PLAN CLAYTON

COMPREHENSIVE LAND USE PLAN

IMPLEMENTATION PLAN

Legacy | People | Context | Vision

CITY OF CLAYTON IMPLEMENTATION PLAN

This Implementation Plan serves as a guideline for execution of the City of Clayton Comprehensive Land Use Plan. The Plan itself describes the Vision, Goals, and Objectives for future development; the Implementation Plan provides specific projects to move forward with.

The implementation is ordered by the Comprehensive Plan goals: Walkable Neighborhoods, Central Cores, Connected Parks, and Great Streets and Infrastructure. Each goal has short, mid, and long-term projects identified. In general, the time line for the projects is based on:

Short-term: 1 – 7 years
Mid-term: 7 – 15 years
Long-term: 15 + years

The implementation plan is a snapshot in time—the City will continually update it as resources and priorities change.

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Goal			Project	Justification/Description	Implementation Priority	Action Steps	Challenges	Entity Responsible
Walkable Neighborhoods	**I**	**1**	**Sidewalk Improvement Plan**	To support safe, convenient, and comfortable walking in Clayton neighborhoods, create an Improvement Plan to ensure all existing streets in Clayton have sidewalks and that there is a connected sidewalk system so pedestrians do not have to cross streets or unpaved areas to get to a sidewalk. Use the Existing Sidewalk, Bikeway and Bus Plan, found in the Goal IV section as a basis. ・Prioritize sidewalk upgrade projects into a 5 - 10 year plan	Short-Term	1. Determine and secure funds to complete a Sidewalk Improvement Plan. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service
Walkable Neighborhoods	**I**	**2**	**Parking Lot Improvement Plan**	To support safe and convenient walking in neighborhoods, identify commercial areas in which parking can be adjusted to the side or rear of buildings, following the Main Street Overlay defined in Clayton Codified Ordinance Chapter 1172. ・Prioritize upgrade projects into a 5 - 10 year plan	Short-Term	1. Determine and secure funds to complete a Parking Lot Improvement Plan. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Engineering
Walkable Neighborhoods	**I**	**3**	**Landscape Study**	Identify what kind of street trees or low maintenance landscape materials are appropriate for public areas of the city, and where street trees and landscape projects would most benefit the city. ・Prioritize upgrade projects into a 5 - 10 year plan	Short-Term	1. Determine and secure funds needed to perform Landscape Study. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Service
Walkable Neighborhoods	**I**	**4**	**Signage/Focal Point Study**	To support wayfinding and convenient and comfortable walking environments, identify areas in the city that lack distinct identity and could benefit from additional signage or focal points. ・Prioritize upgrade projects into a 5 - 10 year plan	Short-Term	1. Determine and secure funds needed to perform Signage/Focal Point Study. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Service
Walkable Neighborhoods	**I**	**5**	**Garber Road Upgrade**	To increase walkability, add sidewalks to east side of ROW.	Short-Term	1. Develop street section to accommodate sidewalks with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service
Walkable Neighborhoods	**I**	**6**	**Wenger Road Upgrade (Diamond Mill Road to Murray Street)**	To increase walkability, provide sidewalks and landscaped easements following ROW details from Table 9a in the Clayton Transportation Analysis, page 24.	Short-Term	1. Develop street section to accommodate sidewalks with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service

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Walkable Neighborhoods	**I**	**7**	**Neighborhood Development: Walkability**	As future neighborhoods are developed, require inclusion of features that make walking safe: ・ Planting strips with trees between sidewalks and streets as a buffer between cars and pedestrians ・ Crosswalks curb-cuts that are in line with sidewalks, not encompassing the entire corner ・ Alleys for access to garages and services ・ Parks with homes facing them to assist in crime prevention	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering Park
Walkable Neighborhoods	**I**	**8**	**Neighborhood Development: Convenient Routes**	As future neighborhoods are developed, require inclusion of features that create convenient routes: ・On-street parking or parking to the rear of neighborhood businesses so pedestrians do not have to cross parking lots ・Sidewalks on both sides of the streets ・Connected sidewalks systems so pedestrians do not have to cross streets or unpaved areas to walk on a sidewalk ・Focal Points at ends of axis, corners, or centers of parks to assist in wayfinding ・Signage to identify distinct neighborhood in a walking area	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering
Walkable Neighborhoods	**I**	**9**	**Revitalize Older Neighborhoods**	To support neighborhood stabilization and revitalization, take actions to address aging housing stock. By using active code enforcement, remove or improve neighborhood blights. ・Based on "worst first", prioritize housing upgrade and demolition projects into a 5 - 10 year plan.	Short-Term	1. Identify houses to be upgraded or demolished. 2. Create a by-neighborhood implementation plan and timeline. 3. Determine and secure funding.	1. Identifying owners and coordinating their plans with the Comprehensive Plan. 2. Securing grants and funds. 3. Determining method of execution.	Planning Service

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Walkable Neighborhoods	**I**	**10**	**Neighborhood Development: Comfortable Environments**	As future neighborhoods are developed, require inclusion of housing features that create comfortable public environments: ・Porches on all new homes, at least six feet deep and above street level ・Parks and open spaces--parks should be within a five to ten minute walk from every home ・Install underground power and telecommunications lines	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering
Walkable Neighborhoods	**I**	**11**	**National Road Upgrade**	To increase walkability, continue the 11 feet wide multi-modal path on the south side with landscaped easements.	Mid-Term	1. Determine and secure funds. 2. Create an implementation timeline. 3. Secure landscape easements.	1. Securing grants and funds. 2. Acquire easements. 3. Relocate utilities.	Planning Service
Walkable Neighborhoods	**I**	**12**	**Neighborhood Development: Patio Homes**	A percentage, to be identified, of future homes can be "patio homes", with one or two levels and lower level porches. In these homes, the porch will be minimally elevated above ground level, accessible with steps, ramp, or interior access with no steps. Patio homes should not face public parks.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Engineering

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Central Cores	**II**	**1**	**Provide Street Furniture on Main Street**	Creating cores along Main Street will begin with creating places for people to gather. Using the Main Street Overlay and Cores map in Plan Clayton, focus on cores with more expected future growth to provide benches, tables, etc. that will create these places.	Short-Term	1. Develop implementation plan; Street Furniture should be installed in completed improved sections of Main St. 2. Determine and secure funding sources. 3. Develop maintenance plan.	1. Securing grants and funds. 2. Maintenance of furniture.	Planning Service Parks
Central Cores	**II**	**2**	**Wayfinding**	In the city cores, ensure adequate wayfinding. Wayfinding refers to the ability to the ability to easily navigate one's path from one location to another via signs, maps, focal points or other means.	Short-Term	1. Preform analysis and develop implementation plan. 2. Determine and procure funding sources. 3. Develop maintenance plan.	1. Securing grants and funds.	Planning Service Parks
Central Cores	**II**	**3**	**Main Street Central Cores**	Continue to pursue development along Main Street, focusing incrementally on the nodes identified in Plan Clayton. ・Work with the Montgomery County Land Bank, and Community Development Block Grant Program ・Follow the Main Street Overlay defined in Clayton Codified Ordinance Chapter 1172	Short-Term	1. Finding suitable end users. 2. Securing funds to acquire and demolish unsecure structures.	1. Securing grants and funds.	Planning
Central Cores	**II**	**4**	**Central Cores: Enhance Existing Residential City Cores**	Within existing development, create new and enhance existing residential cores: ・Provide small playgrounds/pocket parks within 10 minute walk of all homes ・Create clear park entrances with appropriate signage	Short-Term	1. Develop and implement design standards. 2. Incorporate standards into zoning code standards.		Planning Park
Central Cores	**II**	**5**	**Central Cores: Lively Central Cores**	For all future development, require Central Cores that include: ・Street Furniture ・Outdoor seating for all restaurants and cafes ・Required entry zones for buildings that focus on central cores	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.		Planning Service Engineering

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Central Cores	**II**	**6**	**Create Central Cores: Future Residential City Cores**	For all future development, require Central Cores that include: ・Mixedc use buildings ・Outdoor seating for all restaurants and cafes ・Onc street parking ・Parks/openspaces appropriate for multiple age ranges within a 10-minute walk of all homes ・Required entry zones for buildings that focus on parks and open areas ・Clear park entrances, bike and pedestrian connections, and signage	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering
Central Cores	**II**	**7**	**Create Focal Points**	To support lively Central Cores, create focal points identified in the Signage/Focal Point Study. Focal points can be highlighted by landscape features, statues, public art, water features, etc.	Mid-Term	1. Develop and implement design standards. 2. Determine maintenance responsibilities 3. Incorporate standards into zoning code standards.	1. Securing grants and funds. 2. Secure any required easements. 3. Determine maintenance responsibilities.	Planning Park
Central Cores	**II**	**8**	**Main Street Central Cores Future Development**	As part of Main Street development: ・Use exploration of central cores included on the Main Street Central Core Plan as a guide to use building form, street layout, and open space to develop cores along with mixed-use development	Mid-Term			

