

COMPREHENSIVE PLAN UPDATE - 2015

PECULIAR, MISSOURI

31 August 2015

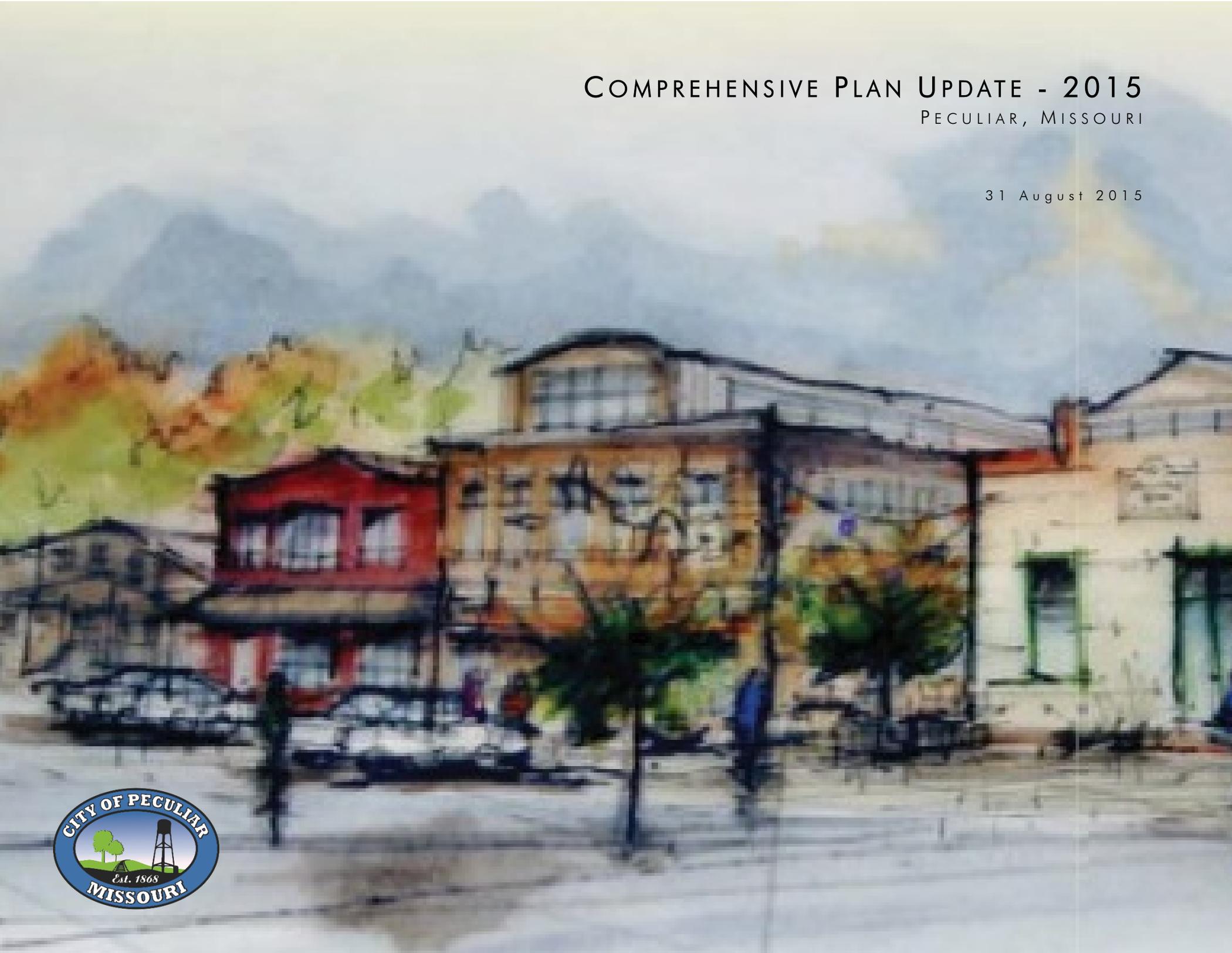


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INTRODUCTION

The current Comprehensive Plan for the City was adopted in 2008 and has had minor updates since that time. A community based process was initiated to update the content of the comprehensive plan to address changes in the community since plan adoption and in anticipation of future change. Since 2008 the community growth and residential building has slowed dramatically as the national and local economies have slowed. Now, as the economy continues to rebound, the City of Peculiar is once again seeing growth and new opportunities. The recent designation of Interstate 49 will continue to impact the City of Peculiar, most directly through the construction of a new interchange at Peculiar Way. The new interchange will provide additional access and development opportunities for the City. To address the future change within the community the Comprehensive Plan update has focused on those most pressing issues. Those items and recommendations for improvements are addressed within this document.

DEMOGRAPHICS / ECONOMICS

The future projections for the growth of Peculiar, MO will be based on 1.0% annual growth rate (Figure 1). This projection is a significant departure from the projection included in the 2008 Comprehensive Plan and more closely aligned with the recently completed market analysis for Peculiar. The reduction in population growth in the future is largely the result of the economic, and building slowdown of 2008. The future trend line is based on the 2010 census population defined for Peculiar of 4,608. Future populations based on this estimate would be as follows:

- 2012 – 4,794 (est.)
- 2020 – 5,069
- 2030 – 5,576
- 2040 – 6,133
- 2050 – 6,747

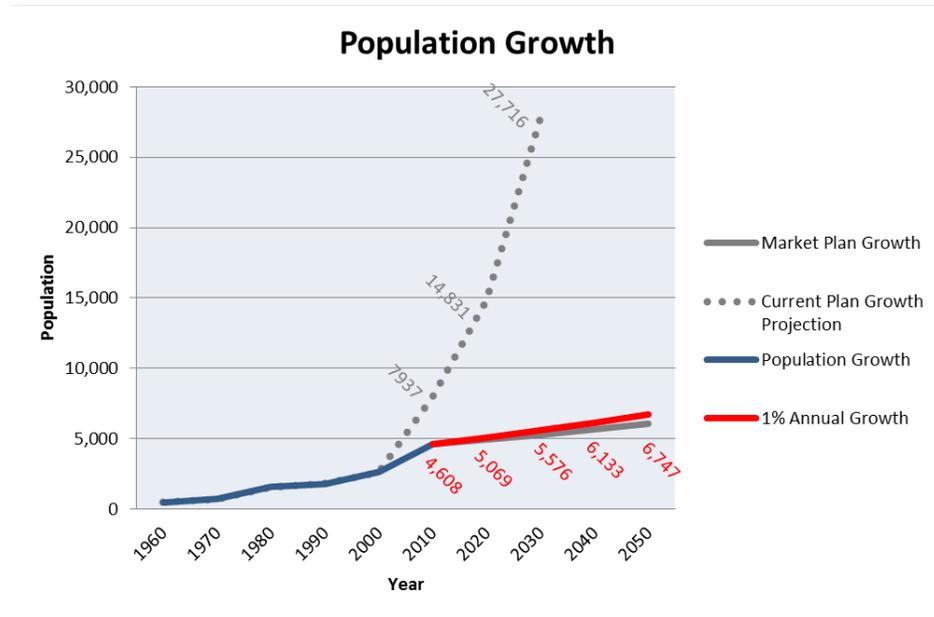


Figure 1: Population Projection, 2010 to 2050

The revised population projections align with the projections proposed in the Downtown Market Analysis & 211th Street Corridor Analysis completed for Peculiar in 2014. This study identifies a .8% annual population growth projection for the community. Based on the revised population projections, the economic forecasts from the market analysis can be used to project future growth and development. Figure 2 identifies the projected growth in residential and retail uses in the community for the next five years. As you can see modest growth is forecasted in the near future.

The market analysis identifies the addition of approximately 75 homes over the next five years, or 15 new homes annually. Based on this growth, combined with existing demand, the analysis identifies strong future demand for retail services in Peculiar, in excess of 365,000 square feet, which equates to a significant fiscal impact to the community.

Anticipated industrial development was estimated at one-million square feet, based on the current and future available industrial land. The future land use plan identifies a significant amount of land planned for industrial uses in the

northwest quadrant of the community. The process to have this area designated by the State of Missouri as a Certified Site is underway. This area is appropriate for a significant amount of industrial development based on the land available and the improved access provided by the Peculiar Way interchange.

The market analysis includes several residential, retail and industrial recommendations to maximize the potential market and market influence on the city. This recommendations are incorporated as the City's economic development policy and improvements based on their adoption and are incorporated as a part of this Comprehensive Plan.

Projected new development (Residential, Retail and Industrial)				
	Market Opportunity (sq. ft. or units)	Investment Created	Jobs Created	Annual Sales
Residential	73 homes 162,936 ² sqft	\$11,132,500 ³	219 ⁴	n/a
Retail	365,000 sqft	\$51,539,250 ⁵	799 ⁶	\$61,320,000 ⁷
Industrial	Not forecasted, 1,000,000 sqft example	\$105,550,000 ⁸	1,720 ⁹	n/a
TOTALS	1,527,936	\$168,221,750	2,738	\$61,320,000

Figure 2: Estimated Development Impact, 2014 to 2019

CITY BEAUTIFICATION

In addition to the City Beautification elements already outlined in the Comprehensive Plan there are further enhancements that can contribute to the character of the community. Those improvements include:

Landscape Standards

Improved landscaped standards within the zoning ordinance should be incorporated to complement additional public beautification improvements. Improvements to the landscape regulations should include expansion of landscaping and screening standards to residential development. Additionally the special screening requirements for commercial and industrial development, within the code, that address the site design along major streets should be expanded to cover all development along these corridors. The streets that are appropriate for additional design consideration include US 49 (71 Highway), Peculiar Drive, YY Highway, South East Outer Road, J Highway, Harper Road, C Highway, School Road and Peculiar Way.

Character Streets

The implementation of the character street concepts, defined in the Transportation Network section of these updates, throughout the City will add to the character and quality of design within Peculiar. The concept is intended to provide street design that supports the function of adjacent development with access, but also with design elements that contribute to the character of the advanced design.

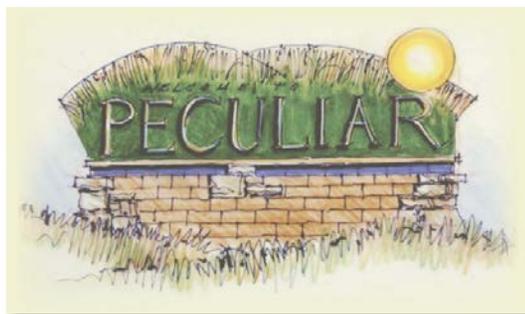


Figure 3: Entry Monument Rendering

SPECIAL CHARACTER AREAS

Interstate 49 and Peculiar Way Interchange

To address the anticipated development at the future Peculiar Way Interchange, the design polices and standards will be codified within the Peculiar Way Deign Overlay. The overlay will apply to development adjacent to interchange and along Peculiar Way.

Community Entrances

In addition to the policies identified in the current plan the recommendations for delineating community entrances includes:

- The identification of each major entryway from Interstate 49 should be delineated with a gateway markers that reflect the rural character and modern amenities of the community.
- The entryways into Downtown Peculiar should be delineated with markers that reflect the small town, downtown community feel and the arts/cultural district theme.

	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local (Residential)
# of Through Traffic Lanes	4-5	3-4	2-4	2-3	2
Width of Lanes (excludes curb and gutter)	10' – 12'	10' – 12'	10' – 12'	10' – 11'	10'
# of Parking Lanes	0-2	0-2	0-2	0-2	0-2
Parking Lane Width	8'	8'	8'	8'	7'
Width of Median (includes curb and gutter)	10' - 16' (turn lane no wider than 12')	0-10'	0-10'	0	0
Min. R/W Width	100'	80'	60'	60'	50'
Bike Facility	5' lane (min.)	5' lane (min.)	5' lane (min.)	5' lane (min.)	Share the road
Pedestrian Facility	2 (1 multi-use path + 1 sidewalk preferred)	2 (1 multi-use path + 1 sidewalk preferred)	2	2	1-2
Sidewalk Width (Min. / dependent on street type)	5' – 10'	5' – 10'	5' – 10'	5' – 10'	4' to 8'

Figure 5: Functional Classification of Streets Standards

Peculiar are delineated on Figure 5 and design standards are included in Figure 6.

Complete Streets

“Complete Streets” is an important concept for the City of Peculiar’s future transportation system and development. This concept considers all modes of travel equally in the planning and design of transportation networks. A complete streets policy should prioritize the ability to connect people to the community at the network scale, weather on foot, on bicycles, in cars or through transit. To achieve this, the complete streets policy should be applied according to

context, and in a manner where each street segment may serve a specific function in a larger network. This avoids one-size-fits-all “complete streets” that generically accommodate every mode but work well for none. The Complete Streets Design Guide (Figure 7) provides the necessary guidance to implement the complete street concept, by character street.

Complete Streets Policy Statement

The City of Peculiar will develop a safe, connected transportation system that accommodates all modes, including motorists, pedestrian, bicyclists, and transit riders and is

accessible to all users regardless of age or ability. To implement a complete streets network throughout Peculiar, the city will require the design and construction of appropriate complete street elements with each road way project undertaken. All projects including incremental changes – resurfacing, restoration and rehabilitation, transformative – reconstruction, and new construction will be evaluated for their ability to incorporate complete streets elements

that improve the transportation network and bring value to abutting development. Peculiar will benefit from the implementation of a completes streets network through

- promotion of public health,
- improved public realm,
- enhanced economic development,
- reduced transportation costs,
- enhanced community connectivity,
- improved environmental sustainability, and
- the creation of a more livable community.

