Appendix H: Transit-Supportive Development

The transit-supportive development analysis is one of the deliverables from the consultant team. It provides detailed land use analysis along the fast and frequent transit corridors (15 minutes or less) identified in Smart Moves 3.0.

The data displayed along each route includes current population and employment, existing and future land use, an analysis of the type of transit service supported, redevelopment potential, and housing/transit affordability.

RideKC Transit-Supportive Development – Components Section

Overview

The initial ten Fast and Frequent corridors throughout the region were studied and analyzed based on a series of factors, outlined below and illustrated in the following maps and charts:

1. **Existing Employment** – Map created utilizing 2014 census data.
2. **Existing Population** – Map created utilizing 2014 census data.
3. **Existing Employment + Population** – Also called out as 'EMPOP', a map that combines 2014 employment and population census data.
4. **Existing Land Use** – Map created utilizing MARC's existing land use raster data
5. **Future Land Use** – Map created utilizing MARC's future land use data which is based on each jurisdiction's future land use plan, all with varying planning horizons. Projections calculated from regional classification system of 'paint chips' defined by MARC.
6. **Future Land Use** – Map created by overlaying future land use maps by jurisdiction and per each jurisdiction's future land use category.
7. **Land Use and Transit Relationship** – Influenced by the methodology used in the 2013 North Oak Corridor Transit Study, this chart conceptually illustrates the numbers of riders necessary to sustainably support different modes of fixed-route transit services.
8. **Redevelopment Potential + Potential Mobility Hub Locations** – Map illustrating the redevelopment potential as well as potential mobility hub locations along each corridor. Redevelopment Potential is an evaluation of the effective year built of the building, improvement value, and land value associated with each parcel. After the query is run, four categories are established based on each parcel's redevelopment potential – Today; 0 to 5 years; 5 to 10 years; and 10+ years. The building lifespan assumed was 50 years with a 2% annual land appreciation.
9. **Housing + Transportation Index** – Map created based on housing and transportation costs per each census block. If the combined cost of housing and transportation is below 45% of the average regional income, it is generally considered more affordable. If these costs are above 45% of the average regional income, the area is considered less affordable.

The analysis of the ten corridors illustrated below was used to inform the final layout and selection of the Fast and Frequent routes utilized in the final model run by Conveyal, and are further explained in Tech Memo 2. The ten Fast and Frequent corridors analyzed in further detail below are:

- 39th Street Corridor
- Streetcar / Main Street Corridor
- 7th Street / Rainbow Avenue Corridor
- Linwood Boulevard Corridor
- Metcalf Avenue / Shawnee Mission Parkway Corridor

- Prospect Avenue Corridor
- Troost Avenue Corridor
- 75th Street / Quivira Road Corridor
- Independence Avenue / State Avenue Corridor
- North Oak / Grand Boulevard Corridor

39th Street Corridor

This approximately 5-mile long corridor generally extends from the west at the University of Kansas Medical Center complex located at 39th Street and Rainbow Boulevard in Kansas City, Kansas to an area just east of Emanuel Clever II Boulevard in Kansas City, Missouri. It is also one of the heavily populated corridors included as part of this study when comparing the existing employment and residential density.

The medical center complex serves as a significant anchor on the western end for employment, which also drives some of the residential densities along this corridor. This facility recently concluded a master planning effort and is amid a significant multi-year expansion program that will increase their health care services, employment, and student enrollment.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 24,342, with a total population of 28,554 people, making it the third most dense corridor out of the ten corridors analyzed. The concentration of employment is primarily at the west side of the corridor near the KU Med area, while the largest concentration of population is near the intersection of Main Street and 39th Street.

Figure 1: Employment Map for 39th Street Corridor

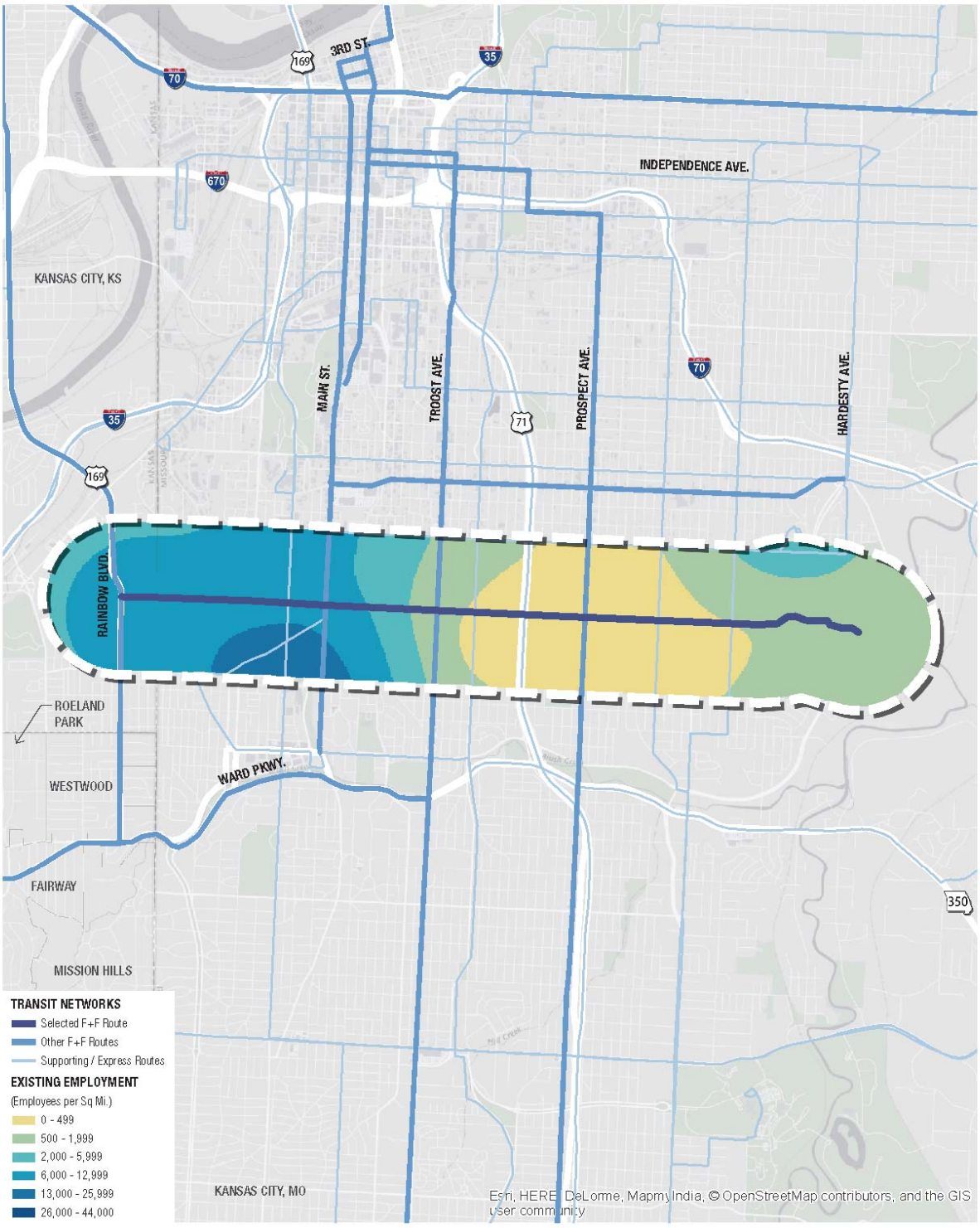


Figure 2: Population Map for 39th Street Corridor

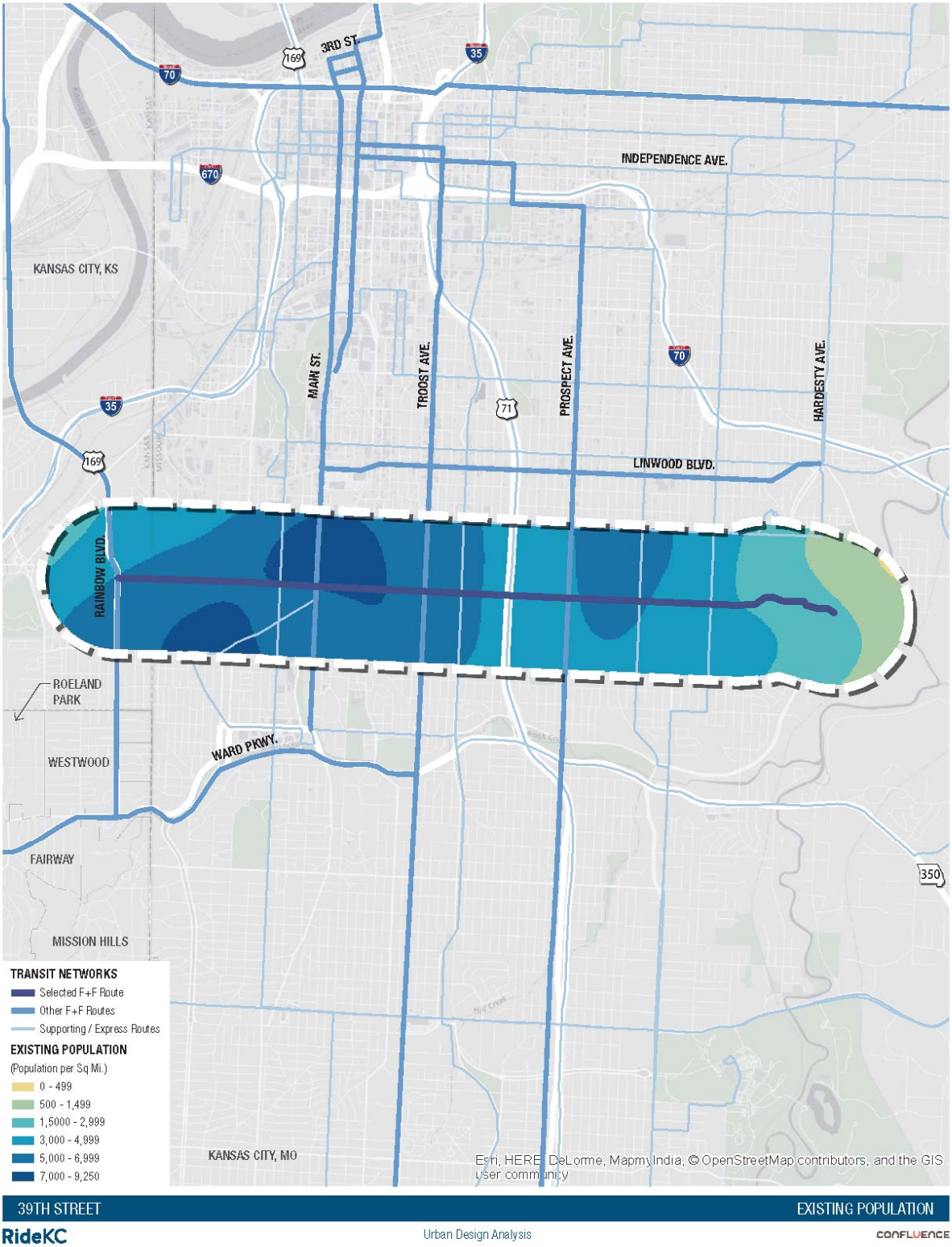
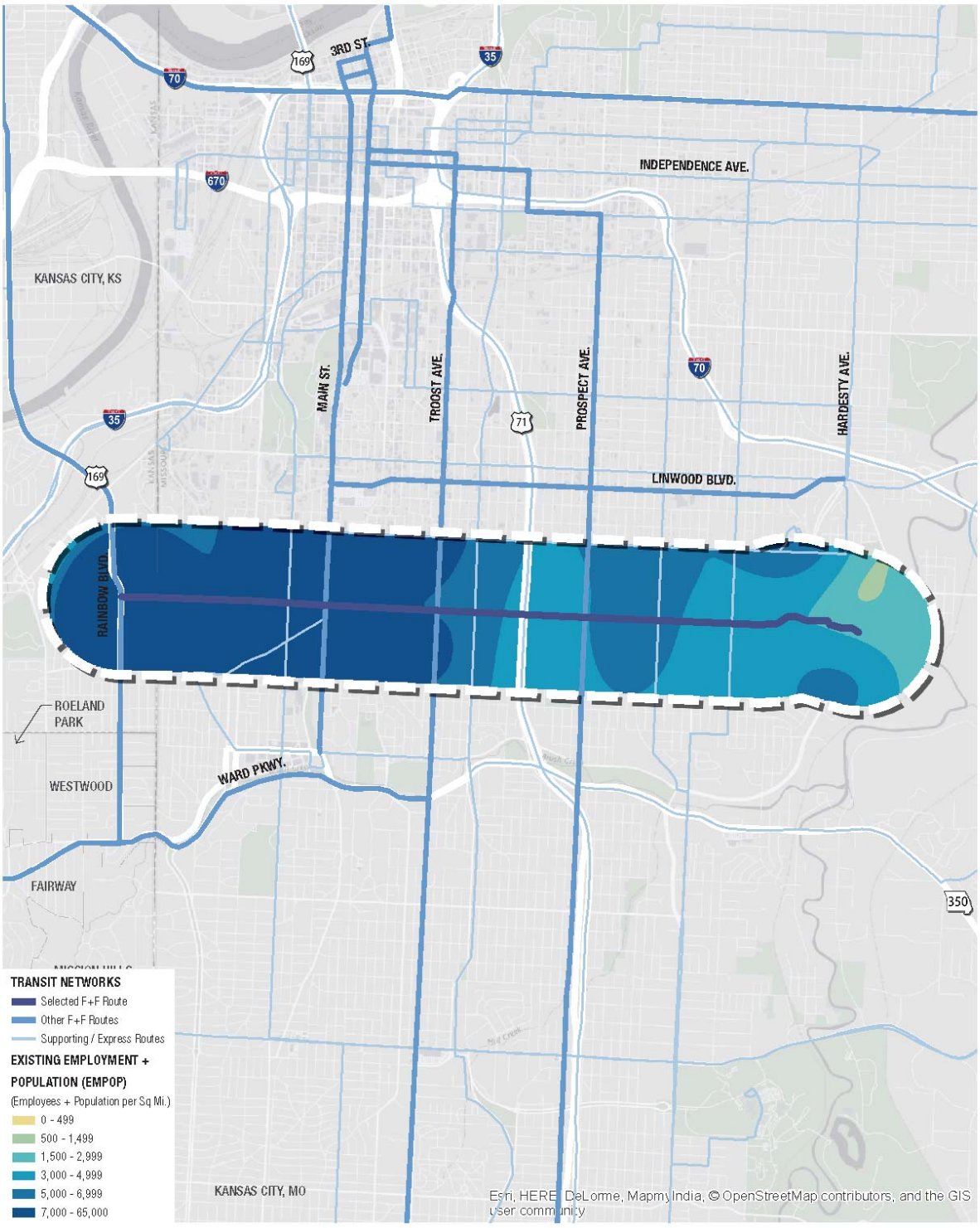


Figure 3: Employment + Population Map for 39th Street Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data supports these existing employment and population numbers, illustrating primarily single family housing towards the west of the corridor, transitioning to a mix of land uses (commercial and multifamily) towards the center of the corridor, with heavy public/semipublic uses at the west end of the corridor.

Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 69,983 people and employees, an increase in total population and employment by 17,087 people. MARC's Future Land Use Raster Data hints at where these increases might occur, shown around the Main Street and 39th Street intersection.

The future land use maps for each jurisdiction within this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data near the Main Street and 39th Street intersection, with minimal impact or change to existing neighborhoods within the east parts of the corridor.

Figure 4: Existing Land Use Map for 39th Street Corridor

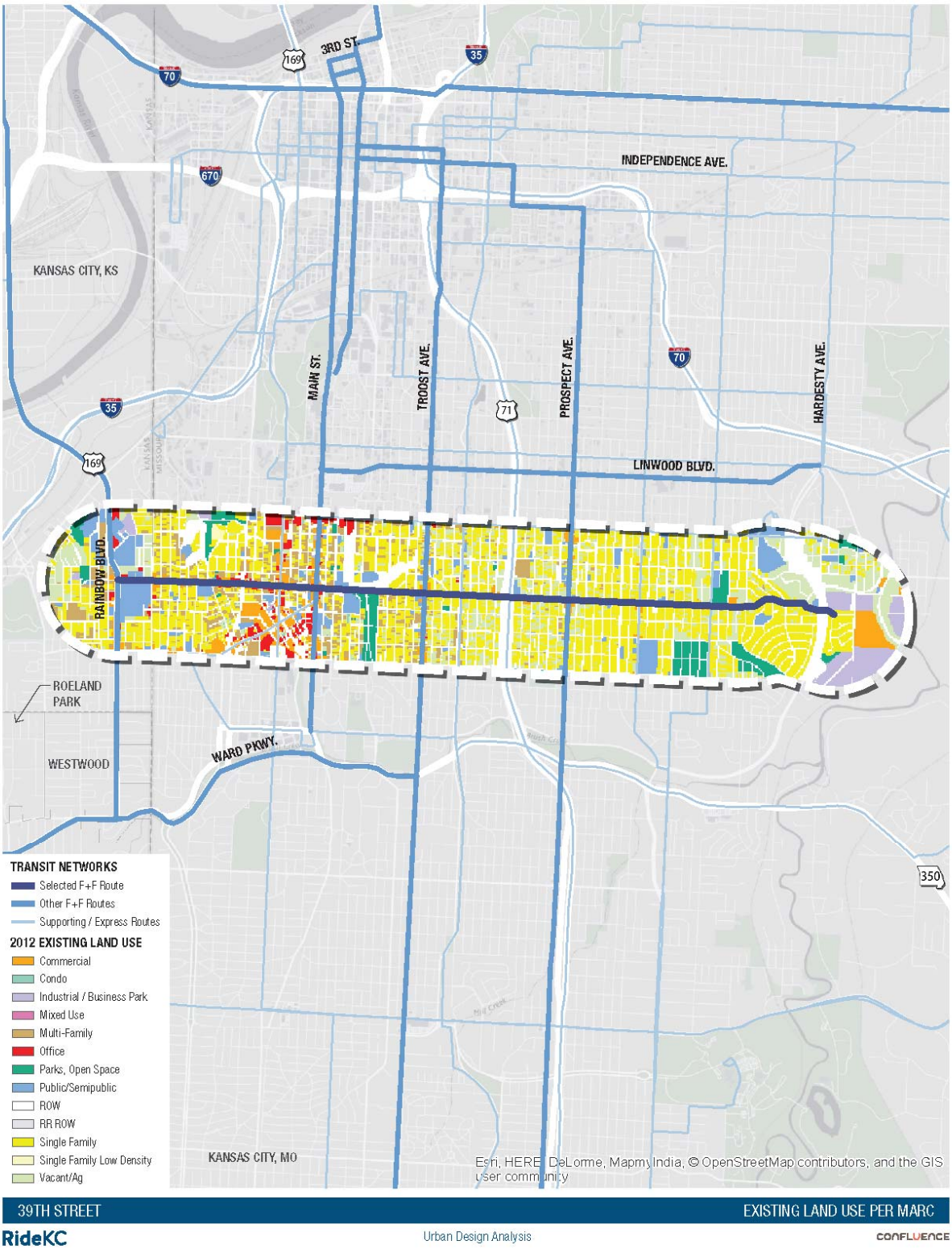


Figure 5: Future Land Use Map for 39th Street Corridor

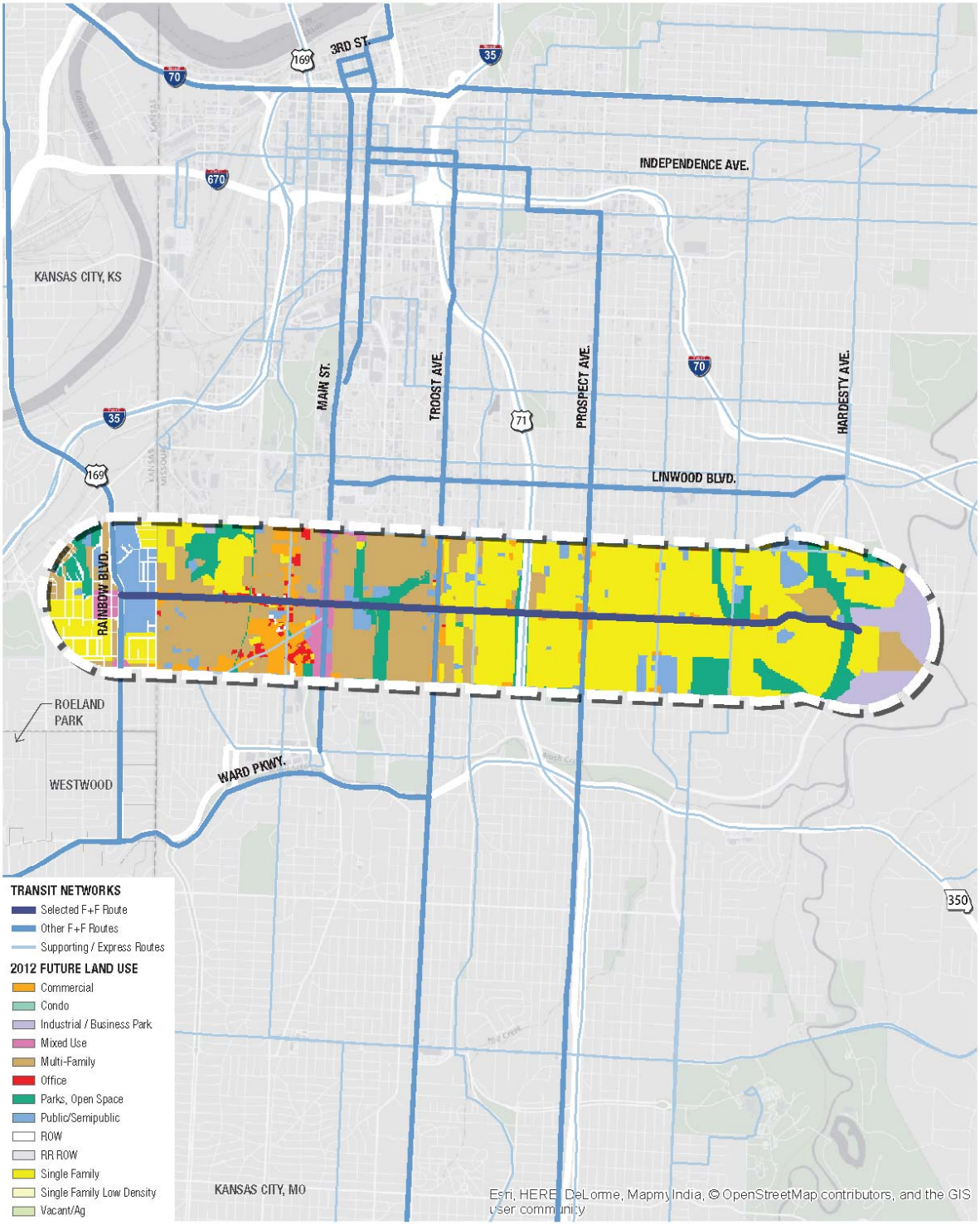
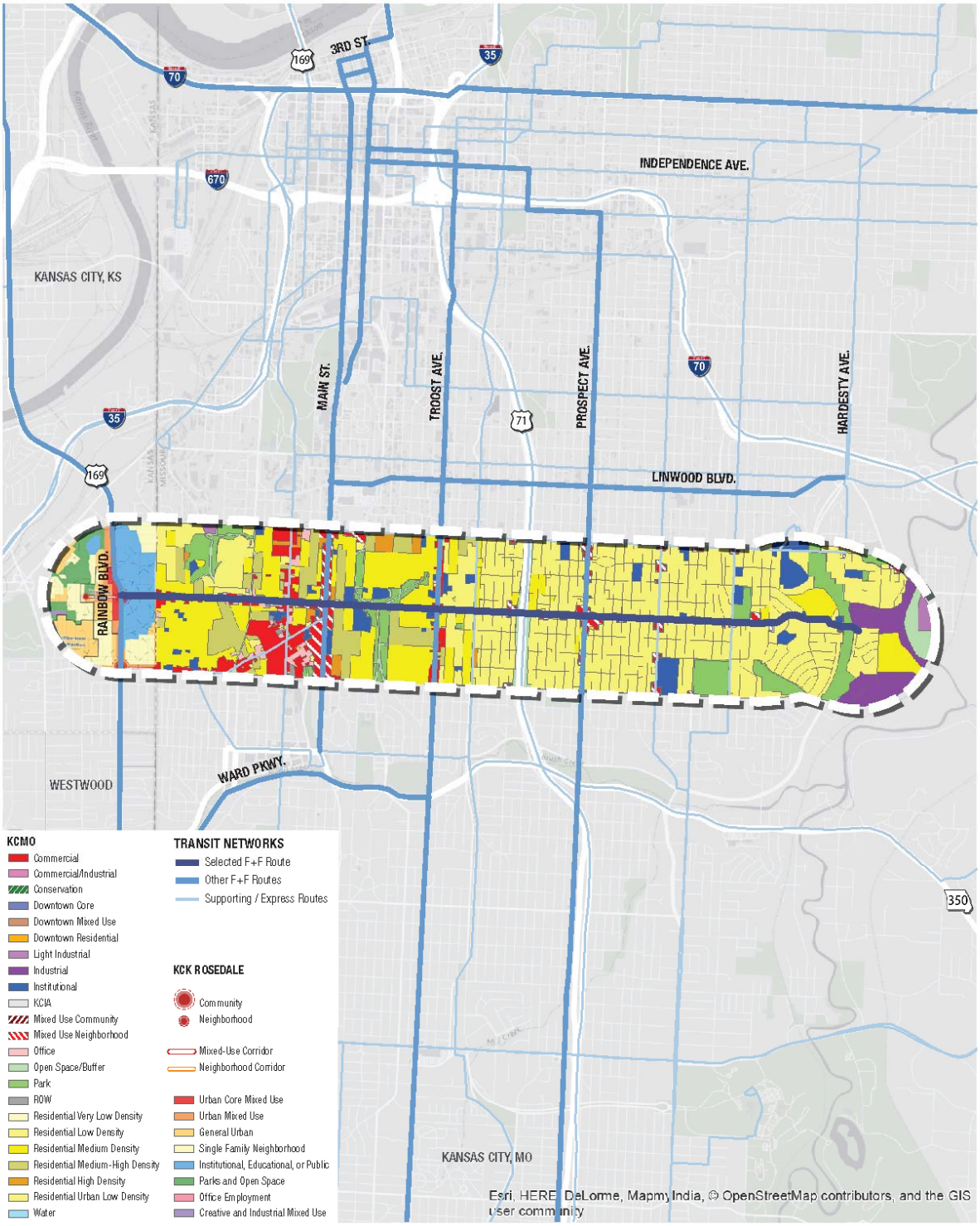


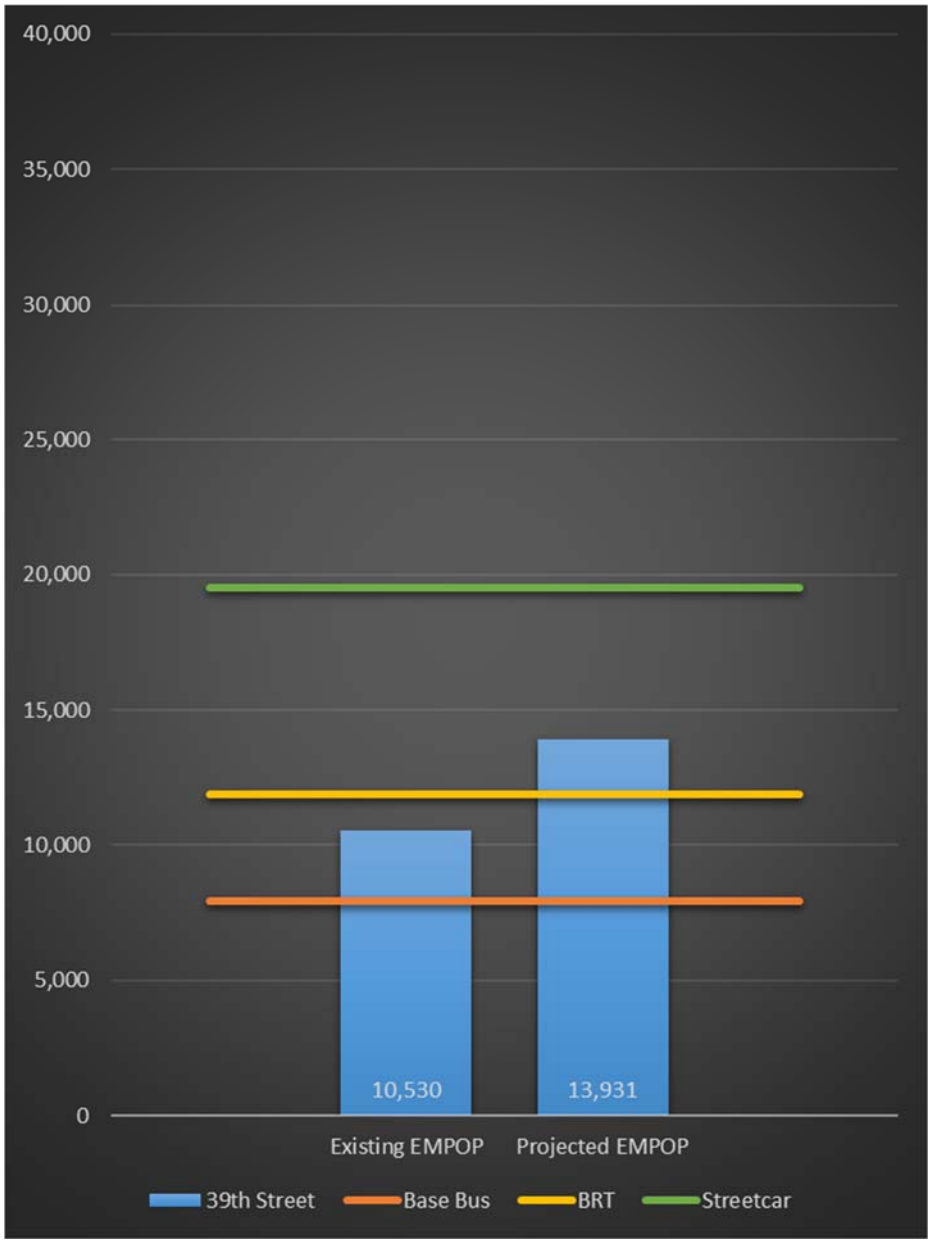
Figure 6: Future Land Use Map by Jurisdiction for 39th Street Corridor



Land Use and Transit Relationship

Currently, the existing population and employment per mile along the 5-mile 39th Street Corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARCs 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Bus Rapid Transit.

Figure 7: Land Use and Transit Graph for 39th Street



*EMPOP = employment + population

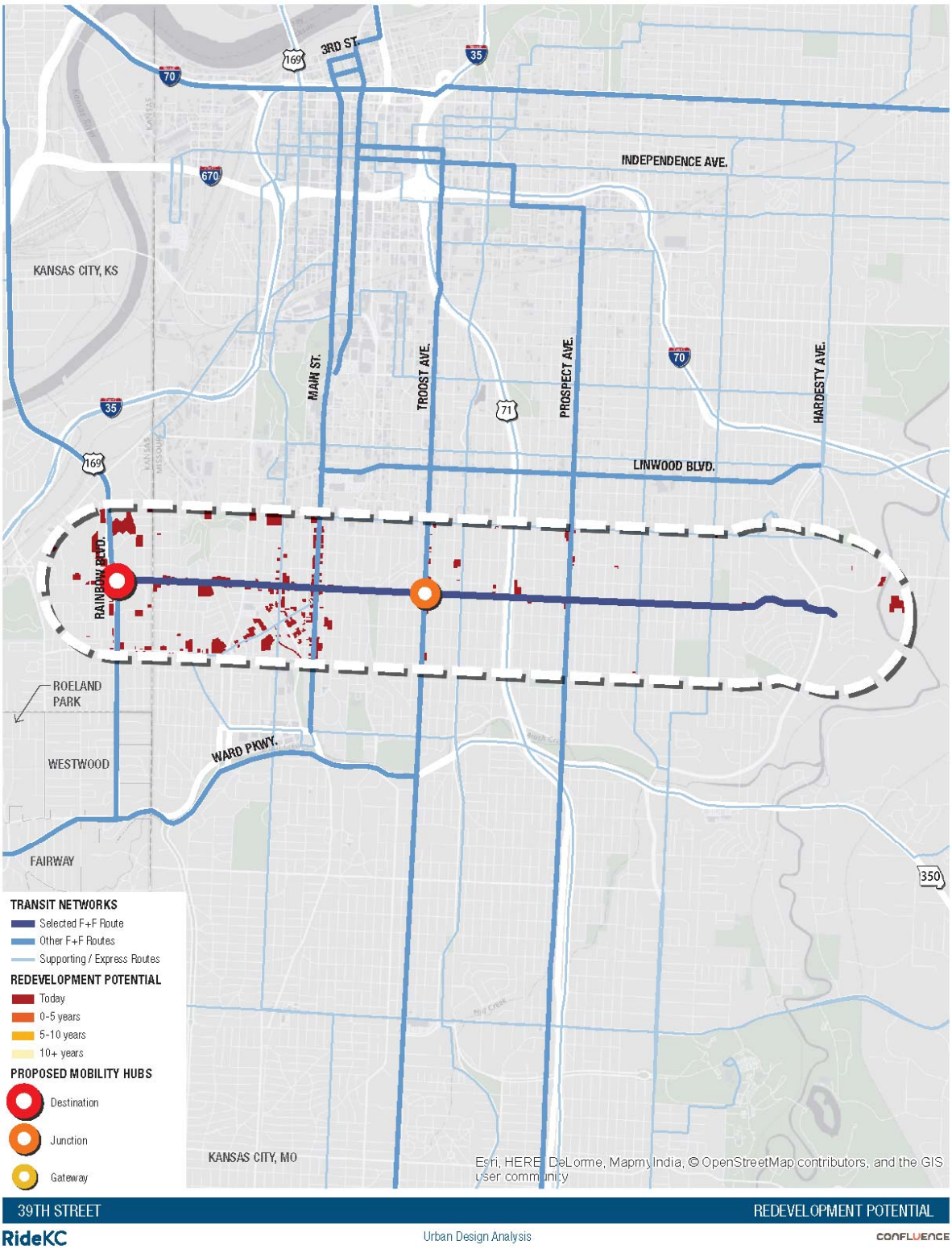
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures is shown within the corridor buffer as well. The redevelopment map illustrates that much of redevelopment potential is most likely to occur around the intersection of Main Street and 39th Street, estimating about 157 acres available for potential redevelopment.

Mobility Hub Opportunities

Two mobility hubs are proposed along the 39th Street route – one near the 39th Street and Rainbow Boulevard intersection, and the other near the 39th Street and Troost Avenue intersection. The Rainbow Boulevard mobility hub is proposed as a “destination” hub, building on the west terminus of the 39th Street route to primarily serve the University of Kansas Medical Center facility and surrounding area. The Troost Avenue mobility hub is proposed as a “junction” hub, anticipated to serve the surrounding area, as well as riders transferring between two fast and frequent routes that intersect at this location.

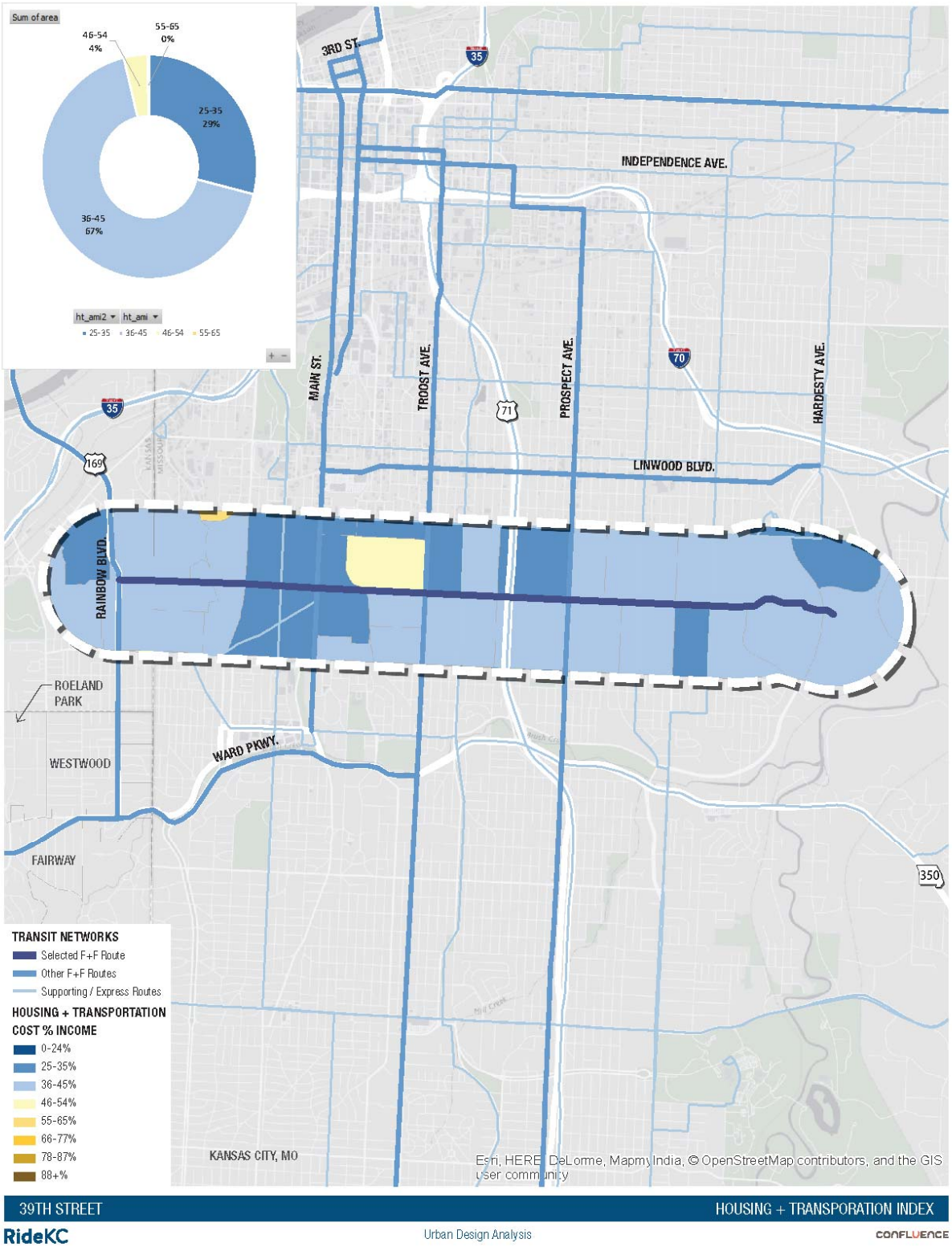
Figure 8: Redevelopment + Mobility Hub Map for 39th Street Corridor



Housing Affordability Analysis

The 39th Street Corridor weighted average of housing and transportation affordability is 38%. Ninety-six percent of its area is considered “most affordable” (equal to or less than 45% of total income dedicated to housing and transportation costs). This includes areas that are near the KU Med campus, areas around the Main Street and 39th Street intersection, and sprinkled throughout the edges of the corridor buffer. Only four percent of the corridor area is considered not affordable, primarily located between Main Street and Troost Avenue.

Figure 9: Housing + Transportation Index Map for 39th Street Corridor



Initial Takeaways

Based on the high-level analysis of the 39th Street Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Encourage future dense development per the MARC 2012 Future Land Use Projections to reach a sustainable level of Fast and Frequent transit service.
- Focus mixed-use redevelopment near the Main Street and 39th Street intersection, while maintaining the existing balance of affordability within this area.
- Increase housing options (market rate and affordable) at the west terminus of the 39th Street corridor to support the future growth of the KU Medical Campus.
- Preserve existing single family households west of Troost along the 39th Street corridor.

Downtown Streetcar / Main Street

This north-south corridor is approximately 5.5 miles in length and extends north towards the river to the River Market and south to 47th Street in the Country Club Plaza. This is the most populated corridor when comparing existing employment and population density, as the transit route runs though one of Kansas City's largest employment centers, and continues throughout urban, dense housing and jobs towards the Country Club Plaza.

The north part of this route (River Market to Union Station) has already seen significant redevelopment and infill as a result of the Downtown Streetcar. This includes over $1.7 billion in new development investments and approximately 1,400 new residential units within 3 blocks of the Streetcar line, many that started to be developed as design and construction of the Streetcar line was taking place. In other words, once it was clear that the streetcar project was officially going to be built, the development community responded immediately by exploring opportunities for renovating, expanding, and constructing new residential, commercial, and mixed-use projects along the entire route.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 110,448, with a total population of 26,088 people, making it the densest corridor out of the ten corridors analyzed. There are two large employment centers located within this corridor, downtown Kansas City, Missouri and the Country Club Plaza. The largest concentration of population is near the southern parts of the corridor, but a decent amount of population density is also in the downtown area.

Figure 10: Employment Map for Downtown Streetcar/Main Street Corridor

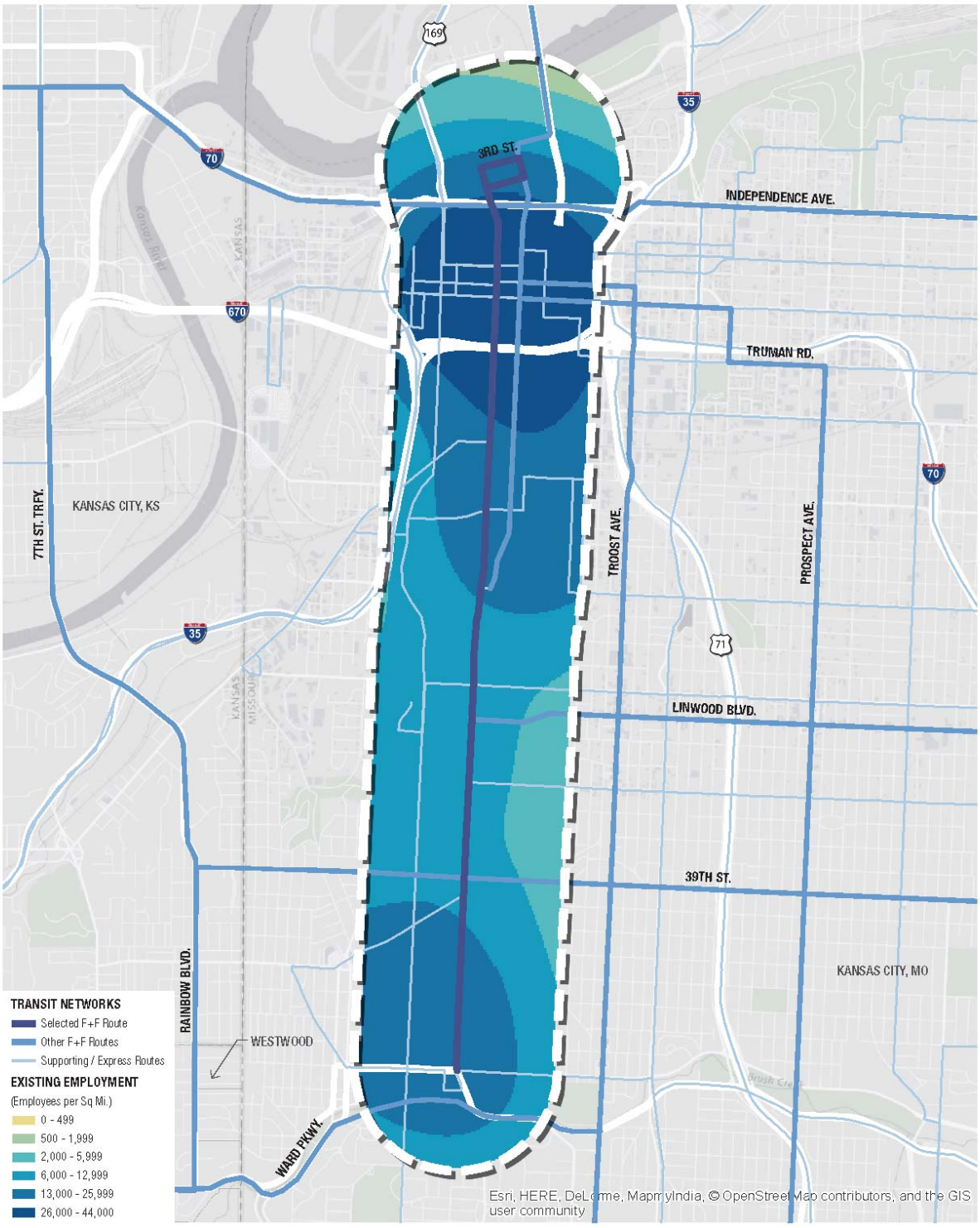


Figure 11: Population Map for Downtown Streetcar/Main Street Corridor

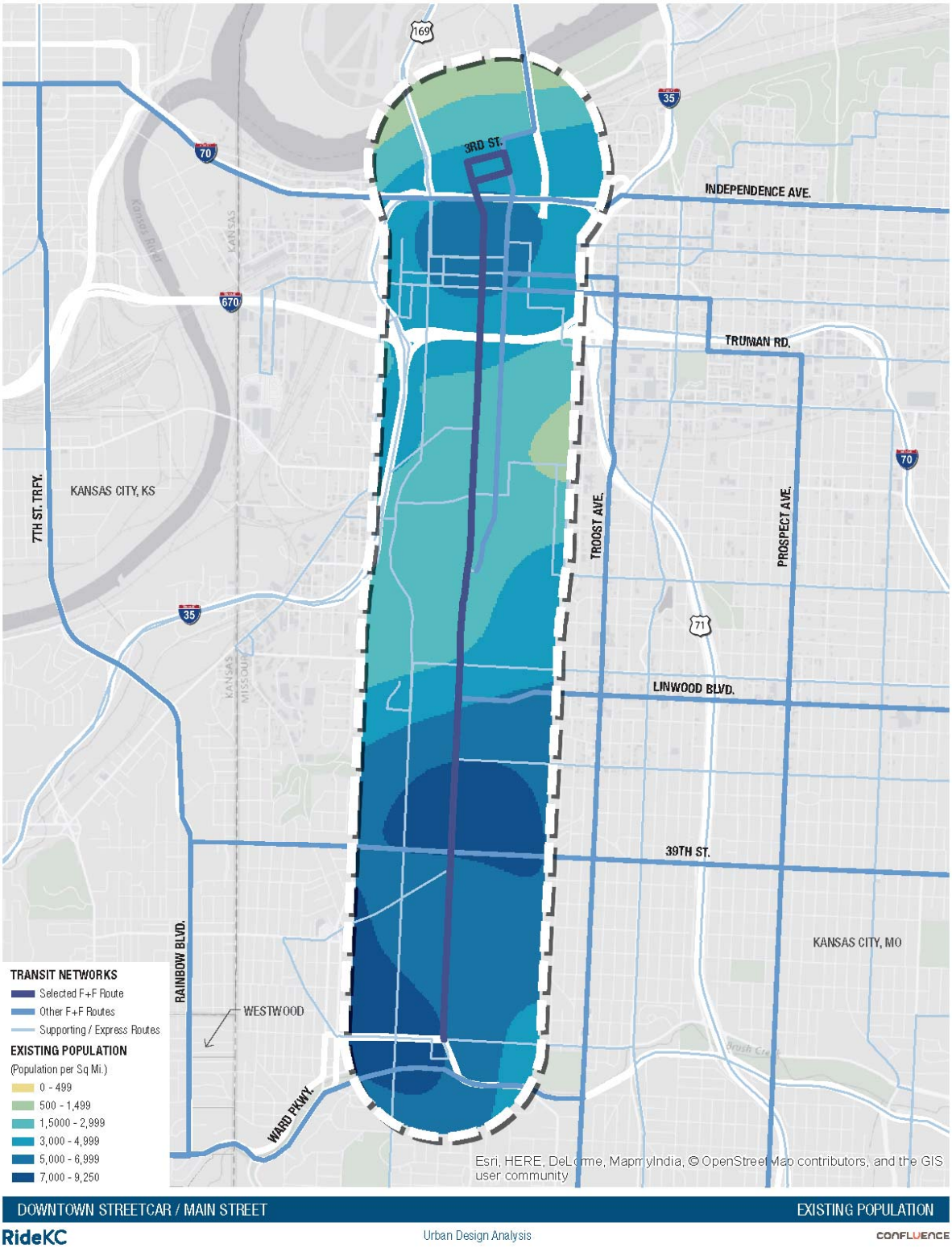
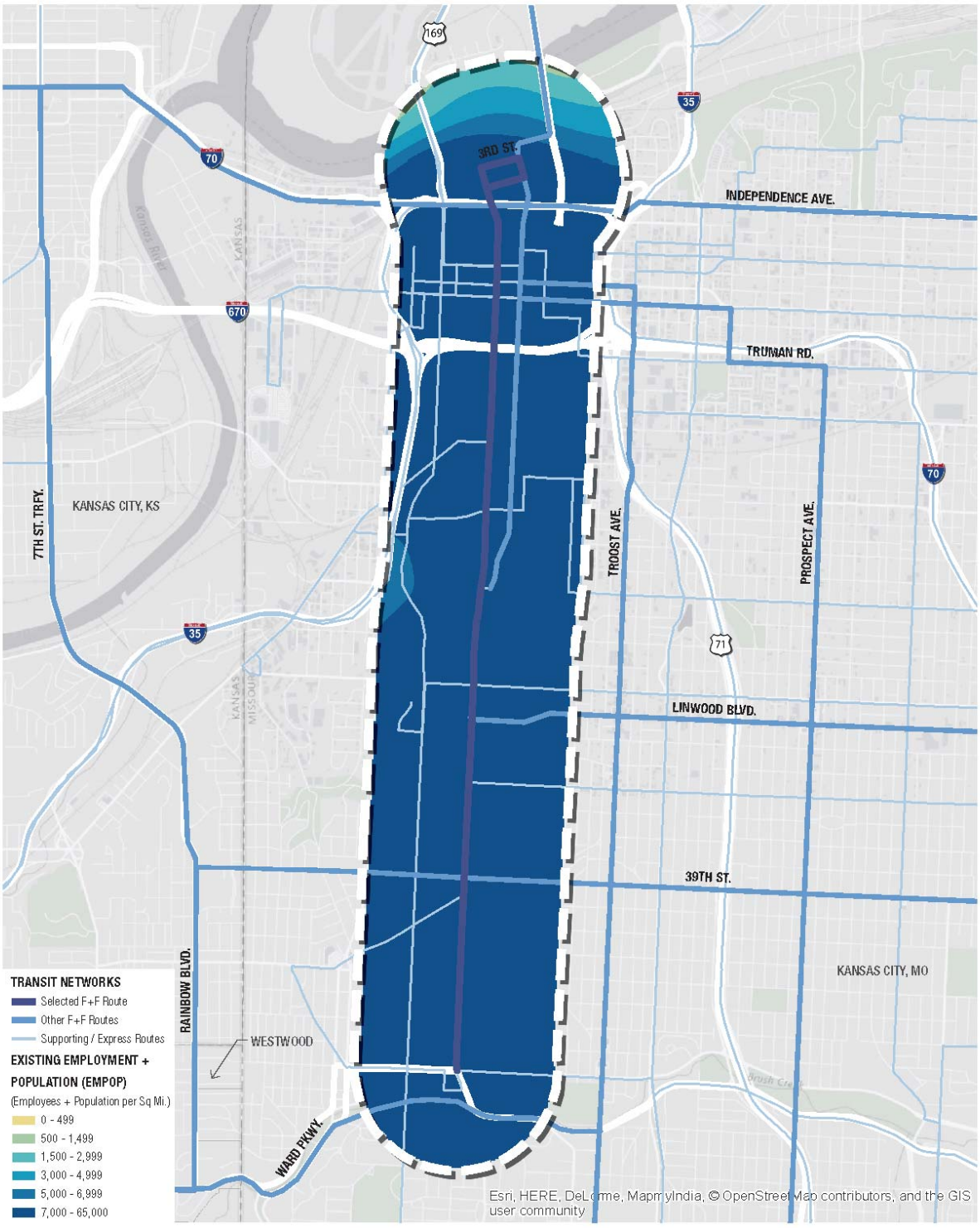


Figure 12: Employment + Population Map for Downtown Streetcar/Main Street Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data illustrates a diverse area around this corridor buffer, showing the true urban fabric along the proposed Fast and Frequent route. Detailed information about existing development occurring along the existing streetcar line is not available, but the map in figure 14 highlights the areas of redevelopment that have occurred since the opening of the streetcar.

