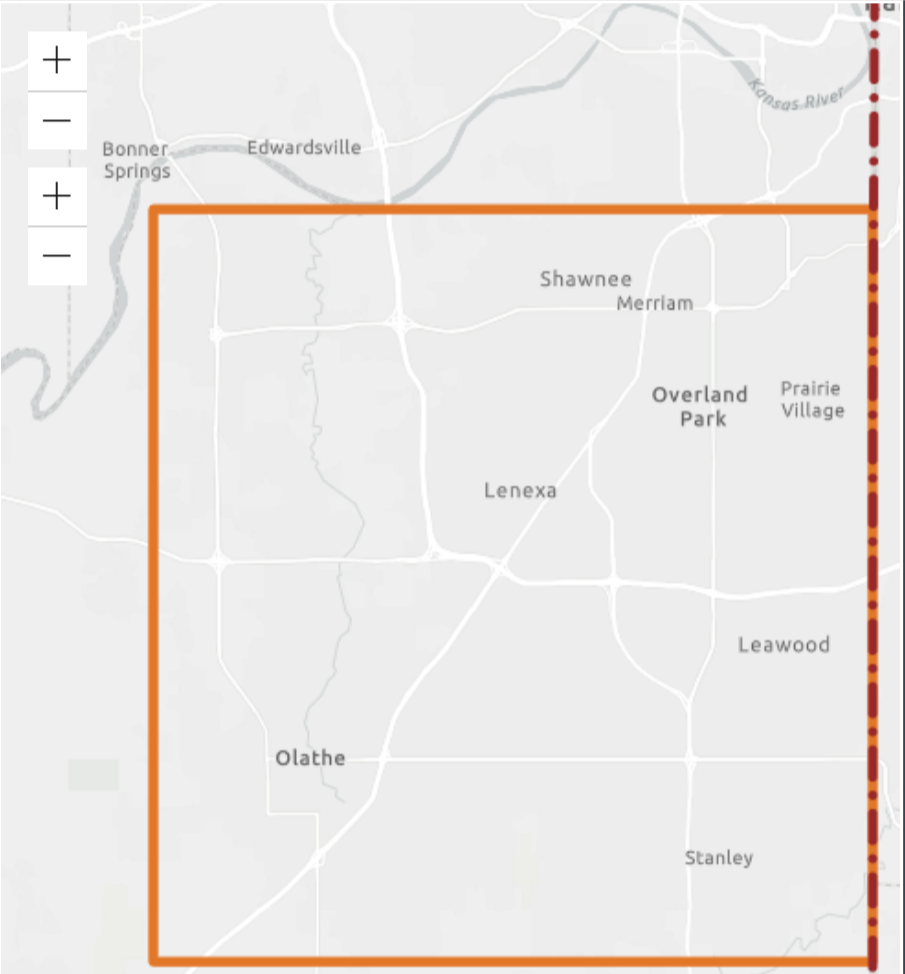


Carbon Reduction Program

Carbon Reduction General Questions

Question	Answer
Project Name	"Connecting JOCO" -A Coordinated Public Electric Vehicle Infrastructure Pilot Project
Sponsoring organization name	Johnson County Kansas
Which best describes your type of organization?	Non-Profit Agency
Project type	
Project description	<p>Johnson County, Kansas, in partnership with Climate Action KC, is piloting a creative, collaborative application for federal funding for Electric Vehicle (EV) infrastructure in Johnson County. Called, "Connecting JOCO", this program will directly address one of the key outcomes of the Regional Climate Action Plan, switching gasoline-fueled vehicles to electrified vehicles. This was the top reduction transportation strategy outlined in the Climate Action Plan, endorsed by Johnson County Government and many of the participating partner cities. Our current transportation sector makes up 34% of the region's GHG emissions. Creating new EV charging infrastructure will help lower those emissions. Current registration data shows Johnson County has only 2494 electric vehicles, 802 electric hybrid vehicles and 220 plug-in hybrid vehicles. These 3,516 vehicles are just .05% of the total vehicles registered (600,868 vehicles) in Johnson County. 7% of new vehicle sales are Electric Vehicles. Clearly the EV infrastructure will need to grow to meet this demand.</p>
Project length in miles (if applicable, otherwise answer 0)	0.0
Is this project consistent with the goals and strategies of ConnectedKC 2050?	Yes
Please explain how this project is consistent with the goals and strategies of ConnectedKC 2050:	<p>This EV charging pilot program addresses several areas outlined in ConnectedKC 2050. It focuses on energy centers and corridors by building EV charging stations in existing high-traffic areas such as courthouses, community centers, libraries and parks. It promotes climate protection and resilience by encouraging the adoption of zero tailpipe emissions by providing more EV infrastructure to residents. It creates new transit hubs for EV charging where residents can utilize existing bus lines, park trails and more. It will provide data feedback about how often the charging stations are being utilized and how these EV hubs could grow over time. Please see our attached map for more details on how our project aligns with ConnectedKS 2050. EV infrastructure needs to grow exponentially to meet the climate goals outlined in MARC's Regional Climate Action Plan. In addition, residents need to see the amount of public charging stations grow in order to feel comfortable about purchasing a new or used EV. There is still quite a bit of apprehension caused by "range-anxiety,". (Range-anxiety is defined as the concern an electric car battery will run out energy before the individuals trip is completed.)Finally, many lower-income individuals will not have the ability to charge at home, living in multifamily units that do not typically offer EV charging. This new network will offer support for those most vulnerable to purchase and charge electric vehicles.</p>
Is the project consistent with the relevant adopted local comprehensive plan(s)?	Yes

Explain how the project is consistent with the adopted local comprehensive plans.	<p>The Coordinated Public Electric Vehicle Infrastructure Pilot Project is consistent with numerous adopted local comprehensive plans. For the Regional Climate Action Plan, this project specifically helps to switch our transportation system to low and no-emission vehicles. It also provides more affordable trips by offering a free EV charge to residents. As the plan states “in order to support the efficient electrification of our vehicle fleet, charging infrastructure needs to be deployed effectively throughout the region.” This proposal directly addresses Smart Moves Regional Transit and Mobility Plan Goal #10 - Climate Change and Energy Use: Decrease fossil fuel use and greenhouse gas emissions through energy efficiency, alternative and renewable fuels and VMT reduction. This proposed project is consistent with the Transportation Improvement Project (TIP) 2022-2026 with several projects aligning close to the proposed sites. They include TIP 996097, Capital and Operating Assistance for The JO; and TIP 380209, US-56 multiple locations. The Coordinated Public Electric Vehicle Infrastructure Pilot Program will improve air quality as electric vehicles are zero-tailpipe emission vehicles.</p>
State	Kansas
County	
Municipality	, , , , , , ,
US Congressional District(s)	
Does this project have a geography that can be mapped?	Yes
Please draw the boundaries of your proposed project's study area.	<div><div><div><div>+</div><div>—</div></div><div><div>+</div><div>—</div></div></div><p>Missouri Dept. of Conservation, Missouri DNR, Esri, HERE, Garmin, SafeGraph, METI/NASA</p></div>
Total Cost	\$2,239,270
Federal Amount	\$1,791,416
Non-federal Cash Match - Must be at least 20% of Question 15 above...	\$447,854
Source of local match:	Refer to Appendix C for a detailed capital cost estimate. Johnson County Government Johnson County Parks & Recreation Johnson County Library City of Lenexa City of Mission City of Overland Park City of Prairie Village City of Roeland Park
Is the project scalable?	Yes
If project is scalable, what is the minimum amount?	\$1,836,201
	<p>The Connecting Johnson County electric vehicle charging project is made up of 17 proposed sites spanning 8 municipalities in the southwest Kansas City metropolitan area. The scope at each individual site cannot be cost-effectively reduced further, but a number of the proposed 17 sites may be removed or deferred in order to reduce the scale of the overall</p>

How will the scope proposed in the application change if the proposed project were to receive less funding than requested?	project. Johnson County has met with representatives from each partner organization to identify their highest priority sites in the event the project does not receive 100% of the funding requested. Site priority will balance the needs of each partner organization with the demographic factors depicted in Appendix A, such as environmental justice, transportation disadvantage, and access for various populations.
Explain if the project includes a dedicated/defined revenue source for operations and maintenance	Each partner organization is responsible for the operation & maintenance costs for the EV charging stations located on their property.

Carbon Reduction Sustainability

Question	Answer
Describe how the project promotes sustainable land-use patterns (e.g., mixed use, transit-oriented, walkable, affordable housing, etc.) For more information see the sustainability principle of Housing Choice or Reinvestment in the Sustainable Land Use Resource .	<p>This pilot program promotes sustainable land-use patterns in several ways. 1. The EV charging stations are being built in existing high-traffic public areas, such as courthouses, community centers and parks. 2. EV chargers are already partially powered by renewable energy sources, such as wind. As Evergy’s energy mix continues to get cleaner, these EV chargers will provide more renewable energy for our residents. Several locations are in or near disadvantaged Census tracts, they include the Johnson County Courthouse, the Roeland Park Community Center, the Merriam Community Center/ New Antioch Library, Youngs Pool/Park, the Myron Scafe Building, and the Central Resource Library. Numerous proposed locations are within ½ mile of current transit stops. They are the Roeland Park Community Center, Powell Community Center, Broadmoor Park, Merriam Community Center/ New Antioch Library, Youngs Pool/Park, Myron Scafe Building and the Johnson County Courthouse. Most of the proposed EV charging network are Environmental Justice Tracts. They are: Roeland Park Community Center, Hickory Hills Park, Broadmoor Park, Powell Community Center, Shawnee Library, Merriam Community Center/ New Antioch Library, Youngs Pool/Park, Myron Scafe Building, Central Resource Library and the Johnson County Courthouse. The benefit of these locations is that they will help residents in affordable housing units, mixed-use areas, transit-oriented development and walkable neighborhoods to easily utilize EV charging. Multi-family units are not easy to charge from as most do not have EV charging available. These sites throughout Johnson County will help fill that gap. This is just year one of what Johnson County envisions as a multi-year effort.</p>
Describe how the project advances environmental stewardship. For more information see the sustainability principle of Resource Conservation and Energy Efficiency in the Sustainable Land Use Resource .	<p>This pilot program advances environmental stewardship by investing in the infrastructure needed to power tailpipe-free emissions in our region. In addition, by placing these charging stations at active sites, such as parks and community centers, individuals utilizing these charging stations can take part in active living activities, such as walking, biking and hiking. The EV charging network will promote equity by welcoming all residents to utilize these chargers. While it is up to each jurisdiction to determine whether or not there will be billing for these units, many have indicated charging will be free to the customers in the immediate future. This proposal supports the environment by supporting electric vehicles, which are much more environmentally sustainable than standard combustion engine vehicles. And it enhances economic development by supporting the emerging electric vehicle sector , which leads to new jobs, such as the Panasonic battery plant in DeSoto, the production of new EV vehicles, such as the new EV transit vehicles built at Claycomo Missouri by Ford, as well as supporting our local electricity providers.</p>
	<p>This pilot program builds an electric vehicle charging network that allows residents to charge while visiting the library, parks, community centers and their municipal and county facilities. Electric Vehicles have zero tailpipe emissions, leading to much</p>

<p>Describe how the project advances improved public health. (E.g. promotes active lifestyles, decreased air and water pollution, promotes physical safety and protection, etc.) For more information see the sustainability principle for Healthier Lifestyles in the Sustainable Land Use Resource.</p>	<p>greater air quality in our region. This air quality will continue to improve over the near-term as our electricity providers continue to invest more in renewable energy. Kansas City battles the summer ozone season yearly, providing a network of EV chargers will help combat those air quality issues by providing the infrastructure needed to support zero tailpipe emission cars and trucks. Many of Johnson County's most vulnerable populations live near highways and major thoroughfares and will benefit from any decrease in direct emissions. Many individuals are hesitant to invest in EV's citing range anxiety; this charging network will help alleviate these concerns, and we envision a multiple year program that will allow residents to charge easily and efficiently, wherever they travel in our metro area. By placing many of these charging stations at public parks and community centers, it will promote active lifestyles for those utilizing the EV chargers. The proposed EV charging sites are almost in or adjacent to current environmental justice tracts. This was done strategically to help those residents who need sustainable infrastructure the most.</p>
<p>Describe how the project supports investment in areas with existing infrastructure. For more information see the sustainability principle of Corridors & Activity Centers in the Sustainable Land Use Resource.</p>	<p>10 of the proposed sites are within one mile of the Shawnee Mission / Metcalf planning corridor, and 14 sites are within 3 miles of this corridor. Six of the proposed sites lie within an Activity Center. Refer to maps A6 and A7 in Appendix A.</p>
<p>Describe how the project improves economic growth (i.e. jobs retention, jobs generator, tax growth).</p>	<p>EV charging infrastructure promotes economic growth in numerous ways. Directly, construction jobs to build the new EV charging stations are created. Other direct jobs are the maintenance and upkeep of the EV charging network. Indirect economic benefits include a greater demand for electricity, which benefits not only the local electricity provider, but renewable energy jobs like wind and solar farms and the maintenance of each. Lastly, an indirect economic benefit to EV chargers is the greater demand for electric vehicles themselves. In our area specifically, Ford's Claycomo plant announced in 2022 it was adding an additional 1,000 workers to meet the demand for building E-Transit vehicles. That will continue to grow as the network to support EV's grows. A perfect example of the power of electric vehicles to improve economic growth was the recent announcement of the new Panasonic EV battery factory in DeSoto. Officials state this new facility will create 4,000 new jobs.</p>
<p>Describe how the project promotes resiliency (physical and/or economic).</p>	<p>The Connected JOCO program supports economic resiliency by powering vehicles with 100% electricity. 100% of electric production comes from US sources, whether that be wind, solar or coal. Conventional combustion engine vehicles are still at the mercy of the international oil market. The invasion of Ukraine by Russia is just the most recent example of US gasoline prices being vulnerable to the international oil markets. EV charging networks promote physical resiliency by tapping into the electric market, which is already cleaner than gasoline, and as the grid becomes cleaner, will be even more so. As for physical resiliency, electric vehicles are known for requiring much less maintenance. Electric vehicles do not require oil changes. Recent studies have shown that electric vehicles maintenance cost are about ½ of gasoline powered cars.</p>
<p>Describe how the project promotes equity and justice (i.e. promotes access to opportunities, fair and just distribution of resources and benefits, etc.)</p>	<p>The Connecting JOCO EV charging network offers vehicle charging at a much lower cost than traditional gasoline vehicles. The latest cost equivalency for a "gallon" of an electric charge is \$1.00. In addition, many of the sites being built will offer free charging for the immediate future; a policy decision on when to bill consumers and what to bill consumers will need to be determined by each jurisdiction. This will provide access to all residents for free or affordable/fair distribution of electric vehicle charging. Many of the proposed EV charging sites are close to environmental justice sites. In addition, several proposed EV charging sites will be within walking distance of MARC's designated heating/cooling centers in Johnson County. Currently, a significant amount of EV charging is being done in</p>

single-family homes. The current system often precludes residents of multi-family units from having the ability to charge, since there are no charging capabilities at their homes. The proposed EV charging network will help alleviate that issue; and over time, as more and more EV charging units are installed, hopefully eliminate the issue entirely.

Carbon Reduction Transportation Impacts

Question	Answer
Describe how safety and/or security measures are integrated into the project.	The proposed sites are located at existing government facilities, each with their own existing security measures and procedures. All facilities have posted hours and are closed to the public during the overnight hours. A number of facilities and parks are patrolled by law enforcement regularly. A review of safety and security measures at each site will be incorporated into the detailed architecture and engineering design phase. Electric vehicle charging stations may benefit from additional lighting, security cameras, accessibility upgrades, and traffic safety modifications to parking areas.
Describe how the project promotes and/or connects travel choices.	This project promotes travel choices in numerous fashions. First, 11 of the proposed EV stations are within a ½ mile of a current bus line. Other EV chargers are along the MetroGreen corridors, encouraging more walking and biking. The proposed EV charging network is strategically placed throughout Johnson County to best maximize areas the public already utilize in great numbers, such as libraries, parks, community centers and courthouses.
Does this project directly serve a regionally identified activity center(s)? <i>Use this map and turn on the appropriate layer to view data. You may then need to zoom to where your project is located.</i>	Yes
If yes, what activity center hierarchical classification(s) does this project serve?	Numerous sites within our application are in regionally identified centers. They are: The Johnson County Courthouse Monticello Library Central Resource Library Expansion Myron Scafe Building Powell Community Center Roeland Park Community Center The Johnson County Courthouse is within the most walkable developed category. The remaining sites are in the moderately walkable developed category.

