



COMMERCIAL and INDUSTRIAL DESIGN MANUAL



Avondale
Aspiring. Achieving. Accelerating.

Promoting Physical Activity and Health in Design

INSIDE FRONT COVER

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RESOLUTION NO. 3573-819

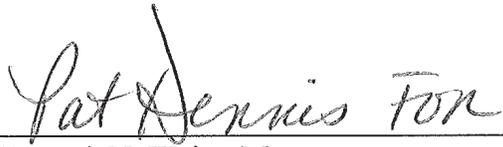
A RESOLUTION OF THE COUNCIL OF THE CITY OF AVONDALE, ARIZONA, ADOPTING THE COMMERCIAL AND INDUSTRIAL DESIGN MANUAL.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF AVONDALE as follows:

SECTION 1. The Commercial and Industrial Design Manual, Amended and Restated August 12, 2019, is hereby adopted in substantially the form attached hereto as Exhibit A and incorporated herein by reference.

SECTION 2. The Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to take all steps necessary to carry out the purpose and intent of this Resolution.

PASSED AND ADOPTED by the Council of the City of Avondale, Arizona, August 12, 2019.



Kenneth N. Weise, Mayor

ATTEST:



Marcella Carrillo, City Clerk

APPROVED AS TO FORM:



Michael Wawro, City Attorney



Introduction

The Commercial and Industrial Design Manual is intended to promote physical activity and health in the design of development projects. The City of Avondale encourages the creative and innovative use of current and emerging development practices and seeks to strike a balance between the needs of the commercial and industrial industry, the employer, employee, City, consumer, and the resident. The Commercial and Industrial Design Manual (this “Manual”) seeks to provide project designers the City’s expectations for commercial and industrial development.

Purpose and Intent

This Manual is designed to further the goals and policies in the City of Avondale’s General Plan 2030 and Strategic Plan. This includes emphasizing visual character, health, environmentally conscious design, and pedestrian-friendly opportunities to establish a healthy sustainable community. Avondale’s Strategic Plan outlines the desire to foster sustainable community development that creates a sense of place for residents and local businesses that are unified by pride and common values. Compliance with the Manual is required and will be evaluated during the entitlement and design review process.

Serving in conjunction with the General Plan, Strategic Plan, Zoning Ordinance, Subdivision Regulations, and General Engineering Requirements, this Manual was prepared to promote and create a sense of community, livability, and unique identity for the residents of Avondale. The intent of this Manual is to provide a set of specific criteria that will achieve the City’s design expectations by:

- ▶ Providing a framework so that commercial and industrial developments offer a variety of diverse and attractive building architecture, site design, and functionality.
 - Encouraging uniquely designed developments throughout the City.
 - Eliminating redundancy by encouraging a variety of architectural styles and site design elements.
 - Promote architectural variety and diversity with contextualism for mass, scale, and material.
- ▶ Providing an innovative commercial or industrial site layout that creates walkable, safe, pedestrian-friendly, and sustainable commercial centers, industrial and business park developments with usable amenities, open space, and sustainable features.
- ▶ Ensuring streets follow the City’s hierarchy of classifications and are designed to conform to the City’s General Engineering Requirements, maintaining arterial and collector grid systems that are designed to meet the half-mile and one-mile spacing standards.
- ▶ Master planning phased projects so that circulation and other on-site considerations can be addressed such as grading and drainage, parking, building arrangement, and landscape.

Discretionary Decision Making

City staff will review all site and building design review applications to determine conformance with this Manual, the Zoning Ordinance, and any other applicable City development code requirements. Every project is unique and requires some decisions to be made on a case-by-case basis. While some provisions of this Manual include quantitative standards, most require qualitative interpretation. The Zoning Administrator has the latitude to interpret this Manual and to permit flexibility so long as proposed projects meet the intent of this Manual.



DESIGN REVIEW

An applicant who desires to change only a portion of their existing building should comply with all design guidelines related to the portion changed. If proposed modifications affect more than fifty (50) percent of any facade visible to public parking areas or public right-of-way, or City staff determines that the proposed changes are significant, the project will be evaluated to determine if all items discussed in this Manual have been considered.

All the following will require a submittal of a site plan and design review application:

- Exterior building alterations, including paint color changes
- Changes to landscape design, except for dead plant replacement
- Installation of new or changes to existing site or building lighting
- Re-configuration or modifications of parking and circulation areas
- New fences and walls
- Changes to a site's grading and drainage

Appeals

An appeal of the City's Development Review Committee's design review decision may be submitted to the Planning Division within fifteen (15) business days of the Committee's decision and accompanied by a nonrefundable application fee. Upon written request of the applicant, the Zoning Administrator shall schedule the appeal hearing for a regularly scheduled Planning Commission meeting. The Planning Commission shall review the site plan and design review application and decide as to whether the required findings have been met and approve, approve with stipulations, or deny the appeal. A majority vote of the Planning Commission is necessary to make a finding on the appeal.



