ROCHESTER HILLS

GATEWAYS AND STREETSCAPES MASTER PLAN

DESIGN AND IMPLEMENTATION GUIDE JULY 2023



ACKNOWLEDGMENTS

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Overview

The purpose of the Rochester Hills 2023 Gateways and Streetscapes Master Plan is two-fold: to identify locations and design concepts for community gateway signs and to identify amenities to include in future streetscape improvements.

Gateways and intentional landscaping are meant to celebrate the sense of arrival into Rochester Hills and demarcate unique places or community assets. Some of the gateways may be considered destinations themselves. This concept is not new; the Gateways Master Plan draws upon the 2003 Gateways Master Plan and develops a new approach to appropriately locate the gateways in distinct locations and reflect the updated Rochester Hills' brand and identity. The Gateways Master Plan is a unique approach to explore ways for the City to reflect through signage and landscaping the quality of life, economic vitality, and abundant natural resources offered in Rochester Hills.

In combination, the 2023 Gateways and Streetscapes Master Plan provides a framework to guide the City, partner agencies, and private developers through future investments in its streets.

INTRODUCTION

Rochester Hills continues to grow, but its street network is largely already built out. Presently, there are no streetscape guidelines or standards to direct the design and implementation of street construction projects in Rochester Hills. The Streetscapes Master Plan intends to support the goals of the 2021 Transportation Plan and the 2021 Master Plan, aligning transportation and land use to establish new, comprehensive street design standards for the entire City. These guidelines serve as a resource to advance citywide goals of establishing a process for developing street improvement projects. A menu of preferred materials and streetscape amenities is compiled in the Streetscape Master Plan to maintain consistency in street design throughout Rochester Hills.

Planning Process

The 2023 Gateways and Streetscapes Master Plan is the product of an inter-departmental and inter-council effort to develop visual themes using gateways and street furnishings along Rochester Hills' streets. An internal team and steering committee with representatives from the Planning Commission, City Council, Planning Department, Parks and Recreation Department, and Engineering Department was assembled to develop these guidelines. Together, these groups guided the gateway design process and the development of the Streetscape Master Plan. The planning process consisted of four tasks:

INVESTIGA	ΓE

- Internal planning team project kick-off
- Assemble steering committee
- » Review previous planning efforts
- » Establish project schedule and steering committee meetings
- » Collect study area data to evaluate existing streetscape characteristics

EVALUATE

- » Draft Master Plan goals with steering committee
- » Tour Rochester Hills to identify potential gateway locations
- » Develop maps and visual aids to advance the gateway planning process
- » Approve proposed gateway locations with steering committee

ENVISION

» Develop gateway concepts and streetscape guidelines with steering committee feedback, including cost estimates and phasing and implementation strategies

FINALIZE

- » Incorporate steering committee input into the final Master Plan
- » Present to the Planning Commission and City Council for formal adoption

The City of Rochester Hills developed the 2023 Gateways and Streetscapes Master Plan to provide design guidance to the City, partner agencies, and private developers. The document is organized into the following sections:

Introduction.

Existing Conditions. Describes the general characteristics of existing gateway features and streetscapes in Rochester Hills. Consult this section for strengths, weaknesses, opportunities, and challenges regarding the existing gateway and streetscape elements found in Rochester Hills.

Landscaping Design Guide. Covers strategies for targeted greening, including gateway planting palettes, median and roundabout landscaping, and right-of-way landscaping, such as street trees and stormwater management.

Implementation. Provides a phasing strategy to implement the Gateways Master Plan recommendations. The Streetscape Master Plan will be implemented on a case-by-case basis and does not require a coordinated timeline of implementation. Organizational roles and responsibilities related to streetscape projects are defined here.

How to Use this Plan

Gateways Master Plan. Provides gateway design concepts with dimensions and materials call-outs, lighting, and elements that lend a sense of place to residents and visitors. Landscape treatments can be found in the Landscaping Design Guide. Plan view renderings can be found in Appendix A.

Streetscape Master Plan. Identifies two streetscape design families for streetscape furnishings and construction standards. New developments and capital improvement projects are recommended to apply the palette of streetscape elements outlined in this chapter. Specification sheets for these products are available in Appendix B.

Applicability

Gateways. The Gateways Master Plan provides a framework for the City to direct future projects that will implement unique and branded gateway elements and guide the streetscape design. The Guide is not a rigid requirement, but intended to clearly manage expectations. Gateway placement may be adjusted when implemented, but the materials and vision should reflect the concepts provided in this plan. The timing for each gateway will depend on various factors such as funding and ongoing development opportunities that may include gateway incentive considerations.

Streetscapes. The Streetscape Master Plan applies to projects along public rights-of-way in Rochester Hills, including those managed by the City of Rochester Hills, the Michigan Department of Transportation (MDOT) and the Road Commission for Oakland County (RCOC). MDOT, the RCOC, and the City of Rochester Hills are each responsible for the maintenance of several roads located in the City. Few, if any, streetscape design standards will apply to local roads. Private roads are exempt from the streetscape guidelines. This plan establishes a unified vision for all roads in Rochester Hills and is meant to be a guide for MDOT and RCOC to reference for their projects.

The Streetscape Master Plan will inform developer discussions for how the project can proceed to the site plan phase. Streetscape design proposals will be evaluated during the development site plan review process based on the surrounding land use context, site conditions, and ways in which the projects address applicable streetscape guidelines and goals. Alternative solutions will be considered, and developers are encouraged to incorporate gateway and streetscape elements as appropriate.



W Tienken Rd

Dutton Re

Walton Blvd

Hamlin Rd S Adams Rd

W Aubum Rd

South Blvd W

MAP 1: Road ownership.



Plan Goals

Gateways Master Plan

1. To strengthen the sense of place within the City of Rochester Hills through targeted and unique gateway features.

2. The Design features and standards must be realistic and achievable for implementation.

3. Provide a detailed and realistic framework for the City to initiate and implement, including:

- A proposed order of implementation.
- An action plan based upon available funding opportunities and/or City budgets.
- Identification of what is achievable within the next 3 5 years.

Streetscape Master Plan

1. Maintain streetscape harmony across the City through consistent streetscape design elements.

2. Ensure that implemented street designs support adjacent land uses and simultaneously strengthen the safety and character of neighborhoods and business areas.

3. Provide realistic and achievable streetscape standards for implementation.

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Overview

Rochester Hills is renowned for being a place where people want to live, work, shop, spend time at parks and on trails, and more. There are currently two signs considered existing gateways in Rochester Hills, one in the northeast corner at the intersection of Crooks Road and South Boulevard, and a smaller gateway treatment on Auburn Road to delineate the Brooklands district. There is ample opportunity to add more visual cues through a cohesive family of gateways, roadside city boundary signage, and park signage. Featuring the City's memorable brand throughout the community will aid in creating a sense of place and increase Rochester Hills' visibility.

Streets serve as economic drivers for a successful community. By accommodating walkability through a robust system of shareduse pathways, they can also increase connectivity between neighborhoods and commercial centers. Simultaneously, the streets are not always used to their full potential as public, shared-use places. Rochester Hills desires a unified streetscape character through consistent application of hardscape materials, street furniture, lighting, and more. There is a strong tree-planting program in Rochester Hills, but filling street tree gaps is dependent on road jurisdiction and the presence of utilities. To create cohesiveness between each unique street in Rochester Hills, streetscape improvements will share some common elements that tie the Streetscape Master Plan recommendations together. The Streetscape Master Plan process involves a dialogue about materials, design elements, and colors, which will inform the style of streetscape amenities.

EXISTING CONDITIONS

Existing Gateways and Identity Elements

The following pages show examples of existing gateway and identity elements found in Rochester Hills. The City's brand presence is integrated into signage reflecting natural elements, recreation, institutions, and retail areas. Where these key elements exist, the proposed gateways will recognize and contribute to the context of the area without creating unnecessary visual pollution. The new gateways communicate the Rochester Hills brand and will update existing gateway features for consistency.



Left: Identity signage on Auburn Road entering the Brooklands district. Right: Existing gateway at Crooks Road and South Boulevard.



Median and roundabout structures act as gateway and identity elements in the Brooklands district.



The Bebb Oak community.



The Bebb Oak on Livernois Road is an element of the Rochester Hills logo, appearing in lighting and concrete motifs throughout the







classifications.

MAP 2: Roads by National Functional Class (NFC).

