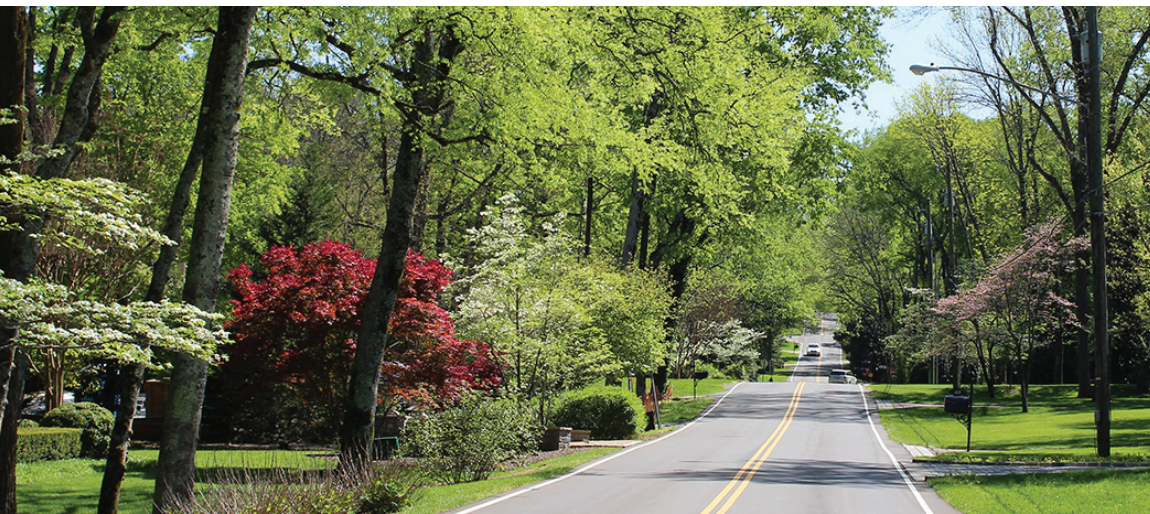
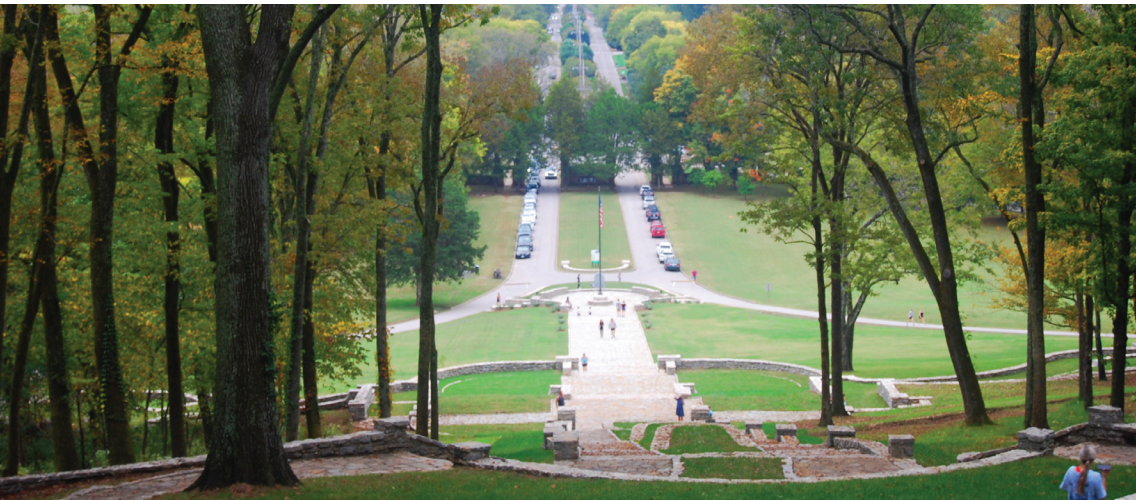


MASTER PLAN FINAL REPORT

BELLE
MEADE
TOGETHER



OCTOBER 2021

ACKNOWLEDGEMENTS

The Belle Meade Together project team thanks the diverse group of participants whose input was instrumental in creating a blueprint for the future of our beautiful city. We extend our sincere appreciation to the elected officials, residents, stakeholders, and local staff who participated in the planning process and guided the development of this plan. Everyone's time, input, and energy are greatly appreciated.

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Adopted by the Board
of Commissioners -
October 20, 2021

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HISTORY AND CONTEXT



The City of Belle Meade is a thoughtfully curated and distinct residential community located in the Nashville metropolitan area and comprises approximately 3.1 square miles of land area in Davidson County Tennessee. The City's history began in 1807, when John Harding purchased a 250-acre tract of land seven miles from Nashville and began developing a farm which he named Belle Meade.

BELLE MEADE

THE BEAUTIFUL CITY IN A MEADOW

Belle Meade- French for “beautiful meadow”- is a description that has become a legacy, transcending time, and the fast-paced, modernized growth of Nashville outside of the City’s borders. Residents are drawn to the community for its historic and elegant character set against the backdrop of a natural landscape. Generations of families continue to call Belle Meade home because of that character.



Belle Meade Historic Site

Mr. Harding constructed an elegant estate at Belle Meade and raised world-famous stallions drawing international attention. Belle Meade’s history and legacy can be tangibly seen in the Historic Belle Meade Site and reflected in the homes, houses of worship, verdant spaces, and other elements that preserve its pastoral character.

BELLE MEADE TODAY

Approximately 2,280 people called Belle Meade home in 2019, according to the United States Census Bureau. To these residents, Belle Meade represents architecturally distinct homes and lush park-like landscape, an atmosphere that pays homage to its historic roots. By design, Belle Meade has a distinct character and identity, which often stands in stark contrast to the bustling Nashville metropolitan area.

Nashville’s emergence as the “It” city over the last decade has placed unprecedented pressure on Belle Meade. The



Belle Meade Boulevard

History and Context

last several years have seen many of the City's traditional homes be torn down and replaced by new homes with clear architectural dissonance with the underlying design pattern. This issue was addressed in 2019 with the creation of a Historical Zoning Commission which adopted conservation-oriented design guidelines.

Now the City has turned its attention to another looming challenge: Nashville's booming growth, coupled with Belle Meade's strategic location relative to many of the region's important corridors, such as Harding Pike and Harding Place, have threatened to turn Belle Meade into a "cut-through community." While the City and surrounding areas benefit from connectivity between one another, the resulting disproportionately high traffic volume and excessive vehicular speeds are an unwanted side effect.

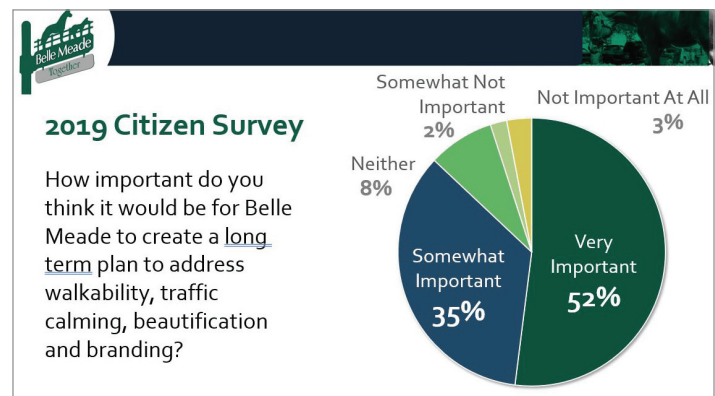
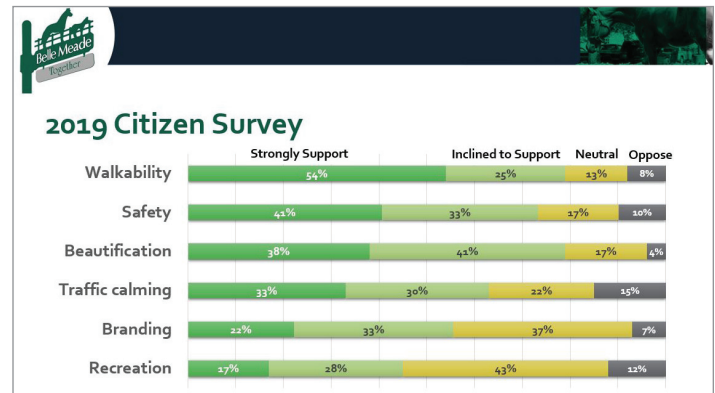
WHAT DO RESIDENTS WANT?

Residents emphasize the need for walking and cycling infrastructure that connects them to goods, services, alternate transportation facilities, as well as their neighbors. Residents also desire traffic calming measures that encourage appropriate motor vehicle speeds and improve safety, and beautification efforts that promote Belle Meade's brand of beauty. These desires are evident in the results of a resident survey conducted in 2019 by the City.

The survey received over 750 responses, representing approximately half of the total households. A majority of the respondents indicated that the development of a long-term plan for walking, traffic calming, beautification and branding are "very important" – the remaining respondents indicated that a plan of this nature was "somewhat important." The 2019 survey response emphasized the importance of a master plan that can be used as a guiding document through Belle Meade's evolution for decades to come.

PROTECT, PRESERVE, ENHANCE

Residents have expressed interest in walking and cycling, beautification, stormwater management, traffic calming and management, and public spaces. Modern infrastructure

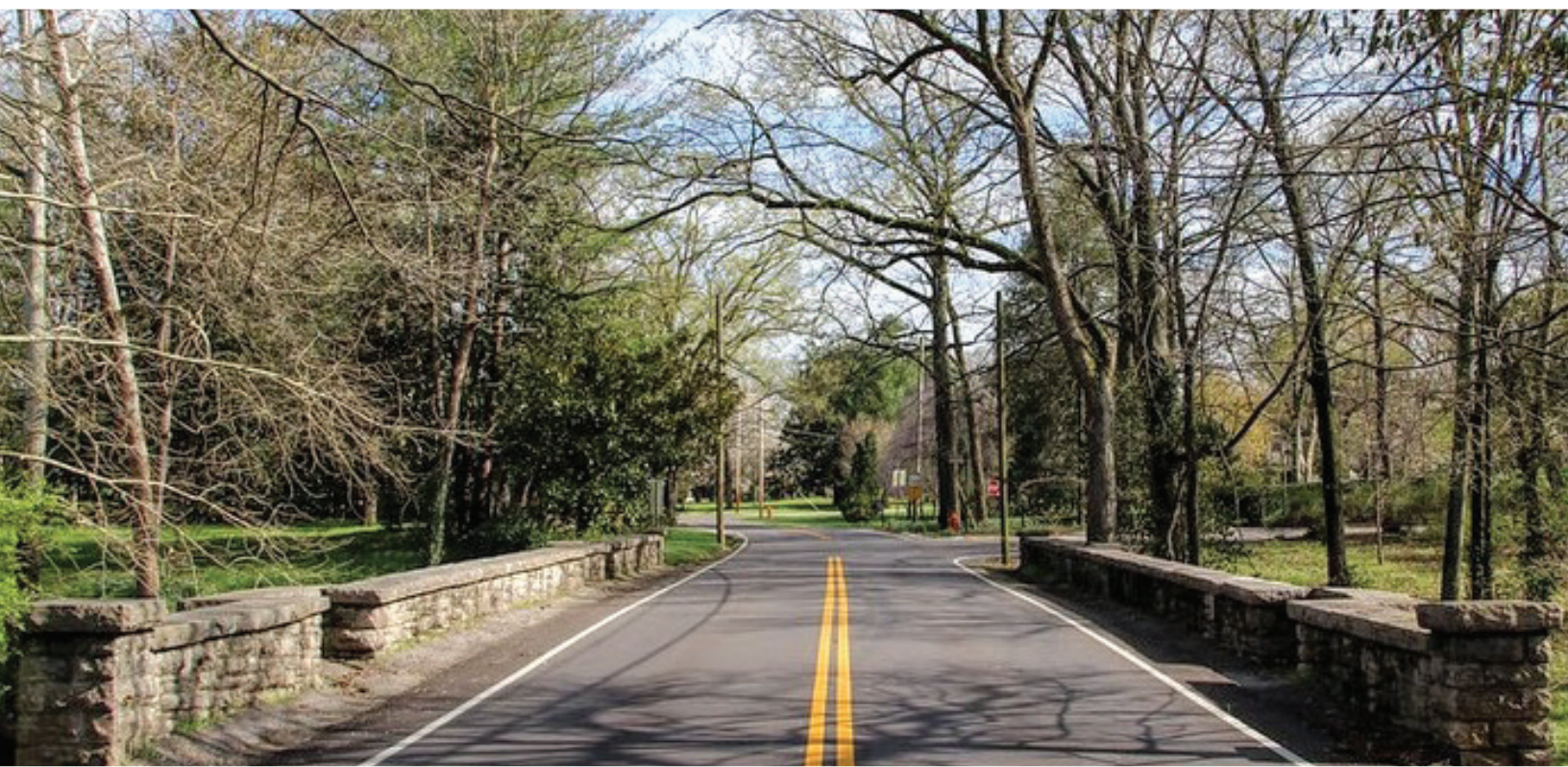


improvements to achieve these goals typically emphasize the use of hardscape and have a heavily "engineered" character and aesthetic. In contrast, the satisfaction survey of 2019 provided directive from residents that the distinctive natural character of Belle Meade be maintained as improvements are made. Belle Meade Together, the City's first master plan, prioritizes understated design solutions that work with Belle Meade's natural landscape, not against it.

The Plan relies heavily on resident feedback, an engaged Steering Committee of passionate, resident-representatives and expertise in the relevant disciplines. Belle Meade Together, in turn, both recommends desired enhancements while preserving the City's historic legacy and associated character.



DESIGN APPROACH AND PHILOSOPHY



The *Belle Meade Together* design approach and philosophy are the result of extensive dialogue with the community. The guiding principles that embody this approach and philosophy inform the various strategies and are applied in the plan recommendations. These principles will continue to guide the City as it implements Belle Meade Together.

DESIGN APPROACH AND PHILOSOPHY

LESS IS MORE

The City of Belle Meade has a unique and distinct history and character. Belle Meade Together will honor the City's legacy through strategies and solutions that cultivate an aesthetically pleasing public realm and complement the beauty and quality of its neighborhoods. This will be

achieved through understated design treatments that aspire to blend seamlessly with the surrounding landscape. Strategies will make minimal use of hardscaping and avoid hard-edged elements that result in an "engineered" look and feel.



Traffic Calming Median and beautification inspiration on Lynwood Boulevard

STREETS AS PLACES

Belle Meade's streets can and should be much more than conduits for moving motor vehicles as quickly and efficiently as possible. In many cases, streets are the bridge between the public and private realms where people interact with each other and the surrounding environment. In this respect, street design should be as much about creating places for people as about moving vehicles.

SPEED IS FUNDAMENTAL

Speed is, by far, the most important factor that determines the look and feel of a street and whether people feel safe walking and cycling. Target speed is a conceptual approach to street design that identifies the highest speed at which vehicles should operate on a given street.

Belle Meade Together uses target speed to determine the application of many street design strategies, such as lane width, and, in turn, uses those strategies as tools to achieve the desired target speed. The map in **Figure 1** identifies target speeds for Belle Meade's streets.

In February 2021 Metro Nashville reduced speed limits on neighborhood classified streets in the Urban Services District (USD) to 25 mph. While this change does not apply to Belle Meade, in the General Services District (GSD), it does provide the opportunity for speed limit coordination on connecting streets.

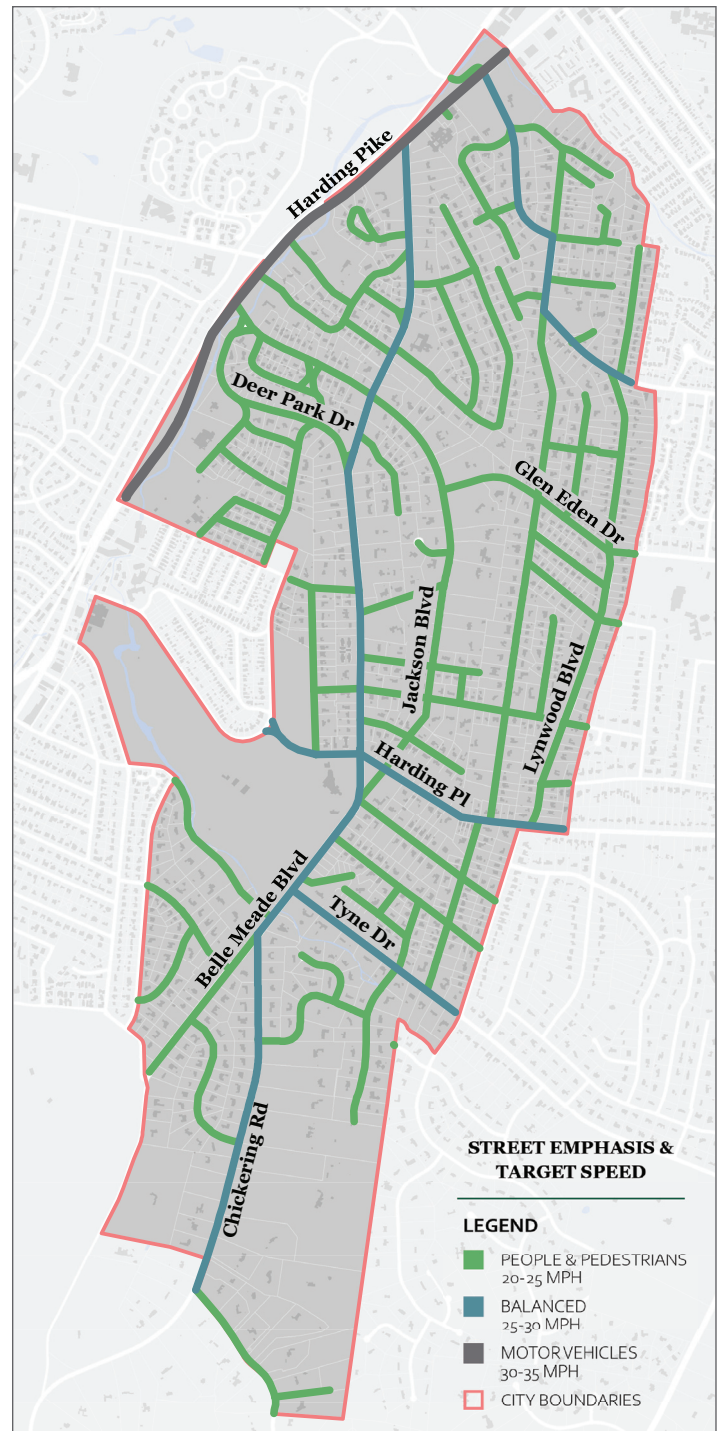
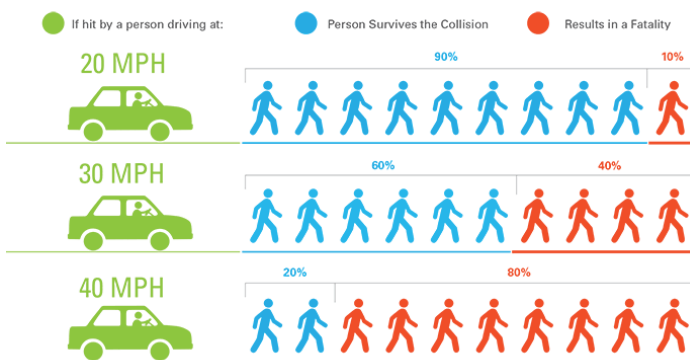


Figure 1. Street Emphasis and Target Speed



The research is clear, speed is the number one factor that determines the safety of a street. Target speed as a tool for creating people friendly streets in Belle Meade.

(image source: San Francisco MTA Vision Zero Action Plan)





KEY FEATURES:

1. Monument signage provides an understated gateway into the city and introduces the Belle Meade brand.
2. Slower traffic makes the street more comfortable for pedestrians and cyclists.

