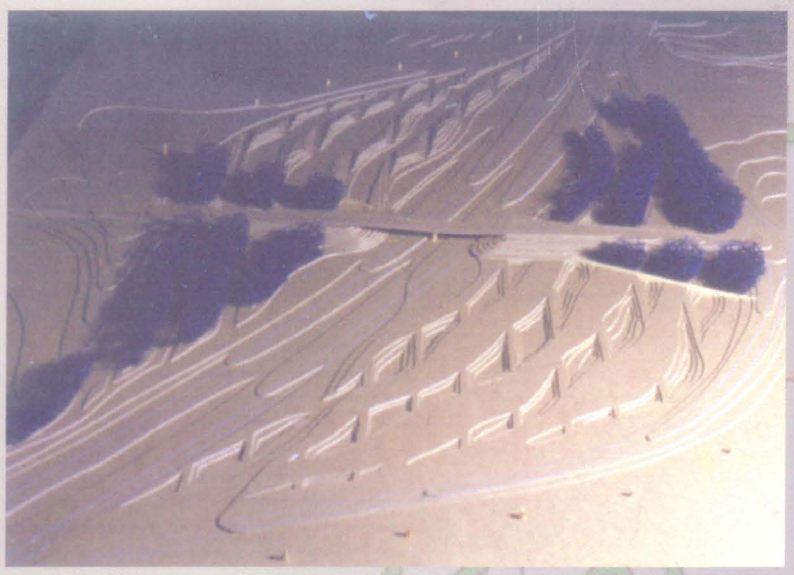

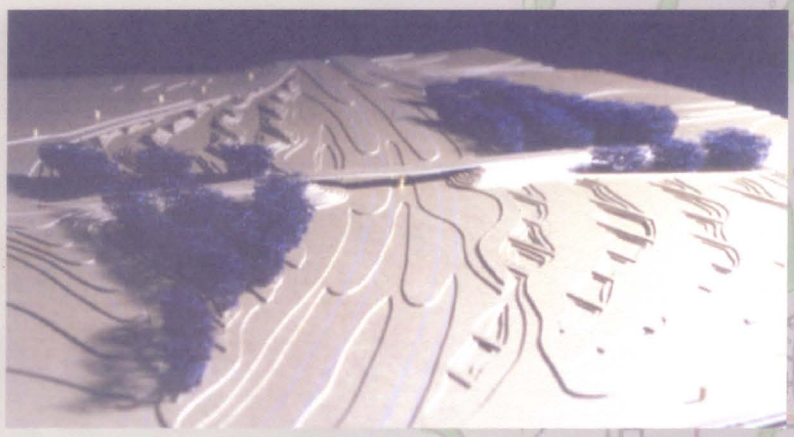

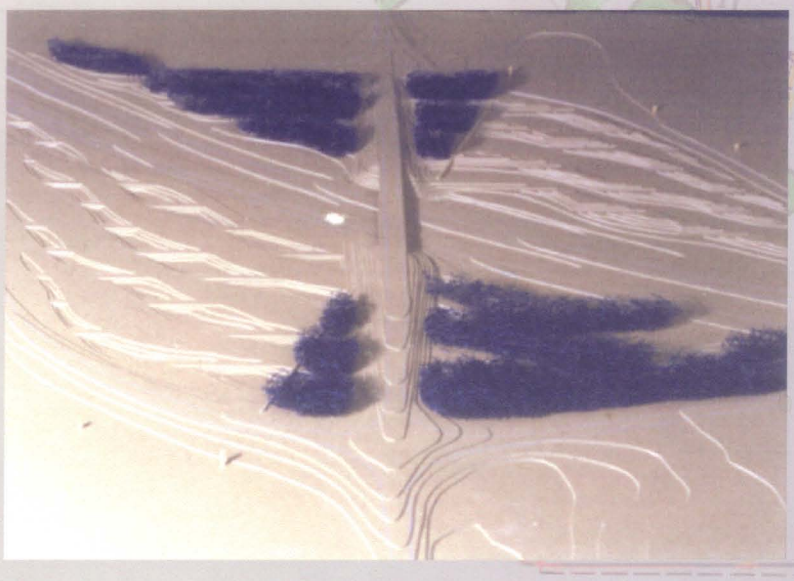

O'Fallon, Illinois Environmental / Landscape Framework Plan

City of O'Fallon, Illinois

Environmental/ Landscape Framework Plan

Prepared by

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O'Fallon Environmental/ Landscape Framework Plan

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O'Fallon Environmental/ Landscape Framework Plan

Prepared for The City of O'Fallon, Illinois

**Prepared by the Metropolitan Research Center,
Washington University School of Architecture**

1.0 Environmental/ Landscape Evaluation

1.1 Introduction and Background

Like many cities on the fringe of urban metropolitan areas throughout the United States, the City of O'Fallon, Illinois has experienced rapid growth in recent years. New residents and businesses have relocated to O'Fallon for a variety of reasons including successful schools, a "pro-business" climate related to land use and development, strong social and cultural conditions such as active churches and community organizations, and the perception of the city as a safe, well-ordered place to raise a family.

In addition to such reasons for growth, O'Fallon has attracted new residents because, until recently, it has managed to retain a "small-town" physical image replete with corn and bean fields growing within blocks of the historic heart of the community. The historic physical environment of O'Fallon includes many common elements often considered to be part of American rural and suburban town plans (i.e. commercial core developed along the rail line, the predominate use of the grid as an organizing device, etc.).[1] Growing from its historical beginning as a rail, agriculture, and coal-based community to a relatively diverse exurban center including retail, commercial, and institutional land uses; the contemporary city has become increasingly associated with large-lot single-family housing for families commuting to work outside of the corporate boundaries. While still maintaining a viable mass of retail and commercial uses,

the city's recent rapid residential growth suggests that O'Fallon is increasingly viewed by new and potential residents as a desirable "bedroom" community. Typical of such "bedroom" communities, O'Fallon currently offers a relatively high quality residential environment that is in measurable contrast to other nearby communities and cities where residents commute for employment.

