CHAPTER 3

GEOGRAPHIC AREA ASSESSMENT

3. Geographic Assessment

The geographic assessment establishes the regional context that influences how and where transportation services are provided across the CTCOG area. This evaluation identifies jurisdictional boundaries, key communities, and major activity centers—employment hubs, healthcare facilities, schools, and commercial areas—that generate and attract trips. Together, these elements help explain travel patterns and inform how transportation services can be planned and coordinated to effectively meet regional mobility needs.

3.1. Planning Area Overview

3.1.1. Regional Boundaries

This section defines the geographic and planning boundaries that establish the framework for the CTCOG region.

The Plan encompasses the seven counties served by CTCOG: Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba Counties (Figure 3.1). These counties define the overall geographic extent of the planning area.

Within this region, several established planning boundaries further delineate areas used for transportation planning and coordination. These include the KTMPO boundary, as well as federally defined urbanized, small urban, and rural areas.

Figure 3.1 illustrates these planning boundaries, including:

- **Large Urban Area (population greater than 200,000):** The Killeen Urbanized Area, which functions as the region's primary large urban center. Large urban areas qualify for FTA Section 5307 urbanized area funding and support more robust transit service, including fixed-route operations, higher-frequency corridors, and enhanced coordination with regional providers. As the largest population and employment hub in the region—driven in part by Fort Hood—it serves as the focal point for regional travel demand, particularly for work, medical, and intercity trips.
- **Small Urban Areas (population between 50,000 and 199,999):** The Temple area, which functions as an emerging small urban center with growing demand for local and regional transit service. Small urban areas also qualify for FTA Section 5307 funding but typically rely on more limited fixed-route service and have greater flexibility in using funds for operations.
- **Rural Areas (population less than 50,000):** The remaining municipalities and counties are classified as rural under FTA Section 5311 eligibility. Rural areas rely primarily on demand-response and coordinated transportation services, with an emphasis on providing access to essential services and connecting them to larger urban centers.
- **Metropolitan Planning Organization (MPO):** The MPO for the Killeen–Temple urbanized area is the Killeen-Temple Metropolitan Planning Organization, which is responsible for regional transportation planning, including transit, within the urbanized area.

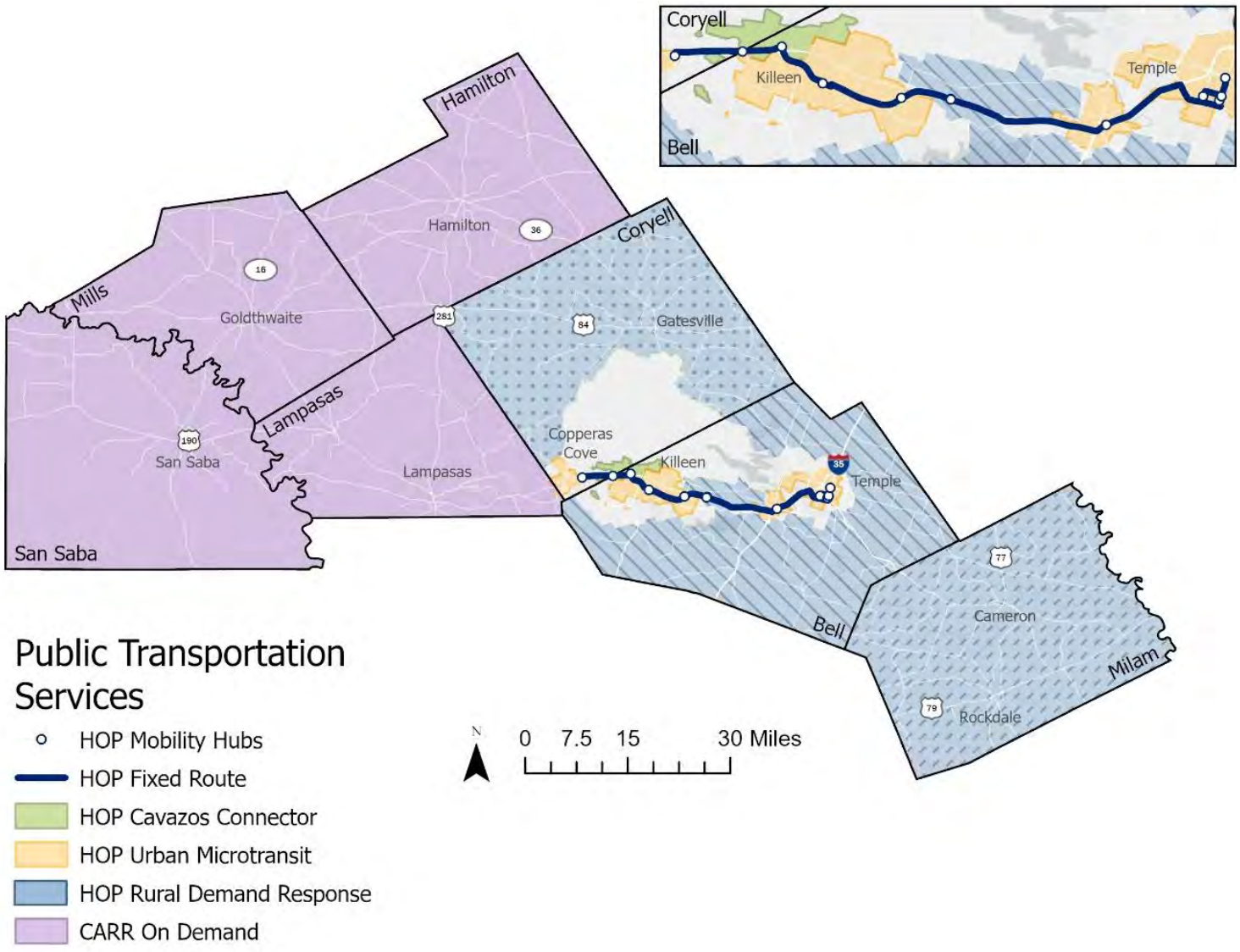
Together, these boundaries define the geographic context for transportation planning across the CTCOG region.

