

3.0 Site Planning Design Standards

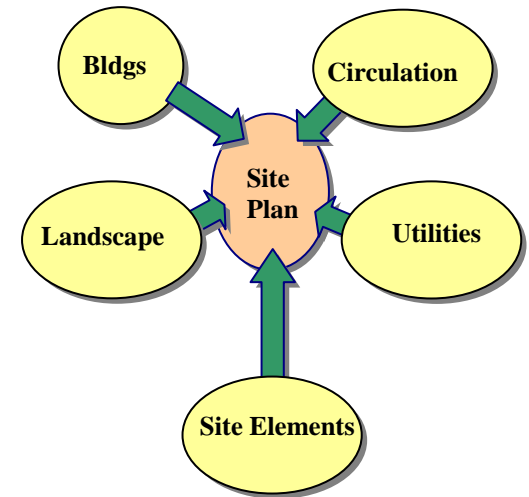
Introduction

Site Planning is the process of arranging an external physical environment in complete detail to include the structures, circulation patterns, and other elements that form the built environment. The site planning and design process is used to develop a project that fulfills facility requirements and creates the optimal relationship with the natural site. Site planning, including program analysis, site analysis, site verification, and concept development should be completed by civil engineering and landscape architectural professionals experienced in site development projects. Environmental documentation will be prepared prior to site development to support the construction activity in accordance local, state and federal requirements.

The Development Standards (under separate cover) component provides the spatial arrangement of the MSP Redevelopment District. The Framework Plan provides information that forms the foundation for site planning and is a mechanism for ensuring that individual projects are sited to meet overall district requirements.

Four other chapters herein are dependent upon site planning for their location and spatial relationships. The other four components are identified below and discussed in chapters four through seven.

- Building Design Standards
- Circulation Design Standards
- Landscape Design Standards
- Site Elements Design Standards



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Site Planning Objectives

The goal of site planning for the MSP Redevelopment District is to produce an attractive, aesthetically coordinated, sustainable development. Sustainability in this case requires the built environment to be designed and constructed to preserve and enhance the natural and manmade environment. New manmade facilities are designed as a part of the environment to minimize negative environmental impacts. General site planning techniques resulting in sustainable development are cost efficient because they conserve energy and reduce construction and maintenance cost. Typical site planning objectives include the following.

Preserve natural site features such as topography, hydrology, vegetation, and tree cover.

Locate facilities with consideration of climatic conditions such as wind, solar orientation, and microclimate.

Preserve the natural site by molding development to fill around existing land forms and features. This development approach minimizes extensive earthwork, preserves existing drainage patterns, and preserves existing vegetation.

Plan for facilities to be clustered to preserve land and reduce construction cost. Clustering should occur on the flattest land areas. Room for expansion should be provided. When clustering facilities, security protection measures must be considered.

The use of locally available materials is a sustainable practice.



The use of locally available materials is a sustainable practice and plan for facilities to be clustered.



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Site Planning Considerations

The site analysis and subsequent site planning determine the primary “fit” of the development to its environment. The determination of primary issues that provide basic location and organization of spatial relationships are determined during the site planning process.

All structures or facilities must meet the standards of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). This includes the avoidance of site barriers through the use of curb cuts, ramps, handrails, and grade-level entrances to avoid site barriers. Provide designated handicapped parking spaces in all major parking lots/structures and drop-off zones for persons with mobility impairments.

Existing structures should be designed and/or modified for handicapped accessibility. Special care should be given to retrofitting accessible designs to structures within the redevelopment district. Consideration should be given to location, materials compatibility and general design appropriateness in relation to the existing structure, while still maintaining accessibility objectives.

Environmental issues to consider in the preparation of a site plan include any action or proposal that has a detrimental affect on a site area’s land, water or air quality. The location of facilities on land that results in minimal disturbance to the existing topography, vegetation and drainage patterns greatly reduces the negative impact on the environment. It is the MSP Redevelopment Commission’s responsibility to ensure that all National Environmental Policy Act (NEPA) documentation is started before the site development process begins.