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Connected Parks	**III**	**1**	**Park Policy**	Develop a policy that promotes parks and green space in relationship to future planned development projects.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering
Connected Parks	**III**	**2**	**Northview Park Swing Replacement and Additions**	In the Master Plan Parks and Recreation (2011) document, the 3-position swing set that is located on site is listed as "fair". By replacing this set and adding an additional 3-position set the park will offer safer and excellent quality swings.	Short-Term	1. Determine and secure funding.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**3**	**Northview Park Bench Installation Along Walking Paths**	By installing benches along the walking path in Northview Park, it will be made more comfortable for all users-- users that are differently-abled, a variety of ages, and looking for a place to relax.	Short-Term	1. Determine and secure funding.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**4**	**Northview Park Address ADA Requirements**	Currently, the walking path at Northview Park is crumbling in places and should be replaced to be a smooth surface. Additionally, the parking lot should be upgraded to include ADA parking.	Short-Term	1. Determine and secure funding.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**5**	**Northview Park Landscape Enhancements**	The current landscaping at Northview is in need of maintenance and replanting. Community members have suggested projects such as removing the Ash Tree stumps, planting new trees, and organizing volunteers to plant low-maintenance perennials at both entrances of the park.	Short-Term	1. Determine and secure funding.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**6**	**Replace Park Signage at Northview, Westbrook, and Hardscrabble Parks**	Park signage at all parks is not highly visible. Work with objectives within the transportation plan to formulate a consistent brand for City of Clayton Parks. At Hardscrabble Park, add an additional sign at the Wenger Road entrance.	Short-Term	1. Determine and secure funding. 2. Develop 'brand' for Clayton Parks.	1. Securing grants and funds. 2. Determine if brand development is completed internally or by consultant.	Park Service
Connected Parks	**III**	**7**	**Westbrook Park Disc Golf Fly Pads**	Establish fly pads to support disc golf. Fly pads add support and grip to people who are throwing their discs.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service

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Connected Parks	**III**	**8**	**Westbrook Park Pedestrian Lighting**	Install pedestrian lighting along the walking path to increase visibility as well as safety within the park. Responses to the Draft Report requested the installation of floodlighting at the shelter, but pedestrian lighting should be enough to deter vandalism and illicit activities.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**9**	**Westbrook Park Bike Rack**	By installing a bike rack at this location, users of the new trail system will be better able to travel to and from the park and its amenities.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**10**	**Install Trash and Animal Waste Receptacles**	All parks should have sturdy waste receptacles and "waste stations" for dog walkers to cut down on maintenance activities such as trash collection.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**11**	**Hardscrabble Park Picnicking Upgrades**	Installing a grill, additional park benches, and picnic tables will make spending time at Hardscrabble more appealing and will better accommodate larger groups of people, enlivening the park.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**12**	**Hardscrabble Park Installation of Horseshoe Pits**	Diversifying Hardscrabble Park's activities makes the park more appealing to a variety of Clayton's residents.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**13**	**Hardscrabble Park Bike Rack Upgrades**	By removing the current bike rack and installing two new bike racks, Hardscrabble Park will be more accessible to bicyclists and will be even more advantageous when adding new bikeways linking Clayton's parks.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**14**	**Hardscrabble Park Storage Building Upgrades**	Hardscrabble Park's current storage building is in poor repair, making it easy to break into. The building should be repaired or replaced.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**15**	**Hardscrabble Park Restroom Building Upgrades**	The current restroom facility at Hardscrabble Park is in need of upgrades. By updating the facility, it will be more comfortable for people to use.	Short-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**16**	**Future Parks and Open Spaces**	To carry on the goal of connected parks within Clayton, in all future neighborhood development, require park layout to follow the regulating plan, be within 1/4 mile or 5-minute walk from all residences, and achieve NPRA National Park Acreage Service Level Goals.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Determine if project is completed internally or by consultant.	Planning Service Engineering

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Connected Parks	**III**	**17**	**Old Salem Loop Bikeway**	Linking Old Salem Road with Northview Park and Westbrook Park to Main Street, Old Salem Road Loop provides safe ways for bicyclists and pedestrians to share roadways with cars.	Mid-Term	1. Develop street section to accommodate bike path with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service Park
Connected Parks	**III**	**18**	**Northview Park Path Upgrades**	Replace the walking path and extend it around the perimeter of the park, mark distances to encourage pedestrians and fitness.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**19**	**Northview and Westbrook Parks Volleyball Installation Exploration**	The City of Clayton is deficient in volleyball courts according to the NRPA's standards (1 court per 5,000 community members, which roughly translates to a 1/4 to 1/2 mile service radius). These two parks are good candidates for Volleyball Courts.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**20**	**Westbrook Park Parking Improvements**	Westbrook Park currently has a small parking lot. Increasing the parking lot size to accommodate more cars for people who are visiting the Disc Golf Course as well as the Tennis Courts will improve the overall experience. Additionally, replacing the existing bollards with new ones will help improve park safety. When making parking lot improvements, universal accessibility should be accommodated.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**21**	**Hardscrabble Park Baseball Diamond Improvements**	Currently, Hardscrabble Park's baseball diamonds are in need of upgrades. Improvements include establishing foul ball netting above the home plate at the ball diamonds, the addition of more bleachers, batting, and bullpen cages, replacing the ball diamond fencing, installing drainage tiles and backfill to facilitate proper drainage of the fields, installing ball field lighting, building a bat house, installing a announcing system, and replacing the dugouts. Hardscrabble Park's historic identity as the little league park in town will be strengthened by making these updates.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**22**	**Hardscrabble Park Replace Pedestrian Bridges**	Hardscrabble Park's pedestrian bridges are in fair condition but need replacement.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**23**	**Hardscrabble Park Parking Lot Updates**	Hardscrabble park needs new bollards surrounding the parking lot to lower the risk of cars driving into the park.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service

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Connected Parks	**III**	**24**	**Installation of Badminton Courts in New Parks**	Currently, the City of Clayton is deficient in the NRPA Recommendation's for one badminton court per 5,000 people. Clayton currently has no badminton courts but, per NRPA, requires two.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**25**	**Installation of a Splash Pad in New Parks**	While many people expressed in the survey that it is important to re-dig the hole at Meadowbrook for a pool, it is more economically feasible to install splash pads for community use in areas that are underserved.	Mid-Term	1. Determine and secure funding. 2. Develop maintenance plan.	1. Securing grants and funds.	Park Service
Connected Parks	**III**	**26**	**MetroPark Connector Path**	A paved path that comes off of the intersection of Main Street and Old Salem Road links into the MetroPark trails that run along the Stillwater River.	Mid-Term	1. Develop street section to accommodate bike path with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service Park
Connected Parks	**III**	**27**	**Wolf Creek Trail**	Wolf Creek Trail begins as a bikeway much like Old Salem Loop, but runs west along Old Salem Road to Kimmel Road using public-right-of-way. The bikeway then turns into a trail that runs along the floodplain and riparian zone at Wolf Creek and property owners are worked with to acquire land that is at-risk for flooding, finally linking into Hardscrabble Park.	Mid-Term	1. Develop street section to accommodate bike path with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service Park
Connected Parks	**III**	**28**	**New Town Center Bikeways**	All of the new development that is proposed in this plan is designed with a street grid that incorporates sidewalks and bikeways, connecting into the YMCA/Northmont Trail and Englewood. A feature of this plan is the wide park boulevard that runs down the spine of the new component of the community, providing a buffered bike and pedestrian path from car traffic. If further development occurs, it will run North along Haber Road, and then cut across Wenger Village, linking into East Park.	Long-Term	1. Develop street section to accommodate bike path with the least challenges. 2. Determine and secure funds needed.	1. Securing grants and funds. 2. Acquire sufficient right-of-way. 3. Relocate utilities.	Planning Service Park

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Great Streets and Infrastructure	**IV**	**1**	**Continue Phase II and III of Main Upgrade**	Upgrades to Main Street were designed in three phases. They include curbs, planting strips with street trees, and street lights. Phase one was funded and completed, extending approximately from Old Salem Road to Woolery Lane. Pursue funding for Phase II and III.	Short-Term	1. Determine and secure funds to complete plan. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service
Great Streets and Infrastructure	**IV**	**2**	**Upgrade Existing Neighborhood Streets**	Provide street lighting in existing neighborhoods, and sidewalks or trails on at least one side of the street. Street lighting should be at a pedestrian scale, at a concentration to provide safety for pedestrians and cyclists. Sidewalks should be a minimum of 4 feet wide, and trails, which accommodate pedestrians and cyclists, should be a minimum of 10 feet wide. Both should include a green/grass buffer from the street.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**3**	**Green Infrastructure Study**	A green infrastructure study will provide innovative solutions for stormwater management in Clayton that can be incorporated into all future development, in order to reduce reliance on engineered systems that can be costly to install and maintain. Consider permeable paving surfaces, bioswales, rain gardens, etc. Liaison with Montgomery County Environmental Services (MCES) to analyze opportunities and execution plans.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**4**	**Hoke Road Upgrade (I-70 to National Road)**	In order to ease traffic challenges and backups, add sidewalks and a landscaped easement, using ROW details from Table 3 in Clayton Transportation Analysis, page 20.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**5**	**Hoke Road Upgrade (Westbrook Road to Salem Road)**	In order to ease traffic challenges and backups, add paved shoulders, sidewalks and a landscaped easement, using ROW details from Table 3 in Clayton Transportation Analysis, page 20.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service Engineering

