Environmental Assessment

Des Moines Transload Facility
200 SE. 15th Street, Des Moines, Iowa

Issued by: Federal Railroad Administration (FRA)
Prepared pursuant to 23 C.F.R. 771

June 2020

Environmental Assessment
Des Moines Transload Facility

Issued by: Federal Railroad Administration (FRA)
Pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et. seq.

Approved by:

MARLYS A OSTERHUES

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CONTENTS

Appendices:

List of Tables:

List of Figures:

List of Acronyms and Abbreviations

APE	Area of Potential Effects
AQCR	Air Quality Control Region
ASCE	American Society of Civil Engineers
af	acre feet
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation & Liability Information System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CORRACTS	Corrective Action Reports
dBA	A-Weighted Decibels
DOT	Department of Transportation
DMAMPO	Des Moines Area Metropolitan Planning Organization
DSMI	Des Moines Industrial
E	East
EA	Environmental Assessment
EC	Engineering Control
EDR	Environmental Data Resources
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
ERNS	Emergency Response Notification System
ESA	Endangered Species Act
FAF	Freight Analysis Framework
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
Ft	Feet
FTA	Federal Transit Authority
FTE	Full Time Employees
GDMP	Greater Des Moines Partnership
I-235	Interstate 235
I-35	Interstate 35
I-80	Interstate 80
IAIS	Iowa Interstate
Ibat	Indiana bat
IC	Institutional Control

ICT	Intermediate Capacity Transit
ID	Identification Code
IDNR	Iowa Department of Natural Resources
IDOT	Iowa Department of Transportation
ISHPO	Iowa State Historic Preservation Office
INFRA	Infrastructure for Rebuilding America
IPaC	Information, Planning, and Consultation
kVA	Kilo Volt Amperes
Limited ESA	Environmental Site Assessment
LOS	Level of Service
LOD	Limits of Disturbance
LUST	Leaking Underground Storage Tank
NAAQS	National Ambient Air Quality Standards
NHL	National Historic Landmark
NE	Northeast
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NFRAP	No Further Remedial Action Planned
NHPA	National Historic Preservation Act
NLEB	Northern long-eared bat
NPL	National Priorities List
NRHP	National Register of Historic Places
NO_x	Nitrogen Oxides
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System Permits
NS	Norfolk Southern
O_3	Ozone
OSA	Office of the State Archeologist (Iowa)
PAH	Polynuclear Aromatic Hydrocarbon
$PM_{2.5}$	Particulate matter equal to or less than 2.5 micrometers in aerodynamic diameter
PM_{10}	Particulate matter equal to or less than 10 micrometers in aerodynamic diameter
PPV	Peak Particle Velocity
RCRA	Resource Conservation and Recovery Act
RRLG	Railroad Revolving Loan and Grant
S	Southern
SGMP	Soil and Groundwater Management Plan
SHWS	State Hazardous Waste Site
SIP	State Implementation Plan
SO_x	Sulfur Oxides
SO_2	Sulfur Dioxide
SWF/LF	Solid Waste Facility/Landfill

SWS	Statewide Standards
TEH	Total Extractable Hydrocarbons as diesel and waste oil
TMW	Temporary Monitoring Well
TPY	Tons Per Year
TSD	Treatment Storage and Disposal
TSP	Total Suspended Particles
UP	Union Pacific
US	United States
USACE	United States Army Corps of Engineers
U.S. DOT ACT	United States Department of Transportation Act
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound
WOTUS	Waters of the United States

1.0 PURPOSE AND NEED

1.1 Introduction

The Des Moines Area Metropolitan Planning Organization (DMAMPO), City of Des Moines, Greater Des Moines Partnership (GDMP), and Iowa Department of Transportation (IDOT), in conjunction with Des Moines Industrial (DSMI), propose to construct a multi-modal transloading facility (Des Moines Area Transloading Facility or Project) to include trackage, docks, and warehousing within the Des Moines Metropolitan Area. DMAMPO selected DSMI as the developer of the Project. DSMI is also the owner and operator of the facility. DMAMPO will use U.S. Department of Transportation (DOT) funds, administered by the Federal Railroad Administration (FRA), to construct this facility. Therefore, FRA must comply with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.) prior to authorizing DMAMPO to use DOT funds and commence construction of the Project. NEPA requires federal agencies to consider the impacts of their actions on the natural, social, economic, and cultural environment and to disclose those considerations in a public document. The NEPA process helps public officials make decisions based on an understanding of the environmental consequences and take actions that protect, restore, and enhance the environment (40 C.F.R. § 1500.1).

As required by NEPA, this Environmental Assessment (EA) provides FRA and the public with a full accounting of the environmental impacts of the alternatives developed to meet the Project's purpose and need. This EA serves as the primary document to facilitate review of the Project by federal, state and local agencies, and the public. The EA process concludes with either a Finding of No Significant Impact (FONSI) or a determination to proceed in preparation of an Environmental Impact Statement (EIS). FRA and DMAMPO are joint lead agencies in the preparation of this EA.

Transloading is the process by which trains and trucks are joined to create a single pathway for transporting commodities. At a transloading facility, parties deliver cargo to the facility using one mode of transportation. The facility then removes, segregates (if need be), and stores the cargo at the facility until a second mode of transportation out of the facility is available. Different commodities have varied material handling techniques, storage requirements, and truck loading requirements. Effective transloading facilities meet these requirements and can load large trains and trucks quickly, to minimize cost to the shipper. The ability to warehouse, store or stage product quickly and efficiently is essential to economic competitiveness.

Central Iowa currently lacks transloading opportunities. Access to rail transload options exists through transload facilities located in Kansas City, Kansas, Kansas City, Missouri, Chicago, Illinois, Omaha, Nebraska and Minneapolis, Minnesota. Based on a 2014 study by DMAMPO, a transload facility in Des Moines, Iowa has the potential to spur additional development from businesses that desire to export and import goods via rail.[1]

[1] Des Moines Area Metropolitan Planning Org. *Rail Market Analysis*. 31 Jan. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-market-analysis-final.pdf.

1.2 Project History

Over a decade of study on goods movement in Central Iowa developed the concept of a transload facility. In 2006, DMAMPO prepared a report entitled *Goods Movement in Central Iowa and in the Des Moines Metro Area*.[2] The report added focus to the market's potential intermodal capabilities and opportunities, identifying a need to respond to increasing congestion in the interstate highway system and to recognize the significant differences in costs to move goods by various methods. Upon completion of the goods movement study, DMAMPO established a recurring roundtable of participants to continue the critical discussion on the movement of goods. This group included representatives from regional freight and trucking companies, major manufacturing and distribution industries, city and county government, and all four major rail lines, including Union Pacific, BNSF Railway, Norfolk Southern (NS) Railway, and Iowa Interstate Railroad, Ltd (IAIS). This group offered ongoing input and assisted with the development of parameters for a deeper analysis of freight demand.

In October 2013, DMAMPO commissioned a study entitled *Des Moines Rail Transload Feasibility Study*[3] to determine the feasibility of locating a transload facility in Des Moines. The study included market, construction/operation, and benefit–cost analyses. The study concluded that a market exists in Des Moines to support the development of a transload facility.

In July 2018, DMAMPO applied for funding from DOT of the Project under the Better Utilizing Investments to Leverage Development (BUILD) grant program. The application was selected for the award of federal funds in November 2018. In April 2019, DSMI was formed to design, construct, operate and own the transload facility.

1.3 Project Purpose and Need

The purpose of the Project is to improve the overall freight capacity and options in the Des Moines metropolitan area; develop rail centric transportation options for existing businesses; expand existing transportation options to attract new industries to the region; and support economic development in Central Iowa.

Demand for third-party logistics solutions for rail-based transloading solutions and opportunities in Central Iowa drives the need for the Project. The Project is intended to provide a more cost-effective and ecologically beneficial shipping alternative to businesses with a 150-mile radius of Des Moines, Iowa.[4]

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[2] Des Moines Area Metropolitan Planning Org. *Goods Movement in Central Iowa and in the Des Moines Metro Area*. 2006, https://dmampo.org/wp-content/uploads/2013/08/goods-movement-2006-update-report_092106_final.pdf.
[3] Des Moines Area Metropolitan Planning Org. *Des Moines Rail Transload Feasibility Study*. 28 Jun. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-feasibility-report-final.pdf.
[4] Des Moines Area Metropolitan Planning Org. *Des Moines Transload Facility Project INFRA Grant Application.* 18 Jul. 2018.

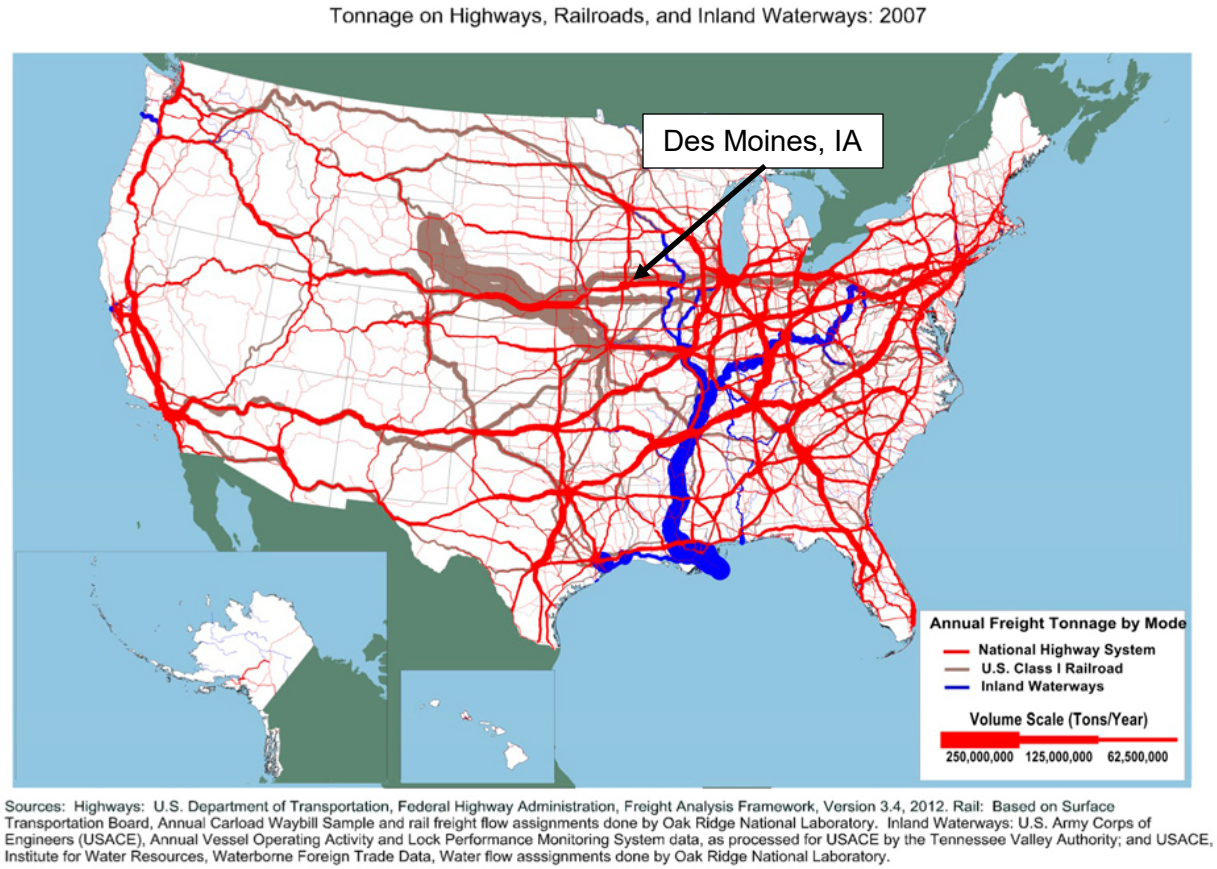
As shown below in *Figure 1*, Des Moines (depicted as the Iowa Inland Port in Figure 1) sits at crossroads of Interstate 35 (I-35), a primary North American Free Trade Agreement (NAFTA) Corridor, and Interstate 80 (I-80), a northern tier Interstate which connects New York to San Francisco.

Figure 1: Des Moines Crossroads[5]

The map below in *Figure 2* illustrates tonnage and commodity flows along the United States (US) highways, rails, and waterways. Iowa is a critical state for long haul traffic, much of which passes through the state.

[5] "NAFTA Super Corridor Map." *Soc. for Amer. Sovereignty*, https://www.americansov.org/super_corridor/nafta_super_corridor.html.

Figure 2: Tonnage on Highways, Railroads, and Inland Waterways: 2007[6]

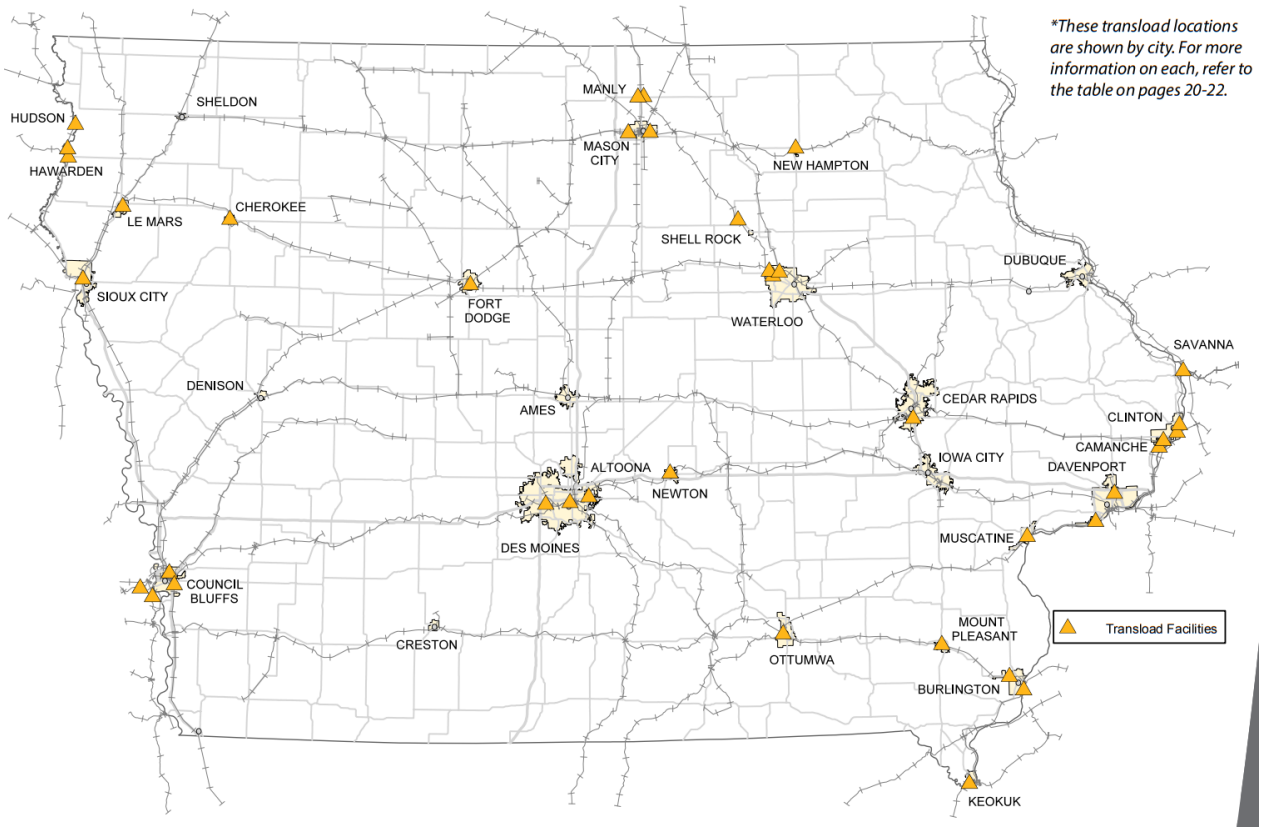


Commodity movements are a response to changing economic conditions and need support from infrastructure that is cost competitive. Competitive infrastructure includes adequate service and capacities for the modes that are providing, or could provide, the region's industries with transportation. Transload facilities rely on trucking services to connect users to the rail network. Transload facilities often act as a buffer allowing users to truck product to a facility where rail equipment can be loaded to maximum weight or cubic capacity loading configurations.

[6] United States, Dept. of Transportation, Fed. Highway Admin. *Tonnage on Highways, Railroads, and Inland Waterways: 2007.* https://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/tonhwyrrww2007.htm.

Figure 3 depicts the existing third-party accessible rail transload facilities throughout the State of Iowa. A third-party accessible rail transload facility is a business that generates revenue by transloading their client's commodities and can have multiple clients at any given time.

Figure 3: Map of Third-Party Rail Transloads – State of Iowa[7]



[7] State of Iowa, Dept. of Transportation. *Iowa Rail Toolkit.* 2019, https://iowadot.gov/iowarail/railroads/industry/iowatoolkit/RailToolkitComplete.pdf, p. 23.

Table 1-1 below further describes the characteristics of the rail transload facilities shown in the map in *Figure 3* above.

Table 1-1: Summary of Iowa Third-Party Rail Transload Facilities[8]

City	Rail Service	Distance	Car Spots	Commodity
Burlington, IA	BNSF	166 miles Southeast	N/A	N/A
Clinton, IA	Union Pacific (UP)	198 miles East	80	Bulk
Council Bluffs, IA	UP	130 miles West	N/A	N/A
Davenport, IA	Canadian Pacific (CP)	165 miles East	25	N/A
Des Moines, IA	UP	0	60	Bulk
Dubuque, IA	Canadian National (CN)	200 miles East	N/A	Bulk
Manly, IA	Iowa Northern	130 miles North	300	Bulk
Mason City, IA	UP/CP	120 miles North	N/A	Bulk
Mount Pleasant, IA	BNSF	135 miles Southeast	N/A	N/A
Newton, IA	Iowa Interstate	40 miles East	20	Bulk
Ottumwa, IA	CP	85 miles Southeast	N/A	N/A
Ottumwa, IA	BNSF	85 miles East	23	Bulk
Waterloo, IA	Iowa Northern	110 miles Northeast	15	Bulk
Sioux City, IA	BNSF/UP/CN	200 miles west	50	Food products

Currently, in Des Moines, there is only one rail third-party accessible transload facility. The capacity of product the facility can handle is limited by the amount of available trackage; it is served only by one railroad (UP); and the facility size can only handle the existing product demand. The lack of third-party accessible transload facilities, constrain the region's shippers and create a cost disadvantage from a rail logistics perspective, as further described below:

- Type of Service to UP Transload: Due to the limited real estate and track space available, this manifest terminal can only handle blocks of up to 20 cars. There is no potential for unit train movements, traditionally viewed as 100+ cars switched in a single shipment. This prohibits the use of unit trains to reduce costs, particularly for bulk commodities like aggregate and mineral products. Historically, a unit train is a more efficient shipment than a manifest train and garners better pricing and service from the rail carrier.

- Single Serving Railroad: To serve a region in the most economical way, more than one Class I carrier should provide rail service in the region. Creating competition amongst carriers provides shippers with leverage to reduce their rates, as well as providing them with direct service nationwide. Direct service means that the delivery of a shipment involves only one rail carrier. In railroading economics, the fewer carriers needed to deliver the shipment, the better the pricing and service.

[8] Des Moines Area Metropolitan Planning Org. *Des Moines Rail Transload Feasibility Study*. 28 Jun. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-feasibility-report-final.pdf.