Contextual illustration of the guiding principles in practice that can be used on multiple streets throughout the City. For continued discussion purposes.

INTEGRATIVE AND CREATIVE

Belle Meade Together provides strategies to calm and manage traffic, create safe opportunities for walking and cycling, beautify and distinguish, celebrate public spaces, and manage stormwater runoff. Belle Meade Together intentionally seeks opportunities for creative solutions that integrate more than one strategy to achieve multiple objectives. For example, a median island can signify a gateway to the city, encourage appropriate motor vehicle

speeds, provide a safe crossing location for pedestrians and incorporate stormwater drainage, all in a single application.

ELEGANT SOLUTIONS

The principles described above will collectively yield elegant solutions fitting of an elegant city. The images of the example street shown above provide a contextual illustration of the guiding principles in practice. The intent is for the strategies described in this toolkit to be applied similarly across the entire city.



KEY FEATURES:

1. Chicanes create horizontal shifts that requires vehicles approach slowly and provide opportunities for landscaping and drainage.
2. Permeable paver crosswalks provide a clearly marked space for pedestrians, establish a gateway and provide drainage.
3. Native landscaping with bioswales for drainage.
4. Minimal use of curbing with materials that are consistent with the City's brand.

Contextual illustration of the guiding principles in practice that can be used on multiple streets throughout the City. For continued discussion purposes.

It is worth noting that the illustrations shown are conceptual in nature and continued discussion with residents and City staff will drive the ultimate chosen design solutions.

THE PLAN



Belle Meade Together provides a unique opportunity to tie all elements together into a single vision and plan. More than 40 specific recommendations will preserve, protect and enhance Belle Meade for generations to come.

THE PLAN

The Belle Meade Together Plan is a milestone document that will help guide the evolution of Belle Meade over the next several decades. The plan articulates the desires of residents through a series of complementary strategies that are encompassed by five elements:

- Creating Safe Places for People: Walking, Cycling and Public Spaces
- Calming and Managing Traffic
- Representing Belle Meade's Brand
- Managing Stormwater
- Belle Meade Boulevard and Lynwood Boulevard/Harding Place Focus Areas

The following sections describe each element and associated recommendations within the City. More detail can be found in the Strategy Toolkit, located in Appendix A. The strategies described in these elements are intended

to be conceptual and suggestive in nature. The ultimate selection and application of specific strategies in Belle Meade is subject to more detailed design and analysis as part of the project development process.



Channelizing Median with Landscaping



Jackson Boulevard



Front Entrance to Former Parmer School



Belle Meade Signage



St. George's Episcopal Church



Belle Meade stallion statue

SAFE PLACES FOR PEOPLE: WALKING, CYCLING AND PUBLIC SPACES

Belle Meade is a primarily residential city. Residents frequently visit their neighbors, children ride their bicycles, and families walk their dogs on Belle Meade streets. Throughout the city, these streets provide a link between the public and private realms where people interact with each other and the surrounding environment. As such, the streets should provide a safe and comfortable route for residents to travel. The design team and the City staff recognize the importance of designing streets that create a safe place for moving people as much as moving vehicles.

Belle Meade Together emphasizes design elements that encourage low-speed, low-traffic streets and provide a safe and comfortable place for residents to walk and bike, eliminating the need to install sidewalks that add hardscape and detract from the natural character and aesthetic. However, the prevailing characteristics of some streets necessitate the use of dedicated pedestrian facilities.

Figure 2 provides recommendations for walking cycling and public spaces. Highlights include:

- A continuous “network” of sidewalks and/or trails on Belle Meade Boulevard, Harding Place, Lynwood Boulevard and Harding Pike that enables residents to walk throughout the city.
- A sidewalk connection to the existing sidewalk on Harding Pike that will allow residents to safely walk to shopping, restaurants and other activities.
- Other key connectors, such as Leake Avenue, Tyne Drive and Brookfield Avenue that will connect residents to the larger network and places such as Parmer Park, the Historic Site, Percy Warner Park and the Harding Pike commercial corridor.
- Treatments that provide safe and visible crossing opportunities at busy intersections and midblock locations.
- The integration of public spaces, including proposed pocket parks, Belle Meade Boulevard and Parmer Park, for residents to interact and enjoy Belle Meade as they walk.



Harding Place



Deer Park Circle



WALKING, CYCLING, AND PUBLIC SPACE

LEGEND

-  CROSSING AND SAFETY ENHANCEMENTS
-  PROPOSED POCKET PARK OR PUBLIC SPACE
-  SPECIAL CONSIDERATION
-  PROPOSED SIDEWALK OR SIDEPATH
-  EXISTING SIDEWALKS
-  SPECIAL CONSIDERATION

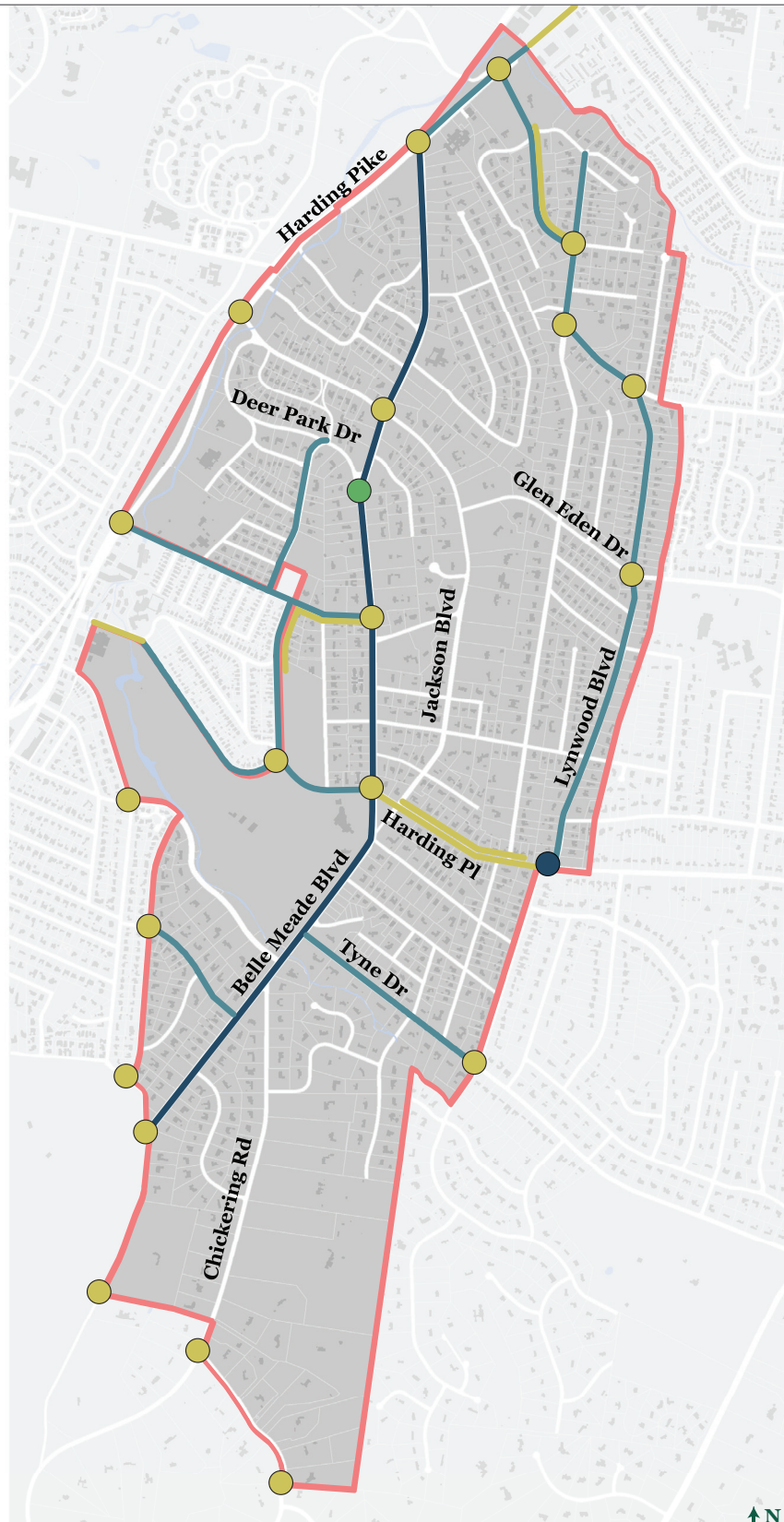


Figure 2. Walking, Cycling and Public Spaces Recommendations



SECURITY CAMERA PROGRAM

The most impactful advancement in law enforcement for the City of Belle Meade was the 2018 installation of security cameras. The camera system includes three different types of cameras: 1) **License Plate Reader (LPR)** captures vehicle tag information in high volume traffic 2) **License Plate Camera (LPC)** captures vehicle tag information in low volume traffic and 3) **Video Cameras** provide continuous video feed of specific areas. The system is controlled by a software program purchased and supported by SkyCop, a video and audio surveillance firm specializing in municipal and public security. The video is streamed to central locations, Dispatch and Patrol Vehicles, using Verizon Wireless “hotspots”. In one camera location, radio connectivity is used. The cameras are installed on NES poles with electric connectivity provided by NES.

The initial installation included priority locations to provide coverage in key areas of Belle Meade. Due to improved technology providing sharp and exact imaging, as well as the broad acceptance and success of the security camera system, the City now has the opportunity to improve and expand the system. Simply—more stolen cars were recovered in one month by the Police Department than in the past twenty years due to security cameras. Also note the advancement of video imaging now possible:



Before Upgrade

After Upgrade

The City of Belle Meade Budget now includes a line item dedicated to the expansion and upgrade of the security system on an annual basis and should be evaluated every year in close collaboration with the City Manager, City Investigator, and the Chief of Police. The Security Camera Program is a foundation to the City’s goal to protect, preserve, prepare and enhance the identity of Belle Meade.

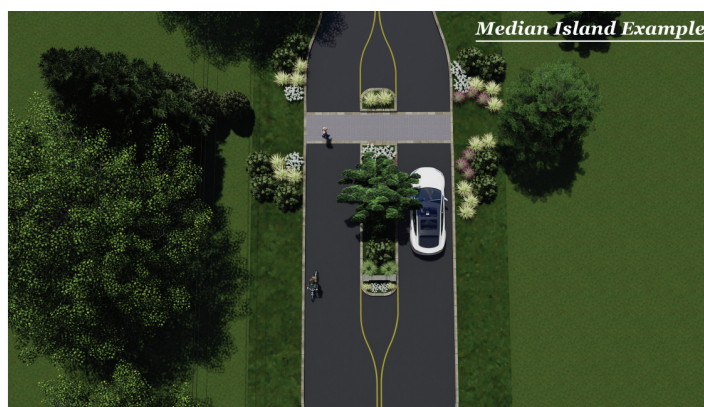
TRAFFIC CALMING AND MANAGEMENT

Inherent to safe pedestrian use of Belle Meade's streets is the incorporation of traffic calming and management strategies for motor vehicles. Nashville's exponential growth translates into increased traffic on Belle Meade's primarily residential streets, often at prevailing speeds that result in uncomfortable and unsafe environments for pedestrians and cyclists.

Belle Meade Together recommends solutions to traffic management that discourage regional motor vehicle traffic on residential streets and encourage appropriate speeds consistent with the established target speed. Traffic calming and management strategies include:

- The installation of medians, islands and chicanes at midblock locations and curb extensions, bulbouts, and intersection improvements in locations such as Lynwood Boulevard, Westview Avenue and Jackson Boulevard that encourage appropriate motor vehicle speeds in a subtle and aesthetic way by introducing horizontal deflection, terminating vistas and reduced traveled way width.
- Gateway treatments such as signage, landscaping, medians and branding elements at entryways into Belle Meade, including Tyne Drive, Jackson Boulevard and Lynwood Boulevard that clearly signal to motorists they are entering Belle Meade.
- Operational improvements at high speed and high traffic intersections such as Jackson Boulevard and Belle Meade Boulevard and Lynwood Boulevard and Westview Avenue. These include mini roundabouts, curb extensions and improved signage to improve safety, encourage appropriate motor vehicle speeds and provide aesthetic enhancement.

Traffic calming and management strategies are highlighted in **Figure 3**.



Contextual illustration of the guiding principles in practice that can be used on multiple streets throughout the City. For continued discussion purposes.

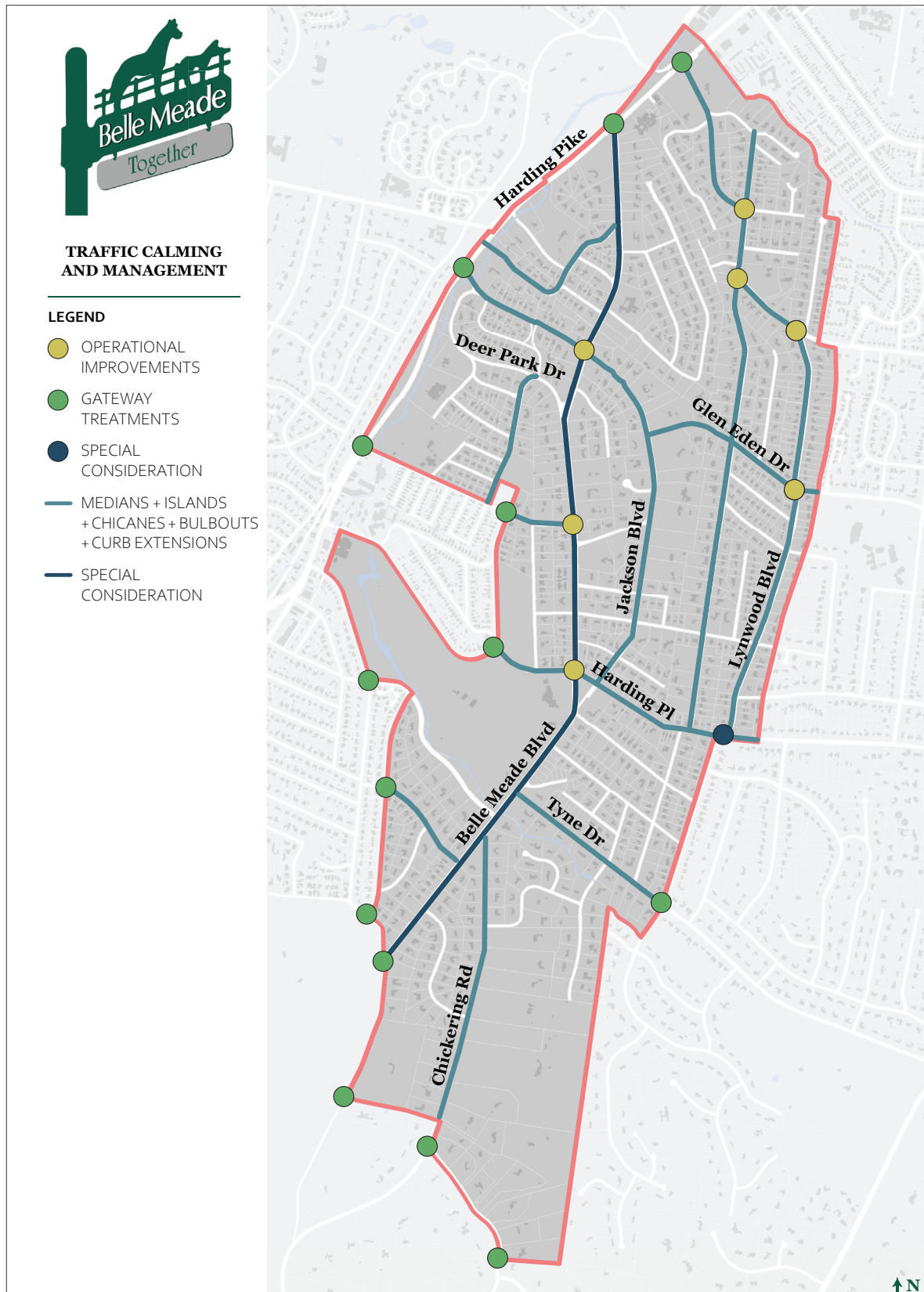


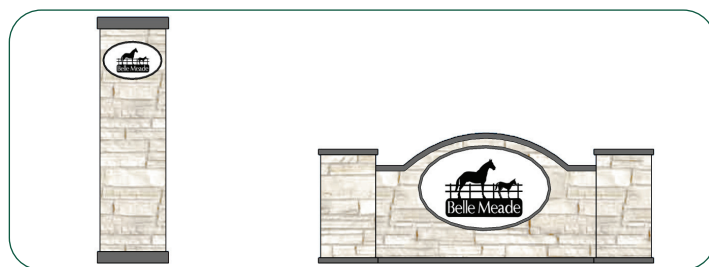
Figure 3. Traffic Calming and Management Strategies

REPRESENTING BELLE MEADE'S BRAND

When people enter the City limits, they should immediately be made aware that they are in a different, distinct and beautiful place. This can be accomplished by incorporating consistent signage and landscaping elements throughout the city, especially at main “gateway” entrances to Belle Meade. The placement of chicanes, bulbouts, medians and islands create additional opportunities for landscape enhancements throughout the city. Opportunities for branding and beautification are shown in **Figure 5**.

Belle Meade Together coordinated closely with the Ceres Society, a resident volunteer committee for the beautification of Belle Meade, on a list of recommended plantings for native species that best represent Belle Meade’s character. The planting list is located in the Appendix B.

Additionally, a branding guide was developed for the City based on City staff and Steering Committee input. The guide will be an aid during the design process to ensure design



Monument signage

decisions align with Belle Meade’s character and brand. This guide is located in Appendix C

Signage in Belle Meade is used for vehicular and pedestrian wayfinding, traffic control, as a gateway and to inform. Regardless of purpose, the City’s signage must convey the Belle Meade brand and reflect the design approach of understated design treatments that blend seamlessly with the surrounding landscape.

The sign family in **Figure 4** includes specific provisions for motor vehicles and pedestrians as well as signage for general information and branding: both using more understated metallic material and more elaborate stone monument column signs.

