELEVATIONS

project 161880 | contract

drawing **CUP-SK006** | rev. **A**

sheet | of | sheets

file 161880_ARCH R22

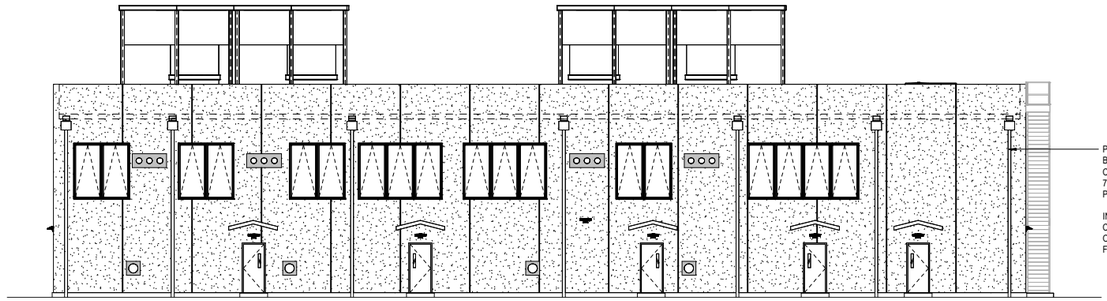


PRECAST CONCRETE BUILDING, FUEL GAS COMPRESSOR BUILDING, 70' x 140' x 30' TOP OF PARAPET HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

FUEL GAS COMPRESSOR BUILDING - NORTH EXTERIOR ELEVATION

0 4' 8' 16'
SCALE IN FEET

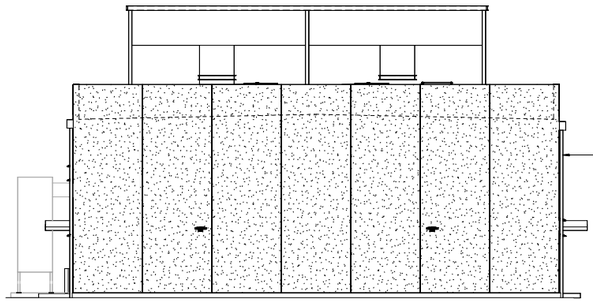


PRECAST CONCRETE BUILDING, FUEL GAS COMPRESSOR BUILDING, 70' x 140' x 30' TOP OF PARAPET HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

FUEL GAS COMPRESSOR BUILDING - EAST EXTERIOR ELEVATION

0 4' 8' 16'
SCALE IN FEET

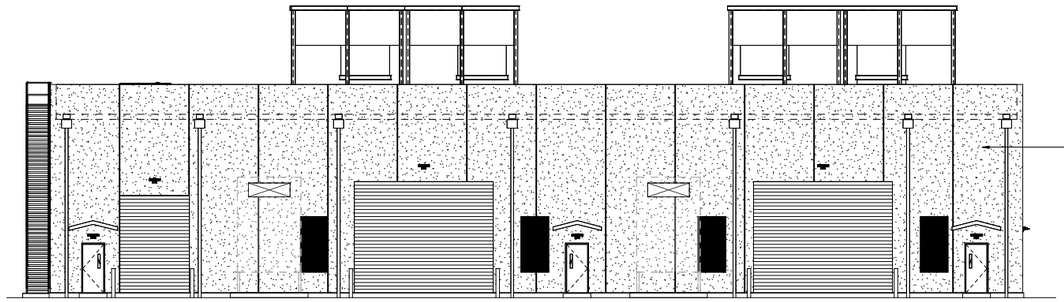


PRECAST CONCRETE BUILDING, FUEL GAS COMPRESSOR BUILDING, 70' x 140' x 30' TOP OF PARAPET HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