Carbon Reduction Community Engagement And Environmental Space

Question	Answer
Please describe the transportation disadvantaged populations that will or may be affected by this project and whether the project impacts them positively or negatively. (MARC defines transportation disadvantaged populations as low-income, minority, older adults, disabled, persons living in zero-car households, and/or veterans.)	Several proposed sites of Connecting JOCO serve disadvantaged populations. The attached appendixes show the proposed EV charging stations are near disadvantaged populations. This investment will have a positive effect on those residents. The air will be cleaner, electric cars are cheaper to maintain, electric vehicles are quieter and they will be either free or very affordable to charge.
Please describe relevant public engagement that led up to the development of the proposed project, from comprehensive planning level to conceptual project development. Please describe what public engagement tools and strategies were employed, how you engaged transportation disadvantaged populations, and how feedback received from the public influenced the project.	Climate Action KC, in partnership with the Mid-America Regional Council, held numerous public engagement sessions for the development of the Kansas City Regional Climate Action Plan. Specifically, CAKC created an equity guide as part of the Climate Action Plan, which was a detailed public engagement tool. These included an equity statement, equity checklist, and a set of 10 action items that local governments could take to address vulnerable communities. Johnson County conducts an annual survey of its residents where it asks about many quality of life issues, including environmental stewardship and sustainability. These results in turn inform decision-makers going forward on the type of investments and programs that should be funded. Many of the proposed EV charging stations were already in the pre-planning or planning stages of the municipalities and county. As such, these projects would have been discussed with the public within the annual budgeting phase of each jurisdiction.

	These jurisdictions conduct multi-year planning of their capital projects which includes public engagement as part of that process.
Please describe ongoing public engagement planned for this project, including techniques and tools to be used for the general public and those to be used for transportation disadvantaged populations.	Connected KC is a pilot project to demonstrate that multi-jurisdictions within Johnson County, Kansas can work together to develop and implement a single public EV charging plan. The expectation as this first pilot project is developed is to engage in meaningful public engagement with all relevant stakeholders, including public listening sessions and focus groups to ensure all residents' voices are heard. Since this is a pilot program, specifics on the public engagement plans are still in its infancy. Upon award of the grant, Climate Action KC will work in concert with Johnson County to host and facilitate a community conversation around Connected JOCO.
Does the project serve an environmental justice area(s) or has areas with hidden environmental justice populations or does the project provide connections to environmental justice area(s) with opportunities (i.e., jobs access, education, reduce health disparities, etc.)? <i>Use this map and turn on the Environmental Justice Tracts layer to view data. You may then need to zoom to where your project is located.</i>	Yes
If you chose 'Yes' for 34, please describe.	14 of the 19 proposed sites are located within 1 mile of an identified environmental justice tract as shown on the map included in appendix A. Additional demographic information for each proposed site is included in Appendix D, including poverty level, household income, transportation cost burden, and housing cost burden. Johnson County is far from homogeneous when it comes to demographics. Large discrepancies exist even between neighborhoods located adjacent to one another. It is assumed that many higher-income households in the county will charge electric vehicles at home. However, a large number of the population of Johnson County do not own single family homes. Proposed sites, many consisting of libraries, community centers and parks, were chosen because they will be accessible to a diverse portion of the population that are unlikely to charge electric vehicles at home. Even those sites that do not sit directly within an identified EJ tract are within a few miles of one, and it is not unusual for libraries, parks and community centers to be visited by people from all across the area. When combined with KDOT's proposed network of fast chargers along interstate highways (NEVI / ChargeUp Kansas), a network of charging stations at public facilities like those proposed here will make owning an EV possible for those without access to home charging.

Carbon Reduction Project Partnerships

Question	Answer
Do you plan on partnering with another agency or organization to implement this effort?	Yes
	Yes, the Johnson County Government is directly partnering with Lenexa, Mission, Overland Park, Prairie Village, and Roeland Park on this initiative. In addition, Johnson County will collaborate with Climate Action Kansas City's new initiative, Plug-in KC, during this entire implementation phase. Several areas of Johnson County government will work in concert on this effort, the County Manager's Office, the Johnson County Transit Department, the Johnson County Park and Recreation District and the Johnson County Library system. Climate Action KC partnered with the Johnson County government to first create this application. Additional partners were added, due to the high interest in building additional EV infrastructure. Sponsor coordinator: Joe Connor, Assistant County Manager, Johnson County (p) 913-715-0430. Email: Joe.Connor@jocogov.org Brian Alferman, Sustainability Program Manager (p) 913-715-0430.

Describe the partnerships formed to develop the project and the manner in which these partnerships will benefit the project. In particular detail project coordination within the sponsor entity and partnership with entities outside the sponsor entity. Please include contact information for sponsor for each agency. Also include partnership agreements in the Uploads portion of the application.	Email: Brian.Alferman@jocogov.org Johnson County Park and Recreation District: Rhonda Pollard, Superintendent of Recreation. (p) 913-826-3020. Email: Rhonda.pollard@jocogov.org Johnson County Library: Adam Wathen, Associate Director, Branch Services, (p) 913-826-4600. Email: Adam.Wathen@jocogov.org Prairie Village, KS: Keith Bredehoeft, Public Works Director. (p) 913-385-4642. Email: kbredehoeft@pvkansas.com Lenexa,KS: Mike Nolan, Assistant City Manager. (p) 913-477-7707. Email: mnolan@lenexa.com Roeland Park, KS: Keith Moody, City Administrator. (p) 913-722-2600. Email: kmoody@roelandpark.org Overland Park, KS: Chelsea Newkirk, Assistant City Manager. (p) 913-895-6106. Email: chelse.newkirk@opkansas.org Mission, KS: Emily Randel, Deputy City Administrator. (p) 9130676-8353 Email: erandel@missionks.org One of the outcomes we are excited about this program is utilizing a multijurisdictional permitting process for this single construction project. Lessons learned from this can be applied to future EV charging stations, and other public works projects. This innovative project will be bid as a single construction project with a partnering effort to coordinate permitting.
Describe if the project demonstrates sustained involvement with social equity and/or typically underrepresented stakeholders.	The Connected JOCO plans to have numerous outreach with underrepresented stakeholders throughout the process; from bidding to award to pre-construction to construction phases. In addition, focus groups with existing electric vehicle and plug-in hybrid vehicle drivers are planned to receive their feedback.

Carbon Reduction Emissions Calculation Outputs

Question	Answer
Carbon Dioxide (CO2)	5239.0
Carbon Dioxide Equivalent (CO2e)	5274.0

Carbon Reduction Project Certification

Question	Answer
In compliance with 23 CFR 450.326, MARC’s Transportation Improvement Program must be financially constrained, meaning that programmed expenditures will not exceed the projected amount of revenues reasonably anticipated to be available for each year ofthe program. Before submitting an application for a project for inclusion into the TIP, all agencies must have sufficient, reasonably-available resources to provide the matching funds required to complete the project. Your project submittal certifies that your agency will have required non-federal matching funds available at the time of federal fund obligation.	Yes
MARC requires all project sponsors to pay a 1% fee from non-federal funds for every dollar of Carbon Reduction Program funds awarded to the project. Does your organization acknowledge and comply with this require?	Yes

Carbon Reduction Uploads

Question	Answer
Partnership letters	31_41.zip
Maps, photos, graphics	31_42.zip
PDF of CMAQ Emissions Calculator Tool with explanation of tool inputs OR explain emission reduction calculations and methodology if no CMAQ tool was available for your project type	31_43.pdf

This calculator will estimate the reduction in emissions resulting from developing electric vehicle charging infrastructure with unrestricted access. The calculator does not consider lifecycle emissions, particularly it refrains from estimating any emissions that may occur outside of vehicle operations. Electric transit buses and transit bus charging infrastructure are included in the Transit Bus Upgrades & System Improvements tool.

INPUT

User Guide

Reset Inputs

Fill Table

(1) What is your project evaluation year?

2023

(2) Please input the estimated number of vehicles in your study area

448

(3) Please enter the projected market share of replacement electric vehicles after construction of the

100.00

%

(4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle

Select All

Unselect All

Vehicle Source Type	Average Annual Miles Traveled Per Vehicle	Number of Existing Conventional Fuel Vehicles	Number of Replacement Electric Vehicles Projected
<input checked="" type="checkbox"/> Passenger Car	11,136	201	201
<input checked="" type="checkbox"/> Passenger Truck	12,176	221	221
<input checked="" type="checkbox"/> Light Commercial Truck	12,459	26	26
<input type="checkbox"/> School Bus	0	0	0
<input type="checkbox"/> Refuse Truck	0	0	0
<input type="checkbox"/> Single Unit Short-Haul Truck	0	0	0
<input type="checkbox"/> Single Unit Long-Haul Truck	0	0	0
<input type="checkbox"/> Combination Short-Haul Truck	0	0	0
<input type="checkbox"/> Combination Long-Haul Truck	0	0	0
TOTAL		0	0

Note: users may overwrite default values in the table with local estimates where applicable.

OUTPUT

Calculate Output

EMISSION REDUCTIONS

Pollutant	Total (kg/day unless noted)
Carbon Monoxide (CO)	54.469
Nitrogen Oxide (NOx)	3.038
Particulate Matter <2.5 µm (PM _{2.5})	0.067
Particulate Matter <10 µm (PM ₁₀)	0.076
Volatile Organic Compounds (VOC)	3.473
Carbon Dioxide (CO ₂)	5,238.888
Carbon Dioxide Equivalent (CO ₂ e)	5,273.967
Total Energy Consumption (MMBTU/day)	70.786

¹ Kansas State Data Center, <https://ipsr.ku.edu/ksdata/ksah/trans/15trans9.pdf>

² Energy Information Administration (EIA) Annual Energy Outlook 2022, Vehicle Sales Projections - Midwest Region

³ Bureau of Transportation Statistics, Vehicle Miles Traveled and Vehicle Trips by State 2017, <https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state>

CMAQ Tool Methodology

The CMAQ Electric Vehicles (EV) and EV Charging Infrastructure Tool estimates the emission benefits of adopting electric vehicles in the current on-road transportation system. The tool was used to predict the emissions reductions achieved from the construction of the proposed Connecting Johnson County electric vehicle charging infrastructure project.

The CMAQ tool inputs are non-prescriptive. It was necessary to determine an appropriate input value for (2) and (3) as shown to the left.

(2) Please input the estimated number of vehicles in your study area

The Connected Johnson County project proposes installing a total of 80 level 2 EV charging ports distributed among 20 proposed sites in Johnson County, KS. In 2020, Johnson County had approximately 375,000 registered passenger vehicles¹ and in 2022 it was estimated that 7% of all new passenger vehicle sales in the Midwest were battery electric vehicles². Many of the proposed sites are public areas, parks, and libraries, with parking facilities shared or accessible by nearby public and private businesses. Because of this, it was not feasible to obtain realistic data on unique passenger vehicles that visit each of the site study areas. Many of the sites serve hundreds of unique visitors each week. Additionally, it seems inappropriate to employ a census tract or municipality wide study area, as there are several existing EV charging stations within each census tract already. Therefore, it was decided that this input should be constrained by the reasonable number of actual vehicles capable of having their average energy consumption fully provided by the proposed sites. In reality, all vehicles are charged at various locations, but the below numbers represent an estimate of the number of EVs benefiting from the proposed charging stations. Furthermore, the proposed public sites serve a diverse population, both geographically and demographically, so it is not unreasonable to assume that a significant number of the site visitors may not own single-family homes do not have economic access to a home electric vehicle charging station.

Continued on the following page.



JENNINGS ENGINEERING, LLC		
TITLE	CONNECTING JOHNSON COUNTY CMAQ EMISSIONS CALCULATOR INPUT METHODOLOGY	
SIZE	11 X 17 (ANSI B)	DWG NO B1 REV 5/19/23

This calculator will estimate the reduction in emissions resulting from developing electric vehicle charging infrastructure with unrestricted access. The calculator does not consider lifecycle emissions, particularly it refrains from estimating any emissions that may occur outside of vehicle operations. Electric transit buses and transit bus charging infrastructure are included in the Transit Bus Upgrades & System Improvements tool.

INPUT

User Guide

Reset Inputs

Fill Table

Calculate Output

(1) What is your project evaluation year?

2023

(2) Please input the estimated number of vehicles in your study area

448

(3) Please enter the projected market share of replacement electric vehicles after construction of the

100.00%

(4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle

Select All

Unselect All

Vehicle Source Type	Average Annual Miles Traveled Per Vehicle	Number of Existing Conventional Fuel Vehicles	Number of Replacement Electric Vehicles Projected
<input checked="" type="checkbox"/> Passenger Car	11,136	201	201
<input checked="" type="checkbox"/> Passenger Truck	12,176	221	221
<input checked="" type="checkbox"/> Light Commercial Truck	12,459	26	26
<input type="checkbox"/> School Bus	0	0	0
<input type="checkbox"/> Refuse Truck	0	0	0
<input type="checkbox"/> Single Unit Short-Haul Truck	0	0	0
<input type="checkbox"/> Single Unit Long-Haul Truck	0	0	0
<input type="checkbox"/> Combination Short-Haul Truck	0	0	0
<input type="checkbox"/> Combination Long-Haul Truck	0	0	0
TOTAL		0	0

Note: users may overwrite default values in the table with local estimates where applicable.

OUTPUT

EMISSION REDUCTIONS

Pollutant	Total (kg/day unless noted)
Carbon Monoxide (CO)	54.469
Nitrogen Oxide (NOx)	3.038
Particulate Matter <2.5 μm (PM _{2.5})	0.067
Particulate Matter <10 μm (PM ₁₀)	0.076
Volatile Organic Compounds (VOC)	3.473
Carbon Dioxide (CO ₂)	5,238.888
Carbon Dioxide Equivalent (CO ₂ e)	5,273.967
Total Energy Consumption (MMBTU/day)	70.786

¹ Kansas State Data Center, <https://ipsr.ku.edu/ksdata/ksah/trans/15trans9.pdf>
² Energy Information Administration (EIA) Annual Energy Outlook 2022, Vehicle Sales Projections - Midwest Region
³ Bureau of Transportation Statistics, Vehicle Miles Traveled and Vehicle Trips by State 2017, <https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state>

CMAQ Tool Methodology [continued]

Average Daily Vehicle Miles Traveled¹: 46.193
Assumed Average Miles Charged per Hour: 21.6 [2.5 mi/kwh at 9.6kw, 90% efficient charger]
Average time required to replace daily miles traveled: 46.19 / 21.6 = 2.1 hours
Assumed Site Business / Open Hours: 14 hours (8 AM - 10 PM)
Number of vehicles per day by each charger port: 14 / 2.1 = 6.6 vehicles
Total number of daily vehicle miles supplied by proposed project: 6.6 X 68 = 448

A total of 448 electric vehicles can reasonably expect to have all of their annual vehicle miles supplied by the proposed electric vehicle charging stations. Since one site (the Nolte Transit Center) serves larger transit vehicles and buses, the effect would be even greater.

(3) Please enter the projected market share of replacement electric vehicles after construction of the new infrastructure.

The number of battery electric vehicles sold in the Midwest was estimated at 7% in 2022, and is expected to increase each year through 2030. According to MARC data, there are only 146 existing alternative fuel charging sites near the proposed project area. Therefore, input (3) was set to 100% to reflect that EV sales are growing faster than public EV charging infrastructure is growing in the Kansas City Area. In other words, demand for electric vehicles is high but constrained by availability of charging stations, and so this input was set to **100%**.

(4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle.

The proposed project sites are expected to serve public passenger vehicles and a limited number of fleet / commercial vehicles. Therefore, the vehicle types were restricted to Passenger Car, Passenger Truck, and Light Commercial Truck.

