Omaha Streetscape Handbook

Prepared for
Omaha by Design
by
RDG Planning & Design

Streetscape Handbook: {Acknowledgements}

Prepared July 7, 2008

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The Gilbert M. and Martha H. Hitchcock Foundation
Fund for Omaha

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Omaha Streetscape Handbook: {Introduction}

This plan

- Establishes fundamental principles to direct streetscape design.
- Presents examples of streets that illustrate good design practices in various contexts.
- Establishes performance guidelines for streetscape elements.
- Considers enhancements to all streets in Omaha.

The image of a city is reflected in its streets, from the fixtures that light them to the sidewalks that frame them.

Coordinating the features and components of the streetscape help define an area's character and create a distinctive sense of place. Without coherence, these same components clash with one another, producing visual noise that wears on both residents and visitors.

Streets define how a city presents itself to the public. An attractive and cohesive streetscape is a vital part a city's physical appeal.

The Urban Design Element of the City of Omaha's Master Plan, adopted in December 2004, calls for the creation of "…a handbook of design and installation standards for streetscape elements that is adopted by the city and applies to all streets, with specific standards for areas of civic importance."

The standards set forth in this handbook were developed by a volunteer committee representing some of Omaha's leading engineers, landscape architects, planners and architects, working with the City of Omaha's Planning, Parks and Recreation, and Public Works Departments, the Nebraska Department of Roads, and the Omaha Public Power District (OPPD). Omaha by Design, a nonprofit organization dedicated to changing the physical face of Omaha through urban design standards and citizen input, managed the project. RDG Planning & Design, as project consultant, articulated the committee's vision and developed this handbook.

The goal of this effort is to unify the appearance of Omaha's streets by establishing a consistent streetscape design vocabulary while recognizing the character and individuality of Omaha's special districts and neighborhoods. Elements of this vocabulary include lighting, signage, paving, furnishings, civic art, public transit and plantings.

Why a Streetscape Handbook for Omaha?

Omaha's streets carry residents and visitors to and from the places of city life. We spend an average of 36 minutes daily or 156 hours annually just traveling to and from work. Stated another way, a typical full-time employee spends nearly four work weeks commuting, usually in a car. The character of the street influences the quality of this time. Bicyclists and pedestrians also use streets and belong in the transportation environment.

We spend more time on streets than in any other public setting. Because of this, we owe it to ourselves to view streets as public places, rather than just as conduits to move through as quickly as possible.

Purpose

The Streetscape Handbook is designed to guide designers and implementers toward creating an attractive and functional street environment for Omaha, and to encourage cohesive design for highly visible public rights-of-way. This Streetscape Handbook should also be used to evaluate new development and redevelopment projects affecting the public rights-of-way, and establish acceptable standards and practices that implement the Urban Design Element of the comprehensive plan.

The Streetscape Handbook should be used together with these:

- Urban Design Element of the Comprehensive Plan
- Green Streets Master Plan
- Suburban Parks Master Plan
- City of Omaha Public Work's Standard Plates
- Downtown Wayfinding Plan
- Public Art Commission Guidelines

Urban Design Element

The City of Omaha Streetscape Handbook evolved from the broad recommendations and goals set forth in the Urban Design Element. That document identified three principal urban design contexts:

- *Green Omaha,* preserving and enhancing the natural setting and public park system.
- *Civic Omaha,* defining and improving the City's public places and image centers.
- *Neighborhood Omaha,* addressing the quality of the residential environment.

The Streetscape Handbook is a component of Civic Omaha and relates to elements in the public right-of-way. In addressing the street setting, the Civic Omaha section of Urban Design Element states:

> *Street lights, traffic signals, traffic information signs, street identification signs, along with street trees, and street and sidewalk materials are the parts of the streetscape that are important in creating the image of any city. Often their placement and design are the*

product of a series of ad hoc decisions that give little coherency and, instead, create a form of visual noise. People may tune them out, but their sense of the city is still very much affected by the way streetscape is designed and installed.

Street lights, traffic signals, traffic information signs, parking signs, street identification signs, street trees, and street and sidewalk materials are important components of the City's image. All elements of streetscape within the areas of civic importance should contribute to harmonious and consistent designs for these areas.

Objectives
All elements of the streetscape within the Areas of Civic Importance should be part of a consistent design vocabulary and installed and maintained in ways consistent with the design.

Policies
The City should have design and installation standards that set a consistent design vocabulary for all elements within the public right of way in delineated areas of civic importance.

Implementation
There should be a handbook of design and installation standards for streetscape elements that is adopted by the City and applies to all streets, with specific standards for areas of civic importance.

In districts or areas designated as Areas of Civic Importance (ACI), the Urban Design Element recommends that:

- *The streets and public spaces within the delineated areas of civic importance should be improved in a consistent and harmonious way.*
- *The City should seek to achieve the best possible civic improvements within the delineated areas of civic importance.*
- *The design of streets and street furniture with delineated areas of civic importance should be subject to special design standards.*

Omaha has already made some important decisions about streetscape. New street lights downtown and along Abbott Drive reinforce and unify areas of civic importance. However, the city lacks an official streetscape vocabulary that addresses pedestrian-scale lighting, traffic signal design, information sign design and placement, sidewalk materials, landscaping, curbs, and other parts of the City's streetscape.

How will this Document be Used and Maintained?

The handbook, along with the Green Streets for Omaha Plan, establishes the expectations that Omaha has for its street environment and guides city project managers, developers and design professionals toward meeting those expectations. These two documents on the design of streets are not intended to be rigid manuals. Instead, they are tools that to be skillfully used and interpreted, leading ultimately to a visually attractive, functionally efficient and sustainable public environment along Omaha's streets.

These handbooks recommend new techniques of standard practice, and are not intended to add major costs to projects. However, good streets add value to the city, and some recommendations may have capital implications. For example, additional right-of-way may be required in some cases to provide space for complete street development, street furniture and landscaping. We should view these marginal added costs as investments that will pay dividends in both quality of life and value of property.

The Streetscape Handbook should be a dynamic document that evolves as its recommendations are applied to specific projects and the state of the practice changes. Therefore, Omaha by Design will sponsor quarterly reviews to evaluate its progress and implementation.

Chapter 1: {Basic Principles of Streetscape Design}

Basic Principles

Six fundamental principles will help achieve the goal of creating high quality, environmentally responsible streetscapes in Omaha.

- ***Implement sustainable practices***
- ***Develop complete streets***
- ***Use cohesive design elements***
- ***Promote security and safety***
- ***Coordinate maintenance with design and implementation***
- ***Protect and enhance historic character***

Legend

1	Bus Stop
2	Street Trees (shade)
3	Coordinated Street Furniture
4	Planters
5	Median Refuge
6	Pedestrian Crosswalk
7	Colocating signs
8	Bicycle Lane
9	Public Art
10	Pedestrian Lighting
11	On-street parking

{Implement Sustainable Practices}

Sustainable processes or states can be maintained indefinitely at a specific level. Sustainable design for streetscapes affects the flow of stormwater through the area, the materials used, and the consumption or renewal of energy and resources. Elements of sustainable streetscape design include:

- Stormwater management
- Use of sustainable materials
- Lighting & dark skies
- Landscaping & urban heat island

Stormwater Management

Stormwater runoff that is not properly managed flows rapidly over impervious surfaces (paved surfaces or other materials that do not absorb water), picking up debris and pollutants along the way and washing them into rivers and streams. Poorly managed stormwater runoff also causes flooding and erosion, destroys habitat and contributes to combined sewer overflows (CSOs). Unmanaged runoff contributes to sewer back-ups in homes in parts of the city with combined stormwater and sewer systems.

Integrating best stormwater management practices (BMP's) into building and site development can reduce the damaging effects of urbanization on rivers and streams. Disconnecting the flow from storm sewers and directing runoff to natural systems such as landscaped planters, swales and rain gardens reduces water velocity and cleans stormwater runoff. Natural stormwater systems also permit reduced pipe size for storm sewers.

Stormwater friendly streetscape with drainage leading to defined planting spaces.

University of Nebraska Medical Center

Portland, OR - 12th Street

Stormwater draining into rain garden and not directly into storm sewer.

Best Management Practices (BMP'S) include bioswales, pervious paving, rain gardens, and rain barrels. The following techniques should be considered in street and parking area design and integrated into the streetscape:

- **Bioswales**, depressions sloped on either side, contain vegetation or riprap that maximize the amount of time water spends over permeable surfaces before entering the storm sewer system. Bioswales also clean stormwater by removing pollutants.
- **Pervious paving** allows water to infiltrate the pavement surface, reducing rapid runoff into streams and storm sewer systems. Pervious paving surfaces include interlocking pavers, porous asphalt, porous concrete and grid pavers.
- **Rain garden**s, depressions that contain plants adapted to wet conditions, are designed to slow, capture and absorb rainwater.
- **Rain barrels** collect and detain rain from building gutter systems. The water in the rain barrels can be used to irrigate the surrounding landscape.

Seattle, WA

Interlocking pavers, providing pervious gaps for stormwater to infiltrate.

Omaha

Porous concrete at Duschesne Academy.

Kansas City, MO - 12th & Mcgee

Rain garden in streetscape.

Omaha

Bioswale- National Park Service Midwest Headquarters.

USE OF SUSTAINABLE MATERIALS

Sustainable materials are manufactured with concern for toxicity, sustainability of sources and the amount of energy required for production. Using sustainable materials reduces energy use and conserves natural resources.

Designers considering alternative materials should ask:

- Is the material made from renewable resources or rapidly renewing materials? Rapidly renewable materials include bamboo or recycled plastics.
- What is the amount and source of energy used to produce the material? Use of renewable or alternative sources of energy conserves resources and often reduces environmental degradation.
- Is the material manufactured regionally? Regional production reduces the amount of energy to transport the material. Leadership in Energy & Environmental Design (LEED) defines materials extracted, processed, and manufactured within 500 miles as "regional."
- Is the material made of recycled content? Without compromising other design considerations, materials and street furnishings should make greater use of recycled components.

Retrieved from CS Environmental

Made of recycled material.

Omaha - Dodge and 40th Street

Precast concrete bench near Joslyn Castle.

Retrieved from darksky.org

Omaha - Old Market at night

LIGHTING & DARK SKIES

Outdoor lighting is important in urban environments. Appropriate lighting levels promotes a feeling of comfort and security and encourages pedestrian activity. Illuminating building facades highlights interesting architectural features and strengthens the character of a district. Facade illumination also directs ambient light to the vertical plane at eye level, creating higher visual contrast and recognition of faces. Proper lighting levels in pedestrian precincts also provides visual cues to motorists, reducing areas of shadow that hide pedestrians from view.

Streetlighting fixtures should relate to the streetscape vocabulary during both day and night. Their scale, spacing and style of the fixtures contribute to the visual tone of the street. Use of light poles for signage, banners and other wayfinding devices adds color and detail and reduces visual clutter by ordering street graphics.

At night, the light sources should become almost invisible. Full cut-off or cut-off fixture optics focus the observer's eye on the illuminated surface below the fixture. If the fixture does not utilize these high performance optics, the resulting glare causes the viewer's pupils to contract, making the illuminated area seem dark.

The type of light source also influences energy consumption and sustainability. Efficient light sources can achieve equivalent lighting levels with lower energy use. The spectrum of light also becomes an important part of the nighttime streetscape. For example, high pressure sodium vapor lights are very efficient, but their orange-yellow light renders colors poorly, making it difficult to distinguish true colors in the environment. Metal halide's white light, on the other hand, renders colors and surfaces more realistically. These lamps are available in different color temperatures to provide a more "incandescent" appearance. Current studies indicate that human peripheral vision and visual acuity in urban settings is substantially better under white light than orange light.

The concept of "dark skies" minimizes extraneous light and directs light to areas and surfaces that should be illuminated. Light pollution and obtrusive light result from both the optical characteristics and placement of the luminaires in an outdoor site or roadway. Outdoor lighting performance should be based on both optics and overall system design, including distribution and functional and aesthetic requirements.