FUEL GAS COMPRESSOR BUILDING - SOUTH EXTERIOR ELEVATION

0 4' 8' 16'
SCALE IN FEET



PRECAST CONCRETE BUILDING, FUEL GAS COMPRESSOR BUILDING, 70' x 140' x 30' TOP OF PARAPET HEIGHT

INSULATED PRECAST CONCRETE WALL PANELS ON STRUCTURAL STEEL FRAME

FUEL GAS COMPRESSOR BUILDING - WEST EXTERIOR ELEVATION

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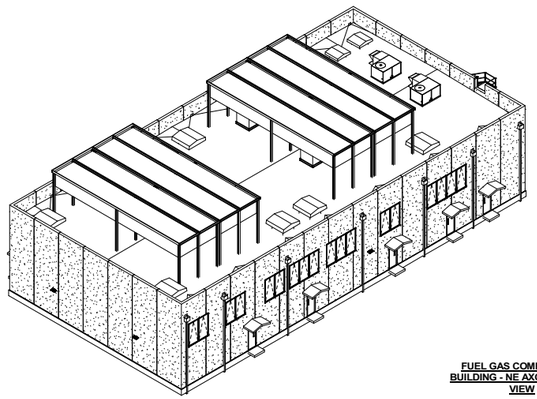
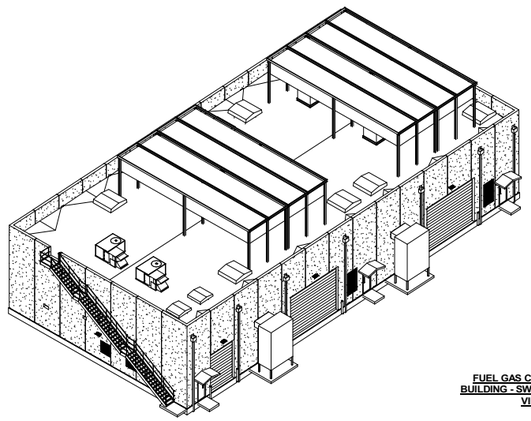
SCALE IN FEET



FUEL GAS COMPRESSOR BUILDING - NE AXONOMETRIC VIEW



FUEL GAS COMPRESSOR BUILDING - SW AXONOMETRIC VIEW

FOR REVIEW ONLY
-NOT FOR CONSTRUCTION-

no.	date	by	ckd	description
A	11/07/24	BO	CJ	PRELIMINARY BUILDING ELEVATIONS FOR CUP

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
Burns & McDonnell Engineering Co, Inc.
Firm Reg. No. 1308-11

designed C.JOHNSON
detailed C.JOHNSON

OAK CREEK FACILITY
OAK CREEK LNG PROJECT
MILWAUKEE COUNTY, WISCONSIN

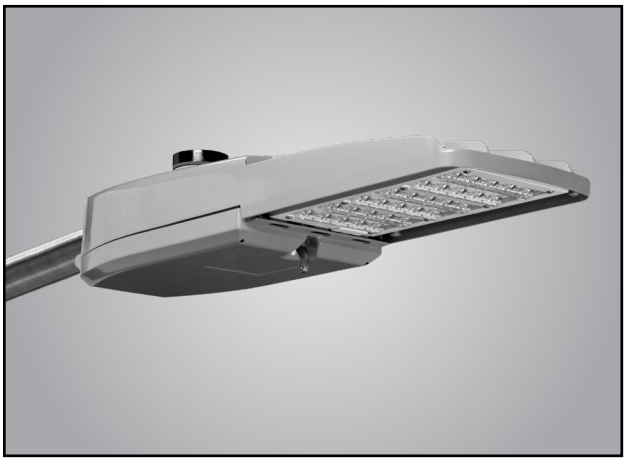
COMBUSTION TURBINE PLANT
FUEL GAS COMPRESSOR BUILIDNG - EXTERIOR ELEVATIONS

project 161919
contract
drawing **CUP-SK0007**
rev. **A**
sheet of sheets
file

Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

Autobahn Series ATB0
Roadway Lighting

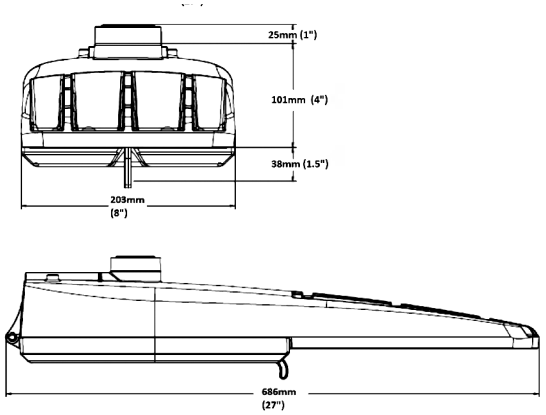
PRODUCT OVERVIEW



Applications:

Roadways
Off ramps
Residential streets
Parking lots

DIMENSIONS



Effective Projected Area (EPA): The EPA for the ATB0 is 0.76 sq. ft.
Approx. Wt. = 14 lbs.

STANDARDS

DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Color temperatures of ≤ 3000K must be specified for International Dark-Sky Association certification.

Rated for -40°C to 40°C ambient
CSA Certified to U.S. and Canadian standards
Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

GOVERNMENT PROCUREMENT — BAA – Buy America(n) Act: Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

Features:

OPTICAL

The Autobahn's new molded silicone optics provide exceptional performance. Silicone optics are superior to other polymeric materials in the areas of; optical efficiency, thermal performance, and reduction in dirt accumulation, all of which can lead to long term lumen degradation and a shift in optical distribution. Also, because silicone allows for the molding of fine details as well as thick sections, it produces the most crisp, clean and well-defined lighting distributions available. Silicone optics paired with modern LED's allow the Autobahn to take full advantage of both technologies.