SUSTAINABLE AND HEALTHY DESIGN

The City of Avondale has a commitment to protecting the environment, improving the quality of life, and promoting sustainability. Through the City's General Plan 2030 and the Strategic Plan, sustainable development is a priority as well as promoting physical activity and health through design. Conventional design and construction methods produce buildings that can negatively impact the environment as well as occupant health and productivity. These buildings are expensive to operate and contribute to excessive resource consumption, waste generation, and pollution. Architects and designers can help to significantly improve the health and well-being of the City of Avondale's population through design. Avondale encourages environmentally sensitive green building and site design.



The City promotes the following criteria designed to encourage the development of "green" buildings without forcing excessive costs or other burdens upon developers, building owners, or occupants. It is recommended that all projects utilize energy-efficient components and building materials to conserve energy, promote sustainability, and meet the goals and objectives of the City's Strategic Plan and General Plan 2030.

All new developments need to be designed in accordance with the City's Street Tree Master Plan and need to provide full canopy coverage over walkways.

All businesses that are registered with the City as a Certified Green Business will receive expedited review.



Green Building Strategies

Most of the location, orientation, and massing decisions made in the early stages of design have a profound effect on the energy and environmental impacts of buildings. This is particularly the case for solar-responsive, daylighting, and natural cooling design where early decisions establish the potential for passive renewable energy use. Other environmental strategies such as stormwater management are also greatly influenced by site planning.

Daylight, Views, and Natural Cooling

Examples of design elements to include that encourage passive renewable energy use are as follows:

- ▶ Floor plan depth is the most important single consideration that affects the potential for daylighting, exterior views, and natural ventilation. Floor plans with relatively narrow wings, such as I-, H-, U-, or T-shaped plans ensure that most interior spaces have good access to natural light and winds. Courtyards and atriums can also be used to bring light and air to surrounding narrow spaces.
- ▶ Incorporate light shelves, prismatic glazing, and other reflective systems to redirect daylight and extend naturally lit interior space to 30 to 35 feet deep.
- ▶ Bring outdoor air into one side of a space and exhausting it on an adjacent or opposite side for narrow floor plans to increase the potential for effective cross-ventilation and achieve a well-designed natural cooling strategy.



Solar

Where site conditions permit, provide landscaping or other shade structures to reduce the amount of sun on the building as an effective method of solar control.

Locate buildings toward the southwest, south, or west sides of a site to provide shade for lower floors from neighboring buildings.

Orient buildings so that the short wall, narrowest portion of the building, faces west or southwest for the least solar gain in the summer.

Place vertical space used for circulation and services such as staircases, elevators, electrical cables, water pipes, and risers at the southwest or west ends to buffer interior spaces from afternoon solar gain.

Consider solar generation products designed to be incorporated into wall and roof assemblies such as “solar shingles”, panels designed to integrate into curtain walls, and etching techniques designed to be used as sunshades.



LOW IMPACT DEVELOPMENT

Low Impact Development (LID) is an approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible. LID looks at stormwater as a resource rather than a waste product and employs strategies such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements to create functional and appealing site drainage. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.



| GI/LID Practices | REDUCES STORM-WATER RUNOFF | | INCREASES AVAILABLE WATER SUPPLY | | IMPROVES COMMUNITY LIVABILITY | | | |
|------------------------------|----------------------------|-----------------------------|----------------------------------|---------------------------------|-------------------------------|-------------------------------|---------------------|---------------------------|
| | Reduces Flooding | Improves Stormwater Quality | Reduces Potable Water Demand | Provides Storage for Future Use | Reduces Urban Heat Island | Provides Vegetation for Shade | Improves Aesthetics | Provides Wildlife Habitat |
| STORMWATER HARVESTING BASINS | ● | ● | ● | ○ | ● | ● | ● | ● |
| SWALES | ● | ● | ● | ○ | ● | ● | ● | ● |
| BIORETENTION SYSTEMS | ● | ● | ● | ○ | ● | ● | ● | ● |
| INFILTRATION TRENCHES | ● | ● | ◐ | ○ | ◐ | ◐ | ◐ | ◐ |
| DRY WELLS | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| CISTERNS | ◐ | ◐ | ● | ● | ○ | ◐ | ○ | ○ |
| PERVIOUS PAVEMENT | ● | ● | ○ | ○ | ◐ | ○ | ◐ | ○ |

Yes
 In Some Cases
 No

LID practices provide multiple benefits for the environment and the community to maximize mutual environmental, social, and economic benefits. A LID feature may benefit property values and increase customer attraction, provide services which contribute to ecosystem health, and can be utilized as a community gathering or recreational space for residents.



Design Features

Meander retention areas paired with recreational pathways through the development to create a connected green-space amenity such as a greenbelt to encourage maximum recreational use.

Contour the sides and bottoms of the basins to create a natural looking appearance. Use varied slopes and curvilinear edges to create a more natural looking facility instead of rectangular forms and long stretches.