Lighting design can also create visual interest by highlighting special features. Uplighting of trees, floodlighting of architectural facades and highlighting other streetscape features provide "sparkle" when complementing good overall street lighting design.

LANDSCAPING & URBAN HEAT ISLANDS

An urban heat island is a densely populated area that is significantly warmer than its surroundings. Heat islands form in urban areas when vegetation is replaced by hard surfaces of low reflectivity. These surfaces absorb the sun's heat, causing surface and ambient temperatures to rise.

Planting trees reduces the urban heat island effect by shading sunlight from hard surfaces. Deciduous trees on the south and west sides of buildings reduces energy use by blocking sunlight in the summer while allowing it to penetrate the building in the winter.

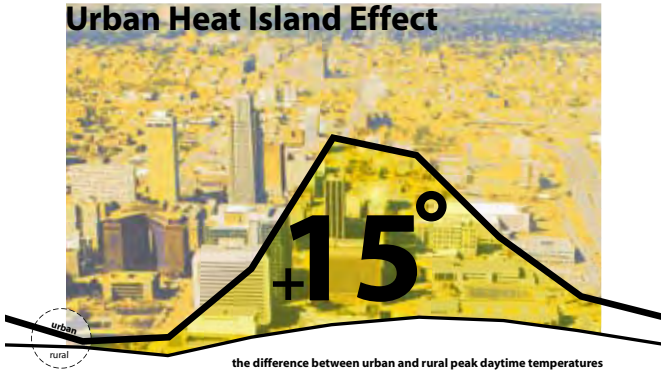
Reflective paving and roofing materials also helps reduce urban heat islands. Of typical paving materials, concrete is somewhat more reflective than asphalt. Green roofs in buildings also absorb the solar radiation.

Omaha - 55th and Center Streets

Little vegetation and many hard surfaces with low reflectivity allows the urban heat island effect to rise.

Omaha - Underwood Street

Deciduous trees planted to shade buildings and the streetscape surfaces below.



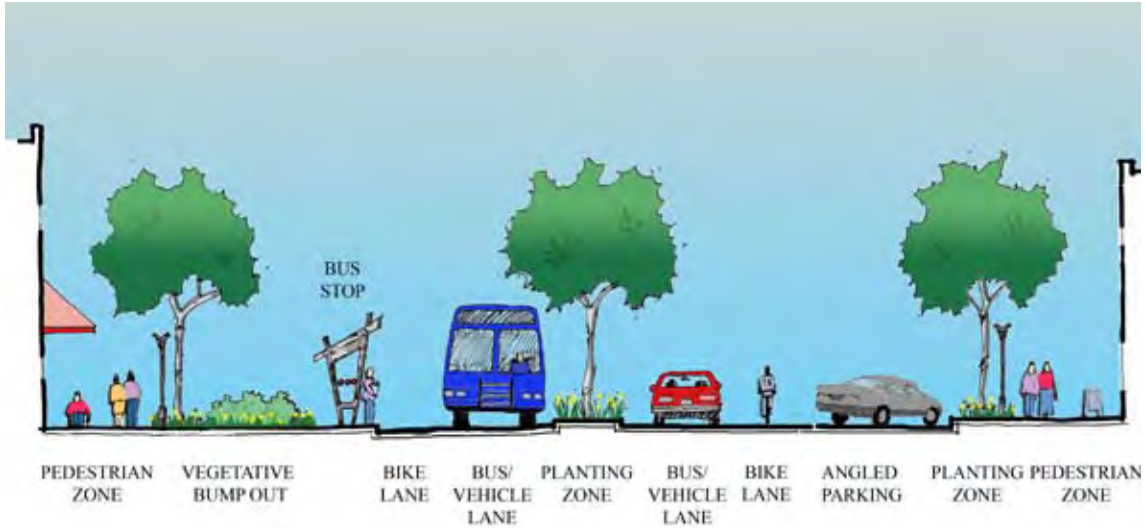
{Develop Complete Streets}

Complete Streets accommodate both motorized and non-motorized transportation. They provide comfortable space for motorists, transit passengers, pedestrians and bicyclists. They also serve the special needs of such users as seniors, children and people with disabilities. Health and environmental concerns and high fuel costs make transportation alternatives more realistic and economical for more people. The design of urban streetscapes should meet the needs of a variety of users.

Traffic calming devices should be a part of complete street design. Examples of calmers include landscaped islands, chicanes, speed bumps and tables, crosswalks, changes in paving surfaces, and slower speed limits. These devices make streets safer for all users and tend to encourage compliance with speed limits.

Clear and well-maintained pavement markings should be used to delineate function-specific lanes, such as bicycle or reserved transit lanes.

The Institute of Transportation Engineer's *Context Sensitive Solutions in Designing Major Thoroughfares for Walkable Communities* provides more information on complete street design. The website, www.completestreets.org provides ongoing information on the state of complete street legislation and design. Street designers should also consult *Green Streets for Omaha*, the companion publication to this handbook, for additional street design guidance.



Boulder, CO

Des Moines, IA

{Use Cohesive Design Elements}

Designing a streetscape is comparable to designing a building. A well-designed building may contain a unified composition of rooms or spaces, spaces with well-defined edges, orderly rhythms of windows and structural elements, cohesive furniture, a hierarchy of spaces, attractive and functional lighting, and interior materials appropriate to their function.

Similarly, a well-designed streetscape includes:

- A unified relationship between pedestrian and building spaces.
- Well-defined edges between pedestrian and vehicle domains.
- A rhythmic and logical use of trees, furniture, paving and planting.
- Attractive and functionally appropriate street lighting.
- A consistent and harmonious family of street furnishings.
- A hierarchy of spaces that helps define the use of the streetscape.
- Attractive and durable materials, varied to reflect functional and aesthetic needs.
- Scale is appropriate to how users will experience the environment.

These factors applied to an urban streetscape may include:

- Strong spatial definition of outdoor "rooms" and "hallways" generated through strong building edges, appropriate walls, fences, plantings, etc. as well as overhead tree canopies. Rooms developed in a hierarchy of sizes and intended uses provide a wide variety of pedestrian experiences in streetscape settings.
- A sense of unity that emerges from consistent textures, colors and forms in trees and other plantings, furniture, paving and other elements.
- Strong rhythms created by regular repetitions of features and dimensions, such as streetlights, hard and landscaped surfaces and height of elements.
- Strategic use of dominant streetscape features (flowers, signage/banners, etc.) to focus pedestrian or driver attention to information, safety considerations, etc.

These and other elements create an ordered, harmonious, unified and vibrant streetscape setting. Everything must have a purpose, relate the street to its surroundings, and satisfy both functional and aesthetic needs.

Omaha - North 24th Street

Unified composition *of paving and planting ties this streetscape together. Paving defines the* ***edges*** *of the pedestrian and vehicular zones.*

Coralville, IA

Outdoor furniture made of the same material creates ***rhythm*** *throughout the streetscape and minimizes visual clutter.*

Coralville, IA

Rhythm *of the trees, bollards, plantings and signage, creates visual continuity throughout the streetscape.*

Omaha - Davenport Street at Village Pointe Mall

Hierarchy *makes the roundabout a visual focus. Materials around the sculpture repeat throughout the streetscape.*

{Promote Security and Safety}

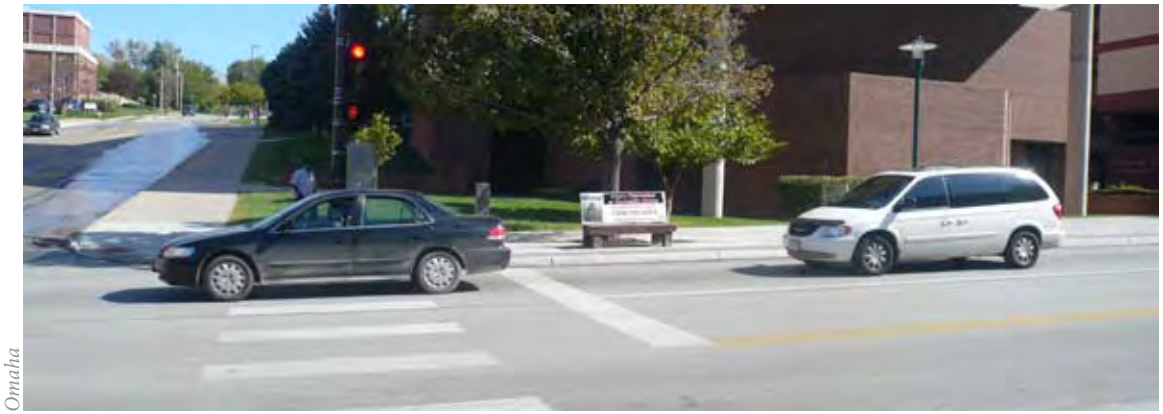
A successful streetscape must offer safety and security to its users. Design for a safe and comfortable streetscape:

- ***Minimizes or manages pedestrian and vehicle conflicts.***
  Effective techniques include better crosswalk definition, improved sightlines, higher lighting levels at points of potential conflict, pedestrian refuges and corner nodes that decrease the distance that pedestrians must negotiate in crossing a street.

- ***Increases observability.***
  Street design and building configurations should provide clear visibility for pedestrians and police. Streetscapes should avoid hiding places or blind corners.

- ***Encourages pedestrian and street activity.***
  People with eyes and ears on the street is one of the best available deterrents to crime. People feel most secure in the company of other people.

- ***Communicates caring and stewardship of the street environment***.
  Good streetscape design should promote good maintenance and discourage vandalism. When they occur, graffiti and other acts of vandalism should be repaired. Evidence of neglect encourages more vandalism. Graffiti should be reported to the Mayor's Hotline 444-5555.



Omaha

Top: *Old Market active with pedestrians.*
Bottom: *Crosswalks with longitudinal markings are highly visible to approaching drivers.*

{Coordinate Maintenance with Design}

A quality streetscape must continue to look good over time. Long-term maintenance is a critical design determinant and is a serious matter for both the City and the local community. Community stewardship can help stretch city resources, and neighborhoods should be involved in both the design and maintenance processes.

A maintenance program should be part of project design. The group ultimately responsible for maintenance should be included in the project team. In addition, initial maintenance should be part of installation contracts.

The streetscape maintenance program should address the following:

- ***Graffiti Prevention***
  Planting trees or other greenery near graffiti-prone areas deters vandalism.
- ***Irrigation System***
  Weekly inspections should be conducted to adjust heads and water performance. Systems should be started in the spring and shut down in the fall.
- ***Landscape***
  Trees and shrubs should be pruned to remove dead or damaged wood annually. Mulch depth should be maintained at 3". All landscape beds should be weeded regularly. Perennials should be cut back in March and divided and fertilized as required.
- ***Lighting***
  All light outages should be repaired. Metal elements should be reviewed yearly and refinished as required.
- ***Sidewalks***
  Sidewalks should be regularly power washed and joints should be sealed every 5 years. Gum removal should occur regularly.
- ***Street Furniture***
  All damaged stone, metal and concrete elements should be replaced immediately. All graffiti should be removed. Using durable materials will ensure the longevity of the project and will help to reduce maintenance costs.
- ***Street Sweeping***
  Streets should be routinely cleaned to remove sand and debris.
- ***Trash Pick-up***
  Trash should be picked up daily or weekly depending on the use of the street. Trash should be removed from the street
- ***Tree Trimming***
  Appropriate tree species should be planted along streets and near power lines. Trees requiring trimming should be done by a certified arborist, carefully pruning to not adversely deform the shape of the tree.

Omaha

Maintenance of ornamental light in downtown.

{Protect and Enhance Historic Character}

Good streetscape design understands the contribution of streetscape elements to the character of historic districts. Historic elements reinforce the district's identity and distinctiveness. Traditional streetscape elements such as paving materials, lighting or other meaningful elements should be retained or re-installed when appropriate. New materials should be consistent with the historic character and design patterns of special areas.