Same Light: Performance is comparable to 100 - 400W HPS roadway luminaires.

White Light: Correlated color temperature - 4000K, or optional 2700K, 3000K or 5000K, all 70 CRI minimum.

Unique IP66 rated LED light engines provided 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing. Available in Type II, III, IV, and V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated >100,000 hours at 25°C, L70. Electronic driver has an expected life of 100,000 hours at a 25°C ambient.

Lower Energy: Saves an expected of 40-60% over comparable HID luminaires.

Robust Surge Protection: Two different surge protection options provide a minimum of ANSI C136.2 10kV/5kA protection. 20kV/10kA protection is also available.

Luminaire ships with a 0-10v dimmable driver. Luminaire is continuous and step dimming capable via A0 option or controls installed on P7 photocontrol receptacle option.

MECHANICAL

Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easily leveling at installation.

Rugged die-cast aluminum housing and door are polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

Mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Provides a 3G vibration rating per ANSI C136.31

Wildlife shield is cast into the housing (not a separate piece).

CONTROLS

NEMA 3 pin photocontrol receptacle is standard, with the Acuity designed ANSI standard 7 pin receptacle optionally available.

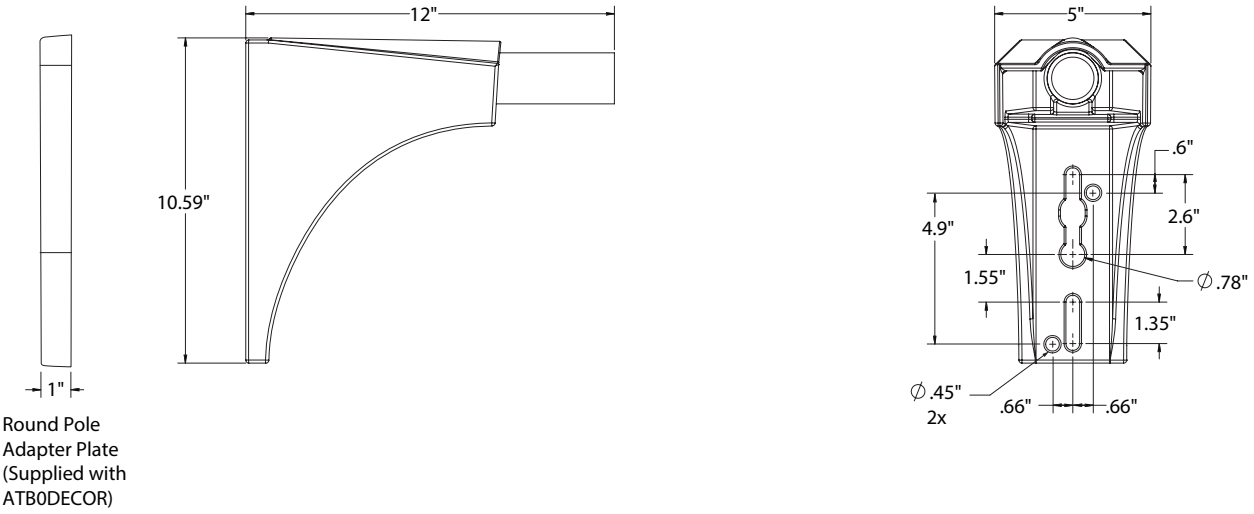
Premium solid state locking style photocontrol - PCSS (10 year rated life) Extreme long life solid state locking style photocontrol - PCLL (20 year rated life).

Optional onboard Adjustable Output module allows the light output and input wattage to be modified to meet site specific requirements, and also can allow a single fixture to be flexibly applied in many different applications.

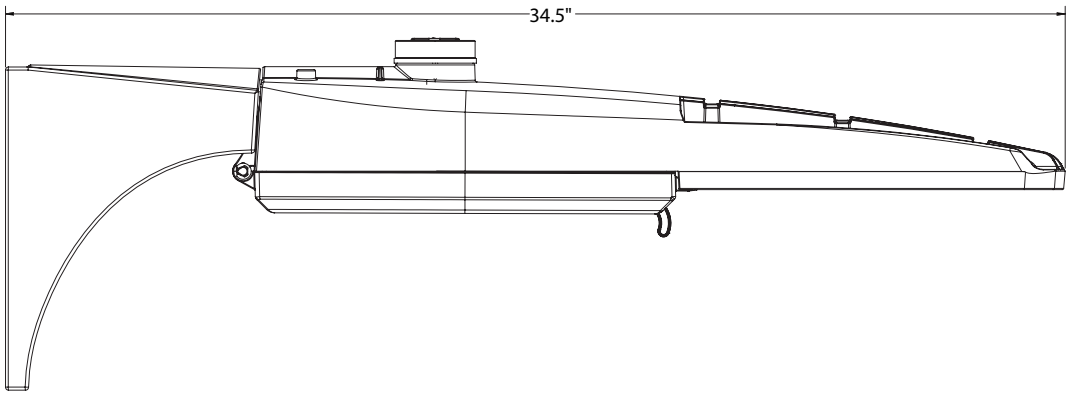
Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