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Great Streets and Infrastructure	**IV**	**6**	**Old Salem Road Upgrade**	To improve traffic on this predominantly residential street, it should remain two lanes, with dedicated turn lanes at Kinsey Road and Dominican Drive. Widen the roadway to allow for an on-street buffered bike lane, connecting much of the southeast side of Clayton to the proposed MVPC bikeway along Union Road. In addition, extend sidewalks and curbing the entire length of the road. Follow ROW details from Table 4 in Clayton Transportation Analysis, page 21.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**7**	**SR 49 (Salem Ave) Improvements**	Ensure access to future development sits are planned to take advantage of exiting access points, particularly those that are or could become signalized.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**8**	**SR 49 (Salem Ave) Improvements**	To promote safe and efficient travel corridor, especially for individual residential properties , establish an access management plan to identify and plan for future access points, frontage or circulator roadways, and the possibility for joint-use drives or driveway consolidation.	Short-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition. 3. Maintenance of access areas.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**9**	**SR 49 (Salem Ave) Improvements**	Provide a green buffer between SR49 and future industrial sites, which can be specified through building setbacks on private property rather than via easements or right-of-way acquisitions.	Short-Term			
Great Streets and Infrastructure	**IV**	**10**	**Access Management**	Include access management study during any roadway design or redevelopment on major roads throughout the city.	Short-Term	1. Determine and secure funds to complete a Access Management Plan. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**11**	**Signage**	Continue replace existing signage during road, park, community area upgrades using the Clayton "sunshine" brand.	Short-Term		1. Continued Maintenance	Service

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Great Streets and Infrastructure	**IV**	**12**	**Continue Phase II and III of Main Street Upgrade**	Coordinate Phase II and III of Main Street Upgrade with "road diet" projects, using ROW details from the Comprehensive Plan and Table 1b in Clayton Transportation Analysis, page 16.	Mid-Term	1. Determine and secure funds to complete a Main Street Upgrades. 2. Create an implementation timeline.	1. Securing grants and funds. 2. Determine if project is completed internally or by consultant.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**13**	**Extend Sanitary Sewer Lines**	To support the City of Clayton, extend sanitary sewer lines to existing areas that are currently on septic systems.	Mid-Term	1. Create an implementation timeline.	1. Securing grants and funds. 2. Right-of-way acquisition.	Service Engineering
Great Streets and Infrastructure	**IV**	**14**	**Innovative Stormwater Management Systems**	When repairing or replacing existing stormwater management systems such as drains and culverts, consider replacing with innovative stormwater management systems, such as permeable paving surfaces, rain gardens, wetland restoration, and rain gardens. Liaison with Montgomery County Environmental Services (MCES) to analyze opportunities and execution plans.	Mid-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**15**	**Replace Above-Ground Utilities with Underground**	During street or other infrastructure projects, pursue burying existing overhead power and telecommunications lines.	Mid-Term	1. Create an implementation timeline.	1. Securing grants and funds. 2. Potential right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**16**	**Extend Bus Route 34 north on Haber Road with a stop at the proposed Warner Village, increase service span/and or service frequency of Routes 34 and 40.**	With increased density and residential development on the north side of Clayton, in addition to increased industrial activity, bus usage will likely increase.	Long-Term	1. Create an implementation timeline.		Planning
Great Streets and Infrastructure	**IV**	**17**	**Haber Road Upgrade (National Road to Phillipsburg-Union Road)**	To support new development in the central and northern parts of Clayton, add sidewalks, landscaped easement, and center turn lane/landscaped median, following the ROW details from Table 5a in the Clayton Transportation Analysis, page 21.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Potential right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**18**	**Haber Road Upgrade (Phillipsburg-Union Road to County Line Road)**	To improve safety on this two-lane rural road, provide paved shoulders, following the ROW details from Table 5b in the Clayton Transportation Analysis, page 21.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Potential right-of-way acquisition.	Planning Service Engineering

City of Clayton
Comprehensive Land Use Implementation Plan

Goal			Project	Justification/Description	Implementation Priority	Action Steps	Challenges	Entity Responsible
Great Streets and Infrastructure	**IV**	**19**	**Wenger Road Upgrade Murray Street to Union Boulevard)**	To support future residential development, widen road following ROW details from Table 9b in Clayton Transportation Analysis, page 24.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Potential right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**20**	**Phillipsburg-Union Road Upgrade**	To support future development, between Putnam Road and Rinehart Road the ROW should include sidewalks with landscaped easements, two travel lanes and a center lane with a landscaped median. Provide paved shoulders on the rest of the roadway.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code. 3. Create an implementation timeline.	1. Securing grants and funds. 2. Potential right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**21**	**Extend Haber Road Water Main**	To support future development in the proposed Phillipsburg Village, extend the Haber Road water main to Phillipsburg-Union and Putnam Roads. Note: Coordinate with any proposed road repairs.	Long-Term			
Great Streets and Infrastructure	**IV**	**22**	**Extend Water Infrastructure**	To support further residential development, extend water infrastructure northward of the Village of North Clayton.	Long-Term			
Great Streets and Infrastructure	**IV**	**23**	**Extend Sanitary Sewer Lines**	To accommodate future development, ensure extension of sanitary sewer lines are part of development. Work with regional partners to ensure meeting future requirements. Note: Coordinate with proposed road and water line projects.	Long-Term	1. Coordinate with regional partners	1. Securing funds. 2. Potential right-of-way acquisition.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**24**	**Innovative Stormwater Management Systems**	In new development, provide innovative and water-friendly alternatives to conventional stormwater management systems such as drains and culverts. Use the Green Infrastructure Plan as a basis for development of stormwater management systems.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.	1. Securing grants and funds.	Planning Service Engineering
Great Streets and Infrastructure	**IV**	**25**	**Future Underground Utilities**	In all new development, require power and telecommunication lines are placed underground.	Long-Term	1. Develop and implement design and engineering standards. 2. Incorporate standards into zoning and service standards code.		Planning Service Engineering

Subject: Plan Clayton Comprehensive Land Use Plan | Transportation Element

The **Plan Clayton Comprehensive Land Use Plan** (Land Use Plan) provides a plan for the future development of the City of Clayton, created collaboratively by stakeholders: residents, land and business owners, city and county staff, and other organizations in the community. The Plan will provide recommendations for policies and strategies to plan for environmental, social, and economic sustainability.

Goal IV: Great Streets and Infrastructure from the Land Use Plan focuses upon the concept of "Great Streets" to enable safe travel and access for users of all ages and abilities regardless of their mode of transportation. A Great Street welcomes people, encouraging them to spend time eating at restaurants, visiting local businesses, and strolling through downtown areas. Streets should be active throughout the day, from employees getting coffee on their way to work to residents eating out for dinner in the evening. Great streets link neighborhoods, enhance central cores, and provide for a diversity of businesses. Creating a Great Street in Clayton is as much a science as an art, involving just the right amount of public initiative and private investment. This Transportation Element Analysis provides guidance to achieve *Goal IV: Great Streets and Infrastructure* of the Land Use Plan. This analysis addresses the four objectives of the plan that support Goal IV.

Objective1: Prioritize Infrastructure Improvements on North Main Street

Objective 2: Increase Multi-Modal Connectivity

Objective 3: Improve Existing Thoroughfares before Expanding Services

Objective 4: Upgrade State Route 49 (SR49) to accommodate Industrial Expansion

Overall Existing Conditions

Transportation planning is the process to ensure the orderly and progressive development of the urban and rural transportation system to meet existing and future travel needs. Connecting communities requires consideration of multiple modes of transportation including vehicles, transit, bicycles, and pedestrians, as well as movement of goods by truck and railroad. Therefore, the Transportation Element includes improvement plans for street, sidewalk, bikeway, and transit.

The City of Clayton is served by over 102 centerline miles of roadway including one major Interstate highway that connect to regional and national destinations including Indianapolis, Springfield (OH), and Columbus. Each roadway is identified by functional classification, a process by which roads are grouped into classes according to the character of service they are intended to provide (see Table 1a). Functional classification is based on two primary travel needs: mobility and access. The following six classifications are relevant to the City of Clayton:

- *Interstate:* An access-controlled road whose primary purpose is to provide long-distance trips and mobility between major urban areas.
- *Principal Arterial:* A road whose primary purpose is to provide service for long-distance trips and mobility between major activity centers.

- *Minor Arterial:* A road whose primary purpose is to provide service for moderate-length trips and link users between collectors to roadways of higher classification.

- *Major Collector:* A road whose primary purpose is to provide service for local trips and link users from local roads to roadways of higher classification.

- *Minor Collector:* A road whose primary purpose is to provide service for rural, local trips and link users from local roads to roadways of higher classification.

- *Local:* A road whose primary purpose is to provide access between adjacent properties to roads of higher functional classification.

