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AIR MOBILITY COMMAND

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**LANDSCAPE  
DESIGN GUIDE**

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*One of Air Mobility Command's top priorities is to provide our people a quality environment in which to live, work, and play. Well designed landscape architecture holds enormous potential to help reach that goal.*

*This guide establishes the benchmark for landscape architecture. Use it in concert with the AMC facility standards to build an environment in which people can take greater pride in their bases and the superb job they do every day.*

*"The Air Mobility Team... Responsive Global Reach for America... Every Day!"*

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Mature, well-maintained landscaping frames the view of this historic residence.

# Introduction

## A. Purpose

This guide provides commanders a practical approach to landscape architecture. The information presented is intended to make commanders and their staffs aware of important landscape considerations and to aid them in project development. This guide should be used by commanders, base engineers, designers, and architectural and engineering firms in the development of a sound and affordable long-term landscape program. It is intended to help all participants better understand Air Mobility Command (AMC) landscape standards for effective participation in the project development process.

## B. Value of Landscape Architecture

Landscape architecture is the art and science of designing exterior areas to improve visual appeal and functionality. It is one of the most effective means of improving the appearance and unity of a base. Quality landscape architectural design and implementation also improve the quality of life for our people and visitors.



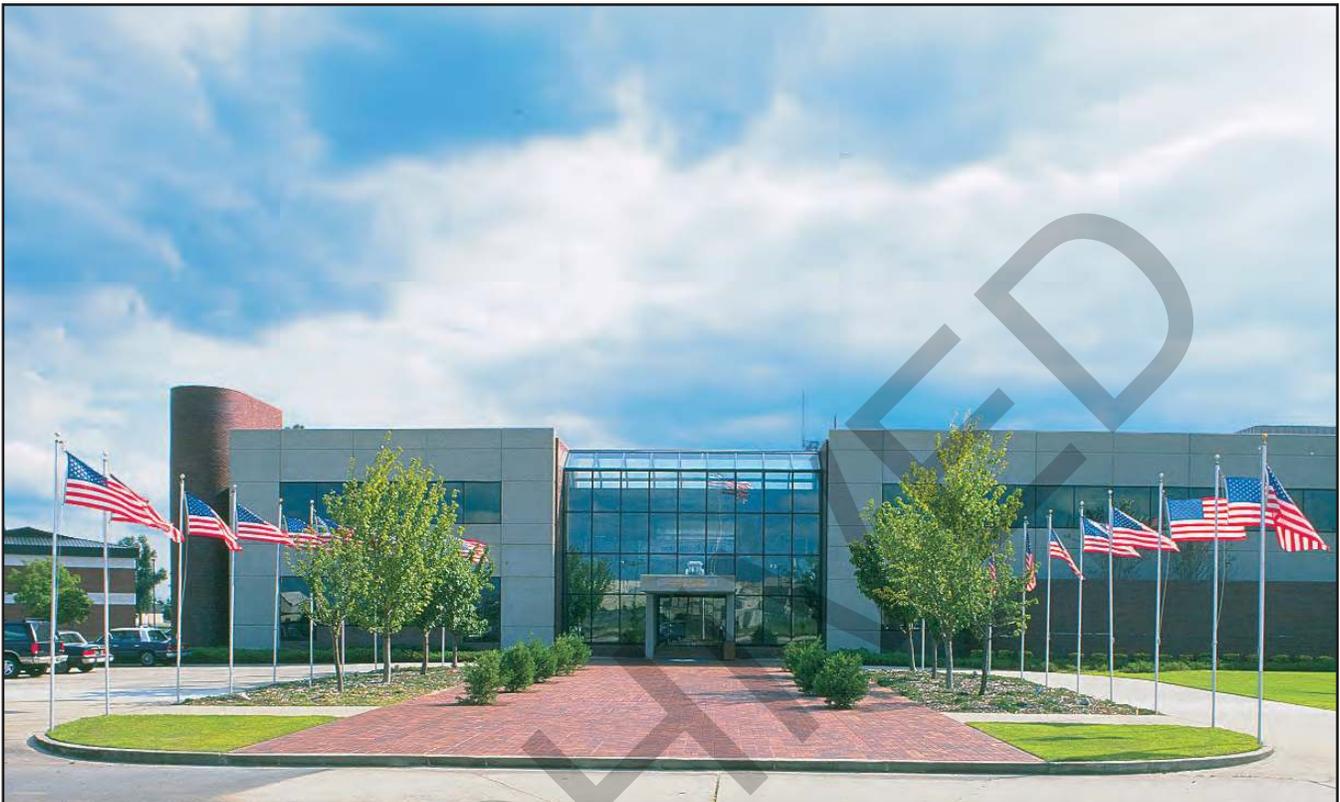
This dramatic floral display focuses the user's attention towards the building's entry. Reserve this treatment for prominent buildings.

## LANDSCAPE DESIGN GUIDE INTRODUCTION

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Natural site features can offer unique landscape design opportunities to heighten visual appeal. Site development is often less costly when working with natural features.



A facility should convey an orderly and attractive appearance. The landscape should be consistent with the facility's function.

## C. Design Guide Scope and Use

It is important that landscape design be consistent with existing publications, such as the Base Comprehensive Plan (BCP), master landscape development plan, and landscape design guidelines. Since each installation has its own unique set of environmental, climatic, and functional needs, use this document as a companion to other AMC guides to establish a landscape design. This guide also supplements other Air Force and Department of Defense (DoD) policies and instructions.

The illustrations in this guide are examples of quality landscape design which address specific site conditions. This document addresses the following:

- ◆ **Landscape Design Process** - Used to develop a landscape project which is part of the BCP.
- ◆ **Landscape Elements** - Consist of various components (i.e., vegetation, land forms, water features, etc.) that are combined to form a landscape plan.
- ◆ **Landscape Site Concerns** - Address the typical site components (i.e., parking, open space and natural areas, buildings, etc.) through the use of landscape elements.
- ◆ **Development Guidelines** - Provide the major functional areas of the base and successful landscape solutions for each.
- ◆ **References** - A listing of documents for additional guidance. ■



Perennial beds provide a dynamic landscape component throughout the blooming period.

# Landscape Design Process

## A. Philosophy

Commanders should address the overall appearance of their installations by taking a comprehensive approach to enhance existing assets and employ sound site planning and design principles. Existing installation assets may include large reserves of natural open space, impressive landscape features, and historic and contemporary buildings of distinctive character. A consistent quality landscape plan should meet the needs of the base for years to come.

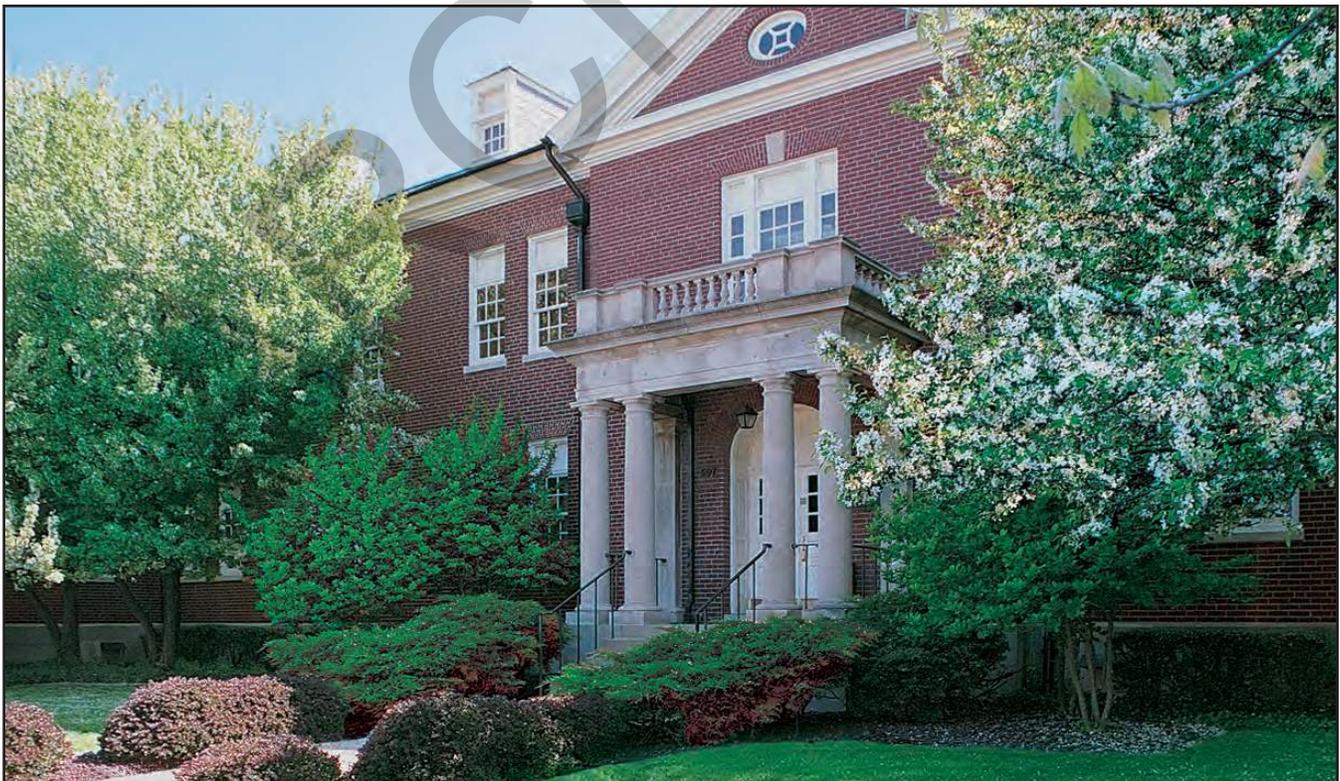
Simple landscape improvements, such as tree plantings or coordinated site amenities, can greatly enhance the appearance of any installation. Sensitive, practical, quality design will ensure that new facilities contribute to the overall