Figure 13: Existing Land Use Map for Downtown Streetcar/Main Street Corridor

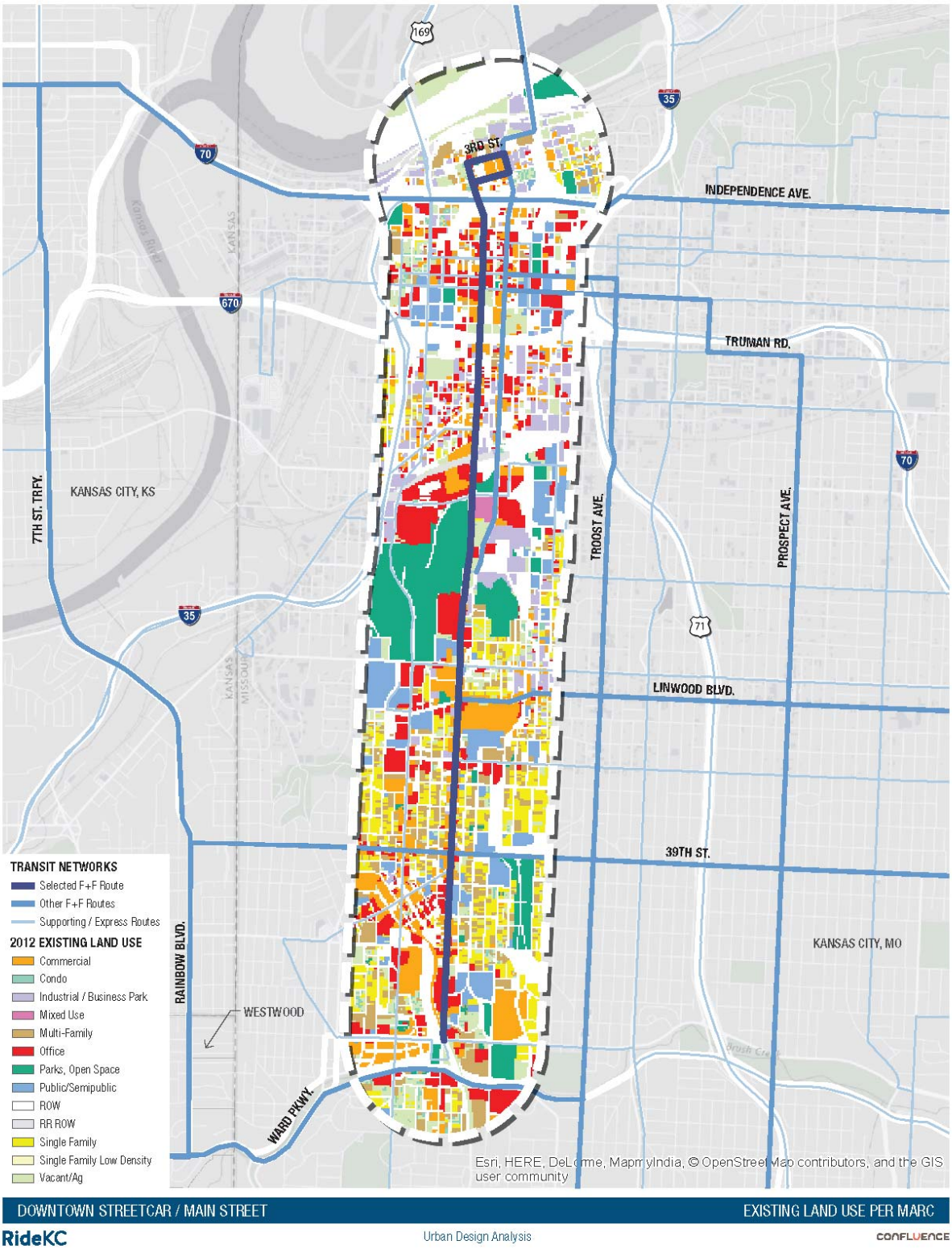
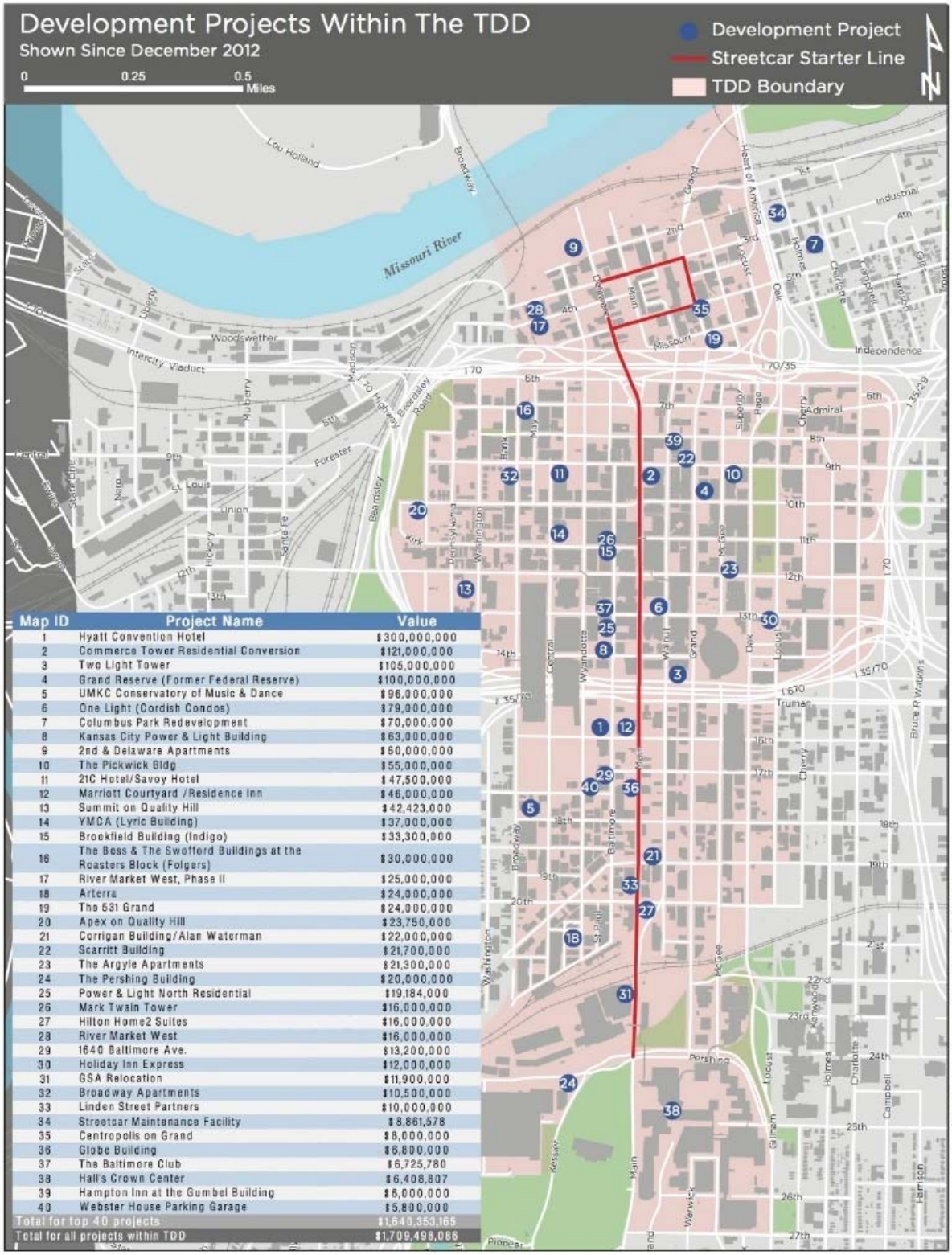


Figure 14: Existing Land Use Occurring Along the Corridor



Map ID	Project Name	Value
1	Hyatt Convention Hotel	$300,000,000
2	Commerce Tower Residential Conversion	$121,000,000
3	Two Light Tower	$105,000,000
4	Grand Reserve (Former Federal Reserve)	$100,000,000
5	UMKC Conservatory of Music & Dance	$96,000,000
6	One Light (Cordish Condos)	$79,000,000
7	Columbus Park Redevelopment	$70,000,000
8	Kansas City Power & Light Building	$63,000,000
9	2nd & Delaware Apartments	$60,000,000
10	The Pickwick Bldg	$55,000,000
11	21C Hotel/Savoy Hotel	$47,500,000
12	Marriott Courtyard /Residence Inn	$46,000,000
13	Summit on Quality Hill	$42,423,000
14	YMCA (Lyric Building)	$37,000,000
15	Brookfield Building (Indigo)	$33,300,000
16	The Boss & The Swofford Buildings at the Roasters Block (Folgers)	$30,000,000
17	River Market West, Phase II	$25,000,000
18	Arterra	$24,000,000
19	The 531 Grand	$24,000,000
20	Apex on Quality Hill	$23,750,000
21	Corrigan Building/Alan Waterman	$22,000,000
22	Scarritt Building	$21,700,000
23	The Argyle Apartments	$21,300,000
24	The Pershing Building	$20,000,000
25	Power & Light North Residential	$19,184,000
26	Mark Twain Tower	$16,000,000
27	Hilton Home2 Suites	$16,000,000
28	River Market West	$16,000,000
29	1640 Baltimore Ave.	$13,200,000
30	Holiday Inn Express	$12,000,000
31	GSA Relocation	$11,900,000
32	Broadway Apartments	$10,500,000
33	Linden Street Partners	$10,000,000
34	Streetcar Maintenance Facility	$8,861,578
35	Centropolis on Grand	$8,000,000
36	Globe Building	$6,800,000
37	The Baltimore Club	$6,725,780
38	Hall's Crown Center	$6,408,807
39	Hampton Inn at the Gumbel Building	$6,000,000
40	Webster House Parking Garage	$5,800,000
Total for top 40 projects		$1,640,353,165
Total for all projects within TDD		$1,709,498,086

source: http://kcstreetcar.org/wp-content/uploads/2015/11/TDD_Dev_Impact_4-11-2016-Final.jpg

Anticipated Future Land Use

By means of employment and population projection based on MARC's Future Land Use Raster Data, the corridor is projected to have around 969,394 people and employees, an increase in total population and employment by 832,858 people. MARC's Future Land Use map has been categorized to match the existing land use, making the increase in population and employment appear vague. However, each land use color has a plethora of different densities within each use that were calculated to provide the future projections along this corridor.

The future land use maps for the jurisdiction within this corridor buffer illustrates a bit more clearly the proposed changes shown in the MARC Future Land Use Raster Data. The Streetcar / Main Street Corridor south of the Crossroads area increases in density with mixed use development, and infill of multifamily is shown. The downtown areas are less evident as to what type of redevelopment would occur here. However, based on existing development trends currently occurring in the downtown areas, it is safe to assume this will continue to redevelop.

Figure 15: Future Land Use Map for Downtown Streetcar/Main Street Corridor

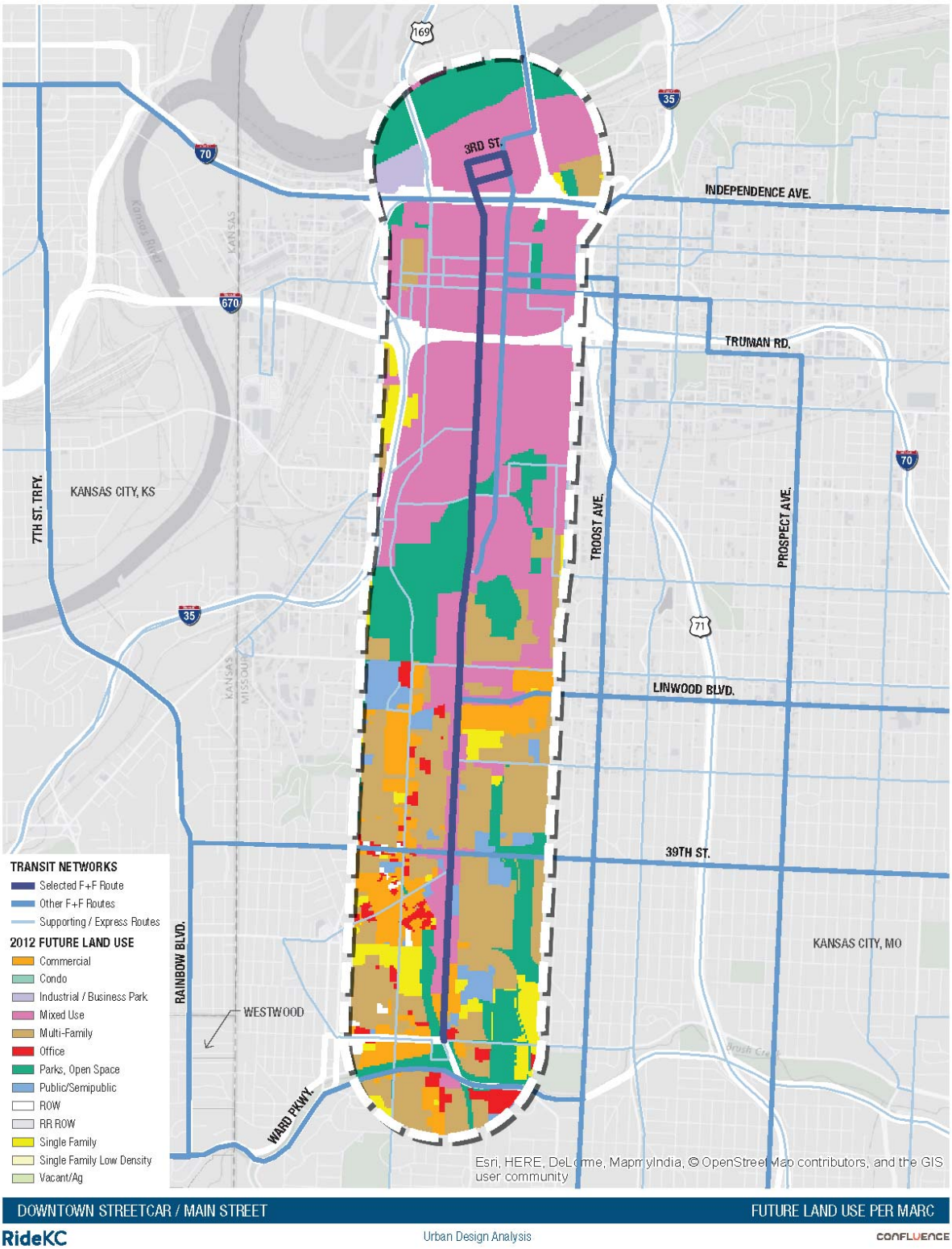
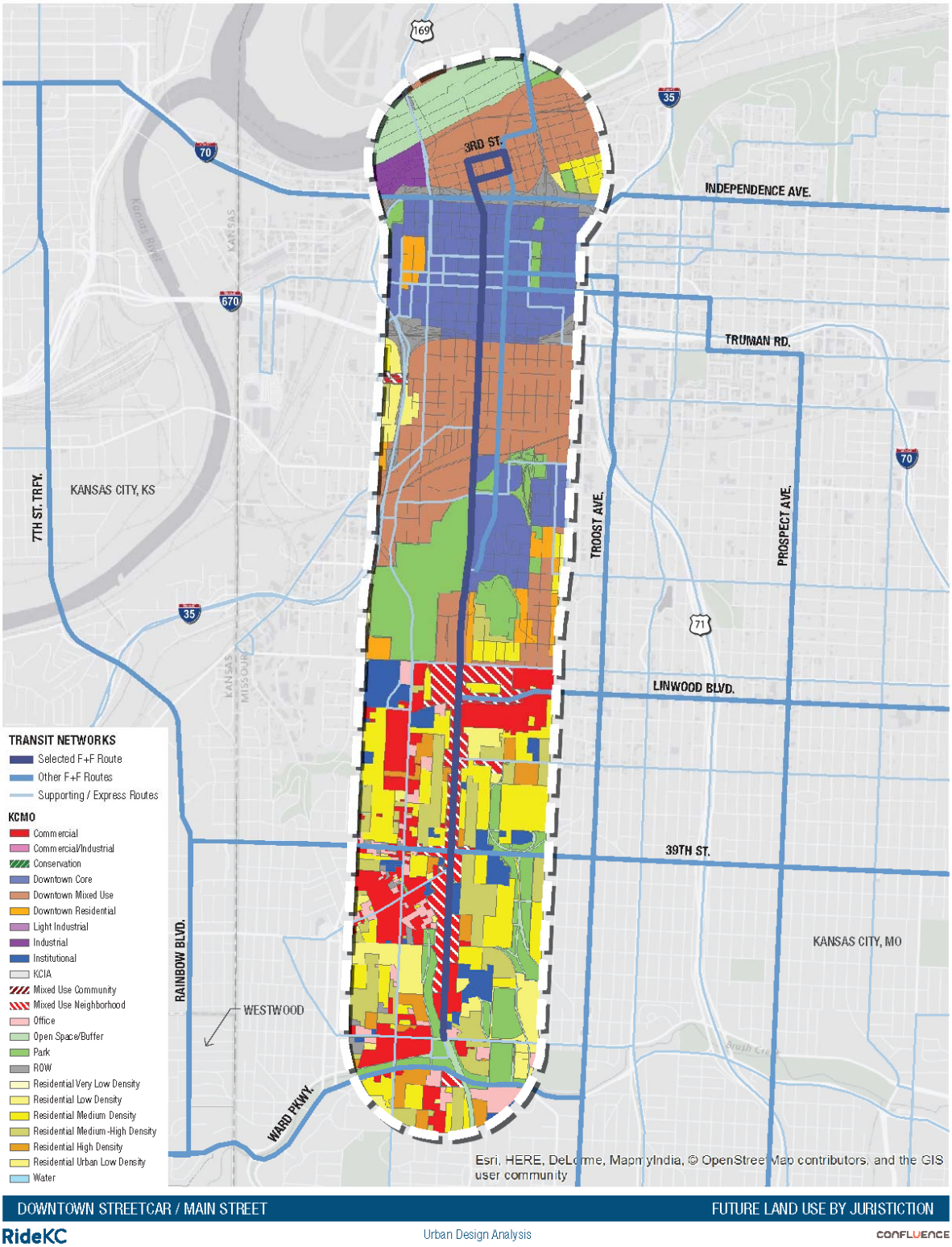


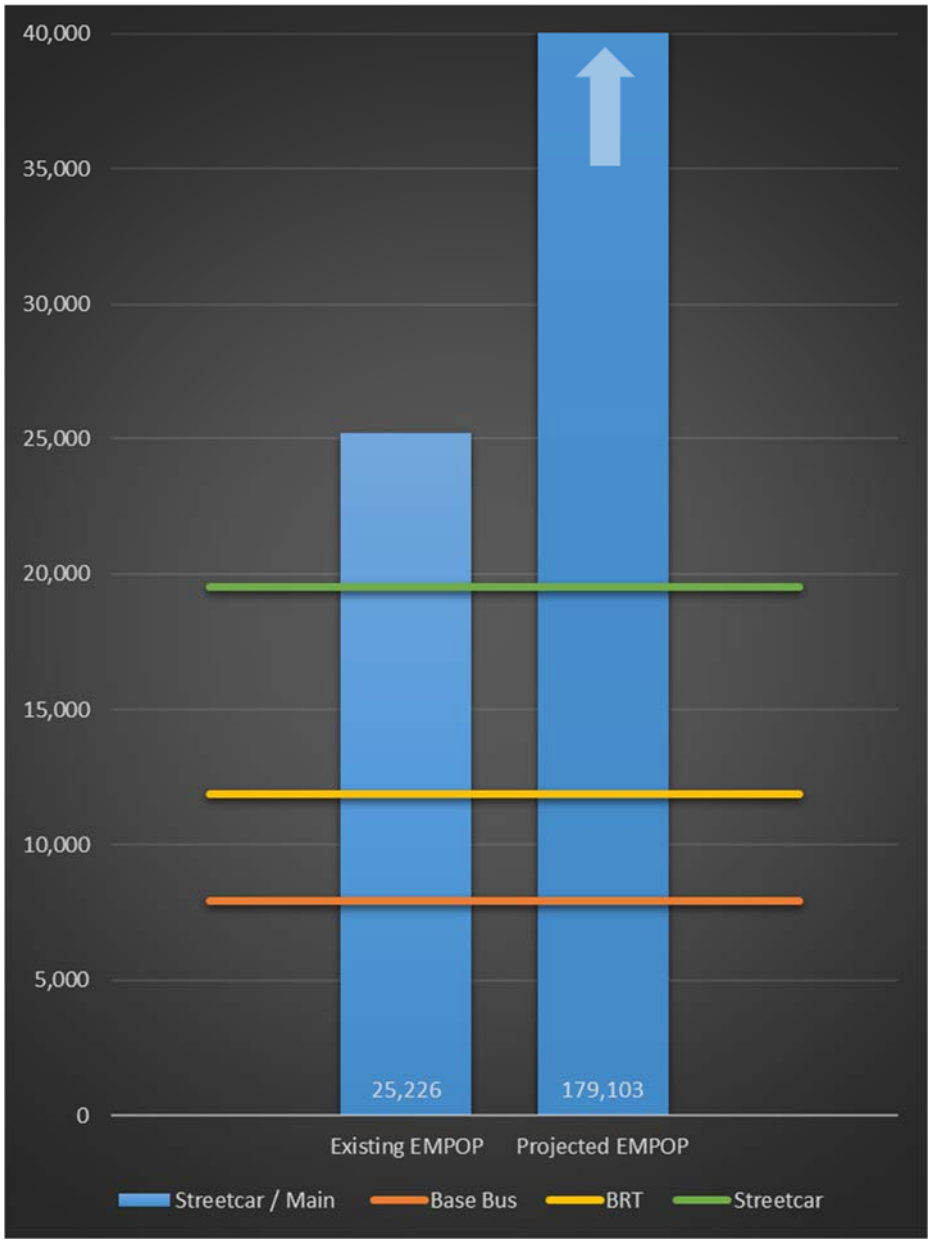
Figure 16: Future Land Use Map by Jurisdiction for Downtown Streetcar/Main Street Corridor



Land Use and Transit Relationship

Although streetcar already exists throughout part of this corridor, the existing employment and population per mile along the Streetcar / Main Street Corridor currently meets the density needed to support the highest level of transit analyzed, Streetcar. Future projections from MARC's 2012 Future Land Use Data implies future development will continue to bolster that employment and population densities along one of the densest transit corridors today.

Figure 17: Land Use and Transit Graph for Streetcar/Main Corridor



*EMPOP = employment + population

Anticipated Future Redevelopment Potential

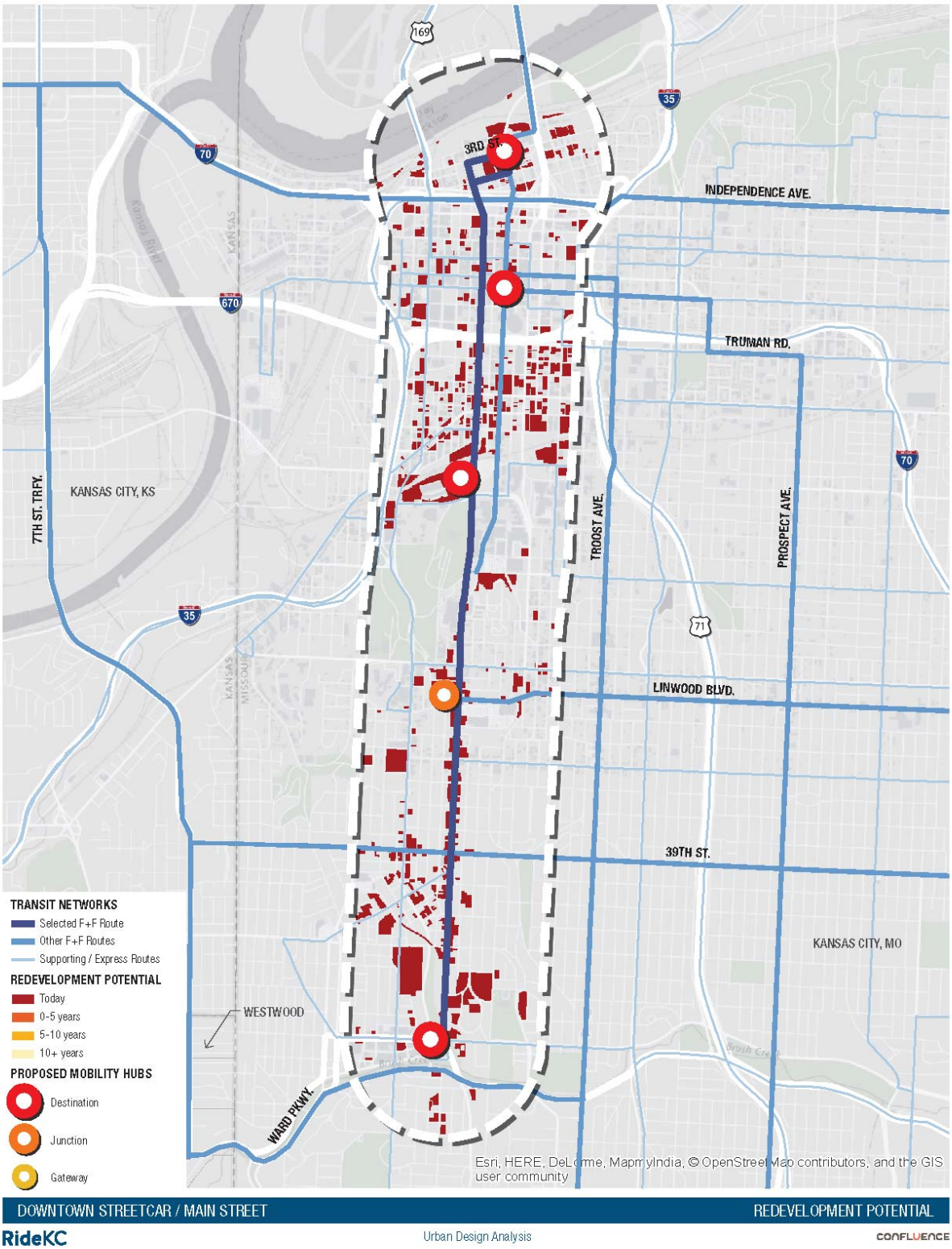
The Streetcar / Main Street corridor has the highest potential for redevelopment to occur out of the ten Fast and Frequent Routes analyzed, totaling 11% of its total acres 'ripe' for redevelopment. Many of these properties are located along the southern half of the Main Street corridor, while a cluster of the properties is located near Westport and Crossroad neighborhoods.

Mobility Hub Opportunities

Three mobility hubs are proposed along the Streetcar / Main Street Corridor – three destination mobility hubs and one junction mobility hub, while two additional mobility hubs are within the vicinity of the corridor. The three 'destination' mobility hubs are located at 3rd and Grand, Union Station, and the Country Club Plaza. The mobility hub located at 3rd and Grand will be a local example of integrating development with the transit network, highlighting the public/private partnership. The destination hub at Union Station has served a similar purpose historically, but will need to integrate any new transit services available as technology is changing the transit scene. The Country Club Plaza destination mobility hub has the potential to serve many different modes of transit and integrate the family of services as it continues to remain a highly desired location to work, play and live in the Kansas City Metro area.

Two of the mobility hubs near the Streetcar / Main Street corridor are located at 12th and Grand and Penn Valley Metropolitan Community College.

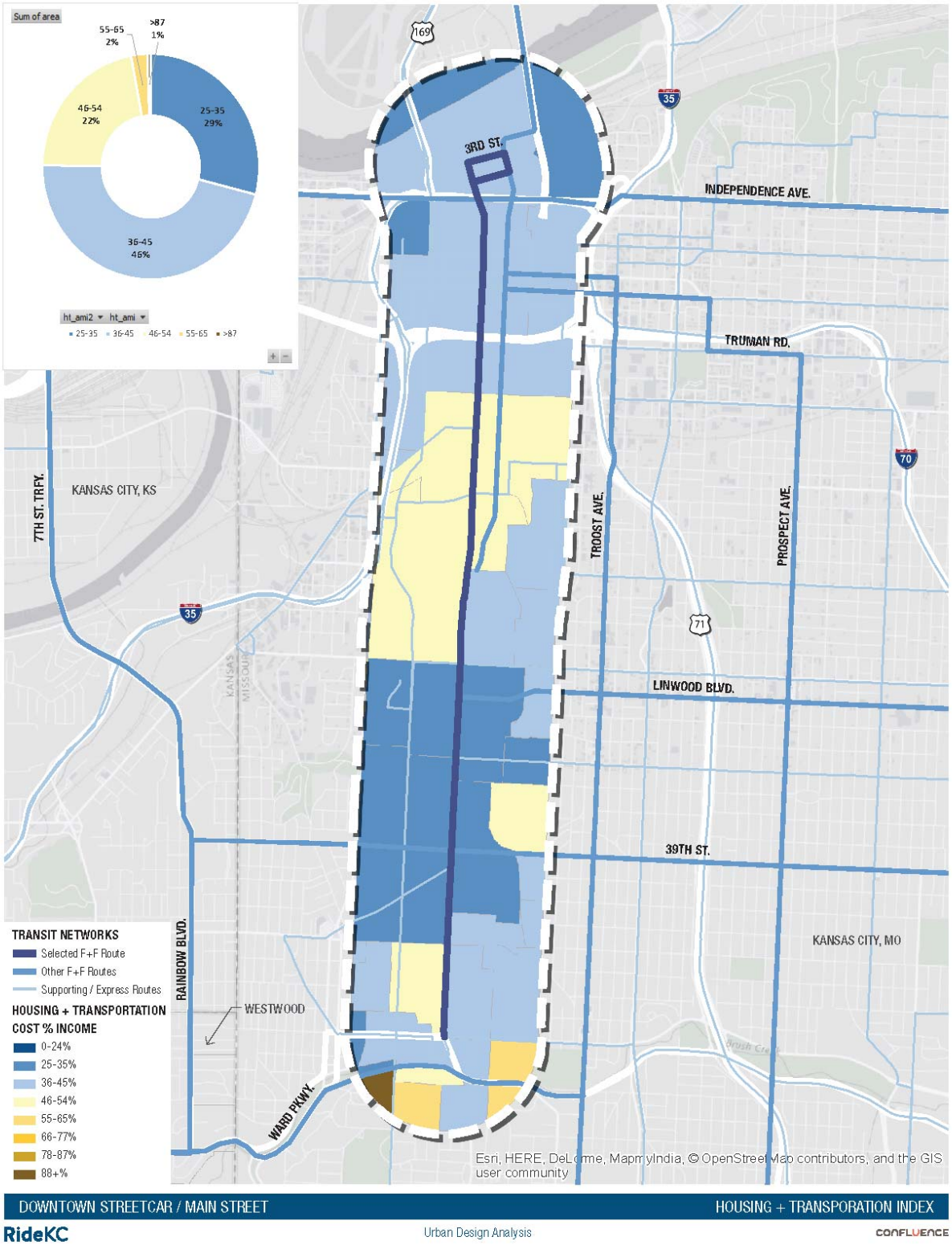
Figure 18: Redevelopment + Mobility Map for Downtown Streetcar/Main Street Corridor



Housing Affordability Analysis

The Downtown Streetcar / Main Street corridor has about 75% of its corridor considered affordable, while 25% of the corridor is not affordable. Areas that appear most affordable are the River Market, Central Business District, Midtown, and east of the Country Club Plaza. The least affordable areas of the corridor are at the southernmost tip of the corridor buffer, and around the Crossroads neighborhood. The weighted average along this corridor is 40%.

Figure 19: Housing + Transportation Index Map for Downtown Streetcar/Main Street Corridor



Initial Takeaways

Based on the high-level analysis of the Streetcar / Main Street Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Promote redevelopment and infill in the downtown core areas, as well as along the southern part of the corridor, approximately 31st Street to the Country Club Plaza.
- Encourage affordable housing with different incentives for any future multifamily redevelopment throughout the entirety of the corridor.
- Track future redevelopment with detailed development attribute information (total units, unit types, total square footage, total parking stalls, etc.) to observe and further study the correlation between redevelopment and transit investment as this becomes a true proof point for the Kansas City Metro area.

7th Street / Rainbow

This approximately 8-mile long corridor generally extends from Downtown Kansas City, Kansas south along Rainbow Boulevard to Shawnee Mission Parkway, then west towards it southern terminus at Mission Transit Center in Mission, Kansas.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 27,189, with a total population of 31,150 people. This is one of the least dense corridors, ranking nine out of the ten corridors for total density. The concentration of employment is primarily in specific nodes along the corridor, such as downtown Kansas City Kansas, the Armourdale area north of the river, the KU Medical Center, and the western part of downtown Mission, Kansas. The areas between these larger employment centers consist of the population concentration along the corridor, primarily single family with hints of higher densities in Kansas City, Kansas and south of the KU Med Center.

Figure 20: Employment Map for 7th Street/Rainbow Boulevard Corridor

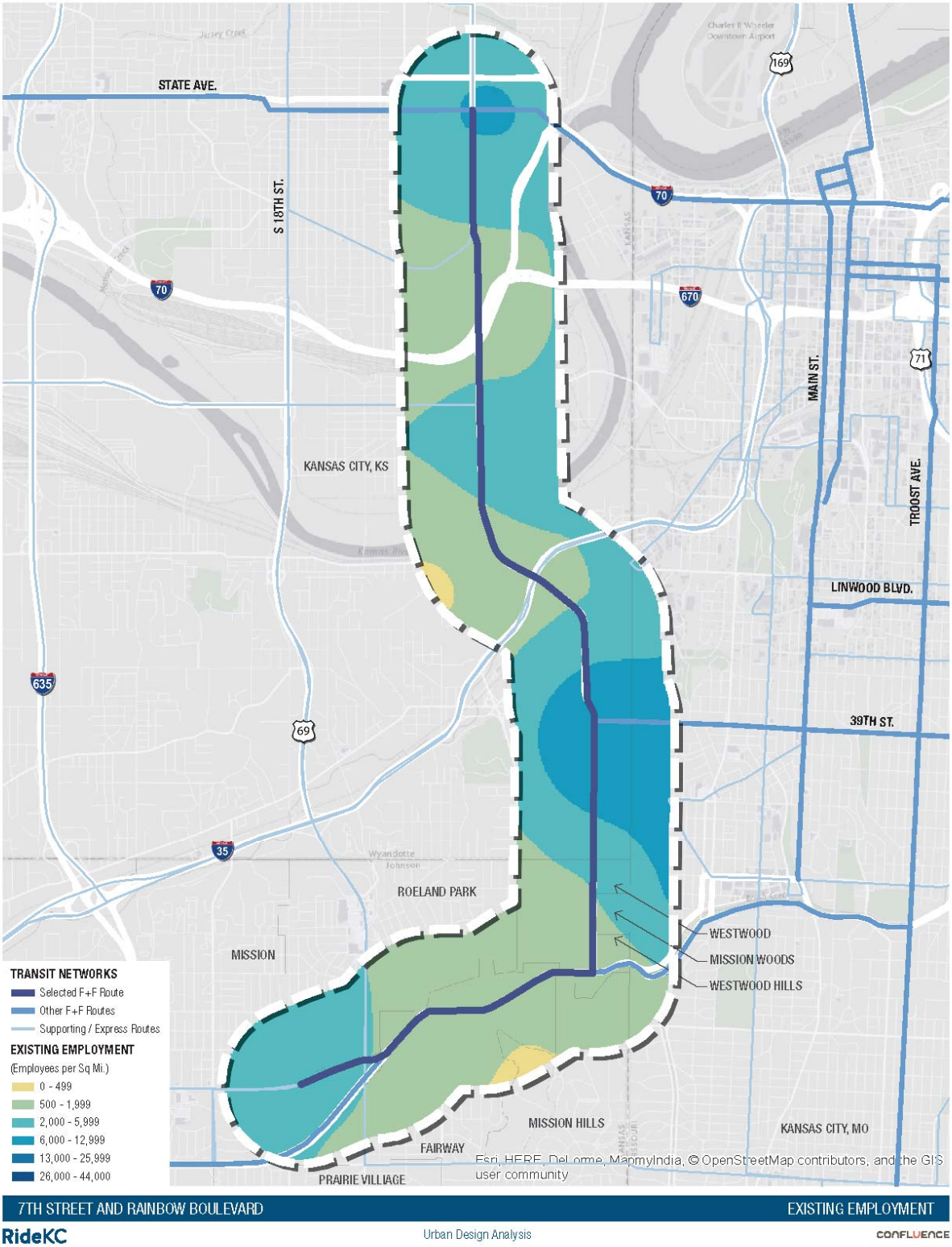


Figure 21: Population Map for 7th Street/Rainbow Boulevard Corridor

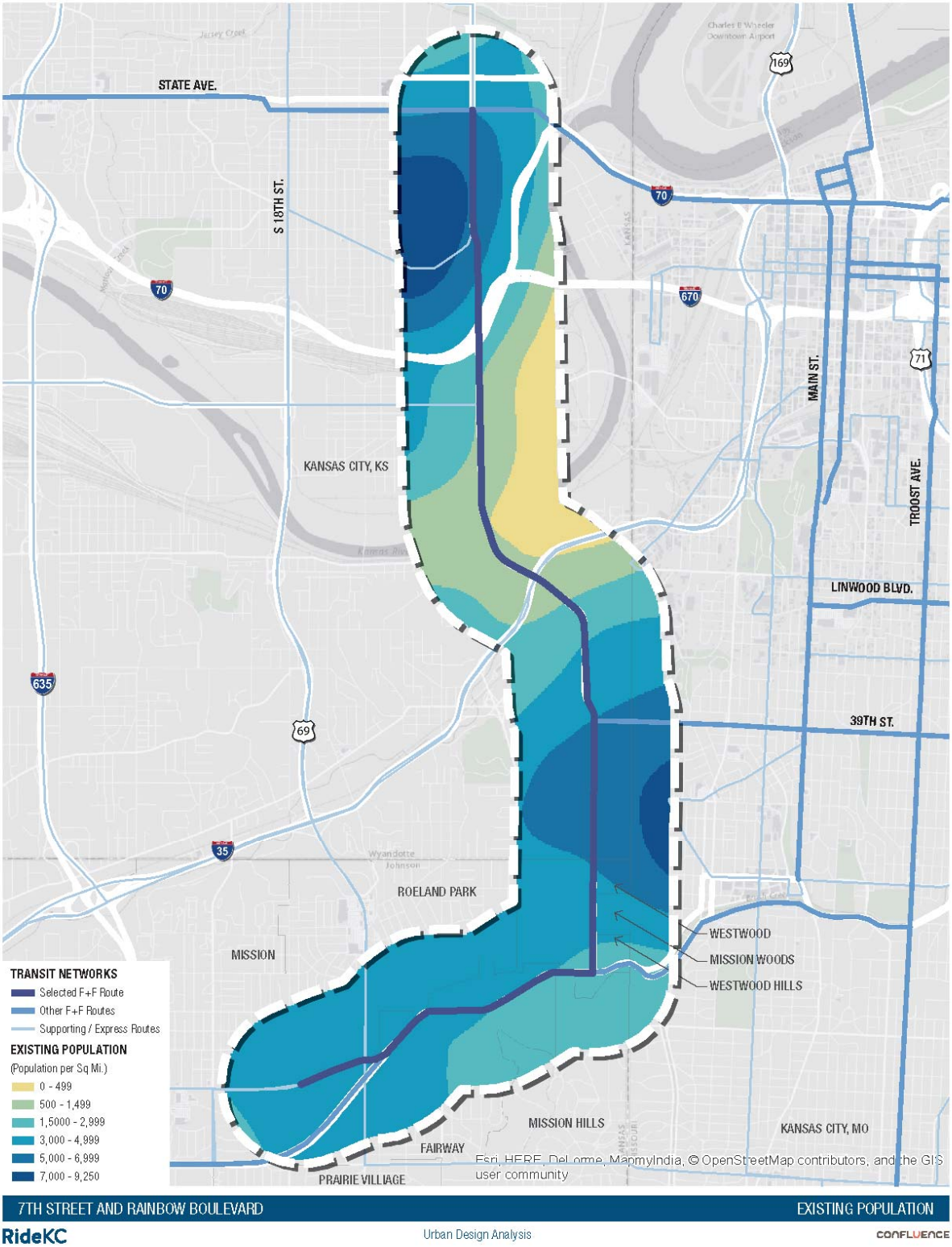
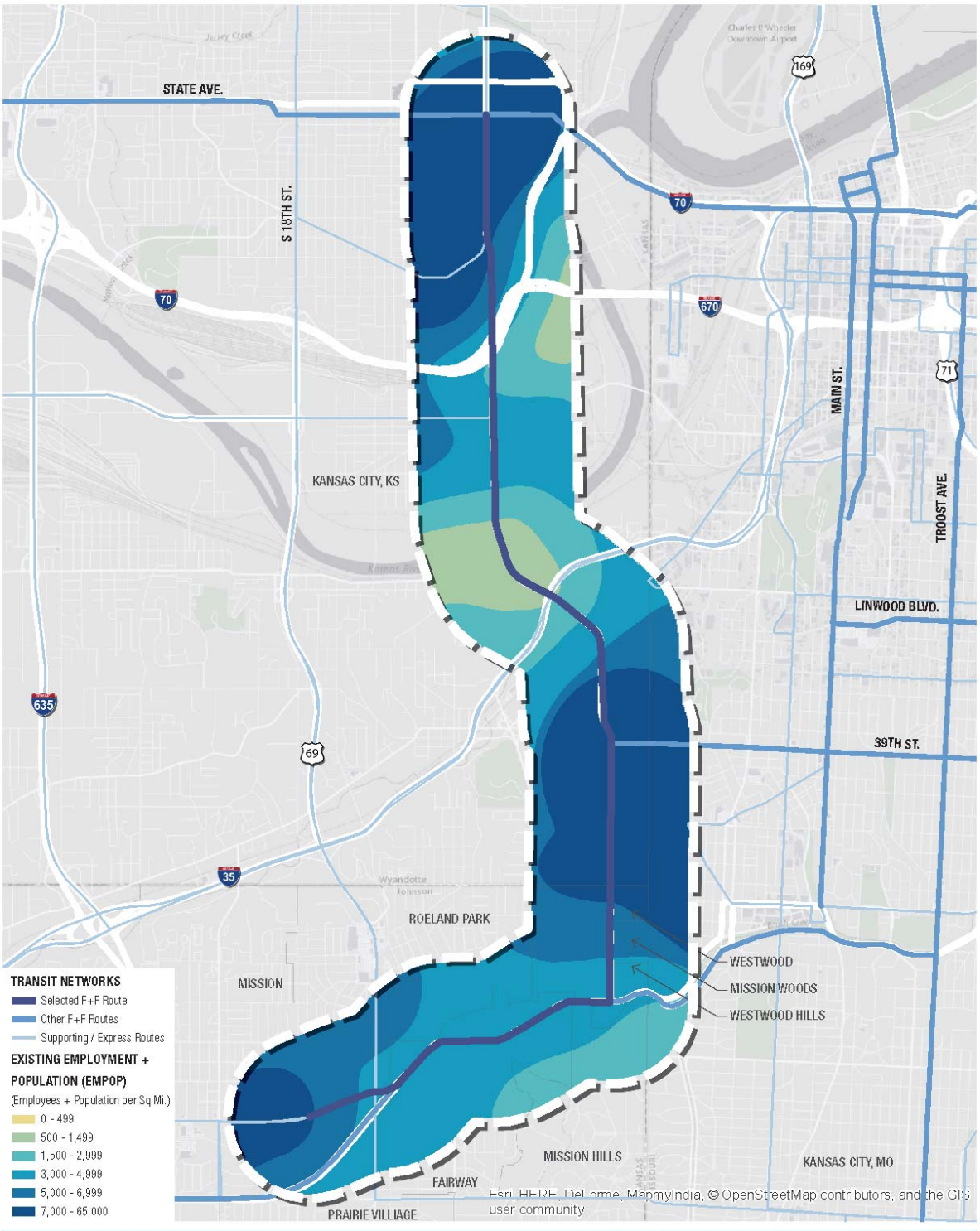


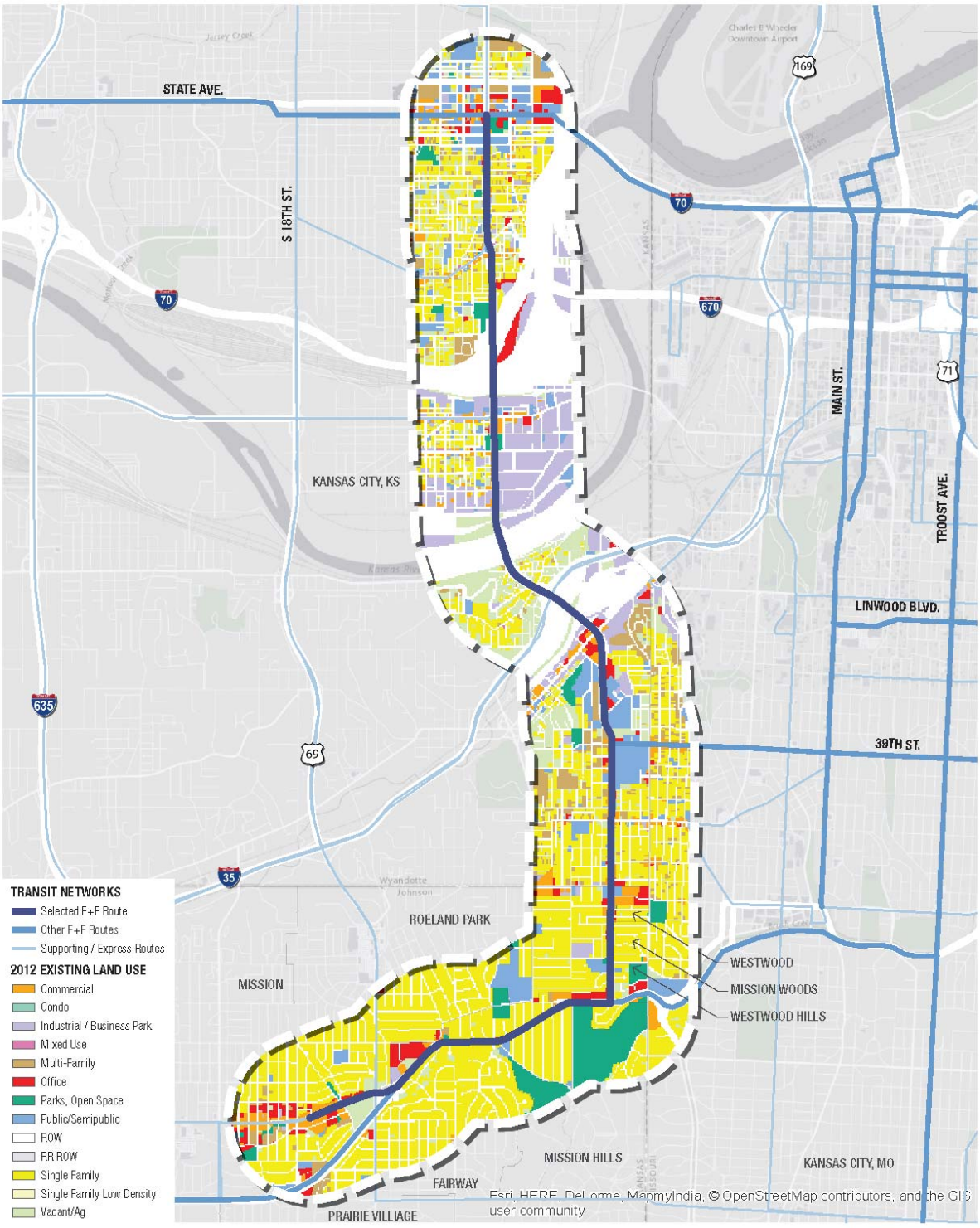
Figure 22: Employment + Population Map for 7th Street / Rainbow Corridor



Existing Land Use

Further supporting the existing population and employment numbers, the existing land use per the MARC 2012 Land Use Raster Data illustrates a similar density pattern of land uses. The northern most terminus in Kansas City, Kansas has the most variety of mixed land uses. When the corridor approaches the river, industrial development is the primary use. The KU Medical Center complex serves as a significant anchor along the midpoint of the corridor for employment, which also drives some of the residential densities near the middle of this corridor. In between these uses is primarily single family neighborhoods until reaching the corridor's southern terminus at Mission Transit Center where there is a mix of neighborhood uses but at lower densities.