OUTPUT

Carbon Dioxide (CO₂): 5,239
Carbon Dioxide Equivalent (CO₂e): 5,274

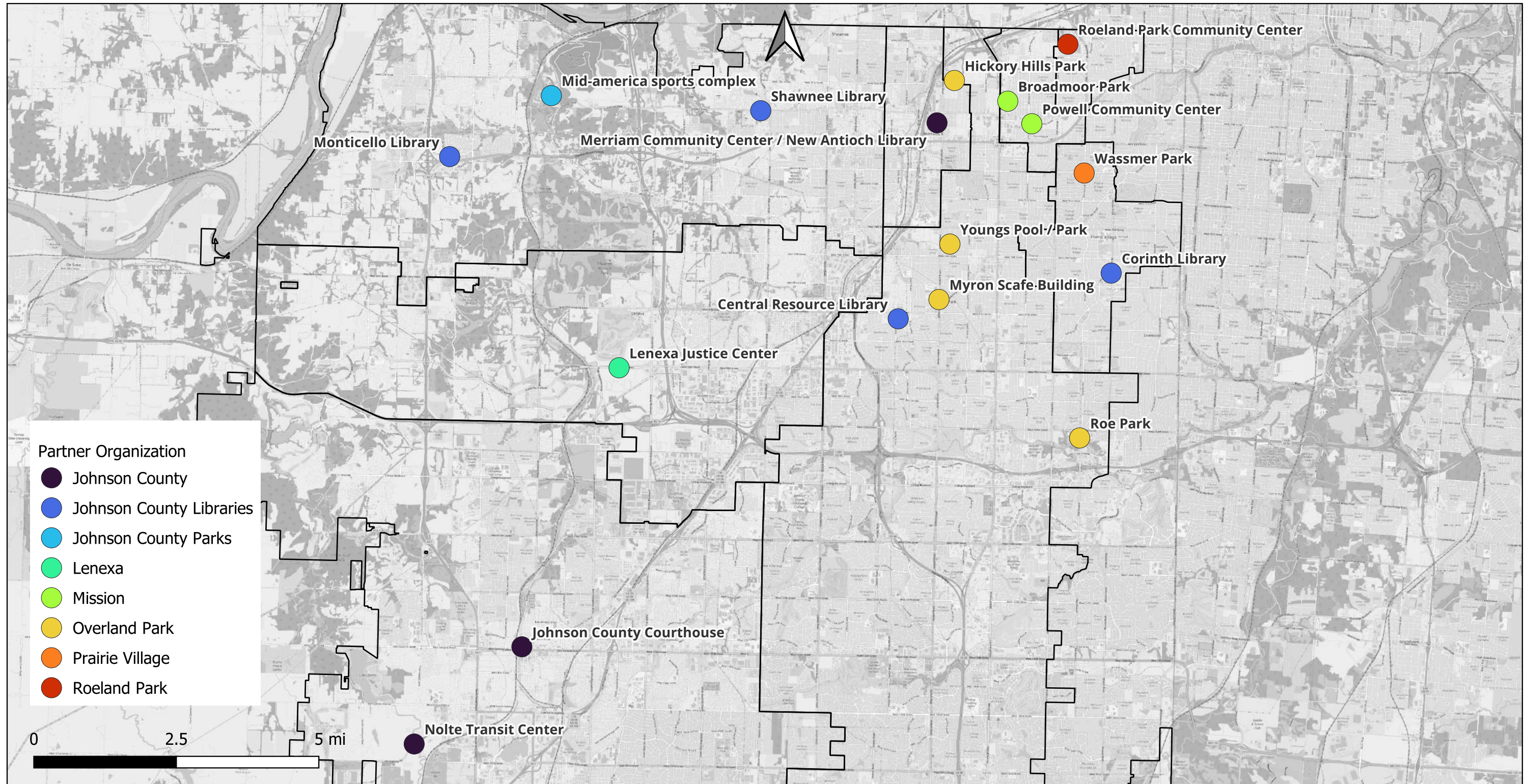


JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY CMAQ EMISSIONS CALCULATOR INPUT METHODOLOGY		
SIZE	11 X 17 (ANSI B)	DWG NO	B2
REV	5/19/23		

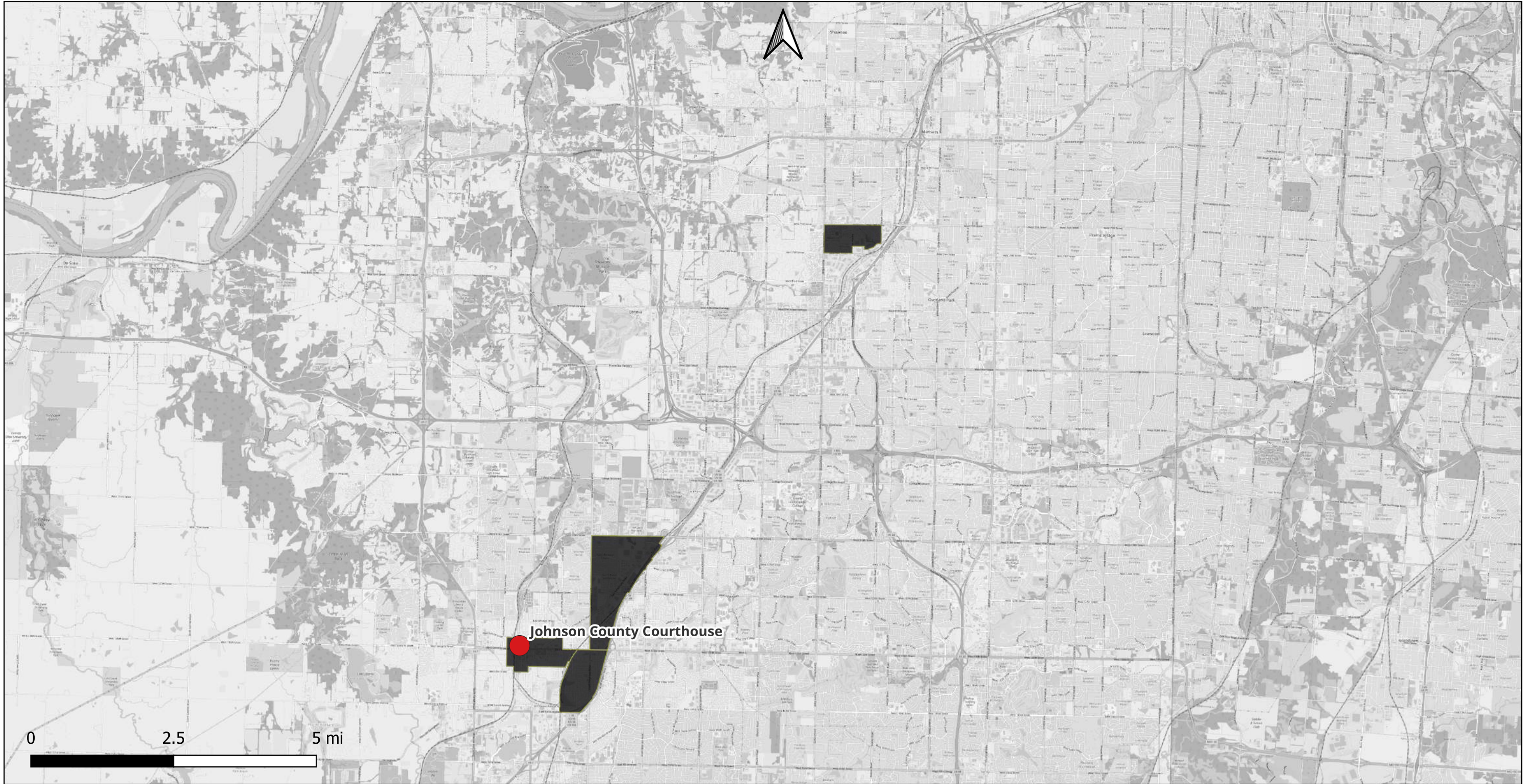
Map Description	Page Number
All proposed sites and their associated partner organizations	A1
Proposed sites located within a Justice40 designated Climate and Economic Justice census tract	A2
Proposed sites located within 1 mile of a designated Transportation Disadvantaged census tract	A3
Proposed sites located with 1/2 mile of a public transit stop	A4
Proposed sites located within 1 mile of a designated Environmental Justice census tract	A5
Proposed sites located within 1 mile of a MARC designated Activity Center	A6
Proposed sites located within 1 mile of a MARC designated Planning Corridor	A7
Existing EV charging stations	A8
Proposed sites located within 1 mile of a ConnectedKC 2050 designated Low Income census tract	A9



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY APPENDIX A - TABLE OF CONTENTS			
SIZE	11 X 17 (ANSI B)	DWG NO	A0
		REV	5/19/23



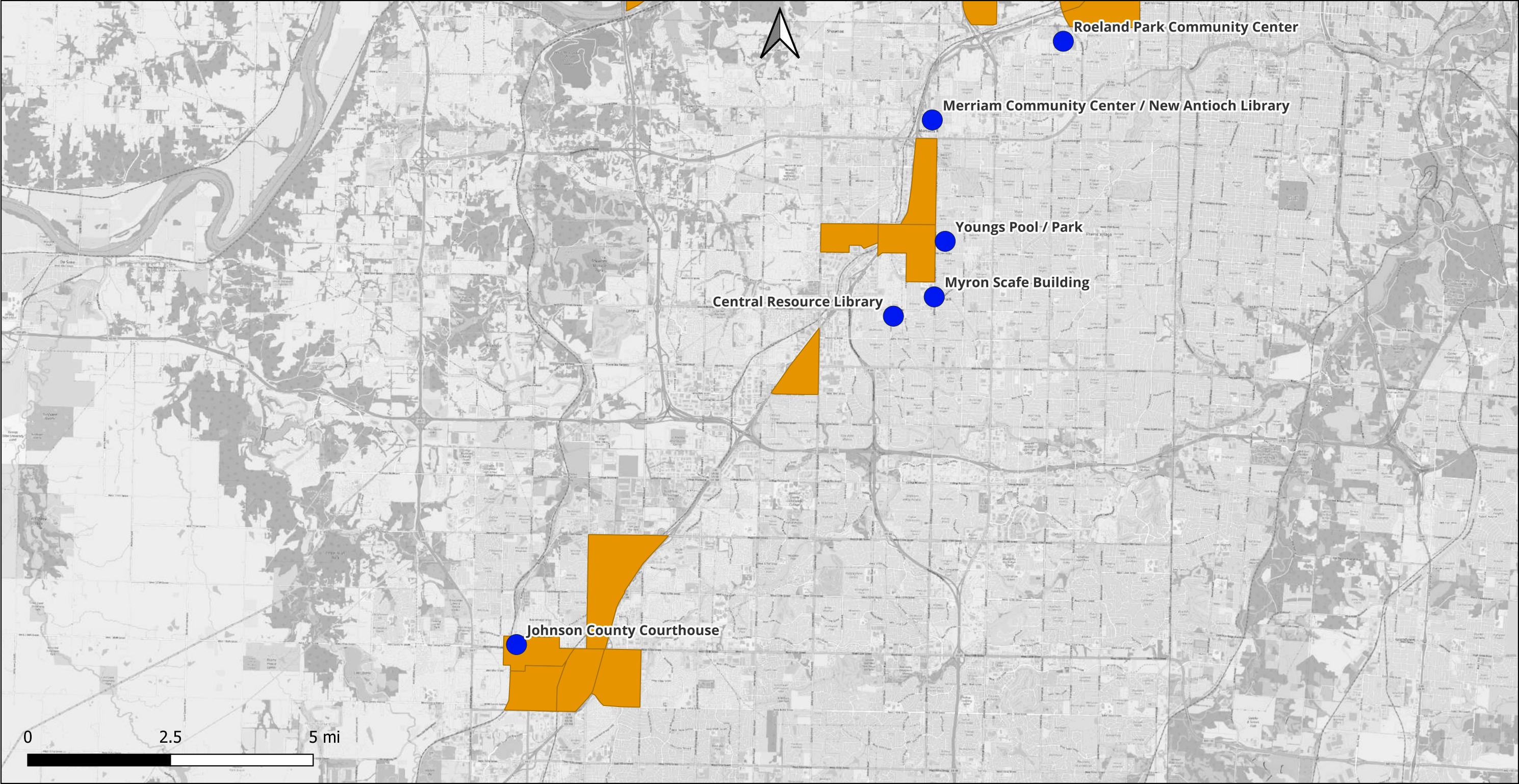
JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY ALL PROPOSED SITES AND PARTNER ORGANIZATIONS		
SIZE	11 X 17 (ANSI B)	DWG NO	A1
REV	5/19/23		



-  Sites within CEJST Overall Disadvantaged Census Tract
-  CEJST_Disadvantaged_Tracts



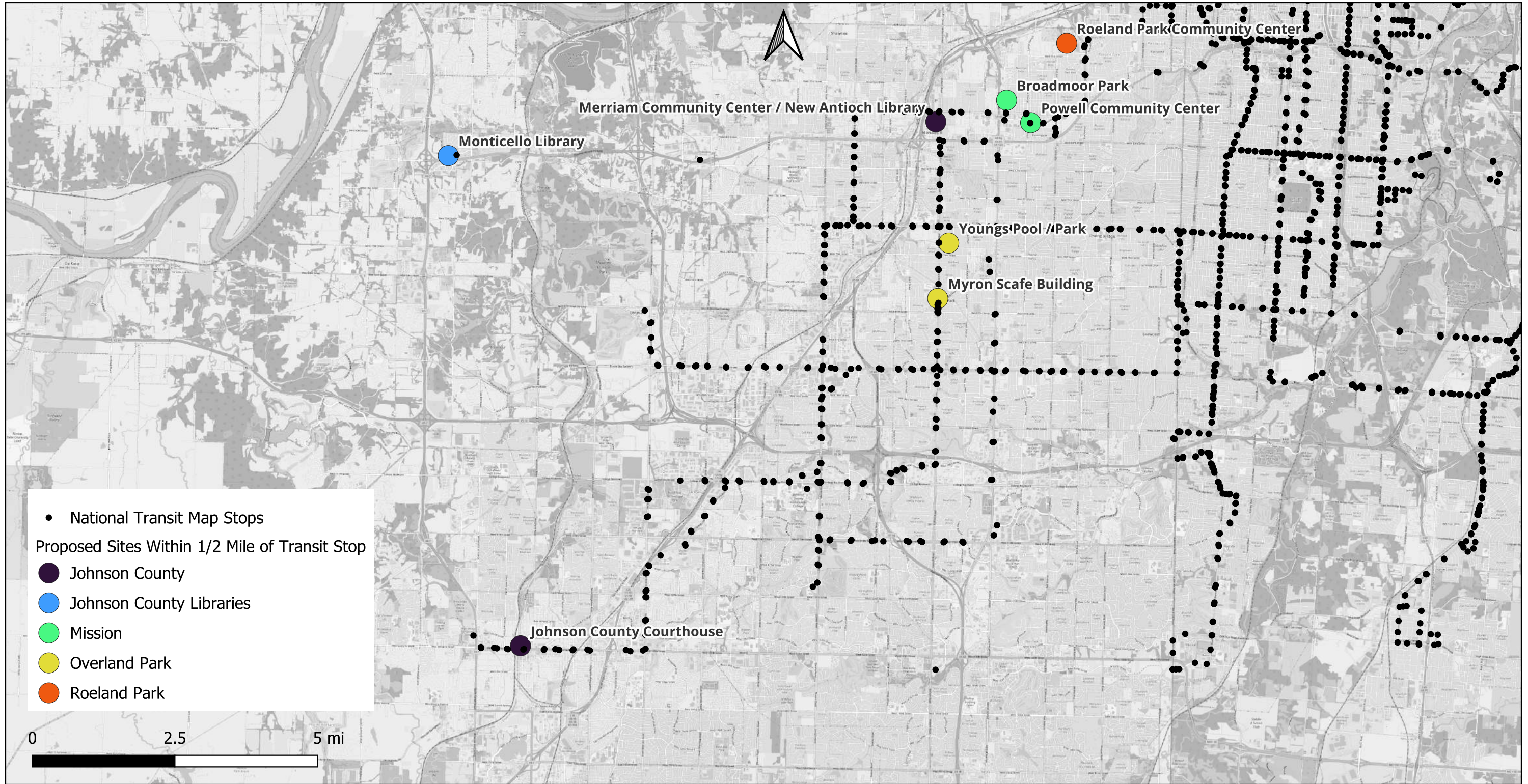
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TITLE CONNECTING JOHNSON COUNTY PROPOSED SITES WITHIN CEJST OVERALL DISADVANTAGED CENSUS TRACTS			
SIZE	11 X 17 (ANSI B)	DWG NO	A2
		REV	5/19/23