appearance of the installation, while minimizing design fees, construction costs, and maintenance requirements.

## B. Design Process

The BCP is the planning document which is the basis for all landscape design. Every project should conform to the concepts outlined in the BCP. The general concepts are as follows:

- ◆ **Land Use Planning** - Based on mission requirements, ecology, physical development, and visual character of the installation.
- ◆ **Future Growth Flexibility** - Plan for expansion to meet future needs of the installation.



Shrubs and ornamental flowering trees frame the entrance and enhance the character of this historic building.

# LANDSCAPE DESIGN GUIDE

## LANDSCAPE DESIGN PROCESS

- ◆ **Vehicular Circulation System** - Serves the base, but does not dominate the setting.
- ◆ **Low Maintenance Requirements** - Design and selection of elements for durability and life cycle cost benefits.

The landscape design process illustrated in Figure 1 brings together the user, existing site features, and comprehensive planning documents. This combination of elements incorporates good landscape and urban design principles that will lead to a solution that is functionally efficient, aesthetically pleasing, and environmentally sound. Figure 2 illustrates a typical conceptual site development plan showing building configuration, planting design, pavement types, plazas, park areas, and vehicular and pedestrian circulation routes.

The most important characteristics of the landscape design process include the following:

- ◆ **Comprehensive Planning Documents** - Coordinate existing planning documents to guide site development in an aesthetic, functional, efficient manner while remaining on track with the installation's intended

mission. Other considerations include an analysis and evaluation of energy demand and conservation.

- ◆ **Site Features** - A thorough analysis of the area which includes: adjacent land uses, topography, vegetation, drainage, views, climate, pedestrian and vehicular circulation, and utility systems.
- ◆ **User Needs** - The determination of user needs early in the design process is essential for an efficient design solution.
- ◆ **Design Alternatives** - Develop and evaluate a variety of alternatives to ensure a well-phased design solution. Consider all points of view before committing to a final design.
- ◆ **Final Design** - The selection of an alternative design that illustrates all the landscape elements.
- ◆ **Implementation Plan** - Ensures that all funding has been correctly identified and construction timing is appropriate. This should also include the siting and construction phase of all projects.

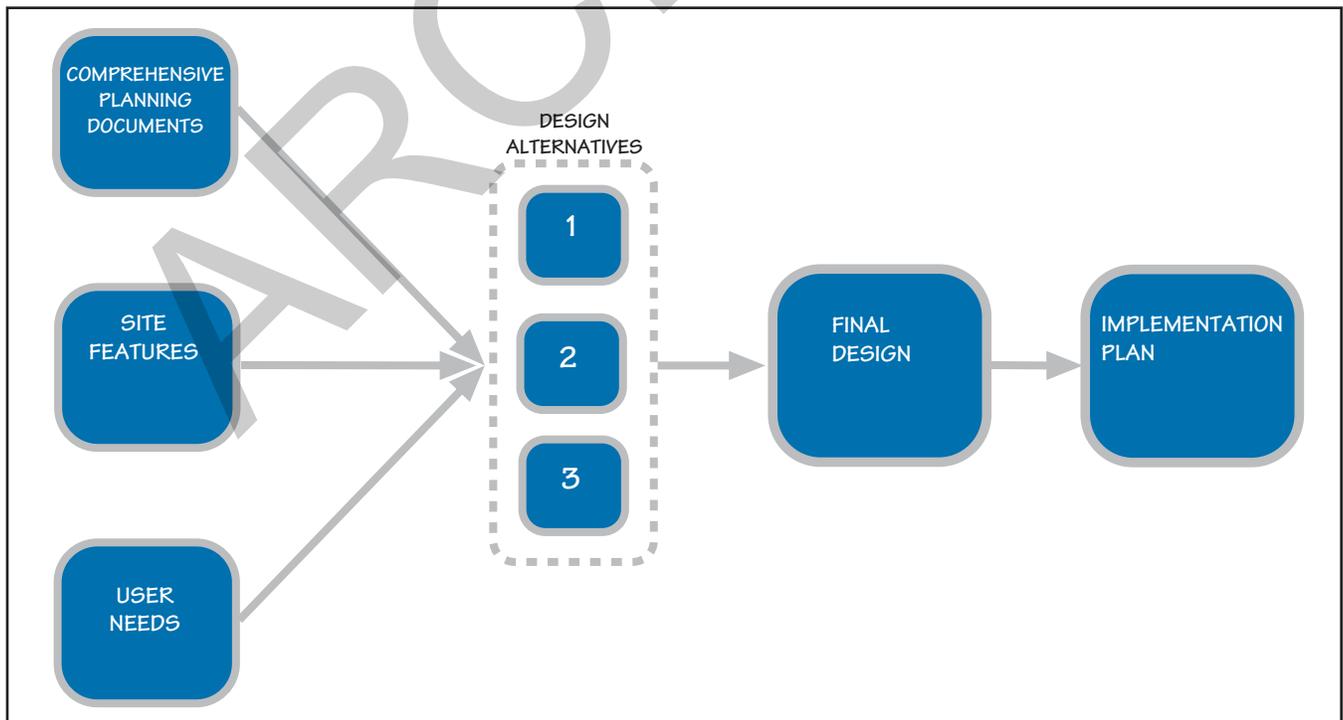


Figure 1: Landscape Design Process.



Figure 2: Conceptual Site Development Plan.



The landscape design should be a balance of vegetation and site amenities.

# Landscape Elements

The coordination and effective use of landscape elements contribute to the overall success of the design. Landscape elements consist of the following:

- ◆ Vegetation
- ◆ Land Forms
- ◆ Water Features
- ◆ Pavement Materials
- ◆ Site Amenities
- ◆ Lighting
- ◆ Signs



An informal planting of spring flowers is a welcome relief after a long winter. For the greatest impact, reserve this concept for a few areas of high visibility.

## A. Vegetation

Vegetation consists of trees, shrubs, ground covers, annuals, perennials, vines, and turf. They serve many of the following functions:

- ◆ **Visual Enhancement** - Vegetation strengthens the appearance of the installation and improves the users' quality of life.
- ◆ **Wind Control** - Strategic placement of trees and shrubs helps to break, guide, and deflect wind currents.
- ◆ **Erosion Control** - Ground cover and turf reduce the amount of soil surface exposed to natural forces. The root structure binds the soil, thereby reducing erosion potential.
- ◆ **Noise Reduction** - Dense foliage and earth berms effectively reduce noise levels by absorbing sound waves.
- ◆ **Climate Modifications** - Vegetation helps reduce temperatures by shading the ground and by the cooling effect of water emitted from its foliage.
- ◆ **Energy Conservation** - Deciduous trees (trees which lose their foliage) shade building surfaces in the summer and, as a result, reduce the demand on air conditioning systems. During winter months, sunlight passes through the trees to provide natural solar heat for the building's interior.

