



metro40™

Product Workbook

Metro40

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People are on the move,

all around the world. We spend countless hours in cars, vans, buses, and trains, on foot, on bicycles, and in the air. We are energized by motion. We move to reach our destinations and also to see and be seen, to learn and explore, to connect and communicate. Motion is the theme and shared experience of our time.

Urban centers face special challenges managing people in motion. Concerns about environment, health, safety, comfort and quality of life are driving initiatives and infrastructure designed to promote walking, biking and greater use of public transit. The growing "Complete Streets" movement advocates for urban design that supports these activities as solutions to obesity, greater independence of the aging population, and the safety of school-bound children. Achieving livable, workable, walkable cities will require more comfortable, attractive, high-quality facilities and amenities capable of making the use of public streetscapes and public transit preferred options for a much broader constituency.

City planners are looking for new and better solutions, and Landscape Forms is putting its leadership in site furniture design and manufacture to the challenge.

Integrated solutions
for urban streetscapes
and transit corridors.





Metro40 is the first collection

that ties together all the key site elements for transit cores and streetscapes, from shelters and lighting to benches, bike racks and bollards, with a design approach that considers the architecture of the urban streetscape as backdrop and context.



mobility



amenity

metro40™

community



MOBILITY:

Metro40 supports people in motion wherever they are.

AMENITY:

Metro40 provides utility and comfort with exceptional style for streetscapes and the transit core.

COMMUNITY:

Metro40 expresses connection and complements urban infrastructure to enhance quality of life.

Our design partner in this challenge is BMW Group Design-worksUSA, an international leader in design strategy, premium design development and brand communication. The firm, which has offices in California, Munich and Singapore, boasts global design experience in a wide range of industries, from mass transit to consumer electronics, medical to motor sports. For this project, Landscape Forms draws on the firm's special expertise in transportation, where its successful products include cars, airplane interiors, yachts, and bicycles—a whole range of products that put people in motion.

Starting with research in Europe, Asia and North America, the two companies have applied their distinctive competencies to create more comfortable, beautiful, flexible urban streetscape and transit furnishings for a world on the move. The result is an extended line of products with design integrity, sophistication and global appeal that is appropriate in many different kinds of settings and can be readily assembled and used in many parts of the world.

Design: Themes and Variations

The large Metro40 family of compatible but not identical products is minimal yet expressive. It combines metal and wood in simple, direct structures with "emotive" surfaces characterized by flowing planes and seamless transition between materials.

A keynote of the design and the source of its distinctive aesthetic is the mobius strip frame (a band of material given a half twist and joined so that it has only one side) on the Hi-Glo and Lo-Glo lighting and Rest bench. These elements are the stars of the show. The other supporting players in the collection have flat ribbon frames with angled edges that vary in thickness to provide interesting visual effects from all directions.

Metro40 products are made primarily of aluminum and wood. Most employ aluminum extrusions and castings joined by concealed connections between parts and materials.

Metro40 combines visual lightness with structural strength, an especially important characteristic in parts of the world where landscape elements that appear dense and heavy are often passed over in favor of those that are lighter and airier in appearance.

Metro40 design is contemporary but not edgy. The collection, which bears a European sensibility, is elegant, warm, friendly, simple and clean.

The Metro40 Collection

Connect
Sitting/Leaning Rail

Collect
Litter/Recycling Receptacles

Rest
Bench

Ride
Bike Rack

Stop
Bollard

Hi-Glo
LED Pedestrian Light

Lo-Glo
LED Pathway Light

Leadership in Design, Engineering and Technology

Metro40 is a groundbreaking collection.

Unified design and broad scope: seven different elements related in design, individual in function, and international in spirit.

Global appeal: based on research conducted in North America, Europe and Asia; form and scale cross cultural and national boundaries.

Elegant integration of design and engineering: of products that can be assembled and finished in multiple locations, and delivered anywhere in the world.

Unprecedented adaptability: Connect transit shelter can be moved, if disassembled and re-installed.

