

An aerial, black and white photograph of a city street grid, likely Immerswick. A large, white, stylized 'X' is overlaid on the image, extending from the top-left to the bottom-right and from the top-right to the bottom-left. The text 'immerswick great streets' is written in a white, lowercase, sans-serif font across the lower right portion of the image. Below this, the phrase 'A New Historic Era' is written in a smaller, italicized, orange-brown serif font.

immerswick great streets  
*A New Historic Era*



**TO THE PEOPLE OF KIMMSWICK,**

**THANK YOU...**for inviting us in!

**THANK YOU...**for your lavish hospitality!

**THANK YOU...**for your good will and open hearts!

**THANK YOU...**for sharing your food and table!

**THANK YOU...**for your hopefulness and kindness!

**THANK YOU...**for your energy, enthusiasm, and leadership!

**THANK YOU...**for celebrating along the way!

Cheers, to a ***new historic era!***



**PROJECT PARTNERS:**

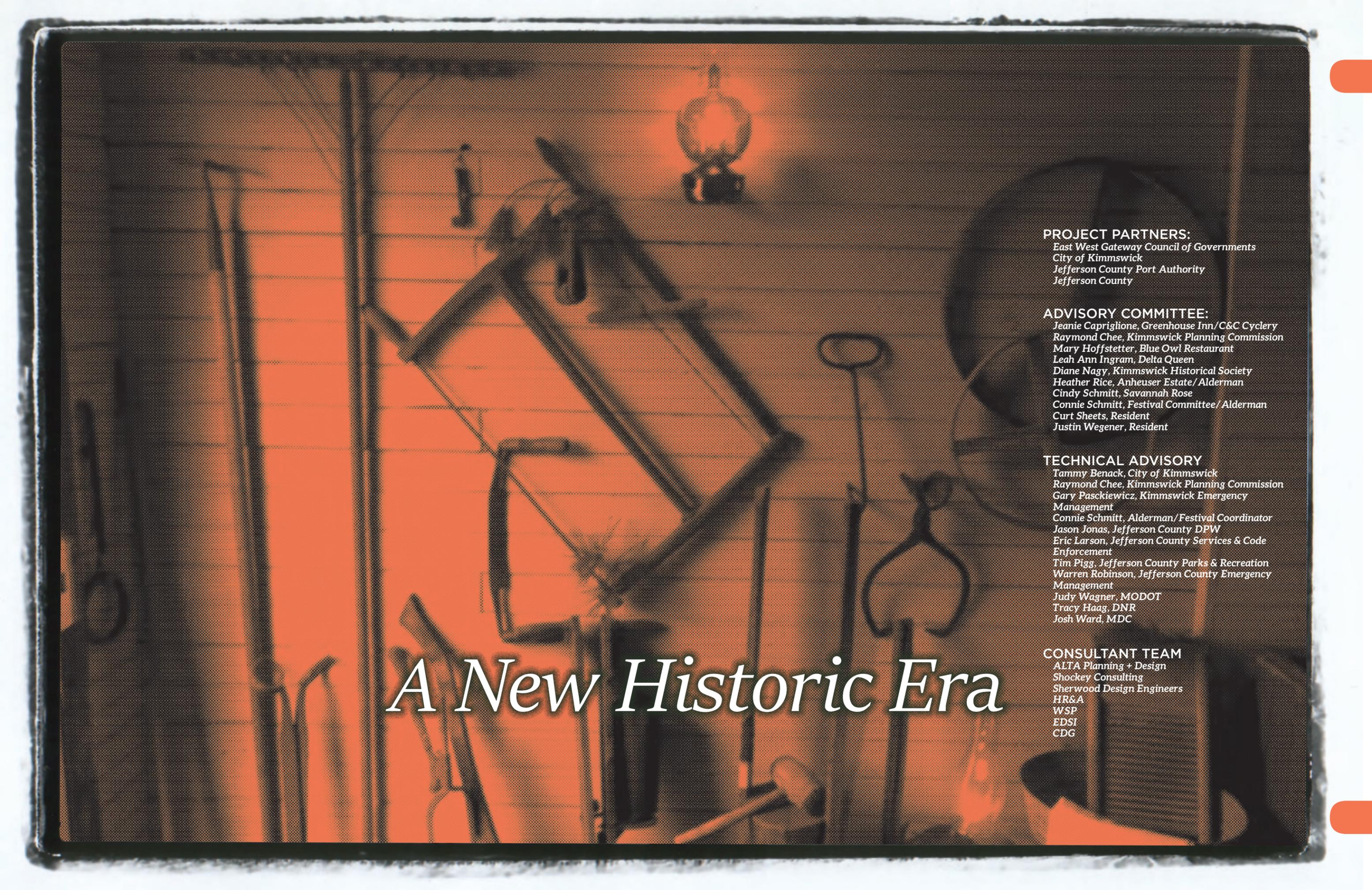


Jefferson County  
Port Authority



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# A New Historic Era

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# immswick great streets

Do not go gentle into that good night.  
Rage, rage against the dying of the light.

*~ Dylan Thomas*  
*A Tribute to Gary Paskiewicz*



# chapter

BARBADALLO  
HOUSE  
EST. 1850



BARBAGALLO  
HOUSE  
C. 1880



# ast & present

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*“...for a town of this size it was unusual, for here lived rich people, poor people, white people, black people, good people, bad people, rebels and Yankees, cultured people and uncultured.”*

~ William Bradshaw,  
*Life in Kimmswick*

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» A place's character and culture develop over time, influenced by geography, geology, politics, civic leaders, shared mores, economy, ecology and opportunity. Developments and decisions of the past sway decisions in the present which affect the future. Securing a strong understanding of what shapes and shaped Kimmswick will help delineate the story lines holding influence today. These histories, stories, and data can help determine Kimmswick's future.

**Built Setting**  
The built setting is the stage in which a story is set describing physical elements, character and quality of Kimmswick. History and culture influence building architecture and the city's layout. Infrastructure and regional connectivity create opportunity and barriers to civic life. Of great importance, the relationship between Kimmswick and the Mississippi has direct impact on the community's prosperity or decline.

**Operational Setting**  
The operational setting outlines the roles and organizational structures supporting the community. Comprehending the responsibilities the City, residents,

Kimmswick Merchant's Association, and Kimmswick Historical Society fill will shed light on what works and what may be holding the community back.

**Environmental Setting**  
Kimmswick's environs are the reason for its existence, and one of its greatest struggles. The Mississippi, specifically its floods, have the strongest impact on civic life. Understanding the lay of the land and the community's response to flooding will reveal challenges and opportunities in hopes of developing permanent solutions.

**Market Setting**  
Economics always have an essential part in a community's story. Kimmswick's novel niche and regional draw make it unique. It attracts daily regulars, moderate sized crowds and large influxes of people throughout the year. This flow of visitors defines the community and its regional identity. When Kimmswick Port and the Delta Queen begin operations, Kimmswick's mystique will become even richer.

This chapter researches each of these settings shedding light on Kimmswick.

# built setting

» Built environment examines Kimmswick's man-made features and what historically and currently shapes the community. The city's layout, public realm, and architecture tell a story unique to Kimmswick. Infrastructure, often unnoticed, determines a visitor's perception and manner of occupying city spaces. Kimmswick's character is beloved by its residents and attracts tens of thousands of visitors. The following examination will explore what makes Kimmswick a great place and consider ways its charm can further be enhanced.

## HISTORY, CULTURE & ARCHITECTURE

Kimmswick's history and architecture drive its civic culture. Its story cannot be told without understanding regional and national culture and events. The story is compelling and even landmark, considering the Kimmswick Bone Bed discovery was the first solid evidence of the coexistence of humans and giant prehistoric creatures like the mastodon.

Women have played a key role in Kimmswick's development. Wilhelmine Kimm oversaw Kimmswick's progress while her husband traveled, and Lucianna Gladney Ross's investments continue to bring life to the town. Women currently represent the majority of business ownership.

Development generally falls within four time periods - Kimmswick's establishment

in 1859 to Kimm's retirement in 1872, post-Kimm from 1872 to the 1920s, a decline in activity from the 1930s and 40s to the 1970s, and Lucinda Gladney Ross's redevelopment beginning in the 1970's to the present day.

Theodore Kimm, a successful St. Louis dry goods merchant, purchased the land to become Kimmswick on Oct 4th, 1850, allegedly following a St. Louis fire devastating the downtown merchants district. The land - divided into Kimmswick, approximately the current township, and West Kimmswick, approximately current-day unincorporated Imperial - spanned from the Mississippi River to what is now Interstate 55. Transportation spurred Kimmswick's founding in 1859 following the St. Louis and Iron Mountain Railroad's establishment in 1958. Two north-south lines bisected Kimmswick, the east line



**HISTORIC BUILDINGS & SITES:** The highest density of historic structures resides along Market, Front and Second Streets.

**REGIONAL/NATIONAL HISTORY**

1820 Missouri statehood  
 1821 Missouri Compromise  
 1839 Mastodon skeleton discovered  
 1850s Civil War Merchant District fire  
 1861 Civil War begins  
 1865 Civil War end  
 1877 Forest Park Reconstruction Opens  
 1896 St. Louis World's Fair re-discovered  
 1897 Mastodon site re-discovered  
 1904 WW I begins  
 1914 WW I ends  
 1918 America enters WW II  
 1939 WW II begins  
 1941  
 1976 I-55 Constructed, MO State Parks purchases Mastodon State Historic Site  
 1976 Kimmswick Bone Bed added to National Registry of Historic Places  
 1980 Delta Queen National Historic Landmark  
 1989 Delta Queen honored

**KIMMSWICK DEVELOPMENT HISTORY**

1850 Theodore Kimm purchases land  
 1858 Iron Mountain Railroad opens  
 1859 Kimmswick founded  
 1871 Kimmswick becomes incorporated  
 1872 Theodore Kimm retires  
 1872 Kimmswick 2nd largest town in Montenegro  
 1876 Park opens  
 1880 St. Louis to Kimmswick run from St. Louis  
 1880 Montenegro Park hotel burns  
 1904 World's Fair patrons visit Kimmswick  
 1904 Bone Bed  
 1905 West Kimmswick becomes Imperial  
 1920 Montenegro Park closes  
 1930 Windsor Harbor Bridge re-erected  
 1933 Show boats discontinue circuits  
 1940  
 1973 The Cabin & Old House moved to Kimmswick  
 1975 Burgeous-Howe & Barbagallo Houses moved to Kimmswick  
 1975 1st Apple Butter Festival, Kimmswick Historical Society founded  
 1977 Apple Butter Pavilion constructed  
 1982 General E Lee Steamboat docks  
 1985 Blue Owl Restaurant opens  
 2016 Delta Queen Port of Call opens  
 2018 Kimmswick Port Phase 1

**THEODORE KIMM ERA 1859-1972**



Railroad Station - 1859



Hermann-Oheim House - 1859



Arnold House - 1865



National Hotel - 1869



Schad-Caldwell House - 1865



Ruess-Terry House - 1866

**POST-THEODORE KIMM ERA 1872-1940**



The Market - 1877



Wagner House - 1880



Kirk House - 1888



Meyer Mercantile Building - 1875



Montesano Park - 1880-1920



Steamboat Providence 1880s-1933

**LUCIANNA GLADNEY ROSS TO PRESENT 1970s-2018**



Burgess-Howe House moved 1975



Barbagallo House moved 1975



The Tavern (1900)- Blue Owl 1985



Apple Butter Pavilion - 1982



The Old House (1770) moved 1973



The Christmas Haus



**WINDSOR HARBOR ROAD BRIDGE**  
 Carondelet, Missouri 1874 - 1928  
 Moved to this site 1930

The County Commission of Jefferson County, Missouri, transferred ownership of this bridge to the Kimmswick Historical Society following its placement on the National Register of Historic Places.

Since the construction of the adjacent modern bridge, this historic bridge has been closed to all but pedestrian and non-motorized traffic.

Windsor Harbor Bridge, a Kimmswick icon, was moved from Carondelet, MO, in 1928 and re-erected in Kimmswick in 1930. Many historic structures in Kimmswick are not original to the town.

which Front Street parallels and the west line dividing Kimmswick from West Kimmswick. Kimm sold lots and built houses selling homes on trust deeds to encourage settlement.

Kimmswick was established during the Civil War and characteristic of a border state, split between the Union and Confederacy. While the Hermann-Oheim House was a safe house for the underground railroad, Theodore Kimm spent time in a St. Louis prison charged as a Southern sympathizer. To this day, when the Mississippi River is low, the Union gunboat Monarch, which sank in a winter ice gorge in December of 1964, can be seen from the Anheuser Estate.

Common St. Louis architectural construction of the period is represented in many types of Kimmswick's brick and clapboard buildings. This period witnessed the construction of the iconic National Hotel, brick and mortar row development like the Schad-Caldwell House and Ruess-Terry house (currently the Dough Depot), Victorian homes like the Kirk House (currently Quinn's Quirks), the Tudor-style Hermann-Oheim House (currently under renovation), and modest structures like the Arnold House. Buildings ranged from one to three stories in height with larger commercial structures located along Front Street near the railway, particularly between Market and Rock Creek.

After Kimmswick incorporated in 1871, Kimm retired in 1872, auctioning his unsold lots and dedicating land as civic open space. He set aside property at the corner of Third and Market Streets for a village green, Jefferson Square for a public park, and gave an acre for a city cemetery. By 1876, Kimmswick was the second largest town in Jefferson County with over 100



On the north end of town, Montesano Park boasted ornate Victorian structures attracting thousands.

residents. It boasted an iron forge, a steam flour mill, a brewery, a brickyard and limestone quarries that supplied materials for St. Louis construction, and large greenhouses shipping fresh flowers to St. Louis. Kimmswick flourished, as William Bradshaw noted in *Life in Kimmswick*, attracting "rich people, poor people, white people, black people, good people, bad people, rebels and Yankees, cultured people and uncultured."

The founding period's business climate flourished during the years following Kimm's retirement, growing from 182 residents in 1890 to 235 in 1910. Montesano Springs Park, a large amusement park, was established in 1880 raising luxuriously ornate Victorian style buildings. The Providence Steamboat and the railway shuttled visitors by the thousands to the



MARKET STREET LOOKING EAST FROM THIRD STREET

park for day trips to “the country.” Fourteen natural sulfur springs served as an attraction and revenue source, shipping bottled spring water as far as New York. The park hosted a hotel and restaurant, dance pavilion, boating lake, merry-go-round, roller coaster, pony track, bowling alleys, shooting gallery, “Herr Bismark’s Tent Show”, and other attractions north of present-day Kimmswick. During St. Louis’ 1904 World’s Fair, attendees traveled to the Kimmswick lime quarry to witness prehistoric Clovis Indian artifacts and mastodon bones. In 1896, the Highlands amusement park opened just west of St. Louis adjacent to the site of the World’s Fair, competing with Montesano Springs. West Kimmswick separated from Kimmswick becoming Imperial, MO, in 1905. Montesano Springs eventually closed in the 1920s, but show boats continued circuits until 1933. The quarry also ceased operations in the 1930s. Kimmswick’s population declined 40% from 1910 to 1920.

Though business and development were receding, the National Landmark Windsor Harbor Bridge was moved from Carondelet, MO, in 1928 and re-erected in 1930. Development during this period included Montesano Springs Park’s ornate Victorian

structures, steamboats and show boats, establishment of civic open space, the City Hall, the Wenom-Drake House whose stone steps have been preserved from the National Hotel, and the two-story Meyer Building with its clapboard main building and log and mortar annex.

Following World War II, the steady closing of businesses sent Kimmswick into a period of industrial decline though the population grew in the quiet, secluded setting peaking at 303 residents in the 1960s. In the 1970’s, a glaring loss of historic buildings to ruin or demolition sparked Lucianna Gladney Ross’s vision of rehabilitating Kimmswick. The heiress to the 7-Up fortune was the driving force behind the preservation of Kimmswick’s industrious, active history.

Restoration began with several old homes being renovated and re-purposed into quaint shops. This plan worked quite well and many more homes and buildings followed suit. A unique feature to Ross’s vision is showcased on the block between Second and Third and Elm and Oak Streets, where old log and mortar buildings from throughout the St. Louis area were relocated. Each unique structure supports differing

attractions with the Kimmswick Historical Society’s The Cabin and the Burgess-Howe House Museums, Jefferson Port Authority’s The Old House currently housing the Delta Queen Port of Call restaurant, the Barbagallo House being renovated as the Delta Queen Museum, and the Winery. The Old House, once a historic carriage stop, has hosted General Ulysses S Grant, General Robert E Lee, and nationally syndicated radio personality Paul Harvey.

Founded in 1977, the Kimmswick Historical Society institutionalized Ross’s vision by expanding Kimmswick’s historical offerings beyond Kimmswick to support local, state and national culture through education, scientific study, protection, preservation, restoration and interpretation of significant sites and objects. Concurrently, Missouri State Parks bought the Mastodon State Historic Site, home to the Kimmswick Bone Bed archaeological area. Started in 1977, the Apple Butter Festival celebrated it’s 41st anniversary in 2018 attracting more than 100,000 visitors. Today this festival, along with the Strawberry Festival, generates 60 percent of Kimmswick’s City revenue. Ross constructed the Apple Butter Pavilion in 1982 on Market Street in Kimmswick’s

center green space.

In the mid-1980s, the steamboat returned. The General E. Lee docked on the Mississippi outside Kimmswick and offered a floating restaurant and regular live entertainment. The ship’s owner proposed making it a casino in the early 1990s, which resulted in a sharp cultural division between residents and the steamboat’s return to St. Louis.

Though commerce, cultural activity, and industry increased, Kimmswick witnessed dramatic population shifts. Between 1970

to 2000, residency declined 65% from 268 to 94 residents. From 2000 to 2016, it grew 57% to 158. Today the community’s culture lives in tension supporting the quaint, quiet community reminiscent of the 1940s to 1970s and the Lucianna Gladney Ross’s resurgence beginning in the 1970s.

With the 2018 planned arrival of the National Landmark Delta Queen paddle boat, Kimmswick continues to build on its history.

## TAKEAWAYS

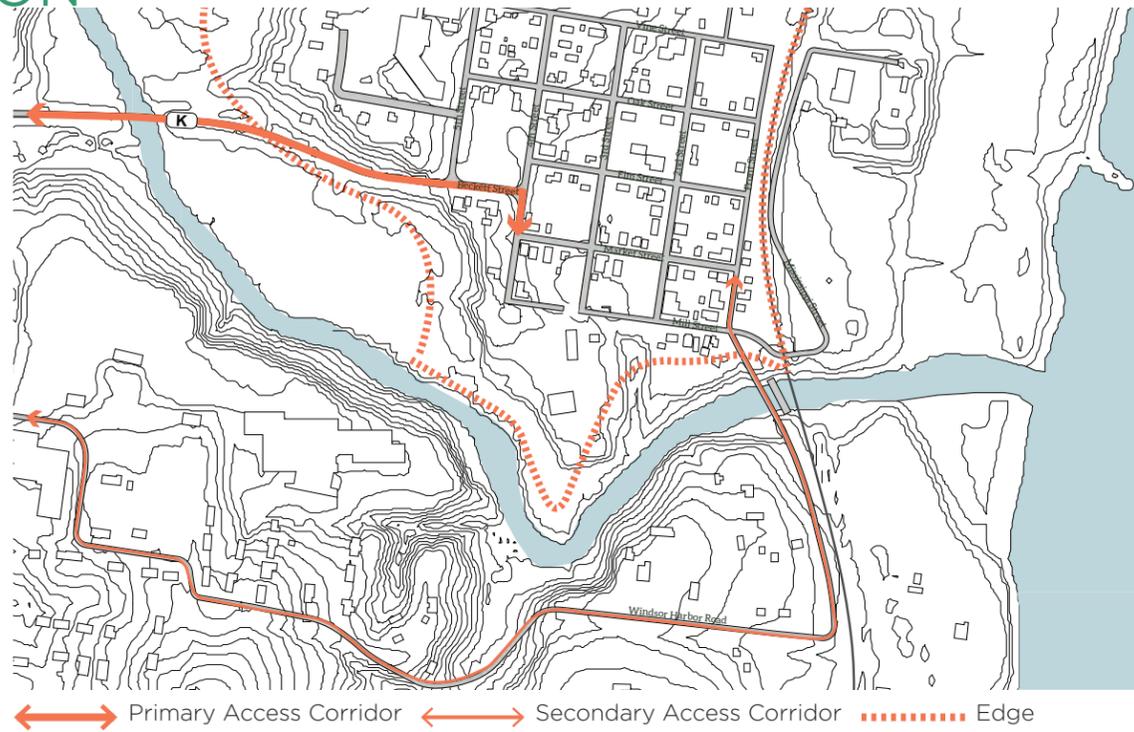
- Four periods define Kimmswick’s development history - Kimm Era, Post-Kimm Era, Post-War Decline, and Gladney Ross Era
- The Post-Kimm Era showcases a boom in culture and entertainment with the introduction of show boats and an amusement park
- Kimmswick erected the Windsor Harbor Bridge toward the end of the Post-Kimm Era
- The Post-War Decline witnessed waning in Kimmswick’s built structures, activity, and identity producing a quiet community
- The Gladney Ross Era continues today working to restore Kimmswick’s identity as a historic destination
- Today Kimmswick culture reflects two time periods Kimmswick as an active destination and a quiet community

- Gladney Ross moved historic regional buildings to the city
- Architecturally, Kimmswick’s fluid history incorporates different pre-modern styles
- Kimmswick’s history links directly to local, regional, national, even international events
- The Kimmswick Bone Bed is an internationally recognized important historic site
- Kimmswick has multiple nationally registered landmarks and historic places
- The Kimmswick Historical Society was founded in 1977 to educate and preserve Kimmswick’s history
- Kimmswick marginally showcases its history story to the public
- Kimmswick continues to attract national history as the Delta Queen steamboat plans to dock at the new port

# SPATIAL ORIENTATION

People instinctively rely on their environs to navigate in and between places. Activity nodes, landmarks, gateways, edges and corridors define places, districts, and regional areas. Distinguishing characteristics of Kimmswick's existing built environment were analyzed to understand what features may have guided visitors to their destination in three distinct settings – an average day with hundreds of visitors, a small to medium event with thousands of visitors, and a large event with tens of thousands of visitors. The following diagrams present a synopsis of Kimmswick's defining features.

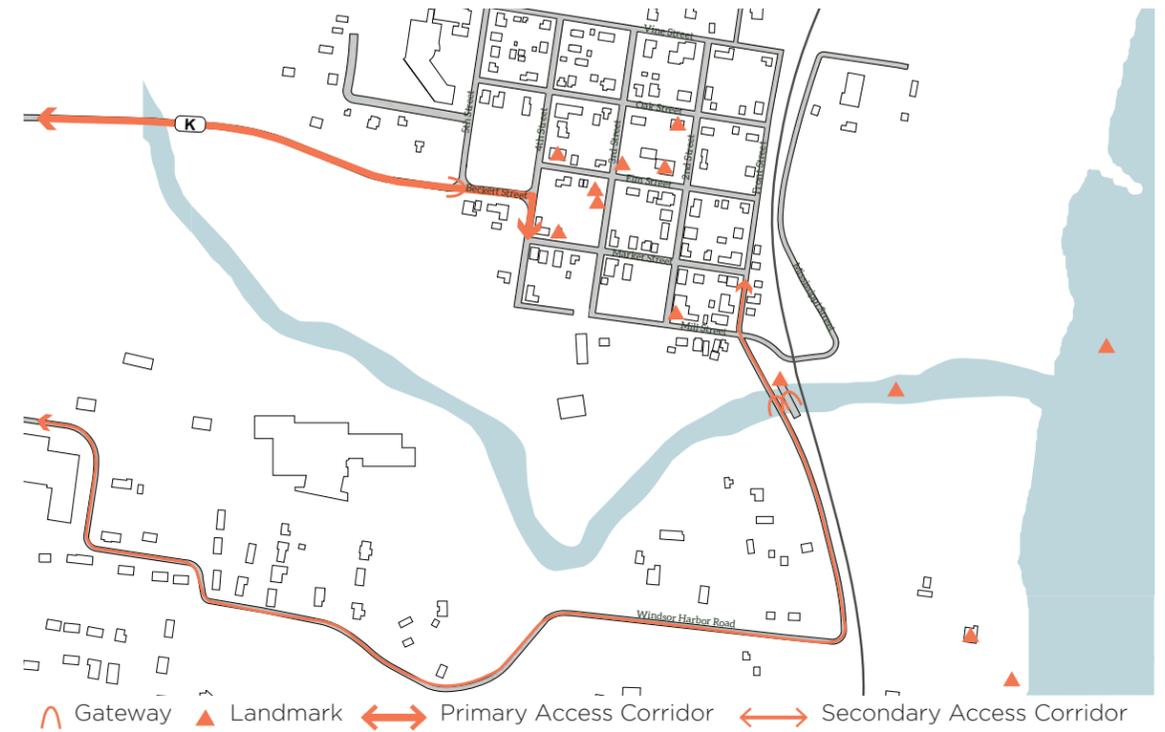
Historically, Kimmswick's entry was the train depot located at the intersection of Market and Front street. People arrived in Kimmswick via the Mississippi River



## CORRIDORS/EDGES

Corridors are linear paths connecting destinations. Function and character often categorize corridors. Kimmswick's corridors can be divided into access, arterial and minor corridors. Highway K functions as the primary access road into Kimmswick. Market serves as the primary arterial for vehicles and pedestrian flow within Kimmswick. Elm, 2nd and Front streets serve as minor corridors moving vehicles and people to destinations off Market. During the Apple Butter Festival corridors could be divided into access, festival and shuttle corridors. Highway K, Montebello, and Windsor Harbor Road classify as access roads conveying vehicles and pedestrians to and from the festival. Active, congested festival corridors are retail and attraction roadways including Market, 2nd, 3rd, 5th, Beckett, and Elm. Moderate activity occurred on Mill and 4th while shuttles hampered festival activity on Front. The shuttle corridor of Front and Vine are designated specifically to the shuttle system. There is no direct path to Kimmswick's Downtown.

Edges are boundaries distinguish one area from another. They can be real, ephemeral, or imaginary. They can be physical barriers like rivers and interstates or permeable such as a forest edge. Kimmswick's edges include Rock Creek on the southern boundary, the railway on the eastern edge, and a more naturalized steep-sloped woodland area defines the west side. No perceivable northern edge exists as residential development to north blends into the community. Rock Creek separates parking at Windsor High School from open field parking along Route K during large festivals. The slopes along 4th Street in Lucianna Gladney Ross Park are a barrier to activity and connectivity during festivals. At a human scale buildings and festival tents define the public realm.



## GATEWAYS/LANDMARKS

Gateways are perceived transitions from one area to another. They can be recognized as literal passage gates, an abrupt change in building character, an elevation change or the signed edge of a district or neighborhood. Typically, Route K serves as the primary recognizable entry to Kimmswick. The rural character along Route K changes to a small-town character upon arriving at the intersection of Beckett and 5th. Windsor Harbor Bridge and the modern vehicular bridge constitute secondary gateways to Kimmswick. Three entries to the Apple Butter Festival signify three distinct gateway experiences. Route K continues to function as an entry with surroundings changing abruptly as the roadway raises to enter Kimmswick and vending booths line Beckett. Barricades on the south leg of the intersection of Vine and Montebello allow pedestrians arriving on shuttles to pass while blocking vehicular traffic into the festival. The Windsor Harbor Bridge over Rock Creek provides a scenic pedestrian transition into the south side of Kimmswick. The railway underpass functions as a secondary gateway. There were few minor gateway transitions after entering the festival area.

Landmarks are popularly recognizable natural or built features which may or may not be activity nodes themselves. The team and visitors identified the Christmas House, City Hall, Blue Owl Restaurant, Windsor Harbor Bridge, the Mississippi River, and the log and mortar buildings Delta Queen Port of Call, Burgess-How House, and Barbagallo House as consistent recognizable landmarks at all times. Landmarks are located throughout the community with a higher density around the central green space and along Elm.



Apple Butter Festival visitors noted the Christmas House as a recognizable landmark.

and the railroad. Today visitors travel an indirect route from Interstate 55, arriving at Kimmswick's historic back door. Developing a stronger connection to Interstate 55 and establishing an understandable front door on the town's western edge will enhance visitor experience. To re-establish Kimmswick as a river town, the community will need to develop creative ways to cross physical barriers like the railroad and levee.



Heading into Kimmswick on Route K, there is no gateway welcoming visitors. The roadway serves as a major pedestrian arterial conveying thousands of visitor during festivals.

### TAKEAWAYS

- Kimmswick’s original “front door” faced the Mississippi River and railway; Currently, Route K accesses the city’s historic “back door”
- Route K is Kimmswick’s primary access corridor, Windsor Harbor Road is secondary
- Edges like Rock Creek, the railway, naturalized woodland buffers and development patterns funnel access to the two primary entries
- Historic structure and well-known businesses act as primary landmarks

- The Beckett and 4th intersection confuses new visitors wondering which direction will lead to events and destinations
- Landmarks are distributed throughout Downtown
- Gateways are not well defined
- Transition in built environment or festival activity function as gateways to Kimmswick
- Market Street and connected ancillary spaces host most activity nodes
- During events, tents, dumpsters, vehicles, and crowd

### ACTIVITY NODES/WAYFINDING

Activity nodes are centers where people congregate and may include plazas, event spaces, or attractions. During common days, the Dough Depot patio and Blue Owl generate peaks of activity most noticeably during lunch hours. During the small to medium event, these locations still remain activity centers with the addition of street activities and entertainment on Market Street at the intersections of 2nd and Front streets. During the large event the team recognized the activity nodes - Blue Owl entry and tabled area on 2nd Street, the Historic Society’s Apple Butter Pavilion, and the Food Court south of City Hall - as unique activity generators within Kimmswick’s Downtown. Shuttles during the large event deterred commercial and festival activity on Front Street. Kimmswick’s activity radiates around Market Street.

Wayfinding helps direct people from place to place. Upon arrival at the intersection of Beckett and 4th, visitors unfamiliar with Kimmswick hesitate trying to understand which direction to turn. Billboards at the intersection point left while the main activity corridor, Market Street, is right. Pedestrian wayfinding signage is installed low for legibility but can be easily blocked by vehicles or other taller elements. Festival coordinators rely heavily on the Palaroo app to help people find specific vendors, destinations, parking, entertainment and more. The app is promoted on the event website and via yard signs. Festival wayfinding in many places including the festival entry points and key locations like the intersection of Beckett and 4th was absent. Signs indicating shuttle stops were small and hard to perceive. Dumpsters, vendor tents or festival attenders often blocked existing wayfinding signage as it was too close to the ground.

# BUILT ENVIRONMENT PROPORTION

Places consist primarily of vertical and horizontal elements. The relationship between vertical and horizontal scales define spatial settings. Recognized guidance height-to-width ratio for primary corridors ranges from a maximum spacing of 1 high by 3 wide (1:3) to a minimum 2 high by 3 wide (2:3); tighter ratios provide stronger definition. Vertical elements create the strongest definition of spaces. Buildings provide solid edges. Trees can provide a canopy enveloping the pedestrian realm creating a comfortable environment and the notion of protection. Benches, fences, lighting, bollards, signage and other elements can further develop street setting.

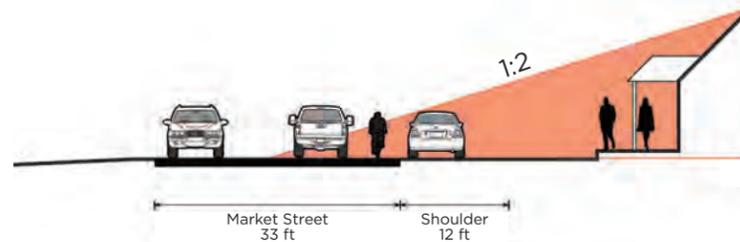
The following diagrams illustrate Market from 4th Street to Front Street. Understanding the spatial make-up will help develop solutions and guidance relating to the historic setting to further accentuate Kimmswick's sense of place.

## TAKEAWAYS

- The Market corridor has inconsistent built environment proportions losing a sense of place at points
- Market from Front to 2nd Streets is a well defined corridor
- Blue Owl parking on Market between 2nd to 3rd Streets reduces definition on Market
- One-story buildings and undeveloped parcels create a wide open space at the central green space
- The Meyer Building at 4th and Market Streets anchors the end of the corridor creating a sense of entry from the west

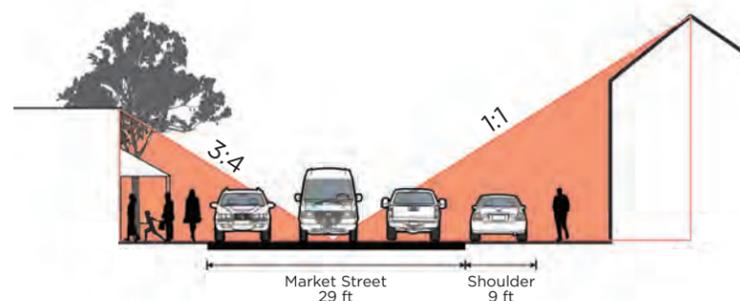


» This section opens to the central green space to the north. One-story buildings front Market to the south along with an open lot. With limited vertical elements on the north this portion is the least developed space along the corridor.



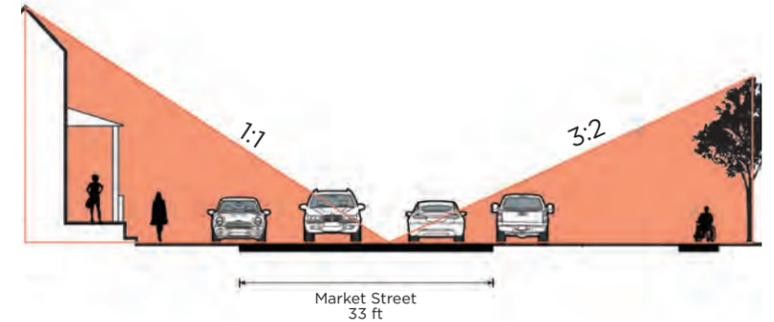
MARKET BETWEEN 3rd & 4th STREETS LOOKING EAST

» This location is the narrowest portion of the corridor. One-story buildings to the north encroach on the roadway reducing the pedestrian realm. The section's narrowness helps support an active node; however, it forces more vehicular and pedestrian mingling.



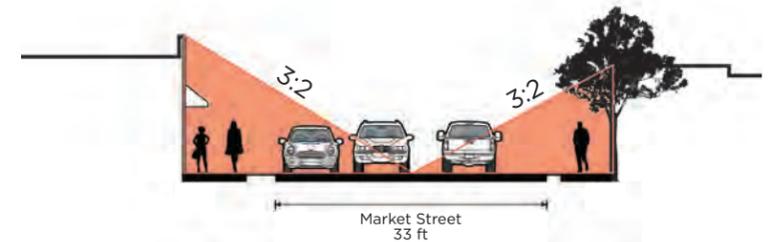
MARKET EAST OF 3rd STREET LOOKING EAST

» This location widens slightly more. Trees define the southern edge, and, with the parking lot behind them, no built elements reinforce the street space. The two-story building on the north helps define the public realm as the southern border softens.



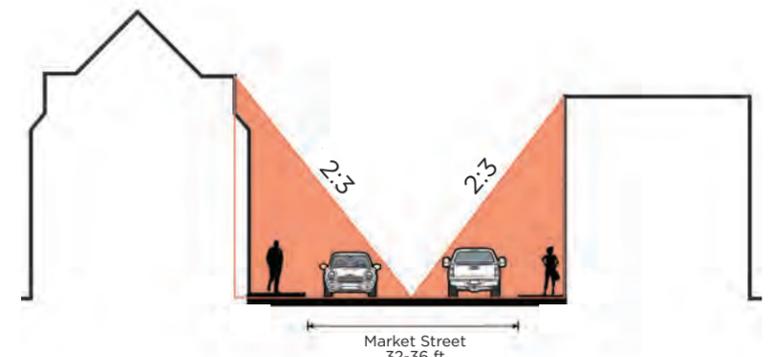
MARKET WEST OF 2nd STREET LOOKING EAST

» This location widens slightly and building heights reduce by half. The road width and building setbacks retain the rural-urban setting; however, the openness to the sky generates a less defined outdoor room.



MARKET EAST OF 2nd STREET LOOKING EAST

» This location has a street to building ratio creating a distinct outdoor room. As the historic gateway to the community, the buildings act as a passage way. The scale is human and comfortable. Multiple story buildings develop a rural-urban setting.



MARKET NEAR FRONT STREET LOOKING EAST



Photo: Once the “front door” to Kimmswick. Three-story buildings at Market and Front develop a well defined public realm.

## INFRASTRUCTURE

Kimmswick's historic setting, flood hazards, diverse program demands, and limited capital funds weigh heavily on the community's infrastructure. Infrastructure observations and analysis focus on these key areas:

- Vehicular traveled ways and typical roadway cross sections
- Street signage and pavement markings
- Topography
- Pedestrian access routes (PAR) and ADA access
- Public utilities, including street lighting.
- Public realm drainage conditions
- Amenities

### Traveled Ways

The main access road to Kimmswick is Missouri Highway K, which intersects US Route 67/61 approximately ½ mile east of Interstate 55 (mile marker 186). This stretch of highway, outside the city limits, is a two-lane, two-way road that includes a modern bridge structure. The traveled way is approximately 24' wide and includes paved shoulders approximately 7' wide on both sides of roadway. The asphalt roadway surface is in generally good condition. A secondary access road into Kimmswick is located in the southeast portion of the city, crossing Rock Creek on a modern roadway bridge adjacent to the pedestrian-only Windsor Harbor Bridge. Its traveled way is approximately 22' wide, and there are paved shoulders approximately 2' wide on both sides of roadway. It should be noted that both of these primary access roads can become impassible during flooding events. The only access in and out of the City during these flood events is via Montebello Road, which runs north from Kimmswick through the Montesano Neighborhood.

Approaching Kimmswick from the west



**VERSATILE INFRASTRUCTURE:** Kimmswick's roadways and public realm function organically with limited definition hosting a wide range of events.

on Highway K, the roadway crests at the intersection of 5th Street, with the general topography of the City rolling downward to the east towards the Mississippi River. After an initial drop in elevation of approximately 15 feet from 5th Street to 4th Street, the terrain flattens out and is quite flat from 3rd Street to the railroad embankment just east of Front Street. North to South, the city's drainage is divided roughly along Oak Street, with runoff concentrating in two main outlet locations in the city. Drainage conditions are addressed in detail later in this chapter in Natural Environment.

The streets of Kimmswick comprise a total of approximately 10,000 linear feet, just under 2 miles, of paved roadway. The typical section throughout Kimmswick is flush, without curbing and mainly without formal sidewalk pavement and with an only slightly crowned traveled way pavement. This is common in small, rural

communities. Street sections are primarily asphalt pavement, with the traveled way varying in width from 22' to 32'. Streets are generally in fair to good condition, both for the roadway pavement and the gravel shoulder areas. Some streets have a gravel shoulder that functions as the pedestrian access route (PAR). Other streets do not have this shoulder, mostly north of Market Street. Market has some stretches of concrete sidewalk. Jefferson County's GIS shows the public right-of-way widths to be approximately 45' wide through most of the city.

### Pedestrians & ADA

Kimmswick's posted speed limit is 20 miles per hour. Given the city's destination appeal for shopping and festivals, lowering the speed limit to an odd number such as 12 miles per hour would provide a more pedestrian-friendly environment and 'calm' traffic throughout town. The lower speed

limit would also complement the small turn radii at street intersections. Existing radii at intersections are small, sometimes not present, with little room to enlarge these radii. The slower speed limit would add a level of safety, contributing to slower, more calculated turning movements. As there are only a few speed limits signs in the City, additional speed limit signage is recommended.

Most of city pavement slopes are ADA compliant, or could easily be made compliant. Some businesses are not ADA compliant at present. Many have steps at the entrance doors, while others have basically flush entries, but with thresholds to negotiate, and some businesses have ramps at the entrance. Key items to address in bringing businesses into ADA compliance include the removal of barriers (as defined in ADA guidance), providing accessible parking stalls, and providing accessible

entrances. However, ADA guidelines include exceptions for facilities built before 1993.

Due to the limited amount of curbed roadway sections, there are almost no ADA curb ramps present in the City. While curb ramps are therefore not needed to provide access to sidewalks and shoulders, the absence of detectable warnings is an issue that makes street crossings more problematic for visually impaired users. Also, the flush roadway and undefined edge further impact visually impaired users.

Consistent pedestrian routes in the form of paved sidewalks, with upgraded signage and pavement markings for consistent crossings, would provide better accommodations for all pedestrians, especially mobility and visually impaired users. Existing alleys, paved and unpaved, are located in the public right-of-way and can be utilized

as access routes. Designating some city alleys strategically in the business district as bicycle and pedestrian corridors could promote increased pedestrian and bicycle traffic. Formal crossings would provide greater safety and comfort for pedestrians.

### Drainage

Storm inlets are sparse in general, and some areas of the city, such as the public green spaces, have shallow ditches leading to open culverts under streets. Some intersections would benefit from additional storm inlets, such as at the intersection of Mill and 2nd Streets. Siltation at that intersection indicates pooling water during storm events. Visual evidence indicates limited erosion occurring adjacent to the roadways. Some sections of roadway would clearly benefit from edge curbing primarily where storm inlets are placed, such as the intersection of Front and Vine Streets. The lack of roadway curbing at those locations limits the effectiveness of inlets and creates a roadside obstacle for vehicular traffic. One area where curbing has been added to enhance storm inlet effectiveness is the northwest quadrant of the Front and Mill Street intersection. Stormwater conditions discussed later in this chapter in Natural Environment.

Though large festival events are few in number, these events are integral to Kimmswick's culture. Festival layouts should be considered in any public right of way design. Certain upgrades like vertical curbing could have benefits but would alter the nature of the large events. Streets are closed to vehicular traffic during large events. The addition of curbs would add tripping hazards and could hamper tent and festival set up. Therefore, while some curbing for stormwater inlets could provide a positive benefit, any improvement should

retain flush pavement grades, particularly in the main business district. Given the variety of business fronts throughout Kimmswick, consistent roadway improvements would unify the roadway, reduce maintenance, and enhance historic appeal.

### Utilities

A significant number of overhead utility power lines parallel Kimmswick's roadways. Considering flooding frequency, retaining



Three bridges cross rock creek serving multiple transportation modes - trains, pedestrians and bikes, and vehicles.

the overhead network could contribute to resiliency. Keeping the utility over flood levels allows for easy access in emergency situations and reduces the potential for underground water damage. Portions of the community could benefit from relocation of these lines or exploring underground options to increase character and reduce conflicts. However, utility relocation or burial is costly. There is also a slight historic nature to overhead utility poles communicating an upgraded but



Friends help a disabled woman negotiate the curb at the corner of Market and Front Street. In addition to Where curbing exists, no ADA accommodations are present.



Retail shops creatively define the pedestrian realm with flags, planters, seating and other elements. Wide gravel shoulders serve as Market Street's pedestrian realm aren't ADA compliant.

not modern industrial aesthetic. There may be ways to creatively integrate these elements with a positive aesthetic effect.

There are a limited number of street light poles, and some areas of the City are quite dark after dusk. This can help promote a quiet evening setting with the opportunity to enjoy the night sky. The addition of pedestrian lighting would enhance security and safety and support Kimmswick businesses operating during evening hours. Existing street lights are low pressure sodium that emit an unnatural orange light with little light pollution cut-off and reflect a small color spectrum. Upgrading to dark sky LED fixtures would emit a greater color range in a more focused pattern, with better results from less light. This in tandem with dark sky pedestrian lighting could retain the rural night skyline yet provide a higher quality pedestrian experience.

Built in 2004, the Kimmswick waste water treatment plant is less than two decades old. Constructed to modern standards, the sanitary system serves Kimmswick sufficiently.

**Amenities**

The presence of amenities for pedestrians in the public right-of-way is limited and generally inconsistent. Planter boxes functioning as bases for wayfinding signage and a few street trees comprise the public realm's limited landscaping. Utilizing landscaping and amenities would further define use, enhance the community's character and identity, increase pedestrian comfort, improve safety, and support adjacent businesses.

### TAKEAWAYS

- Route K has 12-foot 40 mph travel lanes and 7-foot paved shoulders
- Windsor Harbor Road has 11-foot 25 mph travel lanes and 2-foot paved shoulders
- Kimmswick's streets are in fair-good condition with a posted speed of 20 mph and widths between 19-33 feet
- County GIS indicates typical roadway right-of-ways are 45-foot wide
- Most pavement slopes within the public realm are ADA compliant
- Few streets have vertical curb and gutter requiring limited ADA ramps
- Front and Market Street intersection curb and gutter is non-compliant with ADA
- Roadways lack definition adversely impacting visually impaired
- Addition of vertical curbing would impact festival functions potentially creating trip hazards
- Overhead power poles parallel many streets
- Low pressure sodium street lights are only located at intersections

## VISITOR ACCOMMODATIONS

Comfortable settings are attractive places to linger. The Center for Urban Forest Research's 2007 study indicates that retail areas with trees attract more patrons who spend 9-12 percent more time and money while shopping. While there are many factors incorporated in retail development, providing clean, safe, comfortable places increases patronage. People attract people, and places designed to accommodate people support thriving activities.

Safety, particularly at night and when alone, will be the first factor deterring visitors. Lighting is one of the primary design elements contributing to a sense of security allowing people to comprehend their setting at vulnerable times of the day. Kimmswick's current lighting is limited primarily to one street light at every intersection. The low pressure sodium lamps have a limited color spectrum and street lighting is naturally designed primarily for movement in the safe confines of a vehicle. Pedestrian lighting typically creates a space 2.5 times as bright. Pedestrian lights can be found in the central green space, away from any pedestrian path, and the Blue Owl parking lot; however, the spacing in both cases is inadequate to achieve acceptable pedestrian lighting levels. Should business past dusk become common, pedestrian lighting is recommended in areas with evening business hours.

Good maintenance and cleanliness support a visitor's sense of security; therefore, trash receptacles are considered necessary to secure a retail area's character. One trash receptacle per block on each side of the street in a retail area is a common guideline. Market supports this standard, but secondary retail corridors do not have receptacles. Waste collection is as important as providing receptacles. Providing



**AMENITIES AND SHADE SURVEY**  
 ● Street Light   ● Pedestrian Light   B Bench/Seating   ● Table and Chairs   ● Trash Receptacle   ● Shade

receptacles in high pedestrian traffic areas is recommended, provided a public or private maintenance agreement is established.

The presence of people also contributes to visitor safety. Street furnishings and shade help develop street life. Kimmswick's public realm and associated gathering spaces, such as patios on private property, are flush with a variety of seating. Forty seat benches and thirty-one tables with

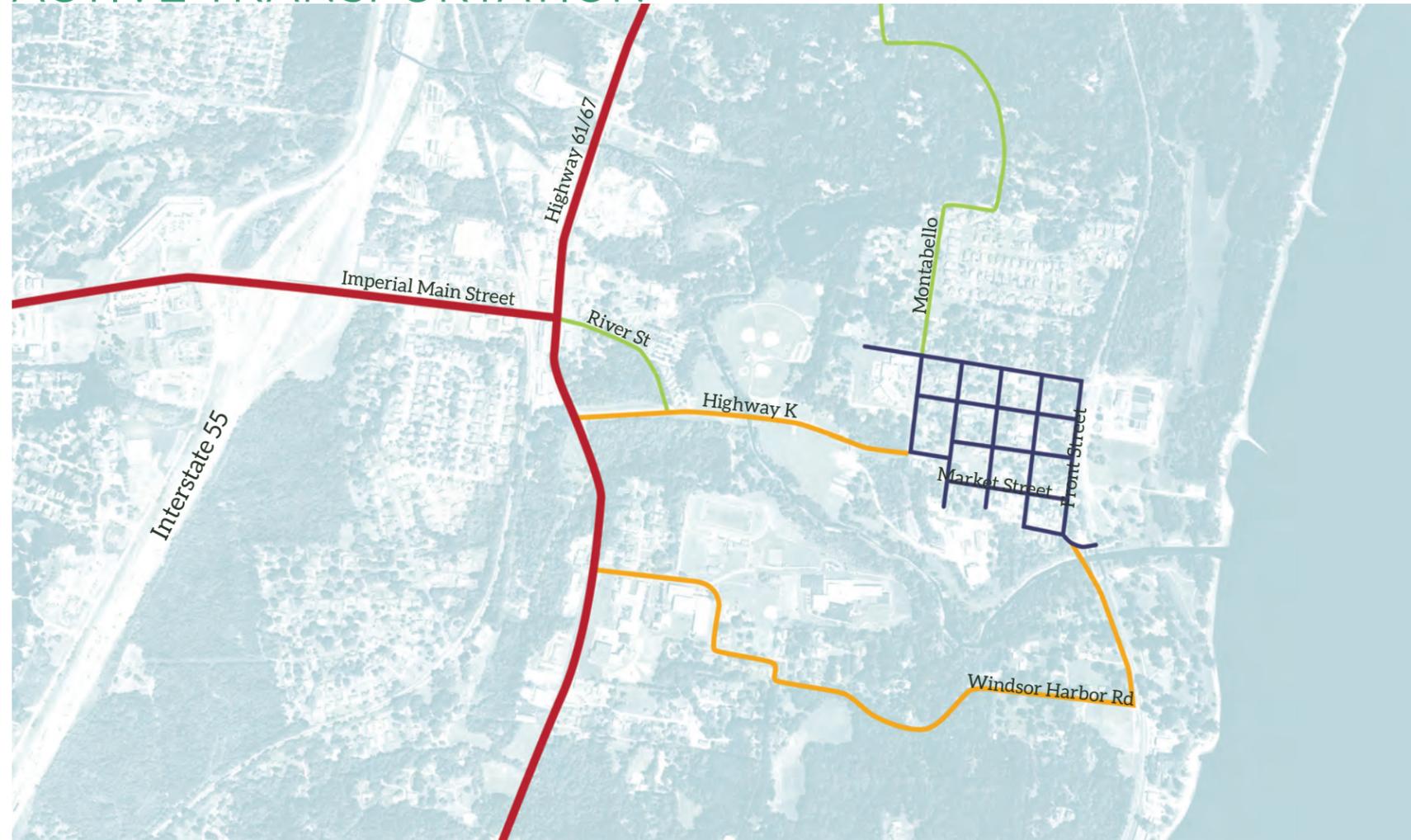
chairs have been identified, well above the street furnishing minimum standards. While seating is numerous, shade is in short supply. Sparse street trees leave 71-81 percent of what could be considered Market Street's pedestrian realm in the sun. Front Street fairs considerably better with approximately fifty percent shade coverage. Considering Market claims half the street furnishings, increasing shade along the corridor should be considered.

While such elements of comfort may not be necessary elements of a streetscape, street furnishings, lighting, and trees strongly contribute to safety and enhance a community's sense of place. These design elements can also establish Kimmswick's identity and contribute to the historic character. Consistent materials and repetition are recommended for safety and identity.

## TAKEAWAYS

- Lighting is limited to one street light at each intersection
- Existing low pressure sodium street lighting emits a limited color spectrum
- Market and Front Streets have no public realm pedestrian scale lights
- Existing pedestrian lighting is widely spaced producing insufficient coverage and doesn't light utilized pedestrian paths
- Market Street has sufficient trash receptacles; secondary commercial corridors do not have sufficient trash receptacles
- Existing trash receptacles do not match Kimmswick's historic aesthetic
- The public realm and associated gathering spaces provide numerous seating opportunities
- Amenities in the public realm are inconsistent in character
- Market Street pedestrian realm has only 19-29 percent shade covering the pedestrian realm
- Front Street has approximately 50 percent shade covering the pedestrian realm
- Increasing shade along Market Street would enhance visitor experience

# ACTIVE TRANSPORTATION



**LTS 1:** All ages and abilities      **LTS 2:** Most adults      **LTS 3:** Confident bicyclists      **LTS 4:** Uncomfortable for most

## BICYCLE LEVEL OF TRAVEL STRESS

Within Kimmswick there are several transportation modes utilized: automobiles, recreational vehicles, neighborhood electric vehicles, bicycles and walking. These modes negotiate within the same roadway realm. As the riverfront develops and destinations expand, there will be increased opportunity for active transportation within Kimmswick, as well as getting to Kimmswick, which in turn increases residential livability, connectivity, safety, and access. It is

critical to define the level of comfort present in the study area. This analysis provides the foundation for direction and recommendations by establishing a baseline for measuring implementation success.

Kimmswick has very few sidewalks with streets serving vehicles and pedestrians. Present undersized sidewalks, 2 to 2.5-foot wide in some locations, do not connect to a broader network. Most local

school properties provide sidewalks along roadways. No pedestrian facilities exist connecting the high school or elementary school properties to local or regional neighborhoods. Rock Creek and Highway 61/67 are major barriers to pedestrian and bicycle activity. The Windsor Harbor Bridge provides a historic active transportation connection from Kimmswick to the Anheuser Estate across Rock Creek.



**LTS 1:** Comfortable for all



**LTS 3:** Comfortable for confident riders



**LTS 2:** Comfortable for most adults



**LTS 4:** Uncomfortable for most

## SEGMENT SCORING MATRIX FOR BICYCLE LEVEL OF TRAFFIC STRESS

# TRAVEL LANES	TRAFFIC VOLUME	MIXED TRAFFIC		STREET W/ BIKE LANES		
		< or = 30 mph	< or = 35 mph	< or = 30 mph	< or = 35 mph	< or = 40 mph
2 - 3 lanes	< or = 3K	1.5	2.5	1	2	2.5
	3K - 10K	2	3	1.5	2.5	3
	10K - 20K	3	3.5	2	3	3.5
	> 20K	3.5	4	2.5	3.5	4
4 lanes	< or = 3K	2.5	3.5	1.5	2.5	3
	3K - 10K	3	4	2	3	3.5
	10K - 20K	3.5	4	2.5	3.5	4
	> 20K	4	4	3	4	4
6 lanes or more	All Volumes	4				

Highway 61/67 is designated as part of the national Mississippi River Trail (MRT), yet it does not accommodate national, statewide, regional, or local travel. The roadway section includes four twelve-foot wide travel lanes with a posted speed of 40 mph and varying shoulders from two to seven feet wide. The speed and shoulder inconsistency are uncomfortable for most cyclists and unsafe for pedestrians. No other roads connected to the study area have bicycle facilities.

Using the Bicycle Level of Traffic Stress (BLTS) methodology established by the Mineta Transportation Institute's (MTI), analysis of bicycle traffic stress on roads in and around Kimmswick was completed. The analysis combines individual roadway characteristics, like the presence of dedicated bicycle facilities, number of travel lanes, presence of parking, and posted speed limit, to assign a level of traffic stress to each roadway segment.

At its core, the BLTS scoring decreases in comfort (1 for highest comfort level) as the number of lanes, posted speed limit, and traffic volumes increase. For example, traffic volumes reduce comfort more where bicyclists share the road with motorized vehicles.

Streets within Kimmswick support an environment comfortable for all ages. Though travel speeds on Windsor Harbor Road and Montebello are slow, minimal shoulders and limited view sheds make riding within the travel lanes comfortable only for seasoned cyclists. Though Route K has generous shoulders, travel speed reduces its score to LTS 3. Discussed earlier, travel lanes, travel speeds, and inconsistent shoulders create an inhospitable environment on the MRT Highway 61/67. Imperial Main Street is also a highest stress

street based on higher traffic volumes and lack of facilities. River Street was analyzed as an alternate route from Imperial into Kimmswick and scored an LTS 2.

Strong active transportation networks encourage greater use when the system connects destinations in support of safety, access, recreation, and intensity of use. Kimmswick is ideally located to leverage local schools, parks and open space, riparian corridors, and historic destinations to support a highly engaging system with multiple funding opportunities. The best networks span across governmental boundaries.

## TAKEAWAYS

- Kimmswick is ideally located to leverage local schools, parks and open space, riparian corridors and historic destinations to support a highly engaging active transportation system
- Kimmswick Downtown supports few sidewalks
- Highway 61/67 is designated the Mississippi River Trail though the roadway's design creates a hostile environment for bicycles
- Locals schools are not connected to a broader bicycle and pedestrian network
- Rock Creek and Highway 61/67 are major barriers to bicycle and pedestrian activity

## RAILWAY CORRIDOR

The Union Pacific (UP) rail line runs north/south parallel to Front Street and limits access to the Mississippi River. Two passenger trains, 5-10 freight trains, and sometimes overflow traffic from UP Chester Subdivision travel through town daily. The speed limit through Kimmswick is 55 mph for passenger trains and 50 mph for freight. Four crossings link Kimmswick to the other side - an at-grade crossing to the sewer plant, an underpass at Mississippi Street, an underpass on the south side of Rock Creek, and an at-grade crossing at the south end of the Anheuser property off Windsor Harbor Road. Both at-grade crossings lack a signal, gate, or train warning devices. The Mississippi Street underpasses have limited vehicle clearance, and the roads are narrow with limited room for simultaneous vehicle and pedestrian or bicycle use. Mississippi Street is the primary existing access point for the proposed port, dock and riverfront development. The fact that the Mississippi Street underpass is susceptible to flooding, is a significant issue to address with regard to maintaining commerce during floods. During these flooding events, there would not be access to the riverfront via the current infrastructure.

The Port Authority has planned an at-grade crossing at Market Street for pedestrian, bicycles, and vehicles. UP has a well-defined process for developing new crossings which includes removing three existing for each new crossing. Eliminating the underpass crossings will not count as a crossing removal. They work closely with MODOT to determine the appropriate safety features. The Port Authority has proposed installing fencing on both sides of the tracks to prevent pedestrian crossings at other locations. Grade-separated crossings are highly preferred over at-grade crossings for safety advantages. The City of Kimmswick

and the Jefferson County Port Authority will need to maintain a relationship with UP officials and facilitate regular communication regarding the condition of the UP overpass structures. The number of projected and actual visitors traversing any crossing should be coordinated. Providing an overpass above UP tracks would require 23-feet of clearance.

Due to the elevated nature of the rail line, it acts as a natural levee, but also traps water within the interior watershed. There is a low area in the northern part of the City that drains through an underpass. However, to prevent flooding from the Mississippi during the extreme flood events, the City blocked off part of the underpass, allowing only a restricted path for stormwater to discharge east to the Mississippi River. Therefore, there are times during major flooding events when pumping is required to discharge storm water from within the interior drainage basin. This requires a discharge hose to be placed across the tracks. Although the hose is placed beneath the rails between the ties, UP takes issue with that arrangement, likely due to the potential to cause derailment.

## TAKEAWAYS

- Kimmswick has four railway crossings - two at-grade and two underpasses
- The Port Authority plan proposes an at-grade Market Street crossing
- UP requires removing 3 existing crossings for each new crossing
- MODOT determines appropriate safety features for at-grade crossings
- The Port Authority has proposed fencing to focus crossing at approved locations
- Eliminating the railway underpasses will not count toward mitigating the Market Street crossing
- UP does not approve of running stormwater pump hoses under rails
- UP would like to remove the north outlet from beneath the tracks



Children sit and play on the railway during the Apple Butter Festival. With development proposed along the Mississippi River, restricting access across the railway should be considered.

# RIVER CONNECTIVITY



## JEFFERSON COUNTY PORT AUTHORITY DEVELOPMENT CONCEPT

Kimmswick's relationship with the Mississippi River and Rock Creek reflect primarily passive and defensive connections. Presently, little waterfront infrastructure and few amenities exist.

These two waterways' character differ sharply. The expansive Mississippi River inhabits a floodplain with more gradual accessible slopes. Its muddy waters pass Kimmswick on a gradual arch regularly carrying industrial vessels. Rock Creek carved a channel at the foot of steep bluffs, exposing rock outcroppings and ledges. The rock bottom produces a much clearer yet non-navigable waterway. Slopes often exceed 3:1. Erosion lines both waterways' edges; however, the Mississippi River banks have highly eroded soil with heavy cracking and shearing. Land adjacent to both riverfronts supports industrial uses, with the water treatment plant near the

Mississippi River and the waste collection site bordering Rock Creek.

The Anheuser Estate and Windsor Harbor Bridge picturesque Mississippi River views. The riverfront panorama significantly contributes to the estate's event bookings. A landmark old oak tree on the estate helped Lewis and Clark navigate the river on their historic journey. Dirt trails along Rock Creek's south side lead vehicles, pedestrians, and bicyclists to informal gathering/fishing areas on the Mississippi. Stakeholder interviews revealed the green space between the railway and Mississippi is a coveted natural recreation area where Kimmswick's residents ride four-wheelers, fish in the slough, and even hunt.

Flooding regularly threatens Kimmswick. The original street grid for Kimmswick begins 1,200 feet west of the Mississippi

## TAKEAWAYS

- The Mississippi River and Rock Creek riverfronts have distinct picturesque characters
- The Anheuser Estate possesses a riverfront observation point, landmark oak tree, and dirt trail bank access to Rock Creek
- Windsor Harbor Bridge attracts visitors viewing the Mississippi over 1,000-feet away
- Kimmswick sits 1,200 feet from the Mississippi River
- Residents covet riding four-wheelers, fishing and hunting in the green space between the railway and Mississippi

- The railway screens the Mississippi from Kimmswick
- Temporary levees restrict visual or direct access to Rock Creek
- Kimmswick development does not relate with Rock Creek
- Industrial land uses occupy both riverfronts
- No wayfinding guides visitors of the riverfronts
- The Port Authority plans riverfront development in 2018, between the railway and Mississippi north of Rock Creek
- The Anheuser Estate is considering a park on the north half of the estate

River with Front Street paralleling the river. The railway acts as a levee, and the town has constructed a temporary levee from the railway meandering west along Rock Creek. The railway acts as a visual and physical barrier to the waterfront hiding the riverfront. Kimmswick has four railway crossings discussed earlier. Development along Mill Street faces away from Rock Creek. These buildings and the temporary levee obscure Rock Creek's waterfront and the bluffs on the other side.

No wayfinding provides directions to the riverfront, nor do any official parks, trails, or additional amenities exist. Jefferson County Port Authority has plans to develop the green space between the railway and Mississippi River including an at-grade roadway crossing at the end of Market Street, a bank landing designated for the Delta Queen riverboat, moorings, parking,

a civic amphitheater near Rock Creek, fishing access to the slough, and riparian boardwalks. The plan proposes moving the Windsor Harbor Bridge 500 feet closer to the Mississippi to link the development directly to the Anheuser Estate as an amphitheater entrance. Because the Anheuser Estate hosts private seasonal events nearly every weekend, the Estate is considering park development on the north end open to public access during private events on the south end.

Jefferson County Port Authority revealed a riverfront redevelopment plan in the fall of 2017 to support the arrival of the Delta Queen. The Port presently has \$985,000 for the initial development phase. The River Connectivity Map (page 19) represents Jefferson County Port Authority planning and interviews with Anheuser Estate representatives. ■

## LEGEND

-  EXISTING USE
-  PLANNED USE
-  RAILWAY BARRIER
-  EXISTING AT-GRADE CROSSING
-  EXISTING UNDERPASS
-  PROPOSED OR POTENTIAL CONNECTION
-  PROPOSED ROADWAY/PARKING
-  EXISTING GATHERING AREA
-  PROPOSED GATHERING AREA
-  PROPOSED AMENITY
-  PROPOSED RIPARIAN/NATURALIZED RECREATION AREA

**RIVER CONNECTIVITY:** The railroad represents a strong barrier between Kimmswick and the proposed riverfront development.



Marina



Observation Point



Anheuser House



High School



Elementary School



Downtown



Water Treatment

to St. Louis



Amphitheater



Parking



Fishing



Kayak/Canoe



Marina



Confluence Park



Observation Point



Landing



Mooring

# operational setting

» Operational examination considers Kimmswick’s management, policies, organizations, traffic, parking, and event management and logistics seeking to understand the functional relationships of the City’s culture impacting infrastructure. This section analyzes the built and natural environments from an operations, policy and programming perspective. Information was primarily acquired through stakeholder interviews, event observation, and official records.

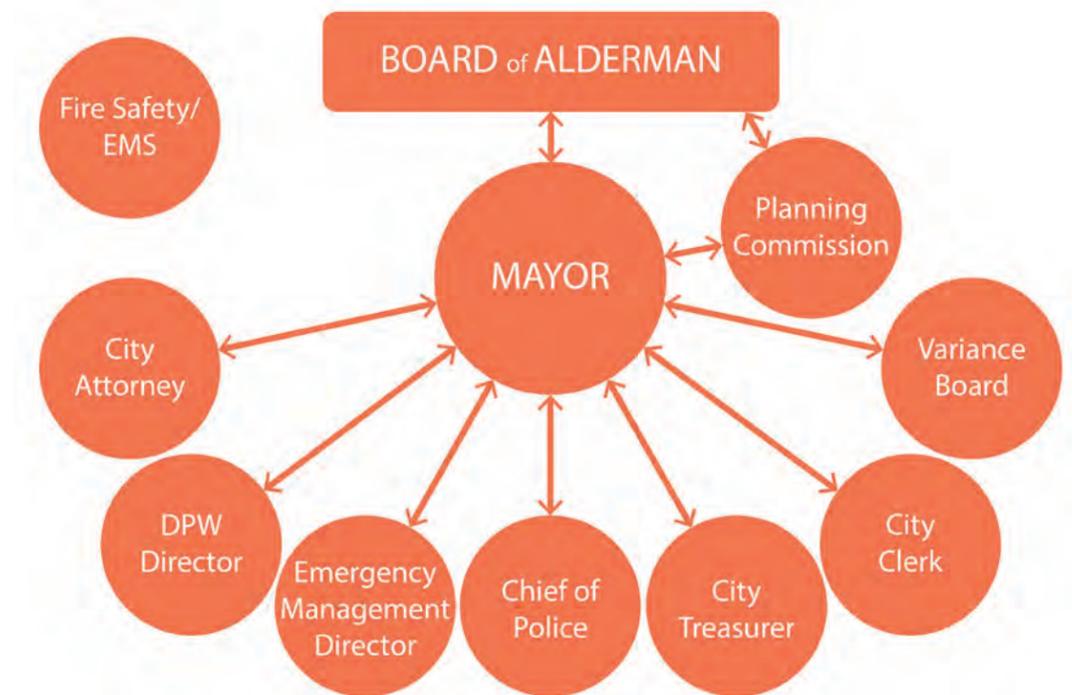
## CITY MANAGEMENT STRUCTURE

Kimmswick city management centers around the relationship between the Board of Alderman performing primarily legislative duties and the mayor working with the Alderman as the City’s executive manager. Kimmswick has two wards with two Alderman each, comprising the Board of Alderman. Third Street divides the wards with Ward 1 to the west and Ward 2 to the east. The mayor acts as a tie-breaker for the Board of Alderman functioning in an executive role responsible for managing the City’s affairs with support from the City Treasurer/Clerk and Director of Public Works, the only two paid employees. The mayor must bring major decisions (ie. hiring employees) before the Board for approval.

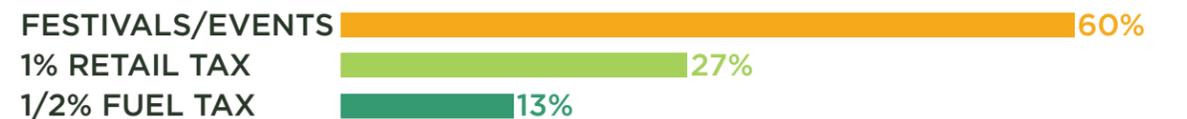
Currently, there are no zoning, ordinances, or comprehensive plan, and policy decisions are brought before the board for comment and vote. To address this deficiency, the

Board of Alderman and mayor have enacted a planning commission tasked with developing the community’s first comprehensive plan, drafting zoning policy, and updating ordinances in alignment with state and federal codes.

Kimmswick operates like a “household” in that money is only spent if money is in the bank. Without a comprehensive plan and consistent policy, borrowing money or bonding is difficult. Revenue hovers around \$200,000 annually from three revenue streams – an enterprise fund, a one percent retail tax, and a road fund garnered from Jefferson County fuel taxes. The enterprise fund, approximately 60 percent of annual revenue, comprises profits from volunteer managed festivals and other events. Retail taxes make up approximately 27 percent of Kimmswick’s revenue with the road fund standing at approximately 13 percent.



CITY MANAGEMENT STRUCTURE



2017 ANNUAL REVENUE

Including reserves, Kimmswick has approximately \$325,000 on the books.

Jefferson County holds a road escrow tax that the community seldom uses, typically for major infrastructure projects. Funds become available upon request to the County. The community must solicit bids, select a contractor, and seek approval. Then Kimmswick fronts the full bill turning in receipts for 100 percent reimbursement when the job is complete. The current escrow balance is approximately \$137,000.

The board is responsible for policy and emergency planning. Flooding preoccupies the emergency management defending against five floods in the last five years. Floods take a considerable toll on Kimmswick's budget, costing approximately \$100,000 or more to protect the town during each event. FEMA reimburses 75 percent of the costs for donations, infrastructure, and damages. These funds are only reimbursed after temporary levees are demolished and the appropriate paperwork is filed. It can take upwards of one and a half years to receive reimbursements placing a substantial financial burden on the community. SEMA promises reimbursement of 10 percent of federal compensation, but Kimmswick has not been compensated by SEMA for any flood events to-date.

Port Authority development will substantially increase Kimmswick's revenue should the Delta Queen receive federal exemption for overnight cruising. Kimmswick passed a petition for a 3 percent tax on all museum profits. The Delta Queen is considered a floating museum. The community will also garner income from the \$1.30 per foot landing fee for vessels not claiming Kimmswick as their port of call. The resulting revenue has not been

estimated or included in current revenue projections.

Capital improvement projects occur as necessary. Kimmswick is currently operating on a policy that no major above-ground infrastructure improvements will occur until stormwater infrastructure is complete. The current financial model is highly vulnerable and unsustainable,



Volunteers run the City's festivals and events helping bring in revenue.

creating budget uncertainty particularly with increased flooding frequency. Kimmswick's greatest revenue source relies primarily on volunteers, and this support has decreased over time. Funding and reimbursement for large expenditures including flood mitigation and infrastructure improvements overextends the community for long time periods. Kimmswick needs to establish mechanisms to increase revenue and borrow money to



Photo: Portions of a temporary levee are constructed and removed for every flood. Kimmswick fronts the costs to be partially reimbursed one and a half years later.



Kimmswick's north stormwater outlet is a backfilled railway underpass with two 15 inch corrugated plastic pipe (shown above). These pipes are undersized and not flood-proof.

establish a consistent budget. This will allow Kimmswick to address flooding with a more permanent solution, and subsequently focus on other improvements.

### Anheuser Estate

Kimmswick maintains the Anheuser Estate, the ancestral home of Fred and Mabel Ruth Anheuser, also known as Fredmar Farms. Fred and Mabel Ruth took ownership of the 23 acre estate in the 1940's from Fred's father, W. Fred Anheuser, whose great grandfather, Eberhard Anheuser, was the founder of E. Anheuser Brewing Company, later Anheuser-Busch Brewing Company,

When Fred passed, Mabel Ruth and her heirs donated this riverfront estate and grounds to the City of Kimmswick with an endowment to help maintain the property. A five-member board with three estate representatives and two City representatives runs the estate, which boasts Anheuser family memorabilia and brewery artifacts preserved for public viewing. Open every Thursday from noon to 4pm April through November, groups of

25 to 100 can enjoy guided tours.

The grounds feature a landmark tree Lewis and Clark used to navigate the Mississippi, panoramic views of the river, and several outdoor arenas occupied by the riding horses still stabled at Fredmar Farms in memory of Mabel Ruth, an accomplished equestrian. Ride On St. Louis, a comprehensive therapy, conditioning, and learning non-profit organization, leases the equestrian facilities to serve adults and children with disabilities. The organization is outgrowing the space and considering moving to other facilities.

Private weddings and events have become regular weekend affairs during the warmer seasons, restricting public access to the estate. Wedding parties have access to the back sun room and lawn but not the entire estate. With no local hotels or bed and breakfasts, wedding parties often stay in nearby Arnold. Operating these events taxes the capacity of the part-time management structure.

The Estate is evaluating opportunities to increase visitorship and revenues. Current marketing relies heavily on word of mouth and Facebook. Located outside Kimmswick proper, no wayfinding identifies the Estate and visitors often don't find it. Corporate executive meetings are being considered, though space is limited for larger corporate meetings and events

### Department of Public Works

Kimmswick's Department of Public Works (DPW) consists of one person who oversees all public buildings, roads and infrastructure, parks and open space, and tends the Anheuser Estate. The City contracts all major projects moving forward as funds become available. The Board of Alderman must approve projects over \$500 and most projects over \$5,000 go out to bid. DPW mows properties. Trash and snow removal are contracted expenditures.

Flooding and stormwater management are of highest importance. Above-ground improvements will not be considered until stormwater problems have been addressed. The outlet under the railway on the north end of town is of greatest concern. Stormwater from developments north of Kimmswick flows down Vine Street and collects at two 15 inch corrugated plastic pipes. Plans have been prepared for installing underground pipe along Vine Street to convey water to the railway; however, upgrades to the outlet under the railway weren't addressed. These outlet pipes are undersized and litter and debris clog them easily, creating ponding that could flood some residences. The Director of Public Works has had to manually clear the outlets in three to four feet of water and was once nearly pulled under by the outlet's vortex. Additionally, the north outlet needs a flood gate for emergency management.

Sidewalks and pedestrian lighting are the highest above-ground priority after stormwater concerns are addressed. Kimmswick is considering succession planning for the current Director of Public Works, who plans to retire.

### Emergency Management

The Director of Public Works supports the Emergency Management Director. Flooding activates the entire community, and volunteers, including inmates, maintain pumps around the clock. Kimmswick builds an eight-foot temporary levee for each flood, which can take upwards of a month to remove. The City continues to work with the Corps of Engineers to develop a ten-foot flood wall solution, but current options cost more than the community can afford. FEMA sets aside mitigation funding for 50/50 matching grants. Kimmswick hopes to leverage its historical landmarks for additional funding.

One alderman holds most emergency management institutional knowledge and experience. A manual does not exist to guide others in the future.

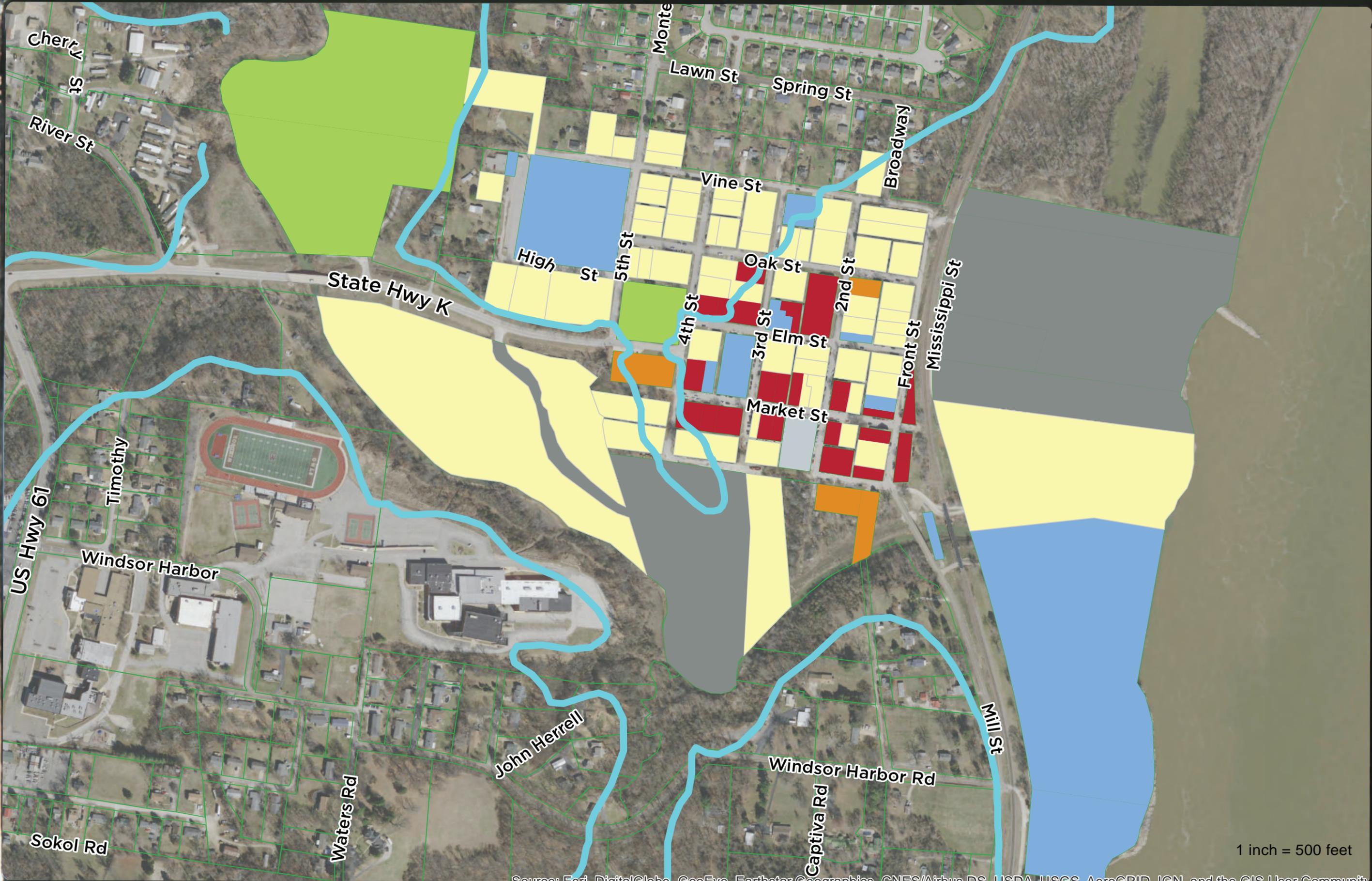
### Police

Kimmswick supports a part-time police department consisting of nine officers, mostly handling traffic incidents. Jefferson County handles calls when no officers are on duty. The police department also supports bigger festivals, including the Apple Butter Festival, Strawberry Festival, and Witches Night Out, and contracts additional help when necessary. The Chief and a veteran crew of fifteen commissioned officers handle the Apple Butter Festival. Increases in City events and programming would impact the police department. Programming for non-city events would need to include hiring security sub-contractors.

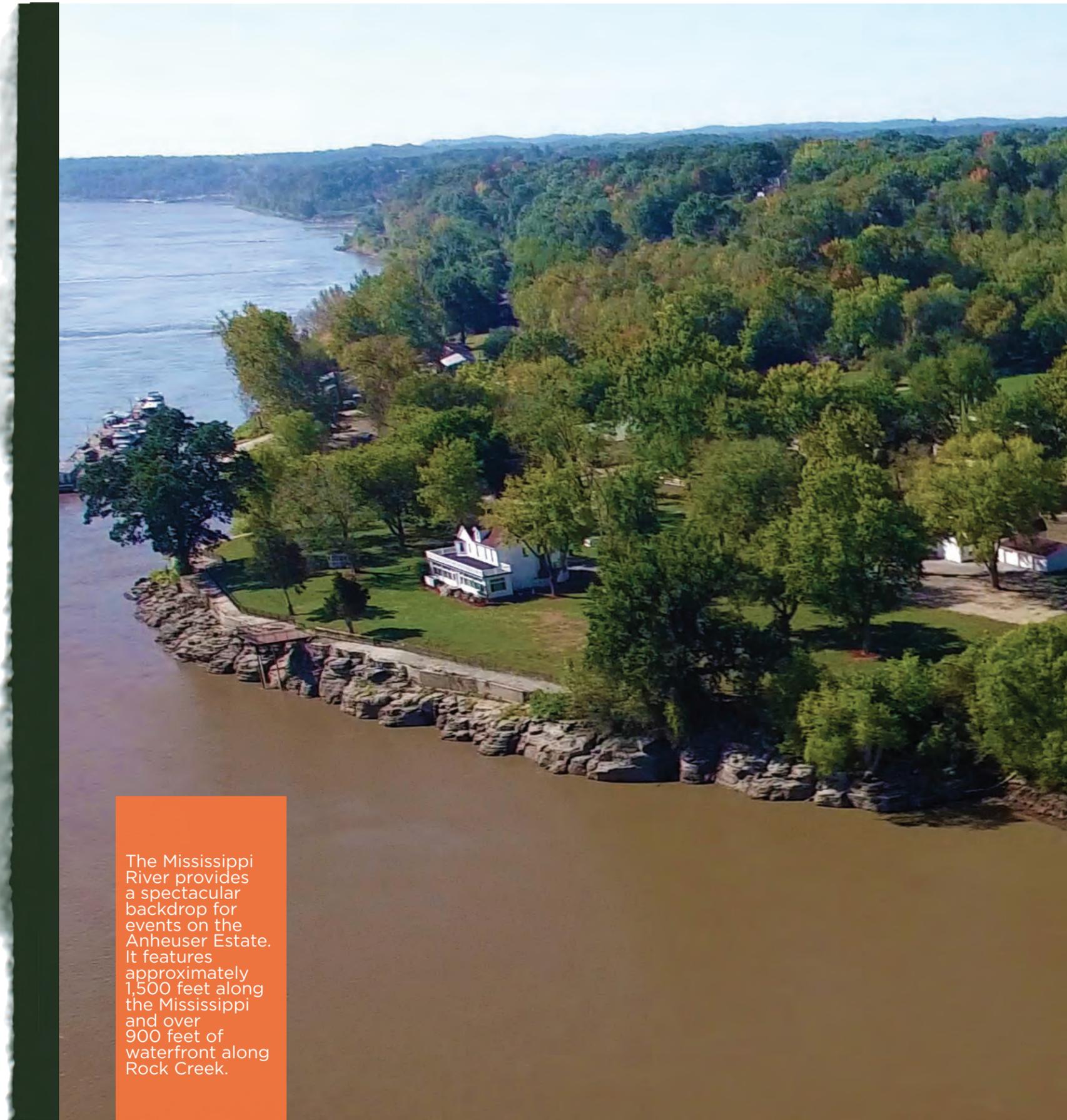
**LEGEND**

- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL
- MIXED USE
- PARKING
- PARK/RECREATION
- UTILITY
- 100 YEAR FLOODPLAIN

**LAND USE BY OCCUPANCY:** Kimmswick has no official land use or zoning ordinance. The Planning Commission is drafting the City's first comprehensive plan.



1 inch = 500 feet



The Mississippi River provides a spectacular backdrop for events on the Anheuser Estate. It features approximately 1,500 feet along the Mississippi and over 900 feet of waterfront along Rock Creek.

### Fire Safety

The Rock Community Fire Protection District addresses fires and provides building inspections and permits for plumbing, electrical, and foundations in accordance with the 2015 International Building Code. Since taking over inspections in 2003, fires have reduced 60 percent. The community has a consistent fire hydrant pressure around 100 psi. Kimmswick's narrow roadways concern the department though the existing facilities are functional. Access to Kimmswick is another concern, particularly during flooding.

The district supports festivals by helping with emergency planning. A minimum 20-foot aisle is required on all streets. During events, Route K hosts a command post at the end of vehicular traffic; a fire truck is stationed near 3rd and Elm Streets, and fire fighters host a cooling station and educational booth.

Waterborne firefighting operations are planned when the fire district acquires a decommissioned coast guard boat. Docking at Kimmswick's port would be ideal along with the inclusion of a water supply standpipe to fight fires at the docks. The timing of the boat acquisition is not precisely known at present.

Development can not extend beyond the reach of the District's 75-foot ladder truck should an observation tower be erected, though access to a 100-foot ladder truck is available in Mehlville and Festus. The district hopes to acquire one within the next 3-6 years.

### TAKEAWAYS

- Kimmswick has limited borrowing ability
- Kimmswick doesn't have zoning or ordinances in place to guide development
- Festivals generate 60% of Kimmswick's revenue
- Volunteers are the City's main work force and primary revenue generators
- Flooding severely burden's City finances
- Investment in above-ground improvements will not occur until completing stormwater infrastructure
- Sidewalks and pedestrian lighting are City's top above-ground priority.
- The Anheuser Estate is under-utilized and not a well-known asset
- Weekend private events stretch the Estate's part-time management capacity
- The Anheuser Estate is considering developing a park on the north end for public access during private events
- Minimum 20-foot aisles are required for events
- Development heights cannot exceed 75-foot ladder truck requirements

## ORGANIZATIONAL RELATIONSHIPS

The Kimmswick Merchants Association (KMA), non-affiliated businesses and Kimmswick Historical Society function within Kimmswick with different relationships with the City and its residents.

### Kimmswick Business Community

Kimmswick supports 45 distinct businesses within the community, including four restaurants, two bed and breakfasts, a motorcycle shop, a photographer, HVAC repair, a day care, and numerous novelty and gift shops. Businesses pay a one percent tax to the City of Kimmswick, which accounts for 27 percent of the City's annual revenue.

Most businesses open between 10am -11am and close at 4pm. Interviews state some opening times can be inconsistent. The Delta Queen Port of Call restaurant stays open Thursday through Saturday until 8pm and Smokee Robinson's Cajun Smokehouse remains open to 8pm Tuesday through Thursday, 10pm Friday and Saturday, and 6pm Sundays. Owners, visitors, and residents have expressed a desire for later hours. Stakeholder interviews revealed two reasons for early closure - closing early supports a quiet, quaint Kimmswick, and the lack of pedestrian lighting is unsafe for clientele, particularly elderly. Many shops close during winter months.

KMA represents the majority of business establishments and runs the Visitor Center located on Market Street across from the central green. The KMA hosts multiple events including the Cookie Walk and Witches Night Out. Witches Night Out is the only event charging an admittance fee of \$25 for a one night party hosting 4,000 women dressed as witches. The event raises \$100,000 in ticket sales alone. Ticket sales open in July and sell out in two weeks.

Tickets cap at 4,000 to keep the event within the commercial area, though residents report witches roaming throughout town. Proceeds support multiple charities, including the Visitor Center, and provide marketing funds for the KMA. In 2017 one dollar per ticket went to the City.

Business owners expressed that visitors like the quaint feel and slow pace. Owners would appreciate public restrooms, a pedestrian friendly environment, and more parking. A clean, continuous sidewalk space, ADA accommodations, seating, lighting, signage, and fewer puddles would constitute a pedestrian-friendly environment. Owners expressed that parking is a daily problem, noting some visitors leave due to parking shortages. Bus parking also needs to be addressed. Some owners proposed a shuttle service from remote lots east and west of Kimmswick.

The business community conceded Kimmswick is not known to everyone in the region. Factors that could increase Kimmswick's recognition include broader advertising, community promotion, greater utilization and promotion of the Anheuser Estate, increased visitation and hours for the history museum, and more places to stay over night. Once, the Blue Owl was the only restaurant destination in Kimmswick. The addition of three restaurants broadens dining choices and increases dining hours.

Friction has existed between the business community and residents. Visitor parking and events intrude on residents' sense of a quiet, quaint community. Closing at 4pm limits opportunities for residents to visit shops and few shops cater to residents' daily needs. Additionally, few business owners reside in Kimmswick, reducing familiarity between residents and owners. As the

quaint, quiet atmosphere is attractive to residents and businesses, owners expressed a concern to stay within a relational comfort zone. Late night drinking establishments and loud music have created problems in the past. Owners also noted some properties' rough appearances reflect poorly on their businesses.

Flooding and the City's finances concern



Historical Society volunteers open the Burgess-Howe house for tours dressing in the building's historic time period.

business owners. Implementation of improvement also alarms owners, who fear disruption in business could be detrimental for a long time after construction is completed. January, February, and March would be the best times for construction.

### Historical Society

Established in 1977, the Kimmswick Historical Society (KHS) was founded during the period Ms. Gladney Ross embarked on her Kimmswick restoration vision. The Society's mission includes education and scientific study, protection, preservation, restoration and interpretation of sites and objects significant to Kimmswick's local, state and national culture. They run the

Kimmswick History Museum open free of admission Saturdays and Sundays March through December from 1pm - 4pm, though donations are welcome. The museum is located away from most visitor attractions at 3rd and Vine Streets. Visitors can purchase a walking tour guide for \$5 and *Life in Kimmswick* by William Bradshaw for an additional \$10. The Society also opens the Burgess-Howe House Sundays from Easter through December from 1pm-4pm. Interviews state opening times can be inconsistent. Groups of ten or more can reserve tours for \$3 per person. Members volunteer to run each of these offerings.

Most members are older non-residents with ties to Kimmswick or a passion for history. The museum is filled with images and memorabilia related specifically to Kimmswick most donated by relatives of former residents or business owners. Admittedly, many current residents and business owners have not visited the museum. Kimmswick's story and history are not well promoted to visitors either.

KHS owns and operates many of Kimmswick's historic structures including Kimmswick History Museum, the Apple Butter Pavilion, Burgess-Howe House, the Little Cabin, and the Windsor Harbor Bridge. Many members would like to see the Society re-build the old depot.

KHS helps host the Apple Butter Festival. Twenty-five volunteers peel apples and man the apple butter vats in the Historical Society's Pavilion, churning the butter over open flames for the festival's duration. In 2017, the Society sold over 306 gallons of apple butter with proceeds going to support the KHS's operation.

## TAKEAWAYS

- The 1% sales tax provides 27% of the City's revenue
- Businesses and business hours do not cater to residents
- Most business owners do not reside in Kimmswick
- Kimmswick's quaint, quiet atmosphere is distinctly attractive to visitors
- Ticket sales from Witches Night Out equal nearly half the City's operating budget
- Owners would like to see public restrooms, pedestrian friendly streets, and lighting
- Lack of lighting and ADA facilities pose safety concerns
- Flooding and City finances concern the business community
- Residents and businesses coexist within comfort zones
- Owners consider lodging and higher utilization of the Anheuser Estate benefits
- Kimmswick Historical Society operates limited hours on volunteer labor
- Most KHS members do not reside in Kimmswick
- Kimmswick History Museum is located out of the way of most local attractions
- Kimmswick's history and story are not well known locally and not readily told to visitors
- KHS maintains many iconic, historic Kimmswick structures

## TRANSPORTATION NETWORK & TRAFFIC VOLUMES



**MULTIPLE TRANSPORTATION MODES:** During large festivals, pedestrians of all ages utilize Route K to walk into Kimmswick from remote event parking.

