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Professional Consulting and Expert Advisory Services  
for Conceptual Review and Evaluation of the  
***“Port NOLA LIT Development Project Impacts  
Regarding W. Smith Jr. Elementary School  
St. Bernard Parish, Violet, Louisiana”***



*Source: Port NOLA Published LIT Construction Phasing Diagrams*

**January 3, 2025**

EVALUATION AND CONSULTING ADVISORY REPORT PREPARED FOR  
***ST. BERNARD PARISH DISTRICT ATTORNEY /  
ST. BERNARD PARISH SCHOOL BOARD ATTORNEY***

***CONFIDENTIAL AND PROPRIETARY***

## TABLE OF CONTENTS

<b>REVIEW AND CONCEPTUAL EVALUATION REPORT COVER PAGE.....</b>	<b>1</b>
TABLE OF CONTENTS .....	2
REVIEW AND EVALUATION PREAMBLE.....	3
REPORT PURPOSE AND OBJECTIVES .....	3
RECENT HISTORICAL BACKGROUND AND GENERAL CONTEXT.....	3
PRELIMINARY INJUNCTION REVIEW AND EVALUATION REPORT FOCUS.....	4
AUTHOR SUMMARY QUALIFICATIONS AND RELATED EXPERIENCE.....	5
DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT.....	6
<b>PART A - LIT PROJECT AND SMITH ELEMENTARY SCHOOL BACKGROUND.....</b>	<b>7</b>
PONO PUBLISHED LIT TERMINAL LAYOUT FOOTPRINT CHARACTERISTICS.....	8
W. SMITH JR. ELEMENTARY SCHOOL OVERVIEW.....	10
PONO PLANS FOR RELOCATION OF THE SMITH ELEMENTARY SCHOOL.....	12
<b>PART B - ENVIRONMENTAL CONSIDERATIONS FOR SCHOOL SITING CRITERIA...14</b>	
U.S. ENVIRONMENTAL PROTECTION AGENCY ENGAGEMENT.....	14
U.S. EPA SCHOOL SITING GUIDELINES CRITERIA.....	15
EPA SCHOOL SITING GUIDELINES - EXHIBIT 5.....	16
EPA SCREENING ENVIRONMENTAL, PUBLIC HEALTH AND SAFETY - EXHIBIT 6...20	
EVALUATION OF LIT ENVIRONMENTAL AND SOCIAL JUSTICE IMPACTS.....	21
PORT AND INTERMODAL RELATED POLLUTANTS AND HEALTH HAZARDS.....	22
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA).....	23
DEFINING COMMUNITY STAKEHOLDER GROUPS.....	23
<b>PART C – REPORT FINDINGS AND RECOMMENDATIONS.....25</b>	
PORT NOLA LIT TERMINAL DEVELOPMENT AND CONSTRUCTION TIMELINE.....	25
LOCATION OF SMITH ELEMENTARY SCHOOL RELATIVE TO THE NEW LIT OPERATIONAL TERMINAL FOOTPRINT .....	26
PORT NOLA AIR QUALITY IMPACTS AND MITIGATION FOR ALL LIT PHASES.....	28
SMITH ELEMENTARY SCHOOL OPERATING PROXIMITY TO LIT TERMINAL.....	28
REPORT GENERAL FINDINGS AND RECOMMENDATIONS SUMMARY OVERVIEW....	28

## **REVIEW AND EVALUATION PREAMBLE**

The St. Bernard District Attorney and St. Bernard School Board Attorney, representing the St. Bernard School Board and herein after referred to as the “St. Bernard School Board” executed an Expert Witness – Professional Consulting and Advisory Services engagement agreement with Vickerman & Associates LLC (hereinafter referred to as V&A) on July 24, 2024, based on the V&A Proposal and Agreement letter to the St. Bernard School Board dated June 24, 2024.

Vickerman & Associates Expert Witness Proposal and Agreement letter for Professional Consulting and Advisory Services covered the preparation of a preliminary report with cursory analysis and findings for the **Port NOLA Proposed LIT Violet container terminal project development layout and siting, and an overview of the potential conflicts and impacts directly associated with the W. Smith Jr. Elementary School location and safe operation** for the proposed Louisiana International Terminal (referred to as LIT) container and intermodal rail development in St. Bernard Parish, Violet, LA.

## **REPORT PURPOSE AND OBJECTIVES**

The purpose and objectives of this report is to provide the St. Bernard School Board with a third-party expert professional opinion and professional opinion review, and conceptual evaluation, of the “Port NOLA Violet Container and Intermodal Rail Terminal project layout, siting and the conflict impacts associated with the W. Smith Jr. Elementary School location and the school’s safe health risk operation relative to the Port NOLA LIT development.

## **RECENT HISTORICAL BACKGROUND AND GENERAL CONTEXT**

The St. Bernard Parish district attorney in his capacity as the St. Bernard School Board Attorney has sued the Port of New Orleans in state court, alleging that the port’s planned \$1.8 billion international container facility should be blocked on jurisdictional and proven significant public health risks grounds to school students, parents, teachers and the general public. The District Attorney filed a legal challenge August 4, 2024, in the 34<sup>th</sup> Judicial District Court on behalf of the St. Bernard Parish School Board, arguing that Port NOLA lacks jurisdictional authority to develop the LIT container, intermodal rail and logistics center in the Violet Louisiana area. The lawsuit alleges that state legislation passed in 1992, blocked Port NOLA’s legal authority to operate in St. Bernard Parish and sought for a permanent injunction to bar the development of this green-field Mississippi River 1,200-acre container port logistics center development project.

Additionally, acting as the St. Bernard Parish School District Attorney, the District Attorney for St. Bernard Parish is currently seeking a preliminary injunction to halt the development process, construction, and operation of the LIT Port NOLA Terminal Project due to a direct conflict associated with the Smith Elementary School property proximity location to the Port NOLA LIT Terminal footprint and therefore a posing a significant health risk for all Smith Elementary School occupants and visitors.

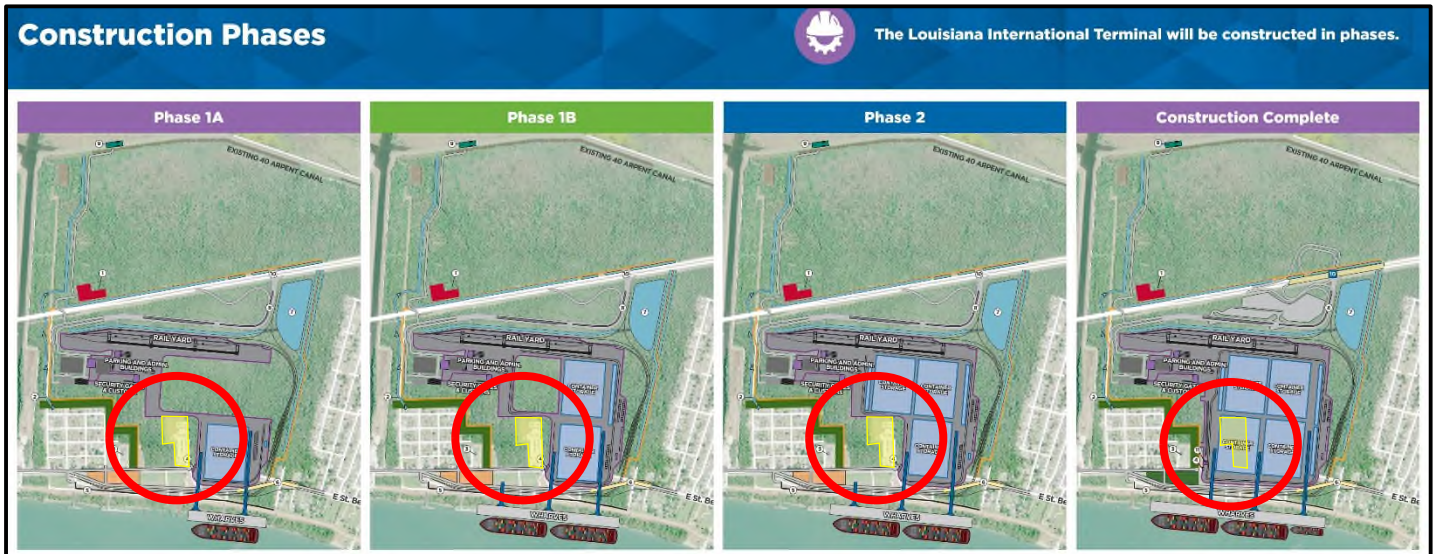
The elementary school is in the central core development area of the Port NOLA LIT Port terminal layout and can be seen in Port NOLA’s phasing diagrams for Phase 1A, Phase 1B, Phase 2 of the project. Within the Final Full Build Out Phase boundary of the project the elementary school location has been deleted in its entirety and use of the land for the last LIT Port Terminal container storage operational area. Please refer to the following Port NOLA Official Project Construction Phasing Diagrams. The red circle in the graphic encompasses the operating boundary of Smith Elementary School operations.

According to the St. Bernard Lawsuit, the cooperative endeavor agreement used by Port NOLA to operate in St. Bernard Parish is understood to be invalid due to current Louisiana State Law.



Conceptual Evaluation and Consulting Advisory Services -  
“Port NOLA LIT Development Project Impacts Regarding  
W. Smith Jr. Elementary School, St. Bernard Parish, Violet, LA”  
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Port NOLA removed the case to the federal court arguing the federal permitting process supersedes Louisiana State Law, however the federal judge disagreed and issued a ruling allowing the case to proceed in State Court.



**PROJECT PRELIMINARY INJUNCTION REVIEW AND CONCEPTUAL EVALUATION REPORT FOCUS:**

The focus of this expert witness consulting and advisory services effort is to provide the St. Bernard Parish School District and the St. Bernard Parish School Board Attorney with an expert professional opinion of the project development as envisioned by the Port NOLA USACE Permit Application documentation and Port NOLA public statements for the Violet LIT Container and Intermodal Terminal project and the adjacent safe operation and full continuing function of the existing Smith Elementary School Complex operations located in Violet, LA.

The expert witness professional services and associated work task elements in this report were envisioned to be completed by the, yet to be scheduled, preliminary injunction court hearing. Recently the case has been remanded back to the Louisiana State Court. A new hearing date has not yet been established.

This report review and conceptual evaluation report will cover the following key Project topical areas, characteristics, and factors all in support of the St. Bernard District Attorney injunction proceedings representing the St. Bernard Parish School Board.

This review and evaluation report analysis will include the following **GENERAL INVESTIGATION AND RESEARCH TOPICS:**

- A. APPARENT LIT AND W. SMITH JR. ELEMENTARY SCHOOL PORT TERMINAL DEVELOPMENT CONFLICTS AND MAJOR CONCERNS** including hazardous environmental airborne pollution issues, terminal noise, suitable view corridors and other operational concerns. This analysis will also include concerns for adjacent ocean carrier vessel and terminal equipment operations including particulate matter (pm) stack exhaust of contaminated diesel emissions and industry recognized and associated critical health issues related thereto.
- B. OVERALL PORT NOLA LIT TERMINAL SITE PLAN LAYOUT AND SITE SELECTION AND GEOMETRY EVALUATION** of the proposed Port NOLA Violet Container Terminal deleteriously impacting the safe operations of the W. Smith Jr. Elementary School in St. Bernard Parish.



**C. IDENTIFICATION AND COMPARISON TO OTHER RELEVANT AND RELATED NORTH AMERICAN PUBLIC PORT TERMINAL DEVELOPMENT CRITERIA.** This review and conceptual evaluation report will also evaluate alternative terminal layouts and potential development sites in the vicinity of the Port NOLA LIT Violet Container Terminal site and applicable other terminal site plan geometries and configurations by Port NOLA that may have superior characteristics and benefits for the W. Smith Jr. Elementary School.

**D. REVIEW AND CONCEPTUAL EVALUATION OF LIT DEVELOPMENT PROJECT ENVIRONMENTAL AND SOCIAL JUSTICE** project impact issues on the current Smith Elementary School site related to air pollution, water pollution, light and noise pollution, terminal and river vessel operations and potential inequitable distribution of project planned benefits and associated community burdens.

Today’s modern environmental and social justice built-environment principles are founded on the social pillars of human rights, equity, participation, and access. When a society is just, everyone is respected, supported, and protected. Achieving environmental and social justice is not easy as there are many complex and overlapping issues that are required to be addressed and evaluated.

Related port and intermodal rail terminal development issues include, but are not limited to, climate change impacts, sea, and river level rise. Today, many factors drive climate change, multiple land and river uses such as agriculture, river commerce and logistics operations, energy distribution, offshore drilling, fracking, public and private transportation, and many more salient issues. However, despite decades of warnings and serious events like drought and hurricanes, fossil fuel emissions have generally not improved dramatically.