Table 1a: Roadway Functional Classification

	City Of Clayton	
Functional Classification	**Miles**	**Percent**
Interstate	1.6	1.60%
Principal Arterial	4.3	4.40%
Minor Arterial	5	5.10%
Major Collector	17.5	17.90%
Minor Collector	0.0002	>1.0%
Local	63.7	65.00%
Total[1]	98	100%

Since the street network within the City of Clayton is mostly undeveloped except on the southeast side of the city, the major roadway improvements will focus upon improvements to connect the planned development on the west side of the city. While several miles of new local roads will be necessary, the roadway improvement concepts identified below are the improvements to the Principal Arterial, Minor Arterial, and Major Collector Roads in Clayton as they relate to the four objectives previously identified.

OBJECTIVE 1: PRIORITIZE INFRASTRUCTURE IMPROVEMENTS ON NORTH MAIN STREET

Existing Challenges: The North Main Street (SR48) corridor is a north-south principal arterial in two non-contiguous corridors (referred to hereafter as the north corridor and south corridor). The public has identified this corridor as one with a great opportunity for future growth and development. The street runs for a total of 2.23 miles within the City. The roadway is a five-lane section with a two-way center turn lane. Parts of the route have curbing and other parts have shoulders—sometimes, the differing roadway treatments exist on opposite each other in the same stretch of the roadway. Sidewalks along the road are also inconsistent, and there are many curb cuts. The corridor is characterized by large lot residential uses in the north corridor and the south corridor has many low-density office and commercial uses (in strip commercial centers or converted single family residential) mixed in with single family residential homes. The commercial character of North Main Street lacks consistency and overall identity. Due to previous development patterns, there are also numerous access points and driveways along the corridor that affect traffic flow and the perception of safety. Traffic volumes are approximately 15,000 vehicles per day[1], with about 6% of that traffic being trucks.

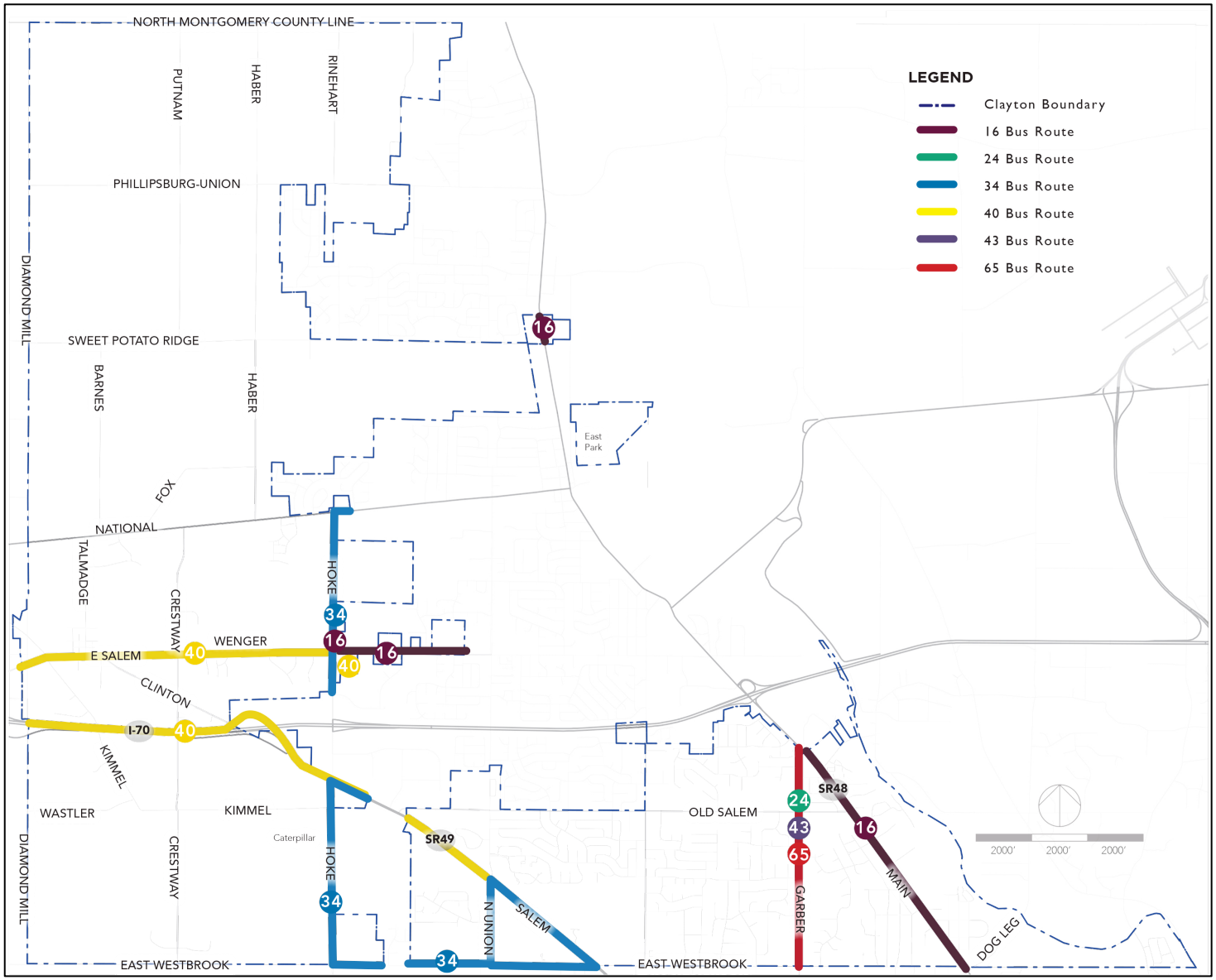
Right-of-Way (ROW) Recommendations: Clayton has already adopted the North Main Street Overlay District Ordinance for the corridor. The Ordinance requires new buildings to follow the build-to line requirements and building requirements up to 275 feet on either side of North Main Street. The ideal Main Street includes wide sidewalks for pedestrians as well as places for people to gather, vegetated medians, and human-scaled building heights and setbacks. Furthermore, a road diet is proposed for North Main Street, to reduce the underutilized road to two travel lanes with a non-continuous center turn lane, interspersed with a landscaped median. The total proposed ROW for the south corridor should be 79 feet wide. Table 1b shows the width of each ROW element:

Table 1b: Proposed Main Street ROW Width

Element	Number	Width (feet)	Total
Sidewalk	2	11	22
Landscaped easement	2	6	12
Travel lane	2	15	30
Center landscaped median/turn lane	1	15	15
Total			79

[1] AADT counts taken by OAKS Engineering 8/19/2016.

Figure 1: Transit Map



OBJECTIVE 2: INCREASE MULTI-MODAL CONNECTIVITY

Pedestrian and bicycle improvements within Arterial and Collector ROWs should be incorporated into the implementation plan itemized wherever possible, supporting all aspects of the Land Use Plan. These include additional off-street bike routes and sidewalk recommendations.

In terms of transit, the City of Clayton is served by the Greater Dayton Regional Transit Authority (RTA). Six RTA bus routes serve Clayton, as shown in Table 2 and Figure 1. Main transfer points are located in the vicinity of Wenger and Hoke Roads and at the Meijer on North Main Street. With new development planned on the north side of Clayton, there will be a need to extend Route 34 north on Haber Road to the proposed Warner Village (See Land Use Plan, pg38-40). With the increased industrial activity and population density in the community, Routes 34 and 40 should be planned to have an increase in service span and/or service frequency. There may also be a need for a new local route connecting Clayton residents to the Dayton International Airport via Wenger and National Roads.

Table 2: Transit Characteristics

Transit Route	Service Days	Approximate Maximum Service Span	Peak Frequency
16	M - Su	5:45 AM to 12:20 AM	30 minutes
24	M - Su	5:40 AM to 11:00 AM	60 minutes
34	M - Su	5:00 AM to 12:00 AM	40 minutes
40	M - F	6:30 AM to 6:30 PM	140 minutes
43	M - F	See Footnote[2]	See Footnote[2]
65	M - F	See Footnote[3]	See Footnote[3]