- Multi-Commodity: Their existing operations have a limited capacity and target and serve the paper, lumber, manufacturing, and agricultural industries.

DMAMPO's *Des Moines Rail Transload Feasibility Study* used the *Freight Analysis Framework* (FAF) to help identify that there is a need for a transload facility in the region. The FAF, which is produced by the Federal Highway Administration (FHWA) and the Bureau of Transportation Statistics, integrates actual freight movement data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation[9]. The FAF uses data compiled from waybill samples from the trucking, rail and maritime industries and is publicly collected by various federal agencies.[10] Trucking is still the dominant transportation mode in Iowa and handles about five times the tonnage than is moved by rail. Iowa's top five outbound domestic trading partners are Minnesota, Illinois, Louisiana, Texas, and Nebraska. The top five states that send tonnage to Iowa include Wyoming, Illinois, Minnesota, Nebraska, and Wisconsin.

Iowa's current highway network will not be able to handle the truck growth over the next thirty years given present levels of investment. Establishing more rail access points will help rail transportation increase its market share in Iowa over the next 30 years and absorb increases in freight shipments (see Figure 4).[11]

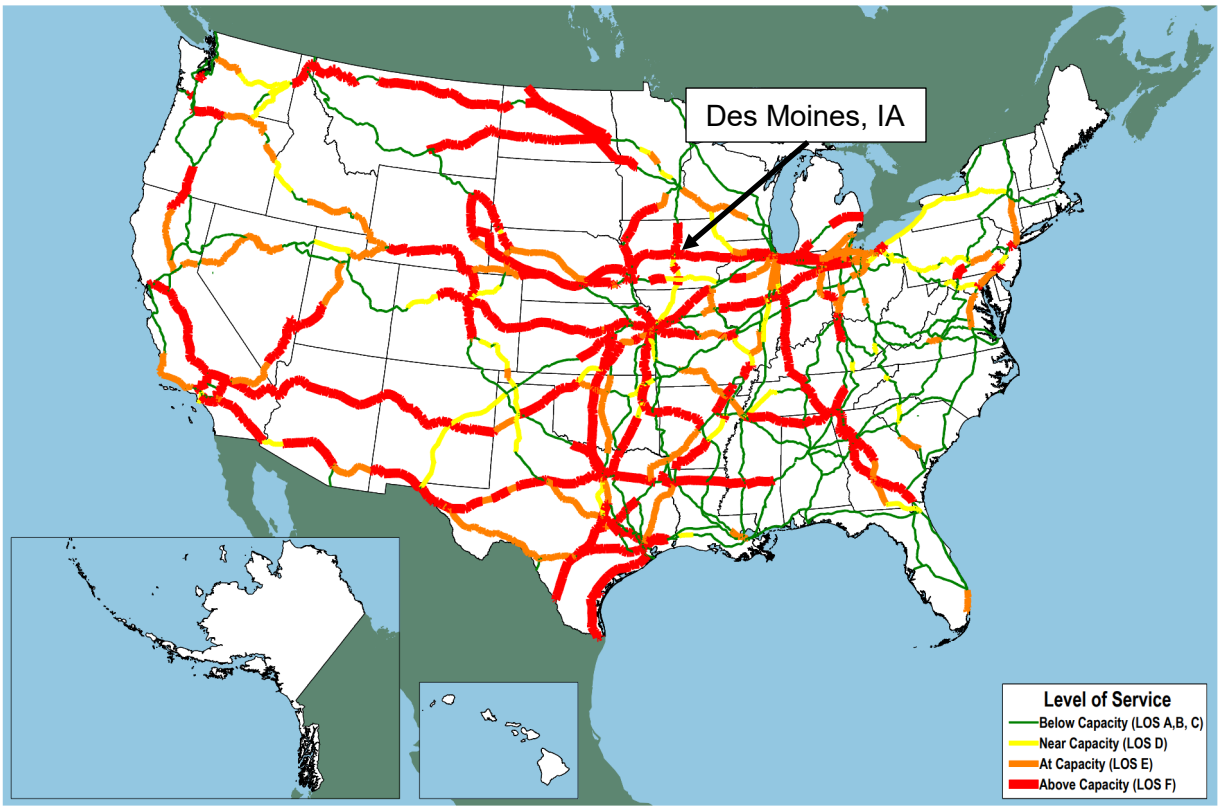
[9] US Department of Transportation Federal Highway Administration. *Freight Analysis Framework.* https://ops.fhwa.dot.gov/freight/freight_analysis/faf/

[10] Des Moines Area Metropolitan Planning Org. *Des Moines Rail Transload Feasibility Study*. 28 Jun. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-feasibility-report-final.pdf, p. 39.

[11] *Ibid*.

Figure 4: Train Volumes in 2035 Compared to Current Capacity.[12]

Train Volumes in 2035 Compared to Current Capacity



Note: Level of Service (LOS) A through F approximates the conditions described in Transportation Research Board, *Highway Capacity Manual 2000.*
Source: Association of American Railroads, *National Rail Infrastructure Capacity and Investment Study,* prepared by Cambridge Systematics, Inc. (Washington, DC: September 2007), figure 5.4, page 5-5.

[12] *Ibid*, p. 14.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Alternatives Considered

As described in Section 1.2, DMAMPO studied the Des Moines area potential for a transloading facility since 2013. As a part of that process, DMAMPO conducted a search of potential locations for a transload facility within the Des Moines Metropolitan Area in 2014, as documented in the Feasibility Study.[13] DMAMPO looked at all available property within the region and identified 11 potential sites based on the sites' proximity to existing Class I and II railroads. Railroads are classified by revenue thresholds. For 2018, the most recent year for which figures are calculated, Class I railroads have an annual operating revenue of $489,935,956 or more and are considered transcontinental; Class II railroads have an annual operating revenue of less than $489,935,956 but more than $39,194,876, and are considered "regional."[14] A useful and efficient transloading facility has access to railroads that deliver goods from long distances as well as required regional delivery options by way of the Class II lines or trucks.

Due to the number of potential sites, DMAMPO used a two-step screening process. First, DMAMPO screened the site alternatives based on whether a site alternative would meet the basic requirements for an effective transload facility, which also serve as the purpose and need of the proposed action. DMAMPO determined that all 11 potential sites would meet the basic requirements for viable sites, and therefore also meet purpose and need of the proposed action. Then, DMAMPO applied the following secondary screening criteria to determine which potential site or sites would be carried forward:

- Minimum size – The completed facility would include at least one warehouse, loading facilities, parking areas, and administrative buildings. DMAMPO estimated that a site of at least 30 acres of property was required to construct and operate these facilities.
- Public Ownership – The site should be owned by a public entity because purchasing private property would be cost prohibitive. DMAMPO, the City of Des Moines, the GDMP, and IDOT are public entities with finite resources and cannot allocate funds for the purchase of land for the facility.
- Zoning – The site should be located within an industrially zoned area so as not to require zoning modifications. The site should meet existing and future comprehensive zoning plans to avoid delays in the construction of the facility.
- Street access – Transloading invariably includes a trucking component; therefore, transport trucks should be able to access the site with existing ingress/egress routes and without modifying the existing traffic patterns.[15]

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[13] Des Moines Area Metropolitan Planning Org. *Rail Market Analysis.* 31 Jan. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-market-analysis-final.pdf.
[14] "Economic Data." *United States Dept. of Transportation, Surface Transportation Bd.*, https://prod.stb.gov/reports-data/economic-data/.
[15] .Des Moines Area Metropolitan Planning Org. *Rail Market Analysis.* 31 Jan. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-market-analysis-final.pdf.

Using this secondary screening criteria, DMAMPO analyzed the following 11 potential sites:

- Site 1 - 1546 E. Euclid Avenue, Parcel ID 110/00554-006-002: A 12-acre privately owned site, located at the northeast corner of E. Euclid Avenue and E. 14th Street, zoned planned unit development, with access to UP on the eastern portion of the property.
- Site 2 - No Address, Parcel ID 270/01090-005-004: A 22-acre publicly owned site, located 0.3 miles to the northeast of the intersection of NE. 14th Street (US Highway 69) and NE. Aurora Avenue, zoned heavy industrial, with access to UP on the western portion of the property.
- Site 3 - 4395 NE. 22nd Street, Parcel ID 190/00344-004-004: A 40-acre privately owned site, located to the west of Interstate 235 (I-235) and south of NE. Broadway Avenue, zoned heavy industrial, with access to UP to the west of the site.
- Site 4 - No Address, 060/09027-606-017: A 45-acre privately owned site, located to the west of and along US Highway 65 and to the east of NE. 56th Street, zoned agricultural, with access to IAIS on the eastern portion of the property.
- Site 5 - No Address, Parcel 221/00070-019-000: A 47-acre publicly owned site, located between Pleasant Hill Boulevard and US Highway 65, zoned heavy industrial, with access to BNSF/NS on the southern boundary of the property.
- Site 6 - No Address, Parcel 131/00012-113-000: A 32-acre privately owned site, located to the east adjacent to US Highway 65 and 0.25 miles to the west of SE. 52nd Street in southeast Des Moines, zoned agricultural, with access to UP on the northern portion of the property.
- Site 7 - No Address, Parcel 120/07006-673-042: A 37-acre privately owned site, located to the west of US Highway 65 and adjacent to SE. 45th Street to the west in southeast Des Moines, zoned agricultural, with access to UP on the northern portion of the property.
- Site 8 - 2901 Cb and Q Street, Parcel 050/04483-000-000: A 17-acre privately owned site, located at the southwest corner of Vandalia Road and Cb and Q Street in southeast Des Moines, zoned heavy industrial, with access to BNSF/NS on the southern portion of the property.
- Site 9 - No Address, Parcel 050/00727-000-000: A 11-acre publicly owned site, located at the southwest corner of Maury Street and SE. 25th Court, with access to BNSF/NS on the southern portion of the property, zoned residential.
- Site 10 - 903 SE. 22nd Street, Parcel 050/04507-004-000: A 20-acre publicly owned site, located to the west of the Des Moines wastewater treatment plant and south of Maury Street, zoned heavy industrial, with access to BNSF/NS on the northern portion of the property.
- Site 11 (Proposed Site) - 200 SE. 15th Street, Parcel 040/00472-000-00: A 40-acre publicly owned site, bound by E. Martin Luther King Jr. Parkway to the south, and SE. 14th Street to the west, zoned heavy industrial, with access to UP, NS, BNSF, IAIS to the north.

Figure 5 below shows the location of the potential sites evaluated in the alternatives screening process.

Figure 5: Alternative Transload Facility Sites[16]

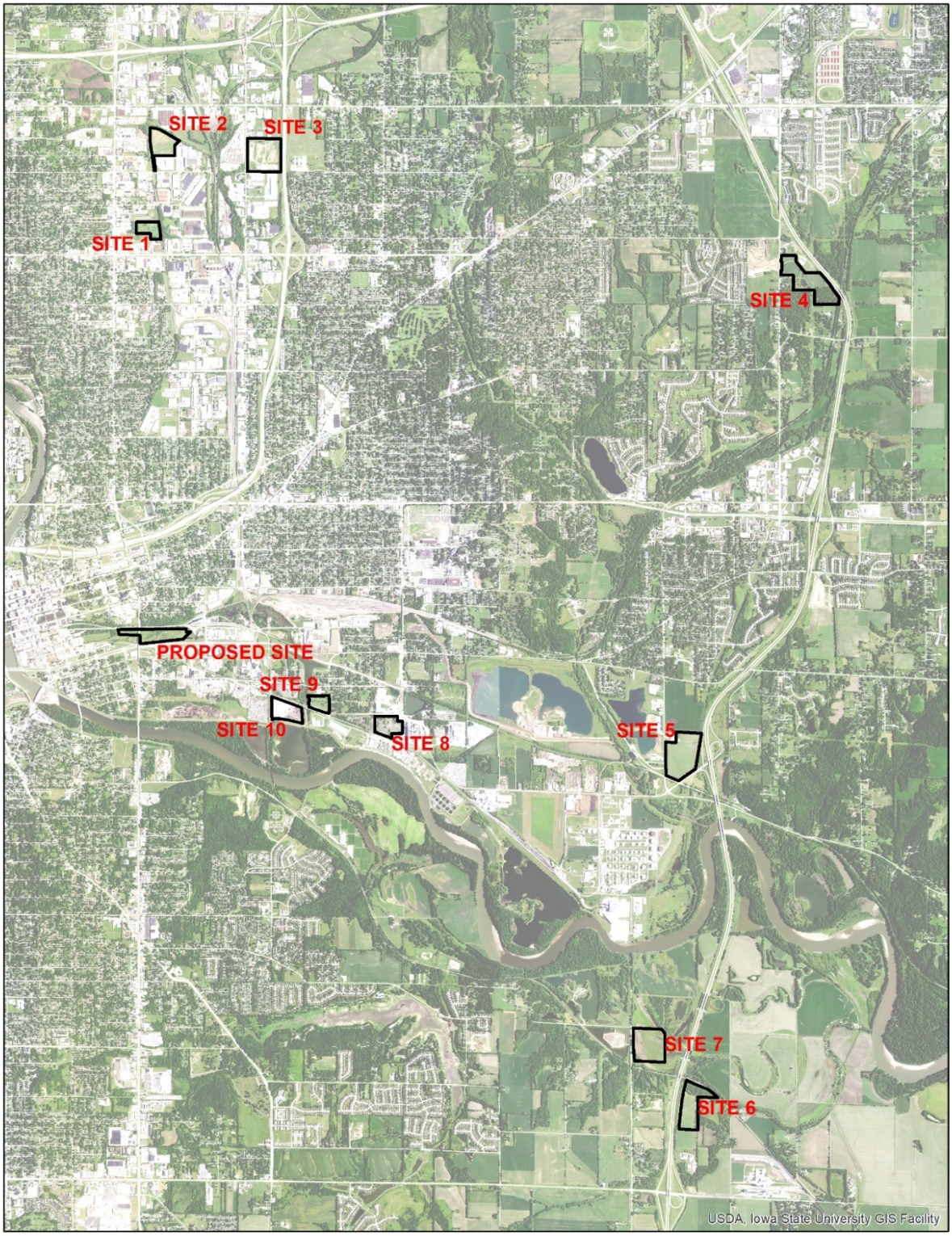


Table 2-1 below summarizes DMAMPO's secondary screening analysis of the 11 potential sites.

[16] *Google Earth*. https://www.google.com/earth/.

Table 2-1: Summary of Screening Criteria

Address / Parcel ID	Acres	Public Ownership	Zoning	Class I and Class II Railroads	Street Access
Site 1: 1546 E. Euclid Ave. 110/00554-006-002	X	X	X	X	X
Site 2: None 270/01090-005-004	X	✓	✓	X	✓
Site 3: 4395 NE. 22nd Street 190/00344-004-004	✓	X	✓	X	✓
Site 4: None 060/09027-606-017	✓	X	X	X	✓
Site 5: None 221/00070-019-000	✓	✓	✓	X	✓
Site 6: None 131/00012-113-000	✓	X	✓	X	X
Site 7: None 120/07006-673-042	✓	X	X	X	X
Site 8: 2901 Cb and Q Street 050/04483-000-000	X	X	✓	✓	✓
Site 9: None 050/00727-000-000	X	✓	X	✓	✓
Site 10: 903 SE. 22nd Street	X	✓	✓	✓	✓
Site 11: 200 SE. 15th Street	✓	✓	✓	✓	✓

DMAMPO determined that Alternate Site 11 is the only alternative site meeting all the secondary screening criteria because it is a 40-acre site currently zoned heavy industrial; includes direct access to two Class I railroads and one Class II railroad; is directly adjacent to E. Martin Luther King Jr. Parkway, which is a major arterial roadway connected to the Central Business District (west) in downtown Des Moines and with a planned connection to US Highway 65 (east); and lies just south of I-235, which provides connectivity to I-35 and I-80.

DMAMPO conducted these screening actions as part of their alternatives analysis work, which was done from 2013 to 2016. FRA reviewed and accepted this analysis in 2019 as part of this EA process.

2.2 Alternatives Carried Forward for Detailed Consideration

2.2.1 No Action Alternative

Under the No Action Alternative, DSMI would neither construct nor operate the Facility. Area shippers would continue to use one mode of transportation (trucking) to deliver cargo long distances, which would impact the amount of goods transported to and from Des Moines and increase shipping costs. Continued reliance upon trucking for the movement of goods would increase the wear on the highway system.[17] Trucking is currently handling the demand; however, the opportunity to provide a more economical and environmental-friendly shipping alternative by implementing the Project would not be realized. Under the No Action Alternative, the purpose of the Project would not be met; however, this alternative is retained to provide a comparative baseline against which to analyze the effects of the Build Alternative, as required under *Council on Environmental Quality (CEQ) Regulations* (40 C.F.R. § 1502.14).[18]

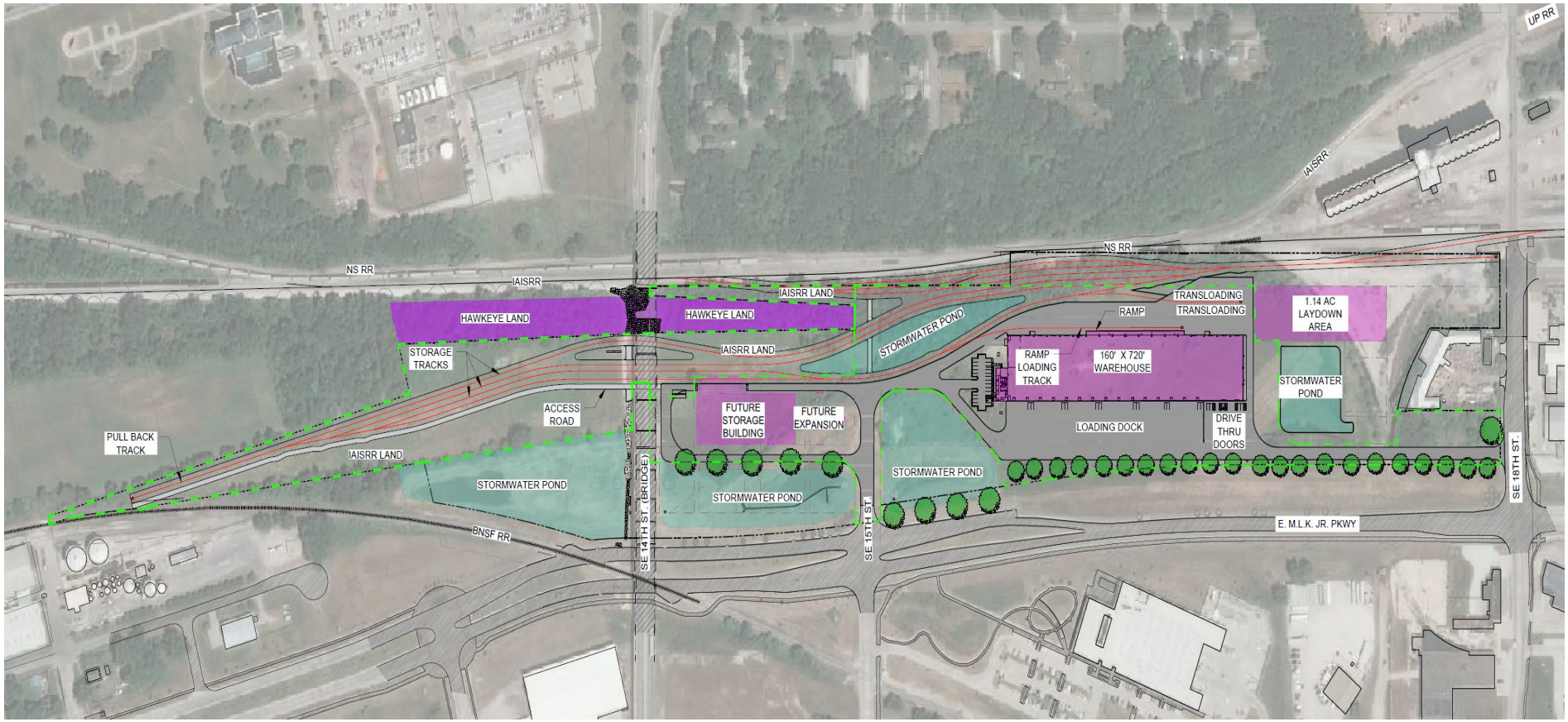
2.2.2 Build Alternative (Preferred Alternative)

Figure 6 below shows the location of the Build Alternative. The City of Des Moines owns the majority of the land on which the Build Alternative would be located; DSMI would purchase the land from the City of Des Moines as part of the Project. IAIS and NS own the remaining land, which DSMI would lease as part of the Project. *Figure 7* below shows the preliminary design for the transload facility.