Figure 23: Existing Land Use Map for 7th Street / Rainbow Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 140,754 people and employees, an increase in total population and employment by 82,415 people. MARC's Future Land Use map highlights some of the employment and population to occur in the employment centers along the corridor, such as downtown Kanas City, Kansas; the KU Medical Center; and near downtown Mission, Kansas.

The future land use maps for each jurisdiction within this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data. This includes revitalizing neighborhood development near the KU Medical Center, and bolstering the mix of uses in downtown Kansas City, Kansas and the industrial uses within the Armourdale area.

Figure 24: Future Land Use Map for 7th Street / Rainbow Corridor

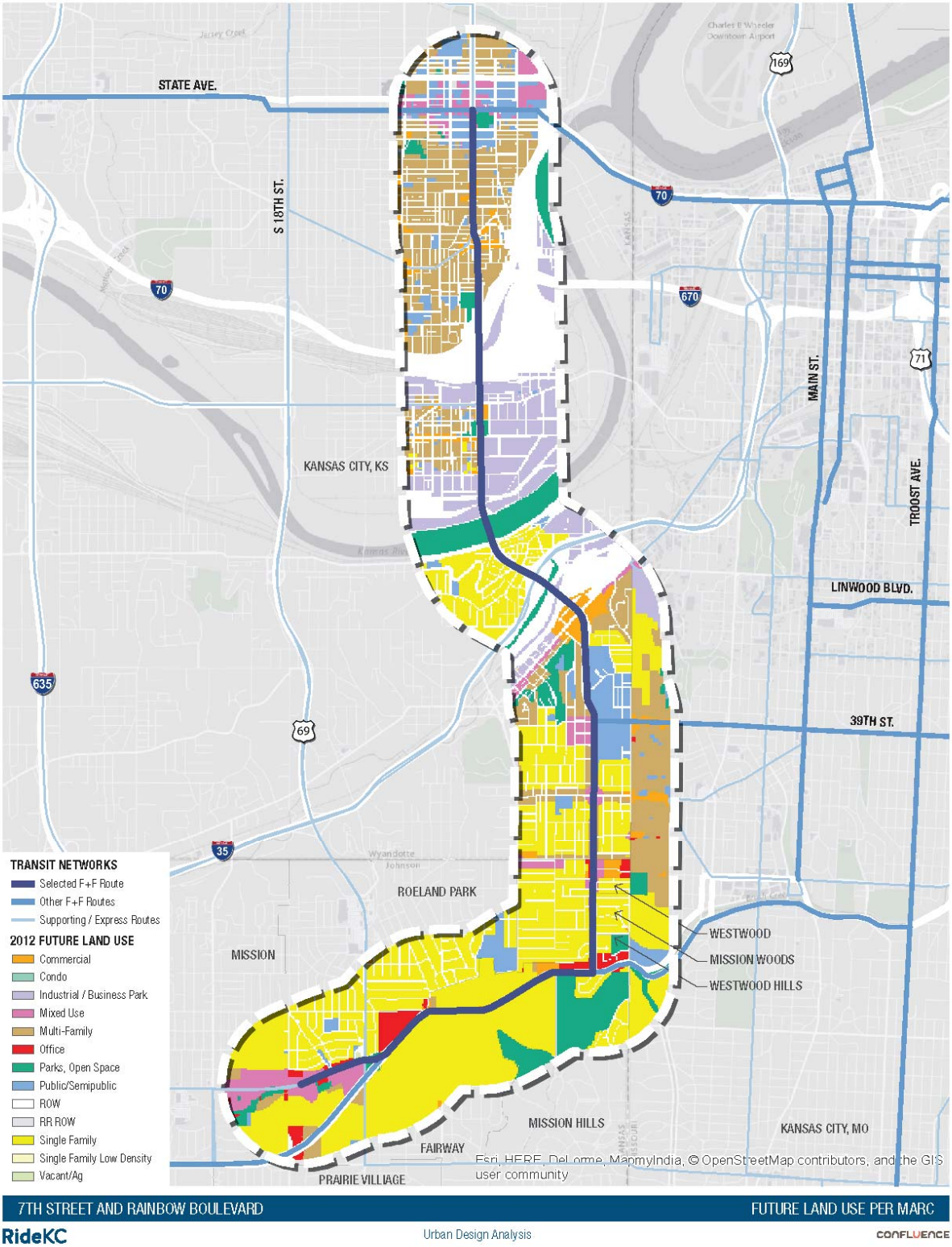
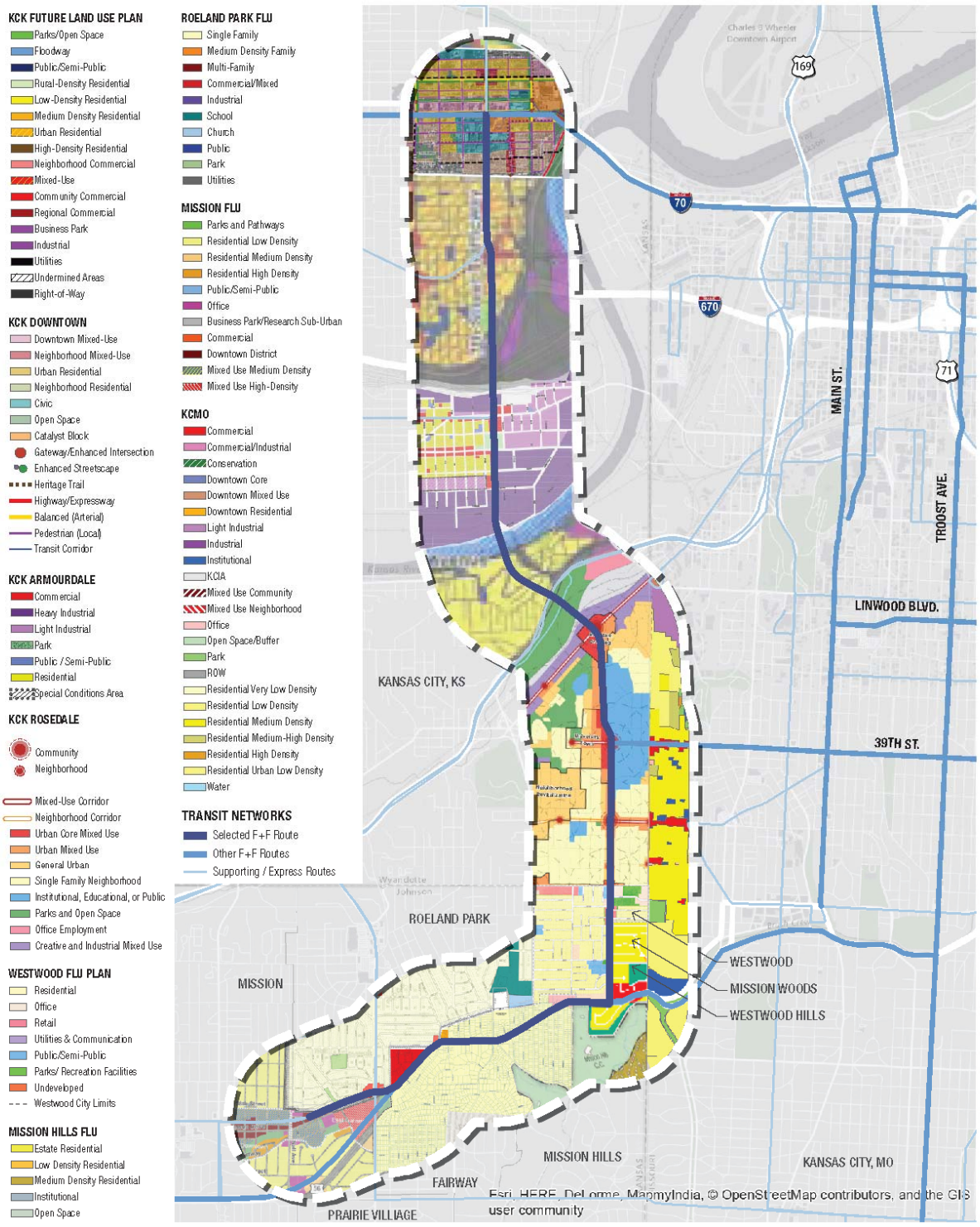


Figure 25: Future Land Use Map by Jurisdiction 7th Street / Rainbow Corridor



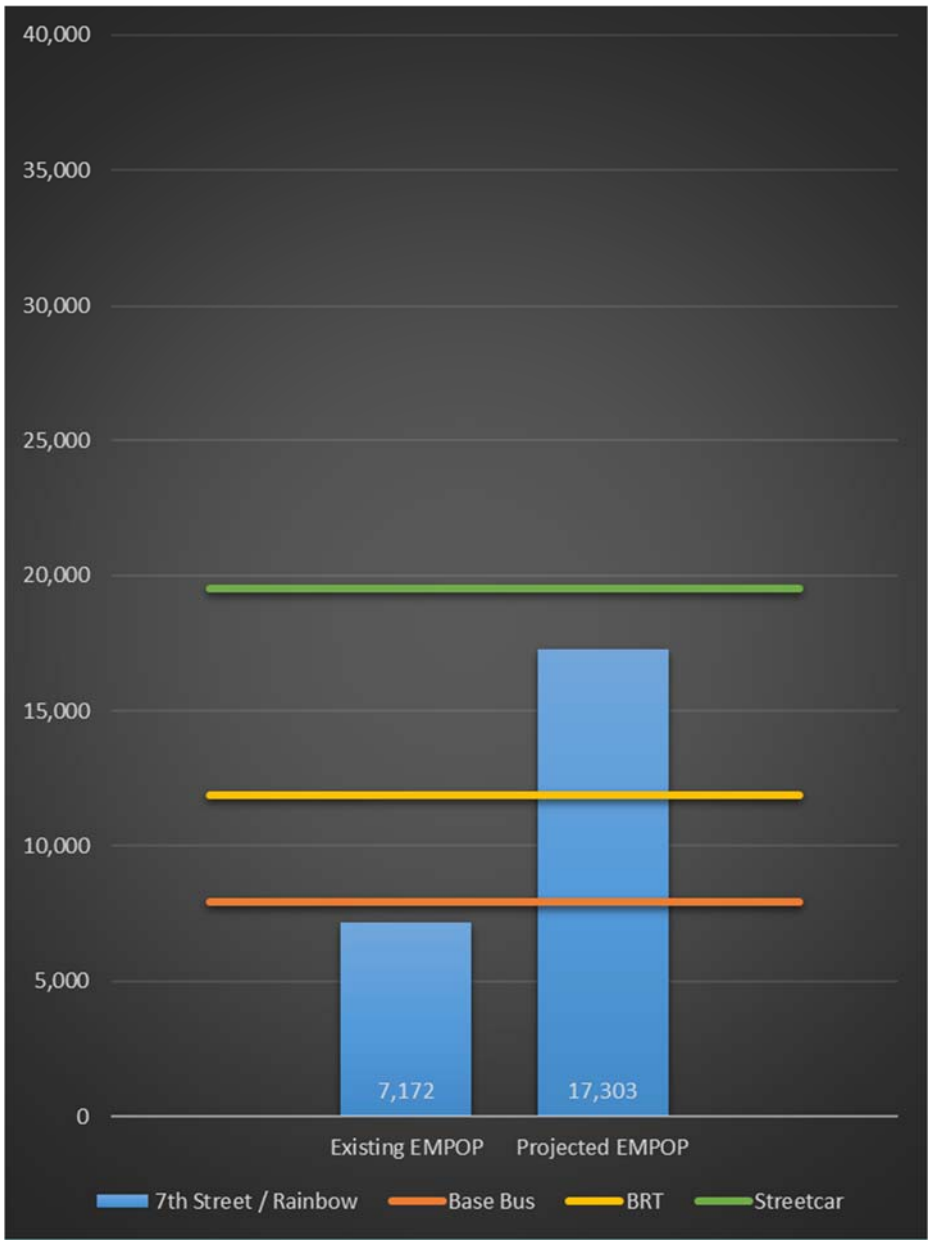
7TH STREET AND RAINBOW BOULEVARD — FUTURE LAND USE BY JURISTICTION

RideKC — Urban Design Analysis — CONFLUENCE

Land Use and Transit Relationship

Looking through the density needs and to support sustainable transit modes, the current employment and population per mile along the corridor as it exists today does not provide enough density to support a sustainable level of base bus service, only a few thousand people per mile short. The future land use projections calculated from MARCs Future Land Use Data does provide enough density of employment and population per mile to support Bus Rapid Transit, projecting about 17,000 people per mile.

Figure 26: Land Use and Transit Graph for 7th Street/Rainbow Corridor



*EMPOP = employment + population

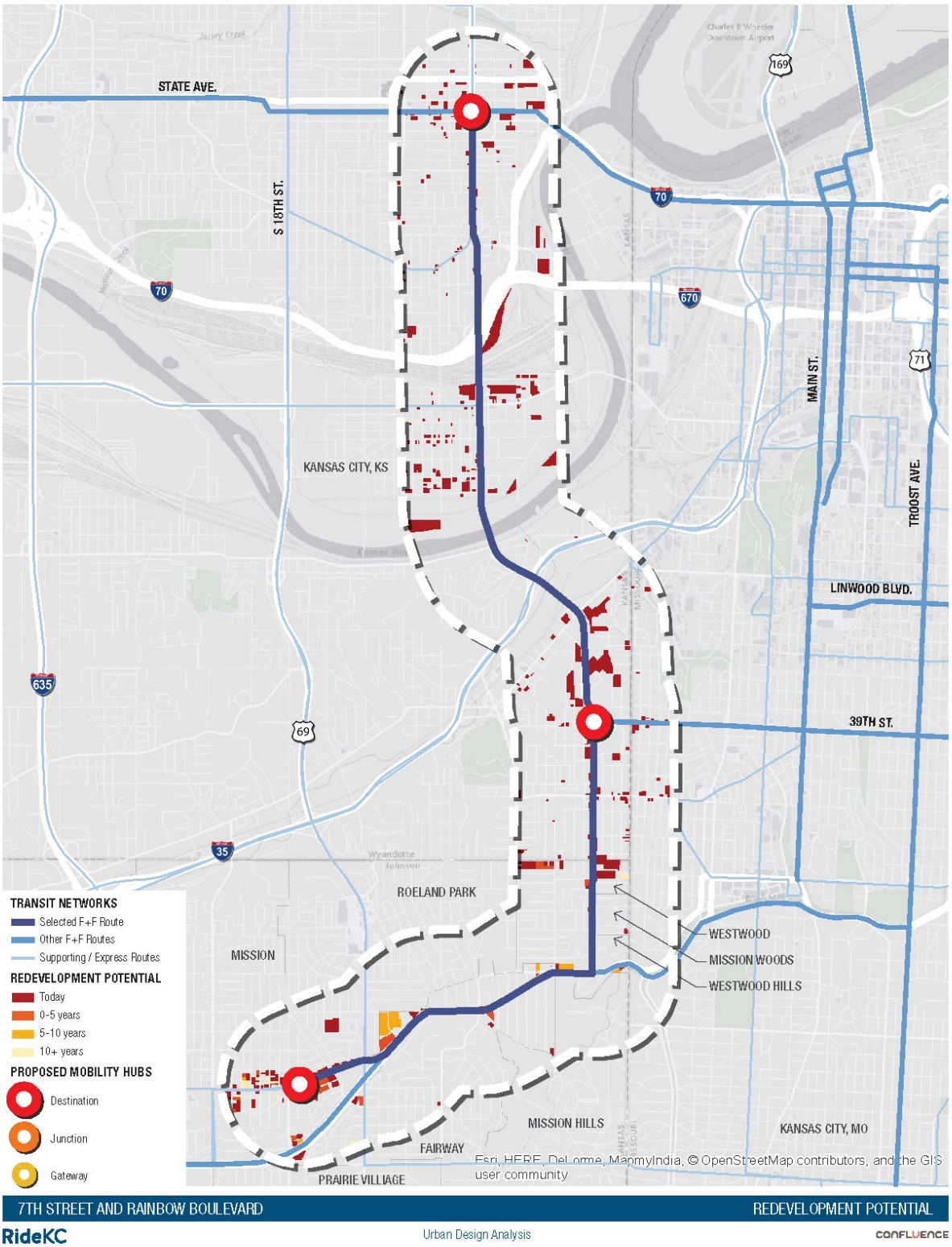
Anticipated Future Redevelopment Potential

The future redevelopment potential for non-residential structures within the corridor is shown in Figure 27. The corridor has about five percent of its total acres 'ripe' for redevelopment, and is primarily focused at the employment centers mentioned earlier - downtown Kansas City, Kansas, the Armourdale area, KU Medical Center, and the Mission Transit Center. There are a few properties shown that still have some value left, but within the next five to ten years will be ready for redevelopment as their value decreases. These properties are scattered throughout the entire corridor area.

Mobility Hub Opportunities

Three mobility hubs are proposed along the 7th Street / Rainbow Boulevard Corridor. One is located at the norther terminus to support enhanced services in the downtown Kansas City, Kansas area; the second one is located at the center of the route at the KU Medical Center; and the third one is in Mission, Kansas located at Mission Transit Center, the southern Terminus. All three mobility hubs are proposed as 'destination' mobility hubs, and have the potential to include the largest amount of family of services of all mobility hubs, providing an opportunity for future development pairing together public and private partnerships.

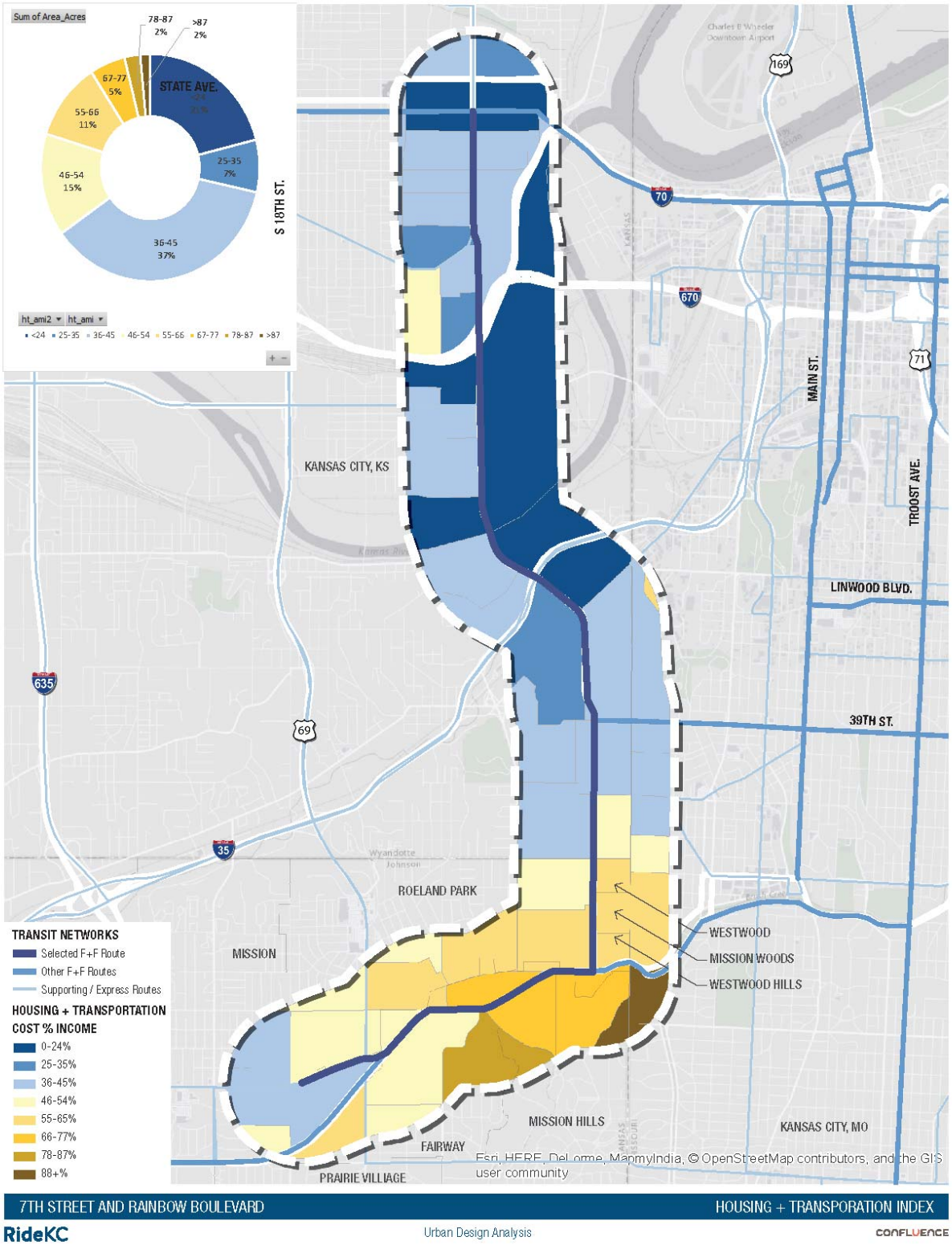
Figure 27: Redevelopment + Mobility Hub Map for 7th Street / Rainbow Corridor



Housing Affordability Analysis

The weighted average for housing and transportation costs along the 7th Street / Rainbow Boulevard Corridor is 38%. A lot of the larger acreages considered “most affordable” within the corridor area have limited amounts of population. The map illustrates by way of areas shaded in yellow, primarily along Shawnee Mission Parkway, is above what is considered affordable.

Figure 28: Housing + Transportation Index Map for 7th Street / Rainbow Corridor



RideKC Urban Design Analysis CONFLUENCE

Initial Takeaways

Based on the high-level analysis of the 7th Street / Rainbow Boulevard Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Focus mixed-use redevelopment near the major employment nodes along the corridor – downtown Kansas City, Kansas; Armourdale; KU Medical Center; and Mission Transit Center.
- Provide housing affordability solutions in areas considered unaffordable, primarily along Shawnee Mission Parkway.
- Maintain quality existing single family neighborhoods and rejuvenate older ones.
- Focus redevelopment in areas ripe for redevelopment.
- Encourage density near areas identified as potential mobility hubs along the corridor.

Linwood

This approximately 3.5-mile long corridor generally extends from the west at the Midtown Market Place located at the intersection of Main Street and Linwood Boulevard to an area just east of Emanuel Clever II Boulevard in Kansas City, Missouri.

The Linwood corridor cuts through established, urban neighborhoods, intersecting with three north/south Fast and Frequent Routes and a handful of supporting routes running parallel to this corridor.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 14,526, with a total population of 18,420 people. Out of the ten corridors analyzed, it is less than moderately dense, ranking sixth. The concentration of employment is primarily at the west side of the corridor near the Midtown Market Place, while the largest concentration of population is the middle of the corridor near Prospect Avenue and a small cluster of higher population density at the southwest corner of the corridor buffer area.

Figure 29: Employment Map for Linwood Corridor

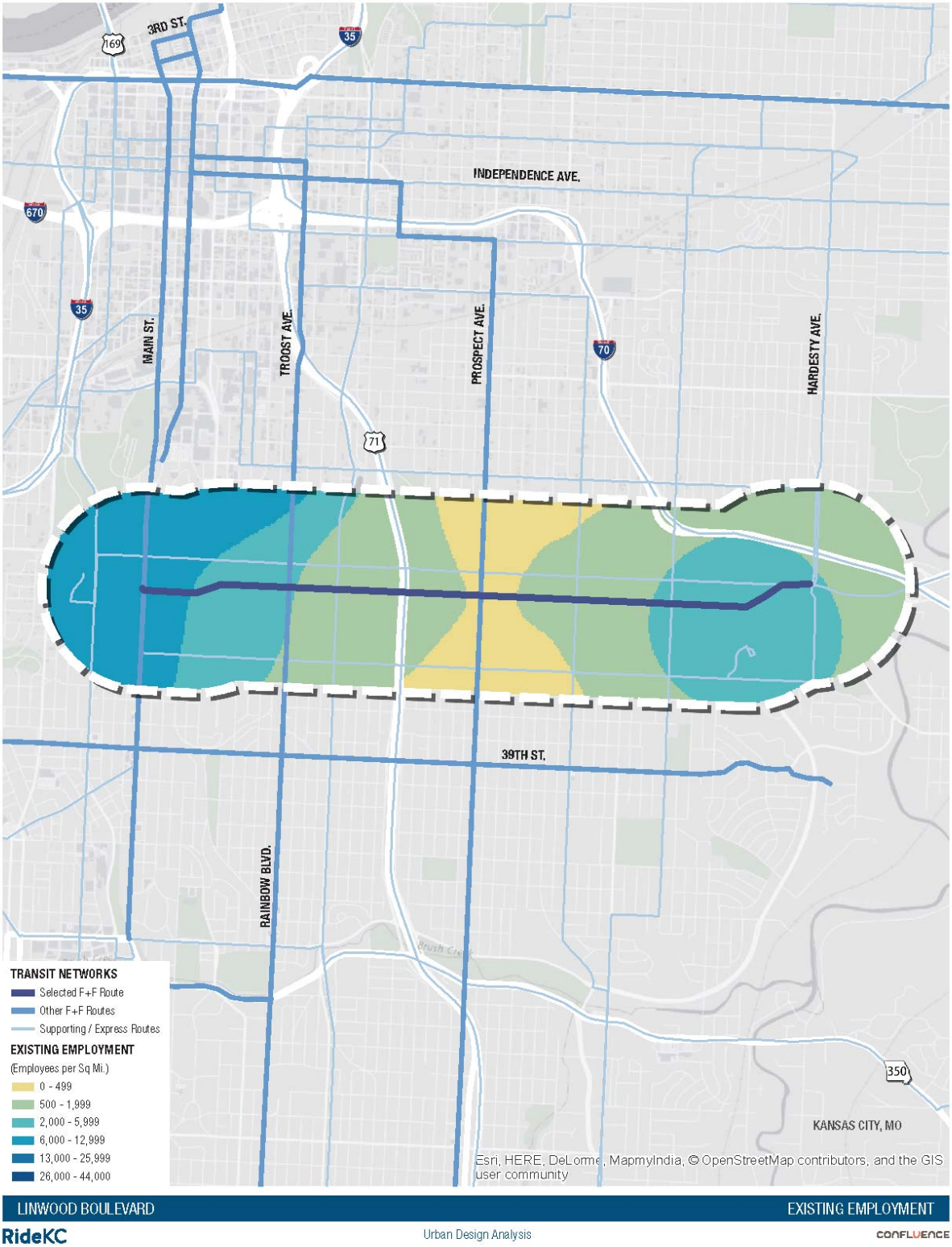


Figure 30: Population Map for Linwood Boulevard

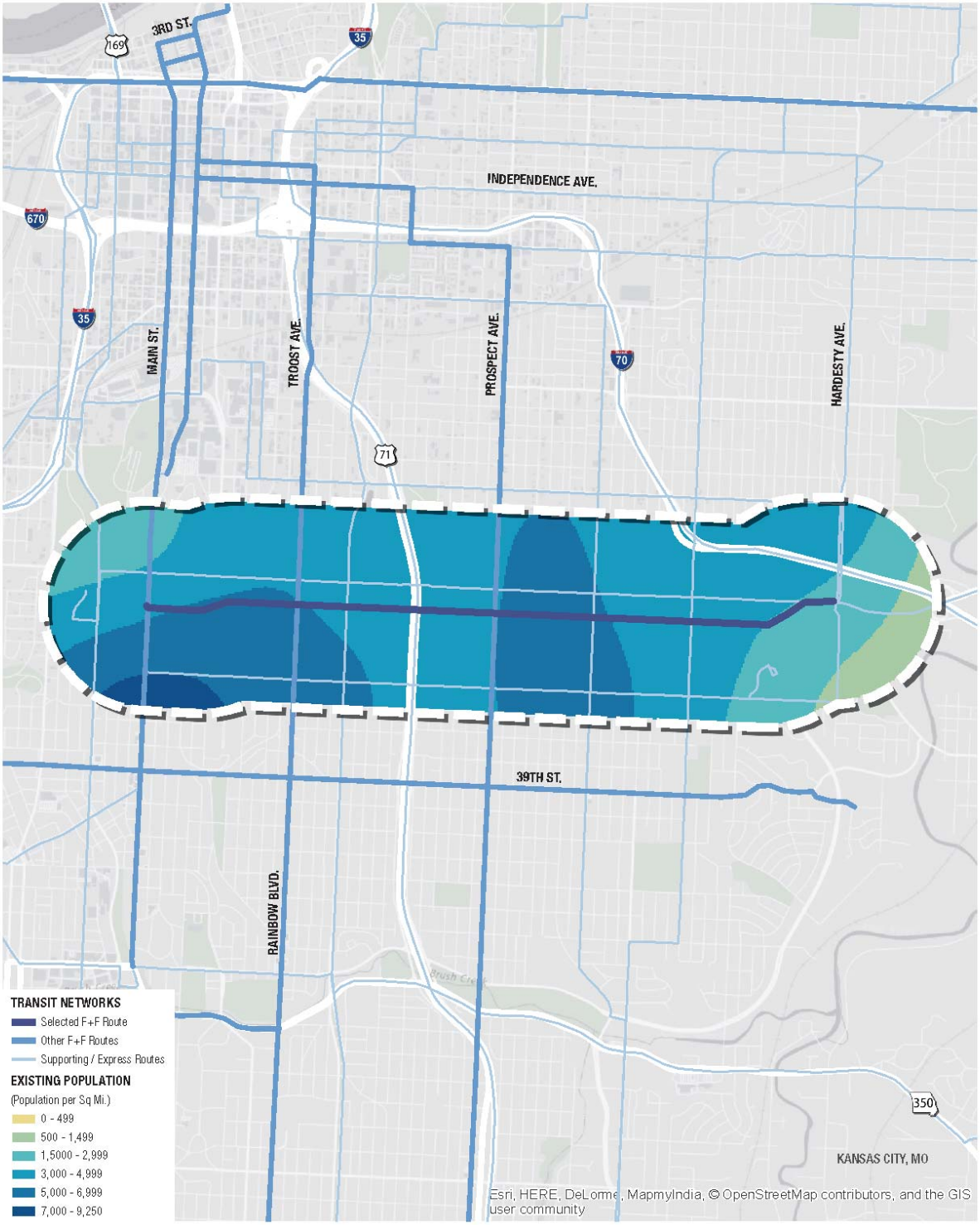
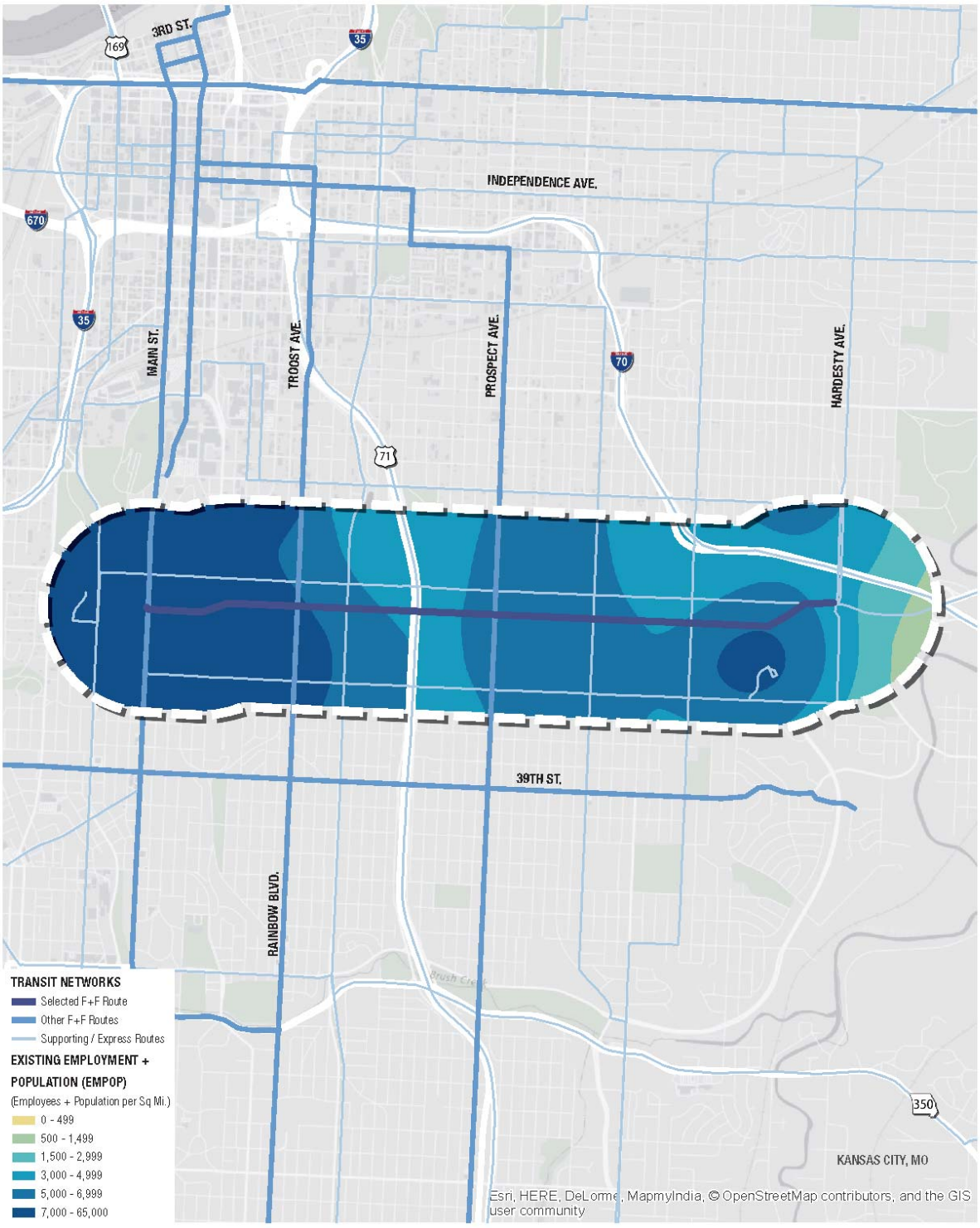


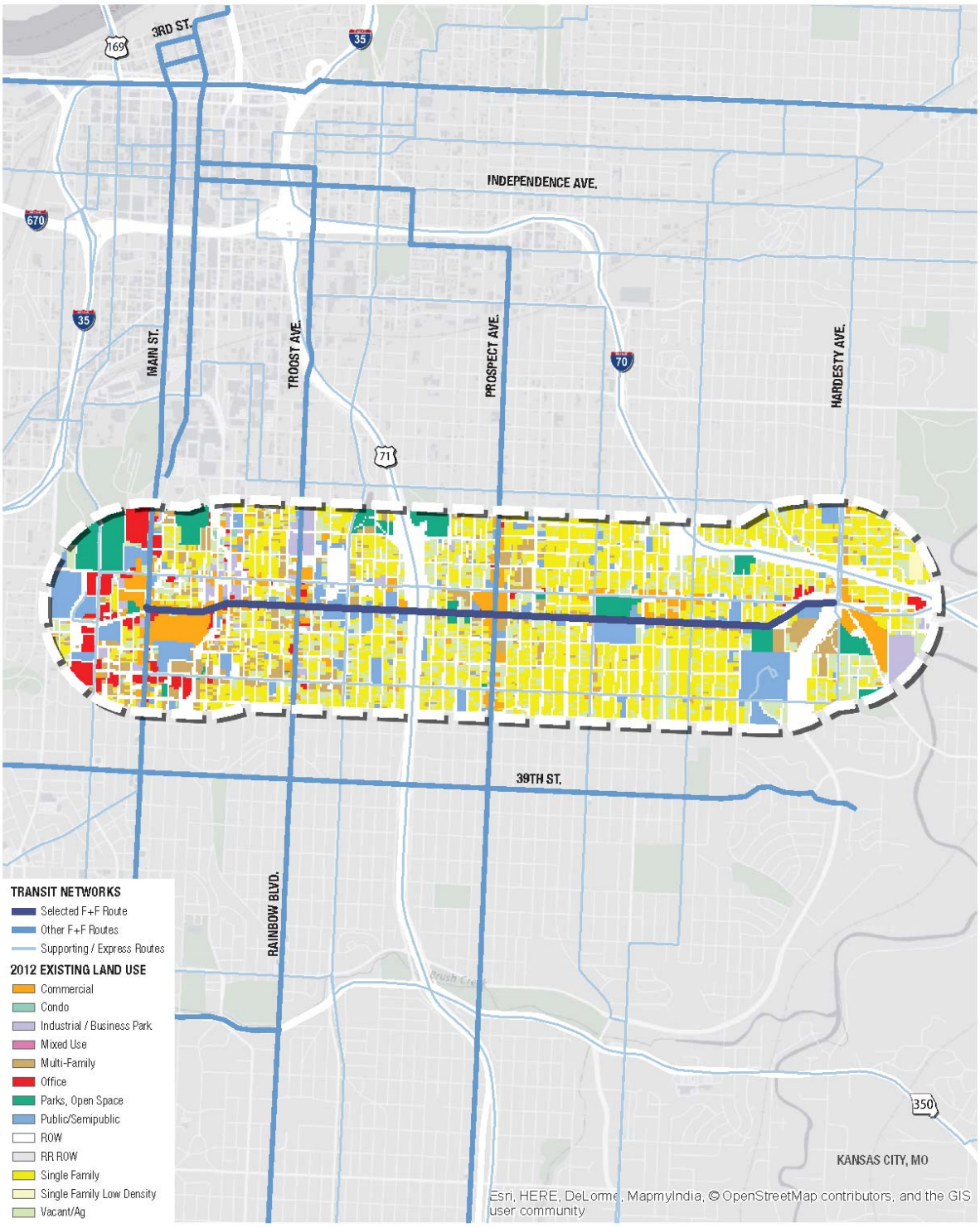
Figure 31: Employment + Population Map for Linwood Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data shows a mix of uses at the west terminus of the corridor, with a few big box stores and pad sites in front. The furthest east terminus shows some commercial and industrial uses. The intersections of Prospect Avenue and Troost Avenue are smaller mixed use nodal developments. The spaces between these commercial-like uses are primarily dense, urban single family neighborhoods with supporting civic spaces and parks.

Figure 32: Existing Land Use Map for Linwood Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 89,427 people and employees, an increase in total population and employment by 56,481 people. MARC's Future Land Use Raster Data hints at where these increases might occur, shown around the Main Street and Linwood Boulevard Street intersection.

The future land use maps for the jurisdiction along this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data near the Main Street and Linwood Boulevard intersection, with minimal impact or change to existing neighborhoods within the east parts of the corridor, but does have some increase in mixed uses along the entire corridor, and bolsters the mixed of land uses at the Prospect Avenue and Troost Avenue intersections.

Figure 33: Future Land Use Map for Linwood Corridor

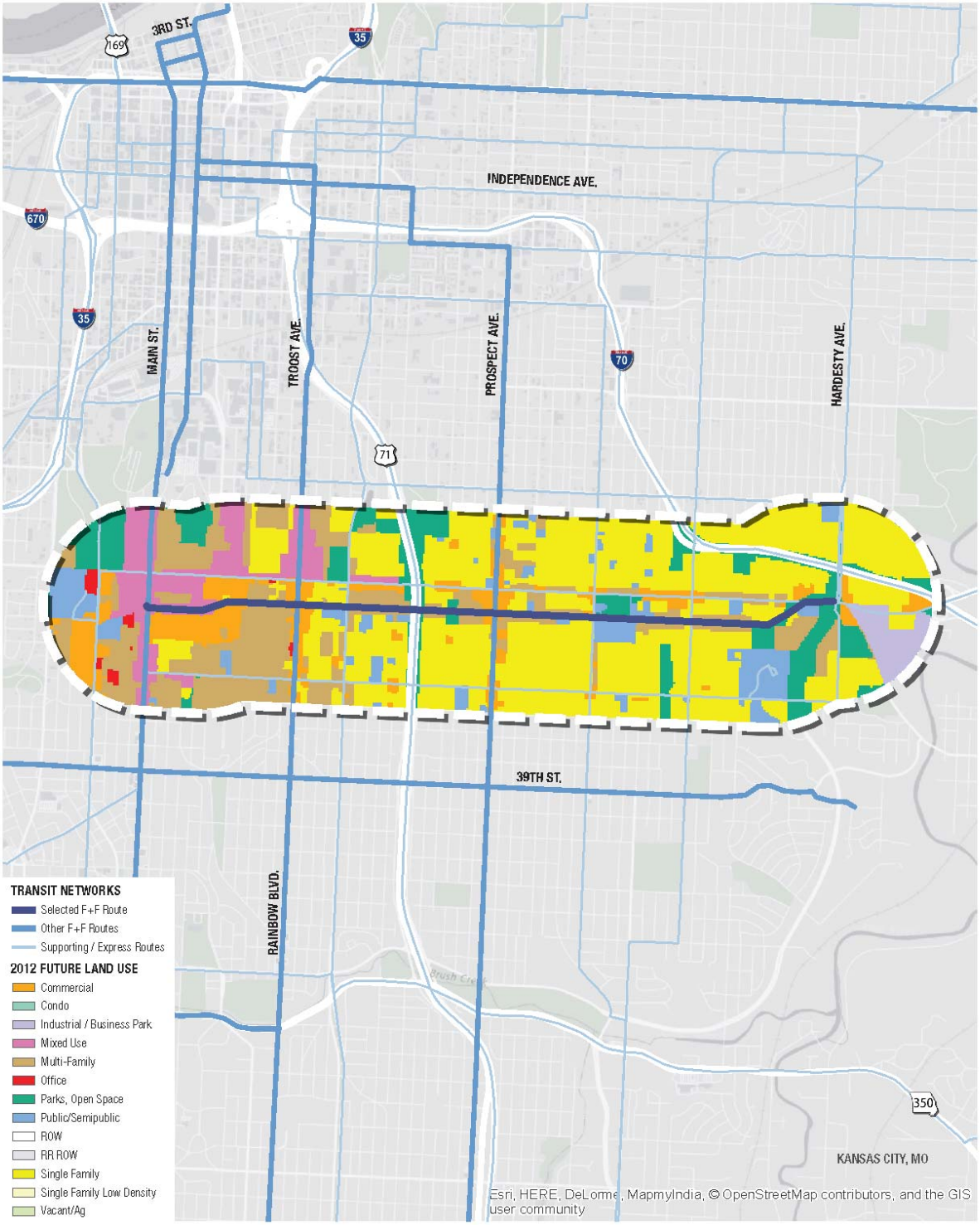
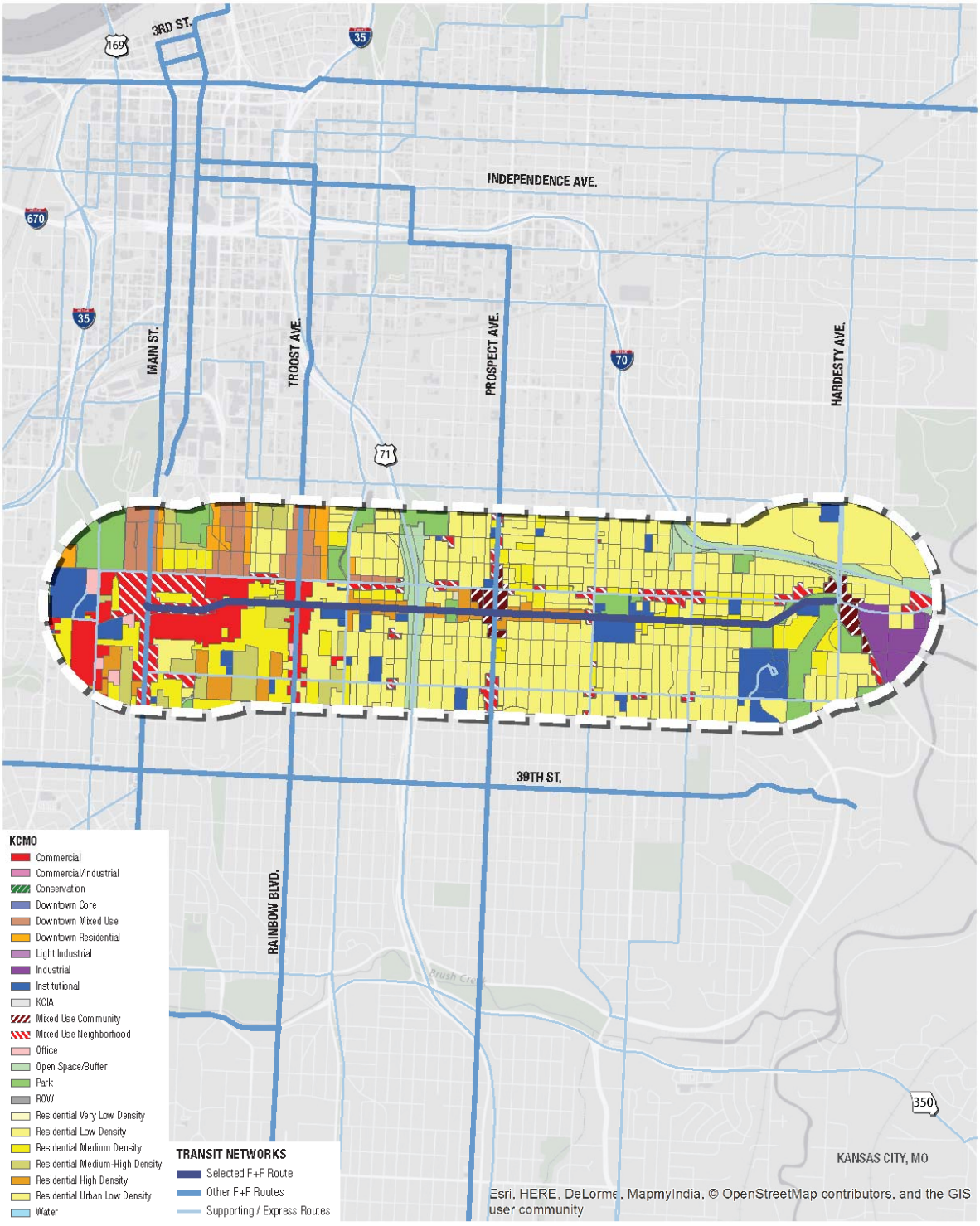


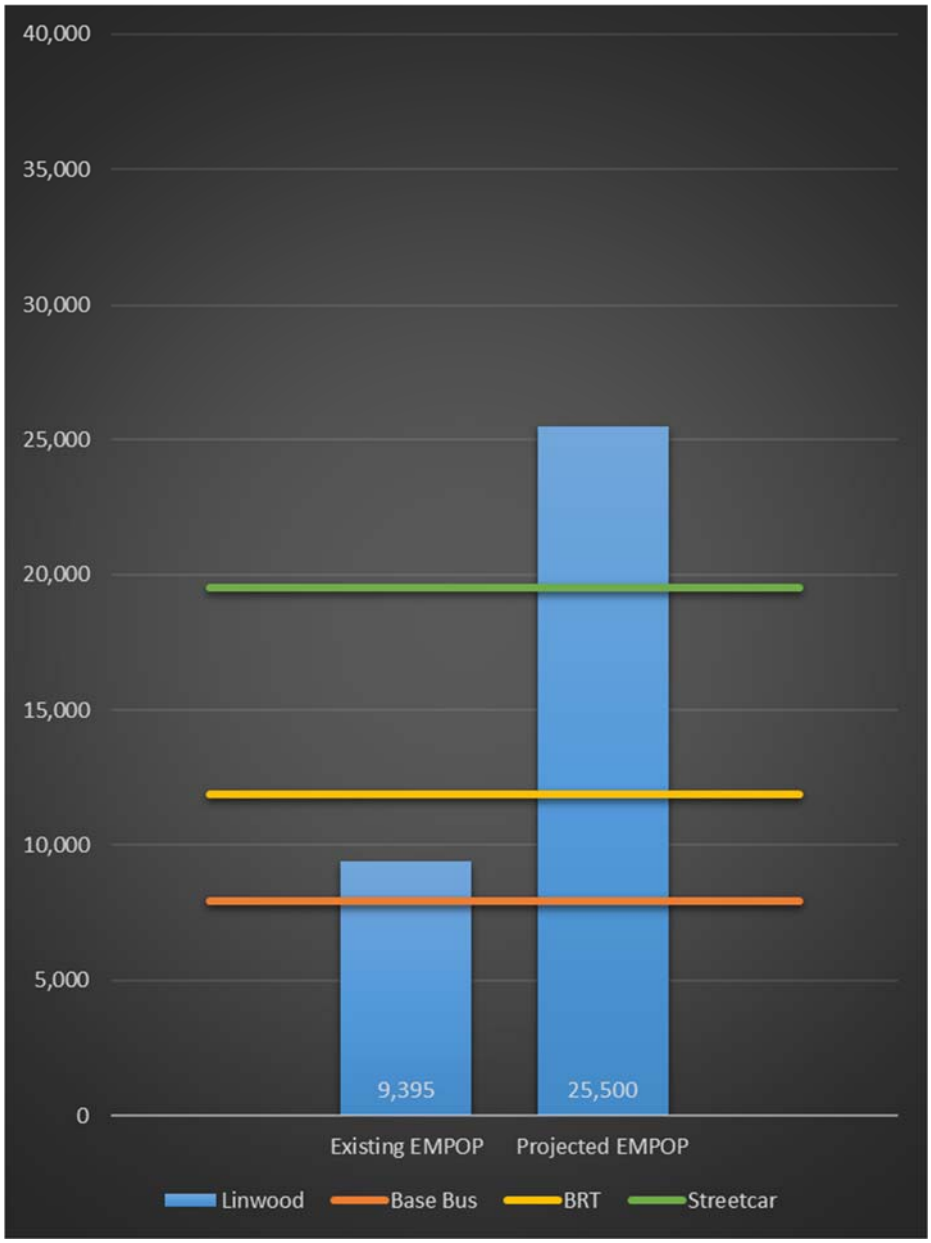
Figure 34: Future Land Use Map by Jurisdiction for Linwood Corridor



Land Use and Transit Relationship

Currently the existing population and employment per mile along the 3.5 mile Linwood Boulevard Corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARC's 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Streetcar.