1.2 Purpose of the Plan

The growth of residential land use seen in O'Fallon parallels findings of previous real estate studies that indicate a substantial majority of the national population wish to live in small towns, and near what is perceived to be a high-quality natural environment. For many communities such as O'Fallon, there appears to be a clear relationship between population growth and a high quality physical environment that allows for access to natural landscape systems and their environs. Recent surveys conclude that access to natural systems such as creeks, streams, and forested areas; common open space; high-quality park systems; and the development of hike and bike trails through such systems are the most important attributes of a community likely to be considered by new home buyers.[2]

Further studies regarding the economic and cultural values of both built and natural landscape systems underscore the need to promote development policies that provide for the creation and maintenance of such systems in O'Fallon. Research arms of national real estate and design organizations including the Urban Land Institute (ULI), the American Society of Landscape Architects (ASLA), and the National Association of Home Builders (NAHB) have developed supporting evidence that costs of preservation or development of landscape systems are far outweighed by economic, environmental, and social benefits derived from such development practices.[3] [4]

Having realized that O'Fallon currently has a unique physical landscape, and because of the rapid growth and accompanying degradations in environmental qualities that the city has experienced, the City has determined a need to develop this Environmental/ Landscape Framework Plan (Figure 1).

The Plan is intended to create a coherent set of policies that will adequately guide development of the built landscape and protect important environmental

resources for future generations in O'Fallon. Accordingly, the goals of the Plan are outlined as follows:

1. Protect the health, safety, and welfare of City residents with land development policies that lead to a safe and well-ordered physical environment for current and future residents.
2. Develop policies related to land use that maximize site specific economic values of the natural landscape to land owners and developers within the City, while minimizing community- wide development and long-term maintenance costs of certain infrastructure components such as storm water management facilities.
3. Promote land development policies that create a direct and positive relationship between residents and the physical landscape that forms the context of the City.
4. Promote land development policies that preserve the qualitative aspects of O'Fallon's natural landscape conditions including landform and slope, vegetative cover, and natural drainage patterns.
5. Create an environmental/ landscape plan that creates alternatives to vehicular roadway connections between all City Parks, Schools, and community institutions within the City.
6. Create an environmental/ landscape framework plan that establishes a consistent set of goals and objectives for environmental qualities that are to be preserved and/ or developed throughout the City, over time.

1.3 Overview of Current Environmental/ Landscape Conditions

Based on the above analysis, the following key areas of concern have been addressed in the Environmental/ Landscape Framework Plan:

1. Natural systems
    a. slopes and drainage
    b. vegetative cover
    c. environmental corridors
    d. use of natural systems for non-vehicular movement

2. Landscape infrastructure
   a. storm water detention and retention strategies
   b. parks
   c. community gateways and major streets
   d. parking lots and environs
   e. utility visual impact mitigation

Planning and design guidelines for major components of the above areas have been prepared to form the Framework Plan. The identified improvements and conditions have been developed as guidelines, at a conceptual level, indicating basic planning and design intentions that are desirable within the City. These guidelines are intended for use by land owners and developers and are proposed to be adopted as part of the O'Fallon Master Plan. Interpretations of the guidelines are at the discretion of the Director of Planning or other City departments as determined by the City Council.

Framework Plan

2.0 Planning and Design Guidelines for Natural Systems

2.01 Slopes and Drainage

Where slope and natural drainage exists within a development site, every effort should be made to preserve landform and drainage patterns when designing the site. The basic objective of such preservation is to minimize both on and off-site hydrologic (flooding) problems created by development.[5] In conjunction with maintenance of existing landform and drainage patterns, infiltration methods of drainage control and storm water management are preferred over other drainage strategies (see Storm Water Management Strategies).

Changes in natural landform and drainage conditions should be planned to minimize impacts to existing trees and other vegetation on the site. For areas containing mature trees, changes in existing slope gradients or drainage patterns within the canopy line or drip line of such trees should be avoided.

In no case shall designed or engineered slopes exceed a 3:1 or 33% slope.

Site surface disturbance should be avoided during development where possible to avoid loss of topsoil, prevent erosion and deposition of sediment within natural drainage ways, and to minimize costs of re-vegetation. When development requires surface disturbance, topsoil should be conserved, stored on-site, and re-used on-site on completion of development.

An erosion control plan and storm water management strategy approved by the City Engineer shall be in place prior to any changes in the landform or vegetative cover of any site.

2.02 Existing Vegetative Cover

Existing vegetative cover including native trees, shrubs, forbs, sedges, groundcovers, grasses, and other flora should be preserved to the extent possible during development. Such existing vegetation provides important wildlife habitat, erosion control, and visual buffers within the landscape.

Vegetative Analysis

As part of the site plan review process the applicant must submit an analysis and report of existing vegetation including the type, extent, and general health of species present may be performed by a landscape architect or arborist as part of the development approval process. The specific requirements for, analysis, documentation, and required preservation of conditions shall be established by the City. The purpose of the analysis and report is to document the locations and extent of existing site vegetation including all large canopy trees (see below) for review by the City.

2.02.1 Guidelines for removal of existing vegetation cover include:

Large Canopy Trees

Until such time as a specific tree preservation ordinance has been adopted by the City, all trees on a site which have a trunk diameter (caliper) of 18" or greater, at BH - breast height (measured 4' from the

base of the tree), shall be protected from removal or destruction. Removal of such trees may be permitted by the Director of Planning if preservation is not possible. Should it become necessary to remove large canopy trees, then each tree shall be replaced on the site or on an approved site within the City with the same number of caliper inches removed from the site. Replacement trees shall be native species, and no less than 2" caliper at BH. For a single 30" caliper tree removed, replacement examples include: fifteen 2" caliper trees, ten 3" caliper trees, etc.