## LANDSCAPE DESIGN GUIDE

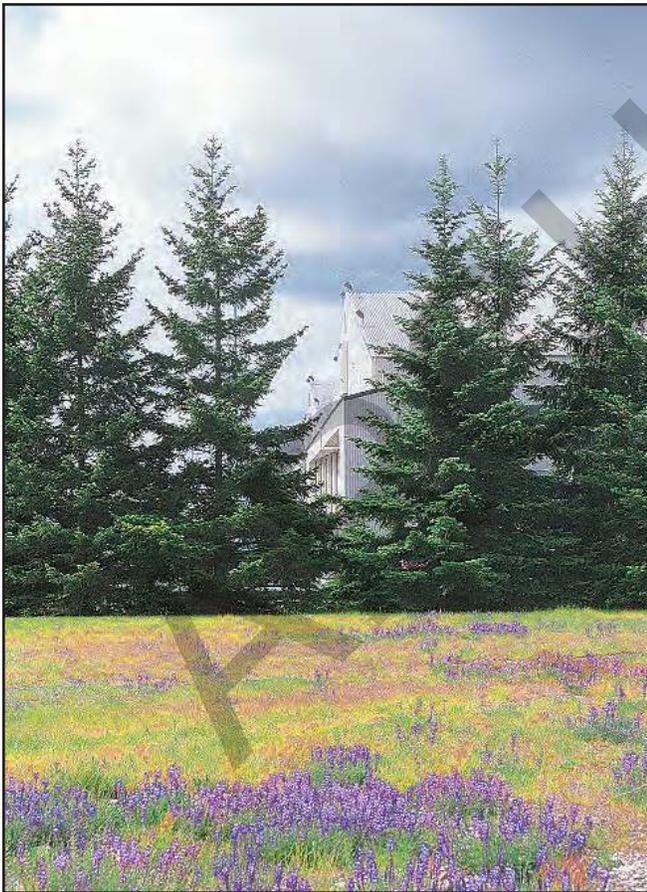
### LANDSCAPE ELEMENTS

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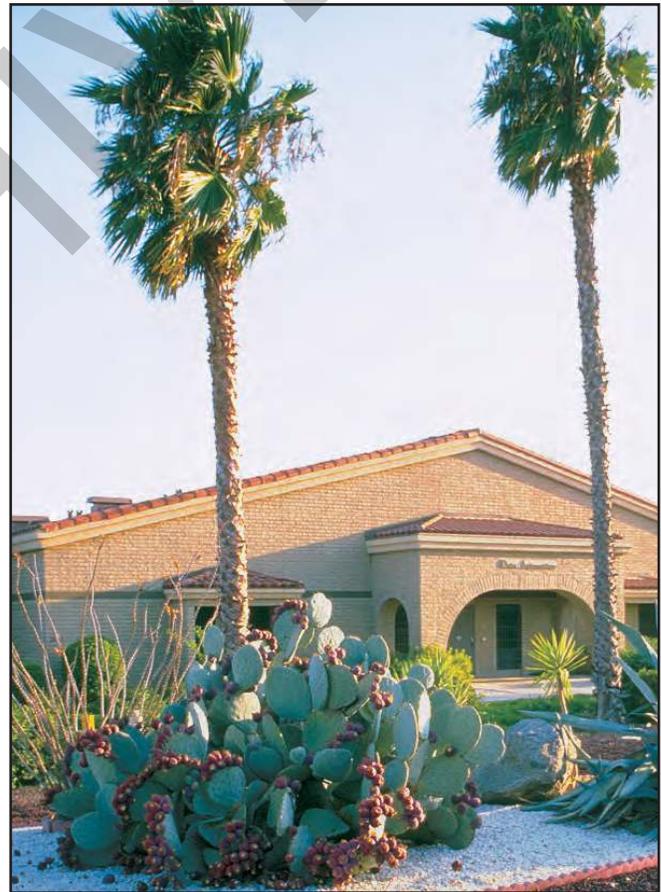
- ◆ **Glare and Reflection Reduction** - Plants can effectively soften glare and reflection from man-made materials.
- ◆ **Air Purification** - Vegetation is a natural filter that removes dust and pollutants from the air.
- ◆ **Wildlife Conservation** - Diverse vegetation types provide wildlife habitat for nesting, shelter, and food.

Select low maintenance indigenous vegetation that is compatible with the natural character of the area. Select native plants or other vegetation that will thrive with little or no supplemental irrigation, fertilization, or pest control. For a suggested list of plant materials, refer to the following:

- ◆ Base Architectural Compatibility Guide
- ◆ Capital Improvements Component of the BCP
- ◆ Landscape Development Plan



Native vegetation is an ecologically sound solution. Once established, it requires little or no maintenance and reinforces an installation's regional character.



Water consumption is a major vegetation selection criterion. Care should be taken to minimize irrigation requirements.

## B. Land Forms

Earth berms, terracing, and retaining walls are examples of land form elements. These elements should be in harmony with the site's natural topography or contrast and respond to the architectural form.

- ◆ **Earth Berms** - Provide spatial enclosures, screening of undesirable areas, and reinforce architectural forms.
- ◆ **Terracing** - Creates useable areas on a sloped site and reinforces architectural forms.
- ◆ **Retaining Walls** - Preserve vegetation, minimize grading requirements on steep slopes, and create visual interest.



Use earth berms and appropriately placed vegetation to screen parking areas.



Retaining walls can help preserve existing vegetation. The vines on this wall provide a smooth transition from the hard surface roadway to the natural preserve beyond.

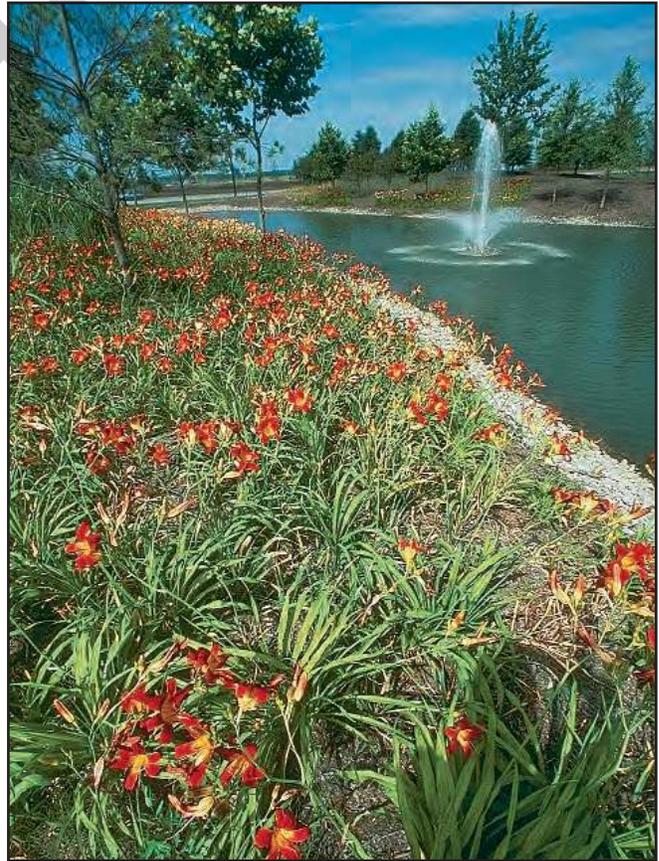
## C. Water Features

Water features include ponds, lakes, fountains, and reflective pools. They can be located along green space corridors or in developed plazas. Water features provide the following:

- ◆ **Visual Enjoyment** - An area that is a source of natural beauty.
- ◆ **Focal Points** - Special interest areas that attract attention.
- ◆ **Auditory Relief** - Fountains and running water mask vehicular and mechanical equipment noises.
- ◆ **Micro-Climate Modification** - A localized cooling effect created by the spray mist from a fountain or bubbler.
- ◆ **Native Habitat** - Areas for wildlife conservation and management.
- ◆ **Recreational Opportunities** - Areas for swimming, boating, and fishing.
- ◆ **Retention Ponds** - On-site stormwater retention and detention facilities. These can eliminate the need to upgrade existing storm water systems to accommodate new development.
- ◆ **Irrigation Reservoirs** - Help reduce the demand for potable water resources.



Lakes provide visual relief and recreational opportunities.



Fountains provide enjoyment and mask undesirable noise.

## D. Pavement Materials

Different types of pavement materials serve various purposes. They can provide the following:

- ◆ **Spatial Definition** - Use various pavement types, colors, shapes, and sizes to define outdoor spaces.
- ◆ **Sense of Direction** - Various surface patterns and colors define movement and direction.
- ◆ **Spatial Character** - Texture and color of surface materials can project a unique character to the area.
- ◆ **Warnings** - Use an abrupt variation of pavement color, texture, or size to signal level changes, roadway intersections, or other hazardous conditions.

Select materials based on purpose and maintenance requirements. Pavement surfaces can be classified as hard, variable, and soft.