American Electric Lighting

ATB Decorative Arms (Cast Aluminum)



Round Pole Adapter Plate (Supplied with ATB0DECOR)



Model	Weight	EPA
ATB0DECOS	6.5 lbs	0.30 ft²
ATB0DECOR	8.0 lbs	0.30 ft²
ATB0DECOS with ATB0 Luminaire	20.5 lbs	0.90 ft²
ATB0DECOR with ATB0 Luminaire	22.0 lbs	0.90 ft²

American Electric Lighting

AEL Headquarters, One Lithonia Way, Conyers Georgia 30012
www.americanelectriclighting.com Phone: 1-866-HOLOPHANE
Email: TechSupport-Lighting@AcuityBrands.com

Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

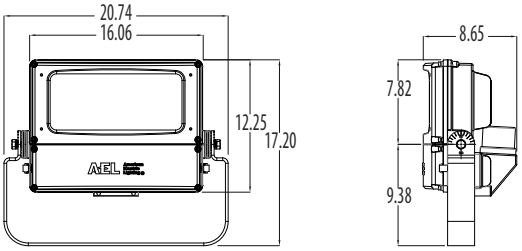
Please contact your sales representative for the latest product information.

ACP0LED Series
American Compact LED Floodlight

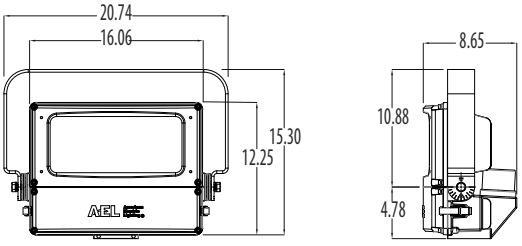
PRODUCT OVERVIEW

Applications:

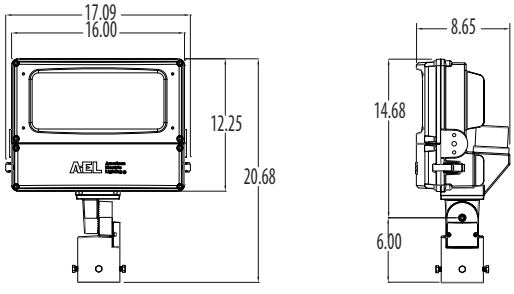
- Auto dealerships
- Schools
- Churches
- Industrial sites
- Shopping centers
- Parking lots
- Substations
- Building facades



YK/YG - Yoke Mount Luminaire EPA of 1.76 Ft² and max weight 30 lbs.



YE - Extended Yoke Mount Luminaire EPA of 1.76 Ft² and max weight 31 lbs.



TM/TS - Tenon Mount Luminaire EPA of 1.89 Ft² and max weight 28 lbs.

Features:

Mechanical

Low copper content die cast aluminum housings has integral heat sink fins to optimize thermal management through conductive and convective cooling. Bolted or optional stainless steel latch disengages electrical cover for easy access to LED driver, surge protection, and terminal block.

Luminaire is vibration rated to 3G per ANSI C136.31-2001 and rated IP66 per IEC60068-2-3.

Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5,000 hours exposure to salt fog chamber per ASTM B117.

Yoke shall be painted steel or galvanized steel. Knuckle mount shall be adjustable to fit 2-3/8 inch to 2-7/8 inch tenon.

Electrical

LED light engine is rated for > 100,000 hours at 25C, L70. Electronic driver has an expected life of 100,000 hours at a 25C ambient.

Robust surge protection: 20kV/10kA surge protection per ANSI C136.2 is the default, with 10kV/5kA surge optional.

Driver power factor is 90% minimum. Driver meets maximum total harmonic distortion (THD) of 20% and is ROHS compliant.

0-10V continuous dimming functionality is standard. Step dimming is available with the DALI driver option. Dimming control can be accomplished via AO, RSBOR options integrally or via photocontrol installed on P7 receptacle option.

Optical

Three multi-die LED's combined with highly specular reflectors provide superior field to beam ratios, uniformity, and spacing.