Existing Streetscape Features

Streets are typically categorized by daily traffic volume and access, following the framework of National Functional Class (NFC). This framework organizes streets into three primary categories: Arterials, Collectors, and Local Streets. This plan differs from the conventional approach and instead reflects the function of a street more holistically, considering land use, character, and pedestrian comfort. In Rochester Hills, the NFC categories are still used to guide decision-making about transportation projects, however, the context-based design families presented in the Streetscape Master Plan will serve as an overlay and supplement to the NFC

The following pages show the existing materials found along streetscapes in Rochester Hills.

Existing Streetscape Features



Aluminum Fencing



Vinyl Fencing and Retaining Wall



Steel Cable Railing



Traffic Light Configuration



Median Lighting



Trail Crossing





Existing Streetscape Features

Roundabout Landscaping and Hardscape Materials



Standard Median Landscaping



Median Landscaping and Hardscape Materials

There is opportunity to unify the varying landscaping and materials found in roundabouts and medians.

Crosswalks, mid-block crossings, abundant median and street landscaping



Pedestrian lighting complements street lighting; median gateway feature



Other street furnishings include benches, litter receptacles, and tree boxes

The Auburn Road Corridor project in the Brooklands district is an example of a cohesive, identity-driven streetscape in Rochester Hills.

Strengths

- » Rochester Hills has demonstrated good streetscape design principles and an innovative vision for the community through its 2018 Master Plan update and 2021 Transportation Plan update.
- All gateways are located in the public right-of-way. There is a \$300,000 budget already allocated to implement gateways over the next 3 years. Further, there is a \$450,000 budget available to implement new parks signage in 2024.
- Most of Rochester Hills is connected by, at minimum, 5-foot-wide sidewalks, and 8-foot-wide shared-use paths which foster excellent pedestrian connectivity through the community. The materials are concrete or asphalt, which is easy to maintain and a low cost to implement. Existing design elements such as fencing, median landscaping, and hardscape can be standardized and distributed throughout the community.

Weaknesses

- Existing gateway features are not very distinctive and few contribute to placemaking opportunities.
- Block sizes and street widths present pedestrian challenges.
- Trail crossings need improvement for pedestrian comfort, maintenance, and safety.
- Inconsistent landscaping and tree canopy along roads.
- Overhead utilities at intersections are unsightly.
- Hardscape materials, lighting, and landscaping used in roundabouts and medians are inconsistent. The red pigmented stamped concrete fades to a muted pink color over time. Material durability and visual longevity should be considered in future hardscape projects.

Challenges

- implementation.

Conclusion

Implementation of gateways that reflect the Rochester Hills' brand will provide visual aids that connect residents and visitors with the community, contributing to an unforgettable experience. Gateways and gateway elements located at community boundaries and near key destinations will distinguish Rochester Hills from its neighbors. There is a strong desire for harmonious and thematic streetscape treatments in Rochester Hills. Currently there is some uniformity across site furnishings, lighting, and signage, but there is a need to complete the package with cohesive components. In combination, the Gateways and Streetscapes Master Plan will consistently implement the Rochester Hills brand and unify the look and feel of streetscapes.

» The 2018 Master Plan proposes careful design of mixed-use places through redevelopment, infill, and re-imagining underutilized properties that will create vibrant places throughout Rochester Hills.

» There are numerous opportunities to implement gateways through public-private partnerships.

» There is abundant space for street furniture, landscaping, mid-block crossings, enhanced crosswalks, and other features to create a more comfortable pedestrian experience.

» There is opportunity to coordinate streetscape design elements with residential and commercial land uses and seamlessly integrate street furnishings that suit the character of the area and promote the Rochester Hills brand.

» Most principal arterial roads are under the jurisdiction of the Michigan Department of Transportation (MDOT) or the Road Commission for Oakland County (RCOC). Streetscape materials and gateway structures will require review and approval prior to

» For the Streetscape Master Plan to be successful, dedicated annual funding is necessary.

» Working within public right-of-way constraints to implement gateways of an appropriate size and scale.

» Long-term maintenance of landscaping.

Dutton Rd

W Tienken Rd

Walton Blvd

Gateways Master Plan

Hamlin Rd

S Adams Rd

W Auburn Rd

South Blvd W

MAP 3: Proposed gateway locations, updated City boundary signage, and updated park signage.



Overview

What people see, whether they're walking, biking, or driving, has a big impact on how they feel about a place. The central goal of the 2023 Gateways and Streetscapes Master Plan is developing a palette of design elements that will be used to create a sense of place and apply a unique, complementary style across the City. Gateways go beyond enhancing the visual experience by announcing the arrival to the community border or demarcating a special place with the City brand.

The process to identify the gateway locations shown in Map 3 took into account City boundaries, surrounding land use, traffic volume, and available right-of-way. The City boundary signage reflects an inventory of existing signage, with the exception of signs to be removed due to their proximity to proposed gateways. Regional parks and sports parks were assigned primary park signage, and secondary signage was developed to maintain the character of neighborhood parks and mini parks.

Overall Design Theme

A well-executed gateway design will provide a positive first impression for the community and convey the overall attitude of the City it represents. The following family of gateway designs embraces the forms and colors of the City of Rochester Hills logo, while also introducing a materials palette that show consideration to the City's "Innovative by Nature" tag line. The gateway family is designed to complement existing signage that will remain, such as the Brooklands District sign and municipal signage.

Comprised primarily of textured concrete and vibrant aluminum paneling, this gateway signage family successfully blends flowing lines, repeated logo features, and a recognizable color palette to create multiple features of varying sizes. By maintaining similar elements across all of the features, they will create a unifying harmony and community familiarity across the City.



Gateway Family Package



Walton Boulevard Primary Gateway



Secondary Gateway



Tertiary Gateway









Rochester Road Primary Gateway Features

The Primary Gateway features are to be placed at the City's most traveled entry points. This gateway is meant to be the largest within the gateway family, located on the north side of the Rochester Road (M-150) and M-59 interchange.

Features:

- Colored acrylic aluminum panels utilize negative space to creatively reflect the Bebb oak and Rochester Hills brand.
- Interior lighting elements makes the gateway stand out, day and night. •
- Larger decorative concrete walls with exposed textures and rolling surfaces are utilized to help anchor the features to the ground plane.
- Robust and intentional landscaping will complement the gateway with seasonal interest.





The gateway illuminated at night.

Wider perspective of the gateway in relation to motorists on Rochester



Gateway dimensions.





Opposite side.

Walton Boulevard Primary Gateway Features

A Primary Gateway feature is proposed at the City boundary by Oakland University, in the median on Walton Boulevard.

Features:

(1)

- Decorative concrete walls and aluminum paneling at a larger scale than the secondary and tertiary gateways.
- Internally-lit cabinet illuminates the text and logo reinforces the Rochester Hills brand, day and night.
- Robust landscaping to establish the arrival into Rochester Hills and enhance the median's appearance.

Gateway dimensions.



Above: Front side, illuminated. Below: Opposite side, illuminated.







Front.

Opposite side.

2

Secondary Gateway Features

The Secondary Gateway features are smaller versions of the primary gateway features, meant to be located in areas where higher impact is desired, but traffic counts don't quite warrant a primary gateway experience.

Features:

- Decorative concrete walls and aluminum paneling at a smaller scale than their primary gateway counterparts.
- Lighting for these features is not likely to be internal, but rather back-lit to accentuate the features at night.
- Landscaping palette is consistent with the primary gateway landscaping, with a smaller footprint.

Locations:

- City boundary
- gateway signage)

Rochester Road and Orion Road

• In the Hamlin Road median near Old Adams Road at the

• Hamlin Road and Adams Road

Crooks Road and South Boulevard (to replace the existing

• Hamlin Road and Dequindre Road

• An alternate Secondary Gateway feature is proposed in the roundabout at Washington Road, Runyon Road, and Tienken Road. This design will maintain the decorative wall and sign panel, however the materials may need to be adjusted to accommodate the historic nature of the area.





Front side, illuminated.



Opposite side, illuminated.



Opposite side.

3 Tertiary Gateway Features

Features:

feature.

These gateway features are designed to fit boundary locations of importance, but without the space available for the larger features. A Tertiary Gateway feature is proposed at Dutton Road and Adams Road, and at eastern the City boundary on Walton Boulevard near the Great Oaks subdivision entrance.

• These features will maintain the decorative aluminum paneling, however the decorative concrete wall was removed for this

Vertical presentation offers a smaller footprint.
Lighting for night time viewing is not necessary, as these locations are lesser traveled than those proposed for Primary and Secondary gateways.



Gateway dimensions.











Park signage dimensions.



placeholder - secondary park signage concept (same style and dimensions as tertiary gateway)

Park Signage

City Park signage is included in the proposed gateway family. The proposed park signs are meant to replace the existing signs at all parks. Two concepts were developed to distinguish regional and sports parks from neighborhood parks. The colored aluminum paneling on the signs may vary from sign to sign (park to park) using the Rochester Hills primary brand colors.