As argued by the current U.S. DOT, environmental and social justice communities often experience stressors beyond health disparities such as neighborhood disinvestment, income inequality, public safety concerns around truck routes and rail crossings, and coastal-related threats from extreme weather events and climate change.

**E. EXPERT PROFESSIONAL OPINION AND PREPARATION OF A PRELIMINARY REVIEW AND CONCEPTUAL EVALUATION REPORT FINDINGS.** This task will provide initial preliminary expert review and conceptual evaluation analysis, for the planned Port NOLA LIT proposed project and injunction hearing yet to be scheduled.

### **AUTHOR SUMMARY QUALIFICATIONS AND RELATED EXPERIENCE**

John Vickerman is the author of this Review and Evaluation Report and is the President of Vickerman & Associates, LLC, a firm specializing in the planning and design of port, intermodal rail, and freight logistics facilities worldwide. John has worked on major port and intermodal rail projects throughout North America and the world for more than 45 years. Mr. Vickerman was the Principal-In-Charge and/or Project Manager for **67 of the 90 North American deep-water general cargo container intermodal port strategic master development plans.**

Mr. Vickerman’s international experience includes work for major Canadian Ports, the Ports of Rotterdam and Hong Kong, the intermodal freight analysis for Eurotunnel (the Chunnel between England and France) for British Rail (Rail Freight Distribution), as well as port strategic master planning projects in Panama, Honduras, Australia, Brazil, and emerging new Transshipment port projects in Indonesia.

John Vickerman is both a licensed Professional Civil Engineer and registered Architect in 22 states. Mr. Vickerman holds a master’s degree in Structural Engineering and Structural

Mechanics from the University of California, Berkeley, and a Bachelor of Science Degree in Architectural Engineering from California Polytechnic State University in San Luis Obispo, California.

The author retired as a U. S. Navy Captain in the Civil Engineer Corps of the United States Naval Reserve after 38 years of continuous service primarily focusing on U.S. Navy facility planning and design projects, many in the marine terminal environment.

John’s port planning and design experience includes the preparation of many Louisiana centric Strategic Port Master Plans and Port Development projects for the lower Mississippi River and Southeastern Louisiana. John was the Principal-In-Charge and/or Project Manager for the following major Louisiana centric Strategic Port Planning projects in the lower Mississippi River region:

Port NOLA – Port of New Orleans - **Port-Wide Strategic Master Plan - Phase II** (2017 – 2019)  
Port NOLA - Port of New Orleans – **“Millennium Port” Strategic Planning Study**  
Port NOLA - Port of New Orleans – **West Bank Port Development Strategic Planning**  
**“CHANGING COURSE” International Competition Finalist** – Future of the Lower MS River Delta  
Port of Plaquemines Parish - **Comprehensive Port Strategic Master Plans** (2009 – 2017)  
**Louisiana International Gulf Transfer Terminal (LIGTT) - Port Commission - General Consultant**  
**Houma Navigation Canal (HNC) Lock Complex (TE-113) Navigation Study - Terrebonne Parish**  
**Calcasieu Ship Channel Salinity Control Measures (CS-065) – Navigation Feasibility Study**  
Port of Baton Rouge – **Strategic Port Master Plan**  
Port of South Louisiana – **Strategic Port Master Plan**

#### **DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT**

John Vickerman has relied on his personal professional knowledge, prior container and intermodal rail port planning, design and operational project experience, and his Subject Matter Expert (SME) experience and direct marine industry expert knowledge in the preparation of this report. Mr. Vickerman has independently obtained and reviewed information from various public sources regarding the parties involved in this review and evaluation analysis and the North American container shipping and logistics industry in general.

This report contains, among other things, Mr. Vickerman’s professional opinion regarding an evaluation of the proposed Louisiana International Terminal (LIT) Critical Development Issues Overview Report commissioned by St. Bernard Parish to identify significant detrimental concerns with the Port of New Orleans (PONO) proposed LIT Container and Intermodal Rail Terminal in Violet, LA, and the project development attributes according to the information submitted to the U.S. Army Corps of Engineers (USACE) in support of the Port NOLA project permit application submittal. Please refer to the report titled:

**“PROPOSED PONO LOUISIANA INTERNATIONAL TERMINAL (LIT) CONTAINER TERMINAL, VIOLET, LA CRITICAL DEVELOPMENT ISSUES OVERVIEW REPORT”**  
dated September 10, 2023 (17 pages).

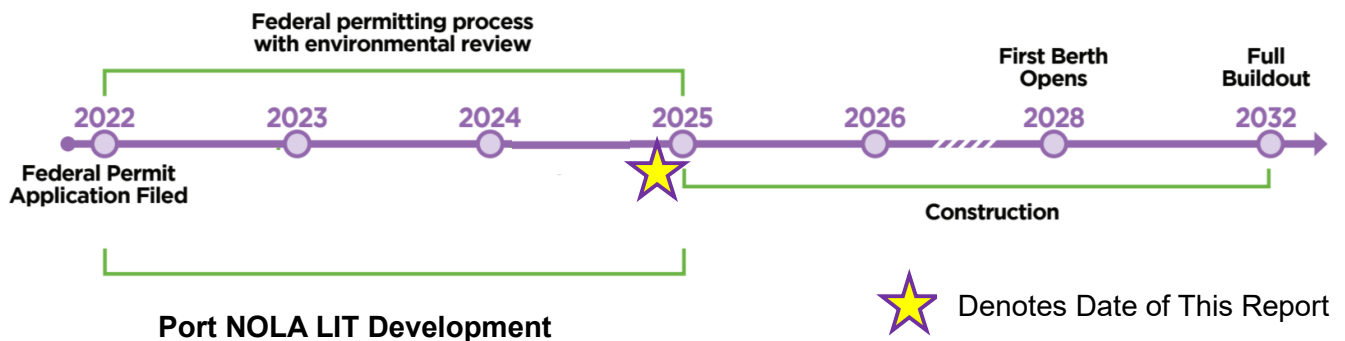
When facts and data from reference documents are cited, the report author has attempted to independently confirm applicability and accuracy with information from previous industry experience and other relevant industry data and information. When referenced documents are used in this report, the author has independently analyzed the parameters, assumptions and methodologies used in the referenced source to ensure the resulting conclusions and figures are accurate and dependable to the best of his professional ability.

### PART A – LIT PROJECT AND SMITH ELEMENTARY SCHOOL BACKGROUND

Port NOLA proposed LIT development is located south of the Violet Canal and west of the E. Judge Perez Drive roadway in Violet, Saint Bernard Parish, Louisiana as depicted in the following LIT vicinity map.



The Port NOLA anticipated LIT Development Timeline is illustrated below:





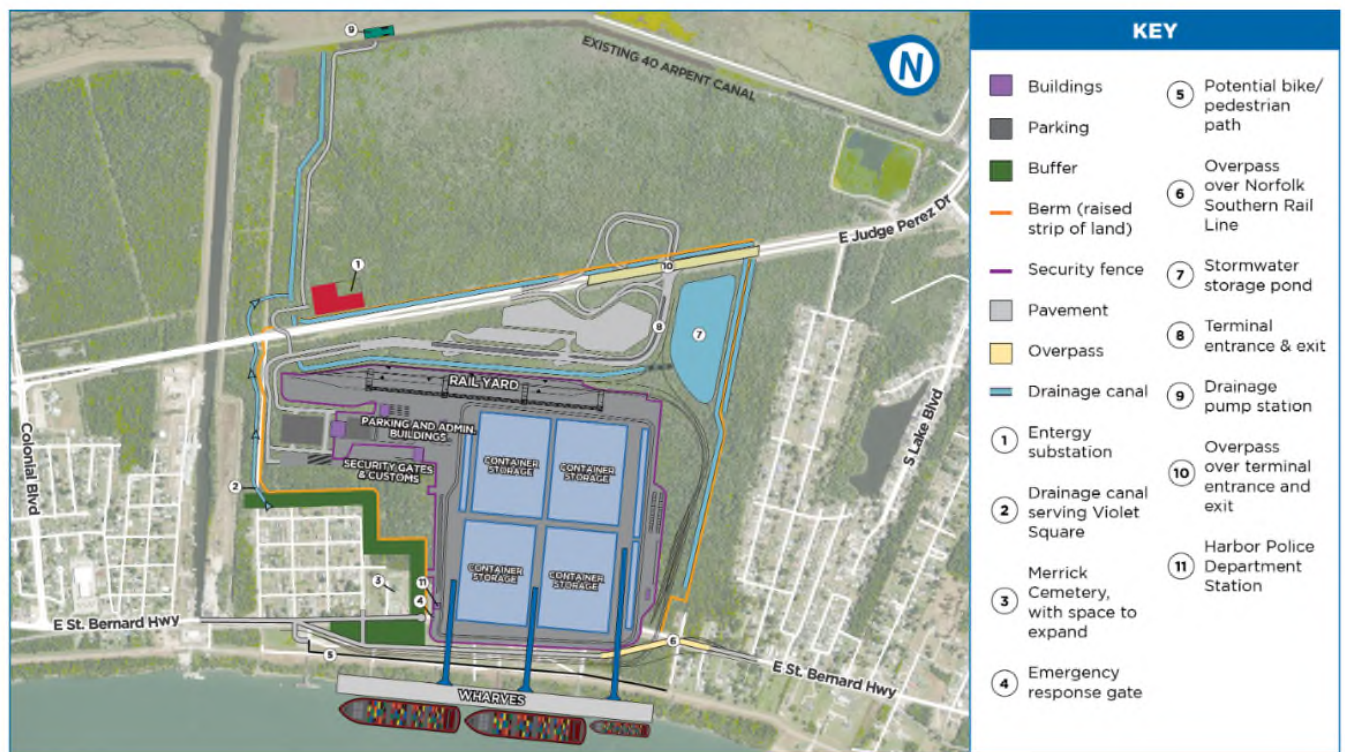
**PORT NOLA PUBLISHED LIT TERMINAL LAYOUT FOOTPRINT CHARACTERISTICS**

The following data and information were published by the Port NOLA and submitted to the U. S. Army Corps of Engineers for permit evaluation and analysis purposes.

The Port of New Orleans has purchased over **1,200 acres of land in Violet, LA**. The Port expects to use approximately 400 acres for the future container terminal, related infrastructure, and buffer areas.

The Port NOLA reports that the proposed terminal layout is still under development. This most recent draft reflects valuable community input. An earlier version rerouted E St. Bernard Highway around the property. According to the Port NOLA’s engineering team the design of the latest proposed new LIT layout keeps the highway along the river.

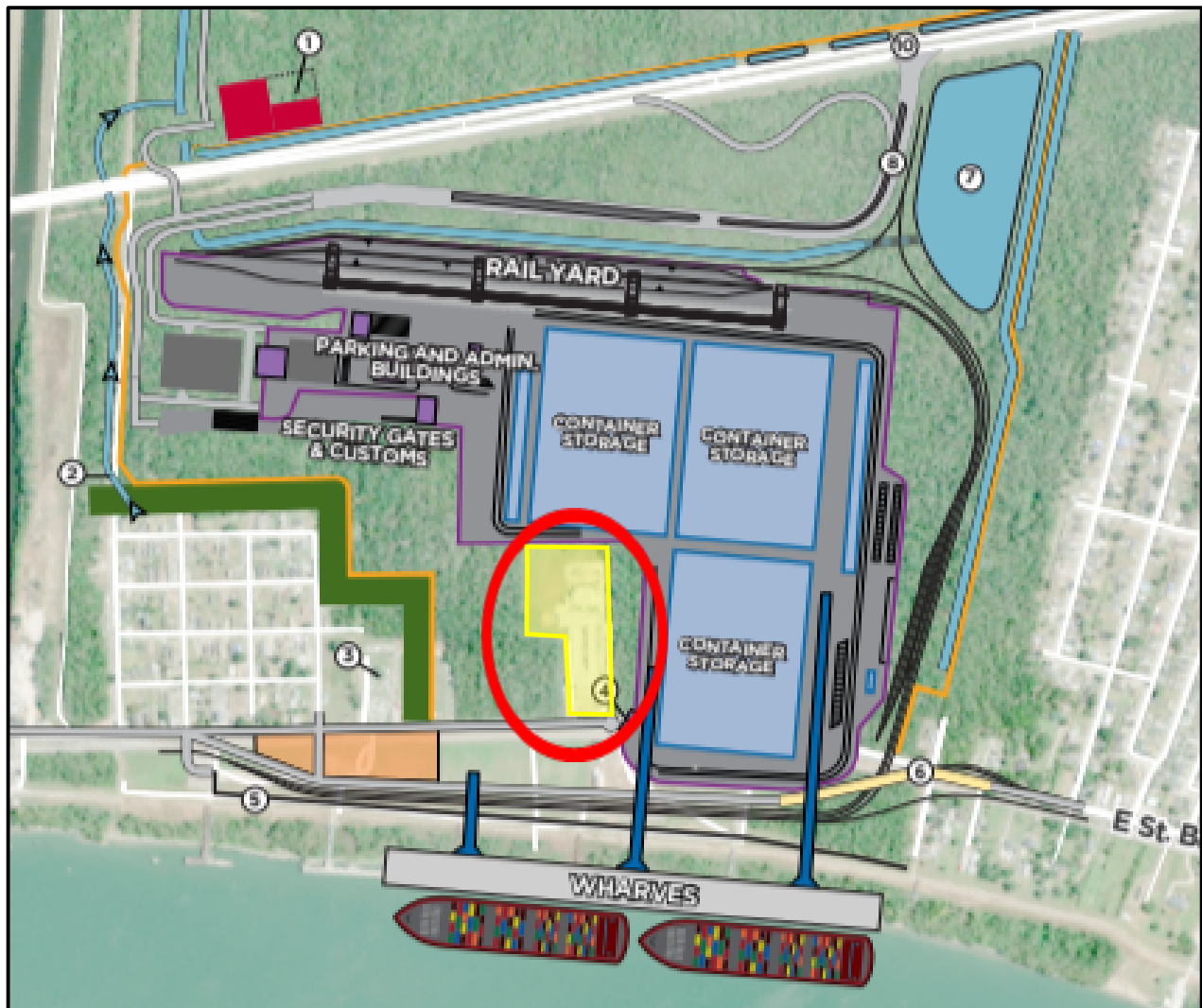
**Port NOLA has indicated that the terminal layout will continue to be a “work in progress” throughout the entire environmental review process.** Port NOLA stated that environmental study results, community input, and the terminal operator’s needs will guide ongoing LIT improvements.