Omaha - Dundee Neighborhood

Chapter ii: {Album of Streetscapes}

Omaha has over 2,000 miles of streets that traverse many different neighborhoods and urban contexts. This chapter presents a portfolio of good streets in Omaha and peer cities, illustrating high design quality and guiding patterns to apply to streetscape contexts in the city.

A Portfolio of Streetscapes

This section presents well-designed streetscapes that illustrate good contemporary practice. Each example describes the street's function (freeway, major arterial, minor arterial, collector, local); development context; and the features and patterns that create a distinctive street environment. The description places the street into one of four Areas of Civic Importance (ACI) designations recognized by new development regulations implementing the Urban Design Element. Chapter Four presents a discussion of these contextual designations.

The reader should combine this portfolio with a similar presentation in the companion publication, Green Streets for Omaha. Streetscape examples include:

- *Larimer Street in Denver*
- *South 24th Street in Omaha*
- *North 24th Street in Omaha*
- *Davenport Street in Omaha*
- *Colorado Avenue in Colorado Springs*
- *University Avenue in Windsor Heights*
- *Martin Luther King, Jr Avenue in Des Moines*
- *Broadway Avenue in Oklahoma City*
- *Highway 6 in Coralville*
- *28th Street in Boulder*
- *NW 62nd Avenue in Johnston*

{Larimer Street}
Denver, Colorado

Function	*Minor arterial (ACI-1)*
Section	*One-way, two-lane street with parallel parking on both sides.*
Posted Speed	*30 mph*
Development Context	*Downtown mixed use historic district*

Patterns in the Street Environment

- Strong street definition with lighting and vertical features behind the curb.
- Sidewalk free of clutter and reserved space for furniture.
- Vertical poles to support pedestrian lighting, planters and over-street graphics.
- Pedestrian lighting with coordinated street graphics for both business and public information.
- Detailed sidewalk using small-scale pavers.
- Coordinated street furnishings.
- Parallel parking with pay stations to minimize street clutter.
- Street-oriented building entrances and shop windows with outdoor dining areas.

{South 24th Street}
Omaha, Nebraska

Function	*Minor arterial in "main street" business district (ACI-1)*
Section	*Two-lane street with angled parking*
Posted Speed	*25 mph*
Development Context	*Mixed use historic business district*

Patterns in the Street Environment

- Themed streetscape expressing the "tree of life" with colors and art allusions to past and present ethnicity.
- Tear drop lamp fixtures recall historic lighting and direct light away to the ground plane.
- Varied paving surfaces to reflect themes and functional sidewalk zones. Materials include color-conditioned concrete at corner seating areas, conventional concrete for primary walking area, random-cut granite to suggest Mexican townscape.
- Large planters and light columns sized for seating walls.
- Major public art installation at gateway and ornamental elements to provide year-round color.
- Ornamental street name signs.

{North 24th Street}
Omaha, Nebraska

Function	*Minor arterial (ACI-1)*
Section	*Wide two-lane street with parallel parking*
Posted Speed	*25 mph*
Development Context	*Mixed use urban district and redevelopment corridor*

Patterns in the Street Environment

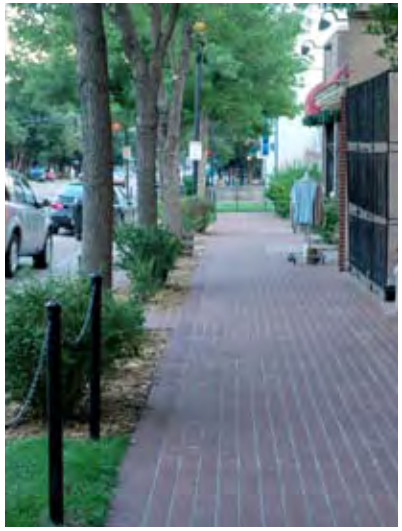
- Clear definition of domains with variegated sectional pavers and formal tree planting in planting beds.
- Variation of paving surfaces defines functional sidewalk zones. Conventional concrete used to define primary pedestrian path.
- Jazz and music themes expressed by contemporary banners, interpretive graphics, and district-specific street signs.
- Unified family of street furnishings.
- Hybrid lighting using sharp cut-off "hockey puck" fixtures supplemented by contemporary pedestrian lighting.

{Davenport Street}
Omaha, Nebraska

Function	*Local interior street within lifestyle shopping center (ACI-2)*
Section	*Two-lane street with angled parking*
Posted Speed	*25 mph*
Development Context	*Single-use retail center (Village Pointe Mall)*

Patterns in the Street Environment

- "New urbanist" shopping center with street-oriented storefronts and building line.
- Ornamental acorn street lighting.
- Landscaped islands with low-lying plants and street trees. Diagonal parking set off by landscaped areas.
- Intersections and pedestrian crossings defined by pavers.
- Coordinated family of street furnishings, including benches, lighting and bollards. Bollards used to define pedestrian domain.
- Public event space included in streetscape.
- Roundabout with public art.
- Variety of sidewalk paving colors and patterns.

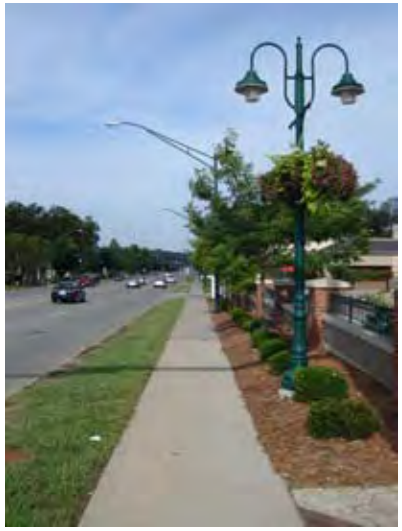


{Colorado Avenue}
Colorado Springs, Colorado

Function	*Minor arterial (ACI-1 & ACI-2)*
Section	*Four-lane street with parallel parking*
Posted Speed	*25 mph*
Development Context	*Mixed use urban historic district*

Patterns in the Street Environment

- Occasional landscaped nodes extending from curb into the parking lane. Landscaped areas define parking pockets and provide tree lawn within a constrained street section.
- Landscape strip separates vehicular and pedestrian domains. Variety of materials include overstory trees, shrubs, grass and ground cover.
- Brick sidewalks reinforce district's historic character.
- Overstory trees and low lying plants behind the curb.
- Clear pedestrian path free of obstructions.
- Permanent installations for benches and trash receptacles.



{University Avenue}
Windsor Heights, Iowa

Function	*Major arterial (ACI-2, ACI-3)*
Section	*Four-lane street with limited on-street parallel parking*
Posted Speed	*25 mph*
Development Context	*Mixed use urban district, redeveloping "town center" intersection and city edge commercial corridor*

Patterns in the Street Environment

- Six-foot grass-covered clear strip separating sidewalk from moving traffic. Low plants and trees between sidewalk and street property line. Ornamental low walls block vehicle light beams from the travelway.
- Hybrid lighting, with cut-off cobra-head fixtures on black poles providing roadway lighting and pedestrian-scale light fixtures illuminating sidewalk. Hanging flower baskets provide detail to pedestrian lights
- Well-designed intersections with traffic signals mounted to black poles.
- Seating areas defined by plants and pavers.

{Martin Luther King Jr. Parkway}

Des Moines, Iowa

Function *Major arterial (ACI-2 & ACI-3)*

Section *Six-lane, divided urban boulevard*

Posted Speed *30 mph*

Development Context *Mixed use automobile-oriented corridor on edge of central business district.*

Patterns in the Street Environment

- Raised landscaped median to separate opposing street channels.
- Double-headed cut-off light fixtures in median, lighting both street channels. Fixtures sited behind curb in undivided sections.
- 15-foot tree lawn with regularly-spaced tree plantings. Wide sidewalk integrated into urban trail network.
- Prairie grass planted in bundles along roadway.
- Pedestrian crossings use large brick bollard at medians, with traffic control device and pedestrian lighting.
- Intersection plazas include low brick monument walls and street furniture.
- Single mast-arm beams supporting four signals.

{Broadway Avenue}
Oklahoma City, Oklahoma

Function	*Major arterial (ACI-2, ACI-3)*
Section	*Four-lane with parallel parking*
Posted Speed	*30 mph*
Development Context	*"Automobile Alley," redeveloping mixed use corridor*

Patterns in the Street Environment

- Hybrid lighting, with roadway lights supplemented by pedestrian-scaled acorn lights.
- Thematic Automobile Alley graphics, permanent thematic medallions in place of conventional banners.
- Paver installations in intersections in the shape of tires, reinforcing corridor theme.
- Interpretive graphics and plaques embedded in pavement.
- Building and signage design guidelines.

{US Highway 6}
Coralville, Iowa

Function	*Major arterial (ACI-3)*
Section	*Five-lane with left-turn lanes*
Posted Speed	*45 mph*
Development Context	*Suburban commercial with railroad corridor on much of the south side*

Patterns in the Street Environment:

- Pedestrian and motor vehicle domains separated by wide tree lawn and formal overstory tree planting.
- Concrete unit pavers define crosswalks.
- Wide pathway accommodates both pedestrians and cyclists, integrated into urban trail system
- Pedestrian-scale lights and graphics located along back of pathway; roadway lighting in sidewalk setback.
- Landscaped median with plantings at strategic intersections.
- Additional landscaping installed between back of path and property line.
- Access consolidation program minimizes driveway interruptions.

{28th Street}
Boulder, Colorado

Function	*Major arterial (ACI-4)*
Section	*Six-lane limited access highway with parallel service road and bicycle lanes.*
Posted Speed	*45 mph*
Development Context	*Suburban mixed use*

Patterns in the Street Environment:

- Complete street design accommodating regional and local traffic, bicycles, transit and pedestrians.
- Public art and natural median landscaping scaled for high speed traffic.
- Bicycle lanes and wide sidewalks on parallel service road.
- Trail and transit accommodations adjacent to university campus.
- Pedestrian circulation under mainline highway with tunnels.
- Extensive public art using sculpture walls, mosaics, custom-designed furniture and three-dimensional art.
- Three functional street types in one corridor, separated by landscaping.

{NW 62nd Avenue}
Johnston, Iowa

Function *Minor arterial (ACI-4)*

Section *Four-lane divided with left-turn lanes*

Posted Speed *35 mph*

Development Context *Suburban mixed use. Existing adjacent uses include suburban residential, public schools, major retail and agriculture, and business park.*

Patterns in the Street Environment:

- Landscaped median using mixed lower-level landscaping and center median berms to screen views of opposing street channel.
- Sections of street have raised medians with tree plantings.
- Intersections enhanced with landscaping, ornamental lighting, pavers, street furniture, community graphics and public art.
- Median dimension is about equal in width to the street channels.
- 10' sidewalk follows roadway, separated by grass and overstory trees.
- Street lighting staggered along corridor.
- Stone monument walls and interpretive ceramic bas-reliefs integrated into street design.

Lessons Learned

The streets illustrated in this section fill different functions and operate in a variety of contexts. By experiencing them and considering their components and dimensions, we can derive patterns that can help guide standards to apply to new and retrofitted Omaha streets. Designers should also consult the companion publication, Green Streets for Omaha, *for design patterns that relate to street sections and landscaping.*

1. Good streetscapes separate the vehicular and pedestrian domains with an "amenity zone," a feature that adds to the simple, functional dichotomy of street channel and sidewalk. This zone may be as simple as a well-maintained strip of turf (University Avenue) or as complex as an intricate symbolic composition of color and surface (South 24th Street).

2. Streetscape elements are scaled to their intended users. Small scale details are lost on motorists moving at 45 miles per hour, while big elements do not engage pedestrians. Streetscapes like 28th Street in Boulder (p.37) include features that add interest without distraction for motorists at high speeds, while providing a different scale for pedestrians and cyclists along this complete street.

3. The use of different paving surfaces and street furniture makes functional sense. Changes in paving material and texture can signal the primary pedestrian pathway, spaces such as crosswalks that will be occupied by both vehicles and pedestrians, or the "amenity zone" that separates domains. They may also reflect streetscape themes. Good streetscapes also place street furniture in places where it is likely to meet user needs. For example, seating areas are located in places that people find comfortable – perhaps buffered from moving traffic, or set off by landscaping or low walls.