Figure 3-1 Planning Boundaries Map

3.1.2. Transportation Provider Service Area Map

The map below illustrates the geographic service areas of the primary public transportation providers operating within the CTCOG region (TxDOT Planning Region 23). The service area map depicts coverage for the region's primary providers: The HOP/Hill Country Transit District (HCTD) (microtransit, demand response and commuter services across its urbanized and rural service area) and CARRs/Central Texas Rural Transit District (CTRTD) (demand response services across Hamilton, Lampasas, Mills, and San Saba counties). Additional human service transportation providers serving targeted populations operate within the service footprint of these primary providers.

Figure 3-2 Public Transportation System Overview



3.1.3. Land Use Context

Land use patterns across the CTCOG region vary widely, from established urban centers and rapidly growing suburban areas to small towns and rural communities. These patterns directly influence how residents travel and where demand for public transportation is most concentrated. The cities of Killeen, Temple, and Belton function as key population and employment hubs, while areas surrounding Fort Hood represent a major driver of regional travel activity due to military, civilian, and support services.

Activity centers such **as downtown districts, major medical facilities (including Baylor Scott & White campuses), Central Texas College, Temple College, and regional retail corridors** serve as consistent trip generators. Additional destinations, including **regional airports, workforce development centers, and government service offices**, also contribute to daily travel needs. Recognizing how these land uses attract and produce trips is essential for identifying where coordinated transit services can most effectively connect residents to employment, education, healthcare, and essential services throughout the CTCOG region.

3.1.4. Transportation Infrastructure

An understanding of the existing transportation network is critical to identifying how people and services move throughout the CTCOG region and where gaps or barriers to access may exist. Major regional corridors—including **Interstate 35 (IH-35), Interstate 14 (IH-14) / U.S. Highway 190 (US 190), State Highway 36 (SH 36), and State Highway 195 (SH 195)**—serve as the backbone of regional mobility, connecting the communities of **Killeen, Temple, Belton, Copperas Cove, Gatesville, and Lampasas**. These corridors support both daily commuting and longer-distance travel, while also accommodating significant freight movement associated with regional economic activity.

In addition to highways, **freight rail lines and military-related transportation activity** influence travel patterns, congestion, and infrastructure needs. At the local level, the quality and connectivity of roadways, sidewalks, and bicycle facilities play a key role in determining whether residents can safely and conveniently access transit services. Transit hubs, transfer locations, and key destinations—medical districts, colleges, and major employment centers—depend on strong first- and last-mile connections.

Evaluating these existing conditions helps identify opportunities for targeted improvements, including enhanced bus stop amenities, sidewalk and crossing upgrades, and better integration between transportation modes. These investments are essential to improving system connectivity and strengthening coordination among public transportation providers across the CTCOG region.

3.2. Regional Projects and Strategies

Public transportation within the CTCOG region is provided through a coordinated network of urban fixed-route services, rural demand-response operations, and specialized transportation programs delivered by public agencies and community-based organizations. Together, these services support

a wide range of users, including older adults, individuals with disabilities, Veterans, low-income households, and residents without reliable access to a personal vehicle.

Transportation investments in the region are supported through a combination of federal, state, local, and partnership-based funding sources, which are programmed through established mechanisms such as the KTMPO Transportation Improvement Program (TIP), the TxDOT Statewide Transportation Improvement Program (STIP), and Federal Transit Administration (FTA) grant programs. These funding frameworks collectively support system operations, asset management, accessibility improvements, and regional coordination.

Federal Transit Administration (FTA) programs provide the primary source of transit funding in the region, including:

- **Section 5307 (Urbanized Area Formula Program):** Supports transit operations, capital, and planning in urbanized areas
- **Section 5311 (Rural Area Formula Program):** Funds transit services in rural and small urban areas
- **Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities):** Supports transportation services and coordination for targeted populations
- **Section 5339 (Bus and Bus Facilities Program):** Provides funding for vehicle replacement and transit facility improvements

In addition to traditional public funding sources, transit providers and partner organizations may leverage public-private partnerships and institutional collaborations to support mobility initiatives, including coordination with healthcare providers, workforce programs, and community organizations to fund or expand access to transportation services.

Across the region, transit investments are primarily focused on:

- Maintaining vehicles, facilities, and equipment in a state of good repair
- Replacing aging fleet and supporting operational reliability
- Enhancing passenger facilities and incorporating technology improvements
- Sustaining demand-response and ADA complementary paratransit services.

3.2.1. Related Regional Plans and Studies

The strategies and investments summarized above are informed by, and intended to remain consistent with, other recent and ongoing transportation and land use planning efforts in the CTCOG region. Table 3-1 summarizes these related plans and studies and how each informs the planned investments described in this chapter.

Table 2.2 Related Regional Plans and Studies

Plan / Study	Lead Agency	Relevance to Planned Investments
Regionally Coordinated Transportation Plan, 2022-2026	CTCOG	This Plan's immediate predecessor. Source of most existing, carried-forward coordination strategies and the prior regional needs-assessment baseline that this Plan updates.
2050 Metropolitan Transportation Plan (MTP)	Killeen-Temple Metropolitan Planning Organization (KTMPO)	The region's long-range (25-year), financially constrained, multimodal transportation plan for the KTMPO planning area (Bell County urbanized area and portions of Coryell and Lampasas Counties). Includes a dedicated Bicycle and Pedestrian Network chapter (Ch. 6) and a Multimodal chapter (Ch. 8). Source of the planned roadway, multimodal, and bicycle/pedestrian investments referenced in this chapter.
Transportation Improvement Program (TIP) / TxDOT Statewide Transportation Improvement Program (STIP)	KTMPO / TxDOT	Programs near-term, funded capital projects drawn from the MTP.
Transit Asset Management (TAM) Plan	Hill Country Transit District (HCTD)	Source of the state-of-good-repair and fleet-replacement investment priorities referenced in this chapter and in Chapter 7 (CP-1, Fleet Replacement).
Area Agency on Aging of Central Texas Area Plan	CTCOG (Area Agency on Aging of Central Texas)	Source of senior mobility needs and coordination priorities reflected in this Plan's senior and disability transportation strategies (Chapter 7, SD-1 through SD-3).
Regional public health planning (e.g., area hospital system Community Health Needs Assessments; HHSC Regional Healthcare Partnership plans under the Texas Healthcare Transformation waiver)	Area hospital systems; Texas Health and Human Services Commission	Source of healthcare-access transportation barriers reflected in this Plan's healthcare and employment access strategies (Chapter 7, HE-1, HE-2, RC-1).