Primary park signage locations:

- Bloomer Park
- Borden Park (1 sign for each entrance)
- Spencer Park
- Innovation Hills Park

Primary park signage features:

• These signs will utilize the decorative concrete wall and aluminum sign panel, however the panel will be situated in a horizontal layout as opposed to the vertical format in the previously mentioned features.

Secondary park signage locations:

- Avon Nature Park
- Avondale Park
- Allen Park
- Nowicki Park
- Veterans Memorial Pointe
- Wabash Park

Secondary park signage features:

• These signs will utilize the vertical aluminum sign panel seen in the Tertiary gateway concepts.





City Boundary Signage

The City Boundary signs are the smallest in stature. These signs are to be located at all City boundary locations where another gateway sign is not proposed. They are intended to provide increased appearance than the square aluminum logo signs that are currently in place. These signs will be made of aluminum typical of a road sign, however they are proposed to be sized and shaped differently, and will provide a vibrant welcome to the City.

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Overview



Amenities and paver design contribute to the character of this streetscape in Grand Rapids, MI.

Streetscape Master Plan

The Rochester Hills Streetscape Master Plan was developed to ensure that streetscape infrastructure is updated in a manner that creates a safe, comfortable, consistent, and attractive environment. Newer streetscape projects, such as the Auburn Road Corridor project, serve as an established benchmark for how a cohesive, identity-driven streetscape can be successfully designed and implemented. Further, there is sustained private investment in Rochester Hills operating without a set of guidelines to adhere to. The purpose of the Streetscape Guidelines planning process is to provide direction for future public and private projects and contribute to Rochester Hills' sense of place.

Streetscape Design Families

The design families were derived from the Rochester Hills' tagline, "Innovative by Nature." The two options are meant to allow flexibility and avoid complete conformity to a single family of furnishings and emphasize compatibility between the area's character and the streetscape element design family. The impact of aesthetics, function, as well as practical concerns such as supply availability, cost, and maintenance were evaluated for each item. Project-level conditions and goals, as well as engineering judgment, should dictate which street design elements are most appropriate. Alternative site furnishings should reflect the forms of the development, be compatible with the design families mentioned in this plan, and be low-maintenance and durable.

Innovative

- Land Use: A mix of local- and regional-serving commercial, office, civic, and industrial developments
- Modern forms and materials emphasize functionality and longevity
- Reflects a thriving economic and public realm
- Opportunity to custom-powder coat furnishings with brand colors

Nature

- » Land Use: Predominantly residential and nature-focused
- Composite wood accents are physically and visually warmer, and resistant to moisture, insects, fire, vandalism, and decay
- Abundant low-maintenance native trees and landscaping to reflect Rochester Hills' extensive park and wildlife habitat systems

The Streetscape Master Plan are organized into three categories: the pedestrian zone, the active zone, and future considerations. The pedestrian zone encompasses the street elements from the curb to the sidewalk that directly influence the walking element. The active zone consists of elements located within the roadway. Future considerations acknowledges transportation innovation such as electric vehicles, micromobility options such as bikeshare, and public transportation expansion. Specification sheets for furnishings like benches and trash containers can be found in the Appendix.

Innovative

Nature

Streetscape Master Plan

Pedestrian Zone Amenities | Hardscape Materials

It is recommended to continue use of asphalt and poured-in-place concrete as paving material in the pedestrian zone for its durability and maximum accessibility. Creativity in paving material and design are encouraged, if they are compatible with the character of the development and the unified character of the streetscape.

- » Type A: Stamped concrete planks
- » Type B: Stamped concrete hexagonal
- Scoring pattern: Perpendicular to curb
- Pigment: Flexible, but grey, dark grey, and charcoal are preferred over brown or red pigments.

» Type C: Exposed aggregate concrete, poured in place



Pedestrian Zone Amenities | *Public Seating*

Providing areas for seating along sidewalks and throughout developments is important to make Rochester Hills an inviting place to walk and visit. While there is flexibility in seating specifics, furniture should be backed, low-maintenance, and durable. Further, providing shade or selecting material finishes that don't become excessively heated when exposed to sunlight is a priority. Rochester Hills' logo and brand colors may be incorporated into custom benches where appropriate.

Innovative

» Type A: Rest bench as manufactured by Landscape Forms, or equal.

Material and finish: Powder-coated metal, flexible finish

Size and configuration: Backed, 26"x80"x33"

Nature

» Type B: Rest bench as manufactured by Landscape Forms, or equal.

Material and finish: Jarrah woodgrain with powder-coated metal, flexible finish

Size and configuration: Backed, 26"x80"x33"

See Appendix B (p. 9) for spec sheets.





Consider placing litter and recycling receptacles near high-volume pedestrian locations. The receptacle should not obstruct any pedestrian paths and should have at least a 5 foot clearance zone surrounding it. Another criterion for location is that the receptacle can be easily accessed, emptied, or serviced for maintenance.

Innovative

or equal.

Material and finish: Powder-coated stainless steel, bright silver gloss or custom brand color

Nature

See Appendix B (p. 99) for spec sheets.

Pedestrian Zone Amenities | *Litter Receptacle*

» Type A: Tonyo receptacle as manufactured by Forms+Surfaces,

Size and configuration: 36- or 60-gallon capacity with rain hat, single-stream preferred. Split-stream receptacles for recycling are dependent on the City's recycling policy and may be implemented should recycling in public places become more prevalent.





» Type B: Tonyo receptacle as manufactured by Forms+Surfaces, or equal.

Material and finish: Wood-paneled, multiple stains available, with powder-coated stainless steel or custom brand color

Size and configuration: 36- or 60-gallon capacity with rain hat, single-stream preferred. Split-stream receptacles for recycling are dependent on the City's recycling policy and may be implemented should recycling in public places become more prevalent.

Pedestrian Zone Amenities | *Bicycle Parking*

The standard bicycle rack is an inverted U-shape that provides contact with the bicycle at two points. Bicycle parking should not obstruct pedestrian traffic or interfere with use of a pedestrian area. Lighting and visibility should also be considered when selecting areas for bicycle parking.

Innovative

» Type A: Twist bike rack as manufactured by Forms+Surfaces, or equal.

Material and finish: Powder-coated metal. flexible finish

Nature

» Type B: Multiplicity bike rack as manufactured by Landscape Forms, or equal.

Material and finish: Powder-coated metal, flexible finish with Jarrah woodgrain

See Appendix B (pgs. 100 - 101) for spec sheets.





Lighting is a critical streetscape element to provide a sense of safety and illuminate pedestrians and cyclists to motorists. While Rochester Hills values dark sky preservation, the installation of new light fixtures will emphasize new gateway features and illuminate trail crossings, mid-block crossings, access ramps, crosswalks, seating, and transit stops, development pathways, and building entrances. Bollard lighting can be used alone or in combination with pedestrian lighting or street lighting in high-activity areas to encourage pedestrian use at night. Lighting should be located in such a way that reduces the overall number of poles along the street.

Innovative

Material and finish: Stainless steel

Nature equal.

Material and finish: Powder-coated aluminum, TBD, solar-powered and Dark Sky Approved 3000K LEDs

See Appendix B (pgs. 102 - 105) for spec sheets.

Pedestrian Zone Amenities | Bollard Lighting

» Type A: Light Column Bollard with Scale shield design as manufactured by Forms+Surfaces, or equal.

» Type B: Radia Bollard as manufactured by Forms+Surfaces, or



Pedestrian Zone Amenities | Pedestrian Lighting

Pedestrian Zone Amenities | *Planters*

The pedestrian-height lighting was selected to be cohesive with the bollard lighting and provide an alternative to replace existing pedestrian lighting, such as the traditional luminaries seen at the Avon and Livernois intersection.

Innovative

» Type A: Light Column Pedestrian Light with Scale shield as manufactured by Forms+Surfaces, or equal.

Material and finish: Stainless steel

Nature

» Type B: Cordia Pedestrian Light as manufactured by Forms + Surfaces, or equal.

Material and finish: Powder-coated metal, flexible finish

See Appendix B (pgs. 106 - 109) for spec sheets.





Innovative

Maglin, or equal.

Nature Forms, or equal.

Material and finish: Steel frame with wood infill panels

The use of planting containers is encouraged in the pedestrian zone and new developments that affect the streetscape. Planting containers should be placed near building frontages and seating areas to add color and vibrancy to streetscapes and intersections. The presentation of the planters seen in the imagery to the right is not meant to be standardized but to serve as inspiration of how planters may be composed.