4. Streetscape elements fit together into a family and have at least some unity of design and/or color. Street features serve a program of intended uses, and are not placed either at random or to fill up space.

5. Good streetscapes minimize clutter. Wires are almost always underground, unless they serve light rail transit. Public information signage is coordinated, rather than scattered throughout the street environment. Clarity and readability takes precedence over size.

6. Streetscapes provide space for all users, and do not subordinate the needs of non-motorized users to motor vehicles. Each type of user is superior within its domain, and unavoidable conflicts are carefully managed for the safety of all. Medians and refuges reduce the scale of wide roadways and provide ways to manage the joint domain of the crosswalk.

7. Examples make frequent use of color and are attractive throughout the year.

8. Materials are durable and selected for maintainability. Successful street environments are also well-maintained. Plant materials are healthy and adequately watered. Paving is clean and unlittered, and surfaces are free of graffiti or other types of vandalism.

9. Hybrid lighting, combining cleanly-designed roadway lighting and more nuanced pedestrian-scaled lighting, is used in many effective streetscapes.

10. In many cases, adjacent buildings contribute to the public environment by providing a street orientation, or a direct path from the sidewalk to building or business entrances.

Chapter III: {Components of the Streetscape}

The following chapter considers the specific components of streetscapes. Elements begin with a general ***Description****.* ***Performance Standards*** *are mandatory requirements that must be met by specific components.* ***Design Considerations*** *provide advisory information and guidelines for consideration.*

{Street Furniture}
Benches

Omaha - Capitol Ave

Omaha

Made of recycled material

Description

- Benches in the streetscape provide outdoor seating for more than one person, with or without backs and/or arm rests.

Performance Standard:

- Benches should provide comfortable, low maintenance seating. They should be built of durable, non-abrasive materials that withstand cracking, rotting, or sagging. Wood, nails or wire should be avoided in construction or repair of benches in the streetscape.
- Seating surfaces should be 16 to 18 inches high (maximum 24 inches) and should have a minimum depth of 16 inches for seats without backs, 14 inches for seats with backs (maximum 30 inches). Benches may vary in length from 4 to 8 feet, depending on design and intended users. Seating walls, ledges, steps, or terraces should be between 12 and 20 inches high and at least 16 inches deep when possible. Two-sided seating walls should be at least 30 inches wide. Benches should avoid sharp edges and be well-crafted.
- Place benches in functional and accessible locations. Users should be able to reach benches directly from public sidewalks or pathways in all weather conditions. Benches should be placed at useful locations, away from spray or other road impact
- Benches should be convenient to and accessible from, but not obstructing the pedestrian pathway.
- Use materials that complement other streetscape elements such as streetlights, trash and recycle receptacles, bicycle racks, railings, and surrounding buildings.
- Anchor benches to hard surface materials such as concrete, granite cobbles or unit pavers.
- Advertising on benches is prohibited in ACI or Civic Place Districts.
- Existing benches removed by development or construction projects should be replaced consistent with these standards.

Benches are subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Omaha - South 24th Street

Omaha - Dundee

Omaha - 42nd Street

Design Considerations:

- Locate benches logically. Potential locations include places intended for gathering, logical resting places along sidewalks and pathways, in ornamental gardens or landscaped areas and at places with views or interpretive information. Available sunlight, prevailing winds and the organization of surrounding open space influence bench placement. Seating in a variety of environments and settings allows individual choice.
- When possible, locate benches near lighting and plantings, making them more useful at night and improving observability. Trees provide shade during the day and some shelter from rain.
- Benches with backs and armrests are generally more comfortable for people with physical disabilities. Benches without backs allow people to face different directions. Armrests or dividers discourage sleeping but can restrict seating and reduce flexibility and comfort.
- Shorter benches can sometimes create more comfortable social situations, such as providing seating sized for a parent and child. Bench length depends on the nature of the design and the context of the streetscape district.
- Construction material should be easily repairable if damaged. Products should be "green", made of:
  - recycled materials
  - materials recyclable for other uses
  - very durable materials such as stone, steel, or other durable metals
- Small donor plaques or logos may be used to commemorate individuals, groups or organizations.
- Bench design should emphasize comfort, straightforward form and detail, maintenance, durability and resistance to vandalism.
- Evaluate the existing condition of bus benches used throughout the city. Each bus stop should have no more than one bench to reduce street clutter, unless more are warranted by user demand or the role of the stop in the system.

Resources:

Landscape Forms
DuMor Inc.
Columbia Cascade Company
Forms + Surfaces
Canterbury International
Columbia Cascade Company
Keystone Ridge Designs, Inc.
Maglin Furniture Systems Ltd.
Sitecraft
Smith & Hawken
Wausau Tile, Inc.; Metal-Form Division

{Street Furniture}
Bicycle Racks

Boulder, CO

Boulder - Racks by planters.

Denver, CO

Description

- Bicycle racks provide secure parking facilities for bicycles. The term "rack" should not be taken to imply the use of long, multiple installations that do not support the bicycle frame.

Performance Standard:

- Permanently anchor bicycle racks to a paved surface. Use vandal-resistant bolts or other attachments that prevent removal by common tools.
- All bicycle racks shall use single inverted-U or post and loop designs, both of which provide primary support for the bike frame. Do not use racks that secure the wheel. All rack placements should provide independent access to each bicycle. Single racks are both flexible and unobtrusive.
- The exterior surface of the rack shall be non-abrasive, non-marring, and durable to minimize refinishing or repair.
- The rack should have a typical height of 36" minimum from base to top of inverted "U", while the width should be 18" minimum between outside walls of parallel tube sections. A 2" minimum diameter is recommended and the tube should have a minimum thickness of schedule 40.

Bicycle racks not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations:

- Convenience and security are the two major concerns for locations. Lighting and adjacency to high traffic areas reduces vandalism and theft.
- Shelter from weather conditions is desirable.
- Well-placed racks encourage bicycle transportation and do not block pedestrian routes. Lack of adequate facilities forces cyclists to lock bikes to signs, railings, parking meters and trees. Racks should be placed at logical locations, such as business districts, at stopping points along trails and at other major destinations and activity centers.
- Locate bicycle racks near major building or center entrances. Do not obstruct entrances or pedestrian paths.
- Place racks to keep secured bicycles at least 3 feet from the curb when the street has on-street parking or 2 feet when next to a travel lane. Racks should be at least 3 feet from street trees or street furniture.
- Exterior surfaces on bike racks include galvanized, vinylized, coated or painted steel. Vinylized or other coated installations are preferable because they do not damage or scratch frames.
- Omaha's zoning ordinance adjusts parking requirements for establishments that provide bicycle parking.

{Street Furniture}
Bollards

Chicago - Lincoln Square

Omaha - Village Point

Lincoln - Haymarket

Omaha - Dundee

Description

- Bollards prevent vehicle encroachment into pedestrian areas or buildings.

Performance Standard:

- Bollards should coordinate with other street furnishings.
- Bollards should be finished in a durable finish consistent with the other street furniture.
- Placement of bollards shall be a minimum of 2 feet from the curb zone. Spacing of bollards should be 5 feet minimum (6 feet preferred) from each other.

Bollards not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations:

- Bollards are very useful for protecting pedestrians and buildings from motor vehicle encroachment. Other uses include providing security for sensitive buildings and sites and calling attention to traffic calming devices.
- Use bollards as part of a designed environment to avoid cluttering the streetscape.
- Bollards should not create hazardous and unexpected obstacles to pedestrians, cyclists, and other non-motorized users.
- Incorporate contrasting detail at base or waist level to aid people with sight impairments.
- Permanent bollards should be easily repairable if damaged. Products should be "green", made of:
  - recycled materials
  - materials recyclable for other uses
  - very durable materials such as stone, steel, concrete or other durable metals
- Visible grouting around the base should be minimized.
- Lighted bollards provide useful light for pedestrians and motorists and emphasize travel pathways.

{Street Furniture}
Bus Stops & Shelters

Saint Louis

Amsterdam

Omaha - North Transfer

Description

- Bus stops provide designated locations at which passengers board or leave transit vehicles. Bus shelters are structures located at some bus stops to protect passengers from weather.

Performance Standard:

- Stops and shelters must be fully accessible to people with disabilities.
- Bus stops fall into four types:
  - ***Type 1***: Simple curbside stops, marked only by a bus stop sign.
  - ***Type 2***: Non-sheltered stops with signs and benches.
  - ***Type 3***: Sheltered stops.
  - ***Type 4***: Transit centers or transfer points.
- All bus stops should be marked by standard signs. Signs should be cleanly designed and maintained, and include at a minimum:
  - Graphic identification or logo identifying the site as a Metro Area Transit (MAT) bus stop.
  - Designations of the routes serving the stop.
  - Phone number for further assistance.
  - Font type and size should be clearly legible to passengers. Capital letters should be no less than one inch in height.
- Type 2 stops should typically include:
  - A bus stop sign, as indicated above.
  - A paved or surfaced pad, connected to the sidewalk, for securing a bench and other furnishings.
  - A bench and trash receptacle if necessary, that comply with the design standards of this document.
- Type 3 stops should include:
  - A bus stop sign or other appropriate designation.
  - A paved pad or surface, part of or connected to the sidewalk, for securing the shelter and other street furniture.
  - A shelter structure that applies the Design Considerations discussed below.
  - A bench and neighboring trash receptacle that comply with the design standards of this document.
- Type 4 stops will be specifically designed for their individual sites.
- Metro Area Transit must approve the design and placement of new bus shelters. Contact MAT 341-7560 for more information. Bus shelters must also receive a permit from the City of Omaha.

Englewood, CO

Chicago, IL

Design Considerations:

- Bus shelter design should not conflict with the adjacent streetscape. "Generic" shelters should be uniform or drawn from a small group of approved designs. Typical designs should meet functional requirements with minimal structure and avoid materials like Plexiglas that are easily vandalized and difficult to repair.
- Individual shelter designs may be used in thematic or historic districts, or at transit centers. In most cases, place shelters close to the curb for passenger convenience. Minimum shelter clearance should be three feet from the back of the curb. Shelter placement should always permit a five-foot wide pedestrian pathway in front of or around the structure.
- Shelters should not permit unauthorized access to adjacent properties.
- Evaluate the use of advertising as a design element on bus shelters. Lighted panels provide shelter and sidewalk illumination that can increase comfort of use. Shelter design should still permit good visibility despite the advertising panel's opaqueness.
- Provide adequate lighting at bus stops to improve safety and identify locations. Lighting may be ambient or incorporated into shelters.
- Major developments (including mixed use projects) should accommodate transit service in coordination with MAT. Projects should provide space for shelters or transit stops that provides good operational function and convenience to riders. Developments should consider assisting with the construction of stops and shelters. The ability of a project to accommodate public transit should be part of the City's review of major development applications.
- Businesses, neighborhood associations and other groups may sponsor an Adopt-A-Shelter program to monitor and report problems, and assist with routine maintenance and upgrades.
- Neighboring property owners and businesses should participate in designing and locating bus stops or shelters. The design of the unit may include public art.
- Bus stop signs along ACI districts should be mounted to an existing pole.

{Street Furniture}
Kiosks

Omaha - Old Market

Lincoln - Haymarket

Omaha - Old Market

Description

- A small, usually open pavilion, booth, or other structure with exterior windows or panels used to display information.

Performance Standard:

- Place information kiosks near but outside of the main pedestrian pathway. Provide kiosks with their own lighting or near a light source.
- Units should be weatherproof and secure. Transparent surfaces and panel covers should be non-breakable.
- Maintenance plan must be prepared prior to installation.
- Install automatic teller machines (ATM) out of the public right-of-way and on private property.

