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Freight Down the Middle: Neighborhood Impacts and the New Orleans Middle Belt Rail Proposal

Department of Planning and Urban Studies, University of New Orleans

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Cara Bartholomew
Eric Bettis
Rexter Chambers
Alexander DePriest
Bailey DeRouen
Carie Fischer
Hunter Hebert
Race Hodges
Carrie MacKay
Annabeth McCall
Adam Tatar

Table of Contents

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Executive Summary p. 3
Introduction p. 4
History p. 6
Affected Communities p. 7
Process and Regulations p. 13
Health and the Environment p. 17
Carrollton Curve and Hazardous Materials p. 23
Conclusion p. 27
Sources p.31
Appendices p. 40

- Map of demolished properties
- Case studies
- Map of current zoning
- Map sources
- Images of mitigation measures
- One page summary brochure

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Executive Summary

The New Orleans Rail Gateway (NORG) serves as a major thoroughfare for freight traffic and is a regional and national priority for redevelopment. NORG traverses Jefferson and Orleans Parishes, currently receiving 35 trains a day. The New Orleans Rail Gateway is currently the subject of a comprehensive study to determine how to increase rail efficiency through the Greater New Orleans Metropolitan Area. As one part of the study, the public-private effort will assess the impacts of two scenarios for increasing freight rail capacity through Orleans Parish.

The Middle Belt option entails the rerouting of freight rail from the Back Belt, which travels through the Jefferson Parish community of Old Metairie, to the Middle Belt which travels through the Orleans Parish neighborhoods of Hollygrove and Dixon. The Middle Belt option would require significant infrastructure improvements along the existing rail right-of-way and has raised concerns among local leaders and community members due to the increased rail traffic.

Currently, the Federal Railroad Administration (FRA) and the Louisiana Department of Transportation and Development (LADOTD), are working on the Environmental Impact Statement (EIS) for the proposed New Orleans Rail Gateway Project. The completion of an EIS is mandated by the National Environmental Protection Act (NEPA) to assess potential impacts and alternatives for communities in proximity to large-scale development projects. The NORG study is being conducted jointly with the FRA, the Louisiana Department of Transportation and Development (LADOTD), the New Orleans Regional Planning Commission (NORPC), and the six Class 1 railroads that utilize the Rail Gateway.

The purpose of the "Freight Down the Middle" study is to assess the potential outcomes for Hollygrove and Dixon residents if the Middle Belt option is implemented. The study analyzes current regulations, established data on health impacts, engineering specifications, demonstrated mitigation measures, and case studies to illustrate possible impacts on the neighborhoods. The study area focuses specifically on Hollygrove and Dixon, and statistical data at the census tract level is used to give context to the risk factors inherent to the population groups in the area.

There are community concerns that the proposed Middle Belt option would expose local citizens to hazards such as increased air pollution, noise and vibration, declines in pedestrian safety and access to transit, loss of green space, community severance, and risks associated with hazardous material spills. The negative impacts of these phenomena on physical and social health are discussed in the Hollygrove context, and the report finds that this population will be especially vulnerable to the anticipated impacts, particularly the young and elderly in terms of air pollution and noise/vibration exposure and the carless in terms of lack of pedestrian access to transit.

The neighborhoods under examination have concerns based on many built environment and demographic factors. For example, the effects of diesel smoke air pollution and particulate matter have documented greater effects on both pre-adolescent and elderly populations, often increasing risk of asthma and other respiratory and cardiovascular illnesses. The study area contains a notably greater percent¬age of each of these populations than the parish as a whole. In Hollygrove, 15 percent of residents are 9 years of age or younger and 21 are over 60, versus 12 percent and 16 per¬cent in Orleans Parish (US Census Bureau, QT-P1 2010). The Middle Belt option, as currently drafted, would also make the community's green spaces less attractive and usable, as all are located within the immediate vicinity of the current tracks, and increased noise and fumes would arguably make recreation less enjoyable. Noise and vibration can also have tangible effects on both human health and nearby structures, with studies showing higher instances of heart attacks and hypertension in those exposed to noise as loud as 80 to 90 decibels when within 50 feet of rail freight (Illinois Dept. of Transportation, 2007).

Mitigation measures such as protective walls to block or dampen noise, vibrations, and air pollution, as well as earthen berms and trenches are identified as feasible options, and measures such as at-grade pedestrian crossings could create a method which could better connect those in the study area with transit and other communities. Possible evacuation routes in the event of hazardous material spills are also addressed in the report. In addition to expecting that many of these measures will be incorporated into the Middle Belt project should it be chosen, a number of options for stakeholder involvement are presented.

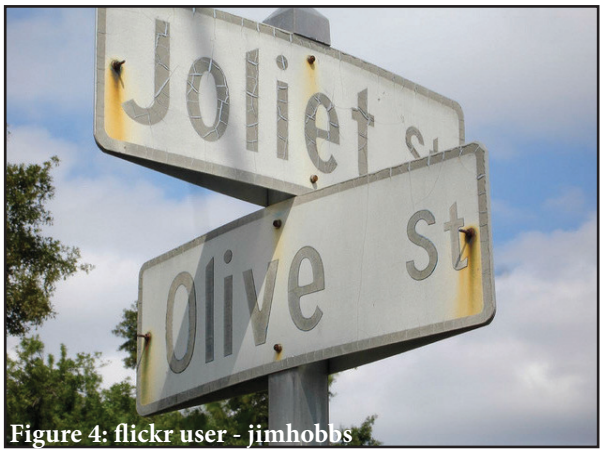


Figure 4: flickr user - jimhobbs

Introduction

New Orleans is a historic trade center, using its geographical advantages to serve as a primary link for the movement of goods across the country (Cambridge Systematics 2008). Freight movement, however, often comes at a price for communities experiencing the environmental and social impacts. The neighborhoods of Hollygrove and Dixon, which continue their struggle to regain population after Hurricane Katrina, will potentially be the site of a new freight rail project. Despite the economic benefits that the region would likely enjoy, there are concerns among members of the Hollygrove, Dixon and adjacent communities that there will be disproportionate negative impacts.

The New Orleans Rail Gateway (NORG) serves as a major thoroughfare for freight traffic in the Gulf South. NORG is a 29-mile stretch of rail that traverses Jefferson and Orleans Parishes, currently receiving 35 trains a day. It serves six Class 1 Railroads, and the New Orleans Public Belt which acts as the terminal switching railroad for the network (FRA DOT 2012). Currently, the system is unable to efficiently handle existing traffic volumes, and, moving forward, will not be equipped to accommodate projected future freight demand (FRA DOT 2012). Inadequacies in the system routinely result in delays to both rail and vehicular traffic throughout the network. The Federal Railroad Administration (FRA) has estimated that there is a combined delay of 29.7 hours per day for trains utilizing the NORG and daily delays to vehicles and trucks of 112.4 hours and 12.2 hours, respectively (FRA DOT 2012).

Freight trains passing through the New Orleans Rail Gateway currently travel along the "Back Belt," the portion of the network that travels through the Jefferson Parish community of Old Metairie (Cambridge Systematics 2008). For several decades, improving conditions along or re-routing freight from the Back Belt has been discussed. With anticipated increases in freight volume over the next several years, as well as acknowledged inefficiencies which cause delays in freight movement throughout the system, the Louisiana Department of Transportation and Development, the Federal Railroad Administration, the Regional Planning Commission, and the Class 1 railroads are studying improvements to the Back Belt, as well as alternatives to the current route.

An alternative entailing restructuring the Middle Belt to accommodate freight traffic is currently under consideration. Currently, the line is used by two daily passenger trains traveling to and from the Union Passenger Terminal, but with the proposed upgrades, this option would require linking this passenger route with the current freight rail line and building an additional track where there is currently a single rail line (Cambridge Systematics 2008).

If the Middle Belt option is implemented, the adjacent neighborhoods could experience significant initial disruption during construction and ongoing negative impacts with the dramatic increase in train volume. Among these possible impacts are increased air pollution, disruptions and damage associated with noise and vibrations, and consequences stemming from the rail line spatially dividing the community (Cambridge Systematics 2008). Community members, believing the Middle Belt option will cause irreparable damage, have raised significant opposition to the project. They have also raised concerns that this proposal would cause disparate impacts on low-income and minority groups who enjoy certain protections under federal regulations.

Before moving forward with the NORG proposal, federal law requires that an Environmental Impact Statement (EIS) be completed to evaluate environmental and related impacts of the proposal and any possible alternatives. The EIS study is being conducted as a public-private partnership among the Federal Railroad Administration, the Louisiana Department of Transportation and Development (LADOTD), the New Orleans Regional Planning Commission (NORPC), and six Class 1 railroads represented by the Association of American Railroads (AAR). While the Federal Railroad Administration will issue a final Record of Decision on the study, multiple public comment periods are a required part of the study process. During public comment periods all options under study—as well as other improvements and issues throughout NORG—will be discussed by a broad group of stakeholders ranging from the residents of particular neighborhoods and the City of New Orleans to the Port of New Orleans and Amtrak.

This report is intended to be a resource for communities interested in understanding transportation decision-making and impacts from freight rail. We explore impacts to the physical and social health of the communities which would be affected should the Middle Belt option be adopted, primarily focusing on Hollygrove and Dixon. The report provides data on the affected New Orleans neighborhoods, potential impacts, mitigation measures, and regulatory context. It neither proposes a particular course for neighborhood stakeholders nor a NORG program of projects. Our examination is not comprehensive of all neighborhood impacts, and a broader regional, comprehensive assessment of costs and benefits of any option is outside of this study's scope. Interested readers can review the 2009 "New Orleans Rail Gateway Benefits Final Report," which summarizes the distribution of benefits and costs for the various rail options or the draft EIS LADOTD expects to release later in 2014.[1]

The following section gives a brief history of the Hollygrove neighborhood, and a description of its location within New Orleans. Chapter Two analyzes various demographic information of the population within the study areas of Hollygrove/Dixon. The demographics are especially relevant given federal rules that protect against disparate negative impacts accruing among low-income and minority communities. Demographic information discussed includes information on vacancy rates, the age of residents, poverty rates, and the racial makeup. This chapter also addresses Hollygrove and Dixon's current land use patterns and the built environment.

The third chapter discusses the process through which new federal projects such as the Middle Belt option are authorized and the regulatory framework in place to ensure projects comply with environmental and environmental justice legislation. The roles of the National Environmental Protection Act and Title VI of the Civil Rights Act are highlighted as laws that are relevant to the debate about NORG options.

Chapter Four contains a description of many public and community health impacts and possible mitigation measures. This section features detailed descriptions of the effects of freight rail on people and the environment, focusing on noise, vibration, air quality, current transportation infrastructure, and accessibility impacts for pedestrians.

Chapter Five focuses on the Carrollton Curve, discussing its implications and potential complications. Concerns about hazardous material spills as well as the creation of evacuation routes are addressed. The report concludes with methods for concerned citizens to affect the outcome of the Middle Belt option whether through learning more about the study, participating in the democratic process in support or opposition to a particular infrastructure option, ensuring compliance with federal mandates, participating in DOTD activities or identifying preferred mitigation measures.

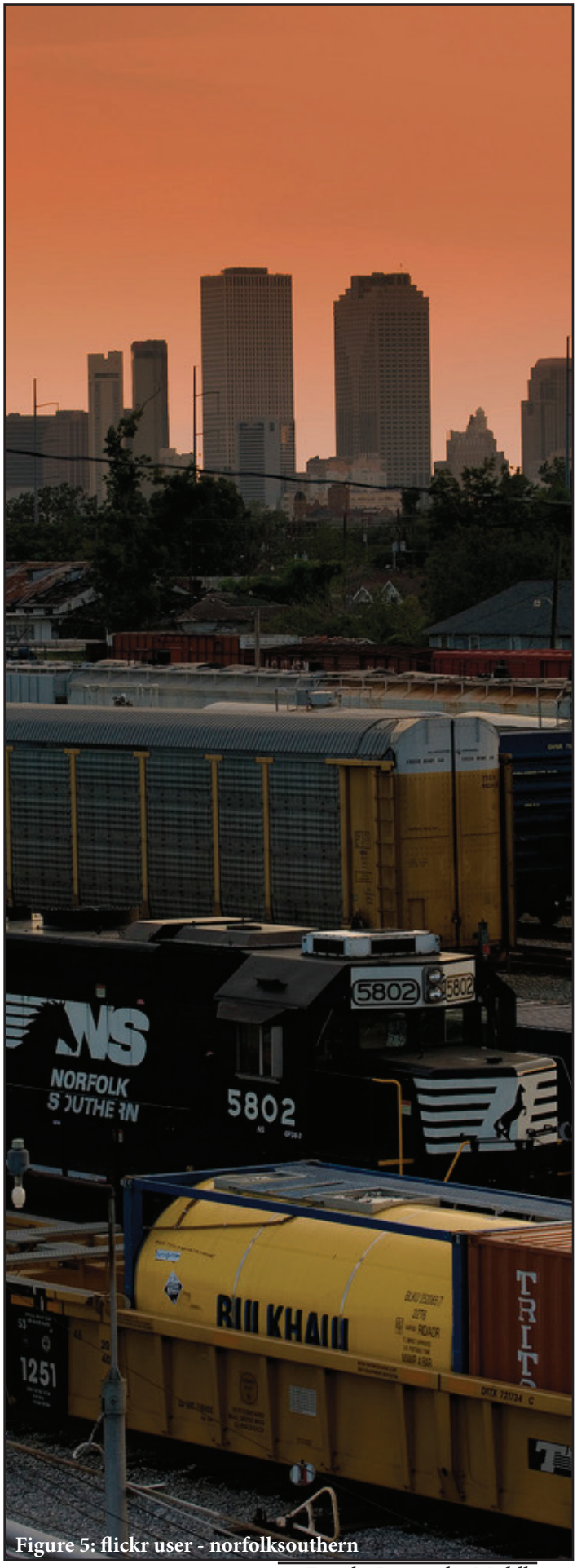


Figure 5: flickr user - norfolksouthern

[1] That study and other documents are available on the LADOTD webpage on the NORG project: http://wwwapps.dotd.la.gov/administration/public_info/projects/home.aspx?key=50 (accessed May 4, 2014).