» Type A: Square or rectangle 1500 planter as manufactured by

Material and finish: Formed steel with matte finish

» Type B: Square Plaza planter as manufactured by Landscape

See Appendix B (pgs. 110 - 111) for spec sheets.





Pedestrian Zone Amenities | Fencing

There are several different types of fencing seen throughout Rochester Hills as a safety measure, to protect natural resources, and to provide screening. Certain developments abutting streets require aesthetically pleasing screening to minimize visual pollution and separate space. The stainless steel cable railing and black aluminum railing both currently exist in streetscape treatments. Fencing is context-sensitive but should be functionally appropriate and comply with the requirements of Ordinance Article 12 - Landscaping and Screening.

Innovative

- » Type A: Stainless steel cable railing
- » Type B: Black aluminum railing





Retaining walls are seen throughout Rochester Hills to delineate steep slope areas along streetscapes. While there is flexibility in the retaining wall composition to complement the character of the development, these options can be employed in public streetscape projects. The concrete option can reflect the treatment found in gateway features, or a form liner can be used to create a relief of the Rochester Hills logo. The stone option can utilize the black aluminum railing already used in streetscape projects.

Innovative

Nature

- » Type C: Composite wood fencing to replace vinyl over time
- » Type D: Densely planted evergreen landscaping to form a living green wall (minimum height: six feet), where appropriate





Nature railing, if applicable.

Pedestrian Zone Amenities | Retaining Walls

» Type A: Sand-blasted concrete and brushed concrete treatment, with optional form liner relief

» Type B: Pre-cast or stamped concrete options to create a natural stone texture with black aluminum





Active Zone Amenities | Crosswalks

Crosswalks and curb ramps should provide a safe and functional transition for pedestrians from one sidewalk to another. Where there is opportunity and resources, themes such as civic elements or school colors can be incorporated into the crosswalks. The options to the right are meant to be inspiration for more creative crosswalk treatments.

» Type A: Standard striped crosswalk

Innovative

» Type B: Artistic crosswalk, where applicable





Active Zone Amenities | Mid-block Crossings, Pedestrian Refuge Islands, and Trail Crossings

The development of updated streetscape environments in Rochester Hills provide an opportunity to incorporate safety and walkability through mid-block crossings, pedestrian refuge islands, and enhanced trail crossings. These improvements will make crossing streets easier and safer for users, with numerous co-benefits, including traffic calming and greening opportunities. It is recommended to utilize the National Association of City Transportation Officials (NACTO) standards, where applicable.



Nature

» Type C: Artistic crosswalk with natural resource themes, where applicable

Active Zone Amenities | Street Lighting

There is inconsistency across street lights in Rochester Hills. Lights may be located at intersections or in medians where required by safety and engineering standards. Ideally, wood post lamp posts will be replaced by metal poles. Mast arm poles at intersections will help to manage overhead wires and visual pollution. Black is the preferred wrap treatment or powdercoat option for light posts at intersections and along streetscapes. The black fluted single- and double-pronged streetlights in the image below reflect the DTE standard for outdoor municipal street lighting, which should become Rochester Hills' standards for street lighting where necessary.





Guard rails present another opportunity to implement consistent materials and promote the Rochester Hills brand. When applicable, a concrete form liner of the Rochester Hills' logo, Bebb oak, or other identity elements can be applied to the concrete wall to create a relief.

Active Zone Amenities | *Barrier Elements*



Active Zone Amenities | Roundabout and Median Materials Standards

Roundabouts have been effectively implemented on Rochester Hills' busiest streets, and several more roundabout construction projects are identified in the 2021 Transportation Master Plan. Roundabout dimensions are context-dependent based on turning radius requirements, but materials used in the roundabouts should be consistent throughout Rochester Hills. Roundabouts also provide opportunities for plantings, gateway features, or public art. The palette of materials is applicable to both roundabouts and medians.

- (A) Striped Crosswalk
- Splitter Island **(B)** No pigment or gray stamped concrete
- Truck Apron (c)No pigment or gray stamped concrete
- Street Lights (D)
- (E)
- Landscaping/Art Landscaping Guide defines appropriate plants



Street sign posts could also receive treatments to create cohesiveness with street lights and further reflect the Rochester Hills brand. There are several developments in Rochester Hills that have customized the appearance of their street sign posts with fluted wraps and logos on the street signs themselves. This level of customization is encouraged for new developments.

Outside of the development realm, galvanized steel street sign posts should receive a black plastic wrap treatment. Street signs and banner arm signage bearing the Rochester Hills logo as demonstrated below can be phased in high-traffic areas, where desired.



Future Considerations | Banner Arm and Street Signage







Future Considerations

There are transportation innovations for which this plan can't identify the construction standards, details, and specifications. Based on recent transportation trends, standards for the future considerations mentioned below should be included as a future task of the Streetscape Master Plan.

Electric Vehicle (EV) Charging Stations

» There is currently a movement by Michigan policymakers to expand the charging infrastructure available for EV owners. Developers may be interested in adding a number of EV charging stations to their parking areas for an incentive and utility rebates.

Micromobility

There may be opportunity to expand bikeshare services to Rochester Hills. The locations that could serve as a pilot project are Oakland University and Rochester University, where there is enough density to generate a significant number of trips. Docked bikeshare stations are preferred to dockless stations. Electric scooter services are not preferred as a micromobility option.

Public Transit Stops

» In anticipation of SMART bus services expanding into Rochester Hills, public transit stop standards are also a future consideration. Bus stops and shelters should incorporate SMART standards and be coordinated with Rochester Hills' Planning and Economic Development Department.



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Overview

Landscaping in the right-of-way, including medians and roundabouts, adds greenery to the streetscape without affecting delineated space for pedestrians. The Gateways and Streetscapes Master Plan call for the selection, installation, and maintenance of landscaping to contribute to Rochester Hills' character. Where space and staff capacity for maintenance allow, street trees, median landscaping, and roundabout landscaping are encouraged. The Landscaping Guide was developed with a focus on low-maintenance perennial plants to provide visual interest, and trees defined as acceptable in the Rochester Hills Street Tree List.





Right-of-way landscaping along Auburn Road located in the roundabout, medians, and along sidewalks.

Gateway Planting Palettes

Overview

The Gateway Master Plan identifies locations and provides design concepts for gateway elements in Rochester Hills. The addition of decorative landscaping with year-round interest reinforces the Rochester Hills brand and emphasizes both the City's commitment to quality of life and preserving beautiful natural places.

Gateway landscaping plans can be found in <u>Appendix C.</u>





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GRA

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Gateway Planting Palettes

FEATHER REED GRASS



FOUNTAIN GRASS



Right-of-Way Landscaping

Median & Roundabout Landscaping

A median is the portion of the roadway separating traffic moving in opposite directions. Landscaping, lighting, and street furnishings should maintain a similar look and feel along the entire length of the road. Where applicable, median landscaping should utilize the planting palette from the recently completed Hamlin Road project. Plantings should be non-invasive, low-maintenance, and droughtresistant varieties and species. Location of utilities such as street lights, fire hydrants, stormwater culverts, power lines and transformers are also a consideration.

Roundabout plantings should be low-maintenance and not block sight lines for motorists or pedestrians. Artistic and cultural elements are encouraged where appropriate.









'URBAN PINNACLE' BUR OAK

'HERITAGE' OAK

'AMERICAN SENTRY' LINDEN



'BOULEVARD' LINDEN

SHRUBS ERING Ο

PERENNIAL



CORNELIAN CHERRY

DOGWOOD



ALLEGHANY

VIBURNUM

DARK TOWERS PENSTEMON



LITTLE QUICKFIRE HYDRANGEA



KODIAK BUSH HONEYSUCKLE

Street Trees

Green stormwater infrastructure (GSI) can also exist in the right-ofway in the form of curb extensions, tree box bioretention planters, and rain gardens. Curb extensions are a suitable landscaping treatment where right-of-way space is limited. They fit well at fourway intersections, reducing the distance to cross the street and collecting stormwater runoff, reducing the amount that enters the stormwater and sewer system. Tree box bioretention planters are best suited in wider areas that lack mature canopy trees. The planter boxes should be a minimum of 5' wide and can vary in length, depending on available space and utility constraints. Rain gardens are plantings in depressed areas that allow rainwater to infiltrate into the soil. Unpaved right-of-way open spaces, ditches, and areas opposite the sidewalk are potential locations for GSI.