Kiosks not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations:

- Kiosks in the public realm convey information. Typical displays include business district maps and directories, other wayfinding graphics, public announcements and informational posters. For example, kiosks in the Old Market display a thematic poster and a district map and directory. Kiosks in the public realm provide opportunities for excellent graphic design, and should take advantage of their prominent locations.
- Displays may require a locking mechanism to prevent tampering of permanent displays.
- Fliers, brochures and handouts should be protected from weather conditions, including wind and rain.
- Bank ATM's allow users to perform banking activities. Pedestrian-accessible ATM locations should be well-lighted and active. Walk-up ATM's should provide at least some overhead shelter for customers.

{Street Furniture}
Mail Collection Boxes

Omaha - Leavenworth

Douglas County SID

Omaha

Description

- Free-standing containers for deposit and collection of mail and packages.

Performance Standard

- Place all collection boxes in compliance with United States Postal Service regulations.
- Collection boxes shall not obstruct sight lines for pedestrians and drivers.
- Post boxes should not be encased in brick or other hard enclosure.
- Group and construct collection boxes of similar material.
- Applications for new collection boxes should be directed to the US Postal Service. Call customer relations at 402-390-3180.

Design Considerations

- Standard walk-up collection boxes should be located at least 2.5 feet behind the curb. Boxes must not block crosswalks or pedestrian pathways. Boxes should not obstruct motorist or pedestrian sight lines.
- When possible, collection boxes should be located near entrances to major activity centers.
- Box locations should be readily accessible to both mail carriers and customers.
- US Postal Service will continue to evaluate the need for existing official boxes, and should remove unnecessary installations.
- Collection boxes for private mail or package carriers should be located on private property.

{Street Furniture}
Newspaper Dispensers

Omaha - University of Nebraska at Omaha Campus

Denver, CO

Omaha - Dundee

Description

- Newspaper dispensers are machines that display and dispense newspapers to the public, and often include vending equipment.

Performance Standard

- The design and color of newspaper dispensers should be appropriate to their context. Darker colors such as black or dark green are preferred for cabinets.
- Place newspaper dispensers outside of the pedestrian paths, with a minimum two-foot clearance from curbs.
- Place multiple dispensers into orderly arrangements or within common enclosures.
- Obtain required permission and licensing consent for new installations.

Newspaper racks not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations

- Newspaper dispensers can contribute to an active streetscape.
- Dispensers should be clustered and be coherent in appearance. Machines with conflicting appearance and placed randomly or in crowded locations contribute to visual clutter and may be difficult to use.
- Single dispensers with multiple cabinets are preferable to individual racks. A unified installation produces a cleaner and more cohesive streetscape.
- Newspaper dispensers may be incorporated into corrals or enclosed by short screen walls.

{Street Furniture}
Parking Meters

Omaha Old Market - Coin and card reader.

Des Moines - Pay station

Omaha - two-headed meter

Description

- Meters are devices that collect payment for on-street parking.

Performance Standard:

- Meters placement should minimize physical or visual intrusions into the sidewalk environment. Minimum impact is the primary priority.

Design Considerations:

- Parking meter heads should use a relatively standard design. Poles should be painted in a dark, unobtrusive color, typically black or dark blue. Poles may reflect the design character of a particular district. For example, in an historic district, mounting poles may be fluted tubes, reflecting the detail of historic street lights.
- Use tandem parking meters for angled and parallel parking stalls
- Consider pay stations an alternative to individual meters. Pay stations, which consolidate payment in one or two mechanisms per block, offer payment options for customers, improve parking management, and reclaiming sidewalk space. Pay station units may use solar power.

{Street Furniture}
Public Art

Omaha - North 24th Street

Omaha - Dundee

Omaha - Old Market

Description

- Public art includes sculpture, mosaics, wall art, and other two- and three-dimensional installations designed for and placed in outdoor public environments.

Performance Standard

- Placement should maintain good sight lines for pedestrians and motorists.
- Locations should not compromise the intended use of specific public spaces.
- Identify maintenance needs, safety considerations, and replacement costs in the design process and before installations.
- Public art proposals are reviewed by the Omaha Public Art Commission. The Mayor must approve both permanent and temporary installations.
- For more information about the criteria for acceptance and placement of public art, contact the Public Art Commission at the Mayor's Office at 444-5000 or Omaha By Design at 342-3458.

Design Considerations

- Art may interpret the history, character, or people of an area.
- Art forms may include landscaping, fencing, brickwork, glasswork, gates, fences, lighting, painting (murals), sculpture, seating, lettering, signage, computer generated, water, use of color, and crafts and artifacts.
- Placement should be site-sensitive and encourage public view.
- Permanent public art should use durable materials that will maintain their appearance and integrity over time.
- Major new street projects in Areas of Civic Importance should provide settings for public art.
- Art selections should recognize diverse types of art and individual preferences, and create a varied environment. The city's "outdoor gallery" should include both representational and non-representational forms, and should not avoid conversation and debate.
- Functional features in the street environment, such as sound abatement and retaining walls, can provide opportunities for public art.

{Street Furniture}
Railings & Fences

Shenandoah, Iowa

Pella, Iowa

Coralville, IA

Description

- Railings help pedestrians negotiate stairs and grades and protect them from potential hazards. They also define special areas like dining areas and landscape beds.

Performance Standard

- Railings must conform to building code and meet ADA requirements when used as a pedestrian aid.
- Galvanized chain link fences are prohibited along arterial and collector streets.
- Railing design should be coordinated with other street furnishings.
- Railings should be made of durable, rust resistant metals.
- Railings and their finishes should provide long-term durability, and shall be maintained on a regular basis.
- Railings used for protective purposes must follow OSHA requirements.

Railings not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations

- Railing design should be consistent with local character and complement street furnishings, buildings and other features.
- Avoid unnecessary use of railings.
- Railings may separate outdoor seating or dining areas from pedestrian paths.
- Vertical elements of railings on ramps should usually be perpendicular to the flat plane.

{Street Furniture}
Signage for Traffic, Directional & Wayfinding

Black round pole in Old Market

Strapping for signs & signals

Downtown Wayfinding

Description

- Signage provides information that vehicle drivers and pedestrian need to operate in a district.

Performance Standard

- Traffic signs in ACI streets should be attached to round black poles rather than the slotted galvanized poles.
- Signs mounted to poles in ACI streets should be mounted using painted black or bronze stainless steel strapping, matching the finish of the street pole.
- Wayfinding for pedestrians and motorists should use color in ways that are clearly comprehensible to users and meet minimum reflectivity standards.
- Pole installations should be strong enough to support banners and other graphics.

Design Considerations

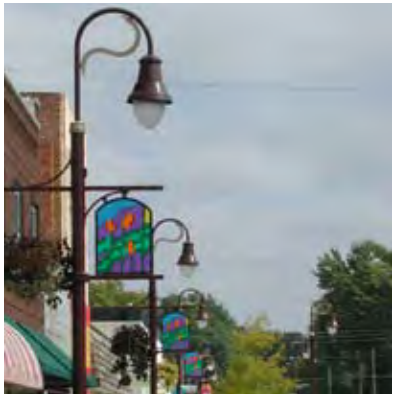
- Wayfinding signage throughout the city may identify significant destinations in the community, such as downtown, major business centers, cultural sites and public facilities. The proposed Downtown pedestrian wayfinding program uses photographs of destinations as icons.
- Interpretative signage should be installed in permanent displays.
- Traffic information and regulatory signs should be used as efficiently as possible, maximizing readability and minimizing the number of poles or sign faces.
- Wayfinding and information signs should be scaled to the speed and nature of users. Wayfinding signs designed for motorists should present no more than three or four items of information per sign.

{Street Furniture}

Signage for Advertising & Banners

Omaha

Omaha - Old Market



Shenandoah -- metal medallions

Description

- Street advertising signs advertise businesses or districts to pedestrians and vehicle drivers.
- *Banners* attached to light poles typically provide information about an area of the city; or recognize organizations and events. Medallions and metal banners may be used in place of conventional canvas banners.
- Banners provide color to the street and communicate activities or cultural values to the public.

Performance Standard

- Installation of banners and signs on poles should be coordinated with and approved by appropriate organizations, including the City of Omaha and the Omaha Public Power District.
- Use of 'A' boards or sandwich boards are prohibited under City of Omaha Code.
- Signage on benches is prohibited in ACI Districts. (See standards for BENCHES)

Street advertising signs not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

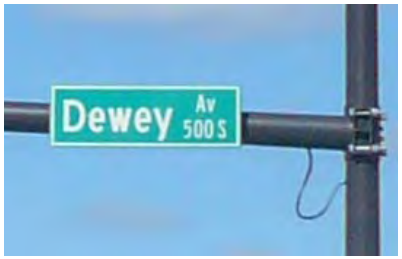
Design Considerations

- Temporary signs such as vinyl banners, cardboard, a plastic placards are not allowed by Omaha's current city code.
- Banners in neighborhood districts should be reviewed by their respective neighborhood association.
- Canvas banners require maintenance and replacement programs. Installations such as metal banners or medallions may substitute as a permanent element of streetscapes.
- 'A' Boards are temporary signs used in business districts to advertise businesses, products, and special offers. 'A' boards used very sparingly can contribute to the vitality of the street, but can also become obstructions. Omaha's current city code prohibits the use of 'A' signs without proper permitting.

{Street Furniture}
Signage for Street Names

Seattle, WA

Chicago, IL



Omaha Standard

Description

- Street name signs identify intersecting streets, helping users find destinations.

Performance Standard

- Street name signs should be mounted to pedestal poles, mast arms or trusses.
- Letters should be a minimum of 4 inches high.
- Letter styling should be simple, with narrow stroke widths, few flourishes and a wide kerning (space between letters). Sans serif fonts are commonly used for maximum character recognition.
- Lettering should contrast with the background to improve visibility.
- Letters should be made of reflective vinyl material to allow future alterations.
- Signs should not obstruct the pedestrian pathway or be located where tree planting or vegetation might obscure them.
- Neighborhoods annexed by the City of Omaha shall either assume responsibility for maintenance of distinctive signs or replace them with Omaha's standard street sign.
- Street name signs should receive approval from the City of Omaha.

Street name signs not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations

- Street name signs may be installed on building walls, in addition to poles. Mounting techniques may include metal bands or clamps.
- Signage should identify the street and may include neighborhood identifiers, such as logos or neighborhood. Distinctive designs should be based on local styles and contribute to the overall character of the area. For example, the North 24th and South 24th Street business districts employ unique street signs that express district symbols.
- Street signs with district names are an effective approach to identifying districts through design. Chicago identifies neighborhood districts on their street name signs. Shenandoah incorporates laser-cut symbols that reflect community themes.
- Block numbers on signs helps the users identify their location
- Street signs on suburban boulevards are black with white letters. These signs may be upgraded if they do not meet future reflectivity standards.
- As new graphic trends emerge, existing and new signs could be modified to new standards. An example is the replacement of the Highway Gothic font by the new Clearview font in standard signage. Clearview's superior readability provides significant benefits.

{Street Furniture}
Tables and Chairs

Omaha - Old Market

St. Paul, MN

Omaha - Dundee

Description

- Tables and chairs include seating areas in the public right-of-way. In a streetscape, they accommodate activities such as outdoor dining.

Performance Standard

- Outdoor seating areas should conform to city regulations. Permission, license, and area rights leases may be required for outdoor seating spaces.
- Plastic tables and chairs are not permitted.

Tables and chairs not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations

- Use tables and chairs in the public realm. They create social space and add activity to an area.
- Private areas with tables and chairs may be surrounded by a railing. Railings or other boundaries are required when alcoholic beverages are served. Railings required by code should be consistent with the district's streetscape standards.
- Outdoor seating areas with tables and chairs do not necessarily need to be surrounded by a railing.

{Street Furniture}
Waste & Recycle Receptacles

Omaha - Old Market

Omaha - North 24th St

Omaha - Dundee

Description

- A waste receptacle is a container for disposing of trash. A recycle receptacle is a container for collecting material that can be reused or reprocessed for another use.
- Receptacles reduce litter and provide for convenient disposal of waste products.