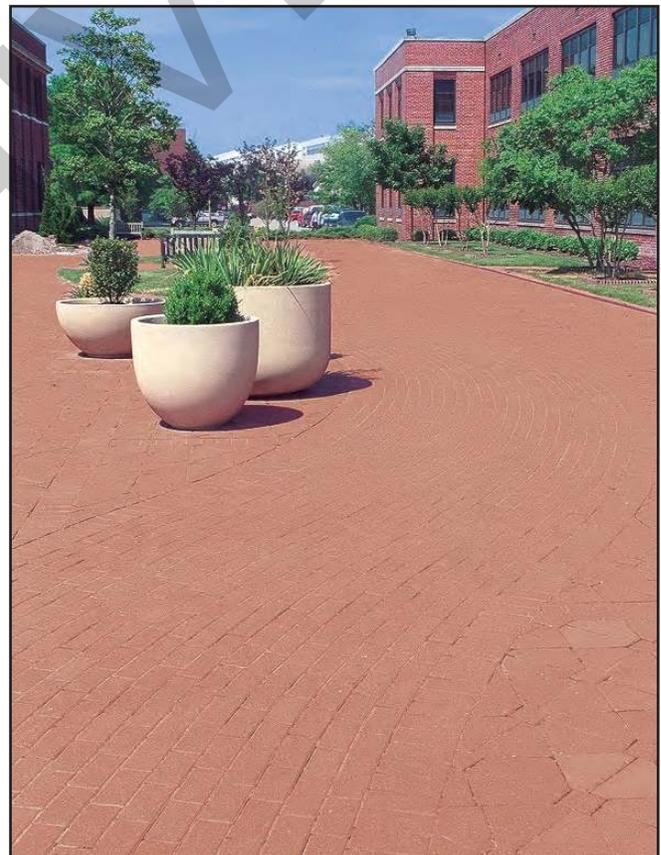
- ◆ **Hard Surfaces** - Consist of asphalt, concrete, mortared brick, and tile. Hard surface materials are firm and regular and are best for wheelchair access. Ice and snow removal is easiest on these surfaces and can be accomplished without damaging the pavement.



Pavement materials provide interest and variety to this building's entrance.

- ◆ **Variable Surfaces** - Include cobblestone, flagstones, mortarless brick pavers, exposed aggregate concrete, and wood decking.
- ◆ **Soft Surfaces** - Made up of sand, river rock, decomposed granite, and wood mulch. These are typically less expensive to install; however, they often require additional maintenance. Soft and variable surfaces make snow and ice removal difficult, as well as hinder wheelchair accessibility.

Pavement material selection should be harmonious with the site's architecture, amenities, and character. Choose materials for durability and compatibility with desired use.



Pavement patterns and planters direct pedestrian circulation and provide visual interest.

## LANDSCAPE DESIGN GUIDE

### LANDSCAPE ELEMENTS

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This bus shelter is compatible with the adjacent architecture. Paving material successfully blends the adjacent structure with the site.



Trash receptacles, benches, ash urns, light bollards, and bicycle racks complement each other and are compatible with pavement materials and adjacent architecture. The next step is to make the area more attractive to the pedestrian by adding shrubs and trees to provide shade.

## E. Site Amenities

Site amenities include trash receptacles, dumpsters, ash urns, benches, tables, mail boxes, vending machines, drinking fountains, telephone booths, bus shelters, kiosks, walls, fences, monuments, memorials, flag poles, gazebos, bike racks, and picnic shelters. With proper planning and design, site amenities become a cohesive link that has a positive effect on the overall appearance of the installation.

Site amenities need to be compatible with the adjacent architectural features, blend with the overall character of the installation, and serve the functional needs of the user.



Achieve visual continuity by selecting site amenities that are compatible in color, materials, and character.

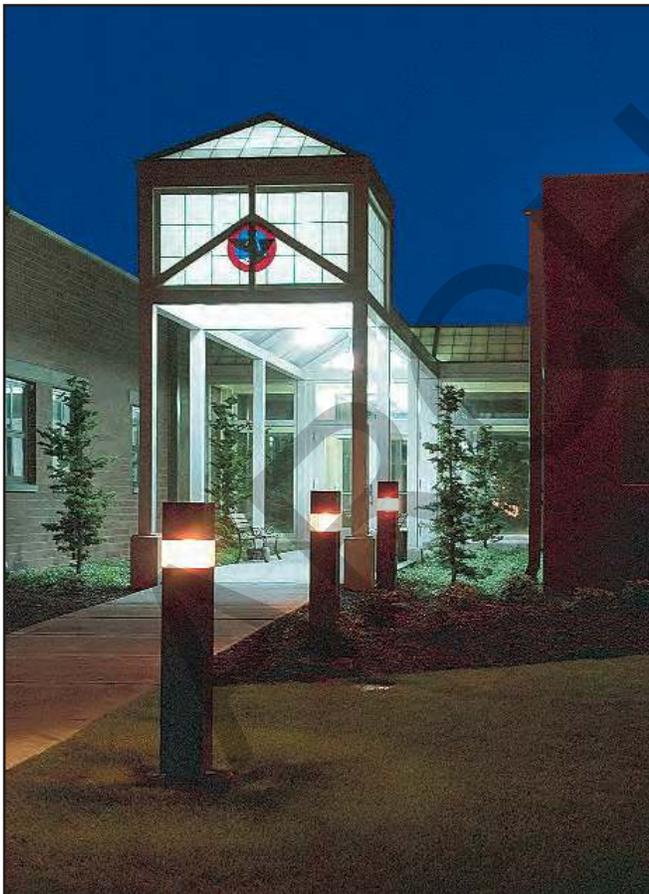


The harmonious coordination of site amenities along with the brick pavers complements the color and style of the adjacent architecture.

## **F. Lighting**

Exterior lighting can be categorized as street, architectural, or walkway and parking lot. Through a variety of applications, lighting serves a number of functions, including the following:

- ◆ **Street Lighting** - Reinforces street hierarchy by visually differentiating major and minor roads through varied light intensities, fixture types, pole spacing, and height.
- ◆ **Architectural Lighting** - Draws attention to the entrance and special features of a facility. Provides orientation and visual interest of prominent buildings or displays.



Lighting can provide orientation, highlight a building entrance, and direct pedestrian movement.

- ◆ **Walkway and Parking Lot Lighting** - Provides safety and security, and identifies the routes and intersections.

Use lighting to create a unified appearance (e.g., use light fixtures of a consistent design and lamp type to illuminate spaces surrounding a building complex). Coordinate light fixture style, scale, illumination levels, and lamp types (e.g., high and low pressure sodium, metal halide, mercury vapor, incandescent, and fluorescent) to achieve a consistent nighttime light color and unified design effect. Facilitate maintenance by selecting durable, easily accessed, and vandal-resistant fixtures.



A building's lighting can create an interesting effect, provide security, and direct attention.



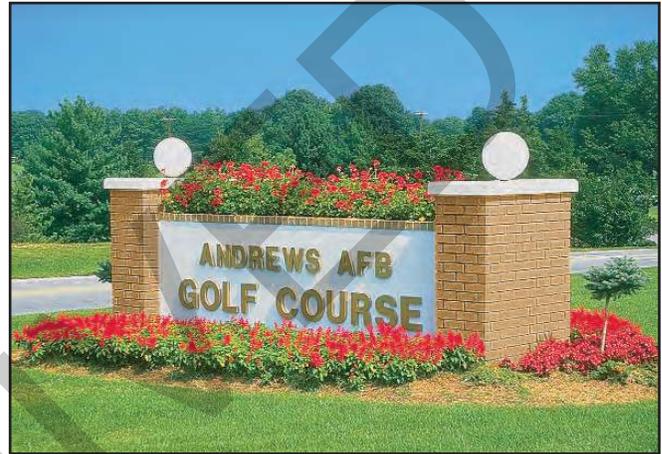
Uplighting a prominent tree can create a dramatic nighttime effect.

## G. Signs

A simple but effective sign system provides a means of communicating information without compromising the appearance of the installation. Signs are categorized as follows:

- ◆ **Identification** - Identifies entrance gates and military, community, recreational, and other facilities.
- ◆ **Destination** - Directs visitors to major activities, such as the commissary, base exchange, community centers, etc.
- ◆ **Regulating** - Controls traffic, parking, maintains security, and identifies hazards.
- ◆ **Motivational** - Boosts morale, improves safety, and aids in recruiting.
- ◆ **Informational** - Provides educational information and directional guidance for visitors.

Installation signs are governed by AMC sign standards. Coordinate signs as a unifying landscape element of the installation's overall appearance. Vegetation should always complement and be in harmony with the sign — not overwhelm it. ■



A colorful display of annuals provides an attractive foundation treatment.



Landscaping serves to enhance, rather than overwhelm this distinctive sign.



A coordinated approach to the design of site amenities, signs, lighting, and vegetation selection is illustrated in this corporate campus.