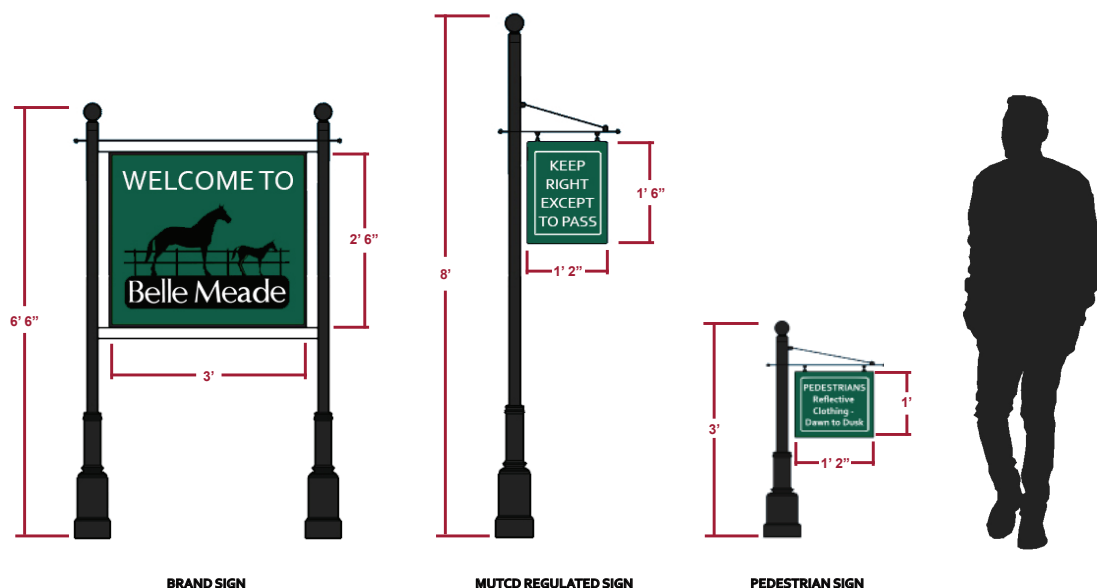


Figure 4. Belle Meade Sign Family



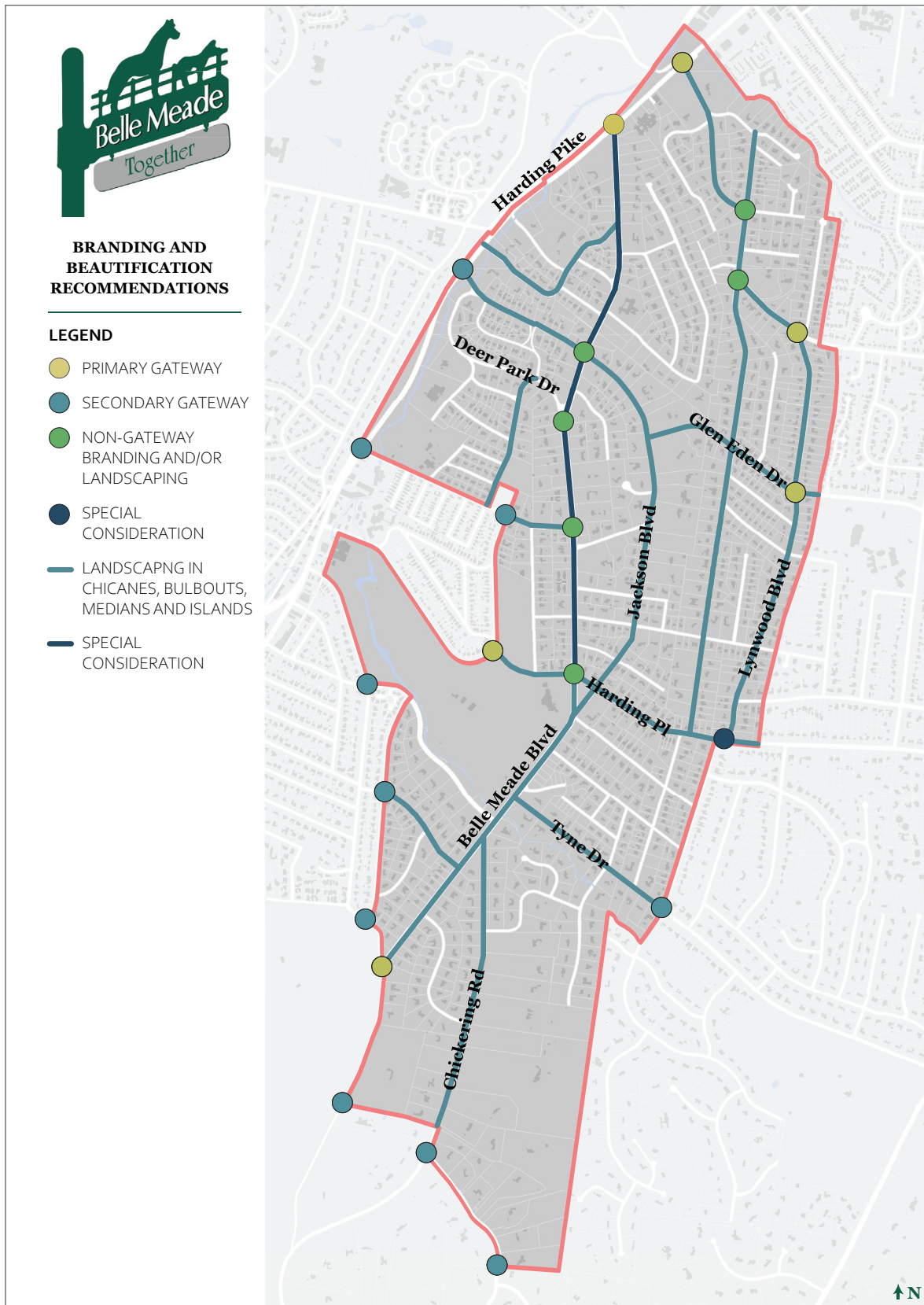


Figure 5. Opportunities for Branding and Beautification



Bioswale



Flow through Planter

MANAGING STORMWATER

Managing stormwater runoff is a fundamental tenet of successful cities. Stormwater management includes strategies to reduce runoff produced by rain or snow in streets and lawns to improve water quality. Additionally, stormwater management includes the effort of providing adequate capacity for runoff through conveyance systems, such as pipes, natural channels, and culverts, storm inlets, curbs and gutters, as well as numerous other infrastructure options. Controlling runoff reduces flooding, which improves the safety of the community and protects the built environment. Like many locations in Middle Tennessee, there are areas in Belle Meade that flood often and require stormwater management improvements. Stormwater solutions such as bioswales, flow-through planters, and pervious pavement are recommended for these areas to complement the city’s brand



Pervious Strip

of understated design and avoid elements that result in an “engineered” look and feel. They provide aesthetically pleasing improvements that complement the City’s branding goals, and they have the added benefit of increasing resiliency within the City by increasing the capacity of existing stormwater infrastructure since runoff to this existing infrastructure will be reduced. Since external conditions are constantly changing, City staff will evaluate stormwater conditions throughout the City annually.

Figure 6 identifies stormwater management strategies in Belle Meade. The Strategy Toolkit in Appendix A provides additional information about each solution. Appendix D provides a list of additional areas the City of Belle Meade has identified as focus areas for stormwater management.

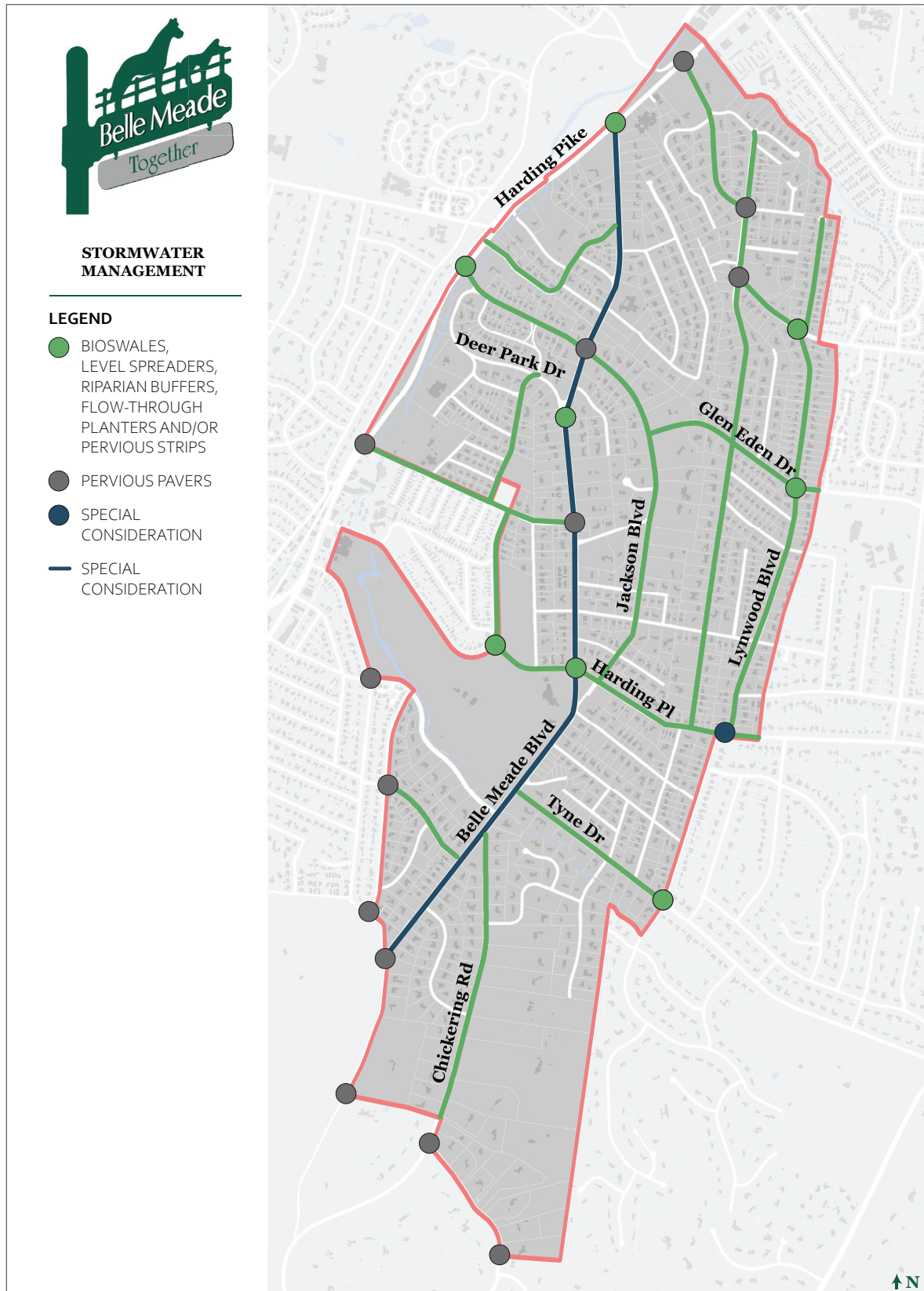


Figure 6. Stormwater Management Strategies

FOCUS AREAS

There are two specific areas within the city that have received special consideration for Belle Meade Together. These Focus Areas are prominent features of the city and have a more complex dynamic and context. The Belle Meade Boulevard and Lynwood Boulevard and Harding Place Intersection Focus Areas are described below.

BELLE MEADE BOULEVARD

Belle Meade Boulevard is the City's signature street, featured prominently by two travel lanes in each direction, a wide landscaped median and the iconic Belle Meade sign and sculptures. Envisioned by Colonel Luke Lea of the Belle Meade Company, the Boulevard was designed to connect newly created neighborhoods to downtown Nashville not just by car, but by a streetcar line along the center of the median.

Although the streetcar line has been replaced by a grassy median, trees and other landscaping elements, its status as the main thoroughfare remains. Residents have expressed a desire to return Belle Meade Boulevard back to its multimodal roots through the creation of dedicated places for people. Working closely with the Steering Committee, Ceres Society, and other stakeholders, Belle Meade Together has developed proposed design concepts that balance the desire to create safe spaces for people on the Boulevard with the need to maintain its aesthetic as the City's signature street.

A handful of design concepts have been proposed for Belle Meade Boulevard, each with their own advantages and disadvantages, all of which are shown in **Figure 7** below:

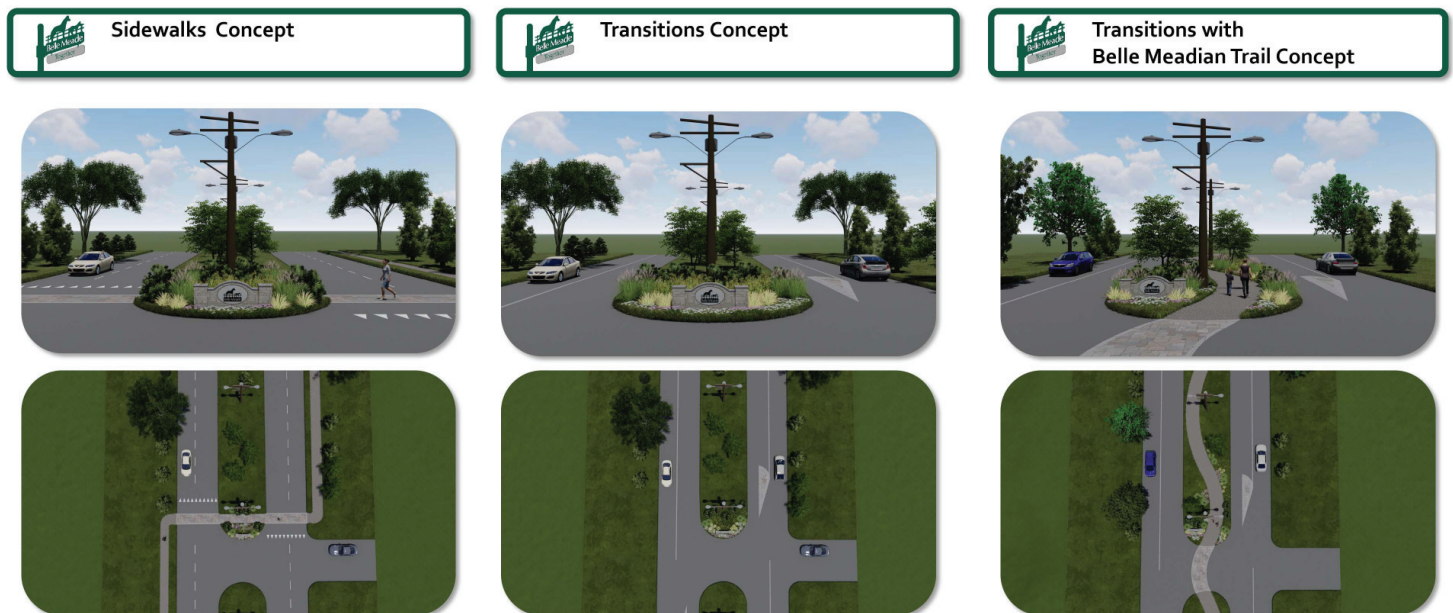


Figure 7- Belle Meade Boulevard Concepts. Conceptual in nature. For continued discussion purposes.

Sidewalks Concept

This concept envisions a six to eight foot sidewalk that alternates to either side of the Boulevard depending on the availability of right-of-way. Stone or brick marked crosswalks through the median delineate locations where the sidewalk transitions from one side of the street to the other.

This concept provides a safe, dedicated facility for walking along the Boulevard that is easily accessible from the roadside. However, the alternating sides could require multiple crossings and the sidewalk will likely conflict with roadside objects and detract from its character. The sidewalks concept is illustrated in **Figure 8**.

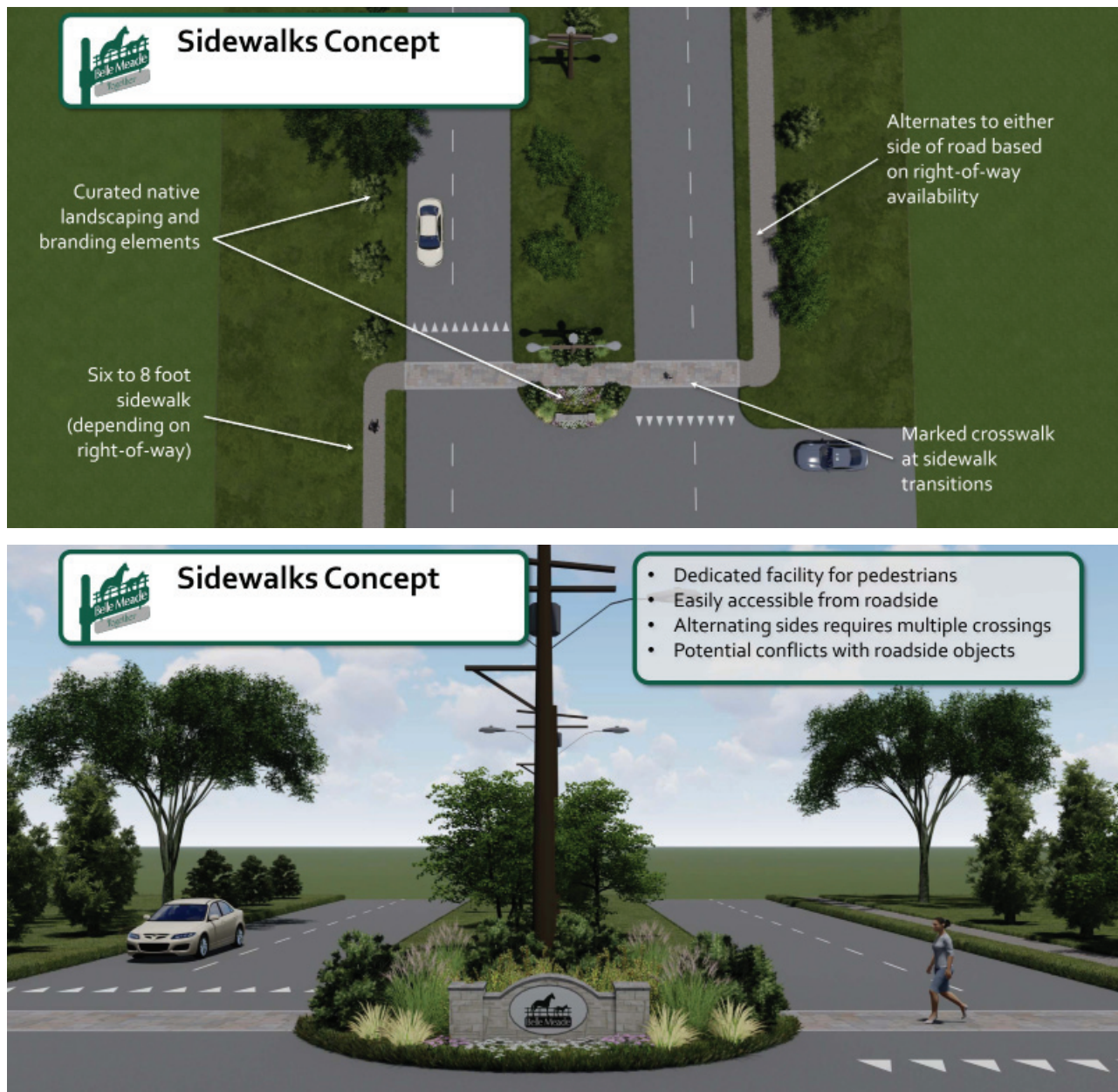


Figure 8. Sidewalk Concepts. Conceptual in nature. For continued discussion purposes.

Transitions Concept

The transitions concept seeks to reinforce the intended use of the inside lane by placing raised, mountable diverters that “transition” through-moving vehicles from the inside lane. The diverters will be placed at strategic locations, enabling turn movements but prohibiting through movement.

In addition to reinforcing the use of the inside lane for turn movements only, the transitions will have a traffic calming effect. However, this concept still lacks a formally designated space for people. The transitions concept is illustrated in **Figure 9**.