COMPLETE STREETS DESIGN GUIDE					
DESIGN TYPE	STANDARD		NEIGHBORHOOD	ACTIVITY	NATURAL
Lanes / Lane Widths	The number of lanes and lane widths for any street section should be based upon the anticipated capacity, the desired vehicle speed, AND balanced with the need to accommodate other critical elements of complete streets* within the ROW. Each Street Design Type has different emphasis on priorities that best support the context. In general "lane widths between 10' and 12' are sufficient for rural and urban arterials," where 10' to 11' lanes are preferred for most urban and rural arterials with multi-modal priorities; 12' lanes should only be used on principal arterials where "higher-speed, free flowing" traffic is the only priority. ¹ Lanes less than 10' can also work for low-volume or slow-speed streets, where frequent truck traffic is not anticipated, and other unique conditions. ²				
Sidewalks	Most streets need sidewalks on both sides (except extremely low density areas, extremely high-traffic/high-vehicle oriented contexts, or where alternate facilities like a multi-use path are provided.) Typically wider is better – 5' is the minimum for two individuals to walk comfortably side by side; 8' is the minimum to support economic activity by pedestrians; 12' is the minimum to support social spaces along our streets. Sidewalks should be buffered from moving vehicle lanes by tree lawns, furniture/amenity areas, on-street parking or a combination of all of these.			8' minimum; 12' preferred (including paving between tree wells); 16' + ideal - recommended to support social spaces along streets at key locations.	Multi-use path preferred on arterials; 4'-5' min. on one side for collectors or local, or omitted as natural conditions warrant.
Bicycle Facility	Multi-use path preferred on arterial and major collectors; Bike-lane or sharrow preferred on minor collectors; acceptable on major collectors.			Sharrow acceptable; bicycle facilities can be omitted on limited segments where design speed is below 20 mph and bicycles comfortably mix with vehicles and/or where alternative parallel routes are located within 600'.	Multi-use path preferred on arterial; Bike-lane or sharrow acceptable on collectors.
Landscape / Amenity Area	Small or large shade trees in tree lawn; Trees within a landscape easement are acceptable as an alternative; At least 35% tree canopy over ROW; Tree lawn width 4' -6' for trees under 30' tall; 6' – 8' for trees 30' to 50' tall; 8'+ for trees over 50' tall.	Large shade trees in tree lawn; 70% to 100% tree canopy over ROW; Tree lawn width 4' -6' for trees under 30' tall; 6' – 8' for trees 30' to 50' tall; 8'+ for trees over 50' tall.		Small or large shade trees in tree wells; 24' s.f. min for tree wells; 36' s.f. + recommended); At least 50% tree canopy over ROW.	More dense, irregular and natural plantings of trees and shrubs; coordinated with sidewalks and/or bicycle facilities and drainage relating to the land forms; 70% to 100% tree canopy over ROW.
Street Furniture / Amenity Area	None; unless in or abutting park, civic spaces or commercial area.			Located in 6' + zone abutting curb and between tree-wells where on-street parking is provided; and/or located in first 6' along building frontage provided at least 6' clear zone for pedestrians provided.	None
Parking	Permitted with engineering review.	7' parallel permitted. (includes curb & gutter)		8' parallel required; 18' angled permitted on local or some collector applications. (includes curb & gutter)	None
Drainage	2' curb and gutter; or "green infrastructure" drainage (i.e. rain gardens and perforated curbs) with engineering review.				10' + natural swale; or "green infrastructure" drainage (i.e. rain gardens and perforated curbs) with special engineering review.

Figure 6: Complete Streets Design Guide

¹ ASHTO. Geometric Design of Highways and Streets, pg. 473, AASHTO, Washington D.C., 2004. The AASHTO "green book" is a guide intended to be used flexibly for different types of streets in different contexts. The Forward to the "green book" makes it clear that the dimensions are guides and not standards, and that ranges should not be used to imply that the larger end of a range is preferred. (AASHTO. Geometric Design of Highways and Streets, pg. xliii). Compare with, *National Association of City Transportation Officials, Urban Street Design Guide* – see "Lane Widths."

² ASHTO. Geometric Design of Highways and Streets, pg. 473, AASHTO, Washington D.C., 2004.

Character Streets

Within Peculiar, the development pattern ranges from rural/undeveloped properties and farmland, to suburban residential developments, and some urban development patterns.

Understanding land use context helps in the determination of mode priority. Street types serve a variety of functions that can result in a travel corridor that ranges from automobile oriented to pedestrian oriented. The application of the character street concept, by street type, is shown in Figure 7. The discussion of Character Areas in this Plan is used to identify context sensitive

solutions for different functionally classified roads. The applicable Character Area types in Peculiar include Natural, Neighborhood, and Activity. Each are further described below.

Natural

Natural streets are appropriate for areas that feature natural landscape or enhanced landscape design. The flexibility in cross-section design allows incorporation of natural features and promotion of environmentally sensitive cross-section design that creates or contributes to the character of the area. The future desire

for Peculiar Drive to be a rural boulevard character is an example of one corridor proposed for a Natural design.

Neighborhood

Neighborhood streets are appropriate to serve the residential neighborhoods throughout the community through improved street and connectivity design. They are typically designed for slower automobile traffic and prioritize pedestrian mobility through sidewalks and trails with streetscapes that establish the neighborhood character and create desirable frontages for housing.

Activity

Activity streets are appropriate for areas where there is, or desired to be, a significant amount of pedestrian activity. They typically prioritize on-street parking, pedestrian movement and amenities, and visibility and access for businesses fronting these streets. The increased connectivity within the area is a result of the interaction of pedestrians and slow-moving cars that create an active environment. Downtown Peculiar is one example of where Activity Streets are encouraged.

Functional Class	Standard	Natural	Activity	Neighborhood
Arterial (major & minor)	■	■	■	
Collector (major & minor)	■	■	■	■
Local	■	■	■	■

Figure 7: Character Street Application

Standard

Standard street designs are appropriate where no particular development or urban design character warrants other street design considerations. Standard roadway design can be used in all areas outside of the City's Special Character Areas.

Illustrative typical street sections that address the functional classification, complete streets and character street components of street design can be found in the appendix.

Strategic Improvement and Connections

Within city limits, there are several existing corridors that play an important role in the circulation of traffic in the community and will play an even more significant role as the city continues to grow and develop. These strategic corridors include C Highway, Peculiar Drive, Peculiar Way, White Oak Street, Twin Oaks Parkway, and the potential to add a grade separated crossing of I-49 south of the current city limits. The strategic improvements and connections recommended for these corridors, Figure 8, focus on either creating special places or improving connectivity on routes that traverse



Figure 8: Transportation Improvements

the city limits. This strategy recognizes that transportation is not just a means to get from point A to point B but rather is an experience in and of itself and that quality of infrastructure is a direction reflection of the community character and values.

Peculiar Drive

Peculiar Drive is a significant road for the community. It is the town’s namesake street and will be a gateway drawing traffic from the future Peculiar Way interchange into the Downtown area. For this reason, Peculiar Drive is recommended to retain its natural character but must also be designed in a manner to safely accommodate increased vehicular traffic and people walking and biking along the corridor. The recommended design for Peculiar Drive is a Natural Collector Complete Street with multi-use trail.

Peculiar Way

Since the adoption of the previous Comprehensive Plan, the City and Missouri Department of Transportation (MoDOT) have planned for a future interchange at the Peculiar Way alignment. This proposed interchange



Figure 9: Peculiar Way Interchange Design

includes a diverging diamond interchange design with sidewalks to accommodate pedestrians crossing I-49. Figure 9 illustrates the planned design of the future Peculiar Way interchange.

Significant amounts of commercial and industrial development are proposed along the corridor. This will have a significant economic and traffic impact for the community; therefore, managing access near the new interchange to ensure it functions correctly will be important. The proposed mixed use development areas should limit the amount of direct driveways that connect to Peculiar Way; rather these developments should have a drive or road that allows for

internal circulation to occur within each development. The industrial land uses should be provided access at Harper Road and Knight Road. Where truck access is provided, a four-way stop or future signalized intersection may be needed to allow safe turning movements for truck traffic.

The recommended design for the future Peculiar Way corridor is a Standard Arterial Complete Street from Y Highway to J Highway and a Neighborhood Collector Complete Street from J Highway to Thorngrove Road. This street should be designed to safely accommodate heavy truck traffic as well as personal vehicles, bicycles, and pedestrians.

Twin Oaks Parkway

Twin Oaks Parkway is an existing north-south Local street that extends north from J Highway connecting to several residential neighborhoods before ending abruptly. This plan recognizes Twin Oaks Parkway as an important secondary north-south route to reduce Local traffic's dependency on J Highway. This plan recommends extending Twin Oaks Parkway to the north from its current terminus to Peculiar Way. The design of the new extension should at a minimum meet the existing cross-section design; however, it is recommended that this future route be designed as a Neighborhood Collector Complete Street.

Nodal Improvements

Several locations throughout the community require strategic improvements at key locations or nodes. These intersection improvements must handle multimodal traffic while considering what works best within the future development context. The specific locations for nodal improvements are illustrated in Figure 8 and include the intersection of YY Highway/219th Street and Peculiar Drive, J and C Highways from Twin

Oaks Parkway to Jamar Street, School Road at Peculiar Way, and the Bradley Crossing area.

YY Highway/219th Street & Peculiar Drive

At the intersection of YY Highway/219th Street and Peculiar Drive two Collector Complete Streets intersect. Peculiar Drive is designated for a Natural character where YY Highway/219th Street will likely be designed to a Standard Collector or possibly Neighborhood Collector design. The intersection of two significant routes near Downtown is anticipated to handle a significant amount of traffic from future development. Furthermore, these routes are the main connections from west peculiar to the I-49 interchange at C and J Highways. Add to that the proposed commercial node at this intersection and the likeliness for a significantly large intersection increases. Although large intersections can circulate significant amounts of vehicular traffic, they can be detrimental to pedestrian and bicycle activity. Best practices for safety and access for pedestrians and bicycles including appropriate signage, lighting and pavement markings are a high priority for this intersection; all while retaining the Natural community character.

I-49 & C and J Highways Interchange

A study was commissioned to prepare potential operational and safety improvements for the segment of Route C between Peculiar Drive and Schug Avenue in Peculiar, Missouri. The study included an assessment of the existing operational and safety conditions and along Route C, and identification of potential improvements to address deficiencies.

Based on the data that was collected, the study segment of Route C is generally operating satisfactorily overall. However, there are some areas of concern, which are summarized below:

- The five-leg intersections create some driver confusion because they are not a standard type of intersection. The skew angle of the Peculiar Drive approaches makes it difficult for drivers to perceive safe crossing gaps, thereby resulting in the potential for higher accident rates.
- A number of rear end crashes have occurred on Route C behind vehicles stopped to turn left at Schug Avenue and at Legend Drive.



Figure 10: Long-term Improvements, Missouri C

- Lengthy delays and long queues form during the peak hours on the eastbound approach of the Route C and North Street intersection.
- Long delays are projected in the future at several side street approaches to the Route C corridor. Improvements are needed to allow for side street traffic to access Route C in the future.

Improvements were identified for two time frames. In the short term, it would be appropriate to eliminate the five-leg intersections with Peculiar Drive and add left-turn lanes at several intersection approaches. In the long term, traffic volumes are projected to increase, and traffic control improvements will be needed to improve operations for side street traffic accessing Route C. Construction of a dual lane roundabout at the intersection of Route C and Main Street would provide acceptable levels of service at a location that is accessible for many drivers in the western portion of Peculiar.

It is recommended that the additional findings from this study be incorporated as part of this Plan.

Bradley Crossing

Bradley Crossing is a previously platted area of land that sits west of I-49 at the intersection of Main Street and Bradleys Parkway. Significant commercial development is proposed for the area north of Bradley Crossing. It is recommended that both Bradley Parkway and Main Street be extended to tie to the transportation network. Main Street would continue northwest and connect to Peculiar Drive. Bradleys Parkway would continue north and tie into the planned commercial development and eventually connect to Peculiar Way.

School Road at Peculiar Way

The offset alignment of School Road north and south of Peculiar Way is anticipated to be an issue in the future as the community continues to grow and develop and as traffic continues to increase. The proposed design of this portion of the transportation network does not call for the realignment of School Road as there are adjacent properties that would be impacted by this realignment. If turn movements become significant enough this may require addition of turn bay lanes for right turn movements or could

potentially be a signal control intersection where a single green light gets drivers through both intersections simultaneously.

Future I-49 Grade Separated Crossing
 As development continues to occur in Peculiar, Raymore and Cass County, the current reliance on J Highway and I-49 will become an issue if no secondary I-49 crossing opportunities are planned or constructed. Adding the Peculiar Way interchange will relieve some immediate and future congestion of the interchanges. However, a long-term strategy for the City is to begin the process of identifying future grade separated crossings (without on- and off-ramps) to provide Local access to areas east and west of I-49. Potential future overpass locations include 203rd Street and other alignments further south (e.g. 227th, 233rd or 237th). Another option would be to capitalize on the existing overpass located at approximately the 249th Street alignment. These crossings will become very important as development occurs and traffic increases in the immediate vicinity of the I-49 interchanges.

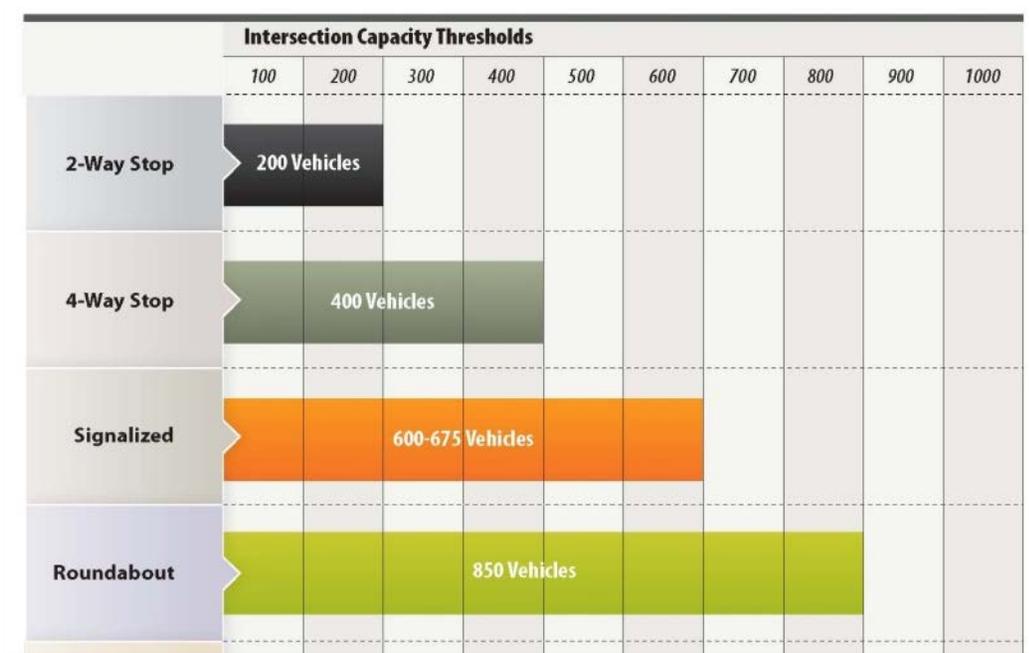


Figure 11: Intersection Capacity by Type

Throughput

The proposed functional classification of streets identified in the previous Comprehensive Plan provided limited throughput for circulation to areas outside the city limits. This Plan includes a roadway network that addresses how each route could potentially tie into the Cass County roadway network and eventually connect to the roadway networks of surrounding cities.