NEMA optical pattern choice of medium flood (4X4), flood (5x5) wide flood (6x6), and wide flood rectangle (6x5). The luminaire is available with 3000K, 4000K, and 5000K CCT with minimum CRI of 70.

Optional shielding available to control light trespass and uplight. Optical enclosure shall be glass lens.

Controls

3 pin and 7 pin rotatable NEMA photocontrol receptacles available.

Optional premium solid state locking- style photocontrol – DSS (10 year rated life).

Optional extreme long life solid state locking –style photocontrol – DLL (20 year rated life).

Optional onboard adjustable output module (AO) allows the light output and input wattage to be modified to meet site specific requirements.

Standards

Suitable for ambient temperature -40C to 40C.

UL/CUL Listed.

DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

GOVERNMENT PROCUREMENT — BAA – Buy America(n) Act: Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS

Catalog Number	
Notes	Type

WallConnect LED

Description
Perimeter, security and roadway underpass lighting requires excellent control and uniformity while minimizing light trespass and glare. The WCNG/WCNP WallConnect LED luminaires excel at this, requiring fewer luminaires to achieve required light levels in infrastructure, industrial and municipal applications. With energy cost reductions up to 77% and expected service life of over 20 years, WallConnect LED provides the latest lighting technology from the company that introduced the very first Wallpack to the market.

Optics
- The WCNG uses a borosilicate glass refractor lens and the WCNP uses a protective polycarbonate lens that covers the light engine's precision-molded proprietary silicone lenses.
- Type 3 Medium
- Type 4 Medium
- Type 4 Underpass

Mechanical
- The housing is constructed of die-cast aluminum and is fully gasketed for ease of maintenance
- Housing is completely sealed against moisture and environmental contaminants, IP66
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering.
- A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

Electrical
- Light engine(s) consist of 10-30 high-efficacy LEDs mounted to a metal-core circuit board and integral aluminum heat sink to maximize heat dissipation and promote long life
- The standard 0-10V dimmable electronic driver and optional XVOLT and DALI drivers have a power factor of >90%, THD <20%
- Zetashield driver (XVOLT option) is available for particularly challenging dirty power environments
- DALI dimmable driver supporting D4i is available as an option. Consult factory for custom programming.
- Adjustable output module (AO option) provides selectable lumens output control.
- Traditional button and twist lock photo controls are available as well as embedded dusk-to-dawn (DDC) and Local Connect (ALCB, ALCF, ALCC) and motion sensing controls (RSBOR).
- SPD: 20kV/10kA standard
- CCT: 2700K, 3000K, 4000K, 5000K
- CRI: 70CRI
- Integrated UL924 emergency backup option is available.

Installation
- Top, bottom, left and right side 1/2" threaded wiring access
- Back access through removable 1/2" knockout
- Feed-thru wiring can be achieved by using a condulet tee

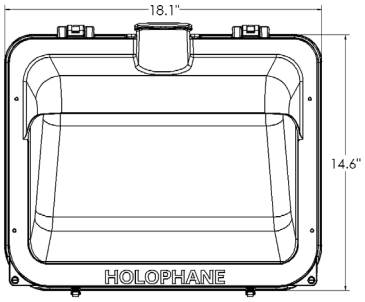
Certification and Standards
- UL listed for wet locations. Rated for -40˚C to 50˚C ambient, refer to page 4 for details
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21
- Luminaire designed and tested to comply with ANSI C136:31 for 100,000 cycles at 3.0G acceleration for bridges and overpasses
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check with the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

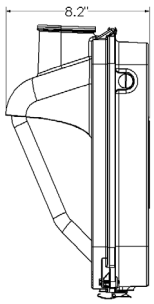
Government Procurement
BAA – Buy America(n) Act: Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.i

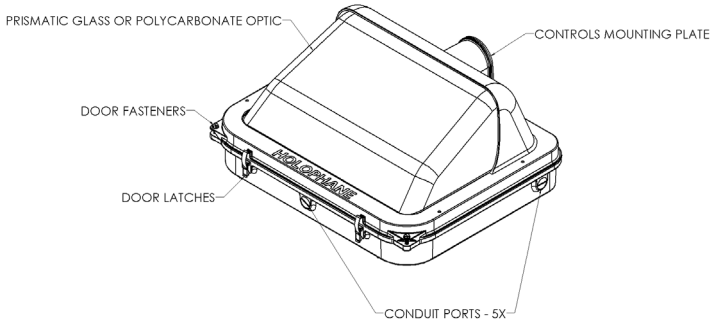
Warranty
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.