Please notice that the Smith Elementary School location and approximate operational perimeter is not shown on the above **“CONSTRUCTION COMPLETE”** Phase of the Port NOLA – U.S. Army Corps of Engineer submitted LIT permit plans.

The new container terminal will occupy 400 acres and include 3,600 feet of river berth space. The LIT first phase construction is targeted to open in 2028 and will have a capacity of approximately 600,000 containers of annual throughput. The LIT development site is protected from storm surges by reinforced federal levees as part of the US Army Corps of Engineers Hurricane & Storm Damage Risk Reduction System (HSDRRS).

An enlarged view of the **Port NOLA LIT Phase Two Terminal Plan** (after Phase 1A and Phase 1B completion but before the Final Construction Phase is completed) is shown below for reference.



The **red circle** illustrated above generally encompasses and depicts the extent of the physical and operational footprint for the W. Smith Jr. Elementary School. Note that on the previous page, the Final Port NOLA LIT Terminal Plan (Full Build-out, Construction Complete Phase) does not include any element of the existing operational Smith Elementary School footprint.

The Final Port NOLA LIT development after the **Construction Phase** is illustrated below:

Again, the **red circle** depicts the approximate location of the current Smith Elementary School physical and operational footprint location completely within the LIT Terminal facilities boundary footprint.

The Port NOLA U.S. Army Corps of Engineers website calls for “**Fund construction of a New School and Park within the Violet community.**”





### **PORT NOLA PLANNED LIT CONTAINER THROUGHPUT**

As discussed by the Port NOLA, a container terminal serves as a transportation hub for containerized cargo that is being imported and exported. At the opening of the LIT Terminal, Port NOLA anticipates the terminal will accept between **180,000 – 280,000 containers in the first year**. The number of containers traveling through the terminal will grow over time as the terminal is built. Port NOLA estimates it may take 25 years to reach the terminal’s maximum annual capacity, which is **1.2 million containers (2 million TEU) per year in the year 2032**.

The terminology used by the Port NOLA uses the acronym “TEU” in the annual LIT Terminal throughput capacity, which as Port NOLA explains means a “twenty-foot equivalent unit.” This refers to 20-foot-long International Standards Organization (ISO) containers, a standard unit of measure used in modern container shipping. Today, 40-foot shipping containers are most common. One 40-foot container equals approximately two “TEUs.”

Currently, Violet Park and Smith Elementary School are located **within the proposed LIT Terminal footprint**. Port NOLA reportedly is committed to funding and supporting the relocation of the park and Smith Elementary School within Violet, LA as a part of its public statements provided to the U.S. Army Corps of Engineers.

### **W. SMITH JR. ELEMENTARY SCHOOL OVERVIEW**

The St. Bernard Parish Public School District is one of the top performing districts in the State of Louisiana for both student achievement and teacher effectiveness. With a tradition of academic excellence, extracurricular achievements, and state-of-the-art facilities, St. Bernard Parish schools prepare all students to excel in college and careers.





The W. Smith Jr. Elementary School is located at 6701 East St. Bernard Highway, Violet, LA. The Mission Statement for W. Smith Jr. Elementary School is: “We believe in hard work, respect, and accountability in a positive environment that creates successful citizens.” The student body is Pre-K to 5<sup>th</sup> grade. The school year consists of 180 days. Regulations specified by the St. Bernard School Board of Elementary and Secondary Education require elementary school students to be in attendance a minimum of 166 days to be eligible for promotion. School session dismissal time is typically 2:30 p.m. The St. Bernard Parish School Board requires that all students adhere to its adopted school uniform. Typically, St. Bernard Parish elementary students receive breakfast and lunch without cost.

After Hurricane Katrina, the St. Bernard Parish School Board quickly began the process of repairing and replacing its heavily damaged schools. Smith Elementary was the first FEMA-funded new construction project to be undertaken in the state of Louisiana after the storm. The demolition of the existing structure and new construction of an **87,200 sq. ft. elementary school** including playground areas was completed in under a year to allow students to begin the school year in the revitalized facility.

W. Smith, Jr. Elementary School is a 2008 reconstructed structure on an existing school site that was affected by Hurricane Katrina. Along with another St. Bernard Parish School, it was the first new construction municipal building in Louisiana post-Katrina. The project consisted of reconstructing from the ground up a state-of-the-art, technology-rich institution of learning that provided 61,000 sq. ft. of new school classrooms and support facilities and a 7,200 sq. ft. new cafeteria. In addition, the project incorporated a 19,000 sq. ft. gymnasium to be utilized for athletics and as an auditorium for school functions. The building construction was designed to be more hurricane resistant than the original and consisted of structural steel and glazed Concrete Masonry Blocks (CMU-block), metal roofing, interior gypsum board and acoustical ceilings. There were also new fireproof doors installed on the exterior of the building at all of the entranceways and all exits.

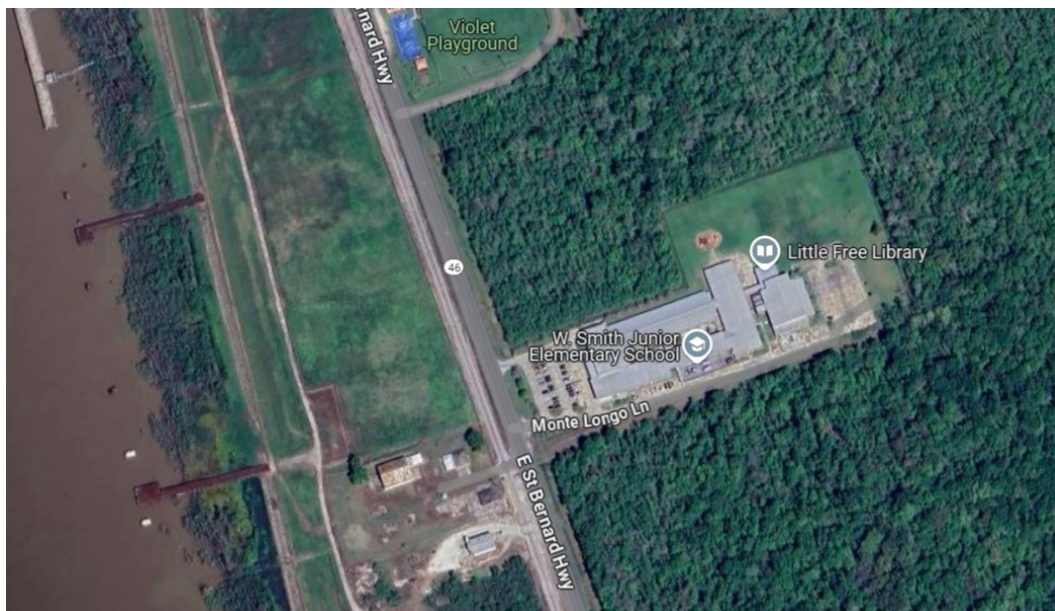


W. Smith Jr. Elementary School is a public school located in Violet, LA, and is located in a fringe rural setting, please refer to red pin school rural location map below.



The student population of W. Smith Jr. Elementary School is 324 and the school serves a PreK-5 grade student population . At W. Smith Jr. Elementary School, 27% of students scored at or above the proficient level for math, and 27% scored at or above that level for reading. The school’s minority student enrollment is 92%. The student-teacher ratio is 14:1, which is better than that of the district as a whole. The student population is made up of 49% female students and 51% male students. **The school enrolls 75% economically disadvantaged students.** There are 22 equivalent full-time teachers and 1 full-time school counselor.

The following is an aerial view of the existing W. Smith Elementary School, in Violet, LA:





## PORT NOLA PLANS FOR RELOCATION OF THE SMITH ELEMENTARY SCHOOL COMPLEX




Port NOLA has stated publicly that it owns the property around W. Smith Jr. Elementary School, and the school is entirely located inside the proposed LIT Terminal operating footprint. Port NOLA has identified two potential locations for the **development of a new W. Smith Jr. Elementary School Campus (Site “A” 13.6 acres and Site “B” 20 acres)**. Please refer to the above two alternative relocation/reconstruction sites proposed by the Port NOLA for the reconstruction of the W. Smith Jr. Elementary School in the final phase of the LIT Development.


The following additional statements have been made publicly by Port NOLA regarding the relocation of the W. Smith Jr. Elementary School.

### Next Steps


**The sooner the new school is built, the less impact terminal construction will have on students.**




Port NOLA has been ready to fund the new school since the project was conceived.



Port NOLA continues its efforts to work with the school board to agree on a path forward.



Port NOLA will provide funds to the School Board for the construction of a new, modern school.



Port NOLA supports a community-driven process that honors the history of Violet Consolidated.

The report author was not privy to the Port NOLA site “A” and site “B” proposal specific details and schedule for relocating Smith Elementary School relative to the overall LIT construction schedule. In the author’s opinion, the proposed Port NOLA Sites “A” and “B” will not meet all the siting and location criteria nor the referenced elements of the recommended USEPA Siting Criteria and Federal Permit Regulations.



## **DISCUSSIONS BETWEEN PORT NOLA AND THE ST. BERNARD SCHOOL BOARD**

It is the author’s understanding that Port NOLA and the St. Bernard School Board **have not previously discussed, in any form**, the relocation of the W. Smith Jr. Elementary School and the incorporation of the Smith Elementary School operational land areas into any of the Construction Phases of the Port NOLA LIT Terminal Development Plan improvements.

Further it is the author’s understanding that **Louisiana State Law State does not provide for expropriation or any other type of involuntary acquisition of the school site by Port NOLA.** Additionally, the St. Bernard School Board has taken the official position that the School Board does not intend to sell or otherwise convey the Smith Elementary School site property to Port NOLA for development of the LIT Container and Intermodal Rail Terminal.

The following reference citations declare that a school board can only sell "**surplus**" property, (i.e., property not in public use and not anticipated for future public use).

<https://legis.la.gov/legis/Law.aspx?d=81220> (RS 17:87.6 - §87.6. School property; alienation by school boards)

<https://legis.la.gov/legis/Law.aspx?d=99167> (RS 41:891 - SUBPART F. OTHER UNUSED SCHOOL LANDS - §891. Sale of unused school lands.

## **PART B – ENVIRONMENTAL CONSIDERATIONS FOR SCHOOL SITING CRITERIA**

### **U.S. ENVIRONMENTAL PROTECTION AGENCY ENGAGEMENT**

The **EPA Community Port-Collaboration Toolkit** was developed by USEPA to foster effective communication, engagement, and planning for ports, communities, and other marine stakeholders. The following are excerpts from the Toolkit that are applicable to the subject matter in this report. **It is HIGHLY recommended that Port NOLA should follow ALL the USEPA Port-Collaboration Toolkit published criteria and requirements for the relocation and reconstruction of the W. Smith Elementary School** related to the Port NOLA LIT Development project.