Additionally, this Plan has laid out an Arterial and Collector grid street network that will provide Local circulation alternatives to reduce the dependency on I-49 and J Highway for circulation within the City and nearby areas. The Plan recommends that Peculiar Way be extended to the west from Peculiar Drive to Y Highway. Additionally Peculiar Way should be extended to the east from J Highway to Thorngrove Road, at

which point travelers could continue on 203rd or 215th Street and connect to 291 Highway. A second, more costly alternative would be to extend Peculiar Way from J Highway to 291 Highway, a distance of approximately 3.5 miles.

Signalized Intersections

As intersection improvements are made, consideration for the safety and accommodation of all transportation modes is important. For a signalized intersection, signal poles along with its respective mast arms and signal cabinets need to be designed specifically for each location. Given that many of the roadways would be constructed as either a two-lane or three-lane roadways during the interim condition, the equipment associated with the signalized intersection would have to be removed when the roadways are upgraded to its ultimate configuration. In addition, there have been many technological improvements in recent years as it relates to hardware equipment at signalized intersections and these would have to be upgraded or improved over time. Figure 11 provides a “rule of thumb” for intersection capacity by intersection type. This Plan does not specifically address intersection types for each

intersection in the Transportation Network. This level of analysis and understanding is best reserved for at the site level.

Pedestrian and Bicycle Facilities

This section focuses on the provision of alternate modes including providing safe and convenient means for people to walk and bicycle in the community. This section includes identification of the Alternate Mode Network, identification of Safe Routes to Schools focus areas, a discussion on a future regional trail, and neighborhood and commercial connectivity guidelines that encourage bicycling and walking.

Alternative Mode Network

The identification of Complete Streets as well as off-street trails or paths and the local sidewalk network is important in determining where people can safely walk or bike in the community. Figure 12 illustrates the Alternative Mode Network. The orange lines represent high priority Complete Streets, including C Highway, J Highway, Peculiar Way, YY Highway/219th Street, 223rd Street and Schug Avenue. Green lines indicate the MetroGreen trail, red lines indicate multi-use paths or trails, and the blue polygons indicate Safe Routes to School Focus Areas.

Safe Routes to School

Each year the Missouri Department of Transportation (MODOT) and the Mid-America Regional Council (MARC) allocate a set amount of funding for the Safe Routes to Schools (SRTS) program. This program helps fund the addition and repair of infrastructure that would support students' choice to bicycle or walk to school. The previous Comprehensive Plan identified the need for sidewalks in the Downtown area that would provide walking and bicycling options for students travel to or from school. This Plan identifies two Focus Areas for future SRTS funding including the Downtown and areas surrounding the school campus at Peculiar Way and School Road. Any existing sidewalk or any street that needs a future sidewalk that falls within these Focus Areas should meet the capture area expectation for SRTS funding. The SRTS Focus Areas are illustrated in blue on Figure 12.

Regional Trail

The Mid-America Regional Council (MARC) previously identified a regional trail route that cuts through the City of Peculiar connecting the community to a larger, regional trail network.

The latest alignment of this proposed trail crosses near the future Peculiar Way interchange. It is the recommendation of this Plan that the implementation timeline for the MetroGreen trail be expedited so the trail can be constructed at the same time as the Peculiar Way interchange construction. The MetroGreen trail is illustrated in green on Figure 12. The trail would run south along School Road, then C Highway, and continue south on Peculiar Drive.

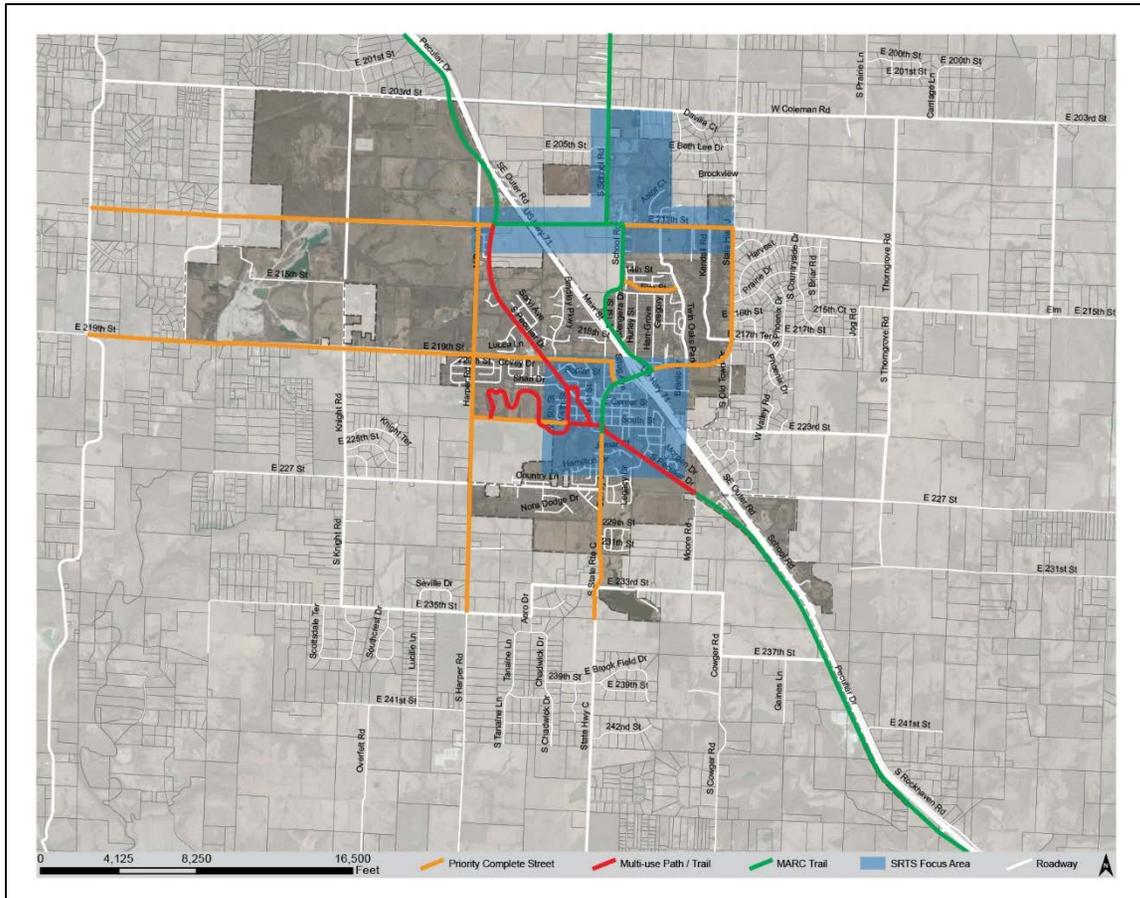


Figure 12: Alternate Mode Network

Neighborhood & Commercial Connectivity Guidelines

Infrastructure improvements are not always paid solely by the City. Many communities require developers to pay their fair share including installing sidewalks and lighting. In addition to these basic improvements this Plan recommends

that additional items be considered in the design and construction of infrastructure including detached sidewalks, bicycle racks, street and pedestrian lighting, and overall neighborhood connectivity. Each of these components are recommended for both publicly-paid and developer-paid infrastructure.

Detached Sidewalks

All sidewalks along Arterial and Collector streets should be detached from the curb. The buffer between the curb and sidewalk should be an allocated amenity zone that can provide space for a landscape strip, street trees, streetscaping, utilities, and street signage. The buffer between the street curb and the sidewalk provides an easily accessible space for buried utilities, provides clearance space to more easily meet the Americans with Disabilities Act (ADA) design standards for slope grade, and improves the real and perceived safety of the pedestrian environment. When right-of-way is available, detached sidewalks are the preferred facility type.

Bike Racks

Bike racks provide a means for parking and secure storage of bicycles at destinations throughout the community. They are a key component to encourage use of bicycle facilities. Throughout Peculiar there is a lack of safe and secure bicycle parking facilities. Bicycle racks that fit universal bicycle design standards can be

Road	Recommendation(s)
Missouri C	<ul style="list-style-type: none"> Design and install sidewalk improvements along Missouri C Highway, between Interstate 49 Interchange and Jamar Street.
School Road	<ul style="list-style-type: none"> Cass County is paying for 55% of the reconstruction of School Road between 203rd and 211th; anticipated completion date summer 2017. Recommend a Complete Street Collector design. Recommend School Road south of Peculiar Way to J Highway to be a Complete Street Collector design.
Peculiar Way	<ul style="list-style-type: none"> MODOT will be constructing the new Peculiar Way interchange and the associated roadway between Peculiar Drive and the east leg of School Road; anticipated completion late 2016. Street and interchange design already determined. Recommend that west of Peculiar Drive to Y Highway be designed to serve industrial users with a Complete Street Arterial design. The previously completed Peculiar Way Corridor Study covers specifics related to anticipated traffic impacts between J Highway to Y Highway. Recommend the City continue to pursue U.S. Department of Transportation TIGER grant to target construction of the remainder of the roadway between J Highway and Y Highway.
Peculiar Drive	<ul style="list-style-type: none"> Recommend that between 203rd Street and YY/219th Street be designed as a Natural Complete Street Collector with a trail.
Harper Road	<ul style="list-style-type: none"> Recommend that between Peculiar Drive and 235th Street be designed as a Complete Street Collector.
Knight Road	<ul style="list-style-type: none"> Recommend that between 203rd Street and 235th Street be designed as a Complete Street Collector.
YY/219 th Street	<ul style="list-style-type: none"> Recommend that between Y Highway to Schug Road be designed as a Complete Street Collector.
203 rd Street	<ul style="list-style-type: none"> 203rd Street will likely need to be expanded as both the City of Peculiar and the City of Raymore continue to grow and develop. There is an opportunity to collaborate and share the cost of this roadway with the City of Raymore. The next step would be conducting a Corridor Study to determine the right-of-way alignment, property impacts, and potential roadway design configurations. Study should consider the feasibility of a separated grade crossing of I-49 (no highway access) to provide improved circulation between the east and west extents of both cities.

Figure 14: Priority Improvement Projects

Transportation Polices and Standards

Future Ballot Measure

The City and City Council should use the successes of this planning process to return to the voters for their approval of General Overhead (GO) bonds for street improvements. The Public Works Department should continue to work with City Management and City Council to

determine the right bonding amount and the minimum commitment to local roads.

Access Management Standards

Access management to private parcels and public roadways is important as it directly relates to safety of motorists, pedestrians and bicyclists. Access management is one of the most successful ways a community can protect its investments in the transportation system. Access

management techniques generally preserve capacity, reduce the number of conflict points where potential crashes may occur and make it easier for people to walk and bicycle. Additionally, access management in terms of cross access across adjacent parcels is also very important as it preserves roadway capacity for those users not traveling between adjacent parcels. Application of the best practices of access management has benefits for motorists,

bicyclists, pedestrians, transit riders, business people, government agencies, and communities. The desired outcomes of access management are streets that:

- Are safer for vehicular and pedestrian traffic;
- Allow motorists to operate vehicles with fewer delays, less fuel consumption, and fewer emissions;
- Provide reasonable access to properties;
- Maintain their functional integrity and efficiency, helping to protect the investment of taxpayer dollars;
- Reflect coordination between land use and transportation decisions; and
- Are used for the purposes (functions) for which they are designed.

It is the recommendation of this Plan that the City work to establish Access Management Standards for Arterial streets and Major Collector street and that the City implement these standards by codifying it in the City’s development regulations.

Access Management Strategies

There are three main access management implementation mechanisms. Planning-based

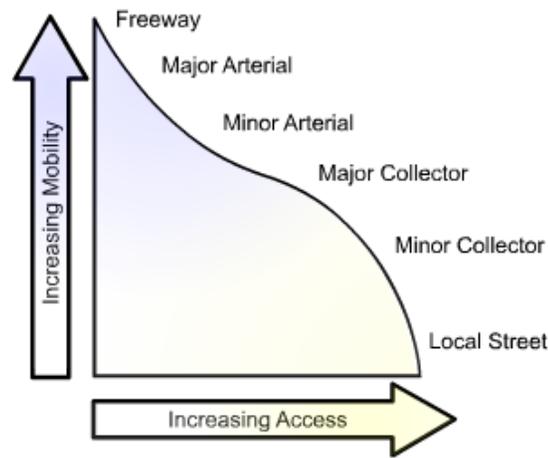


Figure 15: Mobility vs. Access

approaches typically develop functional classification, roadway system, or corridor based practices that specify access management characteristics. Regulatory methods are used to apply permitting procedures to manage access for development. Design-based approaches define engineering standards and methods. Each separate implementation mechanism is a piece of an overall strategy that makes a successful access management program. Various strategies have differing benefits. A successful Access

Management Program may use measures from all three main implementation mechanisms. Figure 15 illustrates how mobility and access affect one another. Traditionally, as the functional classification of a road increases, its access to adjacent land decreases while mobility increases. The lower functionally classified streets have low mobility but high probability of access adjacent land. Access Management is an important component of transportation systems. Not only does access management allow streets to function as they are intended to function, but it improves safety.

<i>Sewer Rates - Effective</i>	<i>No. of Active Meters</i>	<i>07/01/2013</i>	
		<i>\$ per 1,000 gallons</i>	
		<i>First</i>	<i>Over</i>
<i>Within City Limits</i>	1,424	\$15.00	\$6.85
<i>Business/ Government</i>	87	\$20.00	\$8.35
<i>Outside City Limits</i>	20	\$50.00	\$9.35
<i>PWSD #2 or #10</i>	180	\$15.00	\$6.85

Figure 16: Sewer Service Summary

COMMUNITY FACILITIES

The Community Facilities section focuses on the provision and expansion of public utilities to the existing city limits and the anticipated growth areas. These utilities include sewer, water, technology, stormwater, and implementation/projects.