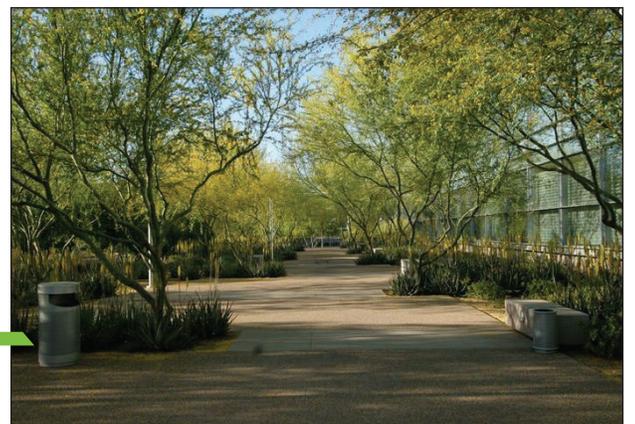


Maximize water permeability by minimizing soil disturbance and compaction in planned landscape areas, reducing paved areas, using permeable paving materials, and preserving open space drainageways when feasible.

Design water features specifically for rainwater harvesting to reduce on-site potable water demands.

Incorporate plants and design themes to support naturalistic landscapes that provide a sense of place in concert with the local natural environment.

Utilize low water use native or desert-adapted drought tolerant plants incorporating at least seventy-five (75) percent of selected plants being local native species.





WATER INFRASTRUCTURE FINANCE AUTHORITY OF ARIZONA (WIFA) GREEN PROJECT RESERVE

WIFA's green criteria are based on EPA's Clean Water and Drinking Water State Revolving Fund Green Project Reserve criteria. While many traditional projects are intended to protect the environment, they do not necessarily meet the criteria to be considered green. Green projects may be for planning, design, and/or construction activities. Either the entire project or only a component of the project can be identified as green. Commercial and industrial developments are highly encouraged to incorporate green stormwater elements. WIFA's Green Stormwater Project examples include:

- ▶ Green infrastructure, low impact development, porous pavement, green roofs, stormwater reuse, harvesting, bioretention, curb cuts, riparian improvements, and planter boxes. For more information visit the Environmental Protection Agency (EPA) Green Infrastructure website for design and implementation tools, <https://www.epa.gov/green-infrastructure>
- ▶ Limited water resources can be a barrier to green infrastructure in arid and semiarid regions. Projects should include the following Xeriscape principles to conserve water resources:
 - **Create a plan** that balances water usage, rainwater supply, and demand such as an annual and monthly water budget for native and exotic plant maintenance.
 - **Install low water use plants** to reduce, if not eliminate, the irrigation requirements of green infrastructure practices by using native and drought-tolerant plants.
 - **Install efficient irrigation systems** and group plants according to their water needs, adjusting the frequency and depth of irrigation according to plant type, plant maturity, and season.
 - **Consider soil** amendments by adding organic material to poor soil to aide in retaining soil moisture, sustaining vegetation, and treating stormwater runoff.
 - **Install organic mulches** to increase water retention and pollutant removal while building soil structure and suppressing weeds for desert plantings that are mulch tolerant.



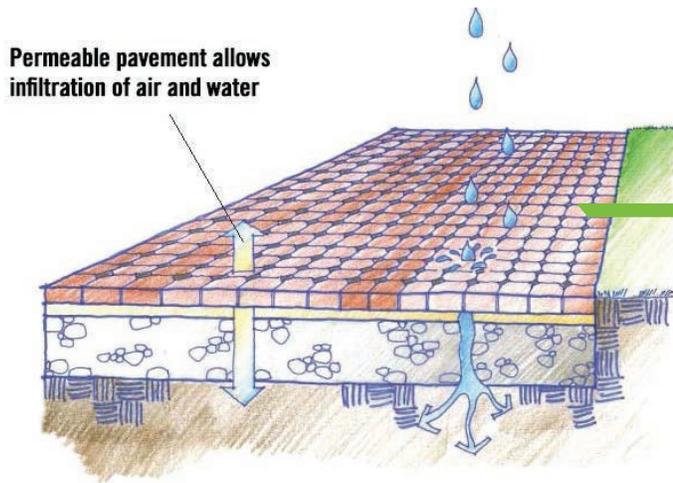
Green Stormwater Infrastructure

Green stormwater infrastructure (GSI) is a cost-effective, resilient approach to manage stormwater by reducing and treating stormwater at its source while delivering environmental, social, and economic benefits. Projects that incorporate GSI, which is a low impact development application, further the City of Avondale’s sustainability goals.

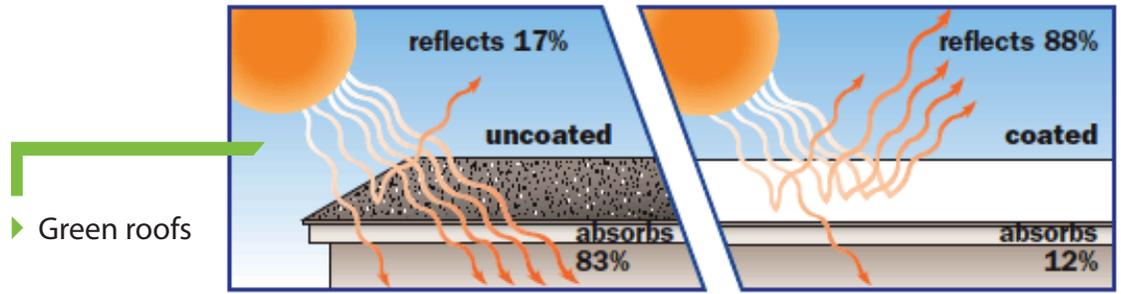




Examples of GSI in commercial and industrial site design include the following:



▶ Porous pavement/permeable pavers



▶ Right-of-way design features



► Bioretention



Mesa Urban Garden Retrofit, Mesa, AZ 2014

► Bioswales



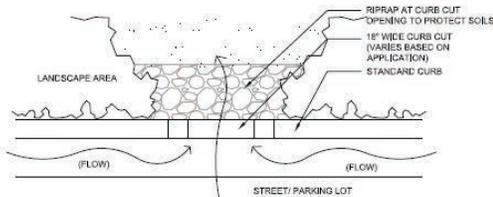
University of Arizona retrofitted their parking lot landscape buffer with a swale to capture runoff.