Figure 35: Land Use and Transit Graph for Linwood



*EMPOP = employment + population

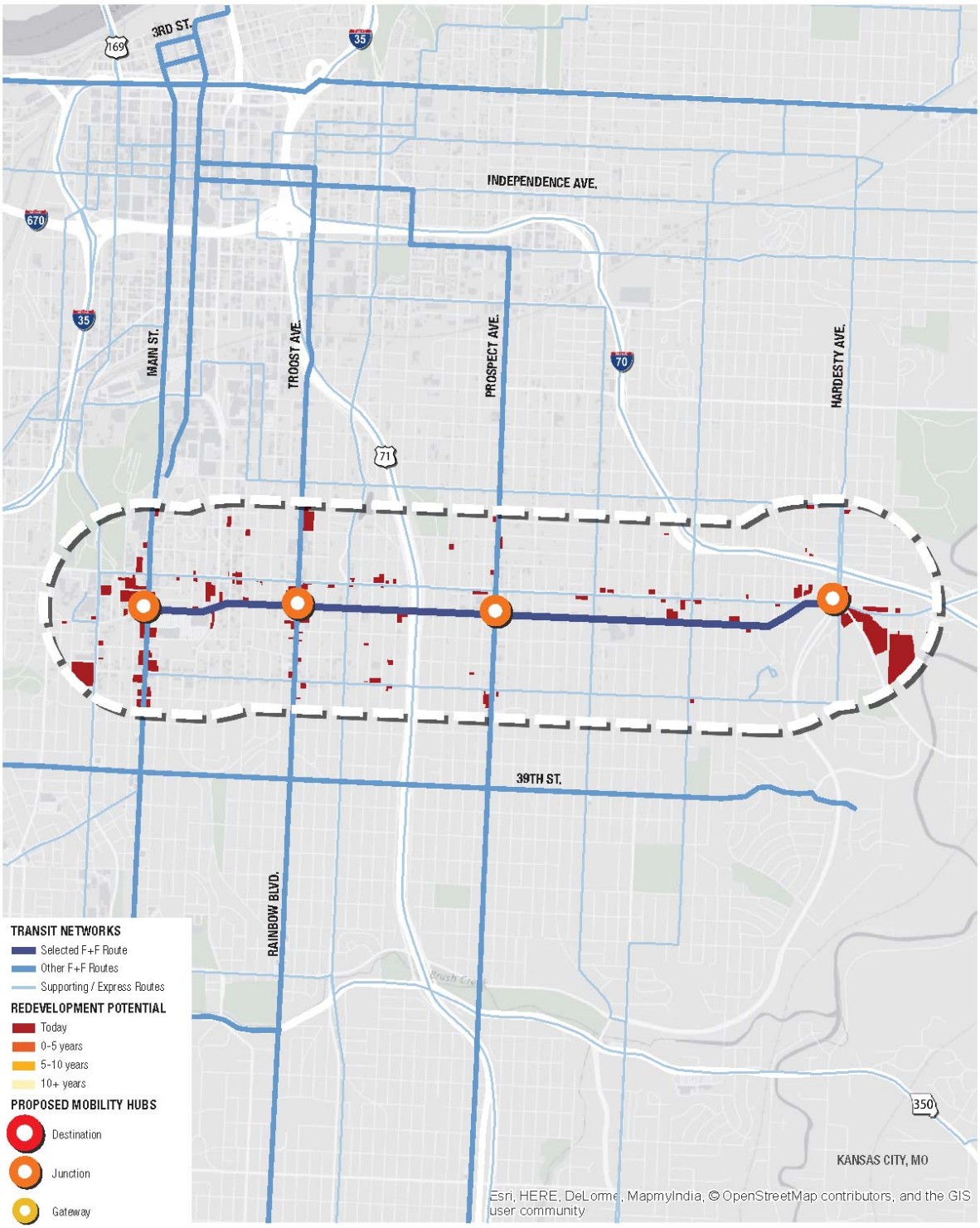
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures is shown within the corridor buffer as well. The redevelopment map illustrates that much of redevelopment potential is located along the north/south Fast and Frequent corridors that intersect the Linwood Boulevard Route, along with a cluster of redevelopment potential occurring at the east terminus along the Linwood Boulevard Route. The route contains approximately 129 acres that are ripe for redevelopment, roughly five percent of its total corridor area.

Mobility Hub Opportunities

Four mobility hubs are proposed along the Linwood Boulevard Route. These are proposed at the intersections of Main Street, Troost Avenue, Prospect Avenue, and Emanuel Cleaver Boulevard along Linwood. All four mobility hubs are proposed as ‘junction’ hubs, anticipated to serve the surrounding area as well as riders transferring between two fast and frequent routes that intersect at three of the mobility hub locations.

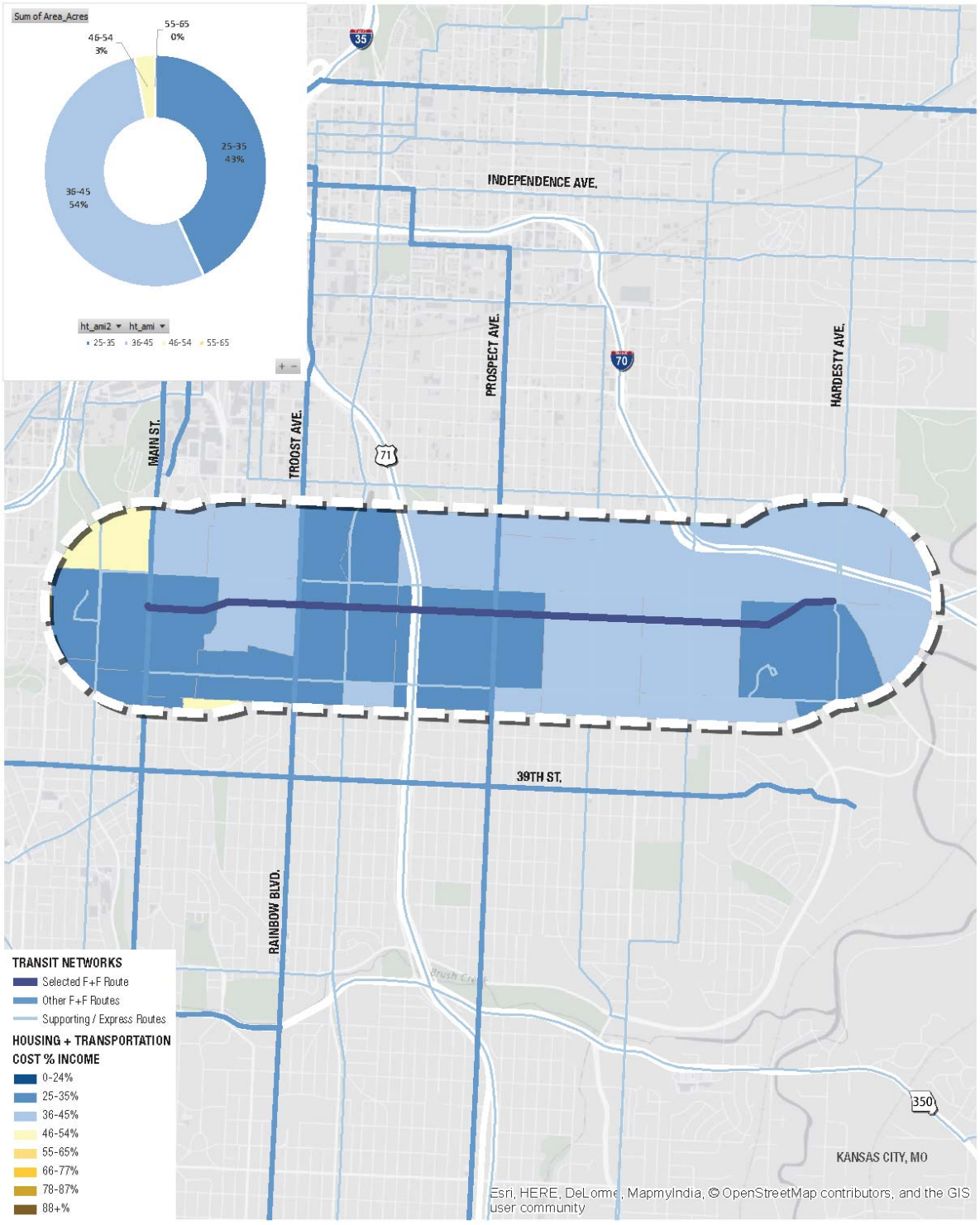
Figure 36: Redevelopment + Mobility Hub Map for Linwood Corridor



Housing Affordability Analysis

The Linwood Boulevard Corridor is one of the most affordable, least cost burdening corridors to live (tied with Independence Avenue / State Avenue Corridor), with nearly 97% of its total area considered affordable. Areas considered most affordable includes areas located on either side of Highway 71, along the entire southwest side of the corridor, and a small area in the south-east part of the corridor. Three percent of the area that is not affordable is located west of Main Street in the northwest corner of the corridor. The weighted average for housing and transportation costs along this corridor is 36%.

Figure 37: Housing + Transportation Index Map for Linwood Corridor



LINWOOD BOULEVARD HOUSING + TRANSPORATION INDEX

RideKC Urban Design Analysis CONFLUENCE

Initial Takeaways

Based on the high-level analysis of the Linwood Boulevard Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Focus mixed-use redevelopment along the Fast and Frequent Routes that intersect with the Linwood Boulevard Corridor.
- Preserve existing single family households west of Prospect along the Linwood Boulevard Corridor.
- Encourage market rate apartments in future redevelopment areas along the Linwood Corridor.
- Encourage public/private partnership development at mobility hubs along the corridor to help increase density.

Metcalf Avenue / Shawnee Mission Parkway

This approximately 15-mile long corridor generally extends from the south at The Shops at Deer Creek Woods in Overland Park, Kansas north to the Country Club Plaza. The Metcalf and Shawnee Mission Parkway Corridor is a major spine in the Johnson County area, providing some of the largest ranges of different land use types and densities, hosting one of the largest employment centers and contains established single family neighborhoods. The corridor cuts through a series of different jurisdictions, with three fast and frequent routes extending through this specific corridor.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 73,355, with a total population of 48,406 people. It is one of the least dense corridors out of the ten corridors analyzed, ranking eight out of the ten analyzed. The concentration of employment is primarily at the northern terminus at the Country Club Plaza, and near the College and Boulevard intersection in Johnson County. The highest population densities along the corridor are along the middle core of Metcalf Avenue, and along Shawnee Mission Parkway near Mission, Roeland Park and Fairway, Kansas.

Figure 38: Employment Map for Metcalf Avenue/Shawnee Mission Parkway Corridor

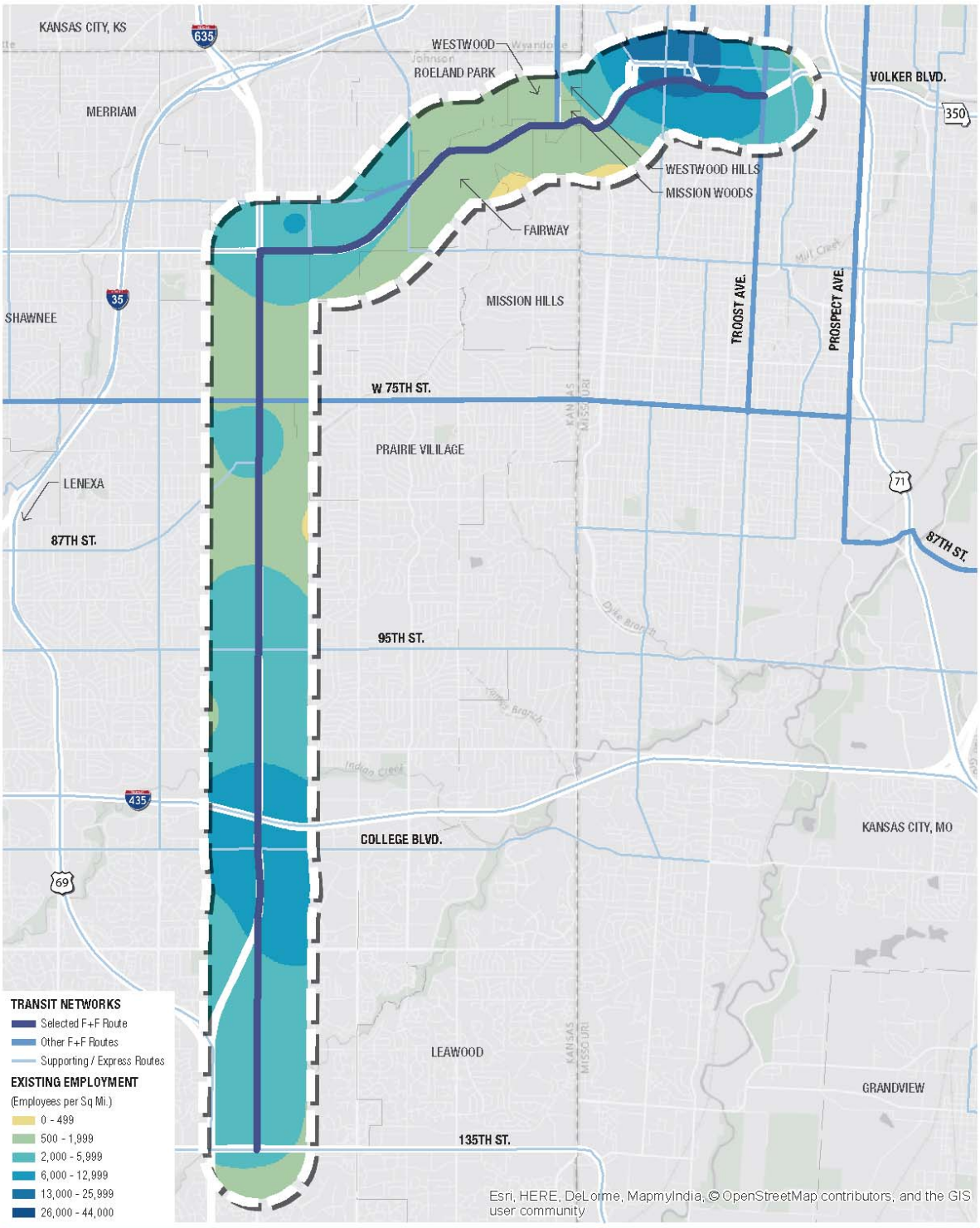


Figure 39: Population Map for Metcalf / Shawnee Mission Parkway Corridor

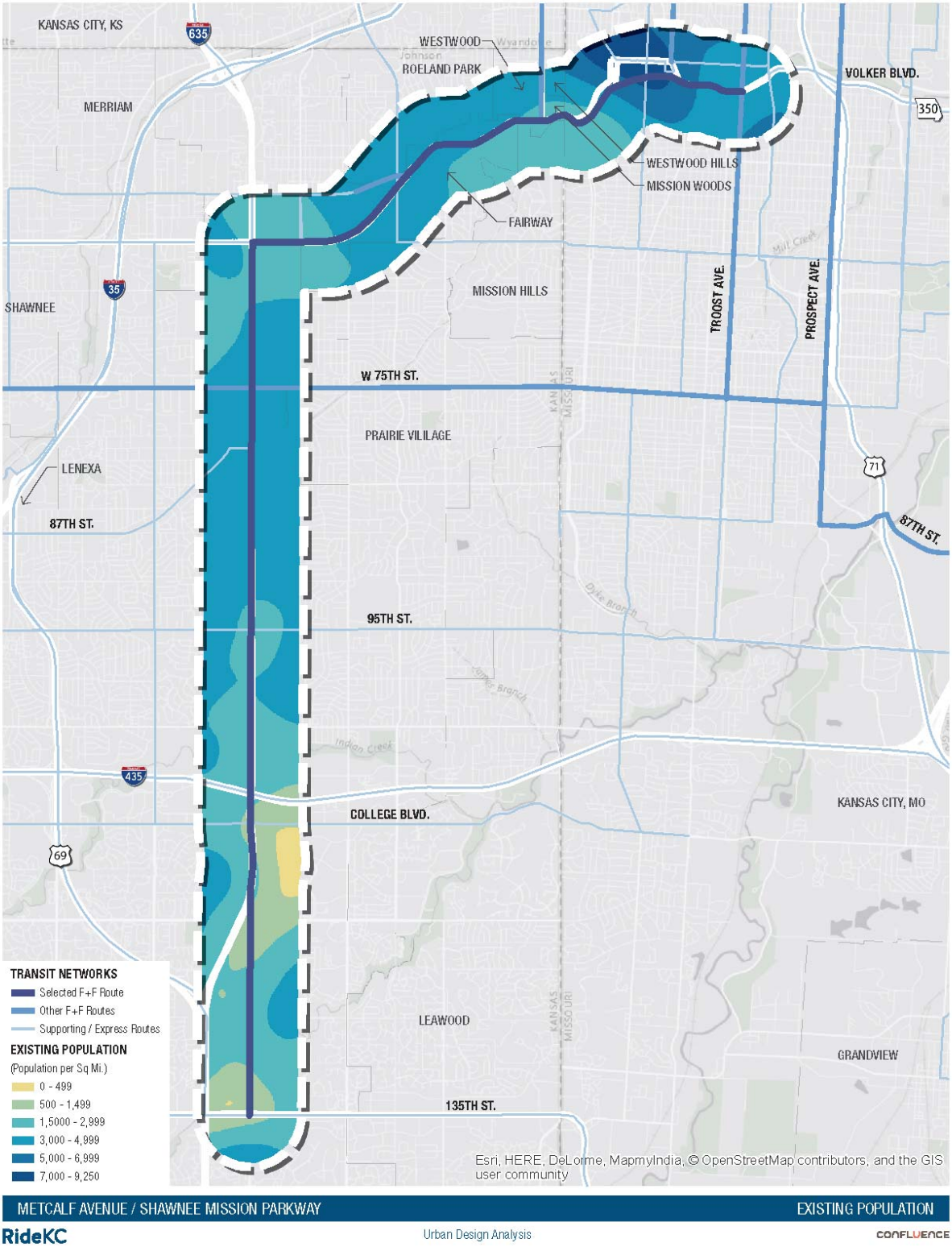
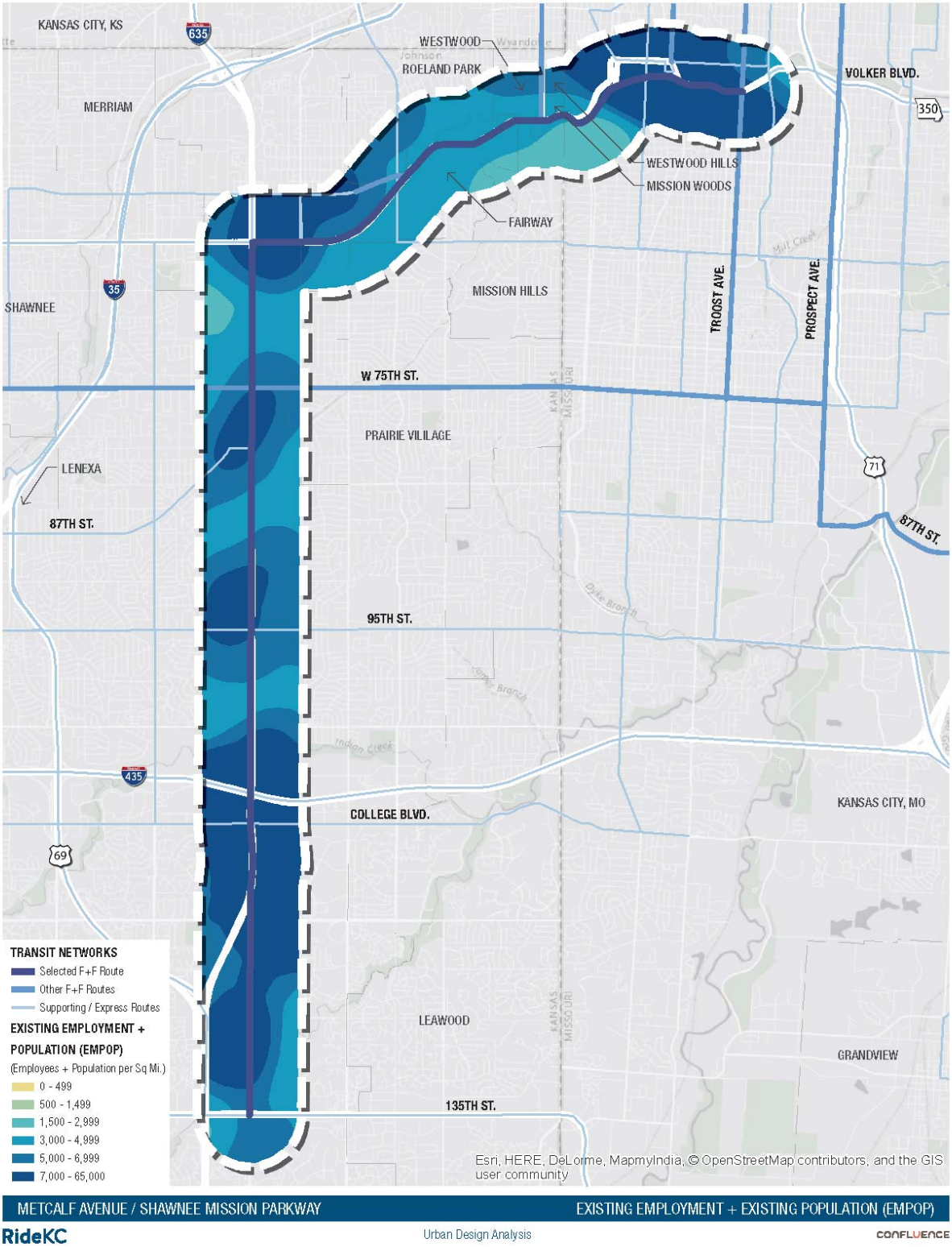


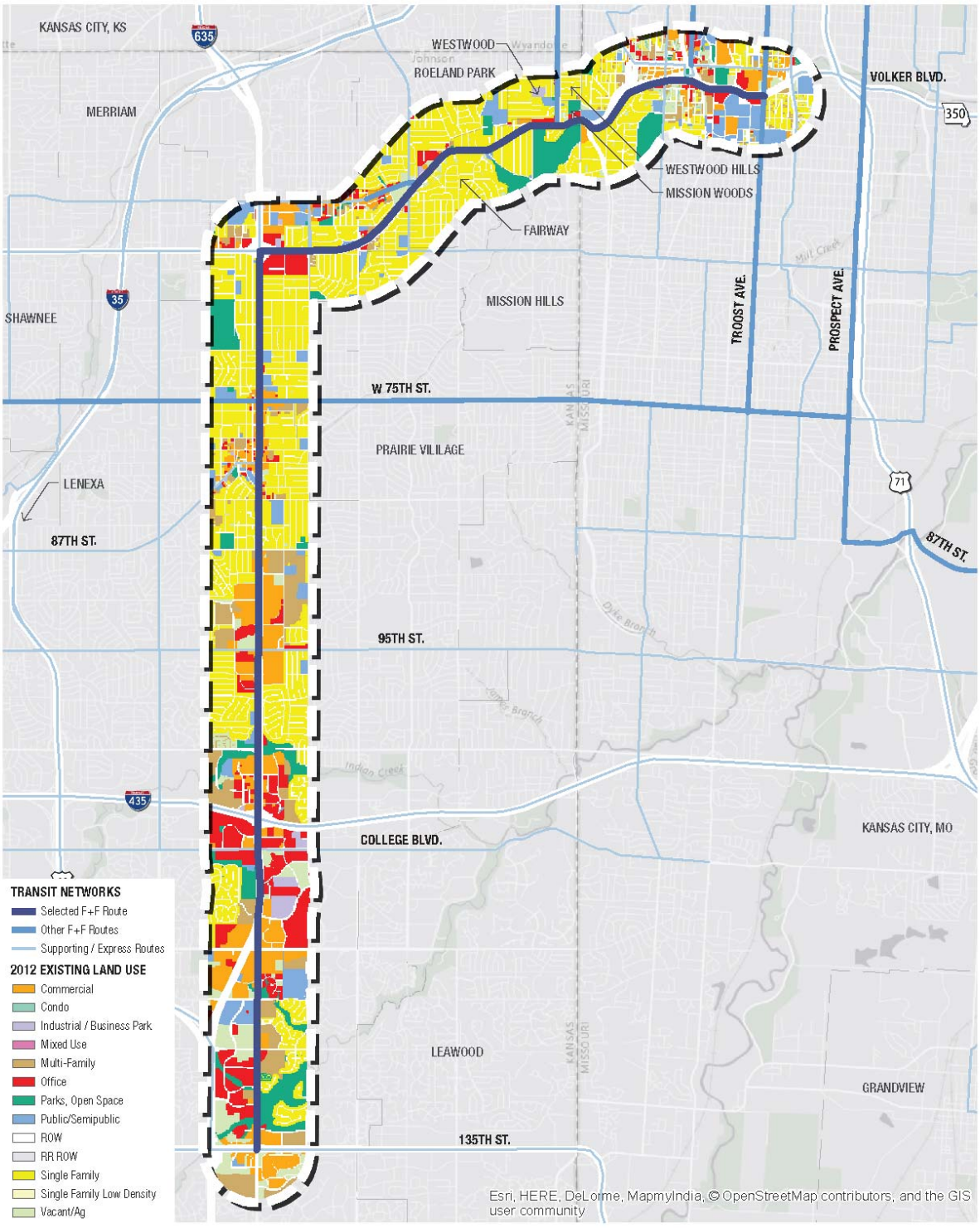
Figure 40: Employment + Population Map for Metcalf / Shawnee Mission Parkway Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data illustrates highly 'textured' areas at the north and south ends of the corridor. Another thing this existing land use highlights is the scale of development along the corridor. Generally, north of 87th street lots are much smaller with a higher density of uses around areas like downtown Overland Park, Mission Kansas and the Country Club Plaza, while south of 87th the lots tend to increase in size and decrease in density of uses. Much of the single-family homes along the corridor exist north of 103rd Street along Metcalf and Shawnee Mission Parkway.

Figure 41: Existing Land Use Map for Metcalf / Shawnee Mission Parkway Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARC's Future Land Use Raster Data, the corridor is projected to have around 294,926 people and employees, an increase in total population and employment by 173,165 people. This future growth projection appears to be at the southern-most area of the corridor.

The future land use maps for each jurisdiction within this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data. Single family residential neighborhoods located along Shawnee Mission Parkway remain, as well as along the Metcalf corridor. Corridor nodes around downtown Overland Park and 91st and 95th Street appear to increase in mixes of uses, with potentially an increase in residential density. The largest area of change is south of 103rd street to the end of the corridor at 135th Street, where commercial neighborhood centers will be increased in density.

Vision Metcalf is an additional study along this corridor that was reviewed. Metcalf is divided into subareas identified for redevelopment of "interdependent nodes" that include a mix of uses to help encourage a pedestrian friendly, walkable environment. It highlights five different subareas along the entire length of the corridor to help support revitalization to the older, commercial developments. These subareas are circled along the Metcalf corridor on the jurisdiction specific future land use map.

Figure 42: Future Land Use Map for Metcalf / Shawnee Mission Parkway Corridor

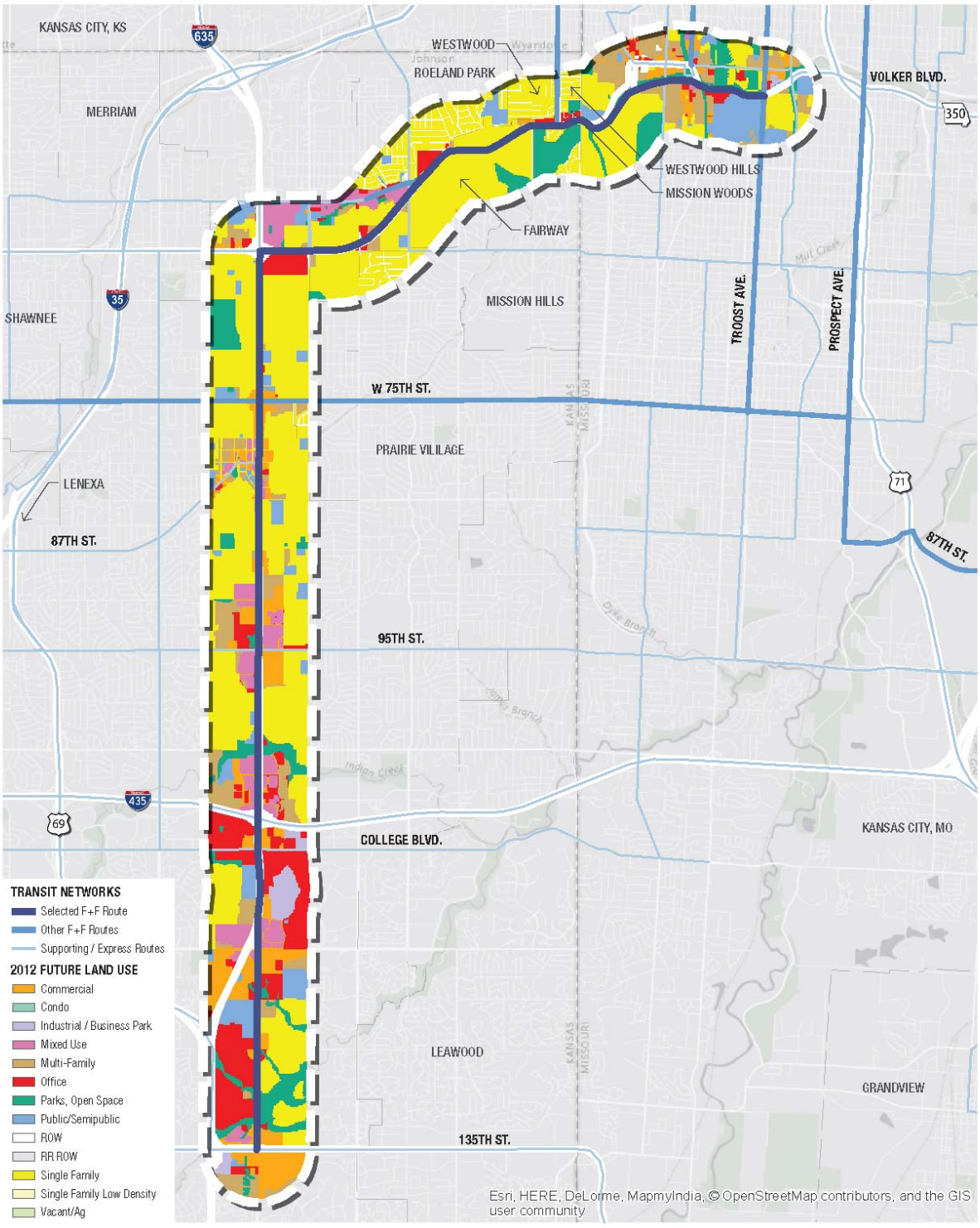
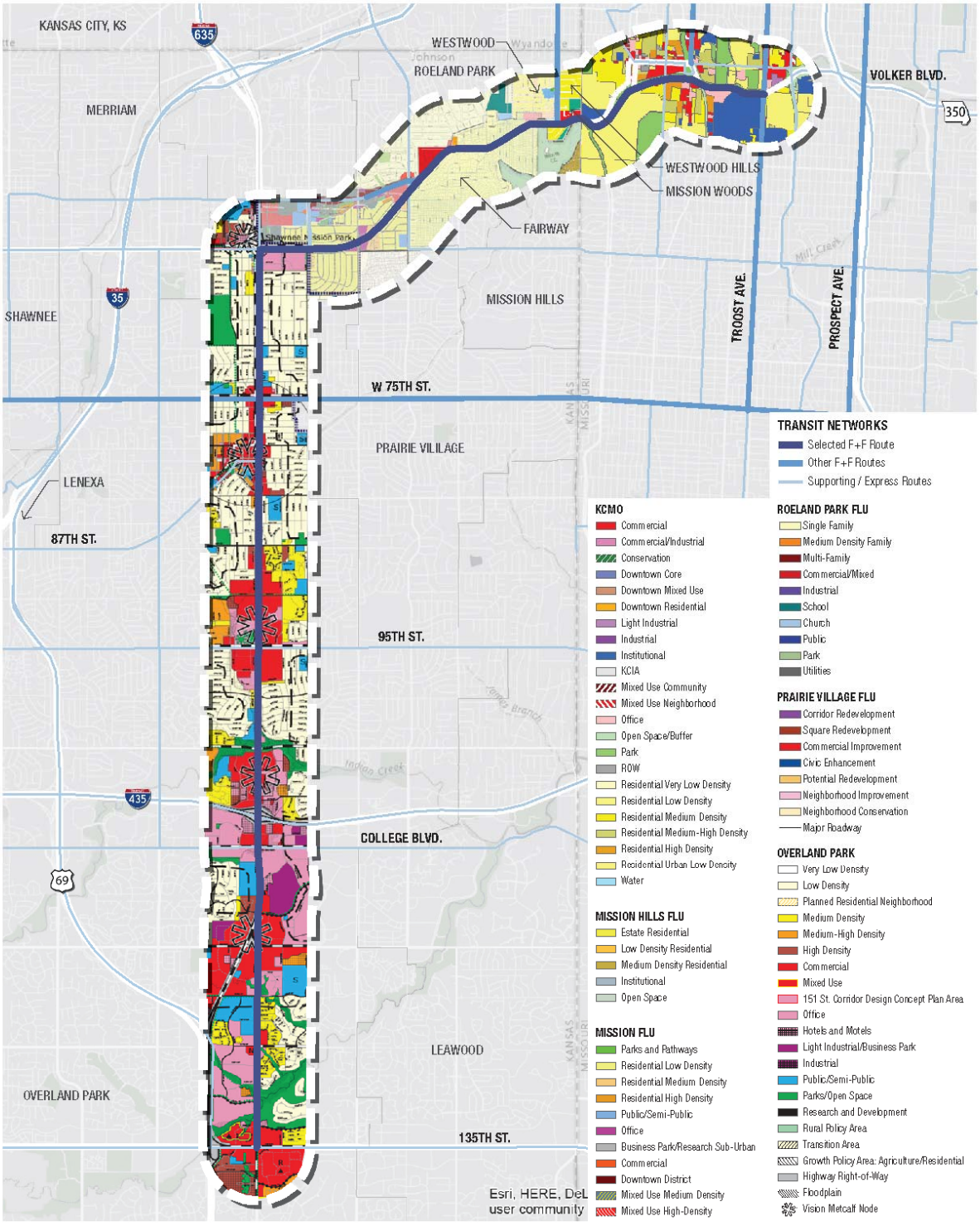


Figure 43: Future Land Use Map by Jurisdiction for Metcalf / Shawnee Mission Parkway Corridor

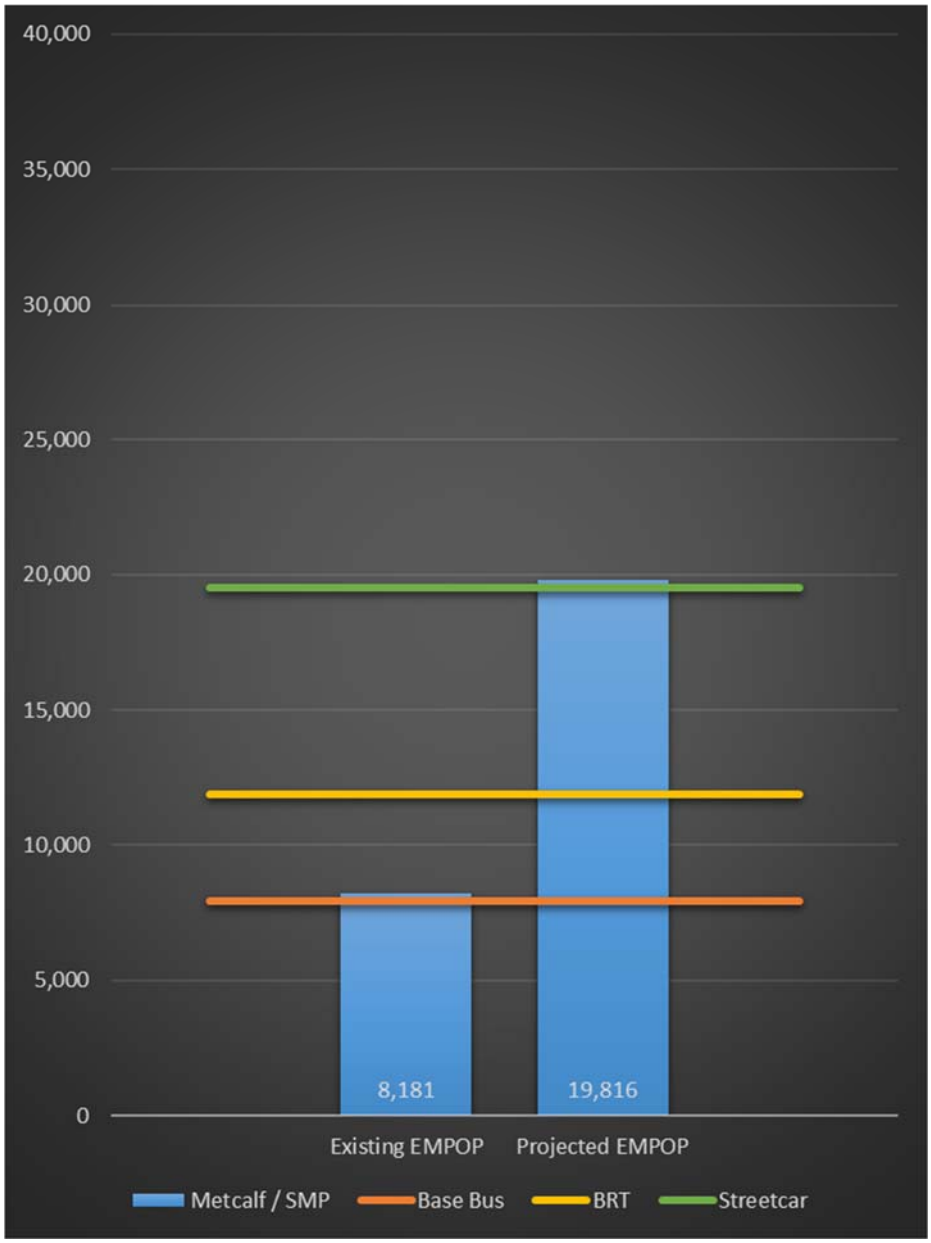


METCALF AVENUE / SHAWNEE MISSION PARKWAY — FUTURE LAND USE BY JURISTICTION

Land Use and Transit Relationship

Currently the existing population and employment per mile along the 15 mile Metcalf Avenue / Shawnee Mission Parkway Corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARC's 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Streetcar.

Figure 44: Land Use and Transit Graph for Metcalf/Shawnee Mission Parkway Corridor



*EMPOP = employment + population

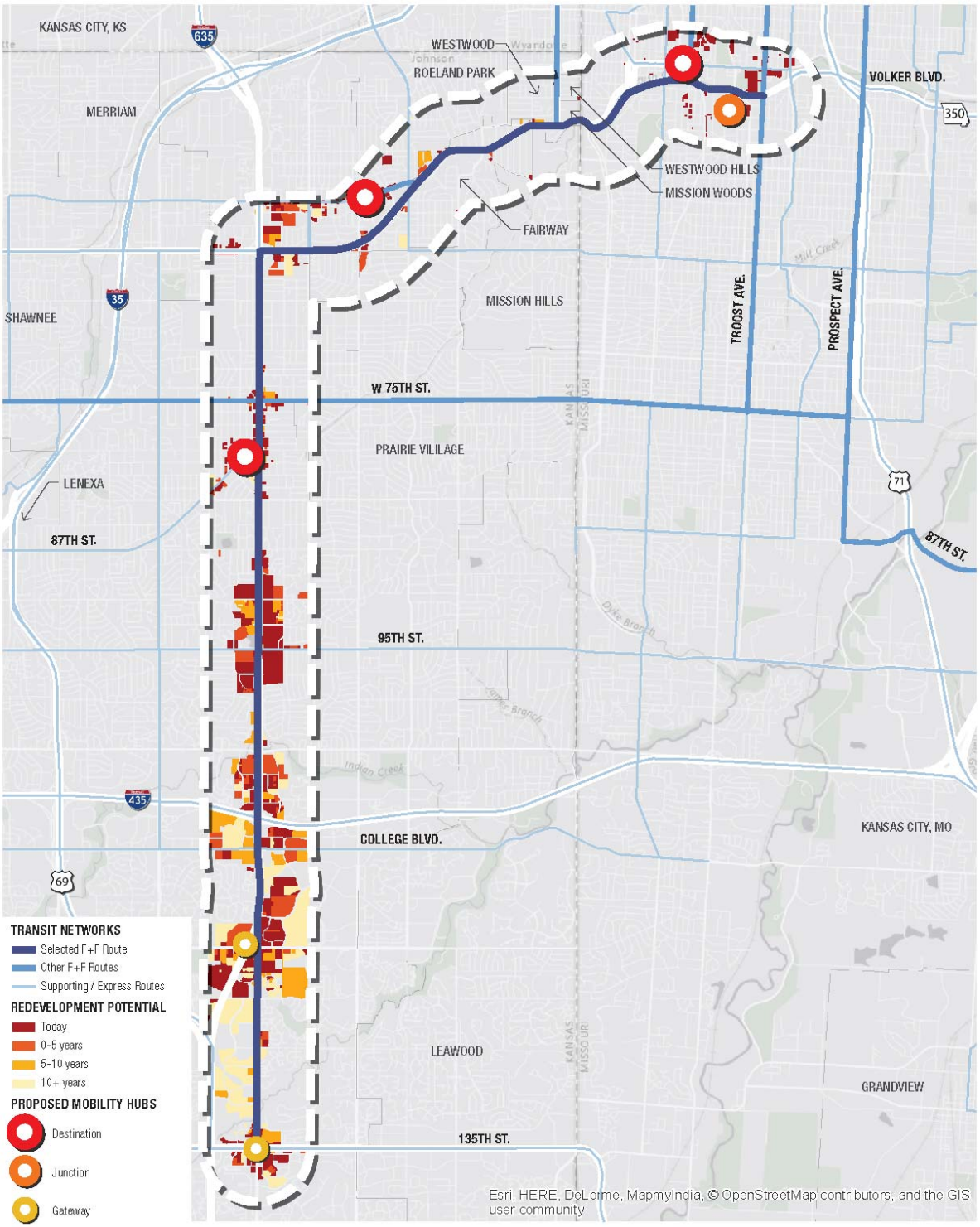
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures along the Metcalf Avenue / Shawnee Mission Parkway Corridor is third out of the remaining corridors for future redevelopment potential. It currently has approximately 9% of its current corridor ripe for redevelopment today; four percent of the corridor will be redevelopment ready within five years; three percent will be ready within ten years; and six percent will be ready for redevelopment in over ten years. Because the corridor has so much commercial land uses along it, it runs the risk of land values increasing while improvement values decrease. The redevelopment map illustrates that much of the redevelopment potential is near these major commercial nodes along the Metcalf Corridor.

Mobility Hub Opportunities

The Metcalf Ave and Shawnee Mission Parkway Corridor has seven mobility hubs located along the route. Three mobility hubs are proposed as ‘destination’ mobility hubs, and are located at the Country Club Plaza, Mission Transit Center, and in downtown Overland Park, Kansas. Two mobility hubs are proposed as ‘junction’ hubs, and are located at the intersection of College Boulevard and Metcalf Avenue as well as near UMKC campus south of the plaza. Two gateway hubs are shown towards the southern parts of the corridor, indicating an area for people to access the Fast and Frequent routes.