### Regional System

Kimmswick is located approximately 25 miles south of St. Louis straight down Interstate I-55. Kimmswick can be accessed via three interchanges at I-55 Richardson/Vogel Road, Imperial Main Street and Route M exits. The most direct access is Imperial Main Street as shown in Figure 1. Almost all Kimmswick visitors use the Imperial Main Street interchange. Getting off I-55 at this location when heading to Kimmswick involves a right turn off Imperial Main Street on Route 61/67 followed by a quick left turn on Highway K. Highway K is the main access into Downtown Kimmswick. Route K, Route 61/67, and I-55 are state routes operated by the Missouri Department of Transportation (MoDOT). Route 61/67 parallels the I-55 acting as an interstate incident bypass. MoDOT also operates and maintains some Intelligent Transportation

Systems (ITS) equipment on their routes to help guide travelers and for incident management, discussed further below.

Jefferson County Public Works operates and maintains Imperial Main Street. There are signals controlling traffic at the Imperial Main Street interchange at I-55 and on Imperial Main at Route 61/67. Route 61/67 at Highway K is side-street stop controlled.

### MODOT ITS

The Missouri Department of Transportation (MoDOT) manages interstate and arterial traffic at its Traffic Management Center (TMC) located at the interchange Interstate 64 and Route 141 in Chesterfield, Missouri. From this location, a collection of roadside traffic sensors, closed-circuit television cameras (CCTV), dynamic message boards (DMS), and other equipment are monitored

daily by TMC staff. This serves as a powerful tool for observing and ultimately relieving traffic congestion and improving safety. This St. Louis Traveler Information resource, or Gateway Guide program, provides information on traffic conditions on interstate highways in St. Louis City and County, as well as St. Charles, Jefferson and Franklin counties. There are CCTV and DMS features that provide travelers information regarding access and traffic conditions to Kimmswick.

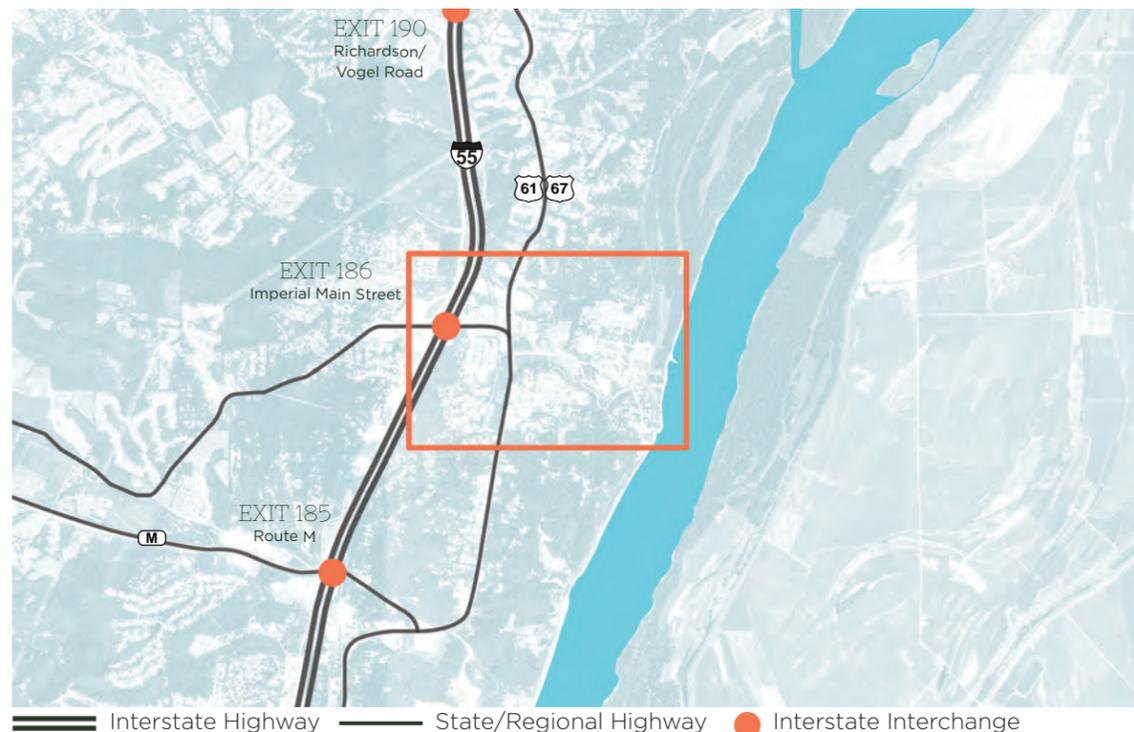
### Average Daily Traffic Volumes

Route 61/67 is a four-lane facility between Imperial Main Street and Windsor Harbor Road, with two lanes both north and southbound. 2016 Annual Average Daily Traffic (AADT) volumes on Route 61/67 at Highway K show 15,500 vehicles per day, with an even 50/50 split northbound

and southbound. There are approximately 200 commercial trucks on Route 61/67 on the average day. There is ample capacity for vehicles on the roadway and at the intersections and access points in this section of roadway. During special events, this roadway can become congested with traffic turning towards Downtown Kimmswick.

### Local Street Network & System

The local roadways that primarily serve and connect Kimmswick to the regional interstate network are Highway K to the west and Windsor Harbor Road to the south. Highway K is a two-lane roadway that serves as the main entrance into Downtown Kimmswick for most visitors. The 2015 AADT volumes on Highway K were 2,900 vehicles, providing ample capacity for accessing the City of Kimmswick. Highway



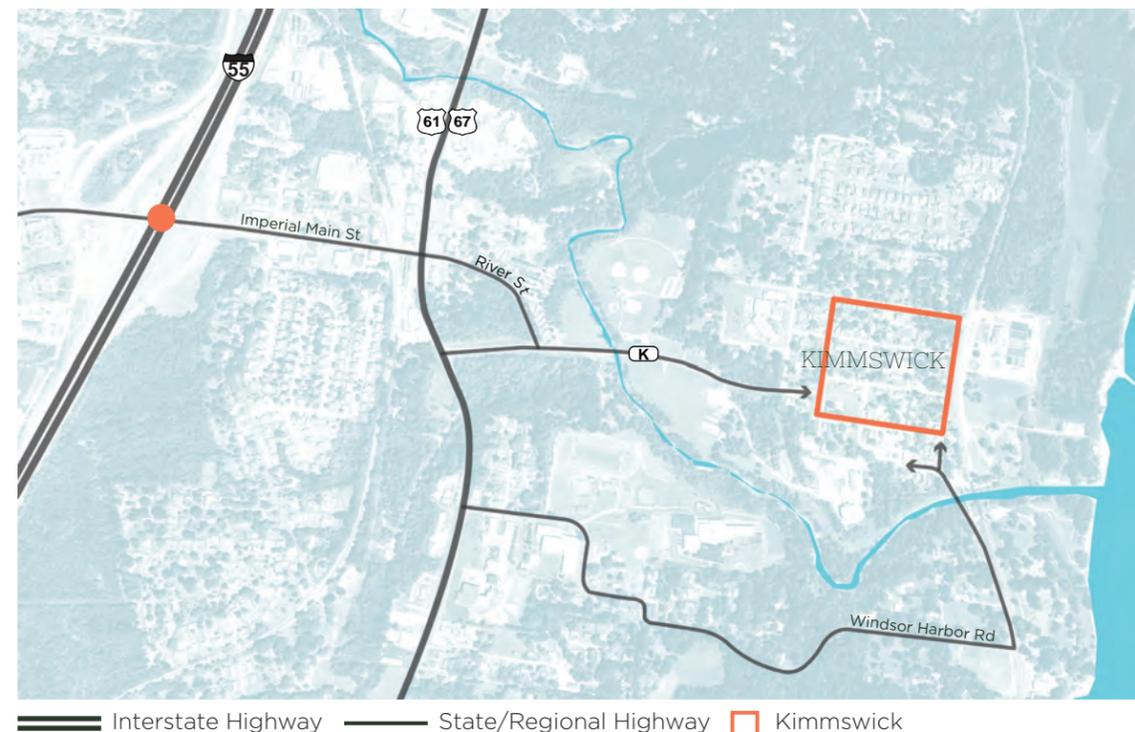
**REGIONAL TRANSPORTATION SYSTEM**

K has wide outside shoulders heading into town, but no formalized sidewalks or pedestrian facilities. Providing entry from the south, Windsor Harbor Road is a narrow, local road with one lane in each direction and limited pedestrian facilities. Traffic volumes for Windsor Harbor Road are estimated at less than 2,000 cars (though no counts have been done recently). Though both provide a clear connection into Downtown, neither Highway K nor Windsor Harbor Road have the character or facilities that foster a sense of arrival or entrance into Downtown Kimmswick.

Downtown Kimmswick has a great historic street grid, providing efficient circulation for the local shops and destinations both on normal days and during special events. The streets are all two-lane roadways, mostly narrow; however, none have centerlines,

curbs, or pedestrian amenities. All the streets have daylighted drainage with the occasional open culvert, of which some areas near Market Street have portions of very narrow sidewalks. A couple locations on Vine Street, Front Street, and Market Street have had some drainage work (including new curbs and storm inlets) completed recently to better handle frequent rainfall and river flooding events. The street infrastructure throughout Downtown Kimmswick is modest and aligned with the humble, historic character of the area, though in many cases mis-aligned with the intended uses and opportunities for increased commercial and business activity in the area.

Within Downtown Kimmswick, Market Street is the major business and commercial street, considered the economic and



**LOCAL TRANSPORTATION SYSTEM**

entrepreneurial heart of the City. It serves as the center of the Apple Butter Festival and the major east-west walking connection between the western entry point on Highway K and the southern entry point at Windsor Harbor. Market Street has limited areas of on-street parking, most of which are unmarked and unpaved, blurring the lines between areas for cars and areas for pedestrians.

With respect to connections between Downtown Kimmswick and the proposed port development on the Mississippi Riverfront, the railroad almost completely disconnects the street network with exception of the winding underpass from Mill Street below the train trestle. This connection point is also subject to major flooding events and the required erection of temporary levee's during flooding events,

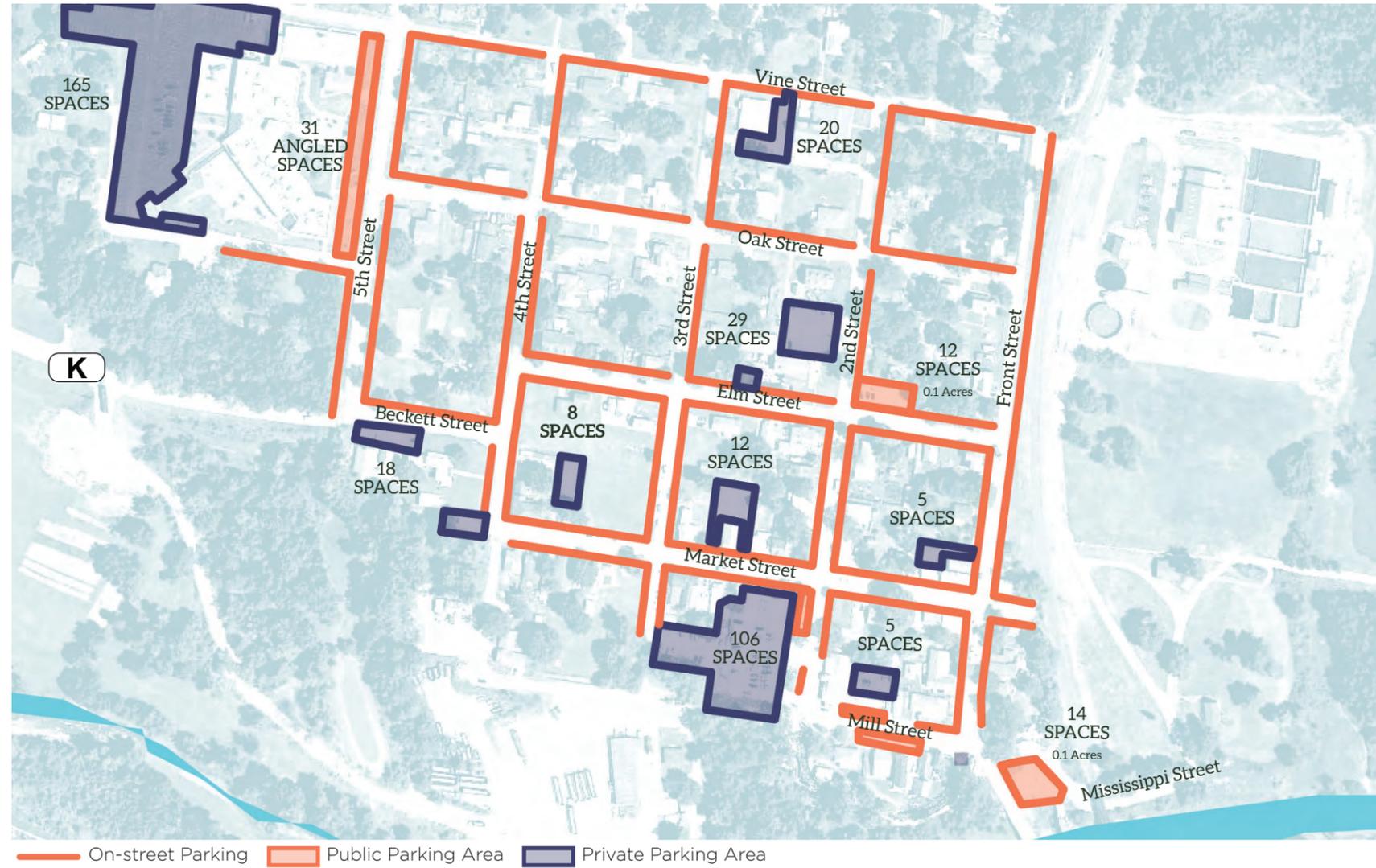
which - with increasing climate extremes - is having a major impact on the local economy and revenues due to impacts on local business, special events, tourism, and increased mitigation demand. Greater consideration should be given to stronger and more resilient, direct connections to increase connectivity between Downtown and the Riverfront.

Kimmswick's street network is intact and interconnected serving the Downtown well; though, some issues do arise relative to the adjacent port, rail, and water infrastructure. Functionally classified roads include Highway K, Beckett Street, 4th Street from Beckett to Market Street, Market Street, Front Street from Market to Vine Street and Vine Street from Front to Broadway.

## TAKEAWAYS

- Most interviewed motorists utilize the Exit 186 - Imperial Main Street on I-55 traveling to Kimmswick
- Access to Kimmswick from I-55 is indirect and poorly marked
- Four-lane Highway 61/67 parallels I-55 between one-quarter to one-half mile east
- Annual average daily traffic on Highway 61/67 at Route K indicates 15,500 traffic volume
- Two hundred commercial trucks utilize Highway 61/67 daily
- Annual average daily traffic on Route K indicates approximately 2,900 traffic volume
- Highway K has wide 7-foot shoulders with no formalized sidewalks or bike lanes
- Annual average daily traffic on Windsor Harbor Road estimates less than 2,000 traffic volume
- Windsor Harbor Road has narrow lanes and minimal paved shoulder
- Neither Route K or Windsor Harbor Road foster a sense of arrival
- Congestion on Imperial Main Street, Highway 61/67, and Route K backs traffic up on the Exit 186 off-ramp during large events

# PARKING



## EXISTING PARKING

Parking in Downtown Kimmswick primarily occurs on street shoulders and formal or informal parking lots. Because this realm is not formalized, on-street parking often conflicts with pedestrian activity. Cars park haphazardly. With few signs limiting parking, cars parked near intersection impede sight distances and walking areas. Vehicles often block business loading zones and driveways even where protective signage is present. Higher parking density

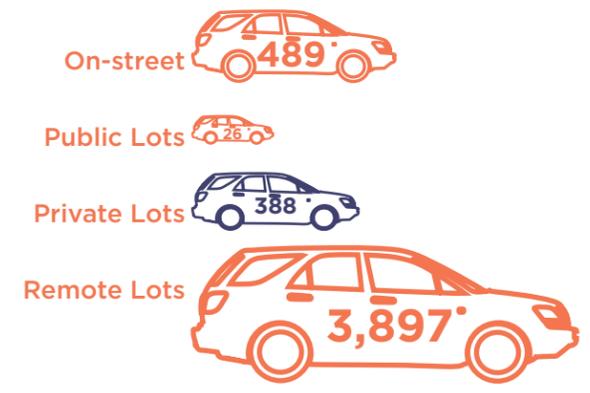
occurs on and around Market Street. The Blue Owl owns the private parking lot at Market and 2nd Streets, which is designated only for their patrons. With exception to special events, on-street and off-street parking appeared to be sufficient during regular and peak daily business hours. Though currently sufficient, formalizing on-street parking would provide clarity and a sense of security for visitors. This

definition would also create a distinct parking-protected pedestrian realm. With the arrival of the Delta Queen, the relationship between parking and pedestrian realm should support the goals of Kimmswick's residents, commercial community, and Kimmswick's numerous events in connecting the community to the riverfront. Kimmswick hosts varying sizes of events.

Small-medium event parking functions utilizes the regular daily patterns and facilities. However, local traffic within Kimmswick shuts down during the Apple Butter and Strawberry Festivals. The lack of definition and vertical changes, like curbs defining parking and pedestrian realms, benefits festival tent layout. The lack of formal designation and definition allows festival managers freedom when organizing events. Parking occurs in remote lots with visitors walking to town or riding a shuttle. Any public realm improvements should support these larger events, providing opportunities for better organization of events of any size.

### TAKEAWAYS

- On-street and Off-street parking appear sufficient for existing regular and peak daily business hours
- Delineating parking would secure availability and develop a protected pedestrian realm
- Signage, particularly at intersections, would improve safety and protect loading zones and accesses
- Small-medium size events function utilizing regular parking patterns
- Roadway improvements should consider large festival operations and layout
- Remote parking at the high school requires shuttle service with no direct pedestrian access to Downtown

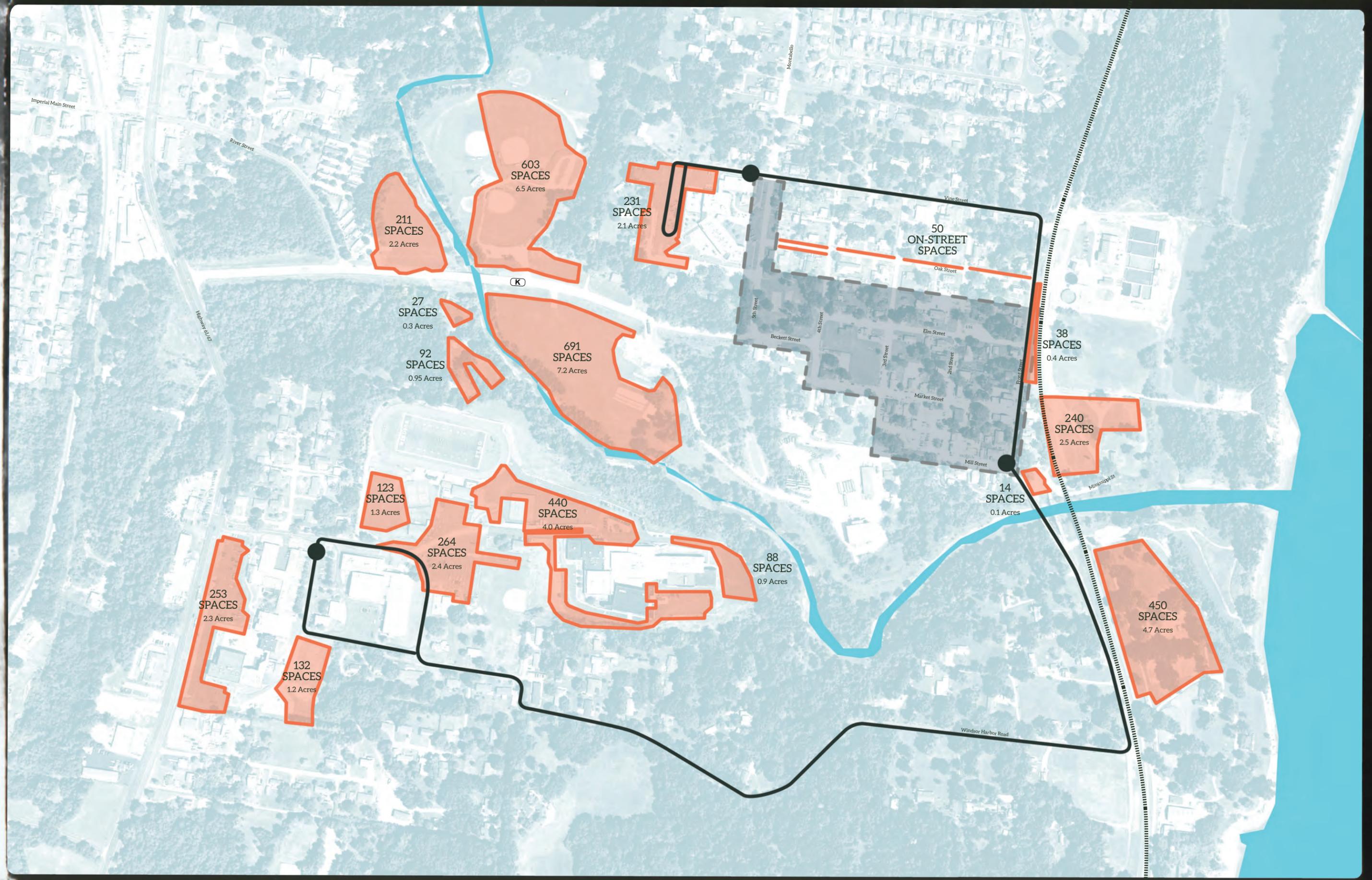


### AVAILABLE PARKING

#### LEGEND

- REMOTE PARKING AREA
- ON-STREET PARKING
- SHUTTLE ROUTE
- SHUTTLE STOP
- ▬ FESTIVAL AREA

**FESTIVAL SHUTTLE CIRCULATION & VISITOR PARKING:** During large festivals, vehicular access within Kimmswick shuts down forcing attendees to park in remote lots.



Imperial Main Street

River Street

Highway 67

Montebello

Vine Street

Elm Street

Market Street

Mill Street

Windsor Harbor Road

Mississippi St

(K)

5th Street

Beckett Street

4th Street

3rd Street

2nd Street

Front Street

## EVENT LOGISTICS & MANAGEMENT

Kimmswick hosts events ranging in size from a few thousand attendees to tens of thousands. Observation and analysis were conducted for a small to medium-scale event, the Kimmswick Christmas Cookie Walk, which attracts between 3,000-5,000 visitors over three days, and a large-scale event, the Apple Butter Festival, which attracts over 100,000 visitors over two days.

With over 40 years of experience, Kimmswick has learned many lessons and runs a festival primarily with volunteers in a highly professional manner. The Cookie Walk invites visitors to walk from business to business collecting a different cookie from each establishment. The recipes for each are assembled into a booklet and sold as the Kimmswick Christmas Cookie Cookbook. Visitors can also meet Santa and Mrs. Claus, ride on a horse drawn carriage, have their faces painted, listen to street performers, or simply sit next to a fire while enjoying Kimmswick's various shopping and dining establishments.

Over the past 41 years, the Apple Butter Festival has grown to be the largest event in Jefferson County. Kimmswick's roadways

shut down to only pedestrian and bicycle traffic. Police must manage traffic at the intersection of Highway 61-67 and Imperial Main Street to and from the event, directing visitors to remote parking areas around Kimmswick.

The contrasting scale and scope of these different events inhabit and impact the community in different ways. Kimmswick's infrastructure must support this dramatic range of civic activity.

### Visitors

Both events attract visitors with a wide age range and physical abilities. A number of disabled attendees enjoyed the events, including visitors on wheelchairs (motorized and non-motorized); with canes, strollers, and crutches; and visually impaired. Dogs as pets were prominent with attendees of the Apple Butter Festival.

Cookie Walk participants come more frequently to Kimmswick than Apple Butter Festival visitors. Cookie Walk visitors are a relatively older population, with over 60% of participants aged 55 and older. The vast majority were female, some with husbands

or partners, but most in groups with other women. Young children were present; however, the visitor survey findings indicate children 18 and under and parent-aged adults from 35-54 were underrepresented.

Apple Butter Festival visitors are not regular visitors to Kimmswick, with the majority of survey takers indicating they visit once per year or less, or that this was their first visit to Kimmswick. There is a wide age range for Apple Butter Festival visitors with a nearly equal distribution of people within the 25-34, 34-44, 45-54, and 55-64 age ranges.

### Pedestrian Flow

During the Cookie Walk, Kimmswick functions like most days with pedestrians assuming priority throughout town. Pedestrians take over Kimmswick during the Apple Butter Festival as vehicular traffic is restricted. Pedestrian facilities are inconsistent, undersized, not accessible or non-existent throughout Kimmswick, forcing pedestrians into the streets. Merchants recognized the need to creatively delineate pedestrian space for business access, visibility, merchandise, furnishings and comfort.

Route K becomes the primary pedestrian access during the Apple Butter Festival, the 5th and Vine Street Shuttle stop functions as a major festival entry with shuttle riders off-loading, and the Windsor Harbor Bridge facilitates the least of the pedestrian flow, though still substantial.

Activities focus on Market Street for both events, extending along Beckett and around 5th Street for the Apple Butter Festival. Elm also hosts substantial activity during the Apple Butter Festival but is secondary to Market as it is narrower. The intersection of Front Street and Market hosts the Cookie Walk's greatest foot traffic, but shuttle traffic on Front Street discourages pedestrian travel and frequency of Apple Butter Festival visitors to booths and shops within the corridor. Pedestrian utilization of the roadway slows vehicular traffic and other modes generally creating a safer environment for all with the trade-off being motorists are forced to travel at pedestrian speeds.

Specific to the Apple Butter Festival, parking on the north side of Windsor Harbor Bridge is not delineated, which creates an

APPLE  
BUTTER »  
FESTIVAL



APPLE BUTTER SOLD



60+ VOLUNTEERS



VOLUNTEER HOURS



POLICE OFFICERS

Apple Butter Festival and Strawberry Festival revenue accounts for between 60-80 percent of Kimmswick's annual budget.



Photo:  
Apple Butter  
Festival  
attenders  
enter  
Kimmswick  
at Becket  
(bottom  
center),  
following  
activity  
around 4th  
Street to  
Market Street.



**APPLE BUTTER FESTIVAL CORRIDOR ACTIVITY**

**APPLE BUTTER FESTIVAL CORRIDOR ACTIVITY**

STREET NAME	APPROX. WIDTH	ACTIVITY	CORRIDOR TYPE
2nd	14'-24'	Very active and congested	Secondary Festival
3rd	13'-17'	Very active and congested	Secondary Festival
4th	21'-27'	Moderate-Active pedestrian use and congestion, Primary connector route to Market and Elm, Pinched to 12' on north corner of Beckett	Secondary Festival
5th	21'-28'	Very active and congested	Primary Festival
Beckett	27'-Full width	Very active and congested	Primary Festival
Elm	16'-24'	Active and congested between 3rd and 4th, Moderate activity and congestion from 3rd toward Front Street	Primary Festival
Front	Full width	Shuttle route, Tempered to Moderate pedestrian activity	Shuttle
Market	18'-35'	Very active and congested	Primary Festival
Mill	Full width	Tempered activity with no congestion	Secondary Festival

indirect pedestrian path from the bridge to the festival. A number of people cross the railway between parking to the east and the festival on the west.

**Traffic Patterns**

Cookie Walk traffic operates similar to daily travel patterns with the exception of unfamiliar visitors. People unfamiliar to Kimmswick arriving via Route K have no clear guidance directing them where to go

at the 4th street intersection. Low volume vehicular circulation poses limited traffic flow concerns. On-street parking occurs throughout Kimmswick with the exception of Vine Street. The corner of 4th and Market is a blind corner which typically does not have regular on-street parking, but parking during the event further decreases visibility.

Kimmswick closes to vehicular traffic at

8am for the Apple Butter Festival and re-opens at 5pm. Vehicles of Kimmswick residents within the festival area are allowed entry via the Windsor Harbor Road bridge; however, very few travel in and out during the festival.

Police manage traffic flow from the Imperial Main Street and Highway 61/67 intersection onto Route K and Windsor Harbor Road. Vehicles arriving via Route K are ushered

into fields for parking. Those leaving on Route K are directed to turn north onto River Street to access Imperial Main Street at Highway 61/67.

Apple Butter Festival shuttle service is a fleet of school buses. They run from Windsor High School following Windsor Harbor Road, north on Front Street, and west on Vine to Windsor Elementary School. Shuttles turn around in the school's parking lot. The modern Mill Street bridge was reserved for buses and the occasional passenger vehicle. In preparation for the festival, the festival coordinators indicated the turn at Front Street and Vine Street was a pinch for the shuttle buses. Upon observation, the corner functioned sufficiently.

There are two shuttle stops within Kimmswick's Downtown, the primary one

at Vine and Montebello; the other at Mill and Front Streets. During the morning through lunch until approximately 1pm, passengers traveled to Kimmswick getting off at the stops. Lines at the shuttle stops began forming around 1pm extending more than one and a half blocks. People walk around the shuttles with little concern for safety. Shuttles and pedestrians conflict along Front Street between Mill Street and Market and at the intersection of Vine Street and Montebello. The scale and frequency of the buses made the vending and shops on Front Street unpleasant for lingering.

**Spatial Use & Character**

Kimmswick knows how to create distinct event atmospheres. Most activity occurred within roadway corridors - bustling with street entertainment for the Cookie Walk and lined with tents and shops during the Apple Butter Festival.

Kimmswick Christmas Cookie Walk showcased a festive Christmas decor with holiday bows on lanterns lining Route K, power poles ringed with ribbon topped with bows and candy canes, evergreen wreaths and garlands, nativity scenes, and inflatable Santas. The setting was light, unhurried and joyous as visitors walked the streets collecting cookies at participating businesses. A horse drawn carriage circled Downtown streets while people waited in line for face painting or a seat at a local restaurant. Men sat on benches or rocking chairs as women visited shops.

Visitors strolled throughout town exploring what was around each corner. Streets became multi-use paths with vehicles, pedestrians, bicycles, golf carts and horse drawn carriages roaming from destination to destination. The same streets also hosted activities like warming around the fire, outdoor dining, pictures with Santa and Mrs. Claus, face painting, carriage stops and vending. Door-to-door pavement was defined in a multitude of ways, from on-street parking lining the roadway edge to planters, seating, merchandise, banners, signage, lanterns, and cones.

The most intense activity occurred in the densest part of town along Market between 2nd and Front streets. The festive nature of the decor and event accentuated warm welcoming business entries. Open green space and the Historical Society Pavilion weren't used for much more than a shortcut across town. The town's history provided the setting but visitors lightly interacted with the history beyond anecdotal references to markers on buildings.

With booths, activities and entertainment, the Apple Butter Festival drew a lively crowd. Most activity occurs within the

roadway corridors and the engagement of tents and storefronts is diffused along the corridors. The entire span of the festival corridors was utilized for booths or pedestrian activity. Tents lined the primary and secondary festival corridors with dispersed gaps for shop access, dumpsters and ATMs.

Tents are 10' x 10' standard with some vendors occupying multiple spaces. As

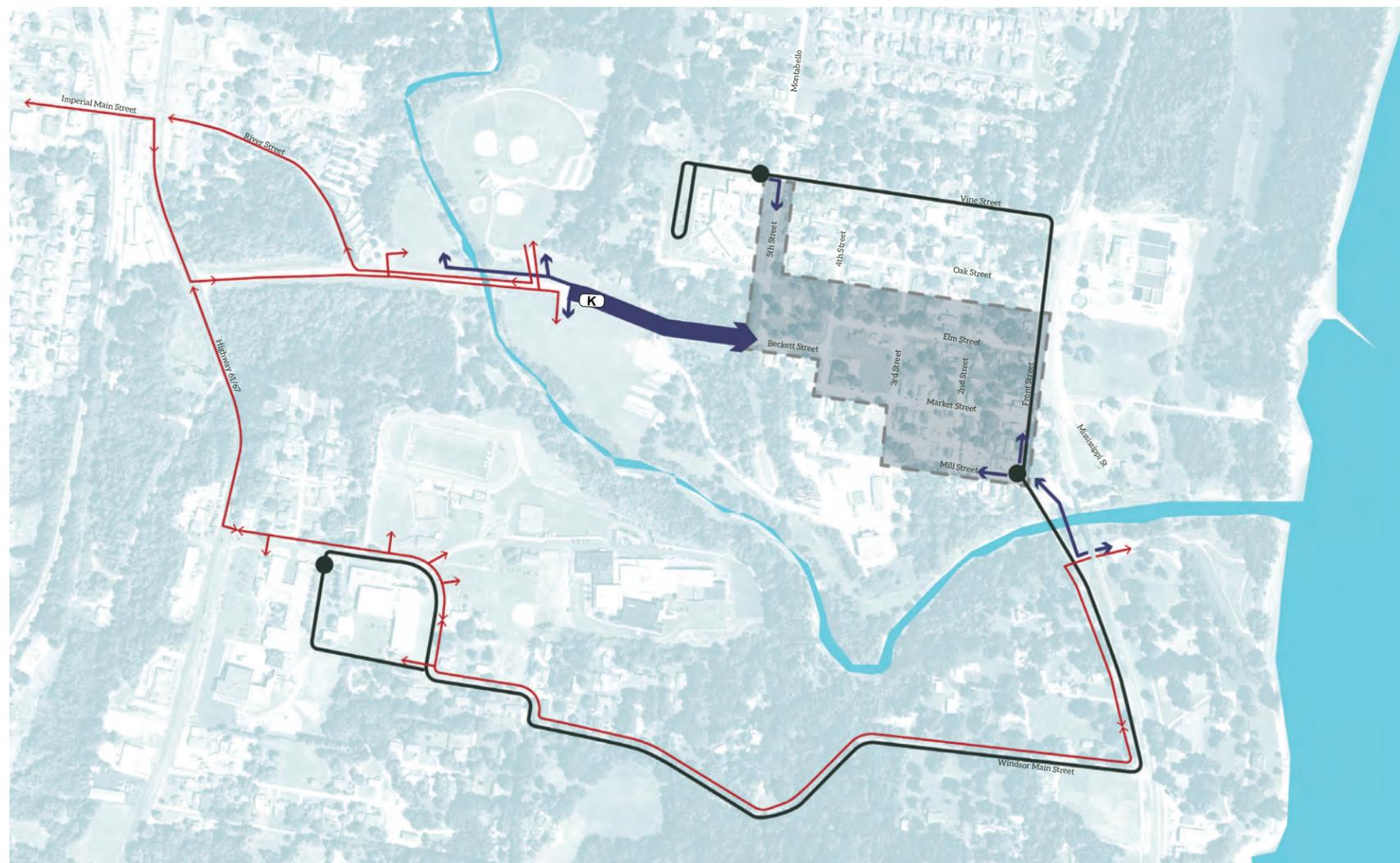


At the Apple Butter Festival, this overflowing dumpster sits in the high traffic intersection of Market and 3rd Streets.

much of Kimmswick's Downtown is one story in height, the character of these buildings is lost in the sea of people and tents. This created a sense that the festival could have been held almost anywhere in many locations. The sense of place was enhanced with sustained views to historic structures peeking over tents and the tops of two story buildings located primarily in the southeast corner of Downtown.



Performers, musicians, games, and exotic animals interspersed booth-lined streets. Annie and the Fur Trappers (pictured), a St. Louis based "hot band," played swing jazz and blues on the Delta Queen Port of Call patio.



**FESTIVAL ACCESS & CIRCULATION**

- ### TAKEAWAYS
- Primary event attendees at both event sizes were women
  - Young children were present; however, visitor survey findings indicate children 18 and under and parent aged adults from 35-54 were underrepresented
  - Pedestrians primarily utilize the roadway to travel around Kimmswick at both event sizes
  - Most event activity occurred within roadways
  - The most intense small-medium size event activity occurred in the densest part of town along Market between 2nd and Front Streets
  - Large event shuttle traffic discouraged visitor frequency to booths and shops on Front Street
  - Merchants recognize the need to creatively delineate pedestrian space for business access, visibility, merchandise, furnishings and comfort
  - During large events, Route K is the primary pedestrian corridor

- Market, Beckett, and 5th streets are primary large event corridors hosting the highest amount of activity
- Small-medium size event attendees arriving via Route K have no clear guidance directing them where to go at the 4th street intersection.
- Large event tents block Kimmswick's shops and buildings one-story building facades
- Tents, vehicles and dumpsters block visibility of existing wayfinding signage
- Police direct traffic, assist with directions of visitors, and appear to be instrumental in safe operations
- Locations of dumpsters supporting the festival can become unsightly
- Event entries lacked a strong sense of welcome and arrival as gateways were marginally defined
- No bicycles were present at the large event, few at the small-medium event

The food court near City Hall and Jefferson Park served as a rest area for visitors, especially families with small children. Play areas, the petting zoo, and pony rides occupied the park and provided activity and novelty for visitors seated at benches or picnic tables. Poor weather may have contributed to the lack of visitor density in open spaces during the observation time. Some visitors used the tops of trash receptacles as bar tables.

The shuttle drastically diminished pedestrian comfort and activity at tents and shops along Front Street, and Mill Street similarly lacked foot traffic compared with northern festival corridors.

Large events require more and larger services. Dumpsters, particularly near the food booths on 3rd Street, were overflowing and created an unsightly and odorous presence. In some locations, portable

restrooms were located directly adjacent to vendors – a potential detriment.

Entries to the festival were not gateways. The beginning of booths delineated the start of the festival. Visitors encountered booths on the north side of Route K. Entry points lacked identification of arrival, such as banners or overhead signage.

With the great crowds milling around,

people became part of the environment, softening edges while sustaining a festive energy. Entries lacked a strong sense of welcome and arrival as gateways were marginally defined. ■



Photo: Pedestrians fill the streets. Three-story buildings at Market and Front streets serve to develop a well defined public realm.

# natural setting

» Natural environment examination considers Kimmswick's environmental setting. Located at the confluence of Rock Creek and the Mississippi River, flooding frequently threatens the community. Public officials have communicated no above-ground infrastructure improvements will be made until the stormwater is addressed. The following examination of the natural environment will analyze Kimmswick's flooding and stormwater infrastructure.

## STORMWATER INFRASTRUCTURE

Kimmswick is located alongside two water bodies, the Mississippi River to the east and Rock Creek to the south. During a site visit November 16, 2017, the Department of Public Works and town officials identified numerous concerns and issues related to stormwater drainage and flood events.

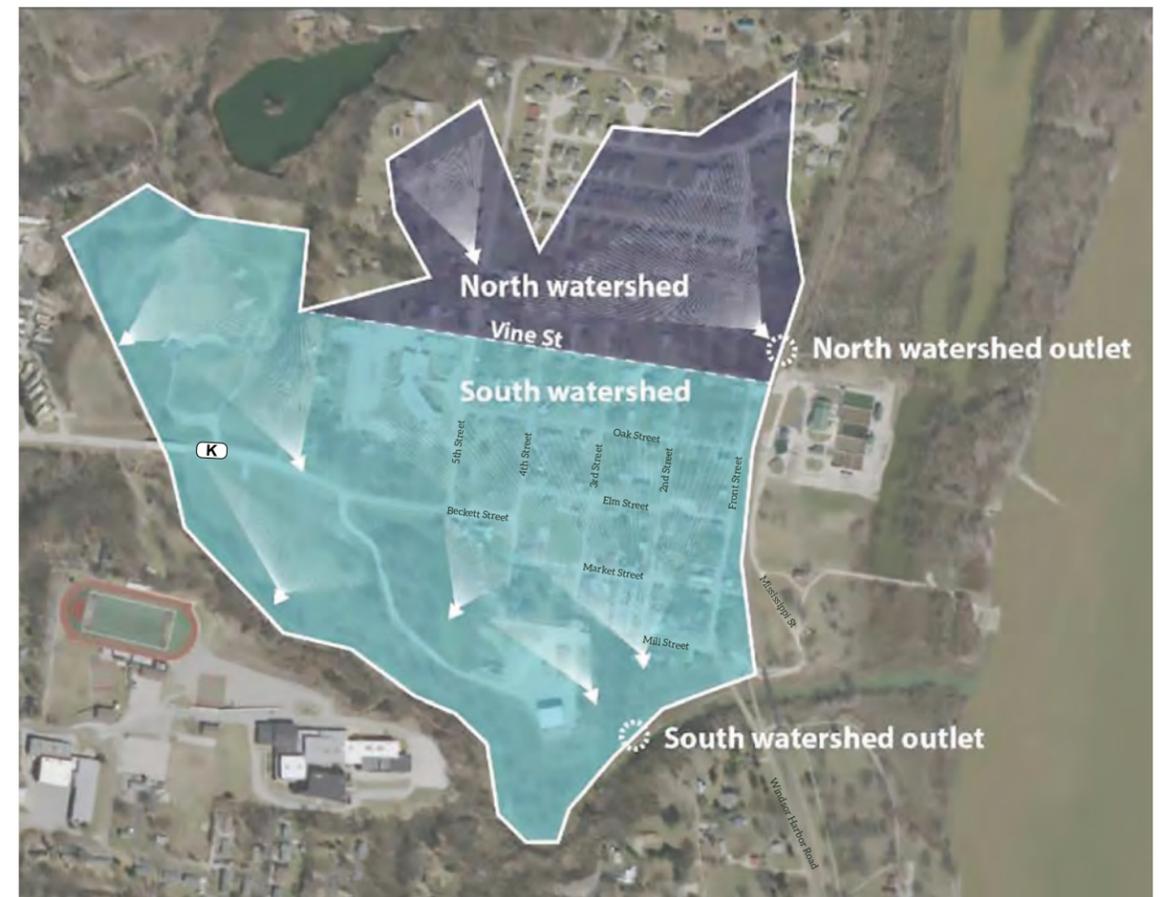
Stormwater infrastructure consists of culverts, ditches, limited drain inlets, three small detention basins, and two stormwater outlets to Kimmswick's north and south.

Kimmswick has two sub watersheds that drain to the north and south of town. Vine St is the dividing line between the two, with runoff in the north heading toward the Mississippi and in the south to Rock Creek. The study area (right) encompasses 130 acres and produces 743,343 cubic feet (5.56 million gallons) of runoff during a two-year storm of 3.25 inches in 24 hours

and 2,545,114 cubic feet (19 million gallons) during a 100-year storm of 7.70 inches in 24 hours.

The north watershed is 32 acres and includes a subdivision to the north of Kimmswick that contributes to the city's stormwater runoff. Sixty percent of the area is impermeable, 21% is soil type C (moderately well-drained), and 19% is soil type D (poorly drained). The north watershed produces 247,692 cubic feet (1.85 million gallons) of runoff in a two-year storm and 739,424 cubic feet (5.53 million gallons) in the 100-year storm.

The north watershed drains to a shallow depression and out through a metal wall barricading the railroad underpass with two 12-inch culverts, one in each corner. According to Kimmswick DPW, the railroad requires the wall and would like to eliminate



**WATERSHED ANALYSIS**



Photo: Taken in January, 2016, this rare winter flood caught Kimmswick by surprise. The community has endured five floods in five years.

Source: <http://www.nydailynews.com/news/national/mississippi-river-receding-deadly-flooding-article-1.2484367>

the culverts which would result in flooding. Leaf debris clogs the culverts requiring constant clearing. During heavy rain, this is unsafe and potentially life threatening. To prevent Mississippi River backflow, exercise balls are placed in the culverts and inflated plugging the outlet. This solution works, but is not best practice and is dangerous for the operator. DPW said a proper flood gate is the highest priority.

The south watershed is larger, encompassing 97 acres. Twenty percent of the area is impermeable, 42% is soil type C (moderately well-drained), and 38% is soil type D (poorly drained). The south watershed produces 506,340 cubic feet (3.79 million gallons) of runoff in a two-year storm and 1,810,852 cubic feet (13.55 million gallons) in a 100-year storm.

The south watershed drains into a detention basin with limited capacity for stormwater mitigation. An expansion of this basin could be beneficial to stormwater management. A manual sluice gate stormwater outlet prevents Rock Creek from backflowing into Kimmswick. Flash flooding can create dangerous operation of the gate, which is closed manually and lacks safe access. Proper access and remote operation would be beneficial.

### Flooding

Kimmswick's location relative to Rock Creek and the Mississippi River creates problematic flood conditions during heavy rainfall and spring floods. Kimmswick has experienced three major floods over the past five years. Highway K remains open until water crests the roadway at elevation 407. Windsor Harbor Road floods at elevation 409, but the roadway closes when flood stage reaches 39 feet and Kimmswick begins building the temporary levee across.

The Anheuser Estate is also susceptible to flooding when waters rise to approximately elevation 411. The Anheuser House itself has flooded.

Approximately 55 percent of Kimmswick is within the 100-year floodplain. Minor flooding is experienced even during a common two-year storm event. When the Mississippi River and Rock Creek flood, water could backflow at the north and south outlets.

During flood events, Kimmswick experiences a bathtub effect where water ponds in town in areas of low elevation and cannot exit because high water levels necessitate closing the north and south drainage outlets. The current strategy is to pump water from town to the river and creek over the levees.

### Levees

Kimmswick has constructed a temporary levee from the railway across Front Street, behind Mill Street's south side development, north to the intersection of Mill and 2nd Streets, and west to the waste management property. The segments across Front Street and 2nd Street must be constructed and demolished after each flood. This temporary levee blocks the access Windsor Harbor Road for upwards of a month after flooding recedes.

At issue with this flood mitigation strategy is the cost burden on the community, and one man, the DPW director, removes the temporary levee.

The graphs to the right show the height of the Mississippi River at the St Louis gage based on estimated and actual data. The range of river levels at the St Louis gage is from -5 feet to an all-time high of 50 feet,

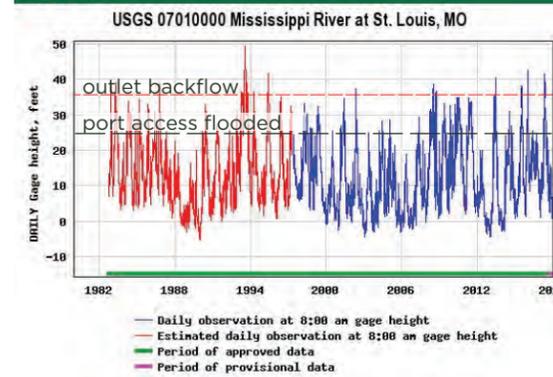
a total range of 55 feet. Typically, the river fluctuates between 0-30 feet.

Observing historical data, 40 feet is a very high level for the river. Looking at the past 5 years, the river exceeded a 40-ft height on three occasions. Historically, this happened a total of two additional times over the past 35 years of data. These findings suggest that the Mississippi River has been reaching higher water levels more regularly which could be occurring for a variety of reasons

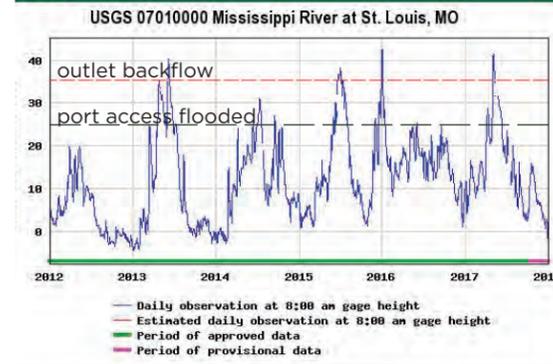
### FLOOD DURATION

Year/Month	Peak Level	Duration Days Over 35 ft
13/04	35 ft	1-2
13/06	40 ft	7-10
15/06-07	37 ft	14-21
16/01	42 ft	3-7
17/05	42 ft	14

### USGS RIVER HEIGHT 1982-2018



### USGS RIVER HEIGHT 1912-2018



including river channelization, upstream development, or changes in climate.

Kimmswick's outlets backflow at the 35 foot elevation marker at which point the south outlet sluice gate and the north outlet culverts must be closed or blocked to prevent backflow. Floodwater has reached this stage five times in the last five years.

The Mississippi Street access to the riverfront floods at approximately the 25 foot elevation marker. Historical data indicates this floods, on average, two to five times annually for 2-30 plus days. Most access-closing floods happen during Kimmswick's peak season.

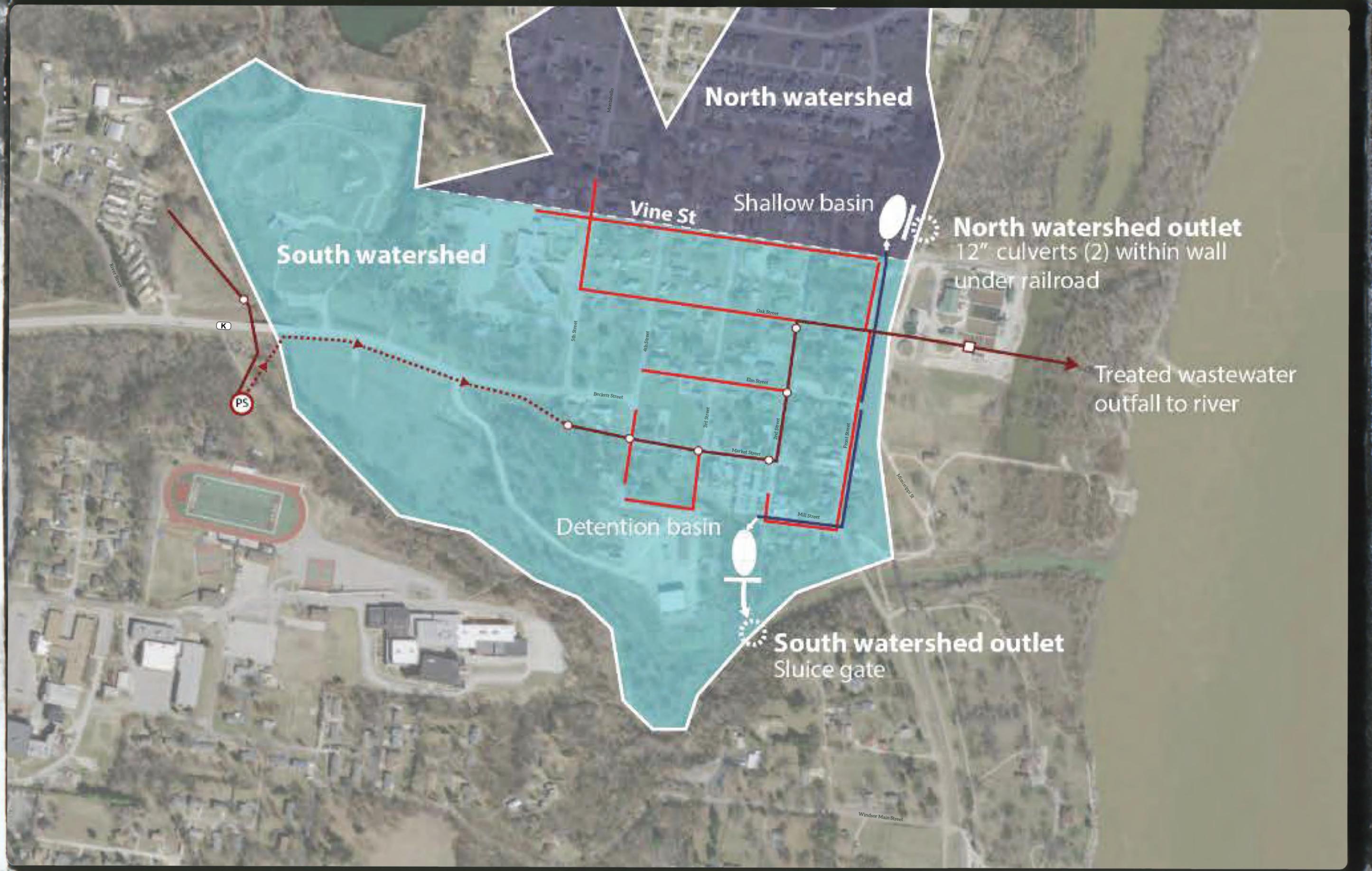
## TAKEAWAYS

- Kimmswick experiences "bathtub effect" flooding and Mississippi floods
- The north outlet floods from runoff outside Kimmswick
- The undersized north outlet clogs easily creating a hazards
- The south outlet does not have proper access and the manual gate can be dangerous
- Both outlets have limited storage capacity
- The outlets backflow at 35 foot flood elevation
- Mississippi Street riverfront access floods at approximately 25 foot flood elevation
- Historical data indicates flooding is becoming more frequent and severe

### LEGEND

- STORMWATER DRAINS
- LATERAL SEWER LINES
- SEWER MAIN LINES
- SEWER FORCED MAIN

**INFRASTRUCTURE STORMWATER & SEWER:** The City's stormwater infrastructure is a combination of drainage swales and underground pipe.



North watershed

South watershed

Shallow basin

Vine St

North watershed outlet  
12" culverts (2) within wall  
under railroad

Treated wastewater  
outfall to river

Detention basin

South watershed outlet  
Sluice gate

K

PS

Windsor Main Street

Mill Street

Front Street

Elm Street

Oak Street

2nd Street

3rd Street

Market Street

4th Street

Beckett Street

5th Street

Memphis

River Street

## TOPOGRAPHY

Kimmswick's topography is higher on the western and northern corner of town with an elevation of 470 feet and slopes towards the east and south. Overall, the land slopes towards Rock Creek to the south and the Mississippi River to the east. The low point of elevation, 390 feet, is on the southern boundary of the analysis area where the south watershed's drainage basin drains into Rock Creek.

A ridge runs from the waste management property at the end of 4th Street north through the school up Montebello. The ridge slopes to the west steeply to the ball park and open field, where terrain flattens in the Rock Creek floodplain. To the east, slopes from the ridge descend moderately to 4th Street where grades level to minimal slope to Front Street.

Kimmswick's Downtown is formed like a bowl. Slopes descend south toward Vine Street, east down the ridge to 4th Street, and the railway on Kimmswick's eastern edge and temporary levee on the southern edge cradle the community.

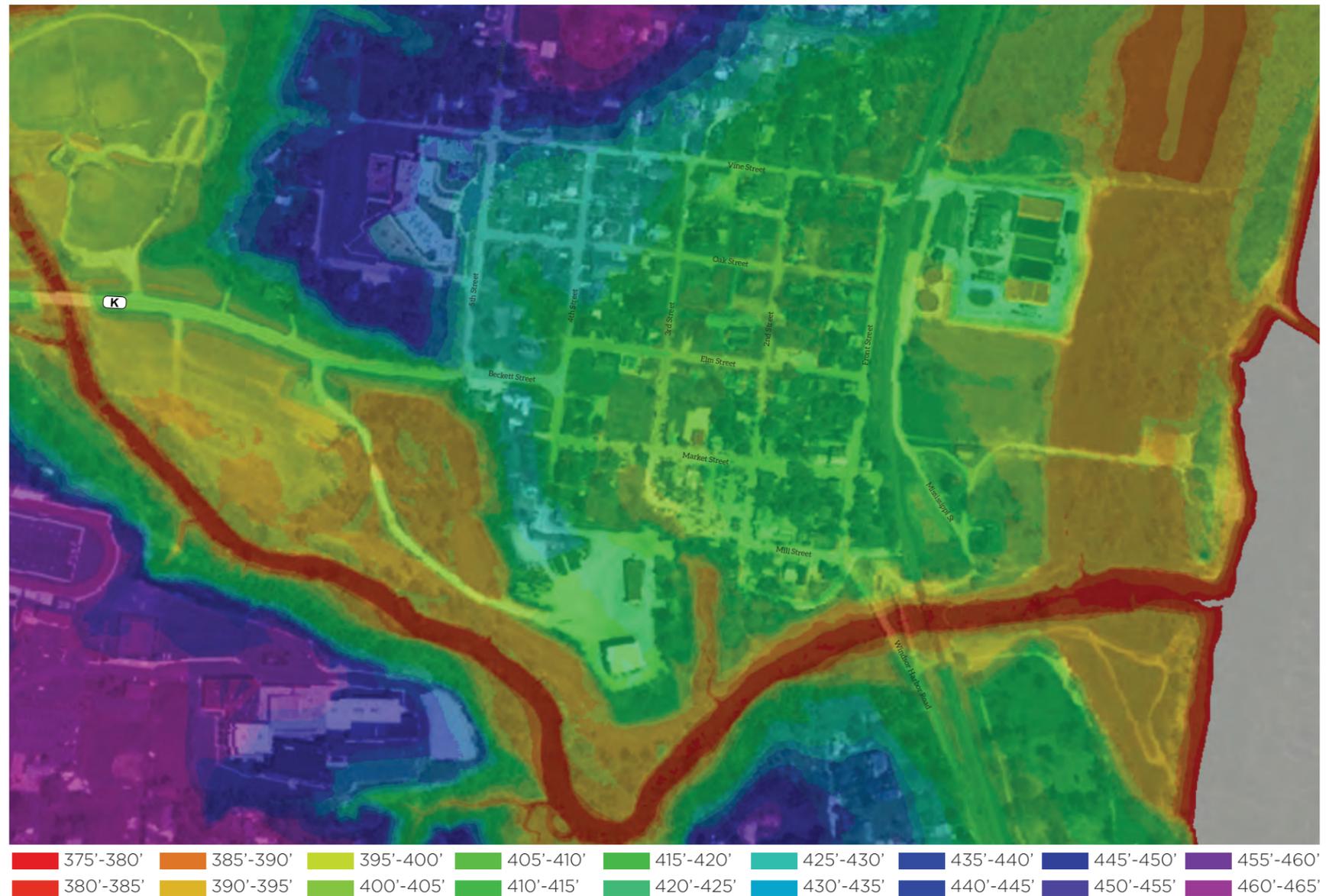
East of the railway, a knoll rises northeast of the underpass, but, generally, grades slope gradually toward the Mississippi River and Rock Creek. The Mississippi's exposed soil river edge is steep but accessible.

Rock Creek carves a channel between the base of steep picturesque bluffs on the southern edge and a flat, lowland shelf to the north nearly 15 feet above the stream's surface. The channel cuts nearly thirty feet below the Windsor Harbor Bridge and tapers down to the Mississippi confluence.

Most of the Anheuser Estate sits approximately 25-feet above the Mississippi with flat, gentle slopes. Approximately four acres on the estate's northeast corner is on a 10 to 15-foot lower shelf at the Rock Creek confluence. Bluffs rise above the estate west of Windsor Harbor Road.

## TAKEAWAYS

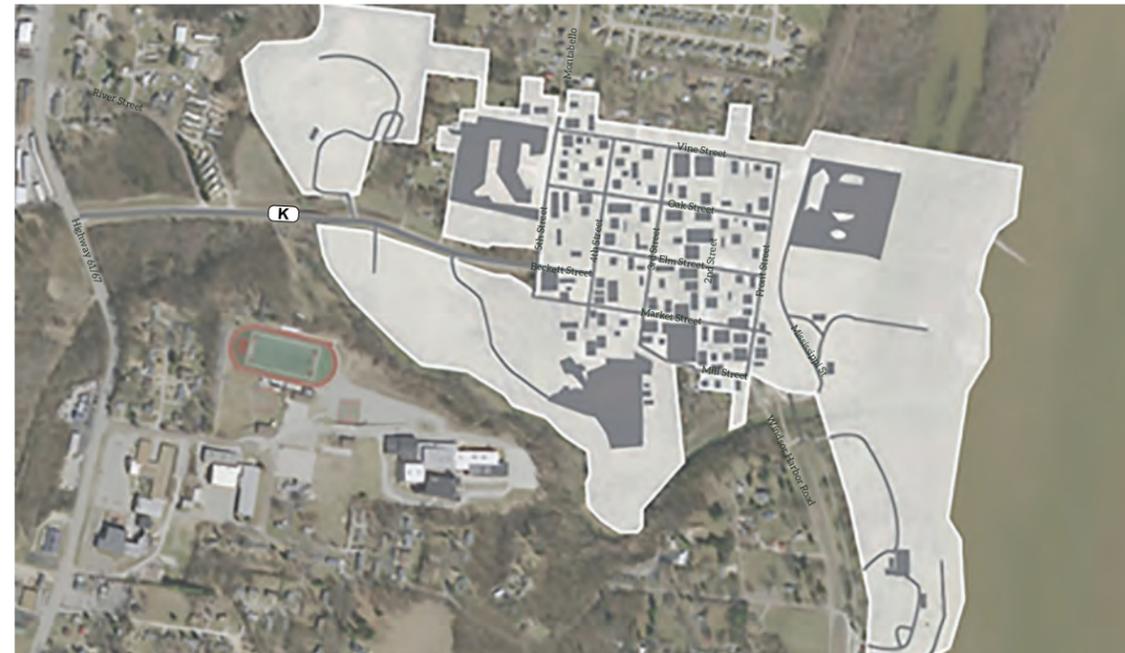
- Topography slopes from northwest to southeast
- The ridge runs from the waste management site to Windsor Elementary and north
- Kimmswick's Downtown is shaped like a bowl
- The Anheuser Estate is approximately 25 feet above the Mississippi
- Bluffs line Rock Creek's southern edge



# SOILS & PERMEABILITY



Well Drained Soils      Poorly Drained Soils



Permeable Surface      Impermeable Surface

## SOIL ANALYSIS

Infiltration Potential	Soil Name	Drainage Class	Infiltration Rate	Area
Well-drained 52%, 89.9 Acres	60043 - Menfro silt loam, 30-50% slope	Well drained C	0.2 in/hr	28.2 Acres
	60024 - Wilbur silt loam, 0-2% slope	Well drained C	0.2 in/hr	26.3 Acres
	60025 - Urban land - harvester complex, 2-9% slope	Moderately Well Drained C	0.2 in/hr	25 Acres
	73208 - Caneyville silt loam 8-15% slope	Well drained C	0.2 in/hr	4.1 Acres
	60003 - Menfro silt loam, 9-14% slope	Well drained C	0.2 in/hr	6.3 Acres
Poorly-drained 48%, 83.1 Acres	60050 - Urban land, Deible complex	Poorly drained D	0.06 in/hr	15.5 Acres
	64007 - Freeburg silt loam 0-2% slope	Somewhat poorly drained	0.01 in/hr	4.1 Acres
	66052 - Waldron silty clay loam. Frequently flooded,	Somewhat poorly drained	0.01 in/hr	30.8 Acres
	66053 - Fishpot-urban land complex 0-3% slope	Somewhat poorly drained C/D	0.01 in/hr	32.7 Acres

Kimmswick's soils are classified as predominantly silty and clay soils in areas closest to the Mississippi River and somewhat more loamy around the community's core, increasing the infiltration rate. These are soils with slow or very slow infiltration rates, meaning they drain slowly and have very high runoff rates. When considering infiltration of stormwater, soil type must be taken into account. Areas with less infiltrative soils would benefit from soil amendment or replacement with structural soils or modular stormwater storage to provide additional sub-surface water storage capacity.

The approximate area of Downtown Kimmswick is 1,560,000 square feet. Approximately 45 percent of Downtown Kimmswick is impermeable, with approximately 702,000 square feet of impermeable surfaces and 858,000 square feet of permeable surfaces.

### TAKEAWAYS

- Soils in Kimmswick's Downtown have a poor infiltration rate
- 60% of Kimmswick's Downtown is impervious

## FLOODING

Most of Kimmswick is located within the FEMA designated 100-year floodplain. A two-year storm event also creates flood conditions in the lower-lying elevation along adjacent watercourses.

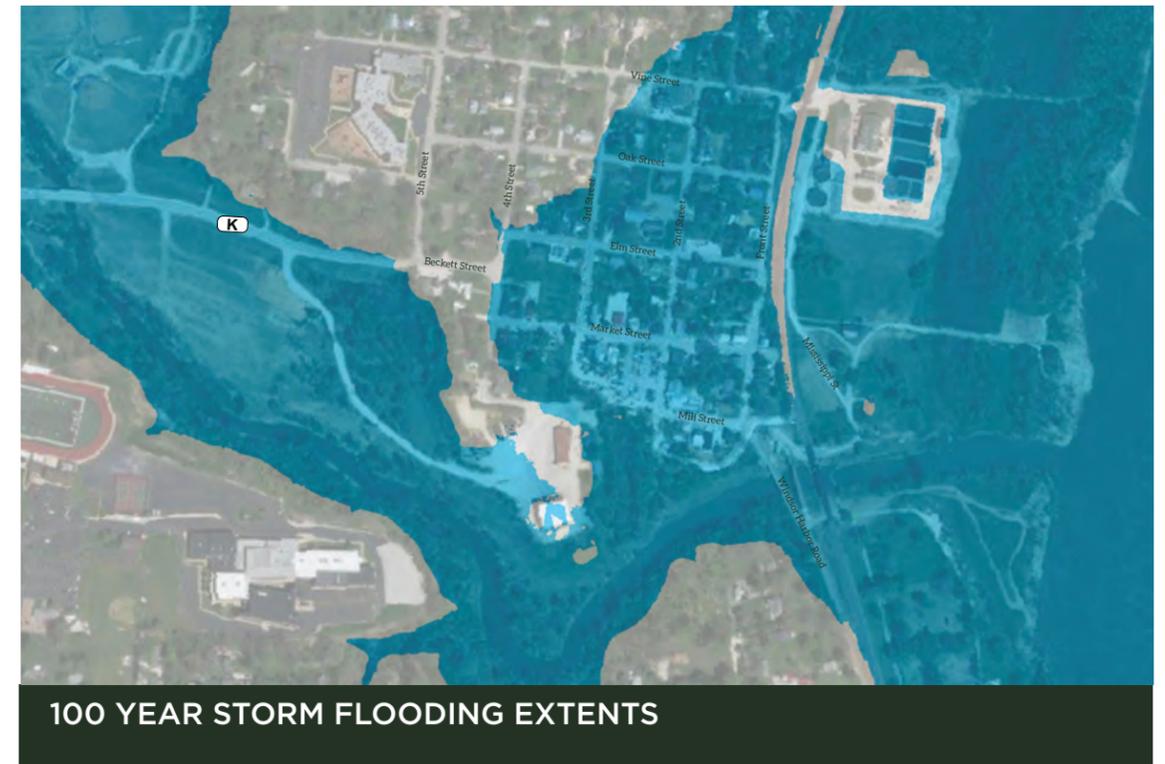
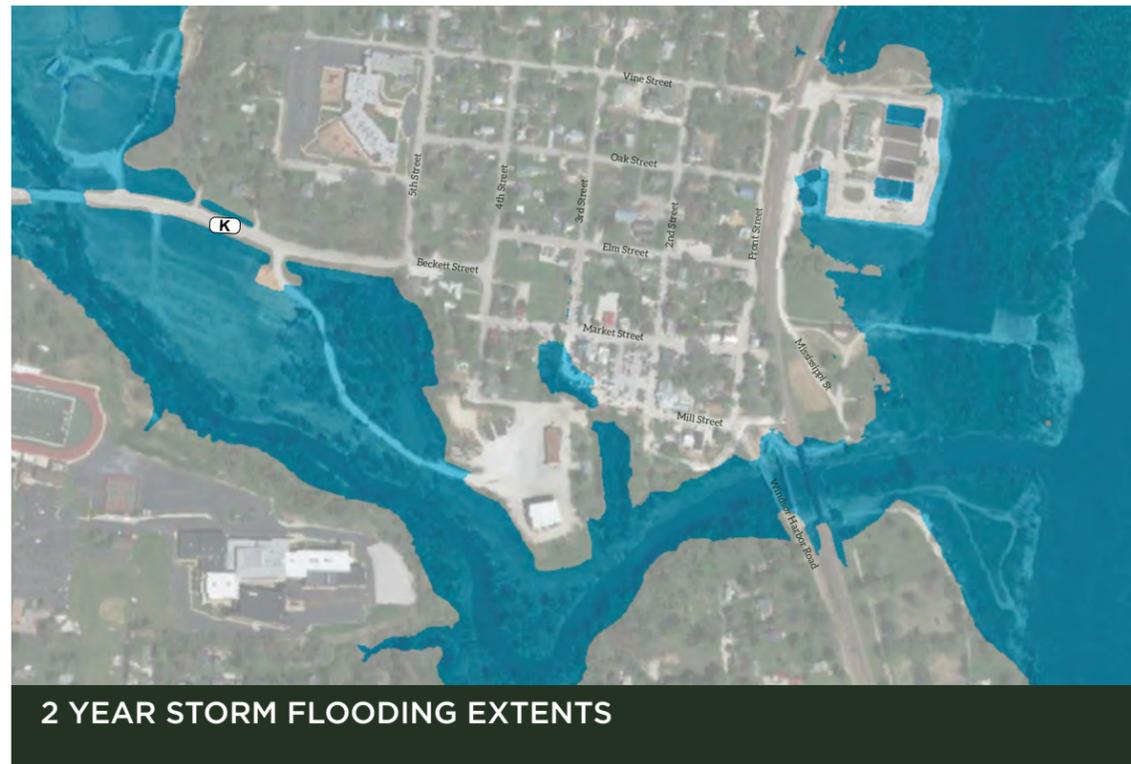
The two-year storm creates flooding in town to an approximate elevation of 379 feet, primarily inundating depression drains and swales to Rock Creek. This area is located south of Market Street west of the Blue Owl parking lot. This small tributary represents a low-lying area next to a set of buildings near Smokee Robinson's Cajun Smokehouse most vulnerable to flooding. Otherwise, flooding from a two-year storm affects largely uninhabited areas, such as the fields north and south of Hwy K and the area east of the railroad.

The 100-year storm event floods to an elevation of approximately 414 feet. Unchecked, flooding would engulf nearly 60 percent of Kimmswick and affect most inhabitants.

### FEMA Development requirements

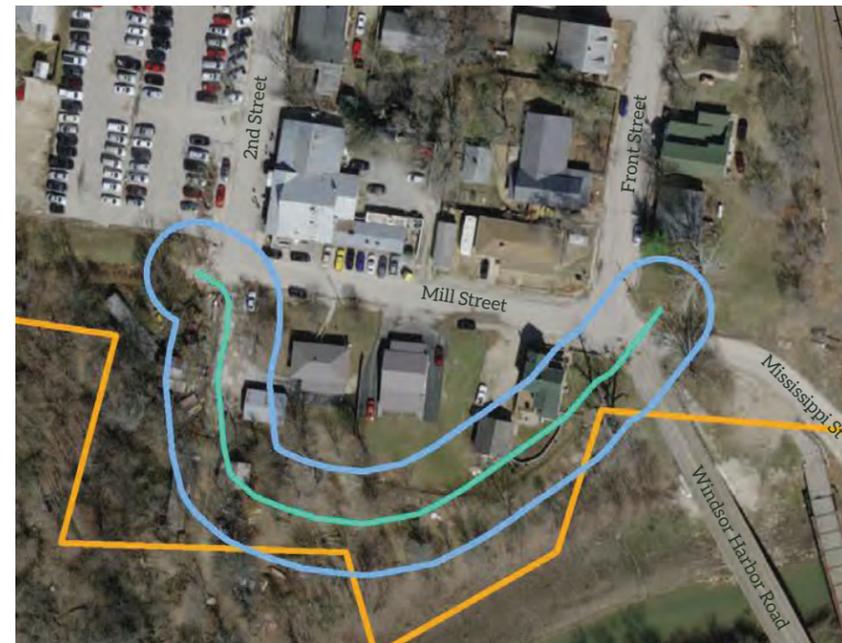
Generally, development must follow the base flood elevation as prescribed by FEMA, according to the Flood Insurance Rate Map (FIRM) for that area. Kimmswick has a flood protection project.

FIRMS with flood protection projects may show areas protected from flooding by the 100-year flood because of the presence of a levee, concrete dike, floodwall, seawall, or other structure. These areas are usually designated as Zone X. This is an indication that the flood protection structure has either been evaluated and found to meet all of the National Flood Insurance Program requirements for flood control structures, or has been certified by a federal agency with levee design responsibility as having





■ Levee    □ Vegetation Buffer    □ City Limits  
**US ARMY CORPS OPTION 1: ACE LEVEE**



□ Floodwall    □ Construction Easement    □ City Limits  
**US ARMY CORPS OPTION 2: ACE FLOODWALL**

**ACE FLOOD BARRIER OPTIONS**

**ACE OPTION 1:** This option proposes a 10-foot tall levee including four feet of overbuild for risk and consolidation. It assumes side slopes of 1:3 (Vertical : Horizontal) and a 12-foot wide levee crown making the levee approximately 74 feet wide. With an additional USACE required 15-foot vegetation buffer on both sides the total width approaches 104 feet. Slope stability concerns locate the levee about 40-feet away from the bank. In conjunction with the levee, a road closure structure would be required over the roadway and a pump station. Acquisition of three properties on Mill Street would be required for this alternative to be constructed. With a 30 percent contingency, Option 1 is estimated at \$8.3 million.

**ACE OPTION 2:** Similar to the levee, the 9-foot floodwall option includes an additional 3 feet of overbuild. This height requires a USACE T-wall type flood wall with a nearly 40-foot wide excavation footprint for safe construction. Again, slope stability concerns locate the floodwall about 40-feet away from the top of bank. Similar to the Option 1, a road closure structure and pump station are required. Acquisition of at least the eastern most property on Mill Street and the garage/shed building at the west end of Mill Street. Floodwalls are often seen “eye sores” degrading the local scenery, but can display murals or art. With a 30 percent contingency, Option 1 is estimated at \$12 million.

**ACE OPTION 3:** Non-structural flood-proofing incorporates multiple flood risk reduction techniques not involving structural methods such as berms, levees, floodwalls, flood gates, etc. Instead, nonstructural flood-proofing encompasses dry or wet-flood proofing, elevation of structures, buyout, acquisition and relocation. The specific non-structural strategies employed are based on variables including flooding characteristics, site characteristics, building characteristics, and repetitive loss status among others. The estimated cost to implement the non-structural flood proofing solutions is estimated at \$2.4 million.

**ACE OPTION 4:** This option proposes a temporary floodwall solution, which the City would deploy prior to a flood and remove after. There are many systems on the market that claim various levels of flood risk reduction. The US Army Corps of Engineers does not endorse or recommend any particular product, but recommends products tested by the Engineer Research and Development Center (ERDC). An estimate for this option is based on a portable “Jersey barrier” type structure stored near the site for rapid deployment. Though labor intensive, it is the most cost effective solution and doesn’t require demolition of private properties. With a 30 percent contingency, Option 4 is estimated at \$294,000.

been adequately designed and constructed to provide protection from a 100-year flood event. A levee that provides a lower level of protection, and that is not certified or does not meet the requirements for levees, may be shown on the FIRM, and flood elevations are computed as if the levee did not exist.

As indicated in the FIRM for Kimmswick, the base flood elevation is 416 feet. The railroad and temporary levee are at higher elevations, preventing backflow from the Mississippi River and Rock Creek from entering Kimmswick and contributing to the 100-year flood.

Major flooding events need protective measures. The US Army Corps of Engineers (ACE) presented four options in the August 2017, Flood Risk Reduction Study. All alternatives reduce flood risk from the 100-year storm described as “1% annual chance exceedance.” Options presented include:

- Option 1: Construction of a 1% annual chance exceedance levee
- Option 2: Construction of a 1% annual chance exceedance floodwall
- Option 3: Nonstructural flood-proofing of flood prone structures
- Option 4: Acquisition of temporary flood risk reduction system

Option 4 is the most cost effective solution, but requires the most labor. In essence, it is a more formal solution to the current temporary levee. Options 1 and 2 require extensive capital costs and up-front labor. They incur minimal long-term maintenance but directly impact on private property. Option 3 is not viable proposing dramatic and invasive measures to existing structures which would undermine Kimmswick’s historic character. ■

## TAKEAWAYS

- Kimmswick’s natural and man-made topography surround the town making a bowl
- Most of Downtown’s topography is flat
- Kimmswick’s soils have slow to very slow infiltration rates resulting in slow drainage and very high runoff rates
- Green infrastructure infiltration/storage solutions would require depressing areas, amending soils, importing structural soil, or modular stormwater storage
- A 100-year flood would inundate nearly 60 percent of Kimmswick if unmitigated
- The US Army Corps of Engineers proposed four flood solutions including a permanent levee, floodwall, non-structural flood-proofing, and a temporary floodwall solution
- All solutions except the temporary floodwall directly impacts private property with two requiring building removal
- The temporary floodwall is the most cost-effective, but requires ongoing labor and maintenance
- The permanent levee, floodwall, and non-structural flood-proofing incur substantial up-front costs and labor, but require minimal ongoing maintenance

# market setting

» Presently, Kimmswick has a strong civic culture that enables it to run numerous events but is challenged by fiscal and formal organizational constraints. On the fiscal side, the City receives its funding from two primary sources: revenues from its major events and sales taxes. These revenue streams vary year-to-year and require significant expense in terms of time and City resources to fully realize. On the organizational side the City is dependent on volunteers, many of whom are aging, to run the events program.

## DEMOGRAPHICS

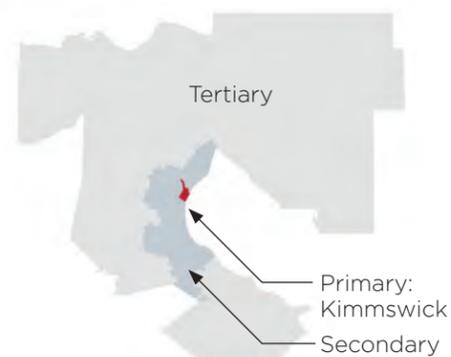
This market study divides the region into three areas. The Primary area comprises Kimmswick. The Secondary Area comprises eight zip codes surrounding Kimmswick. The Tertiary Area includes seven counties surrounding St. Louis region.

In Jefferson County the 65 and older age cohort is expected to grow by 78 percent between 2015 and 2030, according to the Missouri Division of Budget & Planning. Additionally, the 35 to 44 cohort is also expected to grow by 23 percent.

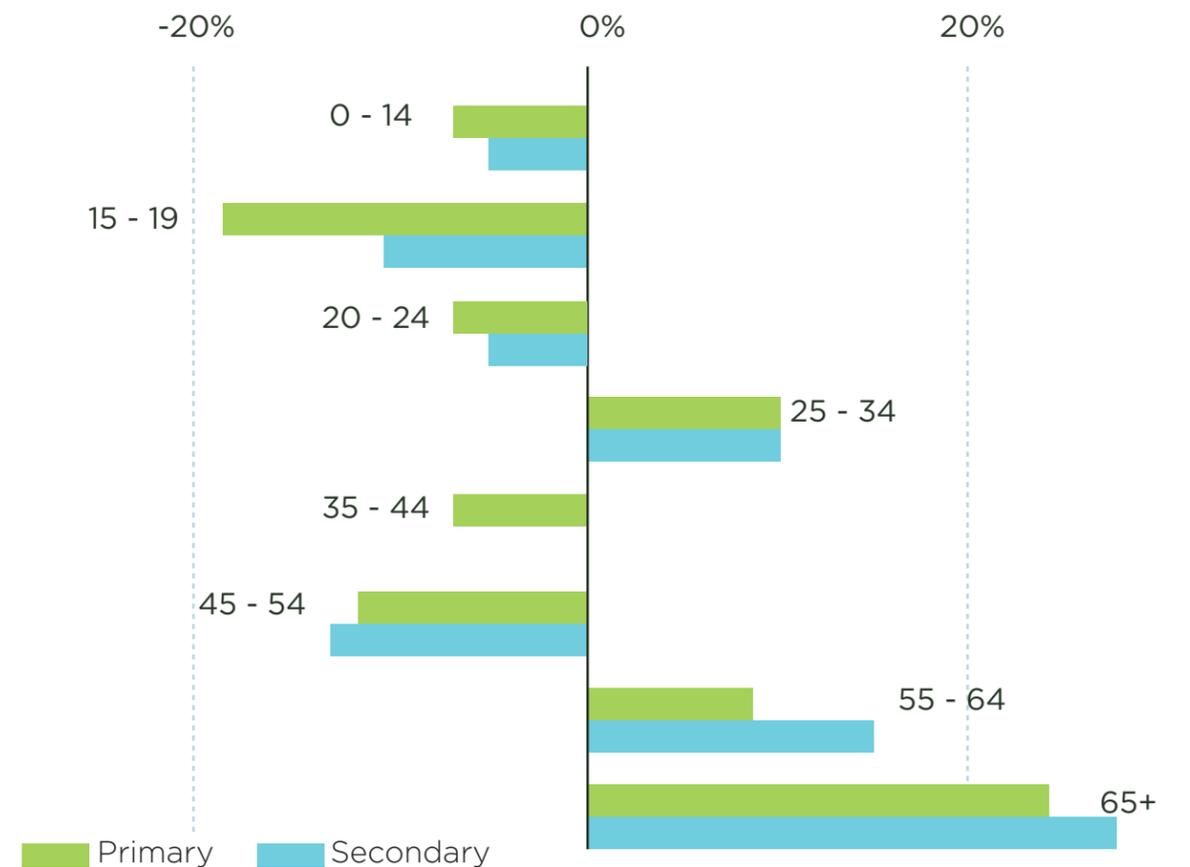
Within the Secondary Study Area, the demographic groups tend to fall into two broad categories: neighborhoods that are dominated by older residents who are either retired or approaching retirement, and those with younger residents who are in the process of establishing families and deeper ties to their neighborhoods. While the

highest percentage of visitors to Kimmswick from the Secondary and Tertiary Study Areas are over 65, the median ages of over 70% of the top market segments living in those trade areas are between 35 and 47.

As indicated in the Population Growth table to the right, ages 25-34 and 55+ increased in population in the primary and secondary study areas.



STUDY AREAS



**POPULATION GROWTH:** From 2010-2017 population decreased except in the 25-34 and 55+ age brackets.

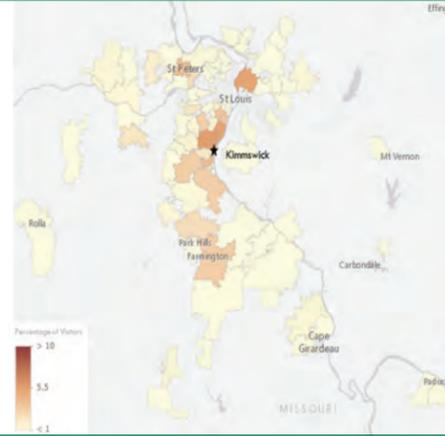


Photo: The National Historic Landmark Delta Queen paddle boat plans to cruise the rivers again in 2019. This luxury cruise ship boasts gorgeous architectural detail and mill work.

## VISITOR MARKET & EVENT VISITATION

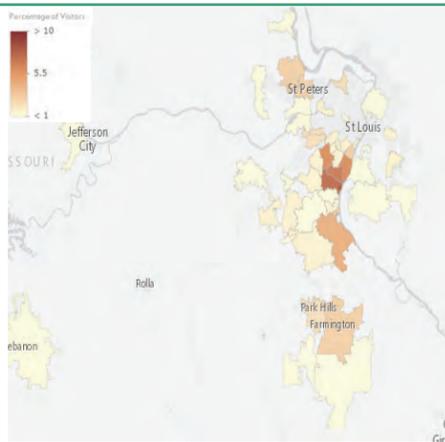
To better understand who attends Kimmswick's festivals and the opportunities these visitors bring, a visitor survey was conducted during Apple Butter Festival, October 28th and 29th, 2017; the Cookie Walk, December 1st through 3rd, 2017; and during non-event days between December 4th and December 10th. In total, 480 surveys were collected - Apple Butter Festival: 247, Cookie Walk: 135, and non-event days: 98. Findings from the three events are bulleted below.

- Draws a wide age range of visitors
- Predominantly women - 67%.
- Not regular visitors to Kimmswick - 36% only time visit the city each year
- Income bracket \$75,000 - \$99,999 equals 24%
- Most frequent purchase from vendors was food and beverages
- Twenty-seven percent of survey respondents suggested new offerings, the most common being for additional restaurants and food options.



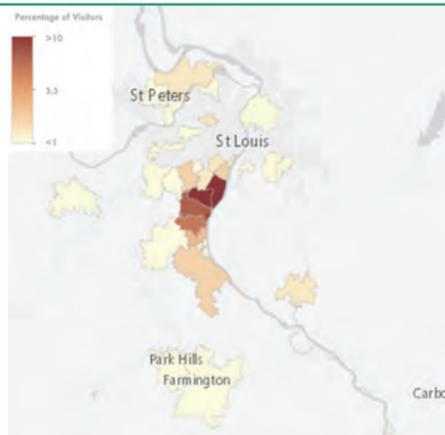
### APPLE BUTTER FESTIVAL VISITORS

- Visitor population over 60% 55+ years in age
- Predominantly women - 74%
- 43% visit once a quarter or bi-annually
- Participants spent money at local shops and restaurants more frequently than festival visitors with comparable or slightly higher purchasing amounts
- 40% wanted more restrooms; Other desires: winery, sports bar, more restaurants, coffee shop, decor shop, bait shop, and ice cream



### COOKIE WALK VISITORS

- Older population with 28% age 65 or older, 38% 45-64 age range
- Predominantly women - 80%
- Visit frequently - 25% weekly, 20% monthly, 26% semi-annually/quarterly.
- Majority of non-event day spending is at Kimmswick restaurants - 87% spend money eating and drinking



### NON-EVENT DAY VISITORS



## TAKEAWAYS

- Population increased in the 25-34 and 55+ cohorts over the past seven years
- Projections say 35-44 and 65+ age ranges will grow significantly through 2030
- Large and medium events attract different visitors than non-event days
- 80 percent of regular visitors are women mostly over 45
- Event visitors desire restrooms and more retail/dining options
- Most frequent purchases are food and beverages

## ASSETS & OPPORTUNITIES

Kimmswick has developed a regional reputation as a destination with charming historic buildings, authentic character, and a plethora of locally-owned shops and boutiques. These stores are in a highly walkable, main street-style setting. This contrasts with the majority of retail options in the area surrounding Kimmswick, which are predominately in malls and auto-oriented locations adjacent to highways. These typically host a high proportion of national chains found everywhere.

Kimmswick's unique setting has also helped establish a strong destination identity for numerous festivals and other events of varying sizes throughout the year, attracting thousands of visitors in support of local businesses and attractions. The two largest events on the Kimmswick calendar, the Apple Butter Festival and the Strawberry Festival, are run primarily by volunteers through the City. These events recently have been more expensive to run while the revenues have remained flat.

Though Kimmswick hosts numerous successful large and medium-scale events each year, there are fewer small-scale events targeted at Kimmswick's local population and the surrounding area. Neighborhoods populations in these areas tend to enjoy outdoor activities and eating out.

Visitors and residents indicated in surveys that they were interested in additional retail and dining options. Kimmswick has nearly 40 existing stores. Visitors noted these stores are not always open. Many close on certain days of the week or have limited business hours to avoid inconveniencing residents or because of merchant lifestyles. Some businesses close entirely for the winter. The inconsistency of business hours constrains Kimmswick's success as a retail

destination.

Neighborhood commercial services like grocery stores, pharmacies or filling stations are not likely to thrive in Kimmswick. Being located off the beaten path with a small population, the through traffic necessary for such establishments does not exist. Commercial businesses geared toward tourism and destination activity are better suited. However, convenience retail focused on cruise ship patrons and supporting over-night visitors will be highly beneficial.

## TAKEAWAYS

- Kimmswick has reputation as regional destination
- Kimmswick's historic character and walkable setting is a unique retail experience in the area
- Most area residents enjoy eating out and outdoor recreation
- Few events concentrate on local area resident
- Strong volunteer base runs large events
- Inconsistent business hours constrain retail destination success
- Visitors and residents indicate interest in broader variety of retail and dining options
- Commerce is best geared toward tourism and destination activities
- Convenience retail will support travelers and over-night guests

## ANHEUSER ESTATE

Kimmswick owns the 95-year-old Anheuser Estate, the ancestral home of Fred and Mabel Ruth Anheuser, great grandson of the eventual founder of Anheuser-Busch Brewing Company. The home is situated on 23 acres of park-like setting, within walking distance of Downtown Kimmswick. It offers occasional tours to the public, and according to the Estate's operators has become one of the region's top wedding venues, hosting numerous outdoor weddings in its gazebo. Expanding private events, including hosting business conferences and retreats, is being considered. A board of directors consisting of two City representatives and three Anheuser representatives operates the Estate. The Trust receives all revenues generated by the Estate.

The Anheuser Estate is a signature asset for Kimmswick. Its recent opening as an events destination for weddings has brought new visitors to the city. However, large events need to be held in outdoor tents since the house only has capacity for small groups, limiting the Estate to seasonal usage. The Estate further lacks certain infrastructure like sufficient restrooms and permanent commercial food preparation areas that would support hosting events year-round.

### TAKEAWAYS

- The Estate is one of the region's top wedding venues
- Broadening Estate offerings is currently being considered
- The Anheuser Estate Trust receives all revenues
- Capacity and infrastructure are insufficient for year-round events



Photo: The Anheuser Estate must host outdoor events lacking sufficient facilities and infrastructure.



Small inns, bed and breakfast style lodging, or small boutique hotels can fit Kimmswick's character and cater to experience oriented visitors

## LODGING

Kimmswick visitors; event and non-event-day visitors, Anheuser Estate private event and wedding attendees, and Delta Queen passengers; currently have limited hospitality options should they wish to stay overnight. A single room at the Greenhouse Inn is the only place available. Another establishment plans to open three more rooms at Front and Market.

Ten mid-scale or upper-midscale hotels operate within 12 miles of Kimmswick. Occupancy rates at these hotels are high in the summer months, peaking at 74% in June, but occupancy steeply declines during the winter. As a result, the overall occupancy rate is 61%, below the 70% occupancy rate that signals sufficient demand to support an additional hotel of a similar format.

Bed and breakfasts are often successful lodging options in heritage-oriented destinations like Kimmswick with evening dining and retail options. An increase in year-round visitors may create a market sufficient to support this style of lodging.

## TAKEAWAYS

- One room is available in town
- Three rooms plan to open soon
- Ten regional hotels have a yearly occupancy around 61%, below 70% occupancy indicating demand for additional accommodations
- Peak regional hotel occupancy is 74% in summer
- Boutique lodging options are often successful in heritage-oriented destinations



Source: Smith Travel Research



## DELTA QUEEN & THE PORT OF KIMMSWICK

The Delta Queen, a National Landmark paddleboat, is a major new attraction planned for Kimmswick in the near future. Jefferson County Port Authority plans to break ground fall 2018 to construct a riverfront access and landing to accommodate the Delta Queen. Future plans include mooring facilities for other potential cruise ships and Mississippi River boat traffic.

The Delta Queen originally operated from 1927 to the 1940s ferrying passengers between San Francisco and Sacramento. In the 1940s, the Delta Queen was itself ferried to the Mississippi River where it was rehabbed and operated until 1966, when Congress passed the first Safety at Sea law prohibiting the Delta Queen from operating as an overnight passenger ship. However, between 1966 and 2008, the Delta Queen operated up and down the Mississippi River, utilizing Cincinnati and New Orleans as its primary ports of call, through a series of legislative exemptions from Coast Guard safety standards. From 2009 until 2014, the vessel operated as a floating hotel based in Chattanooga, Tennessee. Since 2014, it has been docked in Louisiana awaiting a new legislative exemption allowing it to offer overnight passenger trips. Once the Delta Queen receives a new exemption, Kimmswick will become its primary port of call. As of February 2018, the Senate passed a bill that grants this exemption, but the House is yet to act on corresponding legislation.