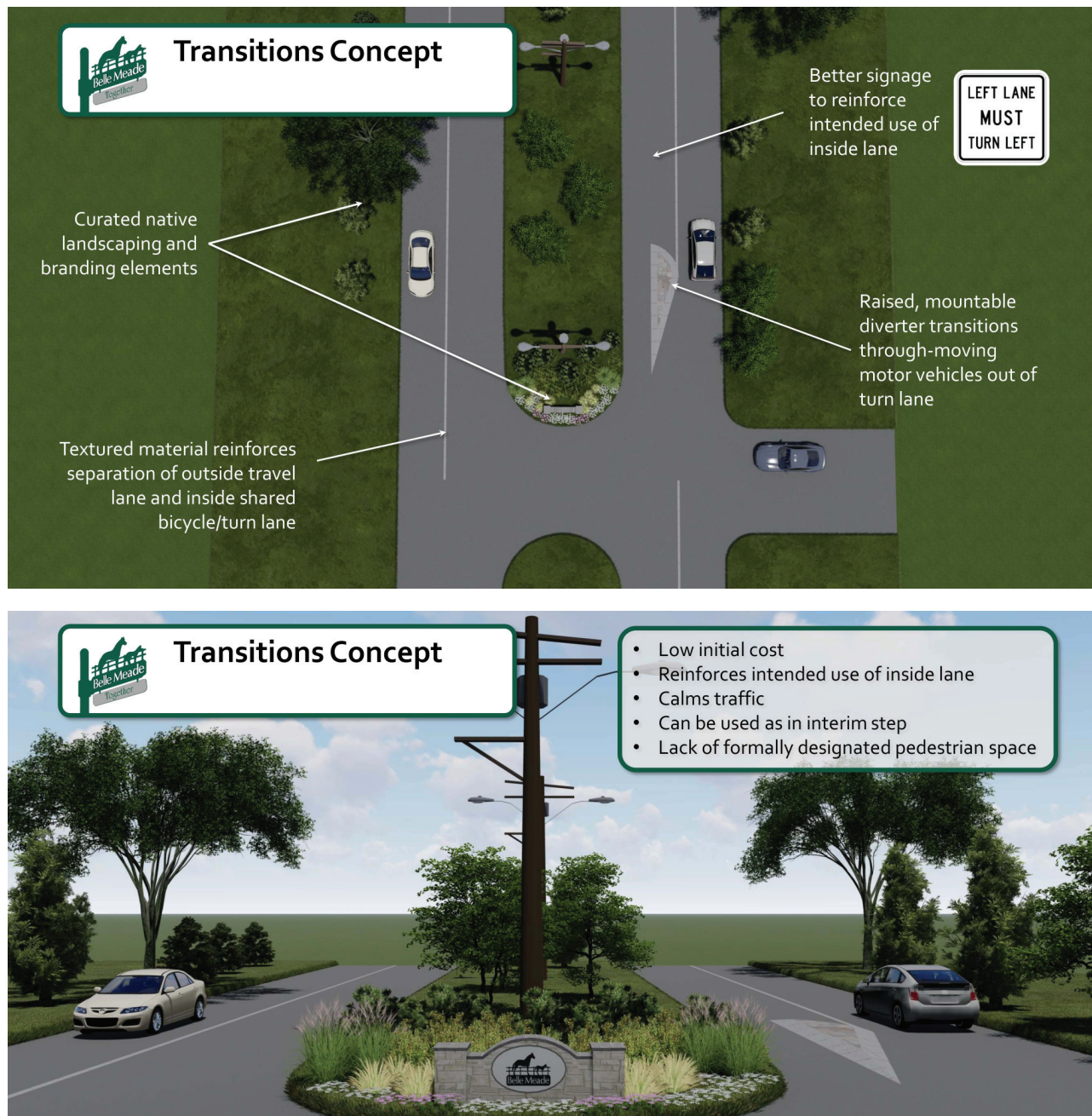


Figure 9. Transitions Concepts. Conceptual in nature. For continued discussion purposes.

Transitions with Belle Meadian Trail Concept

This concept builds on transitions by placing an eight foot wide walking trail in the center of the Belle Meade Boulevard median. The trail meanders through the median, avoiding utilities and creating space for landscaping.

This concept does create a dedicated space for pedestrians and celebrates the Boulevard's multimodal legacy, but will detract from median landscaping. It can be completed as a future phase of the transitions concept. The Belle Median trail with transitions concept is illustrated in **Figure 10**.

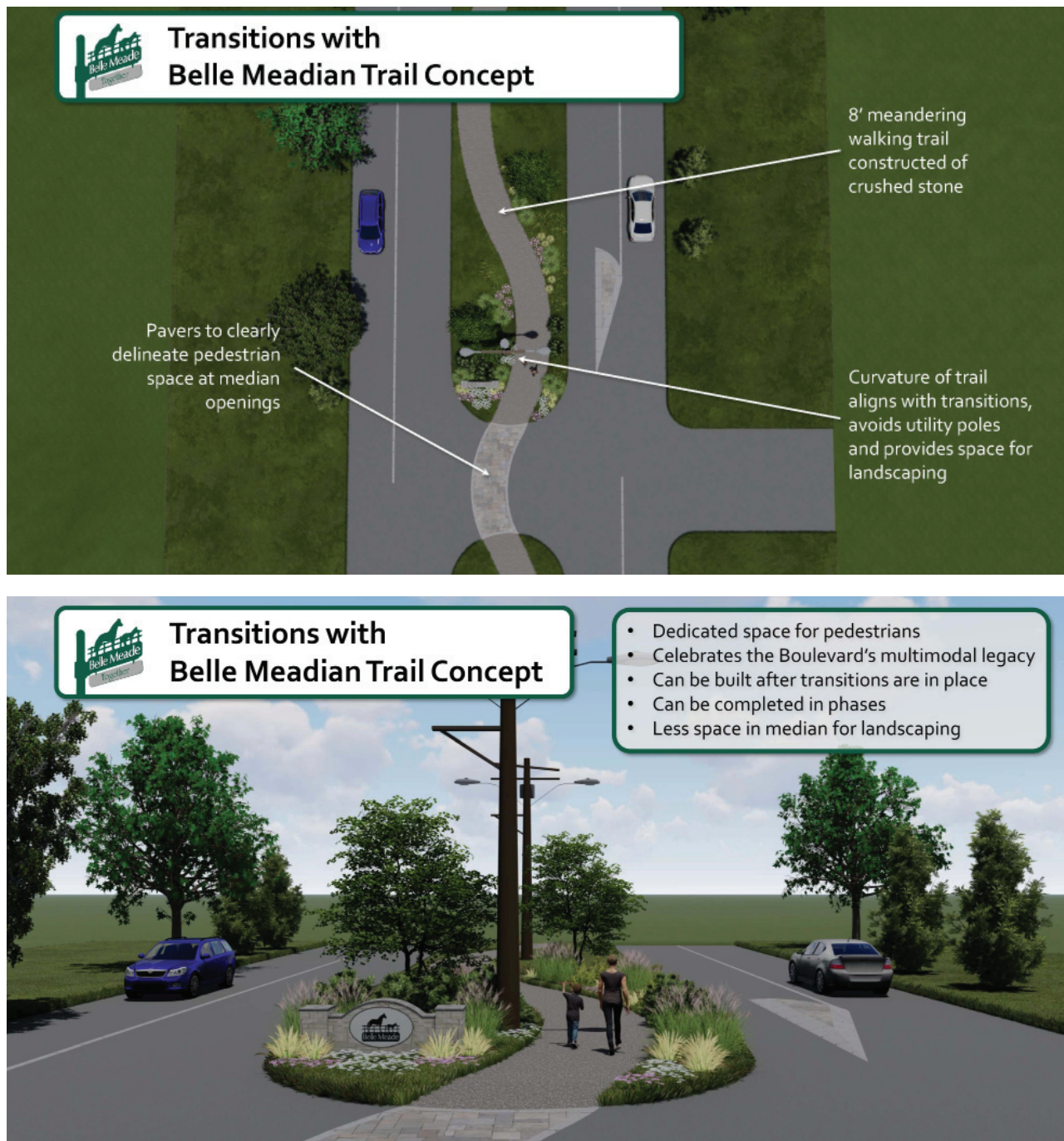


Figure 10. Belle Meadian Trail Concepts. Conceptual in nature. For discussion purposes.

LYNWOOD BOULEVARD AND HARDING PLACE

Lynwood Boulevard intersects Harding Place from the north and the south at different locations, resulting in an “offset” intersection. The current intersection design has long been a source of confusion, frustration, and delay at one of the primary gateways into the City. Belle Meade Together suggests design concepts that rethink and simplify the intersection, create opportunities for landscaping and beautification and minimize impacts to surrounding neighbors.

Peanut Island Concept

The peanut island concept gets its name from the placement of an elongated raised median spanning both the east and west intersections of Harding Place and Lynwood Boulevard. The island functions as a roundabout, replacing stop conditions with a continuous flow. Traffic movements on Lynwood Boulevard are limited to right in and right out.

The presence of the island will have a traffic calming effect by introducing horizontal deflection and can be completed with minimal impact to adjacent properties. It also provides a prominent gateway opportunity by introducing a terminating vista and providing ample space for landscaping. The peanut island concept is illustrated in **Figure 11**.

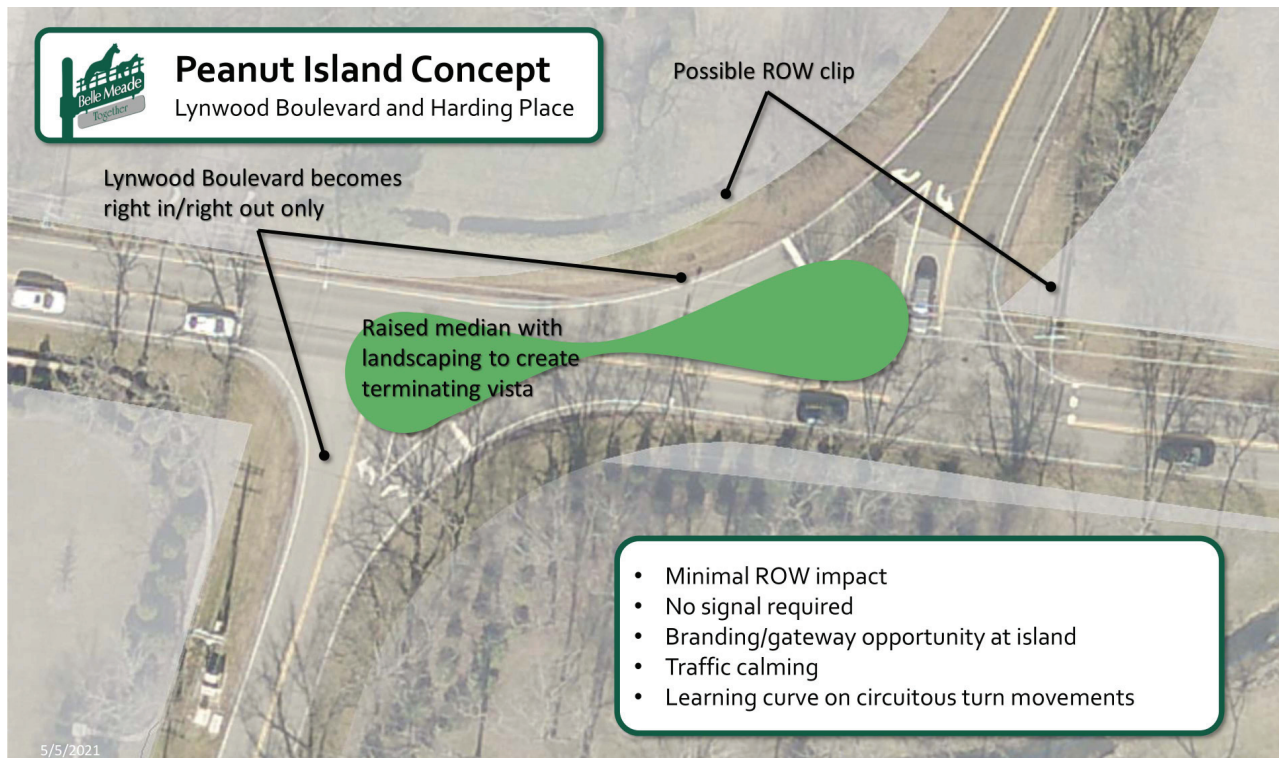


Figure 11. Peanut Island Concept. Conceptual in nature. For continued discussion purposes.

Realignment with Signal Concept

This concept maintains the offset intersection design, but relocates the southbound approach of Lynwood Boulevard to create two separate but coordinated signalized intersections. The signal control will eliminate driver confusion and associated overall delays, but could possibly increase delay at some approaches. In addition to reduced motorist confusion, the signalization will also create a more controlled and predictable environment for pedestrians.

The relocation of the southbound approach at Lynwood Boulevard creates an opportunity for landscaping and gateway treatments where the right turn lane is currently located. The realignment with signal concept is illustrated in **Figure 12**.

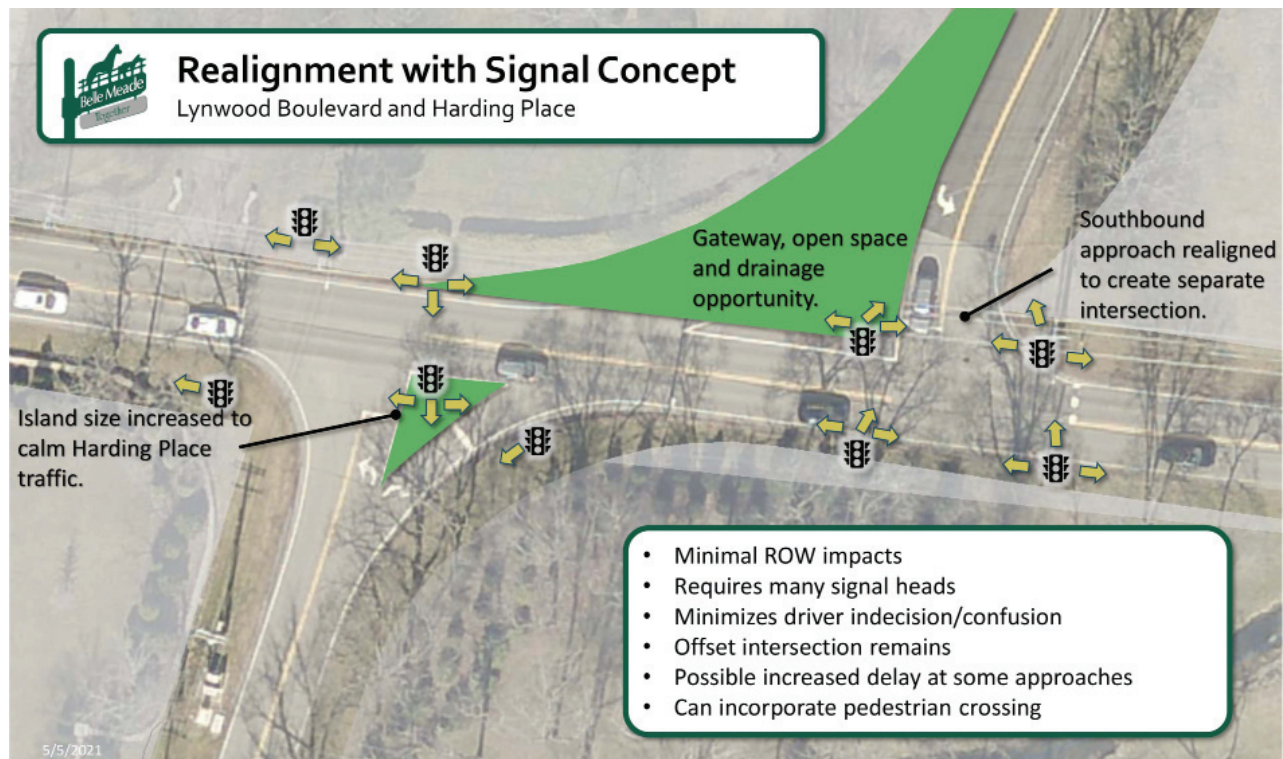


Figure 12. Realignment with Signal Concept. Conceptual in nature. For continued discussion purposes.



Belle Meade Farmer's Market



Listening Session



Walk the Boulevard



Election Day

Resident and Community engagement

The City of Belle Meade launched Belle Meade Together in late 2020 through Kickoff, a series of in person and online events. Kickoff enjoyed unprecedented success thanks to residents, who came out in droves to show how much they care for the future of the City through written comments, question and answer sessions and personal conversations.

Later, in the Spring of 2021, residents were invited to learn about Belle Meade Together recommendations through Plan Discovery. In summary, Belle Meade Together engaged hundreds of residents in many different ways:

- Two Virtual Town Halls via Zoom;
- Four Listening Sessions at the Carriage House of the Belle Meade Historic Site;
- A dedicated project website including an online comment mapper;
- On-site events including Meet the Team Day, Election Day, the Belle Meade Farmer's Market and Walk the Boulevard, which closed the two inside lanes of Belle Meade Boulevard for residents to walk on Saturday morning;
- YouTube project update videos, and
- A feedback survey.



BELLE MEADE TOGETHER

In addition to collecting input of issues and opportunities and keeping residents informed, Belle Meade Together sought feedback on plan recommendations through a print and online resident questionnaire. Approximately 120 residents completed the survey.

A majority of residents who completed the survey said they Agree or Strongly Agree that the recommendations in Belle Meade Together are consistent with their vision for Belle Meade. Overall, the plan was positively received as shown in **Figure 13**, below.



Figure 13. Plan Discovery Resident Survey Results

IMPLEMENTATION



Belle Meade Together makes recommendations to create safe and inviting places for pedestrians, manage vehicular traffic, mitigate stormwater runoff and preserve and protect the City's character and beauty. These recommendations must be translated into practical and actionable steps in order to part of the long-term reality for the City. The following section provides the bridge between planning and implementation. Community engagement never ends. The recommendations will be reviewed on an annual basis with continued conservative fiscal oversight.

IMPLEMENTATION

PROJECTS AND PHASES

The recommendations identified in Belle Meade Together represent over 60 individual projects that will take millions of dollars and several years to plan, design and complete.

The recommendations are divided among four phases based on need, opinions of probable cost, and complexity. Project recommendations and opinions of probable cost are provided in Appendix E.





**PLAN
RECOMMENDATIONS**

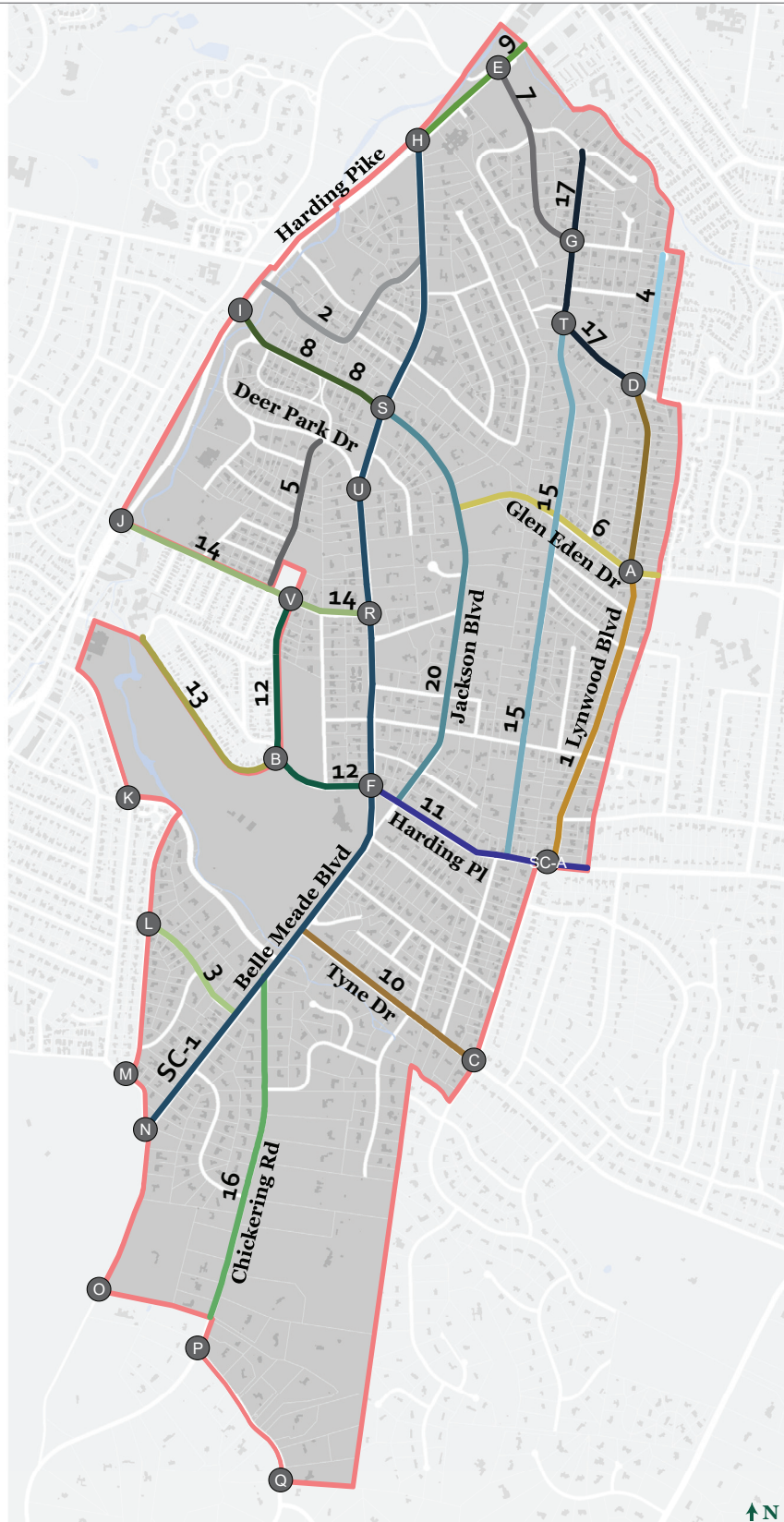


Figure 14: Plan Recommendations Map



PHASE 1 PROJECTS

Recommendations for Phase 1 include:

- Installation of a left turn lane at Belle Meade Boulevard and Harding Pike and corresponding left turn restriction at Jackson Boulevard;
- Traffic calming (medians and/or chicanes) on Lynwood Boulevard;
- Critical sidewalk connections on Harding Pike (in front of St. George's Episcopal Church and City Hall) and on Lynwood Boulevard to connect to the existing sidewalk on Harding Pike at Richland Creek with a goal of creating a continuous pedestrian network;

- Signage and landscaping enhancements on the full length of Belle Meade Boulevard, and
- A “demonstration median” on Belle Meade Boulevard that shows what it could look like at completion: trail, landscaping, crosswalks and signage.
- Stormwater conditions to be evaluated for each phase

Phase 1 projects are identified in **Table 1**. The map and identification number in each phase’s recommendations table corresponds with the project reference map in **Figure 14**;



Belle Meade Boulevard



Entering Belle Meade

Map ID	Location	Recommendations	Phase 1 Projects
1	Lynwood Boulevard from Harding Place to Abbott Martin Road	Create city network trail by constructing sidewalks on either/both sides of the road (there is sufficient ROW - 70 feet) for both sides). Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Install preferred traffic calming measures.
7	Lynwood Terrace	Create city network trail with sidewalk to create a continuous connection to Harding Pike. Install medians similar to existing median at Lynwood Boulevard (will require pavement expansion); align marked crosswalks with sidewalk transitions, if necessary.	Construct sidewalks to create a continuous connection to Harding Pike
9	Harding Pike from Belle Meade Boulevard to Richland Creek	Installation of sidepath on east side to connect Belle Meade to retail node at White Bridge Pike. ROW acquisition will likely be required. Alternatively, a more narrow sidewalk can be installed.	Construct sidewalk from St. George's Episcopal Church to existing sidewalk at Richland Creek to create continuous connection to White Bridge Road commercial node.
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Advisory, brand, and monument signage for the entire boulevard
			Install demonstration median from Belle Meade Boulevard to Chickering
			Install landscaping measures along entire boulevard

Table 1: Phase 1 Projects

PHASE 2 PROJECTS

Recommendations for Phase 2 projects include:

- Installation of dedicated pedestrian path on Belle Meade Boulevard following a Demonstration project and further community engagement;
- Installation of medians (or preferred traffic calming measures) with marked crosswalks on Lynwood Terrace, Jackson Boulevard, Harding Place and Lynwood Boulevard;

- Preliminary study and design of improvements to Belle Meade Boulevard and the Harding Place/Lynwood Boulevard intersection.
- Demonstration projects for traffic calming on Clarendon Boulevard and intersection enhancements on Lynwood Boulevard;
- Stormwater conditions to be evaluated for each phase.

Phase 2 projects are described in **Table 2**.

Map ID	Location	Recommendations	Phase 2 Project
2	Clarendon Avenue (particularly around the blind corner)	Install chicanes to create yield street condition, specifically at approaches to blind corner (with signage). Alternatively, medians can be installed, but landscaping/stonework at will need to be considered for potential impacts.	Traffic calming demonstration project.
7	Lynwood Terrace	Complete City network trail with sidewalk to create a continuous connection to Harding Pike. Install medians similar to existing median at Lynwood Boulevard (will require pavement expansion); align marked crosswalks with sidewalk transitions, if necessary.	Install median with marked crosswalks.
8	Jackson Boulevard from Harding Pike to Belle Meade Boulevard	Installation of chicanes to calm/discourage traffic entering from Harding Pike and to create a yield street condition. Implement left turn restrictions at Harding Pike and truck restrictions to preserve and protect historic bridge. Alternatively, medians can be installed but will require pavement expansion. There is also sufficient ROW to install sidewalks.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions).
11	Harding Place (from Lynwood Boulevard to Belle Meade Boulevard)	Install medians within existing pavement width (will likely result in 9 to 10 foot lane width at median). Mid-block pedestrian crossing treatments should be installed concurrent with medians to connect existing sidewalks. Landscaping in medians may be possible, depending on width.	Install median with marked crosswalks.
17	Lynwood Boulevard from Abbott Martin Road to Millrace Lane	Installation of traffic calming measures, which could include median islands or chicanes. Either option will require pavement expansion. Construct sidewalks on either/both sides of the road connecting to existing sidewalk at Lynwood Terrace and creating a continuous connection to Harding Pike. Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.

Table 2. Phase 2 Projects

Map ID	Location	Recommendations	Phase 2 Project
A	Hobbs Road/Glen Eden Drive and Lynwood Boulevard intersection	Operational enhancements to include a potential mini-roundabout with gateway treatments. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard.	Demonstration project (here or at Abbott Martin Road).
D	Lynwood Boulevard and Abbott Martin Road	Operational enhancements to include a potential mini-roundabout with gateway treatments. Possible creation of pocket park or gateway treatments by extending curb at southeast corner. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard, unless sidewalks run continuously on the west/south side (no crossing necessary).	Demonstration project (here or at Abbott Martin Road).
F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and monument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Design intersection and gateway treatments.
H	Belle Meade Boulevard and Harding Pike Intersection	Install northbound left turn lane to facilitate shift of Harding Pike traffic from Jackson Boulevard. Brick paver crossing enhancements concurrent with proposed sidepath on Harding Pike. Install right turn channelizing island/pedestrian refuge with gateway treatments at Belle Meade Boulevard inbound.	Install left turn lane at Belle Meade Boulevard.
I	Jackson Boulevard and Harding Pike Intersection	Installation of chicanes and/or medians with branding elements. Left turn restrictions from Jackson Boulevard to Harding Pike; consider channelization of right turn and installation of raised median island.	Install left turn restriction at Jackson Boulevard.
R	Leake Avenue at Belle Meade Boulevard	Crossing enhancements to facilitate connection between proposed sidewalks on Leake and trail on Belle Meade Boulevard. Intersection operational/safety enhancements to include curb extensions, pavement marking/treatment and signage and other measures to make drivers more aware of intersection approach.	Demonstration project here and/or at Jackson Boulevard.
S	Jackson Boulevard at Belle Meade Boulevard	Intersection operational/safety enhancements to include curb extensions, pavement treatment/markings, warning signs and other measures to make drivers more aware of four-way stop condition. Crossing enhancements to facilitate connection between proposed sidewalks on Jackson and trail on Belle Meade Boulevard.	Demonstration project here and/or at Leake Avenue.
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Begin preliminary study and design of pedestrian and landscape enhancements. Install transitions.
SC-A	Harding Place and Lynwood Boulevard	Reconstruct or improve intersection to include realignment, signalization and/or installation of peanut median concept. Pedestrian crossing and gateway enhancements concurrent with intersection improvements.	Begin preliminary study and design.

Table 2. Phase 2 Projects

PHASE 3 PROJECTS

Phase 3 project recommendations include:

- Sidewalks on Lynwood Boulevard with additional consideration for Leake Avenue and Park Hill Drive
- Medians or chicanes and crosswalks on Leake Avenue, Park Hill Drive, Clarendon Avenue, Westview Avenue, Jackson Boulevard and Chickering Road;
- Bioswales on Walnut Drive;

- Gateway treatments on Glen Eden Drive, Tyne Drive, Abbott Martin Road, Lynwood Terrace, Harding Place, Jackson Boulevard, Leake Avenue;
- Completion of a pedestrian path on Belle Meade Boulevard from Harding Pike to Jackson Boulevard, and
- Completion of the preferred design for the intersection of Harding Place and Lynwood Boulevard.
- Stormwater conditions to be evaluated for each phase.

Phase 3 projects are described in **Table 3**.

Map ID	Location	Recommendations	Phase 3 Projects
1	Lynwood Boulevard from Harding Place to Abbott Martin Road	Create City network trail by constructing sidewalks on either/both sides of the road (there is sufficient ROW - 70 feet) for both sides). Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Construct sidewalks.
2	Clarendon Avenue (particularly around the blind corner)	Install chicanes to create yield street condition, specifically at approaches to blind corner (with signage). Alternatively, medians can be installed, but landscaping/stonework at will need to be considered for potential impacts.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks.
3	West Brookfield Ave	Evaluating sidewalks relative to connectivity to the Harding Pike retail corridor. A shoulder/bicycle lane may be constructed in lieu of sidewalk. Chicanes aligned with brick paver crosswalks.	Traffic calming demonstration project.
4	Walnut Drive	Install bioswales along one side of the street. If daylighting is required, an easement may be necessary, including coordination with Sugartree Gated Community to tie drainage into their concrete-lined swale located on the corporate boundary of Belle Meade.	Install bioswales.
5	Park Hill Drive	Replace shoulder with sidepath/sidewalk. Install marked crosswalks aligned with entrances to Parmer Park. Could also install chicanes concurrent with sidewalks, creating a yield street condition.	Construct sidewalks. Install chicanes with marked crosswalks.
14	Leake Avenue from Belle Meade Boulevard to Harding Pike	Complete sidewalk gap to create continuous connection between Belle Meade Boulevard, Parmer Park and Harding Pike. Transition to multi-use trail at Historic Mansion site. Installation of four foot wide medians will likely require pavement expansion and chicanes will likely result in yield street condition.	Construct sidewalks. Install chicanes or medians with marked crosswalks.
15	Westview Avenue from Harding Place to Lynwood Boulevard	Installation of traffic calming measures, which could include median islands or chicanes. Chicanes will create a yield street condition; medians will require pavement expansion. Ideally, traffic calming measures will be completed concurrent with improvements to Lynwood Boulevard to mitigate possible traffic shift from Lynwood to Westview.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks.
16	Chickering Road	Installation of traffic calming measures, which could include median islands or chicanes. Either option will require pavement expansion. Alternatively, roadside monuments, planting, and or pavement marking/pavers could be used.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ roadside monuments).
18	Jackson Boulevard from Belle Meade Boulevard to Harding Place	Installation of chicanes to calm/discourage traffic entering and to create a yield street condition. Alternatively, medians can be installed but will require pavement expansion. There is also sufficient ROW to install sidewalks.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/curb extensions).
A	Hobbs Road/Glen Eden Drive and Lynwood Boulevard intersection	Operational enhancements to include a potential mini-roundabout with gateway treatments. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard.	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.
C	Tyne Drive and Lynwood Boulevard Intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Install gateway treatments.

Table 3. Phase 3 Projects

Map ID	Location	Recommendations	Phase 3 Projects
D	Lynwood Boulevard and Abbott Martin Road	Operational enhancements to include a potential mini-roundabout with gateway treatments. Possible creation of pocket park or gateway treatments by extending curb at southeast corner. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard, unless sidewalks run continuously on the west/south side (no crossing necessary).	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.
E	Lynwood Terrace and Harding Pike	Branded monument signage, stonework, etc. to complement stonework on west side. Replace painted channelizing island with a grassed island complete and plantings/signage. Potentially replace northbound left turn lane with raised median and gateway treatments; convert through lane to shared through/left turn.	Design and construct intersection operational and gateway treatments.
F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/ create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and monument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Construct intersection and gateway treatments.
G	Lynwood Terrace/ Lynwood Boulevard Intersection	Intersection operational/safety enhancements to include installation of mini-roundabout or elimination of southbound right turn slip lane and expansion of landscaped area. Pedestrian crossing enhancements to facilitate crossing of continuous sidewalk along Lynwood Boulevard.	"Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard."
H	Belle Meade Boulevard and Harding Pike Intersection	Install northbound left turn lane to facilitate shift of Harding Pike traffic from Jackson Boulevard. Brick paver crossing enhancements concurrent with proposed sidepath on Harding Pike. Install right turn channelizing island/pedestrian refuge with gateway treatments at Belle Meade Boulevard inbound.	Design and construct intersection operational and gateway treatments.
I	Jackson Boulevard and Harding Pike Intersection	Installation of chicanes and/or medians with branding elements. Left turn restrictions from Jackson Boulevard to Harding Pike; consider channelization of right turn and installation of raised median island.	Construct intersection and gateway treatments.
N	Belle Meade Boulevard and Page Road Intersection	Primary gateway treatments to include planting, monuments and/or signage in the raised median.	Construct gateway treatments.
P	Chickering Road (southwest)	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
R	Leake Avenue at Belle Meade Boulevard	Crossing enhancements to facilitate connection between proposed sidewalks on Leake and trail on Belle Meade Boulevard. Intersection operational/safety enhancements to include curb extensions, pavement marking/treatment and signage and other measures to make drivers more aware of intersection approach.	Construct operational and safety enhancements and pedestrian crossing treatments concurrent with trail/sidewalk construction on Belle Meade Boulevard.
S	Jackson Boulevard at Belle Meade Boulevard	Intersection operational/safety enhancements to include curb extensions, pavement treatment/ marking, warning signs and other measures to make drivers more aware of four-way stop condition. Crossing enhancements to facilitate connection between proposed sidewalks on Jackson and trail on Belle Meade Boulevard.	Construct operational and safety enhancements and pedestrian crossing treatments concurrent with trail/sidewalk construction on Belle Meade Boulevard.
T	Lynwood Boulevard at Westview Avenue	Intersection operational/safety enhancements to include turn restrictions, warning signs, curb extension, mini-roundabout to mitigate speed on Lynwood through movement. Crossing enhancements to facilitate connection between proposed sidewalks on both streets.	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.
V	Leake Avenue and Westover Drive	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Construct sidewalk or trail from Harding Pike to Jackson Boulevard.
SC-A	Harding Place and Lynwood Boulevard	Reconstruct or improve intersection to include realignment, signalization and/or installation of peanut median concept. Pedestrian crossing and gateway enhancements concurrent with intersection improvements.	Construct recommended intersection design.

Table 3. Phase 3 Projects



PHASE 4 PROJECTS

Phase 4 project recommendations include:

- Pedestrian enhancements on West Brookfield Avenue, Tyne Drive, Harding Place (between Belle Meade Boulevard and Harding Pike) and Westover Drive;
- Medians or chicanes and crosswalks on West Brookfield Avenue, Glen Eden Drive, Tyne Drive, and Harding Place;
- Completion of intersection enhancements at the intersection of Belle Meade Boulevard and Harding Place;

- Completion of a pedestrian path on Belle Meade Boulevard from Jackson Boulevard to Warner Park, and
- Gateway treatments on Westover Drive, Leake Avenue, Page Road, Brookfield Avenue and Chickering Road.
- Stormwater conditions to be evaluated for each phase.

Phase 4 projects are described in **Table 4**.

Map ID	Location	Recommendations	Phase 4 Projects
3	West Brookfield Ave	Evaluate sidewalks relative to connectivity to the Harding Pike retail corridor. A shoulder/bicycle lane may be constructed in lieu of sidewalk. Chicanes aligned with brick paver crosswalks.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.
6	Glen Eden Drive	Installation of Chicanes to calm traffic entering on Hobbs Road and to create a yield street condition. Alternatively, medians can be installed, but will require pavement expansion.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions).
10	Tyne Drive	Longterm evaluation of sidewalk or sidepath on one side of the street. It is critical to engage Metro and Forest Hills for coordination with their individual pedestrian safety long term plans and investment. Can alternate between different sides depending on ROW and encroachment. Install chicanes ; include marked crosswalks and align with sidewalk transitions. Alternatively, can install medians. Either option will require pavement expansion.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.
12	East side of Harding Place and Westover Drive (from Belle Meade Boulevard to Leake Avenue)	Extend sidewalk from the Belle Meade Boulevard intersection, possibly transitioning to sidepath adjacent to the golf course, connecting to the Leake Avenue sidewalks. Installation of chicanes will likely create yield street condition.	Implement traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalk/ sidepath.

Table 4. Phase 4 Projects

Map ID	Location	Recommendations	Phase 4 Projects
13	South side of Harding Place from Westover Drive to Harding Pike	Install sidewalk on the south side of the road to connect to Harding Pike commercial node. Alternatively, expand pavement and narrow travel lanes to create a shoulder or pedestrian way (with appropriate separation measures).	Construct sidewalks.
B	Westover Drive and Harding Place Intersection	Install primary gateway treatments. Enhancements to existing pocket park, to include signage and possible furniture. Refurbish landscape stone energy dissipation area, which is overgrown with vegetation.	Construct gateway treatments. Install park amenities. Refurbish drainage area concurrent with gateway treatments.
F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and monument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Install mast arm signal
J	Leake Avenue and Harding Pike intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
K	West Tyne Boulevard and Page Road intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
L	Brookfield Avenue West and Nichol Lane intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
M	Page Road and Forrest Park Dr	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
O	Page Road	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
Q	Chickering Road (south)	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Construct sidewalk or trail from Jackson Boulevard to Harding Place. Construct sidewalk or trail from Harding Place to Percy Warner Park.

Table 4. Phase 4 Projects

MOVING FORWARD: HOW TO USE THIS PLAN

Belle Meade Together is a foundational document and blueprint to help guide the City for many years to come. There are four specific ways that Belle Meade Together can be used:

AS A DECISION-MAKING FRAMEWORK

Belle Meade Together does not legally or administratively obligate the City to build or fund anything. Rather, it is a decision-making framework to help leaders make decisions about how and when to pursue projects. Most directly, Belle Meade Together can be consulted as part of the City's annual budget cycle when it makes decisions on allocating funds to complete projects. Additionally, it can help Belle Meade plan and allocate resources for larger projects that will take multiple years to fund, design and construct.

FOR DESIGN GUIDANCE

The projects and strategies in Belle Meade Together are more than just wood, concrete and metal. This plan embodies an underlying approach and design philosophy intended to protect, preserve and enhance Belle Meade's distinct character and aesthetic. This document should be consulted regularly not just for how and when to implement projects, but to ensure that the established design standard is met.

TO IDENTIFY OPPORTUNITIES

One of the most effective ways to implement projects identified in Belle Meade Together is to "piggyback" on existing public works and infrastructure projects, saving a considerable amount of time, money and disruption. A drainage project represents an opportunity to incorporate sidewalks in the reconstruction; a road resurfacing project represents an opportunity to incorporate traffic calming measures. This document provides the City with the ability to coordinate projects identified in Belle Meade Together with other City projects identified in their other plans and programs as well as those of Metro Nashville, the Tennessee Department of Transportation (TDOT) and the Tennessee Department of Environment and Conservation (TDEC), to name a few.

RESOURCE ACQUISITION TOOL

The City will pursue local, state and federal grant resource opportunities to fund the completion of projects identified in the plan. Many of those grant opportunities require that applications clearly demonstrate a need and how the project will feasibly address that need. Belle Meade Together provides the City with the ability to do just that.



APPENDICES



APPENDIX A: STRATEGY TOOLKIT



BELLE MEADE TOGETHER

PRESERVING
OUR HISTORY,
PREPARING FOR
THE FUTURE.



WHAT IS THE TOOLKIT?

This toolkit identifies the universe of strategies to preserve, protect and enhance Belle Meade consistent with the city’s historic and pastoral brand image as described in the Belle Meade Together Branding Guide. They address five areas of emphasis:

- Beautification and branding
- Traffic calming and management
- Walking and cycling
- Public spaces
- Drainage and stormwater

These strategies described in this document are intended to be conceptual and suggestive in nature. The ultimate selection and application of specific strategies in Belle Meade is subject to more detailed design and analysis as part of the project development process.