# Landscape Site Concerns

Each installation is unique in its location, geography, and mission. Specific mission and existing site features such as steep sloped areas, wetlands, or prominent natural features will determine site development. Site concerns that are treated in a landscape plan include the following:

- ◆ Buildings
- ◆ Parking
- ◆ Streets
- ◆ Pedestrian and Bicycle Movement
- ◆ Plazas and Courtyards
- ◆ Open space and Natural Areas
- ◆ Handicapped Accessibility



Landscape elements combine to form a cohesive landscape which addresses site concerns, including buildings, open space, and pedestrian movement.

## **A. Buildings**

The appearance of an installation is largely influenced by the landscape treatment of its buildings. Use professional landscape design to achieve the desired appearance.

Building and associated site development are typically comprised of a standard set of components which include the following: main entries, minor entries, service areas, foundation walls, parking areas, sidewalks, and support

utilities. Landscape development can serve many functions which will help integrate these elements into a unified scheme.

Landscape elements such as earth berms, vegetation, fences, and walls can screen parking areas or other undesirable views. Plantings at a building's foundation serve to visually tie the structure into the landscape and accent building entries.



The building's entrance often begins at the street or the parking lot. This entrance also provides handicapped access.



Annual and perennial flowers are effective landscape design elements. Because of high maintenance needs, however, they should only be used in the highest impact areas.



The harmonious blend of site elements enhances the building's entry.



Properly coordinated screening materials improve visual appearance.

## B. Parking

Parking often requires large quantities of land. Opportunities for creating people-oriented spaces are often lost around and between buildings because of expansive hard surfaced parking areas with minimum landscaping. Effective site planning and landscape design can minimize the impact of large parking areas.

The use of vegetation in parking area islands can greatly improve the visual appearance as well as help define vehicular and pedestrian circulation.

Landscape islands help reduce glare and temperatures in hot climates through the use of properly spaced large shade trees. The design of parking area islands should take into consideration pavement cleaning and snow removal in northern climates. Align each island for maximum efficiency and provide sufficient area to support healthy vegetation growth.



Earth berms effectively screen parking areas from view along roadways.



Small parking areas are usually preferable to large areas, as they reduce the negative visual impact and allow opportunity for more landscaping.



Design parking areas to include enough vegetation to provide a visual screen and shade. Trees and shrubs can be used together for effective screening.



Landscape islands articulate vehicular circulation routes and provide shade and visual relief for parking areas.

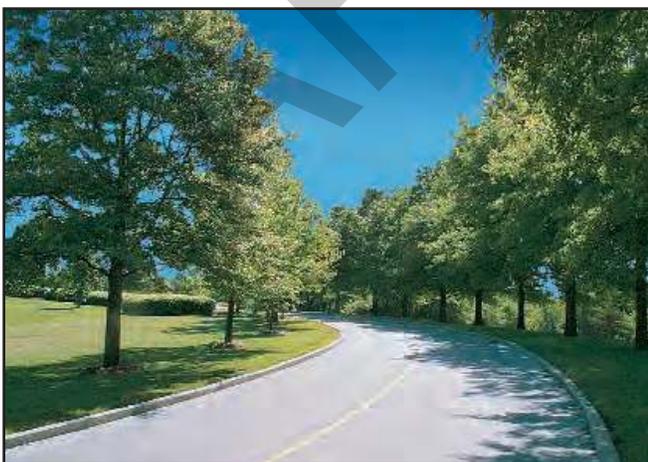
## C. Streets

Planting trees along streets can improve an installation's overall function and appearance. Trees can define and reinforce roadway circulation, reduce glare, provide shade, and physically separate pedestrian from vehicular circulation routes. Planting arrangements include the following:

- ◆ **Formal Planting** - Trees of equal size, spacing, and of the same species should be reserved for prominent primary roadways. This type of planting can require a greater degree of maintenance to preserve a quality appearance. If a tree dies or is damaged, the total scheme can be adversely affected.
- ◆ **Informal Planting** - Trees of various species, sizes, and spacing are a lower maintenance roadway treatment. If a tree dies in a naturalized, informal setting there will be less visible disruption to the total scheme.



The use of annuals is an attractive and effective means to define and reinforce the location of roadway intersections. Trees, shrubs, and earth berms effectively screen the adjacent parking lots.



The regular spacing of trees along streets is especially effective in articulating primary vehicular traffic routes.



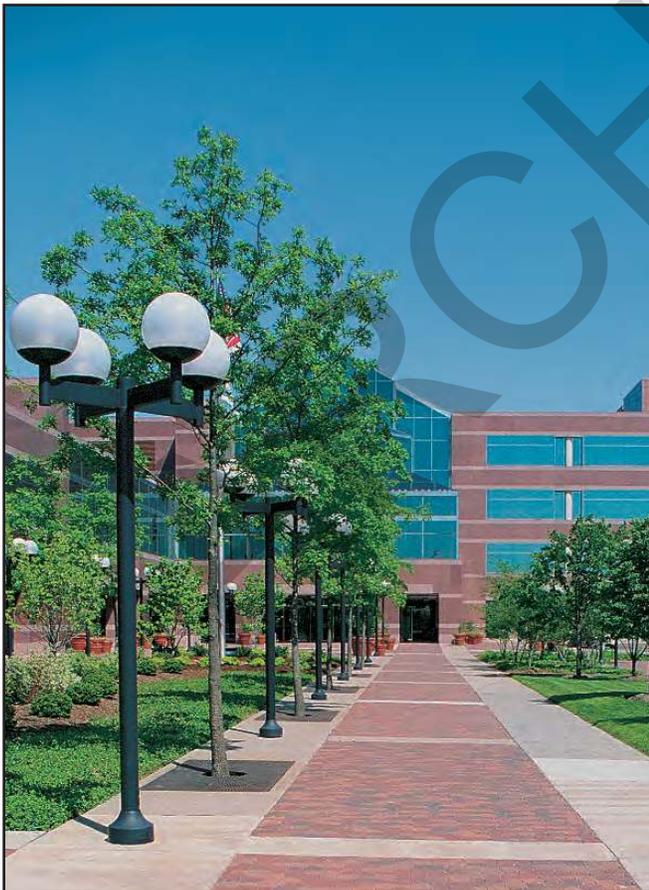
The roadway median is an attractive planter for trees, shrubs, and ground covers. Evergreen vegetation provides visual interest throughout the year.

## D. Pedestrian and Bicycle Movement

Energy conservation calls for reduced dependence on automobiles and encouragement of pedestrian and other energy-efficient alternatives. Pedestrian-oriented site planning and landscape design will contribute to the convenience, comfort, and enjoyment of daily activities.

At many installations, there are few provisions for bicycle traffic or joggers. Individuals are often forced to share either the street with cars or the sidewalk with pedestrians, creating unsafe conditions. Develop pedestrian and bikeway circulation that accommodates the user and incorporates appropriate landscape design elements to improve the appearance, user comfort, and safety.

Pedestrian walkways can be formal or informal, depending on the pavement configuration and vegetation arrangement. Formalized walkways generally have a straight-line pavement arrangement reinforced with a regimented planting design. This type of walkway is appropriate for an entrance to a prominent building or along a formal street. Informal walkways are characterized by curved alignment, and are appropriate in park settings or along streets within naturalized landscape settings. Natural street planting may require additional space for curved walkways and earth berms.



Repetitious treatment of trees and lights reinforces the formal statement created by this walkway.



Separation of pedestrian and vehicular circulation improves safety.



Walking, jogging, and biking trails should be designed within the natural environment for maximum shade and visual interest.

## LANDSCAPE DESIGN GUIDE LANDSCAPE SITE CONCERNS

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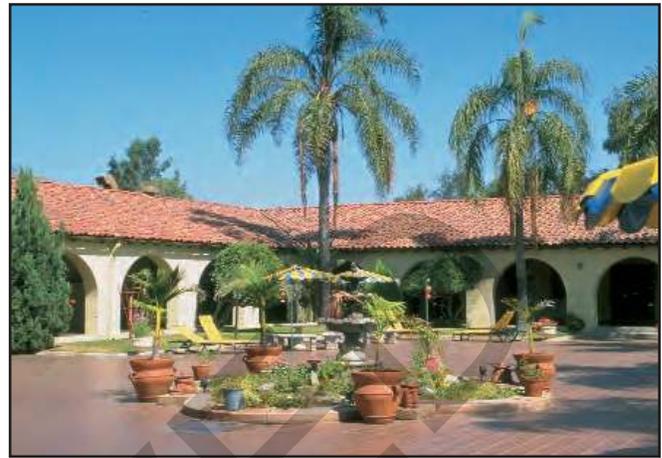
Plazas and courtyards should complement architectural styles, as well as support the facility's intended use. Trees, shrubs, and ground cover define and reinforce the circulation and gathering areas and provide screening of the building's interior.