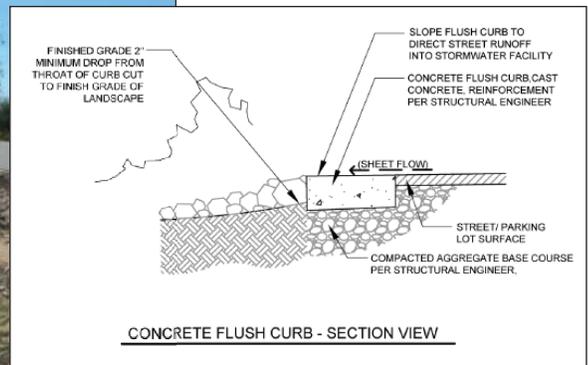
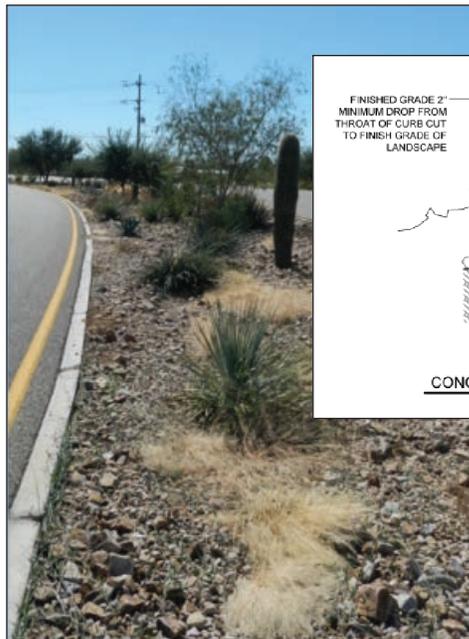
► Curb cuts or flush curbs



A Standard Curb Cut allows runoff to enter a lower landscaped area.



Standard Curb Cut Detail (Plan)





- ▶ Riparian improvements
- ▶ Active rainwater harvesting

For more information visit the Environmental Protection Agency (EPA) Green Infrastructure website for design and implementation tools.

Green Pavement Surfaces

Utilize impervious pavement, concrete and asphalt, only where regular car, bus, and/or truck traffic is expected. In other locations, install surfaces that encourage non-automobile traffic and allow stormwater infiltration.

For parking and highly used bicycle and pedestrian areas, utilize porous asphalt, paver blocks, or large aggregate concrete. Crushed stone or brick is recommended for lightly used pedestrian paths.

Where impervious surfaces are required, recycled asphalt and recycled concrete are encouraged.

Provide curb cuts and slope hardscape landscaping features to allow water flow to permeable surfaces.

Sustainable Roof

Consider the following parameters for designing a sustainable roof:

- For a minimum of seventy-five (75) percent of the total roof surface, a Solar Reflectance Index (SRI) of 78 or higher for a roof with a slope of 2:12 or less, or 29 or higher for a roof with a slope greater than 2:12.
- For a minimum of seventy-five (75) percent of the total roof surface, provide a combined vegetated roof with rainwater collection system and SRI compliant roof.
- For a minimum of fifty (50) percent of the total roof surface, a vegetated roof.
- For a minimum of fifty (50) percent of the total roof surface, a rainwater collection system connected to an irrigation system or other building system through piping.



COMMERCIAL SITE DESIGN

Providing a unique sense of place with each commercial development should be taken into consideration during the design process. Appropriately scaled buildings that avoid strip development patterns and concentrate on the natural environment and outdoor venues that promote pedestrian interaction is the priority. Commercial centers that incorporate creative design, outdoor activity centers, water play, turf areas with amenities such as chess games, Wi-Fi, charging stations, open markets, pedestrian shade with connectivity, and ease of access to bike paths are all elements to a good development plan.



The following site and building design elements include written and illustrated design concepts related to the basic quality of site layout and building architecture to achieve high quality commercial development. This portion of the Manual addresses each of these elements in general terms and establishes the basic principles for good design which should be incorporated into all projects throughout the City. Items contained in this chapter should not be viewed as standing alone but rather in concert with the more specific guidelines found in the subsequent sections of this Manual.