DIMENSIONAL DATA







WCNG Weight = 28.5 lbs
WCNP Weight = 22.5 lbs

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS

Catalog Number	
Notes	Type

Petrolux® LED Low Bay

Hazardous Location for Demanding Environments

PXLH

Description
- For demanding environments with lower mounting heights where dust, dirt and moisture are a concern.
- Certain airborne contaminants may adversely affect the functioning of LEDs and other electronic components, depending on various factors such as concentrations of the contaminants, ventilation, and temperature at the end-user location. Click here for a list of substances that may not be suitable for interaction with LEDs and other electronic components.

Optics
- Prismatic borosilicate glass directs light where needed and reduces harsh glare.
- Silicone rubber lens available that will not brown, chip, shatter or break.
- Four distributions (Type 5 low angle, Type 5 high angle, type 4 forward throw and Type 1 long and narrow) available to maximize versatility.
- Highly engineered LED system ensures superior uniformity and maximizes spacing.
- Lens assembly secured by stainless steel tamper-resistant Torx® T-20 screws.

Electrical
- Luminaire Surge Protection Level: Designed to withstand up to 10kV/5kA per ANSI C82.77-5-2015.
- 0-10V dimming driver is standard. Dims to 10%.
- 3000K, 4000K or 5000K CCT available.
- Fault-tolerant LED light engine continues to provide light even in the failure of one LED.
- Field Adjustable Output (AO) module - Onboard device that adjusts the light output and input wattage to meet site specific requirements. The AO module is preset at the factory to position number 8 (see chart on page 5).
- Integrated Bluetooth occupancy sensor: The SBG BTP is bluetooth enabled with dimming photocells. Allows you to change settings in the field using the VLP app.

Mechanical
- Super durable TGIC thermoset powder coat with corrosion resistant finish is a five-stage pre-treating and painting process that yields over 5,000 hours salt rating per ASTM B117.
- Robust cast aluminum housing with low copper content (0.6% CU content) withstands harsh or hostile environments.
- Universal mount high profile top cover (ceiling/pendant). Optional universal arm available for wall/stanchion. Other mountings include a high profile yoke mount.

Mechanical (cont.)
- Precise number of fins dissipate maximum amount of heat.
- Universal mount can be wall, stanchion, and angle mounted to accommodate a variety of arms.

Listings
- UL Listed to US and Canadian Standards.
- Suitable for use in hazardous locations (UL844, see chart on page 9)
  Class I, Division 2, Groups A, B, C, D
  Class II, Division 1, Groups E, F, and G
  Class II, Division 2, Groups F and G
  Class III
- Simultaneous presence (Class I Division 2, Class II Division 1 / Class II Division 2)
- Zone Equivalency Markings (See chart on page 10)
- -40°F (-40°C) to 149°F (65°C) (see chart on page 7)
- IP65, IP66 and IP67 rated. (see Option Value Ordering Restrictions & Notes on page 3)
- 1G vibration rated.
- NEMA 4X rated (see chart on page 9)
- Marine Rated (see chart on page 9)
- IK rated (see chart on page 5)
- DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Buy American Act
Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.

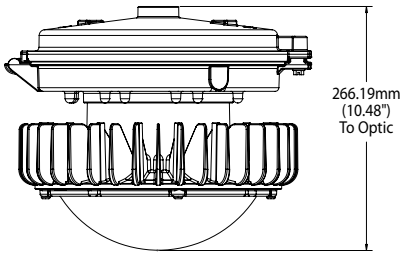
Typical Applications
- Petroleum refineries
- Ethanol facilities
- Chemical plants
- Power plants
- Textile mills
- Water and wastewater treatment facilities

Dimensions: *Inches (millimeters) unless otherwise noted.*
Diameter: 13.11 in. (332.99 mm.)
UNM Height: 11.43 in. (290.32 mm.)
PM Height: 10.48 in. (266.19 mm.)
Weight: 19 lbs. (8.62 Kg.)
Pallet Quantity: 12 fixtures
EPA: .787 ft^2

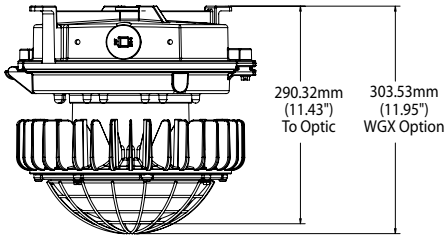
A+ Capable Luminaire
This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.
- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.
*See ordering tree for details