## E. Plazas and Courtyards

Outdoor pedestrian-oriented spaces are desirable and serve many functions, including the following:

- ◆ Building Entries
- ◆ Social Gathering Areas
- ◆ Recreation Areas
- ◆ Visual Appeal Areas

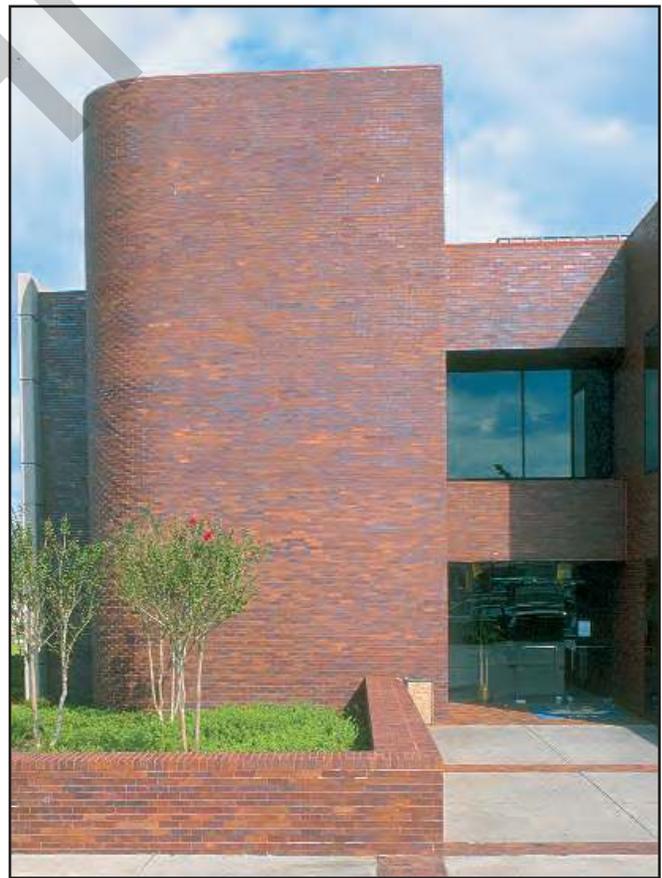
Inclusion of appropriate landscape elements in outdoor spaces are beneficial, whether they are an integral part of an expansive plaza or a component of a small residential courtyard. Design landscape elements to be responsive to the user and in harmony with the space. Select durable materials and always consider the maintenance and climate.



This plaza complements and blends with the architecture of adjacent buildings, creating a pleasing area.



Vegetation softens the rigid masonry walls. The landscape is a pleasant surprise for the visitors as they round the exterior screen wall.



This entry plaza is effectively linked to the adjacent architecture through the use of compatible materials.

## F. Open Space and Natural Areas

Organization of open space is a key factor of efficient land use. The treatment of open space and natural areas often determines the character and quality of the development. Open space and natural areas serve several purposes such as the following:

- ◆ **Visual, Psychological, and Noise Buffers** - Provide separation between incompatible areas.
- ◆ **Recreation Areas** - Natural areas for personal use and enjoyment.
- ◆ **Outdoor Living Areas** - Exterior spaces adjacent to housing areas or other facilities.
- ◆ **Corridor Space** - Provides for pedestrian, bicycle, and vehicular circulation.
- ◆ **Central Gathering Areas** - Use for activities such as parade grounds, sports fields, and playgrounds.

- ◆ **Unifying Elements** - Provide a unifying link between parks, recreation, and other facilities.

The treatment of open space and natural areas requires special consideration in the BCP and landscape design process. Proper use of landscape elements will create pleasant areas for many activities.



Effective treatment of open space and natural areas can be an attractive visual asset to the installation.



Lakes and ponds are natural components of open space. They can serve as natural stormwater retention areas and provide natural beauty.

## G. Handicapped Accessibility

All areas should be barrier-free and accessible to the disabled in accordance with the Americans with Disabilities Act and Uniform Federal Accessibility Standards.

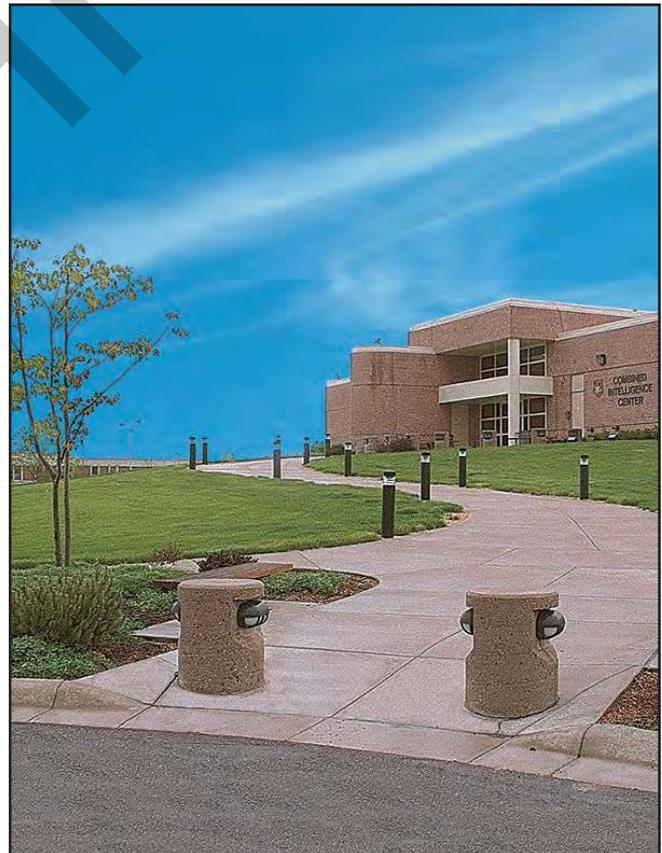
Consideration for the needs of the disabled is necessary for each of the previously discussed landscape site concerns. In each case, early consideration will allow for efficient and functional design and may prevent future alterations and difficult visual design problems. ■



Handicapped accessibility is an integral part of this building's entry.



This commissary has a curb-less design, with bollards, to provide vehicular and pedestrian separation. Special paving colors separate the loading zone from the vehicular traffic, eliminating the need for striping.



This entrance sidewalk is also the handicap access ramp. Light bollards restrict vehicular movement, as well as allow pedestrian access.



Trees, flowering plants, a flag display, and a simple but effective sign achieve a quality appearance at this main gate entrance.

# Development Guidelines

Function and architectural character divide installations into distinguishable areas. This section presents landscape development guidelines for major installation areas, which include the following:

- ◆ Entrance Areas
- ◆ Administrative Areas
- ◆ Operations Areas
- ◆ Industrial Areas
- ◆ Housing Areas
- ◆ Recreation Areas
- ◆ Community Centers
- ◆ Medical Areas
- ◆ Historic Districts
- ◆ Parade Grounds

## A. Entrance Areas

The entrance gate provides the first impression of the military installation. Entrances typically include a gatehouse, signs, parking, fencing, visual displays, and often a separate visitors center. Use coordinated landscape elements to achieve an enhanced, uncluttered entry.

Trees or other landscape elements act as a focus for the driver. Special pavements direct attention, coordinate building architecture with landscape elements, and provide an alternative to painted pedestrian crosswalks. The entrance sign should be highly visible and integrated into the site. Visually integrate the security fence into the landscape and the architecture of the area.

Static aircraft and flag displays are often integrated into the entrance design. These features, complemented with planting and lighting, provide a dramatic focal point that prominently identifies the entrance.



This entrance serves as a gateway and checkpoint for access control. The collocated visitors center provides information and guides motorists to their destination.



Colorful special pavement effectively coordinated with site amenities and building architecture is used as an alternative to striping at this pedestrian crosswalk.



Trees frame the view of this building and create visual order. Plantings around the flag pole focus attention and provide maximum visual impact.

## B. Administrative Areas

These facilities are primarily administrative offices and headquarters functions. The office complex typically is located in a prominent location and is densely populated, requiring extensive parking. Ceremonial activities often occur in these areas.

The nature of these activities requires extensive landscape development to project the appropriate appearance. Planting trees along the street visually reinforces the vehicular circulation route and creates visual order. Screen parking areas and soften their large masses through the use of trees and landscape islands. Landscape elements define the area, improve the appearance, and support the function of spaces devoted to outdoor activities. Use landscape elements at main entrances to focus and direct pedestrian movement and provide an attractive setting. Plazas and courtyards require compatible site amenities such as benches, tables, and lighting.

Screen views of dumpsters, transformers, and service areas. Achieve cohesive site design through the use of similar vegetation throughout the area.