[17] Des Moines Area Metropolitan Planning Org. *Des Moines Rail Transload Feasibility Study*. 28 Jun. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-feasibility-report-final.pdf, 12.
[18] United States. Code of Federal Regulations. Title 40, section 1502.14, https://ecfr.io/Title-40/se40.37.1502_114l.

Figure 6: Site Location

Figure 7: Overall Site Layout[19].



[19] VAA Engineering L. L. C. *Overall Site Layout Des Moines Transload Facility*. 6 Feb. 2020.

The Project would optimize rail, trucking, and warehousing. Under the Build Alternative, the transload facility consists of approximately 115,200 square feet of warehouse, 12,560 linear feet of rail spur lines leading to/from existing rail lines to the facility, 13 intra-terminal switches, approximately 1.14-acres for a laydown area, and four storm water ponds. The roads servicing commercial traffic would be paved.

DSMI estimates that the transload facility would handle an average rail car count of 2,800 cars per year. DSMI anticipates the terminal would receive 2 to 4 independent train arrivals/departures per week from various rail carriers, and contain5 to 30 rail cars per train. Each rail car would be the equivalent of about 4 semi loads, or approximately 11,200 truckloads per year. DSMI anticipates the commodities handled at the Facility would include bulk materials like aggregate and rock salt, bundles of lumber and steel products, pallets of shingles, softener salt, specialty grains and minerals.

The hours of operation would be Monday through Friday from 7:00 am to 6:00 pm, and 7:00 am to noon on Saturday. DSMI estimates about 30 to 50 trucks would access the transload facility each day based on contemporaneous truck volume research and the capacity of railcars the facility would physically manage per year. Under the Build Alternative, the facility would employ approximately 15 to 25 full time employees in 2 shifts per week.

IAIS and NS would provide railroad services through direct physical interconnections to the Project site. DSMI anticipates that NS and BNSF would have a reciprocal switching agreement that would allow the DSMI direct pricing and rail service on BNSF over the NS interconnection. IAIS is working on a switching agreement with UP, which would allow similar access for UP-based traffic. Client demand would drive switches from each of these carriers, which DSMI estimates would average about five days a week.

Construction of the Facility would include:

- Rough and finish grading operations (approximately 125,000 cubic yards (CY) of earthwork) with construction of four storm water management basins;
- Connection to existing utilities (storm, sanitary, water, gas, electric) with service extensions to the site and buildings;
- Roadway connections to E. Martin Luther King Jr. Parkway and SE. 18th Street;
- Paving of interior access roads, parking areas, and loading docks;
- Railway extensions and interconnections with approximately 12,500 linear feet of new track;
- Construction of a multi-tenant warehouse building of approximately 115,000 square feet with attached single-story office; and
- Site landscaping to comply with City of Des Moines requirements.

DSMI anticipates Project construction would include 6 months for sitework, utilities, and paving; 4 months for rail installation; and 6 months for warehouse construction. Some of the work would overlap, providing an overall expected construction duration of 12 to 14 months, depending upon

commencement date and winter conditions. DSMI anticipates Project construction would occur in a single phase and currently plans for all construction work to occur in late 2020 through 2021.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing resources within the Project site and analyzes the potential impacts to these resources based on the proposed action.

3.1 Air Quality

Projects assessed under NEPA evaluate initial air pollution emissions estimates, determine the appropriate level of air quality analysis, assess whether air pollution impacts are likely, and describe the degree and severity of those impacts to resources in the area of the Project site.

3.1.1 Affected Environment

The United States Environmental Protection Agency (USEPA) established primary and secondary National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA), 42 U.S.C. § 7401 et seq.[20] The CAA also set emission limits for certain air pollutants from specific sources, set new source performance standards based on best demonstrated technologies, and established national emission standards for hazardous air pollutants.

The CAA specifies two sets of standards—primary and secondary—for each regulated air pollutant. Primary standards define levels of air quality necessary to protect public health, including the health of sensitive populations such as people with asthma, children, and the elderly. Secondary standards define levels of air quality necessary to protect against decreased visibility and damage to animals, crops, vegetation, and buildings. USEPA has established air quality standards for six pollutants (known as criteria pollutants), including carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur oxides (SO_x) (which are commonly measured as sulfur dioxide [SO_2]), lead, particulate matter equal to or less than 10 micrometers in aerodynamic diameter (PM_{10}) and particulate matter equal to or less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$). Although O_3 is considered a criteria pollutant and is measurable in the atmosphere, it is often not considered as a pollutant when reporting emissions from specific sources, because O_3 is not typically emitted directly from most emissions sources. Ozone is formed in the atmosphere from its precursors—nitrogen oxides (NO_x) and volatile organic compounds (VOCs)—that are directly emitted from various sources. Thus, emissions of NO_x and VOCs are commonly reported instead of O_3.

Table 3-1 below shows the NAAQS for the six criteria pollutants.

[20] "Summary of the Clean Air Act." *United States, Environmental Protection Agency*, https://www.epa.gov/laws-regulations/summary-clean-air-act.

Table 3-1: National Ambient Air Quality Standards[21]

Pollutant	Primary/Secondary	Value	Form
Carbon Monoxide 1-hr average 8-hr average	Primary	35 ppm 9 ppm	No to be exceeded more than once per year
Nitrogen Dioxide 1-hr average Annual average	Primary Primary and Secondary	100 ppb 53 ppb	Hourly - 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years Annual Average – Annual Mean
Ozone 8-hr average[(b)]	Primary and Secondary	0.070 ppm	Annual fourth highest maximum 8-hour concentration, averaged over 3 years
Lead	Primary and Secondary	0.15 μg/m^3	Rolling average
Particle Matter $_{10}$ 24-hr average	Primary and Secondary	150 μg/m^3	Not to be exceeded more than one per year on average over 3 years
Particle Matter$_{.5}$ 24-hr average Annual average Annual average	Primary and Secondary Primary Secondary	35 μg/m^3 12.0 μg/m^3 15.0 μg/m^3	98th Percentile, averaged over 3 years Annual mean, averaged over 3 years Annual mean, averaged over 3 years
Sulfur Dioxide 1-hr average 3-hr average	Primary Secondary	75 ppb 0.5 ppm	99th Percentile of 1-hr daily maximum concentrations, averaged over 3 years Not to be exceeded more than one per year

The USEPA classifies the air quality within an Air Quality Control Region (AQCR) according to whether the region meets federal primary and secondary air quality standards. An AQCR or portion of an AQCR may be classified as attainment, non-attainment, or unclassified based on the air quality standards for each of the criteria pollutants. "Attainment" indicates that standards for one or more of the six pollutants are met in an area. USEPA considers an area to be an attainment area for only those criteria pollutants for which the NAAQS are met. "Nonattainment" indicates that standards for one or more of the six pollutants are not met in an area. "Unclassified" indicates that air quality in the area cannot be classified and the area is treated as attainment. An area may have all three classifications for different criteria pollutants.

The CAA requires federal actions to conform to any applicable state implementation plan (SIP). USEPA has promulgated regulations implementing this requirement under 40 C.F.R. Part 93.[22] A

[21] "NAAQS Table." *United States Environmental Protection Agency*, https://www.epa.gov/criteria-air-pollutants/naaqs-table.
[22] United States. Code of Federal Regulations. Title 40, part 93, https://ecfr.io/Title-40/pt40.22.93.

SIP must be developed to achieve the NAAQS in non-attainment areas (i.e., areas not currently attaining the NAAQS for any pollutant) or to maintain attainment of the NAAQS in maintenance areas (i.e., areas that were non-attainment areas but are currently attaining that NAAQS). General conformity refers to federal actions other than those conducted according to specified transportation plans (which are subject to the Transportation Conformity Rule). Therefore, the General Conformity rule applies to non-transportation actions in non-attainment or maintenance areas. Such actions must perform a determination of conformity with the SIP if the emissions resulting from the action exceed applicability thresholds specified for each pollutant and classification of nonattainment. Both direct emissions from the action itself and indirect emissions that may occur at a different time or place but are an anticipated consequence of the action must be considered.

Projects funded or approved by FRA must meet general conformity requirements; therefore, the General Conformity Rule applies to this Project. A general conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a federal action would equal or exceed any of the applicability thresholds. For ozone maintenance areas outside ozone transport regions, the emissions limits are 100 tons per year of ozone and ozone precursors, including nitrogen oxides and volatile organic compounds.

If a federal action exceeds the applicability thresholds and is not exempt from the requirements, the federal agency must demonstrate and document that the direct and indirect emissions would conform to the SIP. It must be demonstrated that the Project would not:

- Cause or contribute to a new violation of a NAAQS;
- Interfere with the SIP;
- Increase the frequency or severity of existing violations; or
- Delay attainment or any required progress toward that attainment.

The determination generally involves emission estimation and air quality modeling for the entire nonattainment or maintenance area (usually a multi-county area). If the initial conformity determination demonstrates that the proposed action does not conform to the SIP, measures must be established and committed to mitigate the projected air quality impacts. A timeline for implementation of these measures may be specified; however, enforcement measures must also be established to ensure that they are implemented as required.

A federal agency must demonstrate that a Project would not cause or contribute to any new violations of the NAAQS, would not interfere with provisions in the SIP, would not increase the frequency or severity of existing violations, and would not delay timely attainment of any standard. The federal agency must provide documentation that the total of direct and indirect emissions from such future actions would be below the conformity determination emission rates that are established in 40 C.F.R. 93.153.[23]

[23] United States. Code of Federal Regulations. Title 40, Section 93.153, https://www.ecfr.gov/cgi-bin/text-idx?SID=11f0b765409963314576c5971bc96752&mc=true&node=sp40.22.93.b&rgn=div6#se40.22.93_1153.

The Air Quality Division of Polk County operates and maintains an air quality monitor (Carpenter Site) within 3 miles of the Project site, at the Polk County Health Department. The site-specific ambient air quality data that is collected includes: ozone, carbon monoxide, nitrogen dioxide, near road monitoring of nitrogen dioxide, sulfur dioxide, particulate matter, air toxics, wind speed, and wind direction. The Carpenter Site reported air quality data well below the state and federal standards.[24] Additionally, Des Moines sits within an AQCR that is designated as attainment for all NAAQS.[25] Therefore, the Project is not subject to the General Conformity regulations.

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, DSMI would not construct the transload facility. Trucks would continue to primarily transport freight in and around Des Moines. According to a July 2019 Association of American Railroads report, on average, trains are 3 to 4 times more fuel efficient than trucks.[26] Trains also reduce highway gridlock and greenhouse gas emissions. According to a June 2019 Environmental Protection Agency report for 2017 emissions, transportation in general represented 29% of the total US emissions. Breaking transportation down further, medium- and heavy- duty trucks represented 23% of the total emissions, while trains contributed to 2% of this category.[27] Under the No Action Alternative, there would be no predicted change roadway and highway infrastructure use for bulk shipments and air quality would be similar to existing conditions.

Build Alternative

Under the Build Alternative, construction would generate minor amounts of fugitive dust and gaseous emissions of CO, VOC, NO_x, SO_2, and PM_{10} and $PM_{2.5}$ from the combustion of fuel by construction equipment and vehicles.

The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land worked on and the level of construction activity. USEPA estimates that ground-disturbing activities emit uncontrolled fugitive dust emissions at a rate of 80 pounds (lbs.) of total suspended particulate (TSP) per acre day of disturbance.[28] In a USEPA study of air sampling data at a distance of 164 feet downwind from construction activities, PM_{10} emissions from various open dust sources were determined based on the ratio of PM_{10} to TSP sampling data. The average PM_{10} to TSP ratios for topsoil removal, aggregate hauling, and cut and fill operation are

[24] "Monitoring Sites." *Polk County, Iowa, Public Works*, https://www.polkcountyiowa.gov/public-works/air-quality/air-quality-monitoring/monitoring-sites/.

[25] United States, Environmental Protection Agency. "Iowa Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants." *Green Book*, updated 30 Sept. 2019.

[26] Association of American Railroads. *The Environmental Benefits of Moving Freight by Rail*. July 2019, https://www.aar.org/wp-content/uploads/2018/07/AAR-Environmental-Benefits-Movig-Freight-by-Rail.pdf.

[27] United States, Environmental Protection Agency, Office of Transportation and Air Quality. *Fast Facts U.S. Transportation Sector Greenhouse Gas Emissions 1990-2017*. June 2019, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100WUHR.pdf.

[28] United States, Environmental Protection Agency. *Compilation of Air Pollutant Factors, Volume 1: Stationary Point and Area Sources (AP-42)*. 5th edition, Ann Arbor, updated Feb. 2010.

reported as 0.27, 0.23, and 0.22, respectively.[29] Using 0.24 as the average ratio for purposes of this analysis, the emission factor for PM_{10} dust emissions becomes 19.2 lbs. TSP per acre per day of disturbance. During construction, fugitive dust emissions would increase because construction would involve disturbance of 40 acres. However, USEPA estimates that an effective watering program would reduce the effects of fugitive dust from construction activities. Watering the disturbed area of the construction site twice per day with approximately 3,500 gallons per acre per day would reduce TSP emissions as much as 50%.[30] Therefore, watering would be required during construction to minimize particulate and fugitive dust emissions as described in Section 3.1.3 below. With mitigation, the impact would not be significant.

Combustive emissions from construction equipment exhaust, including CO, VOCs, NO_x, and SO_2, were estimated using USEPA-approved emissions factors for heavy-duty diesel-powered construction, along with the emission factors for the estimated types and numbers of equipment expected to be used during construction of the Build Alternative. *Table 3-2* below shows these emission estimates. As with fugitive dust emissions, construction equipment emissions would be *de minimis*.

Table 3-2: Build Alternative Estimated Construction Emissions in Tons Per Year

	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**
Build Alternative	7.397	1.234	16.839	1.797	2.237
Conformity Thresholds	100	100	100	100	100

Notes:
CO = carbon monoxide
NO_x = nitrogen oxides
PM_{10} = particulate matter equal or less than 10 micrometers in diameter
SO_x = sulfur oxides
VOC = volatile organic compound

During operation of the Build Alternative, DSMI assumes that the volume of semi-trucks operating would add fewer than 100 new trips per day to the existing truck traffic.[31] Increased rail traffic using the transload facility would contribute locomotive exhaust emissions. To analyze the potential impact to air quality due to the new rail traffic under the Build Alternative, the analysis assumed that trains would travel from within a 150-mile radius of the Project site and, per CSX system wide train efficiency measurements,[32] each train would consume one gallon of fuel per ton for every 492 miles. Assuming that each train would consist of 2 locomotives and 100 cars, the weight of the train would be 14,600 gross tons and would consume approximately 4,451

[29] United States, Environmental Protection Agency. *Gap Filling PM10 Emission Factors for Selected Open Area Dust Sources, USEPA-450/4-88-003*. Research Triangle Park, Feb. 1988.
[30] United States, Environmental Protection Agency. *Compilation of Air Pollutant Factors, Volume 1: Stationary Point and Area Sources (AP-42)*. 5th edition, Ann Arbor, updated Feb. 2010.
[31] Des Moines Industrial. *Application for Traffic Analysis*. Submitted to City of Des Moines, Iowa, 22 Aug. 2019.
[32] "Fuel Efficiency." *CSX*, https://www.csx.com/index.cfm/about-us/the-csx-advantage/fuel-efficiency/.

gallons of fuel. Based on these assumptions and EPA emission factors, on an annual basis, the emissions associated with the trains would be below the conformity requirements, as shown in *Table 3-3*. Operations emissions would be *de minimis*.

Table 3-3: Build Alternative Estimated Annual Train Emissions for Large Line Haul Lines

	NO_x	**PM_{10}**	**Hydrocarbons**
Emission Factor (gram/gallon) 2023*	84	1.9	3
Grams per train	373,884	8,457	13,353
Annually (tons)	85.7168	1.9344	3.0618
Applicability for Conformity (tons)	100	100	N/A
Notes: NO_x = nitrogen oxides PM_{10} = particulate matter equal or less than 10 micrometers in diameter * = Assumes construction to be completed by 2021 ** Assumes 4 trains per week Source: *USEPA. 2009. Emission Factors for Locomotives. Office of Transportation and Air Quality, EPA-420-F-09-025*			

The Build Alternative would not have a significant impact on air quality.

3.1.3 Minimization Measures

The construction contractor will implement the following air quality Best Management Practices (BMPs) to minimize the combustion engine emissions (CO, VOC, NO_x, and SO_2) and PM_{10} emissions during construction:

AQ-1: Use appropriate dust suppression methods during on-site construction activities. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-moving activities during high wind conditions.
AQ-2: Maintain an appropriate speed to minimize dust generated by vehicles and equipment on unpaved surfaces.
AQ-3: Shut off equipment when it is not in use.
AQ-4: Cover haul trucks with tarps.
AQ-5: Stabilize previously disturbed areas with vegetation or mulching if such area will be inactive for several weeks or more (unlikely).
AQ-6: Visually monitor all construction activities regularly and particularly during extended periods of dry weather and implement dust control measures when appropriate.

3.2 Water Quality

Water quality impacts under NEPA include stormwater runoff degrading the quality streams and rivers, wetlands encroachment, and the depletion or pollution of groundwater aquifers. A qualitative assessment of water quality was conducted to identify established water quality for identified surface waters and understand how the alternatives could influence water quality.

3.2.1 Affected Environment

The Project site lies within the Des Moines River watershed. The Raccoon River and the Des Moines River are part of the watershed of the Mississippi River. The Raccoon River is a 30.8-mile long tributary of the Des Moines River in central Iowa. The Des Moines River and the Raccoon River surface water intakes are hydraulically up-gradient of the Project site.

The Des Moines metropolitan area obtains its drinking water from the Raccoon River just before it empties into the Des Moines River. Every year, Des Moines Water Works treats about 15 billion gallons of water from the Des Moines River and the Raccoon River and the shallow groundwater wells in the river alluvium. Water sourced from the Des Moines River and the Raccoon River is consumed by approximately 500,000 people, around 17 percent of Iowa's population.[33]

3.2.2 Environmental Consequences

No Action Alternative
DSMI would not develop the Project site occur under the No Action Alternative and there would be no changes at the Project site. The Project site currently consists of structurally undeveloped grassed land and runoff from the area that would continue to be captured by four storm water retention basins. Therefore, the No Action Alternative would not impact the Raccoon and Des Moines River watersheds and would not have a major impact on surface water quality in the area.