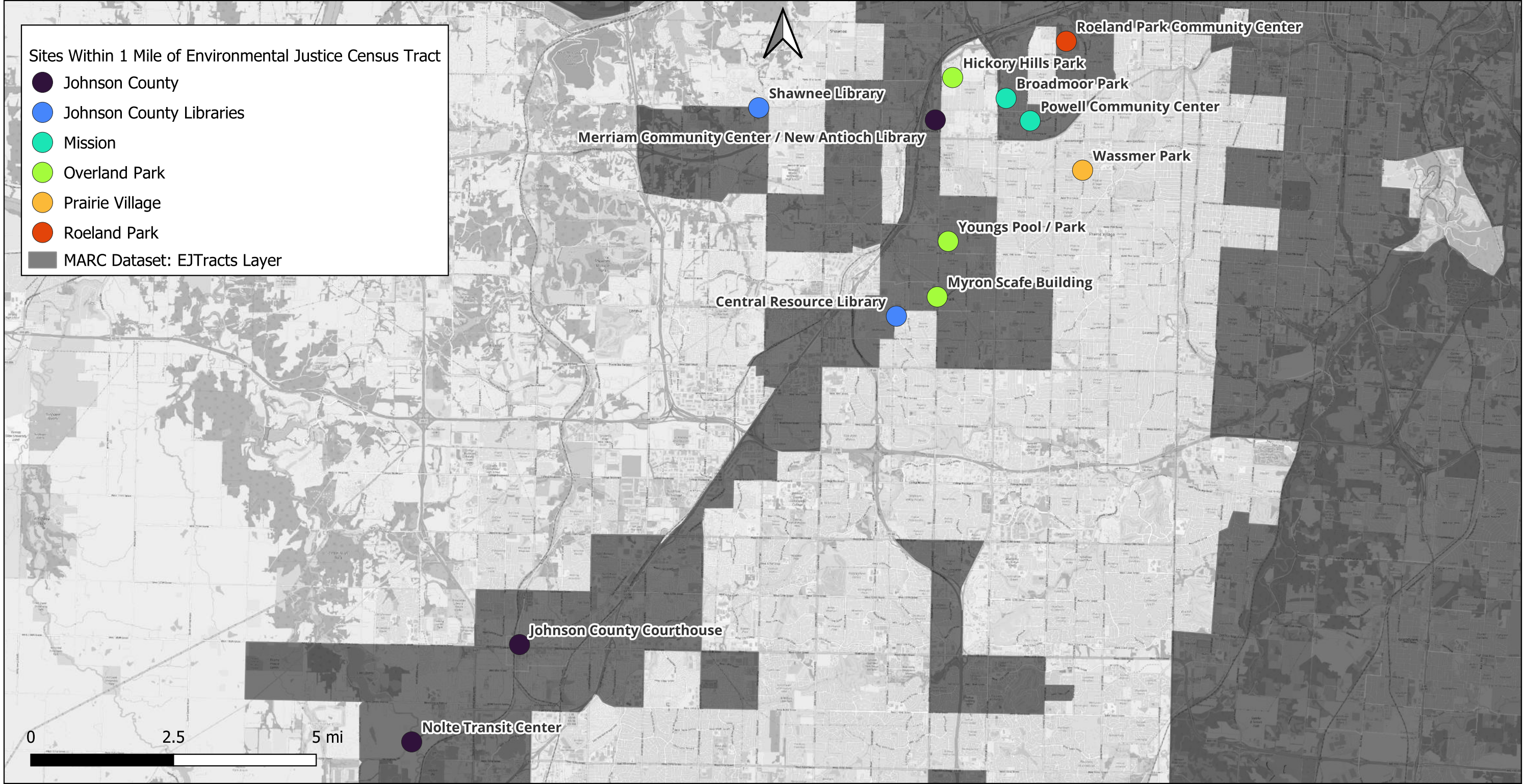
● Proposed Site Within 1 Mile of DOT Disadvantaged Census Tract
DOT Disadvantaged Census Tract
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■ 1 [252]



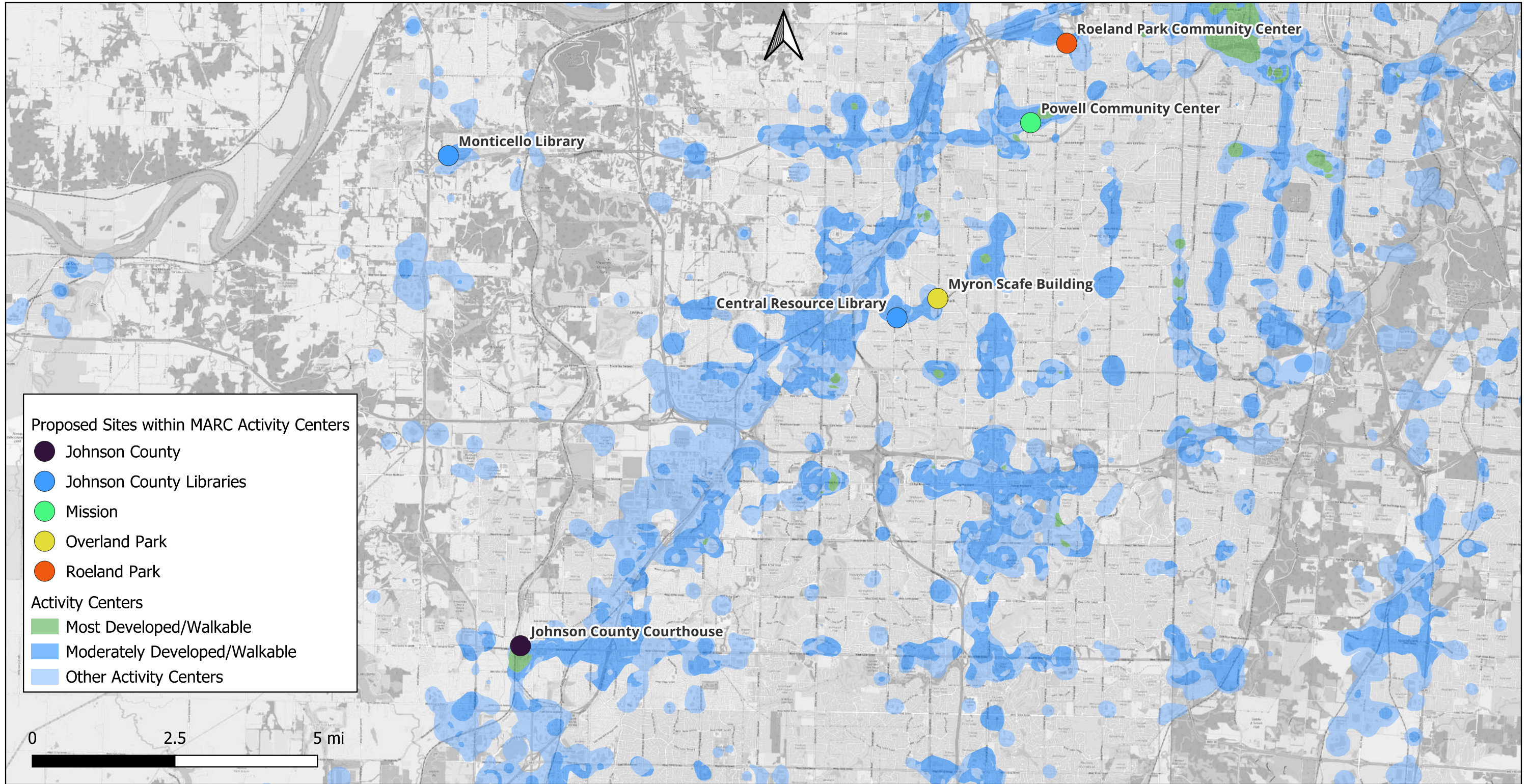
JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY PROPOSED SITES NEAR TRANSPORTATION DISADVANTAGED CENSUS TRACTS			
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		REV	5/19/23



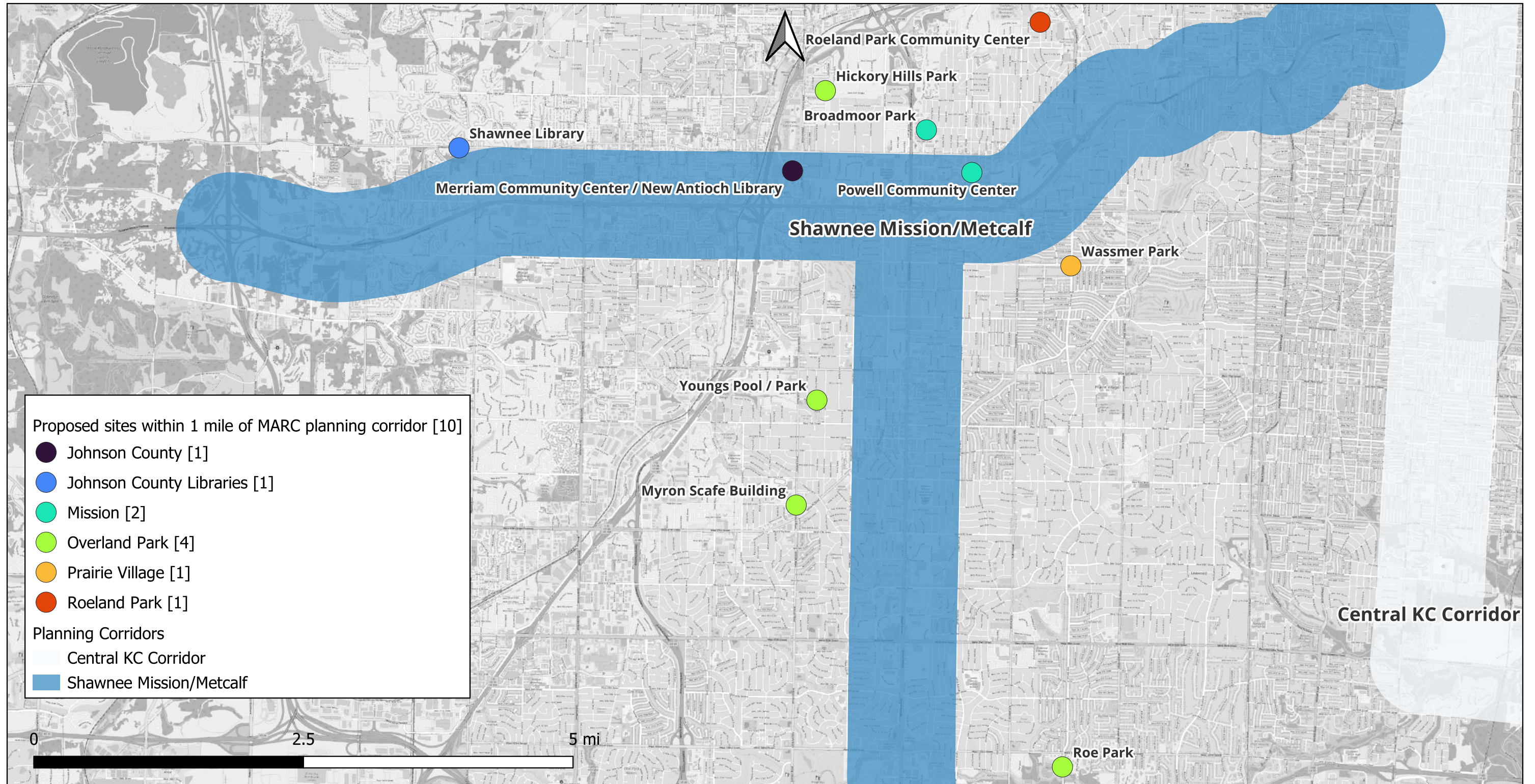
JENNINGS ENGINEERING, LLC			
TITLE			
CONNECTING JOHNSON COUNTY PROPOSED SITES NEAR TRANSIT STOPS			
SIZE	11 X 17 (ANSI B)	DWG NO	A4
		REV	5/19/23



JENNINGS ENGINEERING, LLC			
TITLE			
CONNECTING JOHNSON COUNTY PROPOSED SITES NEAR EJ TRACTS			
SIZE	11 X 17 (ANSI B)	DWG NO	A5
		REV	5/19/23



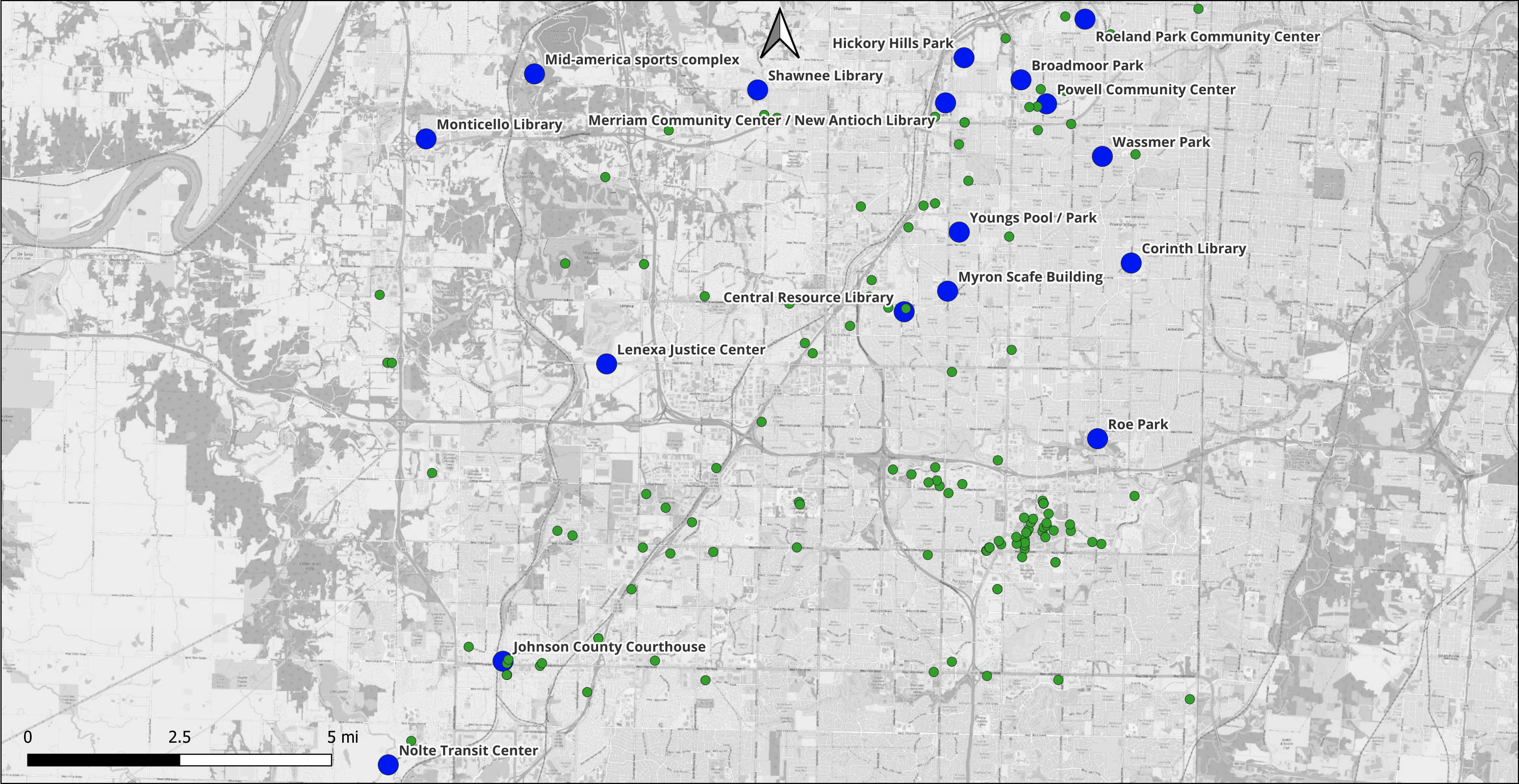
JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY PROPOSED SITES NEAR MARC IDENTIFIED ACTIVITY CENTERS		
SIZE	11 X 17 (ANSI B)	DWG NO A6
		REV 5/19/23