1. Historical Context

History of the Hollygrove Neighborhood

The land upon which the neighborhood of Hollygrove rests was once the site of the McCarty Plantation. In 1833, half of the plantation was purchased by a New Orleans bank to create an extension of the New Basin Canal, with the other half purchased by investors the intention of creating a residential settlement (Greater New Orleans Community Data Center 2002). After its street grid was laid out, the area was incorporated as the suburban town of Carrollton in 1845 (GNOCDC 2002). Though Carrollton housed amenities such as an ornate train station, a hotel, and a racetrack, much of the area remained too marshy for development until effective means of drainage were introduced in the 1920s. The town of Carrollton was annexed by the City of New Orleans in 1874 (Preservation Resource Center 2002), yet even with the beginning of significant settlement in the area after 1920, Hollygrove's tendency to flood acted as a natural control on development (Greater New Orleans Community Data Center, 2002). Still, the area proved attractive, with nearly half of its pre-Katrina homes built before 1949 (Lambert 2006). The 1960s brought more effective drainage technology, and the community quickly grew to near its peak capacity by the middle of the decade (Greater New Orleans Community Data Center 2002).

Figure 6: http://images.rapgenius.com/3vvudm9plwpqjeazmxyx7602g.1000x666x1.jpg

Strongly residential in character and land use, this neighborhood gradually evolved to house a predominately African-American population, many of whom were moderate-income and homeowners (Gotham, Blum and Campanella 2014). However, crime and poverty became persistent problems in the community, with accompanying increases in property theft and violent crime. Despite being the recipient of extensive drainage upgrades such as a new pumping station and canals in 1996 (Greater New Orleans Community Data Center 2002), Hollygrove suffered the same inundation as most of the low-lying areas of the city during Hurricane Katrina. When the 17th Street Canal's levee wall was breached on August 29, 2005, storm surge waters rushed into the neighborhood, destroying homes and completely flooding the area (Gotham, Blum and Campanella 2014). Following Hurricane Katrina, many Hollygrove residents did not return, with an estimated population decrease of 2,542 residents (37%) from 2000 to 2010. However, Hollygrove (two of the three census tracts tabulated in the following section) has shown more resilience in recent years, with 2012 population estimates at 4,919 residents, a 12 percent increase over two years (U.S. Census Bureau 2008- 2012 B01003).

The boundaries of the Hollygrove neighborhood include Palmetto Street to the north, the Jefferson Parish line to the west, and Claiborne Avenue to the south, with its eastern boundary stretching from Carrollton Avenue to Cambronne and Leonidas. The New Orleans Country Club Golf Course, the Palmetto Canal, and the Pontchartrain Expressway, otherwise known as Interstate 10, bound the neighborhood of Dixon (Lambert 2006).

2. Affected Communities

Methodology

The team identified six (6) census tracts adjacent to the Middle Belt in New Orleans. These tracts are referred to as the Middle Belt Study Area (64, 65, 71.01, 75.01, 75.02 and 76.05). Among those six tracts, three align with the Hollygrove / Dixon study area (75.01,75.02 and 76.05); we refer to these three tracts as the Hollygrove/Dixon study area. We collected data for all the 6 census tracts, and tabulated demographic data for the Middle Belt overall and the sub-set of three tracts that comprise the Hollygrove/Dixon area. Our demographic data also includes the City of New Orleans and the New Orleans Metropolitan Statistical Area (MSA) for comparison. The New Orleans–Metairie–Kenner MSA (2010 Census) includes Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, and St. Tammany parishes. Much of the data we report in this section comes from the 2010 Decennial Census. For data not collected in the decennial census, we utilize American Community Survey (ACS) five-year estimates (2008-2012). The American Community Survey (ACS) is a national survey that collects additional demographic information like income. The ACS collects data every year rather than every 10 years but does so only for a sample population.

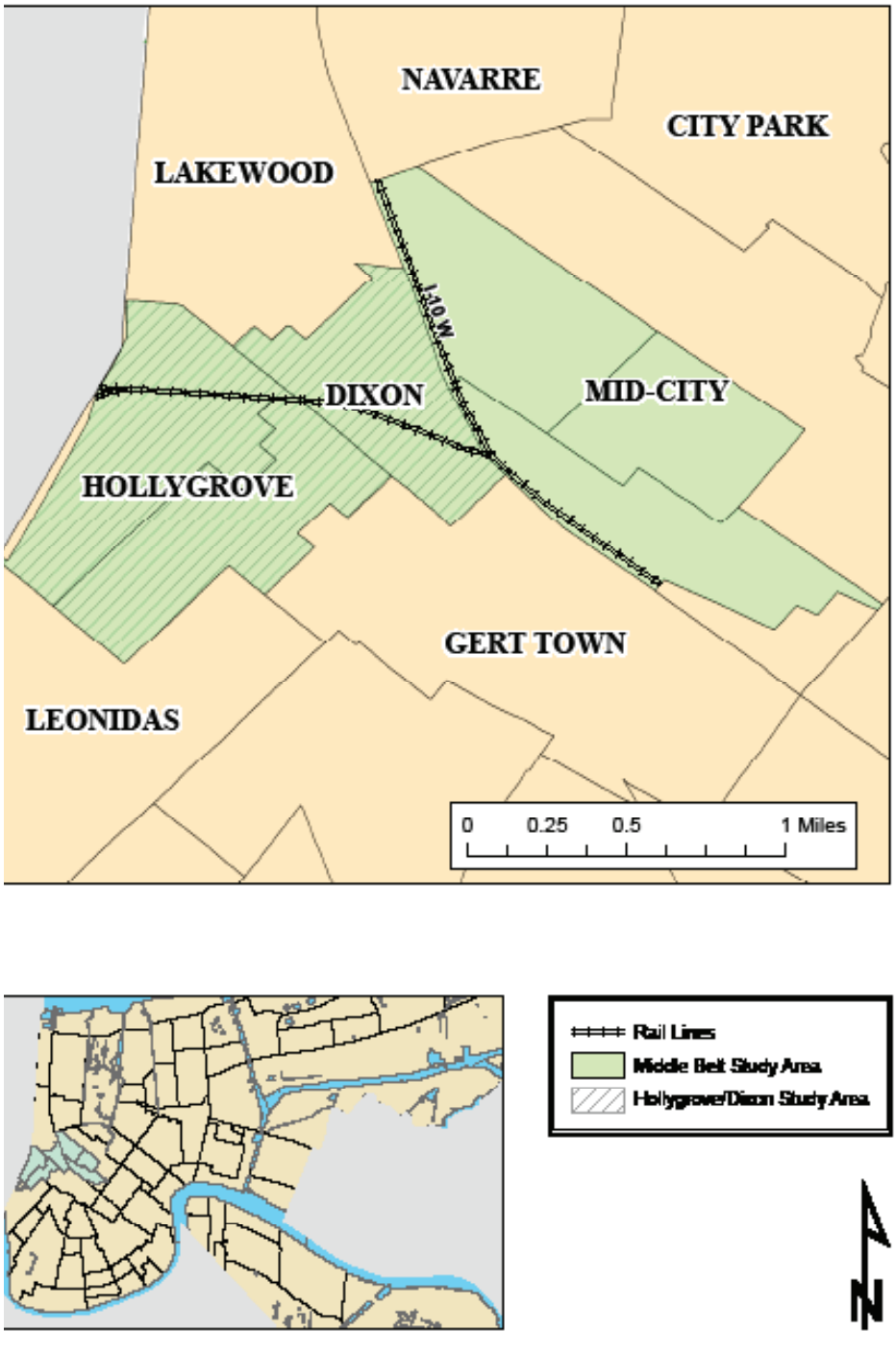
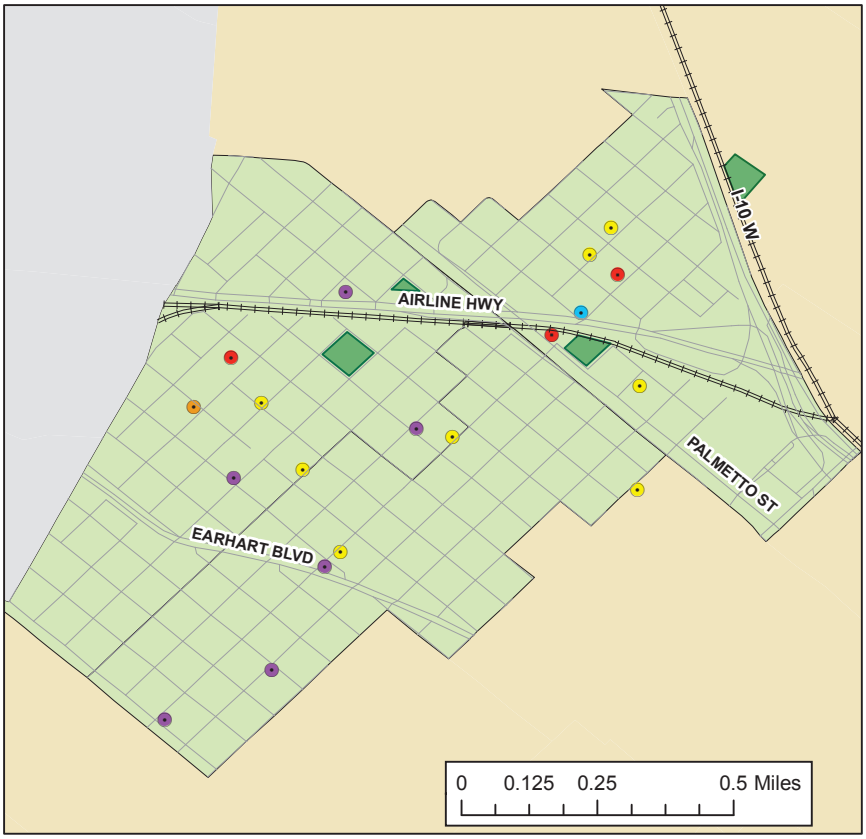


Figure 7: Study Area
This map illustrates the study area of the Hollygrove and Dixon neighborhoods (census tracts 75.01, 75.02 and 76.05) and surrounding area.

Selected Community Resources



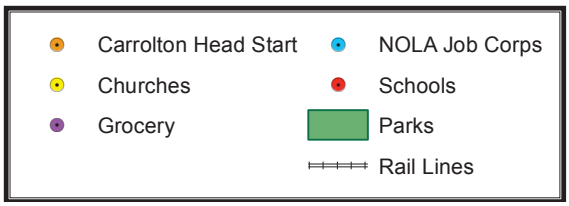


Figure 8: See appendix of map sources

The Built Environment

The Hollygrove and Dixon neighborhoods are primarily residential areas with a moderate level of density. Key citywide and regional transportation corridors surround them.

Land use categories in New Orleans are dictated by the Master Plan which is implemented via the Comprehensive Zoning Ordinance. The study area is primarily zoned residential with other limited uses. The largest residential zoning district is RD-2, two-family residential district, as seen in the appendix. This district is a two-family residential district, which allows for a maximum of two housing structures on each lot. This type of zoning district can also include single-family dwellings and low intensity neighborhoods uses such as churches and recreation facilities. The study area also contains multi-family residential, neighborhood business districts and a limited area of general commercial.

A review of the walkability of the affected neighborhoods revealed that both Hollygrove and Dixon are "somewhat walkable", as is the city as a whole. The neighborhoods fell within the top 25 percent of neighborhoods in New Orleans for their walkability score. The neighborhoods, however, scored lower in bikeability than the rest of the city, with Dixon garnering a particularly weak bikeability score (Walk Score).

Demographics

According to the 2010 U.S Census, the Hollygrove/Dixon Study Area has a population of 5,647. The Middle Belt Study Area recorded a population of just over 12,000. Hollygrove/Dixon has a higher percentage of very young and very old residents than the city as a whole, as seen in TABLE 1 (U.S Census Bureau 2010 QT-P1). The young and old may be particularly susceptible to particulate matter and other environmental health concerns related to freight train traffic.

Table 1: Total Population (U.S Census 2010 QT-P1)

TABLE 1: TOTAL POPULATION (2010)					
	Total Population	Total Male	Total Female	Percent Male	Percent Female
Hollygrove/ Dixon Study Area	5,647	2,520	3,127	45%	55%
Middle Belt Study Area	12,304	5,828	6,476	47%	53%
New Orleans, Louisiana	343,829	166,248	177,581	48%	52%
New Orleans MSA	1,167,764	568,375	599,389	48%	52%

Table 2 : Population by Age and Sex (U.S. Census 2010 QT-P1)

TABLE 2: POPULATION BY AGE AND SEX (2010)								
	Hollygrove / Dixon Study Area				New Orleans, Louisiana			
AGE	Number			Percent	Number			Percent
	Both sexes	Male	Female	Both sexes	Both sexes	Male	Female	Both sexes
Total population	5,647	2,520	3,127	100%	343,829	166,248	177,581	100%
9 and under	870	440	430	15%	41,558	21,054	20,504	12%
10 to 19 years	734	366	368	13%	42,959	21,276	21,683	12%
20 to 39 years	1,392	598	794	25%	110,220	53,895	56,325	32%
40 to 59 years	1,450	654	796	26%	93,014	45,817	47,197	27%

As of 2010, the (3) census tracts for the Hollygrove/Dixon Study Area had a total of 3,354 housing units. Of these housing units, 32 percent were vacant, and 68 percent were occupied. As seen in TABLE 3, the neighborhoods had a higher vacancy rate than Orleans Parish as a whole in which 23 percent, of housing units are vacant (U.S Census 2010 QT-H1).

Table 3: Housing Occupancy (U.S. Census QT-H1)

TABLE 3: HOUSING OCCUPANCY (2010)					
	Total Housing Units	Occupied Housing Units	Percent Occupied	Vacant Housing Units	Percent Vacant
Hollygrove / Dixon Study Area	3,354	2,281	68%	1,073	32%
Middle Belt Study Area	7,536	5,324	71%	2,212	29%
New Orleans, Louisiana	189,896	142,158	75%	47,738	25%
New Orleans, MSA	538,239	455,146	85%	83,093	15%

The percentage of owner occupied housing units and renter occupied housing units varied among the Hollygrove and Dixon census tracts. In aggregate, the percentage of owner occupied housing units within these neighborhoods was 47 percent, and renters reside in 53 percent of occupied housing units. However, among the three census tracts the owner occupancy rate ranged from 36 percent to 58 percent. The aggregate results in Hollygrove and Dixon are similar to Orleans Parish as a whole, where the percentage of housing units that were owner occupied was 48 percent, and the percentage of housing units that were renter occupied were 52 percent, according to results from the Census 2010 (US Census QT-H3 2010).