The Delta Queen Steamboat Company, the current operators of the Delta Queen, selected Kimmswick in part because of its quaint charm. The city's strategic position close to St. Louis, a key riverboat hinge point along the Mississippi River, strengthened the city's appeal.

The Delta Queen plans to dock in Kimmswick 20 - 25 days per year. The Delta Queen will only operate in Kimmswick from June through December moving to the south Mississippi during the off-season. Additional Kimmswick visitors may go to see memorabilia at the Delta Queen Port of Call Restaurant or planned Delta Queen Museum throughout the year.

As the primary port of call, it will exclusively utilize Kimmswick as a starting or ending point for cruises. Each time it docks in Kimmswick, up to 176 passengers will be embarking and 176 disembarking the boat. Delta Queen passengers embarking and disembarking in Kimmswick will have time to explore the town before and after their cruise. On a typical day in port, passengers ending their cruise will disembark between 8 and 9am, while passengers for the next cruise will begin boarding at 3pm. They plan to bring passengers, primarily from St. Louis, to Kimmswick around 12pm, ensuring three hours to explore the town. Previous passengers will leave the city immediately following.

High-ticket prices tend to attract well-off cruise passengers averaging 50 years old in age. The Delta Queen Steam Boat Company anticipates charging \$450 - \$500 per person per night. The steam boat's heritage and historic roots attract an international passenger base totaling nearly fifty percent. During previous operations between 25 - 50 percent of passengers per voyage were repeat guests. According to the operators, the Company caters to conferences and groups theming the ship and port landing accordingly which may include corporate retreats, gardening clubs, college reunions, historic re-enactors, Rhodes Scholars, and the National Railroad Association to name a few. They have even towed a barge carrying



**LOCAL SUPPORT:** Kimmswick garners 3 percent of all Delta Queen sales within the city including tickets.

motorcycles for Harley Davidson groups. Bicycles are provided for passengers who would enjoy getting off at one stop and being picked up at the next.

The Company plans to offer different cruise packages to match demographic trends. Baby Boomers take shorter vacations but more per year. The Delta Queen will offer long regionally based weekend trips from Kimmswick to Memphis, St. Charles, or round trip starting and stopping in Kimmswick.

Viking Cruises has contacted the port with initial expectations to dock in Kimmswick once per week seasonally. The Delta Queen owners also anticipate one 400 passenger and two 100-200 passenger vessels docking per month. The City of Kimmswick has passed ordinances to receive 3 percent of all Delta Queen sales in Kimmswick and \$1.30 per foot dock fee on the port's mooring. ■

### TAKEAWAYS

- The Delta Queen port of call is in Kimmswick for its proximity to St. Louis and quaint charm
- The steam ship will dock 20-25 days in Kimmswick from June-December
- Upwards of 352 passengers will explore Kimmswick each day in dock
- Average passengers are well-off international patrons around 50 year of age
- 25 to 50 percent of passengers are repeat guests
- Delta Queen Steam Boat Company caters to groups and conferences

- The ship and landing are often themed for specific passenger groups
- Passengers are provided bikes
- Demographic specific packages are planned
- Viking Cruises expect to dock in Kimmswick once per week seasonally
- One 400 passenger and two 100-200 passenger are anticipated to dock monthly
- Kimmswick will receive three percent on all Delta Queen sales within Kimmswick
- Kimmswick will receive \$1.30 per foot dock fee on the port's mooring



chapter







# ork in the road

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*“There are two bridges over the creek, the St.L.I.M.&S. RR bridge and the county foot and wagon bridge. Both were truss bridges with high arching tops which was perfect to dive from and to play follow the leader.”*

~ William Bradshaw,  
*Life in Kimmswick*

»Change is coming. The Delta Queen has chosen Kimmswick as its port of call and Jefferson County Port Authority will break ground on their port plan this year implementing the access road and landing. Right now, Kimmswick has the opportunity to decide how these changes will play out. Anticipating potential impacts, good or bad, will help guide change and navigate future events.

As indicated in the previous chapter, many factors have influenced change in Kimmswick, and the city has a long and rich history which continues to shape it. Active, free-market merchants, lavish entertainers, and quaint, modest residents have had their historic moments. Nature, both resources and processes, are a reason for the town's existence propelling life and trade up and down the Mississippi River. Nature is also a great threat to the community's livelihood. Advances in transportation technology fundamentally changed Kimmswick's regional connections and relationships. Local, regional and even national culture and entertainment are essential to the town's operations. All these factors find their expression in Kimmswick's economic life-cycle typically in intense, active bursts.

This chapter analyzes these factors, distilling key findings from the existing conditions to reveal present opportunities and challenges. These findings should empower the community to make decisions and take action toward shaping Kimmswick's desired future.

## **Analysis Dashboard**

The analysis dashboard collects analysis findings into succinct points presented in a graphic summary. Having all relevant conclusions in one place helps facilitate new connections, relationships, and understandings, important when engaging complex integrated situations like Kimmswick's. Justification for these conclusions is presented in the following analysis section.

## **Analysis**

The analysis section unpacks critical conditions and relationships in narrative and diagram forms from which opportunities and challenges are identified. These deductions represent a specific place in time derived from available data. This “snap shot” provides a framework for evaluating and prioritizing future decisions and investments.

# analysis dashboard

» The analysis dashboard is a quick overview which provides the opportunity to see the key challenges and opportunities at once. These opportunities and challenges are integrally connected to one another. Solutions in one area need to consider impacts and potential synergies related to other key areas.

## OPPORTUNITIES & CHALLENGES

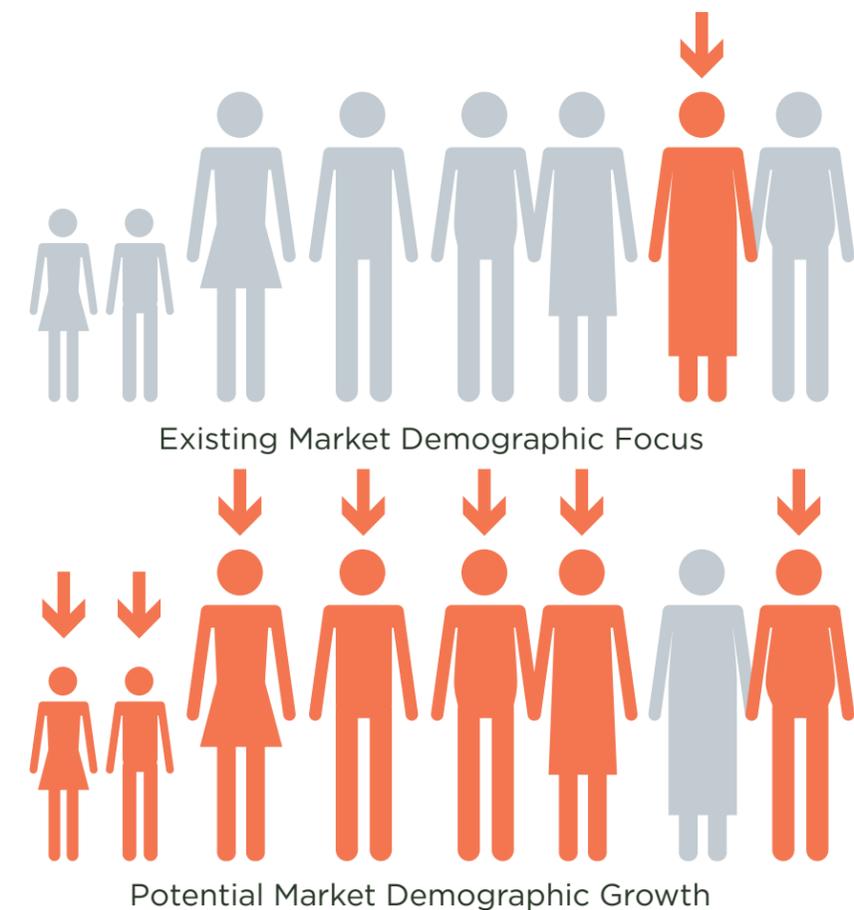
The dashboard on the opposite page highlights ten key opportunity and challenge areas. These include internal relations and operations, flooding, heritage connections, market trends, infrastructure needs, and finances. They appear broad ranging and disparate in nature but, in reality, are intimately related. One example, floods consume 50 percent of the Kimmswick's annual budget and the railway and levee restrict access to the riverfront. This quick example touches three key areas - eliminate stormwater problems, connect to the riverfront, and improve financial resilience.

In tandem with community input, analysis conclusions help formulate the project vision, goals, and objectives described in the next chapter "End in Mind." Centering the project's goals and objectives on Kimmswick's key opportunities and challenges will ensure the most pressing

needs and valued aspects are incorporated at the project's core. Solutions need to address as many of these opportunities and challenges as possible. Better still, leveraging opportunities to resolve challenges further bolsters the solution's value. Thinking this way will inevitably result in unique solutions tailored to fit Kimmswick's unique culture, character and operations.

This dashboard will be influential in project prioritization and implementation. Communicating the essential aspects of any project helps garner community support. It is also helpful when seeking funding assistance. These dashboard items are identified and quantified for each project outlined in the project cut sheets presented in the final chapter "Happily Ever After."

Reasoning and detail behind the analysis conclusions shown in this dashboard are presented in the following analysis section.



**MARKET GROWTH OPPORTUNITY:** Women over 55 make up the majority of Kimmswick's current market. There is great opportunity to expand commerce connecting with other age demographics



## RESIDENT/COMMERCE RELATIONS

Navigating the balance, and sometimes tension, between resident and commercial expectations may be challenging.



## ELIMINATE STORMWATER PROBLEMS

Mississippi flooding and internal flooding present the greatest immediate challenge. Developing an affordable, permanent solution is required for the town to sustain itself.



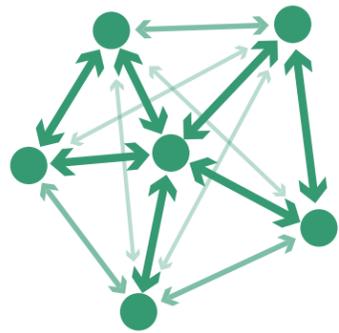
## TELL KIMMSWICK'S STORY

The opportunity to share the rich history and stories associated with Kimmswick's heritage would connect with visitors at many levels.



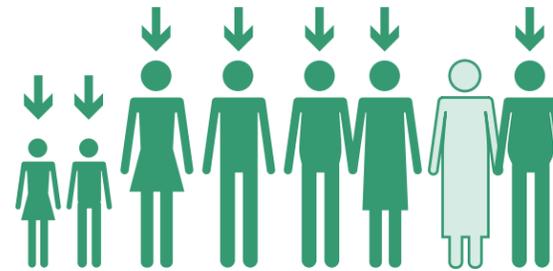
## CONNECT TO THE RIVERFRONT

Once known as a river town, Kimmswick has lost its connection to the riverfront. The railway and levees provide real challenges to reconnect with this great asset. Connecting is a must for port development.



## INCREASE REGIONAL CONNECTIVITY

Regional connectivity is a current challenge. Enhancing connectivity through signage, promotion and recreational connections could expand visitor demographics.



## EXPAND DEMOGRAPHIC MARKETS

Kimmswick thrives on a very narrow demographic, older women. Expanding their market to a more diverse demographic with complimentary businesses is a great growth opportunity.



## DIVERSIFY REVENUE STREAMS

Kimmswick relies almost solely on festival revenues, a community concern. Diversifying revenue streams may be challenging without development and commercial expansion.



## IMPROVE FINANCIAL RESILIENCE

Floods represent a financial burden Kimmswick cannot continue to bear. The community also relies heavily on volunteers. Add in insecure revenue streams and the community is facing imminent challenges.



## CONNECT TO NATURE

The rich natural assets immediately surrounding Kimmswick present an opportunity to connect with a broader segment of the region and could be leveraged to develop complimentary business opportunities.



## LEVERAGE DINING EXPERIENCE

Nearly half the residents in the surrounding area enjoy eating out. Leveraging dining experiences presents an opportunity to connect with a broader population segment

# analysis

» Making wise decisions requires a sober understanding of the challenges and opportunities Kimmswick faces. The analysis section considers driving factors in the built, operational, natural and market settings articulated in chapter 1. Conclusions will provide relevant insight for engaging complex situations with clarity toward a desired end.

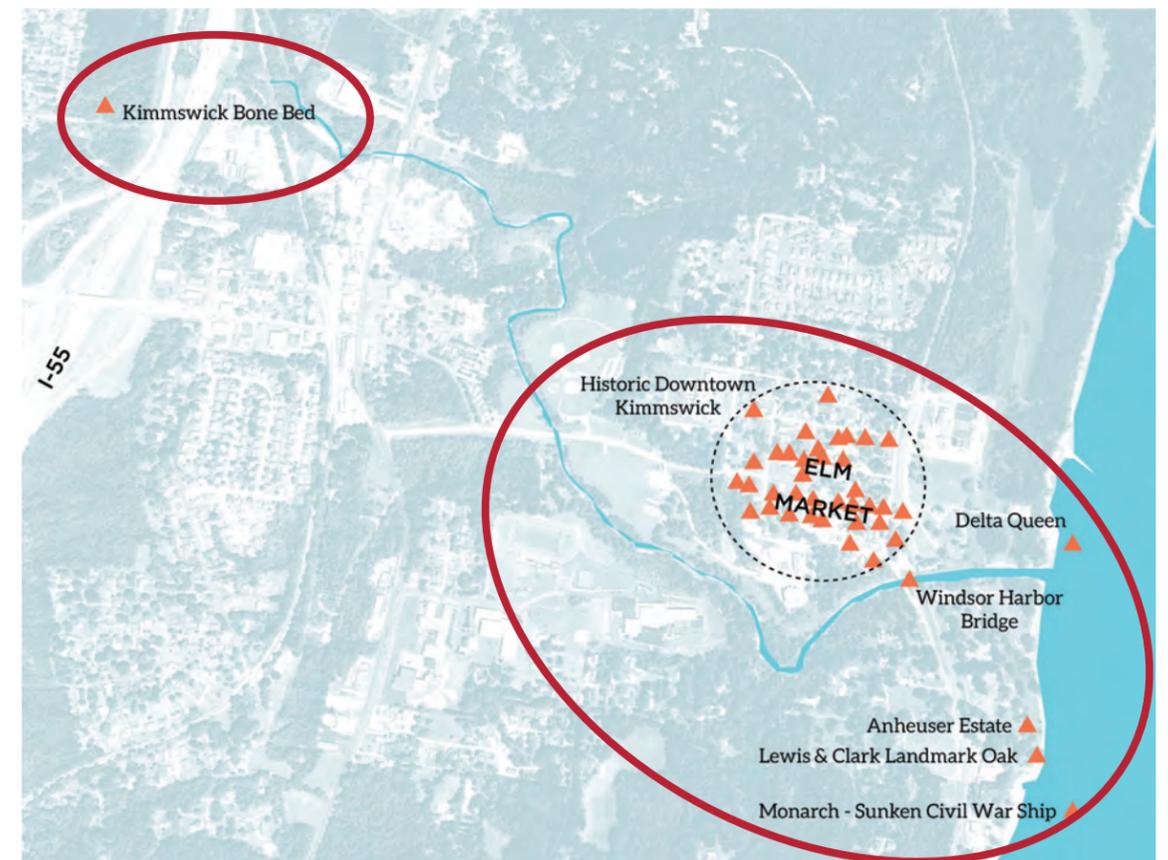
## TIMES ARE CHANGIN'

Kimmswick was founded as a commerce-driven mercantile community with opportunities for all residents to prosper. The resulting prosperity positioned Kimmswick as an economic, cultural and recreational destination finding its apex in the early 1900s and dwindling out entering the 1930s. This commercial decline remained through the 1970s producing a quiet, quaint culture attractive for raising a family resulting in a doubling of the population.

Lucianna Gladney-Ross recognized the latent history and culture and took steps to bolster greater activity with bold and sometimes extravagant projects. She moved many regional historic structures into Kimmswick, built new businesses, and establishing civic institutions trying to cultivate a historic past. In the process she developed a new history laying the foundation for enormous regional events like Apple Butter Festival, the nationally

recognized Blue Owl Restaurant, and even the arrival of the anticipated National Landmark Delta Queen steamboat.

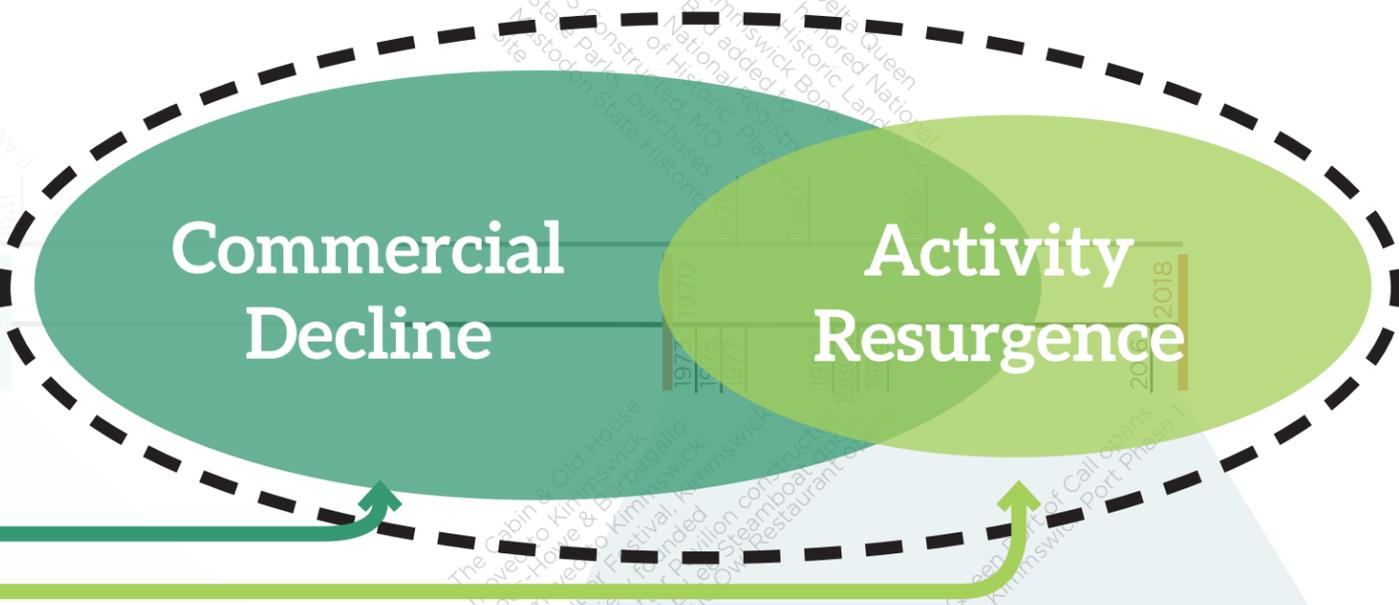
Kimmswick finds itself at the confluence of two epochs - the quaint, quiet community and the more recent culturally active resurgence. These are intertwined in the way the city operates. Between 60 and 80 percent of the annual city budget is generated in two weekend festivals and managed, for the most part, by scores of local volunteers. Businesses open mid-morning and close at 4pm to protect the quiet culture where kids can safely play in the streets. Many businesses aren't even open during the winter. Interviews indicated people specifically come to Kimmswick to step away from their fast paced life. The diagram on page 55 shows the historical time line indicating the overlap of the quaint, quiet community and activity resurgence. Successfully navigating commercial and



▲ Landmark - - - Downtown Kimmswick — Landmark Clusters

**HISTORIC LANDMARKS & ATTRACTIONS:** Most historical emphasis is given to downtown Kimmswick, but the town's history extends beyond the city limits.

# Confluence of 2 Cultures



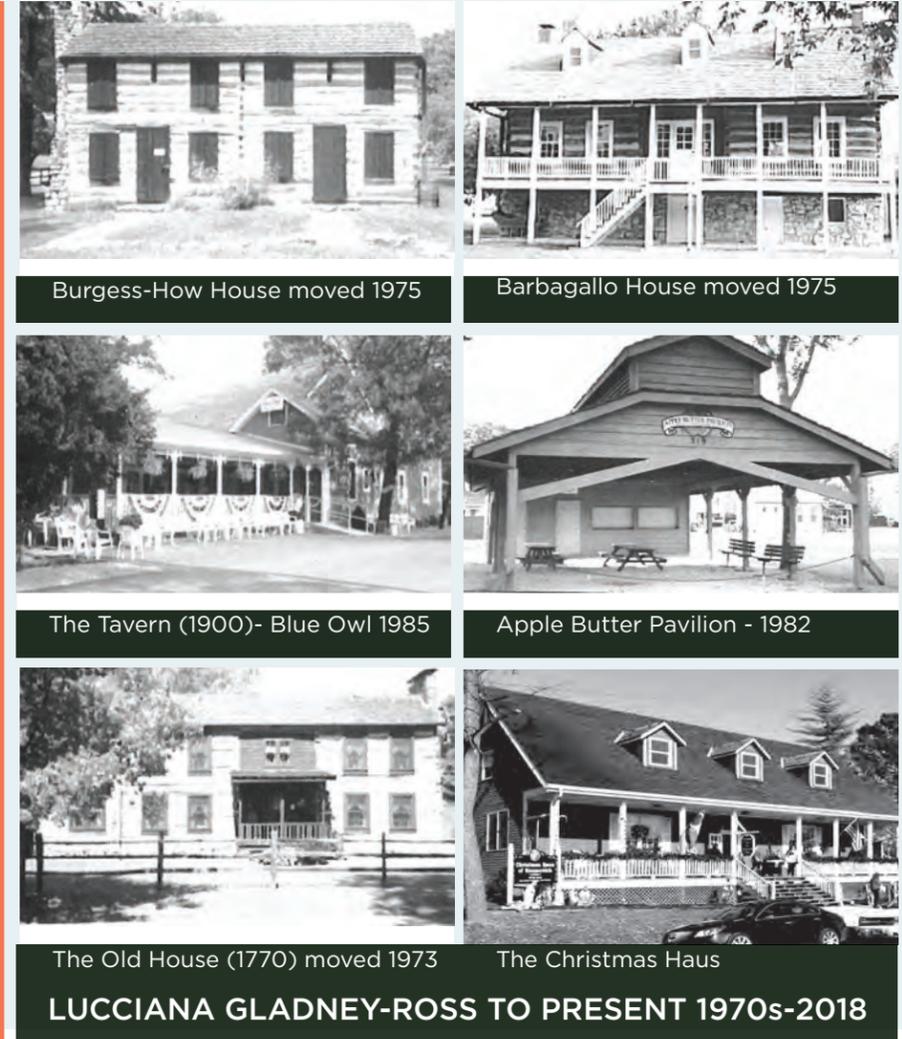
## Quiet, Quaint Community

## Increased Activity & Commerce

residential expectations will be essential as tourism and development increases.

Kimmswick's connection to significant historic people, places and events of beyond the city's boundaries (Historic Landmarks & Attractions page 54). Currently, the community focuses attention on Kimmswick proper and doesn't tell their story publicly. Surrounded by numerous compelling and diverse landmarks, Kimmswick has the potential to attract new visitors and investment as a regional hub of connectivity and culture. The Delta Queen's arrival and diverse historic story could be leveraged to reconnect residents and Kimmswick's identity back to the riverfront. Following are a list of a few of Kimmswick's historic connections:

- The "Kimmswick Bone Bed" at Mastodon State Historic Site is the first evidence in the world humans lived with extinct animals.
- Lewis and Clark used an ancient oak on the corner of the Anheuser Estate to navigate the Mississippi.
- A sunken civil war ship can be seen off the Anheuser Estate's banks when the river is low
- The Hermann-Oheim cellar served as a stop on the underground railroad
- Ulysses S Grant and General Lee frequented the Old House, not to mention national radio personality Paul Harvey broadcast radio shows there



# THE RIVER

The increased risk of flooding and the need for infrastructural improvements poses a significant challenge for Kimmswick. In the past five years Kimmswick witnessed five historically high floods compared with nine in the previous thirty years (see Flood Frequency 1982-2018). Currently the city spends 50 percent of the annual budget fending off each flood building temporary levees. Flooding is not only the largest city expenditure, it is also a threat to annual festivals, the largest source of income for Kimmswick. The city's limited and fluctuating revenue will not be able to sustain flood defenses. A permanent solution in needed.

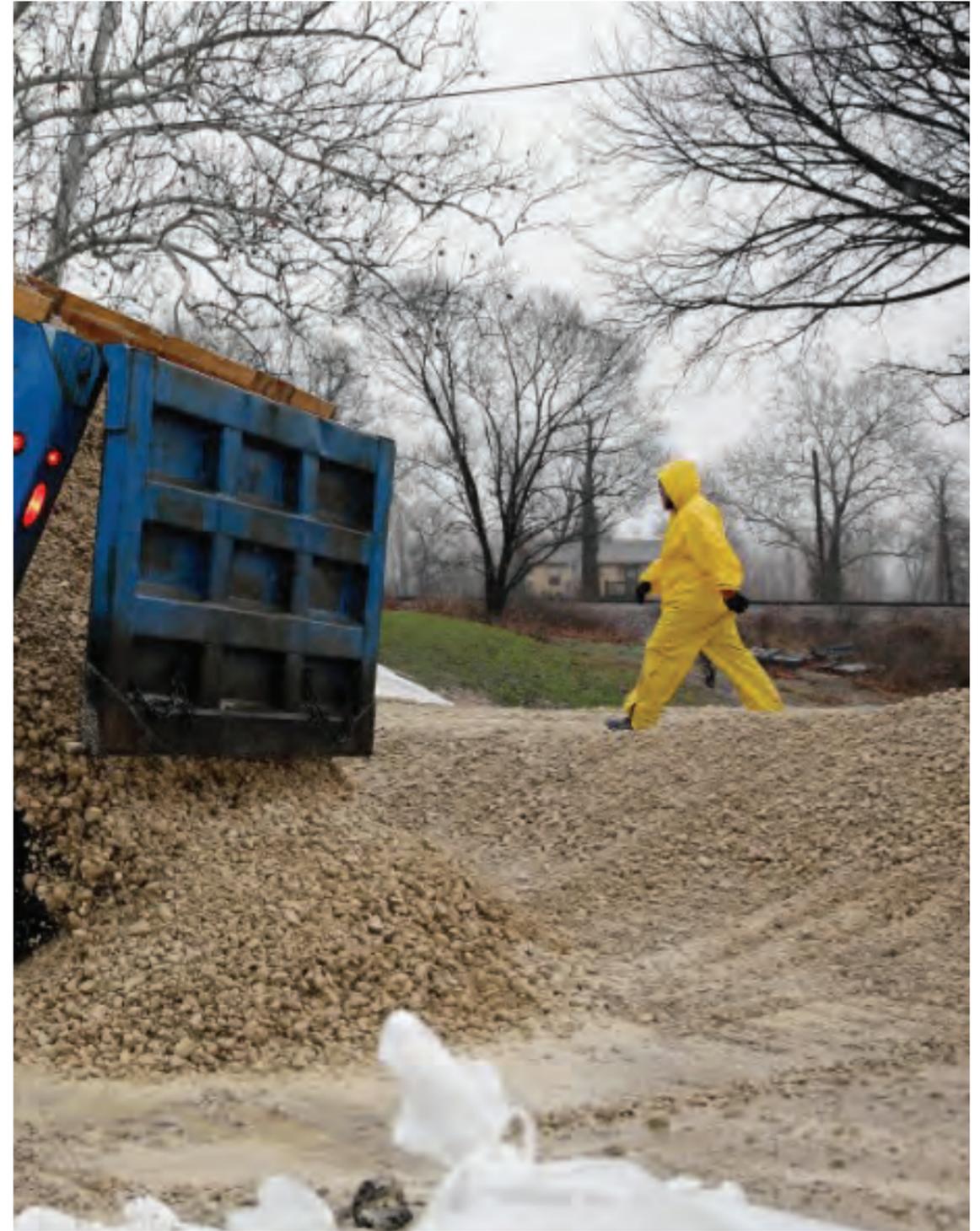
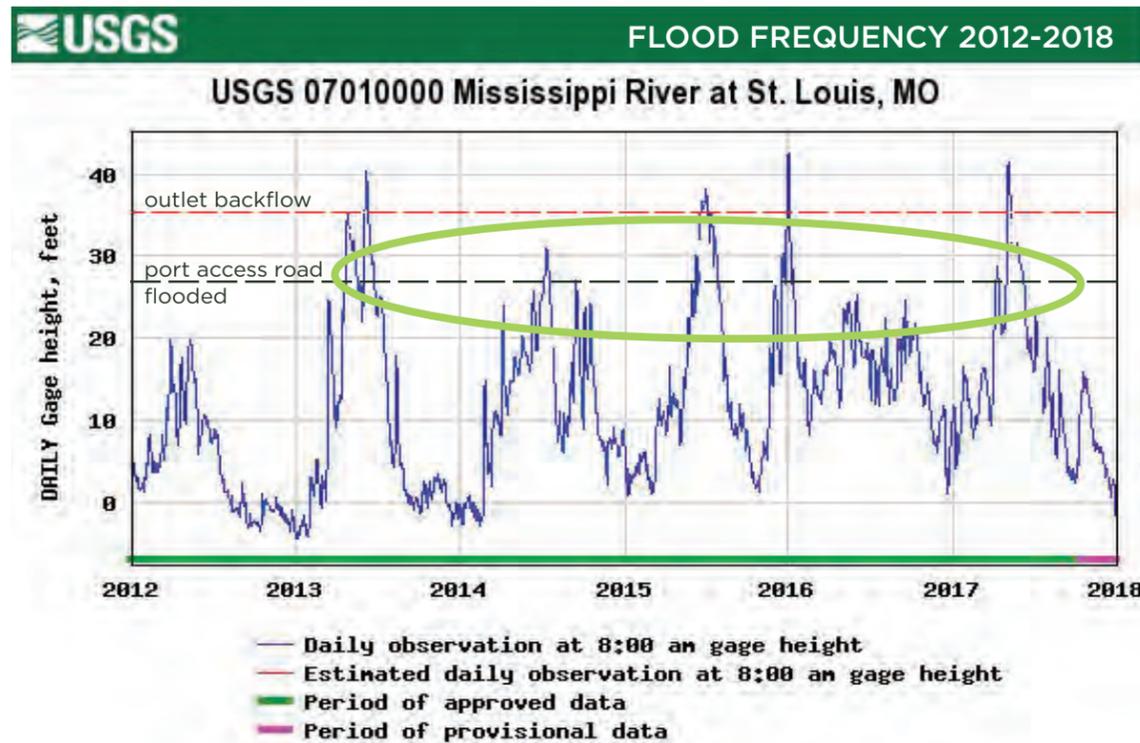
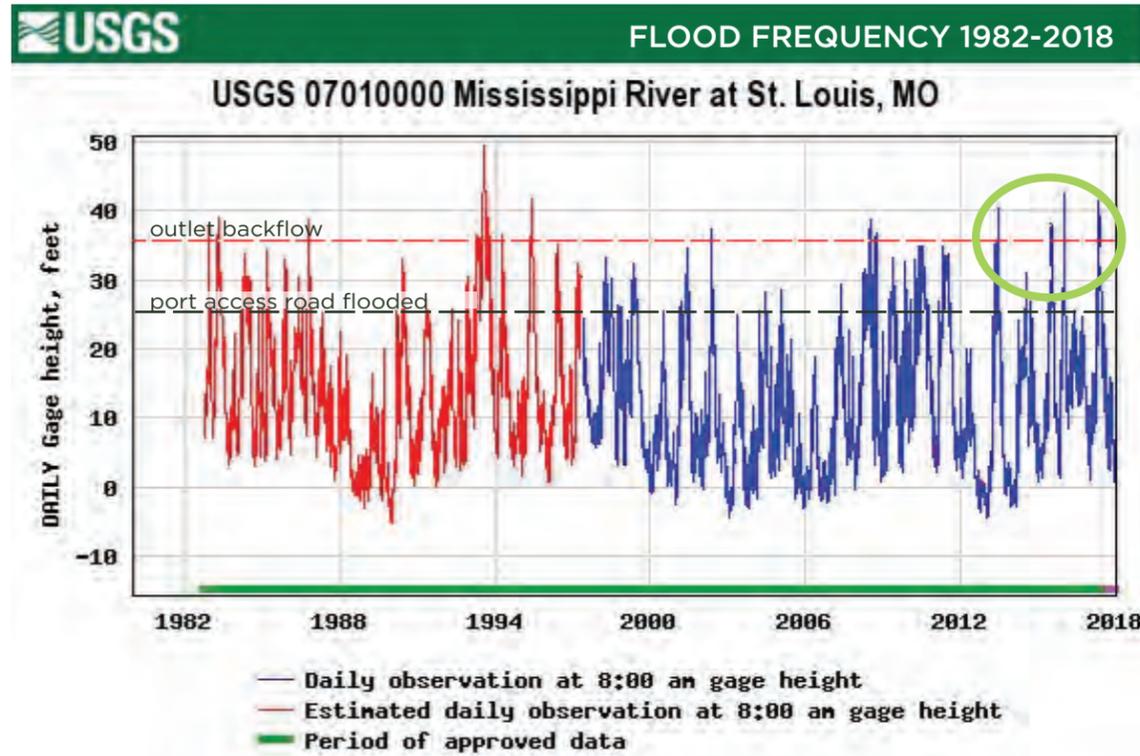
Flood management is not only necessary guarding against the Mississippi, flooding within Kimmswick poses a threat as well. Outlets need upgraded and confronting runoff needs to happen before reaching them.

The only riverfront access, Mississippi Street, regularly floods for extended durations (see Flood Frequency 2012-2018). Being the only route to the proposed port, this presents a critical issue for commerce and events.

- 50% Remaining After Flood
- 60% Festivals
- 27% Retail Tax
- 13% Gas Tax

\*Based on 2017 budget numbers

**CITY REVENUE:** The annual budget varies yearly. Flood defense can deplete it 50 percent or more.



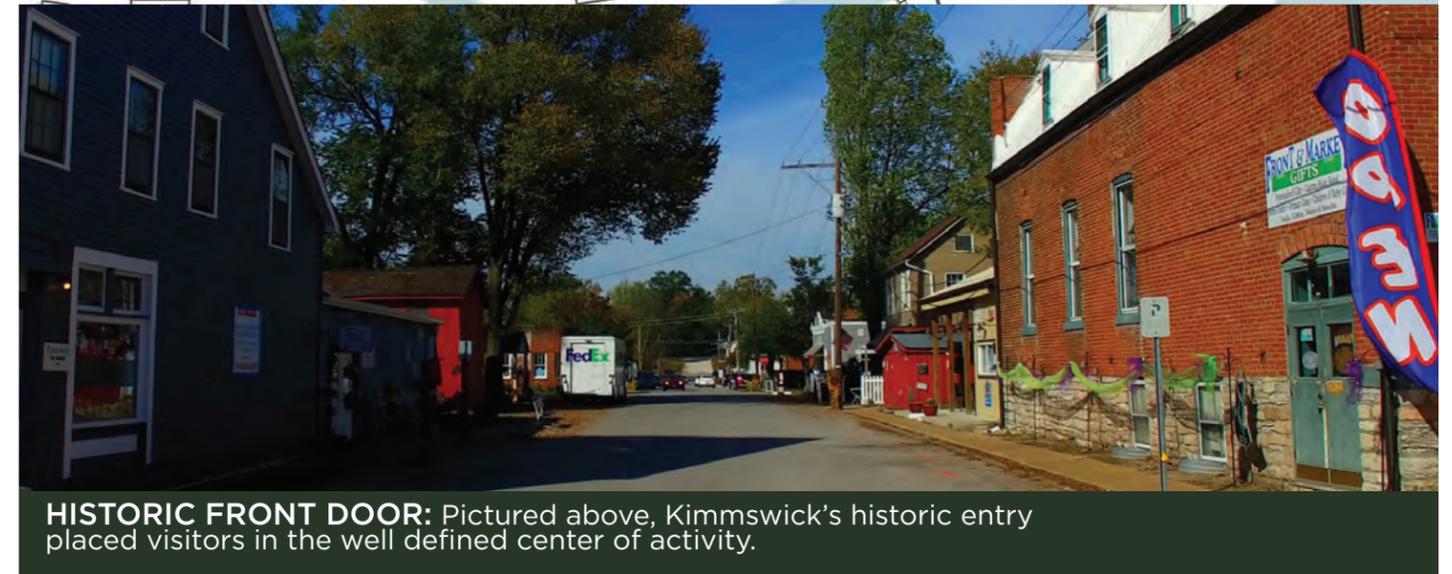
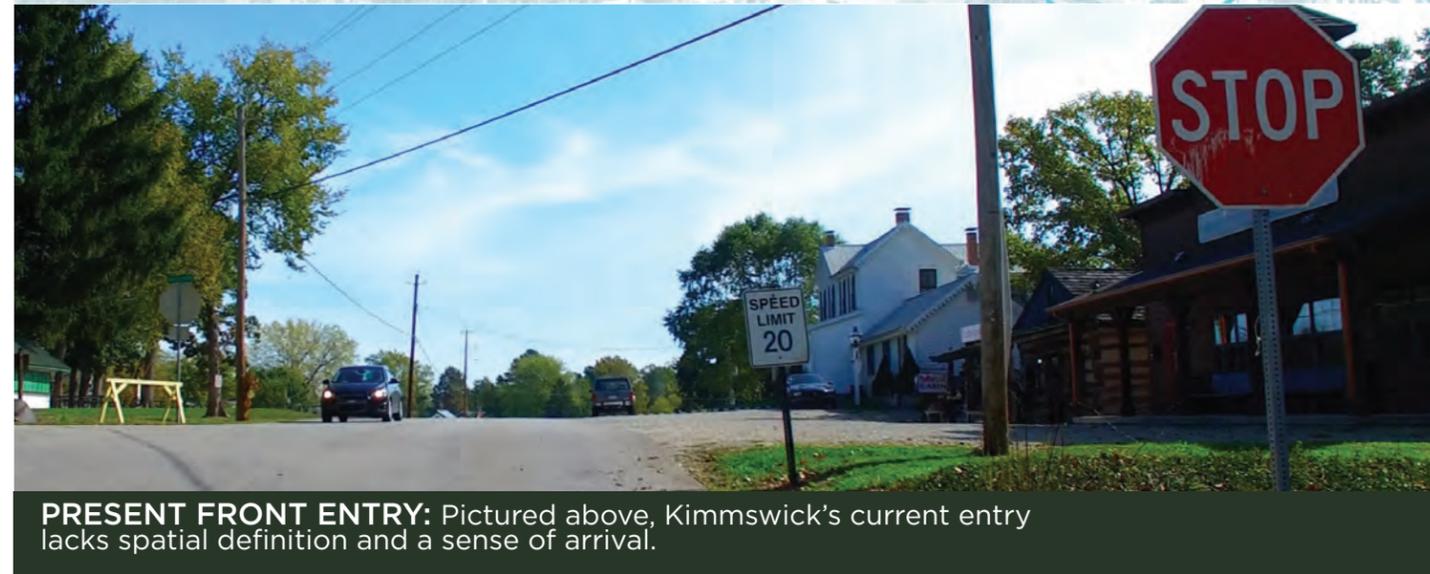
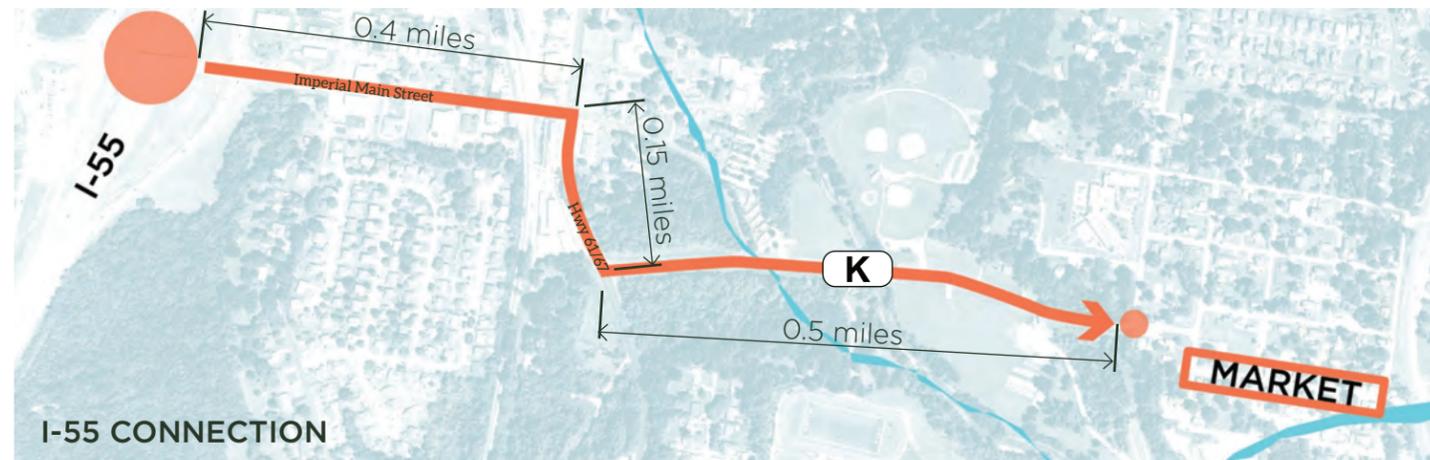
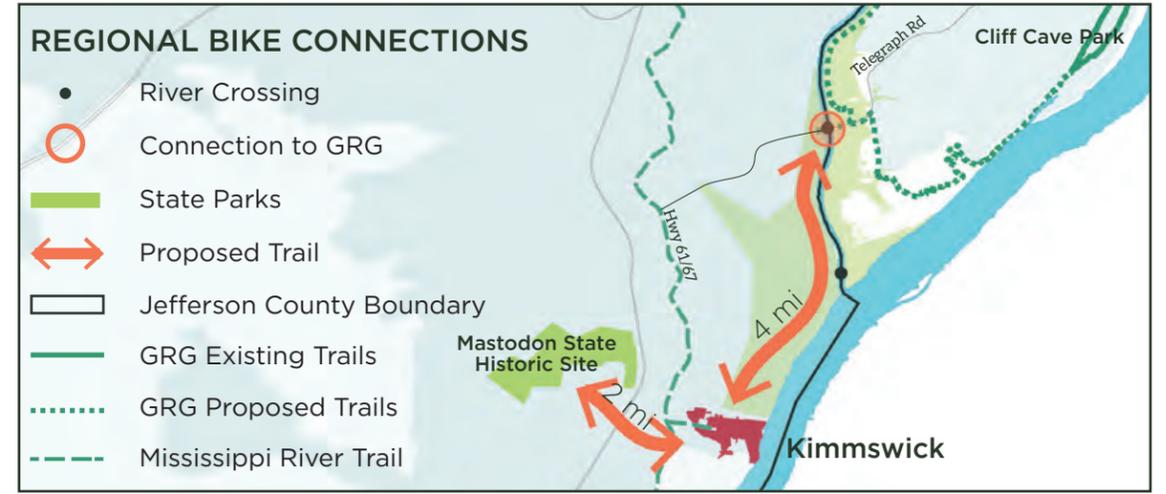
**TEMPORARY LEVEE:** Constructing a temporary levee depletes city funds and closes Windsor Harbor Road access sometimes for three weeks.

# ARRIVAL & CONNECTIONS

Kimmswick's disconnection from a major transportation route poses a major challenge. Historically, visitors and goods arrived on the Mississippi River side of town via boat or train. Visitors arrived directly in Kimmswick's downtown greeted with active shops and a bustling street life. With the advent of automobiles and the construction of I-55, multiple roadways and turns dilute the sense of arrival. What was once the community's back door is now the front entry which is disconnected from downtown activity. Even after arriving in Kimmswick, destinations are not easily perceived and wayfinding is lacking.

The arrival of the Delta Queen and the development of the Kimmswick port will reactivate the riverfront re-establishing the historic entry. The port also has the opportunity to provide new sources of revenue, to supplement festivals and events, and catalyze new developments and connections in historic downtown Kimmswick. Presently, a visitor may not understand Kimmswick's proximity to the Mississippi River and no visual, infrastructure, or signage connections exist in the primary commercial area. A more direct and recognizable connection to the riverfront is needed.

Kimmswick is also regionally disconnected. Not only is the city disconnected via vehicular transportation routes, there are no pedestrian or bicycle connections either. Rock Creek and regional topography limit access opportunities. The Mississippi River Trail follows Highway 61/67, just outside Kimmswick, but lacks bicycle facilities. Mastodon State Historic Site has a popular trail system but is also disconnected from the region. The Great Rivers Greenway system, comprising over six hundred miles of trails and greenways, includes the Mississippi River and Meramec River Greenways which are only four miles from Kimmswick.



## EVENTS & FESTIVALS

Festivals are integral to Kimmswick providing between 60 to 80 percent of the annual revenue. This places the city in a vulnerable position as these events are susceptible to poor attendance, poor weather, flooding, and rely entirely on volunteers. The large influx of visitors provides an opportunity to promote the city's new riverfront development, capture untapped sources of revenue, and attract new demographics. Port space suitable for events could support a 125 percent expansion of the Apple Butter Festival.

Expanding large festivals into new port allows Kimmswick to re-think the way these events operate. Improving pedestrian connectivity from Windsor High School parking to downtown could eliminate the need to run a shuttle into town altogether. Shuttle travel times may be reduced by half creating the opportunity to increase frequency or reduce the shuttle fleet resulting in savings. Dropping off visitors near the Windsor Harbor Bridge would place people on the riverfront giving them a historic gateway experience into town. Front Street could then become a prime festival corridor. Portions of the festival in residential areas could move to Front Street or the port. Looping shuttles around the Anheuser Estate is a great promotional opportunity.

Navigation and way-finding improvements would also improve the pedestrian experience and increase retail exposure. Emphasizing the Kimmswick's unique character and new riverfront development during events and festivals may increase non-event visitation. A redeveloped port is an excellent opportunity to showcase the Delta Queen and promote Kimmswick as "the Historic River City."



**EXISTING FESTIVAL CIRCULATION:** Festivals currently disrupt residential areas and interfere with pedestrian traffic and commercial vendors.



**SHUTTLE CONFLICT:** Due to shuttle traffic, no vendor tents are present on Front Street. Shuttles also impair brick and mortar business.



**POTENTIAL FESTIVAL IMPROVEMENTS:** When the port develops, the festival can expand to the riverfront and changes can be made to improve visitor experience and potentially save money.

█ Parking   
  Festival Area   
  Festival Area Expansion   
  Remove Festival   
 ➔ Pedestrian Flow   
  Existing Shuttle Route   
  Remove Shuttle Route   
  Existing Shuttle Stop   
  Remove Shuttle Stop

## MARKET POTENTIAL

Kimmswick has a number of growth opportunities. The regional market indicates a substantial spending gap in three key areas - sporting goods and hobby stores, food and beverage, and furniture and home furnishings. These markets compliment Kimmswick's current retail offerings. The local consumer cross section directly supports the gap findings for food and beverage and sporting goods and hobby stores. Over 40 percent of the local population is active in outdoor recreation and enjoys eating out. Kimmswick's beautiful natural resources, riverfront development and recent restaurant expansion could tap into these trends. Current trends also indicate a decline in historic destinations while demand for eco-tourism is increasing. This emphasis on

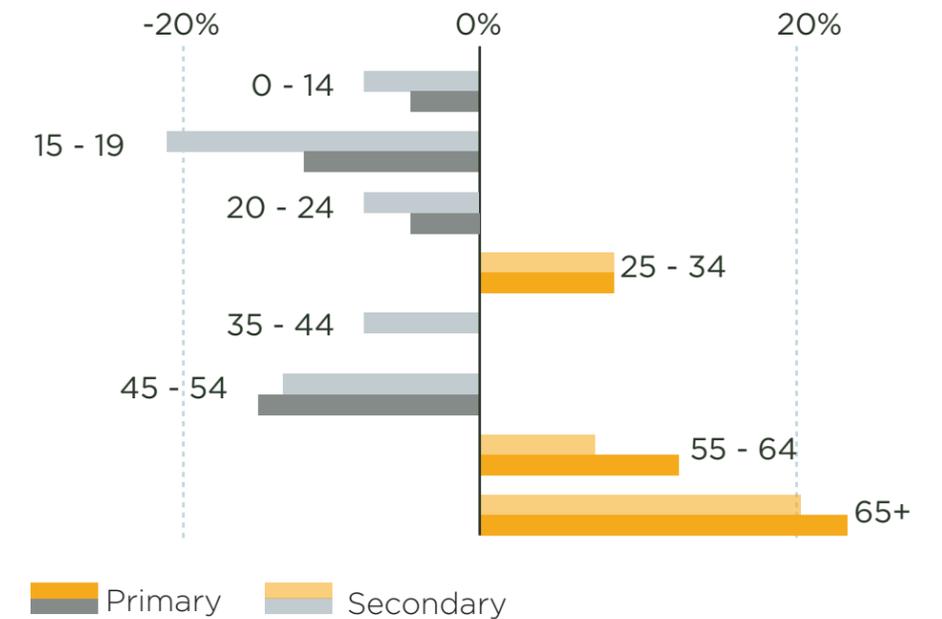
connections to nature would compliment and supplement Kimmswick's historic resources diversifying the market.

Kimmswick's current market leans heavily on older women. Broadening offerings could help capture a wider market segment. Events currently focus on large and medium scales. Smaller diverse events present a low risk opportunity to tailor activities targeting residents, families and a growing population of young professionals.

Given current regional lodging options and the increase in visitors the Anheuser Estate and Delta Queen may attract, Kimmswick could fill a boutique niche with inns or bed and breakfasts providing upwards of ten suites.

**10+%**  
GROWING POP. OF YOUNG PROFESSIONALS NEWLY WEDS

**20+%**  
GROWING POP. OF EMPTY NESTERS & RETIRED RESIDENTS



**POPULATION GROWTH:** From 2010-2017 population decreased except in the 25-34 and 55+ age brackets.

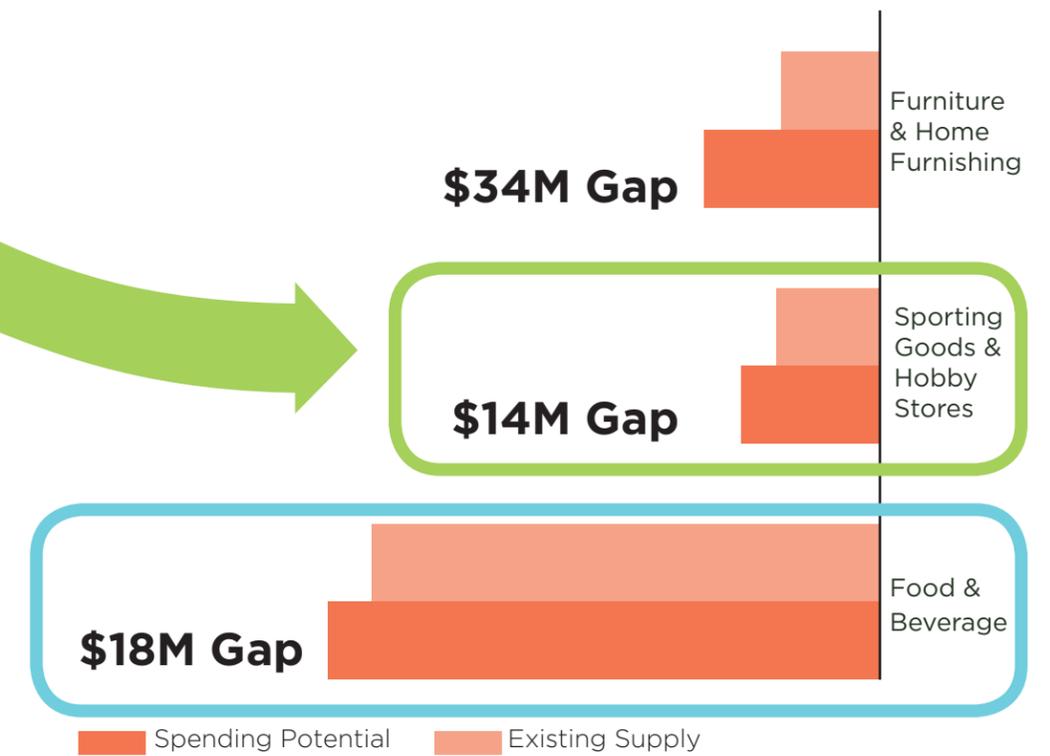
Market Segments	% Secondary Study Area	Median Age	Median Household Income
Thrifty, relies on smartphones and prefers domestic travel	12.3%	35	\$55K
Affluent, and enjoys family oriented-pursuits	12.2%	37	\$84K
Enjoys outdoor activities like hunting, fishing, hiking, and camping	11.5%	43	\$72K
Appreciates amenities and programs that support their children	11.2%	40	\$55K
Enjoys good food, wine, and amenities of city cultural events	8.5%	44	\$104K
Are on the go, eats out regularly, and enjoys home improvement projects	8.1%	37	\$67K
Enjoying the transition from child rearing to retirement	6.0%	47	\$68K

Residents Who Enjoy Outdoor Recreation (Green) Residents Who Enjoy Eating Out (Blue)

### MARKET DEMOGRAPHIC SEGMENTS

**43.4%**  
RESIDENTS ENJOY OUTDOOR ACTIVITIES

**47.1%**  
RESIDENTS ENJOY EATING OUT



### TRADE AREA SUPPLY & SPENDING POTENTIAL



chapter

8



# Hand in mind

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*“Drive like your kids live here.”*

*~ Yard Sign by School*

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» Public participation in a planning process can be a good measure of a community’s desire to create a better future for themselves and for successive generations. By this account, the overwhelming participation in the Kimmswick Great Streets Project is a strong indication that people in this community care deeply about their shared future and are willing to contribute their time, energy, resources, and inspiration to create a better life for themselves, their children, and their neighbors. This collective vision for a brighter future is essential to the planning process, as it represents the community’s shared values and aspirations. This section of the plan captures the people of Kimmswick’s shared vision for a brighter future and identifies goals and objectives to achieve that vision.

### **Vision Statement**

Vision is the most valuable asset to any project. The project vision statement brings together community values and project purpose to create a desired end that will result from the implementation of the plan. Vision can unify efforts and resources and inspire great outcomes.

### **Goals**

Goals are tangible, actionable directions toward realizing the vision. Though the Kimmswick Great Streets Project has one vision, there are two sets of complimentary goals. The City of Kimmswick’s set of goals is locally focused, serving residents first and the region second. Jefferson County’s and the Jefferson County Port Authority’s goals are regionally focused, supporting the broader county. Both sets of goals work toward the same end from differing perspectives.

### **Objectives**

Objectives measure increments of progress toward goals. They help generate energy and enthusiasm among community residents and partners and demonstrate measurable progress towards achieving the broader goals and vision. While accomplishing individual objectives should be celebrated as milestones along the path of implementation, it is important that Kimmswick and its partners continue to keep sight of the long-term project vision and communicate it to residents and visitors.

# project vision

The Kimmswick Great Streets Project vision encapsulates the community's aspirations for economic growth, environmental sustainability, governmental resiliency, and strengthened identity and character. The vision represents the project's ultimate end. Project goals, objectives, recommendations, and implementation strategies all serve as means to bring the vision to life.

The project vision was developed through a collaborative and iterative engagement process through which project partners, stakeholders, and community residents could express their needs, desires, and aspirations for a better Kimmswick. The process began at the Apple Butter Festival before the project was officially started. Here, the project team interviewed festival coordinators, surveyed visitors, and observed people's movements, activities, and interactions with public spaces and places throughout the town.

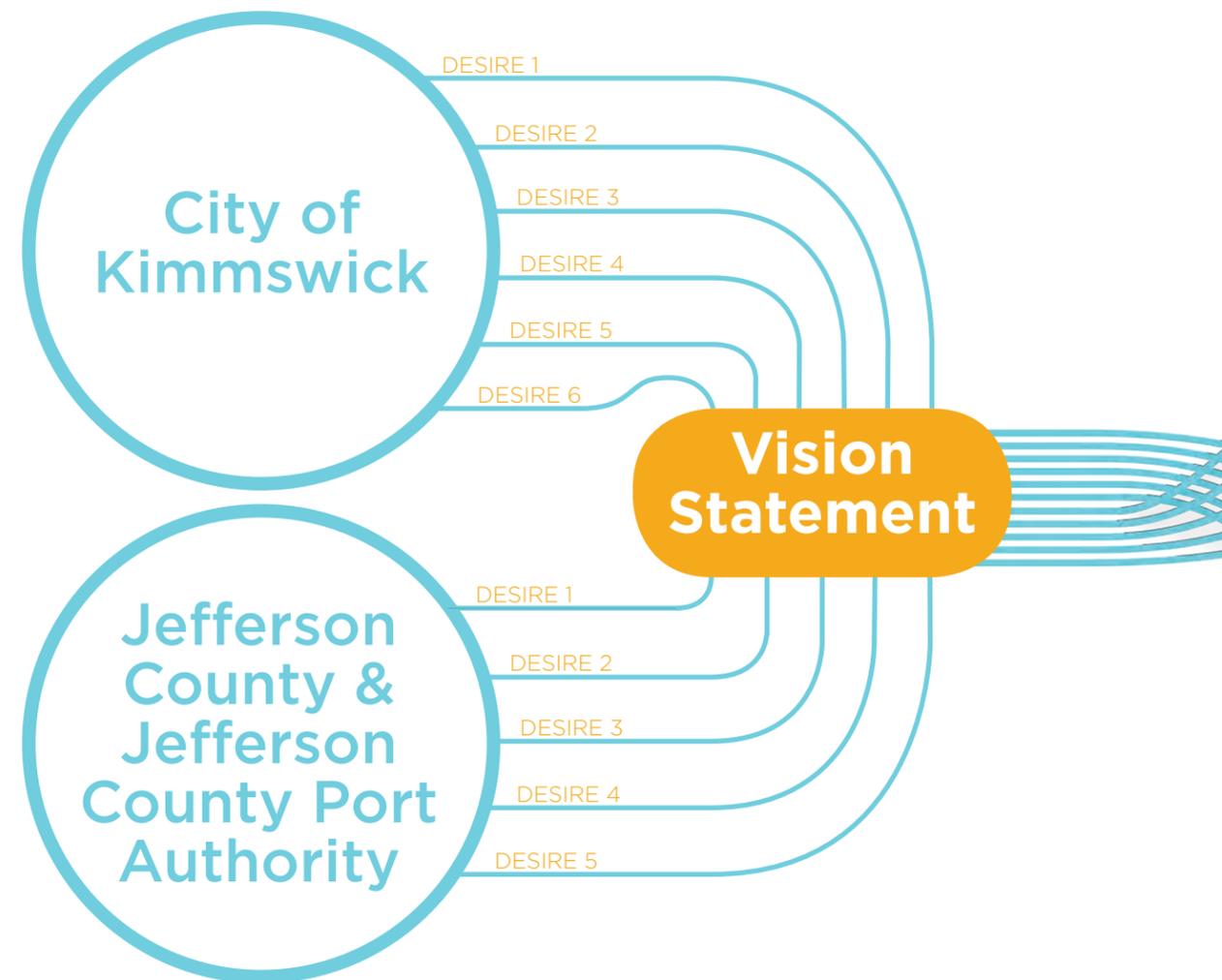
At the project initiation meeting, project partners communicated their desired outcomes for the Kimmswick Great Streets Project, with attention to both local and regional issues. Subsequent conversations with stakeholders illuminated Kimmswick's built, operational, natural, and economic

settings, all of which were further researched and analyzed to develop an understanding of the project's context.

At Public Workshop #1, a listening session, attendees discussed what they love about Kimmswick and what they would like to see change, all over a potluck dinner, which kept the mood light and welcoming. As representatives from each group summarized their discussions to the entire community, common themes emerged: strengthening the historic community character and quality of life, addressing flooding from the Mississippi River and within Kimmswick, increasing riverfront access, supporting economic development, and creating a pedestrian-friendly environment.

The following statement incorporates these diverse inputs in a shared project vision:

**The Kimmswick Great Streets Project aims to realize Kimmswick's full potential as a regional destination, establishing economic, environmental and municipal resilience while maintaining and enhancing Kimmswick's unique charm and character.** ■



# City of Kimmswick

## Goal 1

Create a Community Supported Vision for Kimmswick

- Incorporate Community Supported Solutions
- Mitigate Commercial Pressures on Residents

## Goal 2

Fortify Flood Protection from the Mississippi and within Kimmswick

- Implement Attainable Permanent Flood Protection
- Reduce Aesthetic Impact to Community
- Remove Run-off
- Increase Capacity

## Goal 3

Maintain/Enhance the Quality of Life for Residents

- Create Community Connections
- Maintain/Enhance Community Character & Values
- Retain/Enhance Historic, Rural Character
- Cultivate Historical & Natural Assets

## Goal 4

Enhance the Historic Character of the Community

- Tell Kimmswick's History Publicly
- Capture/Tell History Beyond Downtown
- Set Up Framework for Continuous Living History
- Leverage Regional & National Historic Connections

## Goal 5

Initiate a Sustainable Economic/Management Model for the Community

- Permanently Address Flooding
- Diversify Revenue Streams
- Increase Capacity to Maintain Infrastructure
- Reduce Reliance on Volunteers

## Goal 6

Leverage and Capture the Benefits of the River

- Establish Year-Round Riverfront Attractions
- Develop Infrastructure Supporting Riverfront
- Connect Riverfront to Region

# Jefferson County/ Jefferson County Port Authority

## Goal 1

Support Kimmswick's Future

- Partner to Solidify Economy/Management
- Consider Kimmswick Goals in Local/Regional Development
- Promote Kimmswick as County Asset

## Goal 2

Set Up Opportunities to Implement Riverfront Redevelopment Concept

- Create & Communicate Development Strategy
- Leverage County Resources to Support Development
- Leverage Kimmswick Resources for Riverfront Development

## Goal 3

Improve Riverfront Access as an Amenity for Jefferson County Residents

- Acquire & Develop Riverfront Lands
- Develop Strategic Multi-modal Connections
- Improve Human Connections & Natural Assets

## Goal 4

Stimulate Economic Growth in the Region

- Develop Infrastructure Stimulating Economic Growth
- Leverage Riverfront to Expand Regional Markets
- Promote Riverfront/Kimmswick as Regional Attraction
- Connect Riverfront to I-55

## Goal 5

Establish Emergency Services on Mississippi

- Establish Riverfront Access for Emergency Services
- Develop Infrastructure Supporting Land/Water Emergency Services

# VISION

Kimmswick realizes its full potential as a regional destination, establishing economic, environmental and municipal resilience while maintaining and enhancing Kimmswick's unique charm and character.

### ACHIEVING A VISION

Great projects begin as dreams and a desire for positive change. Activating these dreams and desires takes energy and intention. Specific, actionable goals and objectives to achieve the Kimmswick Great Streets Project vision. As each objective is completed, Kimmswick will move one step closer to transforming the vision into reality.





chapter

4





# Path traveled

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*“I don’t know why we don’t do this more often.”*

*~ Public Workshop  
Potluck Participant*

» In planning, the path traveled determines the end. A planning process with the most brilliant ideas, but no interest in pursuing the plan collects dust on the shelf. It simply isn’t worth the paper.

The Kimmswick Great Streets planning process was designed to develop project champions - resident advocates, political champions, agency support, business buy-in. The project team dedicated whole weeks to being in Kimmswick; getting to know the community’s story; getting to know the people. The intense process made the path smooth and scenic.

### **Tailored Process**

A multi-part charrette format was employed conducting a series of public workshops held at regular intervals over the course of several months. This process allows more opportunity for the team to develop concepts, refine, and iron out technical issues on complex large projects between public feedback sessions. This approach fosters multiple engagements helping build a stakeholder team with relational bonds focused toward achieving one vision. There are many opportunities to express and

engage challenges and develop solutions alongside the community and stakeholder group. It also creates multiple occasions to gather and assess information integrating it into the evolution of the project. There are also multiple times to step back and consider the opportunities and challenges to develop strategies for success.

### **Unique Engagement Approach**

Becoming part of the community was the project’s community engagement goal. Traditional approaches - web site, stakeholder interviews, regular client meetings, visitor surveys, etc. - laid a solid foundation. The tailored process in Kimmswick’s small town setting afforded opportunities to enter into the community and know people by name. A Christmas Card (handed out door to door by Alderman with jars of Apple Butter) introduced the project and the team. A recommendation to host a potluck became essential to every public meeting. An implementation forum introduced potential champions and funders to Kimmswick with a guided tour. These among other touches help develop strong ties.

# Engagement Process

Community Engagement is central to the process accounting for nearly 40% of the project's time and energy. The complex nature and scope of the Kimmswick Great Streets project demanded robust public participation and stakeholder engagement to build the foundation for community driven solutions. In the end Kimmswick will be responsible to implement the plan.

## FEEDBACK LOOPS

The process was designed to create regular opportunities to seek direction and input from residents, community leaders and technical advisors.

### Session #1 Kick-Off

This Project Team meeting set the project's course. The team developed a community engagement plan, assembled the Advisory Committee (AC), and established regular workshops for the Project Team.

### Session #2 Vision Session

This week long work session centered around a public work shop to develop a working project vision during an interactive public engagement events. Meetings with the AC and Project Team developed consensus on a path forward.

### Session #3 Idea Exploration

The second public work shop gathered input on three preliminary scenarios.

Potential project champions met for an implementation forum, and the AC and Project Team developed consensus on next steps.

### Session #4 Working Concept Plan

The third public workshop gathered input on the working concept. The AC and Technical Committee provided feedback.

### Session #5 Finalize Concept

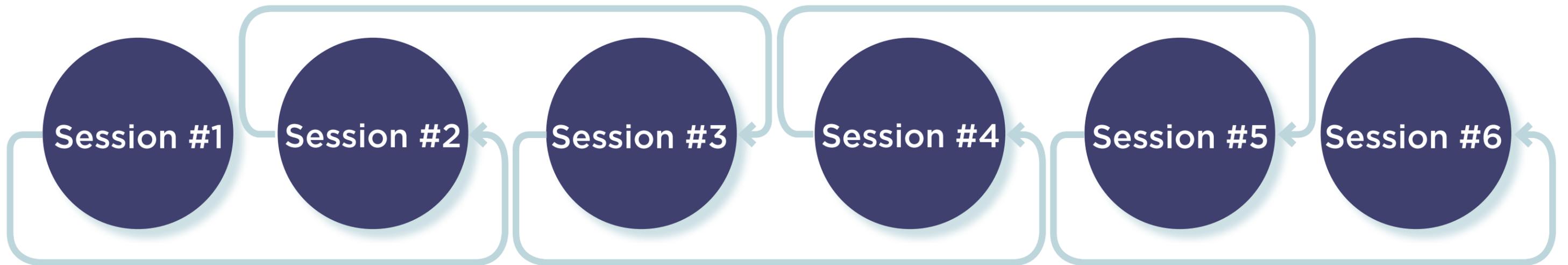
A public open house presented the preferred concept and fielded questions. The AC reviewed potential governance options. The Technical Committee strategized implementation.

### Session #6 Implementation Strategy

The AC met again to discuss recommended governance and the community gathered to generate project excitement celebrating work done and the anticipated first implementation phase.



**COMMUNITY ENGAGEMENT WHEEL:** Listening, asking questions, seeking input, and circling back to verify directed each aspect and step in the process.



- Project Team Kick-off
- Community engagement plan
- Stakeholder Interviews
- Data collection
- Large festival evaluation
- Visitor Surveys
- Advisory Committee formation
- Establish schedule

- Public Work Session #1 visioning
- Community Potluck
- Advisory Committee Meeting #1
- Stakeholder meetings
- Working Project Vision
- Working Project Goals
- Project Team Brainstorming Session

- Public Work Session #2 idea testing
- Advisory Committee Meeting #2
- Implementation Forum
- Guided Kimmswick tour for potential project supporters
- Stakeholder meetings
- Project Team meeting

- Public Work Session #3 to review concept
- Community Potluck
- Advisory Committee meeting #3
- Technical Advisory meeting #1
- Stakeholder meetings
- Project Team meeting

- Public open house to present preferred concept
- Community Dinner
- Advisory Committee meeting #4
- Technical Advisory meeting #2
- Stakeholder meetings
- Project Team meeting

- Advisory Committee meeting #5
- Draft plan review
- Stakeholder meetings
- Implementation forum
- Demonstration projects
- Ribbon cutting
- Press meeting
- Community picnic

# Process Stream

» The project structure takes the shape of a funnel or stream collecting information from broad sources, traveling over and around the terrain, inevitably reaching one end. Six streams mix and merge running a course from beginning to end.

## Data Gathering

The project begins taking a wide-ranging survey of events, routines, elements, structures, and culture past and present. Information from the built setting, operational setting, natural setting, and market setting paints a broad picture of Kimmswick.

## Listening & Visioning

Utilizing varying strategies and techniques, stakeholders, residents, business owners, employees, politicians, visitors, and historians offers on-the-ground perspective of the hopes, dreams, challenges and opportunities relevant to life in Kimmswick. Common themes emerge which are then formulated into the project vision.

## Idea Testing

The most important challenges percolate to the top, and ideas to solve, remove and enhance existing assets and opportunities

are presented to the community to consider from different perspectives.

## Concept Development

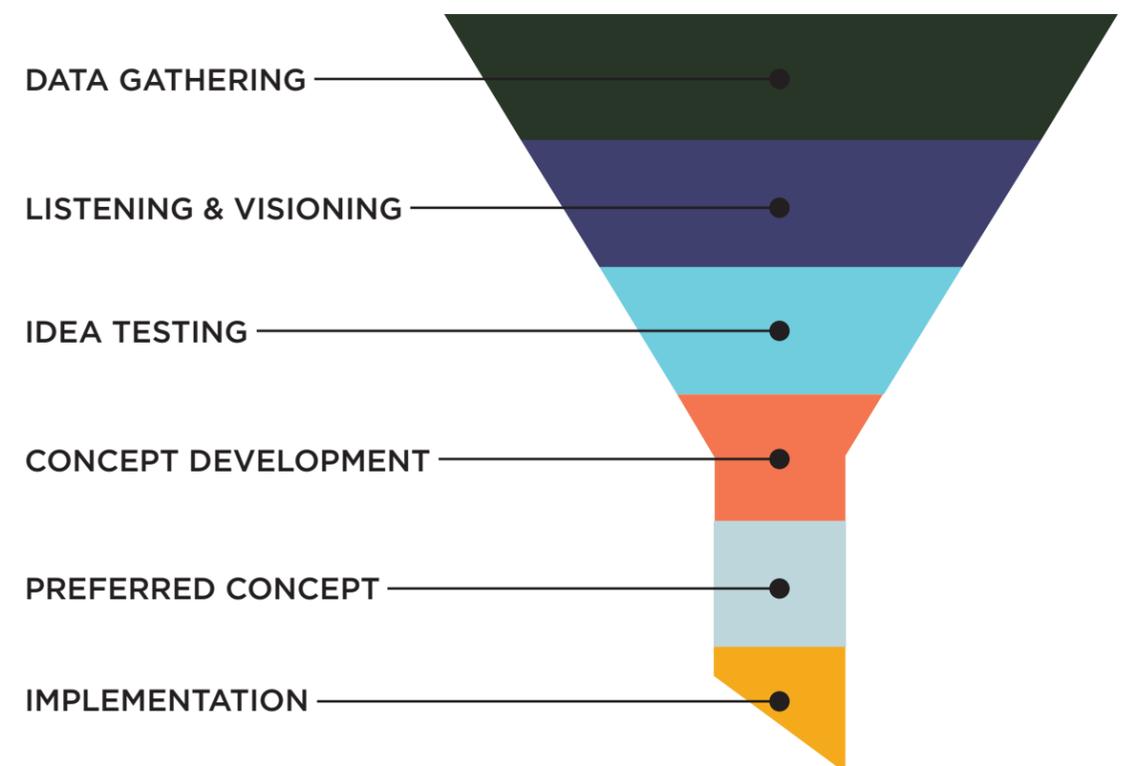
Ideas most appropriate for Kimmswick move forward while others are discarded. The pertinent ideas are then formulated into a working concept. A public workshop draws locals into the design process and the Advisory Committee and Technical Advisory Committee filters the concept with finer detail.

## Preferred Concept

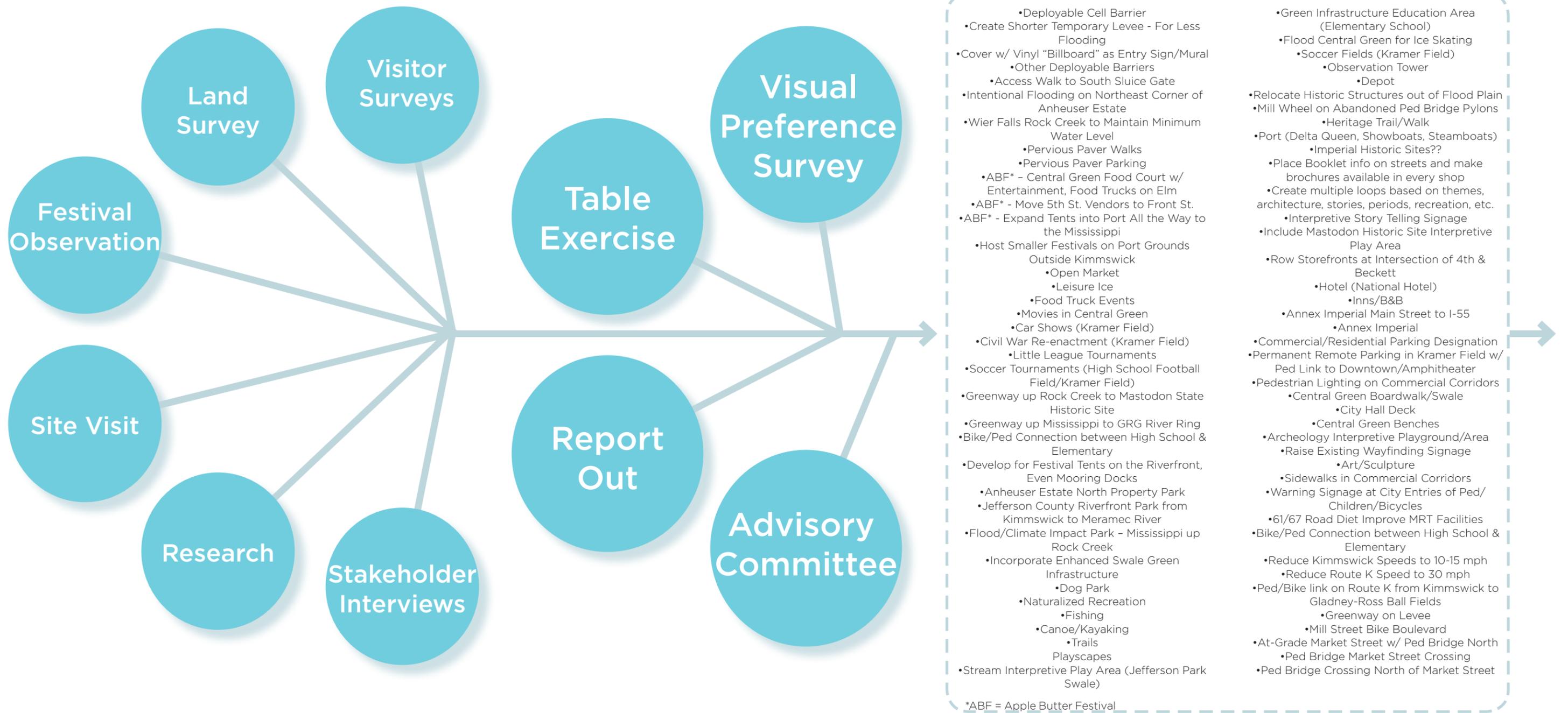
After refining, the concept takes on more detail. Again, it's presented to the public, Advisory Committee, and Technical Committee; this time to answer questions and consider how to make Kimmswick's vision a reality.

## Implementation

Finally, all the streams come together to play their part. Project costs, funding opportunities, project responsibilities, time lines, implementation strategies and design guidance coalesce. With a concept fulfilling the projects vision and goals, the next step is transitioning from planning to construction.



**PROJECT PROCESS FUNNEL:** The project process narrows in definition and focus from start to finish.



## Data Gathering

At the outset of the project, the consultant team went through an extensive process of collecting as much data as possible about the physical, social, and economic aspects of Kimmswick, in order to gain an initial understanding of its issues and history.

## Listening

In concert with gathering data, the consultant team also held meetings and interviews with many local leaders and other key individuals who provided invaluable insight and perspective about Kimmswick's issues.

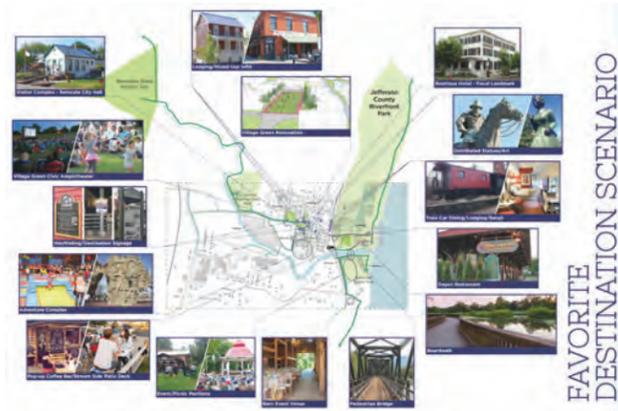
## Idea Generation

Building on what the team had heard and learned from initial interviews and data collection, a public workshop was held to begin understanding the broadest array of desires, and concerns, and hopes among Kimmswick area residents about the future of the City. This allowed the team to begin generating ideas for the next step in the project.



**HISTORIC & HOMEY SCENARIO**

- Historic Baseball League
- Residential Infill
- Dog Park
- Lodging Infill
- Village green Renovation
- Relocate Barbagallo House
- Depot - History Museum/coffee Shop
- Pavilion & Deck
- Damn Falls
- Mill Wheel Fountain
- Modern Bridge
- Flood Wall Entry Gate
- Retail Infill
- History Re-enactment
- Heritage Trail
- Modern Bridge-Historic Embellishing



**FAVORITE DESTINATION SCENARIO**

- Visitor Complex - Relocate City Hall
- Lodging/Mixed-Use Infill
- Village Green Renovation
- Boutique - Focal Landmark
- Distributed Statues/Art
- Train Car Dinning/Lodging/Retail
- Depot Restaurant
- Boardwalk
- Pedestrian Bridge
- Barn Event Venue
- Event/Picnic Pavilions
- Pop-up coffee Bar/Stream Side Patio Deck
- Adventure Complex
- Wayfinding/Destination Signage
- Village Green Amphitheater

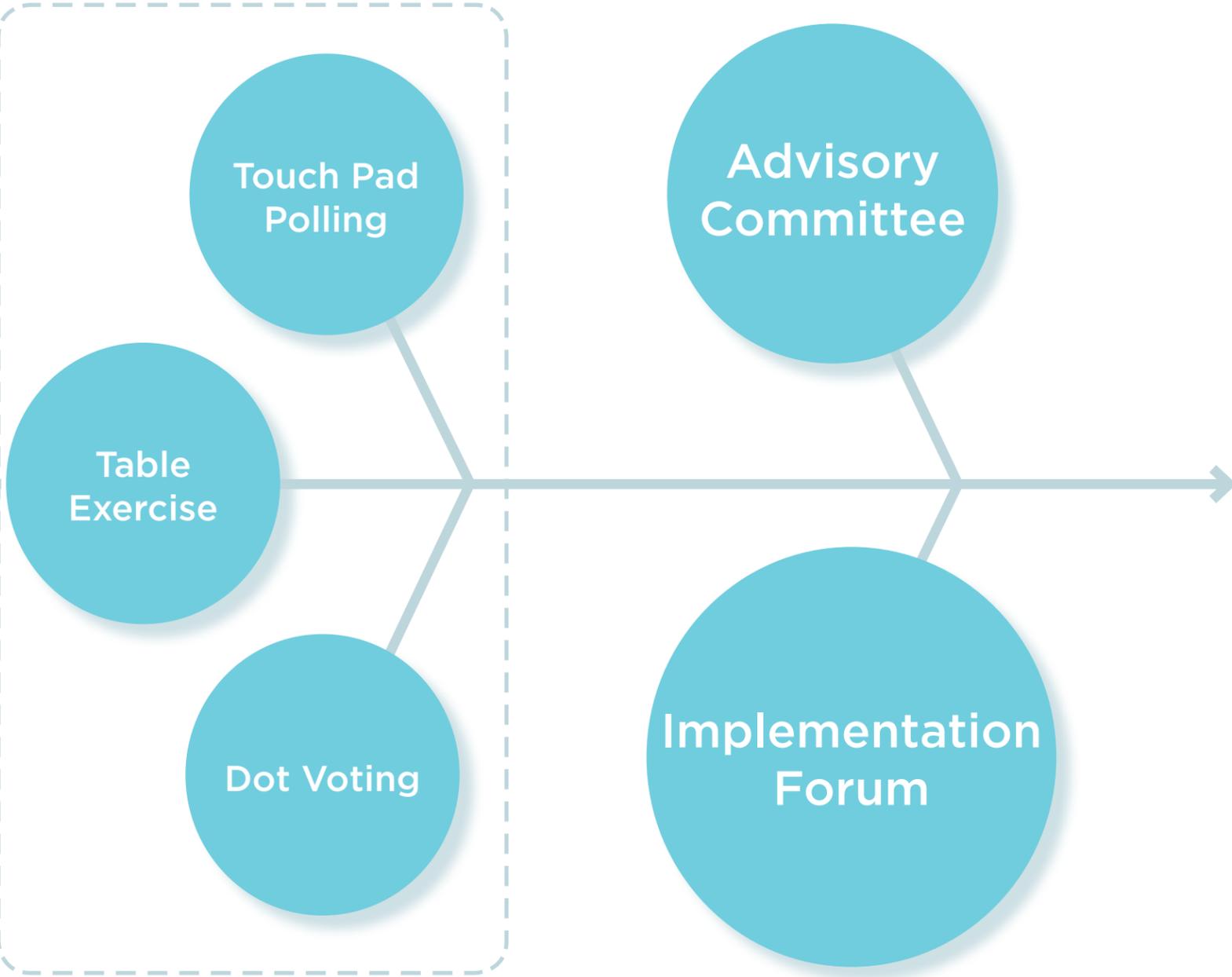


**GREEN/ACTIVE SCENARIO**

- Tiny Home Lodging
- Stormwater Lodging
- Tiny Market Incubator
- 600 miles of GRG Trails
- STL Arch - 22 Miles to Connect
- Village Green Renovation
- River Steps
- Education/Recreation Trail
- Recreational Marina
- Stepping Stone Multi-Terrace Weir Falls
- Stream Edge Observation Deck
- Kayaking
- River Market Pavilion Eco-Retreat Center
- Observation Tower / Public Restroom
- Depressed Green Ice Rink

## Senario Development

The team then translated the initial ideas into a set of scenarios, which were designed to help visualize several alternatives of Kimmswick's future growth and development. Each scenario had a somewhat different and unique emphasis, which helped participants consider the benefits and trade-offs of each.



## Idea Testing

The scenarios were then presented in detail to the public at the next workshop, and participants were asked to discuss and express their preferences for different aspects of each scenario and the scenarios overall. This allowed the team to better understand participant's relative degree of acceptance or resistance to the various scenario elements.

### Right for Kimmswick

- Entry Gateway
- Link to GRG Trail System & St. Louis Region
- Boardwalk
- Education/Recreation Trail
- Pedestrian Bridge
- Stream Edge Observation Deck
- Modern Bridge - Historic Embellishing
- Observation Tower/Public Restrooms
- Pavilion & Deck
- Flood Wall Entry
- Wayfinding/Destination Signage
- Heritage Trail
- Event/Picnic Pavilion
- River Market Pavilion
- Village Green Civic Amphitheater
- Stormwater Deck
- Mill Wheel Fountain
- Visitor Complex - New Visitor Center
- River Steps
- Barn Event Venue
- Village Green Renovation
- Stepping Stone Multi-Terrace Weir Falls
- Village Green Renovation
- Dam Falls
- Observation Tower/Public Restrooms
- Recreational Marina
- Kayaking
- Depot - History Museum/Coffee Shop
- History Baseball League

### Not Sure This Fits

- Distributed Statues/Art
- Eco-Retreat Conference Center
- Visitor Complex - Relocate Apple Butter Pavilion
- Dog Park
- Relocate Barbagallo House
- Depot Restaurant
- Boutique Hotel - Focus Landmark
- Visitor Complex - Relocate City Hall
- Pop-up Coffee Bar/Stream Side Patio Deck
- Lodging/Mixed Use Infill
- History Re-enactment Street Life
- Retail Infill

### Don't Think It's Kimmswick

- Train Car Dining/Lodging/Retail
- Residential Infill
- Adventure Complex
- Inn/Lodging Infill
- Depressed Green Ice Rink
- Tiny Home Lodging
- Village Green Renovation
- Tiny Market Incubator



### A Flood Management & Environment

- A1 Permanent levy with flood wall entry
- A2 Improve north outfall
- A3 Redirect stormwater runoff
- A4 Localized interventions to reduce and store runoff
- A5 Natural environment enhancements

### B Public Space

- B1 At-grade crossing of Market St. at railroad
- B2 Complete Streets enhancements
- B3 Trail and greenway system
- B4 Kimmswick Village Green
- B5 Enhanced gateway signage
- B6 Heritage trail
- B7 Enhanced lighting
- B8 Parking and circulation plan
- B9 Public restrooms
- B10 Screen sewage plant on west and south sides
- B11 Rock Creek improvements with damming and rock weir
- B12 River pavillion and deck & mill wheel concept
- B13 Develop North Anheuser Park

### C Development & Business

- C1 City development master plan through comprehensive plan
- C2 Relocate visitor center function to entry
- C3 Expanded business offerings and hours
- C4 Train station building with food function and (rotating) historic exhibits; rail car dining/lodging
- C5 Observation Tower
- C6 Redevelop trash transfer facility

### D Programming & Events

- D1 Expanded use of Anheuser Estate
- D2 Strategically promote and expand festivals and other year round events
- D3 Close Market Street to vehicle traffic on weekends in summer
- D4 Re-enactors
- D5 Movies and other local events on the village green
- D6 Old time baseball

### E Governance

- E1 Create dedicated funding stream for City needs
- E2 Strengthen city staff capacity
- E3 Revenue enhancement package
- E4 Traffic management
- E5 Property Code enforcement

## Concept Development

The outcomes of the scenario exercise were then evaluated and synthesized by the team. From this, the most promising and pragmatic elements of the scenarios were carried forward into a "working concept," which was subsequently presented to the public at the next workshop.



## Concept Evaluation

During the final workshop, participants were again asked to discuss and provide feedback on the working concept. A combination of interactive discussion and keypad polling was used to help gauge preferences for various concept elements and provided instant sharing of feedback amongst all participants.