Build Alternative
The Build Alternative would not impact the Raccoon and Des Moines River watersheds and would not impact surface water quality in the area. During construction, the construction contractor would protect surface waters and storm systems through the use and enforcement of the Soil Erosion and Sedimentation Control and the National Pollutant Discharge Elimination System (NPDES) permits as described in Section 3.2.3 below. During operations, DSMI would employ permanent best management practices such as permanent seeding, establishment of no mow zones near and adjacent to the watercourse, detention basins with restricted outlets, and the use of native vegetation incorporated in the final landscape design to provide protection to surface waters and storm sewer systems. Therefore, the Build Alternative would not significantly impact water quality.

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[33] Des Moines Water Works. *2019 Consumer Confidence Report.* 2019, http://www.dmww.com/upl/documents/library/2019ccr.pdf.

3.2.3 Permit Requirements

Federal law requires storm water permits for construction activity that disturbs one or more acres or that is part of a larger project that disturbs one or more acres in total, certain types of industrial or commercial activities, and many city storm sewer systems in larger communities or those near larger communities. Because the Build Alternative would disturb one or more acres, DSMI or the construction contractor would obtain a storm water permit before any soil is disturbed at the site under Iowa's NPDES General Permit No. 2.

Iowa's NPDES General Permit No. 2 requires that a pollution prevention plan for construction activity be developed before a Notice of Intent to develop the Project site is submitted to the IDNR. At the start of construction, the construction contractor would implement the pollution prevention plan, which is designed to reduce pollution at the construction site before it causes environmental problems. The pollution prevention plan includes a description of the measures to be used for erosion and sediment controls throughout the construction, including stabilization measures for controlling erosion from disturbed areas and structural controls to divert runoff and removed sediment.

DSMI submitted the final landscape design in compliance with Appendix A-1 to the Third Restated Urban Revitalization Plan[34] for the city-wide Urban Revitalization Area to the City of Des Moines Urban Design Review Board on January 24, 2020, and the Board approved the plan on February 4, 2020. The plan incorporates native vegetation into the Project design.

3.2.4 Minimization Measures

During operations, the construction contractor will implement the following measures during construction of the Build Alternative:

WQ-1: Permanently seed undeveloped areas.
WQ-2: Establish no mow zones near and or adjacent to detention basins.
WQ-3: Construct detention basins with restricted outlets.

[34] City of Des Moines, Iowa. "Appendix A-1 (Rev. 3), Construction and Sustainability Design Standards." *Commercial, Industrial & Multiple-Family Residential Tax Abatement Acknowledgement & Intent Form*, https://www.dsm.city/document_center/Community%20Development/Permit%20Development%20Center/PDC-Commercial-Tax-Abatement-Acknowledgment-Form.pdf.

3.3 Noise and Vibration

FRA noise and vibration analysis relies on the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual. This noise analysis analyzes noise generated by the construction and operation of the Build Alternative, assessing impacts and, where appropriate, recommending noise abatement options to mitigate noise impacts.[35] Noise and vibration can cause nuisance and annoyance effects to the community and impact the quality of life. Vibration can cause damage to infrastructure and buildings.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if 2 identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec) and is most frequently used to describe vibration impacts to buildings. The peak particle velocity damage criteria for concrete, steel and timber is 0.5 (in/sec). The peak particle velocity for damage criteria for timber and masonry buildings is 0.2 (in/sec).

The following steps were undertaken in the analysis of potential noise and vibration impacts:

1. Identify representative sensitive land uses (representative receptors) where noise and vibration impacts could potentially occur.
2. Determine existing noise exposure at representative receptors (preferably from noise measurements);
3. Predict Project noise and vibration exposure at representative receptors using FTA methodology;

[35] United States, Dept. of Transportation, Fed. Transit Admin. *FTA Report No. 0123, Transit Noise and Vibration Impact Assessment Manual*. Sept. 2018.

4. Assess impacts by comparing existing and Project noise levels to FTA noise impact criteria;
5. Where noise and vibration impacts are predicted to exist, discuss appropriate noise and vibration mitigation options; and,
6. Assess potential construction noise and vibration impacts.[36]

3.3.1 Affected Environment

Table 3-4 identifies the six noise receptor locations chosen for the initial noise impact screening. The study area for noise analysis was 1,000 feet from the outer boundary of the Project site based on Table 4-7 (Screening Distance for Noise Assessments) in the Transit Noise and Vibration Impact Assessment Manual.[37] These receptor locations represent of similar land uses in the study area.

Table 3-4: Representative Noise Receptors

Noise Receptor ID	Location	Land Use	Distance to Site (ft)
1	101 Johnson Court	Residential	627
2	1441 E. Vine Street	Church	800
3	1533 E. Vine Street	Park	1,370
4	1551 E. Martin Luther King Jr. Parkway	Municipal Service Center	1,000
5	1300 Scott Avenue	Commercial	670
6	109 SE. 13th Street	Commercial	980

Noise receptor 1 is the closest residential land uses to the Project site; noise receptor 2 is a church and receptor 3 is a small public park. All are located north of the Project site. Noise receptors 4 and 5 are commercial properties in the business park south of the Project site. Noise receptor 6 is a commercial property north of the Project site. *Figure 8* below shows the locations of these noise receptors.

[36] *Ibid*.
[37] *Ibid*.

Figure 8: Representative Noise Receptor Locations

Vibration can impact sensitive manufacturing processes, damage buildings and infrastructure and disrupt people in their homes. The Vibration Screening Procedure considers the type of project and the presence or absence of vibration-sensitive land uses within the screening distance that was developed to identify noise sensitive receptors.

Most commercial and industrial land uses are not considered vibration sensitive because activities in these uses are generally compatible with higher vibrations levels. However, there are residential uses (Receptor 1 in *Figure 8*) located approximately 630 feet north of the Project site, as well as a church (Receptor 2) and a park (Receptor 3).

3.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, DSMI would neither construct nor operates the transload facility. Therefore, the No Action Alternative would generate no new operational or construction-period noise.

Build Alternative

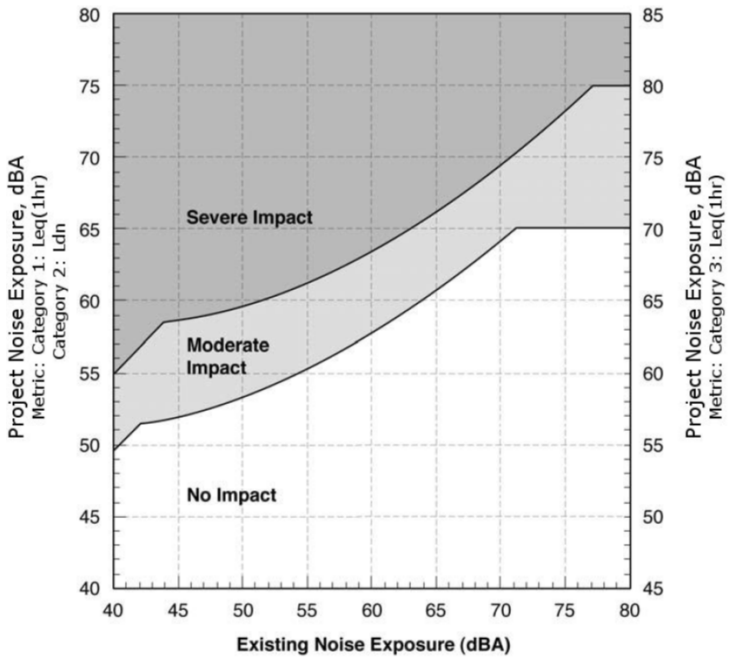
Noise

Operations Noise

Under the Build Alternative, the transload facility would operate from 7:00 am to 6:00 pm Monday through Friday and from 7:00 am to noon on Saturday. DSMI estimates that the average rail traffic at the transload facility would be 2,800 rail cars per year, or approximately 10 cars per day. DSMI estimates that 30 to 50 trucks would enter and exit the transload facility per day. During daily operations of the transload facility the following typical machinery would be expected to operate onsite: diesel skid steer loaders, front loaders, forklifts, and TrackMobile. DSMI also anticipates using electric powered forklifts.

Figure 9 graphically shows the FTA noise impact criteria. The FTA criteria are based on a sliding scale for No Impact, Moderate Impact, or Severe Impact. Based on the operational scenario under the Build Alternative, future noise levels were calculated as they would be experienced by the noise receptors. A portion of sound energy is attenuated by distance. This type of attenuation is called divergence and is greater for point source noise, like a transload facility. Noise from point sources decreases with distance at a rate of about 6 decibels (dB) every time the distance from the source is doubled.

Figure 9: Noise Impact Criteria for Transit Projects[38]



[38] *Ibid.*

Table 3-5 below identifies the future operation noise levels that would be experienced by the representative noise receptors on *Figure 8*. *Table 3-5* provides the existing noise levels and the noise levels calculated based on proposed operations of the transload facility under the Build Alternative. The Build Alternative noise levels were calculated based on distance of the noise receptors from the Project site, which is represented as Future Noise Level in *Table 3-5*. Future noise levels were compared to the FTA Noise Impact Criteria shown in *Figure 9* above to determine if the noise impact would be significant.

Table 3-5: Build Alternative Future Total Noise Level

Noise Receptor ID	Existing Noise Level at Noise Receptors (dBA)	Build Alternative Noise Level (dBA)	Future Noise Level at Noise Receptors (dBA)	Increase (dBA)	Impact?
1	55	45	55	0	No
2	59	45	59	0	No
3	59	45	59	0	No
4	60	45	60	0	No
5	60	45	60	0	No
6	60	45	60	0	No

The analysis indicates there would be no increase in the noise level at each receptor from operation of the Facility. This is due to attenuation of the noise generated at the transload facility based on the distance of the receptors from the Project site. Therefore, the Build Alternative would not have a significant operational noise impact.

Construction Noise

To estimate construction noise under the Build Alternative, a general noise assessment was conducted. To be conservative, the assessment estimated the noise level from the two loudest pieces of construction equipment (a land grader and a bulldozer), assuming that the construction equipment would operate at full power at the same time from the center of the Project site. Existing noise level and the construction equipment noise is not directly additive and is calculated based on the distance of the noise receptor from the noise source. *Table 3-6* below shows the results of the construction noise analysis.

Table 3-6: Predicted Construction Noise Level and Impacts

Noise Receptor ID	Land Use	Distance to Site (ft)	Future Noise Level at Receptor (dBA)	Impact?
1	Residential	627	63	No
2	Church	800	61	No
3	Park	1,370	56	No
4	Municipal Service Center	1,000	59	No
5	Commercial	670	62	No
6	Commercial	980	59	No

As shown in *Table 3-6*, the Build Alternative would not have a significantly impact noise during construction.

Vibration

During operation of the Build Alternative, the transload Facility would be an Intermediate Capacity Transit (ICT) system and include freight trains operating at speeds less than 10 mph.[39] Because of the low operating speeds of most ICT systems, vibration produced by freight trains would dissipate rapidly from the source. The screening distance for vibration assessment for Land Use Category 2 (residential) regarding ICT projects is 100 feet. The nearest residential use (Receptor 1) is over 600 feet from the Project site and would not experience any vibration. Therefore, no vibration impacts would occur during operation of the Build Alternative.

Under the Build Alternative, construction of the transload facility is expected to last approximately 10 months. The heavy equipment used in construction would include large bulldozers, loaded trucks and small bulldozers. The ground-borne vibration levels during construction were calculated based on the vibration that could reach the residential receptor (Receptor 1) located approximately 630 feet north of the Project site. The Peak Particle Velocity (PPV) levels that would reach the residential receptors are shown in *Table 3-7* below.

[39] *Ibid*.

Table 3-7: Assessment of PPV during Construction of the Build Alternative

Equipment	Reference Peak Particle Velocity (PPV) at 25 ft, (in/sec)	Estimated PPV at Residential Site at 630 ft, (in/Sec)
Large Bulldozer	0.089	0.0007
Loaded Truck	0.076	0.0006
Small Bulldozer	0.003	0.0002

PPV damage criteria for reinforced concrete, steel or timber = 0.5
PPV damage criteria for Non-engineered timber and masonry buildings = 0.2

Table 3-7 indicates the total peak particle velocities experienced at the residential area during construction are in the range of 0.002 to 0.007 (in/sec) and would not likely be perceived by the residential uses. The peak particle velocity damage criteria for concrete, steel and timber is 0.5 (in/sec), and for timber and masonry buildings is 0.2 (in/sec). The analysis indicates the peak particle velocities of vibration caused by the construction activities would not result in building damage.

3.3.3 Minimization Measures

No minimization measures are required.

3.4 Wetlands

3.4.1 Affected Environment

Wetlands are defined by the US Army Corps of Engineers (USACE) as "those areas that inundated or saturated by the surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[40] Wetlands generally include swamps, marshes, bogs and similar areas."[41] Iowa's regulatory definition for "wetlands" is "an area of two or more acres in a natural condition that is mostly under water or waterlogged during the spring growing season and is characterized by vegetation of hydric soils."[42]

[40] United States, Dept. of the Army, Corps of Engineers. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*. Jan. 1987, https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf.
[41] *Ibid*.
[42] Association of State Wetland Managers. *Iowa State Wetland Program Summary*. https://www.aswm.org/pdf_lib/state_summaries/iowa_state_wetland_program_summary_083115.pdf.

Waters of the U.S. (WOTUS), including wetlands, are regulated by USACE. Specific permitting requirements may be necessary if WOTUS are impacted. A wetland delineation is required to assess if WOTUS are present and, if so, to identify the boundaries. Terracon completed a Wetland Delineation Report on September 12, 2019 (see Appendix A),[43] in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual[44] and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region.[45]

A wetland delineation was conducted and 4.45 acres of wetlands were identified on the Project site. The Wetland Delineation Report, submitted to the USACE on September 27, 2019, proposed that the identified wetlands are isolated and not jurisdictional since they have no significant nexus to downstream traditionally navigable waterways. On December 4, 2019, the USACE concurred and provided their Approved Jurisdictional Determination (AJD), which specifically states that discharge of dredged or fill material into "these identified isolated wetlands will not require Department of the Army authorization." A copy of this letter is provided in Appendix A.

3.4.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not impact wetlands. Under the No Action Alternative, DSMI would neither construct nor operate the transload facility. Under the No Action Alternative, the Project site would remain structurally undeveloped grassed land.

Build Alternative

The Build Alternative would impact 4.45 acres of non-jurisdictional wetlands located in storm water basins. Consequently, the design of the Build Alternative includes several storm water basins that would be built at the Project site. These storm water basins would have similar wetland characteristics and would replace the functions and values of those wetlands that that would be filled. By replacing the wetlands at a 1:1 ratio, the Build Alternative would not significantly impact wetlands.

3.4.3 Minimization Measures

No minimization measures are required.

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[43] Terracon Consultants, Inc., *Wetland Delineation Report, Des Moines Area Transloading Facility, Des Moines, Iowa*. 12 Sept. 2019.

[44] United States, Dept. of the Army, Corps of Engineers. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*. Jan. 1987, https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf.

[45] United States, Dept. of the Army, Corps of Engineers. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), Wetland Regulatory Assistance Program*. Aug. 2010.

3.5 Threatened and Endangered Species

3.5.1 Affected Environment

The US Endangered Species Act (ESA) of 1973, as amended, provides protections for those species that are listed as threated or endangered, along with their critical habitats. The act grants the US Fish and Wildlife Service (USFWS) primary responsibility in administering the species and habitat designations and protections granted under the ESA. "Endangered" means that a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means that a species is likely endangered in the foreseeable future. "Critical habitat" is the specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. A critical habitat may also include areas that are not currently occupied by the endangered or threatened species but are necessary for its recovery.

IDNR was contacted to determine if federal- or state-listed threatened or endangered species are known to exist at the Project site. In an email response dated October 9, 2019,[46] IDNR stated that it conducted a records search of rare species and significant natural communities within the boundaries of the Project site and found no site-specific records indicating that such species or communities are present.

IDNR noted that the Indiana bat, a state and federal endangered species, and the northern long-eared bat, a federal threatened species, both have the potential to inhabit this part of the state and may occur at the Project site. Indiana bats are found in areas of mature upland forest and along wooded corridors of small streams. Indiana bats forage for insects beneath the canopy. Female Indiana bats form maternity colonies under loose tree bark. Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees) and may roost in structures such as old buildings, culverts, and bridges. IDNR provided guidelines and information about the habitat requirements and survey methods for Indiana bat summer habitats, which are also used for the northern long-eared bat. IDNR suggested contacting USFWS to determine if the summer habitat of the Indiana bat and/or northern long-eared bat exists in the Project site. The IDNR letter is contained in Appendix B.

The USFWS' Information, Planning, and Consultation System (IPaC) provides a species lists that identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of a proposed project or may be affected by a proposed project. The list also includes designated critical habitat if present within the particular study area. The IPaC report is contained in Appendix B. According to IPaC, there are a total of five threatened, endangered, or candidate species on the Endangered Species Act List with the potential to occur on the Project site: the Indiana bat (endangered), the northern long-eared bat (threatened), the Least Tern (endangered), the Prairie Bush-Clover (threatened), and the Western Prairie Fringed Orchid

[46] State of Iowa, Dept. of Natural Resources. *Environmental Review for Natural Resources 17448*. 9 Oct. 2019.

(threatened). The IPaC also stated that there are no critical habitats within the Project site under USFWS jurisdiction.

a Threatened and Endangered Species Habitat Evaluation for the Project site was conducted on October 31, 2019 (see Appendix B).[47] The evaluation identified 72 trees onsite that may be suitable habitat for the Indiana bat or the northern-long eared bat. However, the evaluation did not identify suitable habitat for the Least Tern, Prairie Bush-Cover, and Western Prairie Fringed Orchid. A copy of Terracon's Threatened and Endangered Species Habitat Evaluation is included in Appendix B.

FRA submitted an IPaC report on January 13, 2020 (Consultation Code: 03E18000-2020-R-0165) to reflect the FRA Programmatic Biological Opinion for Transportation Projects. FRA determined that the Project would not likely adversely affect the northern long-eared bat or Indiana bat provided that a tree clearing date restriction is in place. On February 13, 2020, USFWS concurred with this determination and stated that FRA has adequately addressed the potential impacts of the project alternatives on federally listed threatened and endangered species in the Project site. A copy of the concurrence letter is included in Appendix B.

3.5.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not impact threatened and endangered species. Under the No Action Alternative, DSMI would neither construct nor operate the transload facility. The Project site would remain structurally undeveloped grassed land.

Build Alternative

The Indiana bat and the northern long-eared bat are the only threatened or endangered species that may be present at the Project site. FRA determined that the Build Alternative would not adversely affect either the Indiana bat or the northern long-eared bat provided DSMI or the construction contractor remove trees outside of the bats' active season. FRA received USFWS concurrence with the habitat evaluation on February 13, 2020 (Appendix B). The Build Alternative design would include a tree clearing date restriction to avoid direct impacts to bat species, as discussed in Section 3.5.3 below. With minimization, the Build Alternative would not have a significant impact on threatened and endangered species.

3.5.3 Minimization Measures

DSMI or the construction contractor will implement the following measures:

TE-1: Conduct tree removal only between April 1st and September 30th.

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[47] Terracon Consultants, Inc. *Threatened and Endangered Species Habitat Evaluation, Des Moines Area Transloading Facility, NE 14th Street and MLK Parkway, Des Moines, Iowa*. 6 Nov. 2019.