Site Design

- A. Employ an overall project theme including walls, entry areas, and landscaping in line with a mutually sustainable and aesthetic character.
 - Carry a distinct entrance theme throughout the development.
 - Design primary and secondary entrances to a development to create a sense of arrival with landscaping, decorative walls, lighting, pavement, art, or other elements.
 - Accentuate corner developments along collector and arterial streets with lush landscape, pedestrian entrance into the site, and public art where appropriate to serve as a gateway to the development.
- B. Provide enhanced landscaping including large specimen trees and landscaped medians at entrances utilizing LID stormwater harvesting features and graded to accept stormwater from adjacent hardscapes.
- C. Design entry landscape medians at a minimum of seven (7) feet wide to accommodate planting of trees, LID design, and stormwater retention.
- D. Utilize pervious surfaces, such as permeable pavers and concrete, wherever possible instead of conventional concrete and asphalt to reduce stormwater runoff and heat adding to urban heat island.
- E. Avoid large, open un-shaded paved pedestrian areas on all sides of buildings prone to summer sun exposure throughout the afternoon and evening.
- F. Incorporate active design elements to promote physical activity.
- G. Locate common plazas and seating areas in a central location within the development avoiding a site's perimeter.





- H. When designing offices and commercial spaces, provide exercise facilities or walking paths nearby.
- I. For sites containing more than one building, structures should be clustered to create usable pedestrian plazas and outdoor spaces. For sites where clustering may not be practical, visual linkages between buildings should be established through the introduction of arcade systems, trellises, or other similar features.
- J. Outdoor spaces should have clear, recognizable shapes that reflect careful planning and should not appear as a remnant between buildings. These spaces should be designed to maximize shaded pedestrian areas using shade tree canopies or shade structures. Pedestrian seating should be provided where appropriate.
- K. Circulation and building layout should promote comfortable, convenient, and safe movement within and through the site. This includes maintaining and enhancing pedestrian and bike access and access to existing or planned public transportation features both adjacent to and on site.
- L. Provide decorative bike racks throughout the development and locate buildings and entrances near public transit stops and along transit corridors.
- M. Utilize a site's natural and/or constructed stormwater drainage features to serve as landscape amenities such as along recreational pathways or near building fronts and entrances to help add to site green design and cooling capacity.
- N. Drive-through pads along entryways and along arterial and collector streets need to be designed to minimize drive-through lane views. The drive-through and awnings need to be integrated with the building's design.
- O. Rear service areas, fire exit doors, service entrance section cabinets (SES), trash containment, and the like along and visible from entryways need to be integrated with the building's design. Recessing a SES cabinet into building wall planes is preferred. Screening elements should include solid walls, decorative gates, and materials and paint colors to match the building's architecture.
- P. Locate trash enclosures in close proximity to buildings in order to allow convenient access by employees.





COMMERCIAL BUILDING DESIGN

- A. Incorporate active design elements to promote physical activity and health in design.
- B. Provide multiple entries and maximum transparency along the street to help enliven the pedestrian environment.
- C. Incorporate canopies and awnings into building façades.
- D. Design building massing to enhance nearby parks, plazas, and open spaces.
- E. Maximize variety, detail, and continuity on the lower one-to-two floors of the building exterior for multi-story buildings.
- F. Build for biophilic design to support people's health and well-being in the built environment such as the following:
 - Orient buildings to provide view of rain, natural daylight, and shading.
 - Incorporate living green walls, gardens, and natural materials such as wood, stone, flowers, and plants from the local area.
 - Provide metal products such as raw steel for a natural element.
- G. New buildings proposed in areas that have a well-defined and desirable character should be compatible with or complement the architectural character and siting pattern of nearby buildings.
- H. New buildings proposed in other areas should reinvigorate the area by introducing more desirable features. Features that should be used to integrate new buildings include fenestration patterns, building proportions, roof forms, and/or building materials.
- I. Create a well-proportioned and unified building form and exhibit an overall architectural concept of design elements, details, and massing
- J. Building exteriors should be constructed of durable and maintainable materials that are attractive even when viewed up close. Materials that have texture, pattern, and a high quality of detailing are expected.
- K. Avoid large blank walls facing the street and incorporate four-sided architecture.
- L. Incorporate recessed windows, curtain walls, wall plane elements, to break up wall plane massing at appropriate intervals.





- M. Provide convenient, identifiable, and attractive access to the building's entry with seating areas. To ensure comfort and security along paths provide lighted areas that are protected from the weather.
- N. Design hotel developments with a dramatic entrance, pool and barbeque areas, outdoor patio areas for dining, seating areas near the entrance, screened air conditioning units integrated into the building's design, internal roof drain downspouts, and a porte-cochere at the entrance to shelter those getting in and out of a vehicle.
- O. Design prominent and attractive stairs for everyday use and exercise in the form of a grand staircase or fire stairs that also serve as a principle means of travel.
- P. Locate stairs near the building's entrance to encourage use of them versus elevators and make them wide enough to accommodate travel in groups in two directions.
- Q. Use articulated and unique stair compositions such as a grand, sculptural staircase and exciting stair construction incorporating artwork into the stair environment, natural ventilation, and select bright and inviting colors.
- R. Where possible, landscaping should reinforce the character of the development and abutting streetscape while enhancing the architecture of the building project. Possibilities include special pavements, trellises, screen walls, fountains, planters, and site furniture.
- S. To reduce the perceived scale of buildings, façades need to include treatments for every fifty (50) feet of building length. In addition, vary rooflines including parapet heights and widths, and wall plane massing to provide horizontal design variation.