Right-of-Way Landscaping

Street trees play an important role in absorbing stormwater and cooling communities. Tree infill in the right-of-way is encouraged where trees are missing and utilities to not pose a conflict. The Rochester Hills' Street Tree List provides guidance on appropriate species for street tree planting. All new tree plantings should be a minimum of 2-inch caliper in diameter. A diversity of tree species is recommended throughout the project to decrease vulnerability to disease. Large trees not permitted near sidewalks per the street tree list should also not be planted where overhead utilities are present. Small flowering trees and medium-trees will be considered.



Curb extension GSI in Philadelphia, PA.



Tree box bioretention planters in the Brooklands District.

Green Stormwater Infrastructure

Overview

The Gateways and Streetscapes Master Plan provides a framework for implementation. Gateway Master Plan implementation requires coordination between departments to select a gateway fabricator, provide electrical sources where necessary, and install and maintain landscaping. Rochester Hills has available funding resources to implement gateways and enhanced park signage as early as possible. Plan view renderings and landscape plans to guide construction are available in the Appendix.

Implementation

Implementation of the Streetscape Master Plan doesn't have an ambitious timeline for completion like the Gateway Master Plan. It is meant to serve as a guiding tool for public and private projects impacting streetscapes in the future. Implementation of these guidelines as the Rochester Hills standard should begin immediately after adoption. Projects already through the concept design phase may proceed but should attempt to include as many components from the Streetscape Master Plan as feasible.

Gateway Master Plan Goals

1. To strengthen the sense of place within the City of Rochester Hills through targeted and unique gateway features.

The gateway design concepts reflect the Rochester Hills' brand and increase the City's visibility to residents and visitors. Gateway features and city boundary signage enhance the arrival experience and serve as visual anchors.

2. The Design features and standards must be realistic and achievable for implementation.

Material selections reflect the natural resources and vibrant character of Rochester Hills. Landscape treatments at the gateway locations are implemented with sustainability at front of mind, including low-water use plant materials and low-maintenance planting patterns.

- 3. Provide a detailed and realistic framework for the City to initiate and implement, including:
 - A proposed order of implementation.

Gateways being installed in close succession will have a positive impact over incremental progress and promote the Rochester Hills brand at high-traffic areas throughout the City. With the available resources to bring these concepts into built forms, the proposed order of implementation is dependent on the capacity of the fabricator.

• An action plan based upon available funding opportunities and/or City budgets.

There is a \$300,000 budget available to implement gateways and a \$450,000 budget available to implement enhanced park signage.

• Identification of what is achievable within the next 3 - 5 years.

This plan assumes implementation of the proposed gateways and park signage are achievable within the next 3 - 5 years. This is dependent on Rochester Hills staff capacity, selection of a fabricator, and assuming no major supply chain disruptions.

applicable.

Streetscape Master Plan

1. Maintain streetscape harmony across the City through consistent streetscape design elements.

The plan establishes standards for key components of the streetscape, encompassing the pedestrian zone (from curb to sidewalk), the active zone (from curb to curb), and landscaping considerations. These standards will become Rochester Hills' policy to guide departmental projects and private development site plans.

2. Ensure that implemented street designs support adjacent land uses and simultaneously strengthen the safety and character of neighborhoods and business areas.

The plan develops two design element families, Innovative and Nature, to be implemented depending on area context. There is also flexibility for modifications, such as for historic areas. Safety standards are incorporated into components of the plan where

3. Provide realistic and achievable streetscape standards for implementation.

Ordinances changes are recommended to require the Streetscape Master Plan elements to be implemented as appropriate in private projects. Implementation is dependent on available funding to complete public projects. It is understood that implementing the Streetscape Master Plan requires investment and funding on behalf of the City to cover additional project costs.





Appendix A: Gateway Details



PRIMARY GATEWAY

Road Owne Traffic Volu Strengths

Constraints

Segment S

Opinions of

Rochester Road & M-59 - "Super" Primary Gateway Scale: 1" - 20'-0" Rochester Road (M-150) and M-59

ership	MDOT
me (Annual Average Daily Traffic)	39,800
	Highest traffic counts in the City Desirable development activity in the area
peed Limit	50 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Walton Boulevard - Primary Gateway Scale: 1" - 20'-0"

PRIMARY GATEWAY

Road Owne

Traffic Volu Strengths

Constraints

Segment S

Opinions of

Walton Boulevard, at City boundary east of Squirrel Road

ership	RCOC
me (Annual Average Daily Traffic)	30,300
	Catches eastbound traffic from Auburn Hills, Pontiac, and those visiting Meadowbrook Amphitheater
	Busy and economic hub (The Village of Rochester Hills and Busch's shopping centers)
	Culverts and trees located in the median
peed Limit	45 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Rochester Road & Orion Road - Primary Gateway

SECONDARY GATEWAY Rochester Road and Orion Road

- Road Owne
- Traffic Volu
- Strengths
- Constraints
- Segment Sp
- Opinions of

ership	MDOT
me (Annual Average Daily Traffic)	34,000
	Catches traffic from the busiest northern City entrance Desirable development activity in the area
	Limited area for larger feature/signage
peed Limit	50 mph
Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Tienken Road, Washington Road, Runyon Road Roundabout - Custom Secondary Gateway _{Scale: 1" - 20'-0"}

SECONDARY GATEWAY Tienken Road and Runyon Road Roundabout (Stony Creek Historic District)

Road Owne Traffic Volu Strengths

Constraints

Segment S Opinions of

ership	RCOC
ıme (Annual Average Daily Traffic)	21,600
	Busy thoroughfare into northern Rochester Hills, near boundaries of Rochester Hills, Rochester, and Shelby Twp, as well as Oakland and Macomb Counties
	Room in the center of the roundabout for gateway, mirroring design from Avon-Dequindre-23 Mile roundabout (open to modifications to maintain historic character of the area)
	Appears that utilities are already present in the roundabout
5	Just outside of the Rochester Hills city limit - will require a formal maintenance agreement with Rochester
peed Limit	40 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Hamlin Road - Secondary Gateway Option Scale: 1" - 10'-0"

Road Owne Traffic Volu Strengths

Constraints

Segment S

Opinions of

SECONDARY GATEWAY Hamlin Road, east of Squirrel Road (at City boundary)

ership	City of Rochester Hills
me (Annual Average Daily Traffic)	9,100
	Announces arrival to Rochester Hills, with opportunity to highlight the Innovation Corridor, FANUC headquarters, and other development
5	
peed Limit	45 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Adams Road & Hamlin Road - Secondary Gateway Scale: 1" - 20'-0"

SECONDARY GATEWAY Adams Road and Hamlin Road, north of M-59

Road Owne Traffic Volu Strengths

Constraints

Segment S

Opinions of

ership	RCOC
me (Annual Average Daily Traffic)	15,800
	Catches highway traffic and northbound traffic from Auburn Hills and Bloomfield Hills Large median area with existing utilities
5	Does not reach westbound traffic on Hamlin Road
peed Limit	45 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



SECONDARY GATEWAY Hamlin Road and Dequindre Road

Road Owne

Traffic Volu

Strengths

Constraints

Segment S

Opinions of

Hamlin Road & Dequindre Road - Secondary Gateway

ership	City of Rochester Hills
me (Annual Average Daily Traffic)	10,400
	Replaces a standard City boundary sign with an enhanced gateway at a major eastern entry point into Rochester Hills
5	Constrained right-of-way width to work in
peed Limit	45 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



South Boulevard & Crooks Road (Chase Bank) - Secondary Gateway

SECONDARY GATEWAY South Boulevard and Crooks Road (replacing the existing gateway at Chase Bank)

Road Owne

Traffic Volu

Strengths

Constraints

Segment S

Opinions of

ership	RCOC
me (Annual Average Daily Traffic)	10,000
	Replaces existing gateway with a gateway cohesive with the City's cur- rent branding
5	Requires agreement and coordination with Chase Bank
peed Limit	45 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Adams Road & Dutton Road - Tertiary

Scale: 1" - 20'-0"

TERTIARY GATEWAY

Road Owne Traffic Volu Strengths

Constraints

Segment Sp

Opinions of

Adams Road and Dutton Road

ership	RCOC
me (Annual Average Daily Traffic)	20,700
	Second busiest northern City entry
	Adams Road has consistent decorative landscaping, the gateway and landscaping will increase the appeal of the area
	Constrained right-of-way width to work in requires vertical orientation
oeed Limit	35 mph
⁻ Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates



Walton Boulevard at Great Oaks - Tertiary Scale: 1" - 20'-0"