Table 4: Housing Occupancy by Ownership (U.S. Census QT-H3 2010)

TABLE 4 HOUSING OCCUPANCY BY OWNERSHIP (2010)								
	Hollygrove/ Dixon Study Area		Middle Belt Study Area		New Orleans, Louisiana		New Orleans MSA	
Occupied Housing Units	2,281	100%	5,324	100%	142,158	100%	455,146	100%
Owner-occupied	1,080	47%	1,822	34%	68,003	48%	288,234	63%
Renter-Occupied	1,201	53%	3,502	66%	74,155	52%	166,912	37%

Across the Hollygrove census tracts, the total rate of poverty is 29 percent. The entire population for whom poverty status is determined was 6,071, which means 1,762 individuals fall below the poverty level. The rate is similar to Orleans Parish as a whole, where 27 percent fall below the poverty level. On the other hand, poverty in Hollygrove and Dixon is at higher rate than the metropolitan area, which has a poverty rate of 18 percent.

Table 5: Poverty for Whom Poverty Status Is Determined (U.S. Census 2008-2012 S1701)

TABLE 5: POVERTY AMONG THOSE WHOSE POVERTY STATUS IS DETERMINDED (2008-2012)			
	Estimated Population for Whom Poverty Is Determined	Estimated Population Below Poverty Level	Percent Below Poverty Level
Hollygrove/Dixon Study Area	6,071	1,762	29%
Middle Belt Study Area	12,412	4,117	33%
New Orleans, Louisiana	330,364	89,988	27%
New Orleans MSA	1,146,828	203,336	18%

Figure 9: http://media.nola.com/new_orleans/photo/10312146-large.jpg

Table 6: Estimated Income of Population (U.S. Census 2008-2012 S1901) [2]

TABLE 6: ESTIMATED INCOME OF POPULATION								
	Hollygrove / Dixon Study Area Total	Hollygrove / Dixon Study Area Percent	Middle Belt Study Area Total	Middle Belt Study Area Percent	New Orleans-City, LA Total	New Orleans-City, LA Percent	New Orleans-MSA Total	New Orleans-MSA Percent
	Estimate		Estimate		Estimate		Estimate	
Total:	2,416		5,477		143,851		453,883	
Less than $10,000	350	14%	985	18%	22,187	15%	43,067	9%
$10,000 to $14,999	300	12%	653	12%	11,227	8%	28,520	6%
$15,000 to $24,999	595	25%	1,046	19%	19,994	14%	53,562	12%
$25,000 to $34,999	337	14%	754	14%	16,297	11%	50,329	11%
$35,000 to $49,99	199	8%	415	8%	12,396	9%	41,120	9%
$50,000 to $74,999	362	15%	830	15%	20,763	14%	75,697	17%
$75,000 to $99,999	100	4%	271	5%	12,414	9%	51,265	11%
$100,000 to $149,000	66	3%	254	5%	12,049	8%	53,547	12%
$150,000 to $199,999	-	0%	48	1%	4,493	3%	17,442	4%
$200,000 or more	10	0%	21	0%	5,949	4%	18,282	4%
Median Household Income In Past 12 months	N/A		N/A		$36,681		$47,429	

Table 7: Population by Race (U.S. Census 2010 QT-P3)

Hollygrove and Dixon have a high share of African American residents (95%), as does the larger Middle Belt Area (72%). The Middle Belt Area has a high share of Latino residents. Thus, at both scales there is a larger share of minority residents than in the city or MSA (U.S Census 2010 QT-p3).

TABLE 7: POPULATION BY RACE (2010)							
	One Race, Including Latino/Hispanic Population					Hispanic/Latino of Any Race	
	Total	White	Percent White	Black	Percent Black	Hispanic	Percent Hispanic
Hollygrove/Dixon Study Area	5,647	207	4%	5,291	95%	154	3%
Middle Belt Study Area	12,304	2,584	21%	8,850	72%	1,195	10%
New Orleans, Louisiana	343,829	113,428	33%	206,871	60%	18,051	5%
New Orleans MSA	1,167,764	679,773	58%	397,095	34%	91,922	7%

This table reports Latino/Hispanic as an ethnicity. Due to this and rounding, the numbers may not add up to 100%.

[2]Among the Hollygrove/Dixon tracts, median income ranged from $24,405 (tract 75.02) to $24,821 (tract 76.05). Among the expanded Middle Belt Area, median income ranged from $15,655 (tract 71.01) to $32,226 (tract 65). Without access to underlying census records, we could not calculate the median for the study areas.

3. Process and Regulations

In order to update the New Orleans Rail Gateway (NORG), the government agencies involved must go through a specific process, which is guided by the law. The Federal Railroad Administration (FRA), the leader of the project, stays engaged with all projects in this process to assure the protection of the people and places affected by new development. Currently, the FRA is working on its Environmental Impact Statement (EIS); this is the primary tool of the FRA, and people at all levels of government, including citizens, have the right to weigh in during the EIS process. Upon completion of the EIS, which is generally a multi-year process, the FRA will publish a separate document to mark the end of the process, and make public the steps it plans to take in New Orleans. Along with an in-depth discussion of the EIS process, the following chapter describes the laws the government currently uses to ensure environmental justice related to its projects, including NEPA, Title VI, and several others, with the aim of illuminating the complexities of federal decision-making, and helping interested parties know what is happening, what may take place in their communities, and what they can do about it.

Project Process

The Federal Railroad Administration, an operational arm of the US Department of Transportation, is charged as the lead federal agency for the New Orleans Rail Gateway Program. As such, its role is to oversee all safety and development activities on the national rail network. The FRA is responsible for administering the EIS process and issuing the program's official Record of Decision (ROD) upon completion of the EIS process, in accordance with the National Environmental Policy Act (NEPA) (CEQ 2011). While the FRA is the lead agency on the federal level, the Louisiana Department of Transportation and Development (LADOTD) is considered the 'joint' lead agency on the state level. The FRA and LADOTD are in close coordination and are required to use a joint planning process, joint environmental research and studies, joint public hearings, and joint environmental assessments (CEQ 2011). The NORG study is being funded through a combination of federal, state, and private funds. The majority of the funds, 80 percent, came from a 1997 federal earmark for rail improvements in Metairie. The federal funding required a 20 percent local match which is being provided by the State of Louisiana through DOTD and the Association of American Railroads, both providing 10 percent[3]. At the conclusion of the EIS process, after all agencies, individuals, and political entities have weighed in, the FRA will be responsible for issuing the program's Record of Decision (ROD). The ROD officially records the agency's decision and contains much of the same information as the EIS. The agency is required to (1) state the decision; (2) identify all alternatives considered; and (3) state whether all practicable means to avoid or minimize environmental harm have been adopted (CEQ 2011).

National Environmental Policy Act (NEPA)

At this point in the NORG project, the law that most concerns all parties involved is the National Environmental Policy Act (NEPA). NEPA, passed in 1969, is the foundation of the nation's environmental policy. NEPA requires an evaluation of all environmental consequences for all potential federal or federally funded projects (CEQ 2011). One of the effects of NEPA being signed into law was that all federal agencies must now prepare one of two documents, either Environmental Assessments (EA) or Environmental Impact Statements (EIS), to prove that steps have been taken to avoid damage to people or the environment. Many federal agencies also publish guidance, which are rules about the best way to undertake an EA or EIS. Guidance is not necessarily binding, but is intended to offer assistance in interpreting agency regulation. Agencies may provide guidance to interpret existing law or clarify how they will treat or enforce governing legal norms. The FRA will take all of this into account when designing the EIS for the New Orleans Rail Gateway.

NEPA was "enacted to ensure that information on the environmental impacts of any Federal, or federally funded, action is available to public officials and citizens before decisions are made and before actions are taken" (USGS 2014). Depending on the size and scope of the project, there are three levels of analysis that may be required.

In certain cases where the project is quite small, a federal agency may determine from the outset that the project should be "categorically excluded" from the NEPA requirements. The greater the possible impacts of the proposed project, the more study and scrutiny are typically required.[4] For projects as large as the New Orleans Rail Gateway proj-

[3]J. Dean Goddell (LA DOTD), email communication to Kate Lowe, April 9, 2014.

[4]If the level of impact is unknown, federal agencies are required to complete an Environmental Assessment to determine the level of impacts and if additional review is required. If the proposed project is environmentally controversial or if the agency anticipates there will be environmental impacts, the agency may choose to skip the EA and simply conduct a full EIS.

ect, it is a given that there will be significant impacts and the agencies are required to complete a full Environmental Impact Statement.

An EIS is an extensive and detailed analysis of the proposed project and any possible alternatives and serves as a decision-making tool. A typical EIS includes a discussion of the purpose of and need for the action, alternatives, the affected environment, environmental consequences of the proposed action, and a list of all persons and agencies consulted.

During the EIS process, the public, other federal agencies, and any interested parties may provide input, and there is also a public comment period once the draft EIS is complete. Upon the completion of an EIS, the agency that prepared the EIS will create a final document, the "Record of Decision." The Record of Decision acts as an agency's official means of making public the ways that it plans to use the recommendations of the EIS on the ground, when implementing the project.

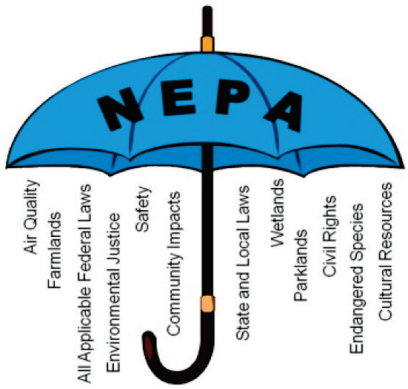


Figure 10: LADOTD, slide 20, 2012.

In order to conduct a study of the New Orleans Rail Gateway and comply with all NEPA requirements, the FRA and LADOTD have developed and are undertaking a three-phase process, including (1) Scoping and Purpose & Need Assessment; (2) Alternatives Studies; and (3) Environmental Documentation (LADOTD 2012). The scope of the EIS study reaches a wide area, comprising 110 square miles in all. The Middle Belt is only one among several rail corridors within the study area.

The first phase of the process, Scoping and Purpose & Need Assessment, includes the identification and evaluation of a broad range of alternatives, public outreach, and the development of consensus on important program and environmental issues (LADOTD 2012). This part of the process began in early 2012, and as of January 2014, LADOTD indicated that this portion of the study was near completion (LADOTD 2014).

LADOTD is currently in the second phase of the process, Alternatives Studies. In this phase, the local program sponsors are developing specific rail and roadway improvement alternatives and are identifying the preferred Program of Projects. The Program of Projects will contain multiple discrete projects that together will comprise the NORG program. In addition to specific rail improvements, the Program of Projects will also contain mitigation measures, necessary right-of-way acquisitions, and enhancements to mitigate indirect adverse effects of the Build Alternatives. (LADOTD 2014). The final Program of Projects is decided through a collaborative process between the FRA and LADOTD where input from all concerned agencies and public comments are taken into consideration.

The third stage, Environmental Documentation, consists of the preparation of the Draft EIS and other supporting documents. Once the Draft EIS is completed, it will be subject to public review and public hearings will be held to present the impacts and take input on proposed alternatives (LADOTD 2012). The project coordinators expect to hold these meetings sometime in 2014. Following public hearings on the Draft, the Final EIS, which addresses comments on the Draft, will be prepared and distributed again for public review (LADOTD 2012). Ultimately, a selected Program of Projects will be identified in the Record of Decision. Currently, the program sponsors anticipate FRA will issue the Record of Decision by Summer 2015 (LADOTD 2014).

The Federal Railroad Administration (FRA)

In 1966, the U.S. Department of Transportation created the Federal Railroad Administration (FRA) in an effort to "enable the safe, reliable, and efficient movement of people and goods for a strong America, now and in the future." (FRA 2014). The FRA is responsible for regulating the United States railroad system. This is accomplished through the development of legislative, non-legislative, and procedural rules that affect "railroads, employees, labor, public interest groups, and other stakeholders" (FRA 2014). Details regarding guidance, adjudicatory actions, data quality, hearing notices, extensions of comment periods, final rules, public comments, and economic and environmental analyses can be accessed by the public at the U.S. Department of Transportation's online database, including the Federal Docket Management System (FRA 2014). In order to better regulate safety throughout the railroad industry, the FRA created the Office of Railroad Safety to supervise regulatory compliance and enforcement of the five "rail safety inspection disciplines": hazardous materials, track, operating practices, signal and train control, and motive power

and equipment (FRA 2014). The FRA also formed the Railroad Safety Advisory Committee (RSAC), comprised of representatives from stakeholder groups such as "railroads, labor organizations, suppliers, manufacturers, and other interested parties" to operate in an advisory capacity and offer recommendations to the FRA (FRA 2014). On a state level, Louisiana is involved in the Rail State Safety Participation Program, which employs and trains safety inspectors to conduct inspections, investigations, and surveillance activities to ensure compliance with federal railroad safety regulations (FRA 2014). As an additional layer of safety, the FRA also formed the Railroad Safety Board (RSB) to review and decide on waiver petitions, block-signal applications, and other requests made by railroads and other interested parties (FRA 2014). Lastly, the Hazardous Material Division of the FRA controls the transportation of hazardous materials, including petroleum, chemical, and nuclear products throughout the United States railroad system(FRA 2014).

Environmental Justice

Purpose of Title VI

Title VI, 42 U.S.C. of the Civil Rights Act of 1964 is a statute enacted to prevent discrimination by Federal agency actions "on the ground of race, color, or national origin" and to ensure that protected populations are not "excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance" (Title VI 1964). Accordingly, in practice, Title VI ensures that if the actions of a federal agency or federally funded program, policy, or activity are found to be discriminatory, then the federal funds will be terminated and the matter will be subject to legal action under the Department of Justice (Title VI 1964).

Executive Order 12898

Under Title VI Regulation 49 CFR 21, all projects or policies implemented with funding from a federal agency must comply with Title VI requirements for assessment of impacts on local populations (Federal Highway Administration 1999). The 1994 issuance of Executive Order 12898 by President Bill Clinton raised Title VI to prominence as a federal issue by directing agencies to make policies and procedures to prevent negative or disproportionate impacts on minority or low-income populations (Federal Highway Administration 2013). This issue is of great importance due to the oversight of Title VI enforcement in the past and the persistence of the unequal distribution of harms and benefits among communities. Under the order, individuals have the power to file an administrative complaint against an entity that receives funding from a federal transportation program. The compliance review process determines if an entity is in violation of Title VI through an audit of their programs' impacts on minority and low-income groups.

The Department of Transportation and Environmental Justice

Environmental Justice is a component of Title VI, based on three basic tenets of environmental non-discrimination quoted below:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations. (U.S. Department of Transportation 2012).