The planned investments summarized in this chapter derive primarily from two sources: (1) the FY2022-2026 Regional Coordinated Transportation Plan -- this Plan's immediate predecessor -- for existing coordination strategies carried forward and updated in Chapters 7 and 8; and (2) the KTMPO 2050 MTP, KTMPO TIP, and TxDOT STIP for capital, roadway, multimodal, and bicycle/pedestrian investments within the KTMPO planning area. For the portion of the region outside the KTMPO boundary, transportation investments are identified directly through this Plan's needs assessment (Chapters 4 through 6) in the absence of a separate long-range multimodal plan covering the rural counties.

3.2.2. Existing Regional Coordination Strategies

Transportation providers and partner organizations within the CTCOG region utilize a range of coordination strategies to improve efficiency, reduce duplication, and expand service access.

Interagency Coordination

Coordination is supported through ongoing collaboration between transit providers, human-service agencies, and local jurisdictions. These efforts include rider referrals, integrated planning activities, joint funding pursuits, and regular communication regarding service availability and operational needs. In its role as the region's Rural Transportation Planning Organization (RTPO), CTCOG serves as a central convener, helping align transportation investments with regional priorities.

Demand-Response Transportation Services

Demand-response service is a foundational mobility option across much of the region, particularly in rural and low-density areas where fixed-route transit is not feasible. These services provide flexible, reservation-based trips connecting residents to employment, healthcare, education, and essential services, and are especially critical for transit-dependent populations.

Specialized Transportation Programs

Targeted transportation services are provided by nonprofit organizations, community groups, and Veteran-serving agencies to meet the needs of specific populations. These programs often focus on essential trip purposes such as medical appointments and nutrition services and extend the reach of the broader transit network through coordinated service delivery.

Information Sharing and Public Outreach

Transit providers and partners use a variety of tools—including online platforms, printed materials, and community engagement—to improve awareness of available services. These efforts are particularly important for ensuring that underserved populations can identify and access appropriate transportation options.

3.2.3. Transit Projects and Investments

Transit investments within the CTCOG region are guided by a combination of short-term implementation programs and long-range planning efforts, including HCTD's system

implementation program and the KTMPO 2050 Metropolitan Transportation Plan. These efforts collectively identify priority projects that support service expansion, system reliability, and improved regional connectivity.

Near-term investments focus on maintaining and enhancing existing services through fleet replacement, facility improvements, and technology upgrades such as scheduling systems and real-time service information. These investments are critical to ensuring safe, reliable, and efficient operations across the region.

Longer-term strategies emphasize expansion of microtransit services, improved connections to major activity centers, and enhanced regional coordination, particularly along high-demand corridors such as the Killeen–Temple–Belton area. Additional focus is placed on improving first- and last-mile connections and expanding service coverage in areas with limited existing transit access.

Together, these planned investments reflect a coordinated approach to strengthening the regional transit network by aligning infrastructure, service delivery, and technology improvements with identified mobility needs.

Table 3-1 Transit Investments (Based on KTMPO TIP FY2025–2028 & STIP Structure)

Project Type	Description	Lead Agency / Sponsor	Funding Source	Target Population Served	Coordination Role
Transit Operations (Urban & Rural)	Ongoing fixed-route and demand-response service supporting regional mobility and access to essential destinations.	HCTD / CTRD	FTA Section 5307 / 5311	General public, low-income households, zero-vehicle households	Core service delivery
Preventive Maintenance (State of Good Repair)	Maintenance of vehicles, equipment, and facilities to meet Transit Asset Management (TAM) performance targets.	HCTD / CTRD	FTA Section 5307 / 5311	General public, seniors, individuals with disabilities	System reliability
Capital Equipment & Technology	Acquisition of dispatch systems, communications, fare systems, and maintenance equipment to improve efficiency and coordination.	HCTD / CTRD	FTA Section 5307 / 5311	General public, seniors, individuals with disabilities	Systemwide coordination
Vehicle Replacement (Fleet Modernization)	Replacement of buses and demand-response vehicles that exceed useful life benchmarks.	HCTD / CTRD	FTA Section 5339 / 5307 / 5311	General public, seniors, individuals with disabilities	Urban & rural transit
Passenger Facility Improvements	Upgrades to transit stops and facilities, including ADA accessibility, shelters, signage, and amenities.	HCTD / CTRD / Local Jurisdictions	FTA Section 5307 / 5339	General public, seniors, individuals with disabilities	First/last-mile connectivity
ADA Paratransit Services	Complementary ADA paratransit service operating alongside fixed-route transit in urban areas.	HCTD / CTRD	FTA Section 5307	Individuals with disabilities, seniors	Required service
Rural Public Transportation	Demand-response transit providing access to essential services in rural and low-density areas.	HCTD / CTRD	FTA Section 5311	Rural residents, seniors, low-income households	Rural mobility
Enhanced Mobility Programs	Transportation services and capital projects supporting seniors and individuals with disabilities, including mobility management.	CTCOG / Subrecipients	FTA Section 5310	Seniors, individuals with disabilities	Human services coordination

Project Type	Description	Lead Agency / Sponsor	Funding Source	Target Population Served	Coordination Role
Mobility Management & Coordination	Regional coordination activities including travel training, service integration, and implementation of coordinated plan strategies.	HCTD / CTRD / Partners	FTA Section 5310	Seniors, individuals with disabilities, low-income residents	Regional coordination
Safety & Performance Programs	Implementation of safety plans, performance monitoring, and system improvements aligned with federal requirements.	HCTD / CTRD	FTA Section 5307	General public, transit riders	System safety

Note: *Transit investments reflected in the TIP, STIP, and FTA funding programs are largely programmatic, supporting ongoing operations, maintenance, and capital needs across the CTCOG region. These investments sustain both urban and rural services—including fixed-route, demand-response, and microtransit—and play a key role in maintaining mobility for priority populations while supporting access to employment, healthcare, education, and other essential services.*