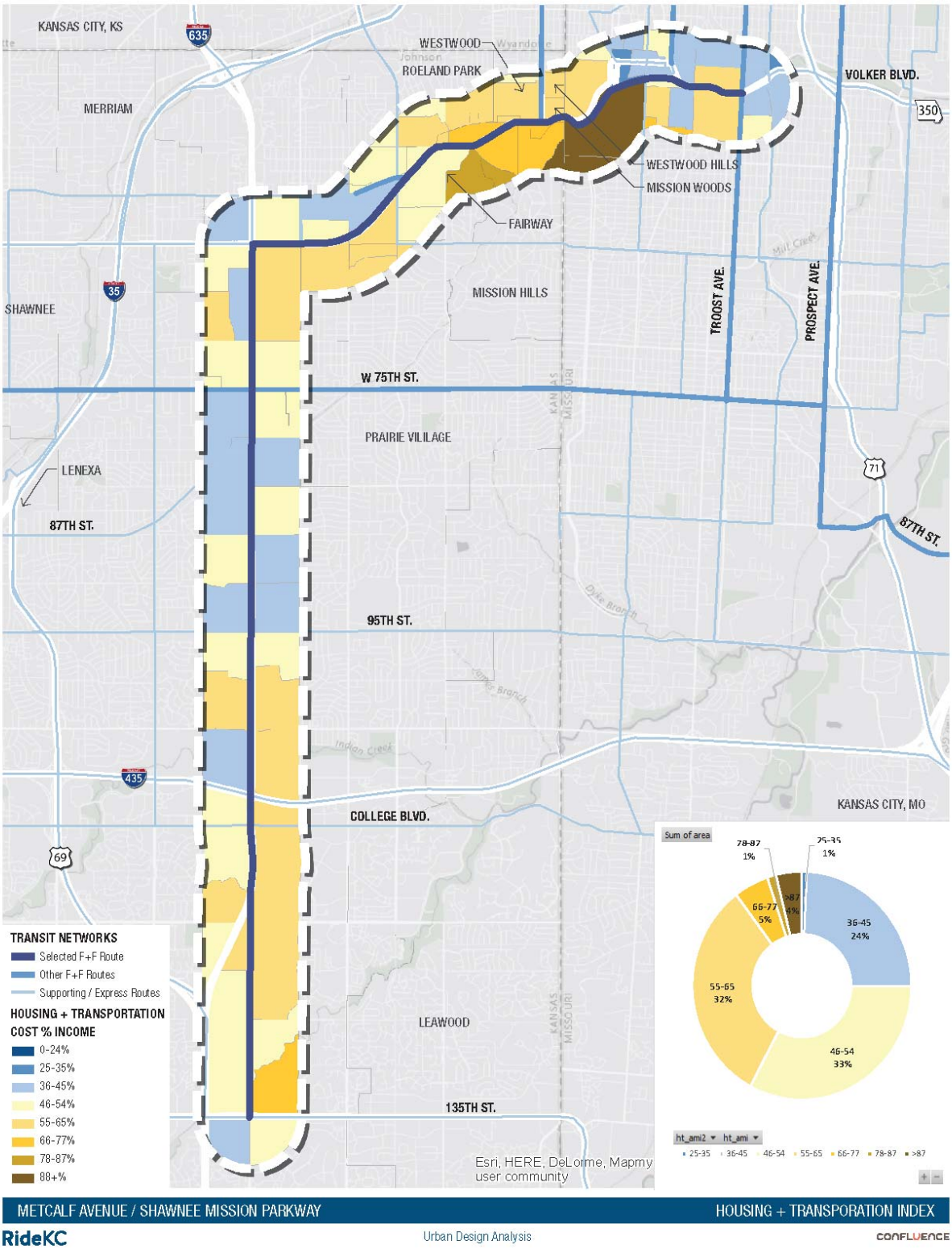
Figure 45: Redevelopment + Mobility Hub Map for Metcalf / Shawnee Mission Parkway Corridor



Housing Affordability Analysis

The Metcalf Avenue and Shawnee Mission Parkway Corridor is the least affordable corridor out the ten total corridors. It has approximately 75% of its corridor considered unaffordable. The areas that appear most affordable are near downtown Overland Park, the intersection of 91st Street and a few areas throughout Mission, Kansas. The weighted average of housing and transportation percent per average household income along the corridor is 53%.

Figure 46: Housing + Transportation Index Map for Metcalf / Shawnee Mission Parkway Corridor



Initial Takeaways

Based on the high-level analysis of the Metcalf Avenue / Shawnee Mission Parkway Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Encourage more affordable housing opportunities along this corridor to balance the need for transit as it relates to the types of housing available.
- Pair future redevelopment with mobility hubs to create an opportunity for public/private partnerships and bolster the awareness of transit in Johnson County.
- Increase density for properties that are prone for redevelopment to encourage and help achieve the Vision Metcalf study as well as help support the Metcalf Avenue / Shawnee Mission Parkway Fast and Frequent Corridor.
- Preserve existing single family households along the corridor.

Prospect Avenue

This approximately 9-mile long corridor generally extends from downtown Kansas City, Missouri east to Prospect, and south on Prospect to 75th Street.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 49,498, with a total population of 39,176 people, making it the fourth most dense corridor out of the ten corridors analyzed. This is primarily due to the inclusion of downtown within the corridor buffer area. The concentration of employment is primarily in the downtown location, with a smaller node of employment near 63rd and Prospect. The areas with highest population concentration is near the middle of the corridor, between 23rd Street and 47th Street.

Figure 47: Employment Map for Prospect Avenue

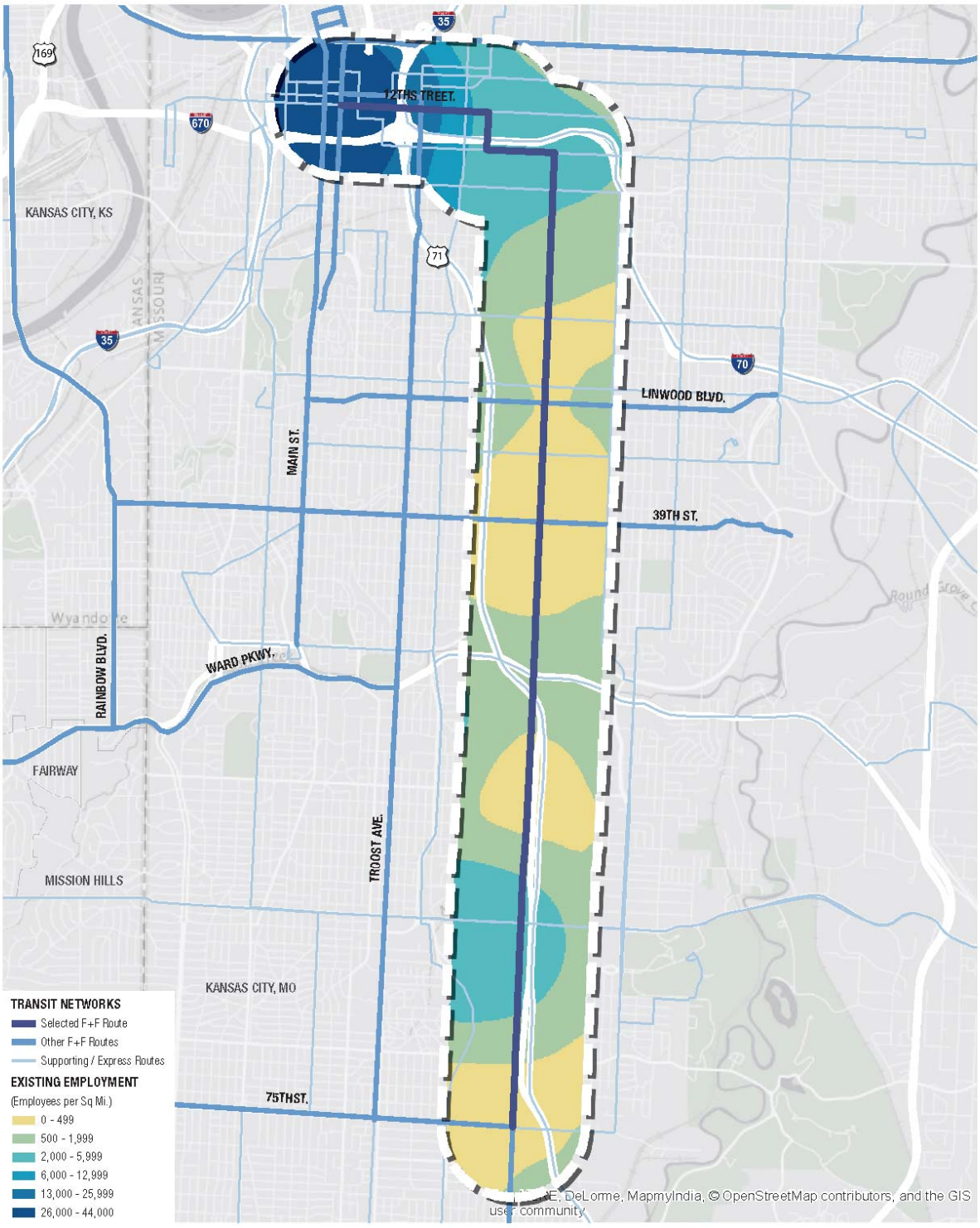


Figure 48: Existing Population Map for Prospect Avenue

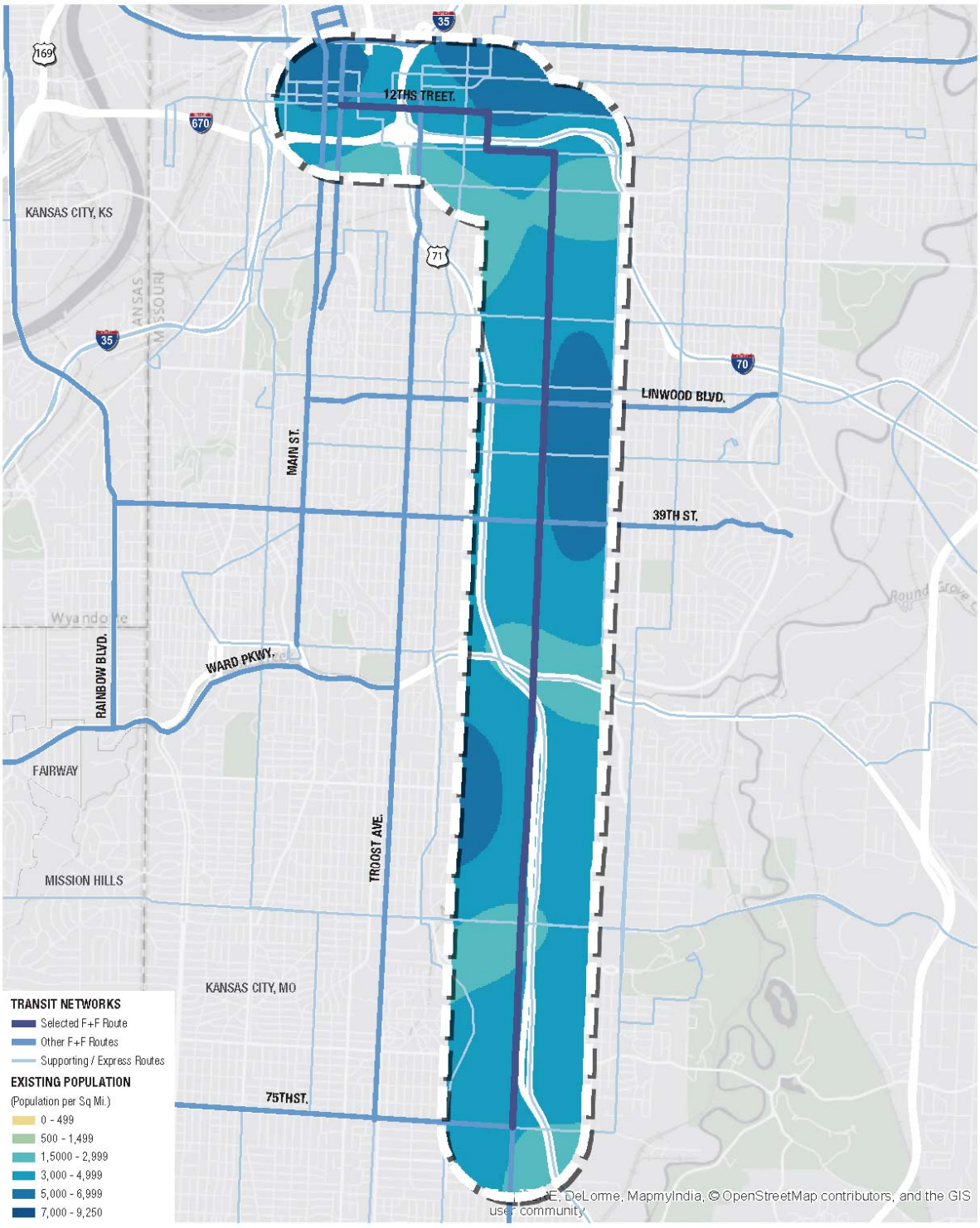
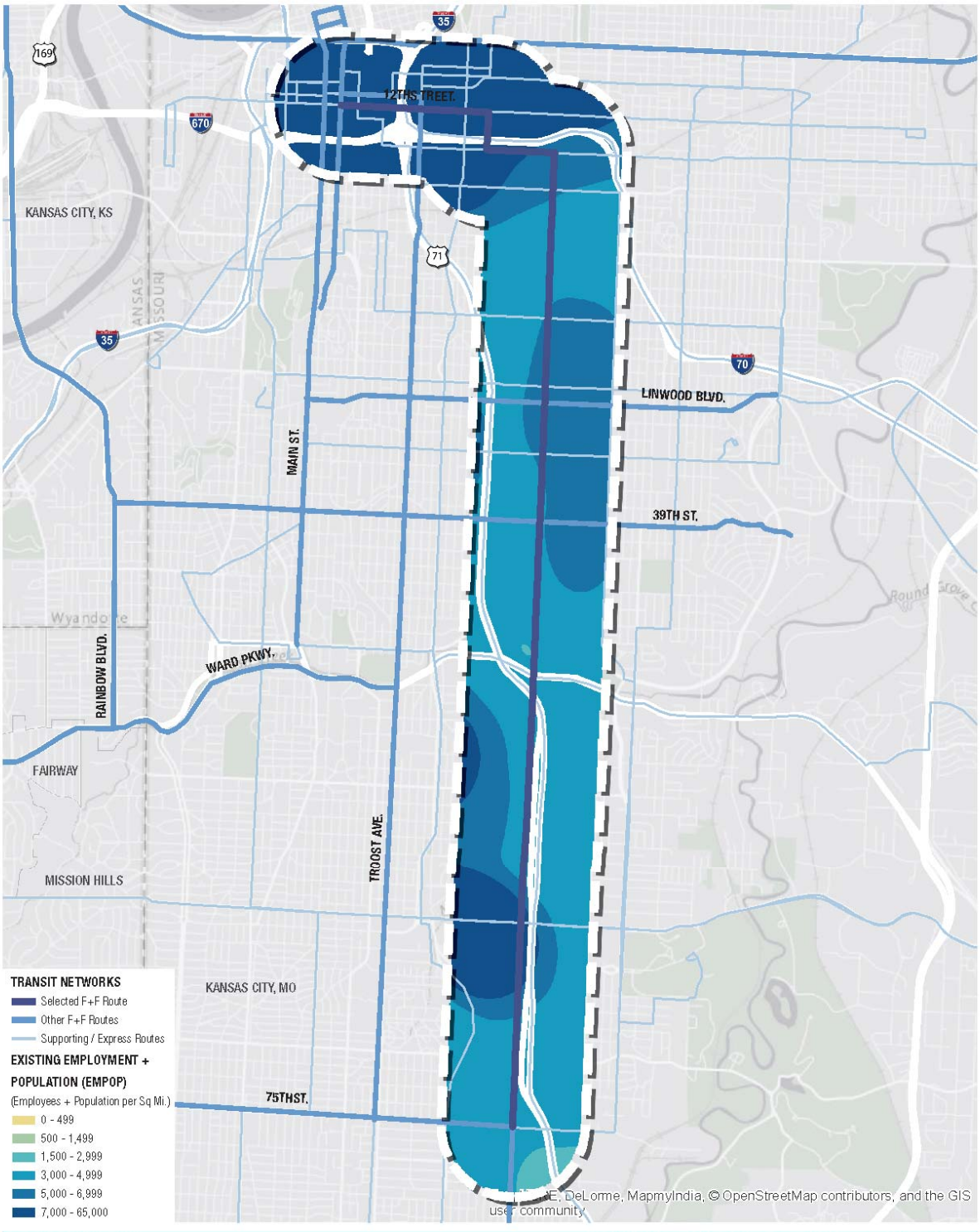


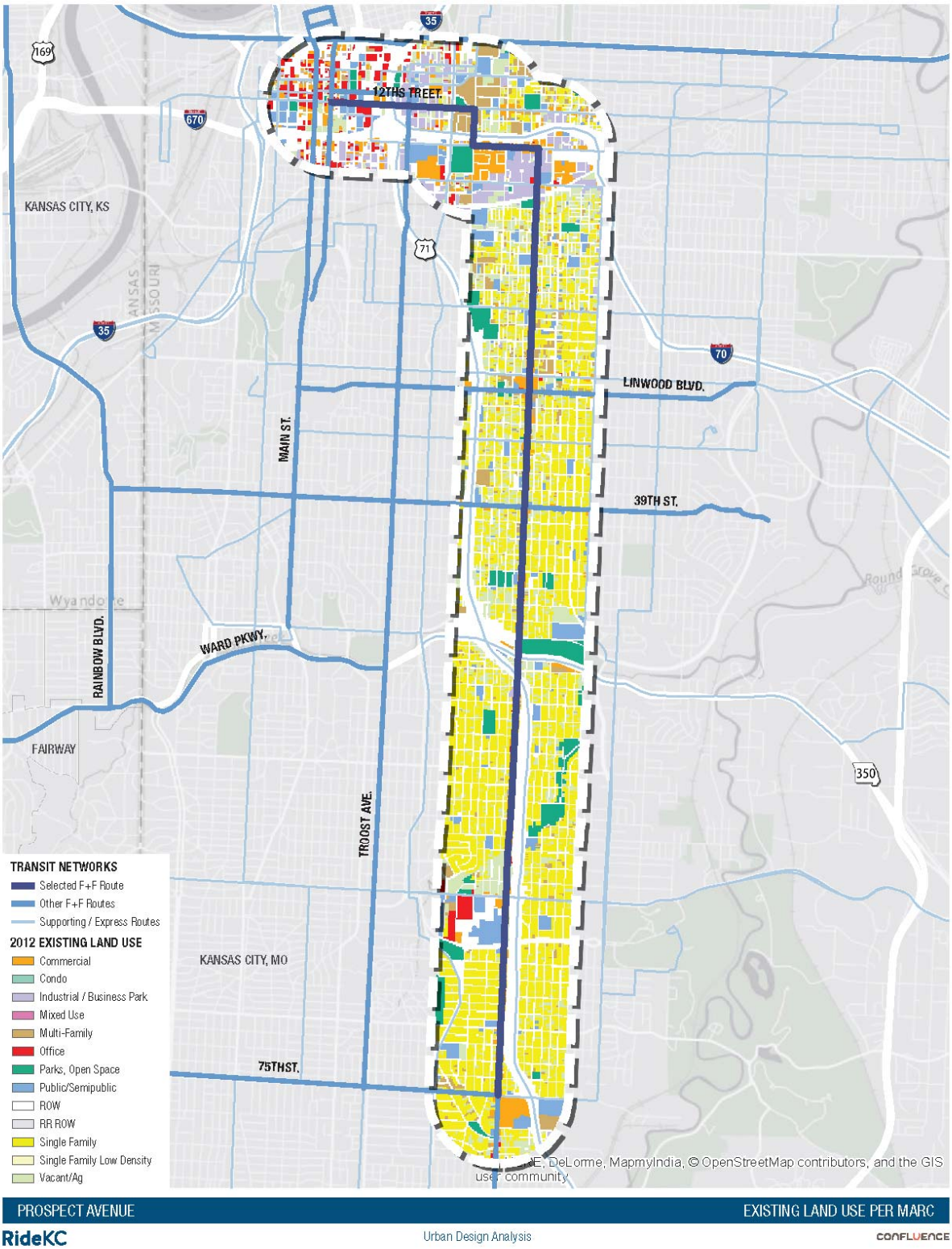
Figure 49: Employment + Population Map for Prospect Avenue Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data supports these existing employment and population numbers, illustrating primarily single family housing towards the middle of the corridor, and a variety of different uses in the downtown Kansas City area. There are a few commercial nodes near Linwood Boulevard and Prospect, as well as near 63rd Street and 75th Street.

Figure 50: Existing Land Use Map for Prospect Avenue Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 631,103 people and employees, an increase in total population and employment by 542,429 people. This large jump in projections is due to the inclusion of downtown Kansas City, Missouri within the corridor buffer area. In addition to the bolstered population and employment projections, MARCs Future Land Use Raster Data indicates a few areas of residential infill south of the Country Club Plaza, and smaller commercial redevelopment along the corridor's entirety.

The future land use maps for the jurisdiction within this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data, highlighting neighborhood commercial and office space along almost the entire corridor south of Brush Creek. Areas north of Brush Creek until Linwood Boulevard have neighborhood commercial and multifamily sprinkled throughout the corridor. North of Linwood Boulevard, the corridor is planned to have more multifamily with smaller pieces of commercial focused around intersections until the railroad tracks. Industrial uses are north of this area along the corridor, then shifts to the mixed-use downtown core land uses as the corridor turns east into downtown.

Figure 51: Future Land Use Map for Prospect Avenue Corridor

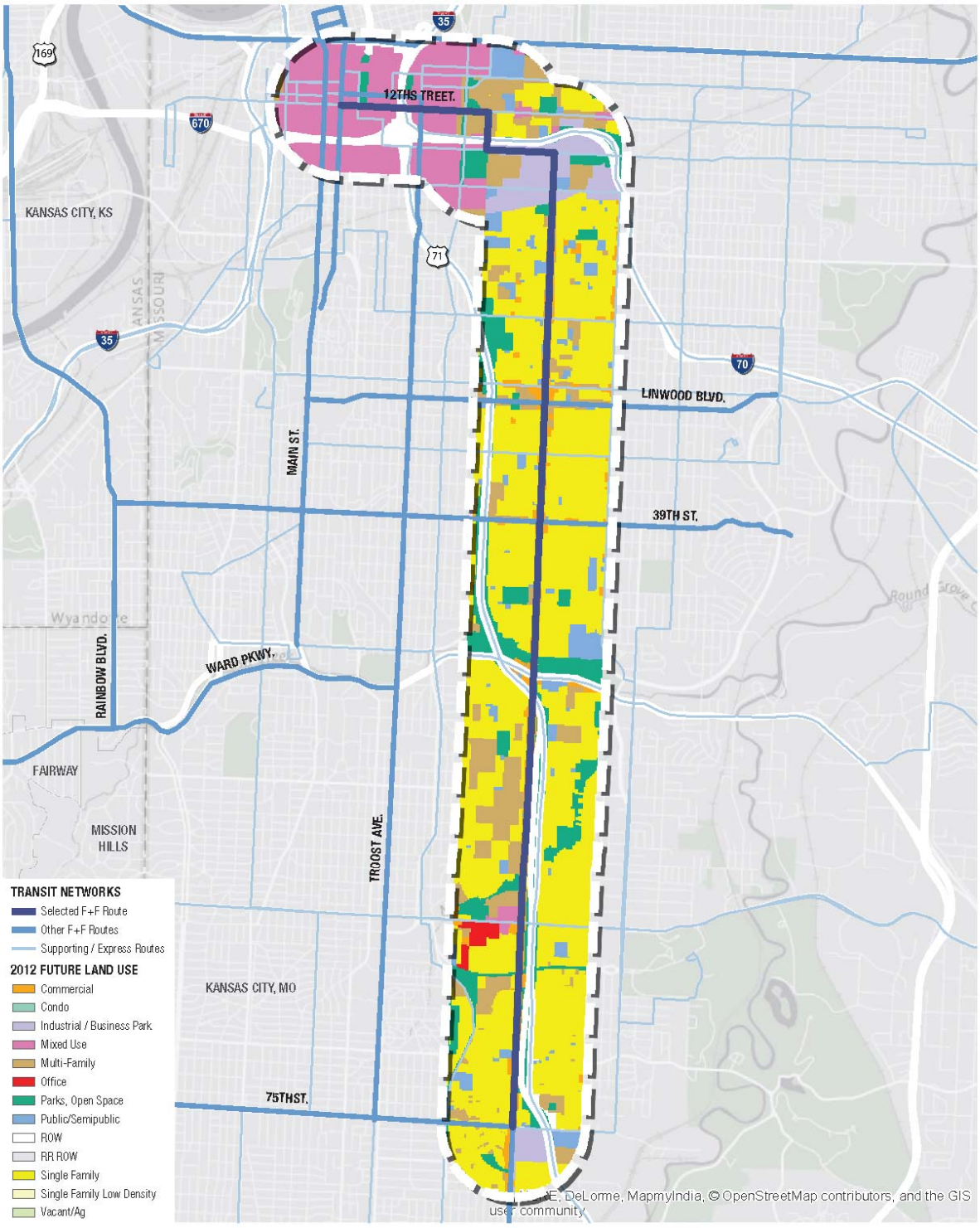
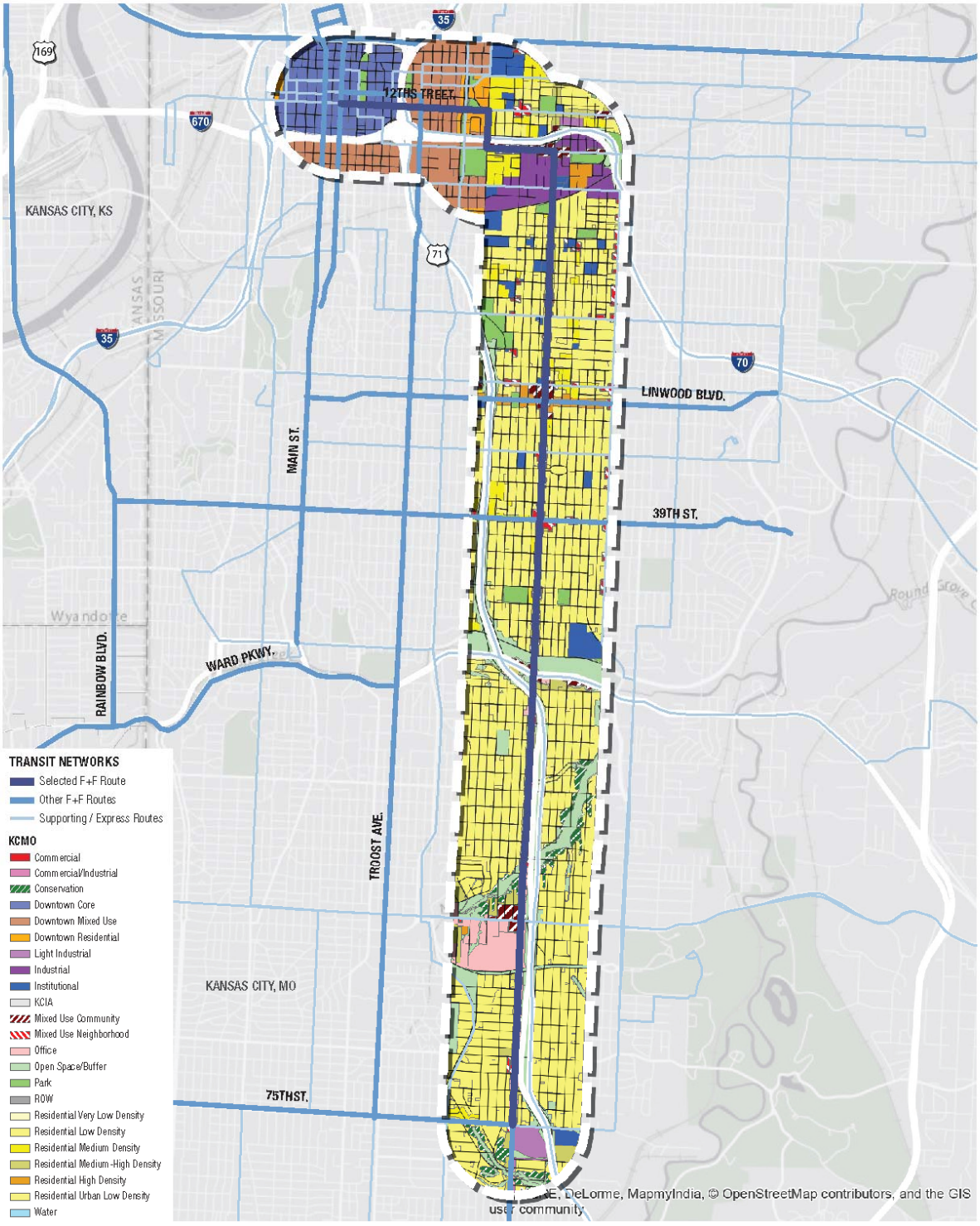


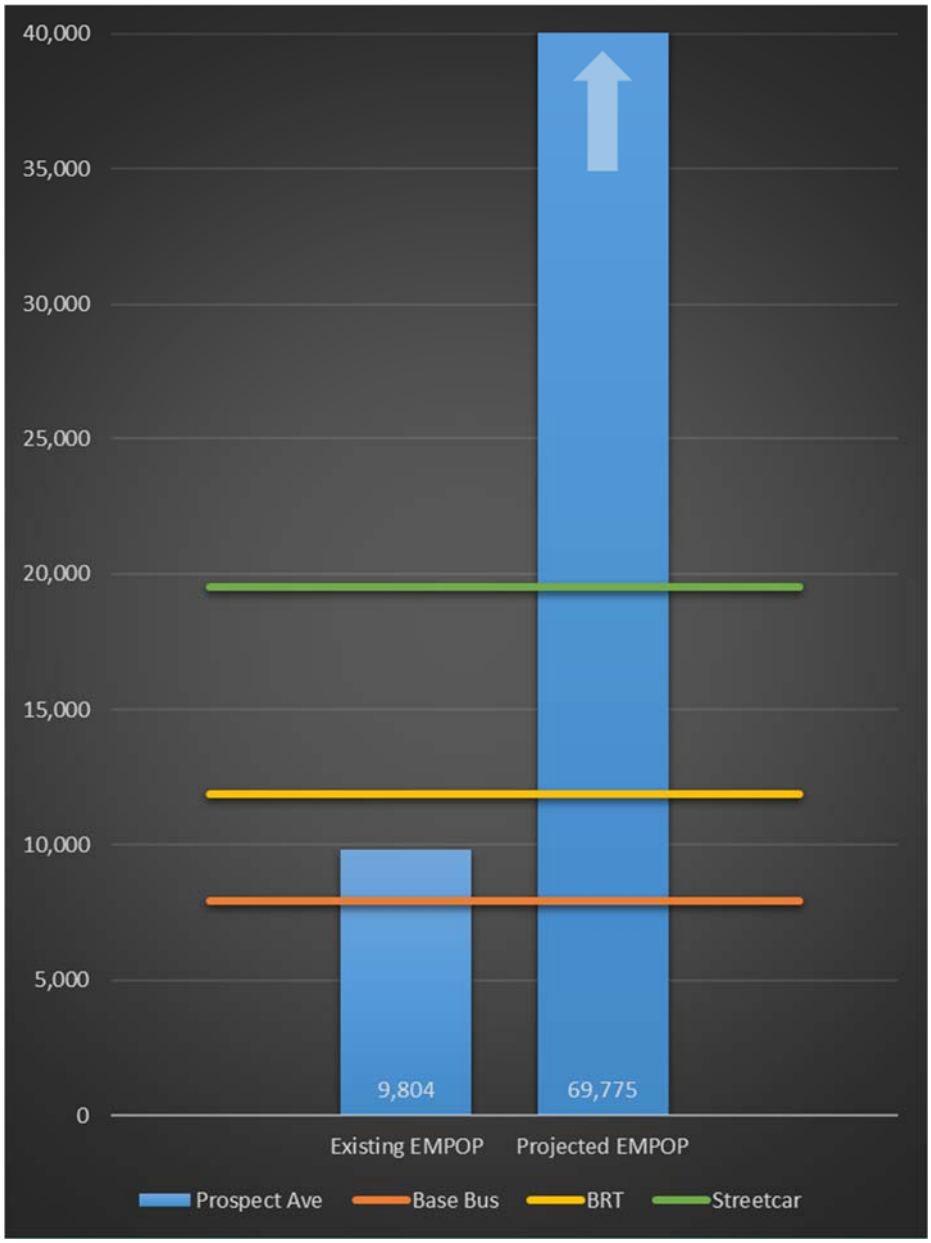
Figure 52: Future Land Use Map by Jurisdiction for Prospect Avenue Corridor



Land Use and Transit Relationship

Currently the existing population and employment per mile along the 9-mile Prospect Avenue Corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARCs 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Streetcar, primarily due to the growth projection along the northern downtown part of the Prospect Avenue Corridor.

Figure 53: Land Use and Transit Graph for Prospect Avenue Corridor



*EMPOP = employment + population

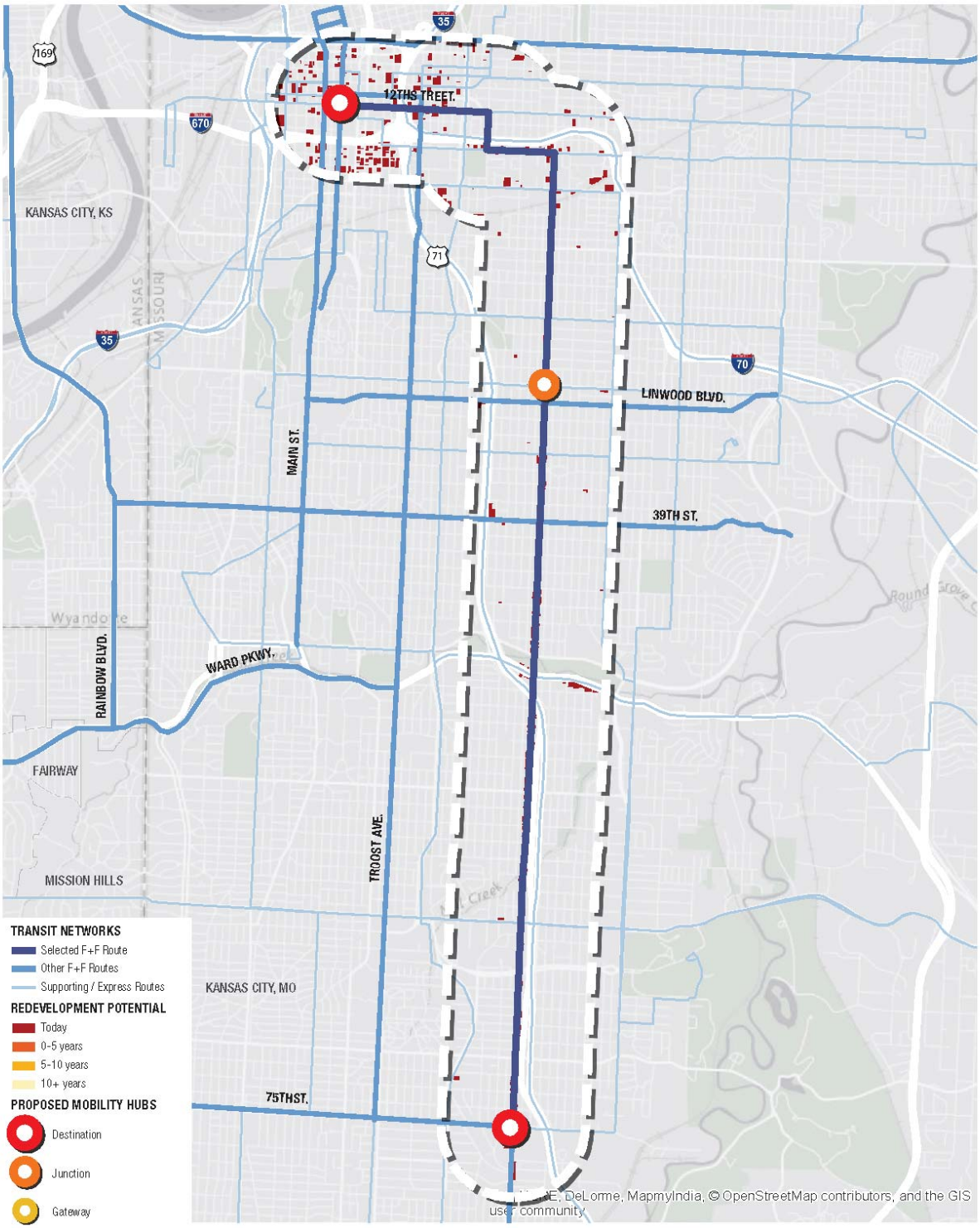
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures along the Prospect corridor is approximately three percent of its total corridor area. This is partially because the lots of land are much smaller along this corridor, but almost all commercial properties along Prospect are 'ripe' for redevelopment. The redevelopment map illustrates that the other half of redevelopment potential is in the downtown core of Kansas City, Missouri as well.

Mobility Hub Opportunities

Three mobility hubs are proposed along the Prospect Avenue Corridor – one in the downtown core at 12th and Grand; one at Linwood and Prospect intersection; and the third one at 75th and Prospect intersection. The downtown hub is a potential 'destination hub' that would provide a family of services and multiple connections to different transit routes. The two other mobility hubs are potential 'junction' hubs that allow users to transfer to other major Fast and Frequent Routes, and may have the potential to spur transit supportive development.

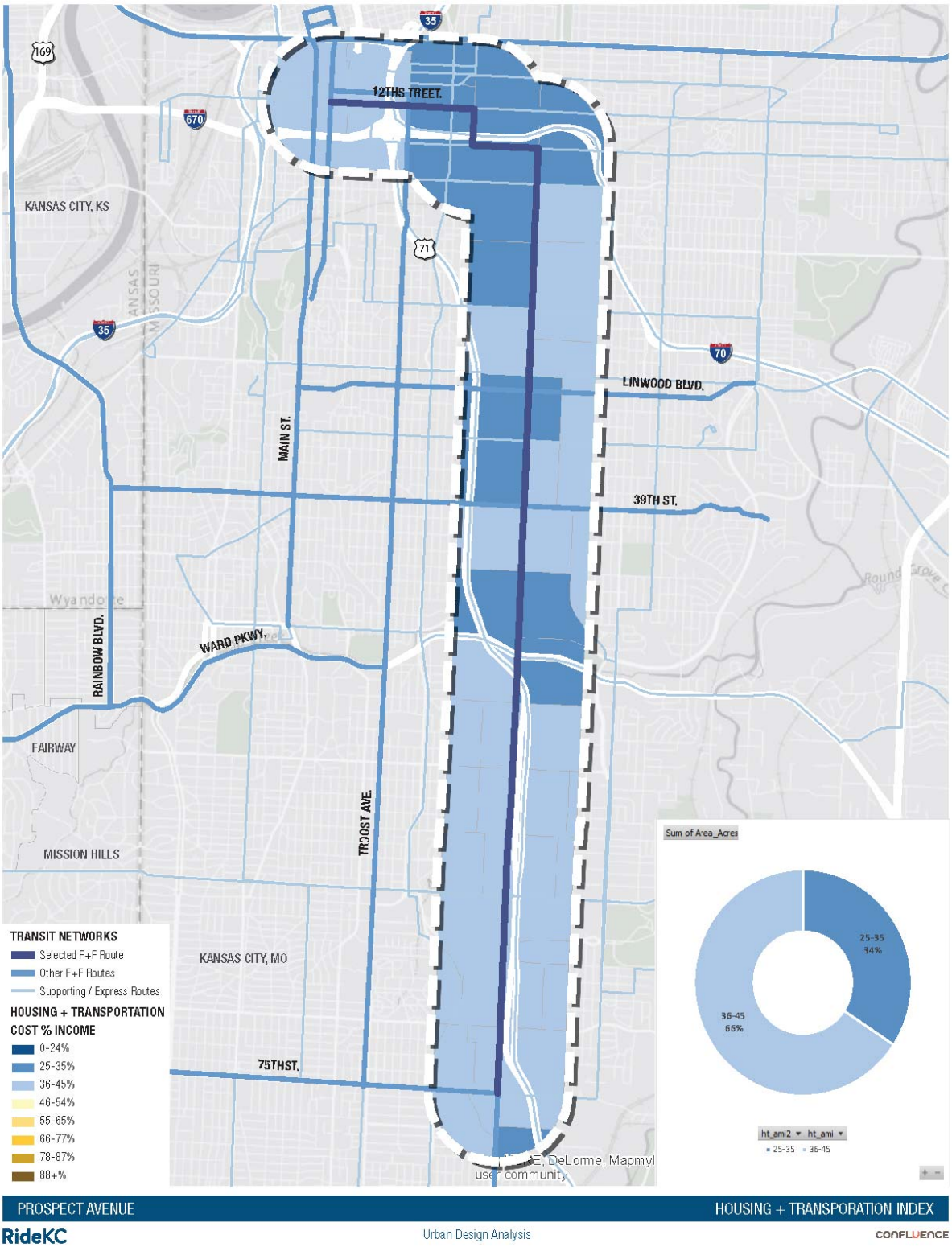
Figure 54: Redevelopment + Mobility Hub Map for Prospect Avenue Corridor



Housing Affordability Analysis

The Prospect Avenue corridor in its entirety is categorized as ‘affordable’ and is shown in blue. Areas with the highest affordability are located primarily towards the north segment of the corridor, with a few located near the core of the corridor. The southern part of the corridor is slightly less affordable than the other areas of the corridor, however it is still considered affordable as housing and transportation costs throughout this area are still lower than 45% of the average household income.

Figure 55: Housing + Transportation Index Map for Prospect Avenue Corridor



Initial Takeaways

Based on the high-level analysis of the Prospect Avenue Corridor, initial opportunities / recommendations to explore specifically along this route are:

- As one of the most affordable corridors, encourage market rate housing options by using specific incentives along this corridor.
- Protect existing housing throughout the corridor.
- Provide development incentives at key intersections, start with key locations such as potential mobility hub sites, to help spur transit supportive development.

Troost Avenue

This approximately 8-mile long corridor generally extends from the north from downtown Kansas City, Missouri, east on 12th Street, then south on Troost Avenue until 75th Street.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 70,327, with a total population of 38,898 people, making it the second most dense corridor out of the ten corridors analyzed. The concentration of employment is primarily in downtown Kansas City, Missouri, with some smaller concentrations near 47th Street and 63rd Street. Primary population concentrations are downtown Kansas City, Missouri, between Linwood and 47th Street, and around 57th Street.

Figure 56: Employment Map for Troost Avenue Corridor

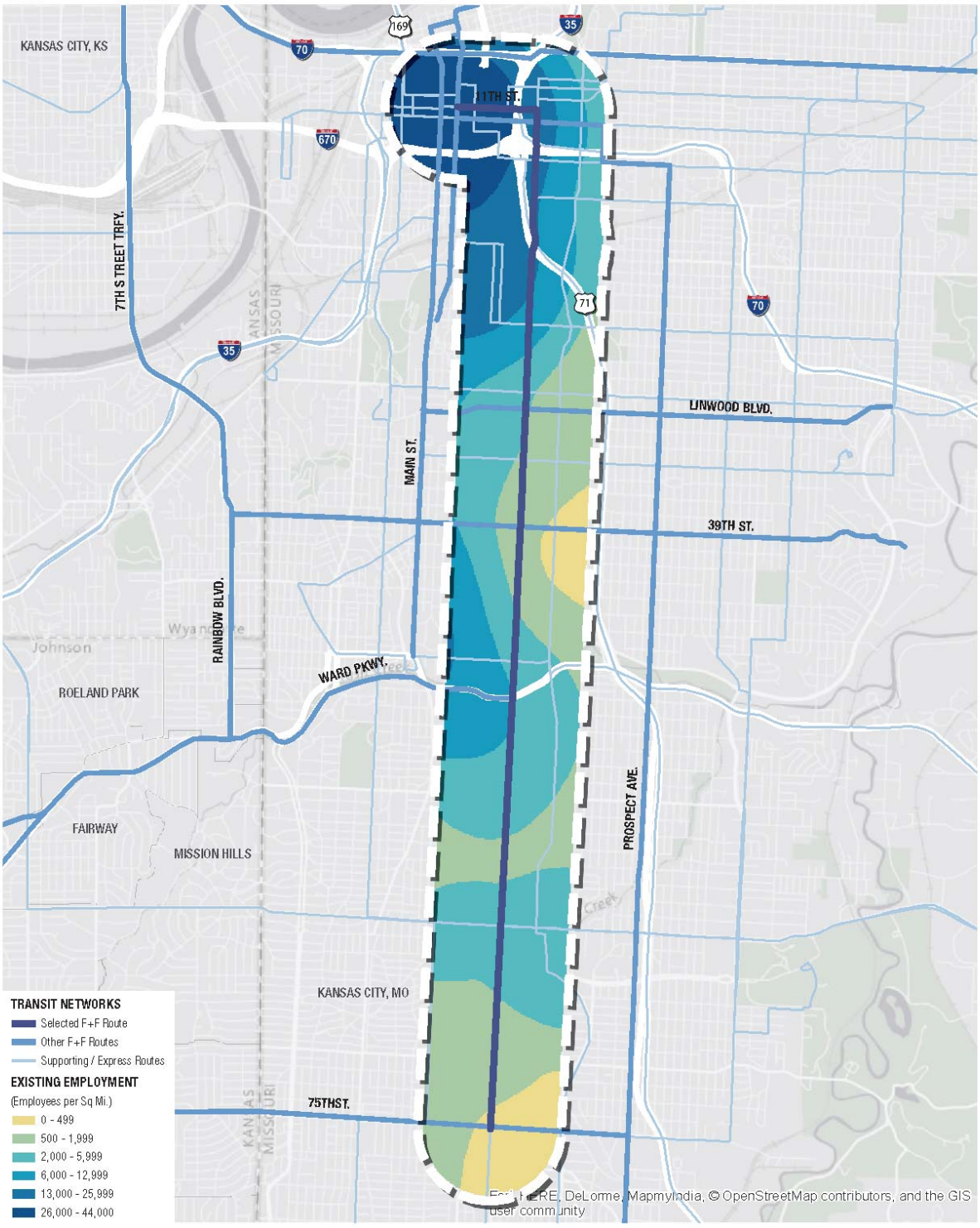


Figure 57: Population Map for Troost Avenue Corridor

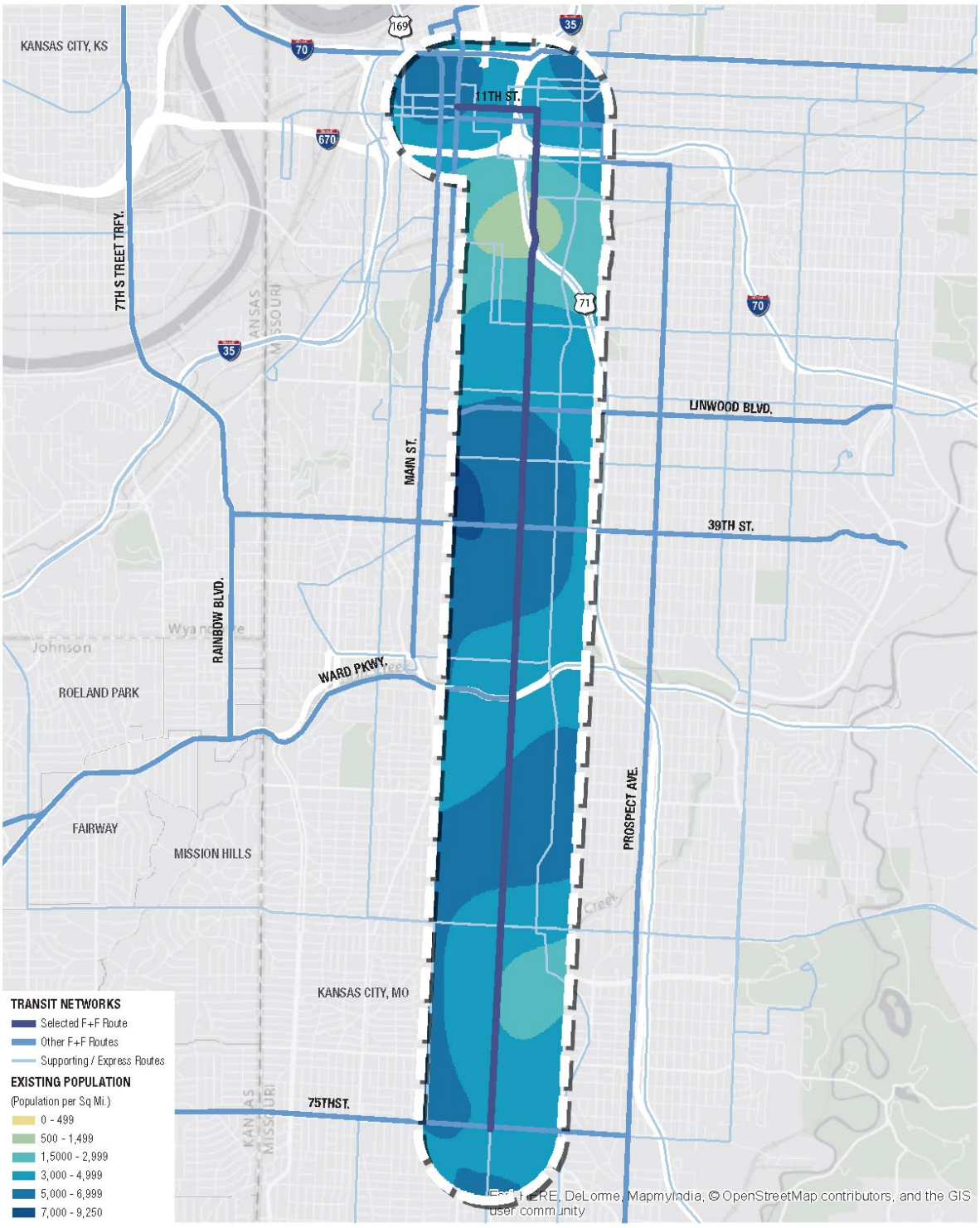
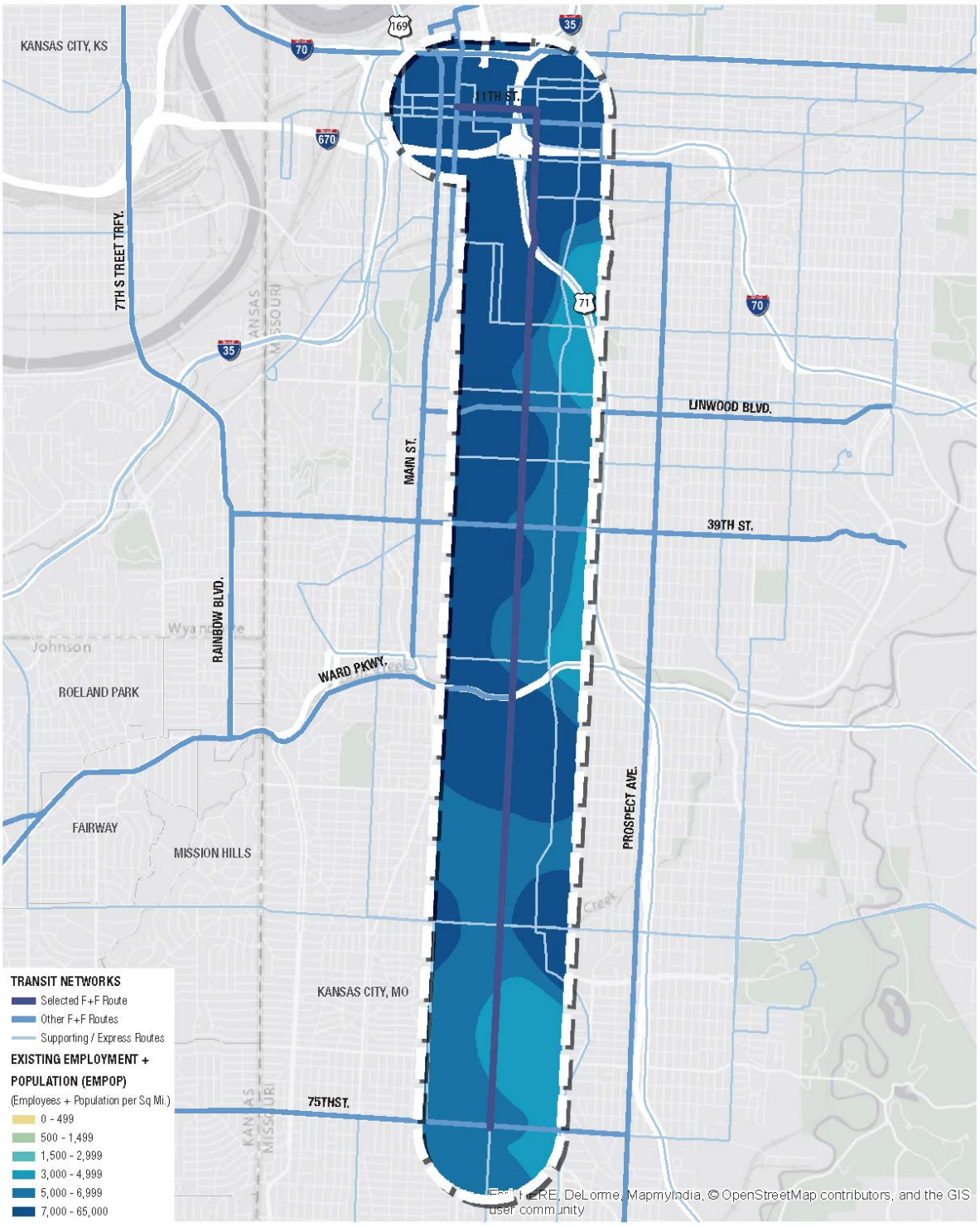