With the issuance of Executive Order 12898, the US Department of Transportation and all of its subsidiary agencies (including the Federal Railroad Administration) are charged with addressing complaints of environmental injustice. As such, when an organization or individual determines that a minority or low-income group is subjected to disparate impact or intentional discrimination in transportation development or policy, they can contact the Department of Transportation's Office of Civil Rights and file an administrative complaint (U.S. Commission on Civil Right 2003). Administrative complaints, filed with agencies such as the FRA or FTA, can address the issues of both disparate impacts and intentional discrimination. Disparate impacts refer to circumstances in which policies or programs appear neutral, yet have differing and often disadvantageous effects for protected populations (such as low-income and minority groups). Intentional discrimination, which by its nature carries a higher burden of proof, involves the conscious decision by transportation providers to directly benefit a target group at the expense of a protected population (U.S. Commission on Civil Rights 2003, 29).

In order to ensure compliance with Title VI, various orders such as US DOT Order 5610.2(a) and FHWA Order 6640.23A were also enacted. These orders require Federal agencies to implement regulatory protections "by identifying and addressing disproportionately high and adverse human health or environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations." Further, regulations such as such as Titles 23, 42, and 49 offer guidance on compliance, reviews, implementation, and strategies to effectively achieve the

above stated goals. Therefore, the ongoing study led by the FRA and the LADOTD must thoroughly evaluate relevant environmental justice concerns in order for the proposed project to be in compliance with Title VI.

Direct vs. Indirect Discrimination

Persons adversely affected by federally funded activities may seek an administrative remedy by filing an administrative complaint, or the harmed individual may file suit in federal court. A strict reading of Title VI offers a prohibition on 'intentional discrimination.' However, federal agencies are required under supporting guidance and authority such as Executive Order 12898, FHWA EJ Order 6640.23A, and EJ Order 5610.2(a), among others, to implement regulations, rules, policy, planning, and decision-making practices that prohibit direct and indirect discriminatory effect on persons based on race, color, and national origin. In an effort to assist individuals and federal agencies, the U.S. Department of Justice published an Investigation Procedures Manual and a Title VI Legal Manual (United States Department of Justice Title VI 1964).

Environmental Justice Complaints and Litigation

The landscape of environmental justice conflict resolution varies dramatically based on the nature of the perceived impacts. The filing of administrative complaints to transportation agencies is comparatively successful due to the fact that all affected parties (or those filing on their behalf) are eligible to bring claims of discriminatory or disparate impacts. This allows claims to be given at least some amount of consideration. This process and other alternative methods of resolving disputes without litigation can be crucial, as the process of filing an environmental justice lawsuit requires claims of intentional discrimination and has become more difficult in recent years due to increased burden of proof demanded by courts. In essence, those seeking to bring suit under Title VI must provide strong and clearly understandable evidence that the accused's decision-making led or will potentially lead to disparate and detrimental impacts and was intentionally discriminatory (Baldridge 2013).The challenge of pursuing these cases is illustrated in the 2001 case of Anderson v. Sandoval, in which the United States Supreme Court ruled that private citizens had no standing to bring suit to "enforce disparate impact regulations" which are declared under Title VI, even though they could make claims of intentional discrimination. (U.S. Commission on Civil Rights 2003).

The Los Angeles Bus Riders Union & Environmental Justice

The filing of administrative complaints has been a valuable tool for parties seeking relief from the adverse or disproportionate impacts of transportation policy or development. For example, in November of 2010, a nonprofit law firm and advocacy group filed a complaint with the Federal Transportation Association (FTA) on behalf of the Los Angeles Bus Riders Union and other community organizations alleging that the Los Angeles County Metropolitan Transportation Authority (LACMTA) was cutting bus service routes and service hours while increasing rail service hours. This practice was seen to benefit more affluent commuters at the expense of low-income and Latino transit users (Public Advocates). LA Metro had cut 564,000 bus service hours between 2008 and 2010, while increasing subway and light rail service over 55,000 hours over the same period (Public Advocates). The administrative complaint alleged that the transit agency had not done a comprehensive assessment of potential impacts on disadvantaged populations, thus failing to meet its Title VI obligations. Without Title VI compliance, LA Metro would not be entitled to the federal transportation funding that it received for its operation and projects.

The FTA, upon executing an in-depth Title VI compliance review, discovered that LACMTA had not done equity assessments while evaluating the impacts potential service changes, as well as neglected to use its own approved indicators of potential discriminatory service changes in order to avoid self-scrutiny. The transit agency was thus ordered to address the complaint using the appropriate protocol (Rogoff 2012).

4. Health and the Environment

This section of the report discusses the effects of freight rail on public health. While there are a number of different ways that freight rail and transportation infrastructure can affect a community's public health, this report focuses on the following four specific components: Air Quality, Noise & Vibrations, Accessibility, and Recreation. These components are discussed in three sections:

- The Affected Environment

This section presents an overview of the respective public health component.

This section discusses the public health component in terms of the current conditions of the community.

- Environmental Consequences

This section discusses how the Middle Belt pro posal may impact the public health component within the community.

- Mitigation

This section discusses how to lessen the negative public health impacts of the Middle Belt proposal.

Affected Environment

Air Pollution

The transportation sector is one of the leading producers of air pollution (Krzyzanowski 2005). Transportation pollution emissions can include carbon monoxide, nitrogen oxide, fine particulate matter ($PM_{2.5}$ and PM_{10}), and volatile organic compounds among others (Bickford 2012). Exposure to these pollution emissions can lead to a number of health problems, including cancer, respiratory and cardiovascular illnesses, impeded lung development in children, birth defects, Sudden Infant Death Syndrome, and infant mortality (Ritz 2006). The Coalition for Clean Air estimates that "transportation sources such as cars, trucks, buses, ships, and trains account for 90% of the cancer risks associated with air pollution" (Coaltion for Clean Air).

The communities immediately adjacent to the Middle Belt railway are currently framed by three major transportation corridors, Interstate I-10, State Highway 61, and Carrolton Avenue. Traffic pollution emissions can induce negative health effects within a 500 meter boundary from the center of transit corridors (Health Effects Institute). Thus, the Orleans Parish residents living in close proximity to the convergence of these three corridors are likely subject to high degrees of auto emissions.

Roadside vegetation, along with large structural barriers can reduce near-road air pollution (US EPA). Field research indicates that for the 2.8 miles of Middle Belt rail in Orleans Parish, there are no existing structural or vegetative barriers separating the rail line from the immediate community. Of the three transportation corridors framing the rail line, there is one structural barrier separating Interstate I-10 from St. Patrick Playground, measuring approximately 830 feet in length by 20 feet in height.

Accessibility

Railroads and railway infrastructure can spatially sever communities. One way that community severance can impact public health is by disrupting neighborhood social support networks, which may lead to an increase in crime and a decrease in likelihood of residential community involvement (Mindell 2012). Rail infrastructure can also be a physical safety hazard for informal pedestrian corridors.

The three census tracts of interest to this report contain a disproportionately high level of residents lacking access to vehicles. According to 2012 ACS 5-year estimates, this amounts to 24 percent of the residents living within these three census tracts, compared to 10 percent of residents in the New Orleans-Metairie-Kenner MSA. This discrepancy suggests that residents living in the Middle Belt environment may rely more heavily on mass transit and walking as modes of transportation.

There are 11 bus stops along Jefferson Highway maintained by Jefferson Transit (JeT). The New Orleans Regional Transit Authority also has two bus routes in this area, maintaining a series of 12 stops along Monroe Street. The presence of stops along Airline Highway requires neighborhood residents to either cross Airline Highway or the existing Middle Belt rail infrastructure by foot to reach their bus stop. There is a single crosswalk along Airline Highway, located at the convergence of Palm Street, Mistletoe Street, and Airline Highway. The lack of additional crosswalks may encourage pedestrians to cross Airline Highway at unsanctioned locations, leading to an increased risk of injury.

Crime is also disproportionately high in census tracts framing the Middle Belt railway. According to Neighborhood Scout, an organization which collects crime data from

law enforcement agencies around the country, two of the three study area census tracts fall in the least safe quartile (Neighborhood Scout 2014).

Recreation and Education Facilities

Recreational opportunities can greatly impact a community's public health. The American Planning Association (APA) has identified a number of positive benefits associated with urban parks in particular. The APA specifically states that parks 1) can help increase fitness and reduce obesity in a community, 2) provide people with opportunities to relieve mental fatigue, reducing aggression, 4) have resources that can mitigate pollution impacts and urban heat, and 4) are gathering places where neighbors form social ties that produce stronger, safer neighborhoods (American Planning Association City Parks Forum 2003).

The APA does, however, claim that:

"There's no guarantee that a city park will be a neighborhood amenity.…Poorly located parks and parks that mark the edges of neighborhoods can serve as barriers or as turf markers to everyone from youth gangs to mothers with toddlers to business people" (American Planning Association City Parks Forum Community Revitalization).

All of the public recreational facilities we identified in the census tracts adjacent to the middle belt are located within 250 feet of the Middle Belt rail line, with two of the four actually sharing a border with the rail line itself. The facilities include Conrad Playground, Little Flower Playground, Dreyfous Playspot, and St. Patrick Playground. Conrad Playground houses a 30,000 sq.ft fenced in field with industrial lighting, a covered basketball court, and two sets of child playground equipment. Little Flower playground contains an unlit, unfenced 60,000 sq. ft open field with a small rusted baseball backstop. This field is adjacent to the Royal Castle Child Development Center, which contains a large fenced outdoor playground facility. St. Patrick playground is a 90,000 sq. ft fenced baseball field equipped with industrial lighting, bleachers, and baseball backstops. Dreyfous Playspot is a 25,000 sq. ft fenced in lot, lacking industrial lighting. The vegetation in each of these parks is minimal, with Conrad Playground hosting five trees, St. Patrick Playground hosting one, and Dreyfous Playspot and Little Flower Playground hosting none whatsoever.

Mary McLeod Bethune Day Academy and the Paul L. Dubar Elementary School are also located within 200 feet of the existing Middle Belt rail infrastructure. These two elementary schools offer outdoor recreational facilities for children.

Noise and Vibrations

A variety of public health reports indicate negative health effects associated with living in close proximity of noise and vibrations, such as the increased likelihood of myocardial infractions (heart attacks), sleep disturbances, stress, hypertension, nervous system conditions, cognitive effects, and premature mortality (Kampa 2008). The World Health Organization reports some populations are more vulnerable to noise related illnesses than others:

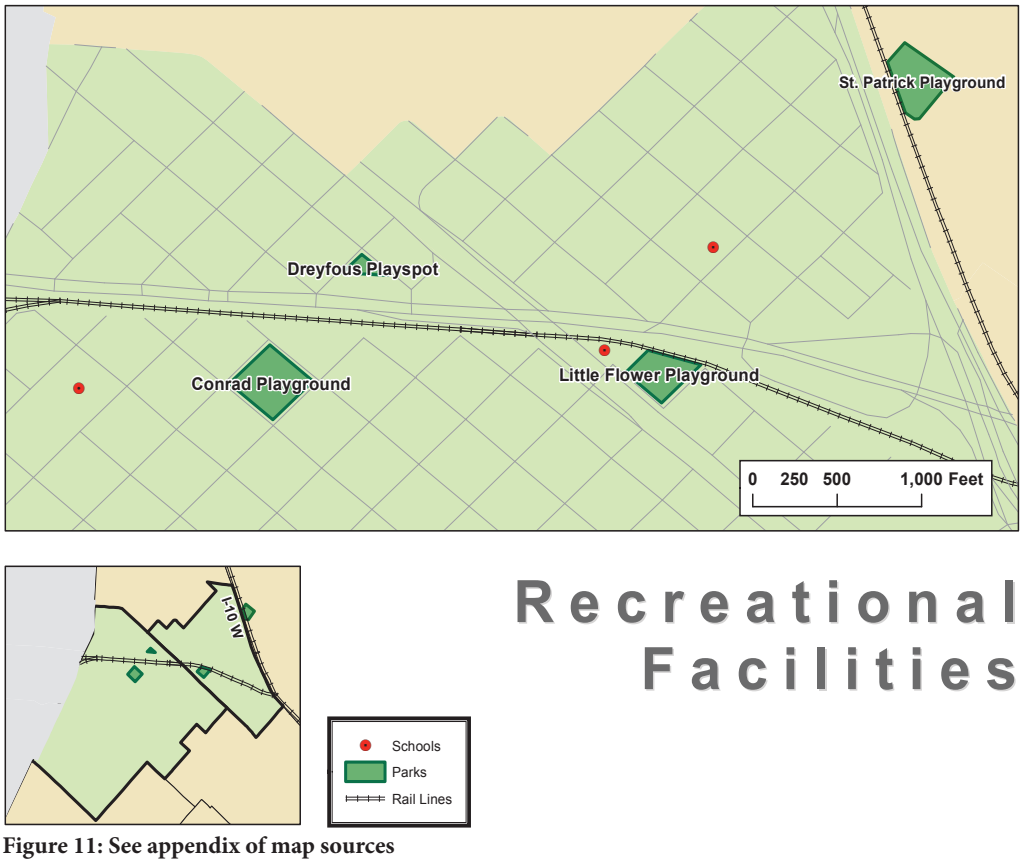


Figure 11: See appendix of map sources

"Chronically ill and elderly people are more sensitive to disturbance. Shift workers are at increased risk because their sleep structure is under stress. In addition, the less affluent who cannot afford to live in quiet residential areas or have adequately insulated homes, are likely to suffer disproportionately…the impairment of early childhood development and education caused by noise may have

lifelong effects on academic achievement and health." (World Health Association).

The current state of noise and vibrations in the communities immediately adjacent to the Middle Belt proposal primarily result from three main automotive transportation corridors framing the rail line. Table 8 gives examples of typical daily activities and the level of noise experienced at a close distance.

Noise studies indicate that at 50 feet noise from freeways generally measures at 70 to 80 decibels (Corbisier). Transportation reports do, however, indicate that noise can be a problem for people that live within 500 feet of a freeway (Washington State Department of Transortation). The World Health Organization recommends less than 30 decibels of noise for healthy sleep quality. With these considerations in mind, the communities in question are likely subject to a high degree of noise pollution stemming from these corridors.

Environmental Consequences

Air Pollution

If the Middle Belt proposal is adopted, freight traffic will contribute to an increase in transportation air pollutant emissions within the targeted areas. The US Department of Transportation's Federal Highway Administration states that rail is a significant source of diesel exhaust pollution, and that while "rail is often held up as a clean alternative to trucks...emissions standards for locomotives lag behind those for trucks, and many older locomotives that are still in use predate even the most basic regulations" (Freight and Air Quality Handbook). As such, the degree to which the Middle Belt freight traffic would contribute to poor air quality varies based on the types of locomotives that will traffic the railway.