Table 3-2 Planned Transit Investments and Strategies

Investment Category	Project / Initiative	Primary Provider	Service Area	Timeframe
Service Expansion	Targeted Service Adjustments to Improve Access to Essential Destinations (e.g., grocery stores, employment areas)	HCTD	Urban	Short-Term
New Service Development	Industrial Blvd. / Wendland Rd. Service Expansion	HCTD	Urban	Mid-Term
Regional Service Expansion	Expanded Intercity and Regional Transit Connections	CTCOG / HCTD	Regional	Long-Term
Service Frequency Improvements	Increased Fixed-Route Frequencies to 30-Minute Headways	HCTD	Urban	Mid-Term
Service Hours Expansion	Expanded Evening Service for Non-Traditional Work Hours	HCTD	Urban	Long-Term
Service Hours Expansion	Weekend Service Expansion on High-Ridership Routes	HCTD	Urban	Long-Term
Flexible Service Deployment	Targeted Flex-Route Service Deployment During Peak Demand Periods	HCTD	Urban / Transitional	Short-Term
Microtransit / On-Demand	Expansion of Microtransit and On-Demand Service Areas	HCTD	Urban / Rural Edge	Ongoing
Coordination & Partnerships	Public-Private Partnership (P3) Development for Transit Support Services	HCTD	Regional	Short-Term
Mobility Programs	Partnerships with Medical, Faith-Based, and Community Organizations for Transportation Access	CTRTAG / HCTD	Regional	Short-Term
Volunteer Transportation	Expansion and Promotion of Volunteer Driver Programs	CTCOG	Rural / Specialized	Long-Term
Regional Coordination	Annual Regional Transportation Coordination Summit	CTCOG / Partners	Regional	Mid-Term
Funding & Sustainability	Grant Pursuit (FTA ICAM, IMI, and Other Federal/State Programs)	CTCOG	Regional	Ongoing
Local Funding Strategy	Increased Local Funding Contributions for Transit Services	CTCOG / Local Jurisdictions	Regional	Mid-Term

3.2.4. Urban Transit Investments

Transit investments within the Killeen–Temple urbanized area are primarily focused on maintaining existing service and ensuring system reliability. Current programming emphasizes:

- Operating support for fixed-route and ADA complementary paratransit services
- Preventive maintenance aligned with Transit Asset Management (TAM) targets
- Replacement of aging vehicles and equipment
- Procurement of operational systems and supporting technology

Overall, these investments reflect a near-term priority on maintaining service quality and asset condition rather than expanding service or infrastructure.

Planned transit investments identified through HCTD's implementation program and regional coordination efforts reflect a mix of near-term operational improvements and longer-term system enhancements focused on expanding service coverage, improving reliability, and strengthening regional connectivity. These investments are intended to support increased ridership, improve travel time reliability, and strengthen connections to major employment centers, healthcare facilities, and educational institutions, consistent with priorities identified in the KTMPO 2050 MTP.

3.2.5. Rural and Specialized Transit Investments

In rural areas, planned investments focus on maintaining and expanding demand-response services, improving access to non-emergency medical transportation, and enhancing coordination across providers. Service expansion efforts, including the incorporation of additional counties into the regional transit network, are expected to improve access to essential services while maintaining flexibility to respond to dispersed travel demand patterns.

Key activities include:

- Demand-response operations connecting residents to essential services
- Vehicle replacement and capital purchases to maintain fleet reliability
- Operating and capital support for programs serving seniors and individuals with disabilities
- Technology investments to improve service coordination and efficiency

These investments play a critical role in maintaining access to transportation in areas where fixed-route services are not viable.

3.2.6. Vehicle and Equipment Investments

A significant share of transit funding in the region is dedicated to maintaining and replacing vehicles and acquiring essential equipment. These investments support:

- Replacement of revenue vehicles and demand-response fleet
- Procurement of non-revenue support vehicles
- Acquisition of operational equipment, including communications and maintenance systems

These efforts are essential to maintaining safe, reliable, and compliant transit service while extending the useful life of system assets.

3.2.7. Role of Regional Projects in Supporting Coordination

Transit investments across the CTCOG region support several key coordination objectives:

- Maintaining service availability across urban and rural areas
- Supporting mobility for priority populations
- Improving coordination through technology and shared systems
- Sustaining core infrastructure and operations

While current investments are largely focused on operations and asset management, the limited emphasis on service expansion and regional mobility enhancements highlights opportunities for future investment. These funding programs and partnerships provide the foundation for existing services, but also highlight opportunities to diversify funding sources and expand mobility options through future coordinated plan strategies.

3.3. Activity Centers and Travel Patterns

Understanding where trips begin and end is fundamental to evaluating travel demand, identifying where transit service is most needed, and highlighting areas where gaps in access may exist. Analysis of the 2023 LEHD OnTheMap employment data shows that trip activity within the CTCOG region is concentrated most heavily in **Bell County**, particularly within the **Temple–Belton** and **Killeen–Harker Heights–Fort Hood** areas. Smaller but still important employment centers are also present in **Copperas Cove, Gatesville, Lampasas, Rockdale, Cameron, Salado, Hamilton, and Goldthwaite**. These activity centers represent key destinations for work trips and help define where coordinated transit service can most effectively connect residents to jobs, education, healthcare, and essential services.

3.3.1. Methodology

Major activity centers were identified through spatial analysis of the **2023 U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) OnTheMap** dataset provided in GIS format. The dataset includes employment point locations and job counts across the CTCOG region. For this analysis, employment points were mapped and reviewed to identify areas with the highest concentration of jobs. Nearby high-employment points were then grouped into broader geographic clusters to better reflect functional activity centers rather than isolated parcels or individual employment sites.

This approach helps distinguish the region's major trip generators and provides a practical basis for assessing where transit service is currently aligned with demand and where additional coordination or service enhancements may be warranted.

3.3.2. Major Trip Generators

The LEHD analysis confirms that the Temple–Belton area and the Killeen–Harker Heights–Fort Hood area function as the region's dominant employment-based trip attractors.

- The **Temple–Belton area contains the region's largest concentration of jobs**, with employment strongly clustered around central Temple, major commercial corridors, and institutional uses.
- The **Killeen–Harker Heights–Fort Cavazos area** forms the second-largest concentration of employment and reflects the major role of military-related activity in the regional employment base (which may be partially underrepresented in LEHD), along with supporting services, retail, and other regional employment destinations.
- **Copperas Cove emerges as a notable secondary employment center**, functioning as an important local hub within western Bell and Coryell Counties.
- Outside the urban core, smaller but notable employment concentrations are present in **Gatesville, Rockdale, Lampasas, Cameron, and Salado**, which function as important local destinations for jobs and services.
- In the **region's more rural counties, employment is more dispersed**, but county seats and small community centers still serve as important anchors for daily travel demand

3.3.3. Employment Clusters

The geographic distribution of employment across the CTCOG region provides important insight into where transit service can best support access to jobs and economic opportunity. Based on clustered LEHD job locations, the strongest concentrations of employment are centered in Bell County, with much smaller but still meaningful clusters distributed across the remainder of the region.