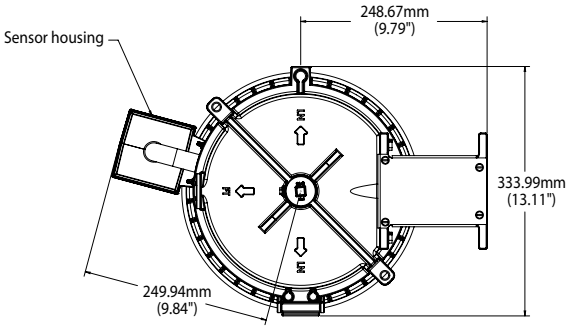
DIMENSIONAL DATA (continued)



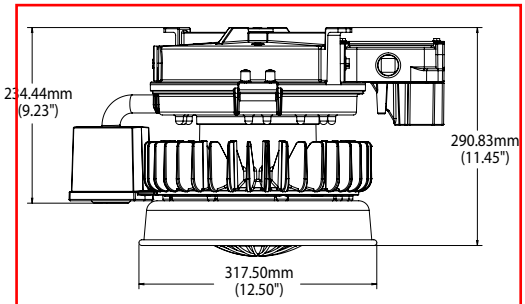
PENDANT MOUNT (PM)



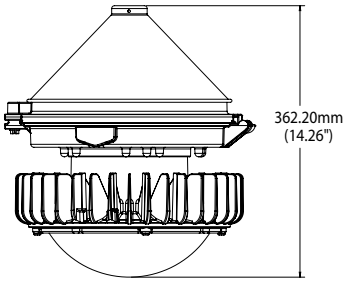
WIRE GUARD OPTION (UNM and WGX)



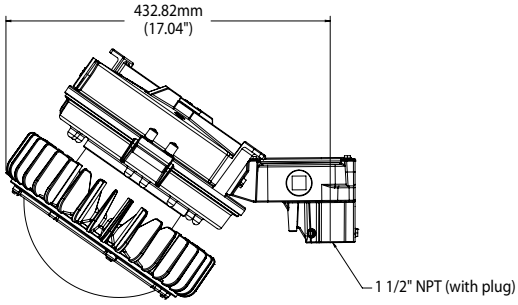
SENSOR OPTION (UNM and P3US)
(P3US ordered separately)



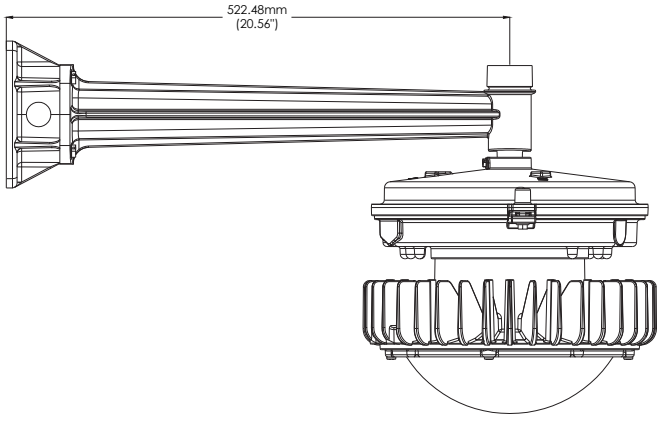
UPLIGHT SHIELD OPTION
(UNM, P3US, SENSOR and UPS)
(P3US ordered separately)



PENDANT CONE ACCESSORY (PM and PC)



UNIVERSAL MOUNTING (UNM and P3US35)
(P3US35 ordered separately)



072331 SUBSTATION ARM (PM) - AVAILABLE AS DOWN ORIENTATION ONLY

City of Oak Creek – Conditional Use Permit (CUP) Amendment
Conditions and Restrictions

Applicant: Wisconsin Electric Power Co.

Recommended for approval by Plan Commission: 1-14-25
Approved by Common Council: TBD
Res No. TBD

Property Address: 4431, 4451, 4503, 4513, 4541, 4541, 4651, 4751, and 4801 E. Oakwood Rd., 4401 E. Elm Rd., 10640, 10770, 10800, 10900, 10920, 10940, 11002, 11002R, 11050, 11050R, 11060 S. Chicago Rd.

Tax Key Number(s): 963-9001-000, 963-9002-000, 963-9003-000, 963-9995-001, 963-9997-001, 963-9998-001, 963-9998-002, 963-9999-003, 963-9999-004, 964-9999-001, 965-9999-001, 966-9997-000, 966-9998-001, 966-9999-002, 967-9000-001, 967-9989-002, 967-9990-001, 967-9990-002, 967-9992-001, 967-9993-000, and 967-9999-003

Conditional Use(s): Major Utility

1. REQUIRED PLANS, EASEMENTS, AGREEMENTS AND PUBLIC IMPROVEMENTS

   A. All requirements of the City of Oak Creek Municipal Code, as amended, are in effect**.**

   B. Any plans for new buildings, additions, exterior remodeling, site modifications, and landscaping shall be submitted to the Plan Commission for their review and approval prior to the issuance of any building permits. The approval of the Conditional Use, along with these Conditions and Restrictions, does not constitute approval of a site plan and architectural review. A separate site plan and architectural review approval will be required.