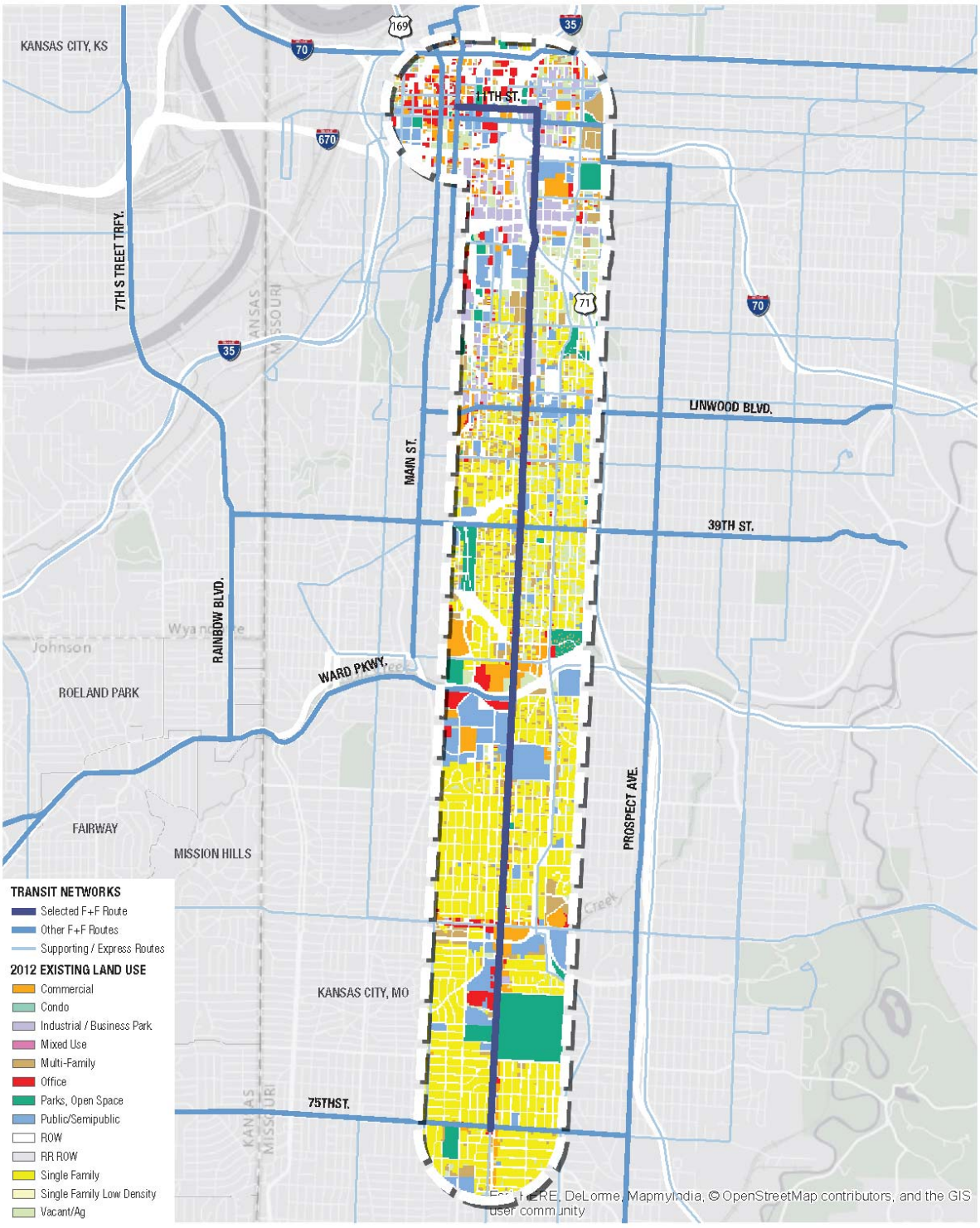
Figure 58: Employment + Population Map for Troost Avenue Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data illustrates the smaller lot sizes throughout this urban corridor. A mix of uses exist in the downtown area, then transitions to single family farther south along the corridor. Commercial and mixed use nodes are just south of Brush Creek near UMKC and near 63rd Street intersection. A decent amount of neighborhood commercial exists along most of the Troost Avenue Corridor.

Figure 59: Existing Land Use Map for Troost Avenue Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 857,375 people and employees, an increase in total population and employment by 748,150 people. This large jump in projections is due to the inclusion of downtown Kansas City, Missouri within the corridor buffer area. In addition to the bolstered population and employment projections, MARCs Future Land Use Raster Data indicates a few areas of multifamily infill along the southern portion of the corridor, and smaller commercial along the corridor's entirety once outside of downtown.

The future land use maps for the jurisdiction within this corridor buffer illustrates more clearly the proposed changes shown in the MARC Future Land Use Raster Data. Higher density single family residential is shown in the southern portion of the corridor. There is still nodal mixed use development throughout most of the corridors entirety at major intersections.

Figure 60: Future Land Use Map for Troost Avenue Corridor

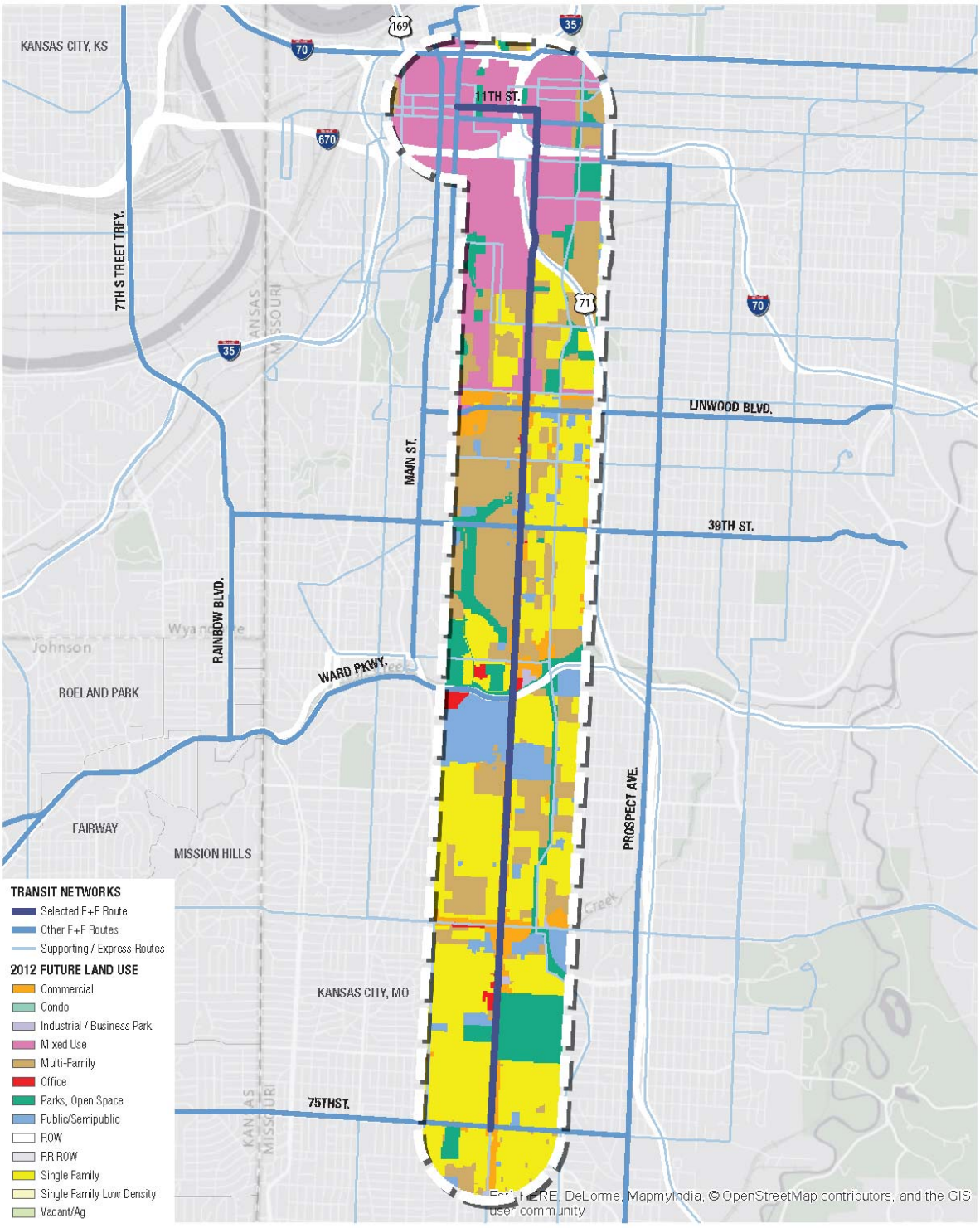
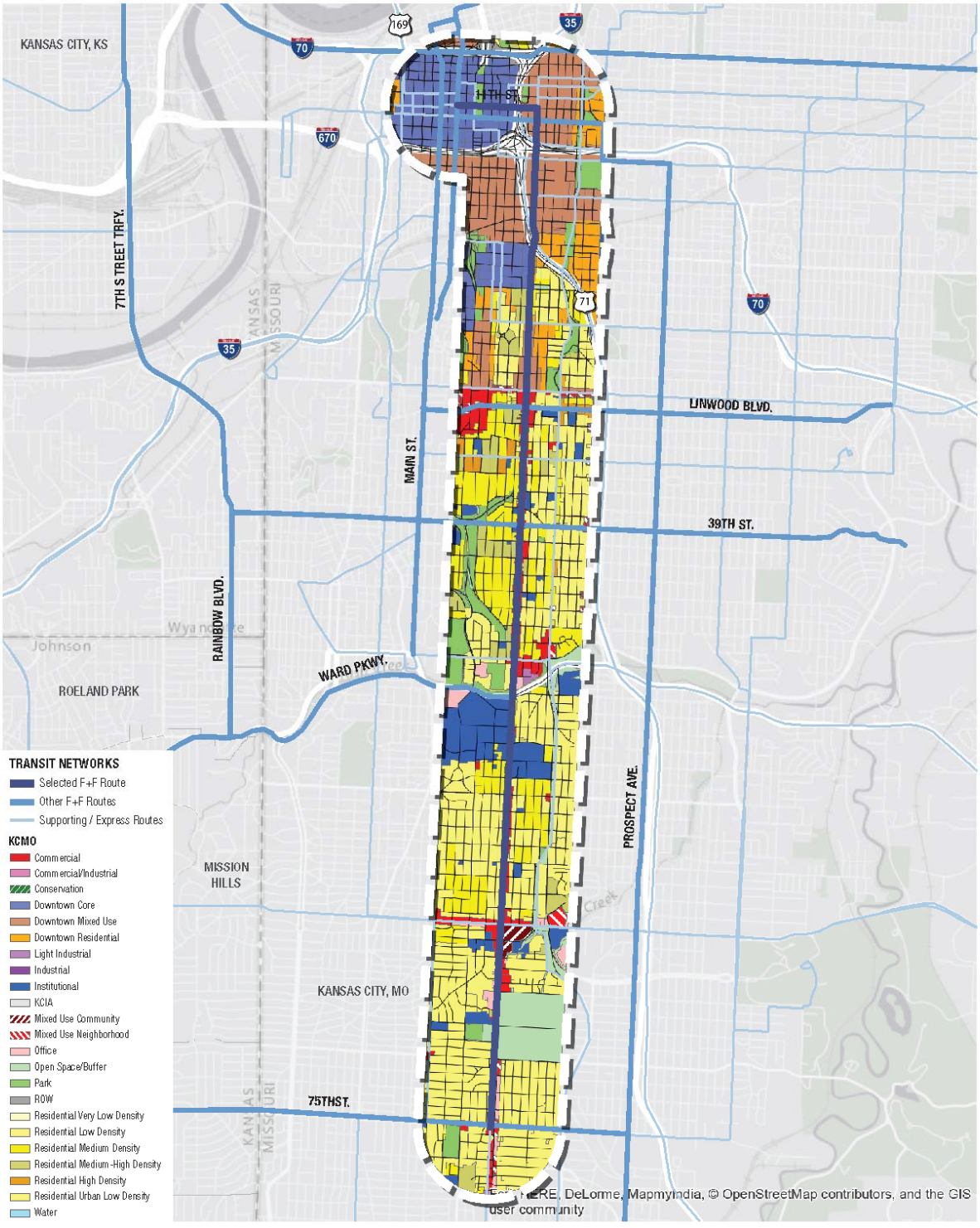


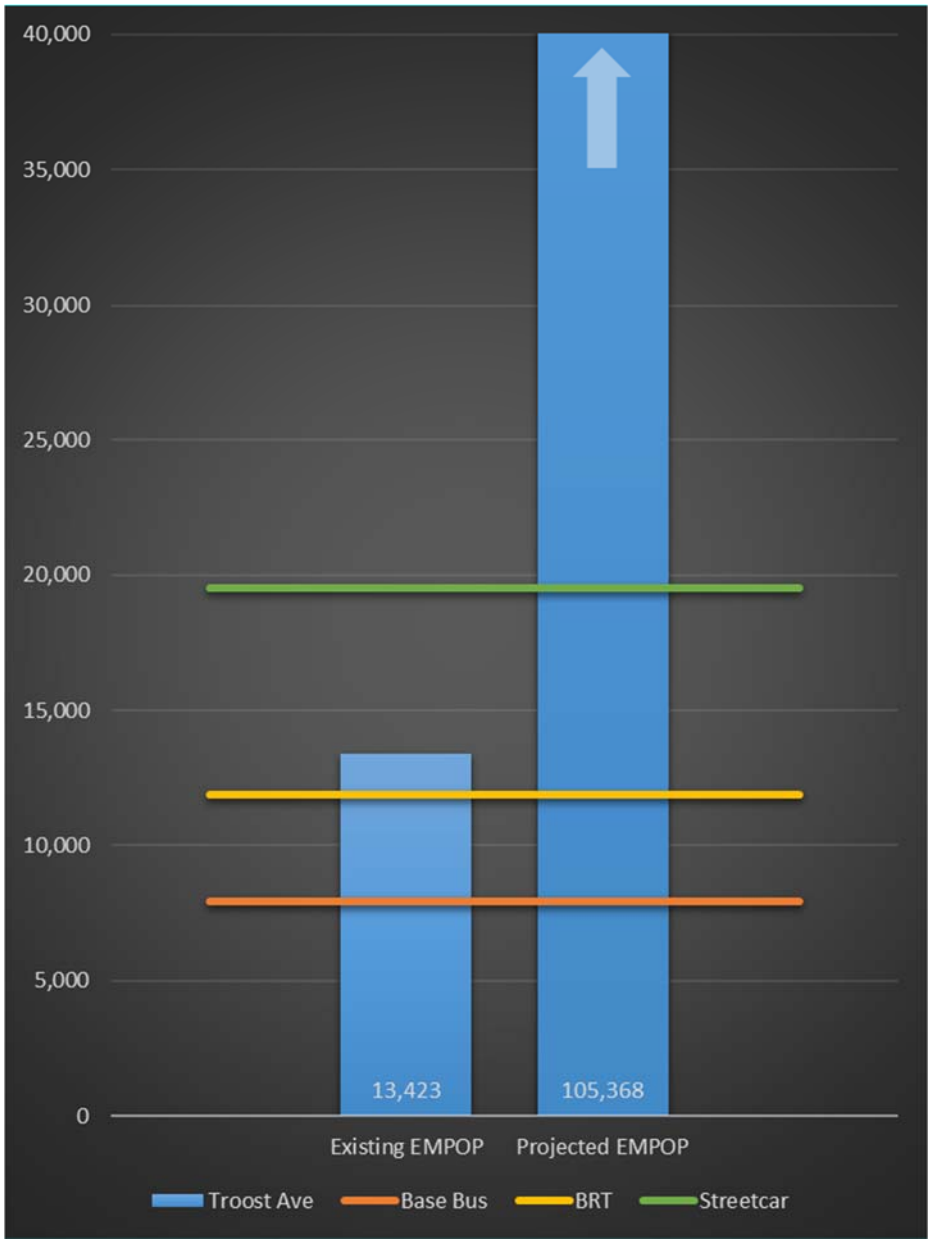
Figure 61: Future Land Use Map by Jurisdiction for Troost Avenue Corridor



Land Use and Transit Relationship

Currently the existing population and employment per mile along the 8-mile Troost Avenue Corridor is sufficient for sustainably supporting BRT Service. With the projected employment and population from MARC's 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Streetcar, primarily due to the growth projection along the northern downtown part of the Troost Avenue Corridor.

Figure 62: Land Use and Transit Graph for Troost Avenue Corridor



*EMPOP = employment + population

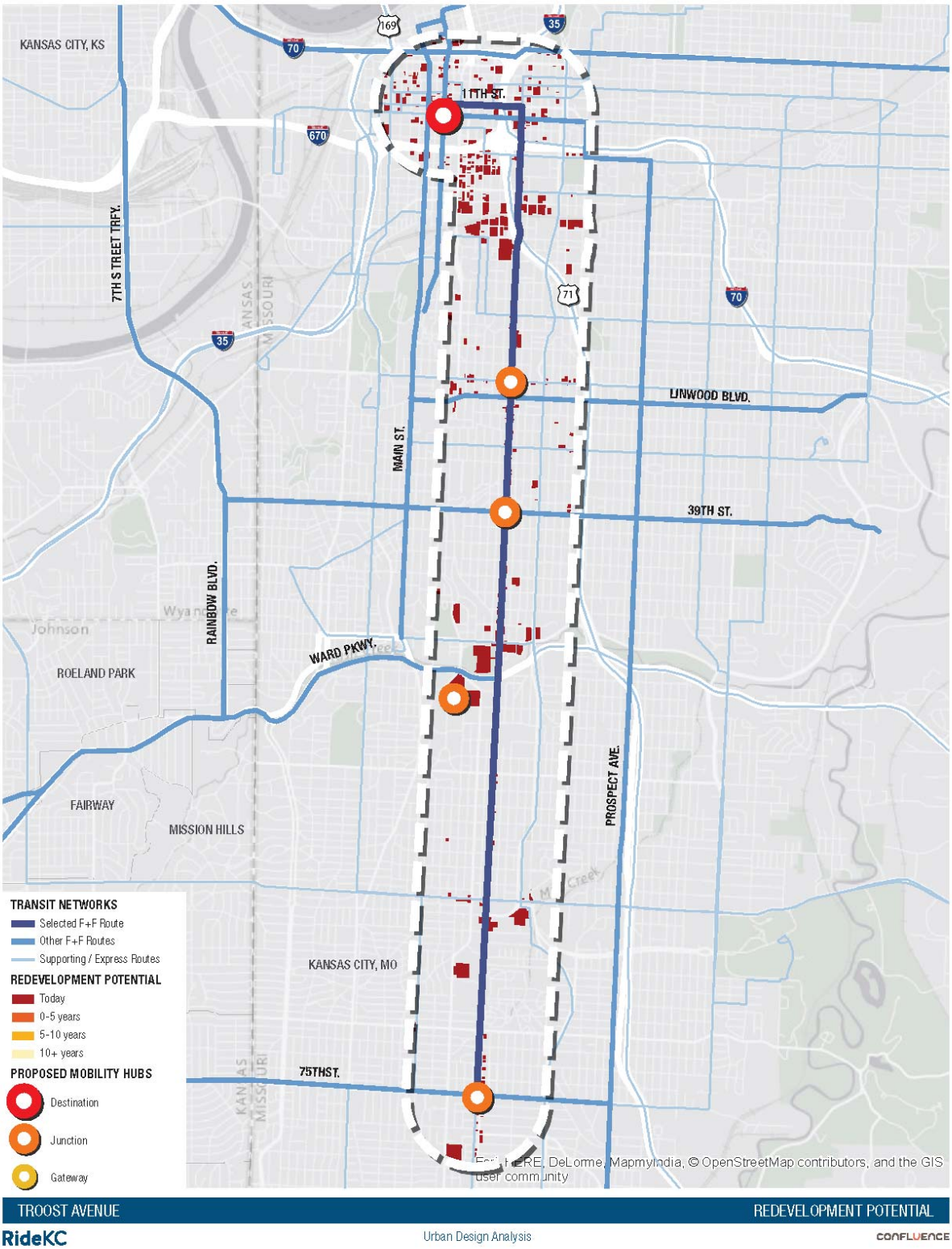
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures for the Troost Avenue Corridor is primarily near the downtown and Crossroads neighborhood. Smaller commercial lots along the corridor south of downtown are 'ripe' for redevelopment as well. Five percent of the total corridor's land area is considered 'ripe' for redevelopment.

Mobility Hub Opportunities

Five mobility hubs are proposed along the Troost Avenue route – one in downtown Kansas City, Missouri; one at Linwood Boulevard; one at 39th Street; one at UMKC; and one at 75th Street. The downtown hub is a proposed 'destination' mobility hub, while the remaining four along the route are proposed 'junction' mobility hubs. Destination mobility hubs have the potential to have a family of services, and provide multiple options for destinations from that hub. Junction mobility hubs are located primarily between two major transit routes, allowing users to transfer to other major parts of the metro.

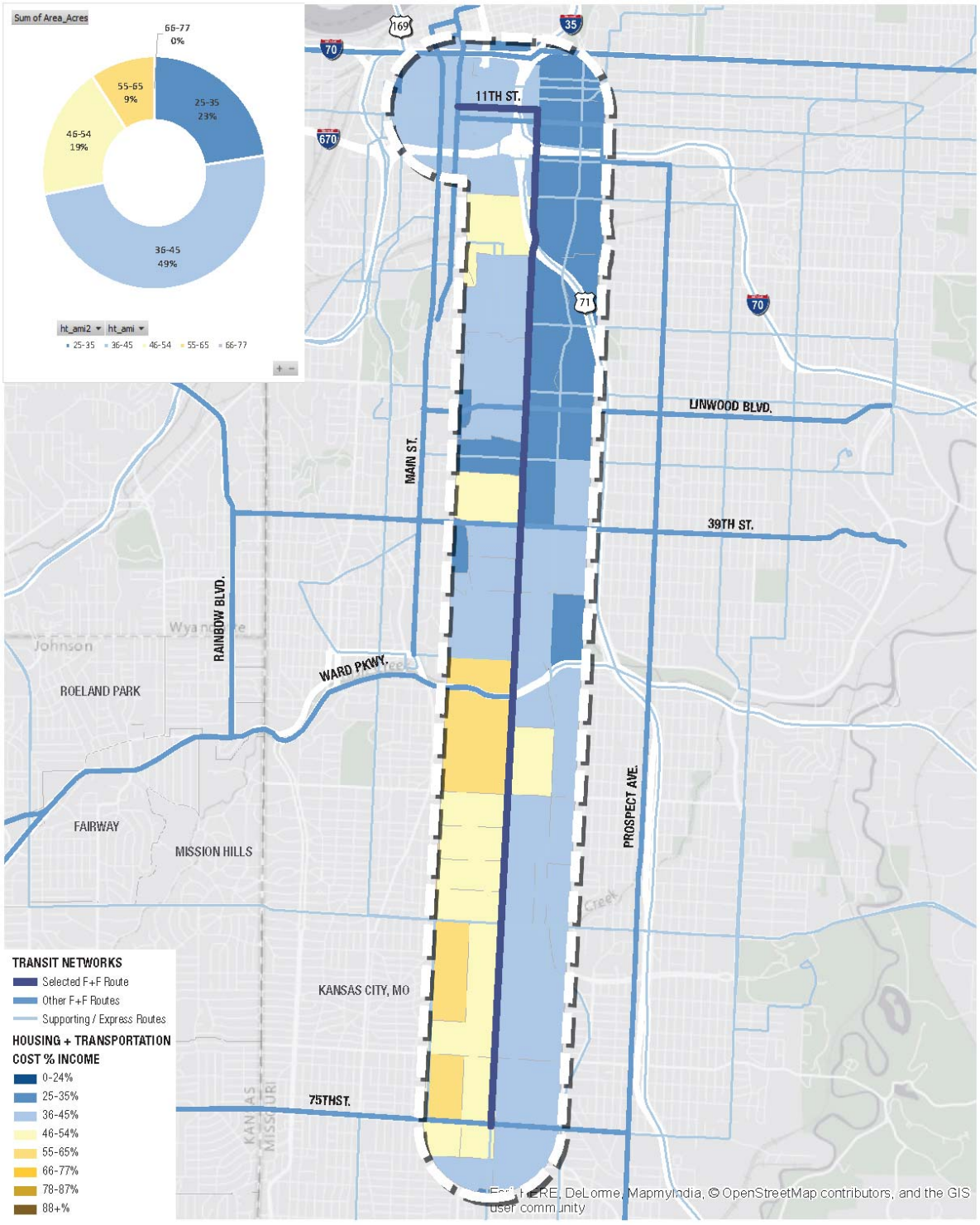
Figure 63: Redevelopment + Mobility Hub Map for Troost Avenue Corridor



Housing Affordability Analysis

The Troost Avenue Corridor has an average of 41% of costs dedicated to housing and transportation per the average household income. This corridor illustrates that east of Troost is primarily affordable, while west of Troost is mostly unaffordable.

Figure 64: Housing + Transportation Index Map for Troost Avenue Corridor



Initial Takeaways

Based on the high-level analysis of the Troost Avenue Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Focus higher mixed-use density along the north/south piece of the corridor where redevelopment potential is ripe.
- Increase housing options (market rate and affordable) along the entire Troost Avenue Corridor.
- Utilized proposed mobility hubs to spur potential transit supportive development and an opportunity to provide potential incentives.
- Preserve existing single family households along the corridor.

75th Street / Quivira Road

This approximately 21.5-mile long corridor is the longest corridor of the ten corridors analyzed. It extends from 127th Street in Johnson County north along Quivira Road to 75th Street and heads east into Jackson County and ends at the new Cerner Campus at Bannister.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 45,369, with a total population of 70,046 people, making it the least dense corridor out of the ten corridors analyzed. There are a few pockets of denser employment centers along the northern part of Quivira Road. However, population is higher than employment within this corridor, and is located throughout much of the route. Higher concentrations of population are only a few pockets also along northern part of Quivira Road, but consistent density is shown along the 75th Street part of the corridor.

Figure 65: Employment Map for 75th Street / Quivira Road Corridor

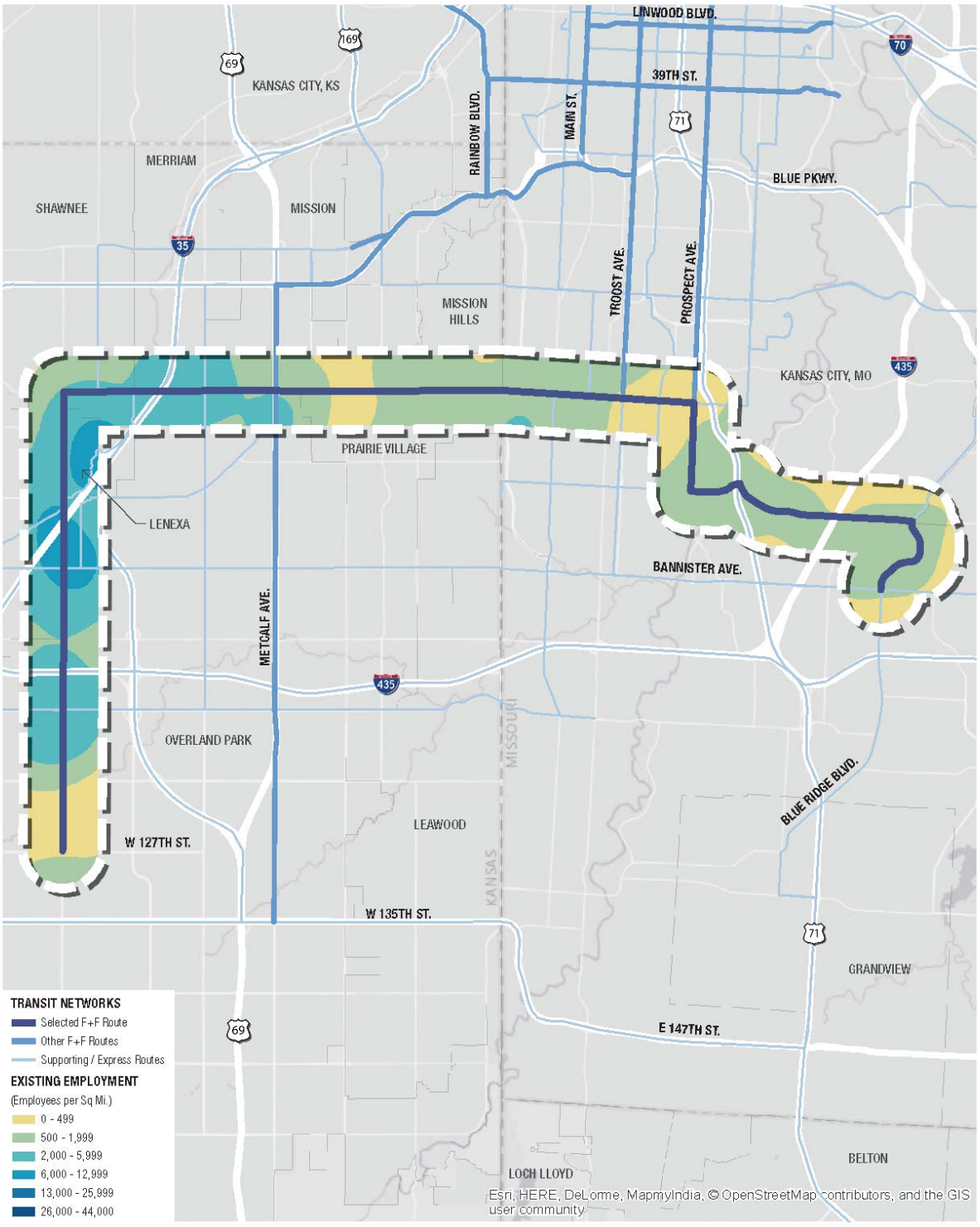


Figure 66: Population Map for 75th Street / Quivira Road Corridor

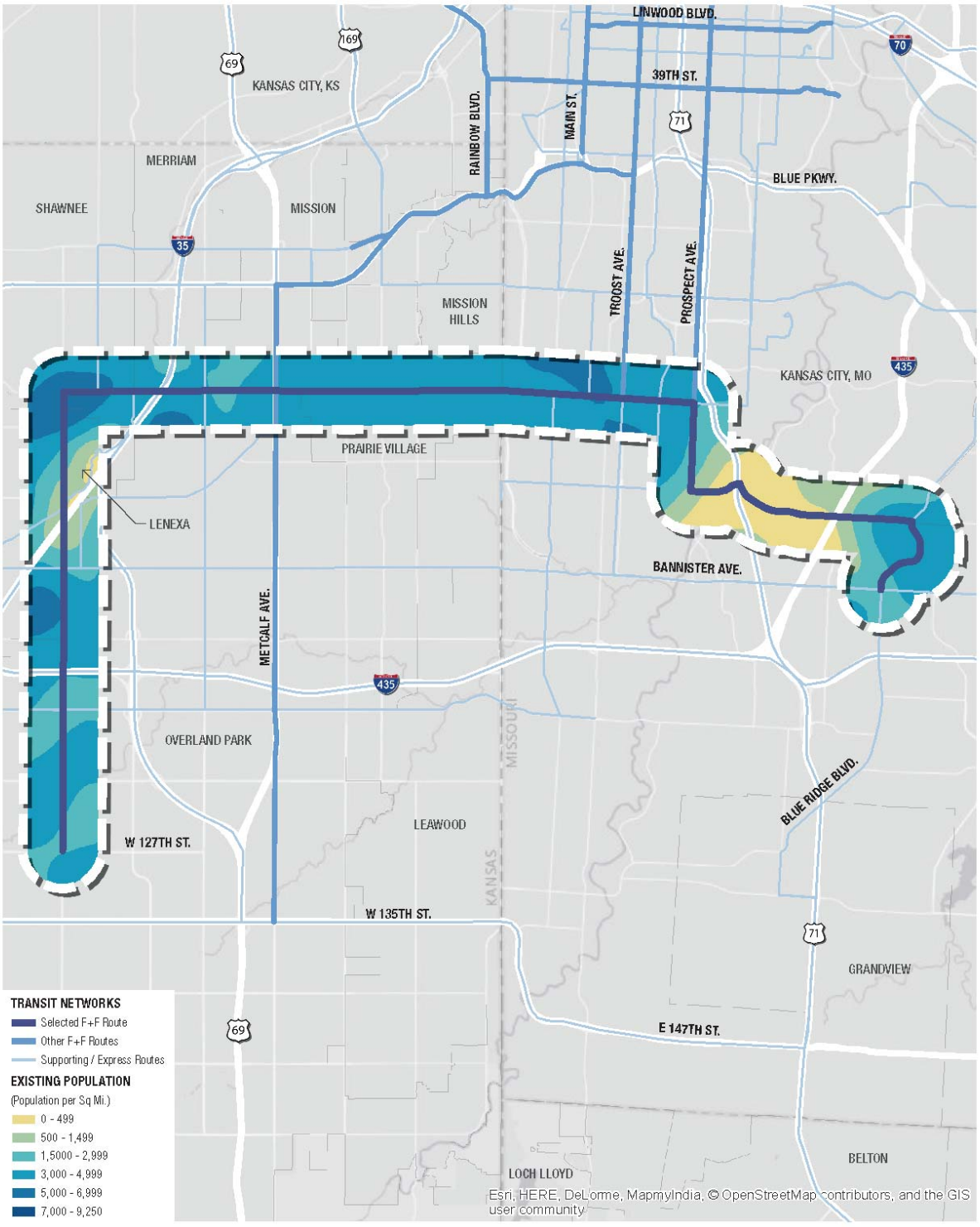
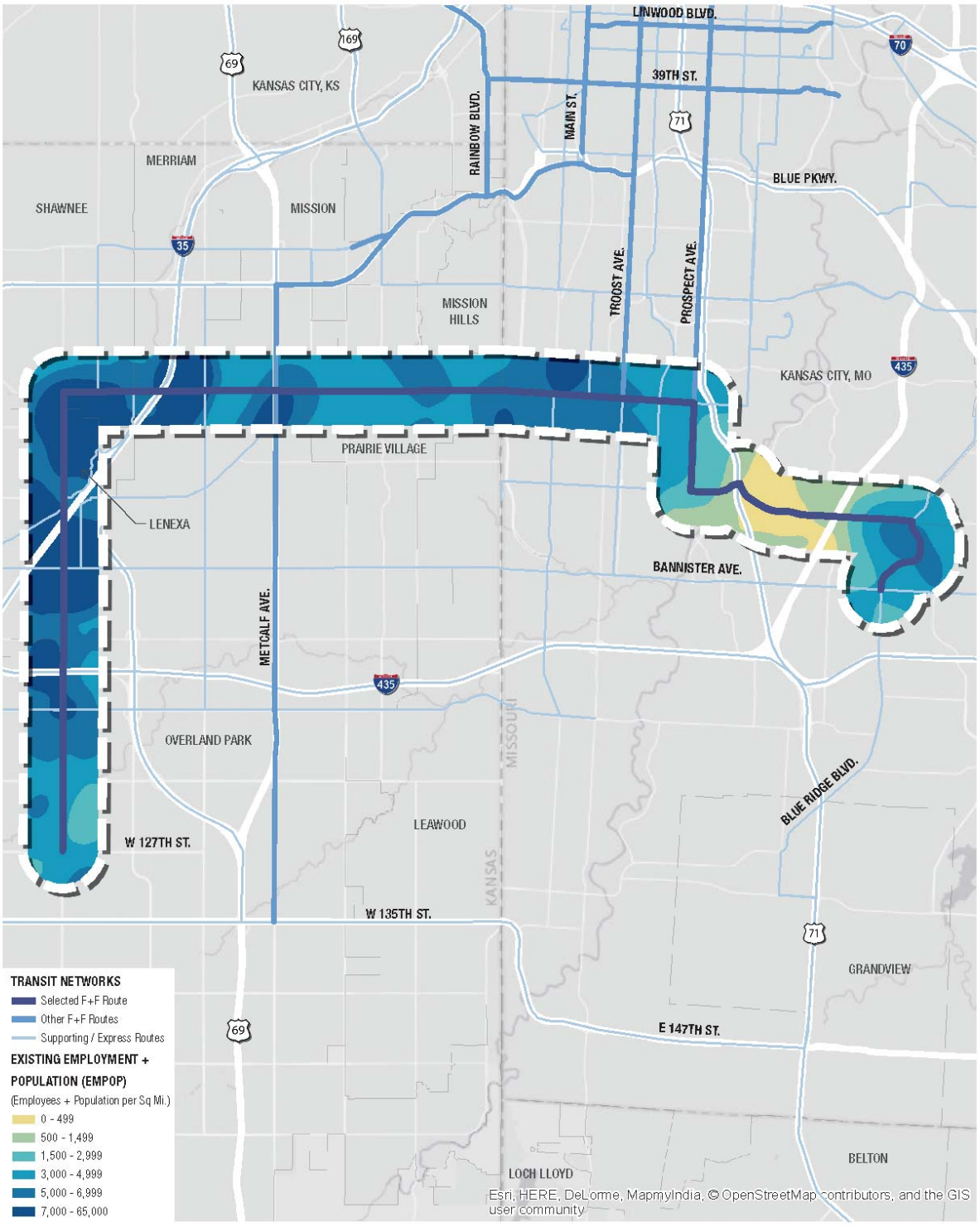


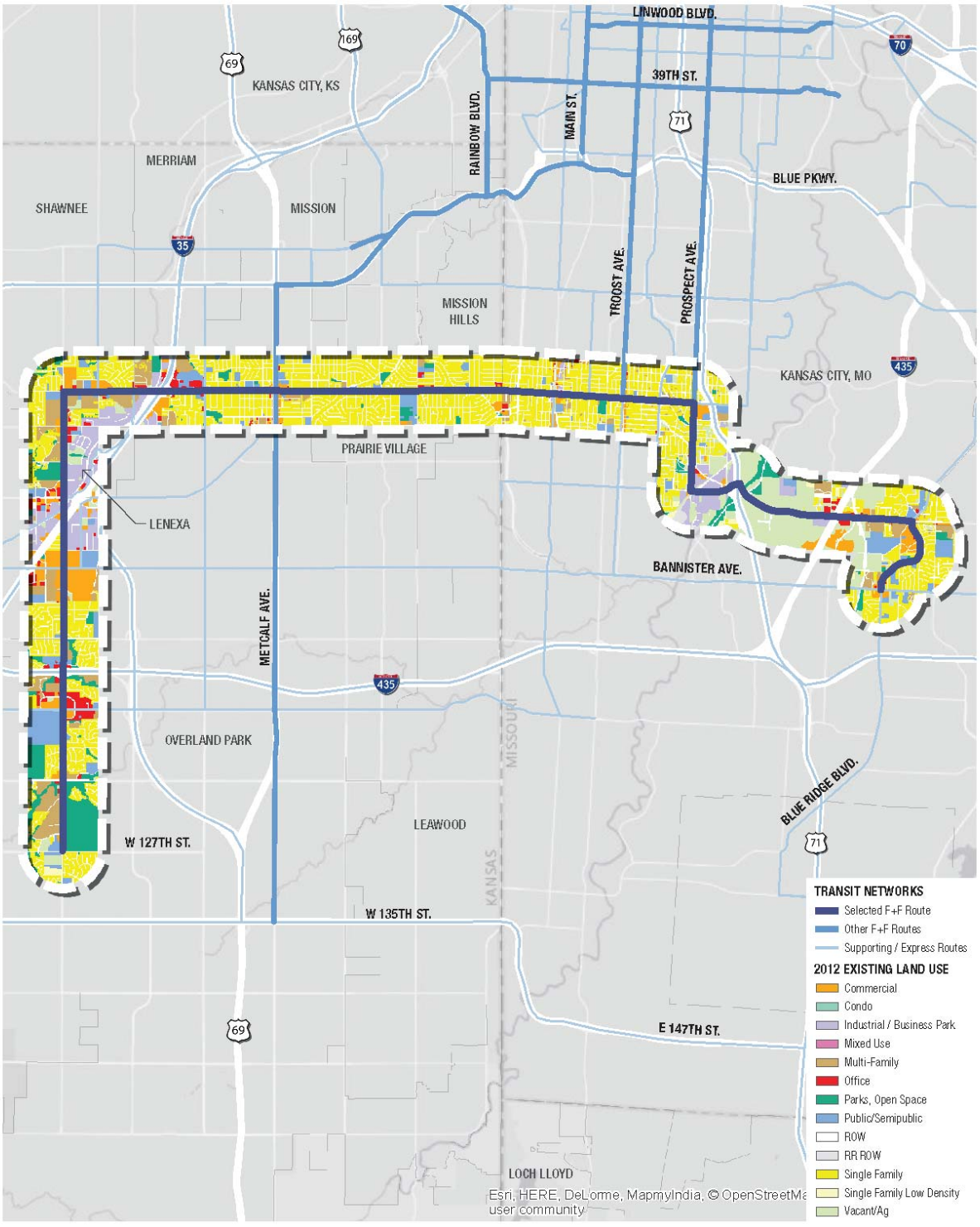
Figure 67: Employment + Population Map for 75th Street / Quivira Road Corridor



Existing Land Use

Along the 21.5-mile long corridor, existing land use per the MARC 2012 Land Use Raster Data illustrates the variety of land uses found along the corridor. Towards the southern terminus of the corridor at 127th Street and Quivira, the existing land uses are on much larger, suburban residential lots, both single family and multifamily. Near Interstate 35, the uses are primarily industrial adjacent to the interstate, then transitioning to multifamily as Quivira Road intersects 75th Street. Interstate 35 and 75th Street hosts Shawnee Mission Medical Center, and 75th Street is primarily made up of single family residential homes, with a few intersections with mixed-uses, such as State Line and Main Street. The Quivira Road / 75th Street route then goes through South Kansas City, crossing the Blue River Greenway and into the future Cerner campus.

Figure 68: Existing Land Use Map for 75th Street / Quivira Road Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 225,131 people and employees, an increase in total population and employment by 109,716 people. MARC's Future Land Use Raster Data hints at where these increases might occur, shown potentially around the 75th Street and Quivira intersection, and the 95th Street and Quivira intersection.

The future land use maps for each jurisdiction within this corridor buffer illustrates more clearly the proposed change shown in the MARC Future Land Use Raster Data near these areas.