INDUSTRIAL SITE DESIGN

Employ an overall project theme including walls, entry areas, and landscaping in line with a mutually sustainable and aesthetic character. Building placement and orientation, open space, landscaping, access, circulation, parking, grading, and lighting are all important components of designing a functional, aesthetically pleasing site.

- A. Criteria that needs to be considered when designing a site in Avondale includes:
- Entry features reflect the overall architectural identity, character, and theme of the development creating a sense of arrival.
 - For sites containing more than one building, cluster structures to create usable pedestrian plazas and outdoor spaces; provide a campus-setting site layout. For sites where clustering may not be practical, establish visual linkages between buildings through the introduction of arcade systems, trellises, or other similar features to achieve a campus-like atmosphere. Site furniture, lighting, and signage should be integrated throughout the development, creating an overall development theme.





- Outdoor spaces should have clear, recognizable shapes that reflect careful planning and should not appear as a remnant between buildings. These spaces should be designed to maximize shaded pedestrian areas using shade tree canopies or shade structures. Pedestrian seating and/or employee outdoor spaces should be provided where appropriate. Locate seating areas contiguous to buildings for convenient access by employees.



- Design the spatial relationship of buildings on a site providing for safe pedestrian access.

- Rear service areas, fire exit doors, service entrance section cabinets (SES), trash containment, and the like along and visible from entryways need to be integrated with the building's design. Recessing a SES cabinet into building wall planes is preferred. Screening elements should include solid walls, decorative gates, and materials and paint colors to match the building's architecture.

- B. Provide enhanced landscaping including large specimen trees and landscaped medians at entrances utilizing LID stormwater harvesting features and graded to accept stormwater from adjacent hardscapes.
- C. Design entry landscape medians at a minimum of seven (7) feet wide to accommodate planting of trees, LID design, and stormwater retention.
- D. Integrate LID features and apply Xeriscape and water conservation practices to the greatest extent possible in all design features.
- E. Utilize pervious surfaces, such as permeable pavers and concrete, wherever possible instead of conventional concrete and asphalt to reduce stormwater runoff and heat adding to urban heat island.
- F. Include enhanced wall materials such as stone, brick, tile, or other sustainable materials, other than ordinary block walls to create an integrated design. Short screen walls should be minimized where landscape and shrubs can be provided in lieu of the wall.
- G. Incorporate LED street lights, landscaping, and accent paving at entries and crosswalks throughout the development.
- H. Entries to industrial buildings should portray a high-quality office appearance while being architecturally tied into the overall building mass and building composition. Windows and doors are key elements and should relate to the scale of the elevation on which they appear. Windows and doors can establish character by the placement and variety.
- I. Recessed openings to provide depth and contrast to elevation planes. Enhance primary and secondary entrances with landscaping, decorative walls and pavement, lighting, art, or other elements.
- J. Truck dock and loading areas need to be screened by decorative wall systems, landscaping, and away from pedestrian connections.
- K. Design warehouse roll-up doors to be architecturally integrated with the building design through style and/or paint colors.
- L. Along freeways and major arterial street frontages, bay doors, truck docks, cross-dock areas, and the like need to be internal to the site's design; not along the site's perimeter.
- M. Where allowed, locate outdoor storage and service yards in areas least visible from public rights-of-way or view. Completely enclose outdoor storage yards shall by a decorative block wall that is at least eight (8) feet in height.



- N. Install mature landscaping at the base of long building walls to help break up façades.
- O. Include internal gyms with changing rooms, showers, and lockers to allow employees the year-round opportunity to bicycle or jog to work, and exercise during the day within buildings greater than 50,000 square feet.
- P. Provide bike racks, exercise stations, and outdoor eating areas for employees.
- Q. Provide indoor or outdoor bicycle parking/storage for use by visitors or employees. All required outdoor bicycle parking should be located closer to main building entrances than automobile parking spaces.

INDUSTRIAL BUILDING DESIGN

Industrial and commerce park buildings are expected to utilize quality materials in their design. The use of various materials, whether masonry, concrete texturing or block used as an accent, glass, stucco, stone, or marble can produce effects of texture and relief that provide character. Buildings should include vertical and horizontal building wall plane relief including projecting and recessed wall plane elements, fin façade systems, metal awnings, asymmetrical design, paint color and building material variation, and enhanced covered front entry design through glazing, recessed elements, lighting, and like elements.



- A. Incorporate active design elements to promote physical activity and health in design such as the following:
 - Provide multiple entries and maximum transparency along the street to help enliven the pedestrian environment.
 - Incorporate canopies and awnings into building façades to provide shade and encourage outdoor work areas.
 - Carefully incorporate stairs and ramps as building design features.
 - Maximize variety, detail, and continuity on the lower one-to-two floors of the building exterior for multi-story buildings.
- B. Build for biophilic design to support people's health and well-being in the built environment such as:
 - Design buildings that mimic places in nature that make us feel good, incorporating natural light and views.
 - Orient buildings to provide view of rain, natural daylight, and shading.
 - Incorporate living green walls, gardens, natural materials such as wood, stone, flowers, and plants from the local area.
 - Provide metal products such as raw steel for a natural element.
- C. Projects should be compatible with the scale of nearby existing and anticipated development and should provide a sensitive transition to existing development.
- D. Long, blank wall planes often associated with industrial projects to be broken up by varying the wall plane at a minimum of one variation per fifty (50) linear feet. Varying the front setback of a building façade is strongly encouraged.