Flowering ornamental trees and spring bulbs provide an attractive, park-like setting.



This headquarters facility, the focus of the area, is easily identified and dominates the surrounding landscape elements. Turf and low growing trees, shrubs, and ground covers allow unobstructed views of the building.

## **C. Operations Areas**

Operations areas are located adjacent to the flight line and incorporate all of the functions that directly support the flying mission.

Landscape development must be responsive to the area's site constraints such as clear zones and security concerns. Use a variety of landscape elements at the flight line entrance to the passenger terminal to provide an inviting focal point and a positive first impression. Integrate security features such as fences and open areas into a cohesive

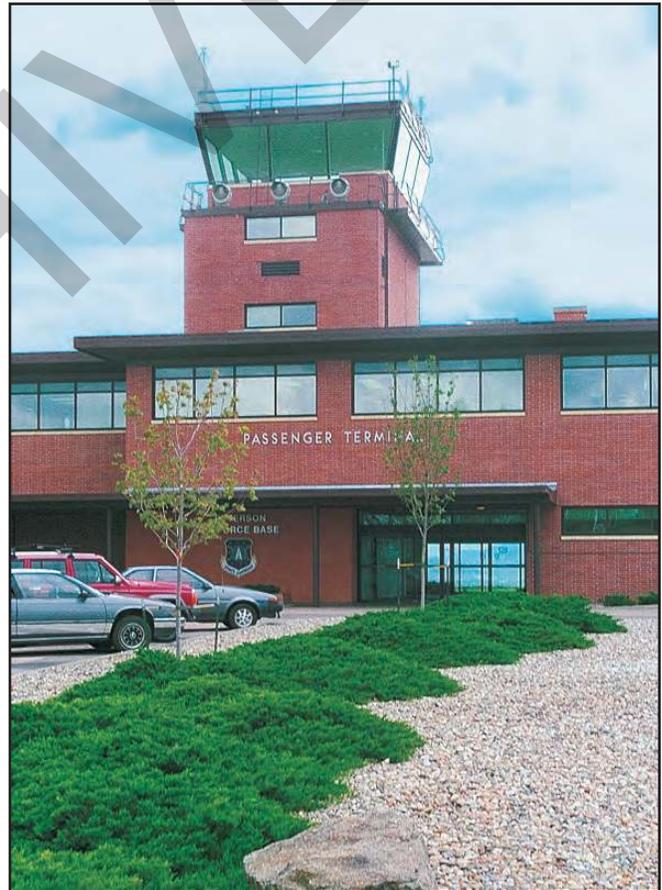
landscape plan. Visually buffer incompatible land uses and buildings. Screen unsightly views such as dumpsters, service areas, and maintenance yards through creative use of landscape elements.



A low maintenance alternative to mowed grass near the airfield is native or naturalized vegetation. Carefully select vegetation for its low growth habit.



Evergreens provide year-round landscape screening of operations areas.



Evergreen shrubs and rock mulch provide an attractive, low maintenance landscape for this passenger terminal.

## D. Industrial Areas

Industrial areas are composed of facilities such as warehouses, maintenance shops, utility buildings, motor pool, fuel storage, and open storage.

Focus landscape development on softening the harsh visual characteristics typically associated with the industrial area. Provide an attractive landscape at exterior pedestrian-oriented spaces which offer seating and tables for outdoor breaks and dining. Landscape development should occur at prominent buildings, such as a supply warehouse. Visually enhance parking areas through the use of shade trees, screening, and landscaped islands. Screen undesirable features such as vehicle storage, dumpsters, and service areas.



Landscape treatment provides a softening effect to typically harsh industrial architecture.



Selective vegetation can be used as an effective means of screening utilities.

## **E. Housing Areas**

Housing areas consist of single- and multi-family residences and dormitory facilities for unaccompanied personnel. The areas may also include dining, post office, and other associated facilities.

Family residences take on a character and scale similar to those of private sector residential communities: peaceful, quiet, and often near recreation facilities. Basic landscape elements provide visual and environmental enhancement.

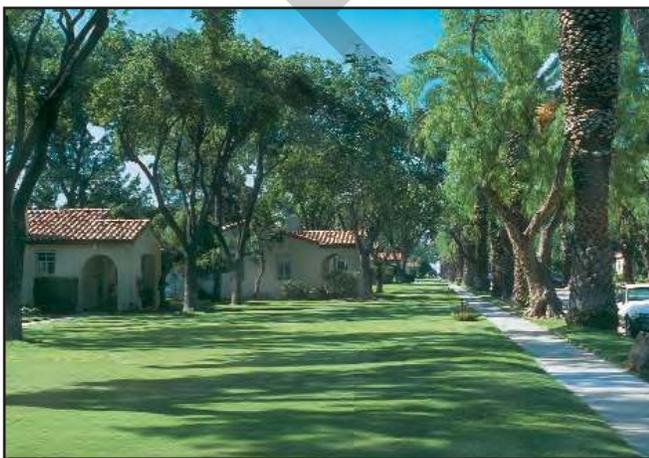
The design should provide privacy and individualized spaces associated with the living units. Open spaces should be accessible from housing units to facilitate recreational activities. Define and buffer the limits of the housing development and accent entry points. Visually define the road and pedestrian walkway systems through the use of vegetation.



Vegetation defines useable open spaces for occupants of this dormitory.



Open space and natural areas will enhance residential settings and provide outdoor recreational opportunities.



Shade trees along streets and near housing units blend these features with their natural setting.



Quality, well-maintained landscape development enhances enjoyment of dormitory residences.

## F. Recreation Areas

Recreation areas include tennis and basketball courts, playing fields, swimming pools, parks, picnic areas, camping facilities, and golf courses.

The design should provide paving, site amenities, and vegetation to achieve an attractive outdoor environment which maximizes the use of natural site features. Vegetation can soften buildings, direct views, and buffer incompatible land uses. Arrange vegetation in large natural groupings to reinforce the relaxing, informal nature of the site. Playground safety considerations and handicap access must always be taken into consideration.



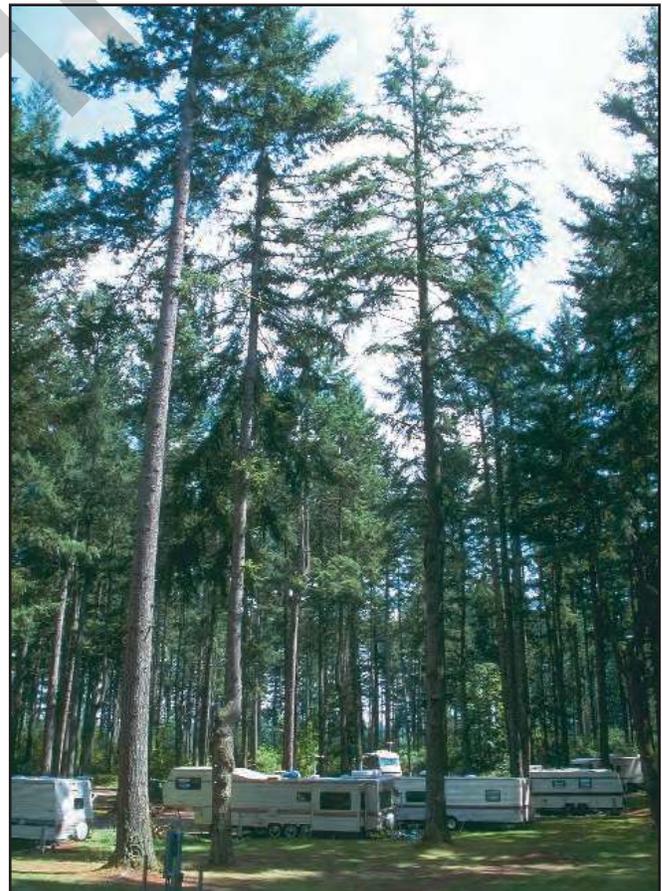
A mature grove of trees provides shade, enclosure, and a more human scale to the playground. Shredded wood mulch is an inexpensive, readily available safe-play surface.



Golf courses provide abundant open green space which can serve as a visual buffer between land uses.



Visually attractive and stimulating walking and jogging trails promote use and enjoyment.



Evergreen forests are used for family campgrounds. The unique and pleasant environment buffers campers from adjacent base activities.