Sewer

The City maintains four separate rate categories for customers including customers within the city limits, business and government entities, customers outside the city limits, and customers within Public Water and Sewer District (PWSD) #'s 2 and 10. As of May 2014, the total number of active meters was 1,711. Figure 16 summarizes sewer service categories, the number of active meters, and the cost charged per 1,000 gallons.

In 2014 the City of Peculiar conducted a Sewer Rate Forecast Study which included a review and analysis of the Summary Sewer Rate Scenarios for fiscal years 2014 through 2019. The City's current challenges include inflation of operating expenses, inflation of project costs, and capacity

issues brought on by residential and commercial development. The scenarios conducted as part of the 2014 Study attempted to resolve the issue of expenses and capital costs. The results of the scenario analysis and recommended approach are summarized in Figure 17.

Following completion of the 2014 Sewer Rate Forecast Study the City pursued and received an

engineering water supply grant from the Missouri Department of Natural Resources (DNR) Financial Assistance for Engineering Report Services in the amount of \$28,000. The grant required a 20% match by the City and is being used to conduct a study of the sewer system capacity. This sewer study is currently being conducted and has a target completion in Spring of 2015. Additionally, the City is currently

	<i>Scenario</i>				
	<i>Recommended</i>	<i>A1</i>	<i>A2</i>	<i>B1</i>	<i>B2</i>
<i>Depreciating Reserve</i>	Yes	No	Yes	No	Yes
<i>Capital Cost Included</i>	Yes	No	No	Yes	Yes
<i>Maintenance Cost</i>	<i>Funded</i>	<i>Underfunded</i>	<i>Underfunded</i>	<i>Underfunded</i>	<i>Underfunded</i>
<i>Yearly (6) Average Rate Increase</i>	4.96%	1.38%	3.72%	7.97%	10.48%
<i>Largest 1 Year Rate Increase</i>	\$0.55	\$0.75	\$1.97	\$3.00	\$4.50

Figure 17: 2014 Sewer Rate Forecast Study Findings

In FY 2016-17, the City could connect to KC water supply in an effort to save customers the additional cost of water charged to the City by no longer purchasing water from Cass PWSD #2. Kansas City has a 24-inch diameter transmission main that extends south of the intersection of Highway J and Hubach Hill Road to the Raymore elevated storage tank. To reach a connection point adjacent to the Raymore elevated tank would require approximately 5 miles of main to be installed north of the City along Route J with two possible end points ... We believe this connection to be in the best interest of our customers ... Although rates continue to increase, the rate is much lower with a direct connection with Kansas City than staying with Cass PWSD #2.

- City of Peculiar

pursuing a service contract with the City of Belton for use of their treatment plant located at Mullen Road and Peculiar Way.

Water

In 2014 the City of Peculiar conducted the most recent Water Rate Study to determine the anticipated revenue, expenses, active meters and inflation rates for water services provided in the



Figure 18: New KCMO Waterline

city limits. Water rate increases occurred in October of 2013 and 2014 and are scheduled to increase again in October 2015 and 2016.

Currently the City holds a contract with Cass PWSD #2 (Cass 2) to provide 700,000 gallons/day for the next 20-25 years; however, the City is currently pursuing a contract to source potable water directly from the City of Kansas City, Missouri (KCMO). The results of several studies indicated the best course of action to reduce the cost of providing water service within the city is to pursue a water service contract with the KCMO as a direct

potable water source. This pending contract will include a 12" transmission line up J Highway and will provide 1,000,000 gallons/day. This contract will become "live" in September 2017. At that time the Cass 2 supply will become a reserve for future development primarily

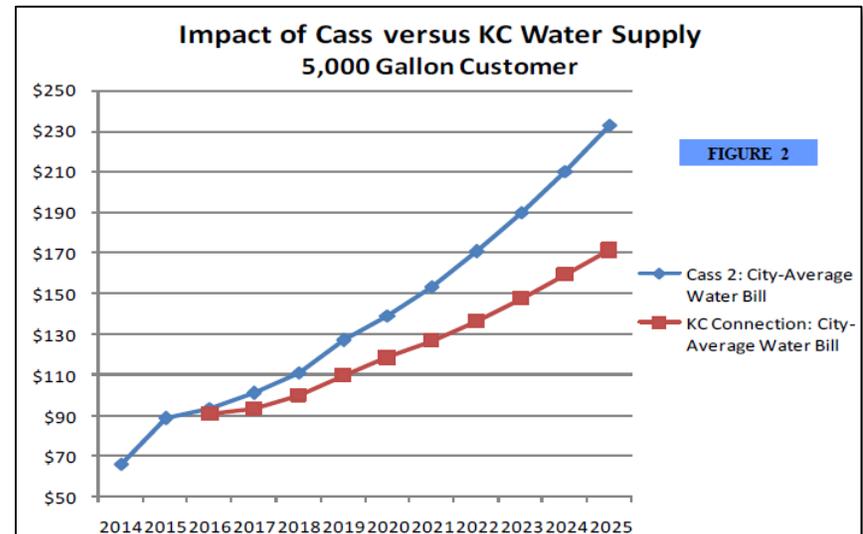


Figure 19: Inflation Rate / Cost Comparison, Cass 2 & KCMO

targeting the northwest corner of the community. Figure 189 illustrates the location of the new water line. Figure 19 illustrates how the anticipated inflation rate for water supply will be reduced under the new contract with KCMO.

The 2013 Water Rate Study included a Summary of Recommended Improvements which is provided in Figure 21. Additionally, the Water Rate Study provided check list for future water system tasks including:

- Continue to pursuit of DNR State Revolving Loan Funding;
- Install 8" minimum diameter for new water mains;
- Continue to replace 2" and 3" water mains as funds allow;
- Eliminate dead end mains with looping as funds allow; and
- Update plan for new subdivisions, commercial or industrial.

Stormwater

In 2006 the City conducted a Stormwater Master Plan which identified deficiencies and needed improvements. In 2012 MS4 Permitting was established for stormwater plans in the City. The Board of Alderman passed the resolution and have since established ordinances to meet these challenges.

Summary of Recommended Improvements	Cost	Priority
Supply Improvement	\$3,772,389	
12" on Peculiar Dr., Hurley St. to Main St., north to E. North St.	\$640,393	1
8" in Spencer Addition	\$369,941	2
8" on Harr Grove Rd. between Elm St. and Highway J	\$292,059	3
8" on Elm St. between Gregory and School Rd.	\$261,482	4
8" on Gregory St. and Kayla St. from Harr Grove and Gregory	\$184,248	5
12" on Peculiar Dr, between Maple Ave. and Willow St.	\$452,156	
12" on E. Broadway between E. 3rd St. and N. Main St.	\$184,046	
12" on E. 3rd St. between E. South St. and Legend Ln.	\$278,154	
Tank Mixing Systems (2)	\$100,000	
Emergency Generator	\$35,000	
Total	\$6,569,868	

Figure 20: Recommended Water System Improvements

FUTURE LAND USE

Land Use Designations

The broad categories of land use indicated on the future land use map, Figures 22 and 23, are defined by their *primary uses*: those land uses that most reflect the intensity and character of the category and which are generally acceptable throughout the area; and *secondary uses*: those land uses that are supportive of the primary uses, and with appropriate limitations, location considerations, and development conditions can reflect the intensity and character of the category as well. Additionally, the land use categories intentionally provide some flexibility to respond to market conditions that may evolve over the course of this plan, provided that the future land uses and development are consistent with the vision, goals and strategies of the plan.

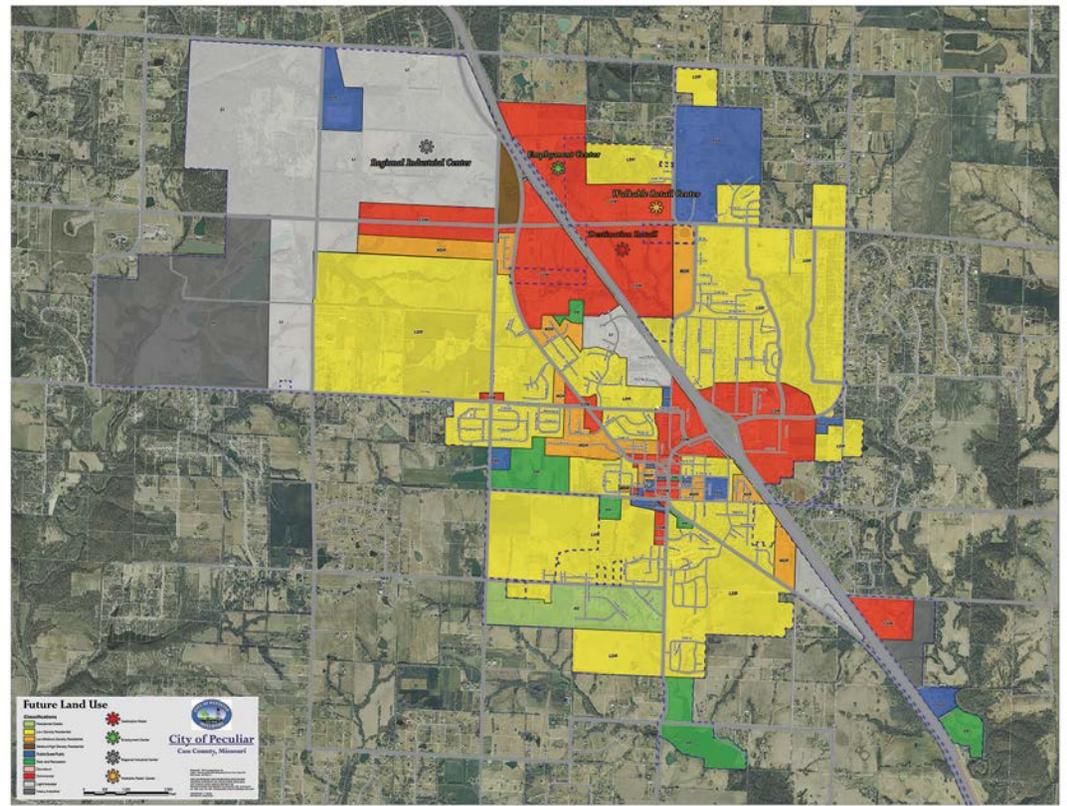


Figure 22: Future Land Use Map

CATEGORY: Residential Estate (RE)

Description:

Residential Estate land use provides for large-lot and very large lot residential development where a full range of municipal services may not be available. This category is intended to allow flexibility of choice for in .5 units per acre to 20+ acres per unit. There should be no expectation of municipal infrastructure to these areas, including roads, unless located near or adjacent to existing or planned municipal services or until an urban development pattern is established. The residential estate development pattern is intended to retain a rural character, and in areas close to urban services should not hinder the future growth and development of the city at greater intensities. This category is also applicable where it is determined to have unique or sensitive natural areas including stream corridors, tree stands, wetlands, natural habitat areas or other opportunities to preserve natural amenities or areas.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Agriculture
- Natural Space / Recreation Area
- Residential – minimum lot size 2 acres

Secondary Uses:

- Cluster residential development opportunities may exist and should be evaluated on a case-by-case basis.
- Institutional uses – places of worship or schools.
- Accessory Uses – see *development criteria*.

Location Criteria:

- Location in areas where City services (water and sanitary sewer) will be difficult and/or costly to provide.
- Location in areas determined to have unique or sensitive natural areas, including stream corridors, tree stands, wetlands, and natural habitat areas. The larger lots allow for greater potential to preserve nature through the use of conservation easements and common open space.
- Development should occur in areas out of the floodplain, away from prime agricultural lands, and otherwise more accessible to road network.

Development Criteria:

- Gross densities of 1 to 5 unit(s) / acre may be clustered on the site with net densities remaining less than .5 units per acre.
- Low impact design strategies should be used for design and construction to minimize building and site development impact on hydrology, topography and other natural features.
- Accessory buildings may be allowed at a scale between typical suburban development and farm buildings.
- Accessory uses should be designed to reflect the design and scale of the primary structure and surrounding development.

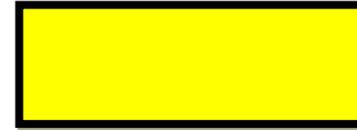
CATEGORY: Low Density Residential (LDR)

Description:

Low Density Residential represents a prevailing development standard in housing and neighborhood design within Peculiar. Suburban residential land uses typically accommodate low to medium density residential development, including single-family patterns of 1 to 4 units per acre. These uses are located throughout town to provide convenient access to transportation routes, commercial areas, jobs, schools, parks and recreation areas, and public services. Low density residential development is typically served by City infrastructure and should also accommodate appropriately scaled uses such as places of worship, schools, parks and other civic and institutional uses.

Similar to residential estate, cluster development is an opportunity to preserve land and capitalize on associated infrastructure cost, by increasing net densities.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Single-family Residential - 1- 4 units per acre

Secondary Uses:

- Single-family Residential - 1 to 5 acre lots
- Home Occupations
- Parks – neighborhood scale
- Public / quasi-public uses such as community center/club house, places of worship, school, or other neighborhood support uses.

Location Criteria:

- Lower density uses should be limited to small percentage of lots within neighborhoods or smaller subdivisions where local transportation connections are difficult due to location or topography and consistent with the goals and objective of the Comprehensive Plan.
- As focal point and central to a neighborhood associated with the intersection of Collector Streets or higher classification; **OR**
- At edges of defined neighborhoods along arterials streets.

Development Criteria:

- Buildings, access points and parking areas should have a similar relation to neighborhood streetscapes as the primary single-family uses.
- Development should reflect a similar scale to single-family uses. Where adjacent buildings are more than 150% of the height or building footprint of single-family uses, additional setbacks, buffers and usable open spaces should facilitate transitions.
- Development of secondary uses should not result in a negative impact to surrounding uses and neighborhoods, including utility systems and traffic.
- The design of secondary uses should strive to complement and enhance the existing character of surrounding uses and neighborhoods.
- Pedestrian connectivity is important; the public sidewalk system should provide adequate opportunities for residents to walk to destinations or for enjoyment.
- Parks should be designed with usable space for recreational activities and gather spaces.

CATEGORY: Medium-Low Density Residential

Description:

The **Medium-Low Density Residential** land use allows for a greater density of residential development, typically in the range of 3 to 10 units per acre in forms such as small-lot single family homes, duplexes, four-plexes and townhomes and other small scaled multiple family residential housing. Urban residential housing incorporates a mix of housing types in a neighborhood setting. Similar to other residential land uses, appropriately scaled uses such as places of worship, schools, parks and other civic and institutional uses should also be accommodated within the Medium-Low Density Residential land use category. These areas should provide a mixture of housing styles and types and should be located throughout town where uses can serve as transitions that buffer and/or screen lower density residential uses from commercial uses and major streets.