In North America it has been shown that emissions from diesel equipment operating at ports and intermodal rail terminals disproportionately impact nearby communities that are often comprised of low-income populations and communities of color. Through the **USEPA Ports Initiative**, USEPA is working to support effective communication and engagement between the port industry, communities, and other port related stakeholders.

To promote community-port collaboration for effective planning and engagement, USEPA developed the following resources focused on **Toolkits, Roadmaps and Primers for School Siting and Construction**. The following referenced USEPA Ports Initiative and port development requirements should be fully employed both for the current and future Smith Elementary School relocation initiative and all future Smith Elementary School operations:

- Community-Port Collaboration Toolkit
- Ports Primer for Communities
- Community Action Roadmap
- Environmental Justice Primer for Ports

Related **USEPA Example Port Pilot Projects:**

- Community-Port Collaboration Pilot Projects
- New Orleans Pilot
- Providence Pilot
- Savannah Pilot
- Seattle Pilot

**EPA Training Modules and Resources**

Related **Environmental Resources:**

- Ports Initiative
- Diesel Emissions Reduction Act (DERA) Funding
- Environmental Justice Interagency Working Group Promising Practices Report
- EJ IWG Goods Movement Federal Resources Compendium

**EPA Ports Initiative Tools:**

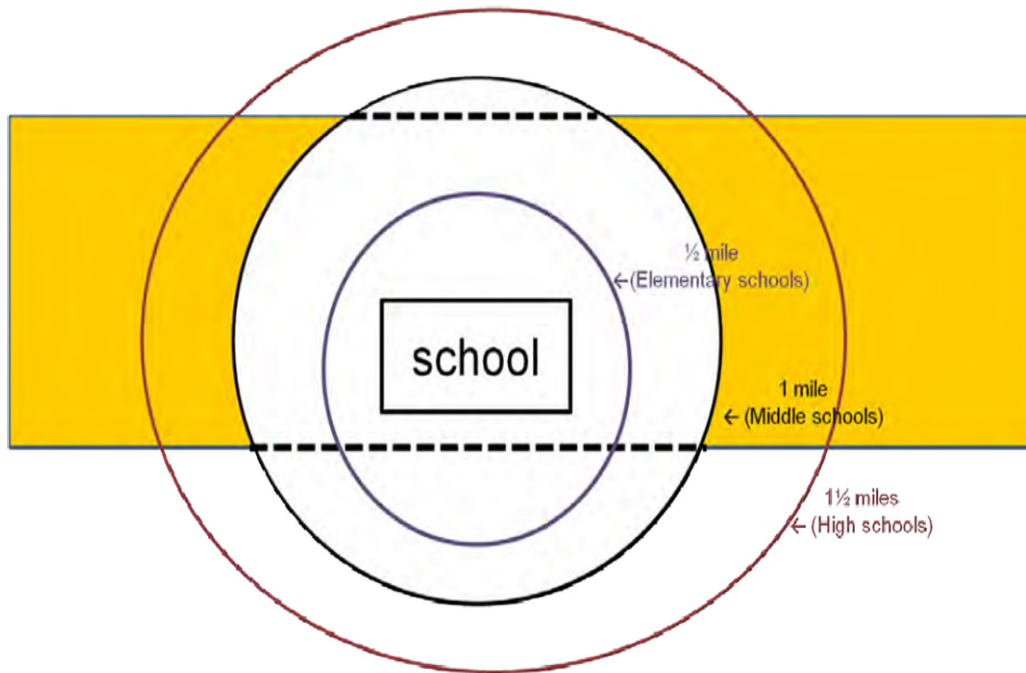
- Best practices for ports to enhance community-port collaboration
- Public Case studies
- Funding for Ports and Near-Port Communities
- 2021 Environmental Justice Small Grants Announced for Communities Living Near Port and Rail Facilities

**U.S. EPA SCHOOL SITING GUIDELINES CRITERIA**

In December 2007, Congress enacted the Energy Independence and Security Act (EISA). Among the provisions included in the Act was a requirement that the U.S. Environmental Protection Agency (EPA) develop, in consultation with the Departments of Education and Health and Human Services, **model guidelines for the siting of school facilities that take into account among many considerations, special vulnerabilities of children to hazardous substances or pollution exposures in any case in which the potential for contamination at a potential school site exists.**

The USEPA and the Office of Children’s Health Protection as established suggested tributary School Enrollment Zones voluntary guidelines as follows:

Exhibit 3: Example Enrollment Area that Creates a Prohibitively Long Walking/Biking Trip for Some Students



Please note that the suggested elementary school enrollment area distance is recommended at  $\frac{1}{2}$  mile for Elementary School institutions. This is a student proximity criteria only and **does not include environmental hazard criteria and mitigation concerns.**

The following **EXHIBIT 5** and **EXHIBIT 6** of the USEPA School Siting Guidelines provides a detailed summary of USEPA recommended environmental hazards and concerns to be evaluated and mitigated for suitable Smith Elementary Schools siting relocation requirements.

**It is HIGHLY recommended that the USEPA School Siting Guidelines Exhibits** (refer to page 16 - 20 of this USEPA report) **and all other USEPA referenced environmental siting criteria be integrated into the detailed planning, design, construction, and operation of the Port NOLA new relocated and reconstructed W. Smith Elementary School Final Determinants.**

It is further recommended that an independent expert consultant be retained to review all new final determinations for the W. Smith Elementary School relocation siting, planning, design, and construction requirements recommended by Port NOLA and referenced by USEPA.

The **EPA SCHOOL SITING GUIDELINES** provides recommendations for adjacent port and intermodal rail terminal operations using EPA “**Environmental Siting Criteria Considerations.**” Please refer to the following Chart excerpt from page 61 of the USEPA School Siting Guidelines. The USEPA recommended screening and evaluation procedures require all marine port and intermodal rail terminals **within one mile of the school** (new or existing) to evaluate on a case-specific and site-specific basis “**Potential Hazards**” and “**Additional Information**” listed below.



## School Siting Guidelines

Feature/Land Use	Description	Potential Hazard(s)	Recommendations		Additional Information <sup>51</sup>
			Screening Perimeter	Evaluation	
Ports	<ul style="list-style-type: none"> <li>Marine ports with more than 100 truck visits/day</li> </ul>	<ul style="list-style-type: none"> <li>Air pollution</li> <li>Noise</li> <li>Soil contamination</li> <li>Surface water contamination</li> <li>Heavy vehicular traffic</li> <li>Accidental releases/spills of hazardous chemicals</li> </ul>	<ul style="list-style-type: none"> <li>Identify and evaluate all port facilities within ~1 mile</li> <li>Ports farther away with a high likelihood of accidental releases should also be considered</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate on a case- and site-specific basis. See <a href="#">Exhibit 5</a> for potential variables and mitigation options.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Air Pollution</a></li> <li><a href="#">Noise</a></li> <li><a href="#">Risk Assessment</a></li> <li><a href="#">Maps and Mapping</a></li> <li><a href="#">Vapor Intrusion/ (VOCs)</a></li> </ul>
Rail yards, intermodal freight terminals and <a href="#">major rail lines</a>	<ul style="list-style-type: none"> <li>A major service and maintenance rail yard; Rail lines serving more than 50 trains/day (excluding electric light rail, except for safety)</li> </ul>	<ul style="list-style-type: none"> <li>Air pollution</li> <li>Noise</li> <li>Odors</li> <li>Soil contamination</li> <li>Ground water contamination</li> <li>Vapor intrusion into structures</li> <li>Accidental releases/spills of hazardous chemicals</li> <li>Fire/explosions</li> <li>Safety</li> <li>Large truck traffic</li> </ul>	<ul style="list-style-type: none"> <li>Identify and evaluate all major rail yards, intermodal freight terminals and rail lines within ~1 mile</li> <li>Rail facilities farther away with a high likelihood of accidental releases should also be considered</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate on a case- and site-specific basis. See <a href="#">Exhibit 5</a> for potential variables and mitigation options.</li> <li>Consult with local air quality agencies to determine locations with high concentrations.</li> <li>Consider additional mitigation approaches.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Air Pollution</a></li> <li><a href="#">Noise</a></li> <li><a href="#">Risk Assessment</a></li> <li><a href="#">Maps and Mapping</a></li> <li><a href="#">Vapor Intrusion/ (VOCs)</a></li> </ul>

Immediately following the page 61 of the USEPA Guidelines, please review the referenced **EXHIBIT 5** for potential port and intermodal rail variables and mitigation criteria options that may be applicable.

Exhibit 5 (below): Includes Charts with Factors Influencing Exposures and Potential Risks are found on page 49, 50, and 51 of the USEPA Guidelines and are duplicated below for ease in referencing and use for the relocation of the Smith Elementary School and its current and future school operations.

**Exhibit 5: Factors Influencing Exposures and Potential Risks**

<i>Potential Hazard</i>	<i>Potential Variables</i>	<i>Potential Mitigation Options</i> N = New schools E = Existing structure
<i>Air Pollution</i> (see Section 8.1)	<ul style="list-style-type: none"> <li>• Type and volume of contaminant released</li> <li>• Distance from the source</li> <li>• Nearby traffic type, fuel, volume and speed (mobile sources)</li> <li>• Stack height, facility practices and type of pollution control employed (stationary/point sources)</li> <li>• Timing of operations (stationary/point sources)</li> <li>• Meteorological conditions (e.g., prevailing wind direction and wind speed)</li> <li>• Atmospheric stability and mixing</li> <li>• Regulatory compliance</li> <li>• Intensity of use</li> <li>• Presence of natural or man-made buffers (e.g., trees, hills, buildings)</li> <li>• Planning and zoning</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt an area-wide approach to address air pollution issues (N/E)</li> <li>• Maximize distance from transportation or other pollution sources (N)</li> <li>• Vegetation buffers (N/E)</li> <li>• Anti-idling policies (N/E)</li> <li>• Limiting bus or personal car use on and near campus (N/E)</li> <li>• Enhanced indoor filtration/air cleaning (N/E)</li> <li>• Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) (N/E)</li> <li>• Timing of HVAC system operations (N/E) or industry operating periods (N/E)</li> <li>• Limiting outdoor activities during high exposure periods (N/E)</li> </ul>
Soil Contamination	<ul style="list-style-type: none"> <li>• Type of contamination</li> <li>• Extent of contamination</li> <li>• Concentration of contamination</li> <li>• Depth of contamination</li> <li>• Potential transport (e.g., runoff or migration to ground water, air transport)</li> <li>• Geology and soil characteristics</li> <li>• Water table</li> <li>• Access or exposure potential (e.g., dermal contact/ingestion)</li> <li>• Barriers (e.g., plants, grass, ground cover, pavement)</li> </ul>	<ul style="list-style-type: none"> <li>• Site cleanup and removal (N/E)</li> <li>• Onsite treatment (N/E)</li> <li>• Engineering controls (e.g., cap, venting systems, vapor barriers) (N/E)</li> <li>• Institutional controls (N/E)</li> </ul>

Potential Hazard	Potential Variables	Potential Mitigation Options N=New schools E=Existing structure
Use of Agricultural Pesticides (see Section 8.12)	<ul style="list-style-type: none"> <li>▪ Use pattern (application rate, crop type)</li> <li>▪ Environmental conditions (wind, temperature, etc.)</li> <li>▪ Toxicity of the pesticide</li> <li>▪ Volatility</li> <li>▪ Persistence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Application of Integrated Pest Management measures to reduce pesticide use (N/E)</li> <li>▪ Choice of pesticide active ingredients (N/E)</li> <li>▪ Oversight and strict enforcement of product label use directions and drift restrictions (N/E)<sup>50</sup></li> <li>▪ Use of drift reducing application technologies and best management practices (N/E)</li> <li>▪ Enhanced indoor filtration/air cleaning (N/E)</li> <li>▪ Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) (N/E)</li> <li>▪ Timing of HVAC system operations (N/E)</li> <li>▪ Limit opening of classroom doors and windows during periods of potential spray drift (E)</li> <li>▪ Limiting outdoor activities during high potential exposure periods (E)</li> <li>▪ Notification when pesticides are applied (N/E)</li> </ul>

<sup>50</sup> Buffer zones are specified on all pesticide product labels. The buffer zones provide flexibility based on several factors such as application rate, field size, application method, and soil characterization.