TOOLKIT KEY

EFFECTIVENESS

- Not applicable or negligible
- Minor
- Moderate
- Major

COST RANGE

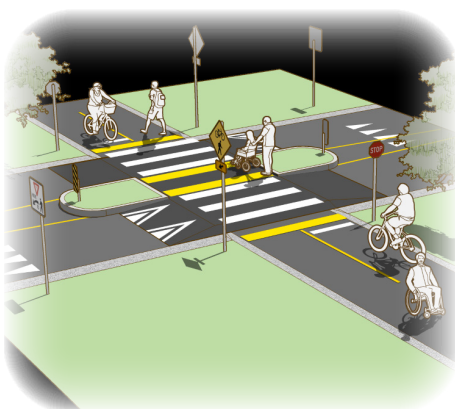
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- \$10,000-\$50,000.....\$\$
- \$50,000-\$100,000.....\$\$\$
- \$100,000-\$250,000....\$\$\$\$
- > \$250,000.....\$\$\$\$\$

MEDIANS AND ISLANDS

Placement of curbed features in the travelled way, which encourages appropriate motor vehicle speeds through horizontal deflection, shifts and terminating vistas. Creates a refuge for pedestrian crossing and separates one complex crossing into two simpler ones. Emphasis is placed on native landscaping with minimal use of curbing and hardscape materials.

EFFECTIVENESS	POTENTIAL USES	COST
<ul style="list-style-type: none"> ● Beautification & Branding ● Traffic Calming & Management ● Walking ○ Cycling ○ Public Spaces ● Drainage & Stormwater 	<ul style="list-style-type: none"> • Traffic calming/speed control • Gateway treatments • Mini roundabouts at intersections (25 mph or less is target speed) • Mid-block pedestrian crossing, with or without pavement treatment or marking and flashing beacons • Drainage by incorporating bioswales 	<ul style="list-style-type: none"> \$\$-\$\$\$\$

EXAMPLE IMAGES



CHICANES, CURB EXTENSIONS AND BULB OUTS

Extension of the roadside that physically narrows the travelled way and creates shifts and horizontal deflection to encourage appropriate motor vehicle speeds. Creates shorter crossing distances for pedestrians and can be used at intersections or mid-block. Emphasis is placed on native landscaping with minimal use of curbing and hardscape materials.

EFFECTIVENESS	POTENTIAL USES	COST
 Beautification & Branding	<ul style="list-style-type: none">• Traffic calming/speed control	\$-\$
 Traffic Calming & Management	<ul style="list-style-type: none">• Gateway treatments	
 Walking	<ul style="list-style-type: none">• Pinch points/choke points• Intersections	
 Cycling	<ul style="list-style-type: none">• Mid-block pedestrian crossing, with or without pavement treatment or marking and flashing beacons	
 Public Spaces	<ul style="list-style-type: none">• Lane transitions	
 Drainage & Stormwater	<ul style="list-style-type: none">• Yield streets (25 mph or less target speed)• Gathering spaces (combined with benches and other furnishings)• Drainage by incorporating bioswales	

EXAMPLE IMAGES

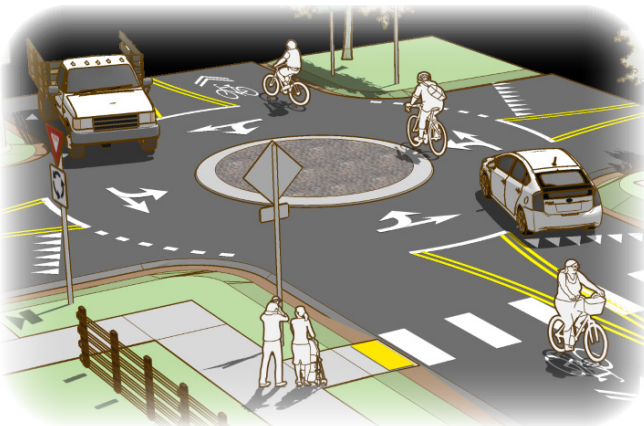


INTERSECTION OPERATIONAL IMPROVEMENTS

Changes to the way that intersections handle motorized vehicles, non-motorized vehicles and pedestrians. Can be achieved through physical changes (curb extensions, islands, pavement marking, etc.) or regulatory changes (signage). Improvements should make economic use of hardscape materials and emphasize native landscaping as design control elements when feasible.

EFFECTIVENESS	POTENTIAL USES	COST
○ Beautification & Branding	• Intersection realignment	\$-\$\$\$\$\$
● Traffic Calming & Management	• Roundabouts and mini roundabouts	
● Walking	• Turn lane addition or removal	
● Cycling	• Pedestrian crossing improvements (with curb extensions)	
○ Public Spaces	• Traffic calming/speed control	
○ Drainage & Stormwater	• Traffic operation and safety	

EXAMPLE IMAGES



POCKET PARKS

Small, dedicated spaces for gathering on public property. Can be passive or active with benches, recreational equipment and other amenities.

EFFECTIVENESS

- Beautification & Branding
- Traffic Calming & Management
- Walking
- Cycling
- Public Spaces
- Drainage & Stormwater

POTENTIAL USES

- Resting locations by connecting to walking opportunities (sidewalk or multi-use trail)
- Recreation
- Public gathering spots
- In combination with curb extensions and bulbouts
- Drainage by incorporating bioswales

COST

\$-\$\$\$

EXAMPLE IMAGES



MONUMENTS & OTHER PHYSICAL FEATURES

Physical features that mark the transition into a specific place. Usually includes strong branding elements. Could include monuments, sculptures and other types of public art. Minimal use is encouraged.

EFFECTIVENESS

- ☒ Beautification & Branding
- ☒ Traffic Calming & Management
- ☐ Walking
- ☐ Cycling
- ☐ Public Spaces
- ☐ Drainage & Stormwater

POTENTIAL USES

- Branding
- Gateway treatments and transitions
- Traffic calming/speed control

COST

\$\$

EXAMPLE IMAGES



BRICK PAVERS & TABLES

...AND OTHER PAVEMENT TREATMENTS

Changes to the physical appearance, texture and elevation of the road that alerts the drivers through a visual change in the continuity of the pavement. Materials should be consistent with Belle Meade's brand and be limited to specific areas where gateways, traffic calming and pedestrian safety are desired.

EFFECTIVENESS

-  Beautification & Branding
-  Traffic Calming & Management
-  Walking
-  Cycling
-  Public Spaces
-  Drainage & Stormwater

POTENTIAL USES

- Gateway treatments and transitions
- Traffic calming/speed control
- Pedestrian crossing (mid-block or intersection) in combination with curb extensions/bulbouts and/or medians
- Speed tables or raised intersections (target speed of 25 mph or less)
- Drainage through use of semi-pervious materials

COST

\$

EXAMPLE IMAGES



PAVEMENT MARKING

Use of paint, thermoplastic or resin to mark or delineate the travelled way as a lower cost alternative to more robust strategies, such as pavers, curb extensions and islands, especially if completed concurrent with road restriping or resurfacing. Limited to specific areas where more robust strategies are too costly or infeasible.

EFFECTIVENESS	POTENTIAL USES	COST
<input type="radio"/> Beautification & Branding	• Narrow lanes and intersections	\$-\$\$\$
<input checked="" type="radio"/> Traffic Calming & Management	• Delineate bicycle lanes	
<input checked="" type="radio"/> Walking	• Crossing treatments	
<input checked="" type="radio"/> Cycling		
<input type="radio"/> Public Spaces		
<input type="radio"/> Drainage & Stormwater		

EXAMPLE IMAGES



STREET TREES AND PLANTING

The placement of trees, shrubs, flowers and other planting materials in close proximity to the roadway. Can be linear (median or roadside) or at a specific location (islands, curb extensions and bulbouts.) Can be used as a branding and beautification element as well as to encourage appropriate motor vehicle speeds through the narrowing of the driver's visual field. Placement in the planting strip between the sidewalk and traveled way creates a buffer for pedestrians. Native species should be used.

EFFECTIVENESS



Beautification
& Branding



Traffic Calming
& Management



Walking



Cycling



Public Spaces



Drainage &
Stormwater

POTENTIAL USES

- Traffic calming
- Gateways
- Branding and beautification
- Within traffic islands, medians, curb extensions, chicanes and bulb-outs
- In combination with bioswales for drainage

COST

\$-\$\$\$

EXAMPLE IMAGES



LIGHTING

Used primarily as a safety feature for motor vehicles, pedestrians and cyclists especially in locations where those modes come into contact with each other (intersections and mid-block crossing). Can be scaled for pedestrians or motor vehicles.

EFFECTIVENESS

- ☒ Beautification & Branding
- ☒ Traffic Calming & Management
- ☒ Walking
- ☒ Cycling
- ☒ Public Spaces
- ☐ Drainage & Stormwater

POTENTIAL USES

- Safety
- Intersections
- Mid-block crossing
- Crossing treatments
- Pedestrian buffer (when placed between the sidewalk and travelled way)
- Branding and beautification (when incorporating signage and beautification elements)

COST

\$\$-\$\$\$\$

EXAMPLE IMAGES



SIDEWALKS

Dedicated linear facilities for pedestrians adjacent to a street, especially on higher speed and higher volume streets. Can be constructed with various materials, but should be consistent with Belle Meade's brand.

EFFECTIVENESS

- ☐ Beautification & Branding
- ☒ Traffic Calming & Management
- ☒ Walking
- ☐ Cycling
- ☒ Public Spaces
- ☐ Drainage & Stormwater

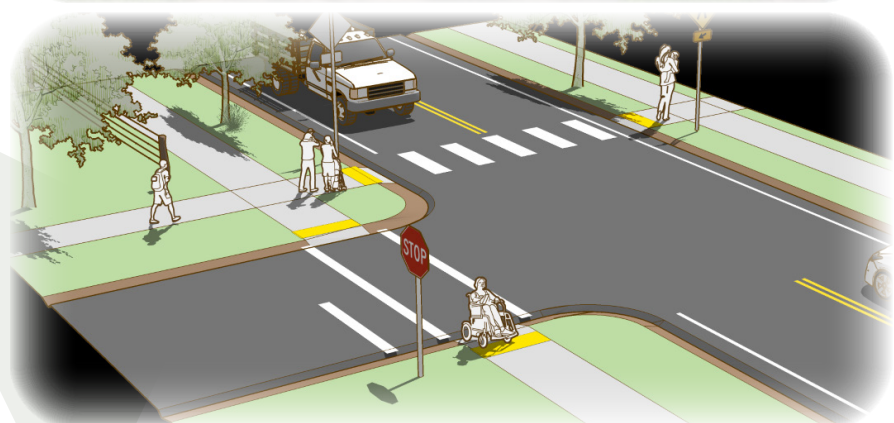
POTENTIAL USES

- Locations of high pedestrian demand (billy goat trails)
- Higher volume, higher speed (>25 mph) streets
- Connection to parks, civic and public spaces, retail and other destinations
- Filling in gaps within existing sidewalk networks

COST

\$\$\$-\$\$\$\$

EXAMPLE IMAGES



MULTI-USE TRAILS

A bi-directional, often meandering trail physically separate from a roadway. These are bi-directional and accomodate bicycles, pedestrians and sometimes other modes such as roller blades and scooters. They can include additional ammenities such as benches, water fountains, and recreational equipment.

EFFECTIVENESS

-  Beautification & Branding
-  Traffic Calming & Management
-  Walking
-  Cycling
-  Public Spaces
-  Drainage & Stormwater

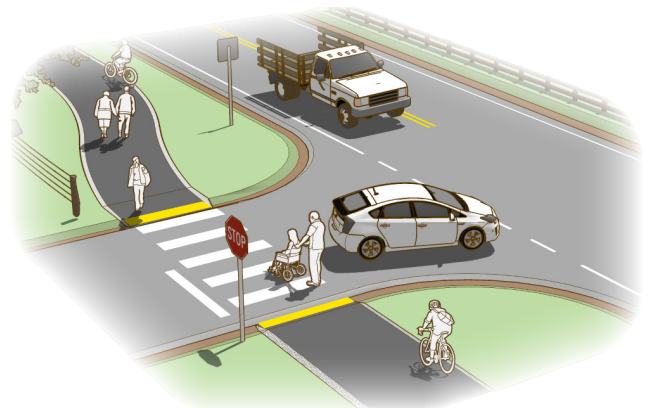
POTENTIAL USES

- In locations with especially high volumes of pedestrians and cyclists
- As linear parks and greenways
- Along water features (blueways)
- In locations with sufficient right of way (wide medians, roadway easements, utility easements)

COST

\$\$\$\$-\$\$\$\$\$\$

EXAMPLE IMAGES



BICYCLE LANES AND ADVISORY SHOULDERS

The physical demarcation of a dedicated space for bicycles on one or ideally both sides of the roadway. On very low speed roads, advisory shoulders create usable space for bicycles (and pedestrians) on both sides of the road, with a single, two-center lane for motor vehicles in the middle. The resulting narrowing of motor vehicle travel lanes encourages appropriate speeds. The application of bicycle lanes should make minimal use of pavement marking.

EFFECTIVENESS

- ☐ Beautification & Branding
- ☒ Traffic Calming & Management
- ☒ Walking
- ☒ Cycling
- ☐ Public Spaces
- ☐ Drainage & Stormwater

POTENTIAL USES

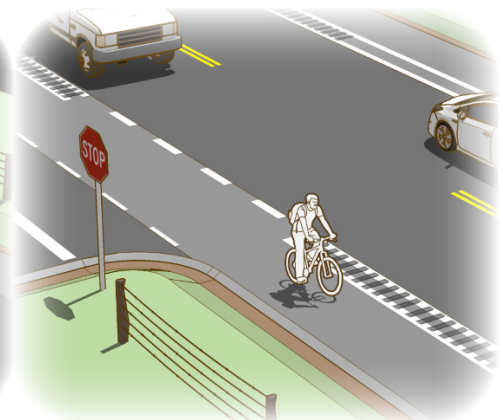
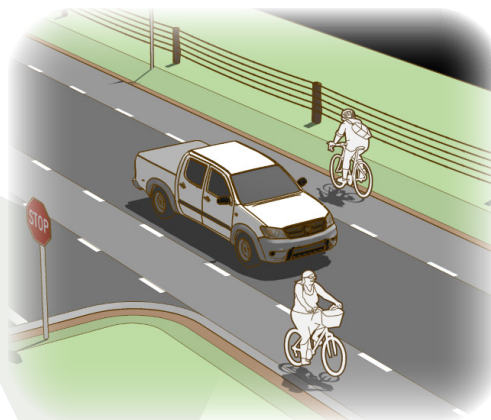
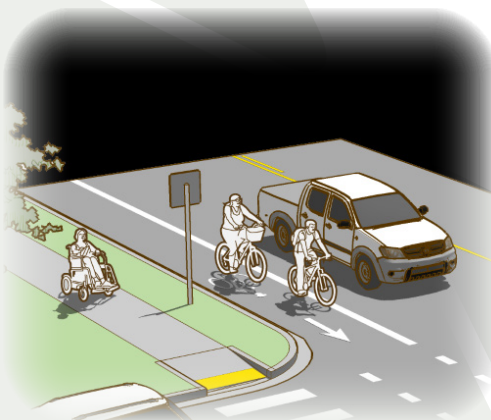
- On roads with excess pavement width (30 feet or more)
- As a traffic calming measure
- Advisory shoulders on very low volume, low speed (<25 mph) roads

COST

\$-\$\$



EXAMPLE IMAGES



ROAD DIETS

Changes in pavement width for motor vehicles through lane width reductions or lane elimination. Lane width reductions encourage appropriate motor vehicle speeds and create opportunities for bicycle lanes, bulb-outs and other features. Changes can be acheived through pavement marking or hardscaping/curbing.

EFFECTIVENESS

- Beautification & Branding
- Traffic Calming & Management
- Walking
- Cycling
- Public Spaces
- Drainage & Stormwater

POTENTIAL USES

- On roads with excess pavement width and/or excessively wide travel lanes
- As a traffic calming measure
- As a drainage or pocket park feature in comination with bulb-outs
- Creation of sidewalks, multi-use trails or bicycle lanes

COST

\$\$-\$\$\$\$\$

EXAMPLE IMAGES



RECTANGULAR RAPID FLASH BEACON (RRFB)

User-activated flashing LED lights and associated signage at unsignalized intersections or mid-block crosswalks. Can be activated by pedestrians manually through a push button or passively by a pedestrian detection system. Application should be limited to locations with high volumes of pedestrian traffic and higher motor vehicle speeds and/or volume.

EFFECTIVENESS

- Beautification & Branding
- Traffic Calming & Management
- Walking
- Cycling
- Public Spaces
- Drainage & Stormwater

POTENTIAL USES

- At unsignalized crossing locations with high volumes of pedestrian traffic
- At unsignalized crossing locations where heightened levels of driver awareness is desired

COST

\$

EXAMPLE IMAGES



SIGNAGE

Advisory messaging for various users including drivers, pedestrians, etc. Depending on the use, signage can conform to Belle Meade's brand.

EFFECTIVENESS

-  Beautification & Branding
-  Traffic Calming & Management
-  Walking
-  Cycling
-  Public Spaces
-  Drainage & Stormwater

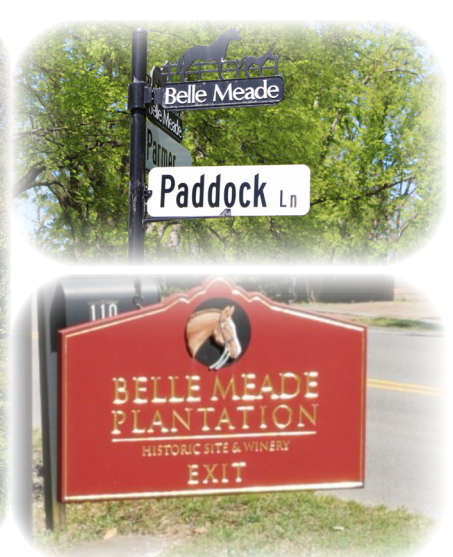
POTENTIAL USES

- Wayfinding and routing for drivers, pedestrians and/or cyclists
- As a gateway treatment
- As a branding element
- To encourage appropriate motor vehicle speeds
- To advise, discourage or prohibit certain behaviors (yield to pedestrians, stay out of the inside lane, etc.)

COST

\$-\$\$

EXAMPLE IMAGES



TRUCK RESTRICTIONS

Limitations or prohibitions for trucks on specific roads. Truck restrictions can limit truck speeds, truck weights, or prohibit trucks altogether.

EFFECTIVENESS	POTENTIAL USES	COST
<input type="radio"/> Beautification & Branding	• Road where heavy vehicles are not desired or might damage the pavement	\$
<input checked="" type="radio"/> Traffic Calming & Management	• Locations where truck movements conflict with pedestrian and cyclist activity	
<input checked="" type="radio"/> Walking	• Locations where the road geometry does not accommodate large vehicles	
<input checked="" type="radio"/> Cycling	• Locations where alternative access is possible	
<input type="radio"/> Public Spaces		
<input type="radio"/> Drainage & Stormwater		

EXAMPLE IMAGES



R14-1
Truck Route



R12-3
No Trucks Over Empty Weight

TURN RESTRICTIONS

Prohibitions on specific motor vehicle turn movements. Can apply to specific time periods or globally.

EFFECTIVENESS

- Beautification & Branding
- Traffic Calming & Management
- Walking
- Cycling
- Public Spaces
- Drainage & Stormwater

POTENTIAL USES

- Intersections where turn movements create safety or operational issues
- Intersections with high volumes of pedestrians or cyclists
- Locations where alternative access is possible

COST

\$

EXAMPLE IMAGES



R3-3
No Turns



R3-1
No Right Turn



R3-2
No Left Turn

BIOSWALES

Vegetated, shallow, landscaped depressions designed to capture, treat, and infiltrate stormwater runoff as it moves downstream, or impermeable surfaces with an underground runoff collection system.