TERTIARY GATEWAY

Road Owne

Strengths

Constraints

Segment Sp

Opinions of

Walton Boulevard east of Livernois Road, at City boundary

ership	RCOC
me (Annual Average Daily Traffic)	25,600
	Captures westbound traffic at the Rochester/Rochester Hills boundary
	Increases visibility of Rochester Hills at a busy commercial and institutional intersection
	Requires agreement with Great Oaks property
peed Limit	35 mph
f Cost Estimate	See pages 95 - 96 for preliminary opinions of cost estimates







Borden Park Sign Scale: 1" - 20-0"



Spencer Park Sign

Scale: 1" - 10'-0"

92



ROCHEST Sign Total Contingen

WALTON Sign Total Contingen

SECONDA Sign Total Contingen

SECONDA Sign Total Contingen



Innovation Hills Park Sign Scale: 1" - 20'-0"

GATEWAY SIGN ESTIMATES

Item	Total	Notes
ER ROAD PRI	MARY	
I	\$180,950	Incl. footings, elecrical, lighting, & landscaping
ncy	\$45,238	25% Contingency
	\$226,188	Total per sign
	1	Total Number of Signs
	\$226,188	TOTAL ROCHESTER ROAD PRIMARY
BLVD PRIMA	RY	
I	\$42,000	Incl. footings, elecrical, lighting, & landscaping
ncy	\$10,500	25% Contingency
	\$52,500	Total per sign
	1	Total Number of Signs
	\$52,500	TOTAL WALTON PRIMARY
ARY		
1	\$31,200	Incl. footings, elecrical, lighting, & landscaping
ncy	\$7,800	25% Contingency
	\$39,000	Total per sign
	5	Total Number of Signs
	\$195,000	TOTAL ALL SECONDARY SIGNS
ARY ALT (RUN	YON, WASHINGTON	, TIENKEN ROUNDABOUT)
1	\$22,175	Incl. footings, elecrical, lighting, & landscaping
ncy	\$5,544	25% Contingency
	\$27,719	Total per sign
	1	Total Number of Signs
	\$27,719	TOTAL ALTERNATE SECONDARY SIGN
		Appendix A: Gateway Details 95

	\$75,000	TOTAL ALL SECONDARY PARK SIGNS
	6	Total Number of Signs
	\$12,500	Total per sign
Contingency	\$2 <i>,</i> 500	25% Contingency
Sign Total	\$10,000	Incl. footings & landscaping
PARK SECONDARY		
	\$128,000	TOTAL ALL PARK SIGNS
	4	Total Number of Signs
	\$32,000	Total per sign
Contingency	\$6,400	25% Contingency
Sign Total	\$25,600	Incl. footings & landscaping
PARK PRIMARY		
	\$25,000	TOTAL ALL TERTIARY SIGNS
	2	Total Number of Signs
	\$12,500	Total per sign
Contingency	\$2,500	25% Contingency
Sign Total	\$10,000	Incl. footings & landscaping
TERTIARY		

TOTAL ALL SIGNS \$ 729,406



Appendix B: Streetscape Specification Sheets

Public Seating | Design Family: Innovative and Nature

Metro40 Collection

Product Data Sheet



When Landscape Forms set out to develop the first comprehensive and integrated collection of site elements for the streetscape and transit core, it partnered with a world-leading expert. BMW Group Designworks brought to the challenge a deep understanding of the role of public transit in the life of the city, and unsurpassed mastery in form making and innovative use of materials. The Metro40 Collection, from benches and bollards to bus shelters and LED lighting, is a pioneering line of urban streetscape and transit elements with sophistication and global appeal for a world on the move. Used with Connect shelter or alone where space is at a premium, sitting and leaning rails provide a 'waiting room' amenity with minimal footprint.

landscapeforms

Metro40 Collection



TV	tainer in the de- and innovative u and boliseds to i urban streetscap appeal for a wor where space is a room' amenity w	of the oby an se of material as shelters a e and transit id on the mov f a premium, ith minimal to	d unsurp a. The M rid LED I elements a. Used sitting ar sitting ar	assed mar eroit0 Col gitting, is a with conne with Conne d leaning	dery in foi lection, fru iptication i letication i letica	n bend n bend g line of and glob or alone le a 'wal
Rest TM Bench		81/14	ingen .	ware.	-	-
 Real angle is to , single over operation present become. Real seat height is 10° and seat double is 10°. 						_
Cotional arms lavailable only on backed version						
End frames are joined using concessed mortise and tenon connections. Assistable with one or two optional intermediate cast aluminum seat	5			ĩ		2
 Environet with "anti-olders" cushinged clastic pada on the underside 	-					
of the frame that keep the banch from moving under seated loads and protect the powdercoat finish from becoming scrutched by concrete or floor.	P	ant artists	av.	~	**	
Materials	-					
End trame is cast aluminum.	10 -			-		
 Seat and back slats are aluminum extrusions or wood. 						
Cast aluminum frame and aluminum extrusion stats are powder-coated. Aluminum version can be two-toned: one color on the continuous ribbon end frame and another color on the stats.	Rate The backless East division serve	consists is along the usual at an		alliste for an	-	
 The wood for exterior applications is jarrah. 						
The wood option for interior application is jamah with LF 80 finish.	1.00	Q				
Installation			- 1	Res Surfa	a Martinet	ngkyaan
 Shipped fully assembled. 		10.00	- 1			
 Freestanding, surface mount or embedded. 		1000	- I.			

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	~	helika	**	~		22122
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i at Snan. a mounting kit.	100			her to be	u Maran (cali	ng kyawa

Rest[™] Bench

- Rest length is 80", longer than typical three-person benches.
- Rest seat height is 18" and seat depth is 16".
- Optional arms (available only on backed version)
- End frames are joined using concealed mortise and tenon connections.
- Available with one or two optional intermediate cast aluminum seat dividers/skateboard deterrents.
- Equipped with "anti-glides:" cushioned plastic pads on the underside of the frame that keep the bench from moving under seated loads and protect the powdercoat finish from becoming scratched by concrete or floor.

Materials

- End frame is cast aluminum.
- Seat and back slats are aluminum extrusions or wood.
- Cast aluminum frame and aluminum extrusion slats are powder-coated.
- Aluminum version can be two-toned; one color on the continuous ribbon end frame and another color on the slats.
- The wood for exterior applications is jarrah.
- The wood option for interior application is jarrah with LF 80 finish.

Installation

- Shipped fully assembled.
- · Freestanding, surface mount or embedded.
- Surface mount and embedded versions are shipped with a mounting kit.



Note: The backless version is always armless. Seat dividers cannot be used at ends as a substitute for arms.



Litter Receptacle | Design Family: Innovative and Nature



Bicycle Parking | Design Family: Innovative



Bicycle Parking | Design Family: Nature



eight only.	
noo mount	or 0

Table	Style	Depth	Width	Height	Weight
	table	35*	95*	29"	119 lb
Litter Receptacle	Style	Depth	Width	Height	Weight

Receptacle	Style	Depth	Width	Height	Weight
	single litter	13*	15*	47*	58 lb
	double litter	26*	15*	47"	85 lb

Bike Rack	Style	Depth	Width	Height	Weight
Ð	bike rack	6"	24*	36"	34 lb

MultipliCITY[™]

Product Data Sheet



Path Light

· Please refer to product data sheet on the more details page for technical information and specifications.

Finishes

- · Exterior woods are unfinished and will weather to a soft pewter gray, requiring no future maintenance.
- · Aluminum is a relatively soft, durable, lightweight, ductile and malleable metal with appearance ranging from silvery to dull gray, depending on the surface roughness.

Designed by Yves Behar and fuseproject

MultipliCITY Bench designs are protected by U.S. Patent No. D712,184; D713,190

MultipliCITY Bike Rack designs are protected by U.S. Patent No. D710,783

MultipliCITY Litter designs designs are protected by U.S. Patent No. D716,013; D717,511

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landscapeforms

Bollard Lighting | Design Family: Innovative



LIGHT COLUMN BOLLARD

CERTIFICATIONS

• ETL and C-ETL listed for wet locations.

ENVIRONMENTAL CONSIDERATIONS

- Please refer to the Light Column Bollard Environmental Data Sheets for detailed environmental impact information.
- Light Column Bollard has high recycled content and is highly recyclable.
- Powdercoat finishes are no- or low-VOC, depending on color.
- Low maintenance.