Performance Standard

- Receptacles should be built of durable material and anchored to the ground. Receptacles should be fixed to a hard surface material such as concrete, granite cobbles or unit pavers.
- Receptacles should have interior polyethylene liners to contain waste. Bins should allow users to drop material in it without requiring physical force (pulling, lifting or pushing).
- Bins should have a decorative shell enclosure with high performance finish that resists vandalism and graffiti.
- Detachable lid should be cabled securely to the unit.
- Bins should not clutter the sidewalk or block the pedestrian travelway.
- External materials should be consistent with other streetscape elements such as benches, streetlights, railings and surrounding buildings.
- Receptacles with advertising may locate within the public right-of-way if they meet City Codes and locate at designated MAT stops.
- All receptacles removed by adjacent development projects should be replaced by installations consistent with these requirements.

Trash Receptacles not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration. Maintenance and management issues should be properly considered.

Design Considerations

- When possible, waste receptacles should be located near lighting.
- Receptacles should be provided where there is a demonstrated need: at transit stops and in or near business districts and other areas of pedestrian activity.
- Waste and recyclable containers may be located together or housed in one unit with compartments for both waste and recyclables.
- Capacity of bins should be a minimum of 30 gallons.
- Ongoing maintenance and emptying of containers may be the responsibility of the organization that installed the unit.

{Bicycle Lanes}

Omaha - Happy Hollow Blvd

Omaha - Happy Hollow Blvd

St. Louis, MO

Description

- Designated area within the street channel reserved for cyclists.

Performance Standard

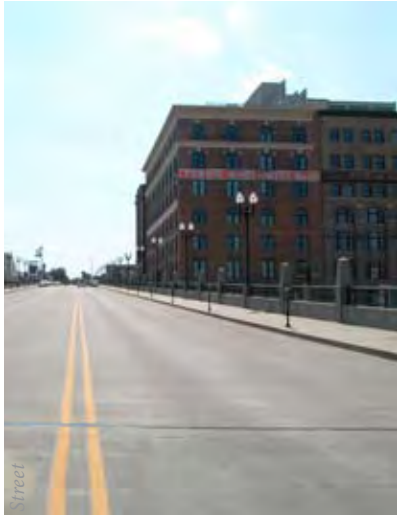
- Lanes should be clearly and simply marked. Lanes should be a minimum of five feet wide. Lanes should be clear of hazard such as sewer grates with long openings in the direction of bicycle travel.
- Share-the-Road or other system signage should be posted along streets with bicycle lanes or other routes identified for bicycling.
- Design should follow Chapter 9C of the Manual on Uniform Traffic Control Devices (MUTCD).
- Using materials such as traffic tape or maintenance through painting, assure that bicycle lane designations are always visible to both motorists and cyclists.

Bicycle lanes not meeting the performance standard described in this section shall be subject to administrative review or submitted to the Urban Design Review Board for further consideration.

Design Considerations

- Colored surfaces may be used to define a bicycle lane. Coloring is typically used in areas of potential conflict between bicycles and motor vehicles, such as traffic that crosses a bicycle lane to reach a right-turn only lane.
- Bicycle lanes should provide adequate clearance to permit cyclists to ride in the lane on a line clear of opening car doors. Buffered bicycle lanes should be considered where right-of-way is adequate.
- Narrow four-lane facilities should be considered for conversion to three motor vehicle lanes with bicycle lanes.
- Where bicycle lanes are not possible, an alternative may be narrower inner lanes and wider outer lanes to provide more comfortable accommodations for cyclists and motorists. Ideally, such a wide curb lane should be 14 feet wide.
- Install or tune traffic signal sensor loops to detect bicycles at principal bicycle route intersections. Mark locations in the bicycle lane or in the street channel where the loop will detect bicycles.
- Explore the Dutch concept of a bicycle track, where a cycle track is located between parked cars and the pedestrian track. Some American cities are experimenting with this concept. In other cases, trails and sidepaths have separate tracks for pedestrians and cyclists. These are delineated by changes in pavement color or surface.

{Bridges}



Omaha - 10th Street

Omaha - Abbott Drive

Des Moines, IA

Description

- Bridges are significant public structures, often becoming icons and gateways for districts and neighborhoods. The scale and design of bridges depend on their function.

Performance Standard

- Lighting along bridges should provide ample lighting for all users.
- Bridges should be complete corridors, accommodating motor vehicles, pedestrians, and bicyclists. Future construction and reconstruction should provide space for all transportation modes.

Design Considerations

- Fencing along bridges may consist of ornamental guard rails and fencing. Omega fencing, used for the bridge along Abbot Drive over the railroad tracks, is a cross between chain link and ornamental design. Its contemporary and modern look is a good alternative to conventional practice of using chain link. Metal grid panels are also frequently and effectively used in contemporary bridge design. When used, chain link fence should be clad in black or dark green vinyl.
- Details along the bridge, including railing, columns and lighting fixtures should be customized to strengthen the design environment
- Bridges should be fully-integrated with lighting systems. Continuous light levels for motorists and pedestrians should be a priority. Accent lighting along the deck and columns is preferred and contributes to design quality.

{Crossings}

Omaha - 108th St

Coralville IA

Omaha - UNMC

Description

- Crossings provide safer domains for pedestrians crossing intersections by defining and delineating pedestrian paths across streets.

Performance Standard

- Designated crossings should meet Manual on Uniform Traffic Control Devices (MUTCD) standards.
- For additional information on crossings, contact the City of Omaha Public Works Department.
- The loading edge of the crosswalk should have tactile dome pavers.

Design Considerations

- Crossing signals with a dedicated phase for pedestrians can increase safety in busy pedestrian precincts. Crossing signals may be fitted with timers that indicate the time left on the green pedestrian phase.
- Pedestrian actuated signals could be installed at crossings. Some streets may need mid-block crossings to improve accessibility.
- Full or partial medians can act as mid-crossing refuges for pedestrians when crossing streets.
- Yield to pedestrian signs may be posted along roadways to notify motorists of pedestrians crossing the street. These signs should be posted 20 to 50 feet (depending on speed limit) before the designated crossing.
- Crosswalk markings alert motorists of pedestrian crossings not otherwise controlled by traffic signals or signs. Markings should be near schools, churches, within zones of high pedestrian use and along major corridors.
- Crosswalks may be defined by contrasting pavement colors or patterns, such as a gridded scoring pattern. Brick pavers in crosswalks are not recommended. Omaha's experience indicates that brick pavers are easily damaged during routine maintenance of the street. However, contrasting treatments using more conventional materials can improve visibility and create texture in the streetscape.
- Speed tables slow traffic and slightly elevate the pedestrian above the travelway. At the University of Nebraska Medical Center, speed tables with parallel ladder striping across Emile Street creates a more pedestrian-friendly campus. The designated area for crossing should have a stained concrete bordered by white lines. The current convention, striping the slopes, encourages pedestrians to walk on the slope of the crossing.

{Curbs}

Omaha - Downtown

Omaha - Midtown

Omaha - Crosswalk curbs

Description

- Define the edge of the street and direct water runoff.

Performance Standard

- Granite curbs should be installed within the downtown district.
- Sloped curbs are required at crossings by ADA regulations.
- Curb design must meet city standard plates.

Design Considerations

- Curbs should be formed with curb cuts planned. New development should not assume to grind curbs.
- Curb cuts may be planned to direct water to bioretention or biofilter areas.
- Red is the standard color for truncated domes.

{Drainage Intakes}

Omaha - North 24th Street

Unknown source

Omaha

Description

- Drainage intakes allow water runoff to enter the city's storm sewer system.

Performance Standard

- Installation of drainage intakes must meet city standards.

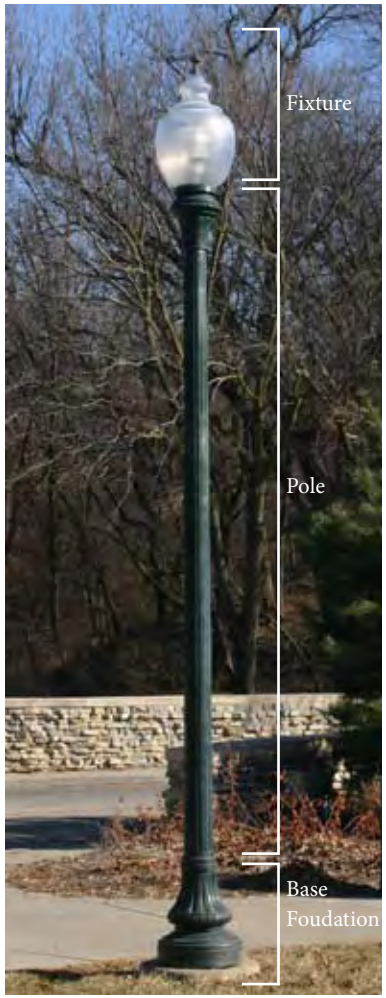
Design Considerations

- Intakes should be grated to prevent debris and objects from entering the storm sewer.
- Drainage grates with bars parallel to the curb may trap bicycle wheels, causing serious crashes. Perpendicular bars or a "vane" pattern, such as the one shown, provide good hydraulics and acceptable bicycle safety. The openings are large enough to prevent debris from collecting on the surface but small enough to allow the bicycle to pass. Grates designed in a "honeycomb" or "herringbone" pattern are also friendly to bicyclists.
- Curb face inlets have no grates, but present hazards if the roadway slopes excessively toward the inlet.
- Consider Best Management Practices for minimizing stormwater runoff (*see page 14*).

{Lighting}

The Basics - Bases, Poles & Fixtures

See also Lighting & Dark Skies on page 17



General Description

- Street lights provide ambient light levels for visibility and safety of streets, sidewalks and sites. Lighting types include decorative, vehicular use, general site, pedestrian use or feature lighting.

Base & Foundation

Description

- Base is commonly the support structure for a pole.

Performance Standard

- Bases must match OPPD standards.

Design Considerations

- Clam shell base, non-structural, constructed of either cast iron or cast aluminum.
- Poles that taper are preferred.
- Electrical receptacle could be installed.
- "Screw base or anchored"

Pole

Description

- Pole support light fixtures.
- Direct embed poles are supported by embedding long lengths of the pole itself into the ground.

Performance Standard:

- Poles must match OPPD standards.
- Sufficient strength to support signs, banners or flower baskets.

Design Considerations:

- Poles may be smooth or fluted.
- Tapered poles are preferred.
- Steel, galvanized with painted or powder coat finish.

Fixture

Description

- Globe, acorn or lens made of glass, acrylic or poly acrylic.

Performance Standard:

- Fixtures must match OPPD standards.
- High Pressure Sodium Light preferred, although metal halide is acceptable.
- Fixtures should have shielding, limiting light trespass and directing light to surfaces needing illumination.
- Fixture should be dark sky friendly, with top side and house side shields.

Design Considerations:

- Minimum assembly required to relamp.
- Captive hardware or tool less entry to access body.
- Use NEMA twist-lock photo-control for easy accessibility.
- Plug-in starter may be installed.
- Post top style to have 3 or 4 inch tenon mount.
- Manufacturer may be able to sell directly to utility.
- Globe, acorn or lens may be glass, acrylic or poly acrylic.

{Lighting}...continued
Vehicular & Pedestrian

Creighton University - Pole with outlet

Single Mast

Precast colored base

Performance Standard

Base & Foundation

- Precast two-piece "collars" (OPPD standard) around direct embed poles limit pole damage from routine maintenance.
- Taller poles require separate structural support "bases" that are either concrete with set in conduit and anchor bolts or steel screw anchors with welded steel base plates.
- Direct embedded or steel base plate for screw base and anchor bolts. Steel is preferred material.

Poles

- Poles should be constructed of steel to increase durability and strength. Steel allows the pole to resist wind and support signs, banners or flower baskets.
- Tapered poles are preferred to straight profiles.
- Poles should be installed at least 2½ feet behind the curb. This provides clearance for vehicles and snow plows. Minimum clearance from the pole to any adjacent structure should be 3 feet.
- GFI outlets need to be specified for poles before installation. Outlets provide electricity for additional seasonal lighting or special events. Outlets should yield 120 volts.