EFFECTIVENESS

- ☐ Beautification & Branding
- ☒ Traffic Calming & Management
- ☐ Walking
- ☐ Cycling
- ☒ Public Spaces
- ☒ Drainage & Stormwater

POTENTIAL USES

- In combination with medians, islands, bulb-outs, and curb extensions
- As public spaces and pocket parks

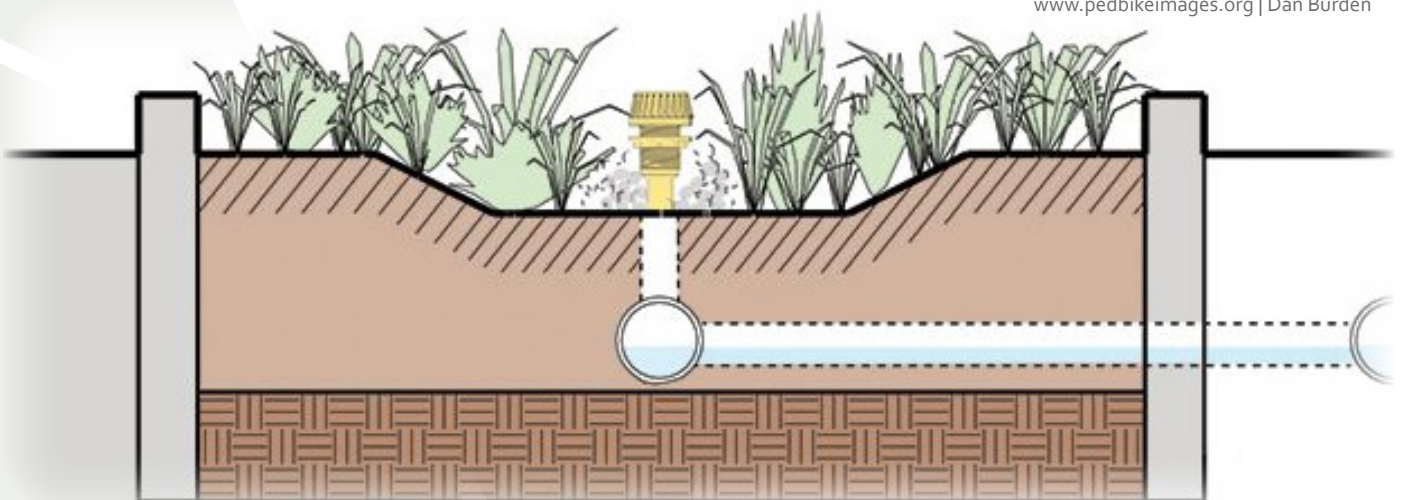
COST

\$-\$\$



www.pedbikeimages.org | Dan Burden

EXAMPLE IMAGES



FLOW-THROUGH PLANTERS

...AND PERVIOUS STRIPS

Hard-edged stormwater management facilities with an impermeable base underground runoff collection system.

EFFECTIVENESS

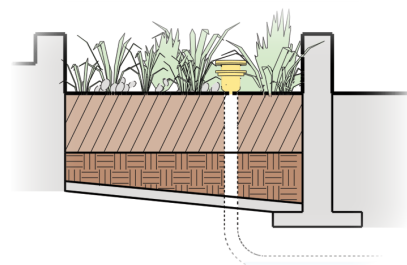
- ☐ Beautification & Branding
- ☐ Traffic Calming & Management
- ☐ Walking
- ☐ Cycling
- ☐ Public Spaces
- ☒ Drainage & Stormwater

POTENTIAL USES

- At constrained sites
- Locations with poorly draining soils, steep slopes (>4%), or areas with contaminated soils

COST

\$



EXAMPLE IMAGES



PERVIOUS PAVEMENT

Hardscape materials that treat, detain, and infiltrate stormwater runoff.

EFFECTIVENESS

- Beautification & Branding
- Traffic Calming & Management
- Walking
- Cycling
- Public Spaces
- Drainage & Stormwater

POTENTIAL USES

- In combination with intersection mid-block crossing treatments
- On sidewalks and multi-use trails
- Hardscape surfaces at pocket parks and other public spaces
- In locations where landscape drainage solutions are not feasible

COST

\$-\$\$\$

EXAMPLE IMAGES



SUMMARY CHART

	BEAUTIFICATION & BRANDING	TRAFFIC CALMING & MANAGEMENT	WALKING	CYCLING	PUBLIC SPACES	DRAINAGE & STORMWATER	COST
MEDIANS AND ISLANDS	●	●	●	○	○	●	\$ \$ \$ \$ \$
CHICANES, CURB EXTENSIONS & BULB-OUTS	●	●	●	○	●	●	\$ \$ \$
INTERSECTION OPERATIONAL IMPROVEMENT	○	●	●	●	○	○	\$ \$ \$ \$ \$
POCKET PARKS	●	○	●	○	●	●	\$ \$ \$ \$
MONUMENTS & OTHER PHYSICAL FEATURES	●	●	○	○	○	○	\$ \$
BRICK PAVERS, TABLES & PAVER TREATMENT	●	●	●	●	○	●	\$
PAVEMENT MARKING	○	●	●	●	○	○	\$ \$ \$ \$
STREET TREES AND PLANTING	●	●	●	○	●	●	\$ \$ \$ \$
LIGHTING	●	●	●	●	●	○	\$ \$ \$ \$ \$
SIDEWALKS	○	●	●	○	●	○	\$ \$ \$ \$ \$ \$ \$ \$
MULTI-USE TRAILS	●	●	●	○	●	●	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$
BICYCLE LANES & ADVISORY SHOULDERS	○	●	●	●	○	○	\$ \$ \$
ROAD DIETS	●	●	●	●	●	●	\$ \$ \$ \$ \$ \$ \$ \$
RECTANGULAR RAPID FLASH BEACON (RRFB)	○	●	●	●	○	○	\$
SIGNAGE	●	●	●	●	○	○	\$ \$ \$
TRUCK RESTRICTIONS	○	●	●	●	○	○	\$
TURN RESTRICTIONS	○	●	●	●	○	○	\$
BIOSWALES	○	●	○	○	●	●	\$ \$ \$
FLOW-THROUGH PLANTERS	○	○	○	○	○	●	\$ \$ \$
PERVIOUS PAVEMENT	●	●	●	●	●	●	\$ \$ \$ \$ \$





APPENDIX B: CERES SOCIETY PLANTING LIST



Narrative descriptors

Refined and tailored with massing treatment providing large impactful views; limited use of sporadic plantings; Southern palette with strong preference to native species.

Scientific Name	Common Name	Notes	Function
Canopy Trees (where applicable)			
Acer rubrum	Red Maple	Native	ROW; pocket park
Liquidambar styraciflua	Sweetgum	Native	ROW; pocket park
Liriodendron tulipifera	Tulip Poplar	Native	ROW; pocket park
Platanus occidentalis	Eastern Sycamore	Native	ROW; pocket park
Quercus rubrum	Red Oak	Native	ROW; pocket park
Understory & Ornamental Trees			
Acer palmatum	japanese maple		Boulevard; ROW
Aesculus pavia	Red Buckeye	Native	Boulevard; ROW
Amelanchier canadensis	Serviceberry	Native	Boulevard; ROW
Cercis canadensis	Redbud	Native	Boulevard; ROW
Cedrus deodara	Deodar Cedar		Boulevard; ROW
Chionathus retusus	Chinese Fringetree		Boulevard; ROW
Chionathus virginicus	white fringetree	Native	Boulevard; ROW
Cornus florida	flowering dogwood	Native	Entryway; Boulevard; ROW
Cornus kousa	japanese dogwood		Entryway; Boulevard; ROW
Hamamelis vernalis	witch hazel		Boulevard; ROW
Juniperus virginiana	Eastern Redcedar	Native	Boulevard; ROW
Magnolia grandiflora 'Little Gem'	Southern Magnolia	Native	Boulevard; ROW
Magnolia virginiana 'Green Shadow'	sweetbay magnolia		Entryway; Boulevard; ROW
Malus spp.	Crabapple		Boulevard; ROW
	Hornbeam	Native	Boulevard; ROW
	Fig tree		Boulevard; ROW
	Peach		Boulevard; ROW
Vitex	Chaste Tree		
Shrubs			
Buxus	Boxwood		Entryway; Boulevard
Buddleia 'Blue Chip'	summer lilac	Invasive?	Boulevard
Camellia	Camellia		Boulevard
Cornus sericea	Redtwig dogwood	Native	Boulevard
Cephalataxus harringtonia	False yew		
Fothergilla gardenii	dwarf fothergilla	Native	Boulevard
Hydrangea		(Native)	Entryway; Boulevard
Hypericum sp.	St. Johnswort	(Native)	Boulevard
Illicium	Anise	(Native)	Boulevard
Itea virginica	virginia sweetspire	Native; wetland	Boulevard
Juniperus virginiana 'Grey Owl'	eastern red cedar		Boulevard
Kalmia		Native	Boulevard
Prunus laurocerasus	Ottolukun Laurel		Boulevard
Rhododendron		(Native)	Boulevard

Rhus aromatica 'Gro-Low'	Fragrant Sumac	Native	Boulevard
Tuxis densiformis	Yew		Boulevard
Viburnum		(Native)	Boulevard

Perennials & Groundcovers

Amsonia Hubrichtii	bluestar	Native
Asclepias	milkweed	Native
Astilbe	goats beard	
Dryopteris	wood ferns	Native
Echinacea	cone flower	Native
Hellebrus		
Heuchera	coral bells	
Hosta		
Phlox		(Native)
Polygonatum	solomons seals	
Rudbeckia		(Native)
Salvia		(Native)
	Yarrow	

Ornamental Grasses

Nasella sp.	Mexican Feathergrass	
Panicum	switchgrass	(Native)
Schizachyrium	Little Bluestem	(Native)
Muhlenbergia capilaris	Pink Muhlygrass	
Pennisetum sp. 'Little Kitten'		
Pennisetum sp. 'Little Bunny'		

APPENDIX C: BELLE MEADE BRANDING GUIDE



BELLE MEADE TOGETHER

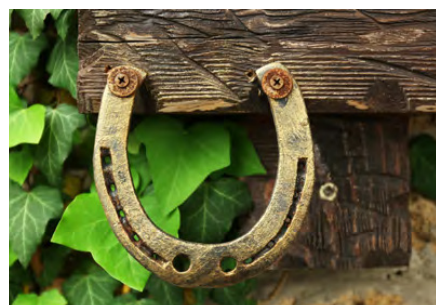
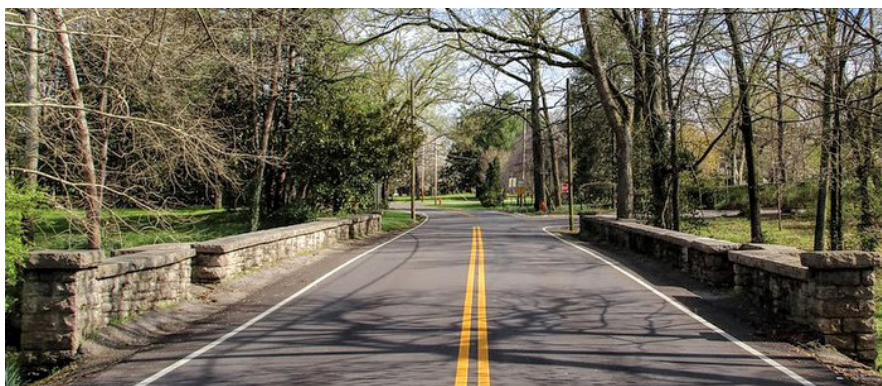
BRANDING



BELLE MEADE BRANDING

2020 Master Plan

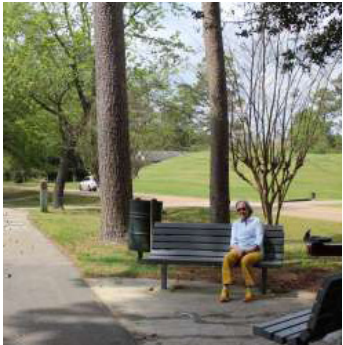
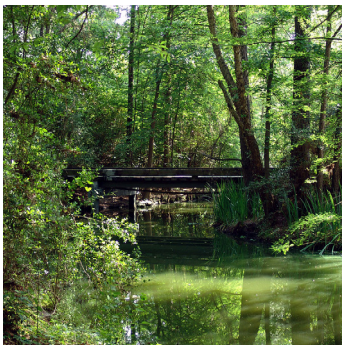
REPRESENTATIVE IMAGES



PRECEDENT IMAGES FROM OTHER COMMUNITIES



RIVER OAKS, HOUSTON, TX



WOODLANDS, HOUSTON, TX

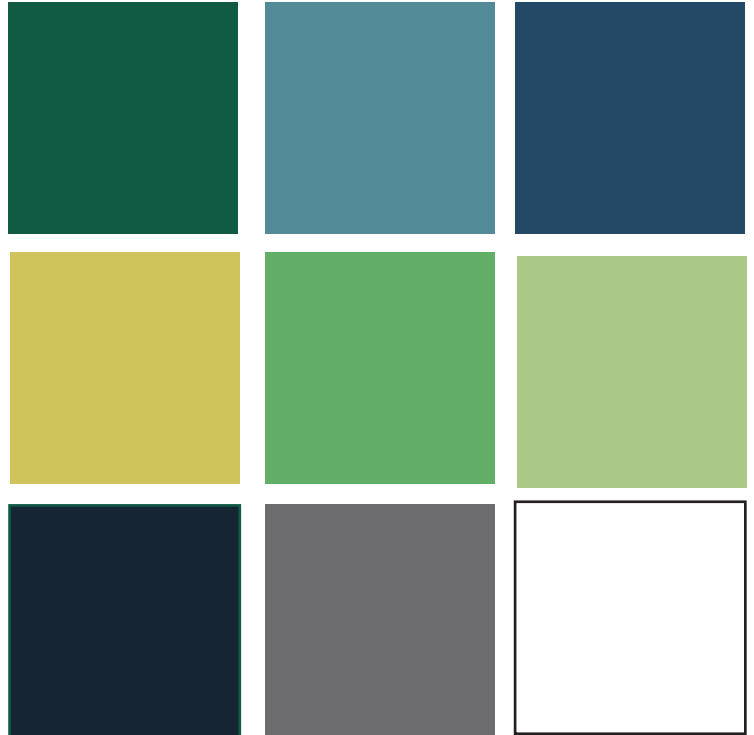
BELLE MEADE BRANDING

2020 Master Plan

CHARACTER

HISTORIC
ELEGANT
PRESERVED
TRADITIONAL
CHARMING
PASTORAL
WELCOMING

COLORS



CONCEPTS

DROUGHT TOLERANT AND LOW
MAINTENANCE NATIVE PLANTS

- Maple, oak, dogwood trees

STONE WORK

- Limestone

HISTORIC STREET SIGNAGE

- Painted wood or metal

PEOPLE FRIENDLY

- Safe opportunities for walking and cycling

CONCEPT STATEMENTS

- BELLE MEADE = “BEAUTIFUL MEADOW”
- PICTURESQUE COUNTRYSIDE CHARACTER
- GRACIOUS LIVING IN A PARK LIKE SETTING
- “THE WORLD MELTS AWAY WHEN YOU PASS THOROUGH OUR GATES”
- TIMELESS LEGACY



APPENDIX D: ADDITIONAL STORMWATER MANAGEMENT LOCATIONS



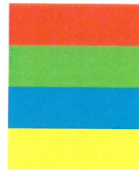
Locations

- 1 - Lynwood Terrace
- 2 - 326 Lynwood Boulevard
- 3 - Abbott Martin Road & Lynwood Boulevard
- 4 - 314-317 Walnut Drive
- 5 - 421-423 Lynwood Boulevard
- 6 - Hobbs Road at Lynwood Boulevard
- 7 - Signal Hill Drive at Lynwood Boulevard
- 8 - 600-611 Lynwood Boulevard
- 9 - Lynwood Boulevard at Iroquois Avenue
- 10 - Lynwood Boulevard at Harding Place
- 11 - Lynwood Boulevard at Warner Place
- 12 - Lynwood Boulevard at Tyne Boulevard
- 13 - West Tyne Drive at Nichol Lane
- 14 - Page Road at Nichol Lane
- 15 - Chickering Lane at Chickering Road
- 16 - Chickering Road at Herbert Place
- 17 - 604 Westview Avenue
- 18 - Herbert Place at Georgian Place
- 19 - Chickering Road at East East Brookfield
- 20 - 425 Westview Avenue
- 21 - 412 Westview Avenue
- 22 - 309 Westview Avenue
- 23 - Jackson Boulevard at Deer Park Drive
- 24 - Jackson Boulevard at Deer Park Circle
- 25- Lynwood Blvd./Lynwood Terrace at Westhampton

Stormwater Traffic Calming Branding



1		X	X	
2		X	X	
3	X	X	X	X
4	X	X		
5	X	X	X	
6		X	X	X
7		X	X	
8		X	X	
9		X	X	X
10	X	X	X	X
11			X	
12			X	X
13		X	X	X
14		X	X	X
15		X	X	X
16		X	X	
17	X	X	X	
18		X	X	
19		X	X	
20		X	X	
21		X	X	
22		X	X	
23	X	X	X	X
24		X	X	
25			X	X



Larry Smith
Chief Eads
Lyle Patterson
C.E.C.



Colored blocks represent areas with the *most* needs
Blocks with an "X", denotes needs attention.

Belle Meade
 Stormwater Infrastructure Needs
 Evaluated on October 5, 2021 by Larry Smith and Steve Casey

Number	Priority	Location	Description	Photo	Comments
1		Westhampton Avenue & Lynnwood Terrace	Lack of positive drainage at culvert outlets		Could be incorporated into a "gateway" into the City due to location
2		Cornwall & Belle Meade Boulevard	Lack of positive drainage at culvert outlet		Likely repair will include grading swale to promote positive drainage but new driveway just downstream has no driveway culvert or dip in its vertical alignment as other driveways have downstream of that one.

3	Vicinity of 604 Westview Avenue	<p>Drainage from east side of Westview relies on maintenance intensive catch basin/trench drain to intercept the flow and prevent it from crossing Westview</p> 	
4	Undersized culvert in vicinity of 4304 Harding Place	<p>Sidewalk work performed at this location in 2020 did not make this worse. Stormwater has been observed by the residences in this vicinity to overtop Harding Place from time to time.</p> 	<p>Downstream pipe network will need to be taken into account when this culvert upgrade is designed.</p>

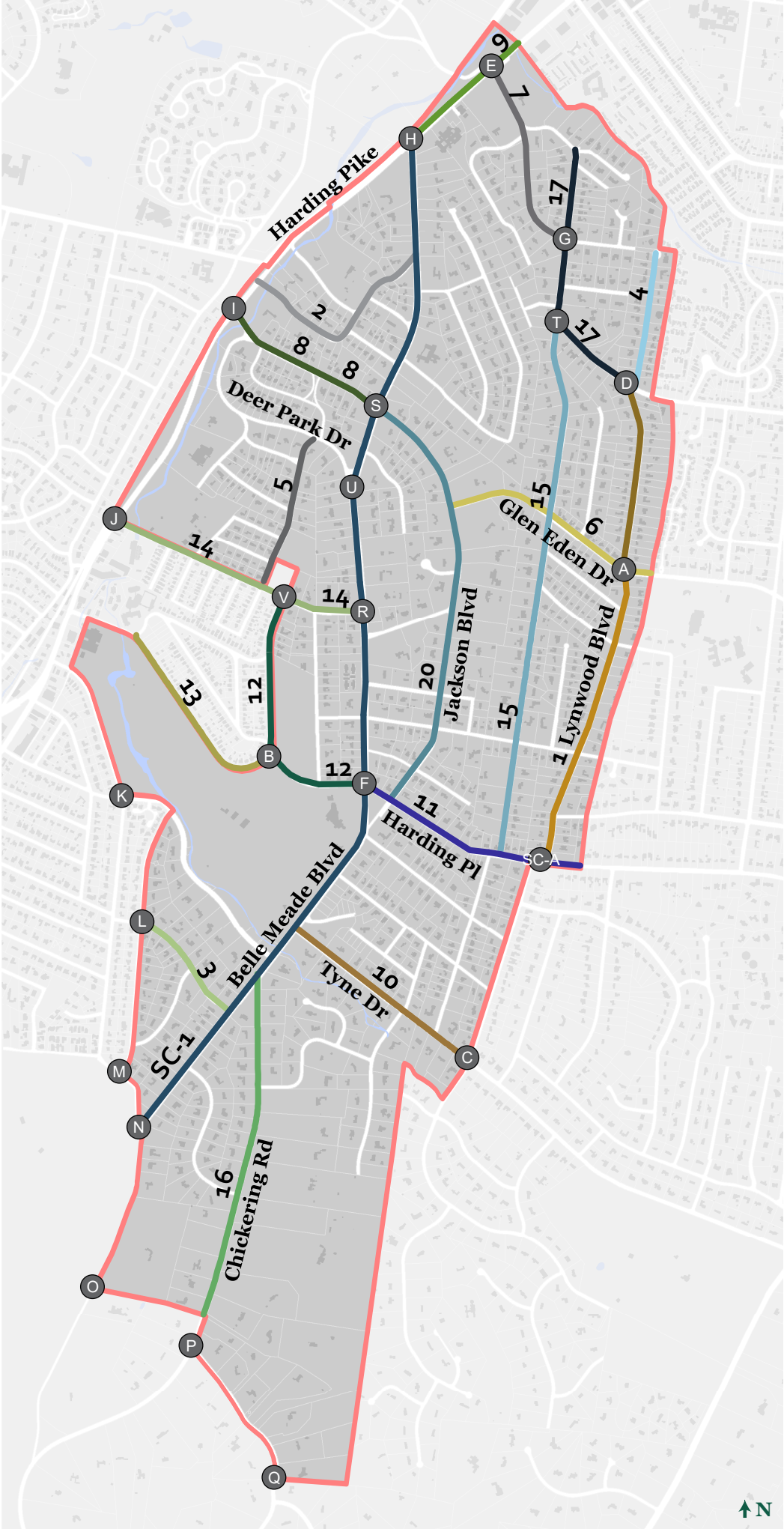
Notes:
Priority based on Level of Service policy document.