TE-2: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all Transportation Agency environmental commitments, including all applicable AMMs.

TE-3: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely.

TE-4: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TE-5: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

3.6 Floodplains

3.6.1 Affected Environment

Federal protection of floodplains is afforded by Executive Order 11988, "Floodplain Management,"[48] which directs federal agencies to consider the impacts of their actions on floodplains.

The Project site is located in an "Area with Reduced Flood Risk Due to Levee" (Shaded Zone X as shown on *Figure 10* below).[49] Shaded Zone X is an area that has 0.2% to 1% probability of flooding every year and is considered to be at minimal risk of flooding. The levee inside this boundary has not been shown to comply with Section 65.10 of the National Flood Insurance Program (NFIP) Regulations and is defined as a "non-accredited" levee system. In March 2011, FEMA made a commitment to update the way flood hazards for non-accredited levee systems were analyzed and mapped. As a result, Flood Insurance Rate Map (FIRM) updates were delayed or otherwise impacted while FEMA developed the updated levee analysis and mapping approach. Seclusion mapping was developed by FEMA as a process to allow the release of these impacted FIRM updates. Levee seclusion mapping will maintain the flood hazard information as depicted on the Project site's FIRM map, which will be revised by FEMA at a later date to update the flood hazard information for this levee. Parties can continue to use the flood hazard data

[48] "Executive Order 11988: Floodplain Management." *Fed. Emergency Mangement Agency*. https://www.fema.gov/executive-order-11988-floodplain-management.
[49] United States, Dept. of Homeland Security, Fed. Emergency Management Agency. *National Flood Insurance Program Flood Insurance Rate Map, Polk County, Iowa and Incorporated Areas*. Panel 355.

shown inside this boundary (which was re-published from the September 18, 1987 FIRM for the City of Des Moines) until this FIRM panel is revised to update the flood hazard information in this area.[50]

The City of Des Moines adopted regulations that apply to development within flood hazard areas. The Project site (the study area) meets the definition of development under the City of Des Moines's floodplain regulations. City of Des Moines Civil Engineer 1, Mr. Jordan Hutchens, P.E., and City of Des Moines Civil Engineer II/Floodplain Administrator, Mr. Adam Prilipp, provided Terracon with a flood map for the City of Des Moines (FIRM Panel 19153C0355F) that confirmed the Project site is within Shaded Zone X (area with reduced flood risk due to levee).[51] There are no development restrictions enforced by the City for areas with this floodplain designation. *Figure 10* shows the FEMA Floodplain Map.

Figure 10: FEMA Floodplain Map[52]

3.6.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not impact floodplains. Under the No Action Alternative, DSMI would neither construct nor operate the transload facility. The Project site would remain structurally undeveloped grassed land under the No Action Alternative.

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[50] United States, Dept. of Homeland Security, Fed. Emergency Management Agency. *Levee Seclusion Mapping*. https://www.fema.gov/media-library-data/1420584854603-6678e6f57914ac22e27d95e91243d989/Levee_Seclusion_Mapping.pdf.

[51] Prillip, Adam, City of Des Moines, Iowa, Engineering Department. "200 SE 15th ST – Floodplain information." Received by Jenifer Harkin, Terracon Consultants, Inc., 22 Oct. 2019.

[52] United States, Dept. of Homeland Security, Fed. Emergency Management Agency. *Levee Seclusion Mapping*. https://www.fema.gov/media-library-data/1420584854603-6678e6f57914ac22e27d95e91243d989/Levee_Seclusion_Mapping.pdf.

Build Alternative
The Project site is located within the Area with Reduced Flood Risk Due to Levee (Shaded Zone X) and is currently outside of the 1% annual chance floodplain. Therefore, construction and operation of the Build Alternative would not significantly impact floodplain values.

3.6.3 Minimization Measures

No minimization measures are required.

3.7 Energy Use

3.7.1 Affected Environment

MidAmerican Energy provides electricity and natural gas to the Project site and the Des Moines area. MidAmerican Energy provides electric and natural gas service in Iowa, Illinois, and South Dakota, and natural gas service in Nebraska as well, and manages approximately 29,000 miles of transmission lines to approximately 783,000 customers. MidAmerican Energy generates, purchases, and uses energy from renewables (wind, hydroelectric, and solar), coal, natural gas, and nuclear. The plants owned and operated by MidAmerican Energy are located in Wyoming, Iowa, and Utah. As of 2019, MidAmerican Energy owns/generates and contracts 11,188 megawatts.[53]

3.7.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would neither build nor use the transload facility; therefore, the energy consumed would not change from the existing condition.

Build Alternative
During construction of the Build Alternative, the construction contractor and any subcontractors would use indirect energy to construct the transload facility, including electricity, gasoline, and diesel fuel to power construction equipment and to install the building materials (concrete, steel, etc.). All contractors would be responsible for providing their own power to accomplish their work., most likely by using gas-operated generators for non-motorized construction equipment. Therefore, there would be no increase in electric power demand at the Project site during construction.

During operation of the Build Alternative, DSMI would use electricity, including for lighting, ventilation, heat, battery chargers, and door operators. The initial expected energy demand (actual energy used) would be approximately 100 kilo volt amperes (kVA). MidAmerican Energy

[53] MidAmerican Energy Company. *Just the Facts:MidAmerican Energy Company*. Apr. 2019, https://www.brkenergy.com/assets/pdf/facts_midamerican_energy_company.pdf.

would be supply electrical power for facility operations up to 2,500 kVA.[54] While the Build Alternative would result in an increase in energy use compared to existing conditions, the electric power and diesel fuel would be available from existing sources. Therefore, the Build Alternative would not have a significant impact on energy.

3.7.1 Minimization Measures

No minimization measures are required.

3.8 Visual Resources

Visual and aesthetic resources include features of both the built and natural environment that together make the visual environment. Examples of these resources can include parks; natural areas; scenic features; open vistas; water bodies; and other landscape features. Historic or urban core districts can also be visual resources. All of these visual resources create aesthetic qualities that are valued by the public that views the features. Viewers may include neighbors (who occupy land adjacent or visible to the project) and travelers (who may see the Project using existing transportation).

A qualitative assessment of the visual resources potentially impacted by the Project was conducted by defining the existing visual character of the Project site and surrounding area and determining if the visual changes as a result of the Project would be incongruous with the existing visual character. The study area for visual effects is the line of site from the surrounding properties and roadways.

3.8.1 Affected Environment

There are no visually-protected resources within or adjacent to the study area.

The Project site is a 40-acre parcel located within an urbanized area of Des Moines that includes commercial and residential uses. Until 2012, the Project site was used as a motor vehicle storage yard. Currently, the Project site is undeveloped and consists of trees that parallel the existing rail line to the north, trees that border the east, short grasses, and a retention pond at the southeast corner. The surrounding properties include residential areas to the north beyond the railroad tracks and tree buffer, commercial facilities to the south and east, and undeveloped areas to the west beyond US Highway 69/SE 14th Street.

Views of the Project site are predominately from US Highway 69/SE 14th Street to the west and the SE Connector Trail to the south. The views from the roadways are from motorists; however, the view from the south of the SE Connector Trail are also observed by those working at the

[54] Janowak, Jake. VAA Engineering, L. L. C. “RE: MidAmerican Energy Usage.” Received by Jenifer Harkin, Terracon Consultants, Inc., 4 Mar. 2020.

businesses immediately to the south of SE Connector Trail. Views of the Project site from the single-family homes to the north and commercial buildings to the east are obstructed by trees.

3.8.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the transload facility, and the visual environment would remain unchanged. Views of the area from the surrounding area would continue to be of structurally undeveloped grassed land.

Build Alternative
Under the Build Alternative, views of the Project site would be industrial in nature, including warehouses and rail lines. While the Project site would continue to be screened from residential properties to the north by the existing wooded areas, the transload facility would clearly be visible from US Highway 69/SE 14th Street and beyond to the west and to the commercial uses to the south and east. The motorists travelling along these roads at approximately 40 miles per hour would view the Project site for approximately one minute (assuming the Project site is visible for approximately 2,000 feet). However, these motorists would be insensitive to redevelopment of the Project site as they would use these roads for commuting. The route would be routine and the view would be of short duration based on the viewer's proximity to and associated focus on the Project site. As the areas to the east, west, and south are industrial and consist of roadways and railroad tracks, the Build Alternative would be consistent with the surrounding visual environment and would not create a substantial change in existing visual character of the study area. Therefore, the Build Alternative would have no significant impact on visual resources.

3.8.3 Minimization Measures

No minimization measures are required.

3.9 Transportation

The potential impacts to transportation were evaluated comparing the current condition and capacity to the volume of use and capacity under the alternatives. The study area for transportation is the regional highway system and the roadway and railway network serving the Project site.

3.9.1 Affected Environment

US highways that provide service to the Des Moines area include I-80, I-35, and I-235. Several state highways also pass through or connect to the Des Moines area. I-80 runs from New Jersey to San Francisco, California, providing a route to both coasts directly out of the Des Moines area. I-35 runs from Laredo, Texas to Duluth, Minnesota, providing a route to the south-central part of the country and the upper Midwest portion of the US. I-235 is a roadway that provides access to

the central portion of the Des Moines metro. The US Interstate System connects I-35 and I-80 to other interstate highways, providing a system of transportation corridors and roadway connections to most of the continental US. In addition, the various state highways connect Des Moines to the local area surrounding the city as well as the rest of the state.

The local roadway/highway network that serves the Project site consists of: E. Martin Luther King Jr. Parkway to the south (four lane); US Highway 69/SE and 14th Street, both elevated across the central portion of the Project site (four lane); and SE 18th Street (two lane) to the east. Maury Street and Scott Avenue (both two lane) to the south of the Project site also serve local truck traffic. A Level of Service (LOS) rating for E. Martin Luther King Jr. Parkway has not been calculated by the City of Des Moines's Traffic Engineering Department.[55] However, city traffic engineers indicated E. Martin Luther King Jr. Parkway has a LOS rating of A, indicating free flow with no congestion. Average daily traffic counts obtained in 2016 by the IDOT[56] for the local roadway/highway network in the study area are listed below:

Local Roadway/Highway	Average Cars per Day
E. Martin Luther King Jr. Parkway	7,800
US Highway 69/SE. 14th Street	34,600
SE. 18th Street	4,170
Maury Street	7,700
Scott Avenue	1,020

The Des Moines area is serviced by several railroads. UP has a rail line that runs north and south across the eastern portion of the city. IAIS's rail line runs east and west through Des Moines. BNSF Railway's rail line runs into the city from the south. There are several spurs of these railroads within the City of Des Moines. Currently, there is only one transload facility located in Des Moines that is owned and served by UP. This facility handles bulk paper, newsprint and plastics and has warehouse storage of 195,000 square feet. The Project site is adjacent to existing tracks owned by IAIS, NS, and BNSF.

3.9.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, DSMI would not construct the transload facility, and the Project site would remain unchanged. There would be no increase in rail or truck traffic to and from the

[55] Bianchetta, Stephen. City of Des Moines, Iowa Traffic & Transportation Engineering Dept. Conversation with Gerald Hentges, Senior Project Manager, Terracon Consultants, Inc. 22 Oct. 2019.
[56] State of Iowa, Dept. of Transportation, Division of Planning and Programming. *2016 Annual Average Daily Traffic, Traffic Flow Map of Des Moines, Polk County*. Ames, Iowa, rev. Oct. 2019.

Project site. Roadway and highway infrastructure use would increase without the expansion of bulk railroad shipments because as demand for good grows, area shippers would rely on trucking to deliver cargo long distances. The increased use of the local, regional and national highway system for goods movement, in addition to increased traffic from population growth in the Des Moines area, would result in congestion. Under the No Action Alternative, there would be no change to the freight railway network and the existing bulk commodity facility in Des Moines would be the only local opportunity to convert freight from truck to rail. No additional transloading capacity would be provided.

Build Alternative

The Build Alternative would improve inbound and outbound reach for products for existing and future industries, increase competition, relieve congestion in the interstate highway system, and lower intercity truck traffic for products that are shipped via truck. While roadway and highway traffic would decrease in general in the region, traffic would increase in the study area under the Build Alternative. The Facility is estimated to reduce truck trips from the highway network by over 17,000 per year and over 524,000 in a thirty-year period.[57] Therefore, the Build Alternative would have a beneficial long-term impact on the highway network.[58]

The City of Des Moines's Traffic and Transportation Engineers conducted an informal analysis that indicated the increased usage of area roadways/highways under the Build Alternative would not impact the capacity of the existing infrastructure because the existing roadways/highways in the study area are currently highly under-used. Several existing roadways in the area, including E Martin Luther King Jr. Parkway, SE 15th Street, SE 18th Street, Maury Street, and Scott Avenue are already designated as truck routes to serve the industrial area adjacent to the Project site. Therefore, the City of Des Moines determined the Project would not require traffic controls or street upgrades. [59] There would be no significant impact to the local roadway/highway network under the Build Alternative.

A minor increase in vehicular traffic would occur during the construction period because no vehicular traffic currently accesses the Project site. The increased traffic on the local roadway network during construction of the Project would not require additional traffic controls or other measures. The City of Des Moines indicated the local roadway system is under used and additional traffic controls and street upgrades would not be required for the Build Alternative.

DSMI does not expect that the new interconnections with IAIS and NS (enabling BNSF freight) would increase train traffic on their existing respective networks. Under the Build Alternative, the transload facility would be a manifest traffic only terminal. DSMI anticipates that an average of 2,800 railcars per year transloaded at the Project site and then would be added to the IAIS, NS and BNSF existing train movements through Central Iowa. DSMI's anticipated 2,800 railcars per

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[57] Des Moines Area Metropolitan Planning Org. *Des Moines Rail Transload Feasibility Study*. 28 Jun. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-feasibility-report-final.pdf.
[58] *Ibid*.
[59] Bianchetta, Stephen. City of Des Moines Traffic & Transportation Engineering Department. "No Traffic Analysis Required for MLK Transload Facility." Received by Gabe Claypool, 3 October 2019.

year is roughly the equivalent of 10 railcars per day, which would not exceed the capacity of the existing national rail network and would not require additional rail capacity improvements elsewhere in the network. The Build Alternative would not have a significant impact on rail transportation.

3.9.3 Minimization Measures

No minimization measures are required.

3.10 Land Use

The land use assessment involved a review of existing local and regional planning and zoning documents to determine the existing and allowable uses. The alternatives were then compared to these documents to make consistency determinations. The study area for land use was a half-mile radius around the Project site.

3.10.1 Affected Environment

The Project site is a 40-acre parcel located within an urbanized area of Des Moines that includes commercial and residential uses. Until 2012, the Project site was used as a motor vehicle storage yard. Currently, the Project site is undeveloped with stormwater retention ponds. Within the study area, the land use consists of a combination of City municipal facilities, state government facilities, commercial, light and heavy industrial, single-family residential, and multi-family residential. The Project site is entirely zoned either M-1 (now defined as I1 light industrial) or M-2 (now defined as I2 heavy industrial). The surrounding properties include residential areas to the north, commercial facilities to the south and east, and undeveloped areas to the west beyond US Highway 69/SE. 14th Street.[60]

3.10.2 Environmental Consequences

No Action Alternative
The No Action Alternative would not impact current land use or zoning. Under the No Action Alternative, DSMI would neither construct nor operate the transload facility. The Project site would remain structurally undeveloped grassed land owned by the City of Des Moines.

Build Alternative
Under the Build Alternative, DSMI would purchase the property from the City of Des Moines. Construction and operation of the transload facility under the Build Alternative would not impact zoning because the Project site is zoned light industrial and heavy industrial and a transload facility is an allowable use in such zones. No private residences or structures would need to be relocated from the Project site, and there would be no displacement of any residential or

[60] City of Des Moines, Iowa. *Des Moines, Iowa Zoning Map*. 14 May 2020, https://maps.dsm.city/docs/maps/ZoningMap.pdf.

commercial uses because there are currently no structures on the Project site. Therefore, the Build Alternative would not significantly impact land use.

3.10.3 Minimization Measures

No minimization measures are required.

3.11 Socioeconomics

This section discusses population demographics, employment characteristics, housing occupancy status, economic activity, and related data providing key insights into the socioeconomic conditions that might be affected by the Project. U.S. Census Bureau data was reviewed to characterize the socioeconomic conditions in the context of regional, state, and national trends. The study area for socioeconomic resources is the City of Des Moines.

3.11.1 Affected Environment

Population

According to the *2018 U.S. Census Bureau* data, the City of Des Moines is a community of 216,853 residents. By comparison, the population of the State of Iowa in 2018 was 3,156,145 residents. Des Moines experienced a 6.2% increase in population between 2010 and 2018, while the State of Iowa experienced a 3.6% increase. Des Moines consists of approximately 90.65 square miles, of which 88.92 square miles is land and 1.73 square miles is water. The State of Iowa reported 54.5 persons per square mile, whereas Des Moines reported 2,515.6 persons per square mile.[61] *Table 3-8* presents detailed information on the populations of both the City of Des Moines and the State of Iowa. The study area is majority white, but has a much higher percentage of Black or African American, Asian, and Hispanic or Latino when compared to the State of Iowa.

Table 3-8: U.S. Census Bureau Population Characteristics

Population Characteristics	City of Des Moines	State of Iowa
White	76.1%	90.7%
Black or African American	11%	4%
Asian	6%	2.7%
American Indians or Alaska Native	0.5%	0.5%
Native Hawaiian and other Pacific Islander	0.1%	0.1%
Hispanic or Latino	13.1%	6.2%

Employment Characteristics

According to the US Department of Labor's *Bureau of Labor Statistics*, the unemployment rate in Des Moines in September 2019 was 2.1%, which is lower than the 2.5% unemployment rate for

[61] "QuickFacts: Iowa; Des Moines city, Iowa." *United States Census Bureau*, https://www.census.gov/quickfacts/fact/table/IA,desmoinescityiowa/PST045218.

the State of Iowa and national rate of 3.7%. In 2017, the median household income in Des Moines was approximately $49,999, with 18.1% of the population living below poverty. The same year, the State of Iowa had a median household income of $56,570, with 11.2% of the population living below the poverty level. In 2016, the State of Iowa reported 81,563 employer establishments (businesses with paid employees) and 211,320 non-employer establishments (businesses with no paid employees). Approximately 86.4% of Des Moines residents hold a high school degree or higher, with 25.2% holding a bachelor's degree or higher. Similarly, 91.8% of Iowa residents hold a high school degree or higher, with 27.7% holding a bachelor's degree or higher. From 2013 to 2017, 70.6% of Des Moines residents encompassed the citywide civilian labor force (age 16 years or older), while 67.5% of Iowa residents encompassed the statewide civilian labor force. Employment in the urban area of Des Moines is diverse, with dominant sectors including trade, transportation and utilities, financial activities, education and health services, professional and business services, government, and leisure and hospitality.[62]

Housing

According to the *2018 U.S. Census Bureau*, in 2018, the State of Iowa had approximately 1,409,650 housing units, of which approximately 71.1% were owner-occupied and the remaining 28.9% were renter-occupied or vacant. The total number of housing units in Des Moines is currently unreported; however, the U.S. Census Bureau estimates that approximately 60% of housing units in the city are owner-occupied, with the remaining 40% renter-occupied or vacant.[63]

3.11.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, DSMI would not construct the transload facility. The current housing and income levels that exist in the study area would remain the same.