Comparing these employment clusters with existing transit service can help identify:

- Areas where transit service is already aligned with major destinations,
- Locations where access gaps may exist between residential areas and employment centers, and
- Opportunities to improve coordination between local demand-response, microtransit, and regional transportation services.

This analysis supports a more data-driven approach to transit planning by identifying the places where access to employment is most critical and where targeted service improvements may provide the greatest benefit. These employment and activity patterns align closely with the Killeen–Temple–Belton corridor and key regional routes, reinforcing the importance of these areas as primary drivers of travel demand and transit need across the CTCOG region.

Table 3-3 Largest Employment Clusters Identified in the LEHD Analysis

Rank	Approximate Location	Estimated Jobs*
1	Temple–Belton area	64,400
2	Killeen–Harker Heights–Fort Hood area	36,300
3	Copperas Cove area	8,000
4	Gatesville area	2,700
5	Rockdale area	2,100
6	Lampasas area	2,000
7	Cameron area	1,200
8	Salado area	1,100
9	Hamilton area	1,000
10	*Goldthwaite area*	*500*

**Estimated jobs shown above reflect grouped employment clusters derived from the 2023 LEHD OnTheMap point dataset and are intended to represent generalized activity centers rather than exact site-specific employment totals.*

Figure 3-3 Major Trip Generators and Employment Centers Map

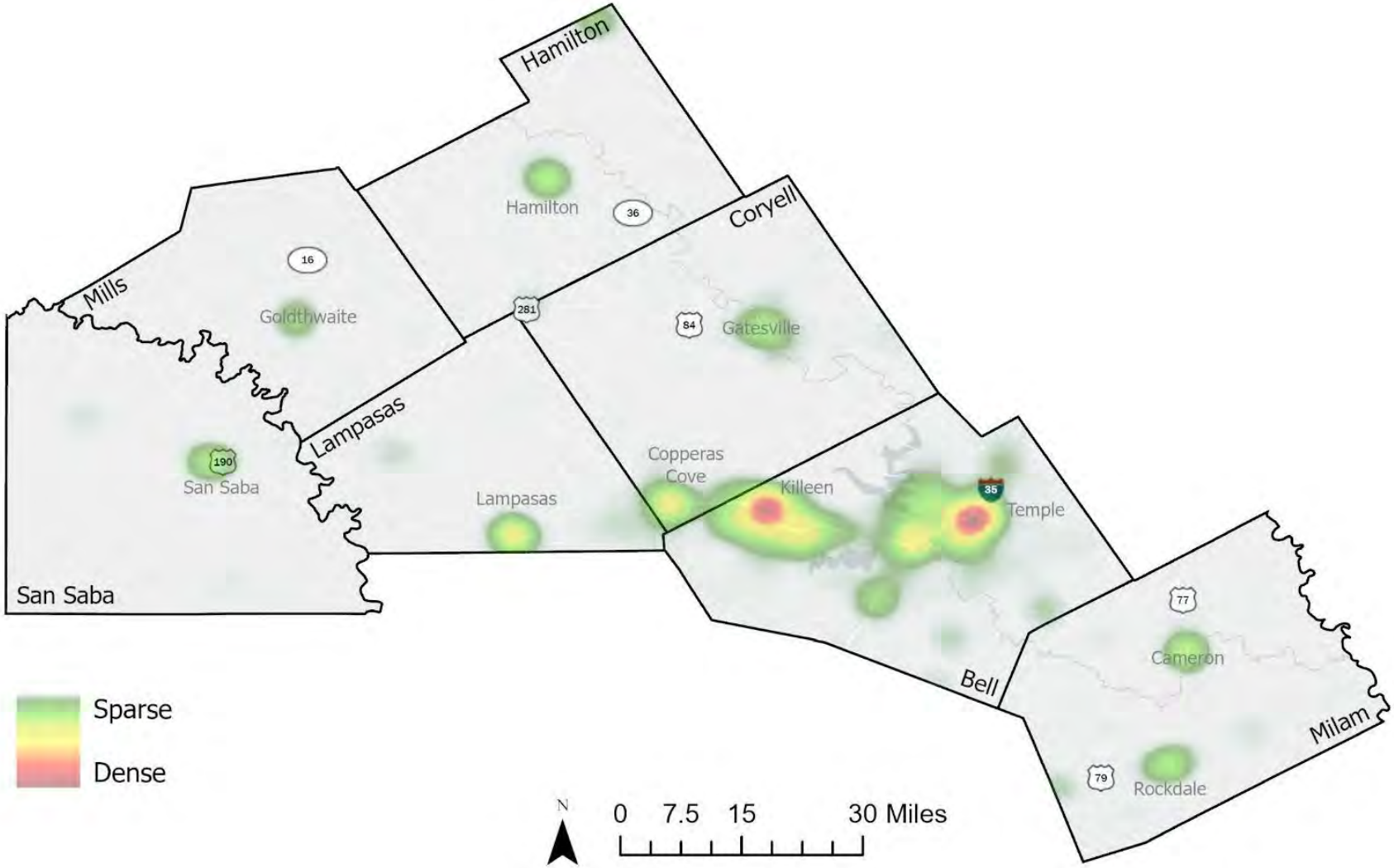


Figure 3-4 Major Trip Generators and Employment Centers Map - Small Urbanized Area