Medium-high density development may be appropriate in specific situations. Townhome, walk-up, flat and single-family attached development of condominium (ownership) or apartment (rental) type and higher-density single-family of a 9 to 15 unit per net acre density may be appropriate along primary transportation corridors or adjacent to commercial or industrial development. To be effective the scale, design, and transitions between uses should enhance and protect the existing fabric of the adjacent uses and neighborhoods. These uses are allowed as secondary uses and should adhere to the location and development criteria below.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Single Family and Multi-family Residential – 3 to 10 units per acre

Secondary Uses:

- Residential - duplexes, four-plex, townhouses and small-scaled residential formats at higher densities.
- Home Occupations.
- Public / quasi-public uses such as parks & open space, community center/club house, places of worship, school, or other neighborhood support uses.

Location Criteria:

- At edges of defined neighborhoods along arterials; **OR**
- As transitions to adjacent commercial / industrial, institutional uses and employment centers.
- As focal point and central to a neighborhood associated with the intersection of Collector Streets or higher classification; **OR**
- At edges of defined neighborhoods along arterials and minor arterials.

Development Criteria:

- Buildings, access points and parking areas should have a similar relation to neighborhood streetscapes as the primary single-family uses.
- Buildings should reflect a similar scale to primary single-family uses; where adjacent buildings are more than 150% of the height or building footprint of primary single-family uses, additional setbacks, buffers and usable open spaces should facilitate transitions.
- Development of secondary uses should not result in a negative impact to surrounding uses and neighborhoods, including utility systems and traffic.
- The design of secondary uses should strive to complement and enhance the existing character of surrounding uses and neighborhoods.
- Open spaces should be located in prominent locations along prominent streets or in front of prominent buildings.
- Connections to the City's trail system should be incorporated.
- Pedestrian connectivity is important; the public sidewalk system should provide adequate opportunities for residents to walk to destinations or for enjoyment.

CATEGORY: Medium-High Density Residential

Description:

The **Medium-High Density Residential** land use allows for a greater density of residential development, typically in the range of 9 to 15 units per acre in forms such as small-lot single family homes, duplexes, townhomes and multi-family residential housing. Medium-high density residential housing should incorporate a mix of housing types in a neighborhood setting and act a transition between lower density residential and commercial uses. Medium-high density residential formats should also be integrated into downtown as well as activity and commercial centers where appropriate. Similar to other residential land uses, appropriately scaled uses such as places of worship, schools, parks and other public / quasi-public uses should also be accommodated within the medium-high density residential land use category.

Appropriately scaled office, retail and services are allowed in the medium-high density residential land use category. To be effective the scale, design, and transitions between uses should enhance and protect the existing fabric of the adjacent uses and neighborhoods. These uses are allowed as secondary uses and should adhere to the location and development criteria below.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Single Family and Multi-family Residential – 9 to 15 units per acre

Secondary Uses:

- Residential - duplexes, townhouses and apartments - 8 to 20 units per acre

- Public and quasi-public uses such as parks, community center/club house, places of worship, school, or other neighborhood support uses.

- Small-scaled convenience retail / service and office uses.

Location Criteria:

- At edges of defined neighborhoods along arterials; **OR**
- As transitions to adjacent commercial / industrial, institutional uses and employment centers.

- As focal point and central to a neighborhood associated with the intersection of Collector Streets or higher classification; **OR**
- At edges of defined neighborhoods along arterials and minor arterials.

- Concentrated at nodes – intersections of collector street classifications or higher; in areas that are supportive of and complementary to the neighborhood scale.
- No closer than ½ mile from similar non-residential centers; serving market area of approximately 1 mile or less

Development Criteria:

- Buildings, access points and parking areas should have a similar relation to neighborhood streetscapes as the primary single-family uses.
- Buildings should reflect a similar scale to primary single-family uses; where adjacent buildings are more than 150% of the height or building footprint of primary single-family uses, additional setbacks, buffers and usable open spaces should facilitate transitions.
- Open spaces should be located in prominent locations along prominent streets or in front of prominent buildings.
- Pedestrian connectivity is important; the public sidewalk system should provide adequate opportunities for residents to walk to destinations or for enjoyment.

- No greater than 5 acres in area total – may be shifted to one quadrant or centered on 4 quadrants of intersections;
- No more than 30,000 square feet of non-residential space total; average tenant space of 1,500 to 3,000 square feet; 1 anchor up to 10,000 square feet.
- Contains pedestrian amenities: plazas, wide sidewalks, on-street parking; limited and well-screened on-site parking; street-front buildings; limited vehicle access and circulation points
- Buildings should reflect a similar scale to residential uses; where adjacent buildings are more than 150% of the height or building footprint of primary single-family uses, additional setbacks, buffers and usable open spaces should facilitate transitions.
- The design of secondary uses should strive to complement and enhance the existing character of surrounding uses and neighborhoods.
- Transitions between secondary and primary uses that minimize the impacts of noise, light, traffic, operations and intensity of development should be incorporated in the site design of secondary uses. Acceptable buffering can include fencing (stone, wood, and masonry), solid plantings, berming or other methods that complement the development character.

CATEGORY: Commercial

Description:

Commercial land uses are currently located around Peculiar primarily along major transportation corridors. The commercial land use designation provides the opportunity for the development of general retail, office and service uses that serve neighborhoods, the community and the region.

Future development of suburban style and large scale commercial businesses that rely on traffic for their business will locate in two areas, Highway C at Interstate 49 and the future interchange at Peculiar Way and I-49. Smaller and local business should be encouraged to locate in the downtown area and at nodes of commercial development. Commercial uses that serve existing and future neighborhoods should be encouraged to develop within mixed-use centers.

Map Code:



Example



APPROPRIATE LAND USES:

<i>Primary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria:</i>
<ul style="list-style-type: none"> • Retail / Service • Office • Public / quasi-public • Park, Recreation & Open Space 	<ul style="list-style-type: none"> • Commercial sites should be located adjacent to arterials which provide needed ingress and egress in order to avoid congestion. • The location of major commercial uses should be coordinated with (future) mass transit routes, higher density residential, centers of employment, and other intensive uses. • Commercially-generated traffic should not feed directly onto local residential streets. • Commercial uses should be located on key corridors and intersections as identified by the plan. 	<ul style="list-style-type: none"> • Ingress / egress points from arterial streets should be combined to support multiple commercial uses and properties. • Cross access easements should be required to reduce the trips on the arterial street network between uses. • The scale of commercial development should respect the scale of surrounding neighborhoods and development. • Commercial development should have required site design features which limit noise, lighting, and other activity so as to not adversely impact surrounding residential areas and adjacent uses. • Transitions between commercial development and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the commercial uses
<i>Secondary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria:</i>
<ul style="list-style-type: none"> • Light Industrial 	<ul style="list-style-type: none"> • Light industrial uses should be located along arterial streets which provide needed ingress and egress. • Light industrial development should have required site design features which limit noise, lighting, traffic and other activity so as to not adversely impact surrounding residential areas and adjacent uses. 	<ul style="list-style-type: none"> • Light industrial uses should be of a scale and character of the surrounding commercial and neighborhood uses. • Transitions between light industrial uses and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the industrial uses. • Limited connectivity between commercial and industrial uses should be maintained to reduce the pedestrian/automobile and truck conflicts.

CATEGORY: Light Industrial

Description:

Light Industrial uses are generally considered as one of the higher intensive uses of land because of their operations and greater community impacts. Light industrial uses include those uses that are typically related to warehousing, distribution, fabrication and parts assembly and rely on large land areas and large single story buildings. They are typically dependent on the acquisition and distribution of goods and this typically occurs through truck and rail. The impact to the transportation system by these types of uses can be substantial, and should be anticipated as development occurs.

Map Code:



Example:



APPROPRIATE LAND USES:

<i>Primary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria</i>
<ul style="list-style-type: none"> • Light Industrial • Warehousing / Distribution • Rail and Support Facilities • Manufacturing (small scale) 	<ul style="list-style-type: none"> • Uses should be located in proximity to support services with good access to major arterials, truck route, highways, utility trunk lines, along railroad spurs, near airports, and as extensions of existing industrial uses. • Traffic from this category of land use should not feed directly onto local streets in residential areas. • Uses should be generally located away from existing or planned residential areas or at a minimum provide buffers from residential uses. 	<ul style="list-style-type: none"> • Cross access easements should be required to reduce the trips on the arterial street network between uses. • Transitions between light industrial development and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the industrial uses. • Light industrial uses shall emit a minimal amount of noise, odor, waste, and other operational by-products. • The design and exterior surface treatments should reinforce existing development patterns; in newly developing areas design themes should strengthen the overall image of the development consistent with the character of Peculiar
<i>Secondary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria</i>
<ul style="list-style-type: none"> • Office • Retail/Service 	<ul style="list-style-type: none"> • Limited to support of Light Industrial uses (general office and retail/service uses as principle use should be focused in downtown or mixed-use centers); OR • Included as part of an overall campus integrating a number of different employment intensive uses. 	<ul style="list-style-type: none"> • Transitions between commercial development and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the commercial uses.

CATEGORY: Heavy Industrial

Description:

Heavy Industrial and manufacturing uses opportunities and are generally considered the most intensive use of land because of operational impacts or functions. In Peculiar a unique opportunity exists for the creation of an industrial park to attract and grow industry and business. A focus on clean, high-tech uses could still attract uses that would be categorized as heavy industrial for their production needs.

Additionally, heavy industrial uses are typically those uses that are manufacturing, fabrication and production related, such as assembly plants and more intense manufacturing uses and can include grain processing, ethanol production and bio-diesel plants. These uses typically require large land areas and large single story buildings.

Map Code:



Example:



APPROPRIATE LAND USES:

<i>Primary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria</i>
<ul style="list-style-type: none"> • Heavy Industrial / Manufacturing / Processing • Airport • Rail and Support Facilities 	<ul style="list-style-type: none"> • Uses should be located in proximity to support services with good access to major arterials, truck route, belt highways, utility trunk lines, along railroad spurs, near airports, and as extensions of existing industrial uses. • Traffic from this category of land use should not feed directly onto local streets in residential areas. • Uses should be generally located away from existing or planned residential areas or at a minimum provide buffers from residential uses. 	<ul style="list-style-type: none"> • Cross access easements should be required to reduce the trips on the arterial street network between uses. • Transitions between industrial development and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the industrial uses.
<i>Secondary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria</i>
<ul style="list-style-type: none"> • Light Industrial / Warehousing • Office • Retail/Service • Employment Centers 	<ul style="list-style-type: none"> • Limited to support of Industrial uses (general office and retail/service uses as principle use should be focused in downtown or commercial areas); OR • Included as part of an overall campus integrating a number of different employment intensive uses. 	<ul style="list-style-type: none"> • Transitions between light industrial / office / commercial development and less intense adjacent uses and neighborhoods should minimize the impacts of noise, light, traffic, operations and intensity of the uses.

CATEGORY: Public / Quasi-Public

Description:

The **Public / Quasi-public** land use category consists of those institutional land uses including government centers and facilities, educational facilities, and other public or semi-public uses and places like "places of worship", hospitals, schools, libraries and cemeteries. Municipal and public safety uses, including fire and police, are also allowed in this district. New development in this category should be integrated with residential neighborhoods or as part of commercial development at a scale appropriate to the context in which they are developed.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Government Uses
- Medical Facilities
- Schools
- Libraries
- Places of Worship
- Public Safety Facilities (Fire and Police)

Location Criteria

- Public facilities such as branch libraries, post offices, and schools that serve residential areas should be grouped together with neighborhood centers, and located near parks or linear park system when possible.
- Public facilities including libraries, parks, and fire, police and EMS stations should be located according to population as well as distance and response time standards as established in adopted facility plans.
- Public and semi-public facilities should have convenient access to arterials, public transportation, and major utility trunk lines.
- Large scale facilities, including high schools, hospitals, central library, and large worship buildings should be located on arterial street and situated as to discourage traffic in surrounding neighborhoods.

Development Criteria:

- The scale of development should respond to surrounding neighborhood development or provide transitional buffering to reduce visual impact on surrounding properties.
- Transitions between civic and institutional uses and surrounding neighborhoods should minimize the impacts of noise, light, traffic, operations and scale of the use.
- The design of civic and institutional uses should strive to complement and enhance the existing character of surrounding uses and neighborhoods.
- Structures should model appropriate architectural design elements, high quality construction techniques, and appropriate materials and finishes.

CATEGORY: Parks, Recreation & Open Space

Description:

The **Parks, Recreation & Open Space** category includes public parkland, recreational uses and publicly-owned open space. These areas may be used for recreational purposes (active and passive) or may be land held for future public use. Privately held recreational land, like private golf courses, are also included in this category.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Parks (Active and Passive)
- Recreational Uses
- Linear Parks
- Open Space

Location Criteria:

- Should be in proximity to neighborhoods and residential population.
- Park and recreation opportunities should be included in all levels of mixed-use centers.
- Open space should be preserved where natural features, including floodplains and slopes, make development difficult and to protect natural resources.

Development Criteria:

- Neighborhood Parks should be integrated in the neighborhood and provide a focal / gathering point for residents and activities.
- Linear parks should provide connections throughout and between neighborhoods and connections to the overall park system.

CATEGORY: Employment Center

Description:

The **Employment Center** designation refers to a development that will cater to large scale employers, provide numerous office buildings and flexible configurations, and attract high-paying, professional jobs to Peculiar.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- Office Park – Office Parks include small offices and service use enclaves which have similar but lower level intensity uses than a Corporate Campus. These uses generally do not require a high level of visibility or access.
- Corporate Campus – Corporate Campuses feature a mix of office types, including multi-tenant mid-rise offices, single-tenant corporate offices, medical and post-secondary research facilities, and office support services such as retail, restaurants, and hotels. A Corporate Campus is designed around an integrated master plan. Visibility and access are very important.
- Industrial Park – Industrial Parks provide for research and development facilities, light manufacturing, and office/warehouse uses that form the backbone of corporate campus uses. Visibility is important, but excellent access is necessary, especially for large truck traffic. Large distribution centers, warehouses, truck terminals, and outdoor storage are inappropriate in an Industrial Park.