Modifications to structures for handicap accessibility shall respect the historic structure’s integrity

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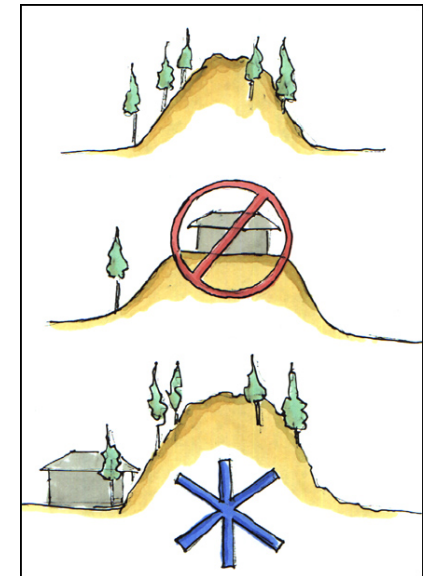
Site Planning Design Criteria

The site planning component of the MSP Redevelopment District comes first in the design process and determines the general location of the other components. Consequently, site planning must consider the criteria for architectural design, circulation, landscape architecture and site elements. Site planning criteria is divided into two categories, natural conditions and manmade conditions. Each is discussed separately in the following paragraphs. These criteria are to be utilized for the assessment of the visual and spatial impacts of site planning.

Natural Conditions

The natural terrain is a major determinant of the layout and form of the installation. The following guidelines should be used to maintain the natural topography:

- Maintain natural ground slopes and elevations.
 - Develop new building sites on previously disturbed sites.
 - Align roadways and buildings along topographic lines.
 - Locate facilities that have expansive ground coverage on relatively flat terrain.
 - Use moderately sloping areas for buildings with less ground coverage area.
 - Avoid development on steep slopes..
 - Provide a reasonable balance of cut and fill.
- The site planning team will consider the following hydrologic concerns for natural drainage corridors, floodplains, and waterways during the site planning process.
- Preserve and maintain natural drainage areas and floodplains.
 - Limit development in floodplains to open spaces and recreation uses.
 - Preserve rivers, lakes, streams, or other waterways, and incorporate them into the design.



Develop Around Existing Landforms

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The installation will be designed in response to local climatic conditions to provide a more comfortable environment, and reduce the demands for heating and cooling.

Plan the site development to maximize the warming effect of solar radiation in winter and reduce the impact of cold winter winds.

Plan the site to minimize solar heat gain, maximize shade during July and August and take advantage of seasonal breezes.

Preserve and enhance positive views and vistas such as The Missouri River and screen unattractive views and vistas such as utility structures. Visual extensions through open spaces provide a sense of orientation, relief, and enjoyment.

Protect and preserve existing native vegetation. This preservation reduces maintenance and enhances sustainability.

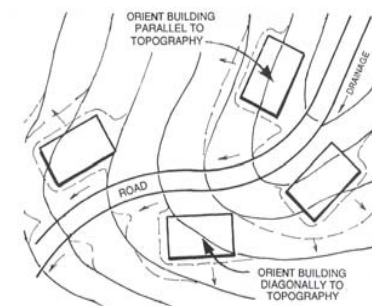
Manmade site Conditions

The site plan provides the locations of the manmade development that will occur on site. It establishes the spatial relationships as well as the relationships between manmade and existing natural features. Manmade site conditions include all development within the redevelopment district to include buildings, roadways, parking lots, walkways, walls, fences, utilities, and other facilities. Buildings, roadways, parking lots and above ground utilities are the primary manmade visual determinants.

The following site planning guidelines will be used in the visual and spatial review of the district:

Minimize solar heat gain for cooling and maximize solar heat gain and retention for heating.

Locate buildings with consideration for the microclimate conditions of the site that result in variances in wind or light because of adjacent land forms, structures, or trees.



Orient Buildings and Roads to Topography

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Orient outdoors pedestrian areas for most comfortable wind and sun exposure.
Orient windows according to impact of climatic conditions.
Design and locate roads to provide a hierarchy of traffic carrying capacities.
Design and locate parking lots to minimize visual impact of broad expanses of pavement and vehicles.
Design and locate pedestrian walkways and bicycle paths to fit the physical environment, and provide a comfortable pedestrian experience, limiting conflicts with vehicular traffic.
Locate trees and shrubs to buffer harsh natural conditions.
Deciduous material provides for sun in the winter and shade in the summer. Evergreen material provides windbreaks for cold north winds.
Design and locate site elements to blend with and enhance the physical environmental.



Screen Parking Areas