Build Alternative

The Build Alternative would introduce transloading opportunities to both Des Moines and Central Iowa. Based on a 2014 study by DMAMPO,[64] a transload facility in Des Moines has the potential to spur additional development from businesses that desire to export and import goods via rail by providing a cost-effective shipping alternative compared to trucking within a 150-mile radius of Des Moines, Iowa. The construction contractor estimates the Build Alternative would create approximately 70 construction jobs.[65] Once operational, DSMI estimates that the Build Alternative

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[62] "Economy at a Glance: Des Moines-West Des Moines, IA." *U.S. Bureau of Labor Statistics*, https://www.bls.gov/eag/eag.ia_desmoines_msa.htm.

[63] "QuickFacts: Iowa; Des Moines city, Iowa." *United States Census Bureau*, https://www.census.gov/quickfacts/fact/table/IA,desmoinescityiowa/PST045218.

[64] Des Moines Area Metropolitan Planning Org. *Rail Market Analysis*. 31 Jan. 2014, https://dmampo.org/wp-content/uploads/2015/03/dsm-railport-market-analysis-final.pdf.

[65] Thompson, Craig. Vice President of Construction, Ryan Companies. "Estimated # of Construction Workers." Received by Gabe Claypool, 3 Dec. 2019.

would generate 15 to 25 full-time employees (FTE) for the maintenance, operations and management of the transload facility. .[66]

In addition, various key targeted industries in Des Moines would also potentially see economic benefits. The Build Alternative would improve the capacity to transport freight in and out of the region and would assist in more cost effectively importing products and exporting goods. As a result, Des Moines Area businesses could potentially add more high-wage jobs in value-added industries. Therefore, the Build Alternative would have a beneficial impact on socioeconomic resources.

3.11.3 Minimization Measures

No minimization measures are required.

3.12 Environmental Justice

The USEPA defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[67] *Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires that federal agencies, whenever practical and appropriate, maintain information of populations by race, national origin, or income and use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects. Consistent with EO 12898, this analysis evaluates the potential for disproportionately high and adverse human health or environmental effects of its actions on minority and low-income populations.

EO 12989 defines minorities as individuals identifying as American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Minority populations are defined as those where either (a) the minority population of the affected area exceeds 50 % or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. U.S. Census Bureau data from 2018 was reviewed to determine the presence of minority and low-income populations within the study area. The study area for EJ is a one-mile radius around the Project site.

Based upon the identification of EJ communities within the study area, potential environmental impacts were subsequently evaluated to determine if those impacts would be disproportionate or adverse. The resource areas linked to EJ and evaluated as part of this EA process include Air

[66] Claypool, Gabe. President & COO, Des Moines Industrial. "Environmental Assessment Clarification - Addendum." Received by Jenifer Harkin, 3 Dec. 2019.
[67] "Learn About Environmental Justice." *United States Environmental Protection Agency*, https://www.epa.gov/environmentaljustice/learn-about-environmental-justice.

Quality (Section 3.1), Water Quality (Section 3.2), Noise and Vibration (Section 3.3), Visual Resources (Section 3.8), Transportation (Section 3.9), and Hazardous Materials (Section 3.14).

3.12.1 Affected Environment

Based on a review of data from the US Department of Labor's Bureau of Labor Statistics[68] and the U.S. Census,[69] it was determined that EJ populations are present in the study area. *Table 3-9* below identifies minority populations in the City of Des Moines and the State of Iowa according to the 2018 US Census Bureau data.[70]

Table 3-9: U.S. Census Bureau Minority Populations

Minority Populations	City of Des Moines	State of Iowa
Black or African American	11%	4%
Asian	6%	2.7%
American Indians or Alaska Native	0.5%	0.5%
Native Hawaiian and other Pacific Islander	0.1%	0.1%
Hispanic or Latino	13.1%	6.2%

In 2018, the median household income in Des Moines was $52,251, with approximately 17.2% of the population below the poverty line.[71] The *EJ Screen Report (Version 2018)*[72] summary reported the following minority and low-income percentages for the study area, which has a total population of approximately 5,696 residents:

- 64% Minority Population; and
- 60% Low Income Population.

Based on the above information, the study area contains EJ communities.

[68] "Economy at a Glance: Des Moines-West Des Moines, IA." *U.S. Bureau of Labor Statistics*, https://www.bls.gov/eag/eag.ia_desmoines_msa.htm.
[69] "QuickFacts: Iowa; Des Moines city, Iowa." *United States Census Bureau*, https://www.census.gov/quickfacts/fact/table/IA,desmoinescityiowa/PST045218.
[70] *Ibid*.
[71] *Ibid*.
[72] United States, Environmental Protection Agency. *EJScreen Report (Version 2018): 1 mile Ring Centered at 200 SE 15th St, Des Moines, Iowa 50316.* 1 Nov. 2019.

3.12.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the transload facility, and there would be no disproportionate impact on low income and minority populations.

Build Alternative
Under the Build Alternative, no private residences or structures would be relocated from the Project site and no residents would be displaced because none exist or reside on the Project site.

The study area does include low-income and minority populations; however, the impacts to these populations would not be disproportionately high or adverse, as described below and in more detail in the sections of the EA for: Air Quality (Section 3.1); Water Quality (Section 3.2); Noise and Vibration (Section 3.3); Visual Resources (Section 3.8); Transportation (Section 3.9); and Hazardous Materials (Section 3.14).

As described in Section 3.1, construction of the Build Alternative would generate minor amounts of fugitive dust and gaseous emissions of CO, VOC, NO_x, SO_2, and PM_{10}, and $PM_{2.5}$ from the combustion of fuel by construction equipment and vehicles. However, the estimated emissions would not exceed the applicable conformity levels. All populations in the study area, regardless of race, ethnicity, or socioeconomic status, would be exposed to fugitive dust and gaseous emissions caused during construction of the Build Alternative. During operations, the Build Alternative would not generate significant air quality emissions and may in fact result in a beneficial impact from reducing the number of trucks moving freight on the highway network. Therefore, the Build Alternative would not have a disproportionately high and adverse air quality impact on EJ populations during operation.

As described in Section 3.2, the Build Alternative would not significantly impact water quality. Therefore, the Project would not have a disproportionally high and adverse water quality impact on EJ populations.

As described in Section 3.3, construction of the Build Alternative would not exceed the noise and vibration limits at the identified sensitive receptor locations. All populations in the study area, regardless of race, ethnicity, or socioeconomic status, would experience any noise and vibration created during construction activities. Therefore, the Project would not have a disproportionately high and adverse noise and vibration impact on EJ populations.

As described in Section 3.8, the view of the transload facility under the Build Alternative would be industrial in nature, including warehouse and rail lines. Existing wooded areas to the north of the Project site would continue to be visually screened from residential properties to the north. The areas to the east, west, and south of the Project site are industrial and consist of roadways and railroad tracks; therefore, the transload facility would not significantly alter the visual character of

the Project site. Accordingly, the Build Alternative would not have a disproportionately high and adverse visual impact on EJ populations.

As described in Section 3.9, construction of the Build Alternative would generate a minor increase in roadway traffic that would not require additional traffic controls or other measures. During operations, while roadway and highway traffic would decrease in general in the region, traffic would increase around the Project site under the Build Alternative. Several existing roadways in the area, including E Martin Luther King Jr. Parkway, SE 15th Street, SE 18th Street, Maury Street, and Scott Avenue are already designated as truck routes to serve the industrial area adjacent to the Project site. All populations in the study area would experience a potential increase in traffic regardless of race, ethnicity, or socioeconomic status. Therefore, the Build Alternative would not have a disproportionately high and adverse traffic impact on EJ populations.

As described in Section 3.14, the Build Alternative could impact known hazardous materials during construction of the transload facility. Operation of the transload facility could involve the transport of hazardous materials that could pose a potential public health concern if not properly handled or maintained. All construction and operational handling of hazardous materials would be conducted in accordance with applicable federal and state regulations, including requirements to maintain best management practices (BMPs) and equipment for spill prevention and response. All populations in the study area could potentially be exposed to public health concerns regardless of race, ethnicity, or socioeconomic status. Therefore, the Build Alternative would not have a disproportionately high and adverse impact on EJ populations.

Based on the above discussion and analysis, the Build Alternative would not have a disproportionately high and adverse impact on EJ populations.

3.12.3 Minimization Measures

No minimization measures are required.

3.13 Public Health and Safety

This analysis of public health and safety includes consideration for any activities, occurrences, or operations that have the potential to affect the safety, well-being, or health of members of the public. A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. This section identifies the potential for accidents or impacts on the general public.

Public health and safety during construction, demolition, and renovation activities is generally associated with construction traffic, as well as the safety of personnel within or adjacent to the construction zones. Operational safety may refer to the actual use of the facility or built-out proposed project, or training or testing activities, and the potential risks to inhabitants or users of adjacent or nearby land and water parcels. Safety measures are often implemented through

designated safety zones, warning areas, or other types of designations. Environmental health and safety risks to children are defined as those that are attributable to products or substances a child is likely to come into contact with or ingest, such as air, food, water, soil, and products that children use or to which they are exposed. *EO 13045, Protection of Children from Environmental Health Risks and Safety Risk*,[73] requires federal agencies to "make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." The study area for public health and safety was the Project site.

3.13.1 Affected Environment

The Project site is served by the City of Des Moines's Police and Fire Departments. It is undeveloped grassed land owned by the City of Des Moines. Currently, the Project site is not fenced and trespassing is managed by the Des Moines Police Department.

3.13.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the transload facility. There would be no change to public health and safety because the Project site would remain undeveloped grassed land.

Build Alternative
Under the Build Alternative, construction of the transload facility would not impact fire, police, medical, or transportation services because the number of employees and visitors during construction would be minimal compared to the overall existing population served. Additionally, construction activities would be confined to the Project site. No changes to the roadway network, including detours and closures, would occur.

During operation of the Build Alternative, the transload facility would not pose a significant threat to public health and safety. The transload facility would be privately owned and operated; it and would not open it to the public. DSMI would design the transload facility to incorporate safety measures, including security camera systems and two ingress/egress vehicle points, and it would hire a third-party security monitoring service.

The design of the Build Alternative incorporates safety and security measures to reduce the risk of rail accidents (i.e., signaling, crossing protection) in accordance with FRA and State of Iowa regulations. In addition, transload facility staff would be properly trained in safety and security matters. Therefore, the Build Alternative would not significantly impact public health and safety.

[73] United States. "Executive Order 13045 of April 21, 1997." *Federal Register*, Vol. 62, No. 78, 23 Apr. 1997, https://www.govinfo.gov/content/pkg/FR-1997-04-23/pdf/97-10695.pdf.

3.13.3 Minimization Measures

The following minimization measure will be implemented by the construction contractor prior to the start of construction:

PH-1: Erect permanent fencing to prevent the public from accessing areas immediately within the Project site.

3.14 Hazardous Materials

3.14.1 Affected Environment

To determine the presence of contaminated sites or hazardous substances within the study area for hazardous materials, a one-mile radius of the Project site, a review of regulatory database information from Environmental Data Resources, Inc. (EDR), (see Appendix C) was conducted.

The federal and state databases reviewed for this analysis include the following:

- **CERCLIS:** Comprehensive Environmental Response, Compensation, & Liability Information System
- **CERCLIS/NFRAP:** Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned
- **ERNS:** Emergency Response Notification System
- **IC/EC:** Institutional Control/Engineering Control
- **NPL:** National Priorities List
- **NPL (Delisted):** National Priorities Delisted List
- **RCRA CORRACTS/TSD:** RCRA Corrective Action Activity
- **RCRA Generators:** Resource Conservation and Recovery Act
- **RCRA Non-CORRACTS/TSD:** RCRA Non-Corrective Action Activity
- **Brownfields:** Brownfields Sites
- **IC:** Institutional Control Sites
- **LUST:** Leaking Underground Storage Tank
- **SHWS:** State Hazardous Waste Site
- **SWF/LF:** Solid Waste Facility/Landfill
- **UST:** Underground Storage Tank
- **VCP:** Voluntary Cleanup Program

The review identified the facility known as Carroll Auto Wrecking, Inc. (Carroll Property), on the western portion of the Project site. According to the EDR, the Carroll Property was listed as an ECHO, FINDS, RCRA-CESQG, ALLSITES, Brownfields, and UST facility. The Carroll Property was bisected when E Martin Luther King Jr. Parkway was constructed circa 2012. The portion of the Carroll Property located north of E Martin Luther King Jr. Parkway was used as outdoor

storage of cars and parts only. According to the database report, the former building on the Carroll Property (Carroll Building) was located on the southern portion of the Carroll Property, just north of Scott Avenue; the Carroll Building no longer exists. According to Google Earth, the Carroll Building was located approximately 590 feet south of the Project site. Prior to 1950, the Carroll Property was undeveloped rural property. The Carroll Property and the Project site were an auto salvage yard from the 1950s until approximately 2012. According to the IDNR Screening,[74] the Carroll Property was a conditionally exempt small quantity generator of hazardous waste. The IDNR Screening stated that a Phase I ESA and a RCRA Compliance Investigation, completed in 2011, identified the following potential sources of hazardous materials at the Project site:

- Above ground waste oil tank and associated used oil filters (recycled for space heaters);
- Gas and diesel from junk vehicles (reused by vehicles);
- Antifreeze (resold or recycled to Interstate Battery);
- Refrigerants (recycled); and
- Degreasers (contained 40-50% solvent naphtha, 30-40% methanol, and 5-10% each of toluene and solvents PCE).

A *Limited Phase II Environmental Site Assessment* (Limited ESA)[75] was performed in 2012 for a proposed City of Des Moines municipal services facility in the study area that encompassed the Project site. According to the Limited ESA, four borings were advanced on the site, three of which were converted to temporary groundwater monitoring wells (TMWs). According to the Limited ESA, concentrations of RCRA metals were identified above Statewide Standards (SWS) in soil and groundwater samples from one of the monitoring wells. Concentrations of Polynuclear Aromatic Hydrocarbons (PAHs) were also identified above SWS in soil samples in a different monitoring well.

Upon review of the Limited ESA, IDNR did not identify evidence suggesting the likely existence of a hazardous condition in the study area. IDNR's contemporaneous letter stated that IDNR did not require any follow-up action based on the findings of the Limited ESA (see Appendix D). The IDNR Letter[76] did say that their determination should not be construed as an endorsement by IDNR that a hazardous condition does not exist on the Project site. Instead, the determination was a conclusion by IDNR that available information (without regard to the quality or quantity of that information) does not suggest the likely existence of hazardous conditions on the Project site.

No other listed facilities in the database report are likely to present a concern in the study area based upon regulatory status, apparent topographic gradient, and/or distance from the Project site.

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[74] State of Iowa, Dept. of Natural Resources. *Brownfield Initial Site Screening*. 21 Mar. 2012.
[75] Barker Lemar Engineer Consultants. *Limited Phase II Environmental Site Assessment*. Jan. 2012.
[76] Culp, Matt, State of Iowa, Dept. of Natural Resources. Letter to Dave McGuffin, City of Des Moines, Iowa. 11 Apr. 2012.

3.14.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the transload facility. There would be no change to hazardous materials because the Project site would remain undeveloped grassed land.

Build Alternative
The Build Alternative could impact hazardous materials during the redevelopment of the Project site, which may include site grading, earthwork for new structures, roadway construction, and construction of utility infrastructure. Construction/excavation would disturb soils/groundwater at the Project site, and unplanned or yet unknown activities might expose workers to the chemicals identified in the soils/groundwater. Therefore, as discussed in Section 3.14.3 below, the construction contractor would prepare and implement an elective Soil and Groundwater Management Plan (SGMP) during construction. The SGMP is not a regulatory-required document; instead, a SGMP is used to protect construction personnel and the environment when expected levels of soil or groundwater impact on a site are below a state's required action levels and the regulatory agencies have indicated no further action is necessary with the site in its current condition. During excavation and dewatering activities, an environmental contractor would conduct testing on the materials removed from the site (soil and/or groundwater), and the results would indicate if special worker protection and disposal procedures are required. If laboratory testing indicated removed soil or groundwater contained elevated levels of hazardous materials, then pursuant to the SGMP, the construction contractor would implement worker protections and obtain appropriate permits to document disposal of the hazardous materials. With implementation of an elective SGMP, the impact of hazardous materials during construction would be reduced to not significant levels.

Under the Build Alternative, hazardous materials could also be handled during operation of the transload facility and could pose a potential public health concern if not properly handled or maintained. Therefore, tenants and the operator of the transload facility would have contractual agreements requiring compliance with environmental regulations, including requirements to maintain best management practices (BMPs) and equipment for spill prevention and response. Operation of the Build Alternative would have no significant impact of hazardous waste materials.

3.14.3 Minimization Measures

During construction of the Build Alternative, DSMI will implement the following:

HM-1: Employ an environmental contractor to develop a SGMP to inform site construction workers of the health and safety concerns and put procedures in place to properly handle, characterize, treat, and/or dispose of impacted soil and groundwater encountered during construction activities. The general contractor will be responsible for implementation and oversight of the SGMP. Precautionary measures in the SGMP will include the following:

- Enact routine control and avoidance of incidental disturbance of soils and groundwater;
- Employ dust control measures during excavation activities at the Project site to achieve no visible emissions;
- Minimize the movement of surface soils from their original location to other areas of the site when working at existing grades;
- Remove and stockpile soils for trenches with a last out, first in process; and
- Minimize the volume of excess soils and prevent exposure between storm water and impacted soils.

During operation of the Build Alternative, DSMI comply with the NPDES General Permit No. 2 requirements discussed in Section 3.2.3.

3.15 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended requires Federal agencies to consider the effects of their undertakings on historic properties and to provide the public and the Advisory Council on Historic Preservation (ACHP) with a reasonable opportunity to comment. Federal agencies, such as the FRA, are required to consult pursuant to the Section 106 process with State Historic Preservation Offices (SHPO), and Tribal Historic Preservation Offices (THPO). 36 CFR 800 (Protection of Historic Properties) governs the Section 106 process and outlines how Federal agencies are to consult with SHPOs, THPOS, Tribes, Native Hawaiian Organizations (NHOs), and other interested parties, identify historic properties, determine whether and how such properties may be affected, and resolve adverse effects.