Location Criteria:

- The Employment Center designated area is located along the west side of Interstate 49, north of the future Peculiar Way interchange. The Employment Center designation includes office parks, corporate campuses, and industrial parks.

Development Criteria:

- See commercial land use development criteria and Peculiar Way Corridor Overlay District regulations.

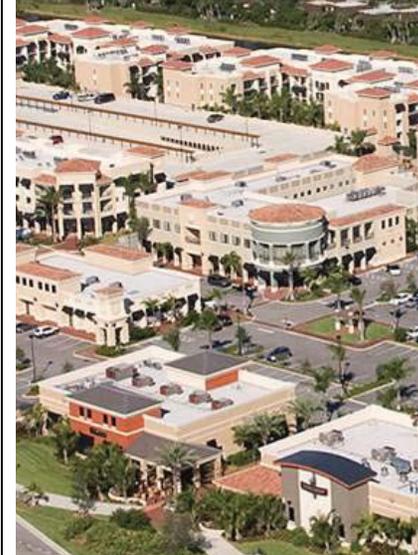
CATEGORY: Destination Retail

Description:
 The **Destination Retail** designation is intended for large-scale retail uses that serve a regional trade area and generate a significant amount of visitors. Examples of destination retail developments in the Kansas City area include Village West and Zona Rosa.

Map Code:



Example:



APPROPRIATE LAND USES:

<i>Primary Uses:</i>	<i>Location Criteria:</i>	<i>Development Criteria:</i>
<ul style="list-style-type: none"> • Large and very large retail establishments • Unique and one-of-a-kind establishments, entertainment venues, and other uses that generate large volumes of traffic • High density residential uses are also appropriate to mix within these developments • Service commercial uses • Smaller retail stores 	<ul style="list-style-type: none"> • Location on a highway due to high vehicle trip generation. • Generally not compatible with low density residential neighborhoods; medium density residential uses should be located at the north end of the Peculiar Way interchange area along the south side of 209th Street and at the east end of the area along School Road. 	<ul style="list-style-type: none"> • See commercial land use development criteria and Peculiar Way Corridor Overlay District regulations. • Sites that are generally larger than 10 acres in size. • The design and exterior surface treatments should reinforce a common theme for the development, one that strengthens the overall image of the development consistent with the character of Peculiar. • Pedestrian scale and orientation will be an important design consideration, maximizing pedestrian access throughout the site. • Large-scale commercial developments should provide a mix of use types, including residential uses above the first floor, where appropriate.

CATEGORY: Regional Industrial Center

Description:

The **Regional Industrial Center** designation is intended to provide for all types of manufacturing, assembly, storage and distribution, and research and development activities in settings ranging from campus-like industrial parks to heavy industrial areas.

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

- All types of manufacturing and processing uses (limited where necessary to ensure compatibility between adjoining land uses)
- Business support services
- Retail and service commercial uses necessary to support manufacturing and processing activities and their employees
- Necessary public utility and safety facilities
- Other similar and compatible uses

Location Criteria:

- Businesses that locate here would benefit from the close proximity of the power generating capability of a KCP&L electrical substation, as well as future improvements to Peculiar Way and an interchange at 71 Highway.

Development Criteria:

- See commercial land use development criteria and Peculiar Way Corridor Overlay District regulations.

CATEGORY: Walkable Retail Center

Description:

The **Walkable Retail Center** designation is intended to provide a local scale, pedestrian friendly commercial center, providing retail, restaurants and services. The proximity of the center to the Raymore / Peculiar School District campus makes it an ideal destination for visitors to the campus. Similarly, it will be a local destination for residents of the north portion of Peculiar.

NEW CATEGORY

Map Code:



Example:



APPROPRIATE LAND USES:

Primary Uses:

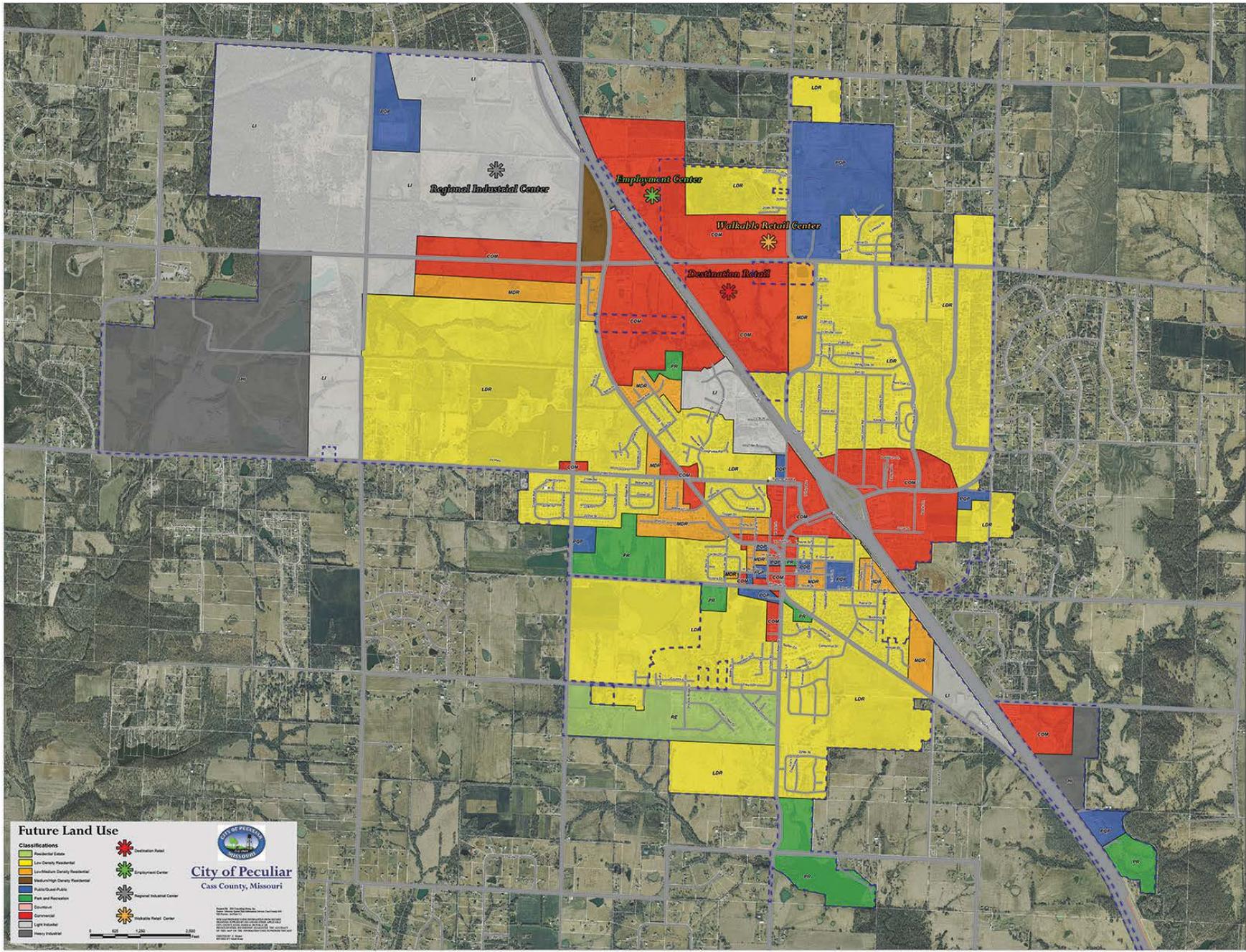
- Retail
- Business support services
- Civic Spaces
- Other similar and compatible uses

Location Criteria:

- Access from a Collector or Arterial roadway.

Development Criteria:

- Smaller, well connected block development pattern.
- Smaller scale development/buildings
- Pedestrian friendly street design



38 Figure 23: Future Land Use Plan

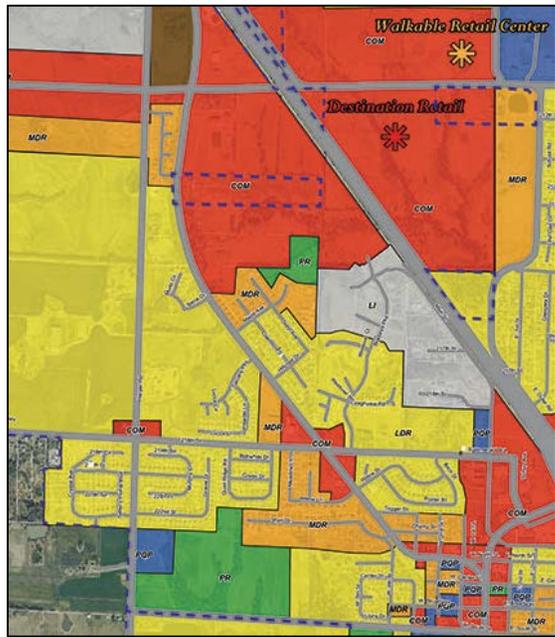


Figure 24: Land Use Pattern, Peculiar Drive

Land Use Changes

Several changes to the Future Land Use Map are recommended to update the Comprehensive Plan. There are specific areas of the community in which change is occurring or likely to occur, and those areas need additional guidance for future development. The areas delineated below

help to define the current and future development patterns of Peculiar through their development use and character. In addition to the updated land use definitions, the guidance provided here will assist in creating places within Peculiar that people value.

Peculiar Drive

Peculiar Drive was once the primary means of access to Peculiar and the Downtown. Since the improvement of US 71 and subsequently I-49, Peculiar Drive has become a secondary means of access for the community and provides local access to downtown. The continued development of commercial uses in downtown, at the Highway C and I-49 interchange and the future commercial development at the new Peculiar Way and I-49 Interchange, as well as the reduced traffic volumes along Peculiar Drive a less desirable location for commercial development. As such, the future land use of the Peculiar Drive roadway, Figure 24, north of Downtown Peculiar should be residential with a node of commercial development located at the YY Highway (219th Street) intersection. Commercial development at this node should be neighborhood in scale and provide supporting

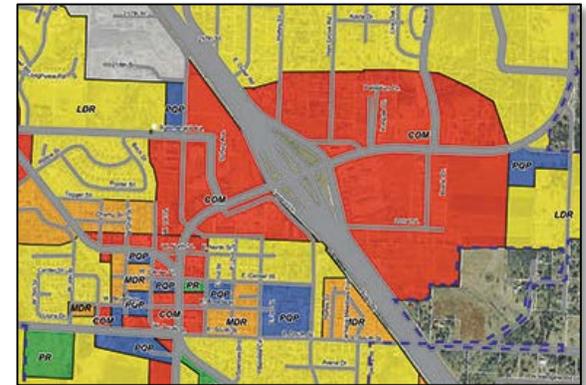


Figure 25: Land Use Pattern, Highway C

services to meet the daily needs of residents. The reconfiguration of Peculiar Drive, discussed in the transportation section of the updates, will support such a change in land use and change the character of the area.

Highway C

The continued development of Highway C with commercial uses is recommended. However, the development pattern established along Highway C, Figure 25, needs to respond to and be supported by the improved and consolidated access to the adjacent properties proposed in the transportation recommendations. The City of Peculiar and the Missouri Department of Transportation (MODOT) are currently studying improvement of the access and connectivity of that section of Highway C. An improved transportation network and commercial development pattern with provide improved access to the community and Downtown as well

as visually support Highway C as a gateway to Peculiar.

Bradley Crossing

The new certified site industrial area, west of the new Peculiar Way interchange will provide the necessary land and incentives to bring larger manufacturing and production facilities, and jobs, to Peculiar. However, to diversify the local economy and jobs base, smaller, potentially more specialized industrial uses will need space in Peculiar. The current industrial uses and the lie north on J Highway west of I-49, at the south end of Bradley Crossing should continue to de development in a smaller scaled industrial use manner and expanded north to occupy all of Bradley Crossing. This represents a change in the land use designation of the northern part of Bradley Crossing from commercial” to “industrial.” (Figure 26) This change is also warranted by the focus on future commercial development at the 21th Street Interchange and Downtown Peculiar.

Peculiar Way

- Interchange – The land use pattern in conjunction with the new Peculiar Way

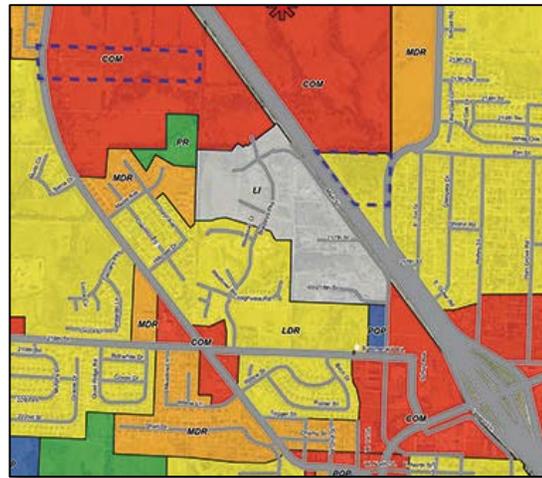


Figure 26: Land Use Pattern: Bradley Crossing

Interchange, Figure 27, will be realigned from the pattern promoted by the current plan. The past land use pattern proposed was based on the anticipated rapid growth of the community and providing a regional destination for commercial services. The area adjacent to the interchange, in all four quadrants, will focus on commercial development that provides goods and service to the community and region as well as jobs to the local economy.

The land use patterns for the Peculiar Way interchange will be:

- o Southeast Quadrant – The primary focus of this area will be destination retail that will serve the community and the region. This area will focus on the provision of goods and services as well as providing an expanded job based for the community, in the service sector.
- o Northeast Quadrant – The primary focus of development in this quadrant will be the establishment of an employment center for jobs in Peculiar. This area will also be home to a smaller scale, walkable retail center. Because of the adjacency to residential neighborhoods, and the Raymore-Peculiar School district complex to the east, this area is a good location to connect to the surrounding residents as well as capture visitors to the community drawn by school district activities.
 - o Northwest Quadrant – The focus of this area will be office and industrial uses created and expanded job and economic based for Peculiar. The designation of much of this area, west of Harper

Road, as a State of Missouri Certified Industrial site provides broader awareness of the area for future development. The attraction of high-tech, specialized manufacturing will elevate the quality jobs in the community and provide additional resources. Immediately adjacent to the highway commercial, particularly office uses are most appropriate to create a strong jobs base in the community. A final piece of medium to high-density residential, proposed by the previous plan, is appropriate to provide housing opportunities in proximity to jobs and services in the northern part of Peculiar.