Potential Hazard	Potential Variables	Potential Mitigation Options N=New schools E=Existing structure
Ground Water Contamination	<ul style="list-style-type: none"> <li>Type of contaminant(s)</li> <li>Type and frequency of contact with contaminated water</li> <li>Type of contact with contaminated water/route of exposure (e.g., ingestion)</li> <li>Extent of contamination</li> <li>Concentration of contaminants</li> <li>Extent of vapor intrusion (for certain contaminants)</li> </ul>	<ul style="list-style-type: none"> <li>Seek alternative drinking water sources or install water treatment systems (N/E)</li> <li>Restrict access to water bodies (N/E)</li> <li>Phytoremediation (N/E)</li> <li>Mitigation system for vapor intrusion (N)</li> </ul>
Surface Water Pollution	<ul style="list-style-type: none"> <li>Type of contaminant(s)</li> <li>Type and frequency of contact with contaminated water/route of exposure (e.g., dermal)</li> <li>Extent of contamination</li> <li>Concentration of contaminants</li> <li>Stormwater runoff</li> </ul>	<ul style="list-style-type: none"> <li>Improve riparian buffers (N/E)</li> <li>Restrict access to water bodies (N/E)</li> <li>Green roof, rain gardens and barrels (N/E)</li> </ul>
Safety Hazards	<ul style="list-style-type: none"> <li>Frequency</li> <li>Intensity of hazard (e.g., explosion vs. flooding)</li> </ul>	<ul style="list-style-type: none"> <li>Emergency response plans (N/E)</li> <li>Emergency shelter design incorporated (N)</li> </ul>
Noise <a href="http://www.epa.gov/schools/siting/resources.html#LINKS_noise">www.epa.gov/schools/siting/resources.html#LINKS_noise</a>	<ul style="list-style-type: none"> <li>Distance</li> <li>Timing and intensity of source</li> <li>Presence of natural or man-made buffers (e.g., hills, noise barriers)</li> </ul>	<ul style="list-style-type: none"> <li>Active noise control (N/E)</li> <li>Install or preserve noise barriers (e.g., highway barriers or other noise buffers) (N/E)</li> </ul>
Odors	<ul style="list-style-type: none"> <li>Timing of operations</li> <li>Meteorological conditions (e.g., prevailing wind direction and wind speed)</li> </ul>	<ul style="list-style-type: none"> <li>Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) (N/E)</li> <li>Enhanced indoor filtration/air cleaning (N/E)</li> </ul>

### **EPA SCHOOL SCREENING SITE LOCATIONS FOR POTENTIAL ENVIRONMENTAL HAZARDS:**

The initial screening process of identifying and narrowing potential school location choices considers a wide range of school siting considerations and challenges. Among the most important of these is to identify potential environmental and public health concerns as early in the process as possible to fully understand the potential costs and benefits of candidate locations before deciding to pursue a particular site.

Unanticipated environmental issues can be extremely costly in terms of cleanup costs, time delays, community concern and potential loss of support for siting choices. A full understanding of the potential risks of candidate sites to ensure that a prospective school site does not pose unacceptable health and safety risks to students and staff is especially important but can be costly and time-consuming. For this reason, it may be desirable to **avoid sites that have onsite contamination or are in close proximity to pollution generating land uses** at the initial stage of identifying candidate sites if other acceptable locations exist in the community that may pose fewer environmental challenges.

**USEPA School Siting Guidelines – Exhibit 6: Screening Potential Environmental, Public Health and Safety Hazards**, referenced in this report, contains a list of potential environmental and safety hazards that MUST be identified, evaluated, and weighed/mitigated, along with other factors, in choosing a suitable school location and applies to the Smith Elementary School relocation evaluation.

In general, the closer a potential hazard is to a candidate location for a school, the more important it is to gain an early understanding of the potential risks that may be associated with that hazard. Exhibit 6 is intended to be used in conjunction with the example Environmental Review Process (see Section 5) and with Evaluating Impacts of Nearby Sources of Air Pollution (see following EPA Section 6 recommendations).

Screening perimeters can help the Local Education Agency (LEA) and the School Siting Committee (SSC) quickly identify activities or features on or in the area surrounding a prospective school location that have the potential to pose a hazard to students and staff and warrant further evaluation. These include a wide range of potential ongoing sources of air, water, and land contamination as well as features or activities that may pose safety risks from accidental releases. For potential school locations identified within the “screening perimeter” of an environmental feature, further study is warranted and **required to ensure that the potential risks associated with that feature are not significant**.

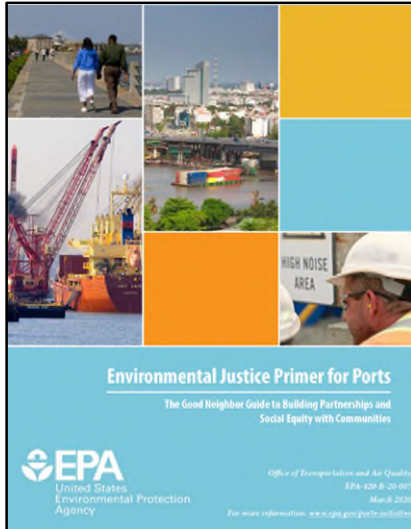
### **USEPA EXHIBIT 6: Screening Potential Environmental, Public Health and Safety Hazards**

**IMPORTANT:** EXHIBIT 6 table is intended to assist with the initial screening of candidate locations but is **NOT** a substitute for case-and site-specific evaluation of potential risks and hazards. It is intended to be used in conjunction with the example Environmental Review Process (**see Section 5**) and Evaluating Impacts of Nearby Sources of Air Pollution (**see Section 6**). For more information on typical environmental hazards that may be encountered during the school siting process, see the Quick Guide to Environmental Issues in **Section 8**). Existing applicable federal, state, tribal or local statutes, ordinances, codes, or regulations take precedence over the recommendations contained in the following table. Users should check with state, tribal and local authorities for applicable requirements or other recommendations.

Specific reference is made in this report to pages 53 through 64 of **EXHIBIT 6**, which covers Ports and Intermodal Rail Terminals section found on page 61 and is included earlier in this report for reference. EXHIBIT 6 was not included in this report in its entirety for the sake of brevity.

**EVALUATION OF LIT ENVIRONMENTAL AND SOCIAL JUSTICE IMPACTS ON ST. BERNARD PARISH AND ON THE W. SMITH JR. ELEMENTARY SCHOOL**

The U.S. EPA Environmental Justice Primer for Ports (48 pp, 936 K, March 2020, EPA-420-B-20-007) is available as a PDF document that can be downloaded (please refer to the following reference link)



<https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YMNT.pdf>. In general, the following excerpts were taken from the above reference and **are made a part of this report’s findings and recommendations.**

Port and Port related intermodal rail operations and associated terminal cargo movements and freight transport logistical activities can impact near-port and intermodal rail communities. They can cause cumulative environmental challenges such as air, water, and land pollution, as well as land use conflicts that impact local quality of life. As port and intermodal developers and terminal decision-makers consider how to address community impacts, they **MUST** balance a range of new and evolving industry challenges, including climate adaptation, post-Panamax and intermodal train logistical shipping infrastructure needs, and workforce development.



The U.S. EPA Environmental Justice Primer for Ports provides useful tools and resources for ports, railroads, terminal operators as well as local, regional and state agencies to proactively engage community stakeholders in addressing these emerging dynamic pressing challenges to ensure shared prosperity and regional resilience for suitable development of modern competitive and sustainable container port and intermodal rail terminal development and operations.

This guide for decision-makers at ports, related intermodal rail facilities and regulatory authorities complements the **Ports Primer for**

**Communities** and the Community Action Roadmap, which provide guidance for near-port/rail container communities seeking to participate in port and intermodal rail planning and decision-making for new container terminal development.

The Ports Primer and Community Action Roadmap (below) was developed by the Environmental Protection Agency’s Office of Transportation and Air Quality (OTAQ) in partnership with Regional Offices and the Office of Environmental Justice to **support ports and near-ports communities in improving local quality of life.**



The environmental justice movement seeks to ensure fair treatment and equal protection under the law for all related communities to avoid disproportionate environmental impacts from proposed terminal development plans, and intermodal container projects and operations.



Developed more than 25 years ago, the USEPA defines environmental justice as “*the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.*”

Many public-sector and private-sector organizations are **adopting environmental justice policies** to ensure their plans, projects and operations do not disproportionately impact vulnerable communities, and instead provide benefits to improve local quality of life. The Port of NOLA, the St. Bernard Parish School Board and the State of Louisiana Permit and Regulatory Authorities should specifically comply with the following USEPA environmental and modern environmental justice policies and procedures for the **current and future operations** of the W. Smith Jr. Elementary School and its proposed relocation, planning, design, and construction requirements.

### **PORT AND INTERMODAL RAIL RELATED POLLUTANTS AND HEALTH HAZARDS**

Near port and intermodal rail terminal communities, public parks, as well as logistical port and rail tributary commercial and industrial operations can face challenges due to sustained exposure to marine and intermodal rail terminal pollutants and toxins, and health impacts from this exposure can span across multiple generations.

### **AIR POLLUTION AND DIESEL PARTICULATE MATTER (PM) EMISSIONS**

The emissions from goods movement by ISO container trucks, truck drayage operations, terminal yard trucks and cranes, terminal yard hostlers, marine and river vessels and barges, intermodal rail trains (both single and double stacked train operations), internal intermodal rail terminal container movements, port containerized cargo handling equipment, as well as from stationary sources such as refineries, oil and gas storage facilities, power generation and storage of open coal piles found near port facilities, **can introduce many air pollutants with the potential to severely impact the health of near port/intermodal rail communities and related port and intermodal rail operations.** Exposure to air pollution associated with emissions from diesel engines has been proven to contribute to significant health problems—including premature mortality, increased hospital admissions for heart and lung disease, increased cancer risk, and increased respiratory symptoms—especially for children, the elderly, outdoor workers, and other sensitive populations in close proximity to today’s container and intermodal rail terminals.

### **WATER POLLUTION**

Port and Intermodal Rail Terminal operations can have a significant impact on adjacent neighborhood communities and schools and adjacent land water quality. Runoff from impervious surfaces can carry pollutants that may prevent people from enjoying local creeks, lakes, or bays, and from eating fish and shellfish from these waters. In some cases, community members may rely on fishing as a subsistence source of food.

### **LIGHT, NOISE AND VISUAL POLLUTION**

Health impacts of light and noise pollution from port and intermodal rail operations can include hearing impairment, high blood pressure and sleep deprivation. Community view corridors can be impacted by container and intermodal terminal infrastructure and large container marine waterfront on interior terminal container crane operations.

Environmental justice communities often experience stressors beyond the above-described health disparities such as neighborhood disinvestment, income inequality, public safety concerns around truck routes and rail crossings, and coastal-related threats from extreme weather events and climate change.

In addition, the industrial super blocks, rail lines and highways surrounding ports can create barriers between residents and basic necessities such as grocery stores, health services, pharmacies, retail centers, transit, and recreation spaces. Industrial features in near-port and railroad areas mean that near-port and intermodal terminal neighborhoods often lack adequate sidewalks, street trees, safe intersection crossings and other basic infrastructure.

### **NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

NEPA requires the evaluation of environmental impacts for major federal action, including issuing federal permits, typically resulting in an Environmental Assessment or an Environmental Impact Statement (EIS). Some parts of the NEPA process require agencies to provide meaningful opportunities for public participation.

Key stages in the process include:

- When an agency starts a NEPA analysis.
- When a NEPA document is published for public review and comment.
- When mitigation alternatives are being considered.

Meaningful engagement with communities can occur prior to and throughout the entire NEPA process, including when defining the affected environment, identifying minority and low-income populations, assessing potential impacts, assessing potential alternatives, determining whether impacts are disproportionately high and adverse, and developing mitigation and monitoring measures.

Methods used by agencies to engage communities in scoping and development for EISs include public meetings, conference calls, formal hearings, informal workshops, and opportunities to submit written comments. Specific guidance, methods and tools are available for analysis and consideration of environmental justice as part of the NEPA review process.

Under previous **Federal Executive Order 12898**, all federal agencies were required to identify and address the disproportionate impacts of their programs, policies and activities on low-income communities and communities of color.

The need for community engagement also goes beyond just meeting regulatory requirements and risk management. The port and intermodal rail industry sectors is currently working on diverse priorities, ranging from infrastructure upgrades for neo and post-Panamax shipping and addressing transportation congestion to workforce development and the need for resiliency planning and adaptation to threats from climate change and sea level rise.

### **DEFINING COMMUNITY STAKEHOLDER GROUPS**

Community stakeholder groups can be divided into the following categories by their role in the process.

**Community Resident Groups:** community residents and resident organizations from near port and intermodal rail terminal communities.

**Community-Based Partners:** organizations working with near port communities to support local goals.

**Local, regional, and national Unions:** organizations representing workers at the port, goods movement industries and other groups.

**Tribes:** tribes have unique rights as sovereign nations.

**Local, Regional and Federal Government Stakeholders:** local, regional, and federal government entities with port and intermodal rail community responsibilities.