Connect Rails



Aluminum
Sitting Rail



Wood
Sitting Rail



Aluminum
Leaning Rail



Wood
Leaning Rail

Metro40 offers sustainable solutions:

- Supports mass transit to reduce automobile traffic.
- Contains recycled aluminum and recycled steel.
- Finished using environmentally friendly techniques.
- All lighting uses LED technology for reduced energy consumption, long life and low maintenance.
- The collection includes bike racks and recycling units that support sustainable activities.
- Wood options include ISO14001 and FSC certified selections.
- Hi-Glo meets IES and IDA full cutoff requirements.

Rest



Backed Aluminum Bench with Arms



Backed Aluminum Bench w/o Arms



Backless Aluminum Bench



Backed Wood Bench with Arms



Backed Wood Bench w/o Arms



Backless Wood Bench

Collect



30-Gallon Top-opening Litter



23-Gallon Side-opening Litter



30-Gallon Recycle Receptacle with Hole



30-Gallon Recycle Receptacle with Slot

Glo



12' Hi-Glo Pedestrian Light



3' Lo-Glo Pathway Light

Ride



Aluminum Bike Rack

Stop



Embedded Surface Mount or Removable Bollard



Embedded Surface Mount Bollard with LED Light





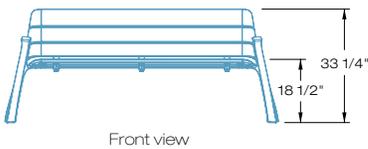
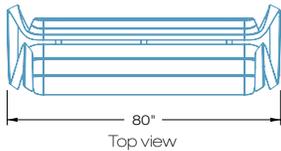
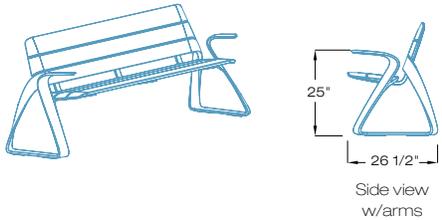
Metro40

Rest™

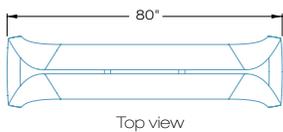
A stunningly simple bench with star quality that helps define a new aesthetic for public space.

Rest employs the mobius ribbon frame to great effect. One continuous, flowing form creates a singular bench in backed and backless versions. A choice of wood or aluminum slats gives designers license to play. The graceful connection between frame and bench slats makes it all look elegantly easy.

Backed and backless versions share the same materials and features with the exception of arms, which are available only on benches with backs. Sleek mounting solution, engineered for durability and beauty.



Backed Bench Dimensions



Backless Bench Dimensions

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.

Dimensions and Features

- 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.
- Tested to ANSI/BIFMA standards for total 750 lb. seat load (300 lbs. on one seat, 225 lbs. on other two seats.).

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

Installation

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

To Specify

Specify Rest, backed or backless. Select aluminum or wood. For interior wood bench, select jarrah with LF80 finish. For exterior wood bench select jarrah. For backed bench, specify with or without end arms. Specify with or without one or two optional dividers. Select freestanding, surface mount or embedded and powdercoat color.



Backed Aluminum Bench with Arms [seat divider options shown]



Backed Aluminum w/o Arms [seat divider options shown]



Backless Aluminum Bench [seat divider options shown]



Rest Surface Mount Locking System



Backed Wood Bench with Arms [seat divider options shown]



Backed Wood Bench w/o Arms [seat divider options shown]



Backless Wood Bench [seat divider options shown]





Metro40

Glo™

Pedestrian and Pathway lights that provide ambient and walkway illumination,
and create a sense of identity in special settings.

Hi-Glo and Lo-Glo LED lights are headliners in the Metro40 collection. They elevate the design vocabulary for streetscape lighting, and chart new territory in lighting technology.

The lights get their elegant profile from the mobius strip that defines the shelter frame. The vertical frame rises from the light base, twists gracefully on its axis to form a shade and then flattens again as it makes its trajectory to the ground. The 12' and 14' Hi-Glo pedestrian light provides ambient lighting for pedestrian-focused spaces. The 3' Lo-Glo pathway light illuminates the walkway. In addition to meeting specific lighting needs, these distinctive lights help define identity in settings such as business districts, campuses or parks.