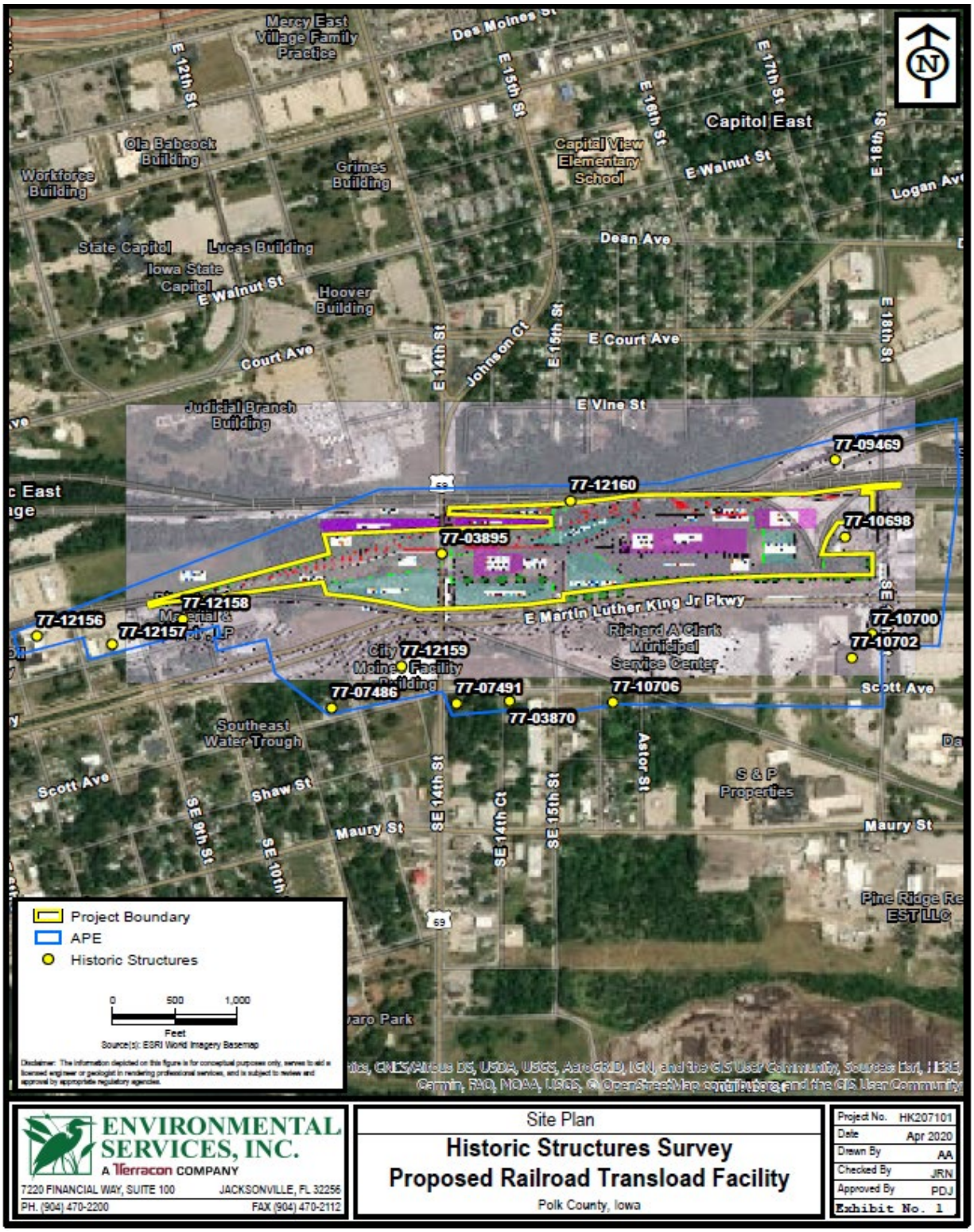
3.15.1 Affected Environment

Area of Potential Effects

In terms of historic properties, the affected environment is referred to as the Project's Area of Potential Effects (APE). The APE, as defined in 36 C.F.R. 800.16(d),[77] is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such properties exist. The delineation of the APE is influenced by the scale and nature of an undertaking. The APE for archaeology was the limits of disturbance (LOD) for the Project, while the APE for the built environment was the immediate viewshed of the Project site (see Figure 11).

[77] United States. Code of Federal Regulations. Title 36, section 800.16(d), https://ecfr.io/Title-36/cfr800_main.

Figure 11: Project Boundary and APE with Site Plan[78]



[78] *Terracon Consultants, Inc.* Historic Structures Report, Railroad Transload Facility, T78N, R24W, Section 2 and 3, Des Moines, Iowa. *Mar. 2020.*

Previous Surveys and Identified Cultural Resources

Terracon completed a cultural resources literature review and field reconnaissance survey in August 2019[79] to investigate the presence of known archaeological and architectural resources within the APE (see Appendix E).

3.15.2 Archaeology

Terracon submitted a records search request to the Iowa Office of the State Archeologist (OSA) on August 2, 2019, for information regarding previously identified archaeological sites within or near the Project site. The records search reported that no archaeological sites have been previously recorded within the Project site or within 328 feet (100 Meters) of the Project site. The file search did note that 45 archaeological sites have been identified within one mile of the Project site (the APE). However, the information provided by OSA did not exclude the possibility that the subsurface at the Project site could contain intact pre-modern archaeological deposits.

Numerous archaeological sites are known to be in the general vicinity, which suggested there was a high level of archaeological potential within the APE. This area is within a former river channel of the Des Moines River, and exhibits complex depositional conditions. Because of these factors, a desktop assessment was not sufficient to make a recommendation on the possibility of cultural resources being present within the project area. Therefore, a geoarchaeological survey was recommended, which was used to guide a targeted Phase I archaeological survey of the proposed project area.

In September 2019, Terracon conducted the geoarchaeological assessment[80] using core holes to evaluate the subsurface (see Appendix E). A total of 12 cores were extracted and examined, which found that the geomorphological conditions and landforms identified within the LOD for the project would not be conducive to long term human settlement or occupation in the APE. The geoarchaeological assessment encountered only slack water deposits associated with wetland/oxbow lake environments (late Roberts Creek and Camp Creek member deposits) and Camp Creek member alluvium over channel sands in the APE. The assessment concluded that a historic river course backed up against the valley wall and cut a channel through the APE. The report indicated the APE has low potential for significant archaeological sites. Accordingly, the geoarchaeologist recommended no additional archaeological investigations.

Terracon finalized a Desktop Survey on November 7, 2019. No cultural resources have been previously recorded within the LOD, though it indicated that the western portion of the APE potentially contained resources related to a Sauk and Meskwaki Camp from 1841 (HILD 1108).[81]

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[79] Terracon Consultants, Inc. *Cultural Resources Desktop Assessment*. Des Moines, Iowa, 7 Nov. 2019.
[80] Impact 7G. *Geoarchaeological Investigations for the Proposed Des Moines Transload Facility along Martin Luther King Jr. Parkway, Des Moines, Polk County, Iowa*. 26 Sept. 2019.
[81] Terracon Consultants, Inc. *Phase 1A Cultural Resources Survey, Proposed Railroad Transload Facility, Federal Railroad Administration, Section 2 and 3, T78N, R24W, Des Moines, Polk County, Iowa*. 8 Nov. 2019.

Terracon then finalized a Phase IA Cultural Resources Survey for the APE on November 8, 2019.[82] The survey found evidence of extensive ground disturbances throughout the APE. Such disturbances included the continued use of the APE by modern railroads, prior construction and demolition of structures, utility and rainwater control infrastructure construction and expansions, and a large junkyard, which occupied the eastern half of the Project area. The lack of integrity seen at the ground surface was determined to extend into subsurface conditions by the geoarchaeological report, which found extensive fill deposits overlying the natural soils within the project area. This report also found that conditions within the LOD, both in the prehistoric and historical periods, would not have been conducive to human occupation, as the landscape was primarily wetlands or marsh. The disturbances documented in both the Phase IA and geoarchaeological examination of the LOD suggest that it is unlikely for intact cultural deposits to be present which can be encountered or identified through standard survey methodologies. If extant archaeological resources are present, they are deeply buried and only accessible through extensive mechanical excavation of the fill soils within the LOD. As such, FRA made a determination of no historic properties affected for archaeology in the APE. A copy of the Phase IA Cultural Resources Survey is included in Appendix E.

3.15.3 Built Environment

The transload facility site includes an area where railway infrastructure already exists in a lower lying area, below a bluff from where the nearby residential areas exist, thus preventing intrusions into the viewshed to the north. Additionally, mature trees along the bluff and ridge prevent viewshed intrusions. Views to the south, east and west are characterized as commercial/industrial in nature.

Terracon requested an informal search of the historic structural inventory maintained by the Iowa State Historic Preservation Office (ISHPO) on January 10, 2020. The ISHPO records manager conducted this search for information regarding previously recorded historic properties within or near the APE. This inventory reported information on hundreds of previously recorded historic properties within one mile of the Project area but did not identify historic properties within the APE.

In March 2020, Environmental Services Inc., a Terracon company (ESI), conducted a Historic Structures Survey[83] of the Project APE. A copy of the Historic Structures Survey is included in Appendix E. The APE is located east of the Des Moines River and Raccoon River confluences, south of I-235 and east of US Highway 69/SE. 14th Street. The area was historically known as "Southeast Bottoms" and Chesterfield.

The Historic Structures Survey consisted of a pedestrian survey and historic architectural analysis of all buildings 50 years old or older within the APE. Other research included an examination of

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[82] *Ibid*.

[83] Terracon Consultants, Inc. *Historic Structures Report, Railroad Transload Facility, T78N, R24W, Section 2 and 3, Des Moines, Iowa*. Mar. 2020.

the Sanborn Fire Insurance Company maps, available plat maps, historical aerials and US Geological Survey (USGS) topographic maps, as well as recent past and current street-view images. ESI completed the fieldwork and survey report using the professional guidelines set forth in the US Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 4416). ESI's field survey methods also complied with Rule 223-41.5(303) of the Iowa Administrative Code.

In developing the Historic Structures Survey, ESI reviewed adjacent parcels coupled with a review of Polk County Assessor maps, historic topographical maps, aerial photographs, Sanborn Maps of Des Moines, Iowa, and previous surveys. The Historic Structure Survey identified 14 historic resources within the APE for this undertaking. Nine of the properties have previous recommendations from SHPO; FRA agreed with those previous recommendations after reviewing the resources, as detailed in the Historic Structures Survey. For the remaining five properties that were not previously recorded, FRA has made determinations of eligibility for inclusion in the National Register of Historic Places (NRHP).

Detailed descriptions of all 14 properties are included in the Historic Structures Report and Iowa Site Inventory Forms which are included in Appendix E. Table 3-10 summarizes the properties and FRA's determinations of eligibility.

Table 3-10: Potential Historic Properties within the APE

Site Inventory No.	Property Name	Property Address	Year Built	Previous Recordation	FRA Determination of Eligibility
77-03870	Vestal House	601 SE. 14th Court	1938	Yes – ISHPO Recommended Ineligible	Ineligible
77-03895	14th Street Viaduct	SR 69, between Scott Avenue and Vine Street	1936	Yes - ISHPO Recommended Eligible	Eligible
77-07486	House	1108 Scott Avenue	1882	Yes – ISHPO Recommended Ineligible	Ineligible
77-07491	House	1401 Scott Avenue	1901	Yes – ISHPO Recommended Ineligible	Ineligible
77-09469	Heartland Co-Op	118 SE. 18th Street	1930	Yes – ISHPO Recommended Ineligible	Ineligible
77-10698	Wolverine World Wide	302 SE. 18th Street	1958	Yes – ISHPO Recommended Ineligible	Ineligible
77-10700	C. Amend & Sons Meat Packing Plant	410 SE. 18th Street	1929	Yes - ISHPO Recommended Eligible	Eligible
77-10702	United House & Gate	500 SE. 18th Street	1941	Yes – ISHPO Recommended Ineligible	Ineligible
77-10706	House	609 SE. 15th Court	1900	Yes – ISHPO Recommended Ineligible	Ineligible
77-12156*	Sun Tool Warehouse	305 SE. 7th Street	1940	No	Ineligible
77-12157*	Husmann Warehouse	09 SE. 8th Street	1965 & 1969	No	Ineligible
77-12158*	Bituminous Materials & Supply	900 Raccoon Street	1950 & 1973	No	Ineligible
77-12159*	City of Des Moines Office & Warehouse	1300 Scott Avenue	1967 & 1973	No	Ineligible
77-12160*	Iowa Interstate Railroad	Northern APE boundary	Estimated mid-1800	No	Ineligible

*Newly recorded resources within the APE.

Site Inventory ID: 77-03870
Vestal House, 601 SE 14th Court
Year built: 1938

This single-story Frame Vernacular residence is located on a corner lot with a front facing gable roof and horizontal vinyl siding with corner boards. Single and paired 1/1 and 2/2 replacement sash windows are located along the façade and elevations in an asymmetric fenestration; windows have wood surrounds. An attic window is located at the gable peak along the façade. The main entry is located off center flush with the façade behind a metal porch door, and an uncovered concrete stoop and steps lead to the entry. The structure has a rear addition with a gable roof. A detached shed and a detached single car garage are located at the rear of the building. The garage has similar features to the main structure. A large concrete and gravel drive is located in front of the garage. This resource is located approximately one block south of the Project site but has an unobstructed view. Due to alterations, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

Site Inventory ID: 77-03895
14th Street Viaduct, SR 69, between Scott Avenue and Vine Street
Year built: 1936

The 14th Street Viaduct spans the Project site, and the Project will include building storage tracks beneath and around the bridge supports. An in-depth historical account of the bridge's construction and evaluation is found in *Des Moines SE Connector: SE 12th Street to US 65: Historical/Architectural Intensive Survey, City of Des Moines, Polk County, Iowa. Report No. 77-238*.[84] This resource bisects the APE. ISHPO determined this structure is potentially eligible for the NRHP under Criteria C; FRA agreed with this determination.

Site Inventory ID: 77-07486
1108 Scott Avenue
Year Built: 1882

This 1882 single-story Frame Vernacular residential structure has horizontal wood & vinyl exterior siding, a cross-gable roof with overhanging eaves, and a partial width shed extension along the façade and rear roof kick. Single and grouped 1/1 replacement windows are asymmetrically located along the façade and elevation. An off-center partial width recessed façade porch with square wood supports is located under the shed extension roof. Due to multiple additions, the structure currently has an irregular plan. An ancillary feature consists of a detached garage with gable roof at the rear of the structure. Due to alterations and additions, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

[84] Tallgrass Historians L.C. *Des Moines SE Connector: SE 12th Street to US 65: Historical/Architectural Intensive Survey, City of Des Moines, Polk County, Iowa*, *Report No. 77-238*. Oct. 2007.

Site Inventory ID: 77-07491
1401 Scott Avenue
Year Built: 1901

This single-story Frame Vernacular structure has horizontal wood and brick exterior siding with corner boards. It has a high pitch cross gable roof with overhanging eaves and an off-center partial width shed extension over the enclosed porch. The porch is enclosed with grouped 1/1 replacement sash windows and includes a brick chimney located off-center of the enclosed porch. The front facing wing has infill and paired replacement slider windows, along with a single panel main entry with a single square light behind a metal porch door and hip extension with braces. To the rear is a side-facing two-car garage under a shed roof. It is directly adjacent to the house, but the property appraiser notes it as a separate structure. This resource is located approximately one block south of the project area but has an unobstructed view due to the street layout. Due to alterations, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

Site Inventory ID: 77-09469
Heartland Co-Op, 118 SE. 18th Street
Year Built: 1930

This resource is a series of attached concrete grain silos, two and three wide, with an attached elevator and additional detached buildings, including a scale house, shop, utility building, and attendant's booth. Attached to the sides are various machinery parts, mostly large metal pipes. A small shed roof overhang is located at the base of the tower. On the north façade is an off-center shed metal roof mass (enclosed) with two large loading bays. The foundation, walls, and roofs are poured concrete. The railroad track, previously the Wabash Railroad and now NS Railroad, is directly south of the building. The Project site is located south and west of this property. In agreement with an evaluation completed in 2000 in association with a proposed cell tower project (R&C No. 000877193), "the facility does not appear to have any unusual characteristics and looks like every other grain elevator across Iowa." This resource does not appear to meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

Site Inventory ID: 77-10698
Wolverine World Wide, 302 SE. 18th Street
Year Built: 1958

This single-story industrial property contains a large warehouse building and manufactured home. The industrial warehouse building has a metal exterior siding and a mix of gable and shed roof lines with no overhanging eaves. Some openings appear to be boarded, and visible windows are

vertical ribbons with fixed single pane lights. No entry location is evident from the right-of-way. The manufactured office building has a flat roof, vertical plank siding, 6/6 vinyl sash windows, and a metal hollow core entry door. No clear construction date is provided on property appraiser's website. This resource is located directly east of the Project site. Due to alterations and additions, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

Site Inventory ID: 77-10700
C. Amend & Sons Meat Packing Plant, 410 SE. 18th Street
Year Built: 1929

The history of the meatpacking plant has been documented in previous reports, including an in-depth accounting in *Des Moines SE Connector: SE 12th Street to US 65: Historical/Architectural Intensive Survey, City of Des Moines, Polk County, Iowa. Report No. 77-238*.[85] As a long-running, family operated meatpacking business reminiscent of the area's original industrial setting, this structure has been determined by ISHPO as potentially eligible for the NRHP at the local level under Criteria A; FRA agreed with this determination.

Site Inventory ID: 77-10702
United House & Gate, 500 SE. 18th Street
Year Built: 1941

This two-story masonry vernacular industrial building has a brick, concrete, and concrete masonry unit (CMU) exterior with a flat roof and caped parapet. Most windows on the first story have been enclosed with CMUs, and second story windows are filled with glass block. The Polk County property appraiser notes the northern mass(es) were added in 1966. The original structure had a shallow L-shaped footprint, constructed of concrete block with brick cladding on the west façade and a portion of the interior of the ell. There may have been a second story as there is a material change near the center of this original mass. In this original portion, there are multiple loading bays on the east façade and a single large loading bay on the west. To the north of this building is a single-story concrete block flat roof addition, with a curved north façade and large loading bays. To the south are multiple additions that lengthen the footprint of the ell. There are two loading bays and multiple entries. The foundation is continuous (concrete and brick), although grade is built up in some portions to allow grade-level access. Due to alterations and additions, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

[85] *Ibid*.

Site Inventory ID: 77-10706
609 SE. 15th Court
Year built: 1900

This single-story Frame Vernacular residence has a rectangular plan, a front facing gable with overhanging eaves, and horizontal wood siding with corner boards. Single replacement 1/1 sash windows with vinyl infill are located on the façade and elevations, along with a single bay window. A centrally located brick chimney is located at the roof peak. A rear elevation addition under a shed roof contains a semi-detached carport extension. Another addition is located at the rear under a hip roof. The main entry is located off-center along the façade behind a metal door with a single pane light, flush with the façade. An ancillary rectangular storage building is located at the rear of the structure. Due to alterations, this resource does not meet criteria for listing in the NRHP individually or as part of a district. This resource has been recommended ineligible for listing on the NRHP by ISHPO; FRA agreed with this determination.

Site Inventory ID: 77-12156
Sun Tool Warehouse, 305 SE. 7th Street
Year Built: 1940

This industrial warehouse is a single story, T-shaped building with three bays clad in corrugated metal exterior siding and medium pitch gable roofs with no overhanging eaves. On the recessed facade are garage loading bays under a pent roof extension with angled metal brackets. Centrally located is a single pedestrian entry on recessed façade, accessible by a metal stairway. An off-center third bay extends west of the other two bays. Partially obscured windows are located on the northern bay elevation behind iron security bars. Although dates have not been verified, there have been several additions to the original structure. The property appraiser notes a remodel date of 1970, suggesting the additions may have been at this time. While it is typical of industrial buildings and may be connected to the history of the area, this association appears to be general rather than specific, and the structure is not architecturally notable. A view of the Project site is partially screened by trees. FRA has determined this building to be ineligible for listing in the NRHP.