**Local, Regional and Statewide Educational Institutions:** local universities, colleges, schools, and minority serving institutions (historically Black colleges and universities, tribal universities, and Hispanic serving institutions).

**Local, Regional and Statewide Environmental Groups:** environmental and/or environmental justice advocacy groups.

**Internal Port and Intermodal Rail Stakeholders:** port authority or related agency departments.

**Port and Intermodal Rail-Sector Stakeholders:** port tenants, nearby industrial facilities, and the goods-movement sector.

Relations between the port and intermodal rail terminal operations can vary widely based on the degree of shared interests, trust level and past conflicts. Engagement efforts can tend to focus on those stakeholder groups with shared interests and low conflict. However, reaching out directly to impacted communities despite past communication challenges is essential to begin to understand community concerns and explore feasible ways to address concerns in planning and decision-making.

Port and intermodal rail infrastructure regulatory agencies are subject to a range of state and federal laws and regulations that seek to mitigate environmental and social impacts, including:

- [National Environmental Policy Act \(NEPA\)](#)
- [Title VI of the Civil Rights Act](#)
- [Clean Water Act](#)
- [Safe Drinking Water Act](#)
- [Clean Air Act \(as amended\)](#)
- [Resource Conservation and Recovery Act \(RCRA\)](#)
- [Comprehensive Environmental Response, Compensation, and Liability Act \(CERCLA\)](#)

Many of these regulations include standards and guidance for addressing common community issues related to air quality and other project-related or operational impacts to the community. These regulations also specify minimum requirements for public input. The regulatory guidance for each law or regulation offers best practices, technical resources, funding, and other tools that can help guide discussions and evaluate options for setting shared goals and targets.



## PART C – REPORT FINDINGS AND RECOMMENDATIONS:

### PORT NOLA LIT TERMINAL DEVELOPMENT AND CONSTRUCTION TIMELINE OVERVIEW:

The Port NOLA Louisiana International Terminal (LIT) development is expected to begin construction in 2025, with the first berth opening in 2028, marking the start of operations at the new container terminal; the full terminal development will be phased in over time after the initial opening.

According to Port NOLA the overall LIT Terminal Construction and Initial Operational Schedule is as follows:

**Environmental and Permit Review - 2023 to 2025:** Currently, the LIT Development is in the environmental review process with the US Army Corps of Engineers and is expected to be completed in 2025.

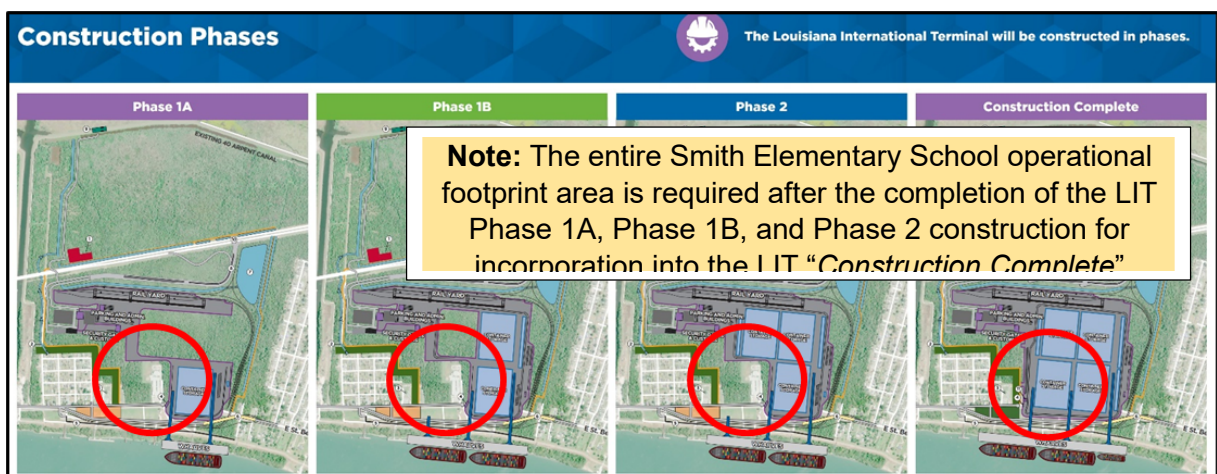
**LIT Terminal Construction Start - 2025:** Construction is anticipated to begin in 2025 once all final regulatory permits are received.

**First Berth Opening Phase 1A - 2028:** The first berth of the LIT (Phase 1A) is expected to **open in 2028**. At opening, Port NOLA anticipates a LIT terminal throughput of **180,000 – 280,000 containers in the first year**.

**Phase 1B, Phase 2 and “Construction Completion” last Phase – 2028 to 2032:** After the first berth opens and first berth is operational in 2028, construction will continue with the remaining LIT berths and backlands terminal improvements. The LIT Terminal will be sequentially opened in phases until construction phasing is completed. It is assumed that **Phase 1B, and Phase 2** will be completed in approximately 2 years (2028 to 2030).

The last phase of the LIT Terminal “Construction Complete Phase” schedule is planned for completion in 2032 (refer to Port NOLA Construction Phases Chart below). According to the Port NOLA LIT Construction Phasing Plan, Smith Elementary School will be operational during the construction of LIT Terminal Phase 1A, LIT Terminal Phase 1B, and LIT Terminal Phase 2.

**The Smith Elementary School will be operational from the start of LIT Terminal operations in 2028 (completion of Phase 1A - 2028), through all of Phase 1B, and through all of Phase 2. The Smith Elementary School associated land area is required for the final “Construction Complete Phase” at which time, all existing and related Smith Elementary School structures will be demolished and the land incorporated into the last phase of the LIT Terminal improvement.**



While the first phased portion of the LIT Terminal is in operation, the remainder of the new LIT terminal phased construction will be opened in sequential phases over time as the construction is completed.

The terminal is expected to reach its annual design throughput capacity of **1.2 million containers (2 million TEUs) per year 25 YEARS AFTER THE INITIAL TERMINAL OPENING** of the LIT with the first phase expected to open in 2028.

**LOCATION OF SMITH ELEMENTARY SCHOOL RELATIVE TO THE NEW LIT OPERATIONAL TERMINAL FOOTPRINT:**

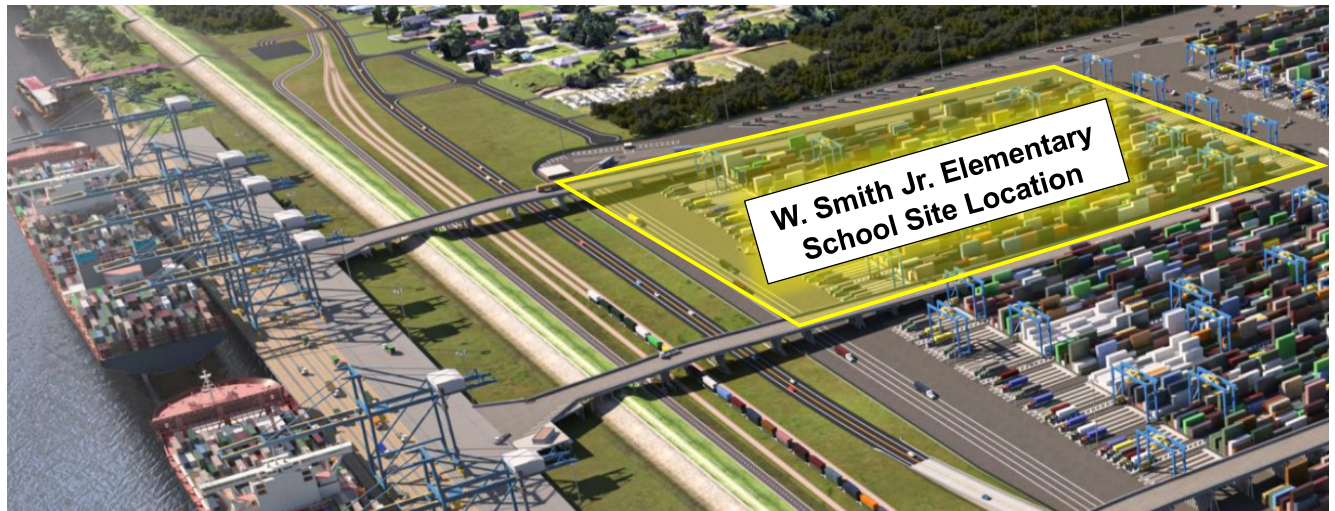
The **yellow highlighted area** below depicts the approximate current existing location of the W. Smith Jr. Elementary School footprint area superimposed on the latest LIT total terminal area. This yellow highlighted LIT area represents one of the most significant and impactful operational areas within the total new LIT Terminal development.

The Smith Elementary School footprint area is approximately 25 percent of the total LIT Terminal container storage yard. It is the storage yard closest to the river container vessels immediately inland from the two new river containership berth locations midway along the new riverfront between the two largest container vessel river berths.



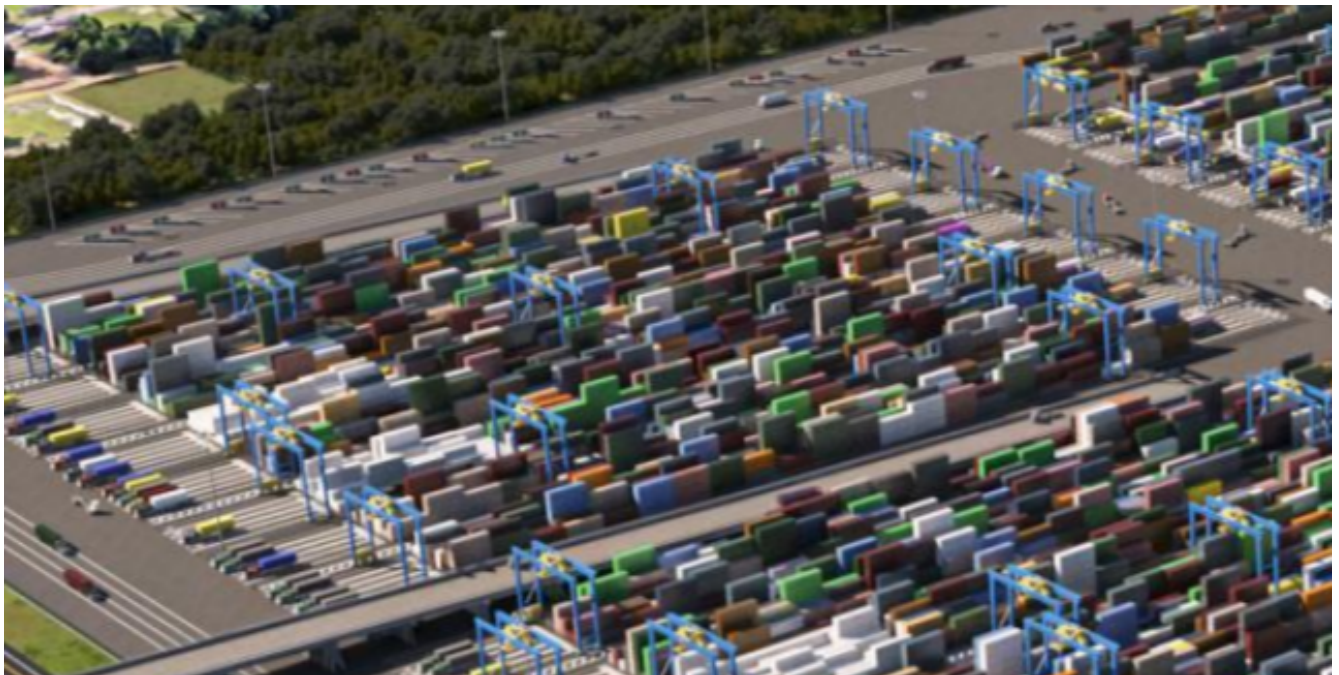
The above LIT conceptual rendering was a part of the USACE development permit information provided by the Port NOLA.





The existing Smith Elementary School site location is illustrated conceptually within the yellow highlighted illustration area above within the adjacent river front LIT Terminal container storage area.

Within the above yellow highlighted area is an expanded artist rendering illustration (depicted below) of the LIT Terminal conceptual container yard storage area operation. Rubber Tired Gantry (RTG) cranes and/or Rail Mounted Gantry yard storage crane systems are illustrated in an automated container storage yard operation.



Please note that for the period 2025 to approximately 2032 (Port NOLA the Final Construction Completion Phase) the Smith Elementary School would be sited and would operate immediately adjacent to the first three phases of construction and subsequent terminal operation of the Port NOLA LIT port and intermodal terminal development.