Hi-Glo and Lo-Glo provide light that is appropriate to their application, deliver excellent performance and longevity, and take an innovative approach to color. Developed in consultation with environmentally proactive lighting consultants, Nancy Clanton and Associates, they offer effective solutions to pressing issues of energy efficiency, maintenance, and environmental & human health. Please refer to Hi-Glo and Lo-Glo Product Data Sheets for additional technical information.





Metro40

Collect™

Litter receptacles and a coordinating recycling unit that provide basic function with surprising flair.

Collect litter and recycling receptacles have a distinctive profile. A cast aluminum ribbon frame, wide at the top and tapering toward the base, trimly wraps a rotationally-molded polyethylene bin. Frames are available in the standard Landscape Forms powdercoat color palette; litter bins are available in the standard polyethylene color palette. Recycling bins are green to signal their unique purpose.



Collect

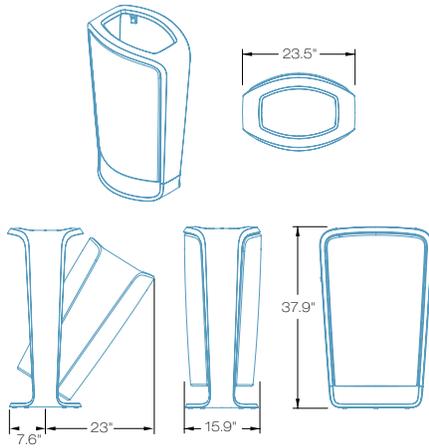
TYPES, SIZES AND FEATURES

All Collect receptacles have a cast aluminum frame and rotationally-molded polyethylene bin.

Collect Litters

Collect Top-opening

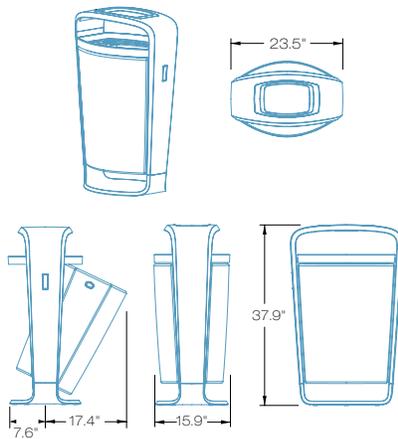
- 30-gallon capacity.
- Freestanding or surface mount.
- Freestanding version has a cast iron base.
- Bin pivots open for emptying; bag is pulled out at a 35° angle.
- Bag is attached by clips to inside of molded bin.
- No diverter rim.
- Molded bin color comes standard in matte black; optional polyethylene colors available.
- Side latch with optional keyed lock.



Top-Opening Freestanding Litter

Collect Side-opening

- 23-gallon capacity.
- Open on two sides for easy trash toss.
- Freestanding or surface mount.
- Freestanding version has a cast iron base.
- Bin pivots open for emptying; bag is pulled out at a 35° angle.
- Bag is attached by clips to inside of molded bin.
- Spun-steel diverter around top opening directs trash; diverter is connected to the ribbon frame and diverter is powdercoated matte black color to coordinate with the standard black bin. If an optional bin color is selected than the diverter is powdercoated to match the frame.
- Optional ash pan.



Side-Opening Freestanding Litter

Collect Recycling Receptacles

- 30-gallon capacity.
- Freestanding or surface mount.
- Freestanding version has a cast iron base.
- Bin pivots open for emptying; bags are pulled out at a 35° angle.
- Bags attached by clips to inside of molded bin.
- Side latch with optional keyed lock.
- Visit landscapeforms.com for signage options.



Collect Recycling Hole and Slot Tops

Latch/Lock Location and Operation

Latch is located on the side of the receptacle, within the ribbon. When lockless, the latch is simply pushed to release the bin; bin is pushed back into place to automatically catch. When locked, a key is used to free the latch before operation. The lock is self-contained and can be retrofitted.

Ash Pan

The Collect ash pan is available on the Collect Side-opening Litter.