- E. Provide roofline height variation to add building interest from streets and adjacent properties.
- F. Building design elements, details, and massing should create a well-proportioned and unified building form and exhibit an overall architectural concept.
- G. Construct exteriors of durable and maintainable materials that are attractive even when viewed up close. Materials that have texture, pattern, and a high quality of detailing are greatly encouraged. Avoid large blank walls facing the street and design buildings to achieve four-sided architecture.
- H. Provide convenient, identifiable, and attractive access to entry. To ensure comfort and security, light paths and entry areas and ensure they are protected from the weather.
- I. Design prominent and attractive stairs for everyday use and exercise in the form of a grand staircase or fire stairs that also serve as a principle means of travel, are close to natural light and are visible.
- J. Locate stairs near the building’s entrance to encourage use of stairs versus elevators and construct wide enough to accommodate travel in groups in two directions.
- K. Use articulated and unique stair compositions such as a grand, sculptural staircase and exciting stair construction incorporating artwork into the stair environment, natural ventilation, and select bright and inviting colors.
- L. Where possible, landscaping should reinforce the character of the development and abutting streetscape while enhancing the architecture of the building project. Possibilities include special pavements, trellises, screen walls, fountains, planters, and site furniture.
- M. To reduce the perceived scale of buildings, façades need to include treatments from the list below for every fifty (50) feet of building length as appropriate, per Table 1-2 below.

Table 1-2:

| Building Length (Feet) | Number of Façade Treatments Required |
|------------------------|--------------------------------------|
| 0 - 50 | 4 |
| 51 - 80 | 6 |
| 81 - 110 | 8 |
| Greater than 110 | 10 |

Include each of the façade treatments into a building’s design where necessary:

- 1. Reveals and projections
- 2. Offsets, measuring at least four (4) feet in depth
- 3. A vertical architectural treatment, a minimum of twelve (12) inches
- 4. Color, texture, or material change
- 5. Architectural banding
- 6. Awnings and trellis’
- 7. Decorative parapet, such as arched, arched gabled, stepped, or cornice treatments
- 8. Covered walkways
- 9. Variations in roof forms/heights
- 10. Deep-set windows with mullions or decorative glazing
- 11. Ground-level arcades or upper balconies or galleries
- 12. Columns or pillars with stone/rock
- 13. Fin façade systems
- 14. Marble, brick, stone, tile accents
- 15. Artwork



CIRCULATION

Transportation and on-site circulation effects almost every aspect of a site, overall project design, convenience, and livability. Each project must take into consideration the adjacent parcels, ingress and egress, ease of the consumer, safety of the pedestrian, and overall success of the business.

Developments need to be proactive in addressing traffic impacts with new developments in relation to growth in surrounding areas. A Traffic Impact Study or Traffic Impact Analysis may be required to address existing and future traffic demands related to a project as well as surrounding areas. The following design items should be used in conjunction with the general concepts found within this Manual.

- A. Provide direct and safe pedestrian access to adjacent or nearby transit.
- B. Encourage a walkable, pedestrian-friendly environment that is devoid of large, unoccupied spaces and promotes mobility equity for all ages and abilities.
- C. Design mobility networks in conjunction with shade tree canopy landscaping.
- D. Incorporate and expand alternative transportation networks including bike lanes, shared use paths, enhanced public transportation access points, bike share facilities, and park and ride areas.
- E. Phase projects must provide an overall phasing plan of future connections or driveways and on-site access to all potential/future development within the overall site.
- F. All parking areas need to be designed in accordance with ADA guidelines, Fire Department standards, and the Avondale's Zoning Ordinance.
- G. Identify conflict points with on-site circulation and service vehicle zones and mitigate.
- H. Keep vehicular circulation away from direct pedestrian connections where possible.
- I. Angled parking is highly encouraged for larger parking lots which can accommodate one-way aisles or neo-traditional developments which provide parking along public or private streets.

Multimodal streets elements can be incorporated into development design and layout by considering the multimodal streets guiding principles with emphasis given to sustainable, alternative transportation modes. Commercial and industrial development should follow established design standards that provide guidance on multimodal mobility design to support and connect to multimodal streets. These may include, but are not limited to, the following:

- Institute of Transportation Engineers (ITE), *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*
- National Association of City Transportation Officials (NACTO), *Urban Street Design Guide*
- National Association of City Transportation Officials (NACTO), *Urban Bikeway Design Guide*



Multimodal streets are a way of designing and building streets that focus on creating a safe and welcoming experience for all people regardless of their age, ability, income, race, or ethnicity, whether they are walking, biking, driving, or taking public transit.



There is no singular design prescription for multimodal streets; each one is unique and responds to its community context. A multimodal street may include sidewalks, bike lanes, wide paved shoulders, special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more.

Multimodal streets design elements, such as bike paths and pedestrian-friendly sidewalks, may be integrated with LID and GSI strategies to provide further sustainable performance and social benefits to site users. The following guiding multimodal street principles provide a framework for integrating multimodal streets approach into new development.