## **PORT NOLA AIR QUALITY IMPACTS AND MITIGATION FOR ALL PHASES OF LIT DEVELOPMENT**

Port NOLA has publicly acknowledged that for Air Quality purposes Port NOLA is “**currently conducting detailed air quality studies to understand potential LIT project development impacts.**” The studies, not yet completed, reportedly look beyond the boundaries of the LIT Terminal, and consider existing refineries and other potential future developments in the development area to understand the collective air quality impacts of the LIT development.

Port NOLA has promised and proposed that along with the Port’s LIT development private partners, **Port NOLA will make major investments in new green improved terminal related technologies to limit air quality emissions within the LIT terminal development.** These Port NOLA proposed technologies reportedly include but are not limited to:

“**Vessel Shore Power Electrification**” (Wharf-side Cold Iron Vessel Utility System)

“**LIT Terminal Electric Vehicles**” and associated electric equipment (for all terminal operations)

“**Container-On-Barge**” (COB) terminal services

“**Clean TRIP Engine Replacement Technology**”

The extent of the full deployment of net zero emissions - electric vehicles (replacing all diesel-powered terminal functions) in support of a truly net zero, or near zero emissions terminal requirement for both the Port NOLA proposed LIT marine container and intermodal rail terminal operations **is not known at this time but could take 10 years or more to fully achieve** given the historic pace of development.

## **ACHIEVING GREEN TERMINAL NET-ZERO EMISSION (ZE) CARGO HANDLING EQUIPMENT AT LIT**

Port and intermodal rail terminal infrastructure and operations are major contributors to global Green House Gas (GHG) emissions and other air and water pollutants, **contributing directly to poor public health outcomes for the communities that live and work nearby.** Please refer to the USEPA (2020) Environmental Justice Primer for Ports: The Good Neighbor Guide to Building Partnerships and Social Equity with Communities Office of Transportation and Air Quality. <https://nepis.epa.gov/Exe/ZyPDF>.

Exposure to these hazards, such as particulate matter (PM), heavy metals and toxic air pollutants, is frequently compounded by social and economic factors that render port and intermodal rail communities especially vulnerable to adverse health outcomes. People of color and low-income communities are many times disproportionately impacted by pollution and its resulting health impacts.

In 2001, the Port of Los Angeles had plans to expand an existing shipping terminal. Residents in the San Pedro and Wilmington neighborhoods formed a coalition to oppose the port expansion. Their concerns included increased pollution, blight, noise, and congestion. Two San Pedro homeowner associations, the Natural Resources Defense Fund and the Coalition for Clean Air filed a lawsuit against the City of Los Angeles and the Port of Los Angeles, citing violations of the California Environmental Quality Act.



The lawsuit was successful and a **landmark settlement** followed. In 2003, a \$50 million fund was established to mitigate the impacts of port operations in San Pedro and Wilmington. This settlement also required that the Port of Los Angeles adopt pollution prevention measures.

The measures, which included shoreside power for container vessels and alternative-fuel yard equipment, had never previously been implemented at a U.S. ocean shipping terminal. The project reduced air pollution by a ton a day per ship and became a national model for future port development.

In July of 2024, the RMI published an article titled “*The Time Is Now for Zero-Emissions Cargo Handling Equipment at America’s Busiest Cargo Ports*”. The article focused on replacing all diesel cargo handling equipment with zero emissions alternatives to improve local air quality and health particularly in neighboring communities. The following topical data was derived from the referenced RMI article that brings the reader up to date for 2023 - 2024.

The Port of Los Angeles (POLA) and Port of Long Beach (POLB) California moved more than 16 million TEUs, or nearly 40 percent of imported containers, in the United States in 2023. Decarbonizing the equipment that handles these containers has not been totally accomplished to date but must be underway shortly to achieve conversion to net zero or near zero emissions to **meet the 2030 net-zero industry goals**.

The **California Air Resources Board (CARB)** and the North American Maritime and Intermodal Industry have in general, established a CARB regulatory 2030 net-zero goal for future marine terminal applications. The CARB Governing Board directed CARB staff to develop new regulations for **Container Handling Equipment (CHE) Regulation** that will require up to **100% Zero Emissions (ZE) container and intermodal rail terminal equipment by 2030** with regulatory implementation starting as early as 2026.

The neighborhoods closest to POLA and POLB are designated disadvantaged communities under California SB 535 and the federal Justice 40 Initiative, which allocate public funding to communities that are marginalized by underinvestment and overburdened by pollution.

Cargo handling equipment, also known as container and intermodal rail handling equipment, refers to the terminal cranes, top handlers, forklifts, and tractors that load and unload shipping containers on and off mega container vessels and double stacked container trains. **Today, most container/intermodal rail cargo handling equipment operate on diesel fuel.** Replacing diesel cargo handling equipment with net zero emissions fuel alternatives will **improve local air quality and health in neighboring adjacent communities and reduce overall climate impacts on near port communities and container port stakeholders.**

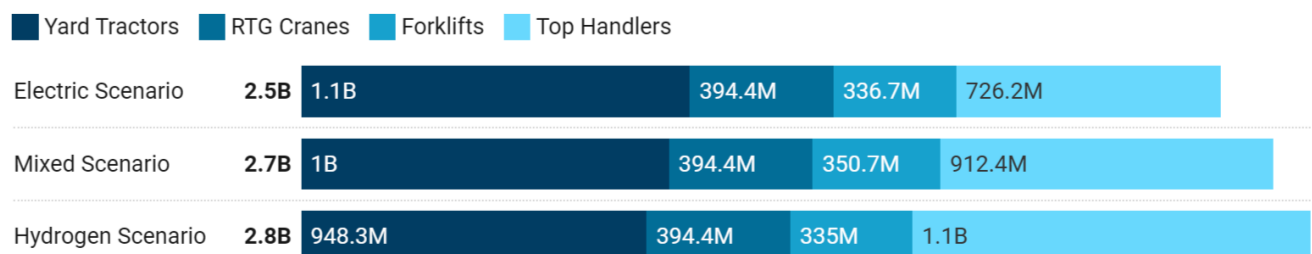
As technologies improve, net zero emissions cargo handling equipment is becoming a cost-competitive alternative to diesel-powered container and intermodal rail terminal operations.

Achieving Port NOLA’s stated goal of deploying electric vehicles and associated electric equipment within the LIT container and intermodal rail terminal initial operating areas may not be achievable due to suitable electric vehicle/equipment availability and economics.

Substantial roadblocks and impediments remain in the North American Intermodal Industry, including a lack of data to analyze and support terminal operators, ports, railroads, labor unions, and other key project stakeholders in making decisions about technology future implementation plans for such support items such as needed standardized North American charging and hydrogen refueling infrastructure.

It is impossible to effectively decarbonize ports and intermodal rail terminals and their stakeholders without a long-term focus on cargo handling equipment net zero or near zero emission strategies. While most port and intermodal rail air emissions come from heavy-duty vehicles and ocean-going container vessels, terminal cargo handling equipment still accounts for more than 15 percent of port/intermodal emissions at POLA and POLB. In North American modern container terminals handling mega container vessels, similar to the LIT, the majority of cargo handling equipment air emissions come from two container and intermodal rail terminal pieces of equipment: top handler cranes and internal yard tractors. Of the more than 3,000 pieces of cargo handling equipment in operation at the ports, yard tractors (48 percent), forklifts (17 percent), top handlers (12 percent), and rubber-tired gantry (RTG) cranes (5 percent) **continue today to use primarily diesel internal combustion engine technology** for all their terminal operational needs.

Publicly available data on green terminal model pricing and maintenance costs are very sparse, with hydrogen fuel prices and infrastructure costs also largely uncertain and unavailable today. The total cost of full cargo handling equipment to electric conversion at POLA and POLB is generally shown below.



All scenarios assume 100% of RTG cranes convert to electric.

Although the above green terminal cost numbers are not directly translatable to the Port NOLA LIT Terminal situation the cost none the less is substantial per containership berth and may be similar for the LIT development.

Federal tax incentives for the purchase of qualifying new net zero or near zero electric equipment can reduce the per-unit capital expenditure by up to \$40,000 even before factoring in upstream production and manufacturing tax credits from the federal Inflation Reduction Act. Terminal operators may also face significant site constraints related to limited suitable electric capacity at the port/intermodal rail terminal site.

Decarbonizing major North American container and intermodal rail ports and converting to zero-emissions cargo handling equipment is just one piece of the decarbonizing ports and goods movement logistical transport system. Actors across the entire value logistics supply chain — beneficial cargo owners (BCOs), terminal operators, ports, railroads, OEMs, utilities, and energy suppliers — all have a role to play in ensuring a rapid and cost-effective transition to new green improved terminal related technologies to limit air quality emissions similar to the LIT terminal development project.

Environmental justice groups are also advocating for a transition away from diesel cargo operations, while longshore labor groups are working to ensure the transition does not displace union jobs.

The Inflation Reduction Act of 2022 provided USEPA with \$3 billion to fund zero-emission port equipment and infrastructure as well as climate and air quality planning at U.S. ports. This new funding program is intended to build on USEPA’s Ports Initiative that helps the nation’s ports, a critical part of our infrastructure and supply chain, proactively address public health and environmental impacts on surrounding communities.

#### **SMITH ELEMENTARY SCHOOL OPERATING PROXIMITY TO LIT TERMINAL DEVELOPMENT:**

Smith Elementary School will be in full operation immediately adjacent to the LIT Terminal construction and marine/intermodal terminal operations during the following Port NOLA identified LIT timeframes:

- 2026 through 2028 LIT - **Phase 1A Construction period** (2028 Phase 1A Operational Start-Up)
- 2029 through 2030 - **Phase 1A Terminal Operations + Phase 1B Construction Period**
- 2030 through 2031 - **Phase 1A & 1B Terminal Operations + Phase 2 Construction period**
- 2031 through 2032 – **Phase 1A + 1B + Phase 2 Terminal Operations + Final Phase** (Construction)
- Prior to the start of the “*Construction Complete Phase*” all existing Smith Elementary School operations will be terminated; all school physical and associated structures will be demolished and the land thereon incorporated into the last phase of the LIT Terminal construction.

The Smith Elementary School could continue full operations for the first three construction and operational phases (Phase 1A, Phase 1B, and Phase 2) for the following LIT construction timeframes:

- **2026 through 2028 - 3 years of construction** for **Phase 1A** + all peripheral terminal construction
- **2029 through 2030 – 1 year of construction** for **Phase 1B** + 1 year of operations for Phase 1A
- **2031 through 2032 – 1 year of construction** for **Phase 2** + 1 year of operations for Phase 1A, 1B and Phase 2      **2 years** of active terminal operations for Phase 1A, 1B, 2, + Final Phase

#### **PROXIMITY FINDINGS AND RECOMMENDATIONS REGARDING SMITH ELEMENTARY SCHOOL AND THE PORT NOLA LIT TERMINAL DEVELOPMENT**

The following two paramount questions have been evaluated and responded to:

**QUESTION 1.** Assuming that the current Smith Elementary School operation and site area is **NOT RELOCATED** to a new USEPA approved location, can the proposed Port NOLA Container and Intermodal Terminal, whether in part, with some or all phases of construction, be **FULLY** developed in the current proximity to Smith Elementary School?

**QUESTION 2.** Assuming (based only on Port NOLA’s public representations, above) that Smith Elementary School and all school site improvements **WILL BE RELOCATED** to a new USEPA approved location, what specific mitigation efforts would be required to appropriately protect the students, faculty and public visitors of Smith Elementary School during phase 1A (2026 through 2029), Phase 1B (2029 through 2030) and Phase 2 (2030 to 2031) i.e.: 2026 through 2031?

Both the above questions depend largely in part on how successful and to what degree the Port NOLA along with the Port’s LIT development private partners and terminal operators will fulfill Port NOLA’s publicly promised and proposed statement that “**MAJOR INVESTMENTS IN NEW GREEN IMPROVED TERMINAL RELATED TECHNOLOGIES to limit air quality emissions” will be made by Port NOLA** for the LIT container and intermodal rail terminal development.