JENNINGS ENGINEERING, LLC

TITLE
CONNECTING JOHNSON COUNTY
PROPOSED SITES NEAR MARC IDENTIFIED
PLANNING CORRIDORS

SIZE	11 X 17 (ANSI B)	DWG NO	A7	REV	5/19/23
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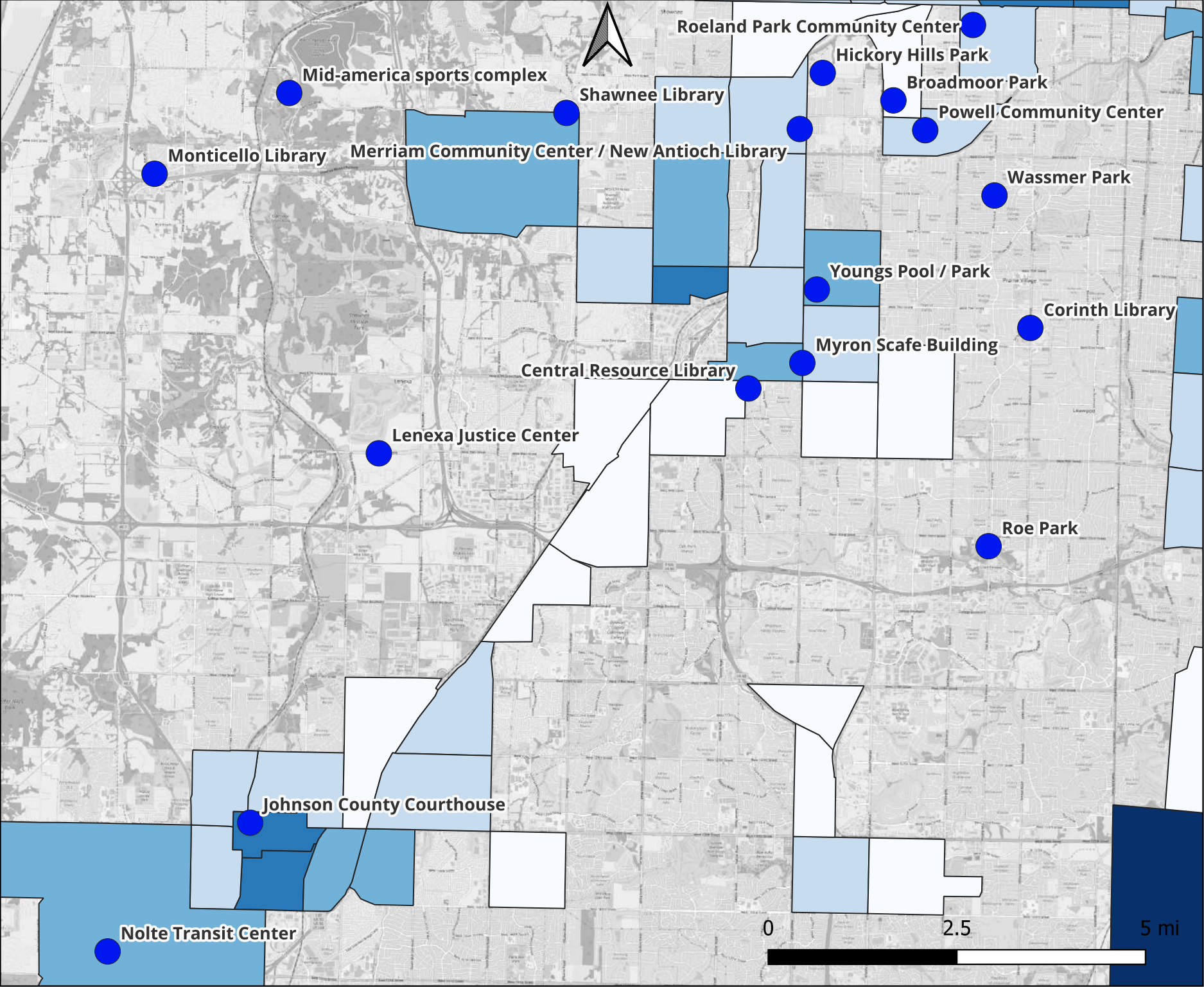


- Alternative fuel stations located within 5 miles of a proposed site [142]
- Connected KC proposed site

Alternative fuel station data provided by MARC ConnectedKC 2050 dataset.



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY EXISTING CHARGING STATIONS			
SIZE	11 X 17 (ANSI B)	DWG NO	A8
		REV	5/19/23



Low Income Population Density

- 0 - 0.101
- 0.101 - 0.152
- 0.152 - 0.201
- 0.201 - 0.282
- 0.282 - 0.656
- Proposed EV Charging Station Site

Low-income population data layer provided by MARC ConnectedKC 2050 dataset



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY CONNECTED KC 2050 LOW INCOME TRACT DATA			
SIZE	11 X 17 (ANSI B)	DWG NO	A9
		REV	5/19/23

This calculator will estimate the reduction in emissions resulting from developing electric vehicle charging infrastructure with unrestricted access. The calculator does not consider lifecycle emissions, particularly it refrains from estimating any emissions that may occur outside of vehicle operations. Electric transit buses and transit bus charging infrastructure are included in the Transit Bus Upgrades & System Improvements tool.

INPUT

User Guide

(1) What is your project evaluation year?

2023

(2) Please input the estimated number of vehicles in your study area

448

(3) Please enter the projected market share of replacement electric vehicles after construction of the

100.00

%

(4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle

Reset Inputs

Fill Table

Select All

Unselect All

Vehicle Source Type	Average Annual Miles Traveled Per Vehicle	Number of Existing Conventional Fuel Vehicles	Number of Replacement Electric Vehicles Projected
<input checked="" type="checkbox"/> Passenger Car	11,136	201	201
<input checked="" type="checkbox"/> Passenger Truck	12,176	221	221
<input checked="" type="checkbox"/> Light Commercial Truck	12,459	26	26
<input type="checkbox"/> School Bus	0	0	0
<input type="checkbox"/> Refuse Truck	0	0	0
<input type="checkbox"/> Single Unit Short-Haul Truck	0	0	0
<input type="checkbox"/> Single Unit Long-Haul Truck	0	0	0
<input type="checkbox"/> Combination Short-Haul Truck	0	0	0
<input type="checkbox"/> Combination Long-Haul Truck	0	0	0
TOTAL		0	0

Note: users may overwrite default values in the table with local estimates where applicable.

OUTPUT

Calculate Output

EMISSION REDUCTIONS

Pollutant	Total (kg/day unless noted)
Carbon Monoxide (CO)	54.469
Nitrogen Oxide (NOx)	3.038
Particulate Matter <2.5 µm (PM _{2.5})	0.067
Particulate Matter <10 µm (PM ₁₀)	0.076
Volatile Organic Compounds (VOC)	3.473
Carbon Dioxide (CO ₂)	5,238.888
Carbon Dioxide Equivalent (CO ₂ e)	5,273.967
Total Energy Consumption (MMBTU/day)	70.786

¹ Kansas State Data Center, <https://ipsr.ku.edu/ksdata/ksah/trans/15trans9.pdf>

² Energy Information Administration (EIA) Annual Energy Outlook 2022, Vehicle Sales Projections - Midwest Region

³ Bureau of Transportation Statistics, Vehicle Miles Traveled and Vehicle Trips by State 2017, <https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state>

CMAQ Tool Methodology

The CMAQ Electric Vehicles (EV) and EV Charging Infrastructure Tool estimates the emission benefits of adopting electric vehicles in the current on-road transportation system. The tool was used to predict the emissions reductions achieved from the construction of the proposed Connecting Johnson County electric vehicle charging infrastructure project.

The CMAQ tool inputs are non-prescriptive. It was necessary to determine an appropriate input value for (2) and (3) as shown to the left.

(2) Please input the estimated number of vehicles in your study area

The Connected Johnson County project proposes installing a total of 80 level 2 EV charging ports distributed among 20 proposed sites in Johnson County, KS. In 2020, Johnson County had approximately 375,000 registered passenger vehicles¹ and in 2022 it was estimated that 7% of all new passenger vehicle sales in the Midwest were battery electric vehicles². Many of the proposed sites are public areas, parks, and libraries, with parking facilities shared or accessible by nearby public and private businesses. Because of this, it was not feasible to obtain realistic data on unique passenger vehicles that visit each of the site study areas. Many of the sites serve hundreds of unique visitors each week. Additionally, it seems inappropriate to employ a census tract or municipality wide study area, as there are several existing EV charging stations within each census tract already. Therefore, it was decided that this input should be constrained by the reasonable number of actual vehicles capable of having their average energy consumption fully provided by the proposed sites. In reality, all vehicles are charged at various locations, but the below numbers represent an estimate of the number of EVs benefiting from the proposed charging stations. Furthermore, the proposed public sites serve a diverse population, both geographically and demographically, so it is not unreasonable to assume that a significant number of the site visitors may not own single-family homes do not have economic access to a home electric vehicle charging station.

Continued on the following page.



JENNINGS ENGINEERING, LLC		
TITLE	CONNECTING JOHNSON COUNTY CMAQ EMISSIONS CALCULATOR INPUT METHODOLOGY	
SIZE	11 X 17 (ANSI B)	DWG NO B1 REV 5/19/23

This calculator will estimate the reduction in emissions resulting from developing electric vehicle charging infrastructure with unrestricted access. The calculator does not consider lifecycle emissions, particularly it refrains from estimating any emissions that may occur outside of vehicle operations. Electric transit buses and transit bus charging infrastructure are included in the Transit Bus Upgrades & System Improvements tool.

INPUT

User Guide

Reset Inputs

Fill Table

Calculate Output

(1) What is your project evaluation year?

2023

(2) Please input the estimated number of vehicles in your study area

448

(3) Please enter the projected market share of replacement electric vehicles after construction of the

100.00%

(4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle

Select All

Unselect All

Vehicle Source Type	Average Annual Miles Traveled Per Vehicle	Number of Existing Conventional Fuel Vehicles	Number of Replacement Electric Vehicles Projected
<input checked="" type="checkbox"/> Passenger Car	11,136	201	201
<input checked="" type="checkbox"/> Passenger Truck	12,176	221	221
<input checked="" type="checkbox"/> Light Commercial Truck	12,459	26	26
<input type="checkbox"/> School Bus	0	0	0
<input type="checkbox"/> Refuse Truck	0	0	0
<input type="checkbox"/> Single Unit Short-Haul Truck	0	0	0
<input type="checkbox"/> Single Unit Long-Haul Truck	0	0	0
<input type="checkbox"/> Combination Short-Haul Truck	0	0	0
<input type="checkbox"/> Combination Long-Haul Truck	0	0	0
TOTAL		0	0

Note: users may overwrite default values in the table with local estimates where applicable.

OUTPUT

EMISSION REDUCTIONS

Pollutant	Total (kg/day unless noted)
Carbon Monoxide (CO)	54.469
Nitrogen Oxide (NOx)	3.038
Particulate Matter <2.5 µm (PM _{2.5})	0.067
Particulate Matter <10 µm (PM ₁₀)	0.076
Volatile Organic Compounds (VOC)	3.473
Carbon Dioxide (CO ₂)	5,238.888
Carbon Dioxide Equivalent (CO ₂ e)	5,273.967
Total Energy Consumption (MMBTU/day)	70.786

CMAQ Tool Methodology [continued]

Average Daily Vehicle Miles Traveled¹: 46.193
Assumed Average Miles Charged per Hour: 21.6 [2.5 mi/kwh at 9.6kw, 90% efficient charger]
Average time required to replace daily miles traveled: 46.19 / 21.6 = 2.1 hours
Assumed Site Business / Open Hours: 14 hours (8 AM - 10 PM)
Number of vehicles per day by each charger port: 14 / 2.1 = 6.6 vehicles
Total number of daily vehicle miles supplied by proposed project: 6.6 X 68 = 448

A total of 448 electric vehicles can reasonably expect to have all of their annual vehicle miles supplied by the proposed electric vehicle charging stations. Since one site (the Nolte Transit Center) serves larger transit vehicles and buses, the effect would be even greater.

- (3) Please enter the projected market share of replacement electric vehicles after construction of the new infrastructure.
- The number of battery electric vehicles sold in the Midwest was estimated at 7% in 2022, and is expected to increase each year through 2030. According to MARC data, there are only 146 existing alternative fuel charging sites near the proposed project area. Therefore, input (3) was set to 100% to reflect that EV sales are growing faster than public EV charging infrastructure is growing in the Kansas City Area. In other words, demand for electric vehicles is high but constrained by availability of charging stations, and so this input was set to **100%**.
- (4) Please unselect below any vehicle source type(s) that will not have electric vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle.

The proposed project sites are expected to serve public passenger vehicles and a limited number of fleet / commercial vehicles. Therefore, the vehicle types were restricted to Passenger Car, Passenger Truck, and Light Commercial Truck.

OUTPUT

Carbon Dioxide (CO2): 5,239
Carbon Dioxide Equivalent (CO2e): 5,274

¹ Kansas State Data Center, <https://ipsr.ku.edu/ksdata/ksah/trans/15trans9.pdf>
² Energy Information Administration (EIA) Annual Energy Outlook 2022, Vehicle Sales Projections - Midwest Region
³ Bureau of Transportation Statistics, Vehicle Miles Traveled and Vehicle Trips by State 2017, <https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state>



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY CMAQ EMISSIONS CALCULATOR INPUT METHODOLOGY		
SIZE	11 X 17 (ANSI B)	DWG NO	B2
REV	5/19/23		

Site Name	Materials & Construction	Engineering Design Fees	Owner's Engineer & Program Management	MARC Program Fee	Total Capital Cost		
Partner: Johnson County							
Johnson County Courthouse	\$ 51,514.00	\$ 7,727.10	\$ 2,575.70	\$ 618.17	\$ 62,434.97		
Nolte Transit Center	\$ 400,000.00	\$ 60,000.00	\$ 20,000.00	\$ 4,800.00	\$ 484,800.00		
						Subtotal Johnson County	\$ 547,234.97
						80% (CRP Funds)	\$ 437,787.97
						20% (Required Local Match)	\$ 109,446.99
Partner: Johnson County Parks & Recreation							
Mid-America Sports Complex	\$ 51,514.00	\$ 7,727.10	\$ 2,575.70	\$ 618.17	\$ 62,434.97		
						Subtotal Johnson County Parks & Recreation	\$ 62,434.97
						80% (CRP Funds)	\$ 49,947.97
						20% (Required Local Match)	\$ 12,486.99
Partner: Johnson County Libraries							
Monticello Library	\$ 69,981.00	\$ 10,497.15	\$ 3,499.05	\$ 839.77	\$ 84,816.97		
Shawnee Library	\$ 77,264.00	\$ 11,589.60	\$ 3,863.20	\$ 927.17	\$ 93,643.97		
Corinth Library	\$ 85,216.00	\$ 12,782.40	\$ 4,260.80	\$ 1,022.59	\$ 103,281.79		
Central Resource Library Expansion	\$ 80,000.00	\$ 12,000.00	\$ 4,000.00	\$ 960.00	\$ 96,960.00		
Merriam Community Center / Antioch Library	\$ 80,000.00	\$ 12,000.00	\$ 4,000.00	\$ 960.00	\$ 96,960.00		
		\$ -				Subtotal Johnson County Libraries	\$475,662.73
		\$ -				80% (CRP Funds)	\$380,530.19
		\$ -				20% (Required Local Match)	\$ 95,132.55
Partner: City of Lenexa							
Lenexa Justice Center	\$ 107,000.00	\$ 16,050.00	\$ 5,350.00	\$ 1,284.00	\$ 129,684.00		
		\$ -				Subtotal City of Lenexa	\$129,684.00
		\$ -				80% (CRP Funds)	\$103,747.20
		\$ -				20% (Required Local Match)	\$ 25,936.80
Partner: City of Mission							
Powell Community Center	\$ 102,794.00	\$ 15,419.10	\$ 5,139.70	\$ 1,233.53	\$ 124,586.33		
Broadmoor Park	\$ 81,869.00	\$ 12,280.35	\$ 4,093.45	\$ 982.43	\$ 99,225.23		
		\$ -				Subtotal City of Mission	\$223,811.56
		\$ -				80% (CRP Funds)	\$179,049.24
		\$ -				20% (Required Local Match)	\$ 44,762.31
Partner: City of Overland Park							
Youngs Pool / Park	\$ 130,000.00	\$ 19,500.00	\$ 6,500.00	\$ 1,560.00	\$ 157,560.00		
Hickory Hills Park	\$ 130,000.00	\$ 19,500.00	\$ 6,500.00	\$ 1,560.00	\$ 157,560.00		
Myron Scafe Building	\$ 100,000.00	\$ 15,000.00	\$ 5,000.00	\$ 1,200.00	\$ 121,200.00		
Roe Park	\$ 130,000.00	\$ 19,500.00	\$ 6,500.00	\$ 1,560.00	\$ 157,560.00		
		\$ -				Subtotal City of Overland Park	\$593,880.00
		\$ -				80% (CRP Funds)	\$475,104.00
		\$ -				20% (Required Local Match)	\$ 118,776.00
Partner: City of Prairie Village							
Wassmer Park	\$ 91,075.00	\$ 13,661.25	\$ 4,553.75	\$ 1,092.90	\$ 110,382.90		
		\$ -				Subtotal City of Prairie Village	\$ 110,382.90
		\$ -				80% (CRP Funds)	\$ 88,306.32
		\$ -				20% (Required Local Match)	\$ 22,076.58
Partner: City of Roeland Park							
Roeland Park Community Center	\$ 79,356.00	\$ 11,903.40	\$ 3,967.80	\$ 952.27	\$ 96,179.47		
			\$ -			Subtotal City of Roeland Park	\$96,179.47
						80% (CRP Funds)	\$76,943.58
						20% (Required Local Match)	\$ 19,235.89
Subtotal	\$ 1,847,583.00	\$ 277,137.45	\$ 92,379.15	\$ 22,171.00			
						Total (All Sites)	\$ 2,239,270.60
						80% (CRP Funds)	\$ 1,791,416.48
						20% (local match)	\$ 447,854.12

Cost Estimate Methodology

Jennings Engineering prepared conceptual level cost estimates on behalf of Johnson County for each of the proposed sites identified in this application, with the exception of the sites located in Overland Park and Lenexa, which were provided by the city of Overland Park and Lenexa, respectively. A number of variables were incorporated into the estimated project costs, including available site infrastructure, the distance to likely sources of power, and recent construction bids for similar public projects. The estimates shown here are not intended to be used to procure or bid any construction activities, and should be utilized for budgetary and reference purposes only. Construction costs and labor rates are based on the 2023 RSMeans union labor data set for Kansas City metro area.