MODEL NUMBERS AND DESCRIPTIONS

MODEL	DESCRIPTION
LBLCB-504	Light Column Bollard, Series 500, illuminated
LBLCB-604	Light Column Bollard, Series 600, illuminated
LBLCB-504-RGBW	Light Column Bollard, Series 500, illuminated, RGBW
LBLCB-604-RGBW	Light Column Bollard, Series 600, Illuminated, RGBW
LBLCB-504-N	Light Column Bollard, Series 500, non-illuminated
LBLCB-604-N	Light Column Bollard, Series 600, non-illuminated

PRODUCT OPTIONS

The following options are available for an upcharge

Upgrade to embedded security core (available for Series 600)*	Add 360° custom shield (customer-supplied artwork)
Upgrade to removable base*	Add GFCI outlet (available for Series 600, illuminated, non-security bollards)*
Add stainless steel mounting hardware	Add powdercoat color from Forms+Surfaces Powdercoat Chart
Add 180° shield in standard designs	Custom RAL powdercoat color
Add 360° shield in standard designs	Custom fixture height
Add 180° custom shield (customer-supplied artwork)	

*Not available with RGBW LED option.

LEAD TIME: 6 to 8 weeks. Shorter lead times may be available upon request. Please contact us to discuss your specific timing requirements.

PRICING: Please contact us at 800.451.0410 or sales@forms-surfaces.com. At Forms+Surfaces, we design, manufacture and sell our products directly to you. Our sales team is available to assist you with questions about our products, requests for quotes, and orders. Territory Managers are located worldwide to assist with the front-end specification and quoting process, and our in-house Project Sales Coordinators follow your project through from the time you place an order to shipment.

TO ORDER SPECIFY: Quantity, model, finish, lamp, shield (if applicable), and mounting. Quote/Order Forms are available on our website to lead you through the specification process in a simple checkbox format.

NOTE: Because different computers will render colors and textures differently, actual colors and finishes may vary slightly from those shown here.

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PRODUCT DATA



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LIGHT COLUMN BOLLARD

ILLUMINATED BOLLARDS

LAMP	DESCRIPTION	LUMINAR	E LUMENS*	B.U.G. RATING	LED STARTING
		500	600		TEMPERATURE 'C
3000K LED	10W custom LED light engine	1005	990	B0-U3-G1	-30
4000K LED	10W custom LED light engine	1005	990	B0-U3-G1	-30
RGBW LED	78W custom LED light engine	varies	varies	varies	-30

metry for the luminaire, and indicates the NOTE: Polar candela and isofootcandle plots can be found on the Light Column Bollard product page on our website.





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Bollard Lighting | Design Family: Innovative

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Bollard Lighting | Design Family: Innovative



Bollard Lighting | Design Family: Nature

Pedestrian Lighting | Design Family: Innovative





LIGHT COLUMN PEDESTRIAN

NOMINAL DIMENSIONS

PRODUCT DATA

LIGHT COLUMN PEDESTRIAN

Sleek in stainless steel, Light Column Pedestrian Lighting integrates into a wide range of settings and offers numerous design possibilities. Fixtures are available in 5" or 6" diameters. Illumination options include LED lamping and multiple ways to direct light: no shield for symmetrical lighting, or 180° and 360° shields in standard or custom designs. Coordinating Light Column Pathway Bollards and Light Column Bollards in illuminated, RGBW, non-illuminated, and security core variations make it easy to create a cohesive look across functionalities.

MATERIAL & CONSTRUCTION DETAILS

	CONFIGURATIONS	MATERIALS & FINISHES	LED LAMPS & DRIVERS	
Light Column Pedestrians are available in two sizes. Series 500	Standard stainless steel finish is	 Custom LED light engine with Cree[®] LEDs. 		
	columns use 5" (127 mm) diameter tubular stainless steel; Series 600 columns use 6" (152 mm) diameter tubular stainless steel.	mm) diameter tubular stainless steel; Series 152 mm) diameter tubular stainless steel. Tet-frosted acrylic lens and stainless steel head tet-frosted acrylic lens and stainless steel head See below for details • For optional powdercoat colors see the Forms-Surfaces Downlergend That Outcom	 Features advanced LED technology with 32W, 3000K warm white and 4000K natural white LEDs. 	
Heads consist of a white-fro	Heads consist of a white-frosted acrylic lens and stainless steel head con		LED driver input power is 90-305V.	
	Veather resistant GFCI outlet for maintenance access is available for Series 600 pedestrians. See drawings on our website for details.		 Driver has 0-10V dimming capabilites. 	
		RAL colors are available for an	LED driver certifications include: IP67 (waterproof) enclosure, and Class 2 rated output	
	· Door for optional GFCI outlet is accessed using a flathead	upcharge.	oldo z ratod odpat.	
	screwdriver.			
WEIGHT		SHIELD OPTIONS		
	• Series 500: 65 lbs (29 kg)	Six standard shield designs are available for an upcharge. Refer to pages 3 and 4 for details.		
Series 600: 75 lbs (34 kg) Custom shield designs with either 180° or 360° coverage are als		80° or 360° coverage are also available.		

CERAMILOC TREATMENT

Ceramiloc is an invisible surface treatment that offers significantly enhanced protection from weather and graffiti and increases the maintenance ease of stainless steel. Ceramiloc combines ceramic durability with an unparalleled ability to lock out water spots, fingerprints, graffiti and more. Patented technology bonds nano-silica particles to the surface of the stainless steel. The treatment minimally alters the surface appearance of the stainless and offers numerous benefits:

- Easily Cleaned: The Ceramiloc treatment creates a surface that simultaneously resists fingerprints and is easy to clean. Water spots, grease marks and more can be quickly wiped away. It also creates an "anti-graffiti" surface - even permanent marker is easily removed with a clean microfiber towel and water.
- Durable: Ceramiloc-treated materials are abrasion- and scratch-resistant. The treatment is permanent, UV stable, and will not degrade or discolor over time.
- Environmentally Sound: The Ceramiloc treatment is a no-VOC, water-based process. Because Ceramiloc surfaces are so easily maintained, cleaning solutions and maintenance are kept to a minimum.

INSTALLATION & MAINTENANCE

INSTALLATION	MAINTENANCE
• Standard mounting is 1/2" stainless steel base plate with cover. Base plate is slotted for rotational capability.	· Metal surfaces can be cleaned as needed using a soft cloth or
 Installation of a surge protector as part of each units wiring is recommended. 	brush with warm water and a mild detergent. Avoid abrasive
Stainless steel mounting hardware sold separately. Template is available upon request.	clearers.





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5" (127 mm), Series 500

6" (152 mm). Series 600

_ white-frosted acrylic lens

custom LED light engine

- driver mounting plate

stainless steel column 5" (127 mm). Series 500 6" (152 mm), Series 600

.5" thick stainless steel base plate with cover

- 1/2-13 anchor bolts (4x) (sold separately)

conduit with 108" (2743 mm) wire whip (by others)

- 8" (203 mm), Series 500; 9" (229 mm), Series 600

- stainless steel compression cap

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PRODUCT DATA



STANDARD SHIELD DESIGNS







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Pedestrian Lighting | Design Family: Innovative

LIGHT COLUMN PEDESTRIAN

STANDARD SHIELD DESIGNS (CONTINUED)



	Series 500	Series 600
180 Pedestrian	N/A	•
360 Pedestrian	N/A	N/A
180 Bollard	N/A	•
360 Bollard	N/A	N/A

PRODUCT DATA



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BUBBLES

	Series 500	Series 600
180 Pedestrian	•	•
360 Pedestrian	•	•
180 Bollard	•	•
360 Bollard	•	•

PRODUCT DATA

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PERFORATED	
	Γ

	Series 500	Series 600
180 Pedestrian	٠	٠
360 Pedestrian	٠	•
180 Bollard	٠	٠
360 Bollard	٠	•





RIBBON				
	Series 500	Series 600		
180 Pedestrian	N/A	N/A		
360 Pedestrian	•	•		
180 Bollard	N/A	N/A		
360 Bollard	N/A	N/A		



	Series 500	Series 600
180 Pedestrian	•	•
360 Pedestrian	•	•
180 Bollard	•	•
360 Bollard	•	•

NOTE: "•" indicates that the shield design is available in the selected series and size combination



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ARGYLE		
	Series 500	Series 6
180 Pedestrian	N/A	N/A
360 Pedestrian	•	•
180 Bollard	N/A	N/A
360 Bollard	N/A	N/A

NOTE: "•" indicates that the shield design is available in the selected series and size combination

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Pedestrian Lighting | Design Family: Innovative

LIGHT COLUMN PEDESTRIAN

PRODUCT DATA

LAMP DESCRIPTIONS

LAMP	DESCRIPTION	LUMINAIRE LUMENS*		B.U.G. RATING	STARTING	
		500	600		TEMPERATURE °C	
3000K LED	32W custom LED light engine	3783	3790	B1-U5-G2	-30	
4000K LED	32W custom LED light engine	3783	3790	B1-U5-G2	-30	

*Luminaire lumens represents the absolute photometry for the luminaire, and indicates the lumens out of the entire fixture.