- o Southwest Quadrant – The focus of this area is on establishing a regional employment and office location that can attract jobs to Peculiar and support industrial development to the north.

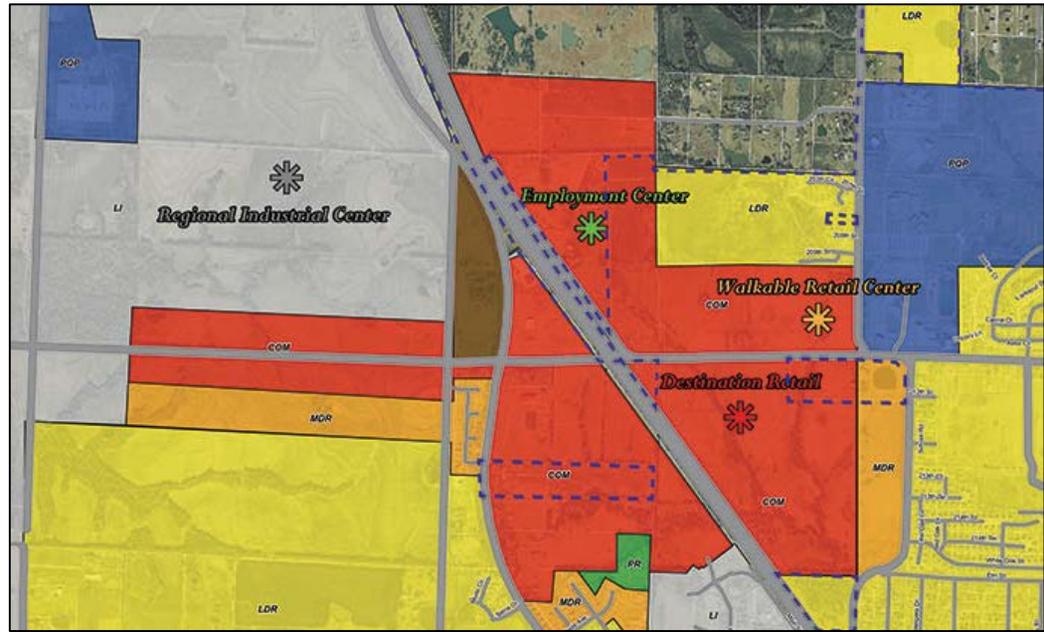


Figure 27: Land Use Pattern, Peculiar Way Corridor

- Peculiar Way Corridor (west) - A significant change from the previous planning effort designates the Peculiar Way Corridor, specifically west of Harper Road from commercial uses to medium/high density residential development, to support a nodal pattern of commercial development along that corridor. Future development of residential along that corridor should be buffered from the surrounding commercial and industrial uses, to provide a higher-density residential neighborhood for people to live in proximity to jobs and services. Future commercial nodes could be established, as Peculiar Way is extended to the west, at an extend Knight Road, and/or further to the west at an extended Mullen Road or Y Highway.
 - o Northwest Industrial Area – The construction of the 211st Interchange at I-49 will provide the access necessary for the future growth and development of the Peculiar to the north. This improvement will also support the development of future industrial land uses in the northwest quadrant of the community. An area of significant size will be designated for the future development of industrial use with a

focus on high-tech and specialized manufacturing and supported by warehousing and offices uses. The process is underway to have this area designated as a State of Missouri Certified Industrial site. The certification will afford development professional and perspective businesses to review sites within Missouri, and consistent information for various sites, for compatibility with their needs. The certification will also provide a statewide level of visibility for the development site and Peculiar as an industrial development location.

- significant population within 1 to 2 miles proximity,
- easy accessibility and well connected by all modes of transportation, most importantly walking and bicycling,
- a sizeable area of land , 20 to 30 acres, and
- a diversity of both passive and active recreational areas and uses.

The provision of parkland and recreational space, to residents and visitors, is an important element of the Peculiar community and should be a priority to support future growth and development.

Parkland

The future growth of Peculiar will necessitate the addition of parkland in the community to provide recreation space and amenities for residents. While not specifically identified on the land use map, parkland should be incorporated into, or accessible to, future development as well as a location for a future community scaled park identified. An ideal location for a community park would include:

APPENDIX

Street Sections

Each cross-section is defined by the color blocks indicating the various components of the street. Within each color block are numerical values representing the width, or range of acceptable width, of each component, measured in linear feet. Figure 28 illustrates the legend used to understand the typical sections that are provided on the following pages.

- Green = pedestrian/ amenity/ utility zone,
- Orange = sidewalks
- Light gray = curb and gutter
- Purple = parking lanes
- Blue = bike lanes
- Black to White Gradient = shared lanes (where bicyclists and vehicles share the lane)
- Asphalt gray = through vehicular lanes
- Brown = left turn lane
- Brown with Gray Outline = raised median

The Character Area context, as defined in the plan, is listed to the right of the section component.

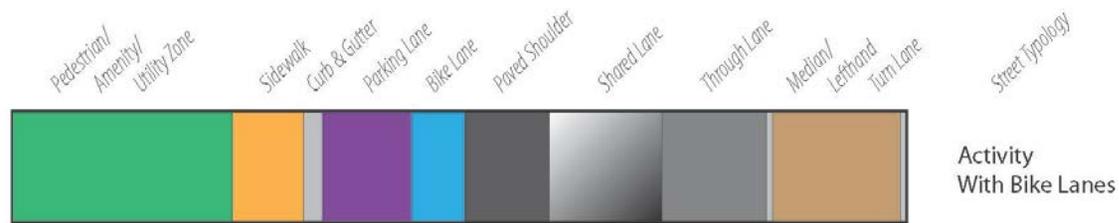
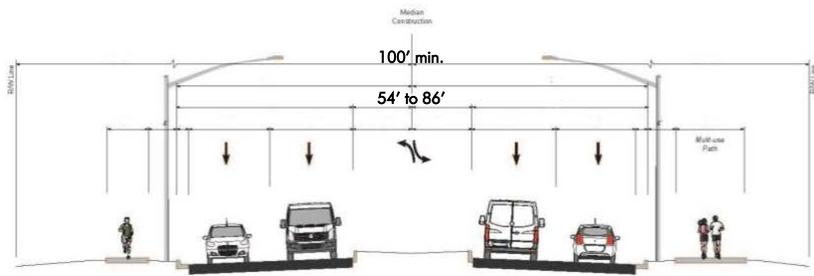


Figure 28: Street Section Legend

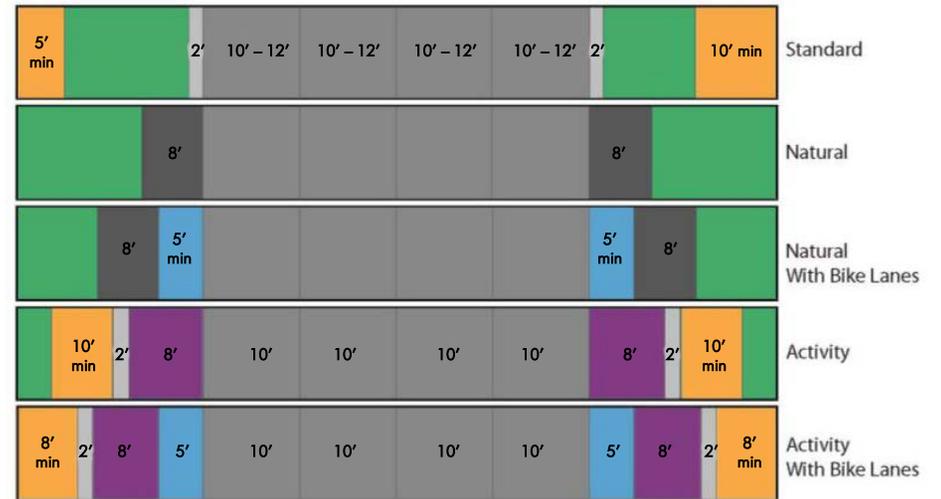
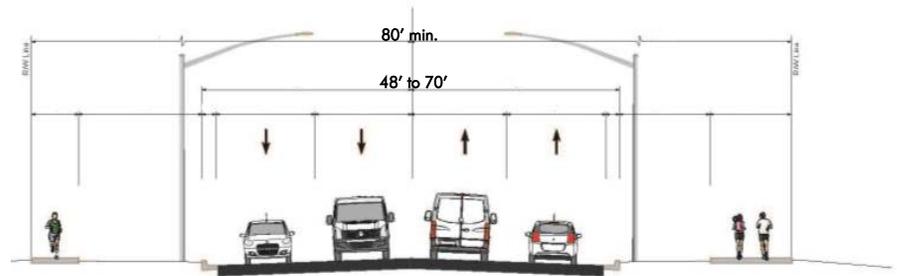
Arterials

Arterial roadways are streets with continuity throughout the city and connect to a larger region, connecting freeways to traffic generators. They are designed for significant volumes of traffic over long distances and often include truck traffic. The illustrations provided demonstrate potential cross-sections for Major and Minor Arterial roadways.

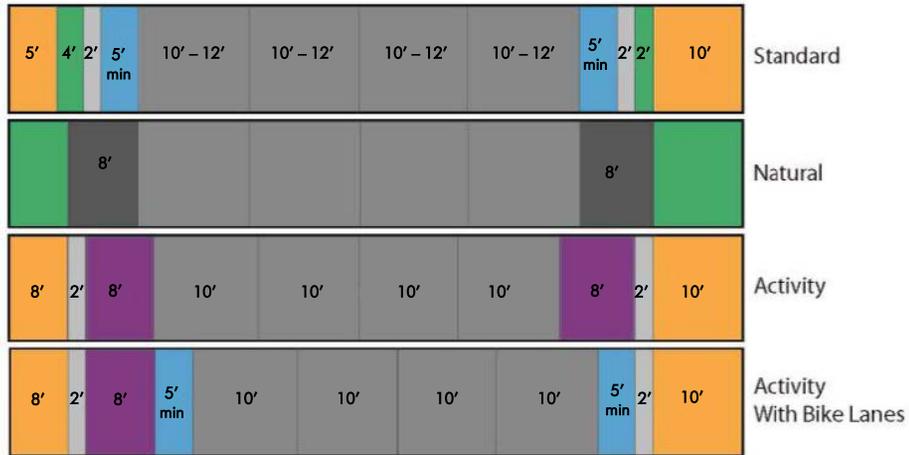
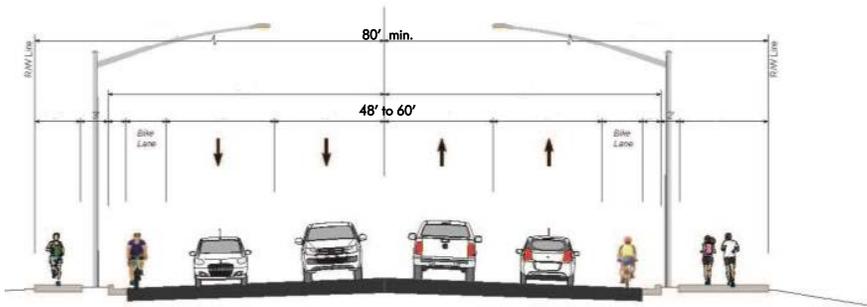
5 Lane Major Arterial



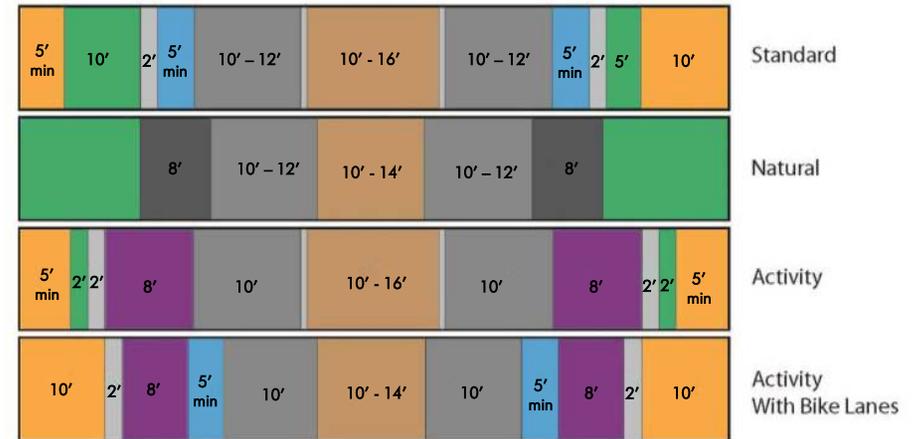
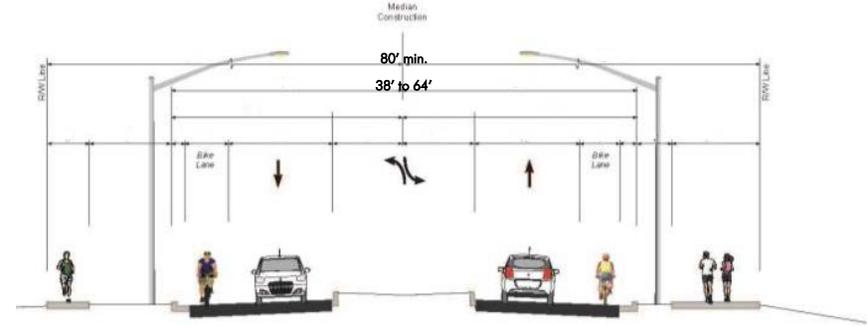
4 Lane Major Arterial