Activity	Decibel level
Silence	0 dB
Whisper	15 dB
Normal conversation	60 dB
Lawnmower	90 dB
Car horn	100 dB
Train horn	110 dB
Jet engine -or- rock concert	120 dB
Gunshot -or- firecracker	140 dB

Table 8 : FRA, 2014. "Train Horn Rules", and Washington State Department, 2104. "Noise Basics".

Retrofitting the existing rail infrastructure will be required for the Middle Belt to become operable. While this retrofitting may temporally require the closure of any one of the three auto transportation corridors, once the construction is complete, the air pollutant emissions from these corridors will likely return to previous levels (Makri 2008).

While illnesses caused by air pollution can impact any population, research shows that children and the elderly are more vulnerable to contracting air pollution induced illnesses (Namdeo 2011). This is particularly concerning for the three census tracts framing the Middle Belt proposal, since this area contains a disproportionally high percentage of children and elderly persons compared the parish and MSA (U.S. Bureau of the Census 2010).

Accessibility

According to preliminary statistics released by the Federal Railroad Administration (FRA) for 2013, there were 7,431 train accidents nationwide (FRA Office of Safety Analysis). The vast majority of accidents concerning bystanders occur at rail crossings, which accounts for 352 incidents in Louisiana alone during this timeframe. As the Middle Belt lacks at-grade crossings, the majority of accidents concerning bystanders being struck by trains will be considered trespasser accidents. The FRA states that "trespassing along railroad rights-of-way is the leading cause of rail-related deaths in America" (USDOT FRA Fact Sheet). Further, according to the organization TrackOff, "the vast majority of people who trespass are adults; for example, people taking a short cut or walking their dogs along the line" (Trackoff).

Based on the location of existing bus stops, pedestrians living in Hollygrove are required to cross the Middle Belt rail line in order to access the Jefferson Parish Transit bus stops along Airline Highway. The presence of freight trains and supporting infrastructure for the Middle Belt will likely make this unfeasible for many residents, some of whom may use public transportation to commute to Jefferson Parish. If supporting infrastructure is not put in place such as gates or fences restricting pedestrian crossing, pedestrians will likely retain present habits, increasing their risk of injury.

The affected neighborhoods should consider research discussing the correlations between community severance, social ties, and crime (Mindell 2012). While both the Dixon and Hollygrove neighborhoods are informally connected via pedestrian foot traffic across Airline Highway, this traffic would be significantly impeded if the Middle Belt proposal requires the development of fencing and barriers. With this accessibility severed, residents

in this neighborhood may lose their ease of access to important trans-neighborhood resources such as the New Orleans Job Corps Center, the numerous churches located in this study's census tracts, food stores, and the Carrollton

Recreation

The proposed Middle Belt rail line will divert freight traffic to pass in the immediate vicinity of four public parks. While the freight line will not directly pass through Conrad Playground, Little Flower Playground, or Dreyfous

Figure 12: flickr user - ardenstreet

Playspot, the noise and disturbances typically associated with freight traffic may reduce the utility of the these facilities. While the same is true of St. Patrick Playground, the proposal will actually require temporarily closing the park while an additional rail line is constructed. This construction will also permanently reduce the useable space of the park. In areas of the city that already have disproportionately high negative health indicators, impacting the area's few available park spaces may further exacerbate the problem.

The presence of freight train traffic may be a deterrent for citizens to use these parks. If residents spend less time in parks as a result, there may be a number of negative resulting public health impacts including, but not limited to, a lack of opportunities to form and strengthen social ties, a lack of physical exercise opportunities for adults, and a lack of safe play opportunities for children.

Noise & Vibrations

Freight trains produce noise primarily though horns and vibrations. According to the Federal Railway Administration's Train Horn Rule (49 CFR Part 222), train horns are required to sound their horns at all public grade crossings. Because no current public at grade crossings exist along the Middle Belt, freight trains going through this area have no reason to sound their horn, unless animals, vehicles, or humans are visibly on the track.

The primary public health issues concerning non-horn related freight noise arise from incidental noise associated with moving trains and intrusive ground born vibrations (USDOT 2006). The Federal Transit Administration has reported that generally freight trains produce incidental noise amount to approximately 80 to 90 decibels at a distance of 50 feet from the center of the rail track (Illinois DOT).

Ground-borne vibrations from rail transport occur where the train wheel meets the rail. A number of factors influence the degree of these vibrations such as the rough conditions found on the rail line and wheel, soil conditions and the system supporting the track (Takemiya 2005).

Vibration velocity levels generally fall between 55 to 75 velocity decibels at a distance of 50 feet from the center of the rail track (Takemiya 2005). These vibrations waves propagate through soil and rock to the foundations of nearby buildings and other structures (US DOT 2006). The U.S. Department of Transportation describes the effects of ground-borne vibration as the moving of the building floors, disturbing of windows, and rumblings that in extreme cases can in fact cause infrastructure damage.

Figure 13: flickr user - jimhobbs

Mitigation

Air Pollution

Physical barriers can mitigate air pollution emitted from freight trains. One option is use of a vegetative barrier—which is simply placement of plants between the rail and the surrounding neighborhoods. (US EPA Mitigation Barriers). As a representative example of existing conditions, figure 14 indicates that the presence of this vegetative buffer is relatively non-existent. The EPA has also identified the use of structural wall-barrier to mitigate the effects of transportation induced air pollution.

Mitigating Air Pollution in West Oakland

Air pollution mitigation continues to be an issue for many communities surrounded by freight traffic. For example, the community of West Oakland is prone to high rates of asthma and cancer due to its location between a busy port and multiple interstate freeways. Multiple freight-related businesses are located within the neighborhood, and diesel-powered truck traffic is commonplace. A sustainability advocacy group, paired with West Oakland community members, created a coherent approach to self-help in identifying risk factors concerning freight-related diesel air pollution. This involved monitoring freight truck patterns, analyzing the effects of these patterns on diesel particulate emission, and measuring pollution levels within their homes. The community and the advocacy group gained the support of the US EPA and the state department of health services during the study, which provided greater visibility for the problem and a likely conduit for solutions. Further, in 2005, an ordinance was passed prohibiting the passage and parking of diesel-powered freight trucks along certain corridors of the community (Pacific Institute 2003).

Figure 14: Courtesy of Carrie Mackay

Noise & Vibrations

Common methods to reducing the overall noise level caused by transportation are similar to those proposed for air pollution mitigation. Large structural barriers, or noise barriers, can reduce noise levels by "five to ten decibels depending on height and location relative to the source" (USDOT 2011). Because sound barriers can be visually intrusive, community input on the design and materials is important. Other methods for mitigating the effects of noise pollution are listed below:

- Barrier Walls

A barrier wall is a solid wall that can be made of a variety of materials. Traditional materials can be used, such as wood, concrete or steel. These can be fairly inexpensive but result in continual maintenance and replacement. Barrier walls can effectively reduce noise levels by 10 decibels (Federal Highway Administration 2011).

Figure 15: flickr user - AntyDiluvian

- Berm Barriers

A berm is an earth mound with vegetation constructed to reduce noise and visual impacts of transportation installments. Providing a natural appearance, berm barriers can be more aesthetically pleasing than a solid wall, but require relatively more space (Federal Highway Administration 2011).

- BioBarriers

Bio-barriers are barrier walls that incorporate vegetation as part of the design. Combining vegetation with a solid wall is an effective way to reduce noise up to five decibels (ICF International 2011) lessen air pollution, and aesthetically enhance the physical structure. Vegetation can also help deter graffiti or vandalism.

- Building Enhancements

Noise perceived from inside a building depends on characteristics of the building shell such as its material and the number of doors, windows, and wall openings. Enhancing sound insulation includes upgrading windows and doors to ensure they are well sealed when closed. Adding an extra layer of glaze to windows and additional material to walls and sealing vents can reduce sound approximately five to seven decibels (ICF International 2011).

- Trenches

A man-made trench can be an effective vibration barrier. In this case, a trench works by obstructing the spreading characteristics of the soil. An open trench can be filled with rock or recycled crushed concrete, and a solid trench can be made with sheet piling or filled in with poured concrete (Mino et al. 2009). Benefits include low costs, easy installation, and minimal land area. Trenches have been recorded to reduce ground-borne vibrations by isolating the vibrations induced by the moving loads that train cars produce. Actual reductions in vibration is highly dependent on local soil conditions, but a study conducted in 2004 found that open trenches are the most effective in isolating the vibrations before reaching the receiving end, or buildings (Kuo 2010).

Figure 16: flickr user - ardenstreet

Accessibility

A number of options exist to reduce the likelihood of pedestrian injury. The most extreme would be to completely restrict pedestrian access, possibly through the use of high fencing to frame the railroad itself. This, however, has the negative effect of contributing to community severance between the Hollygrove and Dixon area, and restricts access for pedestrians who require access to the Jefferson Transit stops. An alternative mechanism is to develop pedestrian only at-grade crossings, which would retain or improve existing community connections (FRA 2008). The pictures in the appendix illustrate mechanisms that the community or project sponsor may wish to consider if the Middle Belt proposal is adopted (Century Group Pedestrian Crossings). If these pedestrian crossings are implemented, trains would be required to sound their horns at these crossings, which may be a nuisance to the community. The communities may also consider collaborating with Jefferson Transit to reroute their service to a portion of Palmetto Drive. This rerouting would allow for Hollygrove residents to make use of this bus service without having to cross the Middle Belt.

Accessibility Mitigation in Billings, Montana

Mitigation measures relating to accessibility is an ongoing issues for many communities facing freight traffic. For instance, Billings, Montana which is expected to experience an explosion in rail traffic over the next several years, is addressing the concerns of pedestrian safety and connectivity within its downtown area with the creation of a pedestrian bridge over the tracks. This was first called for in 1999 as part of a downtown revitalization plan (Hafer 2001). After a narrow passing vote of 5-4 in March of 2014 the effort to move forward with the planning of the bridge commenced. It remains controversial among Billings residents, many of whom believe it to be a bad use of funds, that pedestrian and cyclists are a fringe group, or that the money should be diverted to dealing with vehicle traffic concerns (Hocker 2014). Many supporters believe it to be vital as a link for lower-income citizens living south of the tracks to have access to the more amenity-rich northern side (Kemmick 2014). It is expected to contribute to general connectivity throughout the downtown area, which is experiencing a fragile renaissance that is endangered by the increased traffic (Yamanaka 2012).

Recreation

There are a number of ways to mitigate the impacts of the proposed freight rerouting on the recreational facilitates. For instance, to mitigate exposure to pollutants for park users a vegetative or structural barrier can be constructed. The City of New Orleans or community stakeholders can also bolster the amount of greenery in the park space itself, as park vegetation is often advocated as a mechanism to reduce pollution in urban areas more generally (Nowak 2006).

Communities can also identify other areas in the neighborhood where park space could be developed. Government or

civic leaders could work to implement the Hollygrove Greenline project which would provide additional recreational space to the area. Vacant parcels which are located further away from the railway may be an option for new parks or green space to be created, but many factors would need consideration. The map of vacant parcels (with structures that the City of New Orleans demolished as of 2014) appears in the appendix.

Figure 17: Courtesy Carrie MacKay

5. Carrollton Curve and Hazardous Material Concerns

One of the concerns for members of the Hollygrove/Mid-City community is the area referred to as the "Carrollton Curve". This area currently consists of two tracks from the downtown New Orleans Union Passenger Terminal diverging: one northbound, the other continuing westward. The Middle Belt option requires the construction of a new, curved, rail connection such that the westward and northbound tracks become continuous. The cost estimated to create this curve is $56.1 million (Brown 2007) and would "require compensation and relocation of two homes, two businesses, and an outdoor recreation field" (Cambridge Systematics 2008, vi). The concerns of the community regarding this curve will be evaluated in two stages: potential safety concerns resulting from curved track, and hazardous material concerns connected to potential spills. Although overall railroad incidents have been dramatically reduced via innovations and improvements, accidents still occur, and communities such as Hollygrove, Dixon, and Mid-City remain concerned (Spraggins 2010). In order to gain a deeper insight into the concerns, the safety records of other curved sections of freight rail lines was evaluated. This section will also discuss hazardous material concerns for the neighboring communities rising from the presence of chemical cargo, which ranks as the top commodity moved through the gateway at 44 perent of total area revenue (Cambridge Statistics 2008).

Figure 18: Brown et al 2007

Curve Concerns

The proposed curve is still in the early stages of planning and as such the most detail available to the public consists of a plate showing the general location the curve would inhabit, which can be found in the New Orleans Rail Gateway Infrastructure Feasibility Analysis (Figure 16).

Because the engineering plans for the Carrollton Curve have not yet reached a stage where details about the track geometry are certain, discovering a curve with the same geometry is impossible. When looking for precedent

Figure 19: Courtesy Carrie MacKay

curves bearing similarities in location (urban corridor), track geometry, maximum speeds, and frequency of use were sought out in order to gain an understanding of what a curve like the one proposed might mean for the affected communities. Through contacting track experts in both the Federal Rail Administration (FRA) as well as Texas Department of Transportation (TxDOT), our research narrowed in on three sections of track in Texas, as summarized in Tables 9 and 10. In addition to their sufficient similarities, Texas track examples were selected in an effort to remain within FRA Region 5 (Louisiana, Arkansas, Texas, Oklahoma, and New Mexico).

Table 9: Rail Accidents per County

Area:	County:	Comparison Trait:	Trains per Day	Maximum Speed	Rail Mile Markers
Houston, TX	Harris	Urban, Max Speed	12	20 MPH	14.37 - 15.35
Austin, TX	Travis	Urban	16	30-35 MPH	179.5 - 179.8
Orange, TX	Orange	Frequency of Use	40	70 MPH	254-252

Table 10: Causes of Rail Accidents

Area:	County:	Total Accidents in County 2005-2013	Total Human Error	Total Track Cause	Total Equipment Cause
Houston, TX	Harris	50	19	16	8
Austin, TX	Travis	9	1	4	1
Orange, TX	Orange	3	1	1	1

Due to time and data navigability restraints, FRA accident data was only available at the county scale. As such, this report is unable to pinpoint which accidents occurred at the site of the curves and which were elsewhere in the county. Regardless of this limitation, it is clear that the vast majority of incidents are related to issues in operation and maintenance. This can be frustrating to communities as they have limited control over these matters. When evaluating the incidents across counties, the high rates of Harris County stand out. In fact, Harris was the county with the highest record of incidents in the state of Texas during the period evaluated, with the second highest county coming in at 25 incidents. Harris County also serves as an area with a great number of railroad lines traversing it as they pass through Houston, many including at grade crossings. Related to this, the cause type attributed to the greatest number of incidents was Highway-Rail with 32 of the 50 incidents listing this as a major cause. As a result of this information, it is clear the danger of rail crossings played a major role in the high rate of incidents for the county.