General Vegetative Cover
Outside of environmental corridor preservation areas (see Environmental Corridors), and excluding large canopy trees, up to 70% of existing vegetation may be removed during development of a site. Replacement vegetation or constructed landscapes in areas that have been removed should be native species including trees, shrubs, groundcovers, and grasses. Where analysis of pre-development site vegetation indicates a predominant landscape type (i.e. forest, Savannah, native grassland, etc.) replacement species for all landscape areas should be of a similar species type. Native species as defined by either the *Illinois Species Database*, or *Nature's Heartland, Native Plant Communities of the Great Plains*, are required for all landscape plantings unless other species are approved by the Director of Planning.[6] [7]

2.03 Environmental Corridors

Environmental corridors (Figure 2) are those linear natural landscape systems, which have economic, biological, ecological, or visual values for the community. Within O'Fallon, riparian corridors located along naturally occurring drainage channels have been identified as critical environmental resources within the community. These corridors form important visual and recreational opportunities for the community, which in-turn create economic value when correctly preserved as amenities within developed parcels.

The plan requires the preservation of all existing landform/ topographic conditions and vegetative cover within identified environmental corridors. Riparian corridors, identified in the plan are defined as those natural drainage

channels having tree canopy or other vegetative cover, and/ or soils generally associated with continuous or intermittent drainage or flooding. For purposes of the plan, riparian corridors have been identified by visual means, using current aerial photographs that indicate tree canopy cover over or within natural drainage channels.

2.03.1 Riparian Corridors Preservation and Planning Guidelines:

The City may determine the applicability of specific criteria where existing riparian corridor tree canopy and other vegetative cover is less than 300' in width. In no case may existing trees or other vegetation be removed within riparian corridors identified as part of the Landscape and Environmental Framework Plan without prior written approval by the City. Such review and approval by the City is required in order to maintain a City-wide functional storm water management system and important environmental qualities.

100 Year Flood Plain

Development including grading and/ or removal of vegetation within the 100-year flood plain, as determined by current Flood Insurance Rate Maps, is prohibited. All site plans submitted for review by the City shall include a plan drawing with the current limits of the 100-year flood plain and proposed limits of grading and other developments clearly identified.

Riparian Corridor "x" Zone

The "x" zone (Figure 3, 4) of the riparian corridor is a critical zone of vegetative cover and soil conditions that provides for drainage channel bank stability and erosion control.[8] Current tree canopy along most of the identified riparian corridors occurs within the width of the "x" zone, and in addition to the erosion control created by the vegetation within the zone, the zone creates primary wildlife habitat and movement corridors for the City.[9] The zone's tree canopy, a remnant of the forests which probably covered much of O'Fallon's landscape prior to agricultural use and development, creates important visual qualities for the City. Development and preservation criteria for the "x" zone include:

Width	300' minimum, measured 150' (horizontal or plan dimension) perpendicular from center line of drainage channel on both side slopes[10]
Required Conditions	development of parcels shall not directly or indirectly impact the "x" zone area of the riparian corridors. All vegetative cover and landform/ topographic conditions must be retained in a natural condition during development and post-development activities. Storm water management basins, devices, or strategies shall not be deployed within the "x" zone of the riparian corridor unless other storm water mitigation measures (see Storm Water Retention and Detention Strategies) are deemed impractical by the City.
Use	Use of the "x" zone shall be primarily resource preservation. Limited use of the zone for hike and bike trail crossings may be approved by the City.

Riparian Corridor "y" Zone

The "y" zone (Figure 3, 4) of the riparian corridor is another critical zone of vegetative cover and soil conditions that shall be preserved or re-established outside of the "x" zone described above. The primary purpose of the "y" zone is to provide additional biological filtration of sediment and contaminants carried by storm water run-off into natural drainage channels, and to further buffer or slow storm water time of concentration as storm flows enter natural drainage channels.

Width	50' minimum, measured 50' (horizontal or plan dimension) perpendicular from outside boundary of "x" zone as described above
Required Conditions	development of parcels shall not directly or indirectly impact the "y" zone area of the riparian corridors except for uses noted below. Otherwise all vegetative cover and landform/ topographic conditions must be retained in a natural condition during development and post-development.
Use	use of the "y" zone shall be limited non-structural or natural storm water management strategies, non-vehicular circulation systems, or dedicated parkland/ open space

developed with native plant species. Storm water management basins, devices, or strategies deployed within the "y" zone shall be reviewed and approved by the City Planning Director and City Engineer.

2.04 "Paths" - Use of Natural Systems for Non-Vehicular Circulation

The Plan encourages the use of non-vehicular circulation system design and implementation for all projects regardless of scale or type of land use. The purpose of design and implementation of path systems is to provide alternative routes for pedestrians and bicycle traffic throughout the entire City. The hierarchy of paths proposed in the plan includes hike and bike trails, pathways, sidewalks, and bike lanes.

Wherever possible, these paths should be designed to form circulation connections to the "y" zone of environmental corridors (Figure 5). These systems should also be designed to complement and intersect with paths where they exist on contiguous properties, or planned paths that may be identified in the master plan.

Minimum design and construction standards for paths shall be determined by the City planning, and/ or engineering departments. Until such standards are approved, the following guidelines shall apply:

2.04.1 Improved Hike and Bike Trails

Improved hike and bike trails are those paths that are least developed in terms of construction resources. Hike and bike trails should adhere to minimum standards required for state or federal funding where applicable. Where privately funded hike and bike trails are developed, and in addition to standards for construction established by the City Engineer, the following minimum guidelines shall apply:

Width	8' minimum
Gradient	8.33% maximum longitudinal slope 1% minimum longitudinal slope 2% maximum cross slope 1% minimum cross slope
Material	compacted gravel or crushed stone on compacted sub-base as required for permanent placement of trail. Where desirable, and approved by City planning department, bark mulch may be used over compacted sub-base.
Location	separated from roadways and vehicular travel lanes by a minimum 20' landscape buffer, hike and bike trails are intended for use within the "y" zone of environmental corridors, within common open space areas of development parcels, or certain City Park and Open Space areas.

2.04.2 Pathways

Pathways are minimally developed connections that link hike and bike trails to other path systems including sidewalks and bike lanes. Because they serve as the connection between internal and street-based paths and the hike and bike trails within environmental corridors, pathways are expected to receive less traffic than other portions of the system. Therefore, pathway widths are minimized and construction materials are comparable to hike and bike trail standards.