**Yes Please!**

- Improve North Outfall
- Redirect Stormwater Runoff
- Localized Interventions to Reduce & Store Runoff
- Public Restrooms
- Property Code Enforcement
- Flood Management & Environment
- At-Grade Railroad Crossing
- Dedicated Funding Stream for City

- Permanent Levee with Flood Wall Entry
- Enhanced Gateway Signage
- Complete Streets Enhancements
- Enhanced Lighting
- Screen Sewage Plant
- Promote and Expand Festivals Year-Round
- Public Space
- Development & Business

**Yes**

- Natural Environmental Enhancements
- Strengthen City Staff Capacity
- Revenue Enhancement Package

- Expanded Use of Anheuser Estate
- Traffic Management

**OK, Let's Do This**

- Governance
- Comprehensive Plan
- Expanded Business Offerings & Hours
- Kimmswick Village Green

- Programming & Events
- Trail & Greenway System
- Redevelop Trash Transfer Facility

**Let's Hold on This**

- Movies/Events on the Village Green
- Develop North Anheuser Park
- Train Station with Food/Historic Exhibits
- Rail Car
- Close Market Street to Vehicles
- Parking & Circulation Plan

- Relocate Visitor Center Function to Entry
- River Pavilion & Deck & Mill Wheel Concept
- Re-enactors
- Observation Deck

**Maybe Later**

- Heritage Trail
- Rock Creek Damming and Rock Weirs
- Old Time Baseball



Immediate Impact

Core Projects

Icing on the Cake

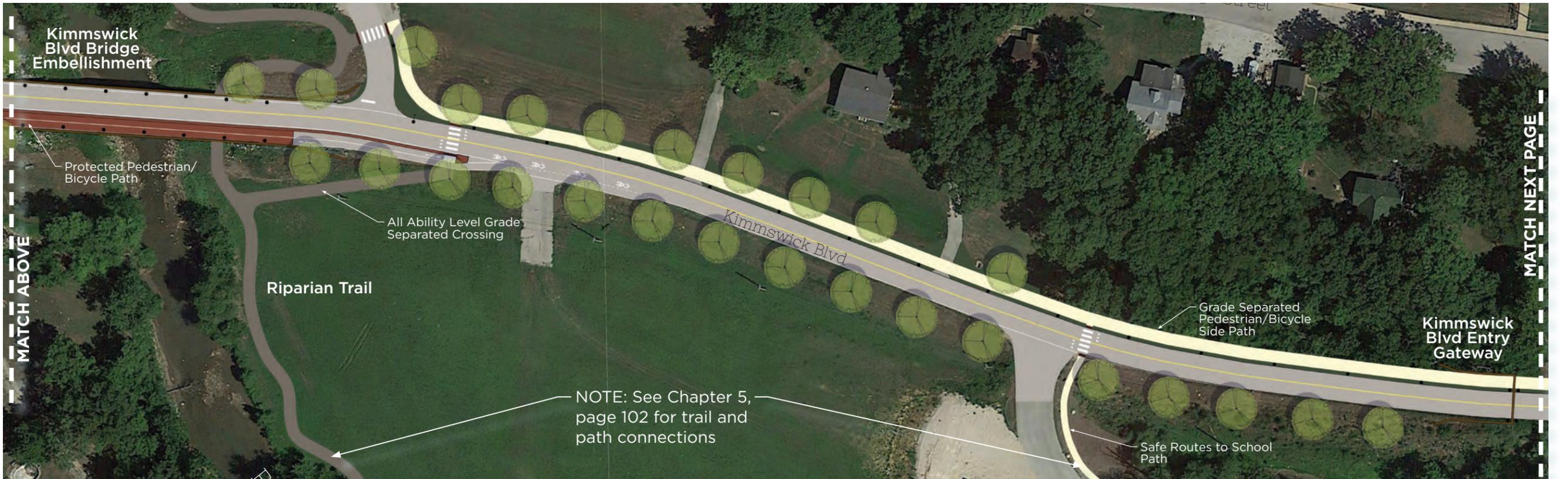
PROJECT ELEMENT	PLANNING AREA
Improve North Outfall	Flood Management & Environment
Redirect Stormwater Runoff	Flood Management & Environment
Localized Interventions to Reduce & Store Runoff	Flood Management & Environment
Public Restrooms	Public Space
Property Code Enforcement	Governance
At-Grade Crossing of Market Street at Railroad	Public Space
Create Dedicated Funding Stream for City Needs	Governance
Permanent Levee with Flood Wall Entry*	Flood Management & Environment
Enhanced Gateway Signage	Public Space
Complete Streets Enhancements	Public Space
Enhanced Lighting	Public Space
Screen Sewage Plant on West and South Sides	Public Space
Promote and Expand Festivals and Other Events Year-Round	Economic Development, Programs & Events
Natural Environmental Enhancements	Flood Management & Environment
Strengthen City Staff Capacity	Governance
Revenue Enhancement Package	Governance
Expanded Use of Anheuser Estate	Economic Development, Programs & Events
Traffic Management	Governance
Comprehensive Plan	Governance
Expanded Business Offerings & Hours	Economic Development, Programs & Events
Kimmswick Village Green	Public Space
Trail & Greenway System	Public Space
Local Events on the Village Green	Economic Development, Programs & Events
Parking & Circulation Plan	Public Space/Economic Development, Programs & Events/Governance
Rock Creek Improvements	Public Space
Heritage Trail	Public Space

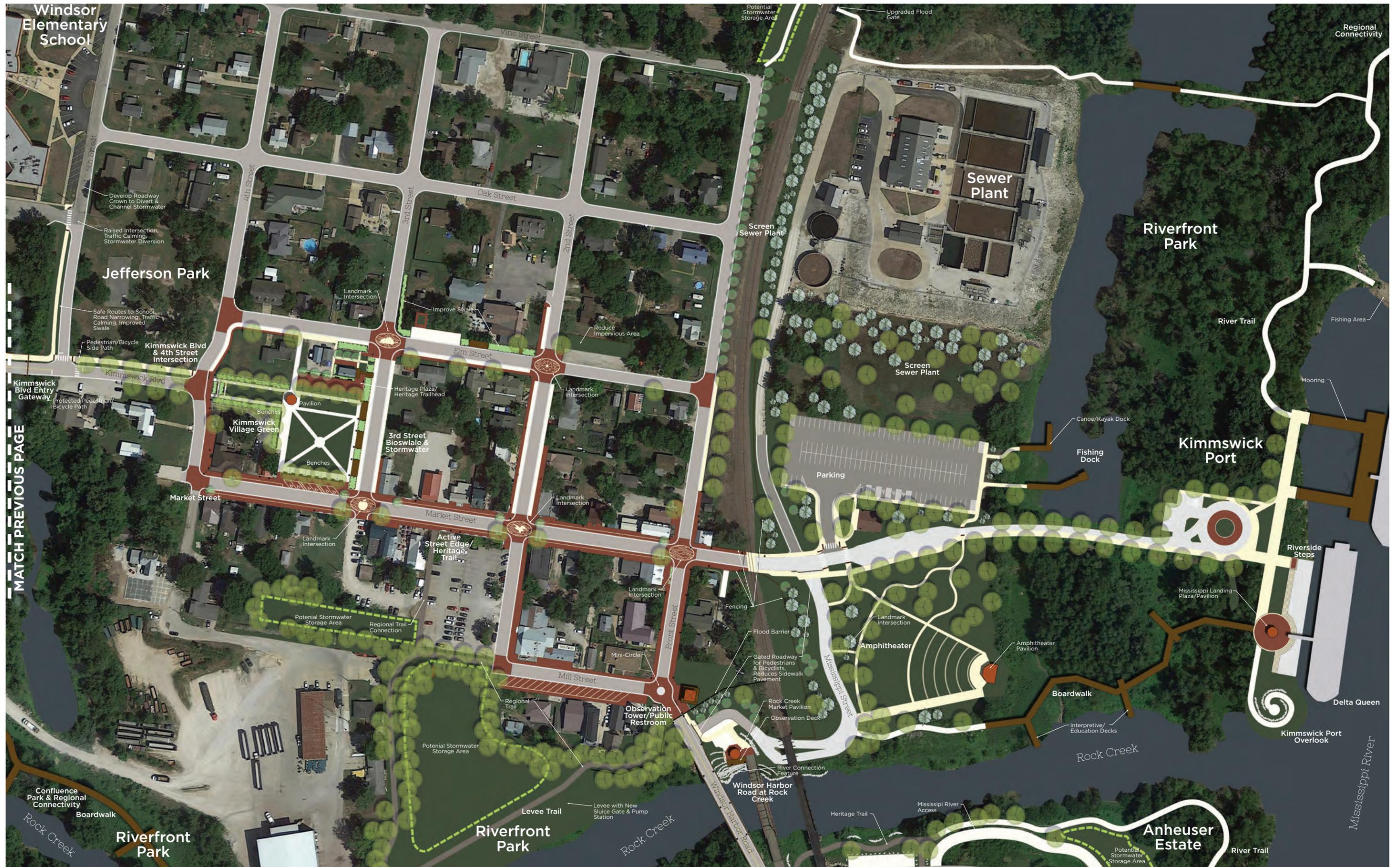
\*The City and residents clearly indicated flood protection as top priority. Project costs and processes moved some flood projects from Immediate Impact to Core Projects

## Preferred Concept

Finally, the team evaluated the results of the feedback received during the workshop. From this, along with input from the Advisory Committee and guidance from the Technical Advisory Group, the team made refinements to the working concept in order to arrive at a preferred concept. This preferred concept became the foundation for the development of a detailed implementation strategy and plan.

# Preferred Concept





MATCH PREVIOUS PAGE



A group of people in business attire shaking hands, with a large white number 5 on the right side.

chapter





# new era

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Flooding & Environment	86
Public Space	90
Business & Governance	104
Design Guidelines	116

*“Down by the river where these boats landed there was a large grove of cottonwood trees, a real nice place in itself.”*

~ William Bradshaw,  
*Life in Kimmswick*

» Kimmswick has a history of giving extra effort to take care of what’s important. Volunteers exude fortitude and perseverance not thinking twice to risk their life because its the right thing to do. At the same time, this town of little over 150 throws the biggest parties in the county. Kimmswick’s spirit has overcome adversity time and time again. The Kimmswick Great Streets project presents an opportunity to address their most difficult challenges taking the community beyond basic survival to flourishing.

### **Flood Management**

The Mississippi presents Kimmswick with a great opportunity in the Delta Queen and planned port. It also threatens Kimmswick’s livelihood. The Great Streets solutions not only defend against flooding, but add to the community’s culture.

### **Public Space**

Kimmswick’s natural setting is core to its inhabitant’s lifestyle cultivating a generational heritage. The outdoor festival culture draws visitors from across the region and even the nation. The Great Streets solutions expand and enhance both

Kimmswick characteristics providing places to develop stronger community relationships and expand their offerings to the region all the while reducing the impact influxes of visitors have on the residents.

### **Business & Governance**

Economic development links directly with the City’s service capacity. Flood Management and Public Space tie directly into the economic development strategy. Zoning and ordinance recommendations provide the framework for economic expansion which supports Kimmswick’s resident lifestyle.

### **Design Guidelines**

Design guidelines recommend good development practices which add to the quaint, historic character. These will protect the aesthetic and appeal developed over time which helps transport people to a slower paced, nostalgic setting. The guidelines also promote natural systems which enhance the aesthetic character.

# flooding & environment

Kimmswick experiences flooding from two directions - Mississippi Flooding and the "bath tub effect" as stormwater is retained within the City behind temporary levees. Flood frequency has increased in the past five years compared with historic data. Addressing flooding is the community's primary concern.

## FLOOD MANAGEMENT INTENT

Proposed flood management solutions protect the City's pocket book reducing capital, operations, and maintenance costs while leveraging external financial resources. Recommendations also protect the City's historic character with a hybrid flood barrier solution using temporary deployable barriers in lieu of a flood gate across Windsor Harbor Road saving millions.

### Mississippi Flood Strategy

Recommendations address Mississippi flooding initially with a temporary deployable flood barrier at Windsor Harbor Road, valve gates and a debris grate at the north outlet, and improved access to the south sluice gate. The deployable barrier will stabilize the city's revenue never having to pay for a temporary levee again. An earthen levee establishes more than fifty percent of the permanent barrier simultaneously creating a large stormwater storage area which helps defend against

internal flooding. Finally, temporary deployable barriers will extend 210 linear feet connecting into 120 linear feet of permanent flood wall which connects to the earthen levee. This hybrid approach could cost 20 to 30 percent of the Army Corp of Engineers (ACE) estimates. Permanent pump stations firmly establish Kimmswick's defenses against Mississippi flooding.

### Kimmswick City Flood Strategy

Diverting runoff and creating stormwater storage areas constitute the primary strategies defending against flooding within Kimmswick. These two management solutions handle 90 percent of a two-year storm and are the most cost effective approaches possible.

Teaming with Jefferson County Department of Public Works (DPW), 730,000 gallons of stormwater (13 percent of a 2-year storm) along 5th Street will be diverted out of Kimmswick's watersheds. A stormwater

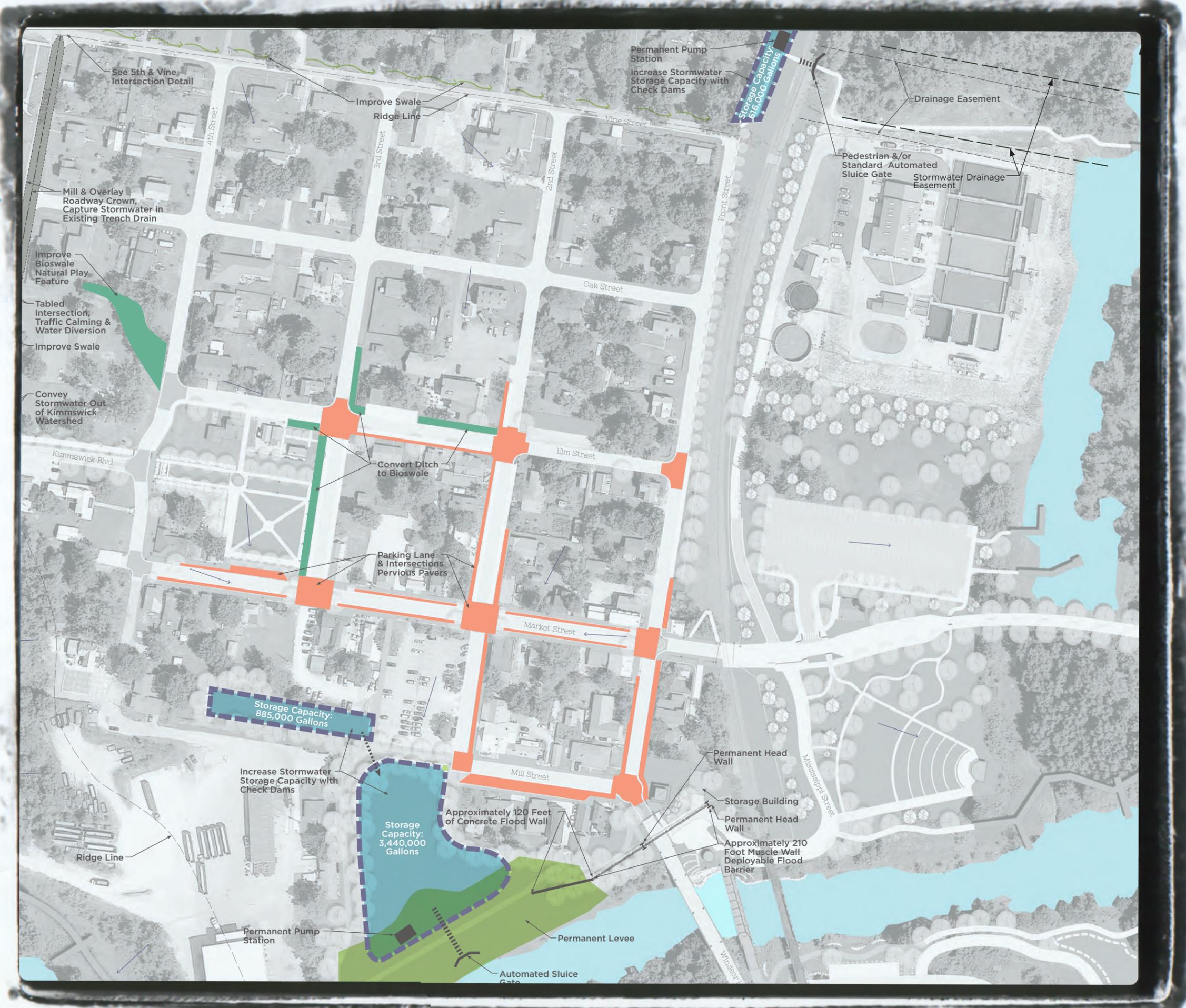


**JANUARY 2016 FLOOD:** An unusual winter flood threatens Kimmswick. In the past five years, Kimmswick has averaged one major flood per year.

**FLOOD DEFENSE:** It's the little things that count. Diverting runoff, slowing and retaining stormwater in swales, designing soils and pavement for infiltration and creating pockets to store water result in big help against flooding.

**LEGEND**

-  Permeable Paving
-  Improved Bioswale
-  Permanent Levee
-  Existing Waterway
-  Roadway Renovation
-  Stormwater Flow
-  Ridge Line
-  Improved Swale Lines
-  Inlet & Underground Pipe
-  Deployable Flood Barrier
-  Floodwall
-  Permanent Pump Station
-  New Outlet Gate
-  Catch Basin



storage area at each outlet increases stormwater storage capacity to 4,900,000 gallons (77 percent of a 2-year storm). This storage buys time during a larger storm to defend against Mississippi flooding and move temporary pump stations in place. Eventually the storage areas render permanent pump stations more feasible.

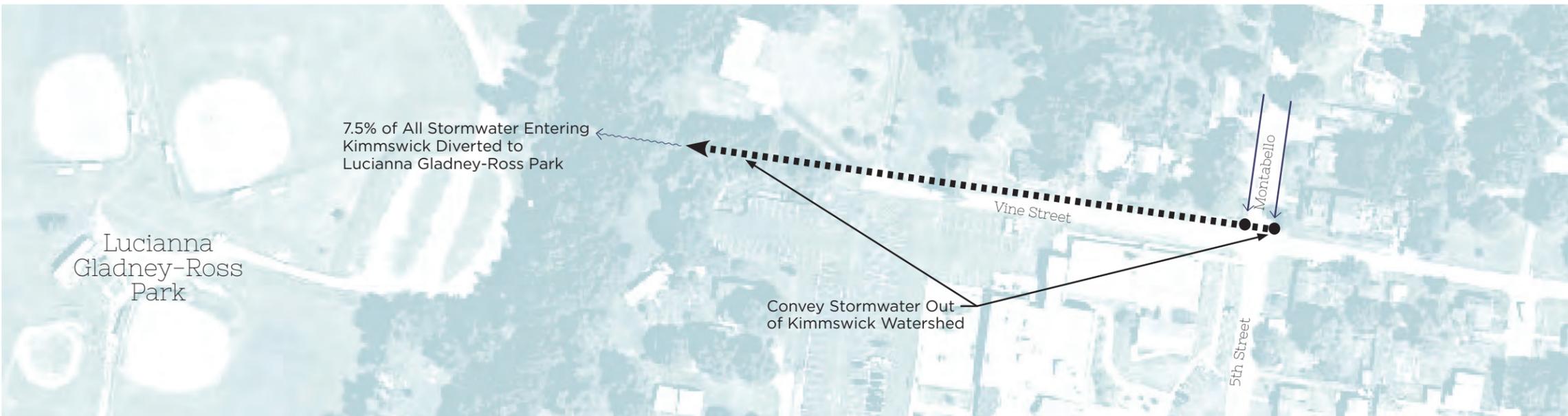


One person can manage the deployable barriers substantially reducing installation time and labor involved.

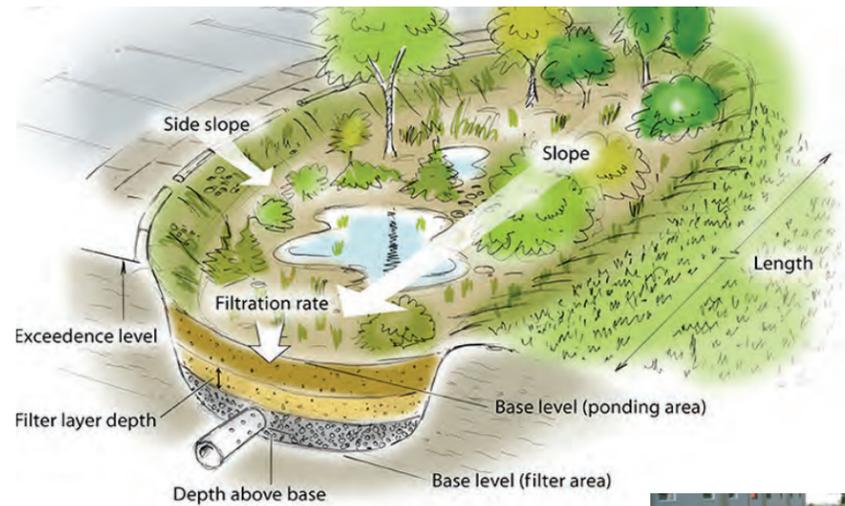


**DEPLOYABLE FLOOD BARRIER:** Affordable, light weight, and easy to assemble, these 4 foot-wide by 8 foot-tall units latch together forming a water tight defense against rising flood waters. The plan recommends a 210 foot deployable barrier at 8 percent of the cost of a concrete flood wall.

Most stormwater runoff flows across Kimmswick from Vine Street to Rock Creek. All stormwater will cross additional low impact development (LID) solutions prior to reaching the storage area. Bioswales, bioretention, and pervious pavements slow runoff, filter water, and increase overflow capacity effectively countering 100 percent of a two-year storm. These applications enhance the community's character elevating residential quality of life and visitor experience. Bioswales and bioretention bring a sense of nature and the riverfront into the built environment. Pervious pavers provide a historic quality to pedestrian and parking realms.



**STORMWATER DIVERSION:** The plan sends over 13 percent of the runoff Kimmswick currently receives out of town reducing flood risks at both outlets. The above plan captures Montabello runoff from development north of town conveying it west to Lucianna Gladney-Ross Park.



**BIOSWALE EXAMPLE** ▶

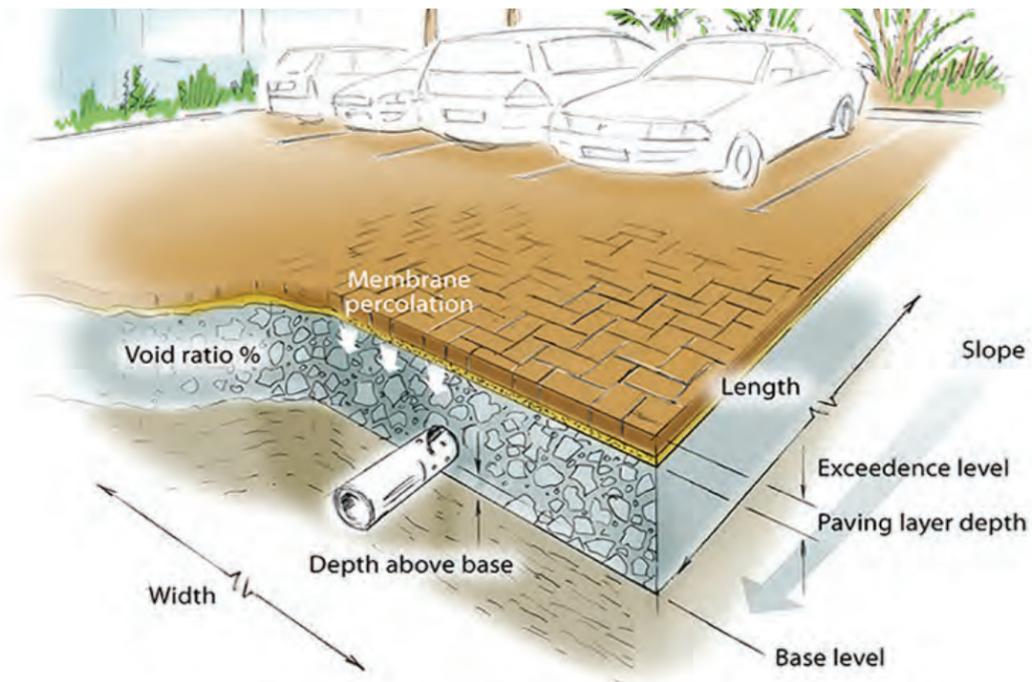


**BIOSWALE DECK**

**BIOSWALES** Bioswales provide greater stormwater management benefits compared with underground piping. Piping stormwater removes water from an area quickly increasing flood frequency and pushing impacts down stream. Kimmswick has experienced the result of developed properties passing stormwater management down the line. The cumulative effects have required increasing resources over time.

Bioswales replicate natural processes. They are stormwater design elements which direct and convey stormwater run-off over land at a natural pace. Engineered soil retains stormwater less than 24 hours preventing mosquitos. Transpiration, vegetative absorption, and soil infiltration can occur as a result. Other benefits include dramatically lower implementation costs compared with sub-surface piping.

Bioswales bring the river experience into Kimmswick's core. The plan makes bioswales attractive features creating opportunities for people to experience nature in a controlled, architectural setting. The stormwater deck pictured frames rain gardens between usable decks over the bioswale. As shown, this unique feature could host tables and chairs and provides greater connectivity between the street and the Village green. The bioswale example illustrates how a simple swale with well-designed landscape is an attractive roadside edge. This treatment should be considered throughout Kimmswick where appropriate.



**MARKET STREET**

**PERVIOUS PAVERS** Pervious pavers are installed to allow water pass through the joints. Stormwater is then collected underneath in rock voids Engineers design a pipe to slowly release the storage into a traditional underground storm system. Slowing the stormwater's release reduces downstream flood impacts.

The Market Street example shows pervious pavers in the parking area. Water from the pedestrian realm and roadway flow to the parking area where it infiltrates. These pavers add to the street's character.

# public space

» Public space recommendations offer the broadest reaching scope and vision. Kimmswick's regional destination identity extends its influence beyond the city limits simply out of necessity. Public space projects also have to cross difficult local barriers including a railroad and insecure city finances. The recommendations which follow may be considered too big for such a small town. Having witnessed the grand accomplishments of this practical community, they would not fit Kimmswick if the proposals weren't larger than life opportunities, attainable with a few good relationships and practical, timely actions.

## POSITIVE NEGATIVES

Kimmswick has a number of excellent assets from which to build. The recommendations aspire to enhance these traits. Threatening challenges also exist. The recommendations aim to leverage those challenges in the creation of unique solutions which enrich life with the very problems making it almost unbearable at times.

Stormwater particularly haunts Kimmswick threatening life and property. Runoff and stormwater impact every inch in town. Solutions meet each site specific challenges accordingly. Near Windsor Elementary, downhill neighbors complain of flooding from the school's runoff. A proposed tabled intersection routes runoff from the school, out of town, stopping water from harming the neighbors or adding to flood problems at the city's outlets. It also slows traffic for children at the entry and helps develop the

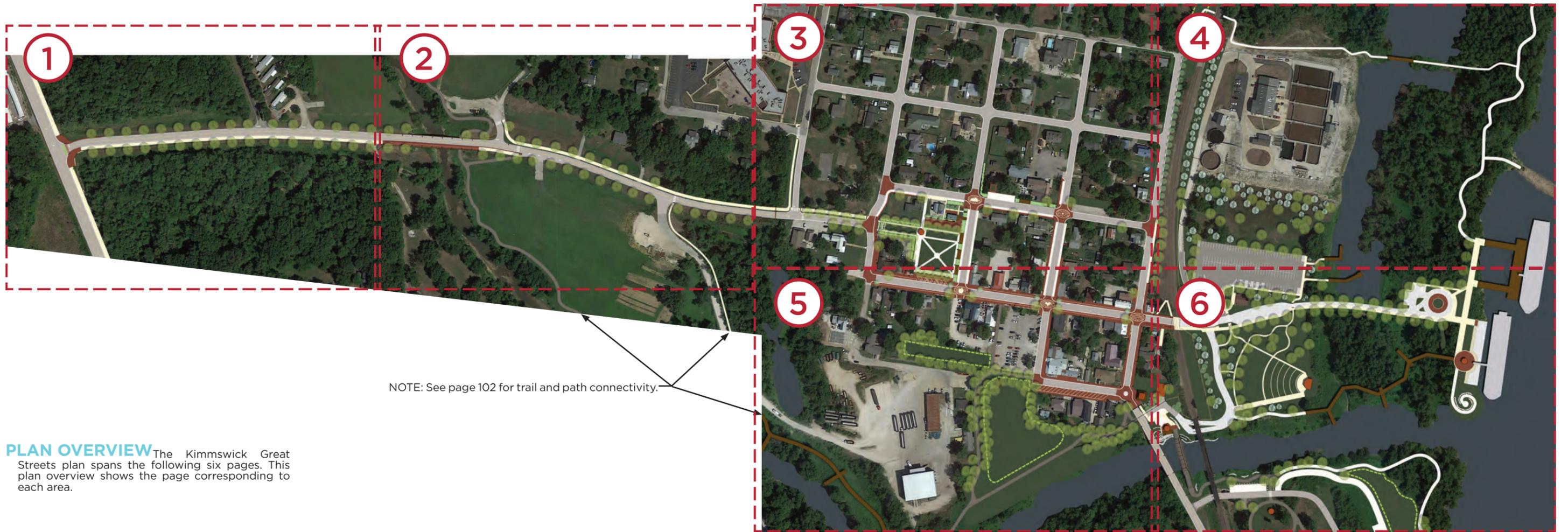
only sidewalk connection to school. Other portions of school runoff are routed to a Jefferson Park swale. Enhancing the swale provides an opportunity to build a natural play area and outdoor classroom.

On Rock Creek's banks, a recreational trail serves the deployable barriers as a level foundation on which to rest while holding back the Mississippi. The alignment provides access to and from Kimmswick in times of danger. It follows the flood barrier's dry side, to the top of the levee, onto an elevated boardwalk, over a bridge over Rock Creek to higher ground. The route also reduces festival shuttle use by about half.

The next six pages present the Kimmswick Great Streets plan. Blue numbered labels correspond with a photo montage on pages 98 through 103.



**NEW WELCOME:** A series of four transitions - monumental gateway, portal, entry gateway and an orientation - welcome and transport into Kimmswick.



NOTE: See page 102 for trail and path connectivity.

**PLAN OVERVIEW** The Kimmswick Great Streets plan spans the following six pages. This plan overview shows the page corresponding to each area.

1

17

Regional Connectivity

Mississippi River Trail

River Street

1 Kimmswick Blvd Intersection Entry

Kimmswick Blvd

Wayfinding Signage

Traffic Calming Intersection

Monument Signage  
Street lighting in Intersection

Protected Pedestrian/  
Bicycle Path

Wayfinding Signage

Road Diet on  
Highway 61/67 from  
Imperial Main Street  
to Windsor Harbor  
Road

Protected  
Pedestrian/  
Bicycle Path

17

Regional Connectivity

MATCH NEXT PAGE



Regional Connectivity

17

Lucianna Gladney-Ross Park

Trailhead

Windsor Elementary School

2

High Street

Kimmswick Blvd Bridge Embelishment

2

Protected Pedestrian/Bicycle Path

All Ability Level Grade Separated Crossing

Kimmswick Blvd

Grade Separated Pedestrian/Bicycle Side Path

3 Riparian Trail

Safe Routes to School Path

MATCH PREVIOUS PAGE

MATCH NEXT PAGE

Regional Connectivity

17

Regional Connectivity

17

3

Windsor Elementary School

Develop Roadway Crown to Divert & Channel Stormwater

Raised Intersection Traffic Calming, Stormwater Diversion

Jefferson Park

Safe Routes to School Road Narrowing, Traffic calming, Improved Swale

Pedestrian/Bicycle Side Path

Kimmswick Blvd & 4th Street Intersection

Regional Connectivity

17

4

Kimmswick Blvd Entry Gateway

Kimmswick Blvd

5

Kimmswick Village Green

8

7

3rd Street Bioswale & Stormwater Deck

Heritage Plaza/ Heritage Trailhead

Elm Street

7

Improved Swale

Landmark Intersection

Landmark Intersection

Oak Street

3rd Street

2nd Street

4th Street

MATCH NEXT PAGE

MATCH PREVIOUS PAGE

MATCH PAGE 96

MATCH PREVIOUS PAGE

Sewer Plant Property

Drainage Easement

4

Regional Connectivity

17

Sewer Plant

Riverfront Park

Screen Sewer Plant

10

10

10

Screen Sewer Plant

River Trail

20

Fishing Area

Mooring

Canoe/Kayak Dock

MATCH PAGE 97



5

6

9

Market Street

Market Street

Active Street Edge Heritage Trail

Landmark Intersection

Landmark Intersection

Landmark Intersection

Potential Stormwater Storage Area

Regional Trail Connection

2nd Street

Front Street

Mini-Circle

Mill Street

Potential Stormwater Storage Area

Regional Trail

Observation Tower/Public Restroom

Gated Roadway for Pedestrians & Bicyclists, reduces Sidewalk Pavement

17

Regional Connectivity

14

Boardwalk

Riverfront Park

12

Levee Trail

Riverfront Park

17

Regional Connectivity

Rock Creek

Rock Creek



### 1. Kimmswick Boulevard Intersection Entry

Residents from the Kimmswick/Imperial area have no pedestrian or bicycle access to Windsor High School or between communities. The 61/67 and Route K intersection lacks visitor guidance to Kimmswick. Reducing the space on Highway 61/67 vehicle use to three lanes (Two through lanes/Center Turn) allows room for a protected ped/bike path on the east side of the roadway. It also affords space to develop a monumental entry to Kimmswick at the 61/67 and Route K intersection. These improvements dramatically increase regional connectivity establishing Kimmswick's identity a mile away from town. A traffic study is needed to define the best facility.



Looking South on Highway 61/67 at Highway K

### 1 Kimmswick Boulevard Intersection Entry

### 2. Kimmswick Blvd Bridge Embellishment

Embellishing Route K's modern bridge with a "historic" character and incorporating lighting is another transition experience into historic Kimmswick. Incorporating a shared ped/bike path increases regional connectivity which also supports festivals.

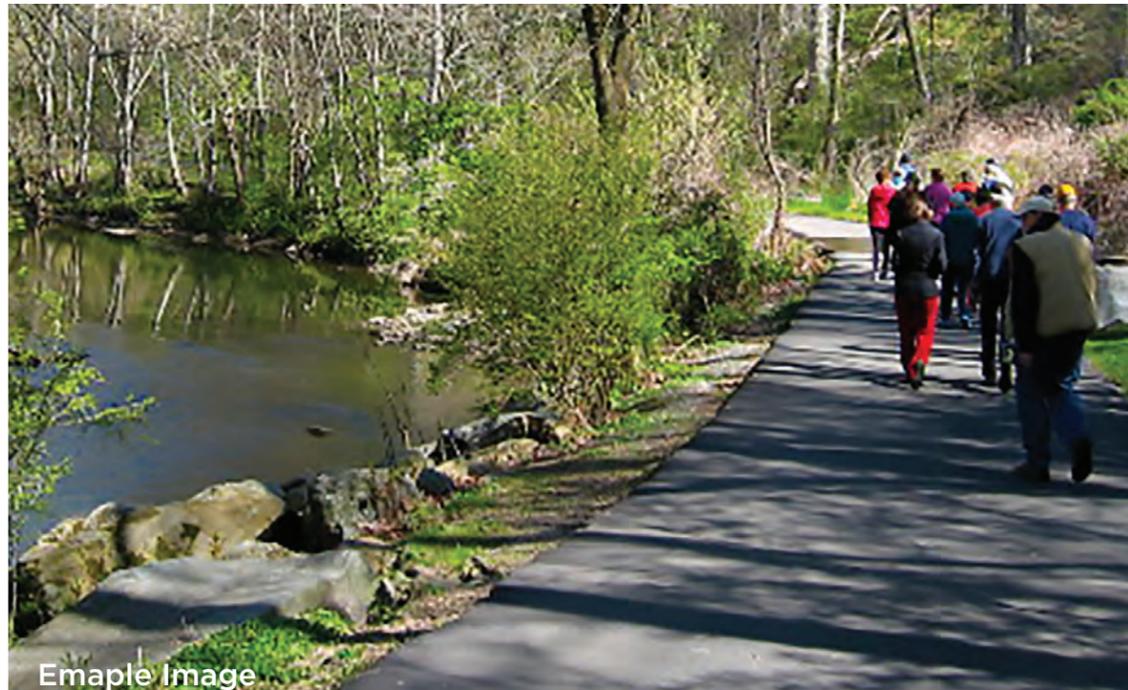


Looking East on Highway K

### 2 Kimmswick Boulevard Bridge Embellishment

### 3. Riparian Trail

A network of riparian trails provides a recreational river experience connecting Kimmswick with Mastodon Historic Site.



Emaple Image

### 3 Riparian Trail

### 4. Kimmswick Blvd Entry Gateway

The final of three transition experiences from modern life into the past, the gateway officially welcomes visitors to Kimmswick. Narrowing and shifting vehicular travel lanes south consolidates space north to create a shared use path.



Looking East on Highway K Approaching 5th Street

### 4 Kimmswick Boulevard Entry Gateway



**5 Kimmswick & 4th Street Intersection**

**6 Market Street**

**5. Kimmswick & 4th Street Intersection**

A key decision point, this intersection helps visitors find their destination. The axial view into the Village Green encourages them to come in and explore Kimmswick.

**6. Market Street**

Kimmswick's main street, the plan recommends improvements elevating roadway function and the community's character. There are no vertical curbs allowing the area to function as it does today which works well for Kimmswick. The improvements make the whole space ADA accessible. Defining realms for vehicular travel, parking, and pedestrians provides safe space for people to walk and interact with shops. Currently, the open roadway perfectly supports Kimmswick's large festivals. These improvements only increase festival functionality. Other improvements include lighting, benches, trees and landmark intersection treatments.



**7 3rd Street Bioswale & Stormwater Deck**

**8 Kimmswick Village Green**

**7. 3rd Street Bioswale & Stormwater Deck**

Described earlier in Flood & Environment recommendations, this environmental feature attractively defines the Village Green's east edge. Decks provide ADA connectivity and a unique space to have lunch with a friend or host a street event. The decks also increase functional space during festivals.

**8. Kimmswick Village Green**

This park is a great asset. It should be designed in homage to historic central greens creating a variety of spaces for rest and activity. A Heritage Plaza is proposed just south of City Hall. An excellent area to gather or host an event, the plaza also functions as the primary trailhead for the Heritage Trail.

### 9. Active Street Edge/Heritage Trail

At street edges without storefronts, the plan proposes defining the edge with interactive elements. These areas are great opportunities to tell Kimmswick's story through interpretive signage, banners, sculpture, art and other historic elements. Utilizing these areas for the Heritage Trail will not only activate the space but invite people to explore the rest of Kimmswick.

### 10. Screen Sewer Plant

The Rock Creek Public Sewer Plant is an eyesore to residents and visitors. When originally constructed a vegetative screen was installed which has since died. The sewer plant should re-establish the screen reducing its visual impact on Kimmswick and the future port.



Looking Southeast on Market Near 2nd Street



Example Image

### 9 Active Street Edge/Heritage Trail

### 11. Fishing Dock

The port plan proposes public access to the "Slough" with fishing and possibly kayaking and canoeing. Kimmswick should leverage amenities like this to welcome visitors and establish a reputation as an active, outdoor community.

### 12. Levee Trail

Incorporating a trail into the levee offers an accessible riverfront experience. This trail as part of a larger regional network provides regional connectivity to the Mississippi and enhances festival circulation. The trail also serves the function of levee access and deployable barrier platform.



Example Image

### 11 Fishing Dock

### 10 Screen Sewer Plant



Example Image

### 12 Levee Trail



Looking North

### 13 Windsor Harbor Road at Rock Creek



Example Image

### 14 Boardwalk

#### 13. Windsor Harbor Road at Rock Creek

This intersection offers a unique opportunity to develop a welcoming public gathering space connected to Rock Creek. Embellishing the modern bridge, an entry gateway over Windsor Harbor Road, and trail access will make it a great crossroads. Windsor Harbor Bridge is an iconic visitor destination. Developing a market area with a pavilion and observation deck will draw in more people and provide a family picnic place for residents. Developing a waterfront connectivity feature further establishes Kimmswick's river-town identity.

#### 14. Boardwalk

Boardwalks have a certain romantic draw. They are a great place to interact with nature. Boardwalks are proposed in the port master plan and along Rock Creek near Windsor High School in environmentally sensitive areas. These areas are fantastic for incorporating educational elements about the water cycle, the unique habitat and other natural phenomena.



Example Image

### 15 Amphitheater



Example Image

### 16 Riverside Steps

#### 15. Amphitheater

Another outdoor area Kimmswick should leverage, the port's amphitheater provides a place outside town for events. It could also be programmed to support smaller groups, light classes or scouting troops during the day.

#### 16. Riverside Steps

Riverside steps are excellent people places. People are naturally drawn to water and activity on the river. Incorporating steps near the landing will enhance visitor experience and potentially bring larger festivals like Apple Butter to the riverfront.

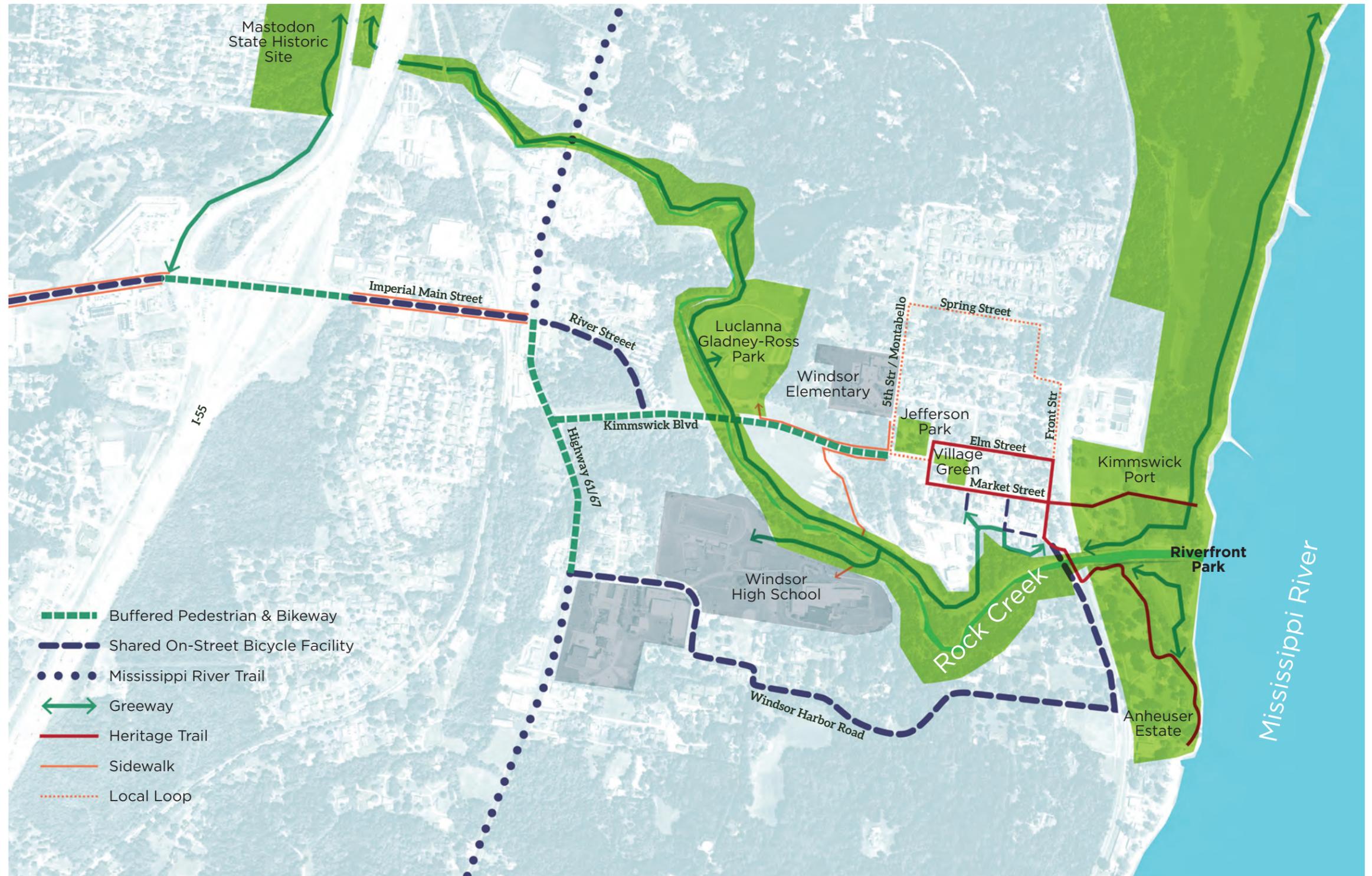
## 17. Confluence Park & Regional Connectivity

A key feature of the plan, developing a riverfront park with connection to regional trails will greatly benefit Kimmswick. Locally, children would have safe routes to schools. People could safely ride a bike or walk between Kimmswick and Imperial.

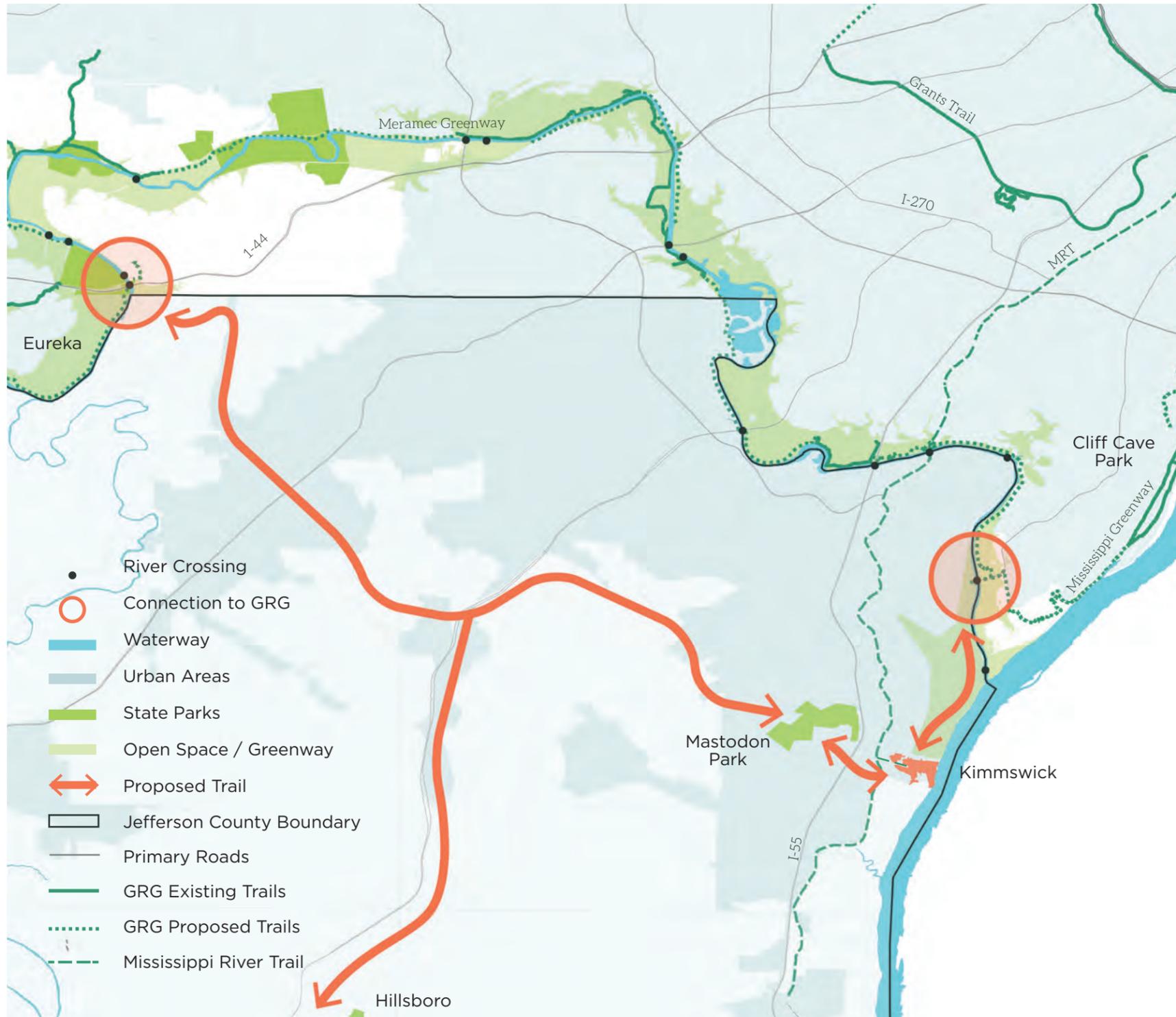
Regionally, Highway 61/67 is designated the Mississippi River Trail (MRT). Currently there are no bicycle facilities on it. The Great Streets plan proposes upgrading this regional asset with a barrier protected shared use path. In addition, a riparian trail to Mastodon State Historic Site could be incorporated into a history tour or heritage trail. Jefferson County has latent plans to provide a bicycle connection from Mastodon to Hillsboro and, shown on the Regional Connectivity diagram on the next page, a connection to Eureka and Six Flags would make a great loop around northern Jefferson County and make more regional connections to destinations.

Kimmswick is only a few miles from the Meramec River confluence, a link into the 600 mile trail network the Great Rivers Greenway system. This link would connect Kimmswick to the Gateway Arch and downtown St. Louis 22 miles away. An economic survey of the Katy Trail found the average daily trip to be 44 miles. And parties spent \$147 on average during these excursions. The ribbon was recently cut on a segment of the Mississippi River Greenway in Cliff Cave park just over the Meramec. Linking to this trail segment would be a great first step.

The economic development plan further describes the regional trail network's benefits. ■



## 17 Confluence Park & Local Connectivity



## Regional Connectivity



18 Delta Queen



19 Kimmswick Port Overlook



20 River Trail

# business & governance

» Business and governance limit or promote each other. Revenues from commerce represent only 20-30% of the City of Kimmswick's small annual budget. Kimmswick's basic geography and city boundaries can support only limited physical commercial growth and taxing residents isn't popular with merchants. Kimmswick cannot rely on revenues from local businesses alone. The City generates 60-80% of its own annual revenue hosting two major regional festivals. Similarly, Kimmswick's Merchant's Association (MA) hosts regular small -medium sized events. Analysis indicates efforts from these groups don't support each other. The vast majority of City revenues come from visitors who return one to three times annually, while consistent regulars primarily sustain the MA. The Great Streets plan recommendations seek to unify the efforts of both groups, elevating the entire community.

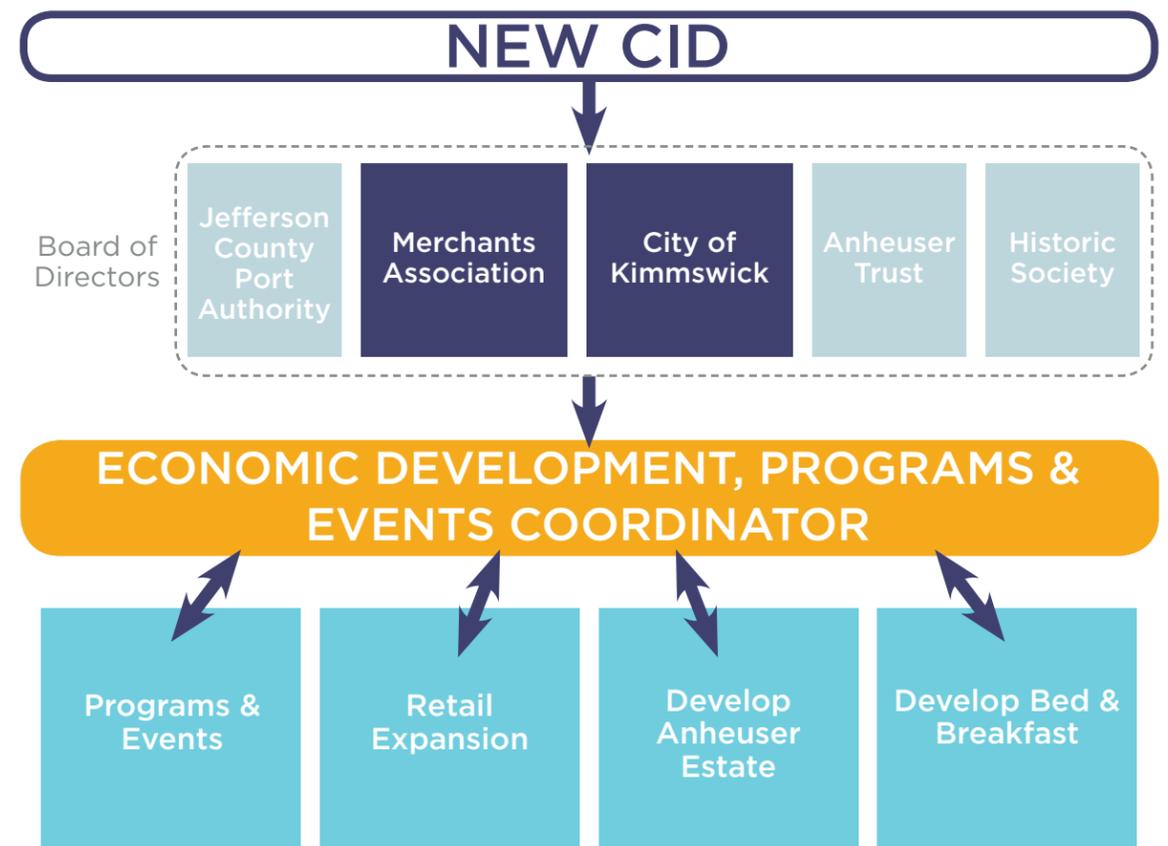
## COORDINATING ENTITY

Imagining 5 years into the future, exciting developments will shape Kimmswick's culture. The Delta Queen and potentially other cruise ships will dock regularly bringing in significant influxes of people, activities, and City revenue. The riverfront amphitheater will draw crowds to concerts, more events will take place at the Anheuser Estate, and a new levee and flood prevention improvements will significantly reduce flood impacts

More activity, more people are all good things that also bring increased demand for services to keep Kimmswick clean, maintain infrastructure, and protect residents from being overrun. Kimmswick should work towards creating a Coordinating

Entity unifying the various groups and organizations toward common goals and a shared future. This entity could expand capacity to make the most of the new opportunities, promote Kimmswick, attract complimentary businesses, run programs and events, oversee capital improvements, and guide the community's future,

We recommend a Community Improvement District (CID). The main purpose of the coordination entity, whether it is a CID or something else, is to direct implementation of the Great Streets plan using the ONE KIMMSWICK perspective. CID's are governmental entities legally recognized within the State of Missouri and separate from the City and Merchant's Association.



**POTENTIAL CID STRUCTURE:** A CID would create a more secure future for Kimmswick focused on shared goals.

CID's offer a wide range of levy powers, reasonable financing capacity (bonds), flexibility for services and improvements, and the ability to change and adjust over time. The following tables list potential public services and infrastructure improvements a CID could provide. CID's can only invest revenue within the district's boundaries fully supporting those within the district. Of the coordinating entities available in Missouri, the CID framework and structure best fits Kimmswick's vision and goals.

This district can be tailored to be as simple or complex as the associated parties would like. The Entity should include merchants, residents, the City of Kimmswick and others to collectively govern development for the good of all. A Coordinating Entity's legal status offers a level of trusted professionalism when entering into contracts, attracting employees, or seeking to attract businesses to Kimmswick. As it is a legal entity, legal council should be retained in the district's establishment.

A CID would offer a relatively small, but unique source of revenue that can be used to do things other sources cannot – specifically fund personnel and provide services. Central to the recommendation, the CID should employ an Economic Development, Program and Events Coordinator. This will expand the capacity of the City and MA, and even the Port Authority, Anheuser Estate and Historic Society. The position may write grants; court complimentary businesses; promote tourism; coordinate programs & events with merchants, institutions, the City, and residents; administer parking control; and bolster security for high-volume events. The benefits to having a CID hire and employ the Economic Development/Event Coordinator include:

- First and foremost, collective leadership for plan implementation
- A higher level of financial security which will help attract better candidates
- More stable support for the time it will inevitably take to establish the position, develop relationships, implement programs & events, steward capital improvements, and generate business development
- Dramatic reduction in perception that the position is tied to the specific interests which fund it
- Opportunity to enter into contracts with the Anheuser Estate, Port Authority, Jefferson County Parks, Kimmswick Historic Society and/or others to potentially increase revenue for operations and maintenance further expanding the CID's capacity, increasing coordination efficiency and benefits between groups, and guaranteeing more control over maintenance standards. This higher level of professionalism and legal standing is more likely to open the door to such relationships and see them blossom.

A CID is not a replacement for the City of Kimmswick but a supporting partner. As City revenues increase, it can be responsible for flood management, as well as funding a basic level of maintenance for city infrastructure and facilities that it has not been able to provide in the past. The Revenue Source table (right) shows a range of rough estimate revenue sources the CID could manage ranging from low to high. A CID could potentially generate as much as \$300,000 to provide services and improvements without any additional taxes

on businesses or residents.

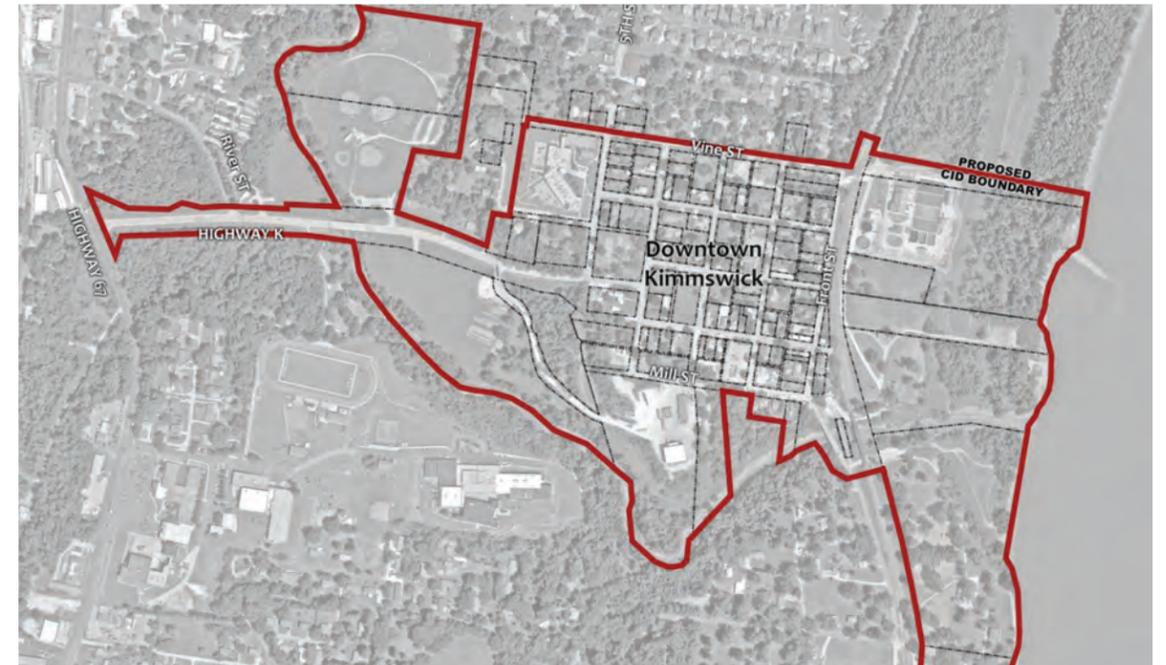
See Appendix for more CID details.

### POTENTIAL PUBLIC SERVICES

- Organize vehicular and pedestrian traffic and vendors
- Operate or contract for provision of live music, parking, buses, mini-buses, or other modes of transportation
- Leasing spaces for sidewalk café tables and chairs
- Providing or contracting for provision of security personnel, equipment or facilities for the protection of property and persons
- Providing or contracting for cleaning, maintenance and other services to public and private property
- Promoting tourism, recreational or cultural activities or special events
- Promoting business activity, development, and retention
- Providing refuse collection and disposal services
- Contracting for or conducting economic, planning, marketing or other studies

### POTENTIAL INFRASTRUCTURE IMPROVEMENTS

- Pedestrian plazas and amenities
- Parks, lawns, trees, and other landscape
- Event center, meeting facilities
- Sidewalks, streets, alleys, ADA ramps
- Traffic signs and signals
- Utilities, drainage, water, storm, and sewer systems
- Parking lots, garages, or other facilities
- Music and entertainment facilities
- Any other useful, necessary, or desired improvement



**EXAMPLE CID BOUNDARY:** Above is a simple representative CID boundary. The boundary can encompass all or a portion of Kimmswick. The CID boundary should be studied during the initial exploration committee.

**CID FUNDING:** Traditionally, CIDs assess fees on properties or levy taxes. Annual assessment for the example CID boundary above is approximated at \$16,000. Additional funds are necessary. Below, the table shows other potential revenue streams.

REVENUE SOURCE	LOW ←	→ HIGH
Strawberry - Apple Butter Festival Expansion	\$100,000	\$150,000
Great Steamboat Festival	\$16,200	\$16,200
Delta Queen Days	\$34,830	\$34,830
Witches Night Out	\$20,000	\$80,000
1/2% Sales Tax Increase	-	\$33,000
Commercial Overflow Parking	-	\$6,150
Ampitheater Event Parking	\$3,075	\$3,075
Ampitheater Event Fee	\$7,500	\$7,500
Anheuser Estate Marina	-	-
Rock Creek Landing Markets & Events	\$53,750	\$53,750
Rock Creek Pavilion	\$3,100	\$3,100
History Tour	\$6,000	\$6,000
Kimmswick Port Operations	\$8,000	\$8,000
<b>Total</b>	<b>\$252,455</b>	<b>\$353,605</b>

# OPEN SPACE & RETAIL EXPANSION

RECOMMENDED EVENT EMPHASIS

EXISTING EVENT EMPHASIS



LARGE SCALE FESTIVALS



MEDIUM SIZED EVENTS



LOCAL - FOCUSED ACTIVITIES

## Existing Programming & Events

The two largest events on the Kimmswick calendar, the Apple Butter Festival and the Strawberry Festival, are run primarily by volunteers with coordination by the City. Interviews with stakeholders reveal that it is increasingly difficult to find enough volunteers to run these events. Additionally, these events recently have been more expensive to run because of higher shuttle and insurance costs, as well as having to hire some staff because there are fewer available volunteers, while the revenues have remained flat, reducing the City's revenue. Medium-sized events, like the Witches Night Out, are run by non-City groups, but similarly report experiencing increased costs.

Though Kimmswick hosts numerous successful large- and medium-scale events each year, fewer small scale events target residents and locals in the surrounding area. Small scale activities, while primarily geared towards families and community building, can also support local businesses. Additionally, there is a critical gap in the events calendar from January to May. The lack of cold weather events limits the year-round appeal of Kimmswick.

## Recommended Programming & Events

Should Kimmswick take steps to add programming, the plan recommends primarily focusing on small-scale, locally-focused events and programs such as painting in the park, lawn games, and movies on the Village Green, as well as adding cold weather programs such as winter art exhibits, and ice carving. Most of these events would likely take place on the centrally located newly renovated Village Green. Smaller events are lower risk to experiment with attracting a broader demographic. Regular localized programming will generate consistent activity raising Kimmswick's reputation as a place to go to see what's happening. Potentially, consistent smaller, locally-focused programming and events could generate enough patronage to consider reducing medium-sized events. Managed appropriately, impacts to Kimmswick's residents could decrease - a win-win for everyone. A Coordinating Entity should plan a portion of events and programming toward experimenting with different models.

Kimmswick should also capitalize on its

riverfront access to provide programs that cater to both residents and regional visitors. In the short-term, family-oriented events such as river walks and ranger programs should be considered. In the longer term, Kimmswick should leverage the Jefferson County Port Authority's planned port amphitheater to host concert series and theatrical performances.

## Open Space Expansion Context

Communities benefit from being regionally connected, especially through methods such as a regionally connected trail network which anyone can utilize. A literature review from the Pennsylvania Land Trust Association demonstrated the positive impact that trails can bring to communities, including:

- Boosting spending at local businesses, with the community benefiting from visitors going to restaurants, snack shops, and retail establishments in the vicinity
- Providing low or no-cost recreation options that are attractive to families and younger cohorts, a missing visitor demographic

- Being an inexpensive way to diversify community activities

A 2012 economic study of the Katy Trail, a regional trail crossing Missouri located in the St. Louis area, revealed visitors' on an average 44 mile day trip spend \$147.



Emphasing outdoor dining generates more public activity which will attract more visitors.

## Open Space/Retail Expansion Recommendations

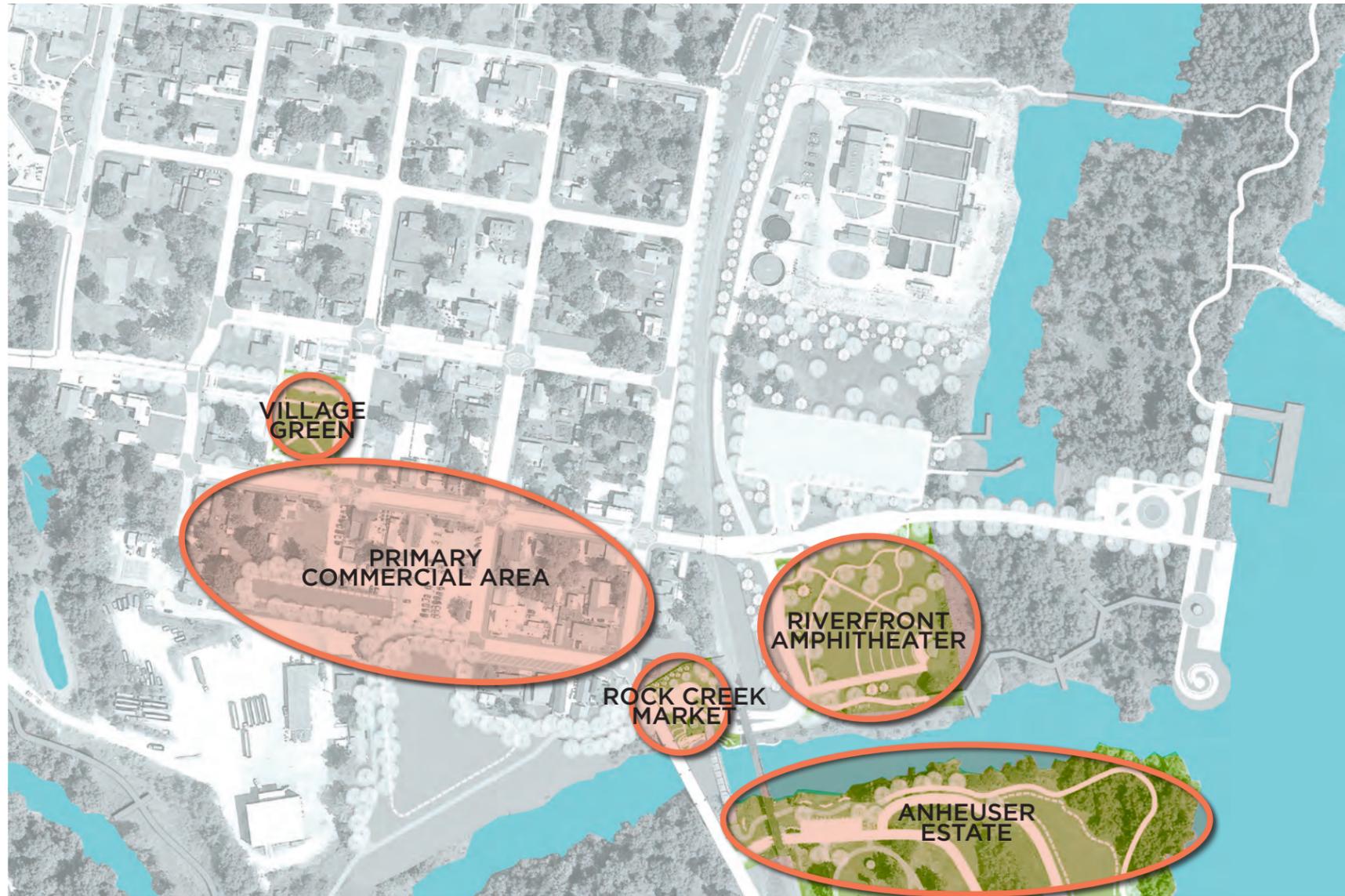
Kimmswick should build out a local trail network, potentially including a heritage trail component. The trail should pass by the Village Green, the riverfront, and lead to the city's core retail corridors. Over the longer term, the community should advocate development of a larger network in northern Jefferson County linked to the broader regional trail network.

A zoning code that clearly designates the

commercial and residential areas of the city should be enacted. This delineation will help to reduce concerns about disruptions to residents, potentially enabling those businesses to extend their operating hours. The delineation would also provide the a Coordinating Entity with clarity on where potential new retail businesses could open. This clarity will help the Entity promote retail business opportunities within the city.

Kimmswick should draft a retail business "guidebook." The guidebook would include recommended standards for business hours, facades, and outdoor dining. In particular, these standards should recommend longer business hours that are responsive to the desires of residents and visitors as demonstrated in surveys of Kimmswick residents and visitors conducted in October and December 2017.

New retail complimentary to current business offerings should be targeted for recruitment. These retailers could include a small outdoors or sporting goods shop that may appeal to men, or a boutique home furnishings and gift store that would appeal to a younger demographic.



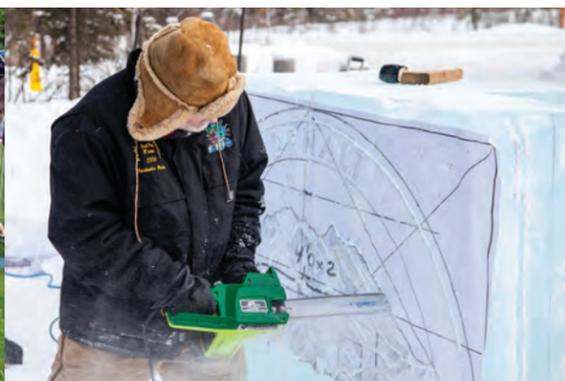
**PRIMARY COMMERCIAL AREA** Leveraging an enhanced pedestrian realm, riverfront, and local trail network, including the Heritage Trail, will bring a broader demographic to support and expand local business. These low-cost or no-cost recreational options attract families and younger visitors.



**ROCK CREEK MARKET** Adjacent to the iconic Windsor Harbor Bridge, this venue could host small markets and fairs. Located along trails, it is a great place to stop for a meal and explore Kimmswick. The pavilion, deck, and waterfront feature offer a picturesque setting for reunions and parties.



**RIVERFRONT AMPHITHEATER** The proposed riverfront amphitheater will have the capacity to host 500+. This incredible asset will support current festivals, entertain riverboat passengers, and showcase concerts and outdoor theater. School children, clubs, and businesses are expected to utilize the space for education, recreation, and entertainment.



**VILLAGE GREEN**

The Village Green is Kimmswick's civic center. The plan recommends small-scale activities geared toward local-area residents. These activities fill gaps in the activities calendar cultivating regular social opportunities which also cultivate business activity. Warm-weather and cold weather

**ANHEUSER ESTATE**

A barn venue could increase capacity for additional types and sizes of events potentially stimulating local business expansion. Corporate retreats and additional weekend use would address a gap in the market providing potential guests for new lodging should it be considered.



### Festival Operations

Festival revenue comprises 60-80% of Kimmswick's annual budget. The new port development presents the opportunity to extend festivals to the Mississippi River. The port has the room to support a 125 percent festival increase; however, 50 percent growth over 5-10 years is more practical. Parking limitations, staff capacity, and vendor diversity are potential limiting factors. The plan recommends restricting festival activity north of Elm Street removing it entirely from the residential area.

Kimmswick should develop a trail system along Rock Creek connecting to Windsor High School. Installing a bridge over Rock Creek makes the walk negligible compared with remote field parking on Route K. This enhanced connectivity and new festival configuration allows shuttle removal within Kimmswick. Providing one shuttle stop at the north end of the Anheuser Estate makes Windsor Harbor Bridge a primary gateway into the heart of the festival more

evenly distributing to two entry points. This removes the shuttle's detrimental impact on Front Street creating a conducive atmosphere for festival street life. The new shuttle route allows on street parking on north Front, Vine, and 5th not possible under current operations. Eliminating the shuttle's entry into Kimmswick increases security control on the Rock Creek bridge. One less stop, avoiding pedestrian conflicts, and a 33% shuttle route reduction will increase efficiency potentially reducing shuttles by half, a substantial festival cost savings.

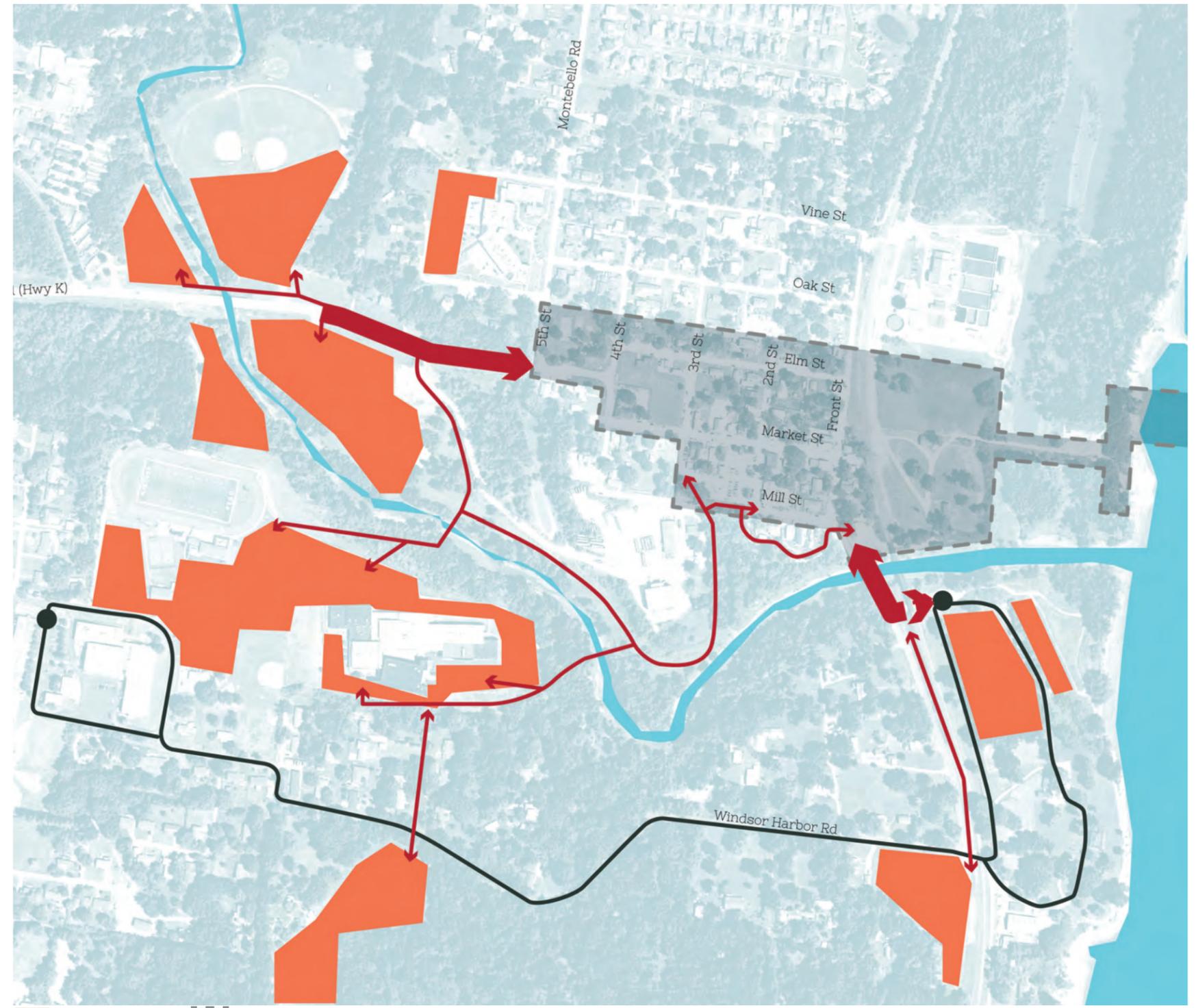
As trail facilities are implemented, designated bike routes, bike valets, and bike parking corrals should be incorporated. This could extend parking options beyond walking distance increasing overall parking capacity and provide a low stress connection for those in Arnold and surrounding areas.

The sum of these changes, illustrated to the right, reduce festival impacts on Kimmswick residents and increase revenue.



Remote Parking Festival Area Pedestrian Circulation Shuttle Route

### EXISTING FESTIVAL CIRCULATION PLAN



Remote Parking Festival Area Pedestrian Circulation Shuttle Route Shuttle Stop

### RECOMMENDED FESTIVAL CIRCULATION PLAN: Extending the festival to the river and eliminating the shuttle route from Kimmswick would reduce impacts to residents and eliminate vehicular conflicts.

## ANHEUSER ESTATE EXPANSION

The picturesque Anheuser Estate is a signature asset overlooking the Mississippi River. Its recent opening for wedding events has brought new visitors to the city. However, large events need to be held in outdoor tents as the house's capacity is limited to small groups. The Estate further lacks sufficient infrastructure including restrooms and a commercial kitchen restricting year-round event hosting.

The City owns the Estate, but the Estate is overseen by a board of five members. The City controls two of the five seats on the board, and the Anheuser Trust controls the other three seats. The Trust receives all revenues generated by the Estate.

In addition to the main house, the Estate boasts four other buildings on-site - a charming stable with 2,200+ square-foot footprint in a pastoral setting, and a cluster of three buildings on the south border

including a simple 1,200+ square-foot residence, a 6,600+ square-foot metal barn, and a 1,900+ square-foot maintenance shed. Ride-on St. Louis, an equestrian therapy non-profit, utilizes the barn, stables and corrals. The group is outgrowing the Estate and considering re-locating.

Any development or facility upgrades should consider flooding. Elevating structures and/or creating mold/flood resistant structures are worthy of consideration.

Park development on the northern half of the Estate is being considered because, during weddings, the Estate is closed to the public. The hope is north park could remain open to the public while events take place on the southern half.

### Recommendations

To ensure its appeal as an events destination and to expand its usage, the Estate

should contact local and regional event coordinators to walk the site and provide recommendations on actions needed to attract additional events and promote the venue. Additionally, the Estate should retain an architect to develop a master plan for the site that would address the concerns raised by the events coordinator.

The Estate should consider constructing a dedicated indoor events facility to expand its availability year-round. This could be accomplished either by renovating an existing underutilized building, or by building a new building specifically designed for events, per recommendations from the event planner and architect. This event facility could compliment current programming, parties for arriving and departing Delta Queen passengers, and other gatherings. Renting tables, chairs, linens, and place settings would expand revenue. If it's determined the Estate

could incorporate a commercial kitchen, particularly a bar, this could further increase reservations and revenue.

Smaller buildings may support corporate retreats and smaller groups bolstering weekday and winter usage. Programming for events and retreats should leverage and promote local businesses and events, specifically the Delta Queen, restaurant catering, as well as lodging options.

The Estate should connect into the proposed heritage trail and leverage revenue opportunities associated with its history and any north park development. History tours, pavilion rentals, and even a marina should be considered primarily to increase the Anheuser Estate's notoriety and potentially develop a supplemental revenue stream. The Anheuser Estate should also be promoted in wayfinding and historic interpretive signage in the heart of Kimmswick.

## LODGING



Boutique B&B's fit well into historic areas adding to a visitor's experience.

There is one inn currently operating in Kimmswick. Boutique inns or bed and breakfasts are often successful lodging options in heritage-oriented destinations like Kimmswick, and an increase in year-round visitors may create a market sufficient to support more of this style of lodging. There are ten mid-scale or upper-midscale hotels operating within 12 miles of Kimmswick, but none offer the unique boutique bed and breakfast experience.

New lodging could attract new visitors to the city and extend the stays of those currently visiting. However, given current occupancy rates, the market may not be able to support another bed and breakfast in the immediate term, but rather could be supported when the Delta Queen operations begin, and the Anheuser Estate's operations have been expanded. Other contributing factors include later dining and retail hours, and a shop supplying everyday necessities. Kimmswick could potentially support ten rooms. Lodging should be designed in keeping with the architectural style of the city. The ideal location for the additional bed and breakfast would be a site overlooking the Village Green, which promises to be a significant new city asset near the commercial core or on the City-owned lot

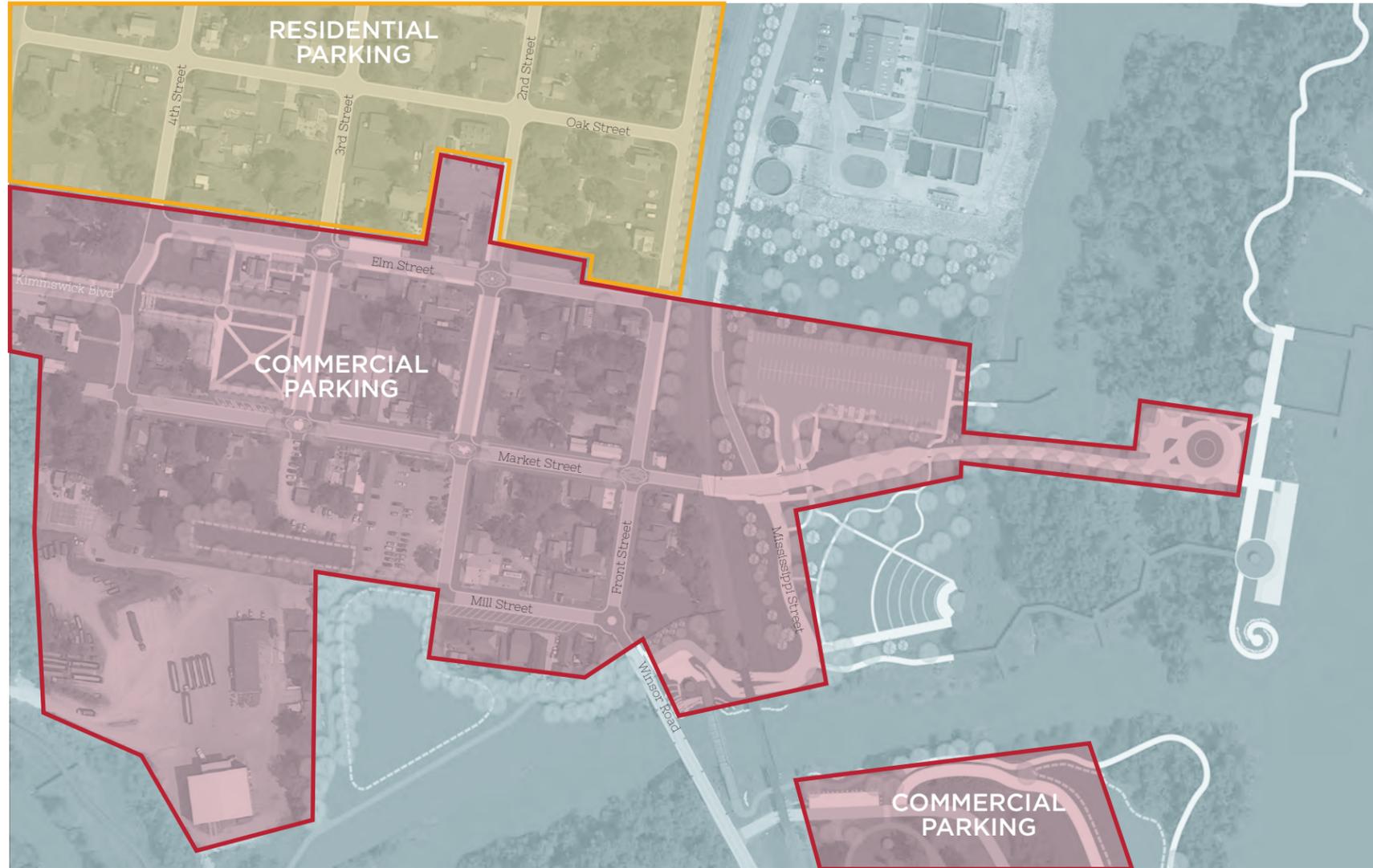


**EVENT VENUE:** An indoor event venue would allow the Estate to capture more revenue and expand event offerings.



**CORPORATE RETREAT:** Big Shark Cycling in St. Louis has hosted corporate retreats. Outdoor recreation could supplement retreat development.

# COMPREHENSIVE PLANNING



Residential
  Primary Commercial
  Secondary Commercial
  Park/ Open Space
  Institutional

Throughout the process, the plan has been aligning with Kimmswick's first ever comprehensive plan.

## Land Use & Zoning

Land use and zoning ordinances help communities guide future development. These policies can protect valued assets like natural resources and historic character. They can also deter unwanted uses.

Land use and zoning policies could have prevented the sewer plant's development and the trash sorting stations location.

The recommended land uses to the right are proposed to protect Kimmswick resident's quality of life, preserve historic character, promote development in line with the community's vision, and protect natural assets. Each land use promotes different

activities and limits others.

### Primary Commercial

This area is the commercial core supporting the greatest activity and commercial uses within Kimmswick. Uses would include retail, dining, entertainment, institutional, lodging, and mixed-use and single-family residential. Being somewhat separated from the residential area, later business

hours and entertainment may occur in the early evening and not disturb people in the Residential area. Pedestrian light levels need to accommodate evening activity and ADA facilities should be enforced according to the latest national standard. Visitor parking should be allowed without restriction, but ample signage and architectural elements should delineate residential boundaries (see Design Guidelines page 118).

### Secondary Commercial

This area transitions from Primary Commercial to Residential. All possible uses in Primary Commercial apply. Lighting should be more focused on entries and pathways. ADA facilities should be enforced according to the latest national standard. Outside of official festivals and events, entertainment after dusk should be kept indoors and at a level unnoticeable to residents. Visitor parking should be unrestricted, but ample signage and architectural elements should delineate Residential boundaries.

### Residential

This area belongs to Kimmswick's residents. Existing commercial uses should be grandfathered, but no further commercial or retail uses should be allowed, and institutional uses should be contained to existing and historic buildings. The City should promote occupancy of historic buildings. Appropriate scale lodging could be considered along the Primary and Secondary Commercial edge but must be approved by residents. Light levels should support resident's desired levels.

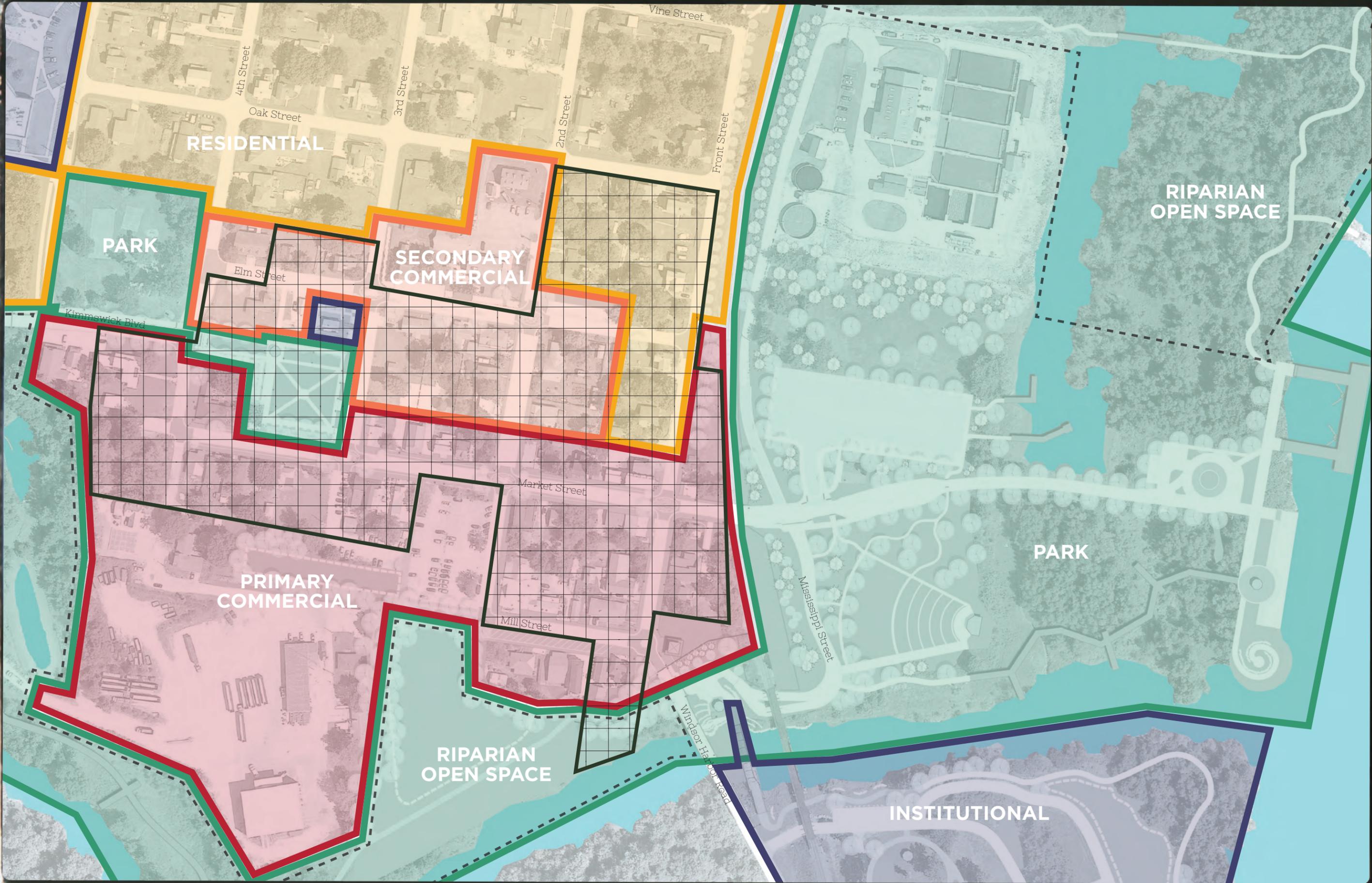
### Park & Riparian Open Space

This use delineates park development and protects natural habitat while prohibiting future industrial development. Active

## LEGEND

- RESIDENTIAL
- PRIMARY COMMERCIAL
- SECONDARY COMMERCIAL
- PARK / OPEN SPACE
- INSTITUTIONAL
- HISTORIC DISTRICT

**DISTRICTS:** The areas indicated to the right show the existing historic district and other proposed districts. They are proposed to promote Kimmswick's quality of life.



RESIDENTIAL

PARK

SECONDARY  
COMMERCIAL

PRIMARY  
COMMERCIAL

RIPARIAN  
OPEN SPACE

RIPARIAN  
OPEN SPACE

PARK

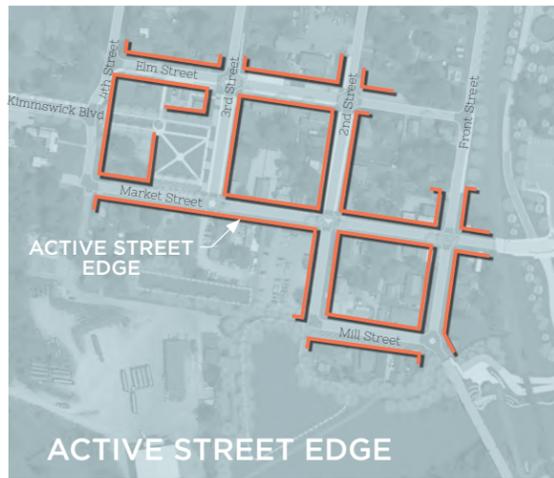
INSTITUTIONAL



VILLAGE ACTIVE STREET EDGE EXAMPLE



ACTIVE STREET EDGE ELEMENTS EXAMPLE IN FRONT OF EXISTING BLUE OWL PARKING



ACTIVE STREET EDGE

Active Street Edge

**Institutional**

Institutional land uses serve a community’s social, educational, health, cultural and recreational needs. They may be government, non-profit, and privately owned and operated.

The City should review and approve all development plans prior to breaking ground.

**Historic District**

Kimmswick has an established historic district (see Districts map page 111). Special legal restrictions apply to properties qualifying as historic. Other specific buildings outside the district are also registered as historic.

**Parking**

The parking overlay areas (see page 110) designate Primary and Secondary Commercial land uses as Commercial Parking areas and Residential land use as Residential Parking areas. Parking ordinances should be put in place to support

the illustrated parking overlay. A parking and circulation study should be conducted to determine parking and circulation patterns during various events and scenarios agreed upon by residents, festival coordinators, and commercial entities.

Commercial Parking area should relegate designated on-street and off-street parking areas and be unrestricted to all users. No new parking lots should be developed along the active street edge. Parking internal to blocks and behind street edge development should be encouraged. Remote parking areas on the North Anheuser Estate and Waste Transfer site should be encouraged if new development occurs. A shuttle system should be considered in the parking and circulation plan to support restrictions in Residential Parking areas. The City should deter parking lot development near residential areas.

Parking within the Residential Parking area should be relegated to residents and their guests. A parking and circulation study

should determine best practices to support residents and deter visitor parking. No residential properties should be allowed to develop commercial parking lots.

**Active Street Edge**

Active street edges encourage walkability. A constant line of building facades with a mix of uses close to the street provides visitors the opportunity to interact with people, businesses, and activities. People attract people. Programming, events, and especially outdoor dining stimulate street life typically leading to more visitors.