Hazardous Material and Evacuation Concerns

Throughout our daily lives many of our activities are made possible by materials deemed hazardous. From the chlorine used to purify our water supplies to the natural gas used to fuel our cars, many hazardous materials are moved via rail. Federal law requires that railroads allow for the transport of hazardous materials the same as any other freight or cargo (Spraggins 2010). Those materials which are categorized as hazardous materials include: "… explosives, gases, flammable liquids and solids, oxidizing substances, poisonous and infectious substances, radioactive materials, corrosive substances, and hazardous wastes" (Ibid 4). While accounting for a very small share of rail carloads, "Toxic Inhalation Hazard" (TIH) materials, which include ammonia, chlorine, and any other materials which result in toxic or poisonous effects on the air, "constitute the largest risk costs for freight railroads" (Ibid 5). All of this serves to underscore the importance of adherence to national safety regulations and a high standard of maintenance.

As to our knowledge, the threat of potential spills encapsulates the extent of hazardous material concerns for the communities, as none of the communities contain areas where materials are loaded or unloaded. Coupling this information with the design of contemporary rail cars, there should be no hazardous materials exposure while the train is en route unless there is an incident, such as a train derailment. Although train derailments and crashes are highly variable incidents almost impossible to predict, it is important that neighborhoods adjacent to rail lines create an emergency event plan focusing on evacuation options and emergency response protocol (FEMA 1996). This plan should then be supported with proper training and education for all related response personnel (Ibid). The implementation of a plan is especially important for neighborhoods adjacent to lines carrying freight containing hazardous materials as any accident carries with it the potential for a spill and therefore a larger affected area (Burnside 2009).

The primary neighborhood of concern regarding evacuation is Dixon. Bounded by I-10, Airline Drive, New Orleans Country Club, and a canal, the isolated neighborhood has few points of access and egress which create great cause for concern. This is especially true for any spill scenario which would result in the closure of Airline Drive as there would only remain three paths of egress for the neighborhood. One of these three paths, however, is I-10 Eastbound which goes over Airline Drive and may also be closed in certain conditions which would further reduce the paths of egress to two. Because one of the few exits for the neighborhood is an onramp for I-10 Eastbound, if there were any closures for the interstate going over the tracks there remains the option of contraflow on a limited section of the interstate to bring residents from Dixon neighborhood Westbound towards Mid-City and Metairie. One other potential for additional paths would be to create gates in the fence to the golf course on the north side of the neighborhood, which could be opened in case of emergency to allow access to golf cart paths and other exits (Figure 20). This option would require negotiation with the owners of this private country club.

Of those neighborhoods adjacent to the Middle Belt, the Hollygrove and Mid-City areas have relatively fewer evacuation concerns related to hazardous material spills. This is a direct result of the tight grid work pattern of roadways in the neighborhoods, with multiple connection points to both the nearest arterial roads as well as nearby neighborhoods. This allows for traffic to disperse among the many roads and to move more quickly away from the areas which may need to be evacuated. One small part of Hollygrove on the North side of Palmetto Street, below Airline Drive, has fewer points of egress, as well as some higher density apartment housing and a daycare center which may be an evacuation chokepoint (Figure 21).

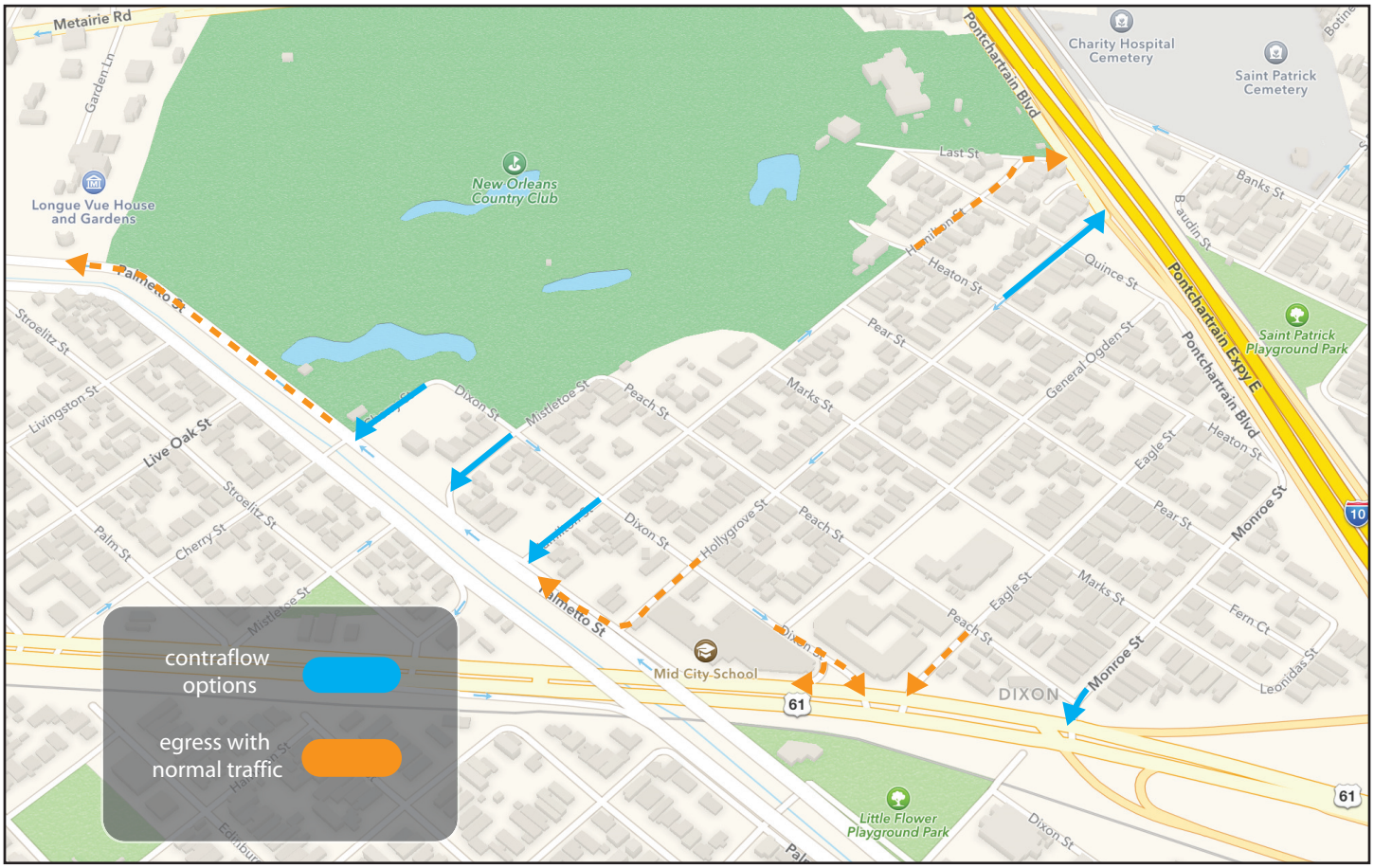


Figure 20: Courtesy of Hunter Hebert

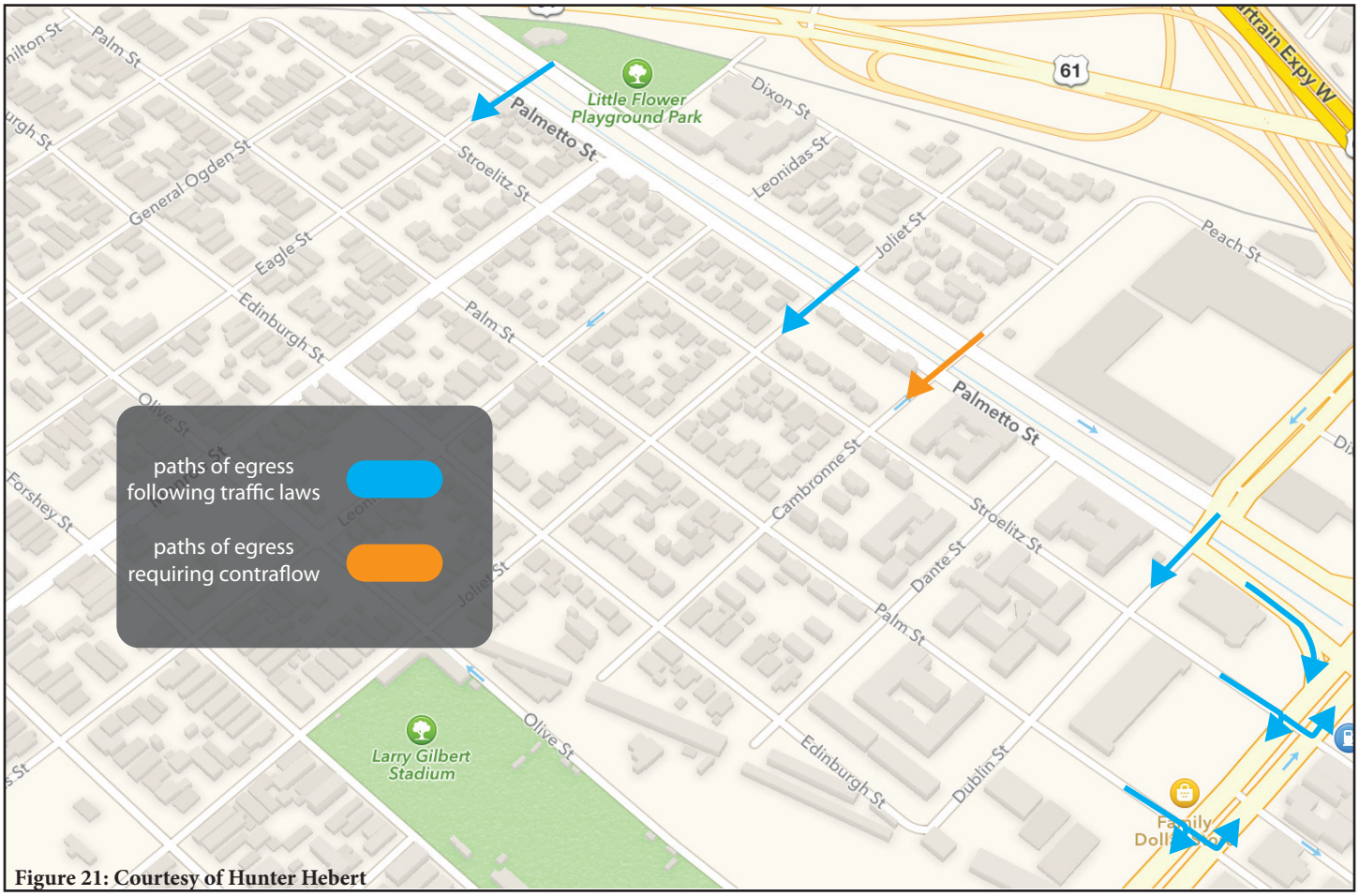
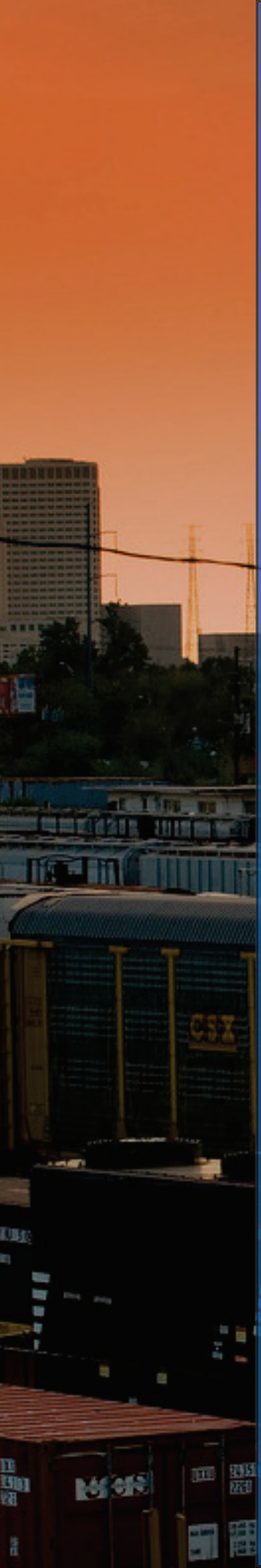


Figure 21: Courtesy of Hunter Hebert



Conclusion

The goal of this report is to provide resources for people interested in the Middle Belt proposal. This report addresses four broad areas:

Law

For people interested in the legal aspects behind this proposal and the agencies involved, this report outlines important regulations that can be explored further. Important regulations include but are not limited to NEPA, TITLE VI of the Civil Rights Act, and certain Presidential Executive Orders.

Community Profile

For people interested about the history and general demographics of the affected area, this report contains a number of tables and maps outlining data collected from the US Census Bureau. This section also reports on zoning designations in the area.

Public Health

For people interested in ways that the area's public health may be impacted, or ways to mitigate this impact, this report outlines these in detail. This section focuses on the areas of Air Quality, Noise & Vibrations, Recreation, and Accessibility. This report also addresses concerns about hazardous material spills.

This report concludes by listing a series of options on the following pages that are available for community members to pursue, if they wish to become more involved in the Middle Belt decision making.

How can community memebers get involved?

Learn More

You can visit websites to learn more about this project:

The New Orleans Rail Gateway Program's Phone Number is (504) 488-6196

- Louisiana Department of Transportation (LADOTD)

  For information about the state government and the Middle Belt Proposal

  www.dotd.la.gov
- Department of Transportation (DOT)

  For information about the federal government and transportation

  www.dot.gov
- Environmental Protection Agency (EPA)

  For information about transportation and environmental impacts

  www.epa.gov
- National Environmental Policy Act (NEPA)

  For information about environmental regulations

  www.epa.gov/compliance/nepa
- Environmental Impact Studies (EIS)

  For information about the environmental impact study process

  www.epa.gov/reg3esd1/nepa/eis.htm
- World Health Organization (WHO)

  For information about transportation and health impacts

  www.who.int/en
- Opposition's Website

  For information provided by people against the Middle Belt Proposal

  www.wewontberailroaded.com

Get Involved in the EIS and Planning Process

Citizens can make their voice heard by engaging with planning processes.