The ash pan consists of: a steel pan that sets in the top of the ribbon frame to hold cigarette butts. Pan is painted the same color as the receptacle frame. A magnet secures the ash pan while a finger-sized hole in the frame enables the pan to be pushed up for easy removal and emptying. Sand may or may not be used in the pan; sand is used, cigarette butts can be sifted off and emptied. If no sand is used, the entire pan can be removed and dumped.



Collect Latch/Lock Mechanism

To Specify

Select top or side-opening Collect litter receptacle.

Specify with or without ash urn for side-opening litter. Specify freestanding or surface mount. Select signage option for recycling unit. Specify with or without key lock. Select powdercoat color for ribbon frame.

Litter polyethylene bins come standard in black. Recyclable Receptacle polyethylene bin comes standard in Grassi and optional polyethylene colors are available.



Collect Side Opening Litter w/ Ash Pan Top



OF MUSIC
MIXON HALL





Metro40

Stop™

A handsome bollard in stationary and removable versions designed to provide traffic control and optional LED light.

Stop has a crisp profile. Its beveled-edge cast aluminum tapered sleeve provides a trim cover for an internal structural steel post. The space between the top of the post and the sleeve provides room for an optional wired LED light. A common aesthetic accommodates mounting and functional requirements. Stop is designed to aid in traffic control, by separating pedestrian and vehicular traffic.



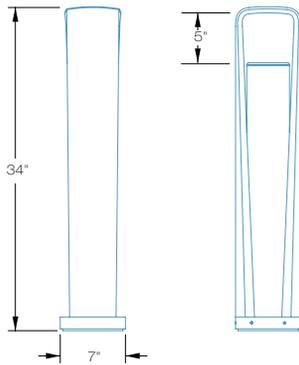
Stop



Embedded, Surface Mount or Removable Bollard



Embedded or Surface Mount Bollard with LED Light



Bollard Dimensions

Materials/Dimensions

- Sleeve is cast aluminum with an integral ring at the base. Aesthetically all mounting options look the same.
- Post is 4" structural steel pipe.
- Post is 28" high; the total height of the bollard from ground to top of aluminum casting is 34".
- Base plate on surface-mounted bollard is stainless steel.
- All exterior parts are powdercoated. Sleeve can be powdercoated in a selection of colors. Post is standard matte black.

Mounting Options

Stop may be embedded, surface mount or removable.

Embedded

This is the strongest and most common method for installation.

- The steel post is set into an 18" concrete footing.
- The steel post is slipped over the top of the post and locked into the base of the post with tamper-resistant set screws.
- A stainless steel ring helps align and aid installation.

Surface Mount

The steel post on all surface mount versions aesthetically matches the embedded version but allows for more installations on existing sites.

- A stainless steel base plate welded to the steel pipe is anchored to the concrete in three locations.
- The stainless steel base plate helps align and aid installation.
- 3 stainless steel leveling glides allow installation to be perfectly "dialed-in" from the top side of base.
- The cast aluminum sleeve with integral base ring is slipped over the top and locked into the base of the post with tamper-resistant set screws.

Removable

The removable version aesthetically matches embedded and surface mount versions.

- A galvanized socket is embedded in concrete.
- The steel post is inserted into the socket, and secured with locking mechanism.
- The cast aluminum sleeve with integral base ring is slipped over the top of the post and locked into the base of the post with tamper-resistant set screws.

To remove bollard

- Using key, turn locking mechanism to release post.
- Remove sleeve and post together by lifting up and out. Post and sleeve can be removed separately if preferred.

NOTE: Unlike some other removable bollards, Stop enables the post and sleeve to be removed as a single unit by one person. (Post and sleeve together weight approximately 60 lbs.) Care should be taken to set the sleeve in a place where it will be protected from damage while not in use.

LED lighting

An optional wired LED light is available on both embedded and surface-mounted versions. The light must be connected to the grid.

Features and Installation

See information under Hi-Glo : Lo-Glo for general LED features and benefits.

- The bollard light is designed to provide wayfinding. It does not project light onto the path. For that function, customers should order the Lo-Glo pathway light.
- The light is mounted in the top of the bollard post.
- The light includes a driver that converts line voltage (120V) to low voltage (12V) and powers the LED's.
- The light cap employs the same Acrylyte lens technology as Hi-Glo and Lo-Glo lights.
- To install, bring conduit up through the concrete into the bollard post.
- Lumen output is approximately 40 lumens.