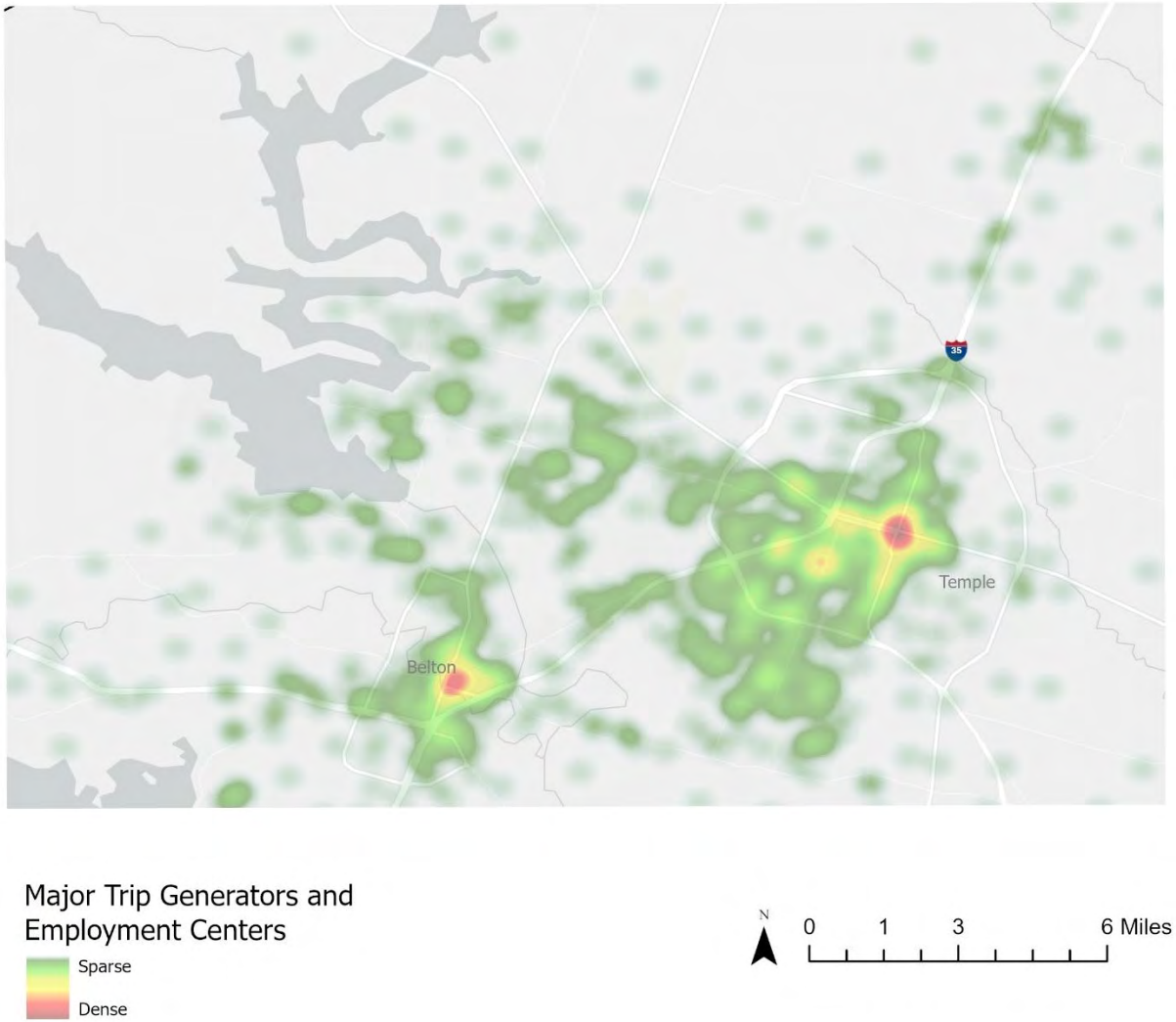


Figure 3-5 Major Trip Generators and Employment Centers Map - Large Urbanized Area