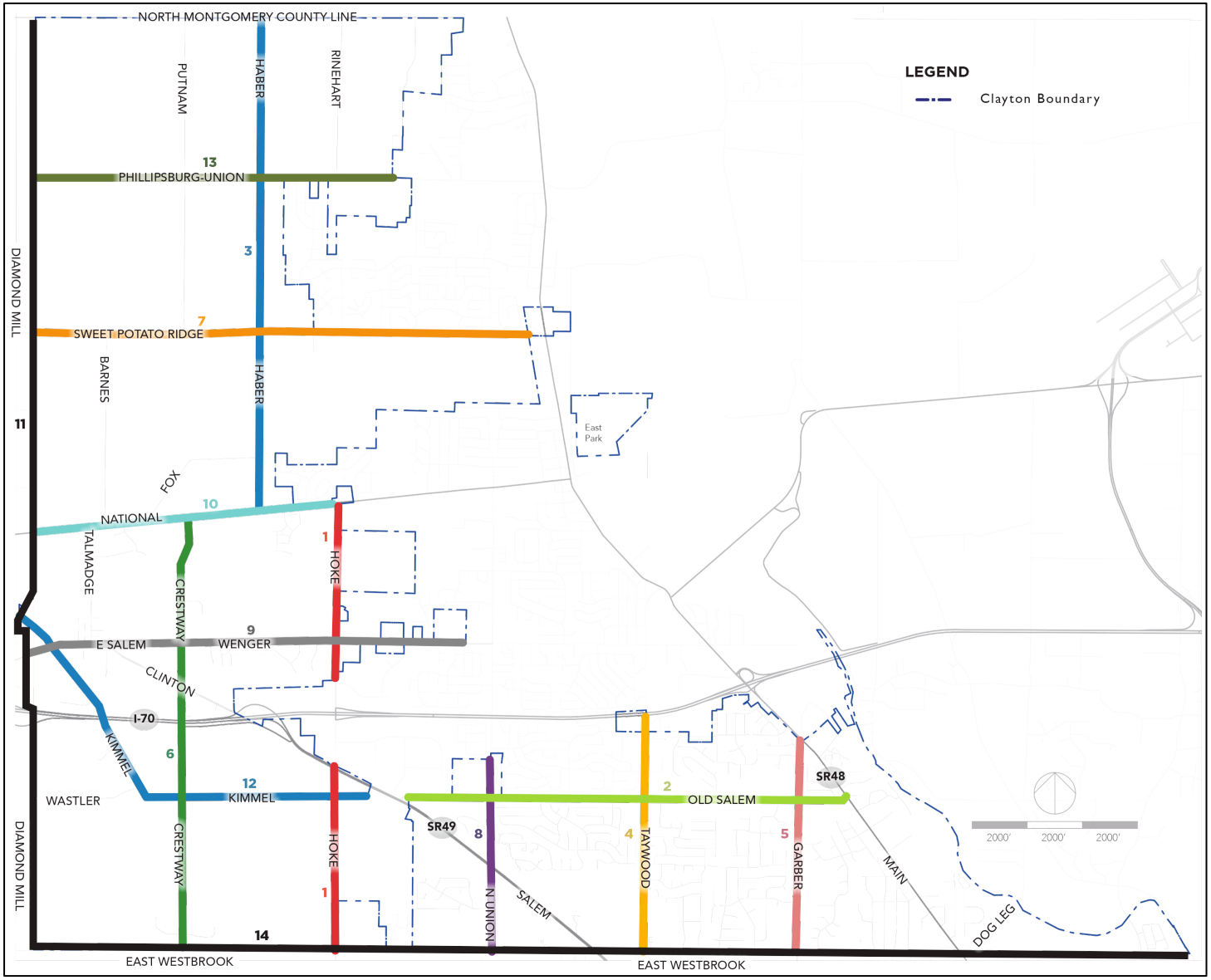
[2] 2 trips per day

OBJECTIVE 3: IMPROVE EXISTING THOROUGHFARES BEFORE EXPANDING SERVICES

The proposed roadway improvements below focus on improvements to Arterial, Collector, and local roads that are projected to become one of these roadway types in the near future. The improvements are grouped by short-term (1-7 years), mid-term (7-15 years), and long-term (15+ years) implementation timeframes. The locations of these proposed roadway improvements are shown in Figure 2.

[3] 4 trips per day

Figure 2: Transportation Priority Map



Short-Term Priorities

Priority 1. Hoke Road

Existing Challenges: Hoke Road is a north-south major collector between Westbrook and National Road; it extends 2.3 miles in Clayton. The roadway has many different characteristics as it travels through the corridor. It is a two-lane road without sidewalks and shoulders until 0.5 miles north of Westbrook Road. The land use on either side of the roadway is agricultural, but portions are proposed to become industrial in the future. Between 0.5 miles north of Westbrook Road and Salem Avenue, Hoke Road is a five-lane section with a two-way center turn lane. The ROW narrows until it reaches the commercial node north of I-70; between there and National Road, the roadway has two lanes with no shoulders as it goes through a large-lot residential district. The varying roadway widths presents challenges and backups north of Salem Avenue by creating choke-points, especially at the intersection just north of the Walmart Supercenter (Smith Drive).

There is no direct connection between the commercial node on Hoke Road and Sweet Potato Ridge Road, even though there is a large residential development proposed. Traffic volumes along the corridor range from approximately 5,000 to 6,000 vehicles per day, with about 5% of all traffic being truck traffic[4], mostly generated from the Caterpillar Logistics facility where trucks are heading north from Kimmel Road towards I-70.

ROW Recommendations: It is recommended that the city work with the county and Englewood to expand the road between Smith Drive and National Road. The south corridor should have paved shoulders added and the middle south corridor ROWs should remain as is, with the addition of sidewalks and a landscaped easement in the middle south corridor. The north corridor should consist of two travel lanes with a center dual turn lane interspersed with a landscaped median. See the Tables 3a and 3b for the proposed ROWs.

[4] AADT counts taken by OAKS Engineering 8/19/2016.

Table 3a: Proposed Hoke Road ROW

	Westbrook Road to Salem Road		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped Easement	2	6	12
Travel lane	4	15	60
Center turn lane/ landscaped median	1	15	15
		Total	*99*

Table 3b: Proposed Hoke Road ROW

	Smith Drive to National Road		
Element	**Number**	**Width (ft)**	**Total**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	1	15	15
		Total	*61*

Priority 2. Old Salem Road

Existing Challenges: Old Salem Road is an east-west major collector between the North Main Street and Salem Avenue. The roadway runs for 2.6 miles in Clayton. The roadway is two lanes for its entire length with dedicated turn lanes only at major intersections (Garber Road and Taywood Road). Sidewalks are present for one mile. For the rest of the roadway, there are no curbs and no shoulders. Parts of the roadway have been designed to be expanded to more lanes, with a few feet of extra ROW paved at Shell Avenue and Dominican Drive. The adjacent land uses are almost entirely residential. Traffic volumes

range from about 3,000 (west of Union Road) to 7,000 (Union Road and North Main Street) daily, with the truck percentage unknown[5].

ROW Recommendations: As this is a predominantly residential area in the City and is anticipated to remain that way, the roadway should remain two lanes. However, the roadway should be widened to allow for a buffered bike lane. This would connect much of the southeast side of Clayton to the proposed MVRPC bikeway along Union Road. In addition, sidewalks and curbing should be extended the entire length of the road, with landscaping where possible.

Table 4: Proposed Old Salem Road ROW

Element	Number	Width (ft)	Total (ft)
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	2	7	14
		Total	*60*

Priority 3. Haber Road

Existing Challenges: Haber Road is currently classified as a local road. It currently runs through an agricultural region, and it has two lanes with no shoulders for its entire length (3.2 miles). Traffic volumes are about 4,000 daily, with 1.3% of that traffic being trucks.[6] The road is adjacent to two proposed neighborhoods (Phillipsburg Village and Warner Village); parts of this road will need to be expanded to accommodate future traffic generated from these proposed neighborhoods.

ROW Recommendations: The roadway should remain two lanes, but with the addition of sidewalks and a landscaped easement to Phillipsburg-Union Road. North of this road, a two-lane rural road can remain, but with paved shoulders added. With these changes, the road should be reclassified as a major collector road. See the Tables 5a and 5b for the proposed ROWs.

Table 5a: Proposed Haber Road ROW

	National Rd to Phillipsburg Union Rd		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	1	15	15
		Total	*61*

Table 5b: Proposed Haber Road ROW

	Phillipsburg Union to County Line		
Element	**Number**	**Width (ft)**	**Total**
Sidewalk	0	6	0
Landscaped easement	0	6	0
Travel lane	2	11	22
Center turn lane/ landscaped median	0	15	0
		Total	*22*

Priority 4. Taywood Road

Existing Challenges: Taywood Road is currently classified as a minor arterial road. It currently runs through a residential area, with a mix of single family and multi-family housing. It has a mix of widths and section profiles. From I-70 to just south of Artistic Court, there are two northbound travel lanes, one alternating or dual direction turn lane, and one southbound travel lane. Between Artistic Court and

[5] AADT counts taken by OAKS Engineering 8/19/2016.

[6] AADT counts taken by OAKS Engineering 8/19/2016.

Rundell Drive, the travel lanes are reduced to one lane in each direction with one dual direction or alternating direction turn lane. Between Westbrook Road and Rundell Drive, the turn lane is eliminated. Sidewalks are intermittent along the roadway. Traffic volumes are about 8,000 daily, with 2.0% of that traffic being trucks.[7]

ROW Recommendations: For the entire extent of the roadway, sidewalks should be extended to eliminate gaps.

Priority 5. Garber Road

Garber Road is currently a 1.4 mile north-south major collector road running between Westbrook and Main Street. No improvements are needed on this roadway although adding a sidewalk to the east side of the ROW is recommended.

Mid-Term Priorities

Priority 6. Crestway Drive

Crestway Drive is currently a 2.8 mile north-south minor collector running between Westbrook and National Roads. It is two lanes its entire length without curbing or sidewalks with minimal shoulders. About 800 vehicles (south of I-70) and 2,000 vehicles (north of I-70) use the road daily[8]. Although the area is currently rural, it is anticipated that future development will require upgrades to this road. The road will generally remain the same south of Kimmel Road, but will be widened north of this road. With these improvements, the road would be reclassified as a major collector road. See the Tables 6a and 6b for the proposed ROWs.