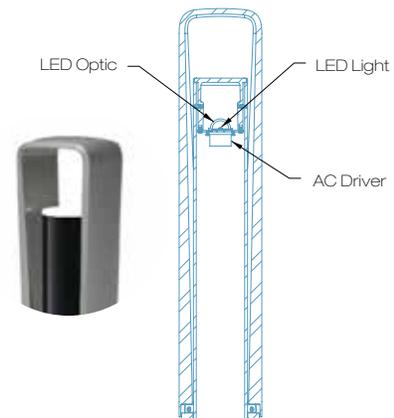
Light shines upward from the fixture, illuminating the inside surface of the sleeve and filling the space between the top of the post and the underside of the ribbon. Depending on the angle from which it is viewed, the light can appear to be up to 5-1/2" tall, providing an excellent wayfinding marker.

To Specify

Select Stop bollard. Specify surface mount, removable or embedded. For embedded and surface mount, choose with or without LED light. Select powdercoat color for cast aluminum sleeve. Bollard tube comes standard in matte black.



Bollard Lock Linkage System



Bollard LED Lighting



Metro40
Ride™

A bike rack formed by a signature frame that marks it as a member of the Metro40 family.

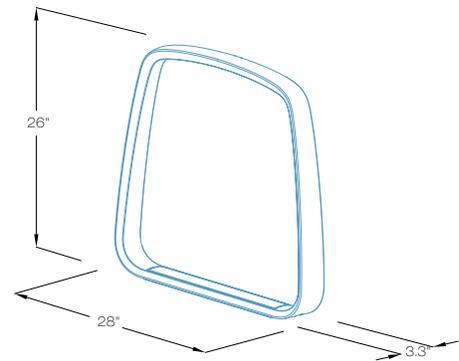
Ride has a cast aluminum flat ribbon frame that is beveled at the edges and tapered from bottom to top. Invisible connections make the looped form appear magically balanced. The 28" wide by 26" tall bike rack meets APBP (Association of Pedestrian and Bicycle Professionals) guidelines. It provides bicycle support with capability for attachment at two points, on the frame and tires. Ride accommodates a variety of commonly used locks including the standard horseshoe type. It is powdercoat finished to coordinate with other Metro40 elements.

Installation

- Surface mount or embedded to concrete surface.
- Requires only two bolts to mount, with extra surface mount anchor hole provided.
- 4 stainless steel leveling glides within the base are provided for fine adjustment from top side of base.
- Cover plate over bike rack base provides seamless appearance.
- Must be spaced 30" apart and 24" from a wall to meet APBP guidelines.

To Specify

Select Ride bike rack and powdercoat color. Specify surface mount or embedded.



Ride Dimensions



Materials and Finishes

Samples of all materials and finishes available. For more technical information call your sales rep or visit www.landscapeforms.com.

Wood

When used outdoors, wood is subject to variable weather conditions that may cause it to chip, crack and change color. This is a natural occurrence and in no way affects the integrity of the wood. Special sizes and lengths for wood benches are available; price varies by style.

Jarraah Solid stock exterior hardwood harvested from managed Australian forests. Unfinished for exterior use. Finished with LF-80 catalyzed lacquer clear finish for interior use only.

Metals

Aluminum combines light weight, corrosion resistance, and versatility of fabrication. For these reasons it is used extensively in the Metro40 collection.

Steel is employed for some elements due to its high strength, durability, wide availability, ease of fabrication and economy.

Stainless steel is steel with chromium and nickel additives that make it more resistant to corrosion. This material is used for mechanical fasteners and some surface mounting mechanisms.

Cast iron is heated for an extended period to improve its strength; used for Collect freestanding base.

Polyethylene

Formed of linear medium density polyethylene (LMDPE). It is resistant to UV rays, moisture, corrosive substances, and extreme temperatures.

Polyethylene is used for all litter liners. Please refer to our standard color chart for color selection.

metro40™

landscapeforms®

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