Width	6' minimum
Gradient	8.33% maximum longitudinal slope 1% minimum longitudinal slope 2% maximum cross slope 1% minimum cross slope
Material	compacted gravel or crushed stone on compacted sub-base as required for permanent placement of pathway. Where desirable, and approved by City planning department, bark mulch may be used over compacted sub-base.
Location	separated from roadways and vehicular travel lanes by a minimum 12' landscape strip or street yard, pathways are

intended to create linkages between internal development paths (e.g. bike lanes and sidewalks) and hike and bike trails that are developed in environmental corridors, or development parcel common open space areas.

2.04.3 Sidewalks

Sidewalks are required for all new developments where land use exceeds residential zoning or residential zoning exceeds a density of 2 dwelling units per acre. Sidewalks provide for pedestrian movement parallel to vehicular roadways, and create internal linkages within development parcels.

Width	4' minimum
Gradient	8.33% maximum longitudinal slope 1% minimum longitudinal slope 2% maximum cross slope 1% minimum cross slope
Material	minimum construction is 4" concrete
Location	separated from roadways and vehicular travel lanes by a minimum 4' landscape strip or street yard, sidewalks are intended to create internal pedestrian linkages within a development parcel. Sidewalks generally parallel roadways and are constructed on at least one side of all roadways throughout a development parcel.

2.04.4 Bike Lanes

Bike lanes are proposed to create connections between environmental corridors, schools, City Parks, and other community land uses, where no other forms of non-vehicular travel connections are available. Bike lanes as well as the above hike and bike trails should form connections to routes of similar paths where they exist outside of the City corporate boundary (e.g. regional or county trail or bikeway systems)

Width	to be determined by traffic engineer or City Engineer as appropriate for safety, or as required by State of Illinois standard
Gradient	8.33% maximum longitudinal slope where possible 1% minimum longitudinal slope 2% maximum cross slope 1% minimum cross slope
Material	as required by roadway standards (match material), with bike lane clearly marked by solid paint line, color approved by City Engineer
Location	primary routes for bike lanes are designated by the Environmental/ Landscape Framework Plan, and may be expanded or amended by the City Planning Department as needed

3.0 Landscape infrastructure

3.01 Storm water Detention and Retention Strategies

In keeping with the intent of the Plan to preserve the character and qualities of natural landforms and drainage patterns that exist in O'Fallon, implementation of storm water detention and retention strategies shall avoid destruction or disruption of such conditions wherever possible. Further, the Plan strongly encourages the physical integration of storm water strategies into the built environment created on each site (Figure 6). The following design guidelines and practices are intended to supplement existing storm water control requirements (Section 5.4 Storm Sewers and other Drainage Appurtenances) which requires that the flow rate and velocity of post-development storm water run-off not exceed the flow-rate and velocity of pre-development run-off from the site.[11] However, the plan calls for amendment of Section 5.4 to require that all storm water detention facilities be located on site, as part of each individual development parcel, regardless of scale.

For reference, the following definitions shall apply:

Dry Detention – Temporary impoundment of storm water runoff that is created by development of the site. Discharge rates from the on-site impoundment are controlled at or below pre-development peak

discharge rates for storm water run-off. Most detention systems are designed to fully drain within 24 – 48 hours after collection of run-off.

Wet Detention – The same as detention systems, except that in a retention system, a permanent pool of water exists with additional volume above the maintained water level used for storm water run-off surges. The storm water run-off is discharged in the same manner as a detention facility.

Infiltration – Designed to retain the maximum amount of post-development storm water run-off on site, infiltration systems are used where soil types allow relatively rapid recharge of storm water into the groundwater system. The purpose of infiltration basins, trenches, or other devices is to create a system which closely resembles pre-development storm water flows and ground water recharge rates on a given site.

Storm water management strategies should be designed to create:

3.01.1 Ecological Restoration

Use of open, vegetated swales are encouraged to direct storm water to on-site infiltration, detention, or retention ponds. Capture of storm water pollutants and sediment loads, and increases in the time of concentration for floodwaters are created by open drainage swales that are vegetated with a mix of native plant species. Vegetated swales should be allowed to "naturalize" over time, creating wildlife habitat, and native plant communities (see *sustainable landscape design and maintenance practices,* below) that are acclimated to the specific microclimatic conditions that exist within a given site after development. Where storm water management strategies interface with Environmental Corridors, such strategies should form an extension of these corridors into the newly developed site. In this manner, the potential enlargement of environmental corridors and extension of their ecological values as habitat, cover, and food sources for wildlife becomes an economic asset to the community.[12]

3.01.2 Sustainable Landscape Design and Maintenance Practices

Design of storm water management strategies should be developed to create landscape and site conditions, which are constructed of materials that are economically sustainable including both required construction and maintenance resources. Use of pervious paving materials such as open-grided "turf-block" paving, unit-concrete pavers set on pervious sub-bases, etc. should be used where possible to reduce run-off, and aid in natural storm water recharge into the site soils. Appropriate use of pervious paving materials may include low-volume roads, private driveways, limited-use parking areas, bike lanes, sidewalks, pathways, and emergency access lanes. Snow and ice removal requirements should be considered when using pervious paving materials.[13]

Other sustainable landscape practices related to storm water management include the use of native plant materials. Native species as defined by either the *Illinois Species Database*, or *Nature's Heartland, Native Plant Communities of the Great Plains*, are required for all landscape plantings unless other species are approved by the Director of Planning.[14] [15] Use of native species is intended to create a mosaic of interrelated "naturalized" sites that will be sustained over time as a visually, environmentally, and economically critical component of the O'Fallon city landscape. The plan defines such a sustainable landscape as one which has the ability to remain intact over a long period of time with limited economic or other inputs.[16]

3.01.3 Recreational Conditions

Recreational conditions such as hike and bike trails, walking pathways, common open space where informal athletic or recreational activities may occur, and constructed/ programmed landscapes such as outdoor theaters, plazas, courtyards, etc., should be integrated with storm water management facilities where possible (see diagram for Infiltration Basins with Commercial Development). Active recreational uses such as sports fields may also be designed to occupy the same areas as some portions of the storm water management system within a site. Areas which may be partially or fully flooded during peak storm water flows may be designed to serve such dual recreation purposes.