4 Lane Minor Arterial



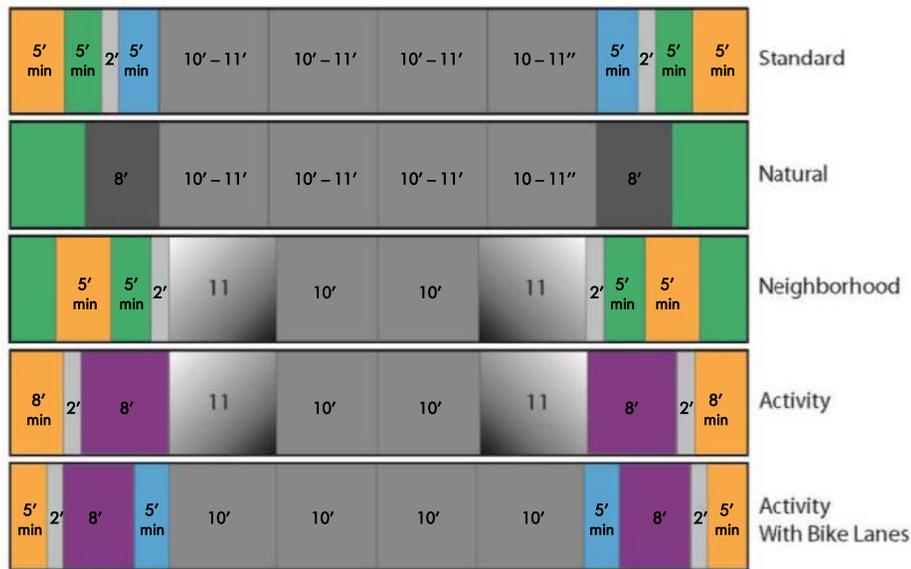
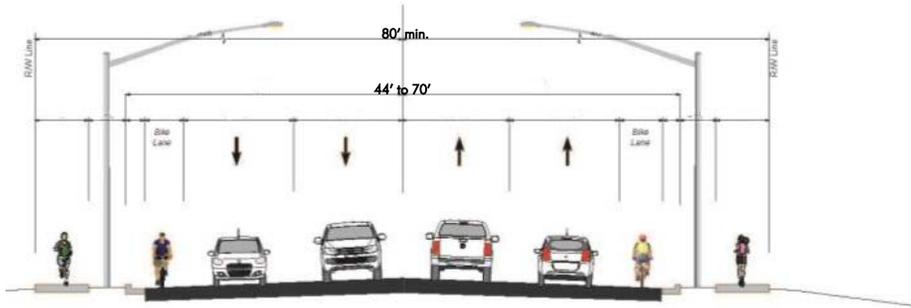
3 Lane Minor Arterial



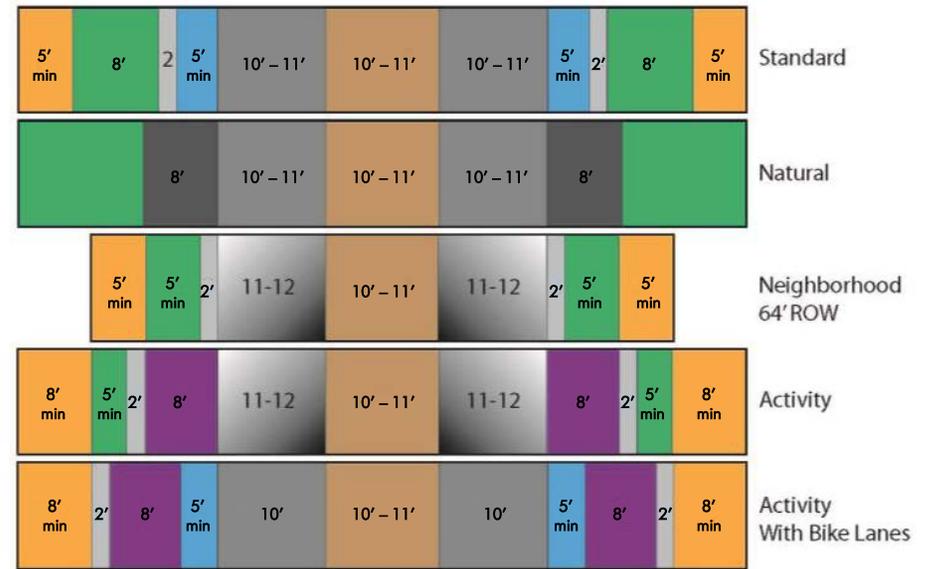
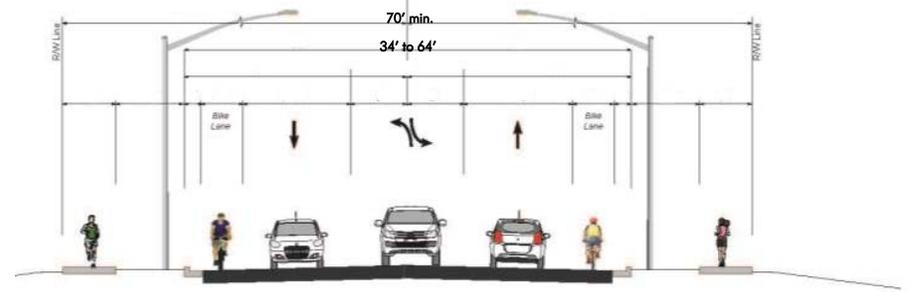
Collector

There are two categories of Collector streets. Major Collectors are streets designed for moderate traffic volumes and typically cover a considerable distance across a community. Minor Collectors are streets designed for moderate traffic volumes that typically cover a smaller distance. The illustrations provided demonstrate potential cross-sections for Major and Minor Collector roadways.

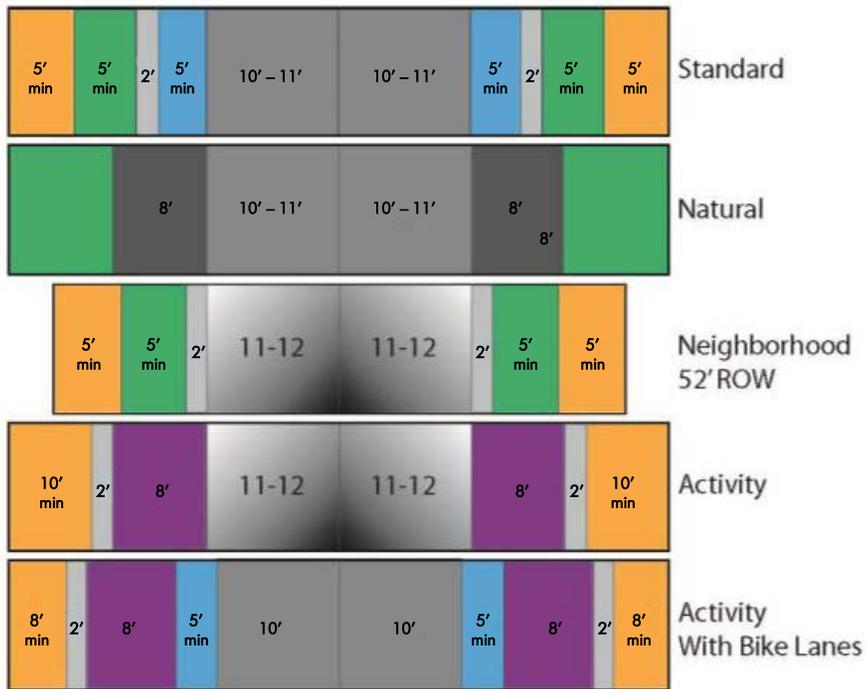
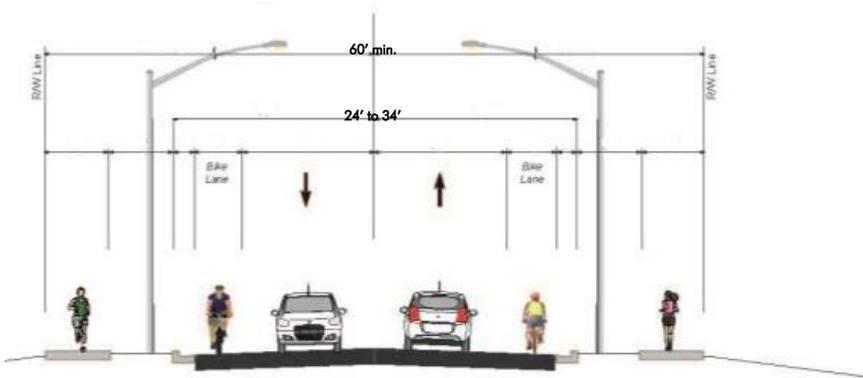
4 Lane Major Collector



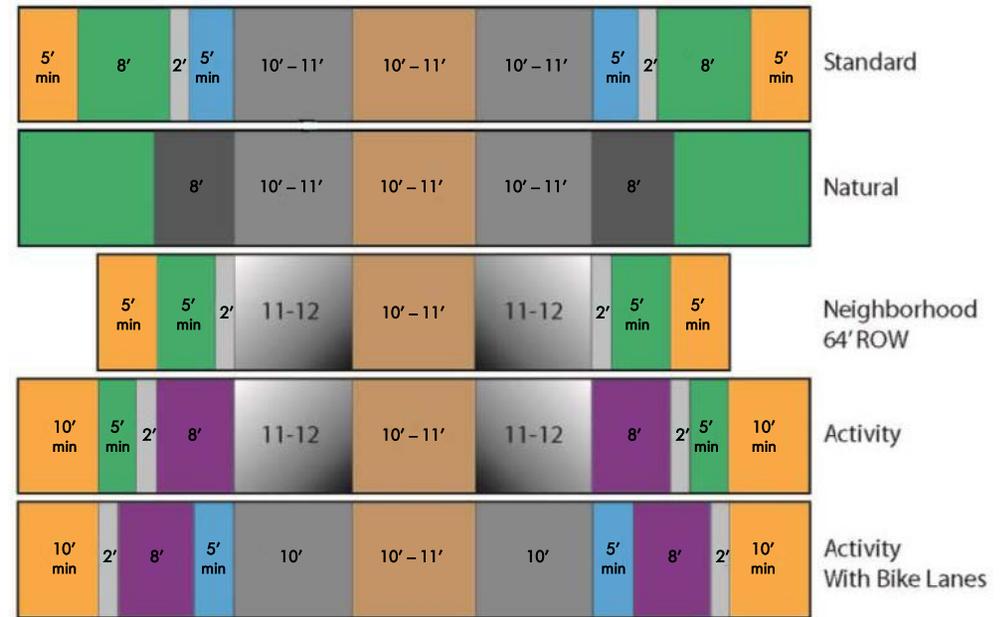
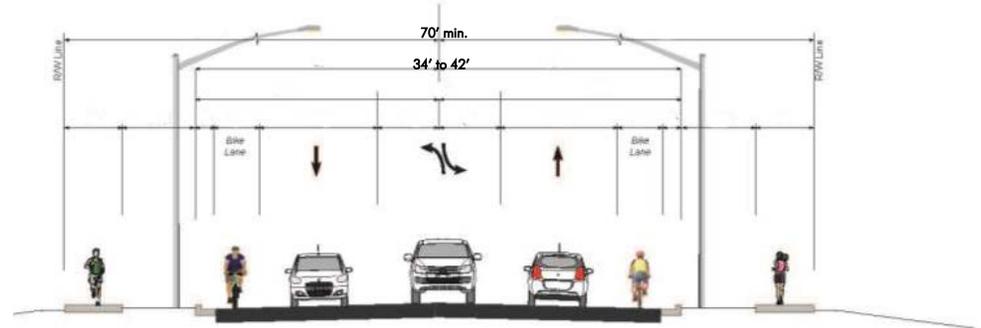
3 Lane Major Collector



2 Lane Major Collector



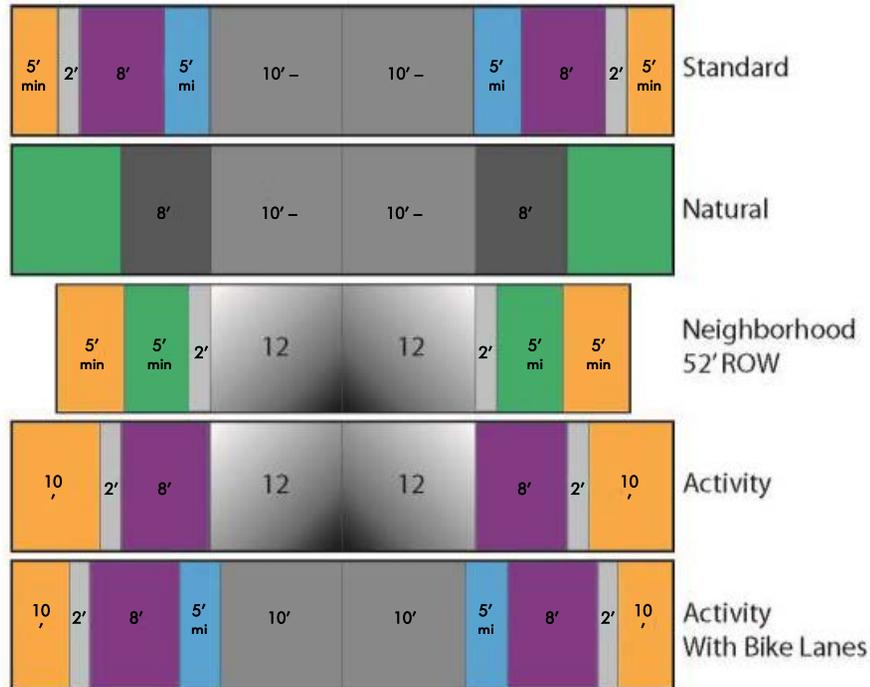
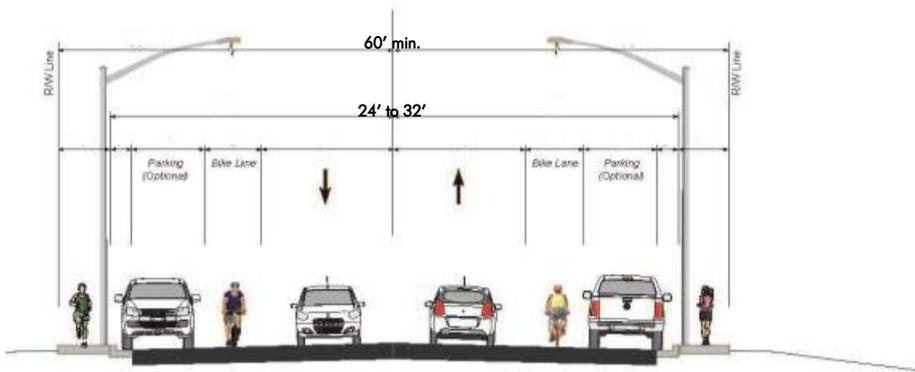
3 Lane Minor Collector



Local

Local streets are intended to cover short distances. They often have high connectivity and are design for low traffic speeds and volumes. The illustration provided demonstrates a variety of configurations for Local street cross sections.

2 Lane Minor Collector



2 Lane Local