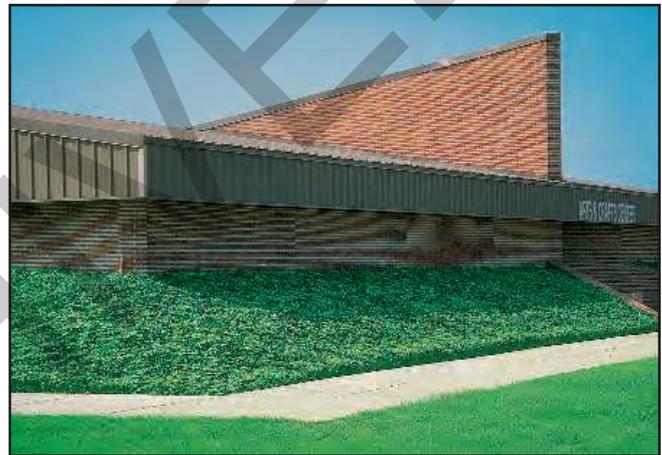
## **G. Community Centers**

Community centers include the major commercial functions of the installation. They typically include the post office, commissary, library, credit union, bank, fast food facility, garden store, theater, and base exchange. These facilities require concentrated short-term parking.

Quality landscape design is essential for the community centers to be inviting and provide a pleasant appearance. Shade trees and landscaped islands break up large expanses of parking, control traffic flow, define pedestrian circulation, parking, and roadways. Community centers should contain a mix of landscape elements such as site amenities, lighting, special paving, and vegetation to provide a desirable space that is responsive to the user's needs.



This community center plaza provides a pleasant and shady setting for rest, relaxation, and dining.



This arts and crafts center uses earth berming and ground cover to provide an energy efficient and low maintenance landscape design.



Vegetation provides a transition while softening the visual appearance of this building. Pavement variations define pedestrian and vehicular circulation, as well as direct pedestrian movement toward the building entrance.

## H. Medical Areas

Medical areas are comprised of hospitals, clinics, and associated medical buildings. These 24-hour facilities serve large numbers of patients, staff, and visitors, thus requiring considerable amounts of parking.

Landscaping can soften parking areas through the extensive use of shade trees and islands. Develop outdoor pedestrian spaces for patient, staff, and visitor use. Treat these areas with landscape elements to provide a comfortable and efficient space that is in character with the adjacent architecture. Accent the primary pedestrian and emergency entrances to the complex with landscape elements to focus attention, direct movement, and reduce anxiety. Screen service entrances, utility courts, and employee-only access points.



This entry plaza coordinates vegetation and site furnishings with the architectural style of the building. The bench wall provides outdoor seating and directs pedestrian circulation. Evergreen vegetation provides year-round interest.



The emotional state of patients and visitors can be improved through attractively landscaped courtyards.

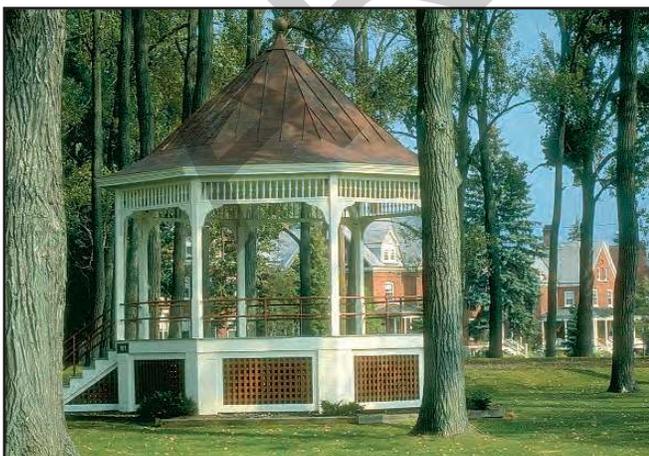
## **I. Historic Districts**

Historic districts may be located anywhere on the installation. They often consist of significant buildings of noteworthy architecture or areas of historic significance that provide an important sense of heritage. Historic districts must also function in support of the current mission. Preservation and enhancement of these areas are important to the overall appearance of the installation, as well as the sense of heritage and pride among military personnel. Maintaining the historical character of these areas is critical to the preservation of their visual integrity.

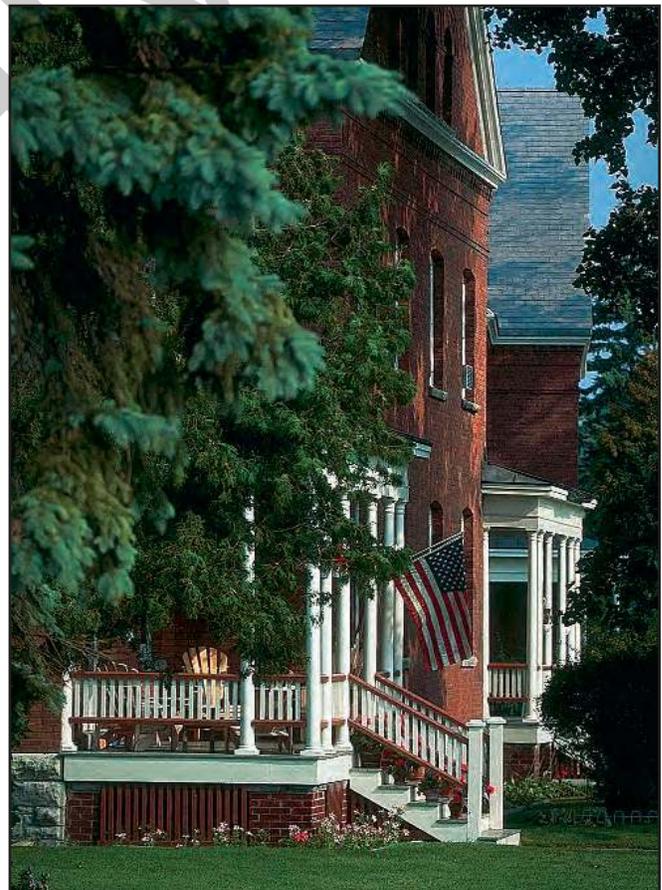
During landscape restoration, use design solutions which complement the character of the historical style and time period. Period site amenities are desirable to achieve continuity. Coordinate requirements with appropriate regulatory agencies responsible for historic preservation.



Quality landscaping visually improves features such as this historic main gate.



Site amenities should be coordinated with the character of the historic district.



Planting design should be consistent with the district's historical character.

## J. Parade Grounds

Parade grounds typically consist of a reviewing stand, a flag display, and expanses of well-maintained turf. Parade ground functions are primarily ceremonial and memorial; however, the open space may lend itself to recreational activities.

Vegetation, such as large shade trees and plant masses, helps define the parade ground boundaries and provides an excellent backdrop and view for spectators. Give special attention to the reviewing stand and its access.

Treat the parade ground as a prime focal point. Coordinate benches, trash receptacles, lighting, and other site amenities with architectural styles to achieve a unified appearance. Coordinate the public address system and electrical support with the users. ■



This permanent reviewing stand provides a functional and attractive setting for troop review and ceremonial activities.

# References

## A. Department of Defense Publications

DoD 4270.1M – Construction Criteria Manual

Military Traffic Management Command (MTMC) —  
No 55-9, Do's and Don'ts for Transportation Master Planning

Military Traffic Management Command (MTMC) —  
No 55-10, Traffic Engineering for Better Roads

## B. Air Force Publications

AF – Installation Landscape Development Guide

AFI 32-1023 – Design and Construction Standards and Execution of Facility Construction

AFI 32-1024 – Standard Facility Requirements

AFI 32-1032 – Planning and Programming Real Property Maintenance Projects Using Appropriated Funds

AFI 32-6002 – Housing Guide

AFI 32-7062 – Master Planning

AFJMAN 32-1019 – Standard Practice for Soil Stabilization

AFJMAN 32-1020 – Standard Practice for Sealing Joints and Cracks

AFM 85-6 – Land Management and Grounds Maintenance

AFM 85-25 – Index, Guide Specifications for Military Family Housing

AFM 88-2 – Air Force Design Manual, Definitive Designs of Air Force Structures

AFM 88-30 – Children's Play Areas and Equipment

AFM 88-43 – Installation Design

AFP 88-40 – Sign Standards

AFR 88-33 – Planning and Design of Outdoor Sports Facilities

## C. Air Mobility Command Publications

AMC Exterior Paint Color Plan Guidance/USAF Family Housing Community Guidelines for Environmental Improvements

AMC Sign Standards, ETL 93-02

Base Dormitory Construction and Renovation Plans

Bases' Architectural Compatibility Guides

Commander's Base Comprehensive Plan Summary

Commander's Guide for Self-Help Success

Commander's Guide to Dormitory Excellence

Commander's Guide to Facility Excellence

Commander's Guide to Family Housing Excellence

Focus Homes – Long Range Family Housing Investment Strategy

Housing Guide

Service Contract Standards

## D. Other Publications

ADA – Americans with Disabilities Act

FED STD.795 – Uniform Federal Accessibility Standards

# AIR MOBILITY COMMAND...



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