3.01.4 Common Open Space Within Individual Development Parcels

As creation of common open space within individual development parcels becomes more economically critical to successful land use and real estate practices, methods of combining such space with functional components of the landscape including storm water management areas should be considered. As noted above, properly constructed landscapes of storm water management facilities can provide multivalent uses within each development parcel. In many development cases, it may be desirable to combine open space areas with storm water systems (Figure 7, 8). Where heavy and continued use of open space is expected within a development parcel such as a mixed-use development, the open space and storm water management areas may be developed as separate, but complimentary areas (see diagram for Detention and Infiltration Basins within Mixed Use Development).

3.02 Parking Lots and Environs

3.02.1 General Parking Lot and Service Area Landscape Requirements

Parking lots have become a primary social space within communities, offering one of the few remaining opportunities for social interaction between residents on a daily basis. Therefore, these guidelines propose the treatment of the parking lot landscape as follows:

A minimum of one large canopy tree shall be planted within the boundary of the parking lot for every 6 parking spaces developed, but the number of trees shall not be less than 2 in any case. Minimum spacing between each tree planted shall be 20'.

A single tree species is to be used for each individual parking lot, but the tree species may differ in parking lots separated on the same site by no less than 50 feet of landscape space.

For every parking space developed, a minimum of 45 square feet of landscape area (planting and irrigation) shall be developed within the boundaries of the parking lot as defined by the edge of pavement or curb and gutter.

Minimum 10' wide landscape strips or planting islands are required between each parking bay when there are 50 or more parking spaces developed within a site. Where any landscape area exists adjacent to a parking space, that space shall be separated from the landscape area by wheel-stops placed at least 2' from the edge of the landscape area.

Landscape strips or planting islands between parking bays may be used for storm water infiltration or detention basins if they do not exceed 3:1 side slopes, and are planted with tree, shrub, and groundcover species that are appropriately matched to the soil conditions found within such basins

All parking areas shall be screened with evergreen hedges or walls/ screens planted with evergreen vines. In place of such screens, earth berms with maximum 3:1 side slopes and which are planted with evergreen shrubs or ground cover or a combination thereof are preferred. These screening devices shall be a minimum of 36" above the adjacent curb elevation of the parking spaces that they screen. Where planting alone is used for screening, the screen height must be 36" within 2 years from the time of installation.

All utility service including but not limited to meters, vaults, sprinkler risers, vacuum breakers, and trash containers, and service or loading areas shall be screened with evergreen hedges or walls/ screens planted with evergreen vines. These screening devices shall be of a minimum height to extend above and completely block the view of such areas or devices within 1 year of the time of installation.

In any case, the screen area surrounding parking lots, and/ or utility service areas shall include a landscape area no less than 8' wide with a length equal to the perimeter length of the area to be screened. This planting area shall also include large canopy trees planted every 30' on center

All landscape areas within each development parcel shall be planted with native species including trees, shrubs, groundcovers, and grasses as defined by either the *Illinois Species Database*, or *Nature's Heartland, Native Plant Communities of the Great Plains*, unless other species are approved by the Director of Planning.[17] [18] The landscape shall be maintained in a healthy condition with proper irrigation and other efforts applied to ensure survival. Landscape material lost due to lack of irrigation, salt applications, or disease shall be replaced immediately.

3.02.2 General Parking Lot Design Guidelines

The following design guideline are intended to minimize cost of infrastructure related to parking lot development, and to create a consistent urban design strategy for parking and building conditions within O'Fallon:

The number of parking lot entries, driveways, and curb cuts should be minimized and the use of combined entries and parking areas among development parcels is strongly encouraged

Buildings should front street rights-of-way wherever possible with pedestrian entries allowed from both street sidewalks and parking lots developed to the rear of buildings. In any case, parking lots should not occupy more than 33% of the development parcel frontage, and should not be located at the corner of public street intersections. The purpose of this guideline is to develop/ maintain a pedestrian-scale environment by maximizing building street-walls and building entry relationships to the public street.

Parking lot layouts and circulation must be clear and well-organized, with pedestrian pathways provided and marked with alternative paving materials or patterns through all parking lots

Paving materials may include asphalt or concrete, but pervious paving systems should be used for any parking spaces developed above the number of spaces required by the Director of Planning. Pervious paving

material may include open-grided "turf-block" paving, unit-concrete pavers set on pervious sub-bases.

3.02.3 Parking Lot Lighting

These guidelines encourage the use of landscape lighting to achieve the required illumination within parking lots and environs. The use of "moonlighting," "silhouette lighting," or "pathlighting" techniques are all suggested for use in these areas, and may be used in combination with more convention area lighting usually provided by parking lot and roadway lights (mast carried luminaries, generally 20 to 35' in height). In any case, metal halide or mercury vapor lights are preferred over high-pressure sodium.

A maintained average minimum required illumination for parking lots and building entries is 10 lux (lx) or 1.0 footcandles (fc).[19] Pedestrian walkway lighting may use point to point lighting such as light bollards with a maintained average illumination minimum of .18 footcandles (fc).

Building illumination and architectural lighting shall be indirect in character (no light source visible). Indirect wall lighting, overhead down-lighting, or interior illumination which spills into the landscape is encouraged. Architectural lighting should articulate and animate the particular building design as well as provide the required functional lighting for safety and clarity of pedestrian movement.[20]

3.03 Community Gateways and Major Streets

Design guidelines for circulation-ways within the City identify community gateways, or important vehicular entry points to the community; and major streets, which are those roadways that either serve as major routes for daily vehicular traffic, or have been included because of their importance as connectors between public uses, parks, and schools, and the environmental corridor system proposed in this plan (Figure 9). These guidelines propose design criteria for each of the roadways identified in the plan. Specific design development and technical documents would be prepared, and construction would occur over-time as implementation resources become available.