- Get involved in the public process by attending planning meetings and design workshops.
- Continue participating in the Environmental Impact Study process and request a draft of the study and comment on it.

Monitor compliance with regulations

The National Environmental Policy Act has specific steps that this project must follow.

- Monitor the NEPA planning process and opportunities for public participation.
- Monitor planning and decisions for compliance with Environmental Justice rules. See earlier section for information on federal environmental justice oversight.

Shape Mitigation and Community Enhancement Measures

Community members can request certain measures be taken.

- Express preferences for rail materials.
- Advocate for vibration mitigation, such as trenches.
- Advocate for structural/vegetative barriers for air quality and noise mitigation.
- Lobby elected officials for additional money for community enhancements.
- Request accessibility to JeT bus lines due to rail implementation.
- Request compensation for lost public space in St. Patrick playground.
- Request compensation for relocation assistance.

Use Democratic Process to Influence Decisions

Community members can reach out to elected officials.

- Use resources provided to establish contact with organizations making decisions.
- Lobby elected officials (city and state) regarding your preferred options.
- Support or oppose public funding for the implementation of the Middle Belt or other transportation projects.

Request more information about NORG projects

Although this study is ongoing, communities can request interim information or additional studies.

- Request interim study results from the DOT (e.g., traffic studies related to NORG, all potential mitigation measures considered).
- Request the DOT identify potential impacts related to mitigation measures.
- Request a public health impact assessment.

The intention of this report is not to suggest that community members endorse a particular view or engage in particular actions regarding the Middle Belt proposal.

Rather, this report serves as a resource for people interested in learning more about the Middle Belt proposal.

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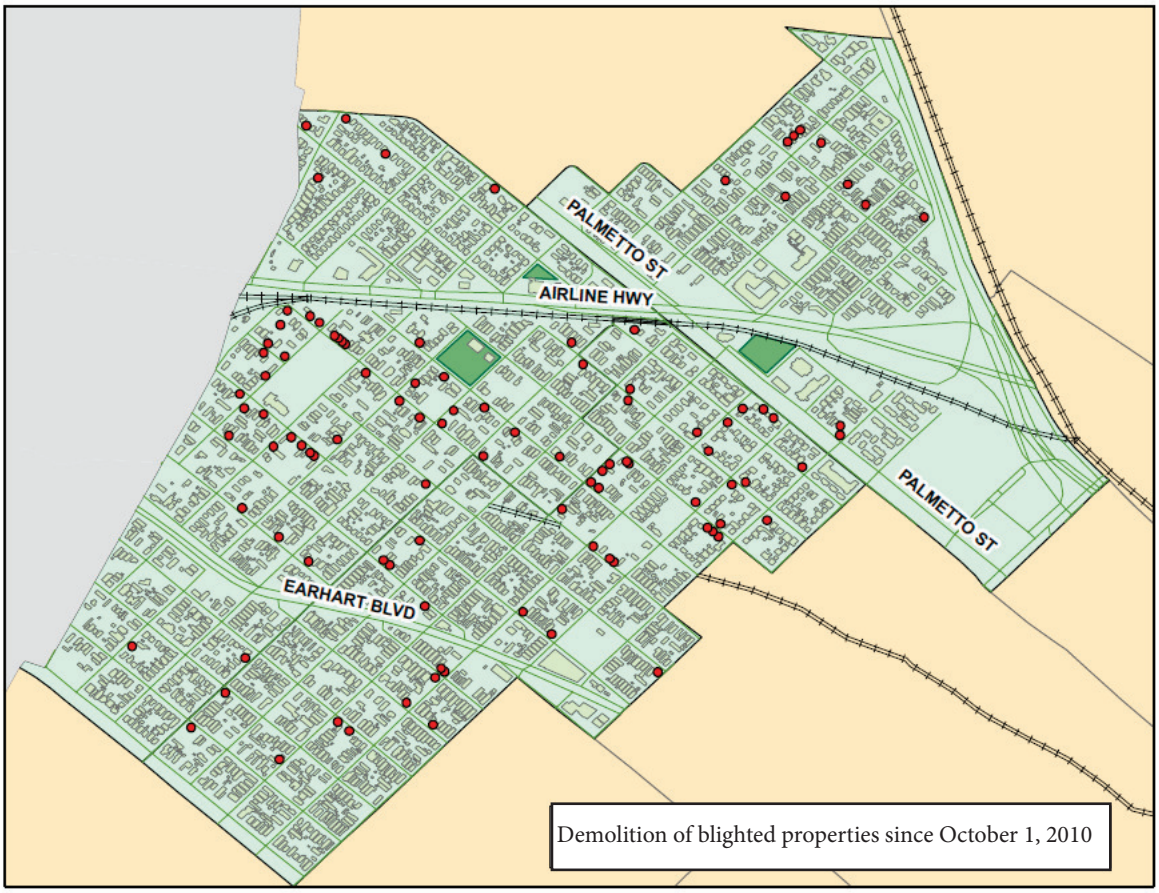
Appendix


PALMETTO ST
AIRLINE HWY
PALMETTO ST
EARHART BLVD
Demolition of blighted properties since October 1, 2010

Mitigation Case Studies

Public and Social Health Case Studies		
Case Study Subject	Location	Highlights
Air Pollution	Delhi, India	Located in Delhi, the Anand Vihar Train station emissions exacerbate existing hazardous air pollution levels, resulting in particulate matter levels that exceed established measurement standards (Anand Vihar 2014).
		Some professional estimates claim that Delhi residents lose as much as three years from their life expectancy due to dangerous levels of air pollution (Angre 2014).
Noise & Vibration	Walthamstow, UK	Dramatic increases in train traffic (Browning 2012) are alarming local residents, causing damage to homes and infrastructure, and causing stress and fatigue (Binns 2012).
		Network Rail, the company that operates the tracks, refused to open a dialogue on possible mitigation measures until local residents enlisted elected officials to force a response (Browning 2012).
		The rail company was found to not be monitoring effects of rail traffic on the surrounding environment, but only maintaining the tracks themselves (Browning 2012).
		While the rail company has agreed to monitor vibrations in nearby homes, it has been non-committal in mitigation action, and has taken a stance of deferring fault to others in most cases (Browning 2012).
Pedestrian Safety & Access to Amenities	Hyattsville & Riverdale, Maryland	Despite the separation of residential and commercial development by the metro rail tracks, the communities host relatively few road-crossing points (which provide the only safe and legal points at which pedestrians can cross tracks) (Snyder 2012).
		There are numerous instances of pedestrians being struck by commuter trains due to lack of connectivity and safety measures. However, the rail companies operating the trains refuse to cooperate with regulators in their investigations (Snyder 2012).
		The involved rail companies have resisted regulatory mandates to provide detailed crash information, citing a belief that this would require greater action on their part to remedy the conditions, of which they have little legal responsibility (Snyder 2012).

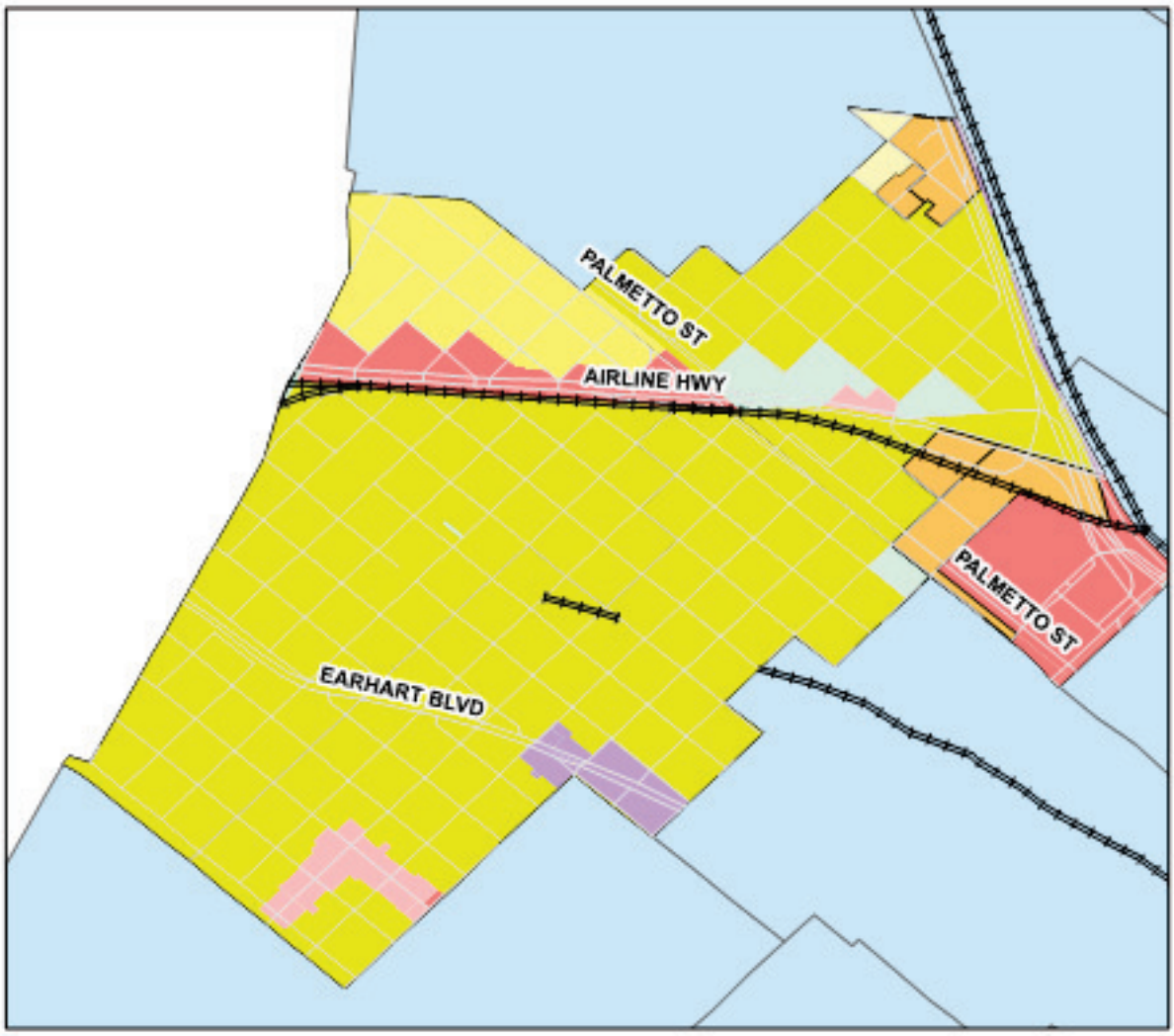
Mitigation Case Studies		
Case Study Subject	Location	Highlights
Air Pollution - Mitigation	West Oakland, California	The community of West Oakland is prone to high rates of asthma and cancer due to its location between a busy port and multiple interstate freeways and their associated air pollution (Pacific Institute 2003). Multiple freight-related businesses are located within the neighborhood, and diesel-powered truck traffic is commonplace (Pacific Institute).
		A sustainability advocacy group, paired with West Oakland community members, created a coherent approach to self-help in identifying risk factors concerning freight-related diesel air pollution. This involves monitoring freight truck patterns, analyzing the effects of these patterns on diesel particulate emission, and measuring pollution levels within their homes (Pacific Institute 2003).
		The community and the advocacy group gained the support of the US EPA and the state department of health services during the study, which provided greater visibility for the problem and a likely conduit for solutions (Pacific Institute 2003). In 2005, an ordinance was passed prohibiting the passage and parking of diesel-powered freight trucks along certain corridors of the community (Bass 2008).
Noise & Vibration - Mitigation	Raunistula, Finland	Raunistula, a suburb of Turku in Finland has a rail line, which has long been associated with significant vibration and noise in the community. These problems have caused property damage and stress for residents living near the train line (Auvinen 2010).
		As part of a study on vibration mitigation and the resident satisfaction associated with it, the Finnish Rail Administration selected the community of Raunistula as a test site for two methods of blocking train-induced vibration and noise (Auvinen 2010).
		Two different walls were employed, both of which resulted in significant (30-60%) reduction in the level of vibration perceived by residents in proximity to the train line. This was accompanied by increased satisfaction in quality of life for residents, as explained by surveys collected before and after construction (Auvinen 2010).
Pedestrian Safety & Access to Amenities - Mitigation	Billings, Montana	Billings, which is expected to experience an explosion in rail traffic over the next several years, is addressing the concerns of pedestrian safety and connectivity within its downtown area with the creation of pedestrian bridge over the tracks. This was first called for in 1999 as part of a downtown revitalization plan (Hafer 2001).
		After a narrow passing vote of 5-4 in March of 2014 (Kemmick 2014), the effort to move forward with the planning of the bridge commenced. It remains controversial among Billings residents, many of whom believe it to be a bad use of funds, that pedestrian and cyclists are a fringe group, or that the money should be diverted to dealing with vehicle traffic concerns (Hocker 2014).
		Many supporters believe it to be vital as a link for lower-income citizens living south of the tracks to have access to the more amenity-rich northern side. It is expected to contribute to general connectivity throughout the downtown area, which is experiencing a fragile renaissance that is endangered by the increased traffic (Yamanaka 2012).

Mitigation Case Studies		
Case Study Subject	Location	Highlights
Low-Income/ Minority Access to Transportation	Oakland, California	The Oakland Airport Connector, a $484 million Bay Area Rapid Transit (BART) rail project designed to connect the Oakland International Airport to the BART rail system, was awarded $70 million by the Federal Transportation Administration (FTA) (Urban Habitat 2010). The 3.2-mile path (Cabanatuan 2013) of the 'people mover' runs primarily along the median of a low-income, predominately minority-populated corridor, which suffers from high air pollution levels (Bass 2008).
		In 2009, a group of multi-modal and transportation justice advocacy groups filed a complaint with the Federal Transit Administration, arguing that the project, which had no planned stops within the low-income corridor (Urban Habitat 2010) and further planned to charge a $6 one-way fee for rides (Bay Area Rapid Transit 2013), had neglected to conduct a sufficient assessment of community impacts. These groups claimed that BART and the Metropolitan Transportation Committee (MTC) were in violation of Title VI of the Civil Right Act of 1964, which ties federal transportation funding to addressing disparate impacts from development (Urban Habitat 2010).
		In 2010, after deliberation, the FTA informed BART and the MTC that the $70 million of stimulus money for the project was being withdrawn due to the lack of compliance with the entities' Title VI obligations. While the organizations had admitted no wrongdoing, advocacy groups point to the exorbitant fares and lack of intermediate stops as signs that the project had no intention of decreasing auto dependency on low-income residents or providing affordable transportation options (Urban Habitat 2010). The OAC is expected to be in service in the fall of 2014, but BART was forced to find alternative sources of funding (Cabanatuan 2013).
Low-Income/ Minority Access to Transportation	Los Angeles, California	In November of 2010, a nonprofit law firm and advocacy group filed a complaint to the Federal Transportation Association (FTA) on behalf of the Los Angeles Bus Riders Union and other community organizations alleging that the Los Angeles County Metropolitan Transportation Authority (LACMTA) was cutting bus service routes and service hours while increasing rail service hours. This practice was seen to benefit more affluent commuters at the expense of low-income and Latino transit users (Public Advocates).
		MTA had cut 564,000 bus service hours from 2008 to 2010, while increasing subway and light rail service over 55,000 hours over the same period (Public Advocates). The administrative complaint alleged that the transit agency had not done a comprehensive assessment of potential impacts on disadvantaged populations, thus failing to meet its Title VI obligations. Without Title VI compliance, LA Metro would not be entitled to the federal transportation funding that it receives for its projects.
		The FTA, upon executing an in-depth Title VI compliance review, discovered that LACMTA had not done equity assessments while evaluating the impacts potential service changes, as well as not neglected to use its own approved indicators of potential discriminatory service changes in order to avoid self-scrutiny. The transit agency was thus ordered to address the complaint using the appropriate protocol (Rogoff 2012).