Table 6a: Proposed Crestway Drive ROW Width

	Westbrook Road to Salem Road		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	4	15	60
Center turn lane/ landscaped median	1	15	15
		Total	*99*

Table 6b: Proposed Crestway Drive ROW Width

	Smith Drive to National Road		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	1	15	15
		Total	*61*

Priority 7. Sweet Potato Ridge Road

Sweet Potato Ridge Road is an east-west two lane local road which is in the heart of what is projected to be one of the biggest residential growth areas in the City of Clayton (Warner Village). This will necessitate improving the road to become a major collector road between Main Street and Hader Road. West of Haber Road, it is anticipated that the area will remain agricultural for the time being, so there would be no changes. See the Table 7 for the proposed ROWs.

[7] AADT counts taken by OAKS Engineering 8/19/2016.

[8] Figures from ODOT 2015 counts.

Table 7: Proposed Sweet Potato Ridge Road ROW

Element	Number	Width (ft)	Total (ft)
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	1	15	15
		Total	*61*

Priority 8. Union Road

Union Road is a north-south minor arterial road that runs for 1.3 miles from Westbrook Road north to the Clayton city limits. The roadway varies from a two-lane rural road to a four-lane road (two travel lanes, one parking lane, one center turn lane), and a three-lane road (one travel lane width shoulder with two travel lanes). Due to the projected industrial development near the intersection of Union Road and Salem Avenue, the roadway will require widening. See the Tables 8a, 8b, and 8c for the proposed ROWs.

Table 8a: Proposed Union Road ROW

	Westbrook Rd to Summersweet DR		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	0	15	0
		Total	*46*

Table 8b: Proposed Union Road ROW

	Summersweet Dr to Old Salem Rd		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	15	30
Center turn lane/ landscaped median	1	15	15
		Total	*69*

Table 8c: Proposed Union Road ROW

	North of Old Salem Rd		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	4	15	60
Center turn lane/ landscaped median	0	15	0
		Total	*84*

Priority 9. Wenger Road

Wenger Road is an east-west major collector road that runs for 2.8 miles from Union Road west to Diamond Mill Road through the original village of Clayton. The roadway is generally a two-lane rural road with the exception of the few blocks within the original village where the road adopts a more "urban" profile. Traffic counts east of Hoke Road are around 8,000 vehicles and 3,000 near the original village. Due to the projected amount of residential development near the road will need widening. See the Tables 9a and 9b for the proposed ROWs.

Table 9a: Proposed Wenger Road ROW

	Diamond Mill Rd to Murray St		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	0	15	0
		Total	*46*

Table 9b: Proposed Wenger Road ROW

	Murray St to Union Blvd		
Element	**Number**	**Width (ft)**	**Total (ft)**
Sidewalk	2	6	12
Landscaped easement	2	6	12
Travel lane	2	11	22
Center turn lane/ landscaped median	1	15	15
		Total	*61*

Priority 10. National Road

This road, also designated as US-40, is the first major federally built improved highway. This section of highway was built in the 1840s, and runs for 2.0 miles through Clayton. The current ROW should generally remain as is, however an 11-foot multimodal path should be added on the south side of the road, in addition to a 6-foot sidewalk on the north side of the road.

Long-Term Priorities

Priority 11. Diamond Mill Road

Diamond Mill Road is currently a 6.1 mile north-south major collector road running between Westbrook and the county line. The adjacent land uses are anticipated to be largely agricultural so no improvements are needed on this roadway.

Priority 12. Kimmel Road

Kimmel Road is currently a 2.6 mile local road running between Hoke and South Kimmel Roads. The roadway has recently been improved up to the Caterpillar Logistics facility to three lanes (two travel lanes, one center turning lane). No further improvements are needed on the other than striping. Between Salem Avenue and Diamond Mill Road, a sidewalk should be constructed directly adjacent to the roadway, with ne easement dividing the two.

Priority 13. Phillipsburg-Union Road

Phillipsburg-Union Road is currently a 2.4 mile major collector road between Rinehart and Diamond Mill Roads. One of the proposed neighborhoods, which will consist of large lot estates, is Phillipsburg Village. Therefore, part of Phillipsburg-Union Road will need to be improved. Between Putnam Road and Rinehart Road, the ROW should include sidewalks, two travel lanes and a center turn lane with a landscaped median. The rest of the roadway can remain as is, with the addition of paved shoulders.

Priority 14. Westbrook Road

Westbrook Road is currently 6.1 miles along the southern city limits of Clayton. There is not much development planned along this corridor, so most of the improvements should be done where development already exists.

OBJECTIVE 4: UPGRADE STATE ROUTE 49 TO ACCOMMODATE INDUSTRIAL EXPANSION

SR49 (Salem Avenue) is a four-lane divided roadway with regular breaks in the grass median to allow for property access, U-turns and the development of left turn lanes at intersections. The corridor is generally rural in character with a mix of commercial, industrial and residential uses along or nearby the roadway, as well as the presence of abutting agricultural farmland. SR49 carries close to 10% heavy truck traffic today. The posted speed limit is 50 MPH.

A primary objective for SR49 is to make appropriate provisions to support industrial land use expansion along the corridor. In doing so, the roadway and its intersections must be designed to accommodate an increase in heavy truck traffic in terms of overweight vehicles and intersection turning radii. Major intersections are located at Hoke Road, Union Road and Westbrook Road. Improved access between SR49 and Interstate 70 (I-70) must also be considered to facilitate access between the two routes. Currently, SR49 has freeway ramps to and from the west on I-70, but no direct access is available for vehicles traveling to and from the east, only via Hoke Road.

Existing Challenges: The SR49 corridor already has numerous median breaks to allow for U-turns and access to individual parcels and land developments. This, combined with several signalized and unsignalized intersections, creates a challenge in fostering additional industrial development on the corridor. Many of the existing drives are closely spaced, limiting the ability to lengthen left turn lanes. Access to future development sites should be planned to take advantage of existing access points, particularly those that are or could become signalized in the future, in an effort to minimize the number of additional accesses along the corridor. Furthermore, intersections should be studied for improvement opportunities.

This higher speed roadway has paved outside shoulders, curbing along the inside grass median with inlets for drainage and no existing sidewalks or paths. Increases in total traffic, and in particular heavy truck traffic, can be expected to occur along this roadway as infill occurs to promote more industrial development. This will complicate safety and access for the individual residential properties along the corridor unless future development results in the conversion of the properties to non-residential uses. In general, an access management plan should be developed to identify and plan for future access points, frontage or circulator roadways and the possibility for joint-use drives or driveway consolidation to promote a safe and efficient travel corridor.

ROW Recommendations: The roadway appears to have a ROW width of approximately 125 feet. Through lane additions are not anticipated to be needed for future capacity; however, minor strips of additional ROW could be required if dedicated right turn lanes are provided on the corridor at a future time. The major intersections of Hoke Road, Union Road and Westbrook Road already have wide turning radii which should be sufficient for heavy trucks to maneuver. Future intersections should be designed with the appropriate design vehicle in mind to ensure a proper truck turning radius is provided. The existing ROW width is anticipated to be adequate to accommodate future changes to land development along this stretch of SR49. A specific area where ROW would require further investigation is at the interchange of I-70 and SR49. Provisions for ramp movements to be provided for the servicing of vehicular traffic to and from the east would necessitate land to be acquired for that purpose.

Additional Recommendations

Access Management: Access management, the planning and design of intersections and driveways to reasonably balance safety, efficiency, and economic activity, should also be considered on principal arterials and other major roadways as appropriate throughout the City of Clayton. This type of corridor management can be encouraged during roadway design or as redevelopment occurs along existing corridors. The Ohio. Department of Transportation (ODOT) Local Technical Assistance Program (LTAP) provides guidance for communities to assist with elements such as intersection spacing, traffic signal spacing, median openings, and driveway spacing.

Subject: Plan Clayton Comprehensive Land Use Plan | Utility Element

Plan Clayton Comprehensive Land Use Plan (Land Use Plan) will provide a plan for the future development of the City of Clayton, created collaboratively by stakeholders: residents, land and business owners, city and county staff, and other organizations in the community. The Land Use Plan will provide recommendations for policies and strategies to plan for environmental, social, and economic sustainability. This Utility Element Analysis provides guidance for the infrastructure components of the Land Use Plan.

Utility planning is the process to develop and maintain cost-effective and environmentally-compatible infrastructure systems that support a modern community and economy. Utilities are a basic building block of urban and rural living and should be coordinated with land use to ensure the community has adequate infrastructure to serve existing and future development. Therefore, the Utility Element Analysis includes improvement plans for public utilities including water, sanitary sewer, and stormwater as well as a brief discussion regarding private utilities.

WATER IMPROVEMENT PLAN

Water infrastructure is an essential utility for communities and a gatekeeper to development. Dayton Water Services provides water for the City of Clayton. Water mains in Clayton run predominantly East-West along Old Salem Road/Kimmel Road, and Westbrook Road. Mains also run along Salem Avenue and Crestway Drive, connecting to National Road, as shown in Figure 1. The following goals and objectives are recommended for the Water Improvement Plan:

Goal 1: Water infrastructure systems should be developed and maintained at an appropriate level to accommodate projected growth and development. The City of Clayton will utilize the Land Use Plan as the basis for the extension and sizing of system components.

Objective 1A: Coordinate water system improvements with roadway projects to ensure the most efficient use of available resources.