- ▶ **Safety:** Provide a safe travel experience to all and design for safety strategies to eliminate preventable traffic fatalities.
- ▶ **Accessibility, Equity, Diversity, and Inclusivity:** Implement multimodal streets elements equitably and inclusively throughout the development and in connection to City elements.
- ▶ **Land Use:** Incorporate context sensitive, flexible design approaches and consider the surrounding community's current and expected land use and transportation needs in an interconnected manner.
- ▶ **Environment and Health:** Support the health and well-being of residents, visitors, and employees, and the natural environment by enhancing sustainable travel options, providing opportunities for physical activity through active transportation such as walking and biking, improving air quality through reduced vehicle emissions, mitigating urban heat island effect, utilizing stormwater runoff and decreasing stormwater pollutants, and maximizing shade trees and vegetation.
- ▶ **Economic Vitality:** Help stimulate economic development by supporting business and job creation and fostering a more resilient workforce that has greater access to employment opportunities through improved travel options.

Shared Transportation Facilities

- For all commercial and industrial buildings, or complexes larger than 50,000 square feet, reserve ten (10) percent of required automobile parking spaces for carpooling, vanpooling, and alternative fuel vehicles, including hybrid vehicles.
- Carpool, vanpool, and alternative vehicle spaces should be located closer to main building entrances than single-user automobile parking.
- Provide covered parking and charging stations throughout the development.
- Utilize prominent signage to draw attention to parking and pick-up areas for carpool and vanpool parking.
- Provide attractive and comfortable waiting areas to encourage carpool and vanpool commuters. Waiting areas should be designed with sunshades, shade trees, and seating.
- Ensure commuter safety by designing lobby space in buildings that view waiting, pick-up and drop-off areas, good lighting, and if necessary, prominent surveillance cameras.



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

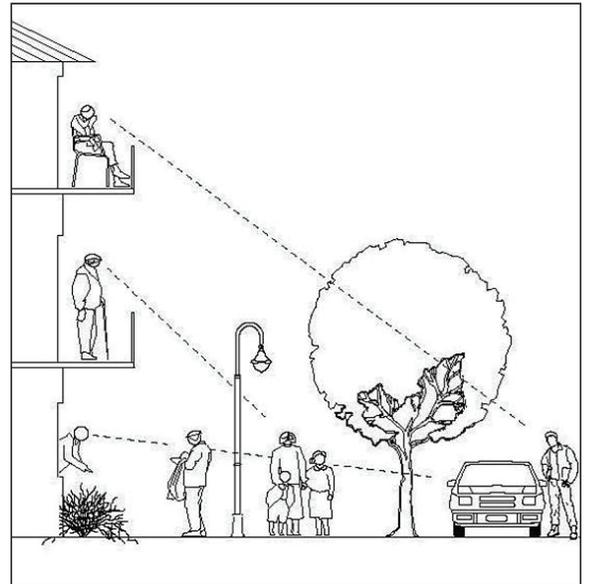
Crime Prevention Through Environmental Design, or CPTED (pronounced sep-ted), is a crime prevention philosophy based on the theory that proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime. It focuses on the positive use of a space and natural elements to maintain a sustainable quality of life for intended users, while offering a sense of security by increasing the difficulty for criminal or abnormal activities. The principles of CPTED, which are natural access control, natural surveillance, territoriality, and maintenance, when integrated with the principles of physical security present a unique approach to minimizing crime opportunities. This may be accomplished through the design elements described in this Manual.

Natural Surveillance

Design the placement of physical features and design for informal and/or programmed activities in such a way as to maximize visibility and foster positive social interaction and activity among legitimate users of the space. Creating environments that allow the opportunity for people to engage in their normal behavior and to observe the space around them limits the potential for crime to occur.

Natural Access Control

Strategically locate entrances and exits, fencing, lighting, and landscaping to control or limit the flow of or access. Most criminal intruders will try to find a way into an area where they will not be easily observed. Limiting access and increasing natural surveillance keeps them out altogether or marks them as an intruder.



Natural Territorial Reinforcement

Design buildings, fences, pavement, signs, lighting, and landscaping to express ownership and define public, semi-public and private spaces, so that natural territorial reinforcement occurs. An environment designed to clearly delineate private space does two things. First, it creates a sense of ownership. Owners have vested interest and are more likely to challenge intruders or report them to the police. Second, the sense of ownership within a community or space creates an environment where “strangers” or “intruders” stand out and are more easily identified.





Maintenance

CPTED and the “Broken Window Theory” suggests that one “broken window” or nuisance, if allowed to exist, will lead to others, and ultimately to the decline of an entire neighborhood. Neglected and poorly maintained properties, lighting, landscaping, or open space areas can increase the level for criminal activity.

Site features within a commercial and industrial development must be maintained always to include paving surfaces, landscaping, walls, gates, entry features, light poles, signs, paint, stone or brick, seating furniture, and other related items typically found within commercial and industrial developments.

The best time to apply this philosophy is in the design phase before a building is constructed. These elements can be successfully applied later but retrofitting an existing environment can sometimes be costly. The use of CPTED standards will deter crime and reduce fear by minimizing criminal opportunity and fostering positive social interaction throughout a community.



INSIDE BACK COVER
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Avondale

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