   C. For any new buildings, additions, structures, and site modifications, site grading and drainage, stormwater management, and erosion control plans shall be submitted to the City Engineer for approval, if required. The City Engineer's approval must be received prior to the issuance of any building permits.

   D. A Development Agreement shall be completed between the owner(s) and the City if deemed necessary by the City Engineer so as to ensure the construction or installation of public or other improvements required, and/or as specified by these Conditions and Restrictions.

   E. All new electric, telephone and cable TV service wires or cable shall be installed underground within the boundaries of this property.

2. SITE & USE RESTRICTIONS, MAINTENANCE & OPERATION REQUIREMENTS

   A. Only the uses approved in accordance with these Conditions and Restrictions is allowed. Other uses permitted by the zoning district, in accordance with other applicable Sections of the City of Oak Creek Municipal Code and these Conditions and Restrictions, are also allowed.

   B. This major utility's hours of operation shall be 24 hours a day, seven (7) days a week, 365 days a year.

   C. Any change to the occupancy of the site or building shall conform to all Building, Fire, and Municipal Code requirements (as amended).

D. Removal of snow from off-street parking areas, walks, public sidewalks, private roads and access drives shall be the responsibility of the landowner(s).

3. BULK AND DIMENSIONAL STANDARDS

Bulk and dimensional standards shall comply with Chapter 17, Article III of City Municipal Code (as amended)

4. PARKING AND ACCESS

A. Parking for this development shall be provided in accordance with Sections 17.0501, 17.0502, & 17.0503 of the Municipal Code (as amended).

5. LIGHTING

Any plans for new or replacement outdoor lighting shall be reviewed and approved by the Plan Commission and Electrical Inspector in accordance with Section 17.0509 of the Municipal Code (as amended).

6. SIGNAGE

A permit shall be required prior to the display, construction, erection, or alteration of any proposed sign(s). All signs must comply with Chapter 17, Article VI of the City Code and applicable sections of the building code as adopted by the City. (as amended)

7. PERFORMANCE STANDARDS

The use must comply with performance standards as stated in Section 17.0510 of Municipal Code (as amended)

8. TIME OF COMPLIANCE

The operator of the Conditional Use amendment shall commence work in accordance with these Conditions and Restrictions within twelve (12) months from the date of adoption of the resolution authorizing this Conditional Use amendment. This Conditional Use amendment approval shall expire within twelve (12) months after the date of adoption of the resolution if building or occupancy permits have not been issued for this use.

9. OTHER REGULATIONS

Compliance with all other applicable City, State, DNR and Federal regulations, laws, Code, ordinances, and orders, as amended, not heretofore stated or referenced, is mandatory.

10. VIOLATIONS & PENALTIES

Any violations of the terms of this Conditional Use Permit amendment shall be subject to enforcement and the issuance of citations in accordance with Section 1.20 of the City of Oak Creek Code of Ordinances (as amended). If the owner, applicant or operator of the Conditional Use Permit amendment is convicted of two or more violations of these Conditions and Restrictions or any other municipal ordinances within any 12-month period, the City shall have the right to revoke this

Conditional Use Permit amendment, subject to the provisions of Paragraph 11 herein. Nothing herein shall preclude the City from commencing an action in Milwaukee County Circuit Court to enforce the terms of this Conditional Use Permit or to seek an injunction regarding any violation of this Conditional Use Permit amendment or any other City ordinances.

11. REVOCATION

Should an applicant, their heirs, successors or assigns, fail to comply with the Conditions and Restrictions of the approval issued by the Common Council, the Conditional Use Permit amendment approval may be revoked. The process for revoking an approval shall generally follow the procedures for approving Conditional Use Permit amendment as set forth in Section 17.0804 of the Municipal Code (as amended).

12. ACKNOWLEDGEMENT

The approval and execution of these Conditions and Restrictions shall confirm acceptance of the terms and conditions hereof by the owner, and these Conditions and Restrictions shall run with the property unless revoked by the City, or terminated by mutual agreement of the City and the owner, and their subsidiaries, related entities, successors and assigns subject to Paragraph 11 above.

Except as expressly amended herein, all of the terms of the Conditional Use Permit and Conditions and Restrictions as originally approved in 2003 through Ordinance No. 2251 shall remain in full force and effect without modification.

_____ _____

Property Owner / Authorized Representative Signature Date

_____

(please print name)