The diagram to the left highlights recommended active street edges. The City’s design guidelines should prescribe dense building development and attractive vertical elements along these edges. The design guidelines should discourage vacant properties and uses like parking lots along these edges. When necessary, incorporate elements like site furnishings, decorative walls or fencing, art, and/or signage along edges such as parking as the image above

illustrates. A more dense street edge also communicates to visitors areas delineated for commercial and residential uses.

**Lighting**

Multiple lighting strategies promote safety and delineate visitor areas. In primary commercial areas, street and pedestrian lighting encompass intersections and open spaces. Supplemental retail lighting, incorporated into business facades, is recommended to reduce operations and maintenance costs. Similar strategies are incorporated in secondary commercial. Foot lighting in residential areas promotes safety and privacy.

Lighting design and intensity correspond with land uses. The plan recommends more intense commercial lighting levels in primary commercial, less intense safety and focal lighting in secondary commercial, and appropriate lighting in residential. All lighting should preserve the view of the wondrous rural night sky and reduce impacts to wildlife.

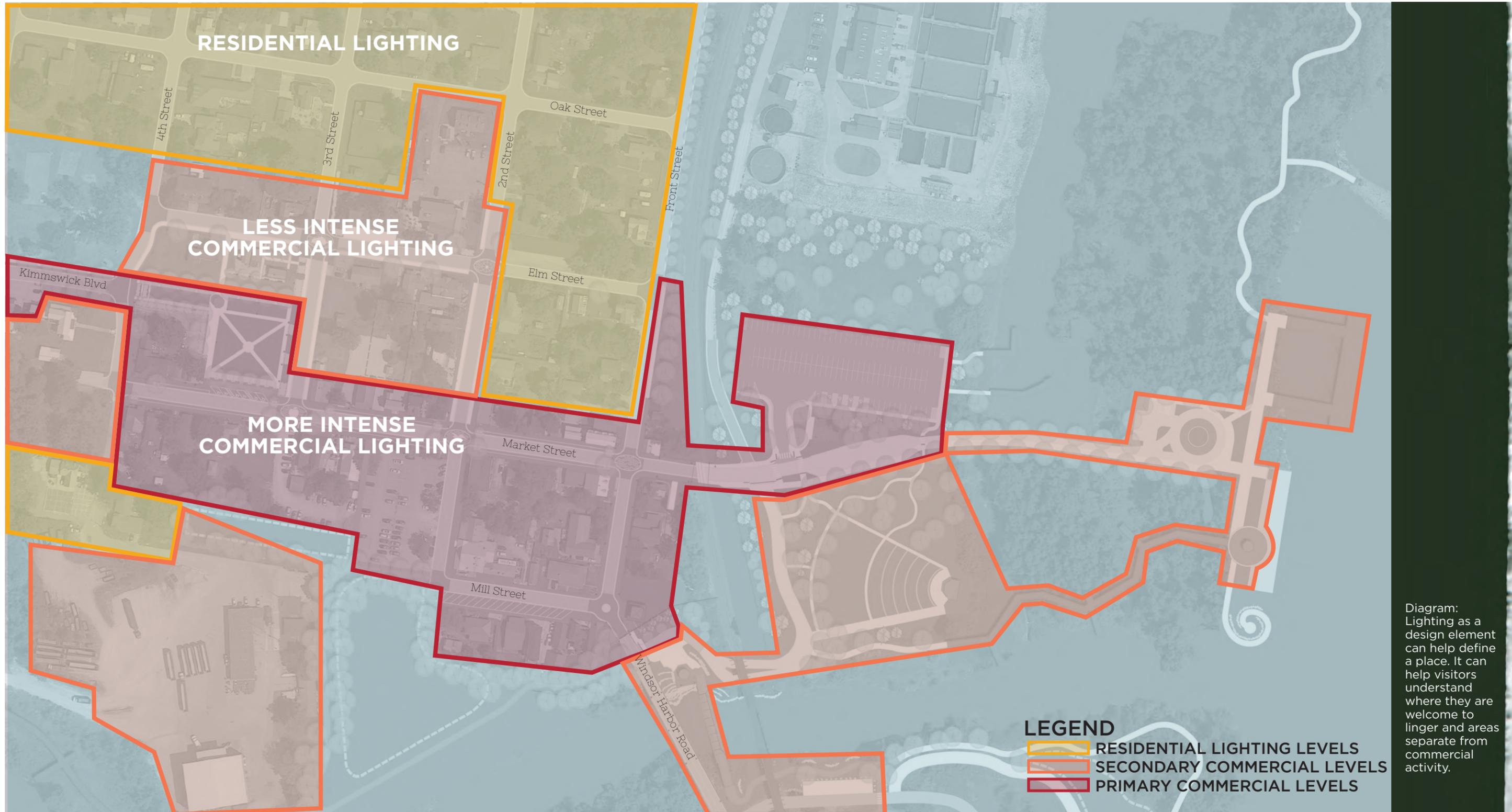


Diagram: Lighting as a design element can help define a place. It can help visitors understand where they are welcome to linger and areas separate from commercial activity.

# REVENUE ENHANCEMENT PACKAGE

Kimmswick has several potential funding sources for the implementation of the plan. Examples of potential revenue streams are listed below and the table to the right illustrates revenue ranges. A specific revenue study should be conducted to better understand feasibility and potential prior to implementation.

Following are high level rough order of magnitude estimates based on regional market assumptions. Some revenues - like Delta Queen Tax, Docking Fee, and Witches Night Out - could be realized immediately according to the outlined assumptions. For the others, totals indicated in the Revenue Source table (right) are tentatively projected to be realized incrementally over five to ten years after programs, events, developments or improvements are implemented.

Should Kimmswick establish a CID, the City and CID need to work together to ensure its success. Revenue sources the CID could manage are indicated. If the CID assumed all the indicated revenue sources, the City would realize approximately \$900,000 annually garnering all other sources.

## Kimmswick Port

**Museum Tax** - The City has established a 3% tax on all Delta Queen Sales from the Port of Call effective immediately when ticket sales begin. Revenue is calculated from Delta Queen Steamboat Company projections.

**Docking Fee** - The City has established a \$1.30 per linear foot fee on and ship docking at the proposed mooring. Revenue is calculated based on market study - one 400 foot ship once per week, one 400 foot ship once per month, two 250 foot ships per month.

**Maintenance Agreement** - Jefferson County Parks will be responsible for Kimmswick Port grounds when completed. The City could enter into an agreement with Jefferson County to maintain it for them. Projection is a conservative professional estimate based on the current Anheuser Estate agreement.

**Operations Agreement** - Activities at Kimmswick Port will need to be overseen. The City could enter into an agreement with the Port Authority or other responsible parties to operate the port. Projections are based on eight month season.

## Festivals & Events

**Existing Festival Expansion** - Development of Kimmswick Port creates a space which could expand Apple Butter and Strawberry Festivals up to 125%. A 50% increase has been estimated.

**Great Steamboat Race Festival** - The Delta Queen is considering re-instituting the historic Steamboat Race, a potential festival addition. Space rentals are estimated.

**Delta Queen Days** - Each time the Delta Queen lands in the port, the operators typically create a festive atmosphere with time period actors and music. Kimmswick could leverage these events as a unique regional attraction. Space rentals are estimated.

**Witches Night Out** - The Merchant Association's Witches Night Out sells out in hours at a \$25 ticket price. The City has received \$1 per ticket. This price should be increased. Increased ticket price of \$5 low and \$10 high estimated designated to the City are shown.

## Sales Growth

**Increased Commerce** - The City has a 1 1/2% retail sales tax. With longer business hours, a more attractive setting, the new Kimmswick Port, and more activity, retail sales will increase. A 10% increase is estimated.

**1/2% Sales Tax Increase** - If the City and Merchants agreed to raise the retail tax, it would increase City revenue.

## Lodging Fee

Many cities with tourist destinations impose lodging fees or taxes. The City could implement a fee on lodging room occupancy.

## Parking

**Enforcement** - Enforcement is essential to guiding visitor behavior. The City could provide residents and guests a pass to park in residential areas and ticket visitors vehicles.

**Commercial Overflow** - Should Kimmswick become a strong destination with large periods of large vehicular influx, the City could charge for parking in remote lots like the one proposed on Kimmswick Port.

## Amphitheater

**Event Parking** - During events like concerts with national acts, the City could charge for parking in remote lots like the one proposed on Kimmswick Port.

**Event Fee** - The city could charge a user fee on tickets sold to the amphitheater.

## Anheuser Estate

The plan recommends the City and Estate partner to develop infrastructure and facilities with each splitting revenues 50/50. The following revenue sources assume this partnership.

REVENUE SOURCE	LOW ←	→ HIGH
Current City Revenue	\$190,000	\$250,000
Delta Queen Tax	\$767,000	\$767,000
Docking Fee	\$16,380	\$16,380
Strawberry - Applebutter Festival Expansion*	\$3,400	\$50,000
Great Steamboat Festival*	\$16,200	\$16,200
Delta Queen Days*	\$34,830	\$34,830
Witches Night Out*	\$20,000	\$40,000
Real Estate Growth	\$4,300	\$11,000
1/2% Sales Tax Increase*	\$23,650	\$33,000
Lodging Fees	\$8,350	\$8,350
Parking Tickets	\$8,970	\$8,970
Commercial Overflow Parking*	-	\$6,150
Ampitheater Event Parking*	\$3,075	\$3,075
Ampitheater Event Fee*	\$7,500	\$7,500
Anheuser Estate Receptions	\$32,355	\$32,355
Anheuser Estate Retreats	\$5,175	\$5,175
Anheuser Estate Pavilion	\$1,350	\$1,350
Anheuser Estate History Tour Fee	\$1,200	\$1,200
Anheuser Estate Marina	-	-
Rock Creek Landing Markets / Events*	\$53,750	\$53,750
Rock Creek Pavilion*	\$3,100	\$3,100
History Tour*	\$6,000	\$6,000
Kimmswick Port / Riverfront Park Maintenance	\$12,000	\$12,000
Kimmswick Port Operations*	\$8,000	\$8,000
<b>Total</b>	<b>\$1,232,735</b>	<b>\$1,375,385</b>

\*Revenue Sources the CID could assume and manage

**Receptions** - Should the Anheuser Estate partner with the City to construct an events venue, the City could make a portion of reception revenues.

**Retreats** - Should the Anheuser Estate partner with the City to construct a retreat venue, the City could make a portion of retreat revenue.

**Pavilion Rental** - Should the Anheuser Estate partner with the City to develop a

north Estate park with a pavilion, the City could make a portion of rental revenue.

**History Tour Fee** - Creating a history tour package including the Anheuser Estate, could provide visitor fee revenue for the City. The fee assumes a \$10 charge per ticket.

**North Park Marina** - Should the Anheuser Estate partner with the City to develop a marina on the Mississippi River, the

City could make revenue on docking fees. Further study is needed and no projections have been made.

### **Rock Creek Market**

**Markets & Events** - Development of a Rock Creek Market creates the opportunity for the City to collect revenue for event spaces for events like a weekly farmers market or Delta Queen Days.

**Pavilion Rental** - Incorporating a pavilion into Rock Creek Market development creates an opportunity for the City to make revenue on pavilion rentals.

### **History Tour**

Should the City develop or partner in the development of a history tour package, the City could make revenue on ticket sales.

## TRAFFIC MANAGEMENT

Protecting the quaint, quiet lifestyle will require deliberate traffic management. Kimmswick expects to increase tourism with more destinations, venues, programs and events. A traffic management strategy works hand in hand with parking management. In taking a holistic approach to creating a vibrant downtown, parking must be managed in a way that will support these efforts, not undermine them.

As Kimmswick grows and a more inclusive infrastructure network comes on line, traffic management plans will be needed for the different activities and scales of events hosted. Regular weekdays should function seamlessly with well signed parking location and designated commercial and residential parking areas. Strategic

enforcement helps establish acceptable driver habits. Additionally, a thoughtful emergency circulation plan will be beneficial with increased riverfront activity and trail use. When parking restrictions in residential areas begin, weekends, riverfront events, medium to large scale festivals, and Anheuser Estate events need specific strategies.

The plans will likely include clear event navigation maps, traffic flow, parking requirements, ADA parking and access, drop offs, shuttle routes and stops, pedestrian and bicycle alternative routes, wayfinding signage, and emergency routes. These plans will establish clear communication prior to any event which is the best mitigation tool.

## CODE ENFORCEMENT

Code enforcement will play an essential role welcoming newcomers to Kimmswick. First impressions go a long way. The Delta Queen plans to regularly bring hundreds of visitors from all over the world to Kimmswick for a few hours. Other ships could potentially land one to two additional times a week in addition. Increased programs, events, venues, and a broader commercial offering will inevitably attract new visitors.

The City needs to work with the residents and commercial community to develop reasonable property maintenance standards. They should be clear and accessible to all residents. Once the standards are established, fair and judicious enforcement should be enforced. ■

# design guidelines

While beauty may be in the eye of the beholder, places have distinct aesthetic character. An aesthetic is cohesive in design and appearance. The individual elements work within the whole picture. Kimmswick's aesthetic has changed over time adding new elements to the overall composition. In general, a visitor would experience Kimmswick as a step into a mixed-period, early frontier through pre-modern past.

## ARCHITECTURE

Kimmswick's historic character is one of its most valuable assets. Clear direction on architectural character was not offered during community engagement. General consensus supported a character fitting the established eccentric historic aesthetic.

### Architectural Quality

One principle was clear: temporary structures or those which look temporary were not welcome. Utilizing or emulating natural historic building materials found in the community such as brick, clapboard, or log and mortar will help retain the community's character. Employing such materials for eighty percent of facades in the commercial areas is recommended. Variations should be considered case by case. Introduction of new historic period structures should be sited to accentuate the street's character and not detract. The intersections of 4th and Beckett, 4th

and Elm, Front and Mill, and all Market Street intersections are key nodes. New development at these locations should be iconic and memorable representing Kimmswick's essential qualities.

A few strategies could be employed to guarantee a particular architectural quality:

- Kimmswick may consider an architecture review board to filter plans within the commercial areas submitted to the City. This would verify quality in new development to sustain the existing historic heritage and allow appropriate variances.
- Kimmswick should consider programs and efforts to help fend off deterioration. One program could be a grant offered by the City and Historical Society to help eligible property owners of historic



**INFILL DEVELOPMENT:** Kimmswick did not give clear guidance on infill development character. More engagement is needed.

structures keep up basic maintenance.

- Ordinances for repairs and renovations of historic structures could be established to retain historic character.
- The established historic district makes historic tax credits (state and national) available to contributing properties, a valuable development and improvement incentive.
- Developed specific design guidance prior to issuing an RFP for any development.

### Historic Character

Kimmswick has many building styles including simple frontier brick or wood buildings, clapboard, Victorian, Tudor-esque log and mortar, steel, and log and mortar. Considering the relocation of historic structures from the region to Kimmswick, a strict historic period can not be imposed. As history continues, historic architectural character considered historic from the local Mississippi region should be respected.

### Building Heights

Historically, building heights descended from two to three-stories on Front Street to one-story single family residences near Market and 4th Street when Front and Market was the community's entry.

This character holds true today; however, the entry is on the other side of town. Kimmswick's Village Green is the new heart of town, and the new town entry is 4th and Beckett. Infill at this intersection should stand one and one-half to two stories in height complimenting existing adjacent buildings and face west welcoming visitors. Infill bordering the Village Green should face the park. Building heights may vary

from one to three stories high. All edges of the park should have an active edge.

Along Market, infill should complement the size and scale of adjacent buildings typically one and two stories. The same principle should be applied to the other primary and secondary commercial corridors.

All new construction in primary and secondary commercial should be constructed on the right-of-way unless accessibility, access, or another circumstance require a variance. Distances separating buildings should be minimized with the exception of creating space for outdoor dining.

### Building Facades & Street Edge

Building facades should be open and inviting. Shop windows should be maximized within aesthetic reason. Windows can be high-efficiency modern windows, but should take on a historic character with multiple panes, wood or cast iron finishes, simple stained glass or other historic character. Doors should have windows at minimum on the top half. Sign styles should compliment the facade and store personality. Shutters, awnings, hanging plants, and other ornaments are recommended.

Outdoor dining areas should be encouraged as people attract people. A space sixteen to twenty feet from the on-street parking edge provides ample room street front activity.

Where gaps larger than sixteen feet occur between buildings on Market Street, trees, fencing or other architectural elements eight feet or taller are recommended. These architectural elements should add to the active edge with benches, art, history/interpretive signage or other unique features.

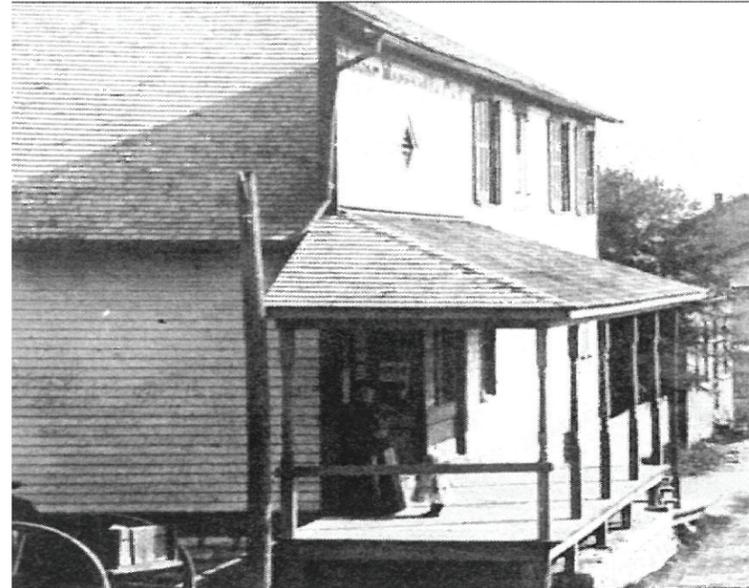


Photo Montage: Historic buildings from multiple time periods from throughout the region add to Kimmswick's eclectic charm and appeal.

## Non-building Architectural Elements

Architectural elements and other vertical elements are the most impactful features for establishing an aesthetic character. The design intent for the architectural elements in the Great Streets plan aims to support Kimmswick's historic and rural character. Natural materials like wood, brick, stone and metal connect people to a simpler time.

Wood elements can be natural or a quality wood replicate material dependent on the application, budget, and labor. Natural, stained, or white finishes should be used.

All pavers should be antique red with rustic color variation resembling natural clay brick. Concrete bricks are acceptable. Gravel areas should be 3/8 inch minus. Colored stamped concrete should resemble brick. Pavement marking other than white should be red utilizing the most durable materials.

Elements like guard rails, hand rails, signage, furnishings, lighting, and other metal construction should have a black or deep bronze finish. Historic detail and character is recommended.

Stones and boulders should match local limestone with rough snapped or chipped finish. Sizes should be proportional to each application.

Each pavilion should be architecturally unique fitting into the different settings as well as a unique name preferably playing off the heritage or a local/regional story..



**ENTRY GATEWAY & FENCING:** Simple Construction, Natural Wood



**VILLAGE GREEN GAZEBO:** Civic Victorian Pavilion



**EMBELLISHED BRIDGE:** Wood Veneer & Railing, Wood/Metal Light Posts



**FENCE & INTEGRAL BENCH:** Painted or Natural Wood Finish



**STORMWATER DECK:** Natural Wood Finish Deck, Deck Rail & Guard Rail



**MARKET PAVILION & DECK:** Unique Pavilion, Natural Wood Finish Deck

# STREET TYPOLOGY

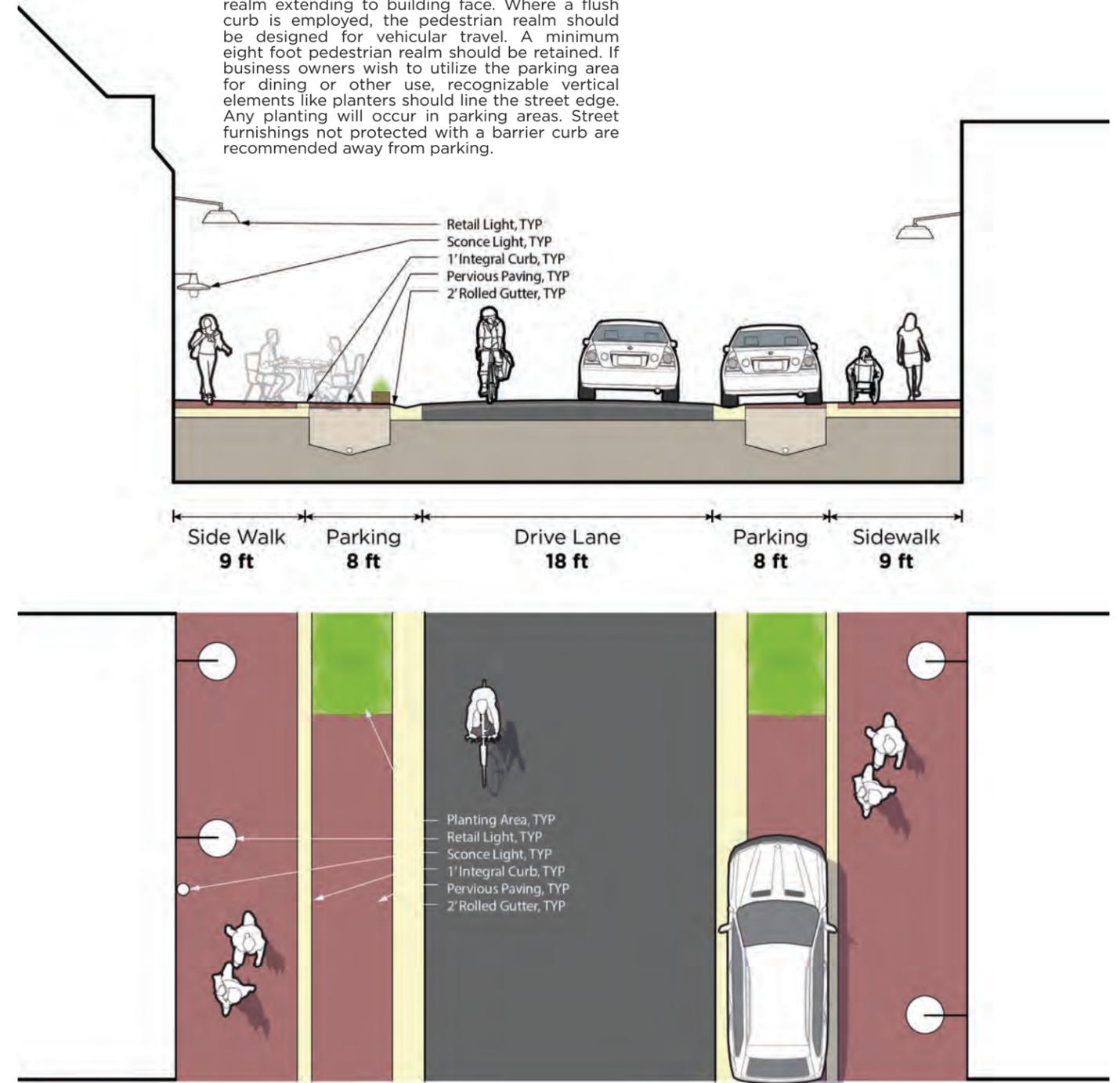
Street typology refers to the variation in typical street character and design dependent on the setting. Guidance for street types is provided for Highway 61/67, Highway K, and the streets within Kimmswick.



**MARKET STREET:** Antique Brick Paver Parking & Walk, Concrete Flush Curbing, Asphalt Roadway

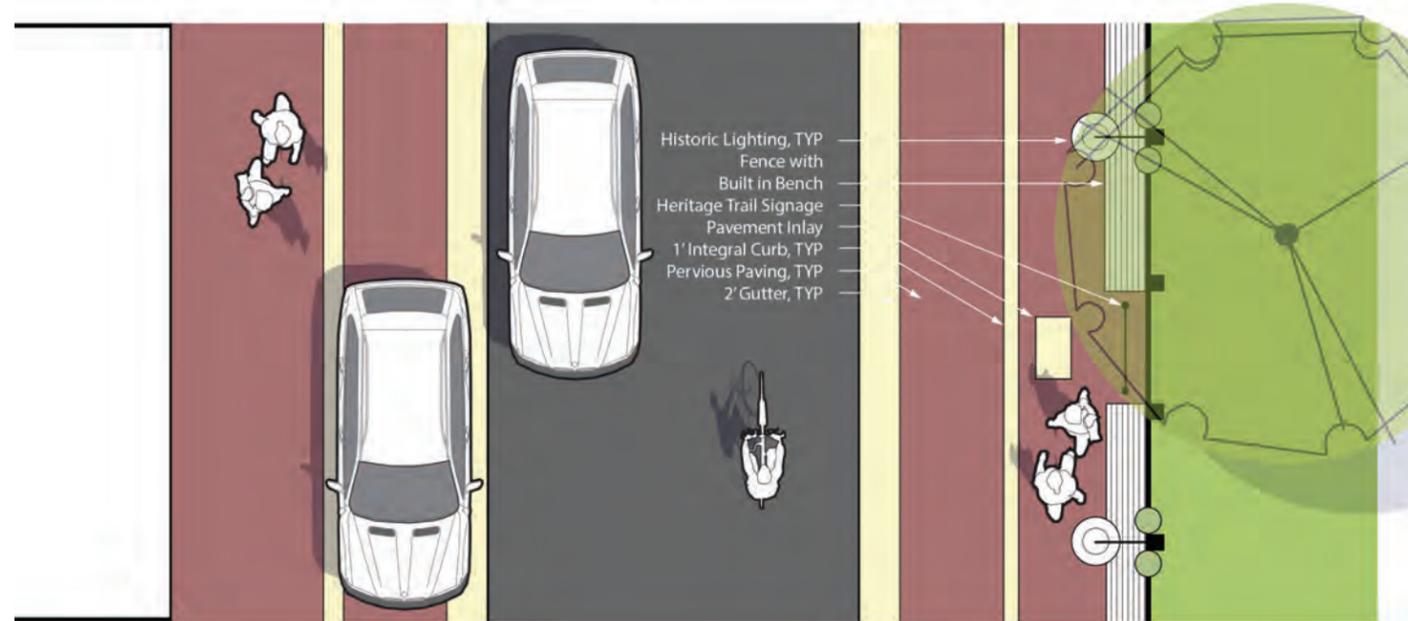
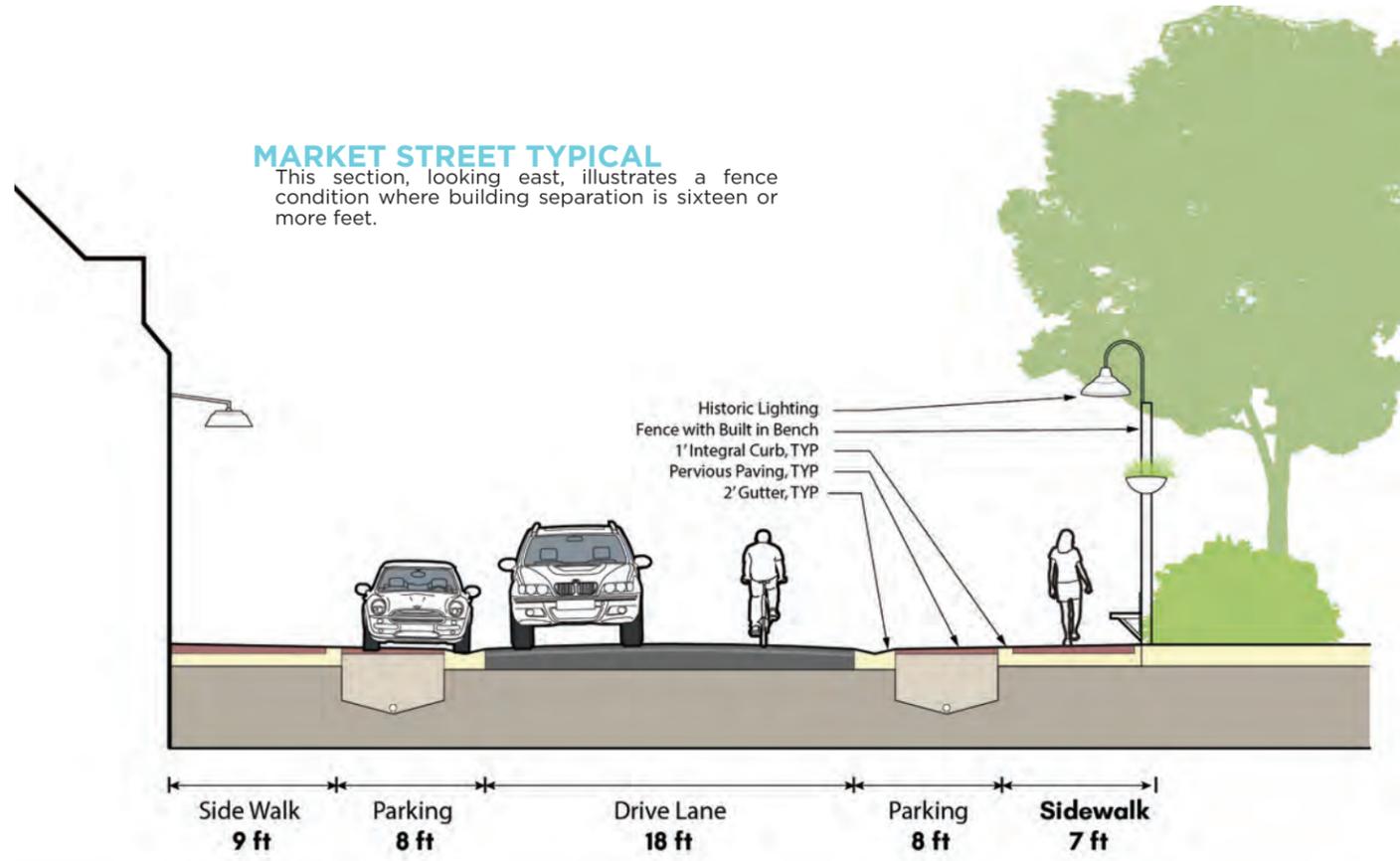
## MARKET STREET TYPICAL

This section, looking east, illustrates the pedestrian realm extending to building face. Where a flush curb is employed, the pedestrian realm should be designed for vehicular travel. A minimum eight foot pedestrian realm should be retained. If business owners wish to utilize the parking area for dining or other use, recognizable vertical elements like planters should line the street edge. Any planting will occur in parking areas. Street furnishings not protected with a barrier curb are recommended away from parking.



**MARKET STREET TYPICAL**

This section, looking east, illustrates a fence condition where building separation is sixteen or more feet.

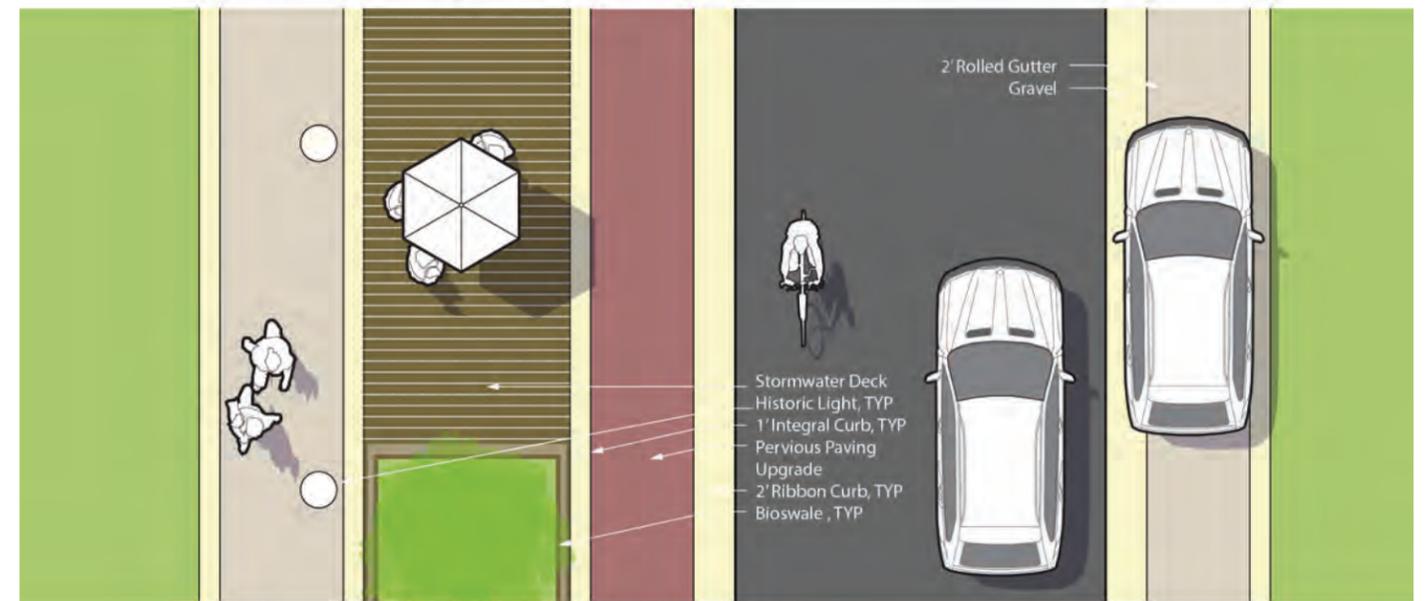
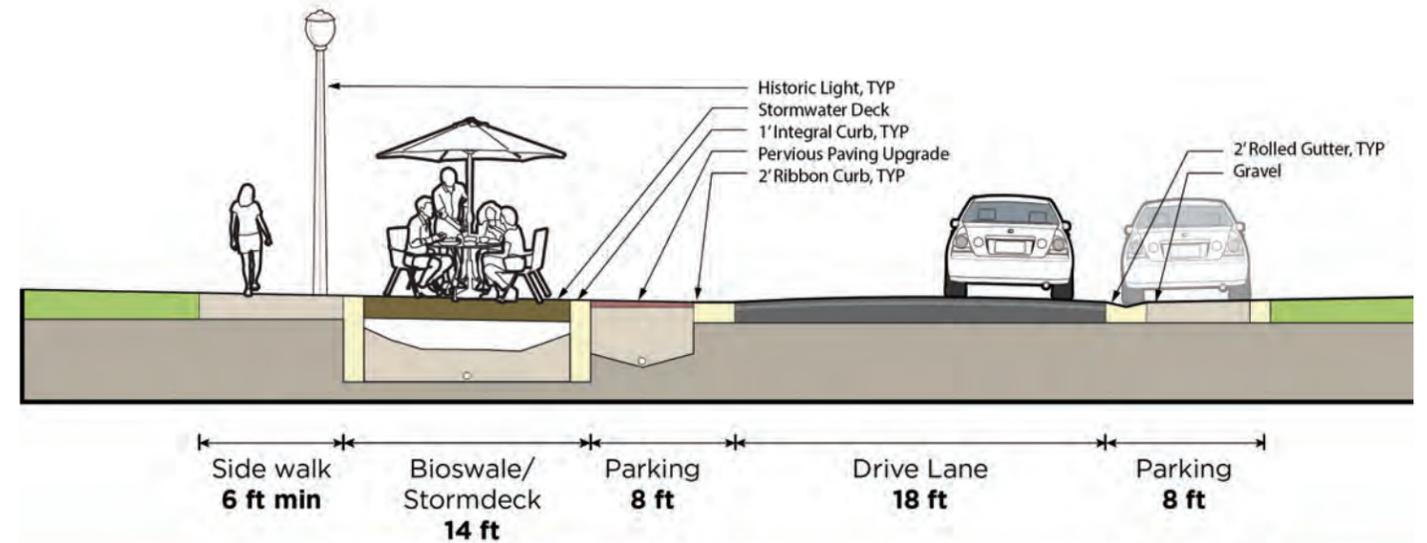




**3rd STREET:** Concrete Rolled Edge, Wood Deck, Gravel/Brick Paver Parking, Asphalt Roadway

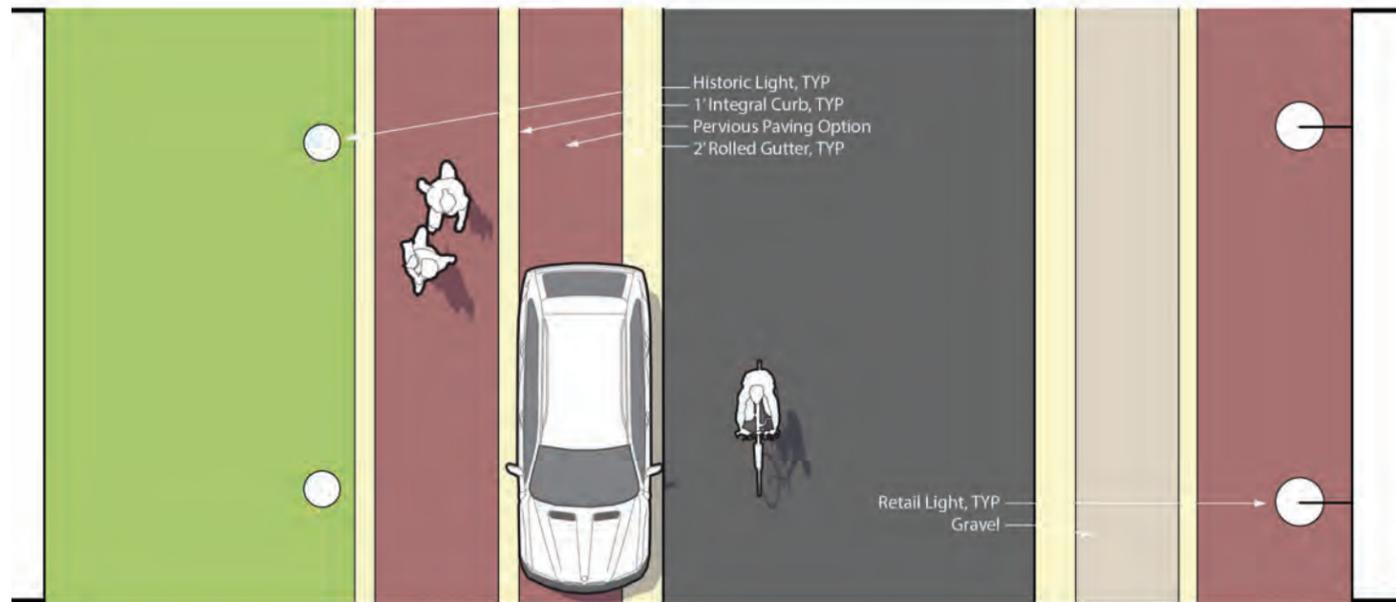
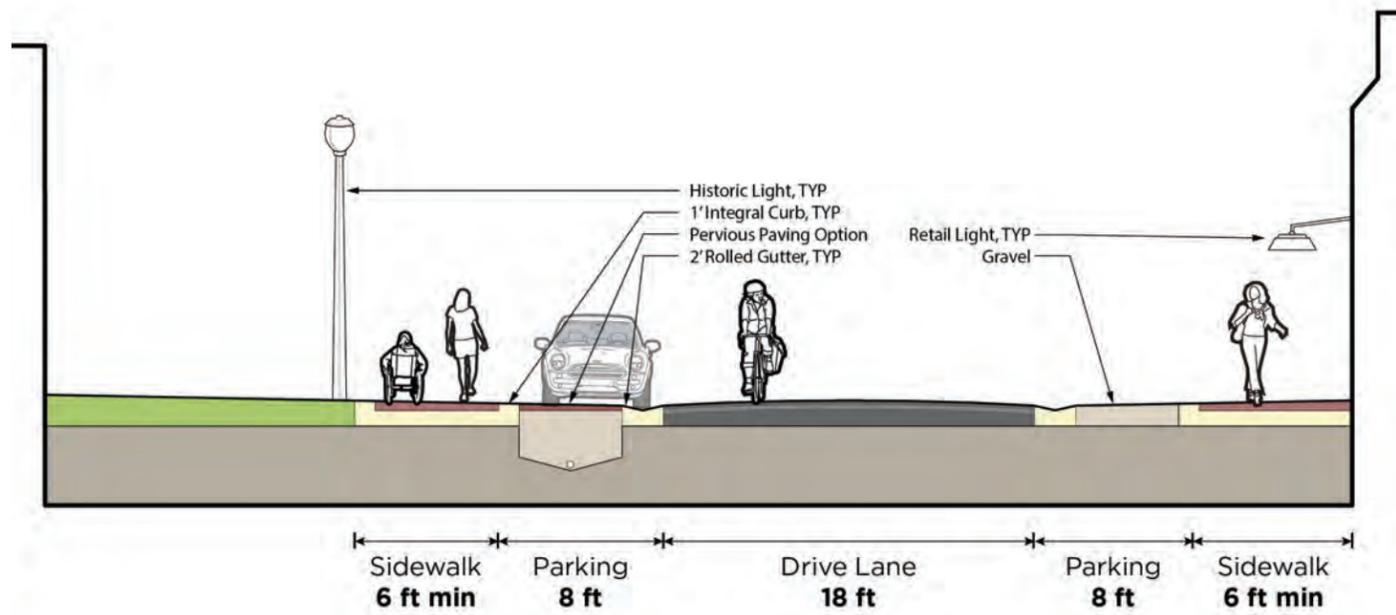
### 3RD STREET TYPICAL

This section, looking north, illustrates a typical stormwater deck's horizontal dimensions. This application may be employed on Elm Street. Adjacent parking may be gravel or pavers. Pervious pavers would ensure ADA accessibility from parking to the deck and increase stormwater management. Stormwater deck section is only illustrative and not for construction.



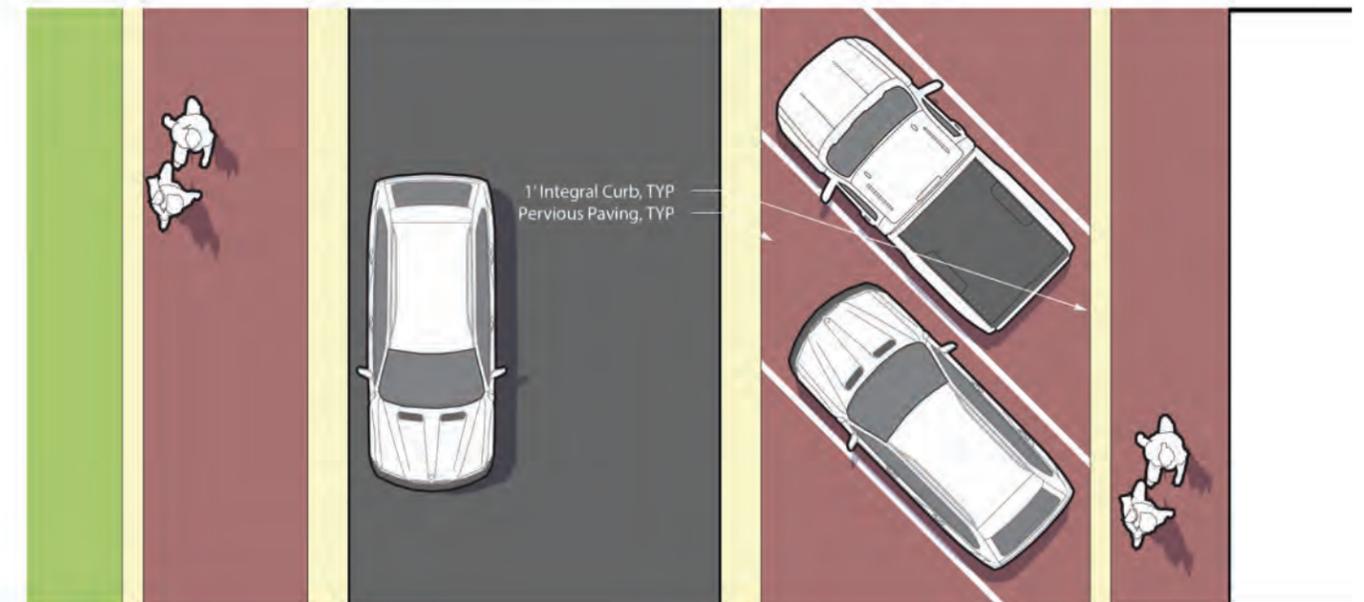
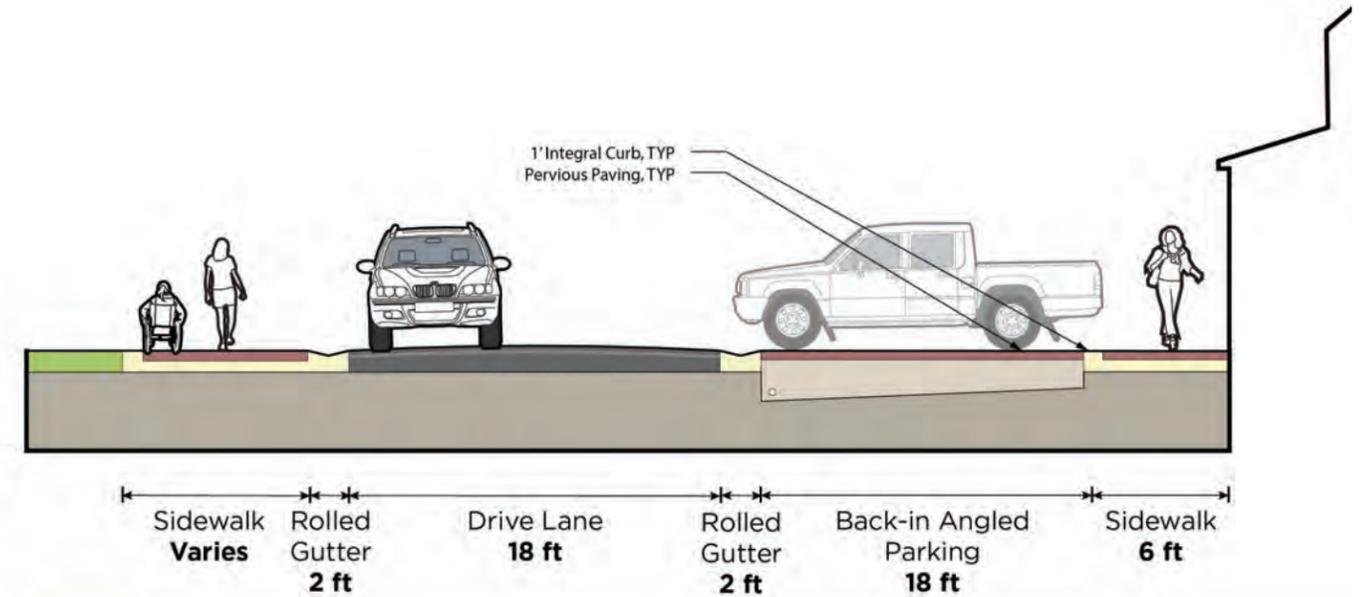
## 2ND STREET TYPICAL

This section, looking north, illustrates a condition with the building set back from the ROW and a condition with the building adjacent the ROW.



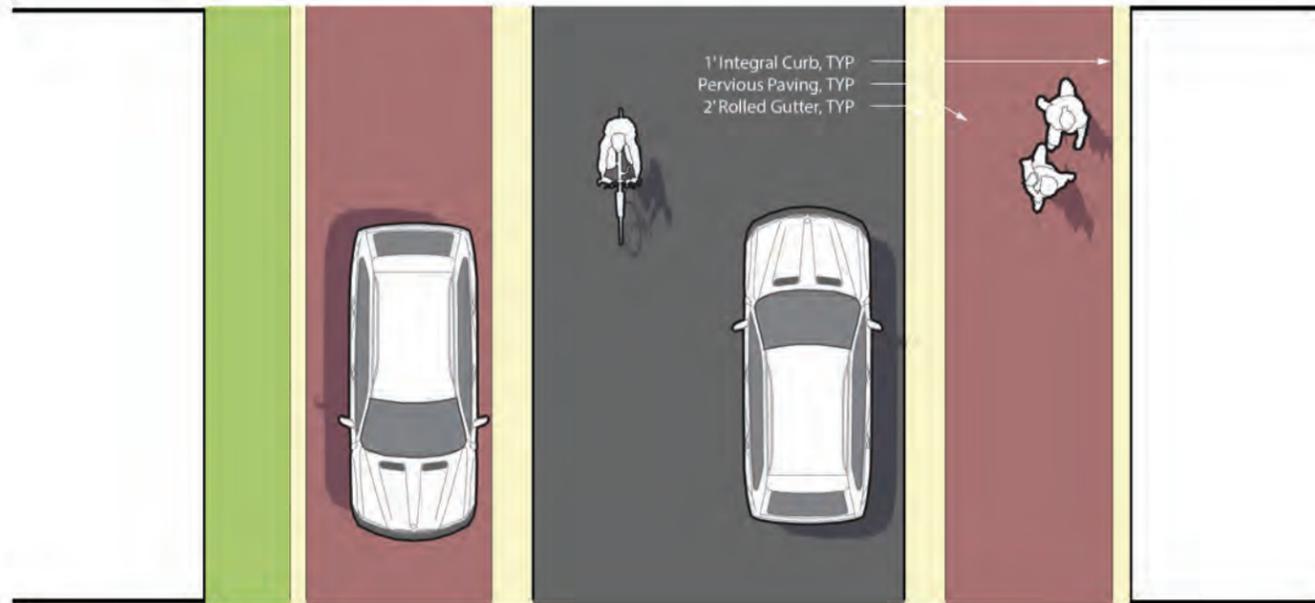
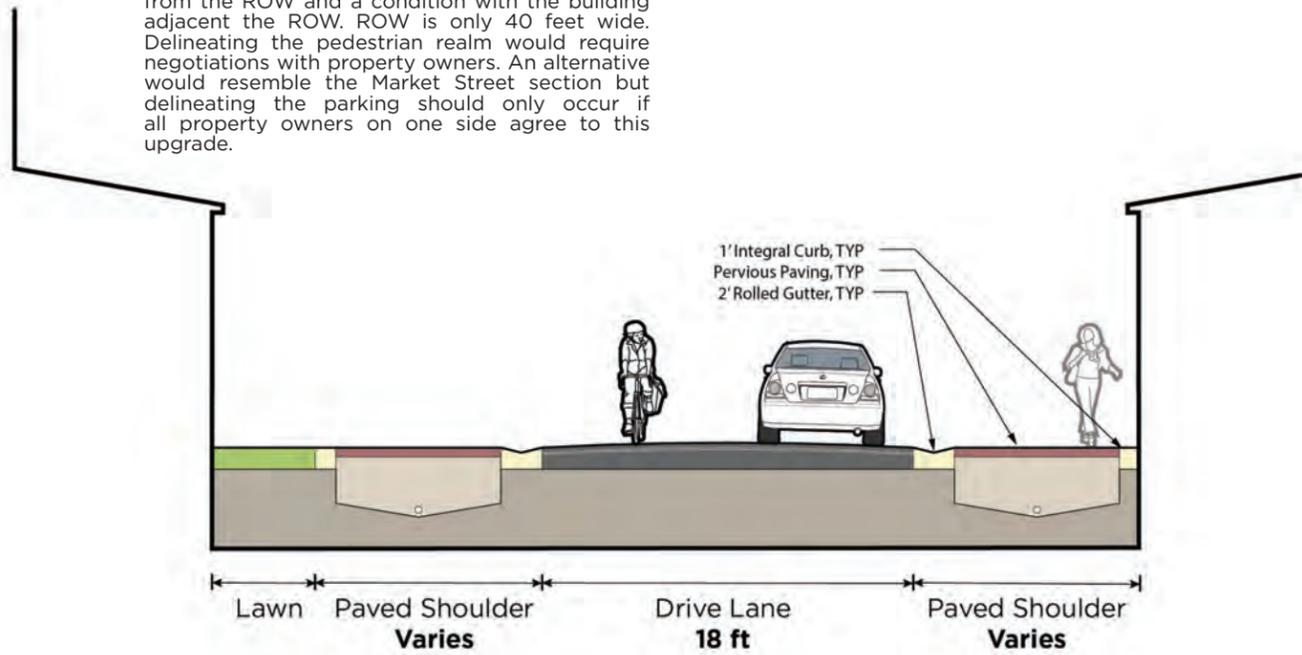
## MILL STREET TYPICAL

This section, looking east, illustrates a condition with the building set back from the ROW and a condition with the building adjacent the ROW. Back-in angled parking is recommended for safety accounting for pedestrians and bicyclists in the roadway.



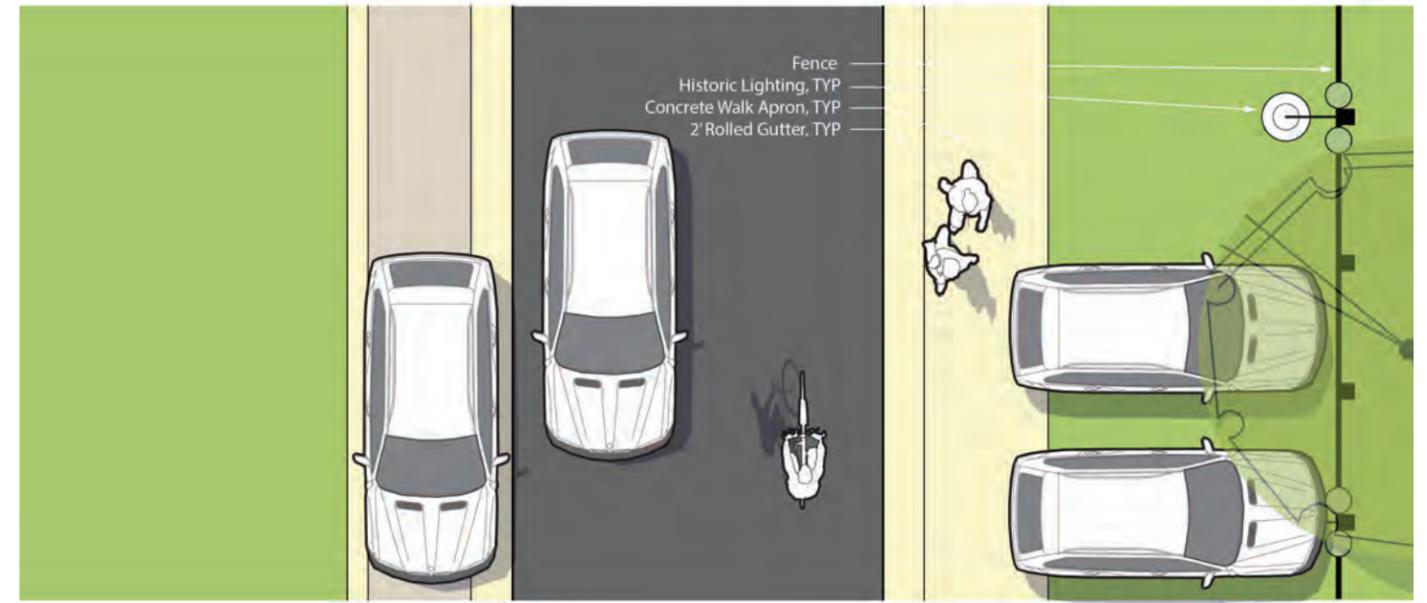
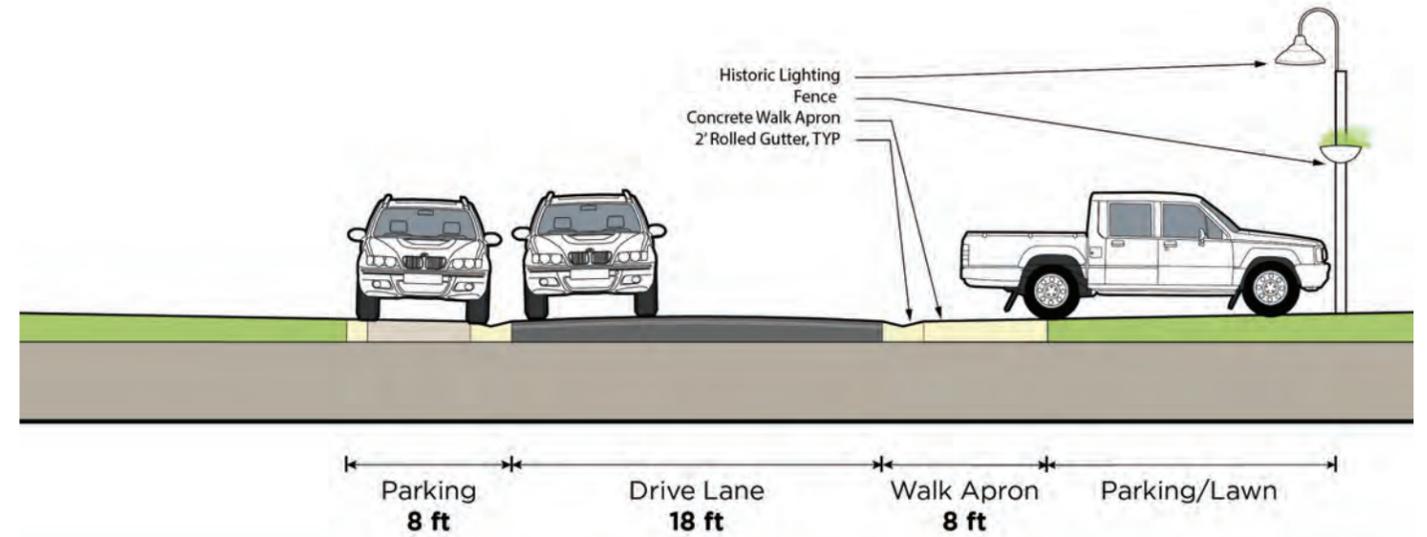
**SOUTH FRONT STREET TYPICAL**

This section south of Market, looking north, illustrates a condition with the building set back from the ROW and a condition with the building adjacent the ROW. ROW is only 40 feet wide. Delineating the pedestrian realm would require negotiations with property owners. An alternative would resemble the Market Street section but delineating the parking should only occur if all property owners on one side agree to this upgrade.



**NORTH FRONT STREET TYPICAL**

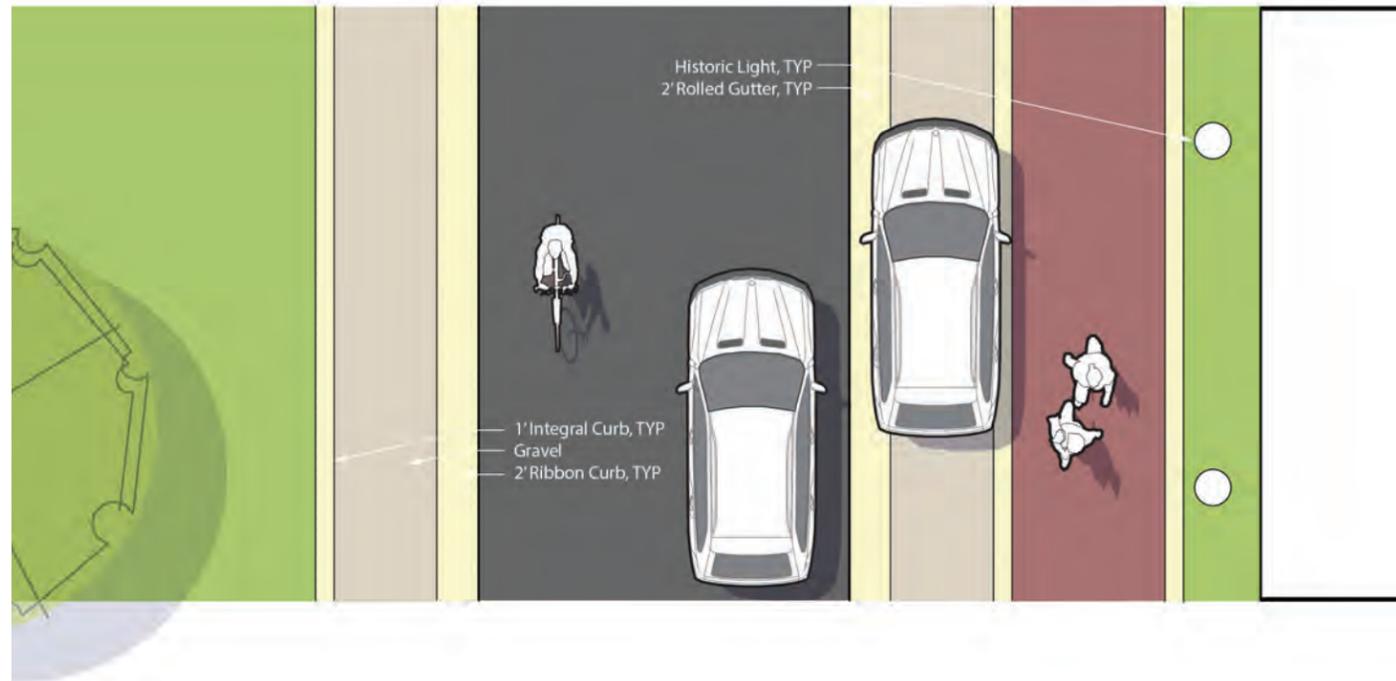
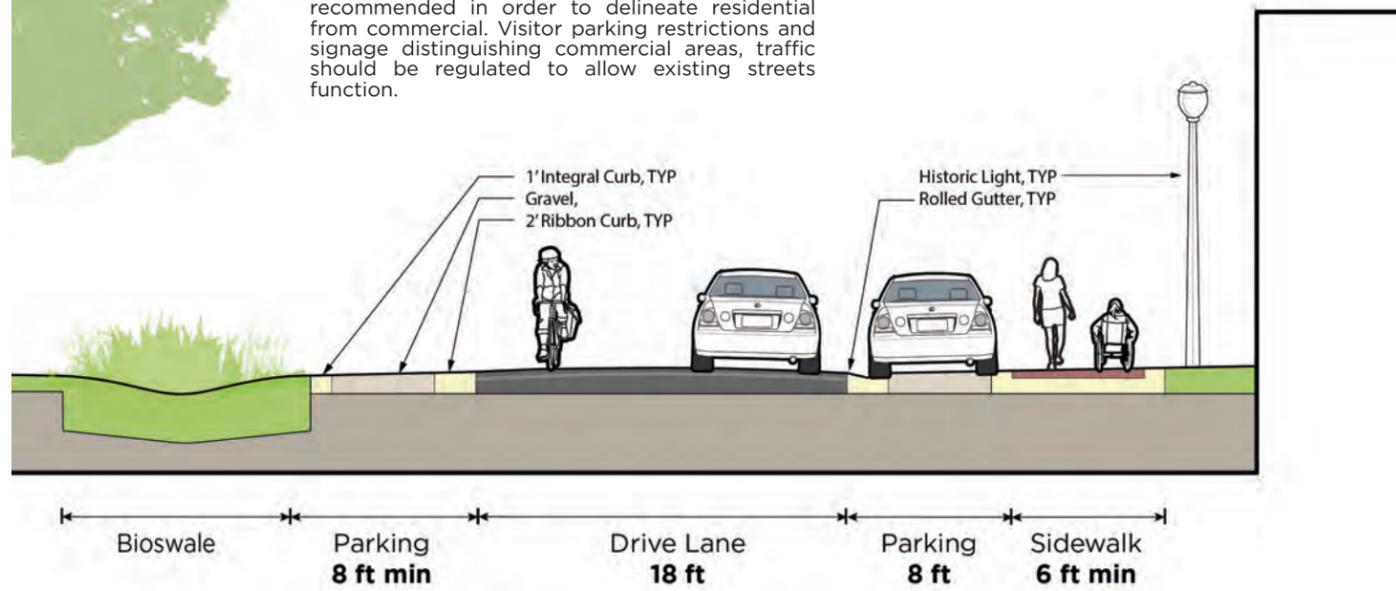
This section north of Market, looking north, illustrates the residential condition west and parking east. The walk adjacent the east curb should be designed for vehicular traffic.



### ELM STREET TYPICAL

This section illustrates a bioswale roadway edge and one without a bioswale. Bioswales should be treated as aesthetic features with boulders and optional landscape.

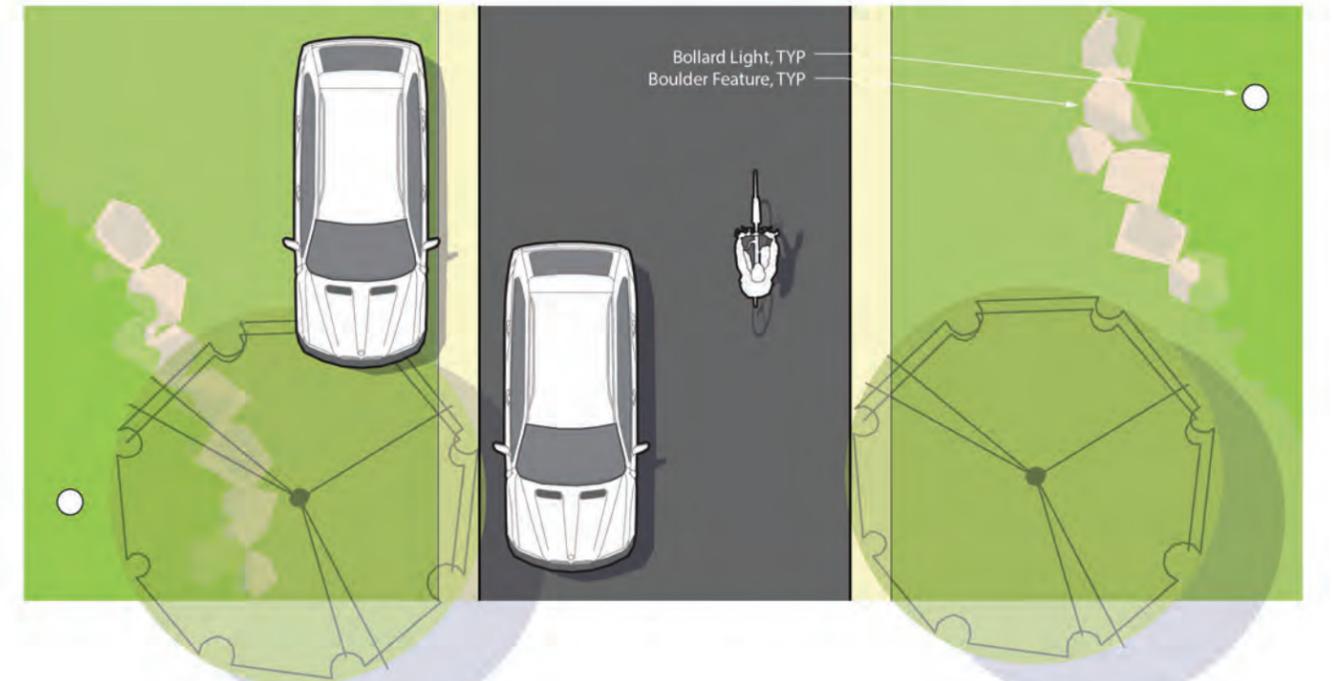
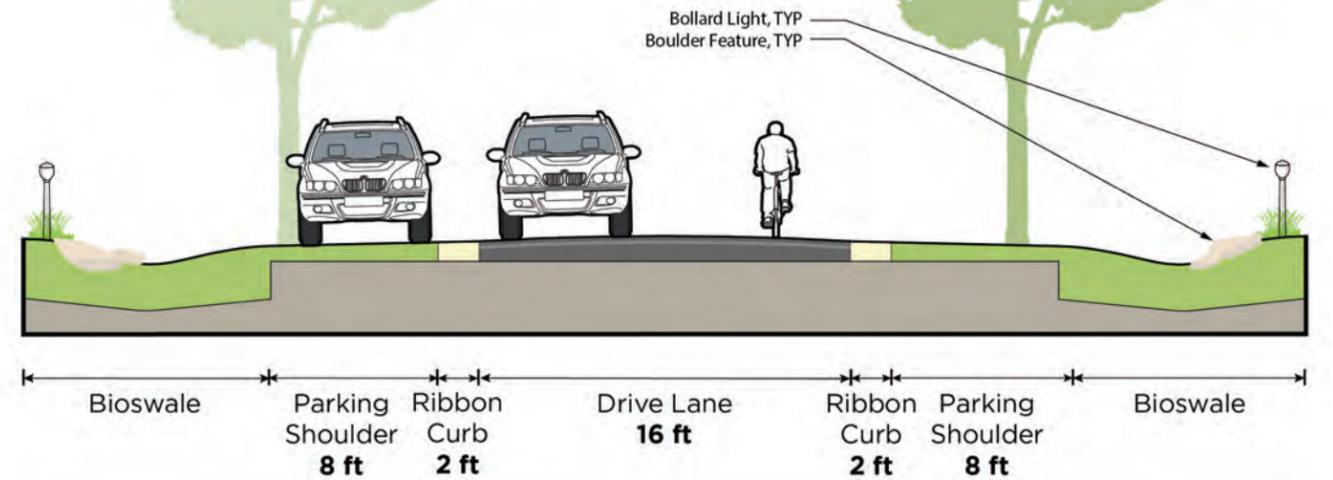
The typical ROW is 50 feet. Sidewalks are not recommended in order to delineate residential from commercial. Visitor parking restrictions and signage distinguishing commercial areas, traffic should be regulated to allow existing streets function.



### RESIDENTIAL STREET TYPICAL

This section illustrates a bioswale roadway edge and one without a bioswale. Bioswales should be treated as aesthetic features with boulders and optional landscape.

The typical ROW is 50 feet. Sidewalks are not recommended to delineate residential from commercial. Visitor parking restrictions and signage distinguishing commercial areas, traffic should be regulated to allow existing streets function.

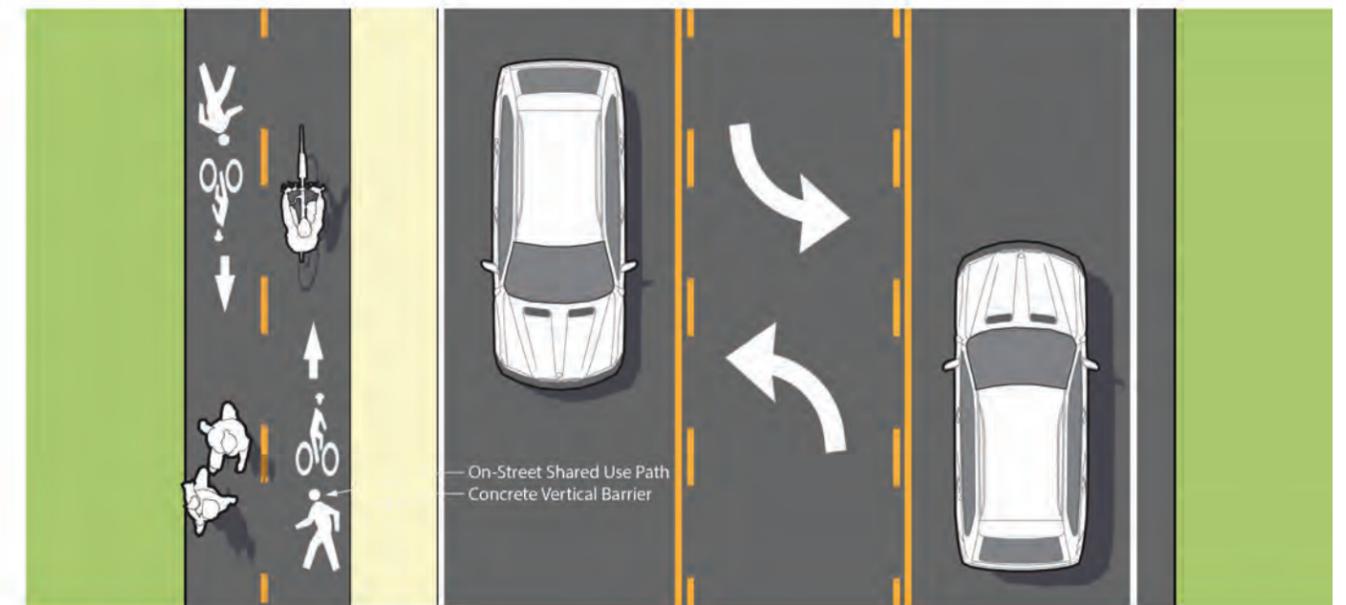
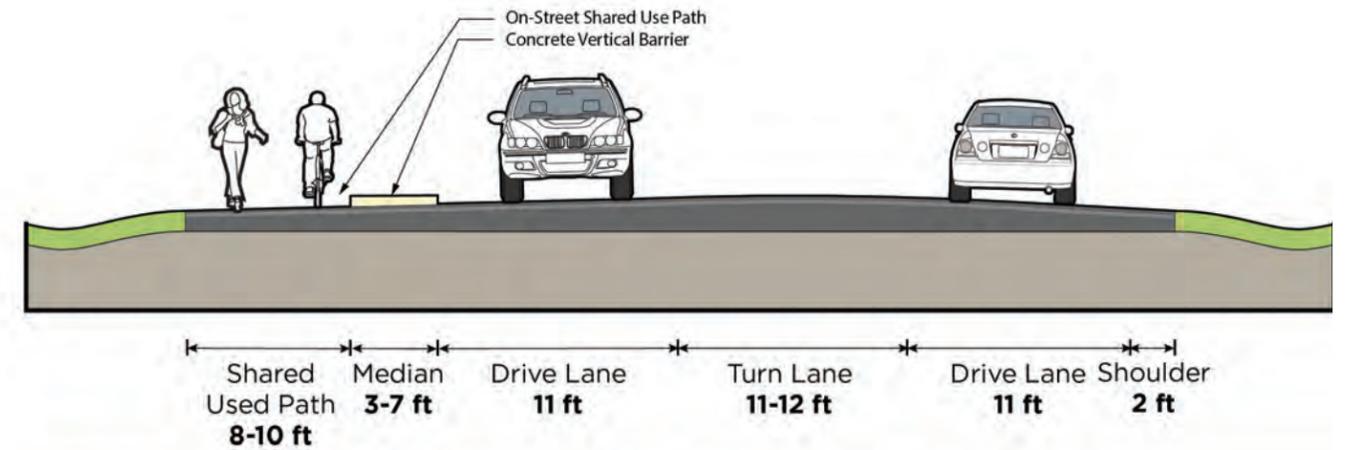




**HIGHWAY 61/67:** Asphalt Roadway, Doweled on Median or Modular Vertical Barrier

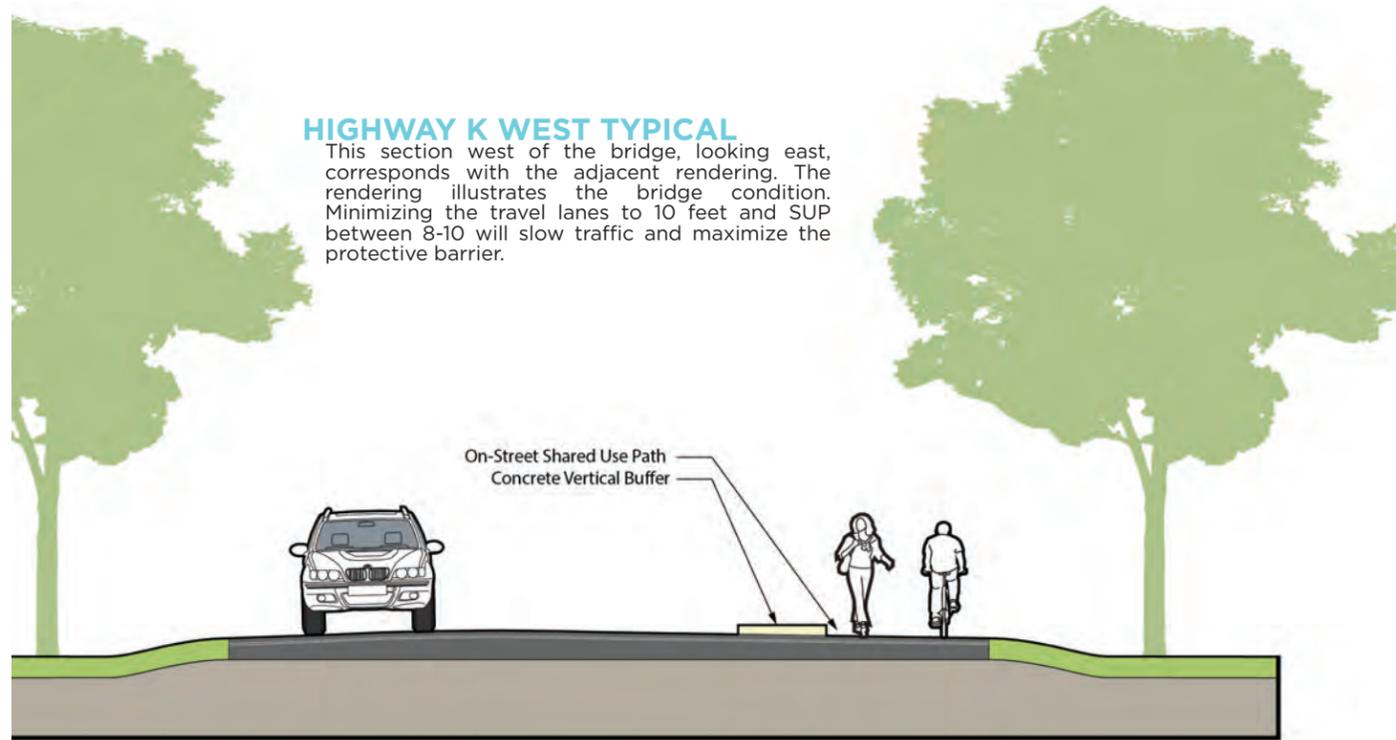
**HIGHWAY 61/67 TYPICAL**

Kimmswick, Imperial, and Windsor School District should advocate a road diet with a minimum 30 mph speed limit. The buffer between the shared use path and roadway should be maximized. Should existing travel lanes remain or increase, a minimum 7 foot buffer is recommended. Lighting along the SUP is also recommended. Section looks south.

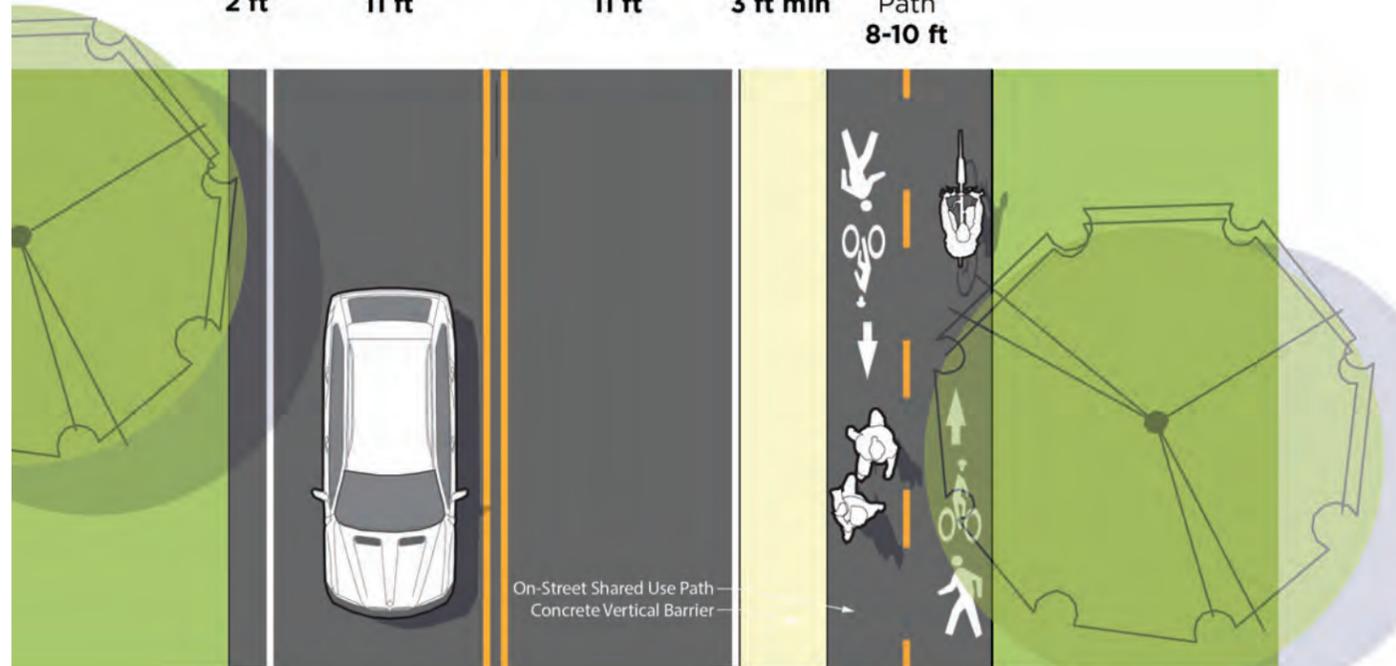


### HIGHWAY K WEST TYPICAL

This section west of the bridge, looking east, corresponds with the adjacent rendering. The rendering illustrates the bridge condition. Minimizing the travel lanes to 10 feet and SUP between 8-10 will slow traffic and maximize the protective barrier.



Shoulder 2 ft Drive Lane 11 ft Drive Lane 11 ft Median Shared Use Path 3 ft min 8-10 ft



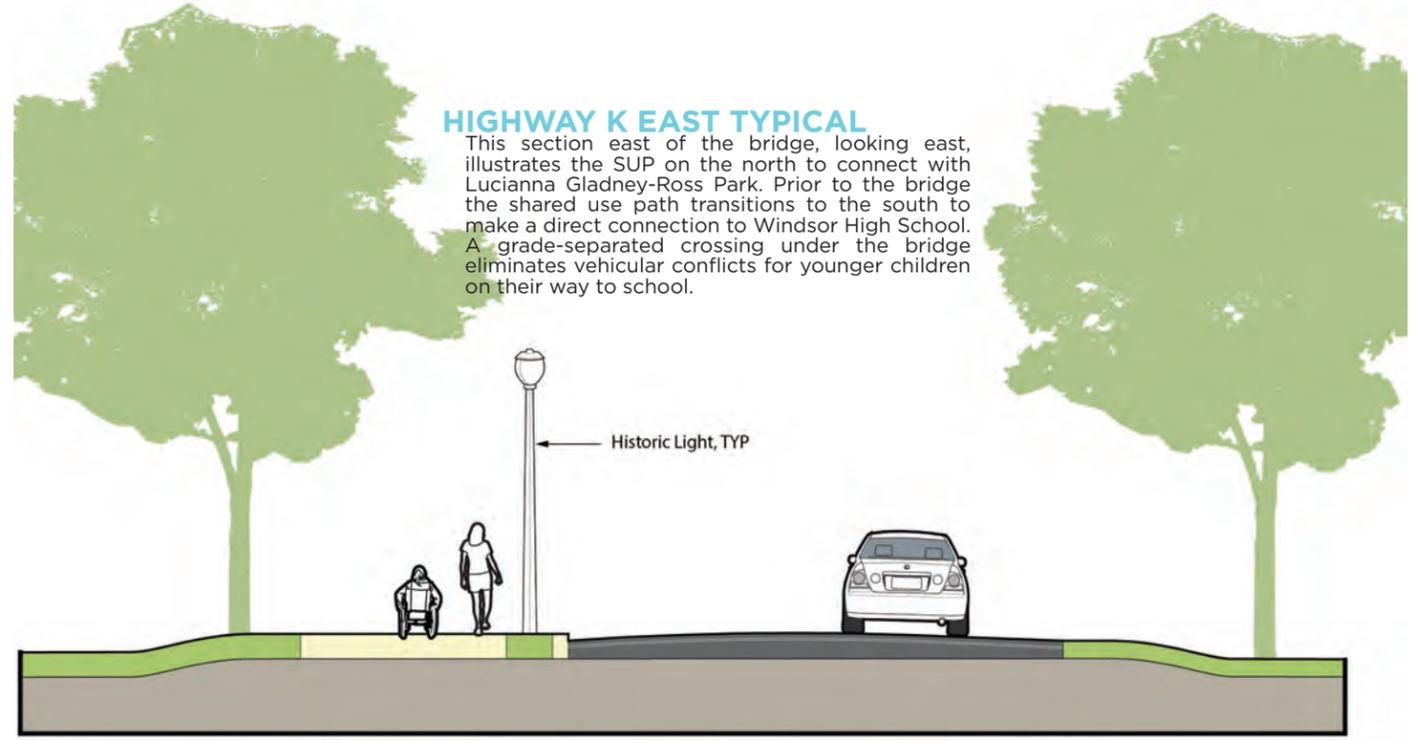
HIGHWAY K BRIDGE: Existing Bridge, Doweled on Stamped Colored Concrete Median, MMA SUP



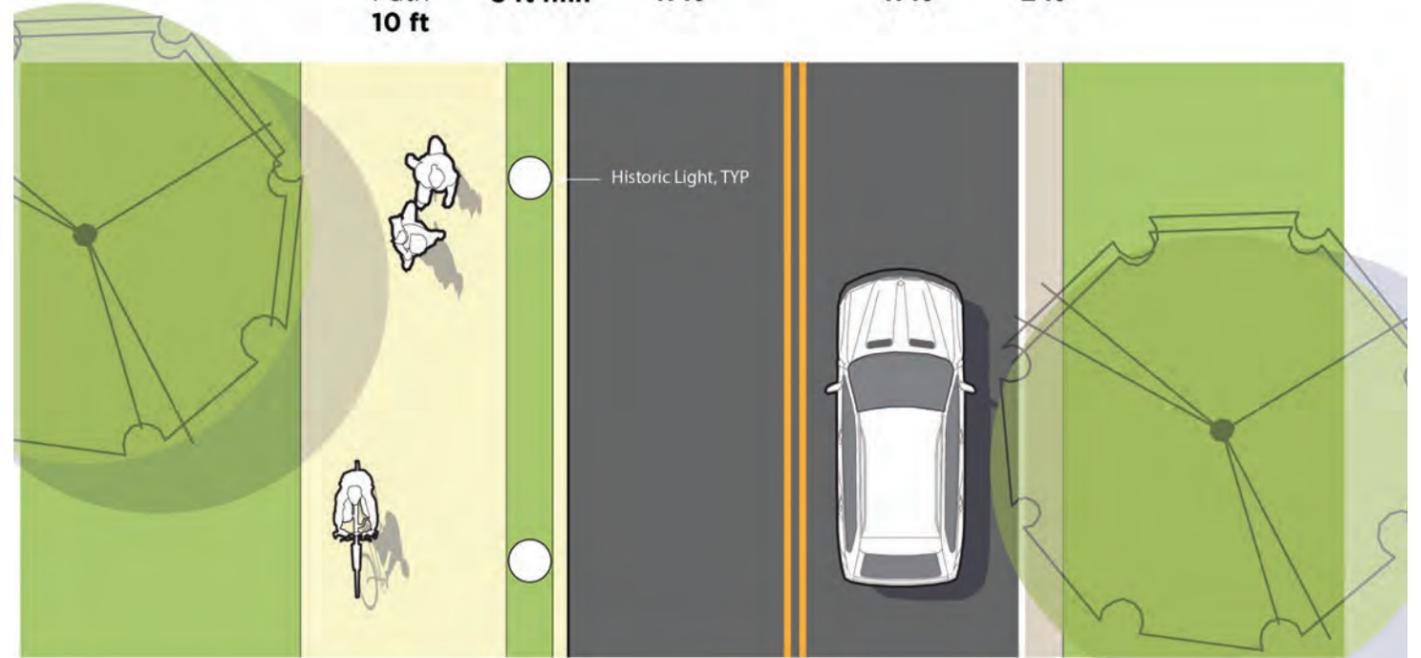
HIGHWAY K EAST: Gravel/Ridged Pavement SUP, Tree Lawn, Asphalt Roadway

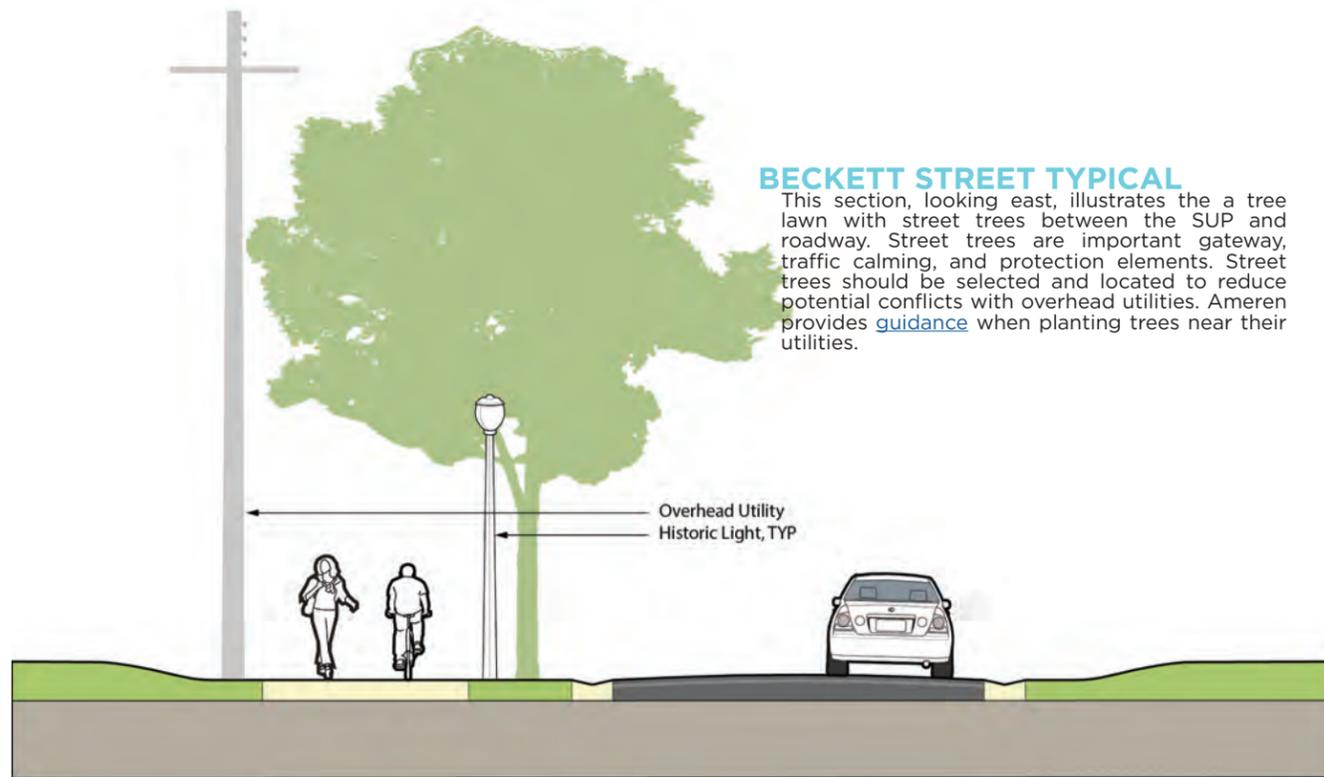
### HIGHWAY K EAST TYPICAL

This section east of the bridge, looking east, illustrates the SUP on the north to connect with Lucianna Gladney-Ross Park. Prior to the bridge the shared use path transitions to the south to make a direct connection to Windsor High School. A grade-separated crossing under the bridge eliminates vehicular conflicts for younger children on their way to school.