Figure 69: Future Land Use Map for 75th Street / Quivira Road Corridor

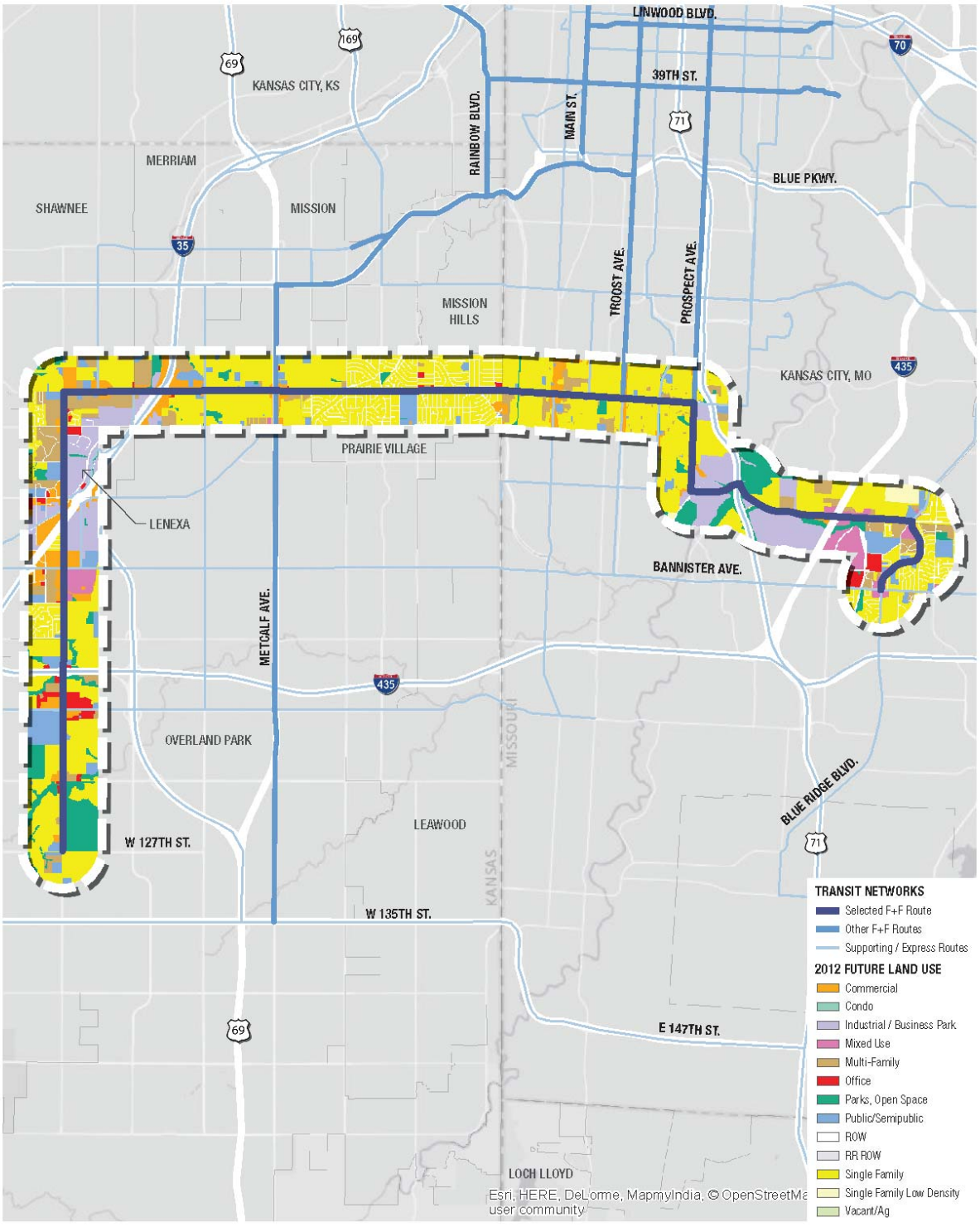
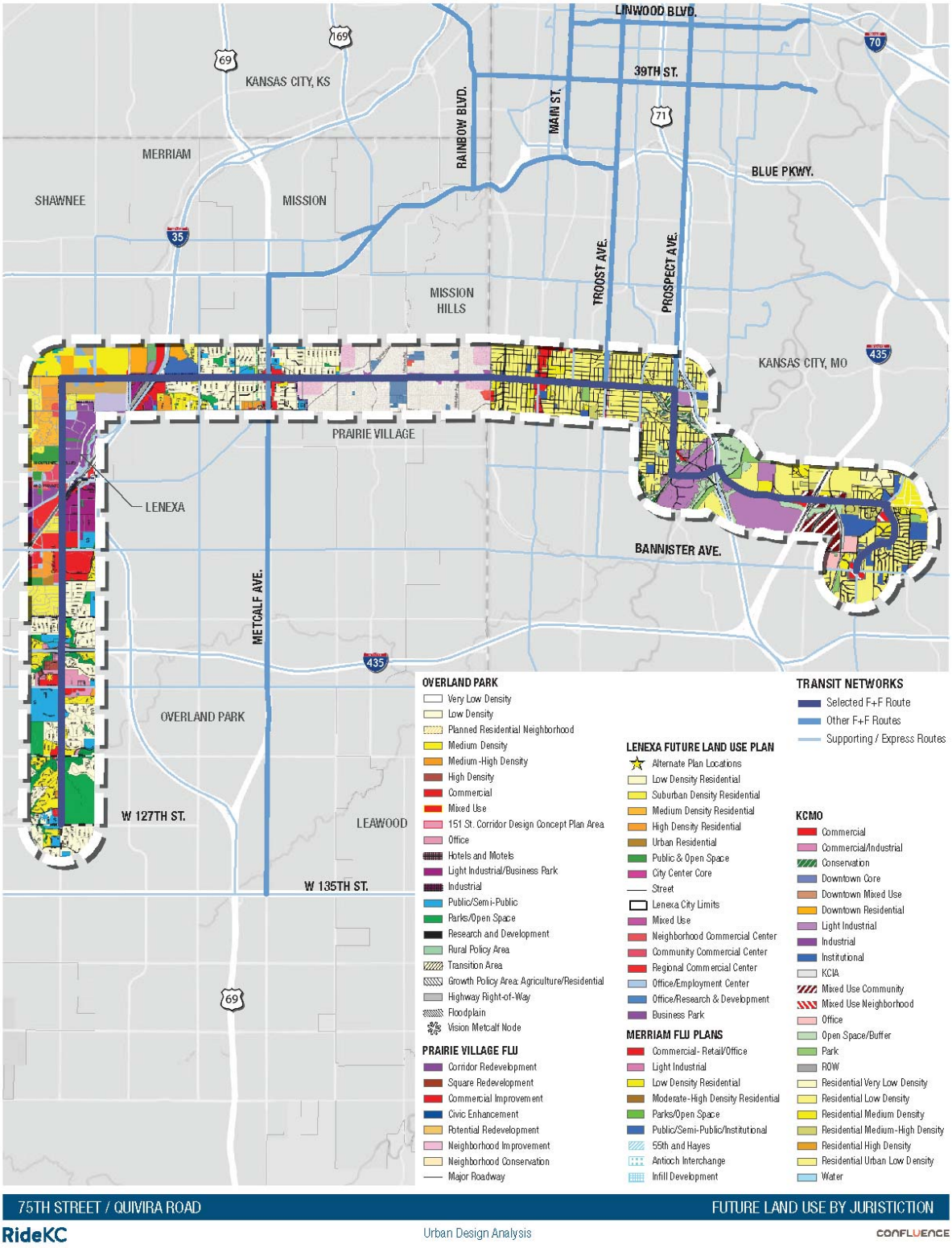


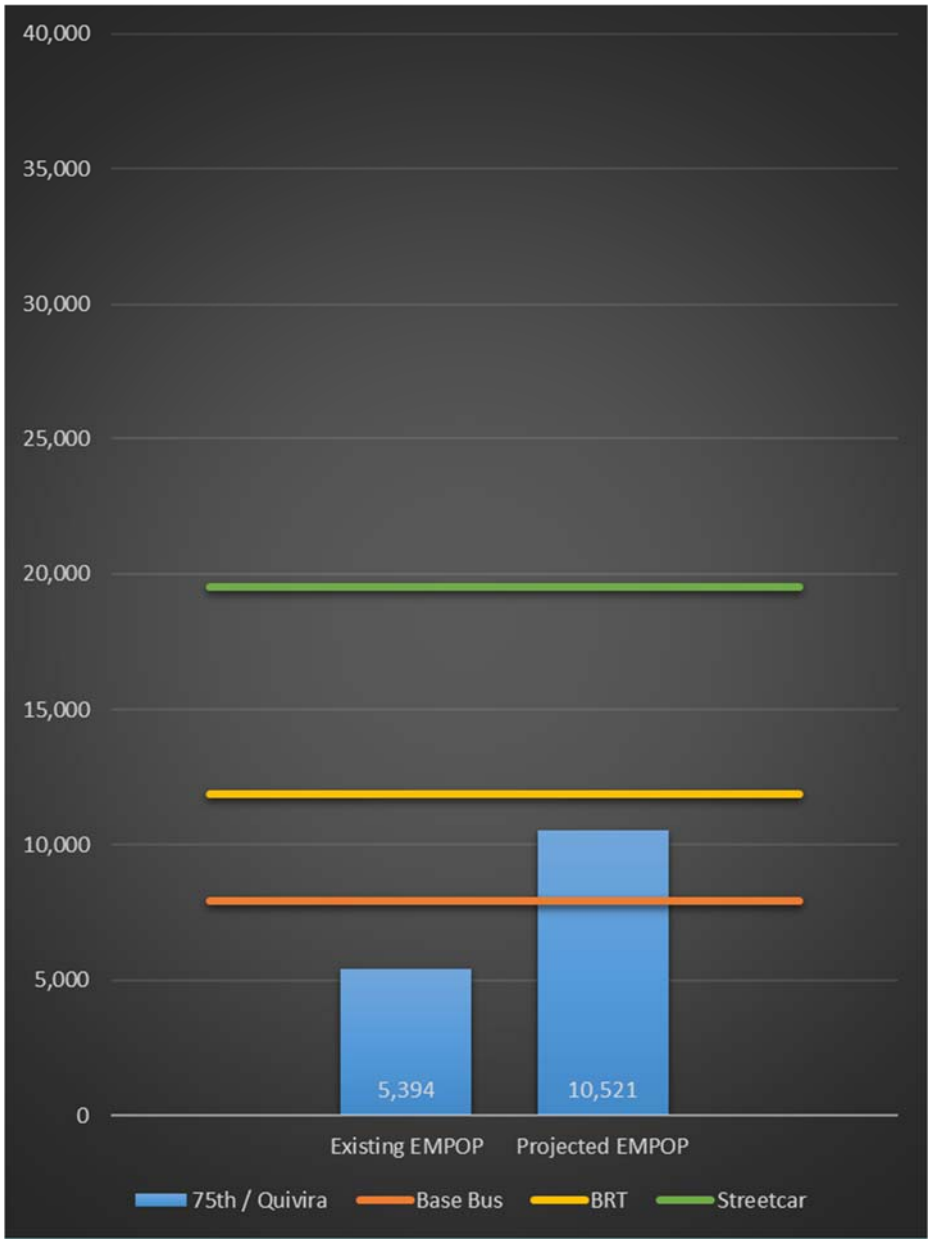
Figure 70: Future Land Use Map by Jurisdiction for 75th Street / Quivira Road Corridor



Land Use and Transit Relationship

Currently the existing population and employment per mile along the 21.5-mile 75th Street / Quivira Road Corridor is insufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARC's 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Base Bus Service.

Figure 71: Land Use and Transit Graph for 75th Street/Quivira Road Corridor



*EMPOP = employment + population

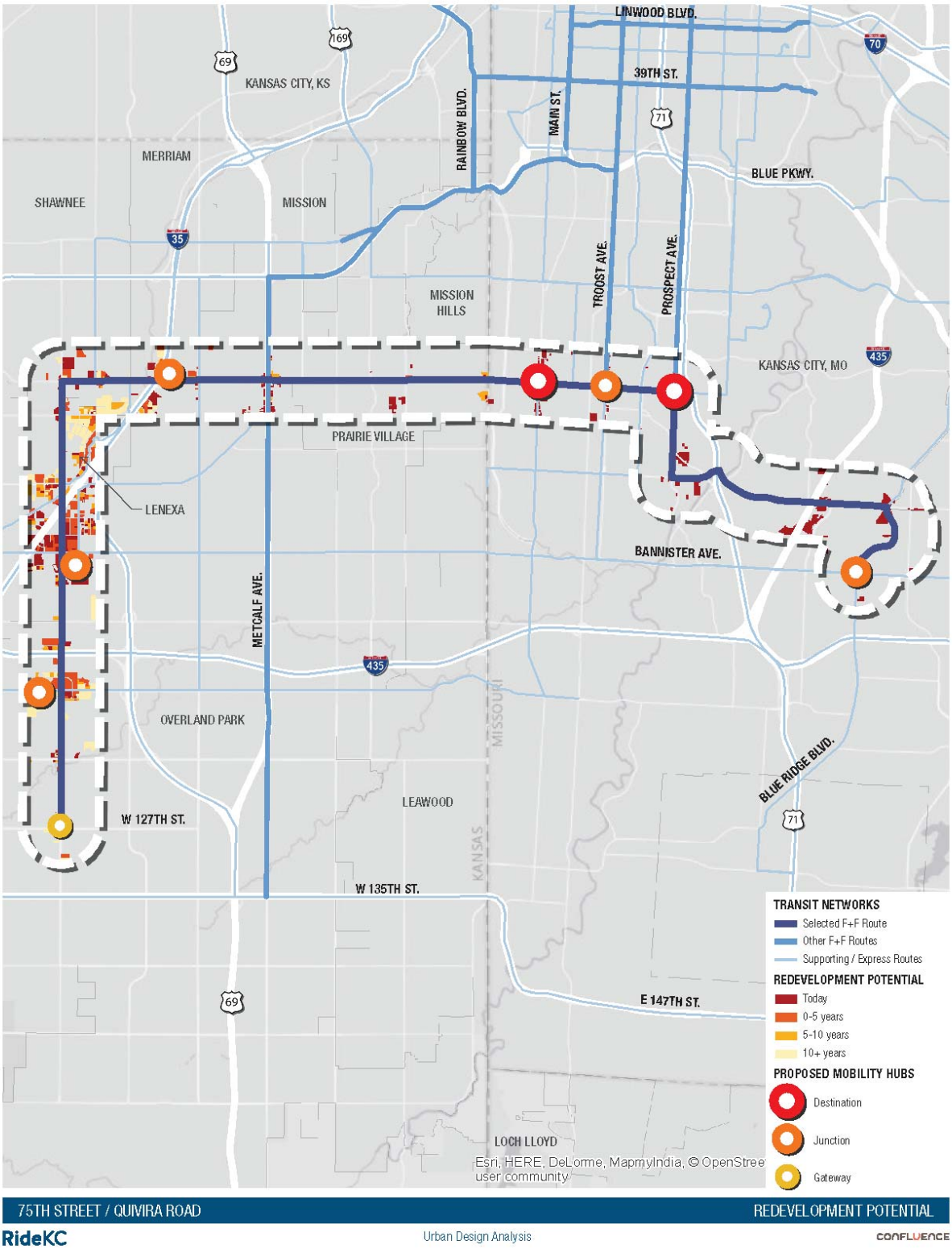
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures is shown within the corridor buffer as well. The redevelopment map illustrates that much of redevelopment potential is likely to occur around the intersection of College Boulevard, 95th Street, and 87th Street along Quivira; additionally, areas near Interstate 35 are ripe for redevelopment as well. Approximately 5% of the corridor's land is ripe for redevelopment.

Mobility Hub Opportunities

Eight mobility hubs are proposed along this corridor. One of the mobility hubs has the potential to be a 'destination' mobility hub, located at the intersection of 75th Street and Wornall in the Waldo neighborhood. Five mobility hubs are proposed as 'junction' mobility hubs and they are located along the Quivira Road near Johnson Community College and Oak Park Mall. The three other 'junction' mobility hubs are located along 75th Street at Shawnee Mission Medical Center and the intersections of Troost and 75th Street, and Prospect and 75th Street. Two mobility hubs are proposed as 'gateway' hubs, located at both ends along the corridor.

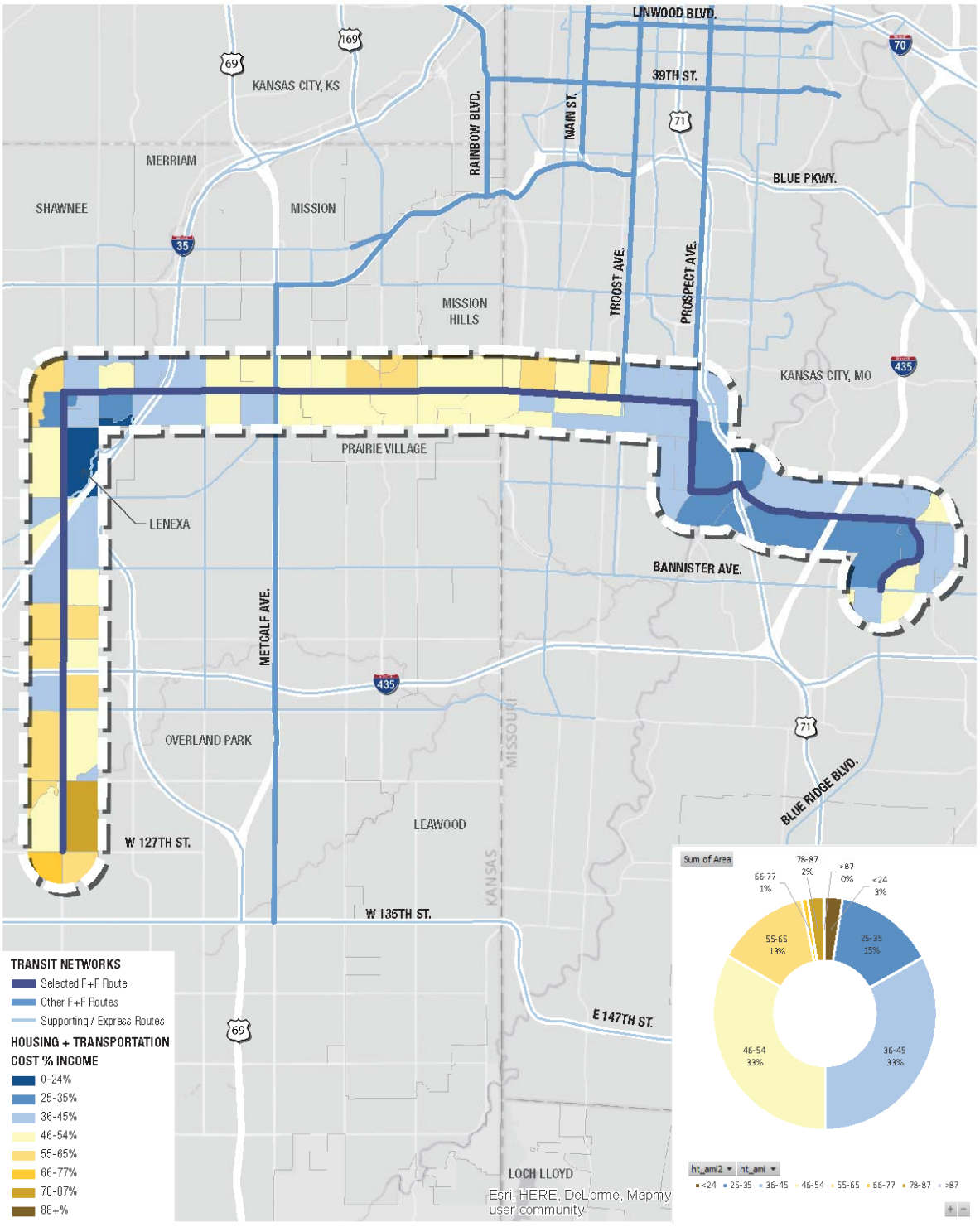
Figure 72: Redevelopment + Mobility Hub Map for 75th Street / Quivira Road Corridor



Housing Affordability Analysis

The 75th Street / Quivira Road Corridor ranks as the ninth least affordable out of the ten corridors analyzed. This corridor has an average household and transportation costs of 45% affordability.

Figure 73: Housing + Transportation Index Map for 75th Street / Quivira Road Corridor



75TH STREET / QUIVIRA ROAD — HOUSING + TRANSPORATION INDEX

RideKC — Urban Design Analysis — CONFLUENCE

Initial Takeaways

Based on the high-level analysis of the 75th Street / Quivira Road Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Increase density along the corridor substantially, specifically where redevelopment potential is anticipated or 'ripe'.
- Provide density incentives along the corridor to promote increased densities throughout.
- Ensure future residential multifamily development includes affordable housing options to balance the level of affordability throughout the corridor.

Independence Avenue / State Avenue

This approximately 11.5-mile long corridor generally extends from just west of 635 in Kansas City, Kansas through downtown Kansas City, Kansas and Kansas City, Missouri to just east of Interstate 435 in Independence, Missouri.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 45,934, with a total population of 51,491 people, making it the one of the less dense corridors (7th) out of the ten corridors analyzed. The concentration of employment is primarily at the two downtown locations, Kansas City, Kansas and Kansas City, Missouri. Population concentrations are outside of the downtown areas on either side of the corridor.

Figure 74: Employment Map for Independence Avenue / State Avenue Corridor

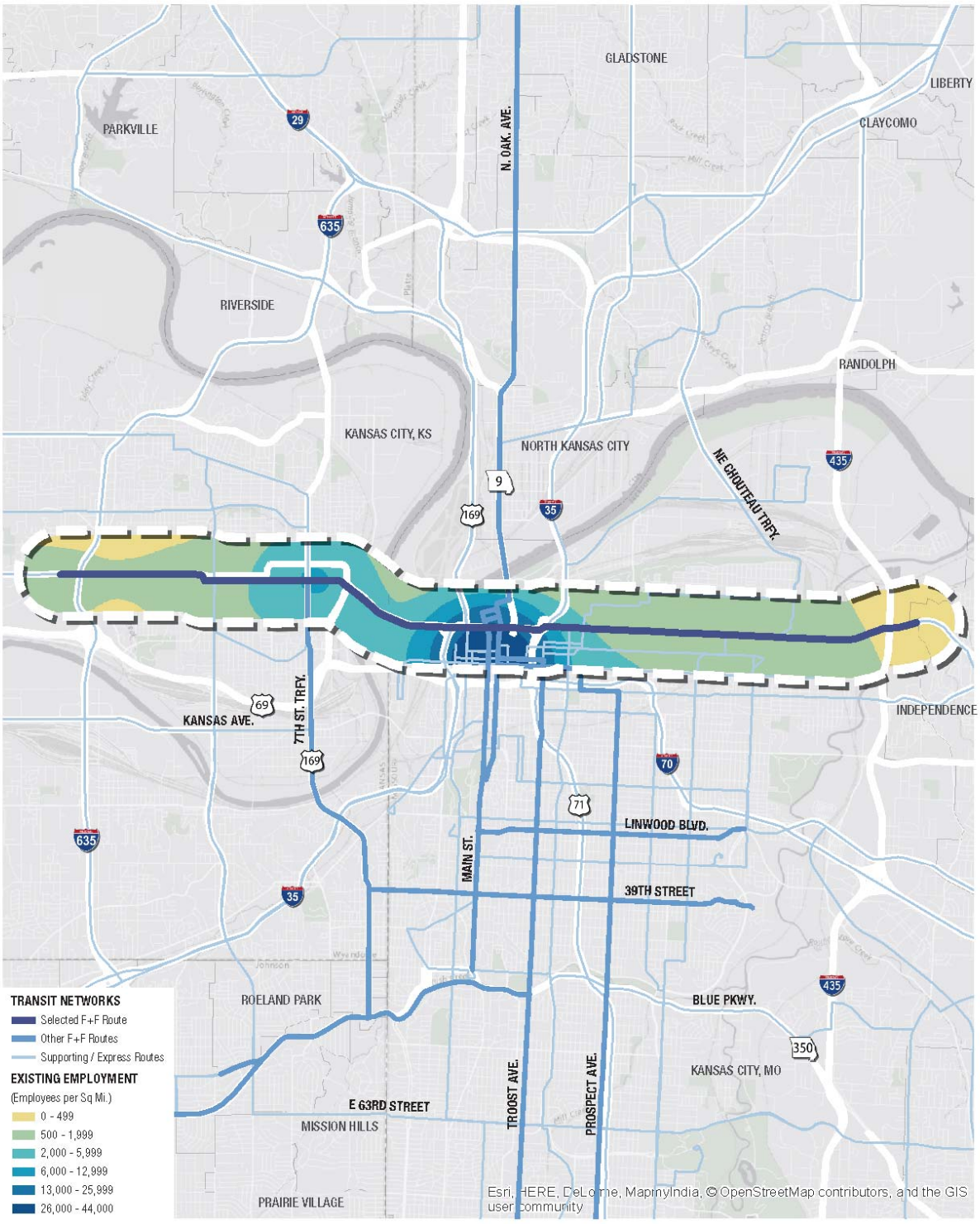


Figure 75: Employment + Population Map for Independence Avenue / State Avenue Corridor

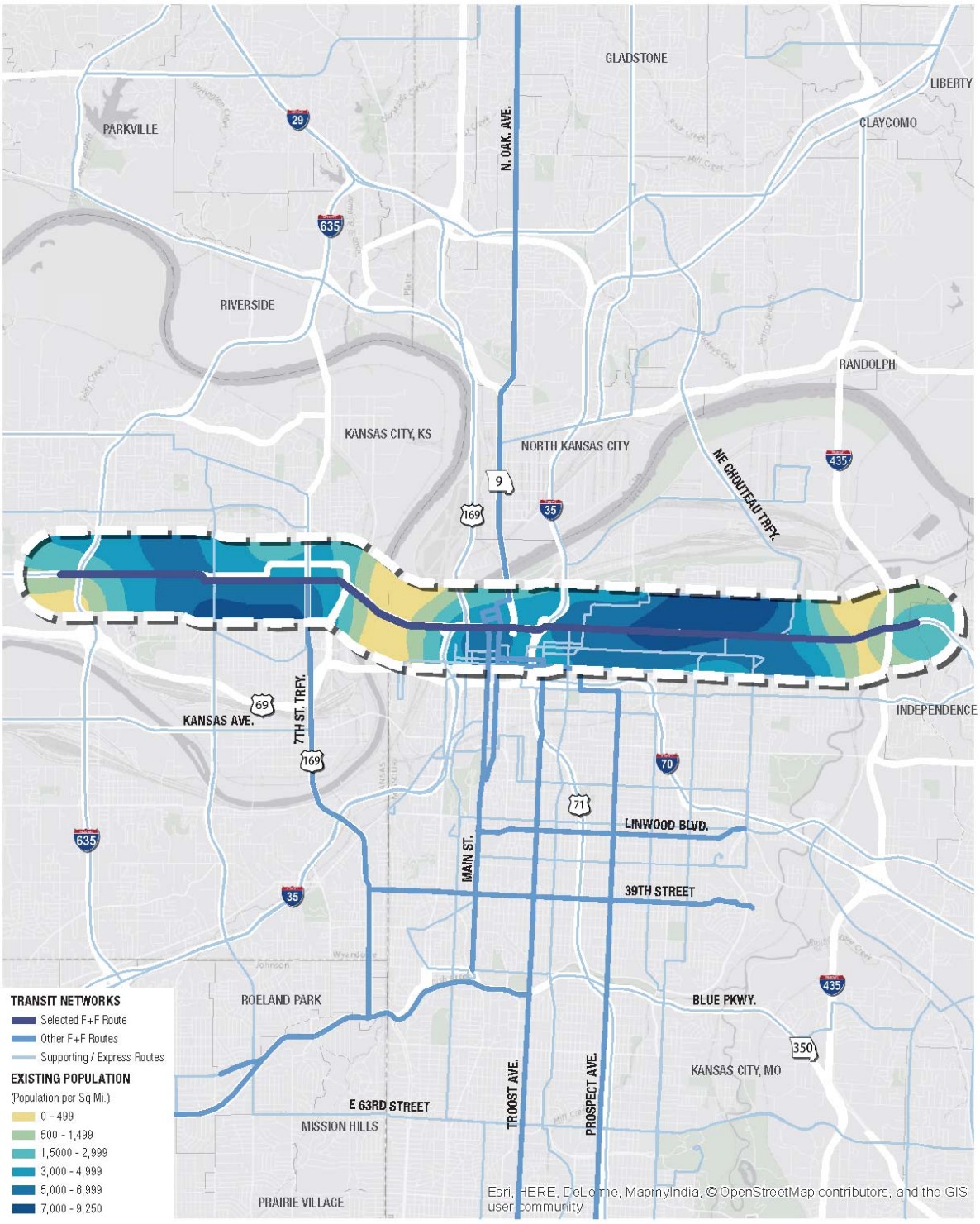
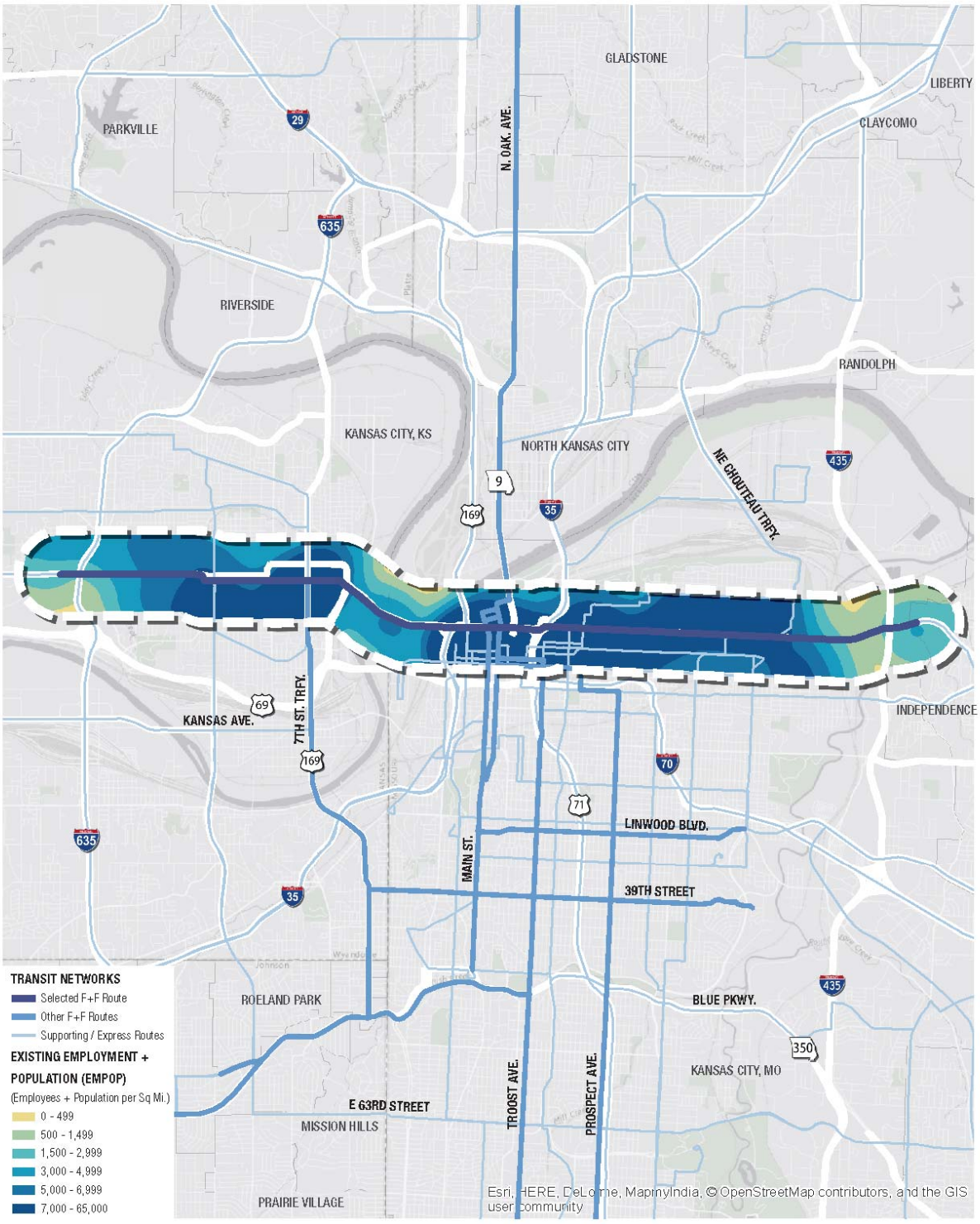


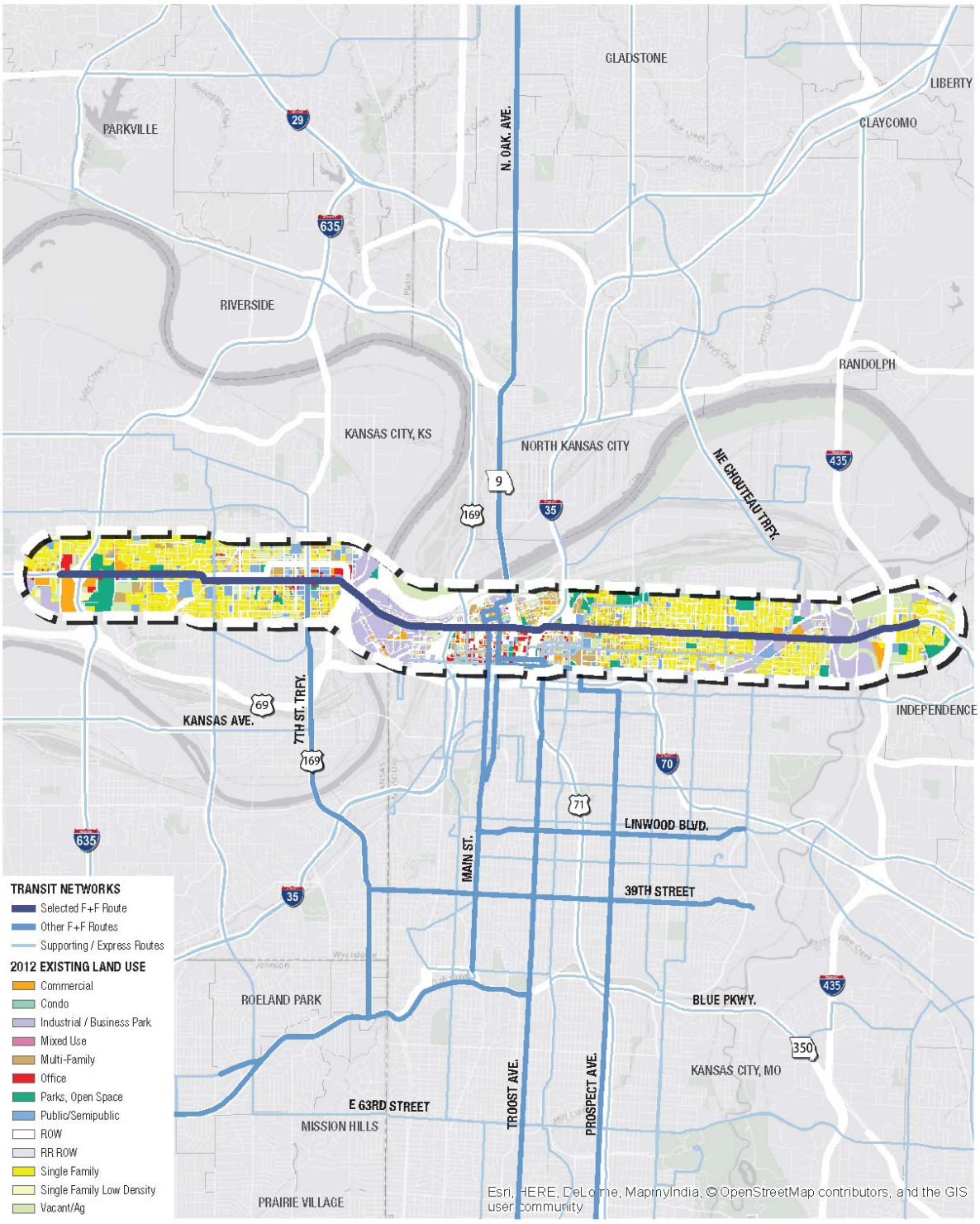
Figure 76: Employment + Population Map for Independence Avenue/State Avenue Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data illustrates a variety of land uses along the corridor. At the western terminus of the corridor are larger commercial suburban lots, transitioning to urban single family neighborhoods and then a mixture of uses in downtown Kansas City, Kansas. Across the river, the west bottoms industrial land uses are disconnected from the corridor until the route approaches downtown Kansas City, Missouri, which has many different land uses on small urban lots. Urban single family lots are adjacent to downtown towards the east, with some industrial uses towards the eastern most edge of the corridor.

Figure 77: Existing Land Use Map for Independence Avenue / State Avenue Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARC's Future Land Use Raster Data, the corridor is projected to have around 750,061 people and employees, an increase in total population and employment by 652,636 people. This large jump in projections is due to the inclusion of downtown Kansas City, Missouri within the corridor buffer area. In addition to the bolstered population and employment projections, MARC's Future Land Use Raster Data indicates most of Kansas City, Kansas single family neighborhoods increasing in density.

The future land use maps for each jurisdiction within this corridor buffer is shown, but does not provide clear detailed direction as to differences from MARC's Future Land Use Raster Data, based on the information available to the planning team at that time.

Figure 78: Future Land Use Map for Independence Avenue / State Avenue Corridor

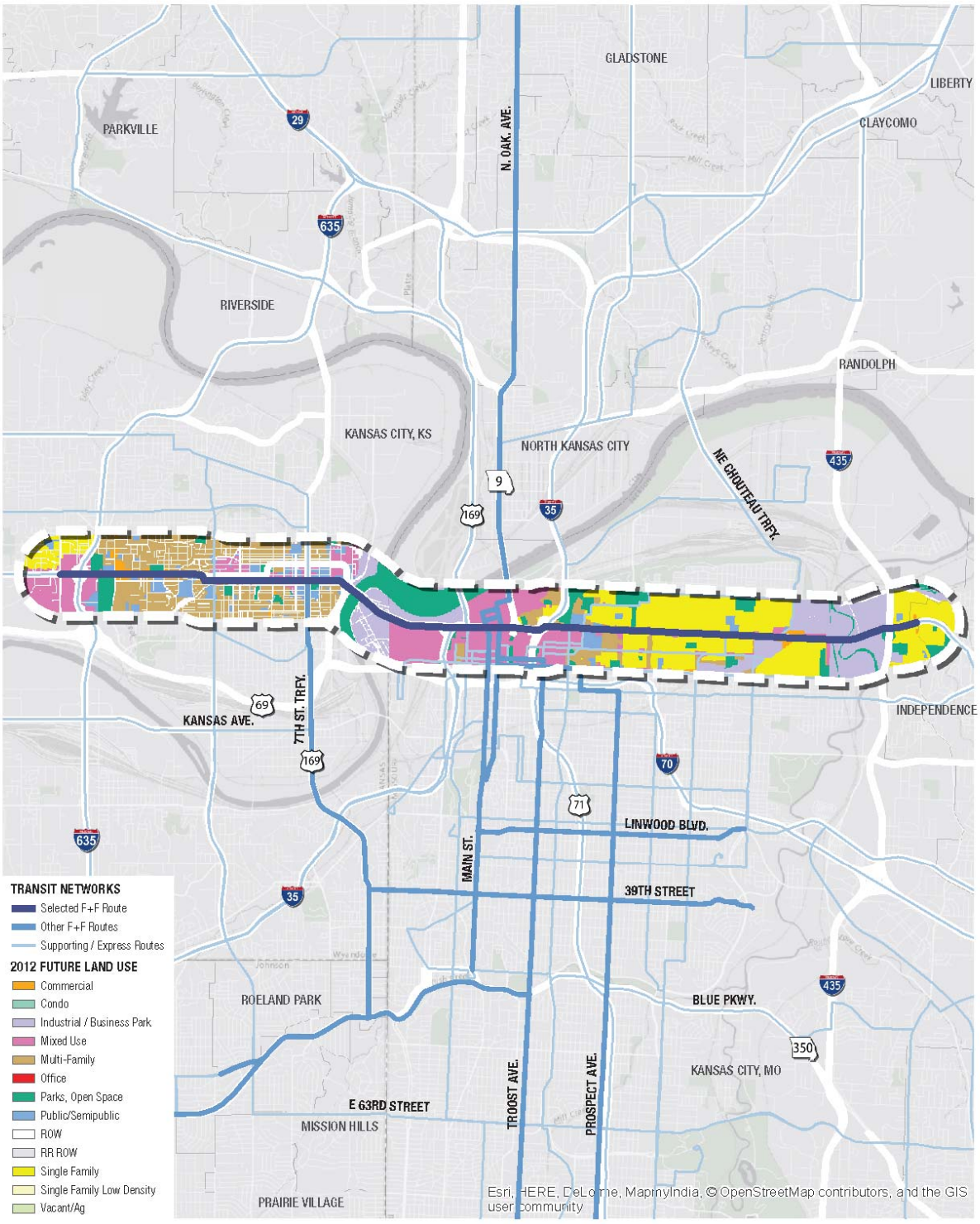
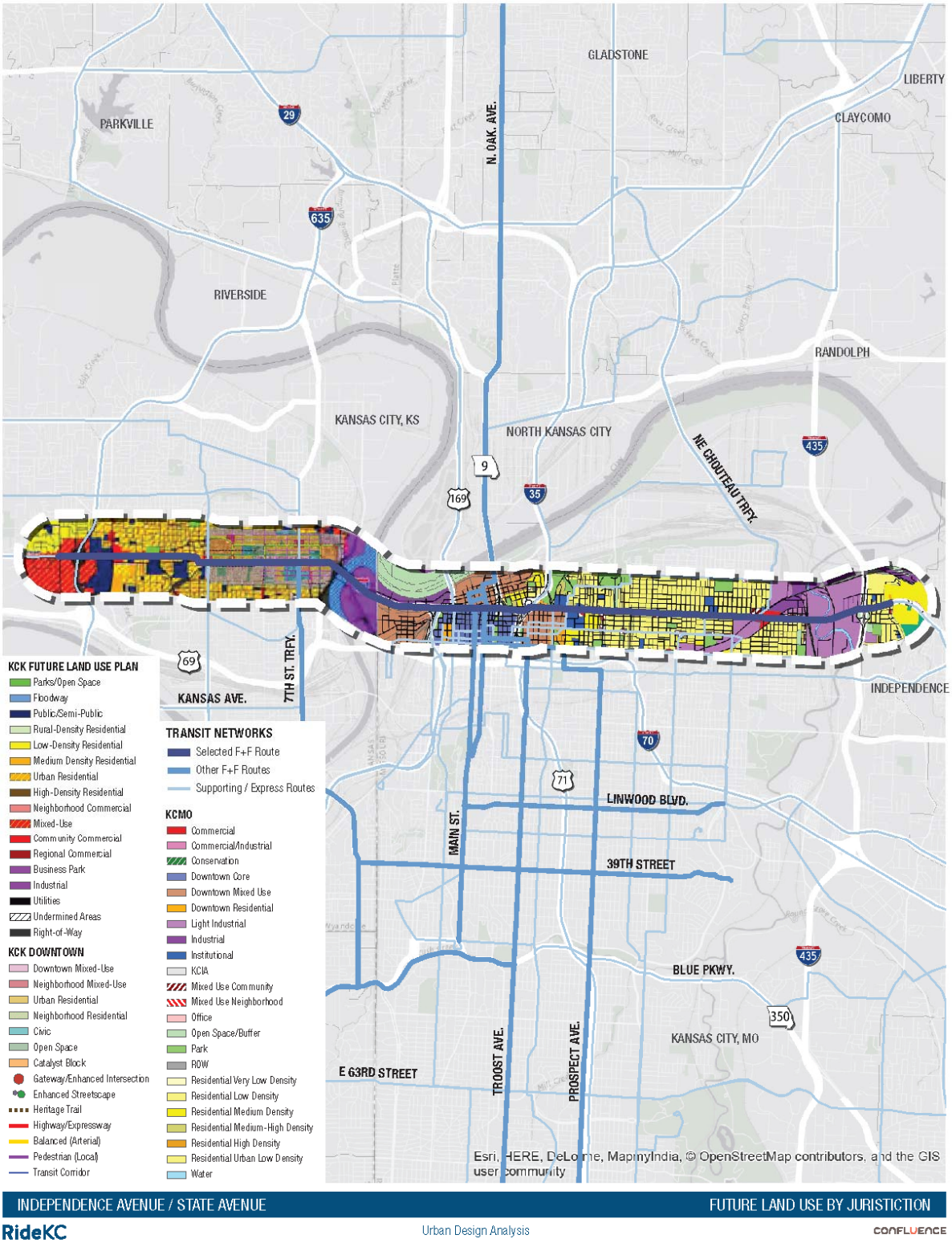


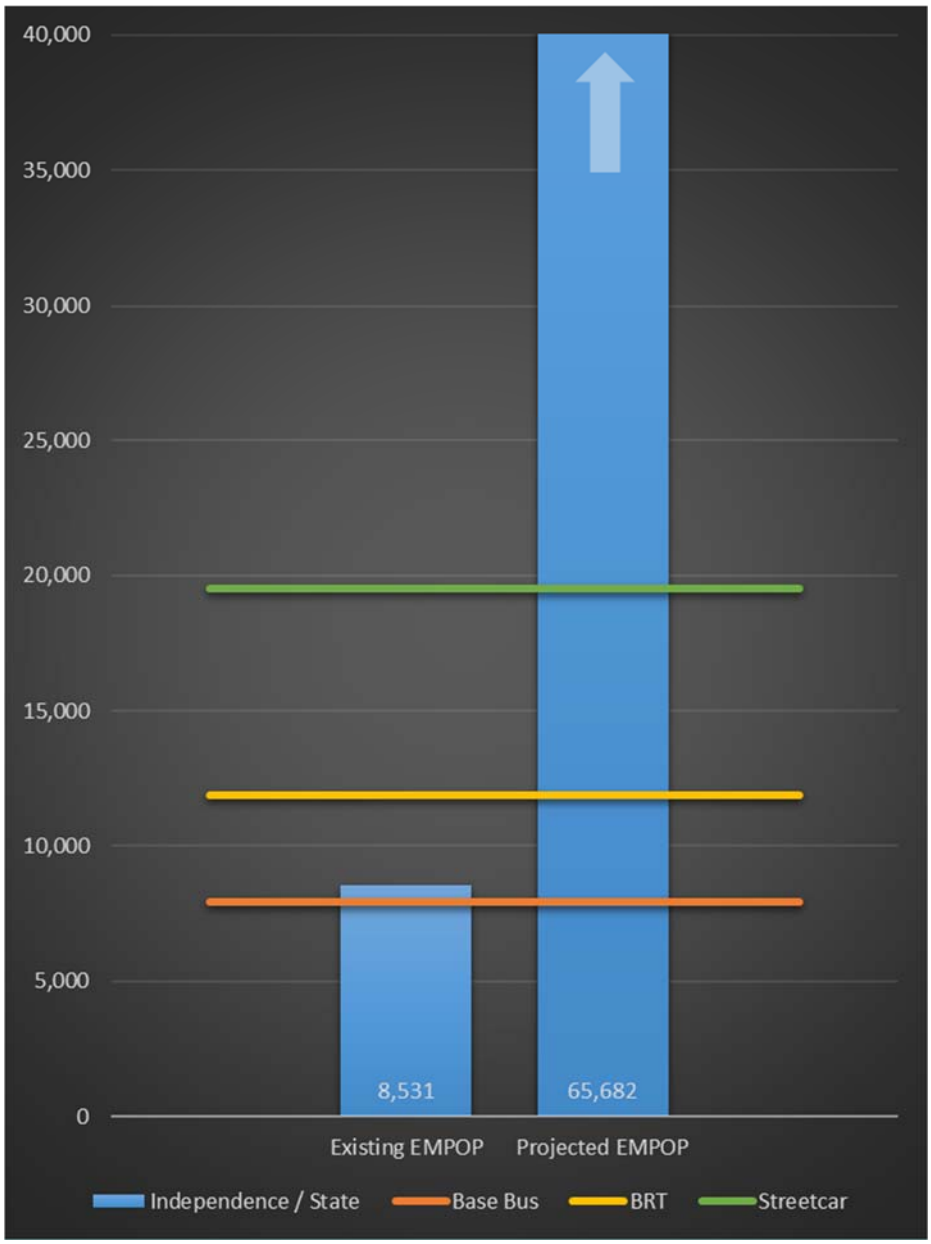
Figure 79: Future Land Use Map by Jurisdiction for Independence Avenue / State Avenue Corridor



Land Use and Transit Relationship

Currently the existing population and employment per mile along the 11.5-mile corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARC's 2012 Future Land Use Data, the total employment and population per mile will be sufficient for sustainably supporting Streetcar. However, most of the growth that qualifies this corridor for sustainably supporting streetcar is projected in downtown Kansas City, Missouri.

Figure 80: Land Use and Transit Graph for Independence Avenue / State Avenue Corridor



*EMPOP = employment + population

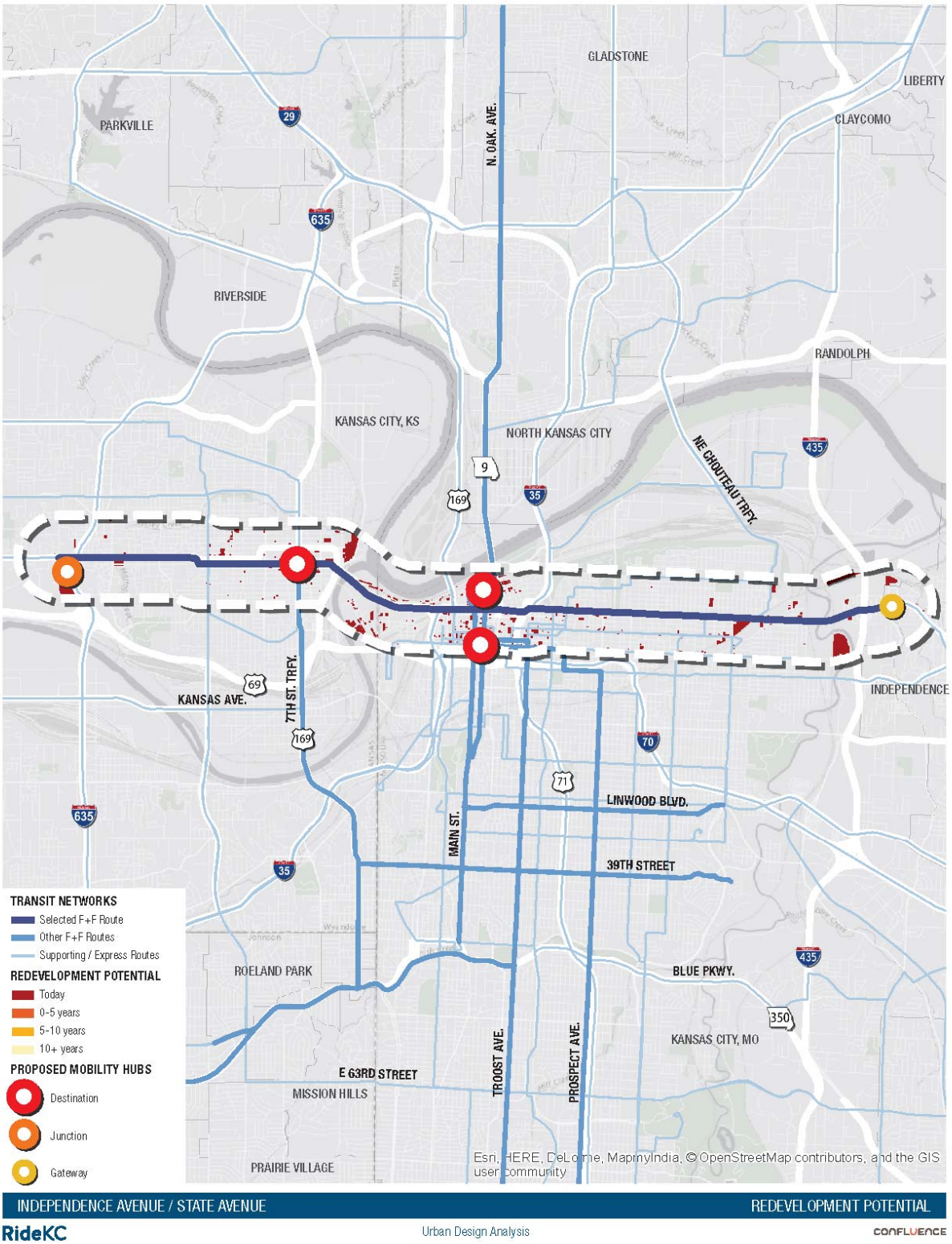
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures is shown within the corridor buffer as well. The redevelopment map illustrates that much of redevelopment potential is located at the center of the corridor, near downtown Kansas City, Missouri. Approximately six percent of the corridor's land is 'ripe' for redevelopment.