Objective 1B: Determine appropriate system extensions to support growth in identified growth areas as well as discourage development in undesirable locations such as floodplains, prime agricultural land, or isolated development areas.

Objective 1C: Extend the Haber Road water main to Phillipsburg-Union and Putnam Roads to serve the proposed Phillipsburg Village mixed use development and extend the water infrastructure system northward to the Village of North Clayton to accommodate further residential development.

Goal 2: As a critical component of city infrastructure, the water system supports urban and rural lifestyles. The City of Clayton will provide a reliable and cost-effective supply of safe, secure, and high-quality drinking water that meets community needs for domestic use, commercial and industrial use, and fire protection.

Objective 2A: Conduct a comprehensive water system study to identify priority maintenance and replacement locations within the aging water system.

Objective 2B: Provide water system redundancy to limit exposure to failures that would adversely impact daily and emergency needs.

Discussion of How to Achieve These Goals

Water infrastructure often serves as the gatekeeper to development. Therefore, the City of Clayton can influence development decisions in preferred areas and ensure development aligns with community goals and preferences.

- Multiple jurisdictions and multiple departments should coordinate roadway improvements and utility improvements for efficient use of resources. Joint projects tend to minimize disruption and prevent the need to rebuild roadway improvements if utility issues arise. For example, strategic replacement of water infrastructure, if needed, should be coordinated with upcoming, planned roadway projects by ODOT within the City of Clayton.

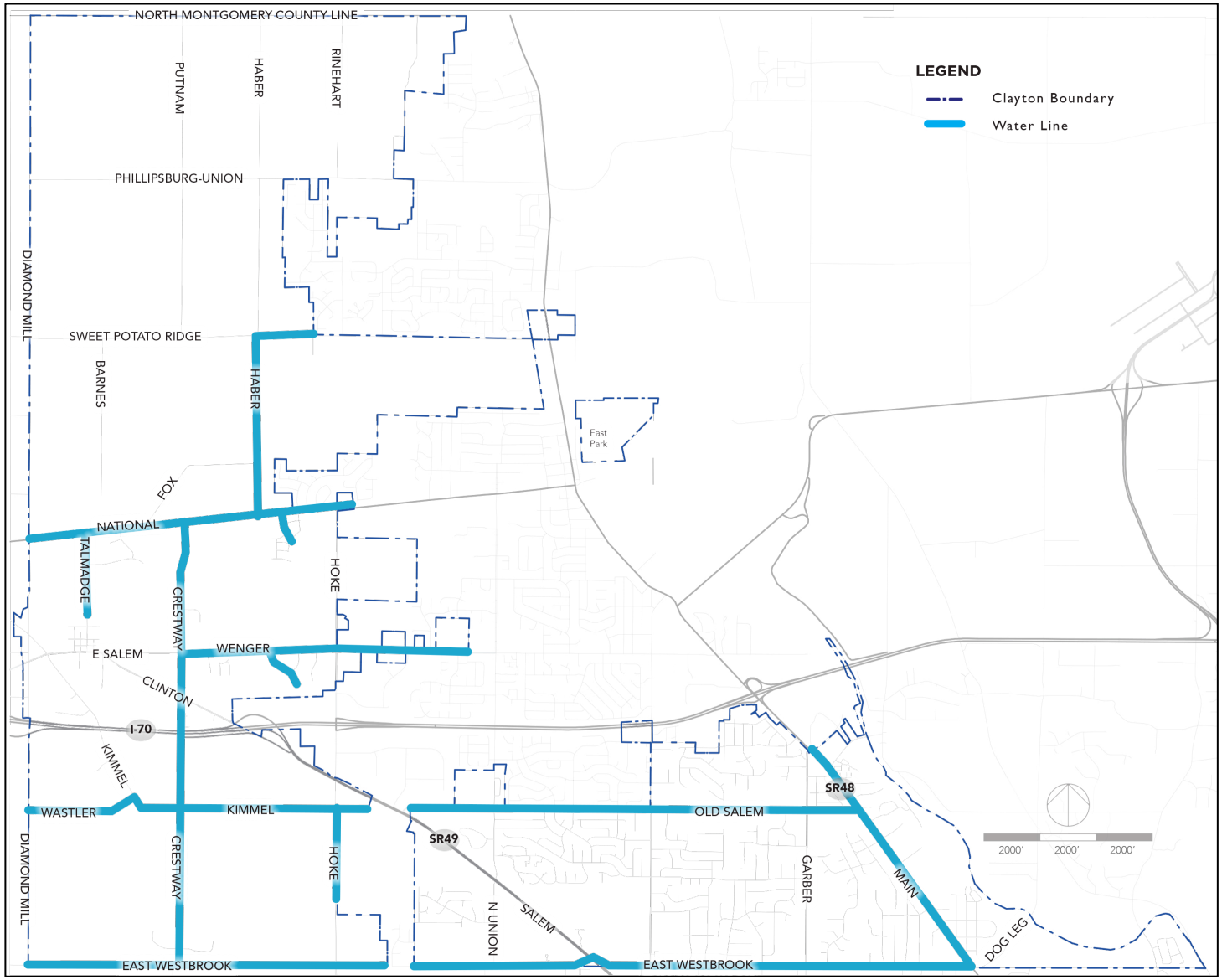
- Smart growth is a strategy to concentrate future development in identified growth areas while preserving open space. Planned economic and community development within or near developed areas can limit the need for expensive utility extensions. Smart growth strategies strengthen and direct development towards existing communities to conserve resources and make development decisions predictable, fair, and cost-effective.

The water system also needs to be preserved to meet the service needs of the community. This is particularly important due to maintenance issues of an aging water system and the need for redundancy to prevent service disruptions. The following improvements relate to the water distribution lines in community.

- Conduct a comprehensive water system analysis to identify priority locations for maintenance or replacement and set aside annual funds to implement solutions.

- Prioritize extending water infrastructure to targeted growth areas.

Figure 1: Existing Water Mains



SANITARY SEWER IMPROVEMENT PLAN

The sanitary sewer system is a network of pipes that carries sewage away from bathrooms, sinks, kitchens, and other plumbing components to a wastewater treatment plant where it is filtered, treated, and discharged. The entire southeast of Clayton is served by sewers but the northern portion of Clayton, north of Wenger Road, including the Old Village, is mostly without sewer lines and all homes in this area are on septic systems. Three wastewater lift stations are located within the Clayton city limits. They are located along the North Main Street corridor and near the Wenger Road and Hoke Road intersection, as shown in Figure 2. Montgomery County Environmental Services (MCES) provides the wastewater treatment for the community, through their facility south of Dayton.

Goal 1: Sanitary sewer infrastructure systems should be developed and maintained at an appropriate level to accommodate projected growth and development. The City of Clayton will reference land use plans as the basis for the extension and sizing of system components.

Objective 1A: Coordinate sanitary sewer system improvements with roadway projects to ensure the most efficient use of available resources.

Objective 1B: Determine appropriate system extensions to support growth in identified growth areas as well as to discourage development in undesirable locations.

Goal 2: An effective sanitary sewer collection and treatment system is essential to the safety and well-being of the community and the environment. The City of Clayton will provide a reliable and environmentally-friendly sanitary sewer system that reduces human health and environmental risks.

Objective 2A: Meet state and federal requirements for management, operation, and maintenance of the sanitary sewer system.

Objective 2B: Develop a systematic process for maintenance and replacement of sanitary sewer lines and lift stations.

Objective 2C: Extend sanitary sewer lines to areas of the City that are currently on septic systems.

Discussion of How to Achieve These Goals
Similar to the water system, sanitary sewer infrastructure often serves as the gatekeeper to development. Therefore, the City of Clayton can influence development decisions in preferred areas and ensure development aligns with community goals and preferences.