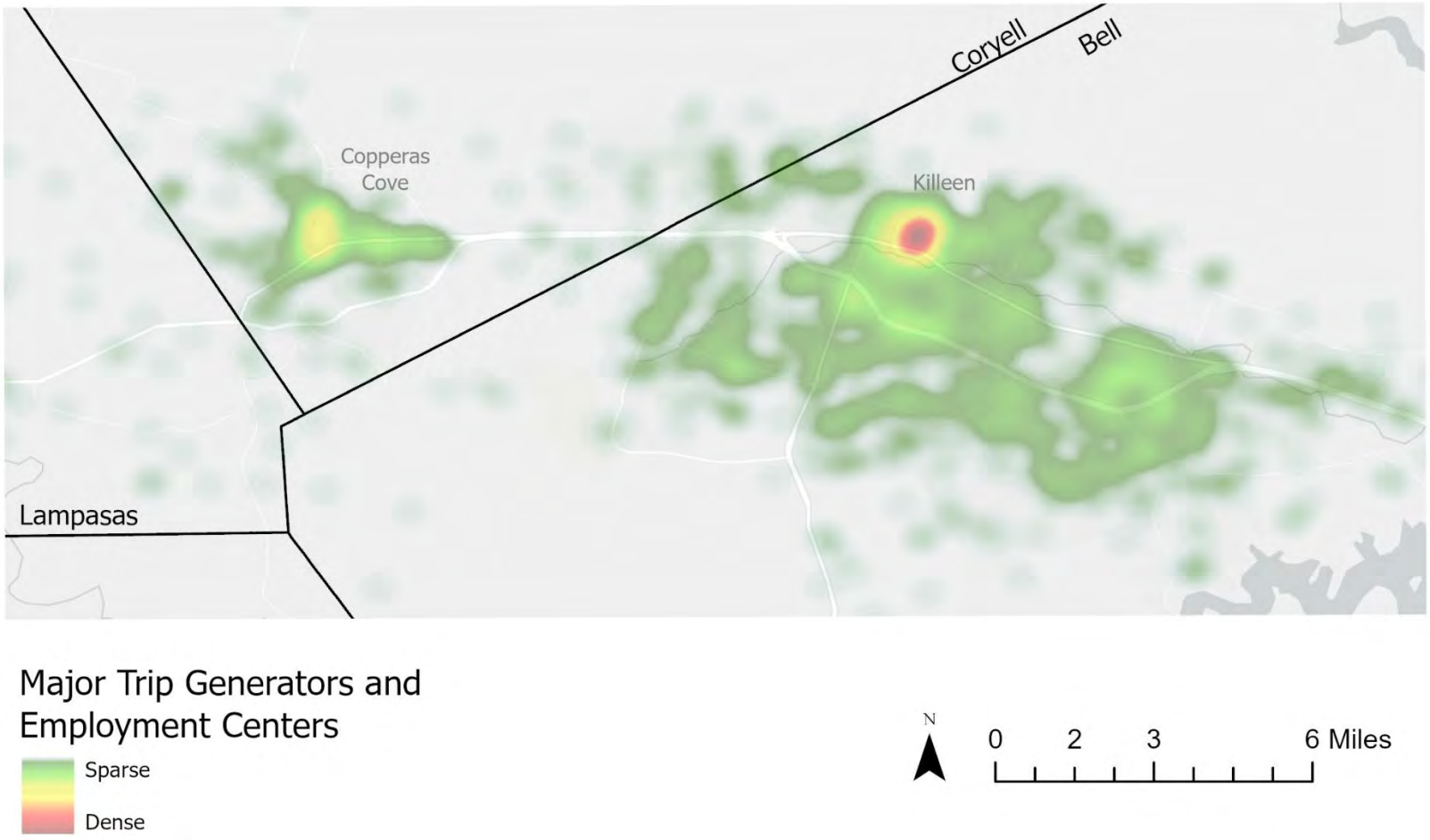


Figure 3-6 Major Trip Generators and Employment Centers Map – Copperas Cove

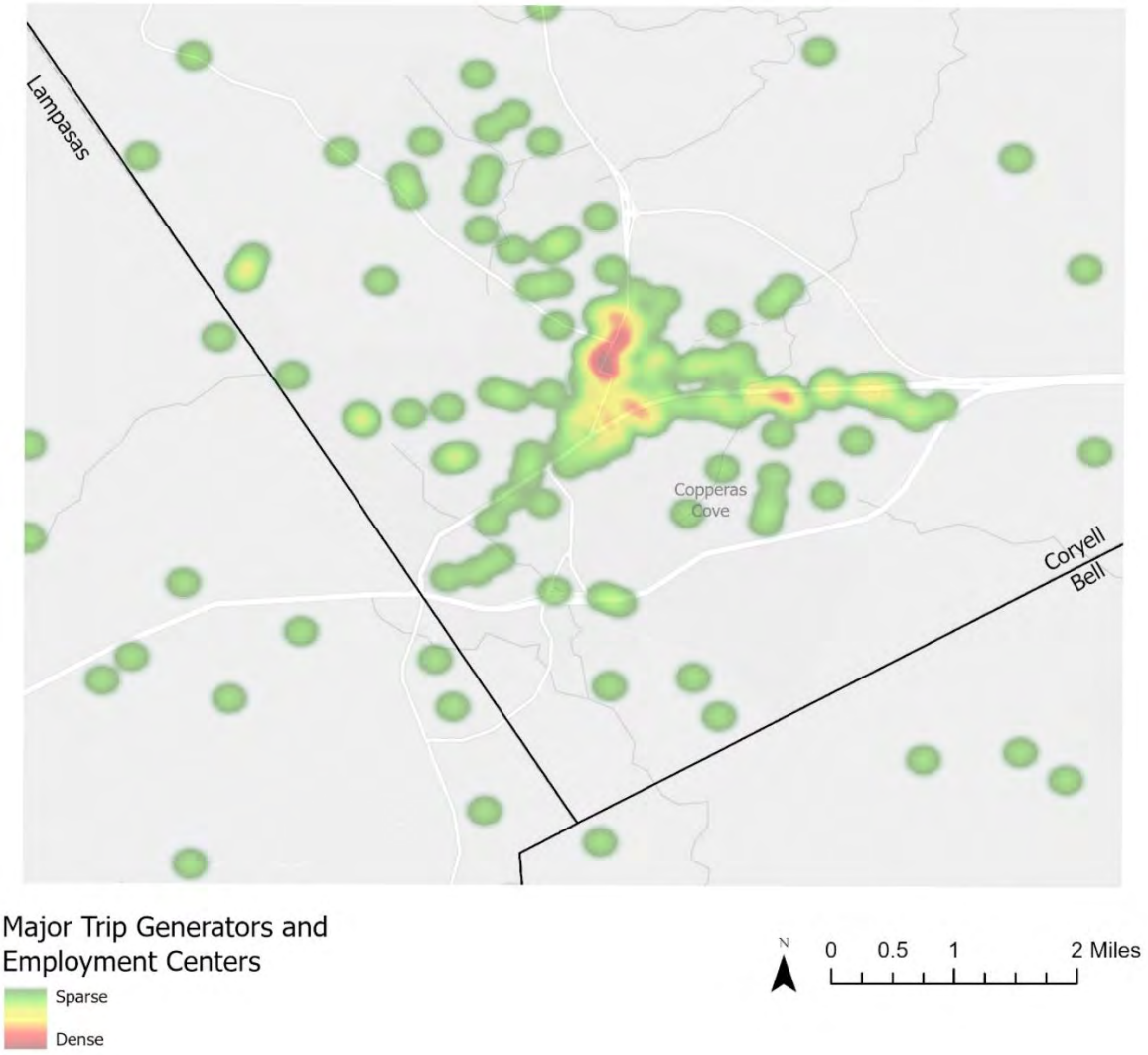


Figure 3-7 Major Trip Generators and Employment Centers Map – Gatesville