Mobility Hub Opportunities

Six mobility hubs are proposed along the Independence Avenue / State Avenue Corridor – four 'destination' mobility hubs and two 'junction' mobility hubs. The four 'destination' hubs are in downtown Kansas City, Kansas, downtown Kansas City, Missouri (two), and at Kansas City University of Medicine and Biosciences.

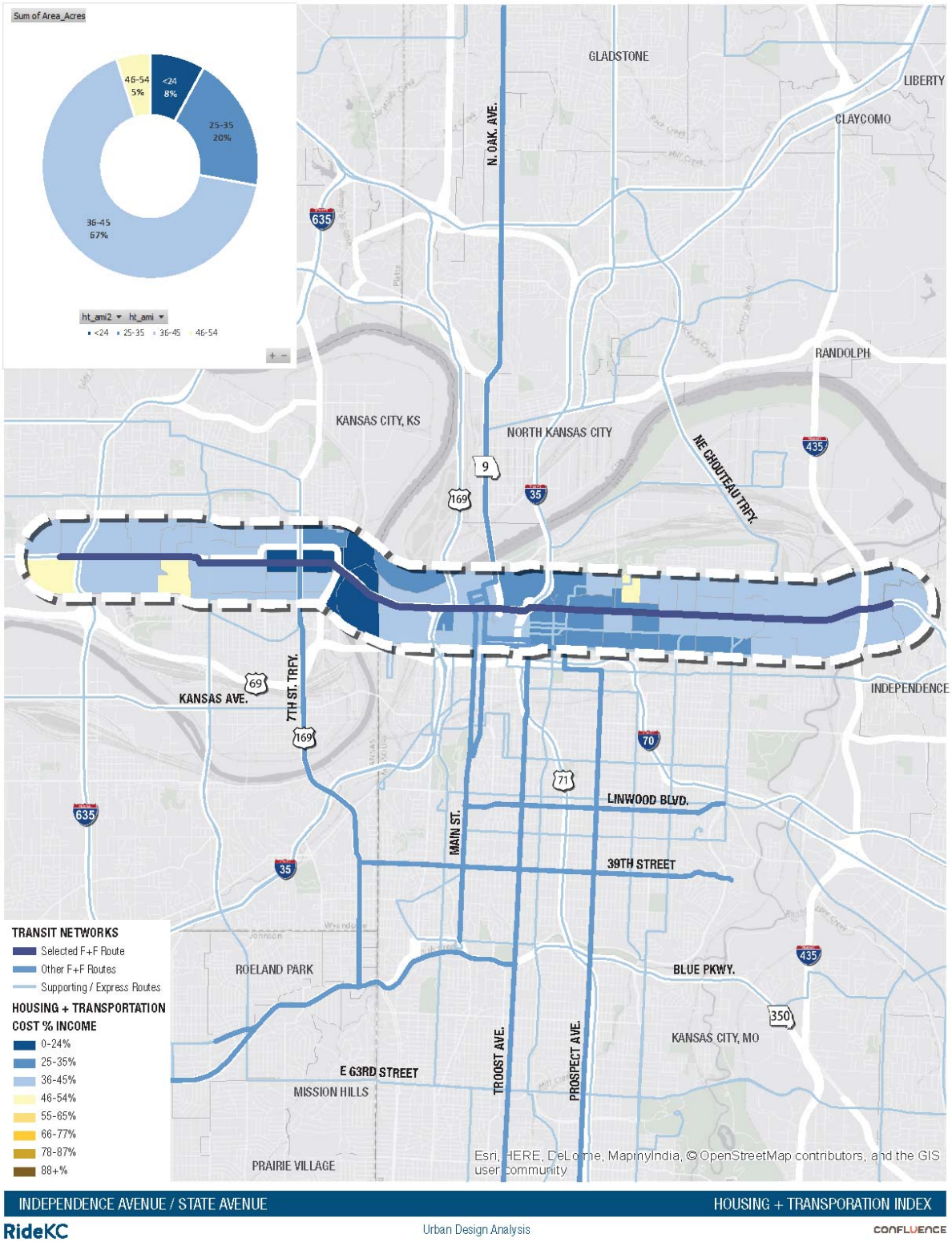
Figure 81: Redevelopment + Mobility Hub Map for Independence Avenue / State Avenue Corridor



Housing Affordability Analysis

The Independence Avenue / State Avenue Corridor is tied as the most affordable corridor out of the ten corridors analyzed. Ninety-two percent of the corridor's area is considered affordable.

Figure 82: Housing + Transportation Index Map for Independence Avenue / State Avenue Corridor



Initial Takeaways

Based on the high-level analysis of the Independence Avenue / State Avenue Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Encourage market rate dense housing options along the corridor to increase diversity, while maintaining established single family neighborhoods and affordable housing options.
- Increase density along the corridor, specifically around mobility hub locations to potentially spur transit supportive development with increased density.

North Oak / Grand Boulevard

This approximately 12-mile long corridor generally extends from the north at Barry Road south to downtown Kansas City, Missouri where Grand intersects with Main Street. It goes through three different jurisdictions: Kansas City, Missouri; Gladstone, Missouri; and North Kansas City, Missouri.

Existing Employment + Residential Population

Per the 2014 LEHD Scrubbed Dataset provided by MARC, the total employment along this corridor is 87,709, with a total population of 27,821 people, making it the fifth most dense corridor out of the ten corridors analyzed. The concentration of employment is primarily in downtown Kansas City, Missouri, with some concentration of employment also just north of the river in North Kansas City. Population concentrations are generally in the downtown area, as well as pockets located in Gladstone and south of Vivion Road.

Figure 83: Employment Map for North Oak / Grand Corridor

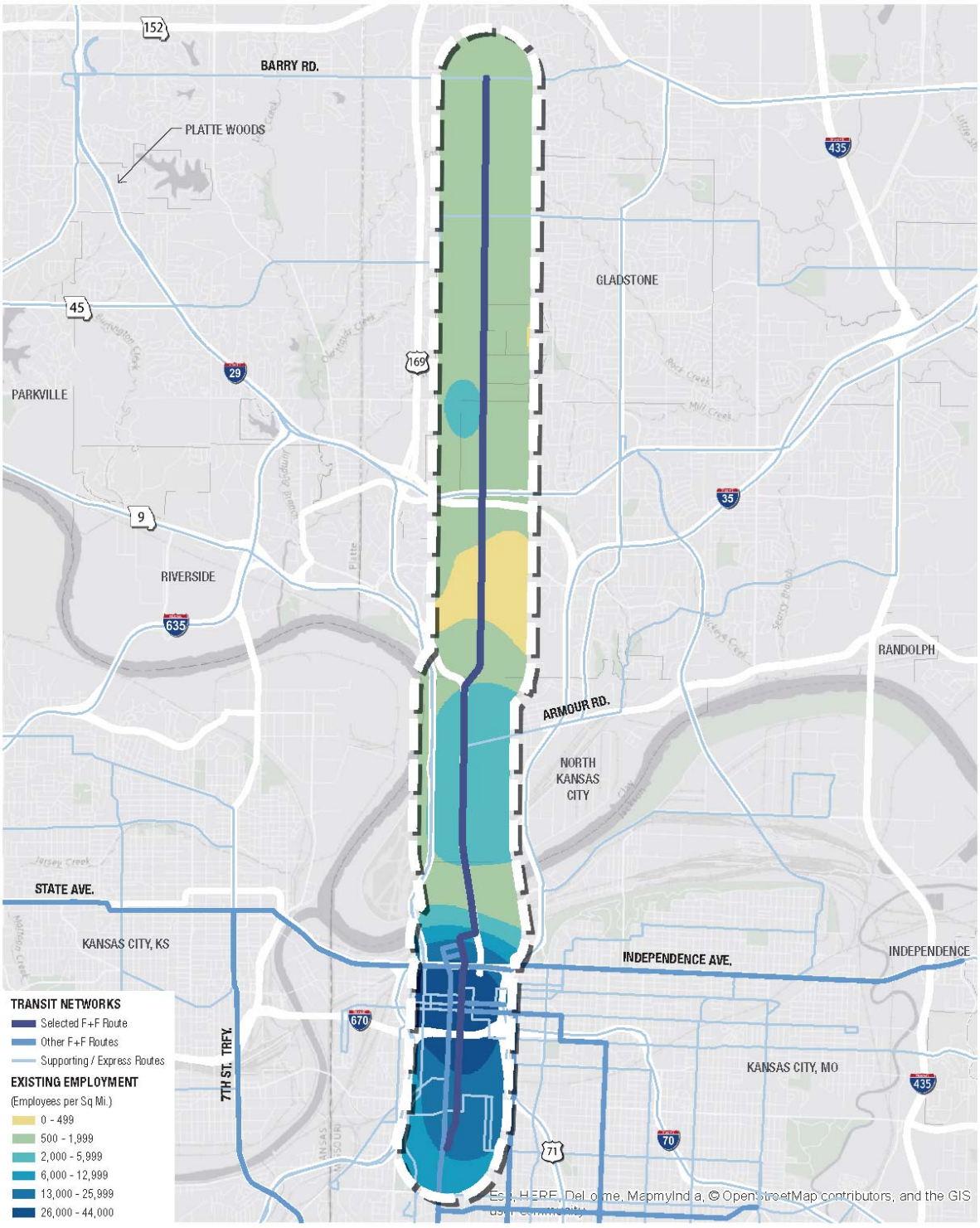


Figure 84: Population Map for North Oak / Grand Corridor

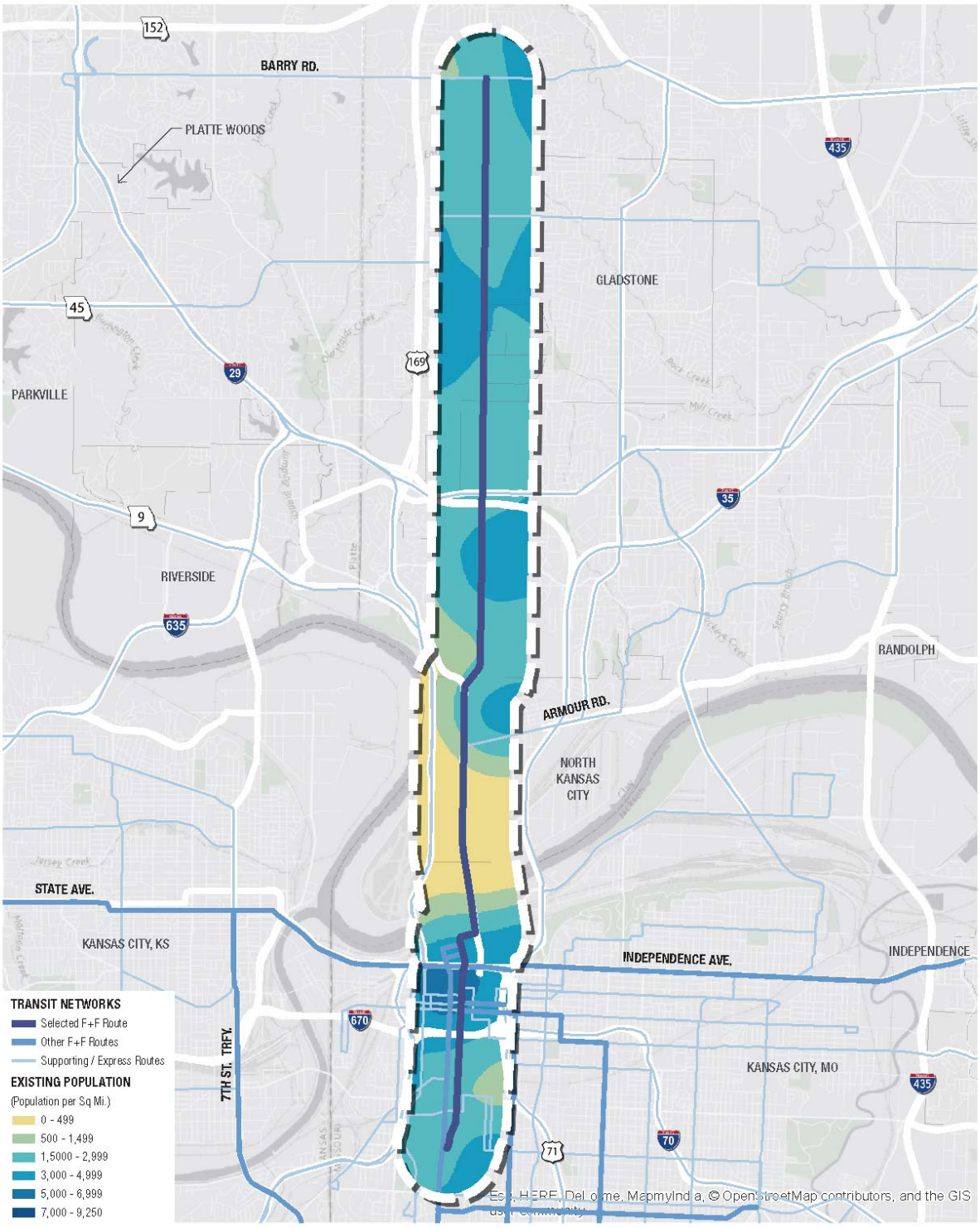
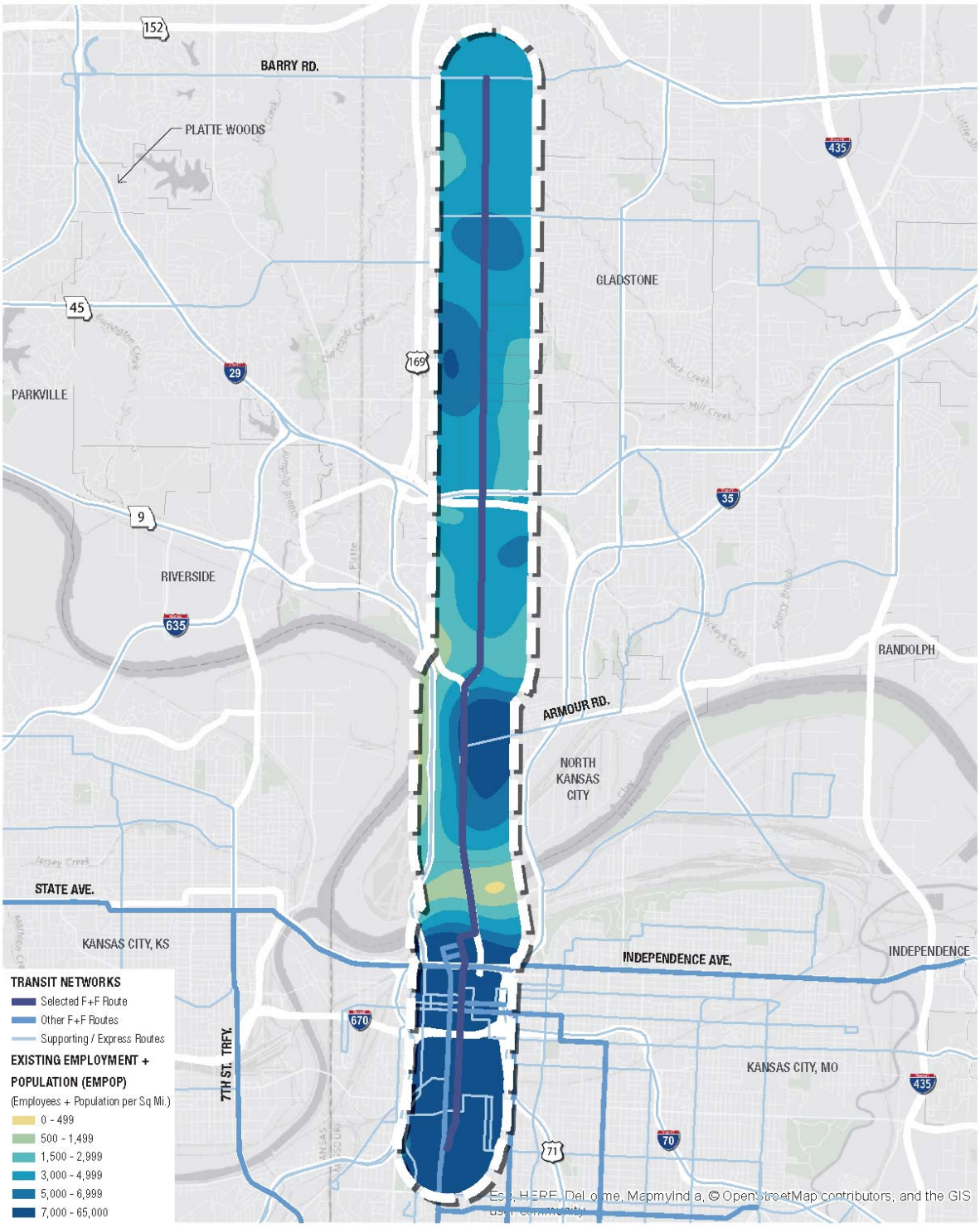


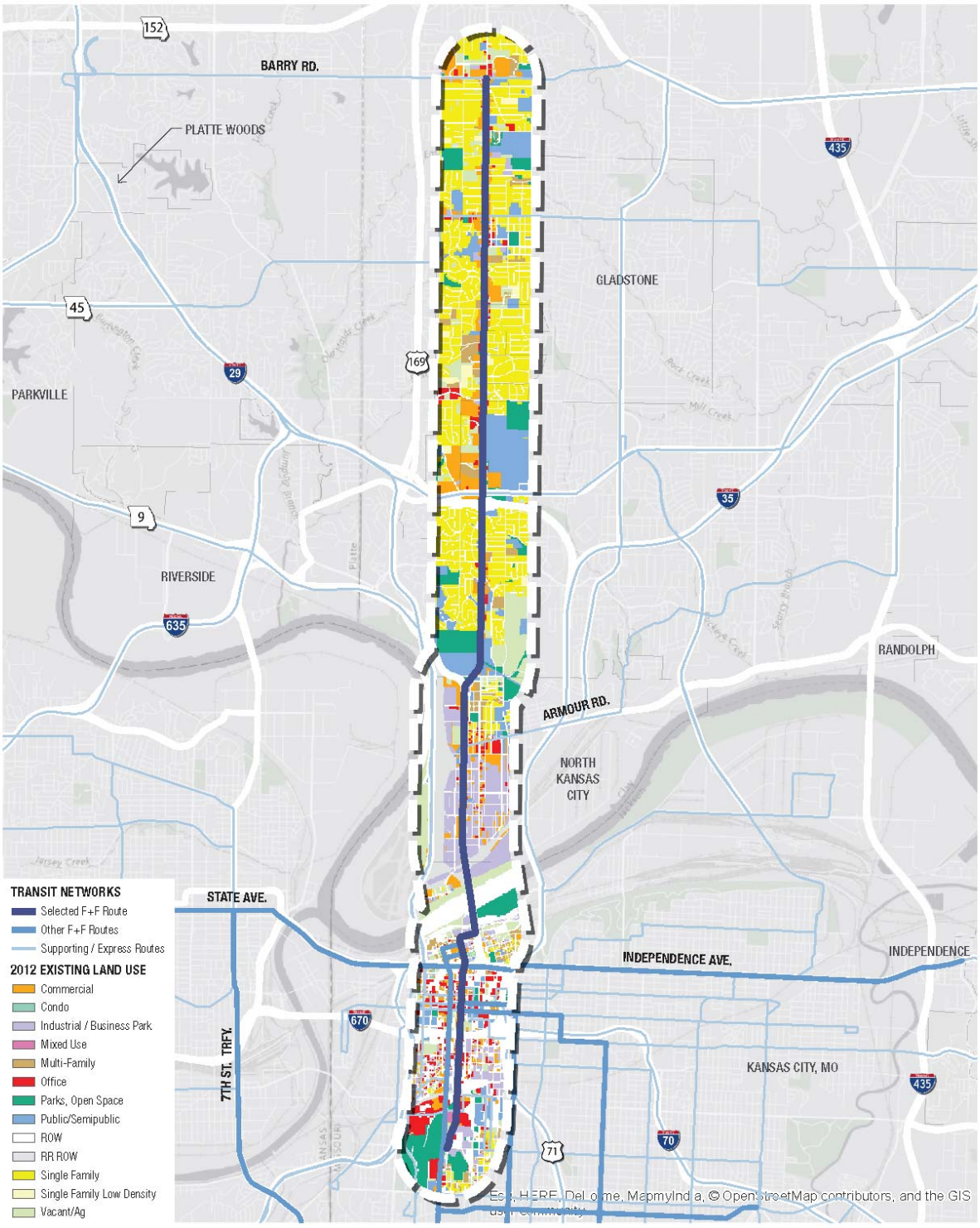
Figure 85: Employment + Population Map for North Oak / Grand Corridor



Existing Land Use

Existing land use per the MARC 2012 Land Use Raster Data illustrates the commercial spine that North Oak is known as in the Northland, surrounding with primarily single family homes on larger suburban developed lots. There is a decent amount of multifamily in pockets throughout the corridor. Directly across the river in North Kansas City, industrial uses are dominant, with small neighborhood commercial uses in downtown North Kansas City near Armour Road.

Figure 86: Existing Land Use Map for North Oak / Grand Corridor



Anticipated Future Land Use

By means of employment and population projection based on MARCs Future Land Use Raster Data, the corridor is projected to have around 1,105,732 people and employees, an increase in total population and employment by 990,202 people. This large projection of people is in part due to the fact the corridor reaches into downtown and that is primarily where the concentration of growth is located. The increase isn't distributed equally along the North Oak / Grand corridor. However, the Future Land Use Raster Data does illustrate much of the linear corridor as mixed-use land uses, which would dramatically increase projections as well.

The future land use maps for each jurisdiction within this corridor buffer are provided for references as well.

Figure 87: Future Land Use Map for North Oak / Grand Corridor

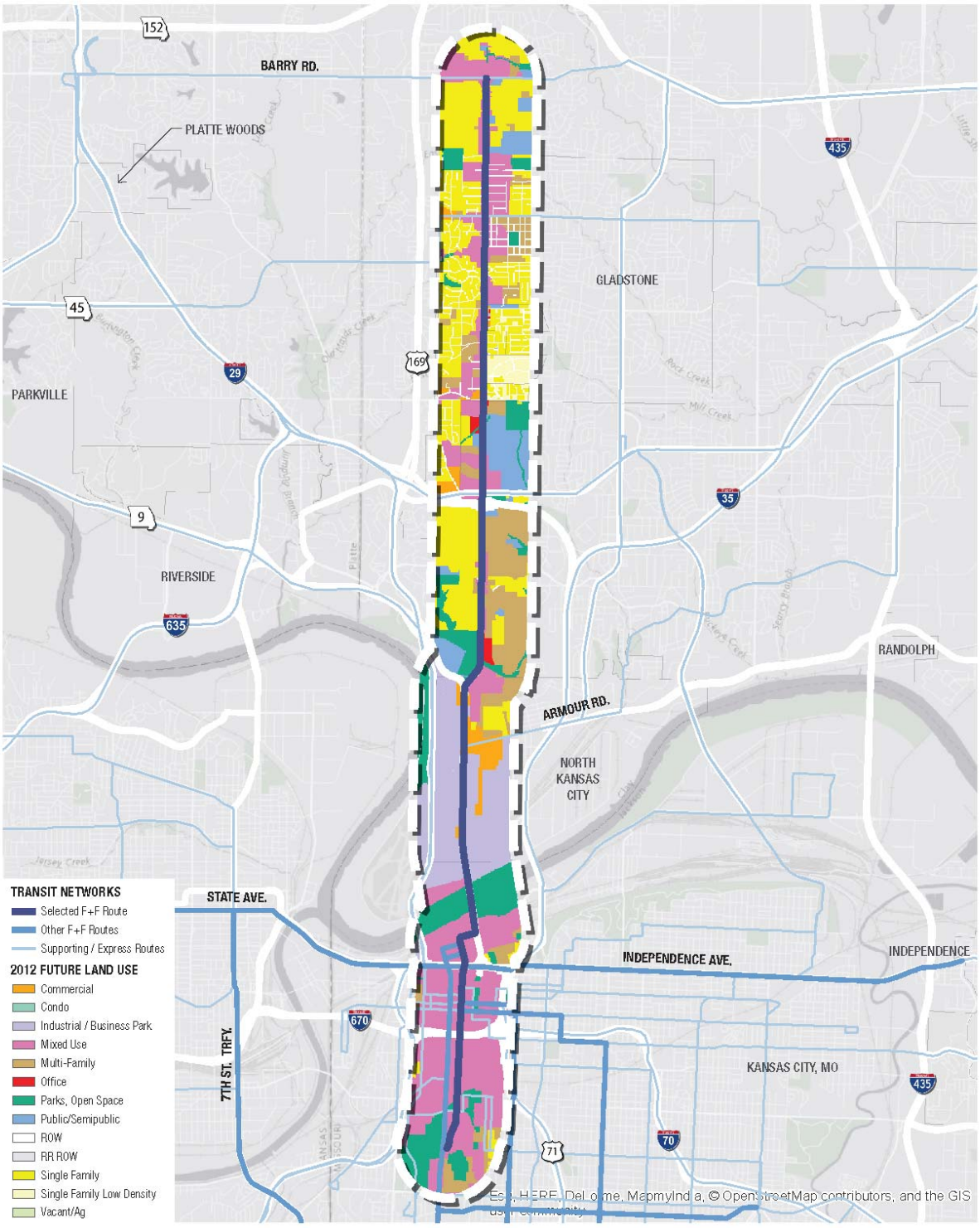
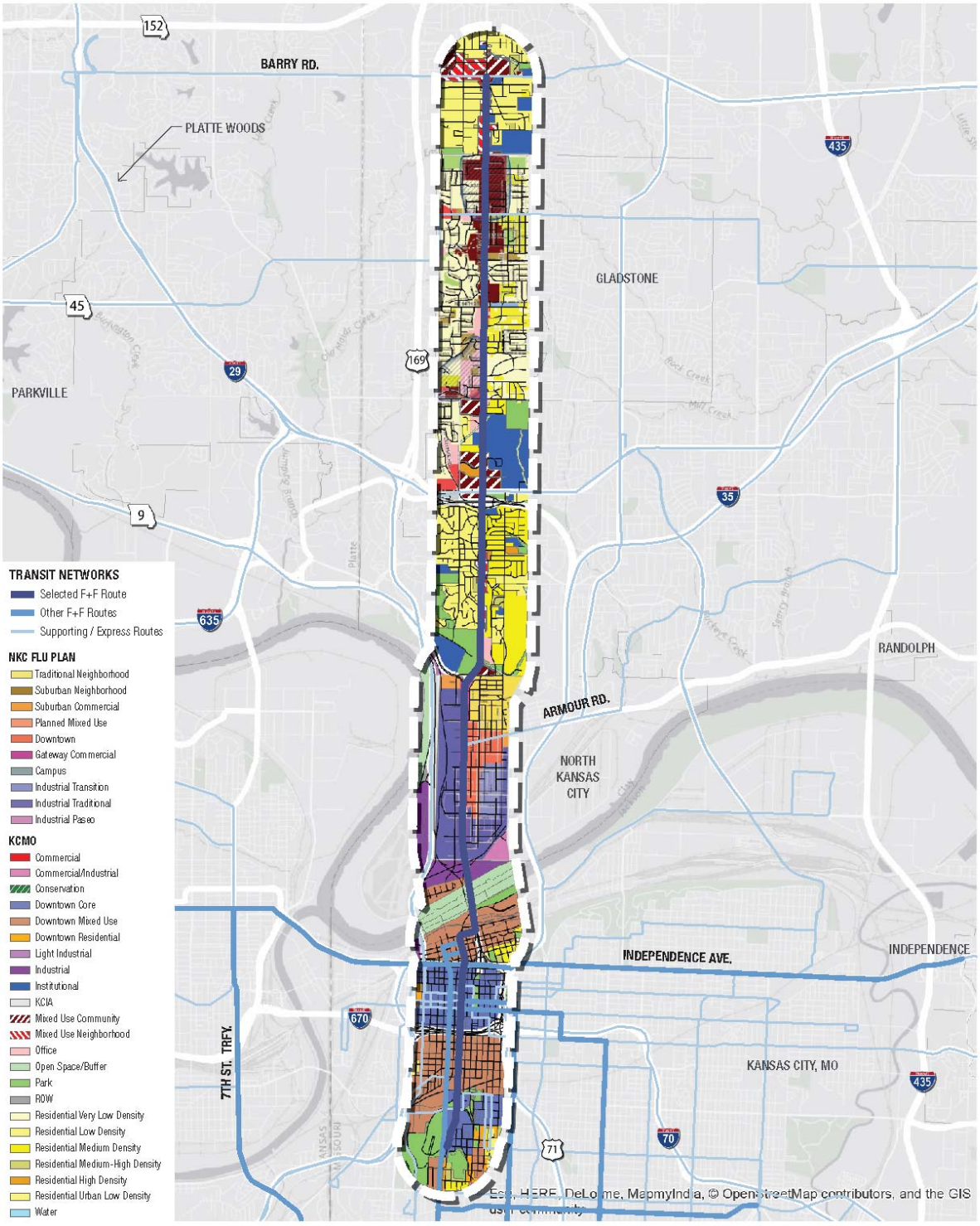


Figure 88: Future Land Use Map by Jurisdiction for North Oak / Grand Corridor

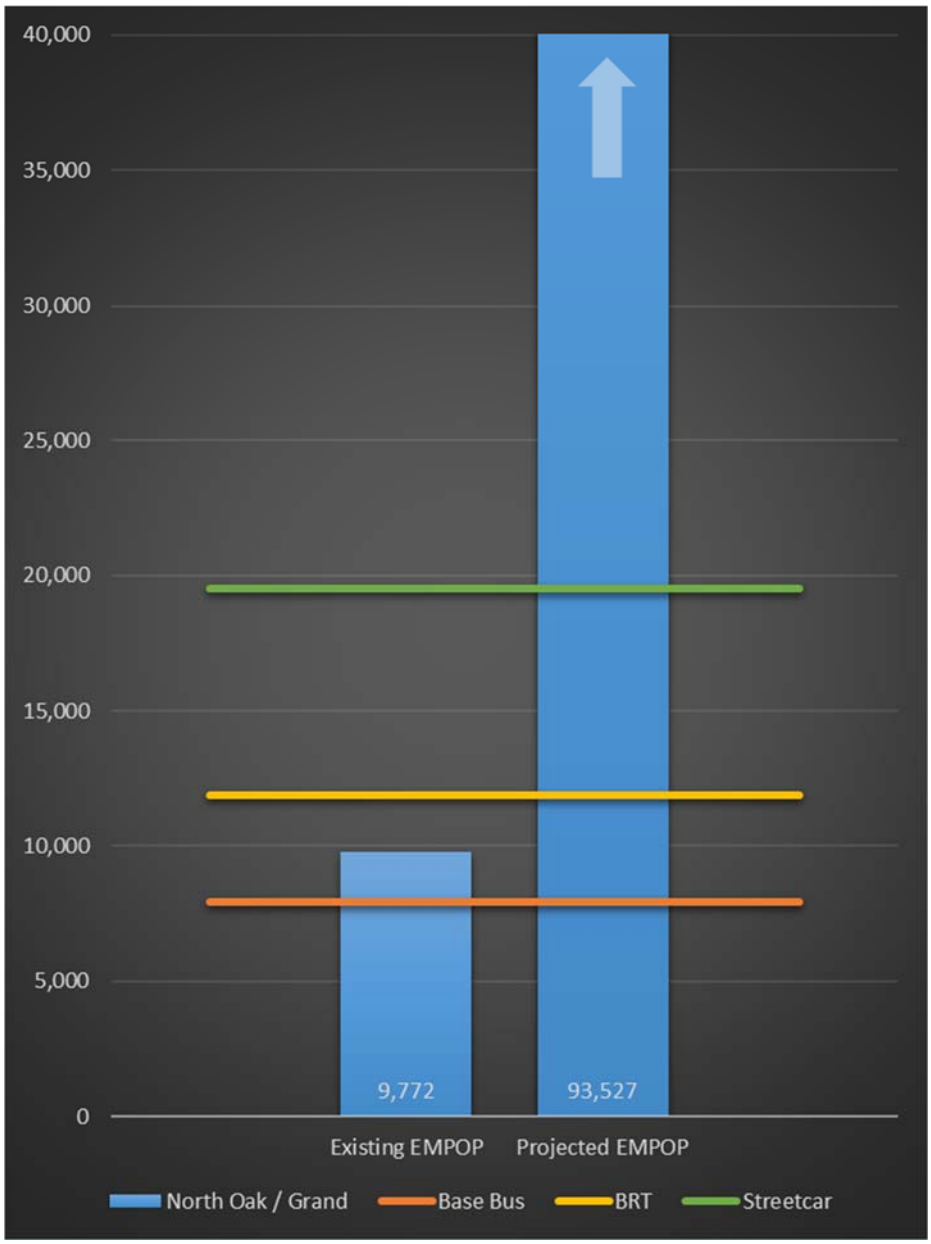


NORTH OAK / GRAND AVENUE — FUTURE LAND USE BY JURISTICTION

Land Use and Transit Relationship

Currently the existing population and employment per mile along the 11.5-mile corridor is sufficient for sustainably supporting Base Bus Service. With the projected employment and population from MARCs 2012 Future Land Use Data, the total employment and population per mile will be more than sufficient for sustainably supporting Streetcar. However, most of the growth that qualifies this corridor for sustainably supporting streetcar is projected in downtown Kansas City, Missouri.

Figure 89: Land Use and Transit Graph for North Oak / Grand Corridor



*EMPOP = employment + population

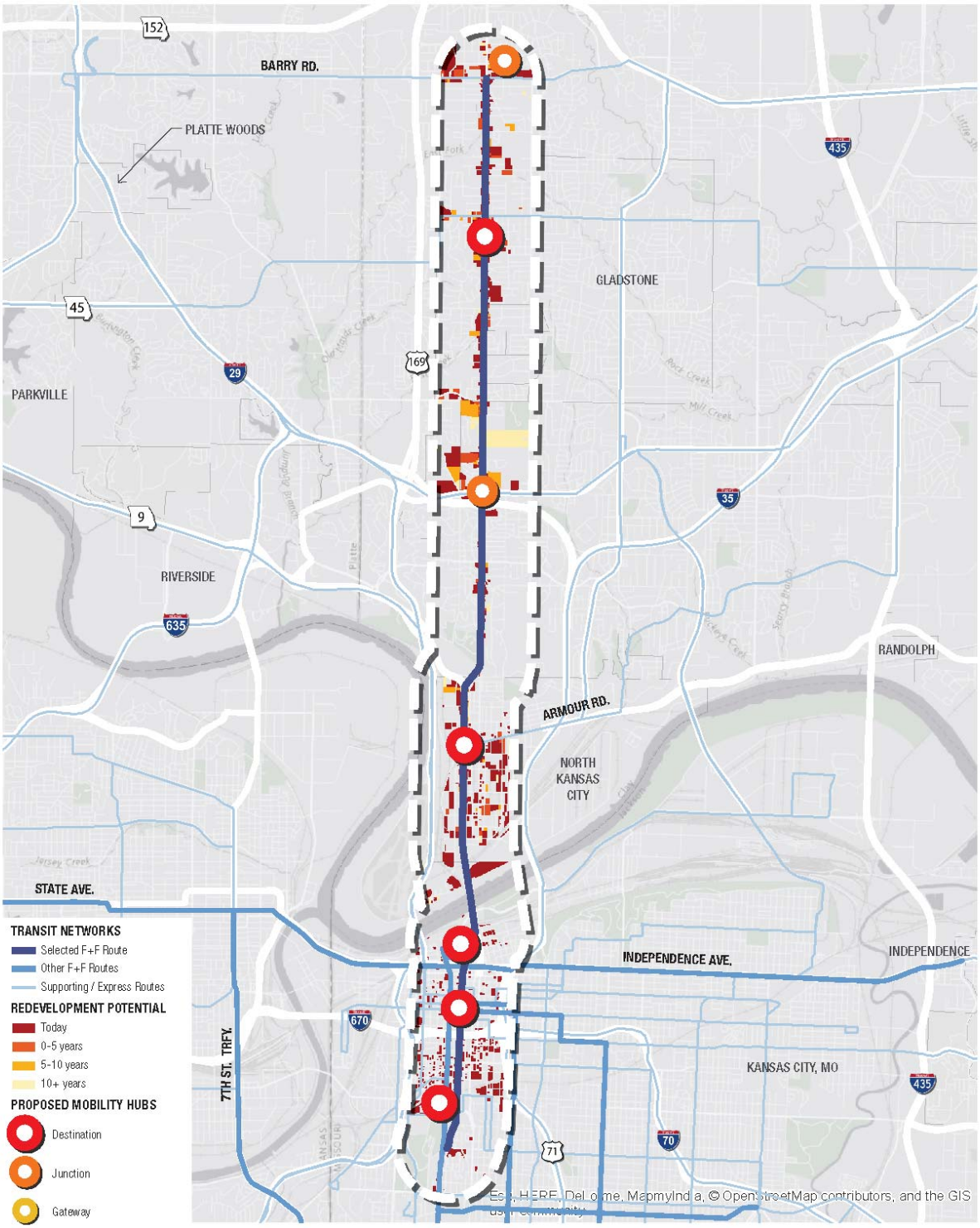
Anticipated Future Redevelopment Potential

Future redevelopment potential for non-residential structures is shown within the corridor buffer as well. The redevelopment map illustrates that much of redevelopment potential is located directly adjacent to the corridor. There are some specific areas, such and downtown North Kansas City and the intersections around Vivion Road and Barry Road that have a decent amount of property that is or will be 'ripe' for redevelopment. Currently, five percent of the total corridors land is ripe for redevelopment today; three percent of the area will be ready for redevelopment in five years or less; one percent can anticipate redevelopment in five to ten years; and three percent of the area has the potential to be redeveloped in over ten years.

Mobility Hub Opportunities

Seven mobility hubs are proposed along the North Oak / Grand Corridor. Five of these mobility hubs are proposed as potential 'destination' hubs. These hubs are located at downtown Gladstone, Missouri; downtown North Kansas City at Armour Road; and three in downtown Kansas City, Missouri. Two mobility hubs along the corridor are proposed as a 'junction' mobility hub, one is located at the Vivion Road and North Oak intersection, while the other is located at the northern most terminus of the North Oak / Grand Corridor at Barry Road.

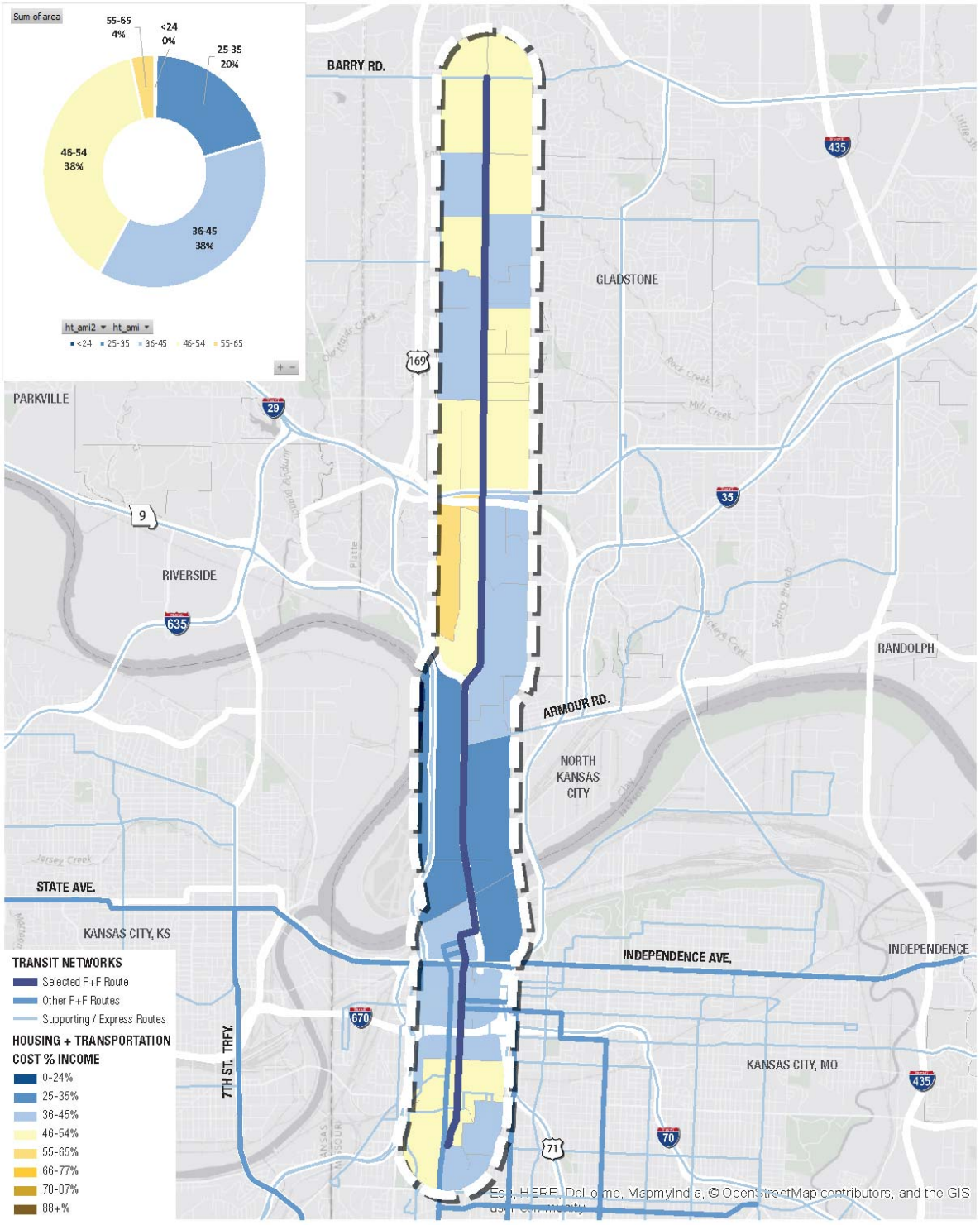
Figure 90: Redevelopment + Mobility Hub Map for North Oak / Grand Corridor



Housing Affordability Analysis

The North Oak / Grand Corridor is ranked eighth out of the ten corridors analyzed as most affordable. Although it has a large area identified on the map as very affordable, most the population lives in areas along the corridor where their household and transportation costs exceed 45% of their average household income.

Figure 91: Housing + Transportation Index Map for North Oak / Grand Corridor



Initial Takeaways

Based on the high-level analysis of the North Oak / Grand Corridor, initial opportunities / recommendations to explore specifically along this route are:

- Encourage pragmatic density for proposed development along North Oak.
- Encourage public/private partnerships at proposed mobility hub locations to increase and spur transit supportive development.
- Increase and encourage affordable housing options by offering incentives that promote the inclusion of affordable housing units included in future multifamily developments along the North Oak / Grand Corridor.

Figure 92: Summary chart of all corridors with data analyzed

SUMMARY MATRIX	39th Street	Streetcar / Main Street	7th Street / Rainbow	Linwood	Metcalf / SMP	Prospect Ave	Troost Ave	75th / Quivira	Independence / State	North Oak / Grand
Total Acres in 1/2 mile buffer of corridor	3,708	3,602	5,666	2,742	9,965	6,193	5,675	13,984	7,779	8,017
Length of Corridor	5	5	8	4	15	9	8	21	11	12
Total Employment (EMP) (EMP_LEHD_V7_2014, FINAL2014)	24,342	110,448	27,189	14,526	73,355	49,498	70,327	45,369	45,934	87,709
Total Population (POP) (EMP_LEHD_V7_2014, P0020001)	28,554	26,088	31,150	18,420	48,406	39,176	38,898	70,046	51,491	27,821
Total Existing EMP+POP	52,896	136,536	58,339	32,946	121,761	88,674	109,225	115,415	97,425	115,530
Existing EMPOP / Mile	10,530	25,226	7,172	9,395	8,181	9,804	13,423	5,394	8,531	9,772
Most Dense (1) to Least Dense (10) Corridor	3	1	9	6	8	4	2	10	7	5
Total Projected EMP+POP	69,983	969,394*	140,754	89,427	294,926	631,103*	857,375*	225,131	750,061*	110,5732*
Projected EMPOP / Mile	13,931	179,103	17,303	25,500	19,816	69,775	105,368	10,521	65,682	93,527
Redevelopment Potential (Acres)										
Today	157	391	267	129	932	183	312	695	500	797
0-5 Years	0	0	20	0	356	0	0	373	0	140
5-10 Years	0	0	17	0	288	0	0	173	0	90
10+ Years	0	1	18	0	612	0	0	386	0	112
Redevelopment Potential (Percent)										
Today	4%	11%	5%	5%	9%	3%	5%	5%	6%	10%
0-5 Years	0%	0%	0%	0%	4%	0%	0%	3%	0%	2%
5-10 Years	0%	0%	0%	0%	3%	0%	0%	1%	0%	1%
10+ Years	0%	0%	0%	0%	6%	0%	0%	3%	0%	1%
H+T Index (Acres)										
Less than or Equal to 45	3,567	2,706	3,618	2,659	2,442	6,193	4,087	6,649	7,163	4,664
Greater than 45	141	894	2,048	83	7,523		1,588	7,335	616	3,352
H+T Index (Percentage)										
Most Affordable (< or Equal to 45%)	96%	75%	64%	97%	25%	100%	72%	48%	92%	58%
Least Affordable (> than 45%)	4%	25%	36%	3%	75%	0%	28%	52%	8%	42%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
H+T Index Weighted Average	38%	40%	38%	36%	53%	37%	41%	45%	36%	42%
Most Affordable (1) to Least Affordable (10) Corridor, per weighted average	4	6	4	1	10	3	7	9	1	8

*includes downtown Kansas City, Missouri projections

Affordable Housing Case Studies

The types of programs and incentives associated with affordable housing can vary widely, and more research and study is needed in the future to craft policies that would be most suited for use in the Kansas City metropolitan area. As a first step for considering this type of strategy, a series of relevant examples from other communities are included below:

- Boulder, CO

  The City of Boulder, Colorado requires that 20% of new housing stock units be designated as affordable (for individuals earning 80% of the area median income) either on or off-site. If a builder chooses not to comply, alternatively, they may dedicate land or pay a fee to the city's affordable housing trust fund of $18,000 for every unit short of the required 20%. This policy excludes single-lot developments with one owner and that are less than 1,600 SF. Builders are rewarded by the reduction of permitting costs if they provide more than 20% affordable units.

- Montgomery County, MD

  For new housing developments in Montgomery County, Maryland, builders who provide 12.5% to 22% of units as affordable housing are permitted to develop properties with 22% more density than their zoning would otherwise allow. This allows many developers to provide as many market-priced as they would typically be able to fit on the property, and then increase the overall density of their project with the additional affordable housing units.

- Austin, TX

  The City of Austin, Texas has taken a more entrepreneurial approach, including the opportunity for the City to own and manage their own market-rate rental properties. The profits the City earns from these projects is used to fund their affordable housing programs and properties in other parts of the City. Austin is also known for providing affordable housing tenants with amenities rarely offered, such as tennis courts and swimming pools. Austin also requires developers to provide affordable housing as part of their projects, and another strategy they utilize provides some leniency on Compatibility Standards and FAR requirements for properties where builders will be providing more than the required percentage of affordable housing units.

Each community will need to evaluate their respective housing requirements, programs, and policies to determine how a new strategy such as this could be implemented to provide long-term local and regional benefits. MARC can serve in a leadership role to promote this approach, and to assist each community in exploring how an integrated regional strategy could be crafted in support of transforming and focusing the region's housing programs to correspond with this corridor-focused growth strategy.