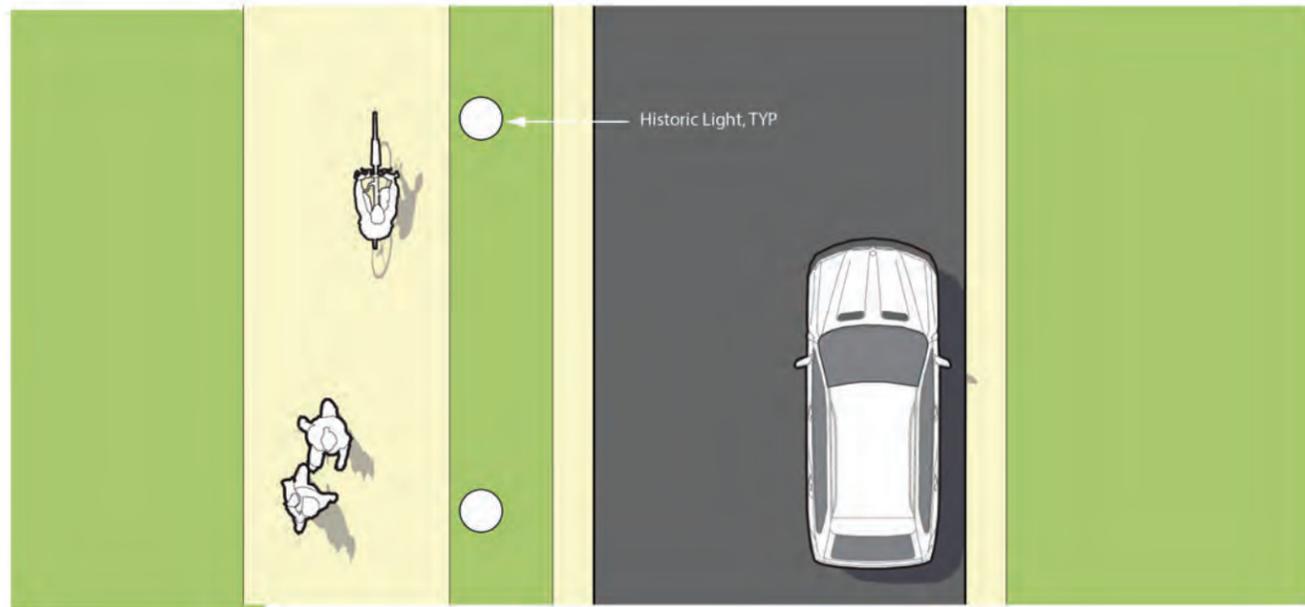
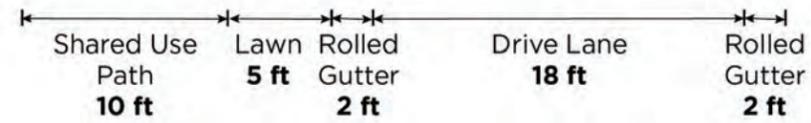
Shared Use Path 10 ft	Lawn 3 ft min	Drive Lane 11 ft	Drive Lane Shoulder 11 ft	2 ft
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**BECKETT STREET TYPICAL**

This section, looking east, illustrates the a tree lawn with street trees between the SUP and roadway. Street trees are important gateway, traffic calming, and protection elements. Street trees should be selected and located to reduce potential conflicts with overhead utilities. Ameren provides [guidance](#) when planting trees near their utilities.



**BECKETT STREET:** Gravel/Ridged Pavement SUP, Tree Lawn, Asphalt Roadway

# LIGHTING

Kimmswick Great Streets Plan recommends utilizing municipal street lighting as well as easy to maintain exterior lighting. This approach reduces capital, maintenance and operation cost on the City. The rural night sky should be essential to lighting design in Kimmswick. Current illumination standards should apply. The following table outlines recommended illumination levels.

ILLUMINATION LEVEL STANDARDS	
Commercial pedestrian realm and bicycle trails with vehicle component	1.3
Commercial pedestrian realm and bicycle trails without vehicle component	0.65
Non-critical trails	No lighting
Residential Area Lighting	Security Silhouette



Primary Pedestrian Light Example Application

## Primary Pedestrian Light



Example Historic "Victorian" Style Decorative Pole-Mounted Lamp

- Utilize as primary pedestrian light at intersections, Village Green, and appropriate locations
- Dark Sky compliant, high-efficiency LED full cut-off lamp
- Black or bronze finish
- All primary pedestrian street light lamps and poles should be the same design which helps with consistent aesthetic and hardware maintenance
- Black high-tension concrete poles recommended to reduce maintenance and sustain flooding if necessary, 15 foot max light height
- Single or multiple pole mounts could be considered (single lamps reduce maintenance and operating costs)
- Waterproof wiring installed underground with tie boxes positioned to resist flooding
- Built-in weather-proof electric plug in for seasonal decorations



Secondary Pedestrian Street Light Example Application

## Secondary Pedestrian Street Light



Example Historic "Victorian" Style Decorative Bell Lamp with Arch Mast Arm Mount

- Utilize on wood post gateways and gateway features, bridge embellishments and other focal street light settings
- Dark Sky compliant, high-efficiency LED full cut-off lamp
- Black or bronze finish
- All primary pedestrian street light lamps and poles should be the same design which helps with consistent aesthetic and hardware maintenance
- Black high-tension concrete poles recommended to reduce maintenance and sustain flooding if necessary
- Single or multiple pole mounts could be considered (single lamps reduce maintenance and operating costs)
- Waterproof wiring installed underground with tie boxes positioned to resist flooding

## Secondary Pedestrian Bell Light



Example Historic/Industrial Style Basic Bell Lamp with Arch Mast Arm Mount

- Utilize on wood post on extended wooden fence posts or singular wood posts for secondary pedestrian lighting
- Recessed lighting to eliminate or dramatically reduce light pollution; Lamp should be compatible with locally available LED bulb
- Black or bronze finish
- All secondary pedestrian street light lamps and poles should be the same design and height which helps with consistent aesthetic and hardware maintenance
- Mount armature with bracket to wood post; height determined by fixture and design, minimum 10 foot/max 15 foot
- Wiring should be sourced underground to post; run stainless steel conduit through center or back side of post; conduit center on post side with equidistant fasteners and clean appearance



Secondary Pedestrian Bell Light Example Application

Street Light



Example Historic “Victorian” Style Decorative Bell Lamp with Mast Arm Mount

- Utilize at Highway 61/67 intersection, mast arm and light replacement in Kimmswick
- Same luminaire as Secondary Pedestrian Street Light
- Black or bronze finish
- Mount arm and luminaire to utility pole when replacing Kimmswick street lights.



Street Light Example Application

Retail Light



Example Historic/Industrial Style Basic Bell Lamp with Arm Mount

- Mount to retail establishments, pavilions, and structures
- Recessed lighting to eliminate or dramatically reduce light pollution; Lamp should be compatible with locally available LED bulb
- Black, bronze, metal finish integrating into building architecture, max 14 foot high
- Installation by professional electrician
- Sconces matching building character recommended for commercial entries



Retail Light Example Application

Residential Bollard Light



Example Historic “Victorian” Style Bollard Light

- Along streets in residential area away from travel and parking lanes; protect with landscape boulders
- Dark Sky compliant, high-efficiency LED full cut-off lamp; Lamp should be compatible with locally available LED bulb
- Black or bronze finish
- Bollard height max 42 inches, spacing to provide security silhouette lighting levels per product specifications

## VEGETATION

Vegetation is an essential aesthetic component in any place. Beautiful plantings, trees, and natural settings are memorable and attract people. Vegetation also provides essential services framing spaces, providing shade, recreation, and ecological functions supporting natural habitat.

Native vegetation has adapted to the regional ecosystem supporting other vegetation in community as well as providing habitat and nourishment for all native animals. Native vegetation should be utilized for a minimum 80 percent of installations. Non-native plantings should be used as accents for seasonal plantings or in planters. Non-natives could be utilized in bioswale plantings for structure or to enhance the aesthetic character. Any non-natives used should not be invasive or aggressive competitors.

For bioswale plant selection, St. Louis Metropolitan Sewer District has developed a plant selection matrix and design guidance in the [Landscape Guide for Stormwater Best Management Practice Design](#).

[Grow Native](#), sponsored by the Missouri Prairie Foundation, has a native plant database and resource guide for native tree, shrub, and perennial selection not associated with stormwater best management practices.

Missouri Botanical Garden sponsors [Biodiverse City](#) which provides resources for integrating native habitat into a city environment.

Missouri Department of Conservation’s Tree Resource Improvement and Maintenance program provides education, installation, and maintenance assistance.

## FURNISHINGS

Furnishings are another essential element for creating places, spaces and unique identity.

Bench



Example Historic “Victorian” Style Bench

- Only one bench City standard
- Black frame with wood bench slats; wood does not retain heat like metal

Receptacle

Example Historic Style Receptacle



- One per block on each side of street near corner
- Black or Bronze Finish
- Commercial Grade lowers replacement and handles inevitable bang ups
- Consider incorporating branding

Bike Rack

Example Historic Style Bike Rack



- Black or Bronze two-point rack
- Consider incorporating branding

## WAYFINDING SIGNAGE

Wayfinding signage is essential to help visitors navigate the community. It can also establish an identity. Developing a signage “family” will contribute to Kimmswick’s character in specific situations. Creating branding and signage design guidelines should be developed using Manual on Uniform Traffic Control Devices (MUTCD) standards. Care should be taken to accommodate elderly visitors. Coordinate signage with planting. Signage should be down-lit where possible with historic style lighting. Locate signage where possible in well lit areas. No internal signage lighting should be allowed within Kimmswick to retain a historic character. Signage from agencies, organizations, or entities other than the City of Kimmswick or CID should follow signage guidelines to ensure a cohesive aesthetic character.

Four signage families engage visitors - Welcome Signage, Civic Signage, Heritage Signage, Riverfront Park Signage.

### Welcome Signage

This signage guides visitors to Kimmswick and welcomes them into the community. It includes I-55 promotional wayfinding, monument signs, and entry gateways.

### Civic Signage

This signage informs visitors about the Kimmswick. It includes wayfinding, pedestrian kiosks, and institutional signs.

### Heritage Signage

This signage tells Kimmswick’s story. It includes Heritage Trail trailhead signs, interpretive signs, and historic plaques.

### Riverfront Park Signage

This signage informs visitors about the riverfront and the park. It includes trailhead signs, educational signs, and wayfinding.





chapter

S



# apply ever after

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» The implementation strategy is where ideas become reality, vision takes shape. Practical, attainable, incremental steps ensure investments attain the goals set forward developing momentum to see the vision completed. This section lines out a comprehensive project outline, implementation schedule, initial phases, funding sources, and implementation cut sheets for individual projects to guide each step in the implementation process from fund raising to ribbon cutting.

## Implementation Strategy

The Implementation Strategy section illustrates in broad terms potential project impacts. It provides the reasoning for implementation priorities; describes initial phasing for flood management, public space capital investments, and economic development; and provides low cost demonstration project instructions which can be used to generate energy between planning, design and construction. These steps show the general end results and reasons for undertaking the projects in the specified order.

## Implementation Resources

The Implementation Resources section provides practical details and guidance for accomplishing individual projects in the context of the broad sweeping Kimmswick Great Streets plan. This section includes four main components:

1. funding sources for project implementation.
2. A project matrix that provides essential project details and relates individual projects plan goals.
3. An implementation schedule outlining project phasing. It outlines projects, the number of phases anticipated, project responsibilities, rough order of magnitude cost estimates, potential funding sources, the implementation strategy for each, identifies goals each project achieves, and lists items worth considering during implementation. Each cut sheet can support grant applications and serve as a reference guide throughout a project's duration.

# implementation strategy

» The desired outcome of any plan is to effect real positive change. Kimmswick's Great Streets planning process will create tangible assets from the project's outset. Garnering public support, developing project champions, and initiating beneficial relationships are as important as a good plan. This section addresses those assets.

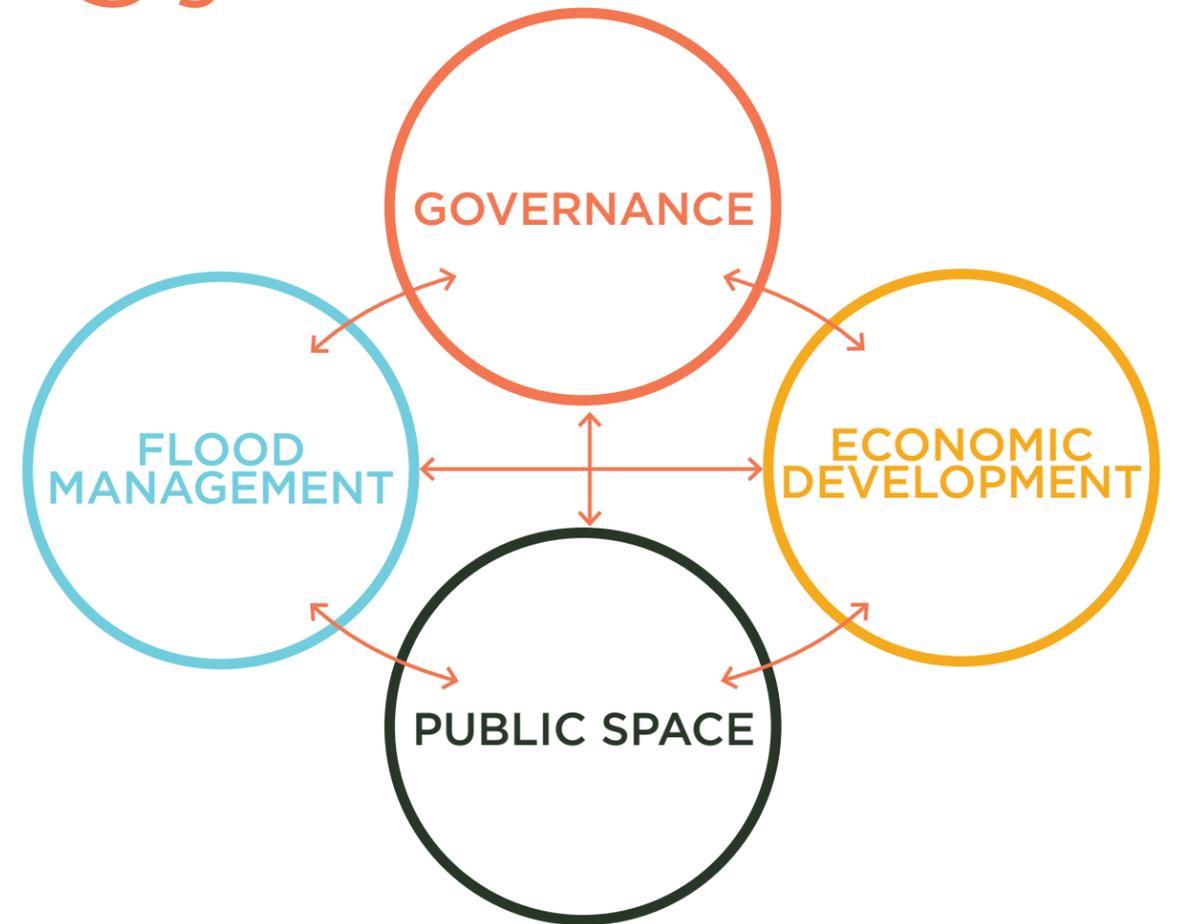
## IMPLEMENTATION INFLUENCE WEB

The four planning areas revealed through the planning process - Flood Management & Environment; Public Space; Economic Development, Programs & Events; and Governance - are not linear A, B, C, D steps toward one final goal. Multiple projects define each planning area addressing a variety of issues and opportunities. Though some projects logically should be accomplished prior to beginning other projects, the implementation plan is dynamic requiring attention to revenue, potential funding opportunities, and ways to leverage work by local and regional partners to the advantage of the whole community.

The Implementation Strategy provides one potential implementation time line including construction projects, economic development strategies, programs and events, and a governance framework. Taken together, this implementation time line charts a path forward, and, as opportunities

arise, priorities will shift. Keeping the community's vision and goals central to decision making is critical.

This section outlines a framework for making decisions in keeping with the project vision and goals. Initial phasing for each planning area defines tangible outcomes for the greatest impact. Affordable demonstration projects generate immediate positive community energy necessary to garner public support and the will to get projects on the ground. Defined funding opportunities emphasize the resources project partners can leverage toward higher cost improvements. A project matrix and time line illustrate the entire implementation strategy in simple two-page charts. Finally, project cut sheets provide the detail needed to plan each step, promote each project, budget and seek funding, and provide design guidance. The implementation strategy is structured as a flexible, living document.



**IMPLEMENTATION INFLUENCE WEB:** There are four distinct planning areas; however, each is intrinsically connected to each of the other three.



Photo: Kimmswick has been able to survive on sheer perseverance. Everyone pitches in when it's needed most.

# PHASING

Continued community and stakeholder engagement revealed Kimmswick’s priorities. These priorities were continually refined each Work Session. Sifted through the lens of the project’s vision and goals at public work shops, stakeholder advisory committee meetings, technical advisory committees meetings, and regular project partner review, the project team narrowed over 130 potential project ideas to the project elements listed in the phasing table pictured to the right.

As outlined in Chapter 2 “Path Traveled,” continual priority polling narrowed the field of project ideas. Ranked from one to four, with four being most important, all project elements in the right table scored 3 or above and are shown with highest ranking at the top continuing in descending order. The Heritage Trail was one exception, receiving a score of 2.9. The Advisory Committee clarified the “lower” ranking noting the trail’s importance, but compared with other more pressing community needs, the trail was not a priority. The community clearly expressed Kimmswick’s history as central to their identity. The market and design recommendations strongly propose incorporating the trail to develop a greater visitor bond through story telling and to provide an activity element that moves visitor’s throughout Kimmswick and introduces them to places to which they may never have ventured. For these reasons the Heritage Trail holds a key position and is incorporated into multiple projects.

The project list has been broken into three phases based on the priority ranking. Immediate Impact projects address Kimmswick’s most pressing concerns, namely flood protection. Planned for implementation within three to five years, addressing flooding not only protects the

community from potential physical danger, it also protects Kimmswick from the severe financial and resource hits, defending against the imminent potential to lose half the annual budget. The City made it clear that no infrastructure capital investments will be made until stormwater is addressed. With less financial and investment risk, revenue becomes more stable for capital improvements. Core Projects, planned for implementation between four and twelve years, are central to the Kimmswick Great Streets project vision. They prepare the way for a greater quality of life, increased prosperity, and a more secure future. The final projects are Icing on the Cake. By the time construction begins on these elements, all is well and good in Kimmswick.

It is important to note that project prioritization is different than project phasing. While prioritization is a critical factor in developing an implementation schedule, funding availability, planned capital improvements, construction phasing, and other factors are also taken into consideration. As a result, some lower-ranked elements may be implemented before other elements that received a higher ranking. In addition, the City of Kimmswick and its community partners must exercise flexibility to be able to pursue opportunities as they arise.

To summarize, these elements represent the top projects, actions, legislation, and further planning studies the City of Kimmswick and the immediate surrounding area identified as important to their future. The elements may not be specifically listed as projects, but all are incorporated in one or multiple projects.

## Immediate Impact

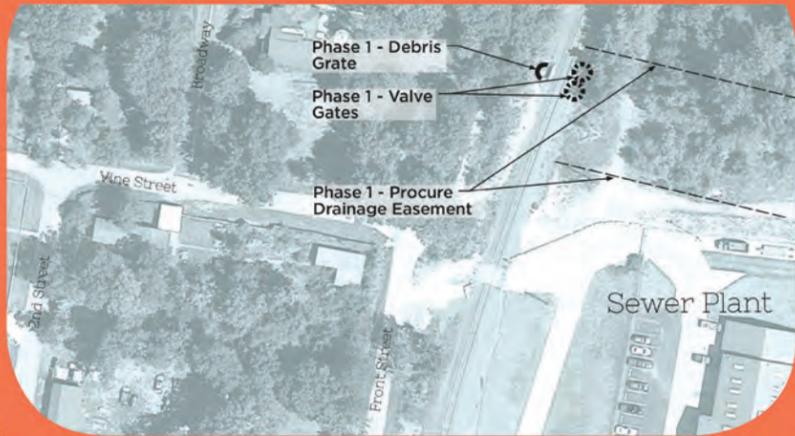
## Core Projects

## Icing on the Cake

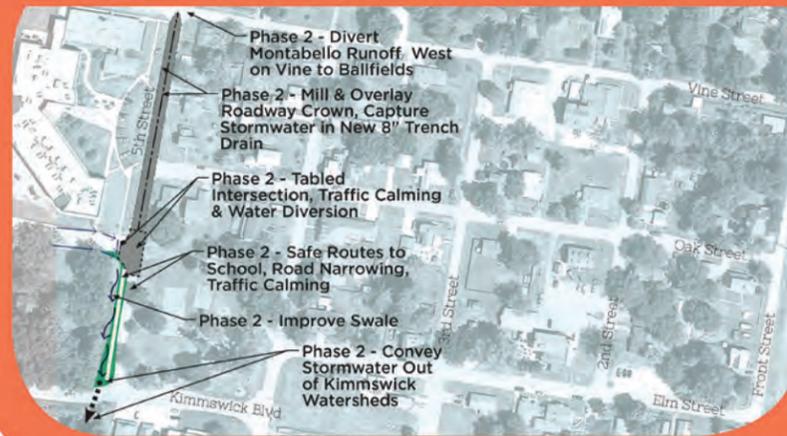
PROJECT ELEMENT	PLANNING AREA
Improve North Outfall	Flood Management & Environment
Redirect Stormwater Runoff	Flood Management & Environment
Localized Interventions to Reduce & Store Runoff	Flood Management & Environment
Public Restrooms	Public Space
Property Code Enforcement	Governance
Permanent Levee	Flood Management & Environment
At-Grade Crossing of Market Street at Railroad	Public Space
Create Dedicated Funding Stream for City Needs	Governance
Enhanced Gateway Signage	Public Space
Complete Streets Enhancements	Public Space
Enhanced Lighting	Public Space
Screen Sewage Plant on West and South Sides	Public Space
Promote and Expand Festivals and Other Events Year-Round	Economic Development, Programs & Events
Natural Environmental Enhancements	Flood Management & Environment
Strengthen City Staff Capacity	Governance
Revenue Enhancement Package	Governance
Expanded Use of Anheuser Estate	Economic Development, Programs & Events
Traffic Management	Governance
Comprehensive Plan	Governance
Expanded Business Offerings & Hours	Economic Development, Programs & Events
Kimmswick Village Green	Public Space
Trail & Greenway System	Public Space
Local Events on the Village Green	Economic Development, Programs & Events
Parking & Circulation Plan	Public Space/Economic Development, Programs & Events/Governance
Rock Creek Improvements	Public Space
Heritage Trail	Public Space

## NORTH OUTLET STRATEGY

### 1. Valves & Grate



### 2. Divert Run Off

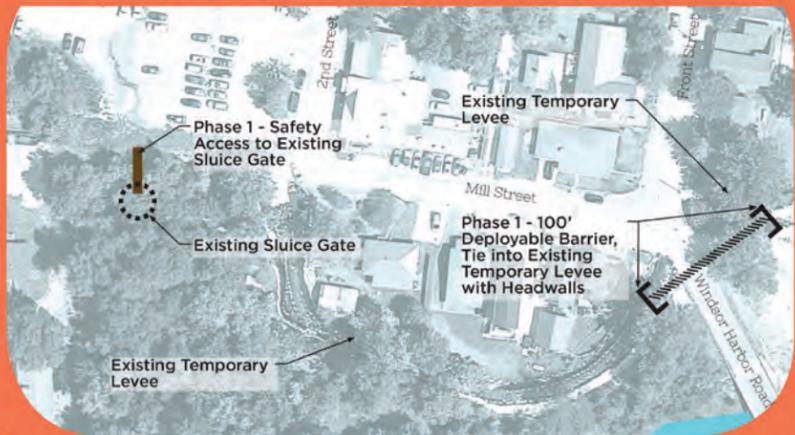


### 3. Increase Storage



## SOUTH OUTLET STRATEGY

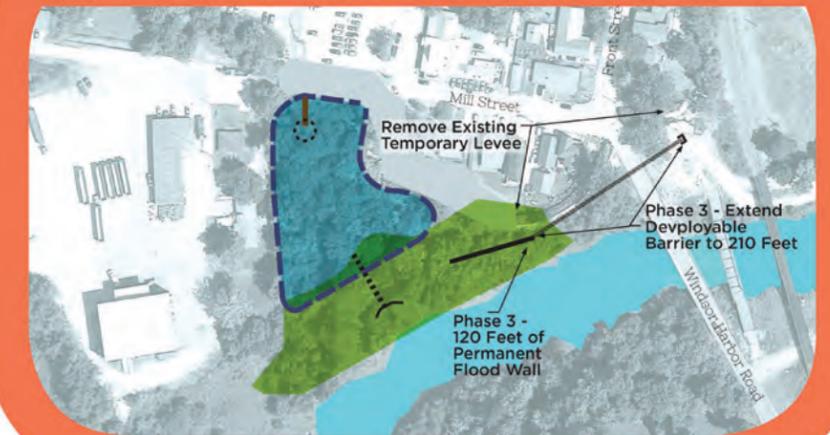
### 1. Access & Barrier



### 2. Levee & Storage



### 3. Flood Wall



### Flood Management & Environment

Flood protection in Kimmswick is of utmost importance. The strategies depicted above delineate three-step solutions to achieve permanent flood protection for the north and south outlets. Permanent pump stations at the outlets are considered icing on the cake. With temporary pumps available, installing them is not critical and, therefore, not included in the strategies.

#### North Outlet Strategy

The undersized existing north outlet is dangerous. Step 1 implements a temporary

solution aimed to reduce hazards. Installing a debris grate to filter stormwater entering the outlet dramatically reduces clogs. Installing valve gates will eliminate the need for make-shift flood gate solutions. Lastly, Jefferson County and Kimmswick need to procure a drainage easement to protect against detrimental future sewer plant or railway development which may alter drainage patterns.

Step 2 removes 13 percent of stormwater run-off Kimmswick receives. First, inlets

capture and convey runoff from Montabello through a pipe west along Vine Street to the Lucianna Gladney-Ross Park. Second, re-working 5th Street's pavement directs the school's runoff south across Beckett to a wetland outside Kimmswick. This step addresses flooding and calms school traffic.

Step 3 develops storage capacity to protect against Kimmswick's "bath tub" effect. Replacing the existing outlet with a pedestrian accessible pipe and flood door shores up the north outlet providing

residents grade-separated riverfront access.

#### South Outlet Strategy

Fortifying flood protection on Kimmswick's southern edge must address the south outlet and Windsor Harbor Road access. Step 1 implements deployable barriers to eliminate financial impacts associated with building and removing temporary levees. A safe access to the existing sluice gate is also installed. This step depends on Mississippi Street's realignment which will serve as the platform for erecting the deployable barrier.

Step 2 constructs a permanent earthen levee across the south outlet slough along Rock Creek. This builds more than 50 percent of the ultimate flood barrier solution and increases storage capacity to reduce internal flood impacts.

Step 3 expands the deployable barrier connecting it into a concrete flood wall extended from the earthen levee. A segment of levee trail must be constructed simultaneously as the deployable barrier's support.

### Public Space

Public space projects provide significant functional, transformational, and economic impacts. The first three phases of public space projects will catalyze development and from Highway 61/67 to the Mississippi River, drawing visitors to Kimmswick's commercial, cultural, and recreational amenities.

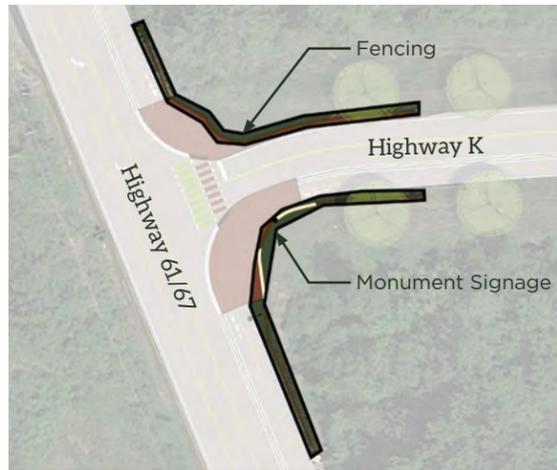
#### Phase 1

Phase 1 promises immediate transformation, connecting Kimmswick to the Mississippi River for great first impression. The Port Authority plans to begin construction of the landing and access road from the riverfront to the railway underpass in October 2018. Capitalizing on these improvements, Phase 1 includes the construction of the Market Street railway crossing, which should include the Front and Market Great Streets intersection. Screening the sewer plant from the south completes the riverfront development and Kimmswick's Riverside welcome. These improvements are shown in Figure A.

Enhancements to Kimmswick's central core,

Village Green (Figure B), are also an integral component of Phase 1 public space projects. These include improvements to the 4th Street intersections from Market to Elm and development of the pedestrian edge along Elm, Market and 3rd Streets. Intersection upgrades at 4th and Kimmswick Boulevard welcome visitors into Kimmswick's historic downtown, helping them navigate confidently to their desired destination. The Market and 4th intersection, together with the Front and Market intersection improvements, bookend Kimmswick's main street. Pedestrian realm improvements along the north side of Market and west side of 3rd define the Village Green with an attractive, active and sustainable edge.

The third and final component of Phase 1 public space improvements is the installation of monument signs and landscaping at the intersection of Highway 61/67 (Figure C). These improvements create a well-defined gateway entrance to Kimmswick. The use of materials and design elements consistent with other public space projects will reinforce the identity and brand of the community.



**FIGURE C:** Monument Entry at Highways 61/67 & K



**FIGURE B:** 4th Street and Village Green Edge



**FIGURE A:** Railroad Crossing, Market & Front Street Intersection, Port Access Road, Landing, and Sewer Plant Screening

**Phase 2**

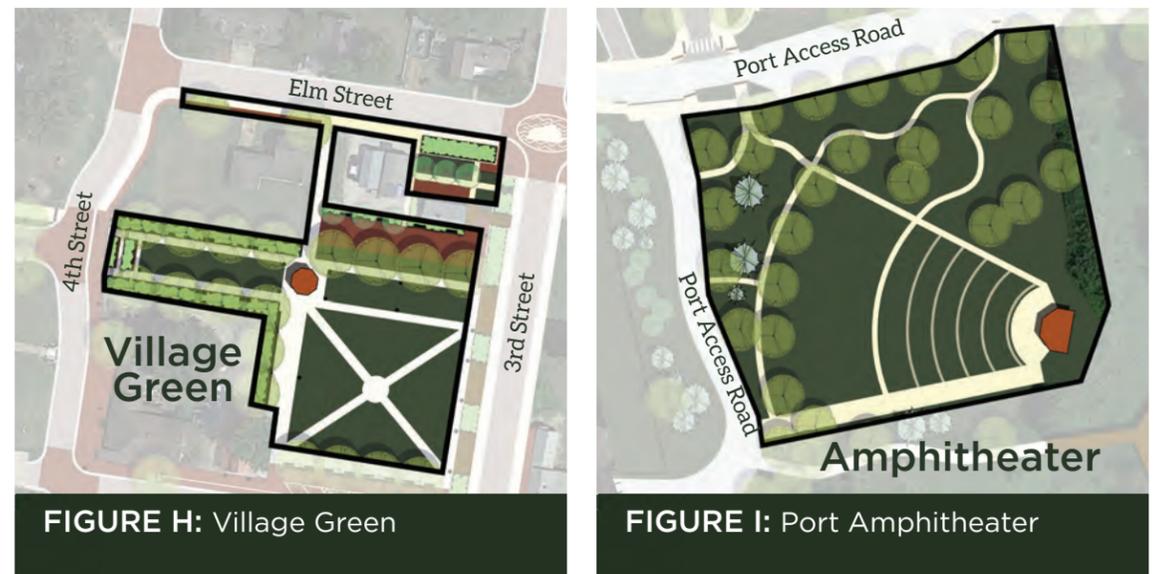
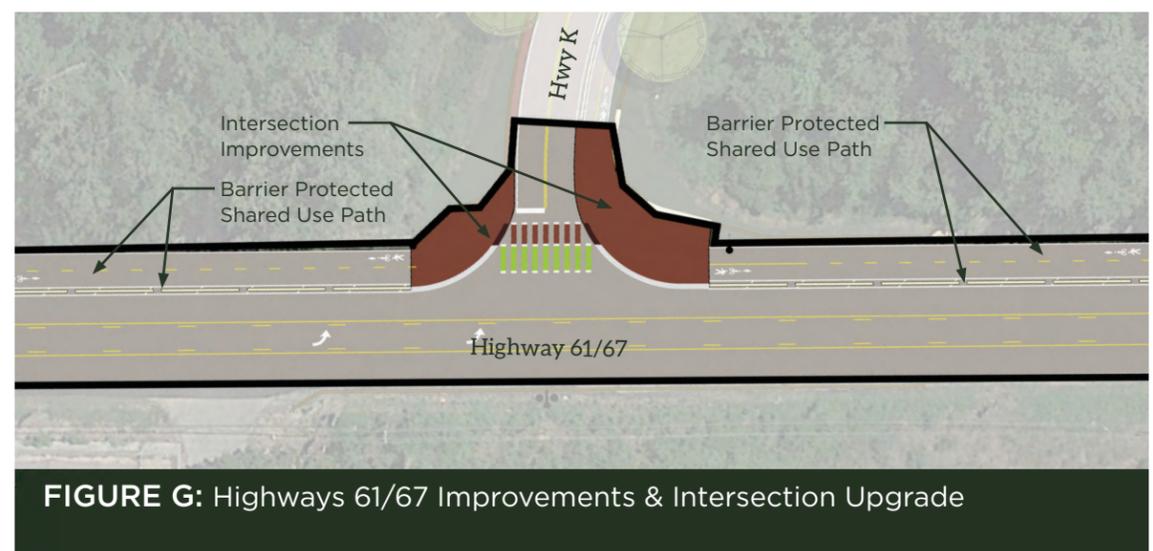
Phase 2 Public Space projects establish the core Great Streets infrastructure and enhance connectivity. Highway K complete street improvements (Figure D) create multi-modal connections into Kimmswick from the west. Market Street improvements (Figure E) create a welcoming, pedestrian-scale environment that complements and strengthens adjacent land uses. The addition of the Heritage Trail (Figure F)

from Market Street railway crossing to the river completes multi-modal access to the riverfront. The construction of port parking (Figure F) builds the Delta Queen's long-term parking supply, provides close remote overflow commercial parking, and makes development of the port amphitheater viable. The mooring (Figure F) finishes port docking plans, expanding cruise ship opportunities and potential revenue.

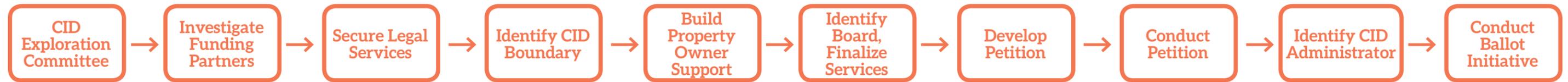
**Phase 3**

Phase 3 Public Space projects extend Kimmswick's regional connectivity and programmatic reach. Highway 61/67 improvements (Figure G) connect Imperial and Interstate 55 to Kimmswick via Imperial Main Street improvements. These improvements also connect the Kimmswick and Imperial areas to Windsor Elementary and High Schools with pedestrian and bicycle facilities designed for all ages.

Constructing the Village Green and amphitheater expands programs and event space. The Village Green (Figure H) improves the civic center to generate consistent, locally-focused activity. The multi-functional amphitheater (Figure I) can be scaled to host a range of events, from mid-sized regional events to smaller community and school programs.



## CID IMPLEMENTATION STEPS



### Economic Development, Programs & Events and Governance

Successful implementation of the plan is dependent on coordinating and managing a diverse array of capital and programmatic efforts. From streetscape enhancements and flood protection improvements to events coordination and business development, the City of Kimmswick must follow an economic development strategy that brings together these diverse efforts in a coordinated, cohesive manner to achieve the vision and goals set forth in this Great Streets Plan.

The economic development strategy is outlined in the following paragraphs and depicted in Figure J on the following page.

#### CID Implementation

The strategy lines out a three-step process to create a Community Improvement District (CID). A CID levies taxes for a defined geographic area in order to fund projects or provide services for that area. CID responsibilities may include capital improvements, pedestrian and streetscape enhancements, marketing and economic development services, and event coordination.

The first step of CID implementation is the creation of the CID itself. This process will include the following actions:

- Establish CID exploratory committee to determine feasibility
- Investigate organizational funding partners
- Secure consultant and legal services to assist in petition and approvals
- Identify general geographic area and estimate total revenues
- Work to build support with property owners and educate voters
- Identify board members and final services and improvements
- Develop petition with committee and get agreement on 5-year plan
- Conduct petition process (to get 50% of per capita owners and 50% of total assessed valuation) to sign and support the legislation
- Identify district administrator and begin administration services
- Conduct ballot initiative with district voters to authorize sales tax

The City and Merchant's Association are the core CID partners. Others may include Jefferson County Port Authority, Anheuser Estate, and Kimmswick Historical Society. If they do not wish to join initially, these groups are still potential funding partners.

Once the CID is in place, the second step is to begin generating revenue to fund CID activities. The revenue streams will have been identified during the creation of the

CID, as required by the Missouri Community Improvement District Act.

The third step is the hiring of an Economic Development, Programming, and Events Coordinator to oversee event management, program development, business expansion and coordinate capital improvements. This position is described in greater detail later in this section.

#### Governance

The strategy lines out a three-step process toward more resilient government operations. The initial step is officially adopting the Kimmswick Great Streets plan and folding the recommendations into the Kimmswick Comprehensive Plan. The comprehensive plan should detail an emergency management policy making provisions for an official documented emergency management plan. The plan should also make provisions for the development of articulated design guidelines and a strategy for working with the business community and/or CID to establish a Business Guide Book. Hiring a consultant to finalize the comprehensive plan and complete the additional documents is strongly recommended.

The Chapter 5 "A New Era" recommends a number of potential funding streams. Funding and revenue analysis should be

conducted by a qualified consultant to comprehend their market viability. The results of the funding and revenue analysis will inform the appropriate steps to develop a revenue enhancement package.

Some revenue streams are already policy. When those streams become viable and permanent flood barrier plans are feasible, the City should either work with a formal or informal Coordinating Entity to hire an Economic Development, Programs, and Events Coordinator. The City could hire this position outright; however, partnering with key stakeholders in any arrangement is strongly recommended. As revenue grows and additional services are needed, additional City staff should be considered to expand DPW capabilities, increase policing, and manage parks and natural resources.

#### Economic Development, Programming & Events Coordinator

The coordinator position is critical to the success of Kimmswick's economic development strategy. This person will manage variety of interconnected capital improvements, economic development programs, and community events, all of which strengthen Kimmswick's identity and appeal as a regional destination. The coordinator will interact with a variety of individuals, organizations, and agencies, including the City of Kimmswick,

Jefferson County, the Jefferson County Port Authority, Missouri Department of Transportation, community residents, local businesses, contractors, and consultants. In all these interactions, the coordinator must maintain focus on the vision set forth in the Great Streets Plan and reinforced in the CID five-year plan. Experience directly associated with the potential coordinator may include business, finance, accounting, public relations, communications, marketing, hospitality, construction, development, or a general entrepreneurial background. Because the position is multi-faceted, the CID should be open to considering qualifying candidates from most any background.

The CID should hire a highly energetic, dynamic individual who is personable and optimistically grounded. The individual needs to be a practical, shrewd organizer who is encouraging to work alongside. They need a strong understanding of the "Big Picture" while seeing each little step toward the vision as important. A \$50,000-\$60,000 salary with a solid benefits package is recommended.



FIGURE J: Economic Development Strategy

# implementation resources

» The Implementation Resources section provides practical tools and references to help implement the Kimmswick Great Streets plan. The section is broken into four parts as described in the following paragraphs.

## QUICK REFERENCES

### 3-5 Year Implementation Check List

With such a broad sweeping plan, getting started can be overwhelming. The 3-5 Year Implementation Check List (Figure K) lays out specific tasks for each project category. The first few years focus primarily on setting up core projects in years 5-10. However, incremental improvements are interspersed to keep spirits high.

### Project Matrix

The Project Matrix on pages 148-149 illustrates all Kimmswick Great Streets projects in one place. The matrix spot lights project responsibility, estimated project costs, potential funding sources, phasing, project implementation priority, and goals for each project accomplished.

### Funding Opportunities

Funding Opportunities (pages 150-152) describes a cross section of potential funding sources relevant to Kimmswick's Great Streets project. Summary narratives of each funding source describe opportunities.

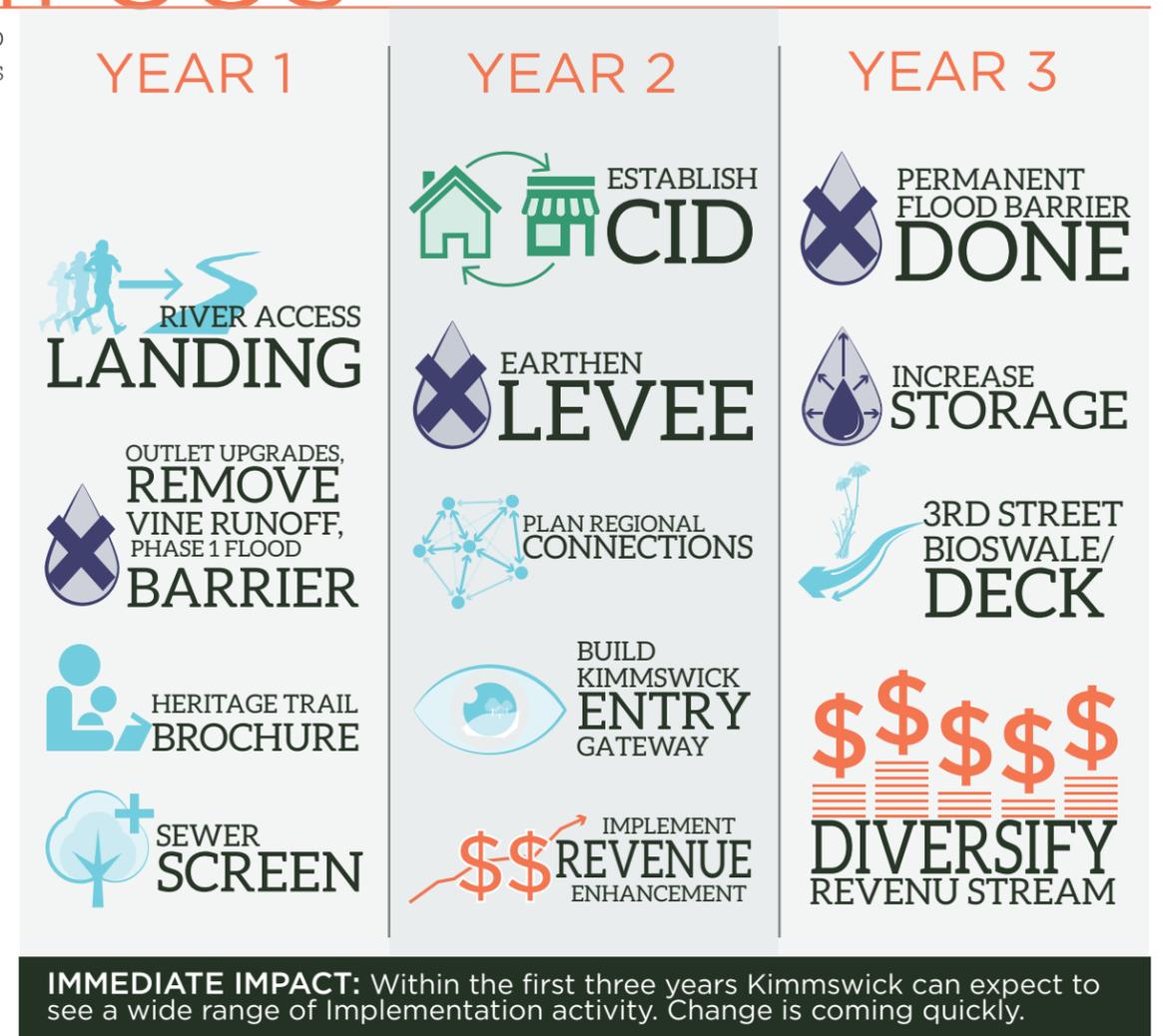
A resource matrix (page 153) outlines opportunities by project type. Matrix details include funding source, eligible project types, potential funding, competitive nature, application schedule, and Kimmswick Great Streets project required match funding.

### Implementation Schedule

The Implementation Schedule on pages 154-157 diagrams the estimated time frame for each project offering a 20 year perspective in one glance. It details project phases and organizes them in four project categories- Flooding & Environment, Public Space, Economic Development, and Governance.

### Project Cut Sheets

Project cut sheets on pages 158-195 outline specifics for each project. This reference provides project guidance from planning through ribbon cutting. Project descriptions, details, step by step implementation strategies, achievement metrics, reference images and detailed rough order of magnitude (ROM) cost estimates.



**IMMEDIATE IMPACT:** Within the first three years Kimmswick can expect to see a wide range of Implementation activity. Change is coming quickly.

<b>FLOOD MANAGEMENT AND ENVIRONMENT</b>	
<b>Task</b>	<b>Responsible</b>
<input type="checkbox"/> Install north outlet A2.1 - Debris Grate & A2.2 - Backflow Prevention Valves	CITY
<input type="checkbox"/> Install south outlet A3.1 - OSHA Compliant Access & A.2 - Automated Sluice Gate	CITY
<input type="checkbox"/> Begin A1.1 - A1.3 Permanent Flood Barrier design in coordination with B4.2 Mississippi Street Realignment design	CITY, JC DPW/JCPA
<input type="checkbox"/> Construct B4.2 Mississippi Street Realignment	CITY or JC DPW/JCPA
<input type="checkbox"/> Construct A1.1 Deployable Flood Barrier & Storage Building	CITY
<input type="checkbox"/> Construct A4.1 - Inlet & Underground Pipe from 5th Street to Lucianna Gladney-Ross Park	JC DPW
<input type="checkbox"/> Implement A4.2 - Improve Vine Street Swale and North Outlet A2.3 - Increase Capacity	JC DPW
<input type="checkbox"/> Construct A1.2 - Permanent Levee and South Outlet A3.3 - Flood Storage Expansion	CITY
<input type="checkbox"/> Construct B9.2 - Levee Trail from Windsor Harbor Road to Flood Wall	CITY, JCPA/JC Parks
<input type="checkbox"/> Install A5.1 - 5th Street Modifications and A5.2 - Jefferson Park Bioswale Improvements	CITY, Windsor School District
<input type="checkbox"/> Construct A1.3 - Flood Wall & Deployable Barriers	CITY
<input type="checkbox"/> Install North Outlet A2.4 - North Pedestrian Access with Flood Door	CITY

<b>PUBLIC SPACE</b>	
<b>Task</b>	<b>Responsible</b>
<input type="checkbox"/> Begin Developing Local & Regional Partners for B5.1 - Safe Routes to School Plan and B9.1 - Healthy, Active Living Plan	CITY, MA, Windsor School District, JCPA, Regional Champions
<input type="checkbox"/> Cede Front & Mississippi Streets to JC DPW	CITY, JC DPW
<input type="checkbox"/> Submit B4.3 - Phase 1 funding application	JCPA, JC DPW, CITY
<input type="checkbox"/> B4.1 - Incorporate Route K into Kimmswick and Rename Roadway	CITY
<input type="checkbox"/> Negotiate B3 - Screen Sewer Plant	CITY
<input type="checkbox"/> Develop B1 - Branding for Kimmswick	CITY, MA, KS
<input type="checkbox"/> Create B10.1 - Heritage Trail Brochure	CITY, MA, KS
<input type="checkbox"/> Design B1 - Enhanced Signage Guide	CITY, MA, KS
<input type="checkbox"/> Petition MODOT for B5.1 - Safe Routes to School Plan & advocate Jefferson County for B9.1 - Healthy, Active Living Plan	CITY, MA, Windsor School District, JCPA, Regional Champions
<input type="checkbox"/> Construct B4.2 - Mississippi Street Realignment	CITY, JC DPW/JCPA
<input type="checkbox"/> Conduct B12 - Parking & Circulation Plan	CITY, MA
<input type="checkbox"/> Install B1.1 - Promotional Signage	CITY, MA, CID
<input type="checkbox"/> Begin B4.3 - Phase 1 railroad and Market Street intersection design	JCPA/JC DPW
<input type="checkbox"/> Implement B4.3 - 3rd Street Phase 1 stormwater deck	CITY, MA, CID
<input type="checkbox"/> Begin B2.1 - Retail Lighting	MA, CID

<b>ECONOMIC DEVELOPMENT</b>	
<b>Task</b>	<b>Responsible</b>
<input type="checkbox"/> Begin C1 - Create a Coordination Entity by creating a CID exploration committee and hire consultant to guide the process through testing a CID boundary, determine feasibility, hold education/information sessions	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> C3.1 - Promote outdoor dining at businesses and events	CITY, MA
<input type="checkbox"/> C4.1 - Retain an Event Planner to provide recommendations	AE, CITY
<input type="checkbox"/> Implement commercial/residential zoning definition through D1.3 - Adopt a Comprehensive Plan & Design Guidelines	CITY
<input type="checkbox"/> C4.2 Retain an Architect to create Anheuser Estate master plan	AE, CITY
<input type="checkbox"/> Retain lawyer to draft petition and conduct CID petition signing parties	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> Bring petition to Board of Aldermen to establish CID	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> Hold CID ballot vote	CITY
<input type="checkbox"/> Initiate administration of CID	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> C1.2 Develop CID Funding	CID Board
<input type="checkbox"/> Develop Economic Development, Programs & Events Coordinator job post and C1.3 Hire Coordinator	CID Board
<input type="checkbox"/> Begin C4.3 - Renovate Buildings and C4.4 - Upgrade Infrastructure	AE, CITY

<b>GOVERNANCE</b>	
<b>Task</b>	<b>Responsible</b>
<input type="checkbox"/> Begin C1 - Create a Coordination Entity by creating a CID exploration committee and hire consultant to guide the process through testing a CID boundary, determine feasibility, hold education/information sessions	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> C3.1 - Promote outdoor dining at businesses and events	CITY, MA
<input type="checkbox"/> C4.1 - Retain an Event Planner to provide recommendations	AE, CITY
<input type="checkbox"/> Implement commercial/residential zoning definition through D1.3 - Adopt a Comprehensive Plan & Design Guidelines	CITY
<input type="checkbox"/> C4.2 Retain an Architect to create Anheuser Estate master plan	AE, CITY
<input type="checkbox"/> Retain lawyer to draft petition and conduct CID petition signing parties	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> Bring petition to Board of Aldermen to establish CID	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> Hold CID ballot vote	CITY
<input type="checkbox"/> Initiate administration of CID	CITY, MA, JCPA, HS, AE
<input type="checkbox"/> C1.2 Develop CID Funding	CID Board
<input type="checkbox"/> Develop Economic Development, Programs & Events Coordinator job post and C1.3 Hire Coordinator	CID Board
<input type="checkbox"/> Begin C4.3 - Renovate Buildings and C4.4 - Upgrade Infrastructure	AE, CITY

**FIGURE K:** 3-5 Year Implementation Check List

No.	Project	Project Phases	Responsibility	ROM Project Cost	Funding Opportunities	Implementation Strategy		
						Immediate Impact	Core Projects	Icing on the Cake
<b>A. FLOOD MANAGEMENT AND ENVIRONMENT PROJECTS</b>								
A1	Permanent Flood Barrier	4	City	\$5,532,214	City, ACE, JCEM			
A2	North Outlet Upgrade	5	JC DPW, City	\$577,331	JC DPW, City, Sewer, JCEM, ACE, MDNR			
A3	South Outlet Upgrade	3	City	\$198,752	City			
A4	Vine Street Flooding	2	JC DPW	\$79,641	JC DPW			
A5	Windsor School Flooding	2	City, WS	\$190,250 +	City, WS			
A6	Bioswales	3	City, MA/CID	\$174,790	City, MA/CID, MDNR, MDC			
A7	Natural Environment	2	JCPA, JC Parks, City, AE	NA	JCPA, Private, JC Parks, MDC, MDNR, City, EWG, Forest Releaf			
<b>B. PUBLIC SPACE PROJECTS</b>								
B1	Enhanced Signage	4	City, MA/CID, JCPA, JC Parks, AE, HS	\$1,217,682	EWG, JCPA, JC DPW, City, MA/CID, JC Parks, MDNR, MDC, HS, AE, WS, MODOT			
B2	Enhanced Lighting	7	City, MA/CID, JCPA, JC DPW, HS, AE	\$1,352,241	EWG, MODOT, JCPA, JC DPW, City, MA/CID, HS, AE			
B3	Screen Sewage Plant	1	City, JCPA, JC DPW	\$129,700	Sewer, JCPA, MDC, Forest Releaf, JC DPW			
B4	Primary Commercial	5	City, JCPA, JC DPW	\$6,934,294	EWG, JCPA, JC DPW, City, DNR, MDC, MA/CID, HS, JC Parks			
B5	Highway 61/67	2	MODOT, City	\$804,103	MODOT, EWG, City			
B6	Kimmswick Village Green	3	City, MA/CID, HS	\$1,025,944	City, MA/CID, HS, Private, MDC, FR			
B7	Public Restrooms	5	City, MA/CID, JCPA, AE, Private	NA	City, MA/CID, JCPA, AE, Private, MDNR			
B8	Secondary Commercial	7	City, MA/CID, JC DPW	\$2,294,108	EWG, JCPA, JC DPW, City, DNR, MDC, MA/CID			
B9	Trail and Greenway System	8	City, MA/CID, JC Parks, JCPA	\$8,522,734	JC Parks, MDNR, JCPA, City, MA/CID, MODOT, MDC, ACE			
B10	Heritage Trail	1	City, MA/CID, HS, AE	\$241,002	EWG, JCPA, JC DPW, HS, AE, City, MA/CID, MDC, MDNR			
B11	Rock Creek Connection	4	City, MA/CID	\$966,946	EWG, JC DPW, COE, City, MA/CID, JCPA, DNR, MDC, Private, ACE			
B12	North Anheuser Park	5	City, AE	\$938,797	AE, City, MDC, DNR, Private			
B13	Parking and Circulation Plan	1	City, MA/CID, JCPA, AE	\$25K - \$50K	City, MA/CID, Private, JCPA, AE			
B14	Residential Improvements	1	City, JC DPW	\$138,848	City, JC DPW, WS			
<b>C. ECONOMIC DEVELOPMENT, PROGRAMMING &amp; EVENTS</b>								
C1	Create Coordinating Entity	10	City, MA/CID	\$15K-\$25K	City, MA/CID			
C2	Identify Programs & Events	3	City, MA/CID, JCPA, AE	NA	City, MA/CID, JCPA, AE, HS, JC Parks			
C3	Retail Expansion	-	City, MA/CID	NA	City, MA/CID			
C4	Develop Anheuser Estate	3	City, AE	TBD	City, AE, Private, MDC, MDNR			
C5	Develop B&B	3	City, MA/CID	NA	City, MA/CID, Private, JCPA			
<b>D. GOVERNANCE</b>								
D1	City Development Master Plan Through Comprehensive Plan	5	City	\$ -	City, MA/CID			
D2	Revenue Enhancement Package	2	City, MA/CID	\$ -	City, MA/CID, JCPA, JC Parks, AE, HS			
D3	Strengthen City Staff Capacity	3	City	\$ -	City, JCPA, MA/CID, JC Parks, AE, HS			
D4	Traffic Management	2	City, MA/CID, JCPA, AE	\$ -	City, MA/CID, Private, JCPA, AE			
D5	Property Code Enforcement	3	City	\$ -	City			

**FIGURE L: Project Overview Matrix**

AE = Anheuser Estate, City = City of Kimmswick, COE = Army Corps of Engineers, DNR = Dept. of Natural Resources,

City of Kimmswick Goals

Jefferson County and Port Authority Goals

No.	Community Supported	Flood Protection	Maintain/ Enhance Quality of Life	Enhance Historic Character	Support Economic Management Model	Leverage Kimmswick Port	Support Kimmswick	Improve Riverfront Access	Regional Economic Growth	Support Riverfront Re-development	Emergency Services
<b>A. FLOOD MANAGEMENT AND ENVIRONMENT PROJECTS</b>											
A1	●	●	●	●	●		●		●	●	
A2	●	●	●		●		●				
A3	●	●	●	●	●		●		●	●	
A4	●	●	●		●		●				
A5	●	●	●				●				
A6	●	●	●	●	●		●		●		
A7	●	●	●	●		●	●	●		●	
<b>B. PUBLIC SPACE PROJECTS</b>											
B1	●		●	●		●	●	●	●	●	
B2	●		●	●	●	●	●	●	●	●	
B3	●		●	●		●	●	●	●	●	
B4	●	●	●	●	●	●	●	●	●	●	●
B5	●	●	●	●	●	●	●	●	●	●	
B6	●	●	●	●	●				●		
B7	●		●		●	●	●		●	●	
B8	●	●	●	●	●		●		●		
B9	●		●		●	●	●	●	●	●	
B10	●		●	●	●	●	●	●	●	●	
B11	●		●	●	●	●	●	●	●	●	
B12	●	●	●	●	●	●	●	●	●	●	
B13	●		●	●	●	●	●	●	●	●	
B14	●		●	●			●				
<b>C. BUSINESS DEVELOPMENT, PROGRAMMING &amp; EVENTS</b>											
C1	●		●	●	●	●	●	●	●	●	
C2	●	●	●	●	●	●	●	●	●	●	
C3	●		●	●	●	●	●	●	●	●	
C4	●		●	●	●	●		●	●	●	
C5	●		●	●	●	●		●	●	●	
<b>D. GOVERNANCE</b>											
D1	●	●	●	●	●	●	●	●	●	●	●
D2	●	●	●	●	●	●	●	●	●	●	
D3	●	●	●	●	●	●	●	●	●	●	
D4	●		●	●	●	●	●	●	●	●	
D5	●		●	●	●	●	●		●		

EWG = East West Gateway Council of Governments, HS = Historic Society, JC DPW = Jefferson County Dept. of Public Works, JCEM = Jefferson County Emergency Management, JCPA = Jefferson County Port Authority, JC Parks = Jefferson County Parks, MA/CID = Merchant's Association or CID, MDC - Missouri Dept. of Conservation, MODOT = Missouri Dept. of Transportation, Private = Private Investment, Sewer = Rock Creek Public Sewer, WS = Windsor School District

# FUNDING OPPORTUNITIES

The Kimmswick Great Streets Plan consists of multiple project recommendations, each having a variety of potential funding opportunities. Descriptions for some of these opportunities are grouped together by funding source and described below. The Funding Matrix (page 151) provides a visual reference guide that matches projects with applicable funding sources.

## **Anheuser Estate**

Should the Anheuser Estate improve facilities and infrastructure, funding could occur in multiple scenarios.

### Estate Trust

The estate has a trust set aside that could be utilized or leveraged to borrow capital investment funding. This would require approval of the Anheuser Estate Board.

### Bonding

The City owns the Anheuser Estate. As they establish secure revenue, opportunities to bond infrastructure improvements become available.

### Private Investment

As the Estate is an heirloom to the Anheuser family history, private donations or investment could be pursued.

## **Army Corps of Engineers (ACE)**

The ACE could provide reimbursement assistance for the permanent flood barrier.

### Federal Match

Projects are broken into three phases with varying assistance. For planning phases beyond initial feasibility, COE provides a 50/50 match. Communities are required to pay 100 percent of project design fees. COE may supplement a 65 percent match providing 35 percent reimbursement toward final construction and construction

management. Funds are allocated upon project completion.

## **City of Kimmswick**

As the City of Kimmswick develops revenue streams, funding and borrowing opportunities arise.

### Revenue Enhancement Package

Discussed in Recommendations Section 5 - Overcoming Adversity, the City's revenue enhancement package represents increasing annual income projected between \$700,000 immediately when the Delta Queen begins selling tickets to \$1,300,000 five to ten years following. Portions of this revenue can be allocated toward capital improvements.

### Bonding

As the City of Kimmswick establishes secure revenue, they will be able to bond infrastructure improvements.

## **Community Improvement District (CID)**

A CID is a recommended organization supporting the Kimmswick Great Streets Plan. This organization would have all the opportunities afforded the City and potentially provided additional services and improvements through a number of sources.

### CID Revenue

Discussed in Chapter 5 - "A New Era," a potential CID could generate revenue from multiple sources projected between \$250,000 to \$350,000 within the next five-to ten years. Portions of this revenue can be allocated toward capital improvements and leveraged for grant matches.

### Bonding

As the CID establishes secure revenue, it will be able to bond infrastructure

improvements.

### Grant Writing

Should the CID hire an economic development, programs, and events coordinator, one job role could include grant writing to identify and bring in additional revenue.

## **East West Gateway Council of Governments(EWGCOG)**

### BUILD (Formerly TIGER)

BUILD grants are awarded to projects over \$5 million in construction which have regional champions and a letter of support. If there is political support for the Kimmswick Great Street or Kimmswick Port project, a project could be packaged over \$5 million to pursue this grant.

EWGCOG does not develop BUILD grant applications. A consultant should be retained for this task. EWGCOG may provide limited technical assistance for the grant.

### Congestion Mitigation and Air Quality (CMAQ)Program

CMAQ focuses on projects mitigating air quality with 20 percent local match. Awards may fund preliminary engineering, right of way acquisition, construction, and construction engineering for traffic flow improvements, bicycle and pedestrian facilities, demand management projects.

### Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities

This competitive program funds capital expenses for traditional projects including vehicles and related equipment used to transport seniors and people with disabilities and New Freedom Type capital projects to remove barriers at bus stops.

It requires a 20 percent local match for preservation projects and 50 percent local match for access to opportunity projects.

### Surface Transportation Program (STP)

STP allocates federal funds for transportation improvements on functionally classified roadways. Route K, Beckett Street, the 4th Street connection from Beckett Street to Market Street, Market Street, Front Street from Market to Vine Street and Vine Street from Front to Broadway have functional classifications. For other roadways, such as Windsor Harbor, the City of Kimmswick could request reclassification in order to open STP funding opportunities.

Applications are awarded at a base 80 percent federal to 20 percent local match. Local matches larger than 20% score higher. Though this practice is not typical, upwards of 30-40 percent of applications in a given year may put forward a 40-50 percent match. Applications are typically received in May and September.

Projects awarded range from \$1-\$1.5 million upwards of \$25 million; however, projects over \$4 million are less likely. Approximately forty million was awarded in FY 2018. Funds have been allocated through 2022. The first opportunity Kimmswick to receive STP funding would be FY 2022/2023 if an application were submitted this year.

Other federal funds cannot be utilized as local match for STP projects. State, local and private funds can be leveraged. Private funds toward a match need authorized documentation denoting a specified amount and support for the project's scope. Land donation can be leveraged toward a local match but needs an appraisal and must be incorporated into the grant application.

Historically, Jefferson County STP project awards range from \$1-to \$1.5 million; however, regional award recipient projects often range from \$2.5 million or less. Application scoring recently changed to reflect EWGCOG's overarching vision. Project cost still plays a large role in scoring, but only accounts for 16 percent (or 20) of a total 135 points available. Other factors include reflecting an area's setting, provision for alternative transportation modes, sustainability, and economic stimulus. Higher project costs would need to reflect well in the scoring. Pedestrian-only applications are accepted.

### Transportation Alternatives Program (TAP)

TAP applications are less competitive than STP as they are focused on bicycle and pedestrian projects other than roadways. However, the program currently only has \$3-to \$4 million available per year, and the program's future is uncertain. Additionally, applications are on hold for the next year or two.

Similar to STP, TAP applications are awarded at a base 20 percent local match. Larger local matches score higher. Funds may be used for design, land acquisition, and construction. Projects may also include Safe Routes to School (SRTS) Non-Infrastructure Projects, safety and educational programs for pedestrians and bicycles grades K-8, and storm water management and control.

## **Jefferson County Department of Public Works (JC DPW)**

JC DPW project funding opportunities depend on jurisdictional authority. Their funding capabilities could support JCPA and potentially the City of Kimmswick on county facilities. Kimmswick should also advocate with JC DPW to prioritize regional bicycle connections.

### **Jefferson County Parks (JC Parks)**

JC Parks could partner with the City, Merchant's Association, CID, or other funders to apply for state and federal grants related to outdoor recreation. The department will maintain the port as improvements develop from the current maintenance budget. Regular riverfront programs and events may provide the opportunity for the City to receive a stipend for riverfront operations and maintenance increasing City capacity.

### **Jefferson County Port Authority (JCPA)**

JCPA functions as a development arm for Jefferson County to attract and establish economic development opportunities for the region. It coordinates other Jefferson County departments toward this end and seeks opportunities to develop the Kimmswick Port plans. JCPA applies most revenue generated toward port infrastructure maintenance and other regional opportunities. They may be a in the CID and have expressed interest in sharing the Economic Coordinator position.

### **Advanced Industrial Maintenance (AIM) Zone**

JCPA has established an AIM zone encompassing the port and the entire city of Kimmswick. During the first three years of operations, one-half the income tax generated from new jobs produced with the zone accumulates in escrow. These moneys are available to reinvest into infrastructure within the AIM zone which can be used for roads, trails, and other projects.

### **Naming Rights**

JCPA is seeking sponsors who will help build the port amphitheater and associated or adjacent port park amenities. Investors will receive naming rights to the amphitheater

for a duration determined by the sponsor's agreement.

### **Kimmswick Historic Society**

The Kimmswick Historic Society is an essential institution in the community with annual revenue and a mission to promote and educate the public about local history. Expanded revenues could help accomplish this mission in a broader scale and promote Kimmswick even more. Infusing elements of Kimmswick's historic narrative into infrastructure investments through interpretive signage, plazas, and the Heritage Trail is central to the Great Streets plan.

### **Annual Revenues**

The Society generates revenue from sales of Apple Butter and Strawberry Jam. These products could be commercialized and sold year-round. A portion of the proceeds could be allocated toward historic capital investments.

### **History Tour Revenue**

Packaging the historic sites in and around Kimmswick, a history tour could be established, potentially generating between \$3,000 and \$10,000 annually. After paying operating costs, a portion of the proceeds could be allocated toward historic capital investments. The Historic Society, City of Kimmswick, CID, Merchants Association, or other entity could develop this tour.

### **Merchants Association (MA)**

The MA raises \$40,000 annually for promotions from ticket sales to Witches Night Out. Tickets sell out within hours. Raising the ticket cost would generate additional revenue which could be applied toward improvement projects or grant matches.

### **Miscellaneous Grant Funding**

Many grants are available from local, regional, state and national sources. The United Way hosts conferences to assist communities in finding and navigating grant application opportunities. These efforts take time and resources, but can be very beneficial. Expanding community capacity to support grant writing is worth exploring, particularly with the acquisition of an Economic Development, Programming and Events Coordinator. Grant writing could be incorporated into the job description and an actively sought skill during hiring. A subscription to [grants.gov](http://grants.gov) or [grantfinder.com](http://grantfinder.com) could be highly beneficial.

### **Missouri Department of Conservation (MDC)**

MDC has many opportunities to support communities.

### **Tree Resource Improvement and Maintenance (TRIM)**

The grant provides non-competitive awards from \$1,000 - \$10,000 per community annually and competitive awards from \$10,000 - \$25,000 per community annually. Resources can be utilized to pay for tree inventory, staff training, tree installation and maintenance. MDC provides workshops to assist communities in the application process.

### **Missouri Recreational Access Program (MRAP)**

MDC could partner with voluntary private land owners to provide access to privately-owned natural resources. Land owners must contact MDC to determine cost-share eligibility and develop an implementation plan. This 2-year old program could be a mechanism providing public trail access depending on the nature activities accessed.

### **Community Conservation Grant Program**

Community Conservation Grant Program funds stream restoration, prairie or native warm-season grass reconstruction, forest management, wetland enhancement, and other related improvements. Grants of up to \$50,000 are available with a minimum 25 percent cost-share match or in-kind contribution. Applications are due in September. Qualifying organizations include county and local governments, schools, and non-profits. Grants are competitive and require a 15-year management plan.

### **Discover Nature Schools**

Windsor already participates in the program and has been involved for several years. Teachers have been trained and have curriculum that meets state standards. These grants can potentially provide more learning spaces.

Teachers can get a grant of \$500-\$1000 and may be able to team with Kimmswick on an Urban Cost Share to extend learning spaces into the community or out to riverfront.

### **Urban Cost Share Program**

This non-competitive, first-come, first-served 50/50 match grants support projects on urban lands the public could access. Urban areas are census-defined and Kimmswick qualifies. Awards range up to \$15,000 per owner per fiscal year and can be applied toward stormwater best management practices, prairie conversions, pollinator habitat areas, and other conservation practices applied in an urban area. Projects under \$6,000 require a ten-year maintenance agreement. Those over \$6,000 require a 15-year maintenance agreement. This includes incorporating educational interpretive signage for the life of the project. Stock signage is provided free of charge, and communities can pay for

custom designs.

To initiate the program, Kimmswick must contact the community conservation planner who will conduct a site visit. There they will discuss project eligibility and develop a simple plan and cost share agreement. Projects are reimbursed upon project completion.

### **Riparian Improvement**

Dependent upon the land owner, riparian improvements could be lumped under Community Conservation Grants, Urban Cost Share Program, or Private Land Grants.

The Forestry Division offers stream bank restoration cost sharing at \$0.75 for each cottonwood and willow cutting planted. On privately owned lands, bare root hard wood trees for projects less than 50 trees cost \$1.20 per plant and \$0.60 for projects over 50 trees. Container stock trees run \$13 each and seeding hardwoods runs \$200 per acre. Maintenance agreements vary with the practice and land ownership. Communities range from 10-15 years and private landowners from 5-10 years.

### **River Access Assistance Program**

MDC Fishery provides significant resources to develop river access along the Mississippi. Funding is determined on a per project basis. The program is very supportive of local communities and could help in the development of a boat ramp or marina. Kimmswick would need to contact MDC Fisheries Regional Supervisor.

### **Possible Teaching, Outreach and Education Opportunities**

Should project partners wish to develop a riverfront park with regional educational draw, MDC has a Teaching, Outreach and Education Division with Education

consultants. These consultants could help plug the park into the MDC events schedule and support with programs like Discover Nature. Contact the Regional Education Consultant for more information.

### **Missouri Department of Natural Resources (DNR)**

DNR offers programs to support outdoor recreation improvements, trail development, green infrastructure and riparian improvements.

#### Missouri State Parks Bus Grant Program

This \$500 bus grant assists schools and nonprofit organizations with the transportation expenses of field trips and outdoor learning opportunities at Missouri state parks and historic sites. It's distributed on a first come basis. This grant could be recommended through the City, JCPA, Jefferson County Parks, Merchant's Association or CID. The CID could help schedule other activities in Kimmswick as part of a trip to Mastodon State Historic Site.

#### Recreational Trails Program (RTP)

Funded with federal moneys through the Surface Transportation Program (STP), RTP awards grants up to \$250,000 with a 20 percent local match for designated trail projects. Grantees must enter a 25-year maintenance agreement. Approximately \$7 million in awards is available.

Applications are ranked based on a competitive 100 point scoring system. Active grants may negatively impact awards as there is a goal to extend awards to communities who have not participated. Wayfinding, trailheads, and trail associated amenities qualify for funding. Ten percent of funds can be allocated to pre-construction planning and design. Planning specific projects are eligible with certain

stipulations.

#### Outdoor Recreation Grants

This grant, supported through the Land and Water Conservation Fund Grant awards a maximum \$250,000 award per project requiring a 50/50 local match. Available to cities, counties and school districts, it funds outdoor recreational projects for public use including playgrounds, ballfields, trails, boating and fishing facilities, signage and other permanent installations. Scored on a point system, development of outdoor spaces is preferred over parking lots and infrastructure improvements. Infrastructure investments like parking lots and roads may be leveraged as a local match. Projects connecting to State Parks and Sites, such as Mastodon State Historic Site, may receive higher scores.

Funds are awarded annually as re-authorized with roughly \$2.9 million available this year. Projects must be maintained in perpetuity. Development and renovation projects must be maintained for a period of 25 years or the life of the manufactured goods. Local matches can come from any sources other than federal funds; however, only local government entities may apply.

#### Section 319 Nonpoint Source Implementation Program

The project partners may consider pursuing funding through the nonpoint source program. It offers the potential for grants up to \$300,000 with a 40 percent local match per project application. To become eligible, the community would need to partner with other entities within the entire Rock Creek watershed to develop a nine point Watershed Plan. Projects within that plan then become eligible for grant funding. Moneys available vary year to

year averaging \$1.8 million annually. Grants funding is competitive, but allocated within a specific pool of candidates with watershed plans. There are relatively few watershed plans within the state of Missouri.

If the plan determines water quality impairment, urban projects funded include best management practices like slowing water for infiltration (ie. bioswales and rain gardens), pervious pavement, native planting, nutrient control measures such as nutrient management plans for yards, riparian corridor improvements and wetland construction and protection.

### **MODOT**

MODOT has multiple transportation funding and incentive programs and access to many of the same funding streams EWGCOG administers including STP, TAP, and CMAQ programs.

#### Match Program

MODOT partners with communities 50/50 to fund projects when

#### Rail Crossing Removal

MODOT provides financial incentives for railway crossing closures between \$7,500 to \$100,000 dependent on each closure's importance. MODOT will review existing crossing operations and create an administrative order to compare with the selected crossings for closure. They will evaluate closures providing recommendations for proper crossing design and estimate costs.

### **Private Investment**

Private investments can achieve projects and outcomes government entities are not likely to accomplish. Project partners should utilize the plan to solicit investment, sponsorship and developers.

As development occurs, Kimmswick should negotiate development to the benefit of the community. The City should require developers to install the City's design standard at the developer's expense. The City could also provide public infrastructure to negotiate with developers.

### **Rock Creek Public Sewer District**

The original development agreement with the City stipulated utilizing vegetation to screen plant facilities. No screening exists. Kimmswick and JCPA should negotiate reinstatement of the vegetative screen. Tree planting resources from MDC, Forest Releaf, and DNR could be utilized in negotiation.

### **USDA**

#### Rural Community Development Initiative (RCDI) Department of Agriculture Utilities Programs

USDA is the intermediary of this program requiring at least 50 percent local matching funds providing financial and technical assistance to recipients to develop their capacity and ability to undertake projects related to housing, community facilities, or community and economic development supporting the community. Funds are awarded between \$50,000 and \$250,000 per application.

### **Windsor School District**

Windsor school district is currently involved in grant programs which could be incorporated into the overall Great Streets plan. Additionally, schools have capital improvements plans which could also be leveraged to serve the community more broadly. Schools also have advocacy and political clout which could be employed to develop a safe routes to school network including improvements on Highway 61/67, Route K, trails and sidewalks. Teaming

with the school district to achieve mutually beneficial ends is worth exploring.

#### Capital Improvements Plan

Windsor Elementary School plans to expand its facilities. Their property does not provide adequate stormwater drainage resulting in the vast majority of current run-off entering residential properties and adding to stormwater discharge at the north and south outlets. Kimmswick should approach the School district concerning current and future stormwater management practices working toward the school remedying current discharge and planning appropriately for future stormwater impacts.

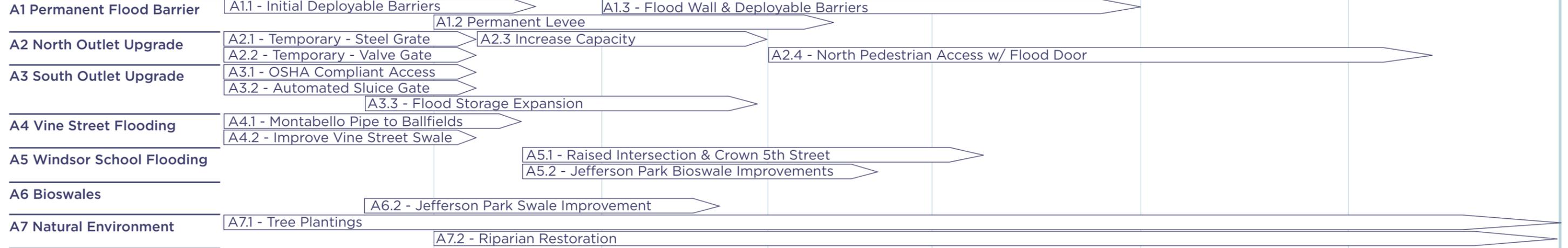
Source	Grant Name	Project Awards	Funding Range	Competition Type	Application Timeframe	Potential KGSPs	Reference	Contact
<b>A. FLOOD MANAGEMENT AND ENVIRONMENT PROJECTS</b>								
MDC	Community Conservation Funding Opportunity	Stream restoration, prairie or native warm-season grass reconstruction, forest management, and wetland enhancement, staff training; Requires 15-year management plan	\$50,000 Maximum	Competitive	Due 9/15/2018	A5-6	<a href="#">MDC</a>	Erin Shank 314-301-1506 x 4207 Erin.Shank@mdc.mo.gov
MDNR	Outdoor Recreation Grant	Projects for public use including playgrounds, ballfields, trails, boating and fishing facilities, signage and other permanent installations. Requires maintained in perpetuity for public outdoor recreational purposes. Development and renovation require 25 years or the life of the manufactured goods.	50% local match \$250,000 Maximum	Competitive	Cycle not scheduled	A5-7	<a href="#">MDNR</a>	MO State Parks, Grants Management PO Box 176 Jefferson City, MO 65102-0176 573-751-8462
ACE	Army Corp of Engineers Flood Protection Match	Match for flood barrier construction and construction management	65% local match			A1-2		
MDC	TRIM Grant	SEE DESCRIPTION IN "PUBLIC SPACE PROJECTS" SECTION				A5-7		
MDNR	Section 319 Nonpoint	Projects to improve water quality, including urban best management practices, riparian and wetland restoration	40% local match \$300,000 Maximum	Competitive	Cycle not scheduled	A1-3, A5-7	See Above	See Above
<b>B. PUBLIC SPACE PROJECTS</b>								
EWGCOG	Surface Transportation Program - Suballocated (STP-S)	Preliminary engineering, right of way acquisition, construction, and construction engineering for roadway resurfacing or reconstruction, bicycle and pedestrian facilities, highway safety infrastructure improvements and programs, including railway-highway grade crossings	20% local match	Competitive	Cycle not scheduled	B1-2, 4-5, B13	<a href="#">EWGCOG</a>	(314) 421.4220 stps@ewgateway.org
EWGCOG	Congestion Mitigation and Air Quality (CMAQ) Program	Preliminary engineering, right of way acquisition, construction, and construction engineering for traffic flow improvements, demand management, bicycle and pedestrian facilities	20% local match	Competitive	Cycle not scheduled	B1-2, 4-5, B13	<a href="#">EWGCOG</a>	(314) 421.4220 cmaq@ewgateway.org
MODOT	Transportation Alternatives Program (TAP)	Preliminary engineering, right of way acquisition, construction, and construction engineering for bicycle and pedestrian project, on-road or off-road trails, safe routes for non-drivers, Safe Routes to School (SRTS) Non-Infrastructure Project, safety and educational programs for pedestrians and bicycles for grades K-8, vegetation management practices in transportation rights-of-way, storm water management, control	20% local match	Competitive	Cycle not scheduled	B4-6, 9		
MDC	Tree Resource Improvement and Maintenance (TRIM) Grant	Tree inventory, hazardous tree removal or pruning, tree planting, and volunteer and city/county employee training	\$1,000 - \$10,000	Competitive	Annual 1st Friday in June	B3-4, 6, 9, 12, 14	<a href="#">MDC</a>	stlouis@mdc.mo.gov Phone: (636) 441-4554
MDNR	Recreational Trails Program (RTP) Grant	Restoration of existing recreational trails, development and rehabilitation of trailside and trailhead facilities, new recreational trails, acquisition of easements and property for recreational trails or corridors	20% local match \$25,000 - \$250,000		Cycle not scheduled	B4-5, 9-12	<a href="#">MDNR</a>	Grants Management, PO Box 176 Jefferson City, MO 65102-0176 573-751-0848 lwcf.rtp@dnr.mo.gov
<b>C. ECONOMIC DEVELOPMENT, PROGRAMMING &amp; EVENTS</b>								
USDA	Rural Community Development Initiative (RCDI)	Projects related to housing, community facilities, or community and economic development support the community	50% local match \$50,000 - \$250,000	Competitive	Due 7/25/2018	C3, 5	<a href="#">USDA</a>	Shirley Stevenson Community Programs Specialist Phone 2022059685
MDC	Discover Nature Schools	Encourage hands-on outdoor learning experiences	\$500 - \$1,000	First Come	Annual June 1	C2	<a href="#">MDC</a>	stlouis@mdc.mo.gov Phone: (636) 441-4554
MDNR	Missouri State Parks Bus Grant Program	SEE DESCRIPTION IN "FLOOD MANAGEMENT AND ENVIRONMENT PROJECT" SECTION				C2		
<b>D. GOVERNANCE</b>								
EWGCOG	Section 5310 - Enhanced Mobility	Transport vehicles and equipment for seniors and people with disabilities, capital projects to remove barriers at bus stops for persons with disabilities, activities related to mobility management	Preservation projects: 20% local match Access projects: 50% local match	Competitive	Cycle not scheduled	D4	<a href="#">EWGCOG</a>	(314) 421.4220 sect5310@ewgateway.org

**FIGURE M:** Funding Opportunities Matrix

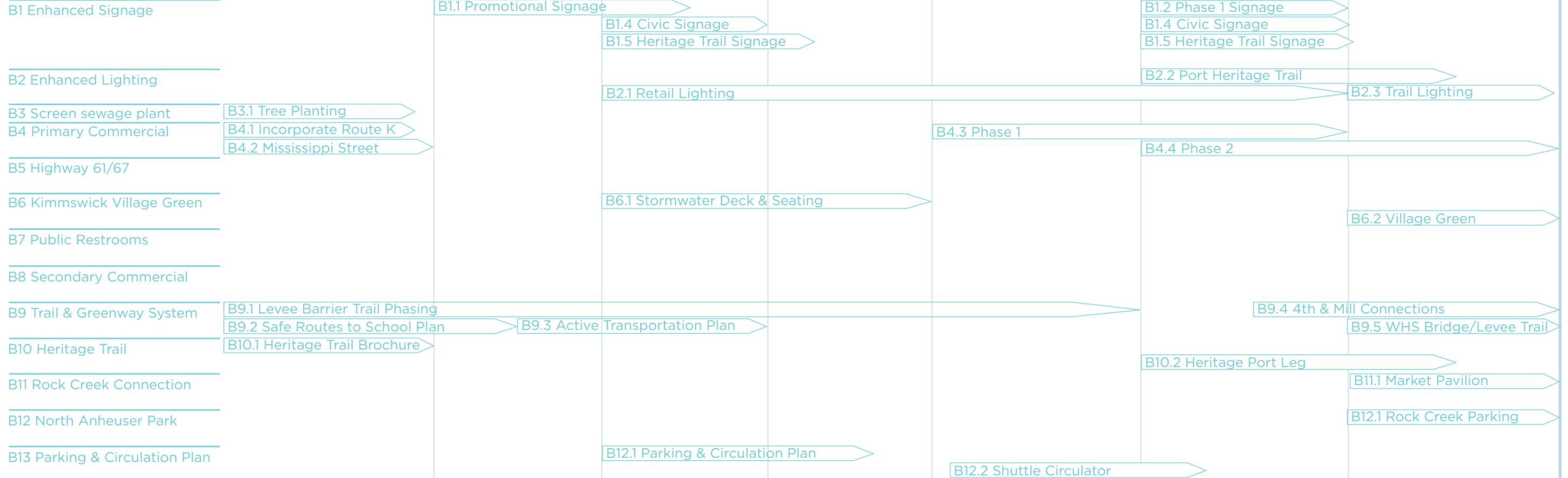
# IMMEDIATE IMPACT

# CORE PROJECTS

## FLOOD MANAGEMENT AND ENVIRONMENT



## PUBLIC SPACE



**FIGURE N:** Project Schedule, Project Categories: Flood Management & Environment and Public Space

CORE PROJECTS

ICING ON THE CAKE

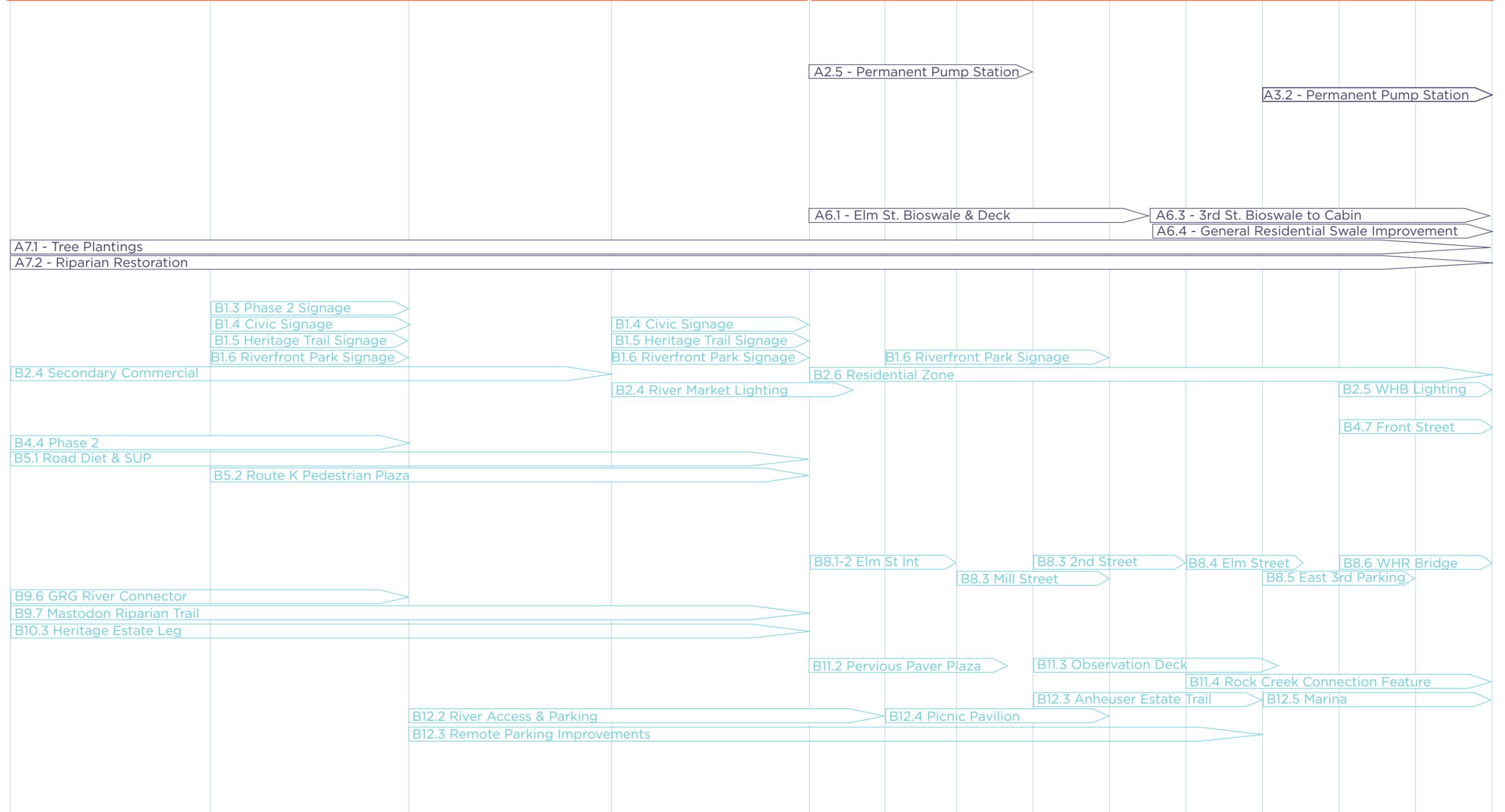
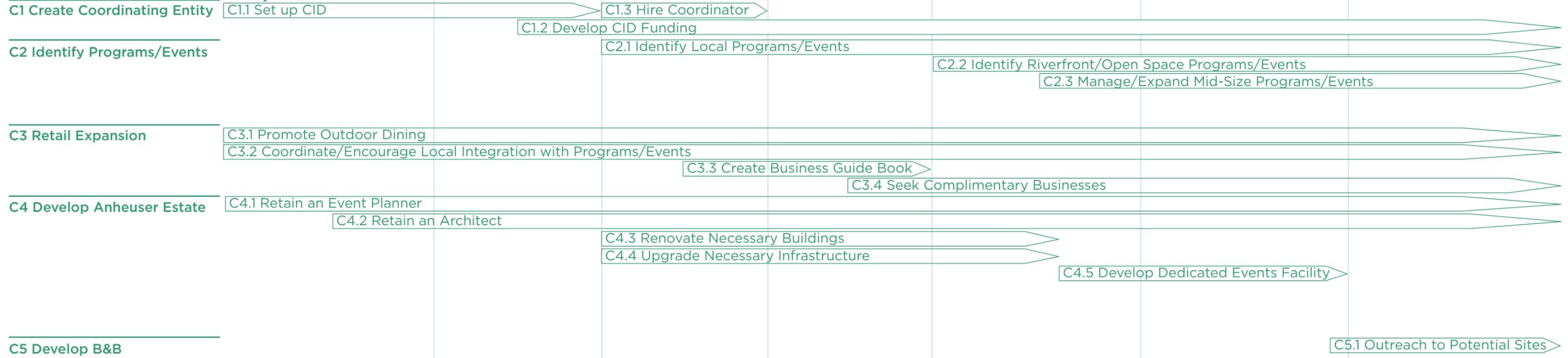


FIGURE M: Project Schedule, Project Categories: Flood Management & Environment and Public Space Continued

# PROJECT SCHEDULE

## BUSINESS DEVELOPMENT, PROGRAMMING & EVENTS



## GOVERNANCE

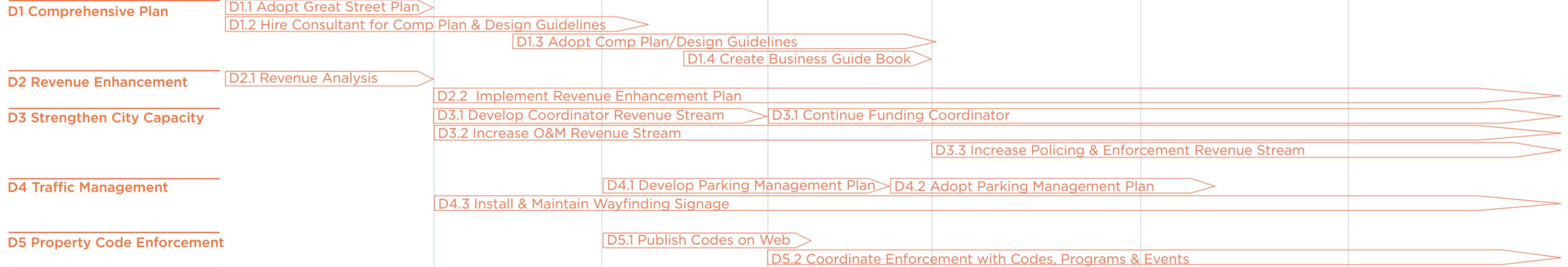


FIGURE N: Project Schedule, Project Categories: Business Development, Programming & Events

CORE PROJECTS

ICING ON THE CAKE

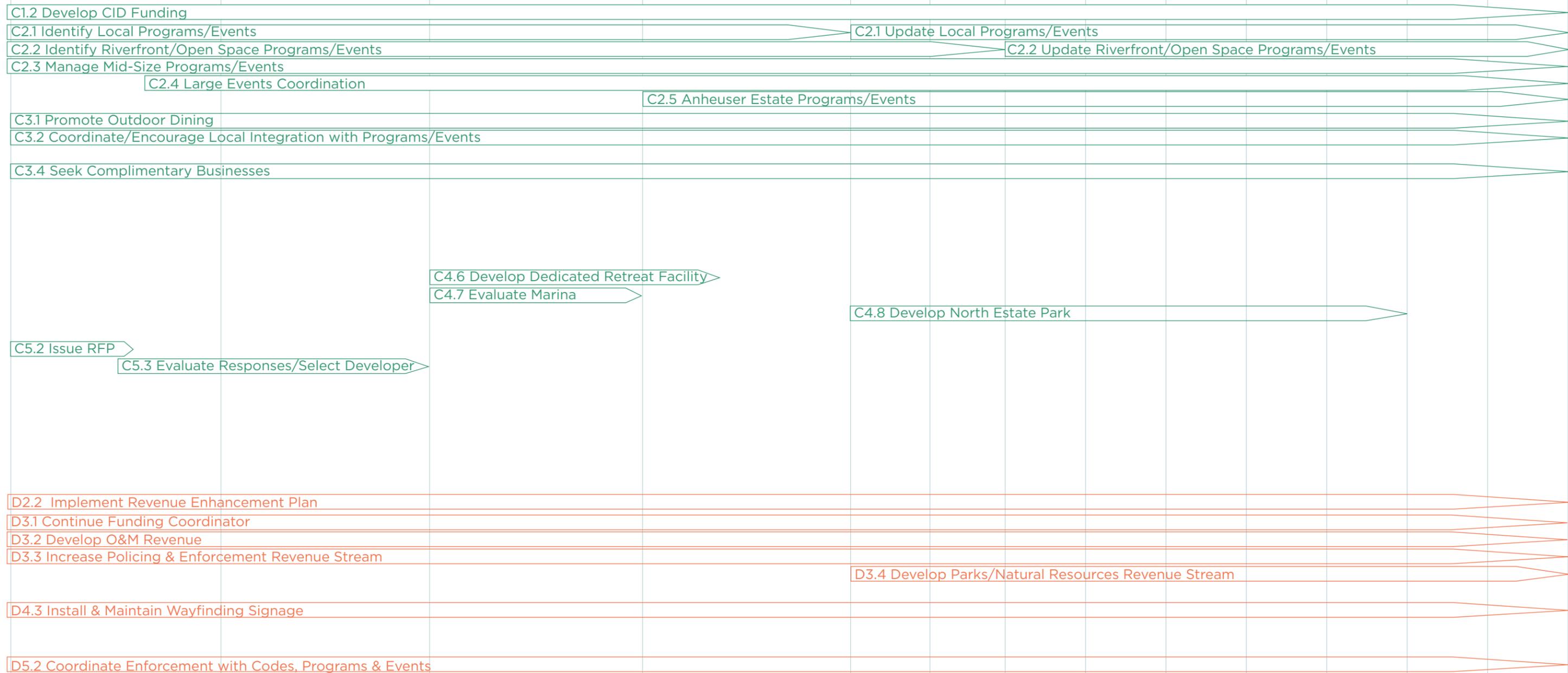
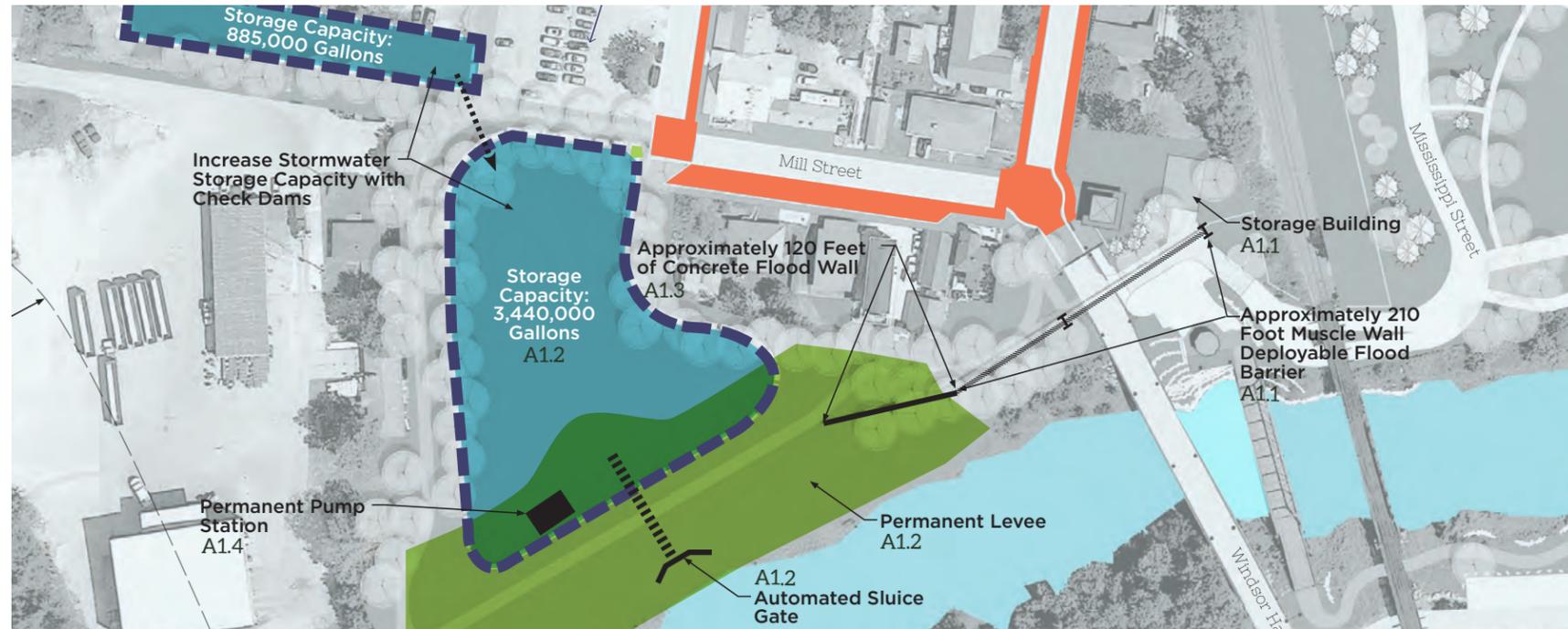


FIGURE M: Project Schedule, Project Categories: Business Development, Programming & Events Continued

# A1. PERMANENT FLOOD BARRIER



Above: Flood Barrier Solution



Above: Deployable Barrier in Action



**\$1M to \$5.5M**  
LOWER THAN  
CORP OF ENGINEERS



**3.4M**  
GALLON  
RUNOFF  
STORAGE



**8 to 27**  
DAYS  
ACCESS GAINED



**INCREASE**  
COMMERCE



**MAINTAINED**  
HISTORIC  
AESTHETIC



**INCREASED**  
FINANCIAL  
RESILIENCE

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character

## A1. PERMANENT FLOOD BARRIER ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

\$5,532,214

A1.1 - Deployable Flood Barrier			Sub Total	\$	137,500.00
1	Deployable System 8' height x 32' width	EA	25	\$ 2,100.00	\$ 52,500.00
2	CIP Concrete headwalls	LS	1	\$ 25,000.00	\$ 25,000.00
3	30'x40' Morton Storage Shed	LS	1	\$ 60,000.00	\$ 60,000.00

A1.2 - Permanent Levee			Sub Total	\$	306,500.00
4	Stripping	CY	800	\$ 10.00	\$ 8,000.00
5	Levee Embankment	CY	7,450	\$ 35.00	\$ 260,750.00
6	Establishment of Turf	AC	1	\$ 3,500.00	\$ 3,500.00
7	Crushed Stone Surfacing	TN	600	\$ 45.00	\$ 27,000.00
8	Sluice Gate with remote control capability	LS	1	\$ 5,000.00	\$ 5,000.00
9	18" Class III RCP	LF	15	\$ 150.00	\$ 2,250.00

A1.3 - Permanent Floodwall			Sub Total	\$	800,700.00
10	Floodwall, T-Type	LF	120	\$ 6,200.00	\$ 744,000.00
11	Deployable System 8' height x 32' width	EA	27	\$ 2,100.00	\$ 56,700.00

A1.4 - Pump Station			Sub Total	\$	2,000,000.00
12	Pump Station	LS	1	\$ 2,000,000.00	\$ 2,000,000.00

<b>Sub-Total</b>	\$	3,244,700.00
<b>15% Mobilization</b>	\$	486,705.00
<b>10% Design</b>	\$	324,470.00
<b>30% Contingency</b>	\$	973,410.00
<b>10% Design</b>	\$	502,928.50
<b>TOTAL Estimated Cost</b>	\$	5,532,213.50

### PHASING PLAN



## A2. NORTH OUTLET UPGRADE



Above: Stone check dams slow runoff collecting debris before it reaches the outlet.