NOTE: Polar candela and isofootcandle plots can be found on the Light Column Pedestrian product page on our website.

CERTIFICATION

ETL and C-ETL listed for wet locations

ENVIRONMENTAL CONSIDERATIONS

- Please refer to the Light Column Pedestrian Environmental Data Sheet for detailed environmental impact information.
- Light Column Pedestrian has high recycled content and is highly recyclable.
- Powdercoat finishes are no- or low-VOC, depending on color.
- Low maintenance.

MODEL NUMBERS AND DESCRIPTIONS

MODEL	DESCRIPTION
LPLCO-512	Light Column Pedestrian, Series 500
LPLCO-612	Light Column Pedestrian, Series 600

PRODUCT OPTIONS

The following options are available for an upcharge

Add 180° perforated shield in standard designs	GFCl outlet (available for Series 600 pedestrian)
Add 360° perforated shield in standard designs	Add powdercoat color from Forms+Surfaces Powdercoat Chart
Add 180° custom shield (customer supplied artwork)	Custom RAL powdercoat color
Add 360° custom shield (customer supplied artwork)	Custom fixture height
Add stainless steel mounting hardware	

LEAD TIME: 6 to 8 weeks. Shorter lead times may be available upon request. Please contact us to discuss your specific timing requirements.

PRICING: Please contact us at 800.451.0410 or sales@forms-surfaces.com. At Forms+Surfaces, we design, manufacture and sell our products directly to you. Our sales team is available to assist you with questions about our products, requests for quotes, and orders. Territory Managers are located worldwide to assist with the front-end specification and quoting process, and our in-house Project Sales Coordinators follow your project through from the time you place an order to shipment.

TO ORDER SPECIFY: Quantity, model, finish, lamp, shield (if applicable). Quote/Order Forms are available on our website to lead you through the specification process in a simple checkbox format.

NOTE: Because different computers will render colors and textures differently, actual colors and finishes may vary slightly from those shown here.

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Cordia Pedestrian Lighting has a graceful design that blends a unique sense of style with optimal light output and LED performance. Fixture body LIGHT ENGINE DESCRIPTION and base are durable aluminum with a powdercoat finish; lens is tempered glass. Cordia Pedestrian Lighting coordinates with Cordia Bollards and the rest of the Cordia line and can be used to bring a contemporary twist to even the most traditional landscape settings

MATERIAL & CONSTRUCTION DETAILS	INSTALLATION & MAINTENANCE		
CONSTRUCTION	LED & DRIVER	INSTALLATION	
Head consists of corrosion-resistant cast aluminum and a tempered glass lens.	Features advanced LED technology with 75W, 3000K warm white or 4000K neutral white	0.75" thick structural aluminum base plate with cast aluminum base cover and 3/4"-10x24" J-bolt	
 Body is made from corrosion-resistant cast aluminum with a powdercoat finish. 	LED chip is mounted to an extruded aluminum	 Installation of a surge protector as part of each units wiring is recommended. 	
Base is made from corrosion-resistant aluminum with a powdercoat	heat sink.		
finish.	LED driver input power is 100 - 277 VAC.	Stainless steel mounting hardware sold separately.	
• 110 lbs.	Driver has 0-10V dimming capabilites.	lemplates available upon request.	
FINISH	LENS, VISIBILITY & SHIELD OPTIONS	MAINTENANCE	
See the Forms+Surfaces Powdercoat Chart for details. Custom RAL	 Includes a tempered glass lens. 	Metal surfaces can be cleaned as needed using a soft	
colors are available for an upcharge.	 Pedestrian emits light with a 360° visibility. 	cloth or brush with warm water and a mild detergent. Avoid abrasive cleaners.	
Due to the inherent nature of metal castings, gloss powdercoats are pat effected for each components.			

not offered for cast component



Pedestrian Lighting | Design Family: Nature

BASE PLATE MOUNTING DETAIL

CORDIATM PEDESTRIAN

PRODUCT DATA

NOMINAL DIMENSIONS

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PRODUCT DATA

LAMPS	DRIVER	LUMINAIRE LUMENS*	B.U.G. RATING	CLASSIFICATION
3000K LED	75W	5323	B1-U2-G1	TYPE V
4000K LED	75W	5323	B1-U2-G1	TYPE V

*LED lumens represents the absolute photometry for the luminaire, and indicates the lumens out of the entire fixture.

NOTE: Polar candela and isofootcandle plots can be found on the Cordia Pedestrian product page on our website.

CERTIFICATION

· ETL and C-ETL listed for wet locations.

ENVIRONMENTAL CONSIDERATIONS

- Please refer to the Cordia Pedestrian Lighting Environmental Data Sheets for detailed environmental impact information.
- Metal components have a long life cycle and are 100% recyclable.
- Standard powdercoat finishes are no-VOC; non-standard powdercoat finishes are no- or low-VOC, depending on color.
- · Low maintenance; easy to disassemble.

MODEL NUMBERS AND DESCRIPTIONS

MODEL	DESCRIPTION
LPCOR-LED	Cordia Pedestrian, LED

PRODUCT OPTIONS

The following options are available for an upcharge

Custom RAL powdercoat color

Add stainless steel mounting hardware

LEAD TIME: 6 to 8 weeks. Shorter lead times may be available upon request. Please contact us to discuss your specific timing requirements.

PRICING: Please contact us at 800.451.0410 or sales@forms-surfaces.com. At Forms+Surfaces, we design, manufacture and sell our products directly to you. Our sales team is available to assist you with questions about our products, requests for quotes, and orders. Territory Managers are located worldwide to assist with the front-end specification and quoting process, and our in-house Project Sales Coordinators follow your project through from the time you place an order to shipment.

TO ORDER SPECIFY: Quantity, powdercoat color and color temperature. Quote/Order Forms are available on our website to lead you through the specification process in a simple checkbox format.

Planters | Design Family: Innovative



Planters | Design Family: Nature

Plaza Planter

Product Data Sheet

landscapeforms



These giant square planters in three sizes bring green to urban streetscapes and plazas where conventional planting is not feasible. Plaza's rugged painted steel structure is complemented with infill panels in a choice of wood or steel. A fiberglass inner basin and strong metal mesh bottom make these planters highly functional as well as visually striking.

Planter	
Planter is available in three sizes-28", 36", or 48"	
Capacity:	
28' = 27 Gallon	
36' = 74 Gallon	
48' = 159 Gallon	

Planter is available only freestanding

- Glides are made of cast stainless steel
- Planter is available in wood or carbon steel
- Available in exterior unfinished Jarrah, Ipe, or
- Domestically Sourced Thermally Modified Ash (DSTMA) Corners for planter are steel
- Corners for planter are always powdercoated Matte Black
- Liner for planter is made of fiberglass

Finishes

 Pangard II Powdercoat Finish Unfinished Exterior Wood

Plaza is designed by Urbidermis

Click here for patent information related to this product.

	Style	Depth	Width	Height	Product Weight
\bigcirc	28" Wood	28"	28"	17"	110 lb
\bigcirc	28" Steel	28"	28"	17"	139 lb
\bigcirc	36" Wood	36"	36"	30.5"	232 lb
\bigcirc	36" Steel	36"	36"	30.5"	288 lb
$\langle \rangle$	48" Wood	47.5"	47.5"	30.5"	318 lb
\bigcirc	48" Steel	47.5"	47.5"	30.5"	393 lb

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Appendix C: Gateway Landscaping Plans

Not To Scale



Rochester Road & M-59 - "Super" Primary Gateway Landscape Plan



Rochester Road & Orion Road - Primary Gateway Landscape Plan Not To Scale

Walton Boulevard - Primary Gateway Landscape Plan

Not To Scale



Runyon/Tienken Roundabout - forthcoming





Scale: 1" - 10'-0"



Adams Road & Hamlin Road - Secondary Gateway Landscape Plan

Not To Scale

Hamlin Road & Dequindre Road - Secondary Gateway Landscape Plan Not To Scale



South Boulevard & Crooks Road (Chase Bank) Secondary Gateway Landscape Plan

Not To Scale

Not To Scale

Adams Road & Dutton Road - Tertiary Landscape Plan



Walton Boulevard at Great Oaks - Tertiary Landscape Plan

Not To Scale





Bloomer Park Sign Landscape Plan



Borden Park Sign Landscape Plan

Not To Scale

Scale: 1" - 20'-0"



Innovation Hills Park Sign Landscape Plan