The following public statements have been made by the Port NOLA regarding addition of new green improved terminal technologies to limit air quality emissions:

*“As design progresses, Port NOLA is announcing **massive investments in sustainability**. The Louisiana International Terminal will be equipped with **shore power**, allowing vessels to connect to onshore electricity and to turn off diesel engines while at dock. Shore power can eliminate up to 98% of ship-related emissions, vastly reducing the environmental footprint of a maritime terminal. Operators will also be investing in an electric **fleet of equipment**. Port NOLA is working with Entergy Louisiana to develop an onsite substation to provide the electricity needs for the terminal. Additionally, the terminal will be designed to grow container-on-barge services, which move containers up and down the river by barge rather than road or rail.”*

*“One of the benefits of building a new terminal from the ground up is that we can **implement the latest advances in green technologies**, and with air quality and noise common concerns that came up in our community outreach.”*

#### **QUESTION ANSWERS, FINDINGS AND RECOMMENDATIONS:**

##### **Answer Assumptions:**

- A. The findings are based on the current Port NOLA published proposed LIT container and intermodal rail terminal configuration, layout, terminal reported terminal throughput capacity and the four Port NOLA published Lit Construction Phasing diagrams and schedules.
- B. The above-described Port NOLA promised and proposed major investments in **new green improved terminal related technologies** to limit air quality emissions (100% net zero air emissions) are assumed to be **fully achieved** for all operational phases of the Port NOLA proposed LIT Container and Intermodal Rail Terminal with Smith Elementary School in its current location and footprint geometry, all as discussed above.

##### **QUESTION NO. 1 RESPONSE:**

The proposed Port NOLA container and intermodal rail terminal could only be **partially developed** (as currently laid out by Port NOLA). The LIT Terminal would achieve only about **75 percent of its original design throughput capacity**. Additional land, roughly equivalent to the current Smith Elementary School footprint would need to be acquired and added to the current Port NOLA LIT footprint and fully integrated and reconfigured into a revised LIT Terminal development and operational plans.



#### QUESTION NO. 2 RESPONSE:

The specific mitigation efforts required to **appropriately protect** the students, faculty, and public visitors of W. Smith Jr. Elementary School during phase 1A (2026 through 2029), Phase 1B (2029 through 2030) and Phase 2 (2030 to 2031) i.e.: 2026 through 2031 (six years) would include but are not limited to the following:

- **100% net zero air emissions** \* for all river front Wharf Quay Vessel air emissions and all LIT container and intermodal rail terminal yard vehicle and yard equipment air emissions **fully achieved** for ALL OPERATIONAL PHASES of the Port NOLA proposed LIT Container and Intermodal Rail Terminal for the period 2026 through 2031 (six years) including but not limited to the following LIT Terminal operations:

:

- All Riverfront **Wharf Quay terminal operations** and **vessel stevedoring operations**.
- All **ocean-going container ships/vessels**, and **container barges** including Container on Barge Service operations.
- All **non-container vessel and Wharf Quay operations**, Break-Bulk, Neo-Bulk, Dry Bulk, Project Cargos, and specialized cargo operations including military operations.
- **All single and double stacked intermodal container train operations**, including train loading, and unloading, train and container platform car switching and rail shunting operations, train locomotive idling and train waiting periods.
- **Container and Intermodal Terminal yard cargo handling equipment** operation including but not limited to top handler yard cranes and internal yard tractors and yard hostlers, forklifts, and rubber-tired gantry (RTG) cranes, Rail Mounted Gantry Cranes (RMG), Straddle Carriers, Chassis operational equipment.
- **All Terminal Automation Control** of terminal equipment.

\* All hazardous air emissions level attainment negotiated and formerly agree to by Port NOLA and the St. Bernard Parish School District with detailed review and approval by the USEPA and State of Louisiana regulatory review and approval.

#### **WIN-WIN APPROACH TO ACHIEVING GREEN TERMINAL NEAR ZERO EMISSIONS**



In a September 2024, ICCT published a Shore Power Working Paper ([www.theicct.org](http://www.theicct.org)) that included the first nationwide port emissions screening for at-berth vessels, identifying U.S. ports where investments in landside terminal shore power (Cold Iron Vessel Utility Systems – SHORESIDE POWER) **could dramatically improve air quality in nearby communities** adjacent to modern container and intermodal rail terminal developments.

This ICCT Shore Power Working Paper and its content is briefly reviewed here to recommend and suggest that the first three Phases of the LIT Terminal development (Phase 1A, Phase 1B, and Phase 2 - 2026 to 3031) corresponding to the timeframe that the Smith Elementary School would have to operate immediately adjacent to the new LIT Terminal before being relocated could provide the **specific mitigation efforts required to appropriately protect the students, faculty and public visitors of W. Smith Jr. Elementary School** during Phase 1A (2026 through 2029), Phase 1B (2029 through 2030) and Phase 2 (2030 to 2031) while providing the exact Port NOLA promised Shore Power Utility desired for the entire terminal. Port NOLA would provide the comprehensive Shore Power utility systems originally conceived for the LIT Terminal and install the Shore Power in the at least the first three LIT Terminal Construction Phases **providing the W. Smith Jr. Elementary School with dramatically improved air quality for nearby communities and for the Smith Elementary School** itself. Focusing on Shore Power eliminated the need to identify specific types of LIT Terminal equipment.

Nearly all oceangoing vessels (OGVs) are equipped with combustion engines which **burn fossil fuels**. While main engines can be turned off while vessels berth at port, auxiliary engines are typically used to provide electricity onboard and allow essential activities like lighting, communication, and refrigeration to continue. Both main and auxiliary engines emit GHGs and air pollutants such as nitrogen oxides (NOX), sulfur oxides (SOX), particulate matter (PM2.5 and PM10), and ground-level ozone (O3), depending on which fuel they burn. **High concentrations of and prolonged exposure to these pollutants can threaten the health of people in port communities and damage local ecosystems** (U.S. Environmental Protection Agency [EPA], 2017).

The National Ambient Air Quality Standards (NAAQS), established by USEPA, set limits on six criteria air pollutants that are especially harmful to public health. Areas that do not meet the NAAQS limits are designated as nonattainment areas (NAAs) and are monitored as efforts are made to meet the limits. Once an NAA improves air quality and adheres to criteria pollutant limits, it is designated as a maintenance area and subject to continued monitoring (U.S. EPA, 2014).

Shore Power, also known as cold ironing or alternative maritime power, allows ships at berth to turn off fossil fuel-burning auxiliary engines by plugging into local electrical grids, nearly eliminating their in-port emissions. Overall emission reductions vary depending on how local grid electricity is produced; cleaner grids result in higher life-cycle emission reductions, but grids that produce electricity with less sustainable methods yield fewer substantial reductions compared with the use of auxiliary engines. **Nonetheless, shore power reduces local emissions near port communities since grid energy is often produced outside port boundaries.**

This ICCT Study assessed 129 U.S. ports and port groups, by considering at-berth vessel air pollutant emissions estimates, historical air quality, and proximity to communities below the median household income. In the Study Ports were assigned a Priority level 1 through 4 based on at-berth vessel air pollutant emissions estimates and the population surrounding each port. The Study further assesses the status of shore power at priority 1 and 2 ports and determined which Ports could benefit most from the installation of shore power at each port.

Automatic Identification System (AIS) data was used to estimate 2019 emissions from at-berth vessels within 5 nautical miles (nm) of 129 U.S. ports. **The Study identified 43 ports of interest** – those with census tracts where the median household income was below the 2019 national median that overlapped with EPA- designated NAAs. Five ports with the highest combined air pollutant estimates from at-berth vessels in 2019 were the New York City port group, the Los Angeles port group, Port Everglades, **Port of New Orleans**, and Miami. Priority 1 ports had the highest combination of air pollutant and population

estimates; priority 4 ports had the lowest combination. **Five ports were categorized as Priority 2: New Orleans**, Seattle, the Galveston port group, Houston, and the Oakland port group.

Container vessels accounted for the highest air pollutant estimate from a single ship type for Priority 1 and 2 Ports.

Cost and the uncertainty of use are issues of concern related to the installation of shore power. A 2015 ICCT study estimated that in addition to shore-side infrastructure, ship-side costs to install shore power capability can range from \$300,000–\$2 million. There is additional uncertainty about whether ships could or would use plugs if they were installed based on system compatibility and the existence of incentive programs.

On a larger scale, shore power requires an electrical grid capable of handling the power demand. Evaluating a grid’s cleanliness and capability at ports is crucial to understanding where port electrification could feasibly be integrated to reduce emissions without overburdening near-port communities. The public health benefits of reducing emissions near ports through shore power should also be considered when discussing the costs. The monetary benefits of avoided mortality and morbidity from reduced air pollution can be compared with the high initial costs of installing shore power at ports to assess costs and benefits (U.S. EPA, 2022).

Long-term costs of shore power also depend on the future prices of marine fuel versus electricity, which vary from port to port. Federal funding can help offset the initial investment and maintenance costs associated with shore power. There is potential for priority 1–4 ports to achieve, meaningful emissions reductions with funding from federal legislation like the BIL or IRA. Port-specific federal funding could place more focus on shore power and port electrification to improve air quality around near-port communities.

This ICCT Study aimed to identify U.S. ports where investment in shore power infrastructure could **substantially reduce dangerous air emissions and dramatically improve air quality at local near port communities and infrastructure.**

## **REPORT GENERAL FINDINGS AND CONCLUDING REMARKS SUMMARY**

This report generally follows and concurs with the detailed recommendations and procedures of the U. S. Environmental Protection Agency (USEPA) that provides information on “**best practices at ports to reduce diesel pollution and associated health impacts**” in the USEPA document titled “**Best Port-Wide Planning Practices to Improve Air Quality**” – (Referenced internet source: [www.epa.gov/ports-initiative/best-port-wide-planning-practices-improve-air-quality](http://www.epa.gov/ports-initiative/best-port-wide-planning-practices-improve-air-quality)).

It is recommended that Port NOLA and the St. Bernard School Board and the leadership of the State of Louisiana land development regulatory agencies proactively work together and thoroughly explore all aspects and elements identified in this report related to the Port NOLA LIT Terminal project construction and marine/intermodal rail terminal operations with the goal of uninterrupted safe continued operation of the W. Smith Jr. Elementary School during the following timeframes:

- The completion of the LIT Terminal Phase 1A construction and the start of LIT marine and intermodal rail terminal operations for LIT Phase 1A.
- The completion of the LIT Phase 1B construction and the LIT marine and intermodal rail terminal operations for LIT Terminal Phase 1A and 1B.

- The completion of the LIT Phase 2 construction and the LIT marine and intermodal rail terminal operations for LIT Terminal Phase 1A, Phase 1B, and Phase 2.

Port NOLA and near port and intermodal rail terminal communities, like the W. Smith Jr. Elementary School student population tributary neighborhoods and all LIT marine and intermodal project stakeholders, including on and off terminal related container and intermodal logistical developments and operators, have **critical LIT environmental project challenges that will require mutual combined joint action and long-term mutual agreements** for the sale/transfer and future land development of the former W. Smith Jr. Elementary School operational footprint within the final “Construction Completion” construction phase of the LIT Terminal development and future LIT Terminal marine port and intermodal rail terminal operations.

LIT project environmental regulatory mandates related to an array of **potentially deleterious environmental project concerns like air quality adverse impacts** have not as yet been formalized, fully agreed to, mutually resolved or mitigated for all phases of the Port NOLA LIT project development and construction with respect to the continued operation and suitable relocation of the W. Smith Jr. Elementary School operational footprint. LIT project proponents and community-port/intermodal rail stakeholders **must address and jointly agree upon the important and emerging environmental justice concerns** (refer to USEPA Environmental Justice (EJ) Primer for Ports) **and should jointly analyze and reach agreement to improve the health safety and quality of life for the LIT Terminal near-port and near intermodal rail terminal communities.**

Meaningful collaboration, education and proactive communication with all community partners and LIT stakeholders can dramatically achieve better port and intermodal rail infrastructure project outcomes, increase project resilience, and proactively manage development and operational risks. Collaborative problem-solving processes or other approaches described in this report and in EPA’s [Community-Port Collaboration Toolkit](#) should be used to identify and communicate key environmental and regulatory issues offering Port NOLA proven LIT Terminal development and operational **best practice joint solutions and actions.**

In addition to **collaborative planning efforts identified above to reduce adverse air quality emissions from vessels and terminal port and intermodal rail terminal diesel vehicles and yard equipment** operating within the LIT Terminal and adjacent to it, Port NOLA, the Smith Elementary School leadership, and the St. Bernard School Board should work closely together to comprehensively identify other potentially viable ways to minimize exposure to the array of potential hazardous air pollution, including but not limited to:

- Evaluating whether physical barriers between port/intermodal rail activities and adjacent communities and neighborhoods should be installed (e.g., man-made solid barriers/berms such as sound walls or fences, vegetative barriers such as trees and bushes and elevated suitably landscaped areas). If professionally designed, these barriers may help to reduce air pollution levels in the adjacent community areas including the Smith Elementary School. Professionally planned and designed sound walls can also reduce noise and vegetative barriers can improve project perimeter aesthetics.
- Evaluating whether existing and planned residences, school buildings and other adjacent or nearby buildings should be renovated, re-constructed, or upgraded to reduce air pollution exposures following modern construction best practices such as installing improved air filtration and suitable air handling units within the building structure envelope.