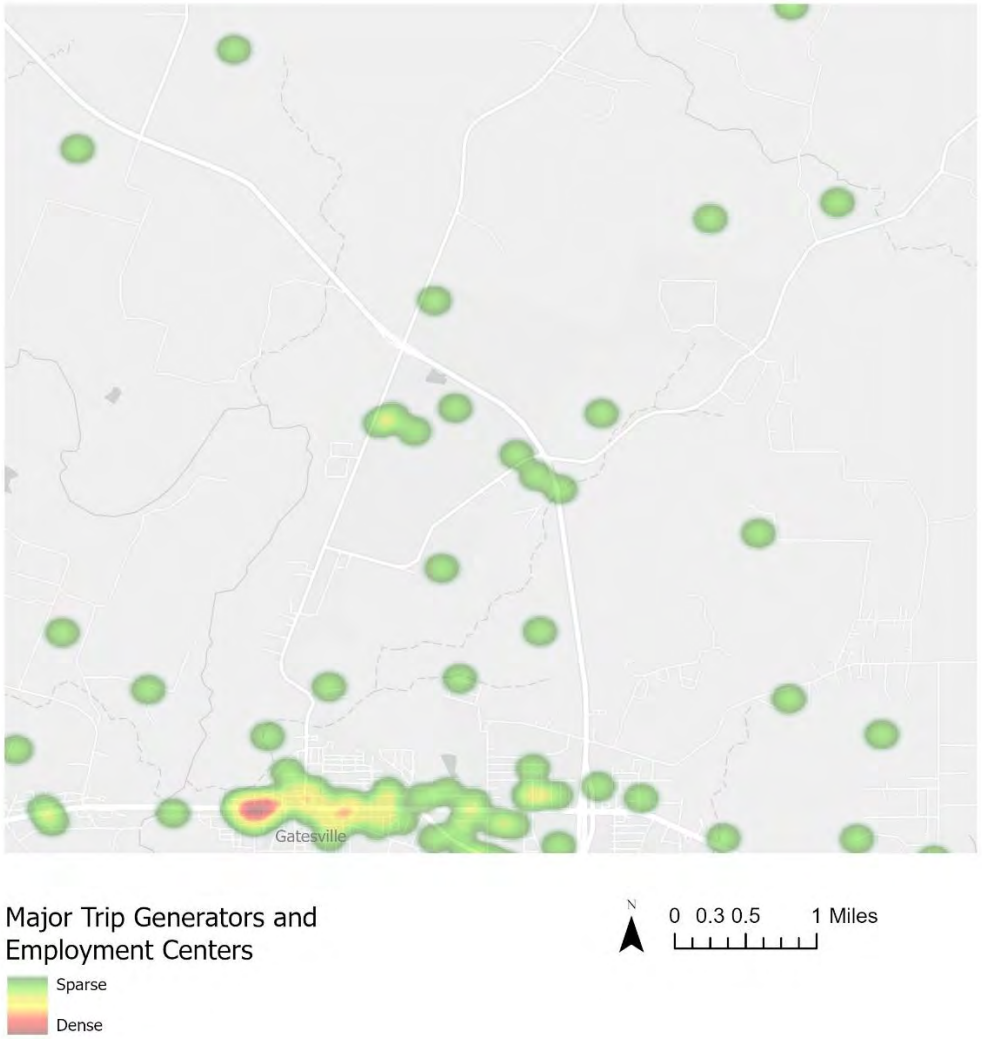


Figure 3-8 Major Trip Generators and Employment Centers Map – Killeen & Fort Hood

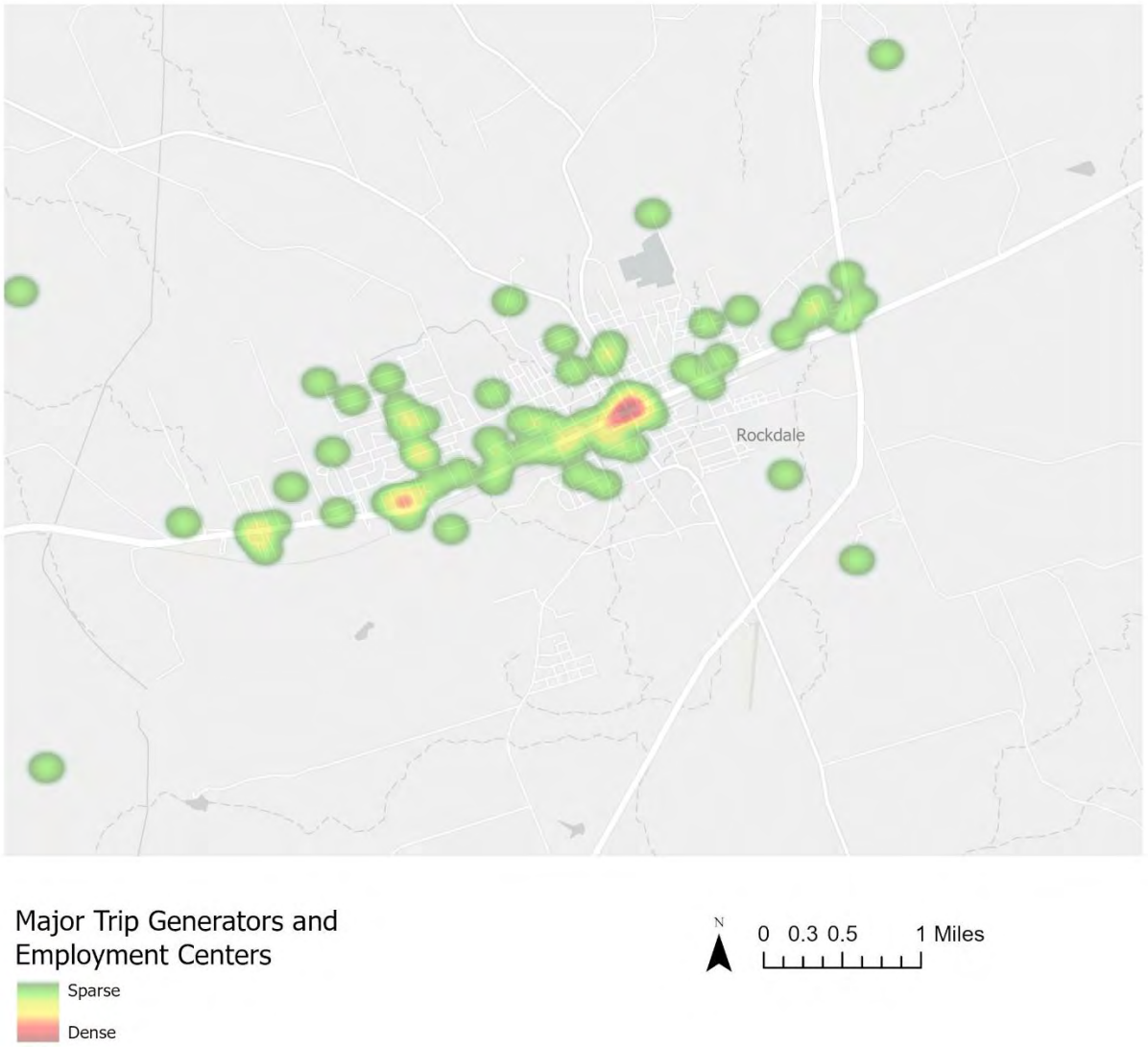



Figure 3-9 Major Trip Generators and Employment Centers Map – Rockdale