3.03.1 Gateways

Entry A/ Primary Gateway to the City

These entry points which have been identified as the most visible and therefore most important gateway points of the city are at key intersections on Interstate 64, and include: I-64 at Highway 50, I-64 at Green Mount Road, and I-64 at Scott Troy Road. Guidelines for these entry points include:

- re-forestation of the intersection or interchange to form a densely canopied grove of native trees
- uplighting of grove trees
- architectural lighting and railing/ balustrade added to bridges crossing I-64

Entry B/ Secondary Gateway to the City

These locations have been identified as important gateway points which form the east and west entries to the city. These points exist on Highway 50 at Scott Troy Road on the east, and Highway 50 at Old Collinsville Road on the west. Guidelines for these entry points include:

- planting of large street trees – minimum of four specimen trees on each corner in tree wells
- uplighting of street trees
- use of alternative paving materials at crosswalks and sidewalks at the intersection
- use of bollards or other architectural marking devices and/ or signage marking entry to the community

Entry C/ Neighborhood and District Markers

these points have been identified as thresholds to areas which are known as specific districts within the community. These points exist on Highway 50 at the State Street "y" intersection, and Highway 50 and Lincoln Street. Guidelines for these entry points include:

- planting flowering trees – ordered groves of trees create the neighborhood and district markers
- uplighting of groves
- use of architectural district markers

3.03.2 Major Streets

Utility Visual Impact Mitigation

Where possible, overhead utility lines should be placed underground within the right-of-ways of streets. The purpose of placing utility lines underground is to mitigate the appearance of such conditions which currently create negative visual impacts within the community. The plan proposes the following streets as priority underground utility relocation sites due to their relative visual importance and entry-ways to the community:

Highway 50 between Interstate 64 and Scott Troy Road
Lincoln Street between Interstate 64 and State Street
Scott Troy Road between Interstate 64 and Highway 50

Upon completion, other streets should be added to a priority list of underground utility relocation sites. Relocation of utilities to underground vaults and conduits should take place as resources become available, and are required when new utility lines are initially placed, or replaced on any street within the city.

Underground utility placement should occur within a specific section of each street area which causes minimal disruption of the paved sections of the street during repairs or future construction related to the utility. In streets considered as part of this plan, utilities conduit locations have been placed at the outside of paved sections of sidewalks or improved bike paths within an easement (see street sections). For roadways and streets not a part of this plan, a similar location for underground utility conduits should be developed as part of the street section.

Primary Street Guidelines

The following street guidelines are proposed as general planning sections, which should be used as the basis for specific design development, and construction

documents prepared for any street improvements. The sections contain information that may be expanded as specific design development occurs, and which is considered as the base-line or minimal improvement suggested for each street.

Highway 50 (Figure 10, 11, 12)

Between Interstate 64 and State Street Spur

Where existing concrete median strips exist, and appropriate minimum width exists (3' minimum), concrete should be removed and replaced with plantings consisting of ground cover species and large canopy trees spaced 25' on center

A 6' street yard planted with a large canopy tree species and an alternating large canopy tree species spaced 30' on center and a medium hedge (3' in height) should buffer between the pavement edge and the right-of-way limit

Beyond the sidewalk section, an underground utility trench location exists with the remaining right-of-way section to be a surface storm water management area for roadway runoff to be constructed as a series of weirs and check-dams with the drainage area to be planted with native riparian species

Between State Street Spur and Scott Troy Road

Where the street section narrows, the street yard is reduced to 4' and planted with one of the same alternating trees from the above section, but with the single species still planted 30' on center, and a medium hedge (3' in height)

A 5' wide sidewalk section is paralleled with an underground utility trench location and existing lawn or other approved landscape beyond

At the Community Park

The same section shall exist on Highway 50 as described above for the length between State Street and Scott Troy Road, with the following exceptions: the hedges are removed from the parkway and replaced

with turf or other ground cover, and a large hedge (6 – 8' in height and 8 – 12' in width) shall be planted on the north side of Highway 50, outside of the underground utility trench location

Lincoln Street between Interstate 64 and State Street (Figure 13)

Maintain a minimum pavement and right-of-way width to create an "urban" mixed-land-use environment.

Large canopy trees are planted 30' on center in tree wells with cast iron grates.

Beyond the outer edge of the tree grates, a 4' sidewalk is proposed.

A 30" planting strip containing hedges or ground cover is proposed beyond the sidewalk pavement, within which the underground utility trench would also be located.

Future building street walls would be required to meet the back edge of the planting strip, which would break for building entries and driveways leading to parking at the rear of each parcel.

Simmons Drive (Figure 14)

Considered a "country-lane," Simmons Drive is proposed to have the minimum allowable pavement width, with no curb and gutter.

Outside of the minimum pavement width allowed by engineering standards, an 8' wide bike lane comprised of crushed compacted gravel is proposed.

Large canopy trees are planted within the outer 2' of each gravel bike lane, and the underground utility trench is located beyond the bike lane.

The maximum 3:1 side slopes shall be planted with shrub, ground cover, and grass species and be allowed to naturalize with minimum maintenance input.