Fixtures

- Base, pole and fixture should perform to OPPD technical guidelines.
- Fixtures should be constructed of die cast, cast or formed heavy gauge metal. Access to the body should not require tools.
- Polycarbonate glass should not be used. The material becomes yellow, losing the desired aesthetic.
- Street lights must be shielded on top and building side, reflecting light to the travelway while limiting light trespass. Lights in public rights-of-way must be dark sky friendly.
- High pressure sodium (HPS) lamps are preferred. Metal halide is acceptable. HPS emits an orange-yellow tint, which is appropriate for historic areas, while metal halide (life 7,500-20,000 hours) emits a cool white light. For longer lamp life, metal halide fixtures are not permitted in "jelly jar" containers.

{Lighting}...continued
Vehicular & Pedestrian

Standard Hockey puck fixture

Flat lens limits ambient light

Discontinued - drop lens

Design Considerations

Base & Foundation

- Base of poles may be accented. Clam shell covers are non-structural. Clam shells can be constructed of cast iron or aluminum.
- Precast concrete bases can improve the appearance and structural quality of the pole. Full concrete footings do not require a precast as long as the top of the footing is formed and finished to match the surrounding streetscape.
- Steel base plates welded on steel screw anchor foundations with precast concrete "caps" is preferred (as shown on page 63).
- Colored precast concrete collars, bases and caps with concrete dyed to best match or compliment appearance of pavement or pole are preferred.

Poles

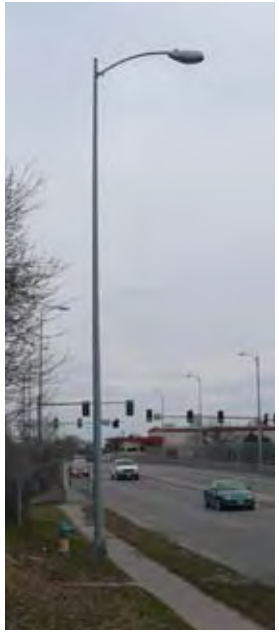
- The height and form of lighting should correlate to the street hierarchy and width, urban context and light spacing.
- Outlets should be mounted at the top of the pole or at least 8 feet above the surface. Outlets should not be installed on poles shorter than 12 feet in residential areas.
- Pole color should match the base and fixture. Black or green poles are preferred for ornamental lights.

Fixtures

- Spacing of fixtures and lighting levels should be provided to meet minimum standard for the City of Omaha, ranging from 0.9 to 2.0 foot candles.
- Use lighting to enhance the urban environment and provide better street definition. Provide lighting along edges of public spaces.
- Vehicle lighting should provide uniform lighting along the street. If a clear and consistent system is provided, low levels may be adequate. Avoid staggering lighting which tends to obscure the direction of circulation and location of intersections.
- A better pedestrian environment results by having a mix of pedestrian scale lights and vehicle fixtures.
- To minimize glare, the angle of light should flare outward greater than 75 degrees from the pole.
- Lamp selection should require little disassembly for replacing bulbs. NEMA twist-lock photo-control are preferred. Minimizing disassembly extends the life of the fixture, reduces the cost of maintenance and expedites maintenance.
- Selection of fixture should consider the ability of the manufacturer to sell directly to the utility.
- Suburban areas should have 70 watt efficiency.

Library of Street Lights in Omaha

Street Classification / Area	Height of Pole	Fixture	Comments
Standardized Street Lighting			
City	Varies	Galvanized cobra head fixture	Mounted to galvanized pole
Areas of Civic Importance	30' or 40'	Anodized bronzed hockey puck	



Cobra
Standard galvanized pole with cut-off fixture.

ACI
Areas designated as ACI and downtown.

Library of Street Lights in Omaha - Electives

Elective Street Lighting	Height of Pole	Fixture	Comments
Acorn	12'-16'		Supplied by OPPD with surcharge. Used in Field Club Neighborhood.
Globe	12'-16'		Supplied by OPPD with surcharge.
Lantern	12'-16'		Supplied by OPPD with surcharge.
Top Hat	12'-16'		Supplied by OPPD with surcharge.

Acorn
Available from OPPD

Globe
Available from OPPD

Lantern
Available from OPPD

Top Hat
Available from OPPD

Library of Street Lights in Omaha - District Designated

	Street Classification / Area	Height of Pole	Fixture	Comments
	District Designated			
1	Abbott Drive 10th Street Capitol Avenue	12' 40'	Globe Anodized bronzed hockey puck	String of Pearls
2	Country Club Dundee Morton Meadows Twin Ridge	12'	Globe	Original cast iron street light Dark green pole and fixture details Limited by what is out there today.
3	University of Nebraska Medical Center	14'	Top Hat Spectra	Private light.
4	Creighton University	14'	Acorn	Private light.
5	South 24th Street Suburban Boulevards	25'	Teardrop Standard skirt	Safety cable should be attached to lens to prevent dropping. Manufactured by Halophane (Atlanta)
6	North 24th Street NoDo (North Downtown)	12'	Contemporary Largent	Various colors.
7	Old Market	20'	Washington Single or Twin Recast	Recast of lights original to downtown.
8	Downtown - 16th Street (discontinued)	22'	Washington Twin	These lights will be replaced with the Old Market's Washington Twin Recast
9	One Pacific Place	30'	Hockey Puck	Private light. ACI fixture that is white rather than bronze.

Catalog of Streetlights - District Designated

Globe

String of Pearls along Abbott Drive and 10th Street in downtown.

Globe

Country Club, Dundee, & Morton Meadows Neighborhood light

Globe

Dundee Business District light Dundee

Top Hat

UNMC leases right-of-way from city for light installations.

Acorn

Creighton University leases right-of-way from city for light installations.

Tear drop

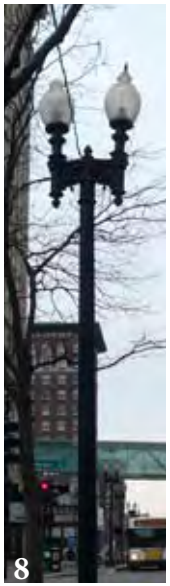
Omaha boulevards and along South 24th Street in the South Omaha Business District

Contem-porary

24th Street between Burdette and Ohio Streets in the North Omaha Business District

Single & Twin Acorn

Old Market and 10th Street bridge in Downtown.



Twin Acorn

16th Street in Downtown. These fixtures are not available.

Hockey Puck

One Pacific Place

{Lighting}
Specialty

Omaha - Downtown

Omaha Qwest Center

Omaha

Amsterdam

Description

- Specialty lighting uses light as an environmental, rather than functional element. It may be used to illuminate specific objects, such as public art; create an atmosphere; or provide subtle directional information. Seasonal lighting is included in the specialty category.

Performance Standard

- Lighting should be installed no closer than 2½ feet to a curb to provide adequate clearance for vehicles and snow plows.
- Fixtures should be aimed away from pedestrians or the line of sight of motorists, and should limit light trespass.

Design Considerations

- Low mount fixtures provide for better uniformity and vertical surface illumination.
- Fixture location and mounting height, fixture type, and lamp intensity should optimize light distribution and minimize glare. Uplighting can be provided from above-ground fixtures or from well lights with louvers. Well lights reduce street clutter.
- Light source should not be visible. Use wells or low lying vegetation to hide fixtures.
- Provide flood lighting and uplighting on landmark buildings and gateway entrances.
- Overlighting may cause glare.
- Two single-point sources effectively illuminate standing objects. One source emphasizes shape and form with contrasting shadows while the other emphasizes details.
- This handbook does not address building lighting. However, effective building illumination can strengthen the nighttime streetscape. Lighting design should complement light provided in the public environment.

{Manhole Cover}

Omaha New Standard Cover

Omaha Old Standard Cover

Omaha Utility Cover

Description

- Manhole covers are typically located within the street or sidewalk and cover access to underground utilities.

Performance Standard

- Covers should meet minimum load capacity requirements to support vehicles and meet structural standards.

Design Considerations

- Manhole covers may have an ornamental design.

{Medians}

Manitou Springs, CO

Omaha - 10th Street

Omaha - Twin Ridge Blvd

PICTURE TO BE PLACED
MEDIAN WITH DRAINAGE
DITCH

NAME

Omaha - 108th St

Oklahoma City

Description

- Medians separate oncoming lanes of traffic.

Performance Standard

- Medians must meet city standards and plates.

Design Considerations

- *Green Streets for Omaha* provides guidelines for median design and landscaping.
- Medians provide mid-crossing refuges for pedestrians when crossing wide streets. They are particularly useful for this purpose in areas where many people have mobility limitations, such as neighborhoods with large senior populations.
- Landscaped medians should include plant materials that do well in challenging settings, and should be properly maintained.
- Best Management Practices may be considered for handling stormwater runoff in medians (see page 14).
- Medians too small for sustaining plant life should be textured and colored. When possible, medians should use materials that do not require irrigation.
- "Virtual" medians are an alternative to a raised median. In this technique, the median is at the same grade as the surrounding pavement, but uses a contrasting material. This concept separates traffic directions, calms traffic, and may provide a pedestrian refuge.

{Paving Standards}

Stamped/Colored Concrete

Colored - 12th and Seward St

Paving Combination - 24th & L

Stamped - 40th & Davenport

Stamped Happy Hollow

Description

- Stamped and colored concrete is an affordable alternative to pavers. They provide texture and color to the streetscape.

Performance Standard

- Paving must meet standards identified by City of Omaha.

Design Considerations

- Material and texture should reinforce distinctiveness and improve the appearance of the area.
- Routine inspections and maintenance should be considered prior to installation. Patching and matching colored concrete is difficult.
- Color conditioned concrete, where color is integral to the concrete mix, will usually maintain its intended appearance longer than surface stained concrete. A pioneer installation in left-turn lanes near 42nd and Center is still somewhat discernible after nearly 50 years.

Broadway, Boulder, Colorado

- Stamped or colored concrete should avoid garish or unnatural colors, unless they are communicating a specific theme. Materials should generally not try to imitate other materials, but should be used and colored according to their own character.
- Lifespan of stamped concrete is typically shorter than that of natural pavers.
- Stamped or contrasting color surfaces should be considered in several functional contexts, such as:
  - providing separations between sidewalks and street channels for sidewalks built to the back of curb along major streets.
  - defining the street edge of a sidepath, to keep pedestrians and cyclists away from moving traffic, or in similar contexts to convey a warning or potentially dangerous condition.
  - as part of traffic calming devices.
  - to separate pedestrian and bicycle tracks along multi-purpose trails.

{Telecommunications Towers}

Tower and lighting combined.

Omaha - Pacific and 95th

Description

- Towers or antenna providing wireless transmission service for communications media, including radio, television, cellular service and internet.

Performance Standard

- Towers must meet city requirements established by the City of Omaha.
- Towers should not obstruct views.
- Providers should colocate or use existing structures whenever possible.

Design Considerations

- Towers may be disguised or camouflaged as part of the landscape or structure of a building. Towers may imitate silos, flag poles, clock towers or trees. For example, a cellular tower in Urbandale, Iowa near Living History Farms simulates an vintage water tower. An installation at 95th and Pacific in Omaha has artificial limbs to look like a evergreen and a tower church grounds at that location is also used as a flag pole.
- Service providers should locate on existing structures, including electronic transmission towers or billboards.
- These considerations and standards provide guidelines to mitigate the adverse visual effect of telecommunications tower, but do not suggest minimizing coverage.

{Trees and Other Plantings}

North 24th Street

Omaha - Village Point

OPPD Arboretum

Description

- Street tree planting transforms a street's appearance and produces great benefits with limited funds. Trees add color and shade to the environment and reduce the heat island effect. They separate vehicles from pedestrian pathways, tend to calm traffic, and help the city breathe by absorbing carbon dioxide.