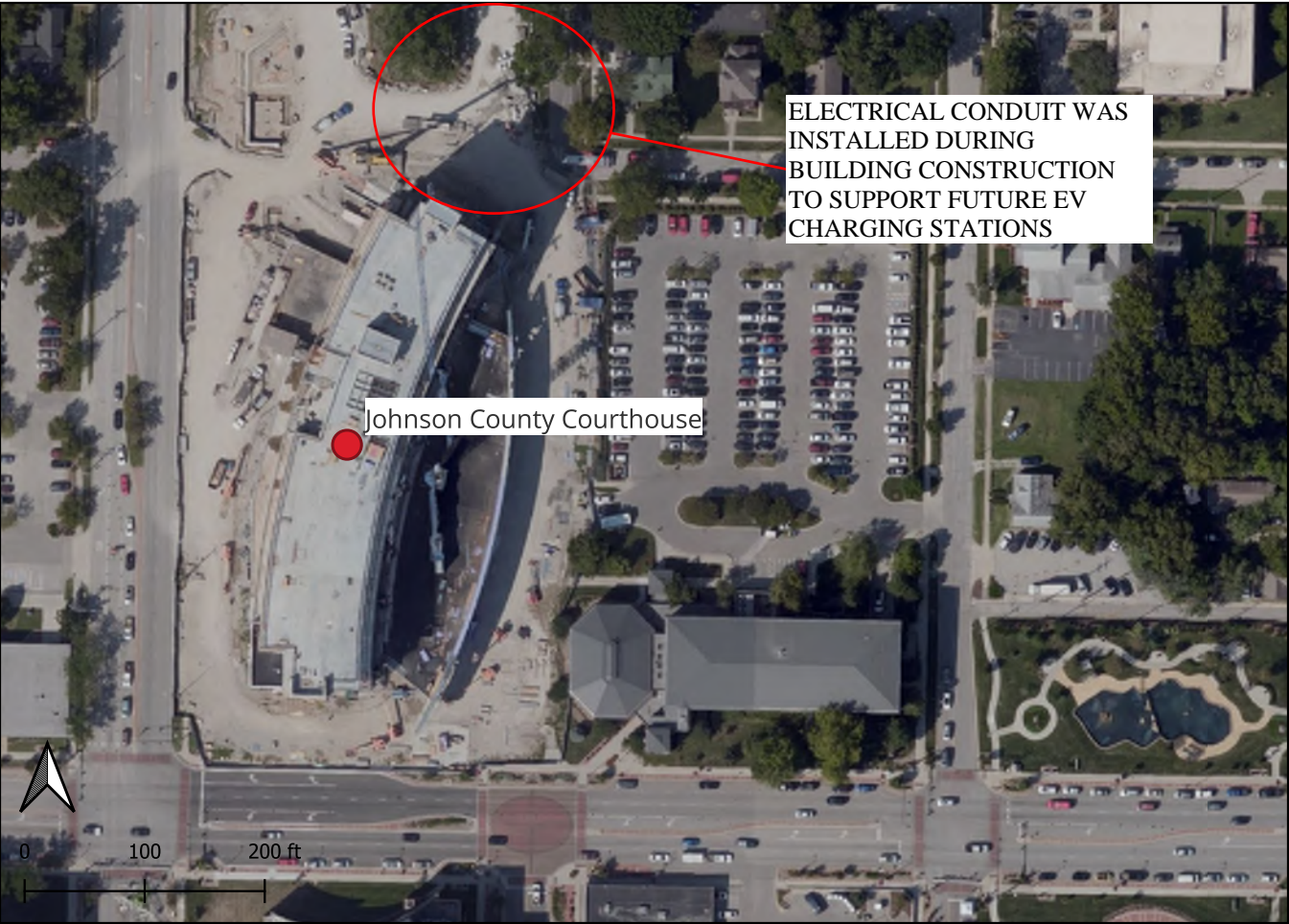


JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY ESTIMATED PROJECT CAPITAL COSTS ALL PROPOSED PROJECT SITES			
SIZE	11 X 17 (ANSI B)	DWG NO	C1
		REV	5/19/23

Site Name	Page Number
Partner: Johnson County	
Johnson County Courthouse	D1
Nolte Transit Center	D2
Partner: Johnson County Parks & Recreation	
Mid-America Sports Complex	D3
Partner: Johnson County Libraries	
Monticello Library	D4
Shawnee Library	D5
Corinth Library	D6
Central Resource Library Expansion	D7
Merriam Community Center / Antioch Library	D8
Partner: City of Lenexa	
Lenexa Justice Center	D9
Partner: City of Mission	
Powell Community Center	D10
Broadmoor Park	D11
Partner: City of Overland Park	
Youngs Pool / Park	D12
Hickory Hills Park	D13
Myron Scafe Building	D14
Roe Park	D15
Partner: City of Prairie Village	
Wassmer Park	D16
Partner: City of Roeland Park	
Roeland Park Community Center	D17



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS APPENDIX D - TABLE OF CONTENTS		
SIZE	11 X 17 (ANSI B)	DWG NO	D0
		REV	5/19/23



Site Overview

The Johnson County Courthouse is north of the administration building and west of Olathe City Hall. The 356,821 square feet, seven story courthouse building includes 28 courtrooms, secure in-custody circulation, state of the art technology, public gathering spaces and a parking lot. The courthouse will meet Johnson County's judicial needs for more than 75 years as the county expects to add 10,000 residents each year. Its design will also allow for the addition of additional courtrooms later as needed. Two level 2 electric vehicle chargers at parking area north of the building are proposed. The chargers are intended to be utilized by both the public and courthouse staff. Electrical conduit for this purpose was installed as part of the construction of the courthouse in 2021, which simplifies the scope significantly.

Address

150 W. Santa Fe St
Olathe KS 66061

Scope of Work

Install two level 2 EV chargers on pedestal stands at the location of the previously stubbed conduit, located in the parking area north of the courthouse building. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV chargers to the existing building power panel. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

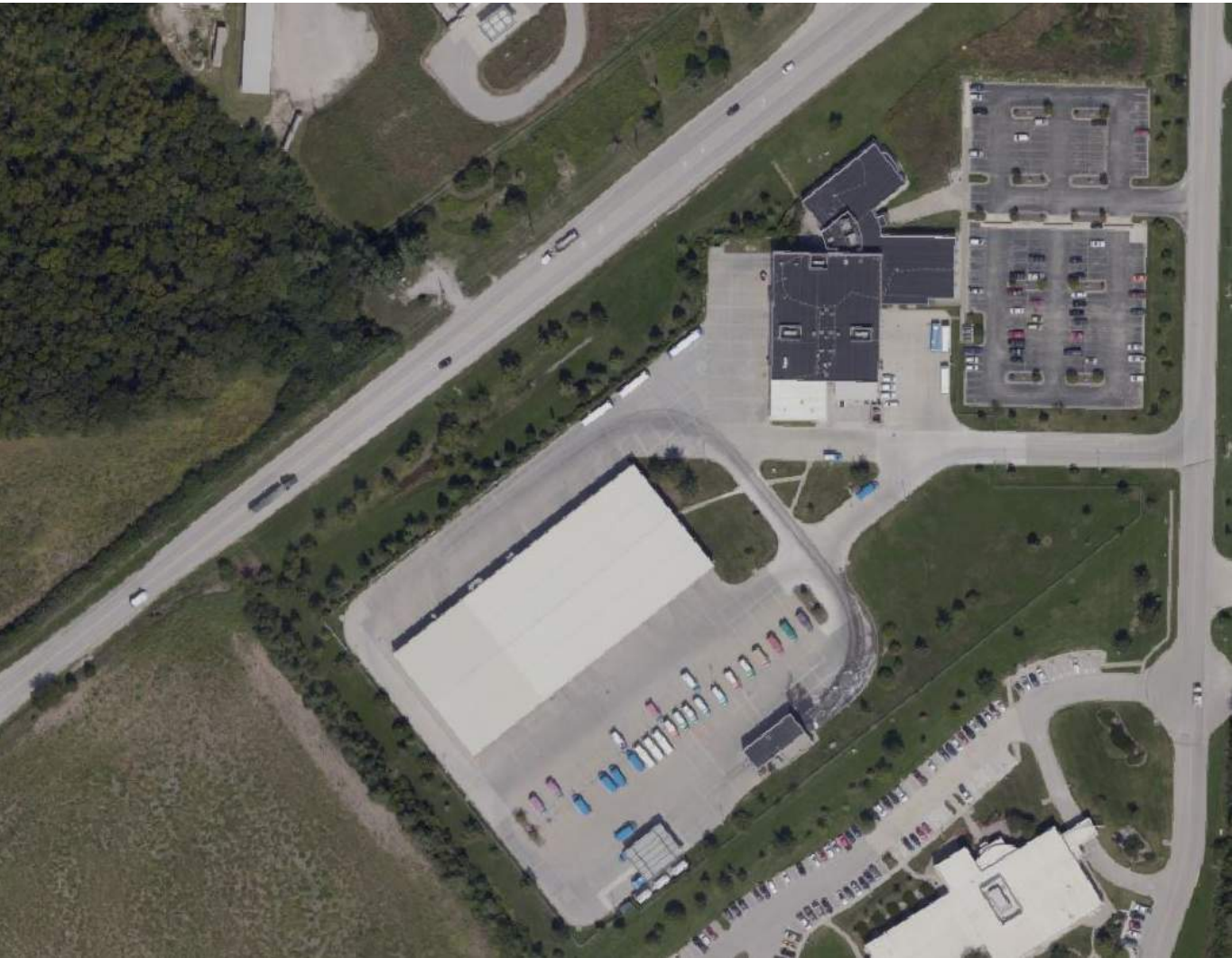
Demographic Information

Tract 20091053555 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes:
<ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary
<ul style="list-style-type: none">• Poverty Level - 45.73% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$34,119.00.• Transportation Cost Burden - The average household in this tract spends 26.68% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,760.00 on transportation.• Housing Cost Burden - 41.04% of households in this tract spend more than 30% of their income on housing.

The Johnson County Courthouse is located in a DOT Transportation Disadvantaged Community Census Tract



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS JOHNSON COUNTY COURTHOUSE		
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D1
		DATE	5/19/23



Site Overview

Johnson County Transit provides public transportation throughout Johnson County, connecting to downtown Kansas City, Missouri and Kansas City, Kansas. RideKC operates weekday commuter services with most routes running during peak morning and afternoon times. RideKC Freedom provides curb-to-curb service services for the elderly and disabled. The Nolte Transit Center supports smaller vehicles such as cutaways as well as large buses.

Charging stations at the Nolte Transit Center will support the electrification of transit vehicles. \$4 million in federal funding has been appropriated for electrification of transit vehicles in Johnson County, Unified Govt/Wyandotte County and KCMO/KCATA. Johnson County Transit is participating in a 18-24 month analysis of how small, medium and large electric transit vehicles perform in our respective jurisdictions, and DC fast chargers are essential to the success of this program. Additionally, KDOT is actively looking at adding EVs to their state contract so that agencies can have access to those vehicles in state procurements.

Address

1701 W Old Hwy 56
Olathe KS 66061

Scope of Work

Install two direct current fast chargers at a location on site determined during the detailed architecture and engineering design phase. Charger location shall balance transit center operating needs, traffic flow concerns, safety, security, and proximity to required electrical infrastructure. Chargers will require new 480 V, three-phase electrical service from Evergy, along with new electrical switchboards and distribution system equipment to supply the large electrical demand.

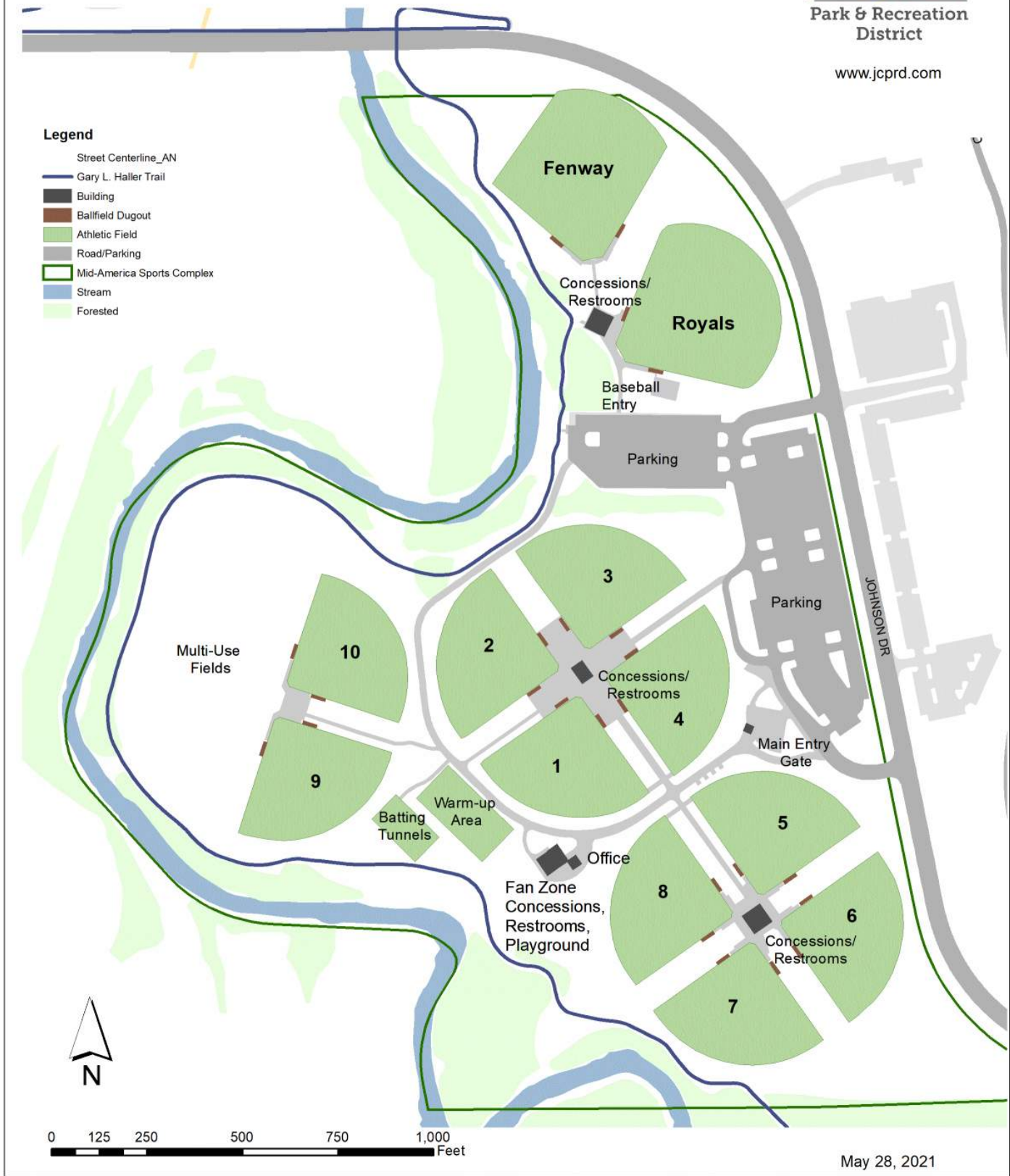
Demographic Information

Tract 20091053603 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - Yes• UZA Population 200k or Less - Yes• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 13.71% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$115,956.00.• Transportation Cost Burden - The average household in this tract spends 8.23% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,994.00 on transportation.• Housing Cost Burden - 33.94% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS NOLTE TRANSIT CENTER		
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D2
		DATE	5/19/23

MID-AMERICA SPORTS COMPLEX
20000 Johnson Drive, Shawnee, Kansas 66218
Phone (913) 826-2920 - Fax (913) 826-2929



Site Overview

Mid-America Sports Complex is a 70-acre facility that hosts a variety of softball leagues, baseball leagues, baseball camps and national and regional softball tournaments. Built in 1991 and acquired in 1994 by JCPRD, the complex is complemented by ten lighted artificial turf softball fields, close parking, concessions, and is home of Okun Fieldhouse.