APPENDIX E: PROJECT RECOMMENDATIONS AND OPINIONS OF PROBABLE COST





PLAN
RECOMMENDATIONS



PHASE 1 PROJECT RECOMMENDATIONS

Map ID	Location	Recommendations	Phase 1 Projects	Opinion of Probable Cost (Construction Materials/ Labor Only):
1	Lynwood Boulevard from Harding Place to Abbott Martin Road	Create City network trail by constructing sidewalks on either/both sides of the road (there is sufficient ROW - 70 feet) for both sides). Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Install preferred traffic calming measures	\$156,250
7	Lynwood Terrace	Create City network trail with sidewalk to create a continuous connection to Harding Pike. Install medians similar to existing median at Lynwood Boulevard (will require pavement expansion); align marked crosswalks with sidewalk transitions, if necessary.	Construct sidewalks to create a continuous connection to Harding Pike	\$126,500
9	Harding Pike from Belle Meade Boulevard to Richland Creek	Create City network trail on east side to connect Belle Meade to retail node at White Bridge Pike. ROW acquisition will likely be required.	Construct sidewalk from St. George's Episcopal Church to existing sidewalk at Richland Creek to create continuous connection to White Bridge Road commercial node.	\$125,000
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Advisory, brand, and monument signage for the entire boulevard	\$109,375
			Install demonstration median from Belle Meade Boulevard to Chickering	\$85,125
			Install landscaping measures along entire boulevard	\$115,200
Total Opinion of Probable Cost (Construction Materials/ Labor Only):				\$717,450

Note: Opinions of probable cost provided in the table above are associated with the cost of construction materials and labor needed to construct the identified recommendations. However, additional study will be required on an individual project basis to determine costs for, but not limited to, the following items: surveying, specific project design constraints, utility conflicts, ROW acquisition, environmental study and permitting, construction inspection and administration, and individual funding source requirements, such as requirements for TDOT grant opportunities.

PHASE 2 PROJECT RECOMMENDATIONS

Map ID	Location	Recommendations	Phase 2 Projects	Opinion of Probable Cost (Construction Materials/ Labor Only):
2	Clarendon Avenue (particularly around the blind corner)	Install chicanes to create yield street condition, specifically at approaches to blind corner (with signage). Alternatively, medians can be installed, but landscaping/ stonework at will need to be considered for potential impacts.	Traffic calming demonstration project.	NA
7	Lynwood Terrace	Create City network trail with sidewalk to create a continuous connection to Harding Pike. Install medians similar to existing median at Lynwood Boulevard (will require pavement expansion); align marked crosswalks with sidewalk transitions, if necessary.	Install median with marked crosswalks.	\$33,800
8	Jackson Boulevard from Harding Pike to Belle Meade Boulevard	Installation of chicanes to calm/discourage traffic entering from Harding Pike and to create a yield street condition. Implement left turn restrictions at Harding Pike and truck restrictions to preserve and protect historic bridge. Alternatively, medians can be installed but will require pavement expansion. There is also sufficient ROW to install sidewalks.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions).	\$33,900
11	Harding Place (from Lynwood Boulevard to Belle Meade Boulevard)	Install medians within existing pavement width (will likely result in 9 to 10 foot lane width at median). Mid-block pedestrian crossing treatments should be installed concurrent with medians to connect existing sidewalks. Landscaping in medians may be possible, depending on width.	Install median with marked crosswalks.	\$33,800
17	Lynwood Boulevard from Abbott Martin Road to Millrace Lane	Installation of traffic calming measures, which could include median islands or chicanes. Either option will require pavement expansion. Construct sidewalks on either/both sides of the road connecting to existing sidewalk at Lynwood Terrace and creating a continuous connection to Harding Pike. Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.	\$490,575
A	Hobbs Road/Glen Eden Drive and Lynwood Boulevard intersection	Operational enhancements to include a potential mini-roundabout with gateway treatments. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard.	Demonstration project (here or at Abbott Martin Road).	NA
D	Lynwood Boulevard and Abbott Martin Road	Operational enhancements to include a potential miniroundabout with gateway treatments. Possible creation of pocket park or gateway treatments by extending curb at southeast corner. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard, unless sidewalks run continuously on the west/south side (no crossing necessary).	Demonstration project (here or at Abbott Martin Road).	NA

F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and minument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Design intersection and gateway treatments.	\$7,500
H	Belle Meade Boulevard and Harding Pike Intersection	Install northbound left turn lane to facilitate shift of Harding Pike traffic from Jackson Boulevard. Brick paver crossing enhancements concurrent with proposed sidepath on Harding Pike. Install right turn channelizing island/pedestrian refuge with gateway treatments at Belle Meade Boulevard inbound.	Install left turn lane at Belle Meade Boulevard.	NA
I	Jackson Boulevard and Harding Pike Intersection	Installation of chicanes and/or medians with branding elements. Left turn restrictions from Jackson Boulevard to Harding Pike; consider <u>channelization of right turn and installation of raised median island.</u>	Install left turn restriction at Jackson Boulevard.	NA
R	Leake Avenue at Belle Meade Boulevard	Crossing enhancements to facilitate connection between proposed sidewalks on Leake and trail on Belle Meade Boulevard. Intersection operational/safety enhancements to include curb extensions, pavement marking/treatment and signage and other measures to make drivers more aware of intersection approach.	Demonstration project here and/or at Jackson Boulevard.	NA
S	Jackson Boulevard at Belle Meade Boulevard	Intersection operational/safety enhancements to include curb extensions, pavement treatment/markings, warning signs and other measures to make drivers more aware of four-way stop condition. Crossing enhancements to facilitate connection between proposed sidewalks on Jackson and trail on Belle Meade Boulevard.	Demonstration project here and/or at Leake Avenue.	NA
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Begin preliminary study and design of pedestrian and landscape enhancements. Install transitions.	\$255,000
SC-A	Harding Place and Lynwood Boulevard	Reconstruct or improve intersection to include realignment, signalization and/or installation of peanut median concept. Pedestrian crossing and gateway enhancements concurrent with intersection improvements.	Begin preliminary study and design.	\$75,000
Total Opinion of Probable Cost (Construction Materials/ Labor Only):				\$1,239,675

Note: Opinions of probable cost provided in the table above are associated with the cost of construction materials and labor needed to construct the identified recommendations. However, additional study will be required on an individual project basis to determine costs for, but not limited to, the following items: surveying, specific project design constraints, utility conflicts, ROW acquisition, environmental study and permitting, construction inspection and administration, and individual funding source requirements, such as requirements for TDOT grant opportunities.

PHASE 3 PROJECT RECOMMENDATIONS

Map ID	Location	Recommendations	Phase 3 Projects	Opinion of Probable Cost (Construction Materials/ Labor Only):
1	Lynwood Boulevard from Harding Place to Abbott Martin Road	Create City network trail by constructing sidewalks on either/both sides of the road (there is sufficient ROW - 70 feet) for both sides). Will need to mitigate cross-slope/drainage and landscape encroachment. Chicanes concurrent with midblock crossing. Alternatively, shoulders could be added for bicycles.	Construct sidewalks.	\$439,875
2	Clarendon Avenue (particularly around the blind corner)	Install chicanes to create yield street condition, specifically at approaches to blind corner (with signage). Alternatively, medians can be installed, but landscaping/ stonework at will need to be considered for potential impacts.	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks.	\$51,675
3	West Brookfield Ave	Evaluate sidewalks relative to connectivity to the Harding Pike retail corridor; a shoulder/bicycle lane may be constructed in lieu of a sidewalk; chicanes aligned with brick paver crosswalks	Traffic calming demonstration project.	NA
4	Walnut Drive	Install bioswales along one side of the street. If daylighting is required, an easement may be necessary, including coordination with Sugartree Gated Community to tie drainage into their concrete-lined swale located on the corporate boundary of Belle Meade.	Install bioswales.	\$250,000
5	Park Hill Drive	Replace shoulder with sidepath/sidewalk. Install marked crosswalks aligned with entrances to Parmer Park. Could also install chicanes concurrent with sidewalks, creating a yield street condition.	Construct sidewalks. Install chicanes with marked crosswalks.	\$363,200
14	Leake Avenue from Belle Meade Boulevard to Harding Pike	Complete sidewalk gap to create continuous connection between Belle Meade Boulevard, Parmer Park and Harding Pike. Transition to multi-use trail at Historic Mansion site. Installation of four foot wide medians will likely require pavement expansion and chicanes will likely result in yield street condition.	Construct sidewalks. Install chicanes or medians with marked crosswalks.	\$33,800
15	Westview Avenue from Harding Place to Lynwood Boulevard	Installation of traffic calming measures, which could include median islands or chicanes. Chicanes will create a yield street condition; medians will require pavement expansion. Ideally, traffic calming measures will be completed concurrent with improvements to Lynwood Boulevard to mitigate possible traffic shift from Lynwood to Westview.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks.	\$50,700
16	Chickering Road	Installation of traffic calming measures, which could include median islands or chicanes. Either option will require pavement expansion. Alternatively, roadside monuments, planting, and or pavement marking/pavers could be used.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/roadside monuments).	\$22,600

18	Jackson Boulevard from Belle Meade Boulevard to Harding Place	Installation of chicanes to calm/discourage traffic entering and to create a yield street condition. Alternatively, medians can be installed but will require pavement expansion. There is also sufficient ROW to install sidewalks.	Implement preferred traffic calming measures (medians/ chicanes/bulbouts/curb extensions).	\$56,500
A	Hobbs Road/Glen Eden Drive and Lynwood Boulevard intersection	Operational enhancements to include a potential mini-roundabout with gateway treatments. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard.	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.	\$30,650
C	Tyne Drive and Lynwood Boulevard Intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Install gateway treatments.	\$29,400
D	Lynwood Boulevard and Abbott Martin Road	Operational enhancements to include a potential mini-roundabout with gateway treatments. Possible creation of pocket park or gateway treatments by extending curb at southeast corner. Crossing enhancements (brick pavers preferred) to connect proposed sidewalks on Lynwood Boulevard, unless sidewalks run continuously on the west/south side (no crossing necessary).	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.	\$43,900
E	Lynwood Terrace and Harding Pike	Branded monument signage, stonework, etc. to complement stonework on west side. Replace painted channelizing island with a grassed island complete and plantings/ signage. Potentially replace northbound left turn lane with raised median and gateway treatments; convert through lane to shared through/left turn.	Design and construct intersection operational and gateway treatments.	\$46,950
F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and monument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Construct intersection and gateway treatments.	\$75,050
G	Lynwood Terrace/ Lynwood Boulevard Intersection	Intersection operational/safety enhancements to include installation of mini-roundabout or elimination of southbound right turn slip lane and expansion of landscaped area. Pedestrian crossing enhancements to facilitate crossing of continuous sidewalk along Lynwood Boulevard. Continue to engage homeowners at four corners of area with consideration of driveway access.	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.	\$76,300
H	Belle Meade Boulevard and Harding Pike Intersection	Install northbound left turn lane to facilitate shift of Harding Pike traffic from Jackson Boulevard. Brick paver crossing enhancements concurrent with proposed sidepath on Harding Pike. Install right turn channelizing island/pedestrian refuge with gateway treatments at Belle Meade Boulevard inbound.	Design and construct intersection operational and gateway treatments.	\$30,150

I	Jackson Boulevard and Harding Pike Intersection	Installation of chicanes and/or medians with branding elements. Left turn restrictions from Jackson Boulevard to Harding Pike; consider channelization of right turn and installation of raised median island.	Construct intersection and gateway treatments.	\$46,950
N	Belle Meade Boulevard and Page Road Intersection	Primary gateway treatments to include planting, monuments and/or signage in the raised median.	Construct gateway treatments.	\$46,950
P	Chickering Road (southwest)	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.	\$46,950
R	Leake Avenue at Belle Meade Boulevard	Crossing enhancements to facilitate connection between proposed sidewalks on Leake and trail on Belle Meade Boulevard. Intersection operational/safety enhancements to include curb extensions, pavement marking/treatment and signage and other measures to make drivers more aware of intersection approach.	Construct operational and safety enhancements and pedestrian crossing treatments concurrent with trail/sidewalk construction on Belle Meade Boulevard.	\$46,950
S	Jackson Boulevard at Belle Meade Boulevard	Intersection operational/safety enhancements to include curb extensions, pavement treatment/markings, warning signs and other measures to make drivers more aware of four-way stop condition. Crossing enhancements to facilitate connection between proposed sidewalks on Jackson and trail on Belle Meade Boulevard.	Construct operational and safety enhancements and pedestrian crossing treatments concurrent with trail/sidewalk construction on Belle Meade Boulevard.	\$46,950
T	Lynwood Boulevard at Westview Avenue	Intersection operational/safety enhancements to include turn restrictions, warning signs, curb extension, mini-roundabout to mitigate speed on Lynwood through movement. Crossing enhancements to facilitate connection between proposed sidewalks on both streets.	Construct gateway and operational enhancements. Install marked crosswalks concurrent with sidewalk construction on Lynwood Boulevard.	\$46,950
V	Leake Avenue and Westover Drive	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treatments.	\$29,400
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Construct sidewalk or trail from Harding Pike to Jackson Boulevard.	\$949,600
SC-A	Harding Place and Lynwood Boulevard	Reconstruct or improve intersection to include realignment, signalization and/or installation of peanut median concept. Pedestrian crossing and gateway enhancements concurrent with intersection improvements.	Construct recommended intersection design.	\$750,000-\$1,250,000
Total Opinion of Probable Cost (Construction Materials/ Labor Only):				\$3,861,450

Note: Opinions of probable cost provided in the table above are associated with the cost of construction materials and labor needed to construct the identified recommendations. However, additional study will be required on an individual project basis to determine costs for, but not limited to, the following items: surveying, specific project design constraints, utility conflicts, ROW acquisition, environmental study and permitting, construction inspection and administration, and individual funding source requirements, such as requirements for TDOT grant opportunities.

PHASE 4 PROJECT RECOMMENDATIONS

Map ID	Location	Recommendations	Phase 4 Projects	Opinion of Probable Cost (Construction Materials/ Labor Only):
3	West Brookfield Ave	Evaluate sidewalks relative to connectivity to the Harding Pike retail corridor; a shoulder/bicycle lane may be constructed in lieu of a sidewalk; chicanes aligned with brick paver crosswalks	Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.	\$290,375
6	Glen Eden Drive	Installation of Chicanes to calm traffic entering on Hobbs Road and to create a yield street condition. Alternatively, medians can be installed, but will require pavement expansion.	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions).	\$33,900
10	Tyne Drive	Long term evaluation of of sidewalk or sidepath on one side of the street. Critical to engage Metro and Forest Hills for coordination with their individual pedestrian safety long term plans and investment. Can alternate between different sides depending on ROW and encroachment. Install chicanes ; include marked crosswalks and align with sidewalk transitions. Alternatively, can install medians. Either option will require pavement expansion. Continue to enhance visibility of three way stop at Lynwood and Tyne	Traffic calming demonstration project. Implement preferred traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalks.	\$400,175
12	East side of Harding Place and Westover Drive (from Belle Meade Boulevard to Leake Avenue)	Extend sidewalk from the Belle Meade Boulevard intersection, possibly transitioning to sidepath adjacent to the golf course, connecting to the Leake Avenue sidewalks. Installation of chicanes will likely create yield street condition.	Implement traffic calming measures (medians/ chicanes/ bulbouts/ curb extensions) with marked crosswalks. Construct sidewalk/sidepath.	\$208,850
13	South side of Harding Place from Westover Drive to Harding Pike	Install sidewalk on the south side of the road to connect to Harding Pike commercial node. Alternatively, expand pavement and narrow travel lanes to create a shoulder or pedestrian way (with appropriate separation measures).	Construct sidewalks.	\$375,000
B	Westover Drive and Harding Place Intersection	Install primary gateway treatments. Enhancements to existing pocket park, to include signage and possible furniture. Refurbish landscape stone energy dissipation area, which is overgrown with vegetation.	Construct gateway treatments. Install park amenities. Refurbish drainage area concurrent with gateway treatments.	\$46,950

F	Belle Meade Boulevard and Harding Place Intersection	Replace standard crosswalks with brick pavers. Install marked pedestrian crossing with median cut at the southern approach. Expand raised median at northern approach to integrate with crosswalk/create pedestrian refuge. Evaluate possibility of prohibiting eastbound north turn. Replace painted triangle with curbed island/pedestrian refuge. Additional planting and minument signage/branding could be added at corners/ within medians if adequate ROW. Replace span wire signal with decorative mast arm and pedestrian indications.	Install mast arm signal	\$500,000
J	Leake Avenue and Harding Pike intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
K	West Tyne Boulevard and Page Road intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
L	Brookfield Avenue West and Nichol Lane intersection	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
M	Page Road and Forrest Park Dr	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
O	Page Road	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
Q	Chickering Road (south)	Secondary gateway treatments to include plantings, branded monuments and/or pavers.	Construct gateway treaments.	\$29,400
SC-1	Belle Meade Boulevard	Branding and beautification to include improved landscaping and/or signage and other branding elements, relocation of overhead utilities. Pedestrian enhancements to include a median trail or sidewalks. Traffic operational enhancements to include raised/mountable transitions to divert through-traffic from inside turn lanes.	Construct sidewalk or trail from Jackson Boulevard to Harding Place. Construct sidewalk or trail from Harding Place to Percy Warner Park.	\$2,791,200

Total Opinion of Probable Cost (Construction Materials/ Labor Only):

\$4,822,850

Note: Opinions of probable cost provided in the table above are associated with the cost of construction materials and labor needed to construct the identified recommendations. However, additional study will be required on an individual project basis to determine costs for, but not limited to, the following items: surveying, specific project design constraints, utility conflicts, ROW acquisition, environmental study and permitting, construction inspection and administration, and individual funding source requirements, such as requirements for TDOT grant opportunities.



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