Above: Butterfly backflow prevention valve

### Project Description

The north outlet is undersized, ill-equipped to stop flooding, and hazardous to operate. Solving the problem will take two steps - first address functional deficiencies and hazards and second install a permanent solution. Installing a steel grate on the outlet's upstream end and a backflow prevention valve downstream addresses immediate hazards, but doesn't increase the outlet size. When upgrading, it's the perfect opportunity to create a 7' foot riverfront access. Bringing the railway to the table is the key, and creating a riverfront access could be a bargaining chip when negotiating the railway crossing at Market.

**RESPONSIBLE:** Jefferson County, City of Kimmswick

**FUNDING:** COE 35% Reimbursement for outlet upgrade

**PHASING:** A2.1-A2.4 Immediate Impact

A2.5 Icing on the Cake

**KICK-OFF:** 2019

### Implementation Strategy

Achieving the ultimate flood protection goal will occur in five phases and three movements - solve existing outlet hazards (A2.1-2.2), upgrade capacity and flow (A2.3-2.4), make outlet self-sustaining during floods (A2.5). Stormwater reaching the north outlet does not come from Kimmswick but from northern development in unincorporated Jefferson County. Working with Jefferson County DPW to reduce runoff and implement improvement measures, those upstream

responsible for producing the problem could take responsibility for paying for and solving the problem.

#### A2.1 - Temporary Debris Grate

Installing a steel bar grate and check dams will reduce clogs and separate debris from the outlet dramatically reducing operational hazards.

Phase Total ROM Estimated Cost: \$14,256

#### A2.2 - Temporary Backflow Prevention

Implementing a backflow prevention valve on the outlet's discharge will protect the community from floods so dangerous make-shift solution are not necessary.

Phase Total ROM Estimated Cost: \$21,681



**\$4.2K**  
LOWER THAN  
CORP OF ENGINEERS



**6.2K**  
GALLON  
RUNOFF  
STORAGE



**INCREASED  
OPERATOR  
SAFETY**



**CITY &  
COUNTY  
PARTNERSHIP**



**INCREASES  
CONNECTION TO  
NATURE**



**IMPROVES  
ACCESS  
TO RIVERFRONT**



**IMPROVES  
RESIDENTIAL -  
COMMERCIAL  
RELATIONS**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Supports Economic/Management Model

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access

**A2.3 - Increase Stormwater Capacity**

The most cost effective method to reduce and delay flood impacts is increasing capacity above ground. With limited ROW, increasing capacity on public lands may not achieve much.

The adjacent property experiences severe flooding resulting from the outlet. Talking with the property owner to work through a solution may achieve a greater outcome. No property negotiation or easements are factored into the ROM estimate.

If an amenable agreement can't be realized and storage capacity within the ROW is insufficient, underground storage may be necessary.

Phase Total ROM Estimated Cost: \$158,784

**A2.4 - Pedestrian Access Outlet**

The north outlet was once a bridge over a narrow roadway access. As flood levels raised, the railway decided to close the access all together which would have trapped nearly 50 acres of runoff. The current compromised solution compromises Kimmswick during floods.

With the proposed at-grade crossing at Market Street, the railway is requiring fencing line both sides of the tracks through town to funnel pedestrian traffic to that one crossing. Reducing riverfront access inconveniences area residents. Installing a 7 foot diameter pipe would create an additional safe separated pedestrian crossing. A watertight door would protect against flooding.

Phase Total ROM Estimated Cost: \$308,360

**A2.5 - Permanent Pump Station**

The previous project phases deal with the practical need to increase flow through the outlet and protect against flooding. Constructing a permanent pump station is not Kimmswick's highest priority and the station would require regular operations and maintenance resources.

During floods the City still needs to pump water over the tracks. A temporary pump does the job. The railway has not appreciated this practice in the past complaining it compromises operations and safety. Constructing a pump station could be another bargaining chip when negotiating improvements with the railroad. A cost/benefit analysis will need conducted to help in the decision making process.

The ROM estimate does not include permits, negotiation costs, or miscellaneous expenses.

Phase Total ROM Estimated Cost: \$74,250

**A2. NORTH OUTLET UPGRADES  
ROUGH ORDER OF MAGNITUDE OPINION OF COSTS**

**\$577,331**

<b>A2.1 - Temporary Debris Gate</b>			<b>Sub Total</b>		<b>\$</b>	<b>9,600.00</b>
1	Steel Bar Grate (10'x5')	EA	1	\$ 2,500.00	\$	2,500.00
2	Gravel Check Dams (20'x18" crushed stone )	LS	1	\$ 4,000.00	\$	4,000.00
3	Excavation	CY	370	\$ 5.00	\$	1,850.00
4	Seeding	SY	250	\$ 5.00	\$	1,250.00

<b>A2.2 - Temporary Backflow Prevention Valves</b>			<b>Sub Total</b>		<b>\$</b>	<b>14,600.00</b>
5	12" Diameter HDPE butterfly valve	EA	2	\$ 7,300.00	\$	14,600.00

<b>A2.3 - Increase Stormwater Storage Capacity</b>			<b>Sub Total</b>		<b>\$</b>	<b>106,925.00</b>
6	Excavation	CY	3,053	\$ 5.00	\$	15,265.00
7	Seeding	SY	18,332	\$ 5.00	\$	91,660.00

<b>A2.4 - Pedestrian Access Outlet</b>			<b>Sub Total</b>		<b>\$</b>	<b>207,650.00</b>
8	7' diameter reinforced concrete pipe, 17' long	LF	17	\$ 450.00	\$	7,650.00
9	7' diameter watertight door	LS	1	\$ 200,000.00	\$	200,000.00

<b>A2.5 - Permanent Pump Station</b>			<b>Sub Total</b>		<b>\$</b>	<b>50,000.00</b>
10	Pumps Station + enclosure + forced main	LS	1	\$ 50,000.00	\$	50,000.00

<b>Sub-Total</b>	<b>\$</b>	<b>388,775.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>19,438.75</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>19,438.75</b>
<b>25% Contingency</b>	<b>\$</b>	<b>97,193.75</b>
<b>10% Design</b>	<b>\$</b>	<b>52,484.63</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>577,330.88</b>

**PHASING PLAN**



## A3. SOUTH OUTLET UPGRADE



Above: Automated Sluice Gate

### A3.1 - OSHA Compliant Access

South outlet access deficiency has compromised the operator's life in during a previous flash flood. A compliant access walk and stairs provides a safety patch until a new gate is constructed.

Phase Total ROM Estimated Cost: \$36,887

### A3.2 - Automated Sluice Gate

Upgrading the existing gate to a automated sluice gate removes the operator from harms way during dangerous weather. Installation is recommended during periods of historically low rainfall.

Phase Total ROM Estimated Cost: \$7,425

### A3.3 - Flood Storage Expansion

Levee construction includes developing the large storage basin at the south outlet. This phase provides for additional stormwater storage, approximately 885,000gallons, should parcels northwest of the basin become available for development. Any parking addition in this area should include stormwater storage capacity.

Phase Total ROM Estimated Cost: \$154,440

### Project Description

The south outlet will be replaced when the permanent levee is constructed. Because it is hazardous to operate, temporary provisions for safe operations are included. Increased stormwater storage capacity will further protect the town during floods.

RESPONSIBLE: City

PHASING: A3.1-A3.2 Immediate Impact

A3.3 Icing on the Cake

KICK-OFF: 2019



**INCREASED  
OPERATOR  
SAFETY**



**8.8K  
GALLON  
RUNOFF  
STORAGE**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model

**COUNTY GOALS**

- » Support Kimmswick

## ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$198,752**

A3.1 - OSHA Compliant Access				Sub Total		\$ 24,840.00	
1	Walkway + Foundation	SF	240	\$ 53.50	\$	12,840.00	
2	CIP Concrete Stairs (24 risers)	LS	1	\$ 12,000.00	\$	12,000.00	

A3.2 - Automated Sluice Gate				Sub Total		\$ 5,000.00	
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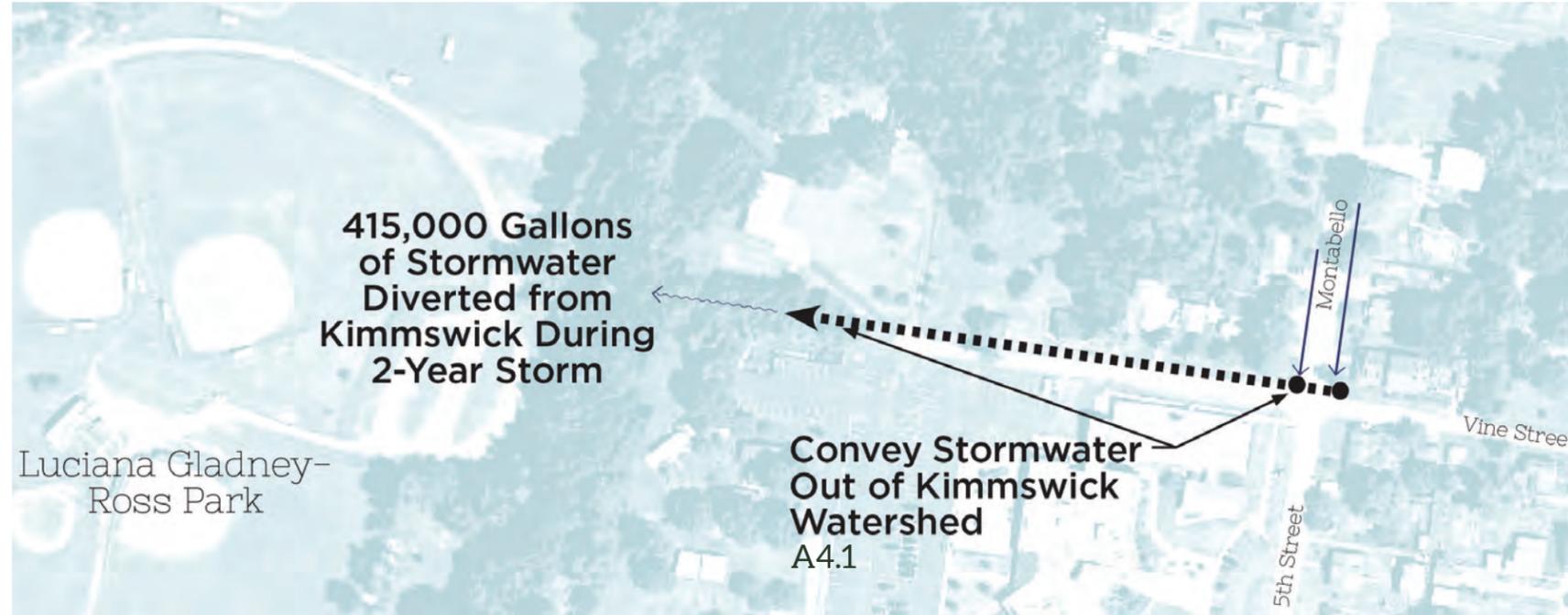
A3.3 - Flood Storage Expansion				Sub Total		\$ 104,000.00	
3	Flood Levee Construction Across Channel	CY	500	\$ 75.00	\$	37,500.00	
4	Excavation	CY	7,800	\$ 5.00	\$	39,000.00	
5	Sod	SY	5,500	\$ 5.00	\$	27,500.00	

<b>Sub-Total</b>	<b>\$</b>	<b>133,840.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>6,692.00</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>6,692.00</b>
<b>25% Contingency</b>	<b>\$</b>	<b>33,460.00</b>
<b>10%Design</b>	<b>\$</b>	<b>18,068.40</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>198,752.40</b>

### PHASING PLAN



# A4. VINE STREET FLOODING



Above: A4.1 Implementation Diagram

## Project Description

Nearly 7.5 percent of the stormwater Kimmswick' receives comes from development north of Kimmswick. This project diverts the runoff from Montabello and Vine through an underground pipe to Luciana Gladney-Ross Park.

**RESPONSIBLE:** Jefferson County  
**PHASING:** A4.1-A4.2 Immediate Impact  
**KICK-OFF:** 2019

**A4.1 - Inlet & Underground Pipe from 5th Street to Luciana Gladney-Ross Park**  
 A storm sewer pipe installed along Vine Street from Montabello west outlets from the side of the bluff facing Luciana Gladney-Ross Park. A utility easement through one property is necessary.

Phase Total ROM Estimated Cost: \$73,700

**A4.2 - Improve Vine Street Swale**  
 Diverting runoff from Montabello dramatically reduces stormwater flowing east down Vine Street. The existing swale should handle remaining runoff. Installing check dams every 50 feet will slow stormwater flow reducing erosion and the need for regular maintenance.

Phase Total ROM Estimated Cost: \$5,940

# A4. VINE STREET FLOODING ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$79,641**

A4.1 - Montabello Pipe to Ballfields			Sub Total	\$	49,630.00
1	36" Reinforced Concrete Pipe	LF	30	\$ 120.00	\$ 3,600.00
2	36" Perforated HDPE Pipe	LF	400	\$ 50.00	\$ 20,000.00
3	RCP Catch Basin	EA	2	\$ 5,000.00	\$ 10,000.00
4	RCP Headwall	EA	1	\$ 5,000.00	\$ 5,000.00
5	Excavation Swale (10'x1' w/3:1 side slope)	CY	103	\$ 10.00	\$ 1,030.00
6	Sod	SY	400	\$ 25.00	\$ 10,000.00

A4.2 - Vine Street Swale Improvements			Sub Total	\$	4,000.00
7	Gravel Check Dams (10'x1' crushed stone ) @ 50' spaci	EA	20	\$ 200.00	\$ 4,000.00

<b>Sub-Total</b>	\$	<b>53,630.00</b>
<b>5% Mobilization</b>	\$	<b>2,681.50</b>
<b>5% Traffic Control</b>	\$	<b>2,681.50</b>
<b>25% Contingency</b>	\$	<b>13,407.50</b>
<b>10% Design</b>	\$	<b>7,240.05</b>
<b>TOTAL Estimated Cost</b>	\$	<b>79,640.55</b>



Accomplishes  
**KIMMSWICK GOALS**

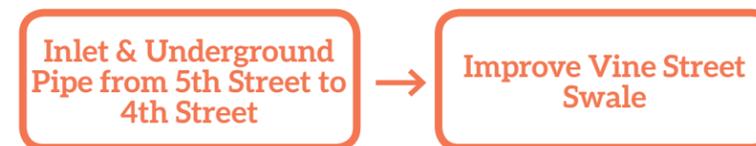
- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

» Supports Economic/Management Model

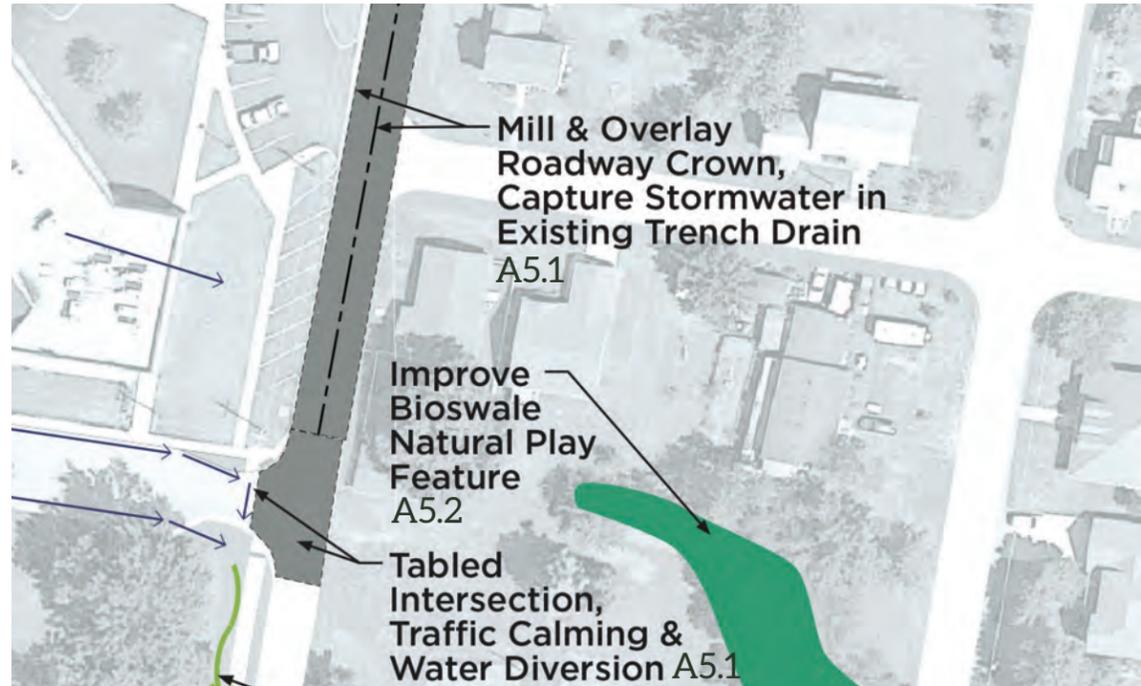
**COUNTY GOALS**

» Support Kimmswick

## PHASING PLAN



## A5. WINDSOR SCHOOL FLOODING



Above: A5.1 Implementation Diagram



Above: A raised intersection at High Street will slow traffic and reroute runoff.

### Project Description

Stormwater management facilities for the Windsor Elementary School development were inadequately sized resulting in residential flooding and greater stress on Kimmswick's storm outlets. Surface roadway modification and minor storm sewer installation reduces stormwater runoff Kimmswick receives by over 6.5 percent and calms traffic too.

**RESPONSIBLE:** Windsor School District, CITY  
**FUNDING:** Windsor School, Forest Relief, MDC MRAP, MDC Community Conservation, MDC Discover Nature Schools, MDC Urban Cost Share, DNR Recreational Trails, DNR

**Green Infrastructure, DNR Outdoor Recreation, 319 Nonpoint, Private PHASING:** A5.1-A5.2 Immediate Impact  
**KICK-OFF:** 2021

### Implementation Strategy

Phase A5.1 should correspond with Windsor Elementary School's planned expansion. Windsor School District's plans are public knowledge meaning they are substantially down the path of design and fund allocation. The City should approach Windsor School District as soon as possible to integrate these improvements into the expansion project.

Packaging Phase A5.2 into the expansion project as well, allows the school to potentially leverage funds as a match

toward MDC or DNR grants. Should Phase 5.2 follow 5.1, increased flow into the park will need to be mitigated as not to overwhelm the swales on Elm Street.

Wrapping both phases into the current expansion plans is a win-win for the school district and Kimmswick. It diverts runoff out of Kimmswick, alleviates residential flooding, implements the first segment of a safe routes to school plan, calms traffic during school drop-off and pick-ups, and

creates an outdoor classroom and natural playground for the school and Kimmswick.

#### A5.1 - 5th Street Modifications

The plan recommends crowning 5th Street and raising the High Street intersection to stop runoff from flowing into Kimmswick residences. This diverts water north and south. A catch basin removes 6.5 percent of Kimmswick's stormwater conveying it through a pipe south under Highway K to the wetland down the hill. Narrowing

 **6.5%**  
STORMWATER  
REMOVED  
FROM OUTLETS

 **SLOW**  
REDUCES  
TRAFFIC  
SPEED

 **925**  
LESS FEET OF  
STORM PIPE  
OVER LAND FLOW

 INCREASES  
CONNECTION TO  
**NATURE**

 **ADDED  
EDUCATION  
OPPORTUNITY**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

» Enhance Historic Character

**COUNTY GOALS**

» Support Kimmswick

travel lanes to 10 feet on 5th Street provides room on the roadway's west side for a curb protected sidewalk and improved swale. The road narrowing and raised intersection calm traffic passing the school increasing safety for children.

A catch basin near the Oak street intersection captures northern runoff conveying it into the Jefferson Park swale (A6.1). The Jefferson Park swale project should be incorporated into this project phase.

Phase Total ROM Estimated Cost: \$90,250

**A5.2 - Jefferson Park Bioswale Improvement**  
Improvements to the Jefferson Park swale should correspond with Phase A5.1 as stormwater from that phase outlets into it. The project is an opportunity to install natural play recreation elements and create a stormwater outdoor classroom and laboratory. A meandering stream should flow through native plantings and over interactive check dam play features. Designing around the turtle sculptures and other art should be considered.

The stream currently outlets into the Elm Street's northern paved swale. Jefferson Park's swale design should take measures not to increase peak flow on Elm. The park project is an excellent education and recreational opportunity which could receive MDC and DNR stormwater and recreation funds. Private funds should be sought specifically for artwork and playground elements.

Should these two projects not coincide, water released into the park needs to be mitigated prior to reaching Elm Street.

Phase Total ROM Estimated Cost: \$100,000 - \$365,000

## A5. WINDSOR SCHOOL FLOODING ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

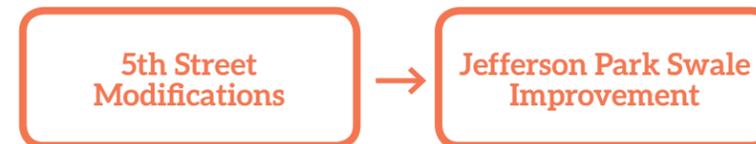
\$454,921

A5.1 - 5th Street Modifications		Sub Total	\$	55,435.72
1	Sawcut	LF	8 \$	212.00 \$ 1,696.00
2	Cold Mill (for cross slope trans)	SY	5 \$	1,142.22 \$ 5,711.11
3	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	90 \$	190.37 \$ 17,133.33
4	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	90 \$	27.59 \$ 2,483.33
5	Concrete Pavement (8" non-reinf)	SY	70 \$	248.33 \$ 17,383.33
6	Tack Coat (0.10 GAL/SY)	GAL	5 \$	139.06 \$ 695.28
7	4" Type 5 Aggregate Base	SY	8 \$	248.33 \$ 1,986.67
8	Compacting Subgrade	SY	2 \$	248.33 \$ 496.67
9	Storm Inlet	EA	4,500 \$	1.00 \$ 4,500.00
10	Manhole Connection	EA	2,000 \$	1.00 \$ 2,000.00
11	18" Class III RCP	LF	90 \$	15.00 \$ 1,350.00

A5.2 - Jefferson Park Bioswale Improvement		Sub Total	\$	224,000.00
1	Swale (excavation + seeding)	SF	3,000 \$	10.00 \$ 30,000.00
2	Landscape Boulders	TN	50 \$	500.00 \$ 25,000.00
3	Bioswale Planting	SY	3,000 \$	45.00 \$ 135,000.00
4	Gravel Check Dams (crushed stone )	EA	20 \$	200.00 \$ 4,000.00
5	Educational/Interpretive signage	EA	5 \$	1,000.00 \$ 5,000.00
6	Natural Play Elements	LS	1 \$	25,000.00 \$ 25,000.00

<b>Sub-Total</b>	<b>\$ 279,435.72</b>
<b>10% Mobilization</b>	<b>\$ 27,943.57</b>
<b>3% Traffic Control</b>	<b>\$ 8,383.07</b>
<b>5% Demolition</b>	<b>\$ 13,971.79</b>
<b>5% SWPPP</b>	<b>\$ 13,971.79</b>
<b>25% Contingency</b>	<b>\$ 69,858.93</b>
<b>10% Design</b>	<b>\$ 41,356.49</b>
<b>TOTAL Estimated Cost</b>	<b>\$ 454,921.36</b>

### PHASING PLAN



## A6.BIOSWALES



Above: Attractive roadside bioswale

### Project Description

Swales convey stormwater from Kimmswick's north to a patchwork storm sewer system starting near Market Street. A series of projects improve the swales' performance and create amenities which define the Secondary Commercial and Residential areas adding to Kimmswick's unique character.

RESPONSIBLE: City

FUNDING: MDC Community

Conservation, MDC Urban Cost Share,  
DNR Green Infrastructure, DNR 319  
Nonpoint

### Implementation Strategy

Each of these projects could be implemented individually. Completing commercial area swales first is recommended to help define the downtown and increase amenities. Residential swale improvements should address the most pressing runoff concerns first and integrate residential lighting.

PHASING: A6.1-6.3 Icing on the Cake

COORDINATE WITH: B8.1, B8.2, B8.5

KICK-OFF: 2030

### A6.1 - Elm St Bioswale and Stormwater Deck

This project extends to stormwater deck feature on 3rd Street east on Elm toward the Port of Call Restaurant. The deck extends their outdoor dining to the roadway. Increased nose in parking at the Burgess-Howe House is also proposed.

Phase Total ROM Estimated Cost: \$128,590

### A6.2 - 3rd St. Bioswale to Cabin

Upgrades to the swale increase flow capacity, slow peak runoff, and incorporate native planting. It also serves as a transition to the residential area.

Phase Total ROM Estimated Cost: \$46,200

### A6.3 - General Residential Improvements

Conveying stormwater over land increases flow capacity and slows peak runoff improving system-wide stormwater mitigation. Additionally, incorporating landscape boulders and residential lighting make the swale a more attractive feature, identify the corridors as residential, and provide a consistent community aesthetic further increasing Kimmswick's quality of life.

Phase ROM Cost per Linear Block: \$107,800

## A6. BIOSWALES ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$174,790**

A6.1 - Elm Street Bioswale & Deck			Sub Total	\$	83,500.00
1	Swale (10'x1' excavation + seeding)	SF	3,000	\$ 10.00	\$ 30,000.00
2	Boardwalk Crossing 30'x12'	SF	360	\$ 100.00	\$ 36,000.00
3	Drain pipe & Parking Access	LS	1	\$ 12,500.00	\$ 12,500.00
4	Landscape Boulders	TN	10	\$ 500.00	\$ 5,000.00

A6.2 - 3rd St Bioswale to Cabin			Sub Total	\$	30,000.00
5	Swale (10'x1' excavation + seeding)	SF	2,500	\$ 10.00	\$ 25,000.00
6	Landscape Boulders	TN	10	\$ 500.00	\$ 5,000.00

<b>Sub-Total</b>	\$	<b>113,500.00</b>
<b>5% Mobilization</b>	\$	<b>5,675.00</b>
<b>5% Traffic Control</b>	\$	<b>5,675.00</b>
<b>5% SWPPP</b>	\$	<b>5,675.00</b>
<b>25% Contingency</b>	\$	<b>28,375.00</b>
<b>10% Design</b>	\$	<b>15,890.00</b>
<b>TOTAL Estimated Cost</b>	\$	<b>174,790.00</b>

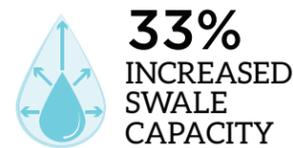
## ROUGH ORDER OF MAGNITUDE OPINION OF COSTS PER LINEAR BLOCK

**\$107,800**

A6.3 - General Residential Improvements			Sub Total	\$	70,000.00
13	Swale (12'x1' excavation + seeding) per Block Length	LF	500	\$ 120.00	\$ 60,000.00
14	Landscape Boulders per Block	TN	20	\$ 500.00	\$ 10,000.00

<b>Sub-Total</b>	\$	<b>70,000.00</b>
<b>5% Mobilization</b>	\$	<b>3,500.00</b>
<b>5% Traffic Control</b>	\$	<b>3,500.00</b>
<b>5% SWPPP</b>	\$	<b>3,500.00</b>
<b>25% Contingency</b>	\$	<b>17,500.00</b>
<b>10% Design</b>	\$	<b>9,800.00</b>
<b>TOTAL Estimated Cost</b>	\$	<b>107,800.00</b>

### PHASING PLAN



Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model

**COUNTY GOALS**

- » Support Kimmswick
- » Regional Economic Growth

- » Support Riverfront Re-development

## A7. NATURAL ENVIRONMENT ENHANCEMENTS



Above: Boardwalk along riparian edge



Above: Riparian trail

### Project Description

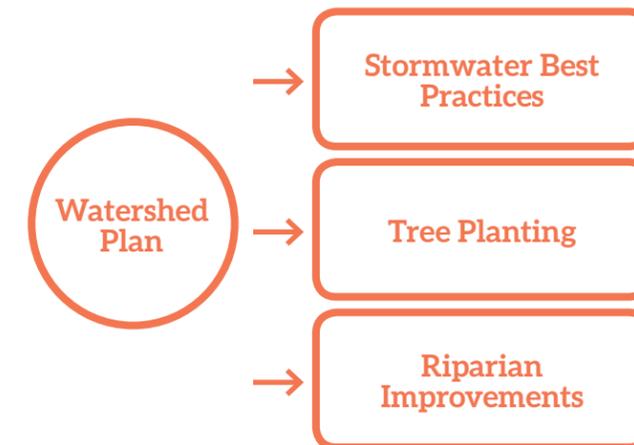
Nature is one of Kimmswick's greatest assets. Connecting residents and visitors to the natural setting will increase physical and psychological health, educate your children, attract visitors and patrons to the Anheuser Estate for events and retreats, make the port and riverfront a more vibrant experience, and communicate without words the Kimmswick's values and character to the region. The Great Streets plan places great emphasis on improving the natural setting not only for an improved quality of life, but to attract a broader visitor demographic and support active and passive recreation. Kimmswick needs to advocate for environmental improvements surrounding the community and upstream particularly concerning port improvements and riparian trail projects.

- **Responsible:** Jefferson County, JCPA, City, Anheuser Estate
- **Funding:** Forest Releaf, MDC TRIM, MDC Private Land Owner Assistance Program, MDC MRAP, MDC Community Conservation, MDC Discover Nature Schools, MDC Riparian Stream Bank Restoration, MDC River Access Assistance
- **Program, MDC Teaching Outreach & Education, DNR RTP, DNR Green Infrastructure, DNR Outdoor Recreation, 319 Nonpoint, Private**

### Implementation Strategy

Specific projects have not been identified. Kimmswick in regional partnership with other stakeholders in the Rock Creek watershed should work together to develop a Watershed Plan to identify specific projects. Projects could include rain gardens, bioswales, pervious paving, native planting, nutrient control measures, riparian corridor improvements, and wetland construction and protection.

This is an opportunity for Kimmswick to be a regional leader to develop pride of place for a significant portion of Jefferson County. This plan could positively impact generations to come.



Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Support Economic Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development

# B1. ENHANCED SIGNAGE



Above: Signage families create and identity and brand

## Project Description

Hospitality is of utmost importance when most people in town are visitors. This is why signage of one of the most essential and helpful elements. Signage can also be the first welcome communicating who the town is. Maybe most importantly signage moves people. Much thought and purpose goes into wayfinding signage. The Great Streets plan Civic signage, Heritage Trail signage, and Riverfront signage being wrapped into one signage family. The signage welcoming committee would greet people at Interstate 55 and guide them all the way to the Mississippi River showing them a plethora of attractions, activities, and unique places along the way.

## Implementation Strategy

Prior to signage installation, Kimmswick should develop a branding and signage guide providing design intent for the full signage family. Once branding is established, a heritage trail brochure should be created and distributed to all Kimmswick vendors and civic institutions. The brochures should also be placed in every welcome center in

the Jefferson County and St. Louis Region. Branding should also be phased into all Kimmswick promotional outlets. Having the branding and signage guide established early will help in the selection of site furnishings and other design elements.

Promotional welcome signage is the only Phase 1 installation not associated with a capital improvement project. These signage direct visitors from I-55 onto Route K headed to Kimmswick and should be installed as soon as possible. All other phase 1 signage corresponds with capital construction projects including Highway 61/67 and Route K intersection entry features (B4.3), entry gateways at Route K (B4.3 or B4.4) and Windsor Harbor Road (B4.2 or B8.7), 4th Street civic signage (B4.3), civic kiosks (B4.3, B4.4 & B4.5), Kimmswick Village Green institutional signs (B6), civic multi-directional signs (B4.3, B4.4, B4.5, B8.1, B8.2 & B8.3), and civic pedestrian trailblazer signage at the railroad crossing (B4.3).

All phase 2 signage is associated with capital improvement projects including Route K promotional welcome signage (B4.3 or B4.4), Lucianna Gladney-Ross institutional signage (B4.4), civic multi-directional signs (B4.3, B4.4, B4.5, B8.1, B8.2 & B8.3),

Kimmswick Port Heritage Trail signage (B10.1), Market Street Heritage Trail Signage (B4.4), civic parking signs (B4.4 & Port Parking), civic banners (B4.3, B4.4, B4.5, B8.1, & B8.2), and port identification signs (B4.2 & B4.3).

All Phase 3 signage is associated with capital improvement projects including the Highway 61/67 monument sign, Heritage Trail trailhead signage, City Hall institutional signage, and Riverfront Park amphitheater identification signs and multi-directional signs.

Appropriate civic signage should be installed with each commercial street improvement, Anheuser Estate project, and residential street improvement. As funds become available institutional signage should be installed at museums and the Visitor Center.

Front Street, Elm Street and the Anheuser Estate Heritage Trail signage should be installed with the associated projects.

Similarly, Riverfront Park signage should be added with associated projects.

**RESPONSIBLE:** Anheuser Estate, City, MA/CID, Historical Society, JC DPW, JC Parks, JCPA, WS  
**FUNDING:** Anheuser Estate, City, MA/CID, EWG STP, EWG TAP, JC Parks, JCPA AIM, JCPA Naming Rights, MDC MRAP, MDC Community Conservation, MDC Discover Nature Schools, MDC River Access Assistance Program, MDC Urban Cost Share,

DNR Green Infrastructure, DNR RTP, DNR Outdoor Recreation, DNR 319 Nonpoint, Private, Windsor Schools  
**COORDINATE:** B4, B5, B6, B8, B9, B10, B11, B12  
**KICK-OFF:** 2019



Route K Entry Gateway - B1.1 (Items KE1-6)



Heritage Trail Banner, Inlay & Kiosk - B1.2



Signs can frame views, greet, and offer direction.

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development

## B1. ENHANCED SIGNAGE ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$1,217,682**

### B1.1 - Welcome Signage

Welcome signage directs visitors to and invites visitors into Kimmswick. These signs include promotional, monument and gateway signs.

Phase ROM Cost: \$308,201

B1.1 - Welcome Signage P1		Sub Total	\$	250,462.00
P-1	Monument Billboard Sign	EA	3	\$ - \$ -
P-2	Concrete Footing Embedded	CY	12	\$ 1,300.00 \$ 15,600.00
P-3	Sign Lighting	EA	3	\$ 3,000.00 \$ 9,000.00
P-4	Landscape	LS	3	\$ 1,000.00 \$ 3,000.00
IT-1	Decorative Light Pole & Luminaire	EA	2	\$ 8,000.00 \$ 16,000.00
IT-2	Power Supply Assembly, Type 1, 240/120 Volt	EA	1	\$ 5,000.00 \$ 5,000.00
IT-3	Base Mounted Control Station 240 Volt - 4 Circuit	EA	1	\$ 10,000.00 \$ 10,000.00
IT-4	1.25" Raceway (Trenched or Bored), #10 AWG	LF	333	\$ 22.00 \$ 7,326.00
IT-5	Fencing	LF	160	\$ 55.00 \$ 8,800.00
IT-6	Monument Sign	EA	1	\$ 10,000.00 \$ 10,000.00
IT-7	Decorative Wall	SF	544	\$ 44.00 \$ 23,936.00
IT-8	Landscape	LS	1	\$ 3,000.00 \$ 3,000.00
KE-1	SUP Gateway (10' Clear, 12' High)	EA	1	\$ 10,000.00 \$ 10,000.00
KE-2	Roadway Gateway (22' Clear, 26' High)	EA	1	\$ 25,000.00 \$ 25,000.00
KE-3	Concrete Footings Embedded	CY	8	\$ 1,300.00 \$ 10,400.00
KE-4	Wooden Columns	LF	100	\$ 120.00 \$ 12,000.00
KE-5	Class B-1 Concrete - Column Reinforcement	CY	2	\$ 1,000.00 \$ 2,000.00
KE-6	Historic LED Luminaire w/ Mount	EA	4	\$ 2,500.00 \$ 10,000.00
WE-1	SUP Gateway (10' Clear, 12' High)	EA	1	\$ 10,000.00 \$ 10,000.00
WE-2	Roadway Gateway (22' Clear, 26' High)	EA	1	\$ 25,000.00 \$ 25,000.00
WE-3	Concrete Footings Embedded	CY	8	\$ 1,300.00 \$ 10,400.00
WE-4	Wooden Columns	LF	100	\$ 120.00 \$ 12,000.00
WE-5	Class B-1 Concrete - Column Reinforcement	CY	2	\$ 1,000.00 \$ 2,000.00
WE-6	Historic LED Luminaire w/ Mount	EA	4	\$ 2,500.00 \$ 10,000.00

### B1.2 - Civic Signage

Civic signage promotes Kimmswick, her institutions, businesses and identity. This portion of the package is the core of the entire signage family. Wayfinding kiosks and directional signs, banners, street and parking signs, and institutional signs are included.

Phase ROM Cost: \$307,850

B1.2 - Civic P1		Sub Total	\$	202,800.00
K4-1	Vehicular Trailblazer	EA	2	\$ 14,000.00 \$ 28,000.00
K4-2	Concrete Footings Embedded	EA	5	\$ 1,300.00 \$ 6,500.00
K4-3	Historic LED Luminaire w/ Mount	EA	2	\$ 2,500.00 \$ 5,000.00
K4-4	Wooden Light Fixture Post	EA	2	\$ 4,300.00 \$ 8,600.00
CV-1	Pedestrian Trailblazer	EA	3	\$ 10,000.00 \$ 30,000.00
CV-2	Civic Multi-directional	EA	9	\$ 5,000.00 \$ 45,000.00
CV-3	Civic Banner & Brackets	EA	44	\$ 300.00 \$ 13,200.00
CV-4	Civic Street Sign	EA	11	\$ 1,500.00 \$ 16,500.00
CV-5	Civic Parking Sign	EA	6	\$ 1,500.00 \$ 9,000.00

### B1.3 - Heritage Trail Signage

The Heritage Trail is a story telling activity. Promotional material, wayfinding, interpretive signs, and Heritage Trail elements are included.

Phase ROM Cost: \$382,688

B1.3 - Heritate Trail Signage		Sub Total	\$	252,100.00
HT-1	Brochure Design	LS	1	\$ 5,000.00 \$ 5,000.00
HT-2	Brochure	LS	1	\$ 1,000.00 \$ 1,000.00
HT-3	Trailhead Kiosk	EA	3	\$ 5,000.00 \$ 15,000.00
HT-4	Banner & Brackets	EA	12	\$ 300.00 \$ 3,600.00
HT-5	Historic Marker	EA	38	\$ 500.00 \$ 19,000.00
HT-6	Trail Marker	EA	12	\$ 800.00 \$ 9,600.00
HT-7	Directional Guide	EA	7	\$ 2,000.00 \$ 14,000.00
HT-8	Building Plaque	EA	38	\$ 500.00 \$ 19,000.00
HT-9	Interpretive/Educational ADA	EA	13	\$ 2,500.00 \$ 32,500.00
HT-10	Interpretive/Educational Kiosk	EA	11	\$ 3,000.00 \$ 33,000.00
HT-11	Pavement Inlay	EA	19	\$ 2,000.00 \$ 38,000.00
HT-12	Commemorative Monument	EA	38	\$ 1,800.00 \$ 68,400.00
HT-13	Artistically Integrated Wayfinding	EA		\$ - \$ -

B1.4 - Riverfront Park Signage		Sub Total	\$	96,800.00
CP-1	Identification Sign	EA	3	\$ 4,300.00 \$ 12,900.00
CP-2	Secondary Identification	EA	3	\$ 3,000.00 \$ 9,000.00
CP-3	Vehicular Trailblazer	EA	1	\$ 5,000.00 \$ 5,000.00
CP-4	Pedestrian Trailblazer	EA	4	\$ 4,000.00 \$ 16,000.00
CP-5	Trailblazer Guide	EA	2	\$ 3,400.00 \$ 6,800.00
CP-6	Amenity Guide	EA	1	\$ 1,800.00 \$ 1,800.00
CP-7	Multi-Directional Guide	EA	4	\$ 1,500.00 \$ 6,000.00
CP-8	Trailhead Kiosk	EA	2	\$ 3,500.00 \$ 7,000.00
CP-9	Trail Information	EA	2	\$ 2,900.00 \$ 5,800.00
CP-10	Regulatory/Safety	EA	9	\$ 700.00 \$ 6,300.00
CP-11	Mile Marker	EA	8	\$ 600.00 \$ 4,800.00
CP-12	Interpretive/Educational	EA	7	\$ 2,200.00 \$ 15,400.00

<b>Sub-Total</b>	<b>\$</b>	<b>802,162.00</b>
<b>10% Mobilization</b>	<b>\$</b>	<b>80,216.20</b>
<b>3% Traffic Control</b>	<b>\$</b>	<b>24,064.86</b>
<b>25% Contingency</b>	<b>\$</b>	<b>200,540.50</b>
<b>10% Design</b>	<b>\$</b>	<b>110,698.36</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>1,217,681.92</b>

### B1.4 - Riverfront Park Signage

The Riverfront Park is the riverfront area along Rock Creek and the Mississippi River. The park's signage will be institutional and educational telling the Mississippi River's history, illustrating the river's water cycle, and explaining its habitat and inhabitants. Riverfront Park's trail system could be the origin of a system circulating north Jefferson County and connecting to the GRG greenway system. This is an opportunity to establish the Kimmswick brand as the basis for the Jefferson County trail network.

Phase ROM Cost: \$146,942

### PHASING PLAN



## B2. ENHANCED LIGHTING

### Project Description

Lighting will open a whole new experience in Kimmswick. It will expand commerce and events, increase lodging occupancy, entertain over changing seasons, and, most importantly, promote safety and security. The lighting design intent aims to enhance the night sky, minimally influence wildlife, delineate Kimmswick's different land uses, and reduce maintenance and operating costs on the City.

**RESPONSIBLE:** Anheuser Estate, City, MA/CID, Historical Society, JC DPW, JC Parks, JCPA, WS  
**FUNDING:** Anheuser Estate, City, MA/CID, EWG STP, EWG TAP, JC Parks, JCPA AIM, JCPA Naming Rights, MDC MRAP, MDC Community Conservation, MDC Discover Nature Schools, MDC River Access Assistance Program, MDC Urban Cost Share, DNR Green Infrastructure, DNR RTP, DNR Outdoor Recreation, DNR 319 Nonpoint, Private, Windsor Schools  
**COORDINATE:** B4, B5, B6, B7, B8, B9, B10, B11, B12, B14  
**KICK-OFF:** 2021

### Implementation Strategy

Typically, lighting will be incorporated into specific capital improvement projects. A number of lighting projects have been estimated separately to either incorporate into the associate capital improvement projects or bid as separate project phases. If these projects are bid separately, conduit and other provisions should be incorporated into the associated capital improvement project.

### B2.1 - Retail Lighting

Retail lighting supplements primary commercial pedestrian lighting. The Great Streets plan recommends the Merchant's Association or CID systematically invest in each property installing lighting maintained and operated by the property owner. Lighting contingency to include light fixtures, hardware, and installation.

Phase ROM Cost: \$514,553

### B2.2 - Kimmswick Port Heritage Trail Lighting

This project lights the Mississippi River pedestrian connection along the port access road. It includes a street light at the parking lot intersection and turn around, a secondary pedestrian light at the railroad crossing and landing, bollard lights every 50 feet, power supply and circuits.

Phase ROM Cost: \$181,170

### B2.3 - Trail Lighting

Events ending at dusk or entering into the evening will occur. Additionally, early winter sunsets will find school kids walking home after dark. The trail lighting estimates lighting per 200 feet to include a secondary pedestrian light every 100 feet and a bollard light equidistant between. Costs assume connection into existing or proposed power supplies of other projects.

Phase ROM Cost: \$37,868 per 200 feet

### B2.4 - Secondary Commercial Zone Lighting

Similar to retail lighting, secondary commercial zone lighting supplements pedestrian lighting. The contingencies are lower compensating for Secondary Commercial land use lighting.

Phase ROM Cost: \$96,525

### B2.5 - River Market Lighting

This project provides lighting in the pavilion, along the deck rail and along the path leading into Kimmswick. Costs assume connection into existing or proposed power supplies of other projects.

Phase ROM Cost: \$56,430

### B2.6 - Residential Zone Lighting

The contingency includes replacing one existing intersection street light and staggered bollard lights two per side on one linear block.

Phase ROM Cost: \$445,500

### B2.7 - Windsor Harbor Pedestrian Bridge Lighting

As night life and Anheuser Estate events increase, pedestrians strolling to the Windsor Harbor Bridge will increase. The project includes a secondary pedestrian light at both ends and a fixture hanging from each overhead steel cross-member. Costs assume connection into existing or proposed power supplies of other projects.

Phase ROM Cost: \$58,064

## B2. ENHANCED LIGHTING ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$1,352,241**

B2.1 - Retail Lighting		Sub Total	\$	346,500.00
1	Lighting Contingency per Building	EA	45 \$	7,700.00 \$
				346,500.00

B2.2 - Kimmswick Port Heritage Trail		Sub Total	\$	122,000.00
2	Decorative Bollard Light	EA	17 \$	3,000.00 \$
3	Decorative Light Pole & Luminaire	EA	2 \$	8,000.00 \$
4	Historic LED Luminaire w/ Mount on Wood Post	EA	2 \$	6,800.00 \$
5	Power Supply Assembly, Type 1, 240/120 Volt	EA	1 \$	5,000.00 \$
6	Base Mounted Control Station 240 Volt - 4 Circuit	EA	1 \$	10,000.00 \$
7	1.25" Raceway (Trenched or Bored), #10 AWG	LF	1,200 \$	22.00 \$
				26,400.00

B2.3 - Trail Lighting		Sub Total	\$	25,500.00
8	Lighting Contingency per 200 linear feet	LS	1 \$	25,500.00 \$
				25,500.00

B2.4 - Secondary Commercial Zone		Sub Total	\$	65,000.00
9	Lighting Contingency per Building	EA	13 \$	5,000.00 \$
				65,000.00

B2.5 - River Market Lighting		Sub Total	\$	38,000.00
10	Decorative Bollard Light	EA	4 \$	3,000.00 \$
11	Pavilion Lighting	EA	4 \$	2,000.00 \$
12	Historic LED Luminaire w/ Mount on Wood Post	EA	2 \$	6,800.00 \$
13	1.25" Raceway (Trenched or Bored), #10 AWG	LF	200 \$	22.00 \$
				4,400.00

B2.6 - Residential Zone Lighting		Sub Total	\$	300,000.00
14	Lighting Contingency per 1 Linear Block	EA	12 \$	25,000.00 \$
				300,000.00

B2.7 - Windsor Pedestrian Bridge		Sub Total	\$	39,100.00
15	Historic LED Luminaire Center Mounted	EA	8 \$	2,500.00 \$
16	Historic LED Luminaire w/ Mount on Wood Post	EA	2 \$	6,800.00 \$
17	1.25" Raceway (Trenched or Bored), #10 AWG	LF	250 \$	22.00 \$
				5,500.00

<b>Sub-Total</b>	<b>\$</b>	<b>910,600.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>45,530.00</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>45,530.00</b>
<b>25% Contingency</b>	<b>\$</b>	<b>227,650.00</b>
<b>10% Design</b>	<b>\$</b>	<b>122,931.00</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>1,352,241.00</b>

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development

## B3. SCREEN SEWER PLANT



Above: Representative Image of Sewer Plant Screening

## B3. SCREEN SEWER PLANT ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$129,700**

B3.1 - Tree Planting Installation			Sub Total	\$	87,340.00
1	Class A Excavation	CY	1,850	\$ 12.00	\$ 22,200.00
2	Compacting Embankment (Subgrade)	CY	1,644	\$ 10.00	\$ 16,440.00
3	Compacting Embankment (4" Topsoil)	CY	206	\$ 50.00	\$ 10,300.00
4	Seeding	AC	1	\$ 3,000.00	\$ 1,500.00
5	Tree (2.5" Caliper Deciduous or 12' Evergreen)	EA	67	\$ 500.00	\$ 33,500.00
6	Tree (Forest Re-Leaf Provided/Volunteer)	EA	67	\$ -	\$ -
7	Tree (MDC Provided/Volunteer Installed)	EA		\$ -	\$ -
8	Removal of Improvements (3%)	LS	1	\$ 3,400.00	\$ 3,400.00

<b>Sub-Total</b>	<b>\$</b>	<b>87,340.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>4,367.00</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>4,367.00</b>
<b>25% Contingency</b>	<b>\$</b>	<b>21,835.00</b>
<b>10% Permitting &amp; Design</b>	<b>\$</b>	<b>11,790.90</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>129,699.90</b>

### Project Description

When Rock Creek Public Sewer District first developed the sewer plant, a screen of trees were promised to the City. Any trees planted didn't survive and the community is left with an eyesore. As the river becomes a primary gateway to Kimmswick for luxury riverboat customers and recreational activity, screening the sewer plant on the south and west faces becomes even more important. Mature trees should be planted in appropriate agronomic soil producing a thick, evergreen screen blocking views in all seasons. Along Front Street trees should be planted on both sides of the railroad.

**RESPONSIBLE:** Rock Creek Public Sewer District  
**FUNDING:** Sewer District CIP, Forest Releaf, EWG STP, JC Parks, JCPA AIM, MDC Community Conservation, MDC

Urban Cost Share, DNR RTP, DNR Outdoor Recreation, Private, City, MA/CID  
**COORDINATE:** B4.3, B4.5, Port Parking  
**KICK-OFF:** 2019

### Implementation Strategy

Kimmswick has a number of angles to negotiate with the sewer district. Trying to work in the ability to upgrade the north outlet should be primary. Even offering to plant (free) trees would be worth a seven foot pedestrian access under the railroad. See project A.2 North Outlet Upgrade for additional outlet negotiation opportunities.

If the district will not install the screen themselves, JCPA could partner with them proposing an economy of scale installing the screen as part of a port project removing permits, bidding, mobilization, and grading

costs from the screening budget. Jefferson County DPW could offer a similar bargain along Front Street. Or, with free trees from Forest Releaf, the City could negotiate installing a portion of the trees themselves not to exceed 50 percent with the sewer district trees being mature evergreens.

Though the private railroad crossing will be removed, the Market Street crossing and improved Mississippi Street access is a much safer and secure access. Included with fencing per the railroad crossing, Jefferson County could build a new access gate.

If negotiated right, the sewer district's investment could be leveraged for a grant toward a trail or recreation project.

### Considerations While Negotiating

- Improvements to the north outlet are highest priority.
- Soil alterations must be required to develop a minimum 30 inch deep planting soil with a minimum 3,000 cubic feet of volume per tree.
- Gravel and deleterious materials must be removed.
- Soil removal and replacement must balance or wetland offsets will be required.
- Replacement soil must be agronomic, suitable to grow trees.



**MAINTAINED  
HISTORIC  
AESTHETIC**



**60+  
ADDED  
TREES**



**CITY &  
COUNTY  
PARTNERSHIP**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

## B4. PRIMARY COMMERCIAL



Above: Mississippi Street realignment provides a base for deployable flood barriers

### Project Description

Primary Commercial contains seven project phases located within the Primary Commercial land use area. The sum total will thoroughly transform Kimmswick's commercial core enhancing its quaint character and creating strong connections to the riverfront. Initial phases provide immediate impact renovating Kimmswick's entries from Highway 61/67 to Market and directly linking Kimmswick to the Mississippi over the railroad.

**RESPONSIBLE:** City, Jefferson County, Jefferson County Port Authority  
**FUNDING:** EWG STP, Forest Releaf, DNR Rec Trails, DNR 319 Nonpoint, MDC Urban Cost Share, Historic Society

**PHASING:** B4.1, B4.2, Immediate Impact B4.3-4.5 Core Projects  
**COORDINATION:** A1.1, A5, B1, B2, B3, B5.2, B6.2, B.7, B8, B9.2, B9.4, B9.6, B11  
**KICK-OFF:** 2019

### Implementation Strategy

First, Kimmswick will incorporate Route K setting the stage for the proposed improvements. At the same time JCPA needs to apply the Market Street port access extension for functional classification making it eligible for federal grant funding. It would benefit JCPA and Kimmswick if the City ceded Front Street north of Market intersection up Vine to Broadway and Mississippi Street altogether. This frees Jefferson County to pursue funding and complete the necessary actions to construct

the railroad crossing.

Meanwhile, the port's funded first phase should be breaking ground building the port access road and landing. The railroad crossing design and construction should follow within three to four years.

In parallel, Mississippi Street needs to be realigned between Mill Street and Rock Creek to provide the base for the first phase of deployable barriers (A1.1). With Jefferson County as the owners, they may help support this project as well which would fully renovate the temporary port access road from the Mississippi River to Windsor Harbor Road. Additionally, the Windsor Harbor Road entry gateway could be raised.

Following these essential actions, the high impact portions of Phase 1 can be set into motion. Welcoming signage features along Route K from Highway 61/67 to the 4th Street intersection should be installed. Great Streets improvements along 4th Street from the Elm Street intersection to the Market Street intersection would anchor the west end of Market complementing the new intersection at Front Street completed with the railroad crossing. And installing the pedestrian realm on the north side of Market from 4th to 3rd Street and along 3rd from Market to Elm finishes Phase 1. Having implemented a whole new entry into Kimmswick and developing the port's

foundational bones, Jefferson County has established a strong, attractive and memorable connection to the Mississippi.

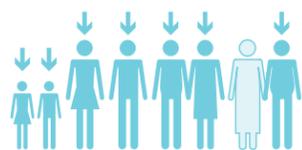
Phase 2 further enhances this experience connecting up all the dots. Finishing Market Street would provide the greatest impact for Kimmswick. This could be accomplished through an STP grant, or piece-meal leveraging City and/or CID funds to string together MDC Community Cost Share or Urban Cost Share Program funds, DNR Green Infrastructure grants to construct pervious parking and intersections. Potentially, the Historical Society could provide a little help for the Market Street Heritage Trail.

With support from a DNR Outdoor Recreation Grant to build the shared use path from Jefferson Park to Lucianna Gladney-Ross Park along Route K, these funds and Kimmswick's match could be applied toward STP funding from EWG to build out all of Route K. If this option doesn't pan out, Route K can be constructed in phases. Kimmswick could leverage a DNR Recreational Trails grant to construct the shared use path, and follow this project with an STP grant or MODOT 50/50 match to implement the roadway renovation.

While Kimmswick is pursuing these ends, JCPA will be implementing the port parking lot and mooring docks. This should generate



**CITY & COUNTY PARTNERSHIP**



**DIVERSIFIES VISITORS**



**INCREASE COMMERCE**



**REGIONAL ATTRACTION**



**INCREASED REGIONAL CONNECTIVITY**



**TELLS KIMMSWICK'S STORY**

Accomplishes **KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

additional funds for both JCPA and Kimmswick. The parking lot construction can serve as a match for a DNR Outdoor Recreation Grant to construct the riverfront steps, Delta Queen landing plaza and overlook. Both funds could then be applied toward a DNR Recreational Trails grant to connect Kimmswick to the Mississippi via a Heritage Trail pedestrian path.

Phase 3 fills in the gaps. Completing Kimmswick Village Green could transpire in a variety of scenarios. Seating, walking paths, plantings and the pavilion may find support from DNR's Outdoor Recreation Grants. If the plantings from 4th Street around the edge of the Village Green are native pollinator habitat, focused primarily on butterflies and moths not bees and wasps, MDC's Community Conservation Grant or Urban Cost Share could support the gardens. The Heritage Plaza and pavilion may find some support from the Historical Society, and if the pavement is pervious, MDC's Urban Cost Share, the DNR's Green Infrastructure grants or 319 Nonpoint may help. Forest Releaf, MDC TRIM, Community Conservation, Urban Cost Share could help plant trees.

JCPA has been courting a corporate sponsor for the port amphitheater. After the port parking lot gets constructed and should the Port Authority line up amphitheater funding, the amphitheater funding could be

applied toward a DNR Outdoor Recreation or Recreational Trails grant to construct the boardwalk connection from Mississippi Street to the Delta Queen landing plaza. Finishing the amphitheater completes all the core public space projects. The remaining projects are icing on the cake.

**B4.1 - Incorporate Route K**

The City of Kimmswick has approached MODOT to incorporate Route K into Kimmswick city limits. MODOT will continue to have jurisdiction over Route K and the surrounding property will be annexed into Kimmswick. The City will not need to own or maintain the roadway to accomplish the Great Streets vision. MODOT has a specified process for the transaction. The transaction allows project B4.3 Phase 1 to install monument and gateway entry signage.

**B4.2 - Mississippi Street Realignment**

To remove costs from project A1.1 realignment of Mississippi will be necessary to provide a base for the deployable barriers. Should Kimmswick cede Mississippi Street to Jefferson County, JC DPW would own the roadway potentially contributing to associated costs. If not, this project will need to be the first project Kimmswick constructs.

The Windsor Harbor Road entry gateway

could be built at any time, but, with contractors mobilized, Savings could range from \$3,000 to \$16,500.

Phase Total ROM Estimated Cost: **\$143,476**

Windsor Harbor Road Entry Gateway Total ROM Estimated Cost (See B1.1 Items WE-1 to 6): **\$103,059**

**B4.3 - Phase 1**

Phase 1 sub-projects are cumulative, often overlapping, with multiple project owners. Coordination will be important. Changes to one project impacting the quality or scope of another need to be reconciled. Funding sources support different project elements creating the opportunity for discrepancies in material, quality and design.

There are a few ways to minimize risks. Be straight forward, from the beginning, about project expectations with project partners, in your grant writing, with jurisdictional agencies, and contractors. Direct design consultants to incorporate performance and design specifications in each project bid package. Often federal and state funded projects will not allow product specification for items such as lighting, site furniture, and special pavements in bid documents. It would benefit the City to invest in design guideline with detailed product specifications to which designers can refer

**B4.2 - MISSISSIPPI STREET REALIGNMENT  
ROUGH ORDER OF MAGNITUDE  
OPINION OF COSTS**

**\$143,476**

B4.2 - Mississippi Realignment			Sub Total	\$	96,616.67
1	Class A Excavation	CY	65	\$ 20.00	\$ 1,290.00
2	Compacting Embankment	CY	65	\$ 20.00	\$ 1,290.00
3	Sawcut	LF	45	\$ 8.00	\$ 360.00
4	4" Concrete Sidewalk	SY	23	\$ 60.00	\$ 1,380.00
5	Truncated Domes	SF	40	\$ 30.00	\$ 1,200.00
6	Concrete ADA Ramp (includes agg base)	EA	2	\$ 2,500.00	\$ 5,000.00
7	30 Inch Wide - High Visibility Markings - White	LF	50	\$ 15.00	\$ 750.00
8	Roadway Asphalt Pavement	SF	4,500	\$ 6.00	\$ 27,000.00
9	4" Type 5 Aggregate Base	SY	220	\$ 8.00	\$ 1,760.00
10	Gravity Boulder Wall	SF	750	\$ 50.00	\$ 37,500.00
11	Concrete Curb Type S	LF	250	\$ 30.00	\$ 7,500.00
12	Sod	SY	287	\$ 16.00	\$ 4,586.67
13	Landscaping Trees	EA	14	\$ 500.00	\$ 7,000.00

<b>Sub-Total</b>	<b>\$</b>	<b>96,616.67</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>4,830.83</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>4,830.83</b>
<b>25% Contingency</b>	<b>\$</b>	<b>24,154.17</b>
<b>10% Design</b>	<b>\$</b>	<b>13,043.25</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>143,475.75</b>

in bid documents. During construction, the City should retain a consultant for construction administration to review product samples, mock-ups and shop drawings. The City should retain as-builts for every project to support consecutive phases.

One design coordination example is the railroad crossing. The design will need to connect with the port's access road planned for construction fall of 2018. Funding for

the railroad crossing may not be available until 2023. The height of the railway and the short distance from the railway to Front Street require elevating the Market and Front Streets intersection 18 inches (see Market Street Profile Diagram on page 172). Raising the intersection will result in ADA access to corner properties sitting a few steps above the roadway; however, the Market and Front Street legs into the intersection will need reconstructed a minimum 50 feet beyond the intersection (see Market &

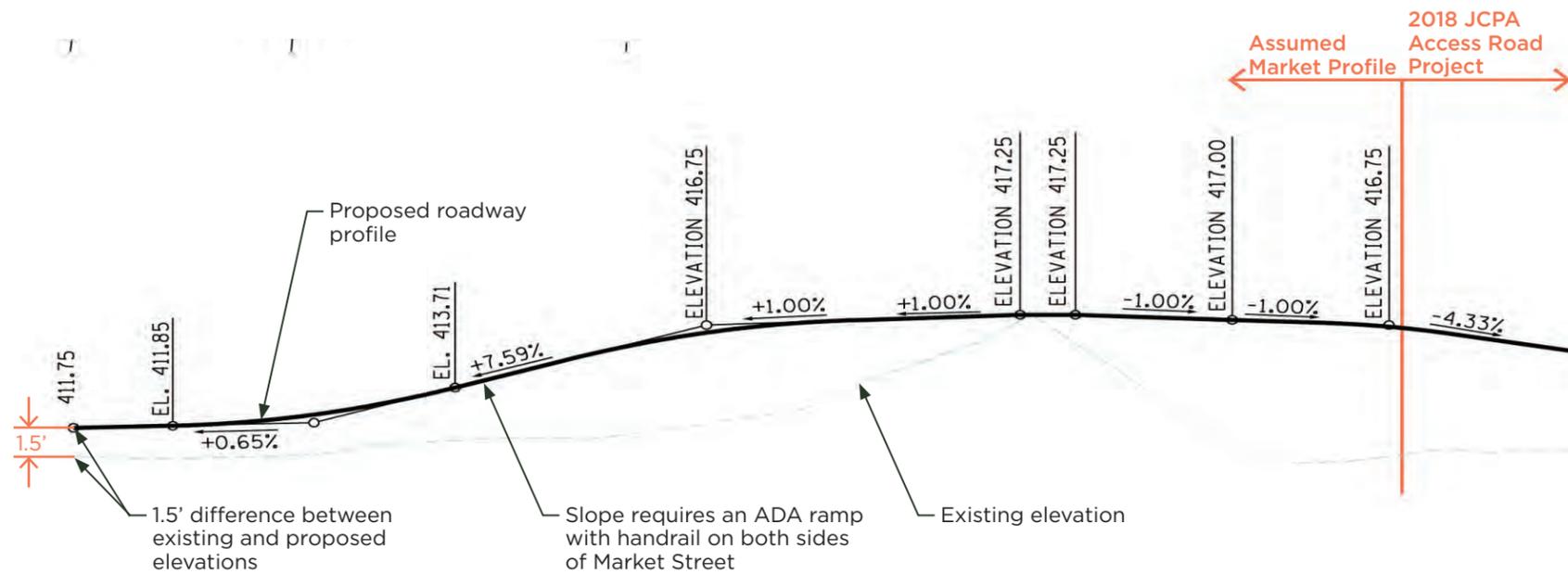
**0.35** ACRE INCREASE PERVIOUS IN AREA

**SLOW** REDUCES TRAFFIC SPEED

**27%** TRANSFER VEHICLES TO PEDESTRIANS

IMPROVES ACCESS TO RIVERFRONT

ADDED EDUCATION OPPORTUNITY



**MARKET STREET PROFILE:** Proposed profile of Market crossing the railroad (Design by Others).

Front Intersection Diagram on page 173). Additionally, the steep slope proposed from the railroad to Front street requires ADA ramps on both sides of the roadway. Pedestrian connections, particularly to the port and the riverfront, are very important to Kimmswick's success as many elderly Delta Queen passengers will need to traverse the railway. Reconstructing the Market and Front intersection must be part of the railroad crossing project.

Intersection reconstruction impacts future Market and Front Street improvements. Decisions on alignments and grade determine transitions and cohesiveness between project phases. Similarly, 4th Street, from the Beckett Street intersection to Market Street intersection, qualifies for federal funding while the segment

north of the Beckett does not. The plan proposes moving the intersection southwest providing pedestrian realms north and east. Transitioning from the intersection north to the 4th and Elm intersection needs to be coordinated.

Utilizing federal and state funds forces competition for project design. If at all possible, utilizing the same designer for concurrent projects will reduce project coordination costs, better ensure seamless transitions, guarantee quality, and give the owner more control over decisions affecting the end product. If the owner's representative is an elected official, a singular designer also offers more stability during political change. ROM cost estimates are divided into different elements to support application writing and other

variables which may divide the phase. The sub-project elements are identified in the estimates with corresponding initials before each item number.

- **4S** - Portion of 4th Street with functional classification including Beckett intersection through Market intersection eligible for federal roadway funds.
- **4K** - Portion of 4th Street without functional classification from Beckett intersection through Elm intersection. Kimmswick is solely responsible for this portion which is not eligible for federal roadway funding.
- **M** - Market Street improvements including ADA improvements on both sides of 4th Street intersection and pedestrian/parking realm along

## B4.3 - PHASE 1

B4.3 - Phase 1		Sub Total	\$	1,901,391.98	
4S-1	Class A Excavation	CY	12 \$	29.25 \$	351.00
4S-2	Compacting Embankment	CY	10 \$	29.25 \$	292.50
4S-3	Sawcut	LF	8 \$	395.00 \$	3,160.00
4S-4	Pervious Pedestrian Pavers(includes open graded base)	SF	15 \$	2,700.00 \$	40,500.00
4S-5	Concrete ADA Ramp (includes agg base)	EA	2,500 \$	2.00 \$	5,000.00
4S-6	30 Inch Wide - High Visibility Markings - White	LF	15 \$	50.00 \$	750.00
4S-7	Underdrain System	LF	35 \$	195.00 \$	6,825.00
4S-8	Rolled Gutter (2' wide)	LF	42 \$	395.00 \$	16,590.00
4S-9	4" Type 5 Aggregate Base	SY	8 \$	87.78 \$	702.22
4S-10	Compacting Subgrade	SY	2 \$	87.78 \$	175.56
4S-11	Concrete Curb Type S	LF	30 \$	390.00 \$	11,700.00
4S-12	Wooden Fence	LF	55 \$	132.00 \$	7,260.00
4S-13	Roadway Signage (2 per 500 LF)	EA	400 \$	1.58 \$	632.00
4S-14	Wayfinding Signage	EA	1,000 \$	2.00 \$	2,000.00
4S-15	POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SER	EA	5,000 \$	0.61 \$	3,038.15
4S-16	BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRC	EA	10,000 \$	0.61 \$	6,076.29
4S-17	1.25" Raceway (Trenched or Bored), #10 AWG	LF	22 \$	118.49 \$	2,606.73
4S-18	Decorative Light Pole and Luminaire (Ped Lighting)	EA	6,500 \$	3.00 \$	19,500.00
4S-19	Street Tree	EA	500 \$	1.00 \$	500.00
4K-1	Class A Excavation	CY	37 \$	12.00 \$	441.00
4K-2	Compacting Embankment	CY	37 \$	10.00 \$	367.50
4K-3	Sawcut	LF	277 \$	8.00 \$	2,216.00
4K-4	Paver Sidewalk	SY	68 \$	60.00 \$	4,080.00
4K-5	Chat path (SUP) (6in thick) (includes 6" open graded base)	TON	140 \$	70.00 \$	9,800.00
4K-6	Rolled Gutter (2' wide)	LF	277 \$	42.00 \$	11,634.00
4K-7	4" Type 5 Aggregate Base	SY	130 \$	8.00 \$	1,036.44
4K-8	Compacting Subgrade	SY	270 \$	2.00 \$	539.11
4K-9	Sod	SY	185 \$	16.00 \$	2,954.67
4K-10	Wooden Fence	LF	132 \$	55.00 \$	7,260.00
4K-11	Roadway Signage (2 per 500 LF)	EA	2 \$	400.00 \$	800.00
4K-12	POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SER	EA	0 \$	5,000.00 \$	1,961.85
4K-13	BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRC	EA	0 \$	10,000.00 \$	3,923.71
4K-14	1.25" Raceway (Trenched or Bored), #10 AWG	LF	77 \$	22.00 \$	1,683.27
4K-15	Decorative Light Pole and Luminaire (Ped Lighting)	EA	2 \$	6,500.00 \$	13,000.00
4K-16	Street Tree	EA	1 \$	500.00 \$	500.00

- **3S** - 3rd Street parking, bioswale and deck, and adjacent walk. Third Street is not eligible for federal roadway funds
- **RM** - Market and Front Street intersection including leg from intersection to the railway crossing, Market leg and two Front Street transitions

- **RR** - Portion of 4th Street with functional classification including Beckett intersection through Market intersection

Following are Phase 1 sub-project total ROM estimated costs:

### Monument Features at Highway 61/67

### Accomplishes KIMMSWICK GOALS

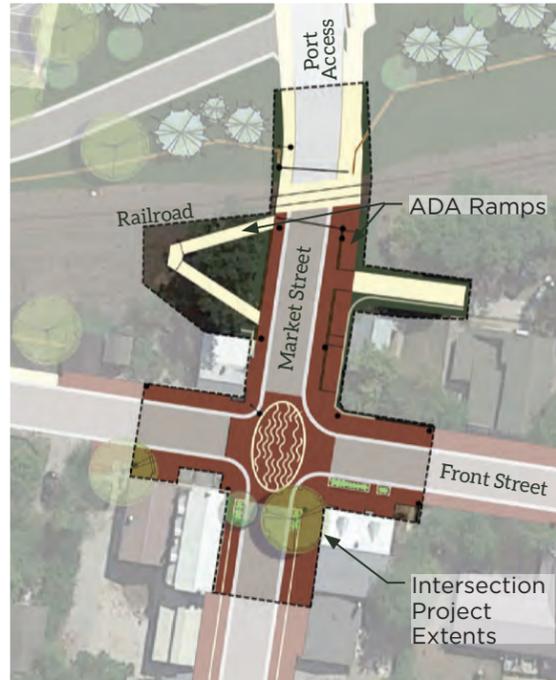
- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

### COUNTY GOALS

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi



**MARKET & FRONT INTERSECTION**

Total ROM Estimated Cost (See B1.1 Items IT-1 to 8): \$124,832

Route K Entry Gateway Total ROM Estimated Cost (See B1.1 Items KE-1 to 6): \$103,059

4th Street Functional Classification (4S) & Market Improvements (M) Total ROM Estimated Cost: \$189,574

Kimmswick's 4th Street Segment (4K) Total ROM Estimated Cost: \$92,363

3rd Street (3S) Total ROM Estimated Cost: \$237,052

Railroad Crossing and Market Street Intersection (RM & RR) Total ROM Estimated Cost: \$1,923,716

**B4.3 - PHASE 1  
ROUGH ORDER OF MAGNITUDE OPINION OF COSTS**

**\$2,868,105**

M-1	Sawcut	LF	275	\$	8.00	\$	2,200.00
M-2	Pervious Pedestrian Pavers(includes open graded base)	SF	3,920	\$	20.00	\$	78,400.00
M-3	Pervious Parking Pavers(includes open graded base)	SF	1,480	\$	20.00	\$	29,600.00
M-4	Underdrain System	LF	275	\$	35.00	\$	9,625.00
M-5	4" Type 5 Aggregate Base	SY	600	\$	8.00	\$	4,800.00
M-6	Compacting Subgrade	SY	600	\$	2.00	\$	1,200.00
M-7	Concrete Curb Type S	LF	275	\$	30.00	\$	8,250.00
M-8	Disabled Parking Symbol	EA	6	\$	1,000.00	\$	6,000.00
M-9	Decorative Light Pole and Luminaire (Ped Lighting)	EA	3	\$	6,500.00	\$	19,500.00
M-10	Street Tree	EA	8	\$	7.00	\$	56.00
3S-1	BMP Areas	SY	330	\$	40.00	\$	13,200.00
3S-2	Boardwalk Areas over Drainage Swales	SF	2,350	\$	100.00	\$	235,000.00
3S-3	6" Gravel Walk	TON	55	\$	40.00	\$	2,200.00
3S-4	Metal Walk Edge	LF	185	\$	3.00	\$	555.00
3S-5	Pervious Plaza Pavers	SF	300	\$	20.00	\$	6,000.00
3S-6	Rolled Gutter (2' wide)	LF	250	\$	42.00	\$	10,500.00
3S-7	4" Type 5 Aggregate Base	SY	291	\$	8.00	\$	2,328.89
3S-8	Chat Parking Shoulder	TON	64	\$	70.00	\$	4,480.00
3S-9	BMP Planting	SY	180	\$	40.00	\$	7,200.00
3S-10	Landscape Boulders	TON	10	\$	500.00	\$	5,000.00
RM-1	Class A Excavation	CY	125	\$	12.00	\$	1,500.00
RM-2	Compacting Embankment	CY	1,143	\$	10.00	\$	11,430.00
RM-3	Sawcut	LF	550	\$	8.00	\$	4,400.00
RM-4	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	7	\$	80.00	\$	523.46
RM-5	Bituminous Pavement Base (4")	TON	13	\$	80.00	\$	1,046.91
RM-6	4" Concrete Sidewalk	SY	284	\$	60.00	\$	17,020.00
RM-7	Aggregate Shldr	CY	25	\$	70.00	\$	1,742.22
RM-8	Concrete Pavement (8" non-reinf)	SY	320	\$	95.00	\$	30,400.00
RM-9	Pervious Pedestrian Pavers(includes open graded base)	SF	5,106	\$	20.00	\$	102,120.00
RM-10	Pervious Roadway Pavers(includes open graded base)	SF	4,600	\$	20.00	\$	92,000.00
RM-11	Truncated Domes	SF	80	\$	30.00	\$	2,400.00
RM-12	Concrete ADA Ramp (includes agg base)	EA	4	\$	2,500.00	\$	10,000.00
RM-13	Underdrain System	LF	362	\$	35.00	\$	12,670.00
RM-14	Rolled Gutter (2' wide)	LF	466	\$	42.00	\$	19,572.00
RM-15	4" Type 5 Aggregate Base	SY	682	\$	8.00	\$	5,456.00
RM-16	Compacting Subgrade	SY	682	\$	2.00	\$	1,364.00
RM-17	MSE Wall	SF	1,148	\$	65.00	\$	74,620.00
RM-18	Wall Coping	LF	164	\$	25.00	\$	4,100.00
RM-19	Sod	SY	373	\$	16.00	\$	5,973.33
RM-20	Roadway Signage (2 per 50 LF)	EA	6	\$	400.00	\$	2,400.00
RM-21	Wayfinding Signage	EA	1	\$	1,000.00	\$	1,000.00
RM-22	1.25" Raceway (Trenched or Bored), #10 AWG	LF	602	\$	22.00	\$	13,244.00
RM-23	Decorative Light Fixture	EA	4	\$	500.00	\$	2,000.00
RM-24	Decorative Light Pole and Luminaire (Ped Lighting)	EA	6	\$	6,500.00	\$	39,000.00
RM-25	Concrete Curb Type S	LF	245	\$	30.00	\$	7,350.00
RM-26	Bench	EA	4	\$	3,500.00	\$	14,000.00

RM-27	Trash Receptacle	EA	2	\$	1,500.00	\$	3,000.00
RM-28	Landmark Intersection	EA	10,000	\$	1.00	\$	10,000.00
RM-29	Street Tree	EA	18	\$	500.00	\$	9,000.00
RM-30	Retaining Wall/Foundation Reinforcements	SF	1,540	\$	65.00	\$	100,100.00
RM-31	Separation Wall between SW and ADA Ramp	SF	140	\$	65.00	\$	9,100.00
RM-32	ADA Long Ramp Sections on W Side of Front, S of Mar	SY	67	\$	84.00	\$	5,628.00
RM-33	Handrailing for ADA Ramps	LF	100	\$	150.00	\$	15,000.00
RM-34	Storm Inlets and Manholes (Cycle Friendly Grates)	EA	10	\$	4,500.00	\$	45,000.00
RM-35	Manholes and Inlets to be modified	EA	2	\$	2,500.00	\$	5,000.00
RM-36	Storm Piping (12" RCP or PVC assumed)	LF	210	\$	70.00	\$	14,700.00
RR-1	Class A Excavation	CY	14	\$	12.00	\$	162.00
RR-2	Compacting Embankment	CY	815	\$	10.00	\$	8,148.50
RR-3	Truncated Domes	SF	80	\$	30.00	\$	2,400.00
RR-4	Concrete ADA Ramp (includes agg base)	EA	4	\$	2,500.00	\$	10,000.00
RR-5	4" Concrete Sidewalk	SY	217	\$	60.00	\$	13,020.00
RR-6	Aggregate Shldr	CY	19	\$	70.00	\$	1,306.67
RR-7	Concrete Pavement (8" non-reinf)	SY	240	\$	95.00	\$	22,800.00
RR-8	4" Type 5 Aggregate Base	SY	457	\$	8.00	\$	3,656.00
RR-9	Compacting Subgrade	SY	457	\$	2.00	\$	914.00
RR-10	Sod	SY	280	\$	16.00	\$	4,480.00
RR-11	Wooden Fence	LF	1,335	\$	55.00	\$	73,425.00
RR-12	RR Crossing Pavement Markings	LS	1	\$	2,500.00	\$	2,500.00
RR-13	RR Crossing Controller	EA	1	\$	25,000.00	\$	25,000.00
RR-14	RR Crossing Gates and Signals	LS	1	\$	260,000.00	\$	260,000.00
RR-15	Rail Crossing Train Detector	LS	1	\$	44,000.00	\$	44,000.00
RR-16	Rail Crossing Trapped Vehicle Detector	LS	1	\$	60,000.00	\$	60,000.00
RR-17	Rail Crossing Pedestrian Warning Signal, Gates	LS	1	\$	31,000.00	\$	31,000.00
RR-18	Roadway Signage (2 per 50 LF)	EA	2	\$	400.00	\$	800.00
RR-19	POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SER	EA	1	\$	10,000.00	\$	10,000.00
RR-20	BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRC	EA	1	\$	5,000.00	\$	5,000.00
RR-22	1.25" Raceway (Trenched or Bored), #10 AWG	LF	180	\$	22.00	\$	3,960.00
RR-24	Decorative Light Pole and Luminaire (Ped Lighting)	EA	2	\$	6,500.00	\$	13,000.00
RR-25	Street Tree	EA	12	\$	500.00	\$	6,000.00

<b>Sub-Total</b>	<b>\$</b>	<b>1,931,383.98</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>96,569.20</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>96,569.20</b>
<b>25% Contingency</b>	<b>\$</b>	<b>482,846.00</b>
<b>10% Design</b>	<b>\$</b>	<b>260,736.84</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>2,868,105.21</b>

**B4.4 - Phase 2**

The concerns described in Phase 1 are less likely during this phase which comprise s roadway segments connecting intersections established in B4.3 Phase 1. Additionally, materials and finishes have been established to justify matching.

ROM cost estimates are similarly broken into sub-projects with corresponding initials with item numbers. The estimate divides Highway K improvements into roadway lane realignment (HK) and the SUP (KP). MDNR Recreational Trail funds only support trail construction. These sub-projects could be combined if federal roadway funds support construction.

- **HK** - Highway K lane realignment and on-street side path from 5th to Highway 61/67.
- **KP** - Highway K curb protected SUP from 4th and Beckett Street intersection to Lucianna Gladney-Ross Park.
- **M** - Remaining Market Street improvements.