Address

20000 Johnson Drive
Shawnee, KS 66218

Scope of Work

Install two dual-port EV charging stations on pedestal stands in one of the existing parking areas. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV chargers to the existing building power panel or to a new utility service meter, depending on the alternative location selected. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091052502 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">UZA Population 50k or Less - YesUZA Population 200k or Less - YesUZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">Poverty Level - 6.81% of the population in the tract are at or below 200% of the federal poverty line.Median Household Income - The median household income in this tract is \$146,441.00.Transportation Cost Burden - The average household in this tract spends 6.96% of their household income on transportation.Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,939.00 on transportation.Housing Cost Burden - 7.27% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS MID-AMERICA SPORTS COMPLEX		
SIZE 11 X 17 (ANSI B)	DOCUMENT NO D3	DATE 5/19/23



Site Overview

Johnson County Library serves over two million people from 14 library buildings in Northeast Kansas. Monticello library is one of 6 library locations proposed that would benefit from public electric vehicle charging stations.

Address

22435 W. 66th St
Shawnee, KS 66226

Scope of Work

Install two dual-port level 2 EV charging stations on pedestal stands in the existing parking area. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing building power distribution panel or a new utility service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091052613 - Johnson County, Kansas	
<u>Urbanized Area Summary</u> Tract contains all or a portion of an Urban Area (UZA) with the following population sizes:	
<ul style="list-style-type: none">▪ UZA Population 50k or Less - Yes▪ UZA Population 200k or Less - Yes▪ UZA Population 200k+ - Yes	
<u>Cost Burden Summary</u>	
<ul style="list-style-type: none">▪ Poverty Level - 7.36% of the population in the tract are at or below 200% of the federal poverty line.▪ Median Household Income - The median household income in this tract is \$148,704.00.▪ Transportation Cost Burden - The average household in this tract spends 6.71% of their household income on transportation.▪ Estimated Cost of Transportation - The average household in this tract spends an estimated \$12,611.00 on transportation.▪ Housing Cost Burden - 13.07% of households in this tract spend more than 30% of their income on housing.	



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS MONTICELLO LIBRARY			
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D4
		DATE	5/19/23



Site Overview
Johnson County Library serves over two million people from 14 library buildings in Northeast Kansas. Shawnee Library is one of 6 library locations proposed that would benefit from public electric vehicle charging stations.

Address
13811 Johnson Dr
Shawnee, KS 66216

Scope of Work
Install two dual-port level 2 EV charging stations on pedestal stands in the existing parking area. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing building power distribution panel or a new utility service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091052308 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 33.78% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$62,151.00.• Transportation Cost Burden - The average household in this tract spends 15.20% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,622.00 on transportation.• Housing Cost Burden - 34.79% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS SHAWNEE LIBRARY			
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D5
		DATE	5/19/23



Site Overview

Johnson County Library serves over two million people from 14 library buildings in Northeast Kansas. Corinth Library is one of 6 library locations proposed that would benefit from public electric vehicle charging stations.

Address

8100 Mission Rd
Prairie Village, KS 66208

Scope of Work

Install two dual-port level 2 EV charging stations on pedestal stands in the existing parking area. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing building power distribution panel or a new utility service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

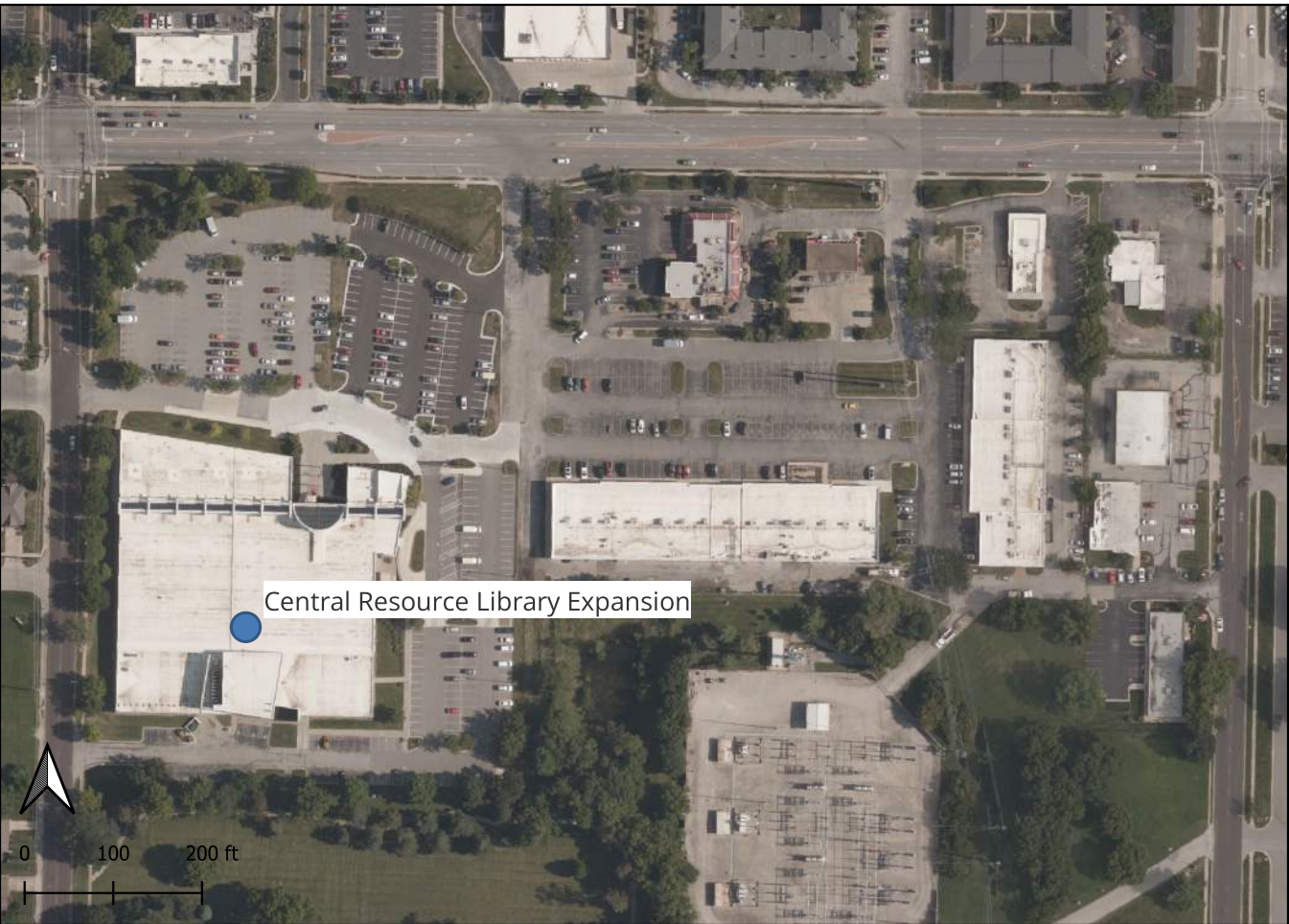
Tract 20091051400 - Johnson County, Kansas
<u>Urbanized Area Summary</u> Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
<u>Cost Burden Summary</u> <ul style="list-style-type: none">• Poverty Level - 9.89% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$101,544.00.• Transportation Cost Burden - The average household in this tract spends 9.44% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,211.00 on transportation.• Housing Cost Burden - 21.75% of households in this tract spend more than 30% of their income on housing.



PHOTO 1: POSSIBLE LOCATION FOR EV CHARGING STATIONS



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS CORINTH LIBRARY			
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D6
		DATE	5/19/23



Site Overview

Johnson County Library serves over two million people from 14 library buildings in Northeast Kansas. Central Resource Library is one of 6 library locations proposed that would benefit from public electric vehicle charging stations.

Address

9875 W 87th St
Overland Park, KS 66212

Scope of Work

Install two additional dual-port level 2 EV charging stations on pedestal stands in the existing parking area near the existing EV charging stations. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing power distribution panel feeding the existing charging stations. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091051902 - Johnson County, Kansas
<u>Urbanized Area Summary</u> Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
<u>Cost Burden Summary</u> <ul style="list-style-type: none">• Poverty Level - 16.90% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$80,224.00.• Transportation Cost Burden - The average household in this tract spends 11.55% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,204.00 on transportation.• Housing Cost Burden - 18.97% of households in this tract spend more than 30% of their income on housing.



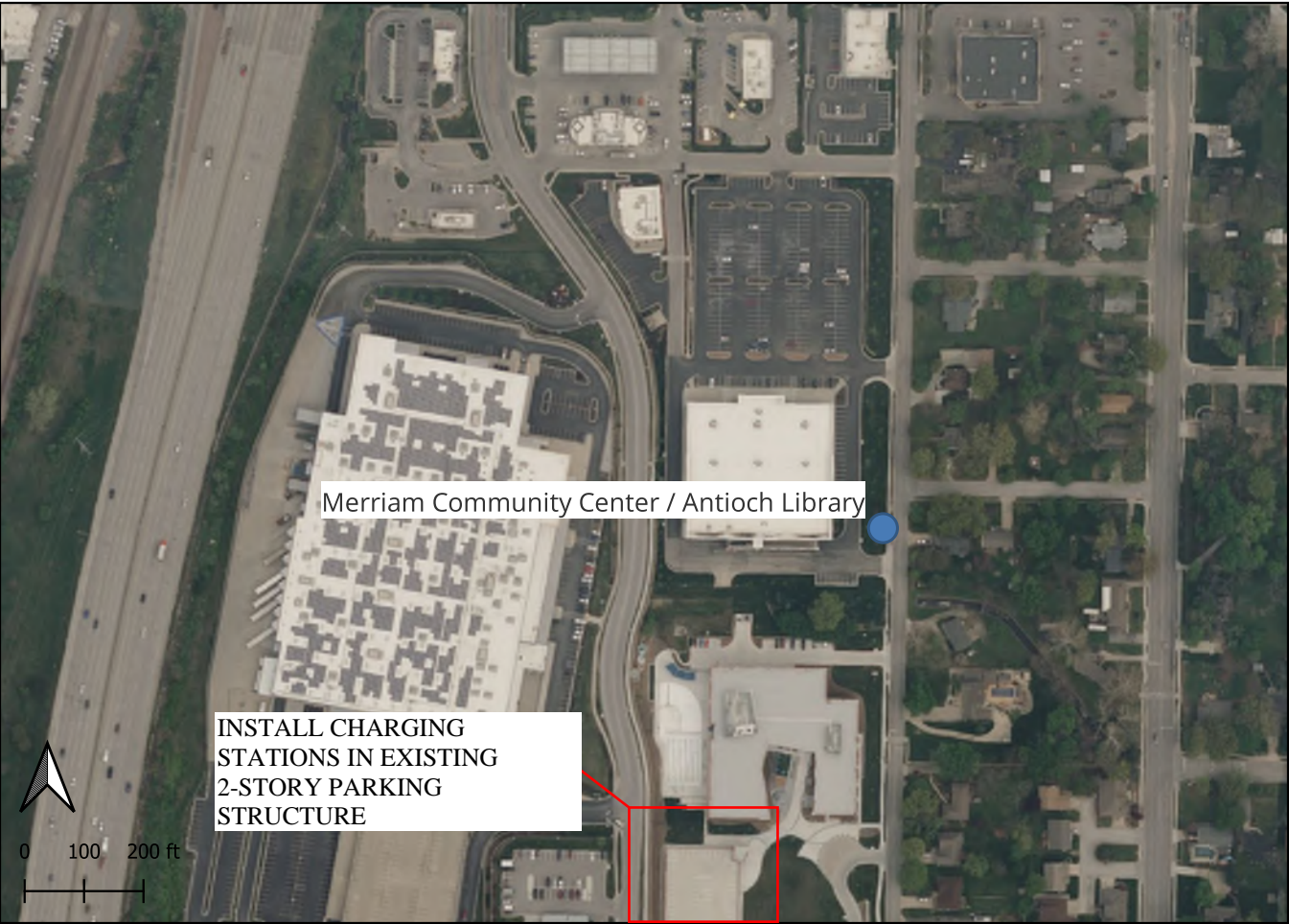
Existing charging station



Existing charging station



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS CENTRAL RESOURCE LIBRARY		
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D7
		DATE	5/19/23



Site Overview

In late 2017, the City of Merriam approached the Johnson County Library to consider relocating Antioch Library to the Merriam Community Center campus, at the 6000 block of Slater. After a study with the City, the Library Board approved this path. Subsequently, the Library Board and City of Merriam approved agreements to convey property to the Library on the campus site in the 6000 block of Slater Street, and in Fall 2022 the property was transferred. The Library and the City have also agreed to terms regarding parking, landscaping, and other maintenance responsibilities. Construction of the library building itself is anticipated to be complete in 2024.

Merriam Plaza Library will utilize the City's two-level parking structure, greatly increasing parking availability compared to the former location. The parking structure offers both covered and open-air parking and is immediately adjacent to the new Library. The Library and Community Center will collaborate on program and event scheduling to ensure parking availability during popular periods of use.

Address

6040 Slater St, Merriam, KS 66202

Scope of Work

Install two additional dual-port level 2 EV charging stations in the 2-level parking structure serving both the existing Merriam Community Center and the new Johnson County public library building. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the nearest suitable building power distribution panel or to a new service meter provided by Evergy. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

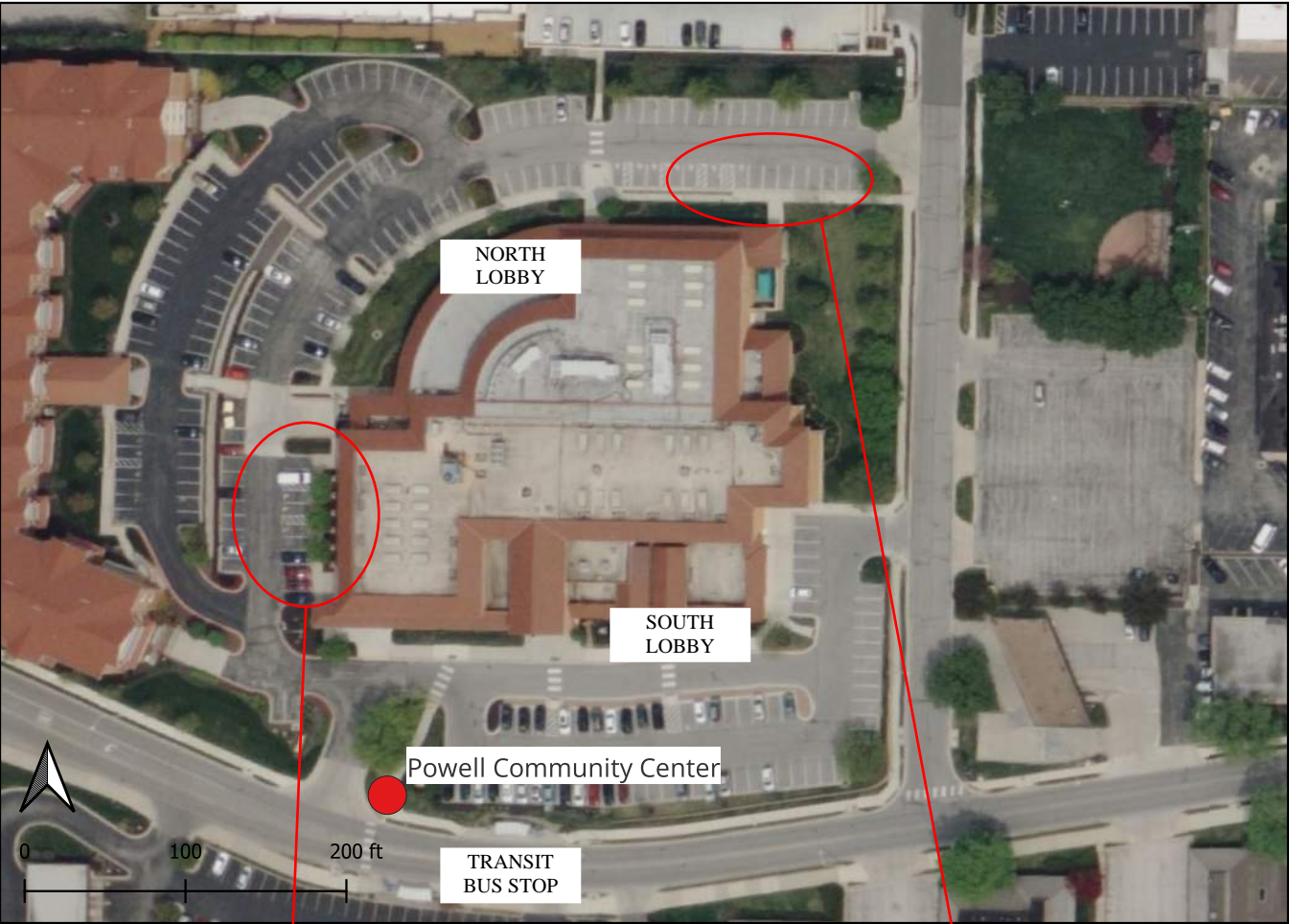
Tract 20091050400 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">UZA Population 50k or Less - NoUZA Population 200k or Less - NoUZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">Poverty Level - 25.88% of the population in the tract are at or below 200% of the federal poverty line.Median Household Income - The median household income in this tract is \$58,862.00.Transportation Cost Burden - The average household in this tract spends 15.99% of their household income on transportation.Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,917.00 on transportation.Housing Cost Burden - 25.50% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC			
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS MERRIAM COMMUNITY CENTER AND NEW ANTIOCH LIBRARY		
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D8
		DATE	5/19/23



SIZE	11 X 17 (ANSI B)	DWG NO	D9	REV	5/19/23
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ALTERNATIVE LOCATION 2: LOCATE CHARGING STATIONS ON WEST SIDE OF BUILDING NEAR EXISTING ACCESSIBLE SPACES AND CLOSE TO UTILITY TRANSFORMER.