Seven Hills Road north of State Street (Figure 15)

Seven Hills Drive shall be designed to include a street yard planted with a large canopy tree species spaced 30' on center

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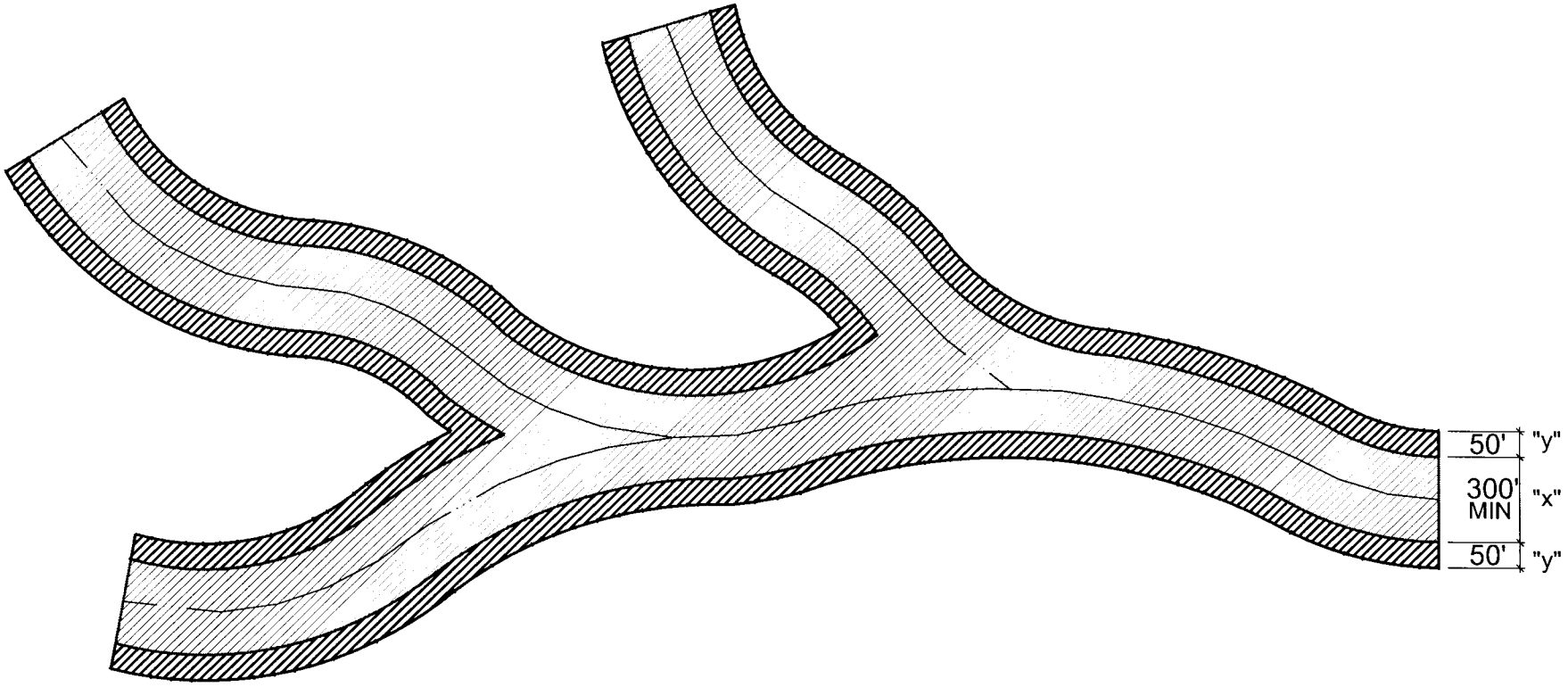
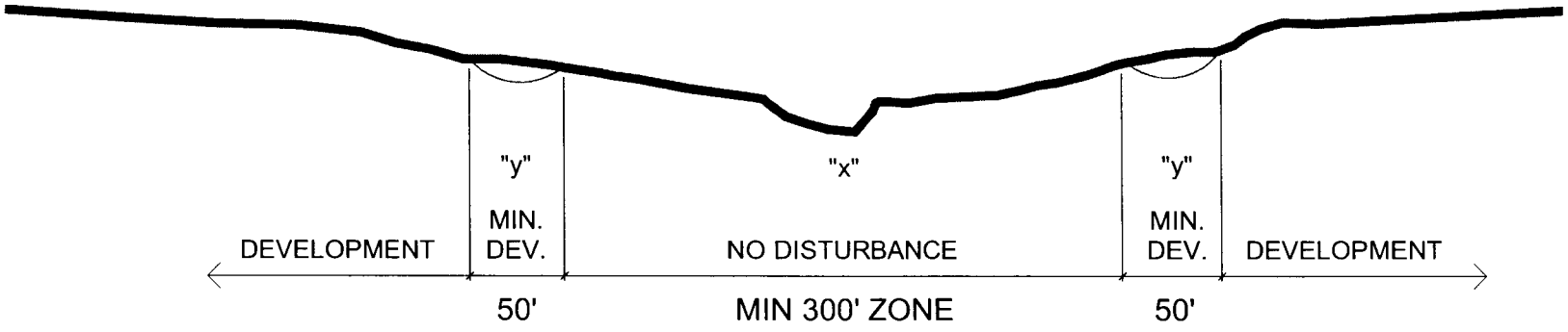
1Keller Easterling, American Town Plans, New York: Princeton Architectural Press, 1993.
[2] 1995 Survey by American Lives, San Francisco, Brook Warrick
[3] *Value by Design: Landscaping, Site Planning and Amenities*, the Urban Land Institute, 625 Indiana Ave., Washington D.C. 20004
[4] *Building Greener Neighborhoods*, National Association of Home Builders, 1201 15th St. N.W., Washington D.C. 20005
[5] Bruce K. Ferguson, *Introduction to Stormwater*, New York: John Wiley & Sons, 1998.
[6] *Illinois Species Database, Illinois Natural History Survey*, Illinois Department of Natural Resources, http://www.great-lakes.net/envt/plant/plant.html, 1998.
[7]Boon and Groe, *Nature's Heartland, Native Plant Communities of the Great Plains*, Ames, Iowa: Iowa State University Press, 1990.
[8] Bruce K. Ferguson, *Introduction to Stormwater*, New York: John Wiley & Sons, 1998.
[9] Richard Formann, *Landscape Ecology*
[10] Michael Binford and Michael Buchenau, "Riparian Greenways and Water Resources," in *Ecology of Greenways*, Smith and Hellmund, Ed., Minneapolis: University of Minnesota Press, 1993. Existing vegetative cover is identified as a critical area to include in greenway or corridor design as related to soil stability, and nutrient and sediment filtration. The width of the O'Fallon riparian corridors is primarily based on the existing band of vegetative cover as identified by aerial photographs. While other studies indicate effective corridor widths generally ranging from 50 feet to 1,000 feet, the 300 foot O'Fallon corridor designation is intended to preserve an existing natural resource (the riparian forest vegetation) which provides storm water and biological filtration capacity to the community.
[11] Ordinance No. 625, The Land Subdivision Control Ordinance of the City of O'Fallon, Illinois, Section 5.4, January, 1970, last amended September, 1997.
[12] 1995 Survey by American Lives, San Francisco, Brook Warrick, Director (will attach survey findings to appendix)
[13] Steven Strom, *Site Engineering for Landscape Architects,* New York: Van Nostrand Reinhold, 1993.
[14] *Illinois Species Database, Illinois Natural History Survey*, Illinois Department of Natural Resources, http://www.great-lakes.net/envt/plant/plant.html, 1998.
[15]Boon and Groe, *Nature's Heartland, Native Plant Communities of the Great Plains*, Ames, Iowa: Iowa State University Press, 1990.
[16] See Richard Formann, "Ecologically Sustainable Landscapes: An Ecological Perspective," *Changing Landscapes, An Ecological Perspective*, New York: Springer-Verlag, 1990.
[17] *Illinois Species Database, Illinois Natural History Survey*, Illinois Department of Natural Resources, http://www.great-lakes.net/envt/plant/plant.html, 1998.
[18]Boon and Groe, *Nature's Heartland, Native Plant Communities of the Great Plains*, Ames, Iowa: Iowa State University Press, 1990.
[19] Charles W. Harris and Nicholas T. Dines, *Time Saver Standards for Landscape Architecture*, 2nd Edition, New York: McGraw-Hill Publishing Co., 1998.
[20] Tim Franke, ASLA, with Takata Associates, *LAX Northside Design Plan and Development Guidelines,* Los Angeles: City of Los Angeles Department of Airports, 1989.