Route K Complete Street (HK) Total ROM Estimated Cost: \$391,020

Route K SUP (KP) Total ROM Estimated Cost: \$892,611

Market Great Street (M) Total ROM Estimated Cost: \$1,674,660

**B4.4 - PHASE 2**

**ROUGH ORDER OF MAGNITUDE OPINION OF COSTS**

**\$2,958,291**

B4.4 - Phase 2		Sub Total	
HK-1	Class A Excavation	CY	330 \$ 12.00
HK-2	Compacting Embankment	CY	330 \$ 10.00
HK-3	Sawcut	LF	3,450 \$ 8.00
HK-4	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	115 \$ 80.00
HK-5	Concrete Pavement (8" non-reinf)	SY	1,033 \$ 70.00
HK-6	Tack Coat (0.10 GAL/SY)	GAL	103 \$ 5.00
HK-7	4" Type 5 Aggregate Base	SY	1,033 \$ 8.00
HK-8	Compacting Subgrade	SY	1,033 \$ 2.00
HK-9	Sod	SY	1,917 \$ 16.00
HK-10	Modular Barrier (conc median island strip)	SY	517 \$ 65.00
HK-11	Bike/Ped Lane Marking Symbols	EA	10 \$ 350.00
HK-12	Shared Lane Marking (Sharrows)	EA	4 \$ 350.00
HK-13	24 Inch solid White	LF	60 \$ 8.00
HK-14	24 Inch WHITE Yield Marking	EA	12 \$ 50.00
HK-15	30 Inch Wide - High Visibility Markings - White	LF	100 \$ 15.00
HK-16	30 Inch Wide - High Visibility Markings - Color	LF	0 \$ 15.00
HK-17	8 Inch Solid White	LF	329 \$ 2.25
HK-18	6 Inch Solid White	LF	8,100 \$ 2.00
HK-19	6 Inch Intermittent White	LF	32 \$ 2.00
HK-20	4 Inch Double Solid Yellow	LF	2,200 \$ 2.25
HK-21	4 Inch Solid Yellow	LF	70 \$ 1.50
HK-22	4 Inch Intermittent Yellow	LF	388 \$ 1.50
HK-23	Pavement Marking Removal	LF	6,600 \$ 1.00
HK-24	Roadway Signage (2 per 500 LF)	EA	9 \$ 400.00
HK-25	Street Tree	EA	63 \$ 500.00
KP-1	Class A Excavation	CY	239 \$ 12.00
KP-2	Compacting Embankment	CY	239 \$ 10.00
KP-3	Sawcut	LF	810 \$ 8.00
KP-5	Truncated Domes	SF	200 \$ 30.00
KP-6	Cold Mill (for cross slope trans)	SY	900 \$ 5.00
KP-7	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	150 \$ 80.00
KP-8	Concrete ADA Ramp (includes agg base)	EA	10 \$ 2,500.00
KP-9	4" Concrete Sidewalk	SY	163 \$ 60.00
KP-10	Chat path (SUP) (6in thick)	TON	500 \$ 40.00
KP-13	Rolled Gutter (2' wide)	LF	465 \$ 42.00
KP-14	4" Type 5 Aggregate Base	SY	163 \$ 8.00
KP-15	Compacting Subgrade	SY	663 \$ 2.00

KP-18	Sod	SY	1,063 \$ 16.00
KP-19	Concrete Curb Type S	LF	2,700 \$ 30.00
KP-20	Wooden Fence	LF	132 \$ 55.00
KP-21	SUP Signage (2 per 500 LF)	EA	5 \$ 400.00
KP-22	1.25" Raceway (Trenched or Bored), #10 AWG	LF	1,348 \$ 22.00
KP-23	Decorative Light Pole and Luminaire (Ped Lighting)	EA	19 \$ 8,000.00
KP-24	Historic LED Steet Light Replacement	EA	6 \$ 2,000.00
KP-25	Street Tree	EA	8 \$ 500.00
KP-26	Under Bridge Connection	LF	470 \$ 150.00
KP-27	Gateway Entry (B1.1 Item KE-1 to 6)	LS	1 \$ 114,483.00
M-1	Class A Excavation	CY	130 \$ 12.00
M-2	Compacting Embankment	CY	303 \$ 10.00
M-3	Sawcut	LF	1,450 \$ 8.00
M-4	Pervious Pedestrian Pavers	SF	22,300 \$ 20.00
M-5	Pervious Parking Pavers	SF	9,160 \$ 20.00
M-6	Pervious Roadway Pavers (2 Intersections)	SF	4,480 \$ 20.00
M-7	Truncated Domes	SF	160 \$ 30.00
M-8	Cold Mill (for cross slope trans)	SY	2,297 \$ 5.00
M-9	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	383 \$ 80.00
M-10	Concrete ADA Ramp (includes agg base)	EA	8 \$ 2,500.00
M-11	Underdrain System	LF	1,455 \$ 35.00
M-12	Tack Coat (0.10 GAL/SY)	GAL	230 \$ 5.00
M-13	Rolled Gutter (2' wide)	LF	1,455 \$ 42.00
M-14	4" Type 5 Aggregate Base	SY	384 \$ 8.00
M-15	Compacting Subgrade	SY	384 \$ 2.00
M-16	Sod	SY	480 \$ 16.00
M-17	Concrete Curb Type S	LF	384 \$ 30.00
M-18	Wooden Fence	LF	237 \$ 55.00
M-19	Bench	EA	12 \$ 3,500.00
M-20	Trash Receptacle	EA	4 \$ 1,500.00
M-21	Landmark Intersection Upgrade	EA	2 \$ 10,000.00
M-22	Roadway Signage (4 per 500 LF)	EA	12 \$ 400.00
M-23	Wayfinding Signage	EA	2 \$ 1,000.00
M-24	1.25" Raceway (Trenched or Bored), #10 AWG	LF	1,730 \$ 12.00
M-25	Historic LED Luminaire Center Mounted	EA	7 \$ 2,500.00
M-26	Decorative Light Pole and Luminaire	EA	7 \$ 8,000.00
M-27	Historic LED Steet Light Replacement	EA	2 \$ 2,000.00
M-28	Street Tree	EA	7 \$ 500.00

<b>Sub-Total</b>	<b>\$</b>	<b>1,992,115.47</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>99,605.77</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>99,605.77</b>
<b>25% Contingency</b>	<b>\$</b>	<b>498,028.87</b>
<b>10% Design</b>	<b>\$</b>	<b>268,935.59</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>2,958,291.48</b>



Accomplishes **KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

**B4.5 - Front Street**

Front Street has two classifications. North of Market has functional classification making it eligible for federal roadway funding. The segment south of Elm falls within the commercial area, while north of Elm is residential. South of Market is a City roadway not eligible for federal roadway funds. The ROM estimate divides Front Street into three sub-projects accordingly.

Ceding north Front Street to Jefferson County would allow the county's DPW to support the railroad crossing and help address flood issues at the north outlet.

South Front Street is a primary commercial corridor connecting Market to the south entry and Rock Creek. The forty foot right-of-way is ten feet narrower than Kimmswick's standard street width. Parking and the pedestrian realm need to combine as a result. A mini-circle at the Mill Street intersection will help calm traffic at the entry. Pervious parking and intersection pavers help address stormwater and could receive partial funding from MDC or DNR grant sources. An application to classify Windsor Harbor Road and this section of Front Street would make both roadways eligible for federal funds should classifications change.

This phases ROM estimate does not include Front Street improvements associated with B4.3 Phase 1 railroad crossing and Market Street intersection. The sub-project elements are identified in the estimates with corresponding initials before each item number.

**B4.5 - FRONT STREET  
ROUGH ORDER OF MAGNITUDE OPINION OF COSTS**

**\$624,518**

<b>B4.5 - Front Street</b>		<b>Sub Total</b>		<b>\$ 531,466.78</b>	
FN-1	Class A Excavation	CY	118	\$ 12.00	\$ 1,416.00
FN-2	Compacting Embankment	CY	276	\$ 10.00	\$ 2,760.00
FN-3	Sawcut	LF	750	\$ 8.00	\$ 6,000.00
FN-4	Cold Mill	SY	702	\$ 5.00	\$ 3,510.00
FN-5	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	78	\$ 80.00	\$ 6,240.00
FN-6	Concrete Pavement (8" non-reinf)	SY	169	\$ 90.00	\$ 15,220.00
FN-7	Tack Coat (0.10 GAL/SY)	GAL	70	\$ 5.00	\$ 350.00
FN-8	Rolled Gutter (2' wide)	LF	1,247	\$ 42.00	\$ 52,374.00
FN-9	4" Type 5 Aggregate Base	SY	576	\$ 8.00	\$ 4,608.00
FN-10	Compacting Subgrade	SY	1,240	\$ 2.00	\$ 2,480.00
FN-11	Sod	SY	428	\$ 16.00	\$ 6,848.00
FN-12	Roadway Signage (4 per 500 LF)	EA	4	\$ 400.00	\$ 1,600.00
FN-13	Wayfinding Signage	EA	1	\$ 1,000.00	\$ 1,000.00
FN-14	1.25" Raceway (Trenched or Bored), #10 AWG	LF	600	\$ 22.00	\$ 13,200.00
FN-15	Historic LED Luminaire Center Mounted	EA	3	\$ 2,500.00	\$ 7,500.00
FN-16	Historic LED Steet Light Replacement	EA	1	\$ 2,000.00	\$ 2,000.00
FN-17	Street Tree	EA	7	\$ 500.00	\$ 3,500.00
FJ-1	Class A Excavation	CY	200	\$ 12.00	\$ 2,400.00
FJ-2	Compacting Embankment	CY	200	\$ 10.00	\$ 2,000.00
FJ-3	Sawcut	LF	1,300	\$ 8.00	\$ 10,400.00
FJ-4	Cold Mill	SY	1,500	\$ 5.00	\$ 7,500.00
FJ-5	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	167	\$ 80.00	\$ 13,360.00
FJ-6	Tack Coat (0.10 GAL/SY)	GAL	150	\$ 5.00	\$ 750.00
FJ-7	Rolled Gutter (2' wide)	LF	1,333	\$ 42.00	\$ 55,986.00
FJ-8	4" Type 5 Aggregate Base	SY	267	\$ 8.00	\$ 2,136.00
FJ-9	Compacting Subgrade	SY	267	\$ 2.00	\$ 534.00
FJ-10	Sod	SY	433	\$ 16.00	\$ 6,928.00
FJ-11	Roadway Signage (2 per 500 LF)	EA	4	\$ 400.00	\$ 1,600.00
FJ-12	Historic LED Steet Light Replacement	EA	2	\$ 2,500.00	\$ 5,000.00
FJ-13	Street Tree	EA	23	\$ 500.00	\$ 11,500.00

- **FN** -North Commercial Front Street
- **FJ** - North Residential Front Street
- **FS** - South Front Street

Following are Phase 1 sub-project total ROM estimated costs:

**North Commercial Front Street Total ROM Estimated Cost: \$**

**North Residential Front Street Total ROM Estimated Cost: \$**

**South Front Street Total ROM Estimated Cost: \$**

The elements include monument signage at the intersection of Highways 61/67 and K, gateway signage on Highway K, 4th Street improvements from Elm to Market, pedestrian realm improvements on the north side of Market from 4th to 3rd and 3rd Street from Market to Elm, and the railroad crossing including the Market and Front Streets intersection.

FS-1	Class A Excavation	CY	758	\$ 12.00	\$ 9,096.00
FS-2	Compacting Embankment	CY	100	\$ 10.00	\$ 1,000.00
FS-3	Sawcut	LF	354	\$ 8.00	\$ 2,832.00
FS-4	Pervious Pedestrian Pavers	SF	4,306	\$ 20.00	\$ 86,120.00
FS-5	Pervious Roadway Pavers (Mill Intersection)	SF	2,500	\$ 20.00	\$ 50,000.00
FS-6	Truncated Domes	SF	120	\$ 30.00	\$ 3,600.00
FS-7	Cold Mill	SY	377	\$ 5.00	\$ 1,885.00
FS-8	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	42	\$ 80.00	\$ 3,360.00
FS-9	Concrete ADA Ramp	EA	6	\$ 2,500.00	\$ 15,000.00
FS-10	Underdrain System	LF	600	\$ 35.00	\$ 21,000.00
FS-11	Concrete Pavement (6" non-reinf)	SY	169	\$ 70.00	\$ 11,837.78
FS-12	Tack Coat (0.10 GAL/SY)	GAL	38	\$ 5.00	\$ 190.00
FS-13	Rolled Gutter (2' wide)	LF	480	\$ 42.00	\$ 20,160.00
FS-14	4" Type 5 Aggregate Base	SY	107	\$ 8.00	\$ 856.00
FS-15	Compacting Subgrade	SY	760	\$ 2.00	\$ 1,520.00
FS-16	Sod	SY	160	\$ 16.00	\$ 2,560.00
FS-17	Concrete Curb Type S	LF	20	\$ 30.00	\$ 600.00
FS-18	30 Inch Wide - High Vis Marking - White	LF	50	\$ 15.00	\$ 750.00
FS-19	Roadway Signage (4 per 500 LF)	EA	4	\$ 400.00	\$ 1,600.00
FS-20	Wayfinding Signage	EA	2	\$ 1,000.00	\$ 2,000.00
FS-21	1.25" Raceway (Trenched or Bored), #10 AWG	LF	400	\$ 22.00	\$ 8,800.00
FS-22	Decorative Light Pole and Luminaire	EA	4	\$ 8,000.00	\$ 32,000.00
FS-23	Historic LED Steet Light Replacement	EA	1	\$ 2,500.00	\$ 2,500.00
FS-24	Street Tree	EA	3	\$ 500.00	\$ 1,500.00

<b>Sub-Total</b>	<b>\$ 531,466.78</b>
<b>5% Mobilization</b>	<b>\$ 26,573.34</b>
<b>5% Traffic Control</b>	<b>\$ 26,573.34</b>
<b>25% Contingency</b>	<b>\$ 132,866.69</b>
<b>10% Design</b>	<b>\$ 71,748.02</b>
<b>TOTAL Estimated Cost</b>	<b>\$ 789,228.17</b>

STP grant funds only apply toward roadways with functional classifications. Route K, Beckett, 4th from Beckett to Market, Market and Front Street north of Market qualify. The riverfront access road is an extension of Market. A request to classify that stretch should be made as soon as possible. The City of Kimmswick has jurisdiction over all corridors listed but the river access road meaning the City would be responsible for any STP matching funds for projects on those corridors. Should Kimmswick disincorporate Front Street and

Mississippi Street to Jefferson County, their DPW would be responsible for those roads. Elements on unclassified roads are not eligible for STP funds.

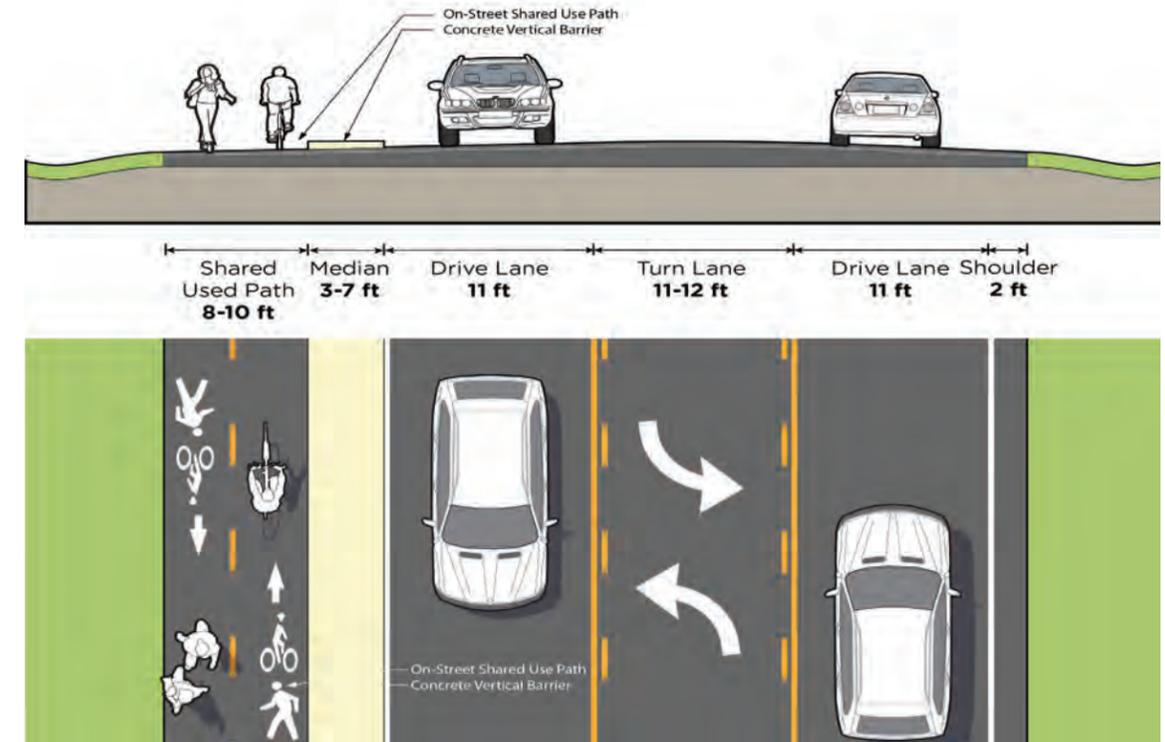
State agency grants and funds can be applied as a local match to STP funding. If this strategy is employed, plan to have those grants secured prior to the STP funds.

ROM cost estimates for Phase 1 are divided into these elements to support wring applications easier

## B5. HIGHWAY 61/67



Above: barrier protected shared use path and monument entry at Route K intersection



Above: Proposed Highway 61/67 roadway section

### Project Description

MODOT reviewed Highway 61/67 data finding an average of 3 complete I-55 closures per month parallel to this section. For the purpose of the Great Streets plan we recommend a road diet for the safety, regional connectivity, and entry development opportunities benefiting the area. No pedestrian or bike facilities connect Windsor High and Elementary schools to the area. More specific analysis on the roadway segment from Windsor Harbor to Imperial Main Street is needed to determine a solution with the greatest balance of benefits. Conducting a Safe Routes to School study, will provide the analysis opportunity and help connect the area.

**RESPONSIBLE:** CITY, MODOT  
**FUNDING:** EWG STP, MODOT, MDC  
 Recreational Trail  
**COORDINATE:** B4.3, B9.1  
**KICK-OFF:** 2020

### Implementation Strategy

MODOT understands the community benefits resulting from the shared use path recommendation on Highway 61/67. They recommend the initial step of conducting a Safe Routes to School plan to develop a reasoned solution addressing connectivity and interstate diversion concerns. TAP or CMAQ funding through MODOT will be the likely avenue for the study. Kimmswick needs to recruit local partners with shared goals. The plan outcome should determine the path forward and hopefully

integrate many proposed regional trails and sidewalks.

When Highway 61/67 gets converted, the monument entry and pedestrian plaza can be built. With that constructed, Phase 3 is complete, leaving Kimmswick thoroughly transformed from Highway 61/67 to the riverfront.

**B5.1 - Safe Routes to School Plan (SRTS)**  
 The highway concerns could kick start a

local active transportation plan developing Kimmswick's initial regional connections and improve residential quality of life. It will also provide the analysis necessary to determine a Highway 61/67 preferred alternative.

Should MODOT partner with Jefferson County when conducting this plan, it could provide the impetus for an active transportation plan for northern Jefferson County.

Phase ROM Cost: \$40,000 - \$70,000

→ **32% TRANSFER VEHICLES TO PED/BIKES**

**REGIONAL ATTRACTION**

**INCREASED REGIONAL CONNECTIVITY**

**REDUCES TRAFFIC SPEED**

**DIVERSIFIES VISITORS**

Accomplishes **KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development

**B5.2 - Highway 61/67 Road Diet**

ROM estimates reflect the road diet proposed with a barrier protected shared use path from Imperial Main Street to Windsor Harbor Road. Should the SRTS recommend adding a lane, the difference between a road diet retrofit and adding a lane could be substantial with dramatic grading. Simply adding one lane would cost more than all road diet improvements.

If a four or five lane section is recommended and an adjacent shared use path developed, implementing aggressive traffic calming is recommended. This may include lane narrowing, drastically reduced posted speeds, speed indicator signage and an increased buffer between the roadway and path.

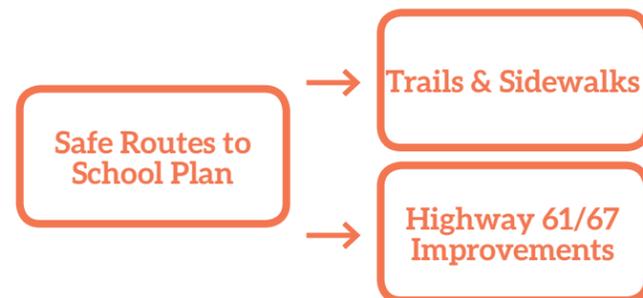
Should MODOT understand the need for alternate connections to the communities but forego a SUP on the highway, it may be an opportunity to leverage TAP funding to develop a segment of trail section with a bridge across Rock Creek, a leg up rock creek and a connection into Imperial Main from the back side of River Street. This provides desired festival connections between high school parking and Kimmswick. A short trail segment would connect the bridge to the Mississippi River.

Funding would may be separated into two pieces depending on construction funding

moneys. Highway 61/67 Road Diet is represented with HW for the estimate line items. Great Streets intersection plaza items are identified by IN.

Hwy 61/67 Road Diet ROM Cost: **\$659,794**

Intersection Plaza ROM Cost: **\$144,310**



**B5. HIGHWAY 61/67  
ROUGH ORDER OF MAGNITUDE  
OPINION OF COSTS**

**\$804,103**

<b>B5.1 - Road Diet &amp; Protected Path</b>			<b>Sub Total</b>	<b>\$</b>	<b>511,191.00</b>
HY-1	Class A Excavation	CY	405	\$ 12.00	\$ 4,860.00
HY-2	Compacting Embankment	CY	405	\$ 10.00	\$ 4,050.00
HY-3	Sawcut	LF	2,700	\$ 8.00	\$ 21,600.00
HY-4	Bituminous Pavement Mix PG64-22 BP-1 (2")	TON	133	\$ 80.00	\$ 10,640.00
HY-5	Concrete Pavement (8" non-reinf)	SY	1,200	\$ 70.00	\$ 84,000.00
HY-6	Tack Coat (0.10 GAL/SY)	GAL	120	\$ 5.00	\$ 600.00
HY-7	4" Type 5 Aggregate Base	SY	1,200	\$ 8.00	\$ 9,600.00
HY-8	Compacting Subgrade	SY	1,200	\$ 2.00	\$ 2,400.00
HY-9	Sod	SY	1,500	\$ 16.00	\$ 24,000.00
HY-10	Modular Barrier (conc median island strip)	SY	900	\$ 65.00	\$ 58,500.00
HY-11	Concrete Curb Type S	LF	350	\$ 30.00	\$ 10,500.00
HY-12	Curb Cut Steel Plate Cover	EA	7	\$ 750.00	\$ 5,250.00
HY-13	Bike/Ped Lane Marking Symbols	EA	18	\$ 350.00	\$ 6,300.00
HY-14	Left Turn Arrow	EA	2	\$ 250.00	\$ 500.00
HY-15	8 Inch Solid White	LF	574	\$ 2.25	\$ 1,291.50
HY-16	6 Inch Solid White	LF	11,160	\$ 2.00	\$ 22,320.00
HY-17	4 Inch Solid Yellow	LF	5,400	\$ 1.50	\$ 8,100.00
HY-18	4 Inch Intermittent Yellow	LF	2,025	\$ 1.50	\$ 3,037.50
HY-19	Pavement Marking Removal	LF	13,500	\$ 1.00	\$ 13,500.00
HY-20	Roadway Signage (2 per 500 LF)	EA	11	\$ 400.00	\$ 4,400.00
HY-21	Signal/Controller Modification	EA	2	\$ 50,000.00	\$ 100,000.00
HY-22	Pedestrian Signal Upgrades per Corner	EA	6	\$ 4,000.00	\$ 24,000.00
IN-1	Class A Excavation	CY	83	\$ 12.00	\$ 996.00
IN-2	Compacting Embankment	CY	83	\$ 10.00	\$ 830.00
IN-3	Sawcut	LF	235	\$ 8.00	\$ 1,880.00
IN-4	Textured Pavement	SY	330	\$ 130.00	\$ 42,900.00
IN-5	Truncated Domes	SF	40	\$ 30.00	\$ 1,200.00
IN-6	4" Type 5 Aggregate Base	SY	330	\$ 8.00	\$ 2,640.00
IN-7	Compacting Subgrade	SY	330	\$ 2.00	\$ 660.00
IN-8	Sod	SY	544	\$ 40.00	\$ 21,760.00
IN-9	Concrete Curb Type S	LF	152	\$ 30.00	\$ 4,560.00
IN-10	Mountable Curb and Gutter	LF	83	\$ 40.00	\$ 3,320.00
IN-11	Wooden Fence	LF	150	\$ 55.00	\$ 8,250.00
IN-12	24 Inch solid White	LF	12	\$ 8.00	\$ 96.00
IN-13	30 Inch Wide - High Visibility Markings - Color	LF	70	\$ 15.00	\$ 1,050.00
IN-14	Roadway Signage (2 per 500 LF)	EA	4	\$ 400.00	\$ 1,600.00

<b>Sub-Total</b>	<b>\$</b>	<b>511,191.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>25,559.55</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>25,559.55</b>
<b>5% Removal of Improvements</b>	<b>\$</b>	<b>25,559.55</b>
<b>3% SWPPP</b>	<b>\$</b>	<b>15,335.73</b>
<b>25% Contingency</b>	<b>\$</b>	<b>127,797.75</b>
<b>10% Design</b>	<b>\$</b>	<b>73,100.31</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>804,103.44</b>

## B6. KIMMSWICK VILLAGE GREEN



Above: Framing a view corridor from the 4th Street Intersection invites visitors into the community.



Above: Example Design of Kimmswick Village Green

### Project Description

A new heart of Kimmswick, the Village Green will have already been established in B4 Phase 1. The resulting south and east defining edges formalizes the space as Kimmswick's living outdoor living room. Officially connection to the 4th and Beckett Street intersection and defining the west and north edges will greatly enhance the park increasing community connectivity and garden delight. The pavilion and northern Heritage Plaza establish the town center as the Heritage Trail trail head and central gathering space. Running a representation of the Heritage Trail around the pavilion's inside edge will give visitors a taste of what to see and where to go. Paths, seating, and lighting round out the Green.

**RESPONSIBLE:** CITY, MODOT  
**FUNDING:** EWG STP, MODOT, MDC  
 Recreational Trail  
**COORDINATE:** B4.3, B4.5  
**KICK-OFF:** 20XX

### Implementation Strategy

First, the park's name should change from City Lot to Village Green or another appropriate name. Vertical elements provide greatest impact defining spaces. Implementing trees, fencing, seating, lighting, and the pavilion should be highest priority. A well-designed, clever Heritage Plaza will generate activity as the Heritage Trail's central activity hub. Finally, greening edges and installing the paths add the

finishing touch.

#### B8.1 - Rename City Lot

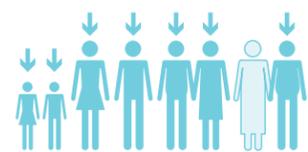
Kimmswick should pass an ordinance at the next meeting officially naming the park.

#### B8.2 - Phase 3

DNR Outdoor Recreation funds may be able to support all improvements including boundary planting, fencing, lighting,

pavilion, plaza and walks; however, the maximum award is \$250,000, only 33 percent of Village Green build out.

The phase may be better split into sub-projects - base park elements, Heritage Plaza, and Heritage Pavilion. Base elements include walks, lighting, landscape, furnishings, fencing and the 4th Street connection. Heritage Plaza encompasses the



**DIVERSIFIES VISITORS**



**TELLS KIMMSWICK'S STORY**



**50% INCREASE IN SWALE CAPACITY**



**INCREASE COMMERCE**



**REGIONAL ATTRACTION**



**INCREASES CONNECTION TO NATURE**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model

**COUNTY GOALS**

- » Regional Economic Growth

plaza and planting area south of City Hall. The remaining Heritage Pavilion stands alone.

Kimmswick Historical Society should be intimately involved in the design of the plaza and pavilion. The plaza also serves as the Heritage Trail trailhead. The Society may have funds to support these endeavors.

Base Elements ROM Cost: \$600,177

Heritage Plaza ROM Cost: \$104,874

Heritage Pavilion ROM Cost: \$139,832

## B6. KIMMSWICK VILLAGE GREEN

### ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$1,025,944**

B6.2 - Village Green Vertical			Sub Total	\$	548,625.00
VG-1	Fence	EA	545	\$ 55.00	\$ 29,975.00
VG-2	6" Gravel Walk	TON	290	\$ 40.00	\$ 11,600.00
VG-3	Metal Walk Edge	EA	1,900	\$ 3.00	\$ 5,700.00
VG-4	Bench - 6' Historic Character	EA	28	\$ 2,000.00	\$ 56,000.00
VG-5	1.25" Raceway (Trenched or Bored), #10 AWG	EA	750	\$ 22.00	\$ 16,500.00
VG-6	Decorative Light Pole and Luminaire	EA	17	\$ 6,500.00	\$ 110,500.00
VG-7	Class A Excavation	CY	125	\$ 12.00	\$ 1,500.00
VG-8	Compacting Embankment	CY	125	\$ 10.00	\$ 1,250.00
VG-9	Structural or MSE Wall	SF	300	\$ 40.00	\$ 12,000.00
VG-10	Concrete Stairs at West Entryway	SF	240	\$ 95.00	\$ 22,800.00
VG-11	Wooden Planter Areas at West Entryway	EA	2	\$ 15,400.00	\$ 30,800.00
VG-12	Decorative Bollards w/ Chain	EA	5	\$ 1,000.00	\$ 5,000.00
VG-13	Flag Poles	EA	2	\$ 5,000.00	\$ 10,000.00
VG-14	Sod	SY	1,750	\$ 16.00	\$ 28,000.00
VG-15	Tree	EA	14	\$ 500.00	\$ 7,000.00
VG-16	BMP Area	SF	90	\$ 40.00	\$ 3,600.00
VG-17	Landscape Area	SY	750	\$ 50.00	\$ 37,500.00
VP-1	Pavilion	LS	1	\$ 60,000.00	\$ 60,000.00
VP-2	Plaza Pavement	SY	160	\$ 130.00	\$ 20,800.00
VP-3	Footings	LS	1	\$ 10,000.00	\$ 10,000.00
HP-1	Metal Walk Edge	LF	250	\$ 3.00	\$ 750.00
HP-2	Plaza Pavement	SY	195	\$ 130.00	\$ 25,350.00
HP-3	Pavement Inlay	EA	24	\$ 500.00	\$ 12,000.00
HP-4	Bench - 6' Historic Character	EA	8	\$ 2,000.00	\$ 16,000.00
HP-5	Tree	EA	3	\$ 500.00	\$ 1,500.00
HP-6	Landscape Area	SY	250	\$ 50.00	\$ 12,500.00

B6.3 - City Hall Plaza			Sub Total	\$	94,600.00
1	Concrete Walk	SF	550	\$ 8.00	\$ 4,400.00
2	Metal Walk Edge	EA	140	\$ 3.00	\$ 420.00
3	Bench - 6' Historic Character	EA	4	\$ 2,000.00	\$ 8,000.00
4	1.25" Raceway (Trenched or Bored), #10 AWG	EA	300	\$ 22.00	\$ 6,600.00
5	Decorative Light Pole and Luminaire	EA	2	\$ 6,500.00	\$ 13,000.00
6	Class A Excavation	CY	15	\$ 12.00	\$ 180.00
7	Compacting Embankment	CY	12	\$ 10.00	\$ 120.00
8	Structural or MSE Wall	SF	500	\$ 40.00	\$ 20,000.00
9	Rolled Gutter (2' wide)	SF	65	\$ 42.00	\$ 2,730.00
10	BMP Area	SF	500	\$ 40.00	\$ 20,000.00
11	Plaza Pavement	SY	55	\$ 130.00	\$ 7,150.00
12	Pavement Inlay	EA	1	\$ 500.00	\$ 500.00
13	Tree	EA	3	\$ 500.00	\$ 1,500.00
14	Landscape Area	SY	200	\$ 50.00	\$ 10,000.00

<b>Sub-Total</b>	<b>\$</b>	<b>643,225.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>32,161.25</b>
<b>2% Traffic Control</b>	<b>\$</b>	<b>12,864.50</b>
<b>5% Removal of Improvements</b>	<b>\$</b>	<b>32,161.25</b>
<b>5% Drainage</b>	<b>\$</b>	<b>32,161.25</b>
<b>3% SWPPP</b>	<b>\$</b>	<b>19,296.75</b>
<b>25% Contingency</b>	<b>\$</b>	<b>160,806.25</b>
<b>10% Design</b>	<b>\$</b>	<b>93,267.63</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>1,025,943.88</b>



## B7. PUBLIC RESTROOMS



Above: At least five public restroom locations are identified



Above: Restrooms & retail could be developed in association with an iconic observation tower

### Project Description

Public restrooms are the highest request in the visitor survey, and Kimmswick knows it. Structural analysis and building design were not envisioned in the Great Street plan; however, five locations are identified for further study. These restroom additions include the Jefferson Park Pavilion, the existing Visitor's Center, the historic brick garage on the port grounds, the small out building north of the large metal stables on the Anheuser Estate and should an observation tower rise at the end of Mill Street, it would be a prime location for restrooms right beside the Rock Creek Market. These locations are spread throughout Kimmswick's primary activity areas.

RESPONSIBLE: CITY, MA/CID, JCPA, AE

FUNDING: CITY, MA/CID, JCPA, JC

Parks, MDNR Recreational Trail, MDC

Outdoor Recreation

COORDINATE: B9.5

### Implementation Strategy

Four locations are controlled by Kimmswick's main players. The City owns the Jefferson Park pavilion and Anheuser Estate building. The Historical Society owns the Visitor's Center though the Merchant's Association runs it.

JCPA owns the port building. The engineering plans call for its demolition. JCPA should change the plans making sure it remains in place.

All responsible parties should consider restroom projects within the next five years, particularly the Merchant's Association and JCPA.

Should the observation tower become a reality, incorporating retail should be considered such as an outdoor sporting goods retailer. No matter the use, public restrooms should be part of the plan.

Existing Visitor's Center Restroom Expansion

Kimmswick Port Restrooms

Anheuser Restrooms

Observation Tower Restrooms



DIVERSIFIES VISITORS



INCREASES CONNECTION TO NATURE

Accomplishes KIMMSWICK GOALS

- » Community Supported
- » Maintain/Enhance Quality of Life

- » Supports Economic/Management Model
- » Leverage Kimmswick Port

COUNTY GOALS

- » Support Kimmswick
- » Regional Economic Growth

- » Support Riverfront Re-development

## B8. SECONDARY COMMERCIAL



Above: Landmark intersections, walks, lighting and bioswales link Elm to primary commercial areas

### Project Description

While Market Street and Front Street are primary commercial corridors, Kimmswick's secondary commercial corridors present the greatest promise for economic expansion. Turning left at 4th Street instead of right to Market, promoting Elm Street may only take one sign. Establishing Elm will create greater traffic on side streets 2nd and 3rd. Mill Street poses the greatest circulation difficulty which could greatly benefit from formalized parking as an initial reason for visitors to turn the corner. Developing a consistent commercial streetscape in all commercial areas will help generate greater visitor awareness.

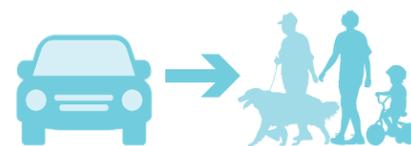
RESPONSIBLE: CITY, CID, MA  
 FUNDING: MDC Riparian Habitat,  
 MDNR Outdoor Recreation, MDNR  
 Recreational Trails

PHASING: B11.1 Core Project  
 B11.2-4 Icing on the Cake

COORDINATE: B2.X, B6.X  
 KICK-OFF: 2026



**0.19** ACRE INCREASE  
 PERVIOUS  
 IN AREA



**19%** TRANSFER  
 VEHICLES TO  
 PED/BIKES



TELLS  
 KIMMSWICK'S  
 STORY

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model

**COUNTY GOALS**

- » Support Kimmswick
- » Regional Economic Growth

### Implementation Strategy

As development occurs Kimmswick should negotiate with developers over public realm installation. The City will need to connect new development to existing using consistent standards. Constructing the public realm could become a development incentive for investors.

Having developed the core commercial street improvements, the City and CID will need to make sure emphasis is not given to one area over another.

Primary commercial corridors should be implemented first. Elm is located in secondary commercial not because of lower status, but as a transition into residential. Elevating Elm with landmark intersection improvements will establish the three main commercial corridors. These are higher impact phases offering a sense that the entire corridor has been improved. Because Mill Street is most vulnerable, improvements in this corridor would provide the greatest commercial value. The next ranked street is 2nd Street followed by Elm, then Mill and the east side of 3rd is the last phase for secondary commercial.

Underdrain connections for future pervious paver upgrades in parking areas should be installed. Permeable pavers are likely the only element which could receive matching funds.

## B8. SECONDARY COMMERCIAL ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

B8.1&2 - Elm Street Intersections			Sub Total	\$	144,040.00
1	Class A Excavation	CY 140	\$ 12.00	\$	1,680.00
2	Sawcut	LF 100	\$ 8.00	\$	800.00
3	Rolled Gutter (2' wide)	LF 160	\$ 42.00	\$	6,720.00
4	Compacting Subgrade	SY 160	\$ 2.00	\$	320.00
5	Sod	SY 40	\$ 16.00	\$	640.00
6	Roadway Signage (2 per 500 LF)	EA 4	\$ 400.00	\$	1,600.00
7	Pervious Roadway Pavers	SF 3,800	\$ 20.00	\$	76,000.00
8	Landmark Intersection	EA 1	\$ 10,000.00	\$	10,000.00
9	Historic LED Luminaire w/ Mount on Wood Post	EA 1	\$ 6,800.00	\$	6,800.00
10	Decorative Light Pole & Luminaire	EA 4	\$ 8,000.00	\$	32,000.00
11	1.25" Raceway (Trenched or Bored), #10 AWG	LF 340	\$ 22.00	\$	7,480.00

B8.3 - Mill Street			Sub Total	\$	227,262.00
12	Class A Excavation	CY 868	\$ 12.00	\$	10,416.00
13	Sawcut	LF 460	\$ 8.00	\$	3,680.00
14	Rolled Gutter (2' wide)	LF 460	\$ 42.00	\$	19,320.00
15	Compacting Subgrade	SY 868	\$ 2.00	\$	1,736.00
16	Sod	SY 30	\$ 16.00	\$	480.00
17	Roadway Signage (2 per 500 LF)	EA 1	\$ 400.00	\$	400.00
18	Pervious Roadway Pavers	SF 4,600	\$ 20.00	\$	92,000.00
19	Decorative Light Pole & Luminaire	EA 2	\$ 8,000.00	\$	16,000.00
20	1.25" Raceway (Trenched or Bored), #10 AWG	LF 460	\$ 22.00	\$	10,120.00
21	Concrete Pavement (8" non-reinf)	SY 360	\$ 70.00	\$	25,200.00
22	4" Type 5 Aggregate Base	SY 360	\$ 8.00	\$	2,880.00
23	Underdrain System	LF 460	\$ 35.00	\$	16,100.00
24	Cold Mill (for cross slope trans)	SY 460	\$ 5.00	\$	2,300.00
25	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON 330	\$ 80.00	\$	26,400.00
26	Tack Coat (0.10 GAL/SY)	GAL 46	\$ 5.00	\$	230.00



Above: Mill Street welcomes trail users at both ends

**B8.1 & 2 - Elm Street Landmark Intersections on 2nd & 3rd Streets**

The project extents include the landmark paver intersections and the squared off pedestrian corners. The intersections are pervious outletting into the 3rd Street and Elm Street swales. Landmark icons should represent a recognizable element or place in Kimmswick and interpretive signage can connect visitors to each intersection.

Potentially the Historical Society will

financially support the landmark and/or signage. Private donations could be solicited from institutions represented in the intersection design.

**Phase ROM Cost per Intersection: \$221,822**

**B8.3 - Mill Street**

Mill Street has developed in such a way that parking is not possible on the north but the south side has enough depth for back-in

angled parking. Back-in angled parking is the safest parking position in a pedestrian oriented setting allowing drivers to see pedestrians when entering the roadway. It also points the rear cargo door toward the pedestrian realm which is beneficial when loading purchases. When parking, the vehicle must stop to reverse giving those behind a moment to react.

Pervious pavers may be the only element qualifying for funding support.

**Phase ROM Cost: \$349,983**

**B8.4 - 2nd Street**

Second Street connects two iconic establishments, the Blue Owl and Port of Call restaurants. Improvements delineate parking and install pedestrian facilities. Pedestrian facilities, north of Market on the east, stop prior to the residence.

**Phase ROM Cost: \$551,612**

**B8.5 - Elm Street**

This phase connects the landmark intersections with parking and pedestrian walks from 4th to 2nd Street. Curbing extends to Front Street without parking or sidewalk improvements in front of residences.

**Phase ROM Cost: \$721,090**

**B8. SECONDARY COMMERCIAL  
ROUGH ORDER OF MAGNITUDE  
OPINION OF COSTS**

<b>B8.4 - 2nd Street</b>		<b>Sub Total</b>		<b>\$</b>	<b>358,190.00</b>
27	Class A Excavation	CY	1,580	\$	12,000
28	Sawcut	LF	960	\$	8,000
29	Rolled Gutter (2' wide)	LF	1,120	\$	42,000
30	Compacting Subgrade	SY	4,500	\$	2,000
31	Sod	SY	960	\$	16,000
32	Roadway Signage (2 per 500 LF)	EA	4	\$	400.00
33	Pervious Roadway Pavers	SF	2,500	\$	20,000
34	Historic LED Luminaire w/ Mount on Wood Post	EA	1	\$	6,800.00
35	Decorative Light Pole & Luminaire	EA	3	\$	8,000.00
36	1.25" Raceway (Trenched or Bored), #10 AWG	LF	960	\$	22,000
37	Gravel Parking	SY	640	\$	25,000
38	Concrete Pavement (8" non-reinf)	SY	160	\$	70,000
39	4" Type 5 Aggregate Base	SY	160	\$	8,000
40	Underdrain System	LF	960	\$	35,000
41	Cold Mill (for cross slope trans)	SY	1,950	\$	5,000
42	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	960	\$	80,000
43	Tack Coat (0.10 GAL/SY)	GAL	192	\$	5,000

<b>B8.5 - Elm Street</b>		<b>Sub Total</b>		<b>\$</b>	<b>468,240.00</b>
44	Class A Excavation	CY	2,000	\$	12,000
45	Sawcut	LF	2,880	\$	8,000
46	Rolled Gutter (2' wide)	LF	2,880	\$	42,000
47	Compacting Subgrade	SY	2,000	\$	2,000
48	Sod	SY	960	\$	16,000
49	Roadway Signage (2 per 500 LF)	EA	6	\$	400.00
50	Pervious Roadway Pavers	SF	0	\$	20.00
51	Historic LED Luminaire w/ Mount on Wood Post	EA	4	\$	6,800.00
52	Wooden Fencing	LF	130	\$	55.00
53	Decorative Light Pole & Luminaire	EA	1	\$	8,000.00
54	1.25" Raceway (Trenched or Bored), #10 AWG	LF	75	\$	22.00
55	Gravel Parking	SY	960	\$	25,000
56	Concrete Pavement (8" non-reinf)	SY	480	\$	70.00
57	4" Type 5 Aggregate Base	SY	480	\$	8.00
58	Underdrain System	LF	1,200	\$	35.00
59	Cold Mill (for cross slope trans)	SY	2,880	\$	5.00
60	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	1,440	\$	80.00
61	Tack Coat (0.10 GAL/SY)	GAL	288	\$	5.00



Above: Historic style embellishment of the modern bridge on Windsor Harbor Road similar to those proposed on the Route K Bridge

**B8.6 - East 3rd Street Parking**

West 3rd Street improvements occurred in B4 Phase 1. East side parking, roadway asphalt upgrades, and the walk near Market happen in this phase. When development occurs along east 3rd, the pedestrian realm can be extended either by the City or developer.

Phase ROM Cost: \$129,460

**B8.7 - Windsor Harbor Bridge**

This phase connects the landmark intersections with parking and pedestrian walks from 4th to 2nd Street. Curbing extends to Front Street without parking or sidewalk improvements in from of the residences.

Phase ROM Cost: \$320,140

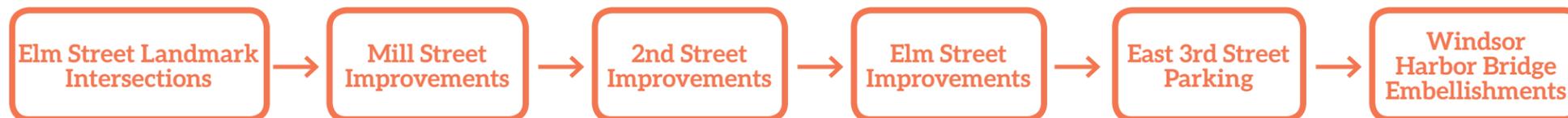
**B8. SECONDARY COMMERCIAL  
ROUGH ORDER OF MAGNITUDE  
OPINION OF COSTS**

**\$2,294,108**

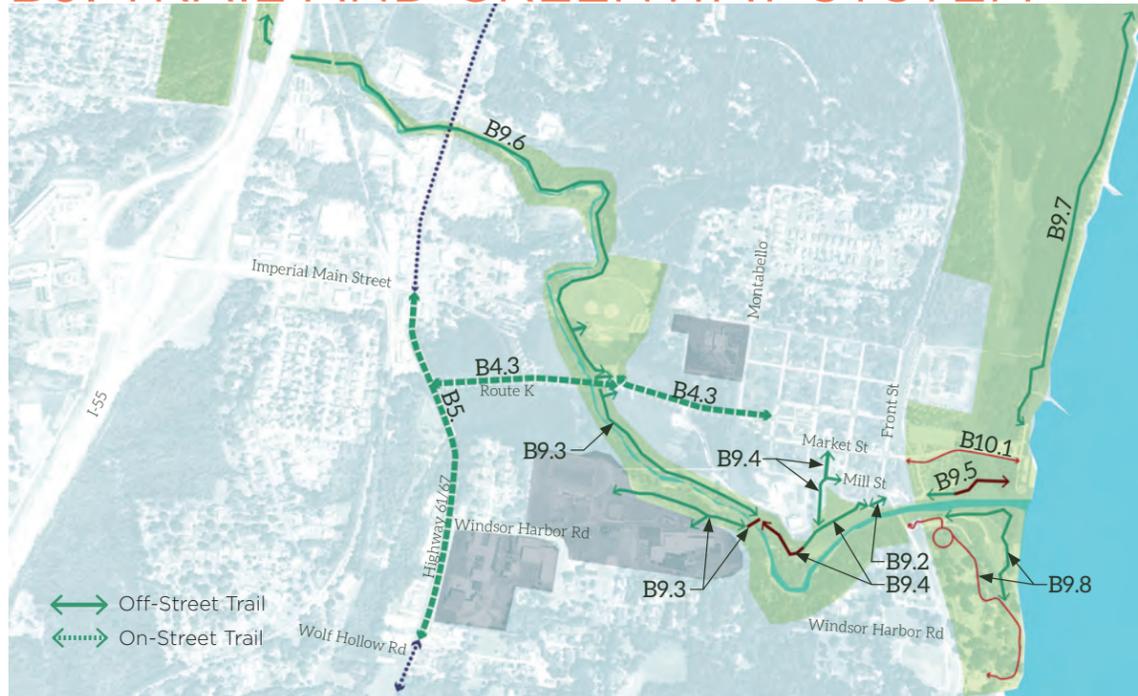
<b>B8.6 - East 3rd Street Parking</b>			<b>Sub Total</b>	<b>\$</b>	<b>84,065.00</b>
62	Class A Excavation	CY	430	\$ 12.00	\$ 5,160.00
63	Sawcut	LF	480	\$ 8.00	\$ 3,840.00
64	Rolled Gutter (2' wide)	LF	480	\$ 42.00	\$ 20,160.00
65	Compacting Subgrade	SY	430	\$ 2.00	\$ 860.00
66	Cold Mill (for cross slope trans)	SY	510	\$ 5.00	\$ 2,550.00
67	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	60	\$ 80.00	\$ 4,800.00
68	Tack Coat (0.10 GAL/SY)	GAL	51	\$ 5.00	\$ 255.00
69	Sod	SY	50	\$ 16.00	\$ 800.00
70	Roadway Signage (2 per 500 LF)	EA	1	\$ 400.00	\$ 400.00
71	Pavers	SF	520	\$ 10.00	\$ 5,200.00
72	1.25" Raceway (Trenched or Bored), #10 AWG	LF	480	\$ 22.00	\$ 10,560.00
73	Gravel Parking	SY	320	\$ 25.00	\$ 8,000.00
74	Concrete Pavement (8" non-reinf)	SY	60	\$ 70.00	\$ 4,200.00
75	4" Type 5 Aggregate Base	SY	60	\$ 8.00	\$ 480.00
76	Underdrain System	LF	480	\$ 35.00	\$ 16,800.00

<b>B8.7 - Windsor Harbor Bridge</b>			<b>Sub Total</b>	<b>\$</b>	<b>207,883.33</b>
77	Modular Color/Stamped Barrier(conc median island str	SY	158	\$ 130.00	\$ 20,583.33
78	Wooden Fence	LF	214	\$ 55.00	\$ 11,770.00
79	GUARDRAIL TYPE A	LF	100	\$ 35.00	\$ 3,500.00
80	TYPE A CRASHWORTHY END TERMINAL	EA	4	\$ 2,150.00	\$ 8,600.00
81	Bridge Anchor Section	EA	4	\$ 3,000.00	\$ 12,000.00
82	Transition Section	EA	4	\$ 800.00	\$ 3,200.00
83	Wooden Barrier Facing	LF	572	\$ 48.00	\$ 27,456.00
84	Wooden Barrier Coping	LF	572	\$ 30.00	\$ 17,160.00
85	POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SER	EA	1	\$ 5,000.00	\$ 5,000.00
86	BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRC	EA	1	\$ 10,000.00	\$ 10,000.00
87	1.25-INCH RACEWAYS (RMC) - BRIDGE MOUNTED (Mo	LF	478	\$ 15.00	\$ 7,170.00
88	1.25-INCH RACEWAYS (HDPE) - TRENCHED AND/OR BC	LF	212	\$ 12.00	\$ 2,544.00
89	#10 AWG CABLE (MoDOT)	LF	690	\$ 5.00	\$ 3,450.00
90	#10 AWG CABLE (GROUND) (MoDOT)	LF	690	\$ 5.00	\$ 3,450.00
91	Side Bridge Mounted Light Fixture Post	EA	16	\$ 2,500.00	\$ 40,000.00
92	Decorative Light Fixture	EA	16	\$ 2,000.00	\$ 32,000.00

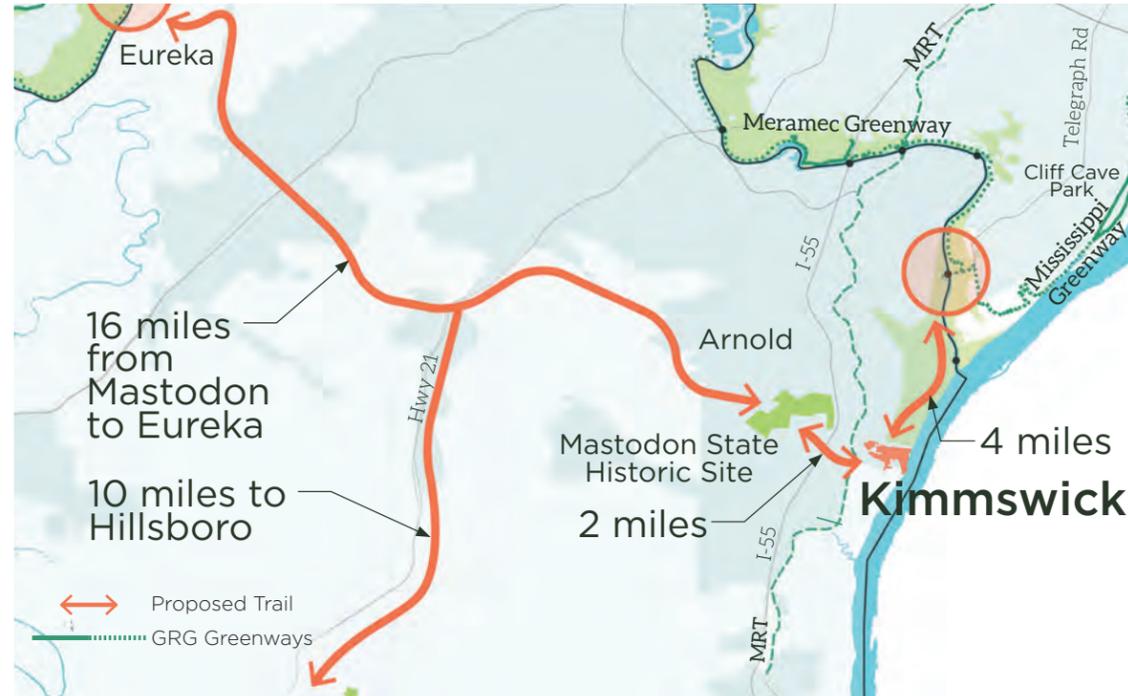
<b>Sub-Total</b>	<b>\$</b>	<b>1,489,680.33</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>74,484.02</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>74,484.02</b>
<b>5% Removal of Improvements</b>	<b>\$</b>	<b>74,484.02</b>
<b>25% Contingency</b>	<b>\$</b>	<b>372,420.08</b>
<b>10% Design</b>	<b>\$</b>	<b>208,555.25</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>2,294,107.71</b>



# B9. TRAIL AND GREENWAY SYSTEM



Above: Trails & greenways could help diversify current visitor demographics.



Above: North Jefferson Regional Trail System: 22 miles with Meramec Greenway is 63 mile Loop

**B9.1 - Regional Active Transportation Plan**  
Positively naming the regional active transportation plan, such as Jefferson County Healthy, Active Living Plan, the county may be able to team with a health care foundation to create a north county active transportation plan.

Phase ROM Cost: \$

**B9.2 - Levee trail from Windsor Harbor Road to Flood Wall**

A short trail segment must be constructed prior to flood barrier Phase 3 to establish a base for the deployable flood barriers.

Phase ROM Cost: \$27,930

**B9.3 - Rock Creek Bridge to Windsor High**

A Safe Routes to School trail would connect Windsor High school to Route K. The trail would travel from the track and field, down the slope to Rock Creek, over a bridge, and north to Route K with its complete streets renovations. The MDC Recreational Access program may need to be leveraged to cross private property.

The phase ROM estimate is broken into two parts - the bridge over Rock Creek and the connecting trail segments.

Bridge ROM Cost: \$453,750

Trail ROM Cost: \$563,560

## Project Description

Trails are an economic generator for welcoming communities. A 2012 Katy Trail economic study revealed the average party spent \$147 on a day trip. Open space and trails are fundamental to the Kimmswick Great Streets plan. Local trails would provide safe routes to school, a recreational connection to the river, and beneficial festival circulation. The GRG River Ring link alone would connect Kimmswick into over 600 miles of greenways. Jefferson County has plans on the shelf to connect Hillsboro to Mastodon. The same Katy Trail study revealed the trail generated approximately \$20 million or \$83,000 per mile annually. For a gravel trail, at that rate, it pays itself off in six years.

**RESPONSIBLE:** JC Parks, JC DPW, JCPA, CITY, CID, MA, AE, HS  
**FUNDING:** MODOT, JC DPW, JC Parks, MDC Riparian Habitat, MRAP, MDC Community Conservation, MDC

Urban Cost Share, MDNR Outdoor Recreation, MDNR Recreational Trails  
**COORDINATE:** A1, A2.4, A7, B1, B2.2-3, B4.2-5, B5, B7, B8.3, B10, B11, B12  
**KICK-OFF:** 2026

## Implementation Strategy

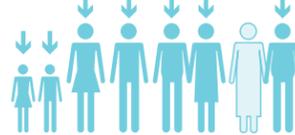
A regional active transportation plan would help the county understand the potential benefits and plan routes, Maybe Jefferson County could partner with MODOT on the Windsor Safe Routes to School plan to start the initial phases of the plan. Leveraging the plan, the first segment would link Windsor High School to Imperial Main Street. Kimmswick and the Port would connect from the Mississippi to that trail. Following a connection from Lucianna Gladney-Ross Park to Mastodon State Historic Site.

The Final planned segment runs up the Mississippi to Telegraph Road where it connects to the GRG River Ring.

Trail lighting has been estimated as an additional project in B2. The ROM estimates in this section are unit costs per linear mile including a 25 percent contingency and design fee.



**INCREASE COMMERCE**



**DIVERSIFIES VISITORS**



**IMPROVES ACCESS TO RIVERFRONT**



**REGIONAL ATTRACTION**



**INCREASED REGIONAL CONNECTIVITY**



**INCREASES CONNECTION TO NATURE**

Accomplishes **KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

**B9.4 - Levee Trail from Windsor Harbor Road to Pedestrian Bridge**

A gravel trail from the end of B9.2 levee trail segment would span the levee descending behind the trash transfer to a boardwalk. The boardwalk connects into the bridge. Building a boardwalk guarantees an alternative school route through Kimmswick should the Creek run high. It also reduces the risk of relying on remote parking for an event.

Phase ROM Cost: \$715,290

**Kimmswick Spurs**

Gravel trail connection from levee trail along the east side of the trash transfer and along the Blue Owl parking to Mill Street:

Mill Street ROM Cost: \$50,200

Gravel trail spur along west side of Blue Owl parking lot up alley easement to Market Street:

Market Street ROM Cost: \$20,080

Gravel trail spur from end of Mill Street north of trash transfer station down slope to west side of 3rd Street north to Market:

3rd Street ROM Cost: \$25,100

**B9.5 - Riverfront Educational/Interpretive Park at River's Edge Boardwalk**

JCPA has been courting a donor to build a boardwalk from the Delta Queen landing plaza over the wetlands to the south side of the amphitheater and up to Mississippi Street. This is an opportunity to create a memorable experience from the port landing into Kimmswick. It will also be a favored walk during events or even on regular day visits. Incorporating educational and historic elements telling the Mississippi River story would further liven the memories. MDNR Outdoor Recreation grant or the Recreational trails program could increase the donation upwards of \$250,000.

Phase ROM Cost: \$734,680

**B9.6 - Rock Creek Riparian Trail to Mastodon**

This 1.6 mile gravel trail would follow Rock Creek across I-55 and north on the outer road. At Seckman, the trail would cross the north roadway leg and follow the outer road into the state historic site. MDNR Outdoor Recreation or Recreational Trail funds could be leveraged. The DNR gives extra points for connecting to state historic sites.

Phase ROM Cost: \$836,515

**B9.7- River Trail GRG Connector**

A 4 mile trail connection up the Mississippi River banks will link to the old Ozark Trail along the Meramec River. Renovating the trail, it could be followed to Telegraph Road bridge where the trail would connect into the GRG River Ring. ROM costs don't estimate the bridge crossing. Cliff Cave Park is only a few miles away boasting a 160' high vista over the Mississippi. What a great destination only a few miles north of Kimmswick.

MDNR Outdoor Recreation or Recreational Trail funds could be leveraged. The DNR gives extra points for connecting to state historic sites. The MDC Recreational Access program may need to be leveraged to cross private property.

Phase ROM Cost: \$2,043,140

**B9.8 - Anheuser Trail**

The last local connection descend from the Windsor Harbor Bridge under the railroad trestle and follows Rock Creek to its Mouth at the Mississippi. The trail heads south along the river climbing up to the formal Estate linking into the Heritage Trail. MDNR Outdoor Recreation or Recreational Trail funds could be leveraged.

Phase ROM Cost: \$176,900



**B9. TRAIL & GREENWAY SYSTEM  
ROUGH ORDER OF MAGNITUDE  
OPINION OF COSTS**

**\$8,522,734**

<b>B9.1 - Active Transportation Plan</b>				<b>Sub Total</b>	<b>\$</b>	<b>60,000.00</b>	
1	Fee	LS	1	\$	60,000.00	\$	60,000.00

<b>B9.2 - Safe Routes to School Plan</b>				<b>Sub Total</b>	<b>\$</b>	<b>60,000.00</b>	
2	12' Wide Riparian Trail - Asphalt	LF	210	\$	133.00	\$	60,000.00

<b>B9.3 - Rock Creek Bridge &amp; Trail to WHS</b>				<b>Sub Total</b>	<b>\$</b>	<b>1,017,310.00</b>	
3	Pedestrian Bridge - 10' Wide	LS	1	\$	453,750.00	\$	453,750.00
4	12' Asphalt Trail to WHS	MI	0.20	\$	772,000.00	\$	154,400.00
5	12' Asphalt Trail to Imperial Main	EA	0.53	\$	772,000.00	\$	409,160.00

<b>B9.4 - Levee Trail to Bridge</b>				<b>Sub Total</b>	<b>\$</b>	<b>810,670.00</b>	
6	12' Wide Riparian Levee Trail - Gravel	MI	0.12	\$	502,000.00	\$	60,240.00
7	12' Boardwalk	MI	0.11	\$	5,955,000.00	\$	655,050.00
8	12' Wide Gravel Trail - Mill Street Spur	MI	0.10	\$	502,000.00	\$	50,200.00
9	12' Wide Gravel Trail - Market Street Spur	MI	0.04	\$	502,000.00	\$	20,080.00
10	12' Wide Gravel Trail - 3rd Street Spur	MI	0.05	\$	502,000.00	\$	25,100.00

<b>B9.5 - Confluence Boardwalk</b>				<b>Sub Total</b>	<b>\$</b>	<b>734,680.00</b>	
11	12' Wide Gravel Trail - Mississippi Street Spur	MI	0.04	\$	502,000.00	\$	20,080.00
12	12' Boardwalk	MI	0.12	\$	5,955,000.00	\$	714,600.00

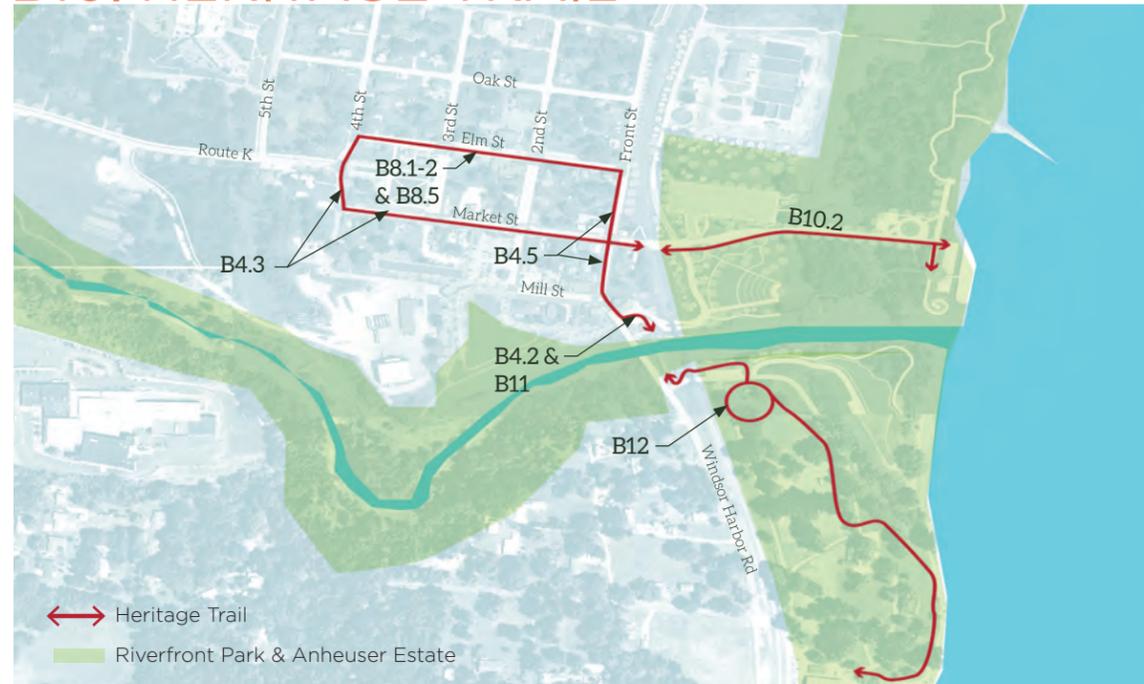
<b>B9.6 - Mastodon Riparian Trail</b>				<b>Sub Total</b>	<b>\$</b>	<b>836,515.00</b>	
13	12' Wide Riparian Levee Trail - Gravel	MI	1.62	\$	502,000.00	\$	813,240.00
14	Modular Barrier (conc median island strip)	SY	325	\$	65.00	\$	21,125.00
15	Bike/Ped Lane Marking Symbols	EA	4	\$	350.00	\$	1,400.00
16	30 Inch Wide - High Visibility Markings - White	LF	50	\$	15.00	\$	750.00

<b>B9.7 - GRG River Connector</b>				<b>Sub Total</b>	<b>\$</b>	<b>2,043,140.00</b>	
17	12' Wide Riparian Levee Trail - Gravel	MI	4.07	\$	502,000.00	\$	2,043,140.00

<b>B9.8 - Anheuser Trail</b>				<b>Sub Total</b>	<b>\$</b>	<b>176,900.00</b>	
18	12' Wide Gravel Trail - Mississippi Street Spur	MI	0.31	\$	502,000.00	\$	155,620.00
19	12' Wide Riparian Trail - Asphalt	LF	160	\$	133.00	\$	21,280.00

<b>Sub-Total</b>	<b>\$</b>	<b>5,739,215.00</b>
<b>5% Mobilization</b>	<b>\$</b>	<b>286,960.75</b>
<b>5% Traffic Control</b>	<b>\$</b>	<b>286,960.75</b>
<b>25% Contingency</b>	<b>\$</b>	<b>1,434,803.75</b>
<b>10% Design</b>	<b>\$</b>	<b>774,794.03</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>8,522,734.28</b>

# B10. HERITAGE TRAIL



Above: Heritage Trail actively tells Kimmswick's story moving people around town and the riverfront.

## Project Description

The Heritage Trail is primarily incorporated into other trail and roadway projects. The phases within this project fill the caps. Bringing Kimmswick's history and the stories associated with famous findings, famous people, famous events, and local lore allow visitors to connect at a much deeper level. The stories themselves will be the reason some will return again and again. Additionally, the heritage trail is an activity moving people throughout Kimmswick and giving them a reason to linger. It'll broaden their understanding of Kimmswick. It's also a great way to introduce people to the Anheuser Estate, a place often overlooked or simply unknown.

RESPONSIBLE: CITY, CID, MA, HS  
 FUNDING: EWG, MDNR Outdoor Recreation, MDNR Recreational Trails, JC Parks, JCPA, ACE, MDC MRAP, MDC Discover Nature, MDC Urban

Cost Share  
 COORDINATE: A1.3, B1, B2, B4.2-3, B4.5, B8.1-2, B8.5, B11, B12  
 KICK-OFF: 2019



Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

## Implementation Strategy

Creating a Heritage Trail brochure is the most important phase. This needs to be done after Kimmswick completes a branding exercise as part of project B1. A visually stimulating and intuitive brochure needs printed and distributed to every business and institution in Kimmswick, as well as visitor centers and brochure racks in throughout the region.

The Heritage trail leg to the Mississippi River is the other miscellaneous outstanding project. Proposed for completion in Public Space Phase 2, MDNR Outdoor Recreation or Recreational Trail Program could support all elements in the plan.

### B10.1 - Heritage Trail Brochure

Brochures can be printed for as little as four to ten cents a piece. Care must be taken to ensure the brochures look professional with something eye-catching to help them stand out in a sea of other brochures.

Brochure Design ROM Cost: \$3,000-\$5,000

Printing ROM Cost: \$240-\$500 for a run of 5,000

## B10. HERITAGE TRAIL ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$241,000**

B10.2 - Kimmswick Port Market		Sub Total	\$	178,520.00
1	8' wide, 4" Concrete Sidewalk	SY	980	\$ 60.00 \$ 58,800.00
2	4" Type 5 Aggregate Base	SY	980	\$ 8.00 \$ 7,840.00
3	Concrete ADA Ramp (includes agg base)	EA	3	\$ 2,500.00 \$ 7,500.00
4	Class A Excavation	CY	50	\$ 12.00 \$ 600.00
5	Compacting Embankment	CY	330	\$ 10.00 \$ 3,300.00
6	Concrete Curb Type S	LF	1,150	\$ 30.00 \$ 34,500.00
7	1.25" Raceway (Trenched or Bored), #10 AWG	LF	1,100	\$ 22.00 \$ 24,200.00
8	Pavement Inlay	EA	8	\$ 500.00 \$ 4,000.00
9	Interpretive Signage	EA	2	\$ 3,000.00 \$ 6,000.00
10	Wayfinding Signage	EA	2	\$ 1,000.00 \$ 2,000.00
11	Monument Signage	EA	1	\$ 3,000.00 \$ 3,000.00
12	Bench	EA	4	\$ 2,000.00 \$ 8,000.00
13	Street Tree	EA	17	\$ 500.00 \$ 8,500.00
14	Sod	SY	330	\$ 16.00 \$ 5,280.00
15	Wooden Road Barrier Gate	LS	1	\$ 5,000.00 \$ 5,000.00

Sub-Total	\$	178,520.00
5% Mobilization	\$	8,926.00
5% SWPPP	\$	8,926.00
25% Contingency	\$	44,630.00
10% Design	\$	2,231.50
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>241,002.00</b>

### B10.2 - Kimmswick Port Market Street Heritage Trail

This leg connects Kimmswick to the Mississippi. The trail should tell the Mississippi's history - natural, political, economic, recreational, entertainment, hydrological, literary, and any other making sure Kimmswick's history and heritage are incorporated into the landing plaza, gateway and other features.

Phase ROM Cost: \$241,000

# B11. ROCK CREEK CONNECTION



Above: Developing a connection from Kimmswick to Rock Creek would generate new activity

## Project Description

The port development will make the Windsor Harbor Road entry into Kimmswick an activity center. The amphitheater, boardwalk trail and observation look out with the Windsor Harbor Bridge should bring more visitors to the Rock Creek waterfront. Developing a versatile, engaging space for programs and events could attract a broader demographic to Kimmswick and generate revenue. Incorporating interpretive art interacting with the water creates an attraction worth stopping your bike for lunch.

## Implementation Strategy

Building a pavilion makes the gravel area a place for picnic with a spot of shade. Adding a plaza and an observation deck creates a unique waterfront experience. The creek connection feature elevates the area to a favored destination. MDNR Outdoor Recreation grants could support any part of the project. MDC riparian habitat grants could establish a beautifully nourishing landscape. The MDNR Recreational Trails could help connect it all to Kimmswick. The project will likely need to be permitted through the COE.

### B11.1 - Pavilion

A 30 foot diameter pavilion is large enough for family reunions, small quartets or acoustic bands. Provisions for electric connection, install lighting, and water access amenities add value to renting the space.

Phase ROM Cost: \$149,820

### B11.2 - Rock Creek Observation Deck

Adding a pervious plaza formalizes the Pavilion and creates a red carpet onto the bridge. The project could be supported with MDC or MDNR best management practice grants.

Phase ROM Cost: \$132,820

### B11.3 - Rock Creek Observation Deck

A deck over water is nearly irresistible and a fantastic place for morning coffee. Footings and support should be flood rated. The rail is a perfect location to add Heritage Trail or interpretive signage. Elements interacting with Rock Creek should be considered.

Phase ROM Cost: \$250,800

### B11.4 - Rock Creek Connection Feature

Stepping the feature makes the landing functional at any water level and they could wrap around the pavilion creating an interesting effect as waters rise. Designed with backflow prevention, it could be a stormwater outlet feature with waterfalls

## B11. ROCK CREEK CONNECTION ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$966,946**

B11.1 - Market Pavilion			Sub Total	\$	90,800.00
1	Pavilion	LS	1	\$ 60,000.00	\$ 60,000.00
2	Plaza Pavement	SY	160	\$ 130.00	\$ 20,800.00
3	Footings	LS	1	\$ 10,000.00	\$ 10,000.00

B11.2 - Pervious Paver Plaza			Sub Total	\$	80,428.00
4	Plaza Pavement	SY	380	\$ 130.00	\$ 49,400.00
5	Concrete Trail Pavement (6" non-reinf)	SY	220	\$ 50.00	\$ 11,000.00
6	4" Type 5 Aggregate Base	SY	220	\$ 8.00	\$ 1,760.00
7	Compacting Subgrade	SY	867	\$ 4.00	\$ 3,468.00
8	Class A Excavation	CY	20	\$ 15.00	\$ 25.00
9	Compacting Embankment	CY	20	\$ 25.00	\$ 500.00
10	Boulder Wall	SF	150	\$ 75.00	\$ 11,250.00
11	Fence - Rail	LF	55	\$ 55.00	\$ 3,025.00

B11.3 - Rock Creek Observation Deck			Sub Total	\$	152,000.00
12	Overlook Decking and Supports	SF	585	\$ 200.00	\$ 117,000.00
13	Riprap	CY	200	\$ 125.00	\$ 25,000.00
14	Footings	LS	1	\$ 10,000.00	\$ 10,000.00

B11.4 - Rock Creek Connection			Sub Total	\$	256,825.00
15	Boulder Wall	SF	2,400	\$ 75.00	\$ 180,000.00
16	Stone Steps	EA	26	\$ 300.00	\$ 7,800.00
17	Landscape	LS	1	\$ 30,000.00	\$ 30,000.00
18	Class A Excavation	CY	15	\$ 400.00	\$ 25.00
19	Class C Excavation	CY	45	\$ 200.00	\$ 9,000.00
20	Compacting Embankment	CY	25	\$ 200.00	\$ 5,000.00
21	Interpretive Installation	EA	1	\$ 25,000.00	\$ 25,000.00

<b>Sub-Total</b>	<b>\$</b>	<b>586,028.00</b>
<b>15% Mobilization</b>	<b>\$</b>	<b>87,904.20</b>
<b>5% SWPPP</b>	<b>\$</b>	<b>29,301.40</b>
<b>30% Contingency</b>	<b>\$</b>	<b>175,808.40</b>
<b>10% Design</b>	<b>\$</b>	<b>87,904.20</b>
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>966,946.20</b>

and water propelled artistic elements. The landing should be blocked off during potentially hazardous conditions.

Phase ROM Cost: \$433,620

RESPONSIBLE: CITY, CID, MA  
FUNDING: ACE, JC DPW, JC Parks, MDC Riparian Habitat, MDNR Outdoor Recreation, MDNR Recreational Trails

PHASING: B11.1 Core Project  
B11.2-4 Icing on the Cake  
COORDINATE: A1.1, A7, B1, B2.5, B4.2, B8.7  
KICK-OFF: 2026



IMPROVES  
**ACCESS**  
TO RIVERFRONT



INCREASE  
**COMMERCE**



REGIONAL  
**ATTRACTION**



INCREASES  
**CONNECTION TO NATURE**

Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

## B12. NORTH ANHEUSER PARK



Above: A North Anheuser Park could create a needed link between Kimmswick and the Estate.

### Project Description

Park improvements are proposed as an opportunity to serve the public when private events are hosted on the south end. As facilities develop to support more private events, the north riverfront park will be more important. Already a great place to fish and picnic, a boat ramp and marina would provide under-served recreational river boats needed access. With remote parking close to downtown Kimmswick, this passive recreation park would bring more attention to this hidden gem.

**RESPONSIBLE:** AE, CITY

**FUNDING:** MDC Riparian Habitat, MDC River Access Assistance, MDNR Outdoor Recreation, MDNR Recreational Trails

**KICK-OFF:** 2026

### Implementation Strategy

Formalizing parking and developing river access are the most practical first steps. Remote parking so close to downtown will be appreciated as restricted commercial parking goes into effect. MDC Fisheries is very interested to work with communities to provide river access. Talking to MDC is the first step to determine feasibility. Partnering with MDC will support infrastructure development which funds can be leveraged toward MDNR Outdoor Recreation or Recreational Trails funding. These funds can go toward the pavilion, trails, or possibly a marina. The pavilion and marina are potential revenue streams and should be evaluated for those opportunities.

#### B12.1 - Rock Creek Parking

Improving the gravel parking with 50 more spots will provide commercial overflow relief. MDNR doesn't like funding parking lots, but the resources could be applied to a match for other recreational amenities.

Phase ROM Cost: \$64,893

#### B12.2 - Mississippi River Access & Parking

MDC hasn't expressed the amount of potential financial support for river access, but one rep indicated its very generous. One of only a few accesses in the area, this would be a reason to draw men and families to Kimmswick. It could even appeal to an outdoor sporting goods shop, a complementary business.

Phase ROM Cost: \$150,184

#### B12.3 - Picnic Pavilion

A large unique pavilion could activate the park every weekend. Provisions for electric connection, install lighting, and water access amenities add value to renting the space. A great place to stop before or after heading out on the river.

Phase ROM Cost: \$120,764

#### B12.4 - Anheuser Estate Trail

Developing a loop trail around the Estate is sure to be a popular route. The scenic riverfront, spacious Viewing deck and picturesque pastoral landscape can also serve as the Heritage Trail.

Phase ROM Cost: \$602,956

## B12. NORTH ANHEUSER PARK ROUGH ORDER OF MAGNITUDE OPINION OF COSTS

**\$938,797**

B12.1 - Rock Creek Parking			Sub Total	\$	48,792.00
1	Class A Excavation	CY	6	\$	72.00
2	Compacting Embankment	CY	10	\$	100.00
3	Chat path (Road) (8in thick) (includes 6" open graded b	TON	30	\$	2,100.00
4	Compacting Subgrade	SY	385	\$	770.00
5	Wooden Fence	LF	50	\$	2,750.00
6	Bench	EA	2	\$	7,000.00
7	Trash Receptacle	EA	1	\$	1,500.00
8	Street Tree	EA	6	\$	3,000.00
9	Boulders	EA	60	\$	30,000.00
10	Riparian Planting	AC	1	\$	1,500.00

B12.2 - Mississippi River Access			Sub Total	\$	112,920.00
11	Class A Excavation	CY	360	\$	4,320.00
12	Chat path (Road) (8in thick) (includes 6" open graded b	TON	180	\$	12,600.00
13	Compacting Subgrade	SY	4,000	\$	8,000.00
14	Class C Excavation	CY	100	\$	4,500.00
15	Compacting Embankment	CY	100	\$	2,500.00
16	Trash Receptacle	EA	1	\$	1,500.00
17	Street Tree	EA	12	\$	6,000.00
18	BMP Area	SY	1,800	\$	72,000.00
19	Riparian Planting	AC	1	\$	1,500.00

B12.3 - Anheuser Estate Trail			Sub Total	\$	453,350.00
20	10' Asphalt Trail to WHS	MI	0.65	\$	376,350.00
21	Bench	EA	8	\$	28,000.00
22	Trash Receptacle	EA	4	\$	6,000.00
23	Street Tree	EA	6	\$	3,000.00
24	Sod	SY	2,500	\$	40,000.00

B12.4 - Picnic Pavilion			Sub Total	\$	90,800.00
25	Pavilion	LS	1	\$	60,000.00
26	Plaza Pavement	SY	160	\$	20,800.00
27	Footings	LS	1	\$	10,000.00

#### B12.5 - Marina

When the City conducts a revenue analysis, a marina on the Estate should be evaluated. Requesting MDC Fisheries to provide an opinion of feasibility should be the first step.

<b>Sub-Total</b>	\$	<b>705,862.00</b>
<b>5% Mobilization</b>	\$	<b>35,293.10</b>
<b>3% SWPP</b>	\$	<b>21,175.86</b>
<b>25% Contingency</b>	\$	<b>176,465.50</b>
<b>Design 10%</b>	\$	<b>93,879.65</b>
<b>TOTAL Estimated Cost</b>	\$	<b>938,796.46</b>

Accomplishes  
**KIMMSWICK GOALS**

» Community Supported  
» Flood Protection  
» Maintain/Enhance Quality of Life

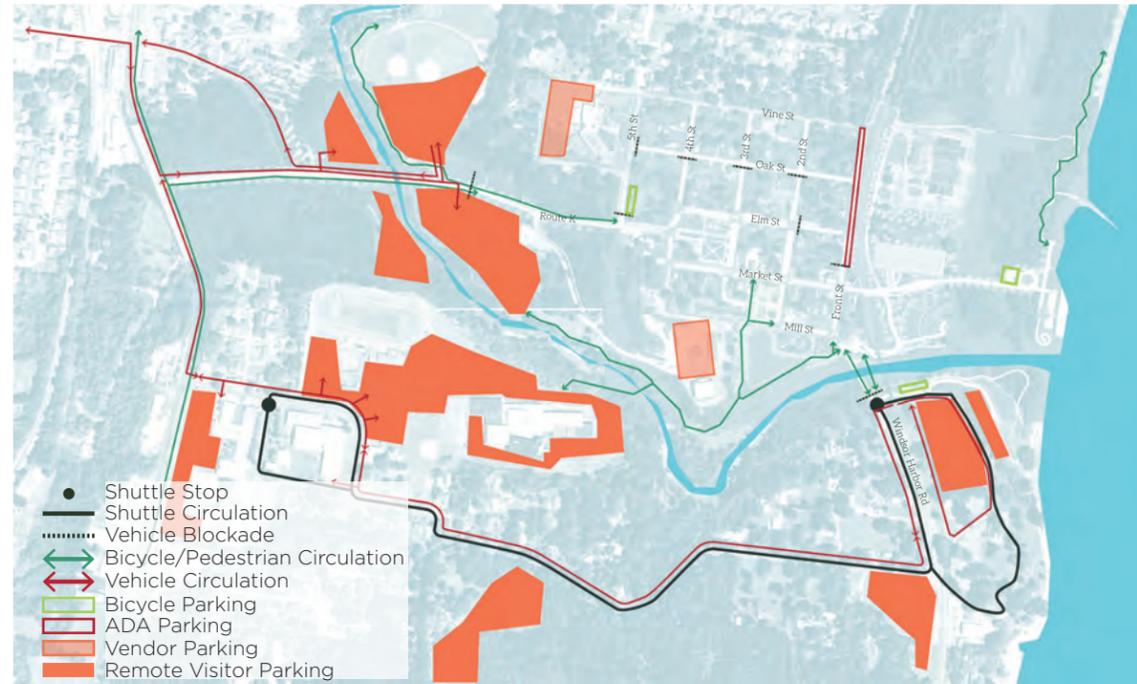
» Enhance Historic Character  
» Supports Economic/Management Model

**COUNTY GOALS**

» Support Kimmswick  
» Improve Riverfront Access  
» Regional Economic Growth

» Support Riverfront Re-development

# B13. PARKING AND CIRCULATION PLAN



Above: Festival Parking & Circulation Recommendations

## Project Description

As the port comes on line and events and programs grow, the City needs to have traffic circulation and parking plans in place supporting visitors while protecting residents. The plan should consider events and festivals, a shuttle feasibility study, new development parking guidance, and parking revenue potential. Recommendations for the best policies for enforcement should be included.

RESPONSIBLE: CITY, CID, MA, JCPA, AE

FUNDING: EWG CMAQ, EWG Section

5310

KICK-OFF: 2021

## Implementation Strategy

The City of Kimmswick in partnership with the Merchant's Association, CID, JCPA, and Anheuser Estate should hire a consultant to conduct a parking and circulation study. The study should take place following hiring the Economic Development Coordinator.

The study should be vetted with residents and merchants with the final plan being adopted by the City, CID and JCPA.

## Festival Parking & Circulation Plan

Planning for festivals will need to work with the Economic Development Coordinator to consider the range of event opportunities in different locations. Plans should include traffic impacts, enforcement, road closures, emergency access and secondary evacuation routes, Remote parking and circulation alternative should also be evaluated. It should plan for increases in large festival attendance, consider bike valets, bike corrals, and remote bike accessible parking as well as various shuttle alternative. Parking incentives and potential revenue should also be involved. Small events need to have equitability at the forefront to support both primary and secondary commercial areas.

## Shuttle Circulator

The study should have a shuttle circulator feasibility component. It should help determine where and how the shuttle would run from remote parking being detrimental to pedestrians, bicycles, and vehicular transportation modes. Different event sizes and common weekend and elderly service need to be covered.

There are potential planning funds available for transportation services serving elderly populations. Kimmswick is a unique place with a small population; however, hundreds if not thousands of elderly visitors come to Kimmswick regularly.

## Parking & Future development

The community has a nebulous idea parking is a problem. Historic data and live counts should be conducted to develop a clearer understanding. These numbers will provide the basis for future projections for the varying potential events and locations discussed with the Economic Development Coordinator. Guidance for parking associated with future development should be included as well as stormwater mitigation practices.

Estimated Fee: \$25,000 - \$50,000



IMPROVES  
RESIDENTIAL -  
COMMERCIAL  
RELATIONS



INCREASE  
COMMERCE

Accomplishes  
KIMMSWICK GOALS

- » Community Supported
- » Maintain/Enhance Quality of Life

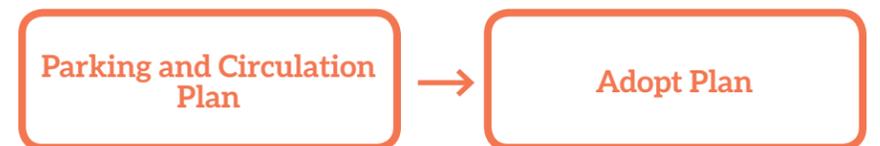
- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

COUNTY GOALS

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

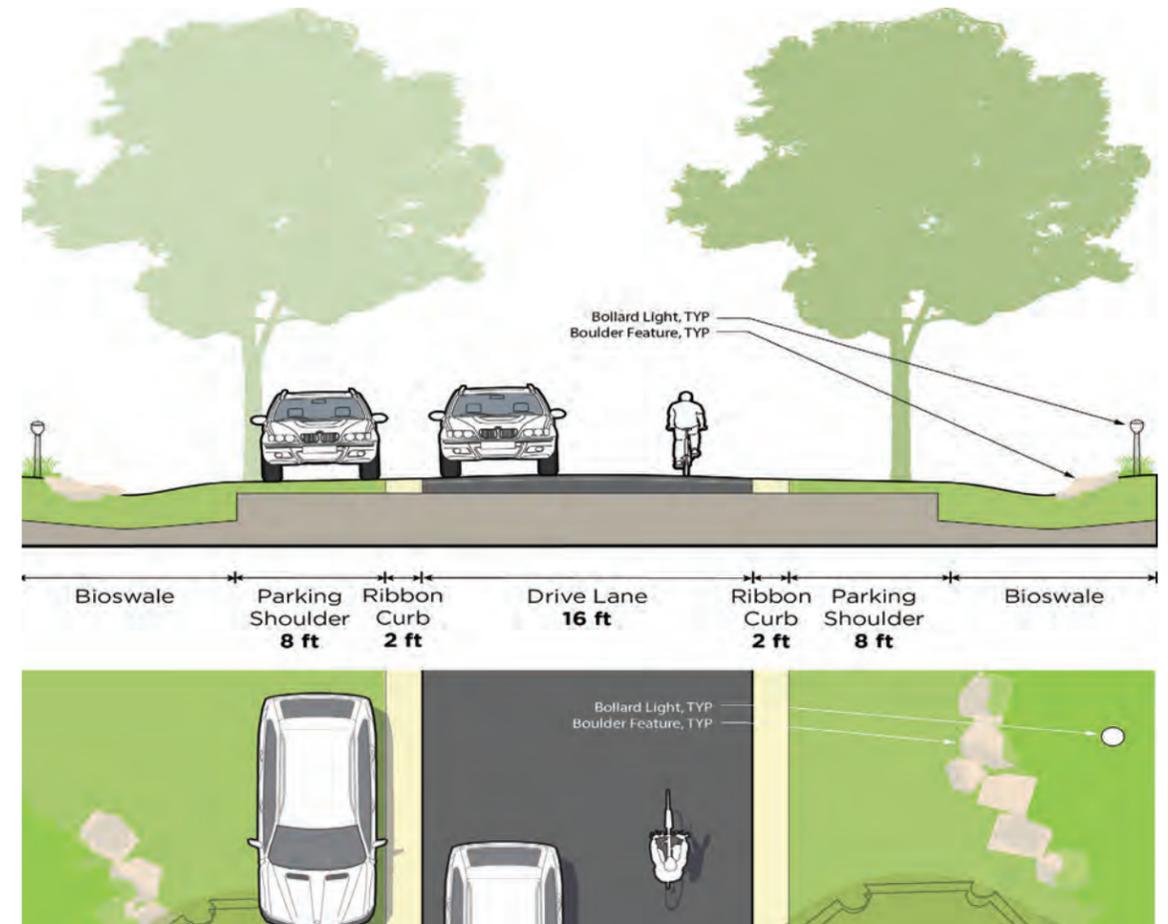
## PHASING PLAN



## B14. RESIDENTIAL IMPROVEMENTS



Above: Installing green stormwater infrastructure as an amenity will provide function & character.



Above: Typical Residential Street Section

### Project Description

The sum total of residential improvement will transform Kimmswick's neighborhoods. Defined streets bordered with enhanced naturalized swales recall romantic streams. Upgraded historic style street lights at intersection accentuated with rhythmic bollard foot lighting will make every visitor envy attracting dog-walkers from all over the region.

RESPONSIBLE: CITY  
COORDINATE: B2.X  
KICK-OFF: 2021

### Implementation Strategy

Kimmswick should conduct a pavement audit to determine roadway conditions. make repairs to the most stretch in the worst condition. Swales in A6 and lighting in B2 could be bundled into one project.

#### B14.1 - Roadway & Parking Curbs Throughout

Each project will bring more consistency to the roadways. The roads look like narrow eight foot lanes, but function as ten with the two foot ribbon curb. Curbing create crisp straight edges, a necessary juxtaposition to

the adjacent naturalized swales. An eight foot lawn shoulder is ample for on-street parking but gives the appearance parking is only welcome to friends. Reducing all asphalt roadways to 16 feet will slow traffic and reduce maintenance. This consistent width decreases impervious area. The streets will look and feel like a wide path for people not cars. Treating the streets like walks sets the president and priority. Not including walks throughout Kimmswick doesn't add impervious area. Between the swales and roadway improvements, peak

## B14. RESIDENTIAL STREET IMPROVEMENTS ROUGH ORDER OF MAGNITUDE OPINION OF COSTS PER BLOCK LENGTH

**\$138,848**

B14.2 - Roadway & Parking Curbs				Sub Total	\$	93,500.00
1	Sawcut	LF	1,000	\$	8.00	\$ 8,000.00
2	Cold Mill (for cross slope trans)	SY	1,000	\$	5.00	\$ 5,000.00
3	Bituminous Pavement Mix PG64-22 BP-1 (3")	TON	500	\$	80.00	\$ 40,000.00
4	Tack Coat (0.10 GAL/SY)	GAL	100	\$	5.00	\$ 500.00
5	Mountable Curb and Gutter	LF	1,000	\$	40.00	\$ 40,000.00

Sub-Total	\$	93,500.00
5% Mobilization	\$	4,675.00
5% Traffic Control	\$	4,675.00
25% Contingency	\$	23,375.00
10% Design	\$	12,622.50
<b>TOTAL Estimated Cost</b>	<b>\$</b>	<b>138,847.50</b>



Accomplishes  
**KIMMSWICK GOALS**

- » Community Supported
- » Flood Protection
- » Maintain/Enhance Quality of Life

- » Enhance Historic Character
- » Supports Economic/Management Model
- » Leverage Kimmswick Port

**COUNTY GOALS**

- » Support Kimmswick
- » Improve Riverfront Access
- » Regional Economic Growth

- » Support Riverfront Re-development
- » Emergency Services on Mississippi