Performance Standard

- Select and install trees and other vegetation according to the guidelines established by the *Green Streets for Omaha document (2007)*. Proper tree selection and planting technique produces healthier, longer-lived trees and more attractive urban spaces.
- Placement of trees and other landscape materials should not violate sight lines for drivers or pedestrians.
- Omaha's zoning ordinance establishes specific requirements for tree planting and maintaining vision clearance zones. The Standards for Urban Landscaping (Omaha City Planning Department, 1987) provides additional guidance on tree selection and planting, largely focusing on private property.

Design Considerations

- Avoid using tree grates wherever possible. Tree grates should only be used in very constrained right-of-ways. Grates are costly and limit the growth of the tree when not removed with maturation. Planting beds and ground covers are better treatments for the base of a tree.
- In business districts, install bike racks in strategic locations to keep cyclists from chaining bicycles to trees.
- New street trees should have a minimum two inch caliper.
- Consider tree and landscape maintenance as part of the design process.
- New construction setback from the property line should maximize green streetyards to improve the quality of the street environment.
- Install rain gardens when possible to reduce excessive runoff and provide natural water to plantings. Alternatives to turf grass may be considered to manage stormwater runoff.
- Trees are not permitted by NDOR in state highway medians. For low-speed highways, trees may be planted 8 to 20 feet from the curb, while trees along high-speed highways must be placed 30 feet from the curb or pavement edge. Tall grasses and shrubs are allowed. All plantings must conform to AASHTO standards.
- It is important to stay current with research on traffic calming and safety effects of trees, and their effect on current clearance standards.

{Utility Lines}

South 24th Street - Buried power lines

Omaha - 48th & Poppleton

Omaha - Leavenworth

Description

- Overhead utility lines provide electricity, telephone, and cable service to surrounding land uses.

Performance Standard

- Improvements must meet requirements established by the Omaha Public Power District (OPPD), telephone and cable companies.

Design Considerations

- When feasible, bury overhead wires during major street reconstruction or enhancement projects. Underground power lines improve the appearance of busy corridors and make the distribution system less vulnerable to weather-based service interruptions. Burying lines may be done in concert with Best Management Practices for controlling stormwater (*see page 14*).
- Wherever possible, the overhead support system should be rationalized to minimize the number of poles.

{Walls and Screening}

Boulder, CO

Fargo, ND

Colorado Springs, CO

Description

- Walls and screens may be included in a streetscape to screen a view, block sound, accommodate changes of grade or retain earth.

Performance Standard

- Walls must conform to standards that implement the Urban Design Element. Walls and screen design should respond to both functional requirements and site aesthetics and context.
- Planter boxes and walls must be made of brick, masonry, textured or aggregate concrete. Chain link or wire mesh may be used only in combination with plant material of sufficient density to create a screen. The fence should be either black or green to blend with the plant materials.
- Solid fences, hedges or walls along lot lines abutting the public right-of-way may not exceed three feet in height to allow visibility into the lot for security.
- Materials for building the screen should be selected based on availability, and capacity to match the local site and architectural character.
- Drainage should be directed away from barrier footings and posts to reduce potential structural damage.
- Consult city zoning ordinance for specific landscape screening and screen wall requirements.

Design Considerations

- The height and material of walls should relate to building architecture and the character of the area. Where space permits, planting and grading should also be considered as visual screens. On major projects, MSE walls are typically using textures, shapes or stonelike surfaces to improve visual appearance.
- Walls and screens can help create a continuous sidewalk edge that unifies the street space. However, walls should not crowd sidewalks or sidepaths. Along sidepaths, a two to three-foot minimum shoulder should be provided between the path edge and the wall.
- Design of walls can incorporate art. Bas-relief images or graphics can create a unique urban tapestry. Walls may also be used as a surface for plant materials such as ivy, or may use sectional or terraced units that accommodate plants.
- The city's zoning ordinance provides requirements for landscaped setbacks for parking lots along sidewalks (typically ten feet in most zoning districts) or horizontal separations and screen walls between land uses that differ in intensity.
- Screening and landscaping in parking lots help prevent headlights from shining into adjacent right-of-way or residential property.
- Fences, planter boxes and low walls can help screen the views of cars as well as soften the appearance of the street.

Chapter IV: {Areas of Civic Importance}

The ACI Areas of Civic Importance overlay district implements an important part of the Urban Design Element of the city's comprehensive plan. It creates four overlay districts for those parts of the city whose characteristics, uses, design or period of development, makes them especially important to the city's physical image.

These context-specific districts include:
ACI-1, Downtown Omaha and immediately adjacent areas.

ACI-2, areas that developed to maturity during Omaha's streetcar era, and display development patterns typical of that period.

ACI-3, representing the transition from the transit to the automotive era, mixing pedestrian and auotmobile-oriented development patterns.

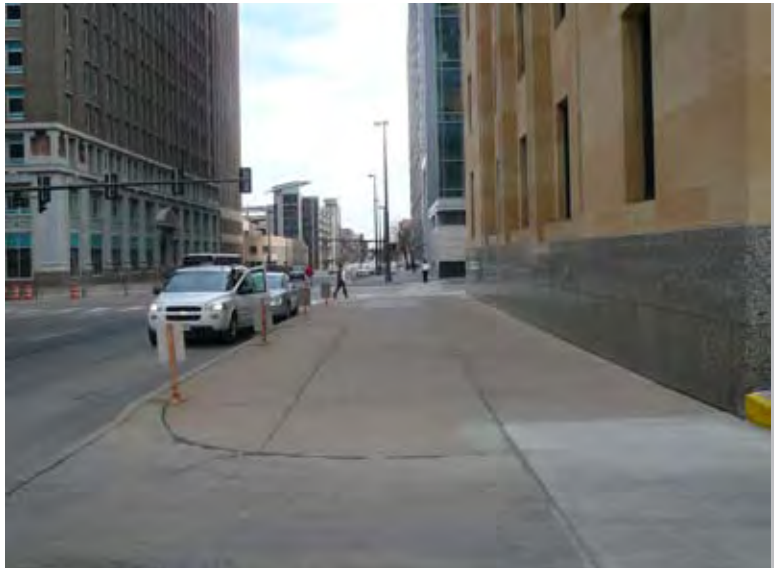
ACI-4, including most contemporary, road-oriented growth. Projects in this district are larger and more dispersed, and a large amount of land is devoted to circulation and storage of motor vehicles.

Where appropriate, the ACI-1, ACI-2, ACI-3 and ACI-4 districts are referred to collectively as the "ACI districts." The objective of the ACI districts is to preserve and promote the development of these areas of civic importance in ways that enhance the physical image of the city.

Although this handbook focuses on ACI streets, principles and concepts can and should apply to all streets in the Omaha metropolitan area, including residential subdivisions.

Areas of Civic Importance - The Fishbone

Omaha's main axis of development is Dodge Street, with important offshoots at 10th, 24th, 72nd, 144th and 180th streets. This local formation, dubbed "The Fishbone."



ACI-1 district (downtown-like)

General Area Description

Dodge Street from the Missouri River to Turner Boulevard.

Design Characteristics and Guidelines

- Buildings and building entrances relate directly to the street;
- Parallel or diagonal on-street parking or the potential for on-street parking;
- Pedestrian-oriented development dominates;
- Strong urban edge with a uniform build-to line (or setback);
- Limited or no off-street parking between the building and the street;
- Vehicular access to site is allowed directly from arterial street; and
- Typical arterial street channel is 60 feet wide with 20 foot sidewalks. Intersection design and signal timing should provide comfort to pedestrians crossing relatively wide streets.
- Relatively large buildings relate to one another across the arterial.

Illustrated Concept

- Coordinated street furniture
- Planter strips
- Street trees
- Sidewalk set back from curb

ACI-2 DISTRICT (URBAN)

General Area Description

Dodge Street from Turner Boulevard to 72nd Street.

Design Characteristics and Guidelines

- Buildings and building entrances relate directly to the street;
- Some parallel or diagonal on-street parking; potential exists for on-street parking in very specific locations;
- Development matured during streetcar transit era, with pedestrian oriented commercial uses along major corridors. Subsequent redevelopment has substituted a greater motor vehicle orientation.
- Relatively strong uniform building line in unmodified areas;
- Little off-street parking between the building and the street in original areas; later development has a more suburban scale;
- Vehicular access to site is allowed directly from arterial street; and
- Width of pavement of the arterial is similar to ACI-1, but with less on-street parking and faster through traffic. Pedestrian crossing at arterials is very difficult at many locations. Street widenings over time have eroded sidewalk space.
- Some relationship between buildings across the arterial, but not as strong as in ACI-1.

Illustrated Concept

- Coordinated street furniture
- Hockey-puck lighting with banners
- 5-6 foot sidewalk setback behind grass buffer
- Street trees planted at least 6' behind curb

ACI-3 district (mix of urban and suburban)

General Area Description

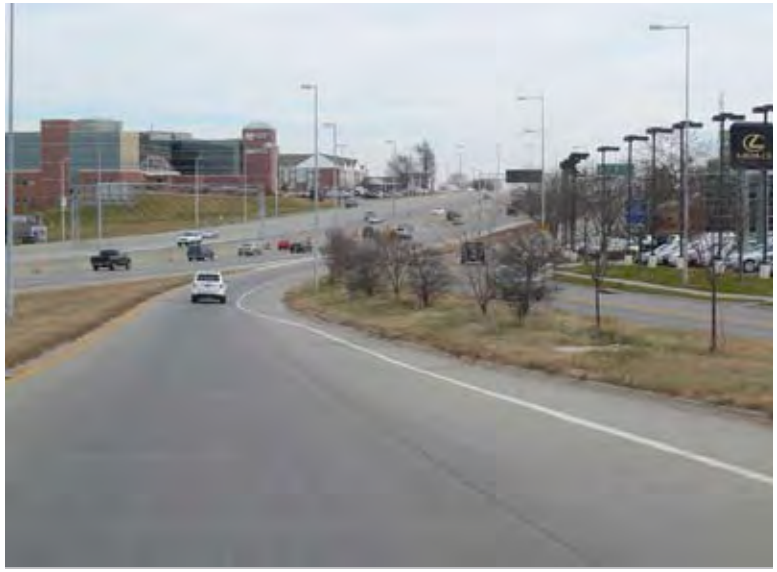
Dodge Street from 72nd Street to 96th Street.

Design Characteristics and Guidelines

- Buildings and building entrances relate to parking lots;
- No on-street parking;
- More auto-oriented than pedestrian-oriented;
- Irregular building line;
- Buildings set back from property line;
- Off-street parking between the building and the street;
- Vehicular access to site is allowed directly from arterial street; and
- Width of pavement of the arterial varies considerable in ACI-3 type areas; pedestrian crossings range from difficult to very challenging.
- Buildings across arterial streets have a weak relationship to one another.

Illustrated Concept

- Coordinated street furniture
- Stained and stamped concrete along edge of curb
- Hockey-puck lighting
- 5-6 foot sidewalk
- Bus shelter with transparent panels
- Shrubs and grasses along parking to limit light trespass



ACI-4 DISTRICT (SUBURBAN)

General Area Description

Dodge Street, west of 96th Street.

Design Characteristics and Guidelines

- Buildings and building entrances relate to interior streets and parking lots, not to arterial street;
- No vehicular or pedestrian access to buildings from the arterial street;
- No direct access to building and off-street parking from the arterial street; vehicular access to building sites and parking is from internal main streets, internal streets or internal access drives;
- Predominantly auto-oriented; pedestrian environment is typically hostile, limited to occasions where a sidewalk is adjacent to the arterial.
- Service roads on limited access arterials provide some opportunity for an improved pedestrian domain.
- Irregular building line;
- Very wide street channel. Dodge includes a two-level section, with express lanes above the local access arterial.
- Pedestrian crossings are very difficult at best and impossible in many instances. Trail corridor or interchanges provide only crossing opportunities.
- Some streets include sidepath or parallel trail development and broader parallel greenways.

Illustrated Concept

- Landscaped edges, open spaces with cluster of trees
- Medians with 2' stamped concrete edge
- Manicured greenspace with shrubs, grasses and trees.
- Hockey-puck lighting

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