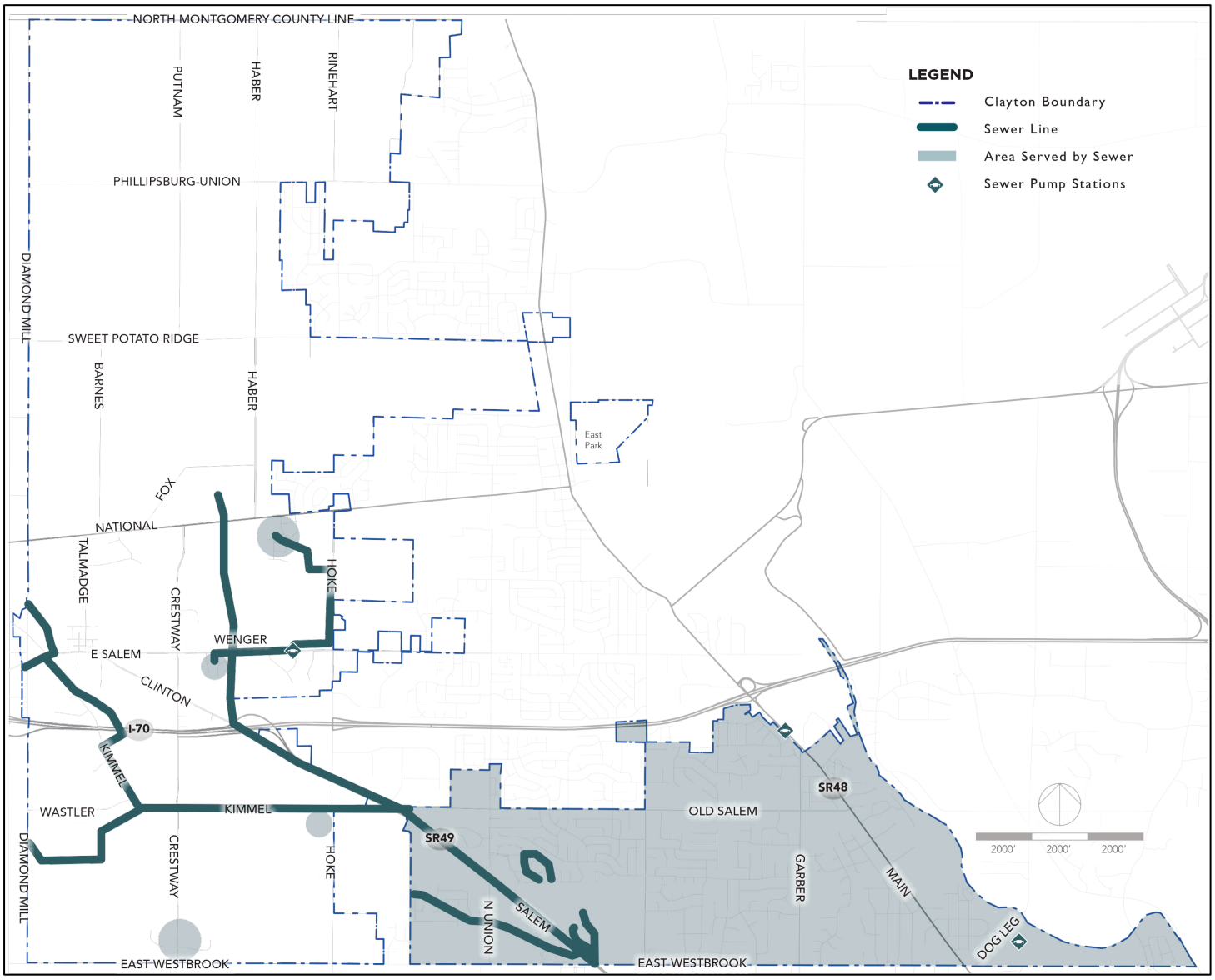
- Multiple jurisdictions and multiple departments should coordinate roadway improvements and utility improvements for efficient use of resources. Joint projects tend to minimize disruption and prevent the need to rebuild roadway improvements if utility issues arise. In addition, coordination with agencies such as the Miami Valley Regional Planning Commission can provide cost-share opportunities and potential benefit districts to meet the development goals of both entities.

- Smart growth is a strategy to concentrate future development in identified growth areas while preserving open space. Planned economic and community development within or near developed areas can limit the need for expensive utility extensions. Smart growth strategies strengthen and direct development towards existing communities to conserve resources and make development decisions predictable, fair, and cost-effective. For example, a planned sewer line extension along Haber Road would help direct future residential development to two identified preferred growth areas (Phillipsburg Village and Warner Village).

The sanitary sewer system needs to be preserved to meet the service needs of the community. This is particularly important due to maintenance issues of an aging sanitary sewer system and new state and federal requirements.

- The City should include any maintenance or replacement of the sanitary sewer system in their five-year Capital Improvement Plan so that funds are adequately programmed.
- The City should develop a systematic methodology for extending sanitary sewer lines to areas that are currently on septic systems.

Figure 2: Existing Clayton Sewer System



STORMWATER IMPROVEMENT PLAN

- The stormwater sewer system is designed to carry rainfall runoff and other drainage through a series of pipes and open ditches until discharged into streams, rivers, or other surface water bodies. The City of Clayton has various stormwater infrastructures including open ditches, detention ponds, and more.

- **Goal 1**: Compared to previous stormwater system development, management practices have shifted over time with a greater focus on water quality, natural resources, and overall site design. Work with MCES to provide the most effective, practical means of preventing or reducing pollution from non-point sources adhering to the following objectives:

- Objective 1A: Design context appropriate stormwater management facilities that reflect the unique design character of a neighborhood or area.

- Objective 1B: Participate in neighborhood-wide or regional stormwater management efforts to provide a holistic approach to the stormwater system.

- **Goal 2**: Effective stormwater systems control damage from storms, protect surface water quality, provide for the safety and enjoyment of residents, and protect the environment. Work with MCES to perform routine maintenance activities to the stormwater system to maintain its intended capacity and condition.

- Objective 2A: Meet state and federal requirements for management, operation, and maintenance of the stormwater system.

- Objective 2B: Develop a systematic process for replacement and maintenance of stormwater conveyance infrastructure.

Discussion of How to Achieve These Goals

- In addition to conventional stormwater management, new Best Management Practices (BMPs) have arisen as a cost-effective means to protecting property and water resources. As stormwater management needs arise, the community should assist MCES by assessing various techniques to best conserve, protect, and manage resources for future generations.

- Stormwater runoff is generally managed on a lot by lot basis rather than a broader neighborhood or regional approach. A larger-scale approach to stormwater management would explore settlement treatment requirements for new subdivisions, detention and retention points at larger discharge points, and cost-share opportunities for initial improvements.

- The community should demonstrate and promote innovative alternatives to stormwater management including roof gardens, permeable paving surfaces, rain gardens, wetland restoration and bioswales. These concepts are attractive and water-friendly alternatives to conventional stormwater management practices. Potential application of innovative concepts could include on-site mitigation with filtration under downtown parking areas, permeable pavement at city facilities, and graywater sprinkler systems.

- Stormwater runoff is generated from many different land surfaces and is impacted by the behaviors and activities of individuals, households, and the public. Activities such as littering, pet waste and household chemical disposal, pest control and lawn care, and compost material in stormwater pipes have the potential to generate stormwater pollution. The community should increase awareness of the direct links between activities, stormwater runoff, drainage, and local water resources and provide action steps to reduce stormwater pollution potential.

- The stormwater system needs to be preserved to meet the needs of the community. This is particularly important due to maintenance issues of an aging stormwater system and new state and federal requirements. The following priority improvements include projects related to program management and stormwater conveyance channels.

- Due to increasing federal and state requirements regarding stormwater management, a city employee with knowledge of requirements and the documentation process will be required. This employee can liaison with MCES to help assist in the planning, development, analysis, coordination, implementation, and administration of water quality control programs the City of Clayton. Allocate a portion of future budgets to provide training for this employee as necessary.

- In conjunction with MCES, conduct an evaluation study, particularly in older neighborhoods, to measure velocity in stormwater conveyance lines, identify blockages in pipes, and provide needed information to prioritize maintenance and improvements.

- Most of the stormwater runoff generated from the City of Clayton is discharged to the Stillwater River with some discharge to Wolf Creek. Routinely clean and replace culverts and drop inlets to ensure appropriate flow and discharge.

PRIVATE UTILITIES

In addition to municipally-owned utilities, private utilities including electrical, natural gas, and telecommunication utilities are important components of the overall infrastructure network, as shown in Figure 3. While the City of Clayton does not have direct control over private utilities, the community can influence utility-related decisions.

- Coordinate with private utility providers to ensure planning for system growth is consistent with land use plans and growth forecasts.

- Limit the amount of disturbance to city infrastructure and neighborhood character by encouraging co-location of facilities and coordination with roadway projects. The aesthetic impact of utilities can be reduced by integrating screening and architecturally-compatible details or relocation of utilities underground within infill and new development.

- Coordinate with private utility providers on the acquisition, use, and enhancement of utility corridors to provide greater opportunities for pedestrian, bicycle, equestrian, and trail use along these corridors.

- Make sure future power and telecommunication lines are placed underground rather than overhead to increase resiliency when weather-related problems occur.

Electrical

Electrical service is provided by Dayton Power and Light. Two major electrical transmission lines cross through the city in north to south, one line running generally parallel to Main Street and another parallel to Crestway Drive and Haber Road. Although the high voltage lines will remain above ground, current lower transmission lines are located above ground, it should be a goal of the City of Clayton to bury underground electrical lines as a requirement of new development.

Natural Gas

Natural gas service is provided by Vectren. Two natural gas transmission lines cross each other in the City of Clayton, near the intersection of National Road and Hoke Road. One of those lines is operated by Vectren, while the other north-south line, identified by the

Pipeline and Hazardous Materials Safety Administration, has an unknown owner.

Telecommunications

Telecommunications is the transmission of information in the form of electronic signals including telephones, wireless communication, cable television, and broadband Internet. Cincinnati Bell serves the residential and business community within the City of Clayton with high speed fiber-optic service and Frontier (DSL) and Time Warner (Cable) can also provide internet service. AT&T, Verizon, and Frontier are landline telecommunication providers in the City of Clayton. In addition, Zayo has long haul lit fiber running through the community. Three registered cell phone towers are located in Clayton (towers over 200 feet tall), all located in the more rural areas of the city as required by code.

While the long-haul lines are already buried underground, any new land lines should be buried below ground. Cell phone towers should be incorporated into existing building or structure design when possible.

Figure 3: Existing Private Utilities