Site Inventory ID: 77-12157
Husmann Warehouse, 309 SE 8th Street
Year Built: 1965 & 1969

This single-story, welded frame, Industrial Vernacular building has a rectangular plan and low pitch gable roof with no overhang. The structure has crimped or corrugated metal exterior siding with no window openings. Ancillary features include a large structure to the rear and a concrete parking lot. A BNSF Railroad track is located northeast of the structure. While it is typical of industrial buildings and may be connected to the history of the area, this association appears to be general rather than specific, and the structure is not architecturally notable. FRA has determined this building to be ineligible for listing in the NRHP

Site Inventory ID: 77-12158
Bituminous Materials & Supply, 900 Raccoon Street
Year Built: 1950

This concrete block Masonry Vernacular resource is located on a corner parcel, with two buildings visible from the right-of-way and multiple cylindrical storage tanks. The main structure is a concrete block building with a flat roof and parapet. The rear elevation addition has a shed extension roof. Windows consist of single fixed and paired sliders, all replacements with blind transoms. Multiple entries are located on the façade. This resource is located directly south of the Project site across the railroad tracks. The ancillary cylindrical storage structures vary in diameter and height and are constructed of metal or concrete. An additional ancillary single-story structure is located behind the main structure. It has a gable roof with no overhang and corrugated metal exterior siding. A large loading bay is located on the south elevation. A third structure is noted on the property appraiser's website as constructed in 1987; it is not visible from the right-of-way. While this resource is typical of industrial buildings and may be connected to the history of the area, this association appears to be general rather than specific, and the structure is not architecturally notable. FRA has determined this building to be ineligible for listing in the NRHP.

Site Inventory ID: 77-12159
City of Des Moines Office and Warehouse, 1300 Scott Avenue
Year Built: 1967 & 1973

This multi-story, metal clad warehouse and masonry office building has had multiple additions. The primary mass is double height with a T-shaped footprint; the projecting mass extends south. At the southwest corner is a single-story rectangular mass that appears to serve as an office. All of the massings together create an irregular footprint with a void in the southeast corner. A portion of the parcel is surrounded by a chain link fence, and directly to the east is the elevated 14th Street Viaduct. Paved surfaces are present at each loading bay. The primary mass has a low pitch gable roof with a very slight overhang; the projecting mass has a shed roof and may be an addition. The siding is corrugated metal, with painted strips on the gable mass that simulate columns. A loading bay, set at grade, is located near the southeast corner, and a pedestrian entry, also at grade, is located east of the loading bay. There are multiple loading bays of various heights located on the west façade. Here the ground is built up to create a ramp and provide grade level, but is dug out for the smallest, southernmost bay with concrete retaining walls. Directly south of this is a pedestrian entry with a shed roof and metal railing on the adjacent retaining wall. There appear to be secondary, unused entries on the north and west facades. The office mass has a flat roof and pent roof skirt with asphalt shingles on the south facade. It is a masonry vernacular structure, primarily stucco or painted concrete block, with brick at the southeast corner. Windows, set in a mostly regular pattern, are two light metal sliding with brick sills. The entry, located off-center to the west, is metal commercial with sidelights of the same size. This building is also set at grade. While it is typical of industrial buildings and may be connected to the history of the area, this association appears to be general rather than specific,

and the structure is not architecturally notable. FRA has determined this building to be ineligible for listing in the NRHP.

Site Inventory ID: 77-12160
Iowa Interstate Railroad
Year Built: estimated mid-1800s

The railroad tracks closest to the project location are owned by the Iowa Interstate Railroad. This line was originally the Wabash Railroad (WR). The WR served Ohio, Illinois, Iowa, Indiana, Michigan, Missouri, and the Province of Ontario. It began as the Toledo and Wabash Railroad in 1858, although the first rail to use 'Wabash" solely in their name was the Wabash Railway in 1877. The earliest predecessor of the railway was the Northern Cross Railroad, the first railroad in Illinois (Paxson 1912). WR merged with the Norfolk & Western Railway (NWR) in 1964, to then be absorbed when NWR became NS Railway in 1982. The Iowa Interstate Railroad (IAIS) was formed in 1984 in partnership with Hartland Rail. IAIS operated the recently acquired 553 miles of track formally owned by Rock Island Railroad. In 1988, Iowa Southern Railroad (ISR) took over ownership of sixty-one miles of the WR in Iowa. Iowa Interstate purchased the rail in 2006. The IAIS railway runs along the northern portion of the APE. Rail lines through and around the APE have shaped the character of the neighborhood. A full evaluation of the railroad was outside the scope of this review. The Historic Structures Report states that there was no information found to suggest that IAIS is eligible for the NRHP, either individually or as contributing to a district. FRA has determined this segment of IAIS be ineligible for listing in the NRHP Even if the IAIS were to be determined eligible for the NRHP, the Project would not impact any aspects of integrity of the railroad.

The Project will be visible from two historic properties within the APE: the 14th Street Viaduct and the C. Amend & Sons Meat Packing Plant. However, the purpose of the Project is to construct a new industrial facility within an area historically used for industrial activity, and therefore, the overall character of the area and the viewsheds will remain unchanged. As such, FRA has determined that no historic properties will be adversely affected. A copy of the Historic Structures Survey is enclosed in Appendix E.

3.15.4 Consultation

Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) "Protection of Historic Properties" (Section 106), FRA has initiated Section 106 consultation with the ISHPO, federally-recognized Tribes, and potential consulting parties, as described below. FRA will continue to work through the Section 106 process and seek concurrence as required in CFR Part 800. Should any of the parties have concerns about the undertaking and its potential effects to historic properties, FRA will continue to consult with the parties and ISHPO to resolve those issues prior to implementing the Project.

Consultation with ISHPO
FRA is required to contact ISHPO to initiate the Section 106 consultation process for the Project and to seek concurrence with FRA's findings. FRA submitted the Section 106 package of materials to ISHPO via electronic upload on April 30, 2020.

Consulting Parties
FRA identified the following federally-recognized Tribes who may have interest in the project:

- Apache Tribe of Oklahoma;
- Iowa Tribe of Kansas and Nebraska;
- Iowa Tribe of Oklahoma;
- Menominee Indian Tribe of Wisconsin;
- Sac & Fox Nation of Missouri in Kansas and Nebraska;
- Sac & Fox Nation, Oklahoma; and
- Sac & Fox Tribe of the Mississippi in Iowa.

FRA sent consultation packages via email to these Tribes on April 24, 2020.

FRA has also identified the following organizations that may have an interest in Project:

- City of Des Moines;
- DMAMPO;
- Des Moines Parks and Recreation Department; and
- Downtown Neighborhood Association.

These potential consulting parties may be interested in the Project and FRA's determination of effect. They were copied on FRA Section 106 consultation letter to serve as their notification of the Project. FRA sent this information to the potential consulting parties via email on April 24, 2020.

3.15.5 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the Facility. The No Action Alternative has no potential to affect historic properties because no ground disturbing activity would occur and the Project site would remain undeveloped grassed land.

Build Alternative
Archaeology
The archaeological literature review and field reconnaissance surveys do not indicate the presence of inventoried archaeological resources within the APE, although several sites were identified in the general area. A geoarchaeological assessment determined that a historic river course backed up against the valley wall and cut a channel through the APE. The assessment concluded that the area has low potential for significant archaeological resources. FRA made a determination of no historic properties affected for the Project with regards to archaeology.

Therefore, it is anticipated that the Build Alternative would have no significant impact on archaeology.

Build Alternative
Architecture
A Historic Structures Survey of the APE was conducted. The survey identified 14 historic resources within the APE for this Project. Nine of the properties had previous recommendations from ISHPO; FRA agreed with those previous recommendations after reviewing the resources, as detailed in the report. For the remaining five properties that were not previously recorded, FRA has made determinations of ineligibility for inclusion in the National Register of Historic Places (NRHP).

Given the information described in 3.15.2, FRA has determined that the Project would result in no adverse effect. FRA has requested ISHPO's concurrence with this determination. Therefore, it is anticipated that the Build Alternative would have no significant impact on the built environment.

3.15.6 Minimization Measures

Minimization measures, if required, will be detailed upon completion of the Section 106 process

3.16 Section 4(f)

Section 4(f) of the U.S. Department of Transportation Act (49 U.S.C. § 303) protects publicly owned and accessible parks, recreation areas, and wildlife and waterfowl refuges, as well as historic sites and archeological sites, regardless of ownership and accessibility. A use of a Section 4(f) property is defined as a physical take of land from a protected property (temporary occupancy or permanent incorporation) or an action that substantially impairs the protected features, activities, or attributes of the Section 4(f) property.[86] The study area for Section 4(f) is a half-mile radius from the Project site.

3.16.1 Affected Environment

Pete Crivaro Park is the closest Section 4(f) property to the Project site; it is located approximately 0.55 miles to the southwest Project site and is located outside of the study area. The park is approximately 12.5 acres in size and has restrooms, picnic tables, basketball courts, playground, disc golf, splash pool, and a walking/bike path. There are no Section 4(f) properties are located in the study area.

[86] United States, Code of Federal Regulations. Title 23, section 774.17.

3.16.2 Environmental Consequences

No Action Alternative
Under the No Action Alternative, DSMI would not construct the transload facility. There would be no use of Section 4(f) properties because the Project site would remain undeveloped grassed land. The Project site is not a Section 4(f) property.

Build Alternative
Under the Build Alternative, no Section 4(f) properties were identified within the study area; therefore, construction and operation of the transload facility would not use Section 4(f) properties.

3.16.3 Minimization Measures

No minimization measures are required.

3.17 Indirect and Cumulative Impacts

The NEPA process requires FRA and other federal agencies to address and consider indirect and cumulative impacts to a project's surrounding environment.[87]

3.17.1 Indirect Impacts

Indirect impacts are future consequences to the environment at or near a project that are indirectly associated with the implementation of a build alternative. The CEQ defines indirect impacts as those that are "caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable."[88] Indirect impacts may include growth in population or development due to changes in land use, increased population and employment density, and effects on air, water, or other natural systems.

Indirect impacts differ from direct impacts in that they are indirect or induced changes that result in changed patterns of social and economic activities. Direct impacts are directly related to the construction or the implementation of the proposed action. Indirect impacts are usually determined by land-use policies, development objectives, and the physical location of the proposed action. Indirect impacts are either adverse or beneficial.

No Action Alternative
The No Action Alternative would not result in any secondary impacts. DSMI would not construct the transload facility, and the Project site would remain undeveloped grassed land.

Rail and truck traffic to and from the Project site would not increase. By not providing a shipping alternative to area businesses, the City of Des Moines would not have the potential to increase

[87] United States. Code of Federal Regulations. Title 40, parts 1500–1508, https://ecfr.io/Title-40/.
[88] United States. Code of Federal Regulations. Title 40, section 1508.8, https://ecfr.io/Title-40/.

economic development. Roadway and highway infrastructure use would increase without the expansion of bulk railroad shipments in the area.

Additional jobs related to the construction, maintenance, and operation of the Facility would not be created. In addition, the No Action Alternative would not improve overall freight capacity and options in the Des Moines metropolitan area. Existing local businesses would not see rail centric transportation options developed. The Des Moines area would miss the opportunity to attract new industries to the region and support economic development.

Build Alternative

The Build Alternative would have beneficial indirect impacts on the Project area. The transload facility would create increased economic development in the surrounding business communities. The transload facility would create more rail-centric options for local shippers, and provide additional freight capacity in the Des Moines industrial area. This in turn could attract new industries to the area, which could also increase available jobs.

Rail truck and traffic to and from the Project site would increase; however, as described in Section 3.1 and 3.9, those impacts would not create any significant impacts.

3.17.2 Cumulative Impacts

A review of *Plan DSM: Creating our Tomorrow*, the City of Des Moines's comprehensive plan,[89] was conducted to determine if there is any planned development of the parcels directly adjacent to the Project site. Based on this review and discussions with City of Des Moines staff regarding future developments in the study area indicate that the only planned development is a city-owned storm water retention area planned on the parcel west of the Project site. The study area would be expected to remain an industrial area under the Build Alternative.

In DMAMPO's study of the project area and in developing the analysis required for this EA, no other projects have been identified as planned for the project area. Therefore, it is not foreseeable that the Build Alternative would result in any significant cumulative impacts.

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3.18 Other Environmental Resources

Neither the Build Alternative nor the No Action Alternative would affect any of the following resources because such resources are either not located in the Project site or would otherwise not be impacted during construction or operations of the Facility: solid waste disposal systems,

[89] City of Des Moines, Iowa. *Plan DSM: Creating Our Tomorrow*. Apr. 2016, https://plandsm.dsm.city/system/resources/W1siZiIsIjIwMTkvMDgvMTIvNzQ1ZGlob2c2ZF9GSU5BTF9QbGFuRFNNX3dlYi5wZGYiXV0/FINAL_PlanDSM_web.pdf?sha=88890f389b2da193.

ecological systems; coastal zones; use of water, mine, or timber resources; wild and scenic/natural rivers; and farmlands.

Solid waste disposal systems would not be impacted by the Build Alternative as the City of Des Moines currently provides standard waste disposal service the area. Based on a City of Des Moines Engineering Department review conducted on August 22, 2019, the solid waste generated by the Project site would be minimal based on the existing capacity at the Metro Park East Sanitary Landfill.[90]

The Build Alternative would not impact ecological systems because the Project site was formerly used for industrial purposes. In addition, a portion of the Project site has been converted to storm water detention. USFWS indicated in a letter dated February 13, 2020, that no critical habitats or ecological systems would be impacted by the Build Alternative with incorporation of the minimization measures listed in Section 3.5.3.

The Build Alternative would not impact coastal zones because no coastal zones are present.

The Build Alternative would not impact water use because no processing water would be needed and only minor volumes are proposed for consumption at the Facility.

The Build Alternative would not impact mines or minerals because no mineral resources are currently extracted or would be extracted at the Project site.

The Build Alternative would not impact timber resources because no merchantable timber resources are present on the Project site.

The Build Alternative would not impact wild or scenic river because there are no rivers in the Project site.

The Project site is located within the City of Des Moines's city limits and is a former automotive salvage yard. and as such, the Farmland Protection Policy Act does not.

[90] Dunn-Young, Frank. City of Des Moines, Iowa, Community Dev. Dept. Letter to Patrick Koehnen, VAA Engineering, L. L. C. "DSM Transload Facility – 301 SE 15th Street." 12 Mar. 2020.

4.0 COORDINATION AND CONSULTATION

4.1 Agency Coordination

During the development of this Environmental Assessment, Terracon conducted coordination with DSMI, IDNR, DMAMPO, USACE, USFWS, IOSA, and the City of Des Moines. During the development of this Environmental Assessment, FRA conducted coordination with USFWS, various Tribes, potential consulting parties, and ISHPO.

Coordination Activities
August 22, 2019 – Pre-Application Meeting City of Des Moines Engineering Department.

September 25, 2019 - Pre-Application Meeting City of Des Moines Engineering Department Review.

September 27, 2019 – Wetland Delineation Report submitted to the United States Army Corp of Engineers (USACE),

October 2, 2019 – Conversations with the City of Des Moines Traffic and Transportation Engineering Department.

October 9, 2019 – Environmental Review for Natural Resources completed by the Conservation and Recreation Division of the Iowa Department of Natural Resources,

October 22, 2019 – Email and telephone conversations with the City of Des Moines Civil Engineer and Floodplain Administrator.

December 4, 2019 – Concurrence letter received from the USACE.

February 13, 2020 – Threatened and Endangered Species Habitat Evaluation and IPaC report submitted to the United States Fish and Wildlife Service (USFWS).

February 13, 2020 – Concurrence letter received from the USFWS.

April 24, 2020 – Section 106 consultation documentation submitted to federally-recognized Tribes and potential consulting parties.

April 30, 2020 – Section 106 consultation documentation submitted to Iowa State Historic Preservation Office

Coordinating Agencies
City of Des Moines
City Hall – Second Floor

400 Robert D. Ray Drive
Des Moines, IA 50309

Des Moines Area Metropolitan Planning Organization
450 Watson Powell Jr. Way, Suite 200
Des Moines, IA 50309

Des Moines Parks & Recreation Department
1551 E. Martin Luther King Jr. Pkwy
Des Moines, IA 50317

Downtown Neighborhood Association
PO Box 93451
Des Moines, IA 50393
dnaboard@desmoinesdna.com

Environmental Review for Natural Resources
Conservation and Recreation Division
Iowa Department of Natural Resources
502 E. 9th Street
Des Moines, IA 50319

Iowa Office of State Archeologist
Colleen Randolph
The University of Iowa
700 S Clinton St.
Iowa City, IA 52242

State Historic Preservation Office of Iowa
Deputy Heather Gibb
Capitol Complex
East 6th and Locust Street
Des Moines, IA 50319

United States Army Corp of Engineers
Matthew Zehr
Rock Island District-Regulatory Branch
Clock Tower Building
PO Box 2004
Rock Island, IL 61204-2001

United States Fish and Wildlife Service
Midwest Region, Illinois-Iowa Ecological Services Office

1511 47th Avenue
Moline, IL 61265

4.2 Tribal Coordination

FRA initiated consultation with the federally-recognized Tribes listed below. FRA invited these Tribes to participate in the Project as a consulting party in the Section 106 process. FRA requested Tribal input regarding any historic properties that have religious and cultural significance to them and may be affected by the Project. The Section 106 documentation packages were sent by FRA via email on April 24, 2020. The coordination letters described the Project background, the location of the site and the general construction components of the proposed facility. The coordination letters also listed the APE, and the results of surveys conducted on archaeology and historic properties at the Project site.

A copy of the letters sent are included in Appendix F. The responses received from the Tribes are also included in Appendix F.

FRA contacted the following Native American Tribes concerning the Project:

- Apache Tribe of Oklahoma
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Menominee Indian Tribe of Wisconsin
- Sac & Fox Nation of Missouri in Kansas and Nebraska
- Sac & Fox Nation, Oklahoma
- Sac & Fox Tribe of the Mississippi in Iowa

4.3 Public

DMAMPO has been working on the Project since 2012. The following outlines key committee meetings where the Project was discussed. These meetings were open the public and minutes were published in the local print media.

MPO Policy Committee, MPO office, 420 Watson Powell, Suite 200, Des Moines IA 50309

- October 17, 2012 – Voted to approve the application for Iowa DOT Revolving Loan and Grant (RRLG) for the Project Feasibility Study.
- January 17, 2013 – Updated the committee on the MPO's selection for RRLG funds from the Iowa DOT.
- March 28, 2013 – Updated the committee regarding the proposed process for selecting a consultant to complete the Project Feasibility Study.
- May 23, 2013 – Provided an overview of the draft RFP for the for the Project Feasibility Study.

- September 19, 2013 – Updated the committee on the six RFP submittals for the Project Feasibility Study.
- October 17, 2013 – Updated committee on final consultant selection for the Project Feasibility Study
- September 18, 2014 – Consultant presented draft Feasibility Study for the Project.
- October 16, 2014 – Committee approved final Draft of Feasibility Study for the Projec.t
- February 15, 2018 – Committee discussed sub-agreement between MPO and Selected Operator for the RRLG funds from the Iowa DOT.
- April 19, 2018 – Committee discussed sub-agreement between MPO and Selected Operator for the RRLG funds from the Iowa DOT.
- May 17, 2018 – Committee discussed sub-agreement between MPO and Selected Operator for the RRLG funds from the Iowa DOT.
- June 21, 2018 - Committee discussed sub-agreement between MPO and Selected Operator for the RRLG funds from the Iowa DOT.
- September 20, 2018 – Committee voted to end contract with selected operator and reissue RFP for transload operating services.
- November 8, 2018 – Updated committee regarding the timeline for the reissued RFP for transload operating services.
- April 18, 2019 – Committee voted to approve Des Moines Industrial, LLC as the selected owner/operator of the Project.
- September 19, 2019 – Committee voted to approve the sub-agreement between MPO and Des Moines Industrial, LLC for the RRLG funds from the Iowa DOT.
- November 21, 2019 – updated the committee on the progress made to complete the Environmental assessment and discussed the process for competing the grant agreement attachments for FRA.

5.0 LIST OF PREPARERS

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