ALTERNATIVE LOCATION 1: LOCATE CHARGING STATIONS ON NORTH SIDE OF BUILDING NEAR EXISTING ACCESSIBLE SPACES.

Site Overview

Powell Community Center is operated by the city of Mission Parks and Recreation Department, and is located at 6200 Martway Street in Mission, KS. The community center is open to the public 6 days a week, offering a variety of amenities including fitness facilities, pools, and classes for youth and adults. The site is directly adjacent to a transit bus stop, and is within walking distance of single-family homes, multi-family communities, multistory office buildings, restaurants, and entertainment venues.

Address

6200 Martway St
Mission KS 66202

Scope of Work

Install two level 2 EV chargers on pedestal stands at one of the alternative locations shown on this drawing. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV chargers to the existing building power distribution panel. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091050302 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 27.53% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$63,859.00.• Transportation Cost Burden - The average household in this tract spends 14.29% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,420.00 on transportation.• Housing Cost Burden - 36.74% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS POWELL COMMUNITY CENTER		
SIZE 11 X 17 (ANSI B)	DOCUMENT NO D10	DATE 5/19/23



Site Overview

Broadmoor park is operated by the Mission Parks & Recreation Department. The park provides public access to a baseball/softball field, a natural grass field, a reservable shelter, and an approximately ¼ mile multiuse trail. The city of Mission estimates there are 1,205 weekly visitors, with a total of 62,636 visitors to the park in 2022. The park is regularly used for youth and adult team soccer, baseball, and softball practices from spring through fall.

Broadmoor park is surrounded by single family residential homes to the north and east, a multistory medical office building to the south, and by office buildings to the west. It is anticipated that both park visitors and employees of surrounding office buildings would make use of the electric vehicle charging stations.

Scope of Work

Install two dual-port level 2 EV charging stations on pedestal stands on the northeast corner of the existing parking lot, near the location of the existing electrical meter and electrical distribution panel. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

It is anticipated that the existing utility feeder, meter and distribution panel will need to be upgraded to supply the necessary power. The utility service is fed from overhead distribution poles to the north of the property.

Demographic Information

Tract 20091050301 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 31.61% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$50,366.00.• Transportation Cost Burden - The average household in this tract spends 18.08% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,668.00 on transportation.• Housing Cost Burden - 33.12% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS BROADMOOR PARK		
SIZE 11 X 17 (ANSI B)	DOCUMENT NO D11	DATE 5/19/23



POSSIBLE LOCATION

Site Overview

Young’s park is a 14.5-acre community park, home to a variety of recreation options, including swimming, baseball and softball fields, pickup play, a playground, and more. It is operated by the city of Overland Park.

Address

8421 W. 77th St
Overland Park KS 66204

Scope of Work

Install two dual-port level 2 electric vehicle charging stations in the public parking area serving both the park and pool facilities. New electrical service and meter shall be provided by Evergy. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV chargers to the new service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091051100 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 16.64% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$71,058.00.• Transportation Cost Burden - The average household in this tract spends 12.96% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,866.00 on transportation.• Housing Cost Burden - 22.79% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC		
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS YOUNG'S PARK / POOL	
SIZE	11 X 17 (ANSI B)	DOCUMENT NO D12
		DATE 5/19/23



ALTERNATIVE LOCATION 1: LOCATE CHARGING STATIONS ADJACENT TO EXISTING ACCESSIBLE PARKING SPACES IN LOT EAST OF PLAYGROUND.



ALTERNATIVE LOCATION 2: LOCATE CHARGING STATIONS ADJACENT TO EXISTING ACCESSIBLE PARKING SPACES IN LOT WEST OF TENNIS COURTS.

Site Overview

Hickory Hills Park is a 10-acre neighborhood park. Amenities include a baseball/softball field, basketball court, tennis court, playground, picnic tables and restroom. The park is located within walking distance of a subdivision of single family homes to the south and east, and to multifamily apartment homes to the west. It is anticipated that both park visitors and residents in the adjacent homes would make use of the EV charging stations.

Address

8420 W 54th Terrace
Overland Park KS 66202

Scope of Work

Install two dual-port EV charging stations on pedestal stands in one of the alternative locations depicted on this drawing. Existing park electrical service provides power to the bathrooms, parking lot lights, and a tornado siren. The existing service is unlikely to be sufficient for two new chargers, so a second utility service feeder, electric meter, and distribution panel shall be installed to provide power to the new EV charging stations. The closest utility distribution lines are located to the south of the adjacent single family homes.

Demographic Information

Tract 20091050400 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 25.88% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$58,862.00.• Transportation Cost Burden - The average household in this tract spends 15.99% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,917.00 on transportation.• Housing Cost Burden - 25.50% of households in this tract spend more than 30% of their income on housing.

JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS HICKORY HILLS PARK		
SIZE 11 X 17 (ANSI B)	DOCUMENT NO D13	DATE 5/19/23



Existing EV Charging Stations

Site Overview

The Myron Scafe building is located across the street from Overland Park City Hall and serves the police department, Information Technology, Community Services and the on-site health clinic for city staff. There are currently three electric vehicle charging station ports at the station, which are frequently fully utilized by fleet, staff and public users. This project will allow for additional fleet integration of electric vehicles and public availability. Charging is currently free of charge.

Address

8500 Antioch Rd
Overland Park KS 66212

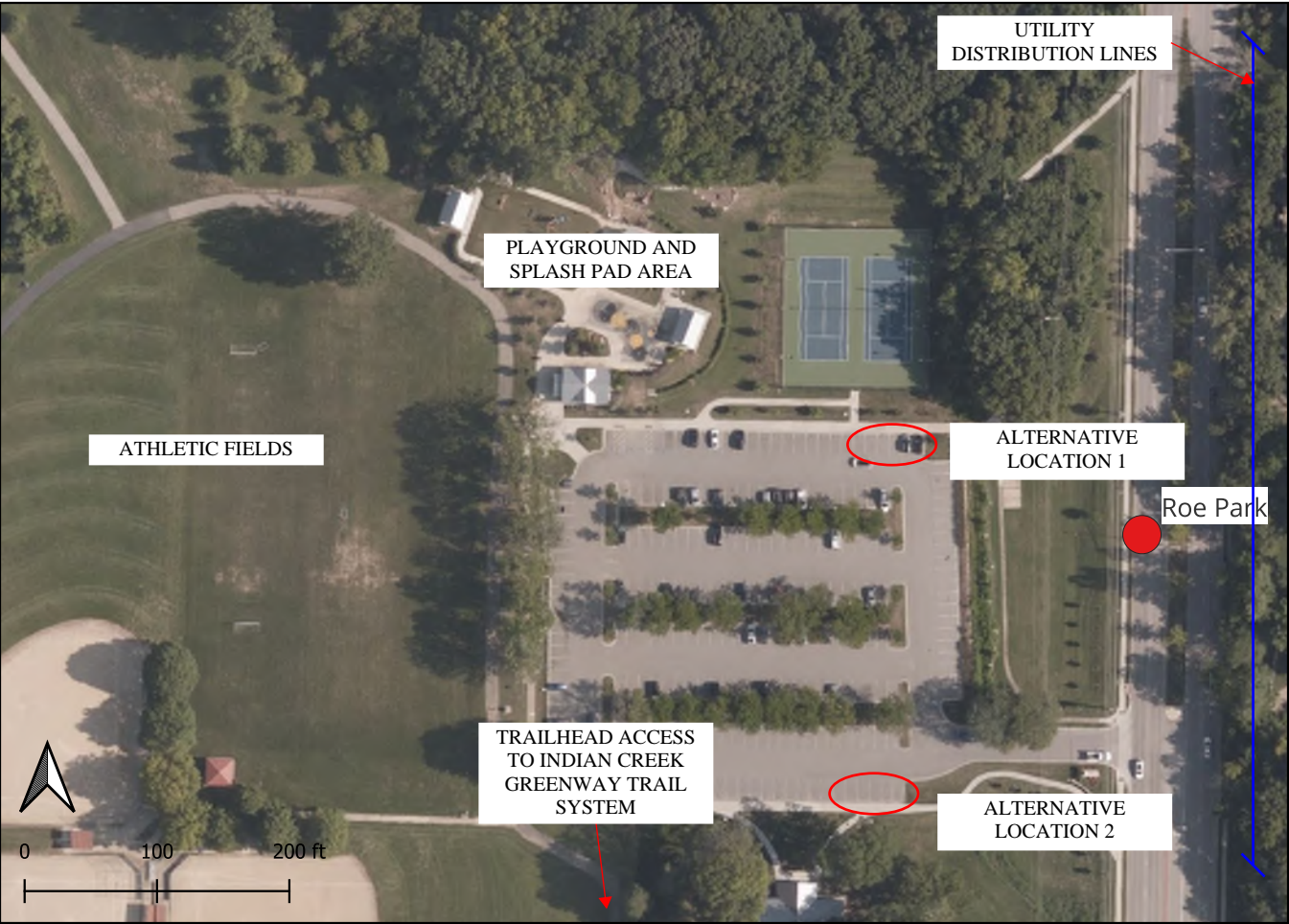
Scope of Work

Install two dual-port level 2 EV charging stations in the location of the previously installed electrical conduit, near the existing charging stations. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing building power distribution panel serving the existing 3 EV charging station ports. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091051907 - Johnson County, Kansas
<u>Urbanized Area Summary</u> Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
<u>Cost Burden Summary</u> <ul style="list-style-type: none">• Poverty Level - 23.99% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$71,833.00.• Transportation Cost Burden - The average household in this tract spends 12.78% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$11,131.00 on transportation.• Housing Cost Burden - 20.77% of households in this tract spend more than 30% of their income on housing.

JENNINGS ENGINEERING, LLC		
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS MYRON SCAFE BUILDING	
SIZE	11 X 17 (ANSI B)	DOCUMENT NO D14
		DATE 5/19/23



Site Overview

Roe Park is a 40.1-acre community park with many amenities and spaces to keep the whole family active and busy, including several fields, lighted tennis courts, a large playground with splash pad and connection to the bike and hike trails. It includes a popular trail head to access the Johnson County Indian Creek Greenway Trail, a heavily used, 17-mile paved walking/biking trail that runs from Olathe KS to Kansas City, MO and is maintained in partnership between several municipalities in Kansas and Missouri.

Address

10400 Roe Ave
Overland Park KS 66207

Scope of Work

Install two dual-port level 2 EV charging stations on pedestal stands in the existing parking area. Install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV charging stations to the existing building power distribution panel or a new utility service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging.

Demographic Information

Tract 20091051806 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 6.67% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$101,250.00.• Transportation Cost Burden - The average household in this tract spends 9.44% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,971.00 on transportation.• Housing Cost Burden - 17.75% of households in this tract spend more than 30% of their income on housing.

JENNINGS ENGINEERING, LLC		
TITLE	CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS ROE PARK	
SIZE	11 X 17 (ANSI B)	DOCUMENT NO D15 DATE 5/19/23



PREFERRED LOCATION: LOCATE CHARGING STATIONS ON SOUTHEAST CORNER OF PARKING AREA NEAR EXISTING ACCESSIBLE SPACES.



WASSMER PARK HAS EXISTING SOLAR PV PANELS INSTALLED

Site Overview

Wassmer Park is located at 67th Street and Roe Avenue in Prairie Village. There are two park shelters on the site. The East shelter, located near the playground, is available for reservations. The pavilion is lighted, has two electrical outlets, four ADA accessible picnic tables, and a grill. The West shelter is available on a first come, first served basis. The pavilion is lighted, has two electrical outlets, two Adirondack chairs, and two picnic tables. The park features playground equipment, a zip line, a bocce ball court (equipment not provided), Johnson County Master Gardeners’ display gardens, open green space, and restroom facilities.

Wassmer park is surrounded on all sides by single-family residential homes.

Address

6700 Roe Ave
Prairie Village KS 66208

Scope of Work

Install two dual-port EV charging stations on pedestal stands in the southeast corner of the parking area. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signs to denote EV charging. Chargers shall be fed by new electrical conductors in underground conduit, terminating at the existing electrical distribution panel located on the south side of the east shelter building approximately 100 feet away.

Existing 240V, single-phase electrical service and onsite solar was installed during park construction in 2019. However, it is assumed that electrical wires will need to be upgraded to supply the larger power requirements of the charging stations.

Demographic Information

Tract 20091050700 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 6.11% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$91,250.00.• Transportation Cost Burden - The average household in this tract spends 10.13% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,810.00 on transportation.• Housing Cost Burden - 19.53% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC			
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS WASSMER PARK			
SIZE	11 X 17 (ANSI B)	DOCUMENT NO	D16
		DATE	5/19/23



ALTERNATIVE LOCATION 1



ALTERNATIVE LOCATION 2

Site Overview

Roeland Park Community Center is a multifaceted facility that provides a wide range of services and a wealth of recreational and learning opportunities. The center is managed by the Johnson County Park & Recreation District in cooperation with the City of Roeland Park and is located at 4850 Rosewood Drive in Roeland Park. The center includes a fitness room and an Early Childhood Development Center. Also conveniently located on the site is the Roeland Park Sports Dome and Roeland Park aquatic center.

Alternative location 1 is located on the southwest corner of the south parking lot. It provides for convenient access to the community center south entrance and may also be utilized for pool parking during the summer months. It is located directly adjacent to utility distribution lines, which will allow for installation of a new utility service and meter while minimizing disturbance to existing facilities. Alternative location 2 is located on the north side of the south parking lot, near the community center entrance and existing accessible parking spaces. It provides ready access to both the community center and the pool facilities.

Address

4850 Rosewood Drive
Roeland Park KS 66205

Scope of Work

Install two dual-port EV charging stations on pedestal stands at one of the alternative locations shown on this drawing. Furnish and install electrical conductor, safety switches, circuit breakers, and other associated electrical equipment needed to connect the EV chargers to the existing building power panel or to a new utility service meter. Install bollards and modify curb/sidewalks as necessary to meet accessibility and code requirements. Repaint parking spaces and install signage to denote EV charging.

Demographic Information

Tract 20091050100 - Johnson County, Kansas
Urbanized Area Summary Tract contains all or a portion of an Urban Area (UZA) with the following population sizes: <ul style="list-style-type: none">• UZA Population 50k or Less - No• UZA Population 200k or Less - No• UZA Population 200k+ - Yes
Cost Burden Summary <ul style="list-style-type: none">• Poverty Level - 33.27% of the population in the tract are at or below 200% of the federal poverty line.• Median Household Income - The median household income in this tract is \$63,971.00.• Transportation Cost Burden - The average household in this tract spends 14.37% of their household income on transportation.• Estimated Cost of Transportation - The average household in this tract spends an estimated \$10,778.00 on transportation.• Housing Cost Burden - 24.83% of households in this tract spend more than 30% of their income on housing.



JENNINGS ENGINEERING, LLC		
TITLE CONNECTING JOHNSON COUNTY EV CHARGING STATION SITE CONCEPTS ROELAND PARK COMMUNITY CENTER		
SIZE 11 X 17 (ANSI B)	DOCUMENT NO D17	DATE 5/19/23