Laws & Regulations Table

Order/ Regulation	Agency	Purpose	Importance
Title VI	All Federal Agencies	To prevent discrimination by Federal agency actions "on the ground of race, color, or national origin" and to ensure protected populations are not "excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance"(Title VI, Sec. 2000d).	Component of the Civil Rights Act of 1964
EO 12898	All Federal Agencies	Requires all Federal agencies to implement protections for "environmental and human health effects of federal actions on minority and low-income populations"(EO 12898 1994).	Component of Title VI created to: (1) "avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;" (USDOT 2012) (2) "ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;" (USDOT 2012) (3) "prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations." (USDOT EO 12898 2012).
U.S. DOT Order 5610.2(a)	U.S. DOT	Updates and clarifies environmental justice procedures as per Executive Order 12898 (USDOT Order 5610.2a 2012)	Applies to all facets of the DOT
FHWA Order 6640.23A	FHWA	EJ Directives: to establish policies and procedures in compliance with Executive Order (EO) 12898. (FHWA 1998)	Environmental justice directive and implementation measure, requiring federal actions to address environmental justice in minority and low income populations, as a means to achieve the goals set out in EO 12989. (FHWA 1998)
Title 23 CFR	FHWA	To enforce Title VI provisions with regard to FHWA operations. (23 CFR 200)	To provide the Federal Highway Administration (FHWA) with guidelines for implementing Title VI program compliance reviews of the Federal-aid Highway Program (23 CFR 200)
Title 49 CFR	U.S. DOT	To enforce Title VI provisions with regard to U.S. DOT operations. (49 CFR 21.1)	To ensure that no person shall be "subjected to discrimination under any program or activity receiving Federal financial assistance" (49 CFR 21.1) from the U.S. DOT including the FHWA
Title 42: Uniform Relocation and Real Property Acquisition Policy Act	U.S. DOT	"To encourage and expedite the acquisition of real property by agreements with owners, to avoid litigation and relieve congestion in the courts, to assure consistent treatment for owners in the many Federal programs, and to promote public confidence in Federal land acquisition practices." (42 CFR 61)	Serves to provide fair and equitable treatment of persons displaced by Department of Transportation (DOT) projects (42 CFR 61)

Current Zoning



Legend

- Lakewood Country Club Single Family
- Single Family Residential District
- Two-Family Residential
- Multiple Family Residential District
- Neighborhood Business
- General Commercial District
- Light Industrial

Adam Tatar
March 26, 2013

Map Sources

Maps authored by:

Tatar, Adam

Maps created with:

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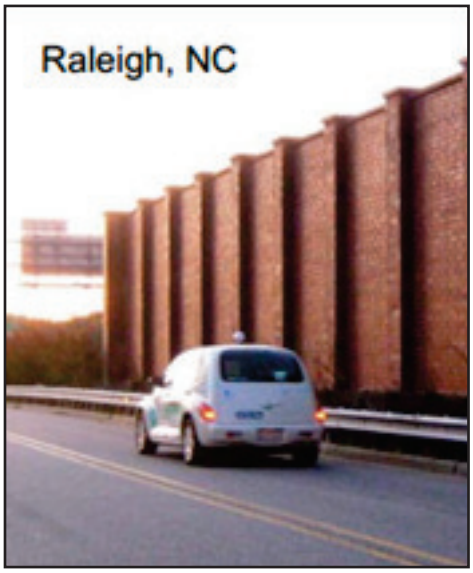
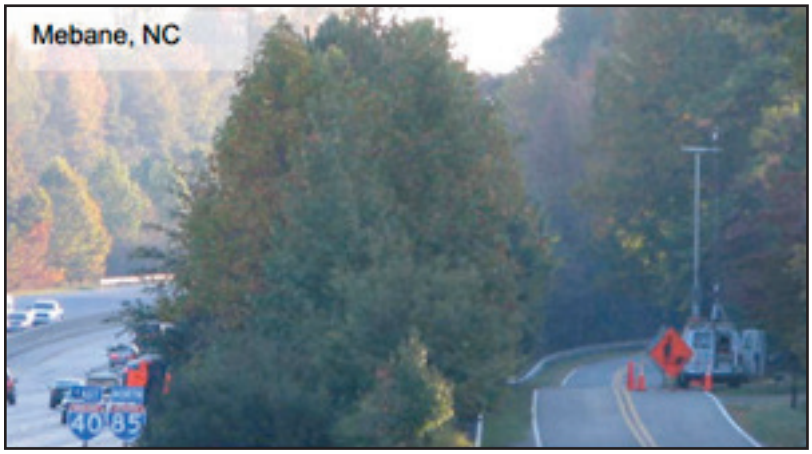
Images of Mitigation Measures



This image shows a structural barrier separating a transportation corridor from a residential neighborhood. These can be useful in reducing the effects of transportation air and noise pollution.

Source: EPA 2009



This image shows a vegetative barrier separating a transportation corridor from a residential neighborhood. These can be useful in reducing the effects of transportation air and noise pollution.

Source: EPA 2009

This image shows a biobarrier. Vegetation used with a noise barrier masks the appearance of a solid wall. This can be effective in reducing both noise and air pollution.

Source: Federal Highway Administration, 2011.

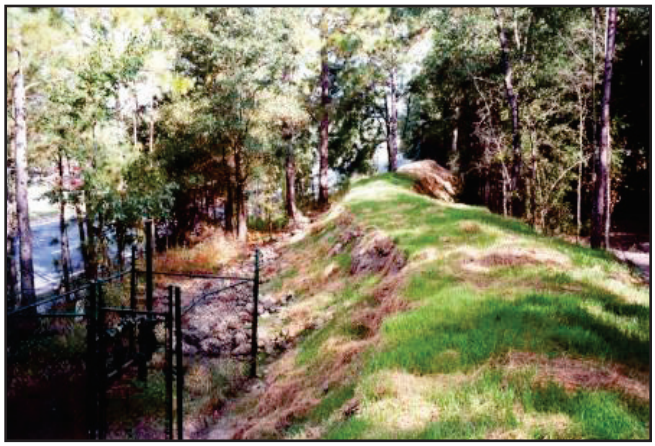
Images of Mitigation Measures

Source: The Century Group 2014

Source: The Century Group 2014

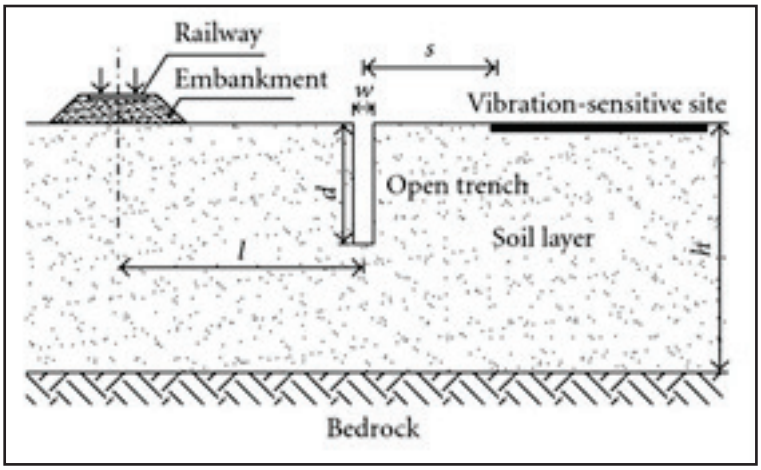
These images show pedestrian only at-grade rail crossings. These can be useful in reducing the effects of community severance that rail may have on a community.

Images of Mitigation Measures



Source: Hellis Tree Consultants, 2014

This image shows a berm barrier. Complementing the earth feature are numerous trees planted on both sides to further insulate an area from transportation caused vibration.



Source: Giunta et al. 2009

This image shows a trench, which can be useful in reducing the effects of vibration from railways.







Freight Down The Middle

Neighborhood Impacts and the New Orleans Middle Belt Rail Proposal

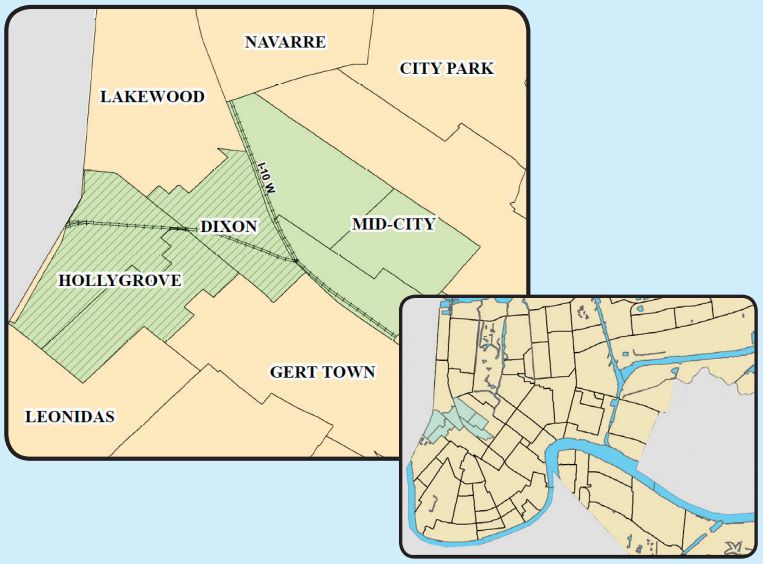
What's going on?

The New Orleans Rail Gateway (NORG) is currently the subject of a comprehensive study to determine how to increase rail efficiency through the Greater New Orleans Metropolitan Area.

One proposal involves rerouting freight rail traffic away from the Back Belt in Old Metairie to the Hollygrove, Dixon, and Mid-City neighborhoods of New Orleans.

Our class sought to provide a resource for people interested in the learning more about the Middle Belt proposal. In doing so, our report outlines the history of the project, provides demographic information for the areas immediately adjacent to the Middle Belt Railway, discusses laws and regulations, and provides the community with information about public health and environmental justice.

Where would the train traffic move to?

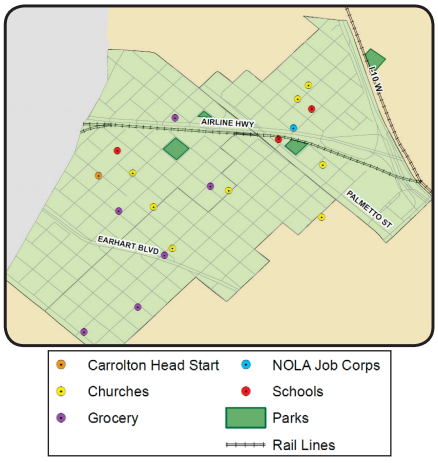


Hollygrove & Dixon Neighborhood Profile

	Hollygrove/Dixon	New Orleans Metro
Total Population	5,647	343,829
Under Age 9:	15%	12%
Over Age 60:	21%	16%
Black:	95%	34%
White:	4%	58%
Living in Poverty:	29%	18%

Population, Age, and Race counts reflect 2010 Census data
Poverty counts reflect 2008-2012 American Community Survey 5-Year Estimates
"Metro" refers to Metropolitan Statistical Area

Community Assets



Regulations and Environmental Justice

The Federal Railroad Administration (FRA) and the **Louisiana Department of Transportation and Development (LADOTD)** are the leaders of the New Orleans Rail Gateway project. They are required to follow federal rules, two of which are described below.

National Environmental Policy Act (NEPA): Agencies receiving federal money must conduct an Environmental Impact Study (EIS) to evaluate the environmental consequences for all projects that may have major impacts. An EIS includes a discussion of the purpose of and need for the action, alternatives, the affected environment, environmental consequences of the proposed action, and a list of all persons and agencies consulted.

Title VI, 42 U.S.C. of the Civil Rights Act of 1964: This law prevents discrimination by Federal agency actions "on the ground of race, color, or national origin" and to ensure that protected populations are not "excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance".

Additional federal rules define environmental justice and related agency requirements.

How would freight on the Middle Belt affect Hollygrove & Dixon?

Air Quality

Because the Middle Belt area is currently framed by three major transportation corridors, air quality in the area is likely poor. It is unclear if the additional air pollution from freight rail traffic would be significant. Building vegetative and/or structural barriers can reduce air pollution.

Noise and Vibrations

Noise and Vibrations from freight traffic can cause a number of health problems. The freight trains will likely not sound their horns, since there are no at-grade crossings. Barriers, trenches, earth mounds, and home retrofitting can reduce train vibrations.

Recreation

Three of the four public parks in this report's study area are within 50 feet of the Middle Belt. Two elementary schools are located within 200 feet. Adding vegetation to the existing parks, or building parks in other locations may lessen the impact on recreational opportunities.

Accessibility

If walls or fences are constructed around the railway, community members may have reduced access to nearby resources. Creating pedestrian only crossings or pedestrian only bridges over the railroad may lessen the impact on community accessibility.

Hazardous Material Spills

The Middle Belt proposal requires that trains make a sharp curve. In the metropolitan area, hazard materials are currently more than 40 percent of freight rail cargo. Developing community evacuation plans may be useful in the event of a spill.

Prepared as part of a project by students enrolled in MURP 6702-602 at the University of New Orleans (Spring 2014).
Download our full report at http://www.uno.edu/cola/planning-and-urban-studies/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LEANS
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