No Disturbance "x"
Minimum Disturbance (potential flood water control area) "y"

Figure 3



300' Zone of No Development ("x") maintains biological capacity of riparian condition to support native flora/fauna, act as filtration system, etc. Minimum disturbance zone ("y") allows for on-site flood water retention, hike/bike trails, ect.

Figure 4

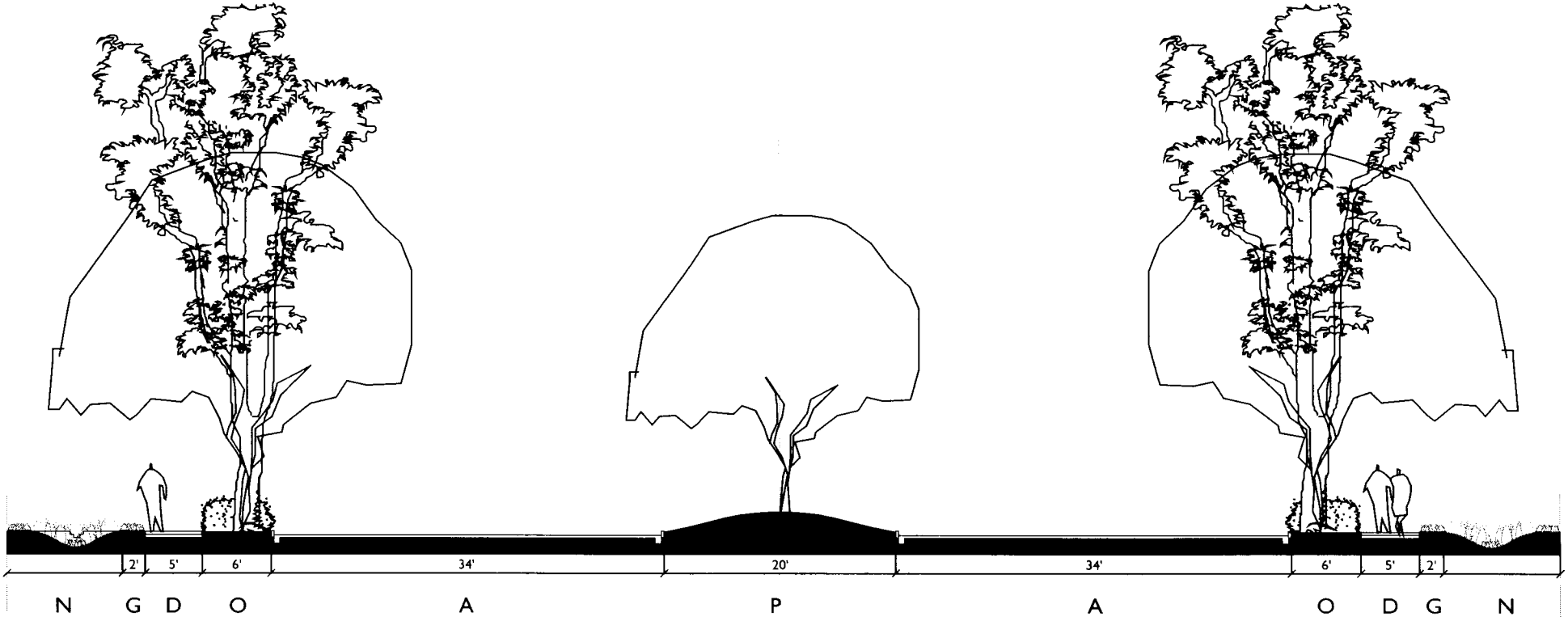


Figure 10

KEY

A Existing Pavement Section
B Pavement Section
C R.O.W.
D Walk
E Crushed Stone Shoulder
F Marked Bike Path
(width determined by Traffic or City Engineer)
G Underground Utility Trench Location
H Hedge
J Tree Wells / Grating
K R.O.W. & Landscape Buffer
(planted with approved native species)
L Building Area
M Community Park
N Storm Water Management Zone within R.O.W.
O Street Yard
P Proposed Re-use of Median Strip
Q Level Edge
R Compacted Gravel Bike Path Shoulder

Highway 50 @ Venita
N.T.S.

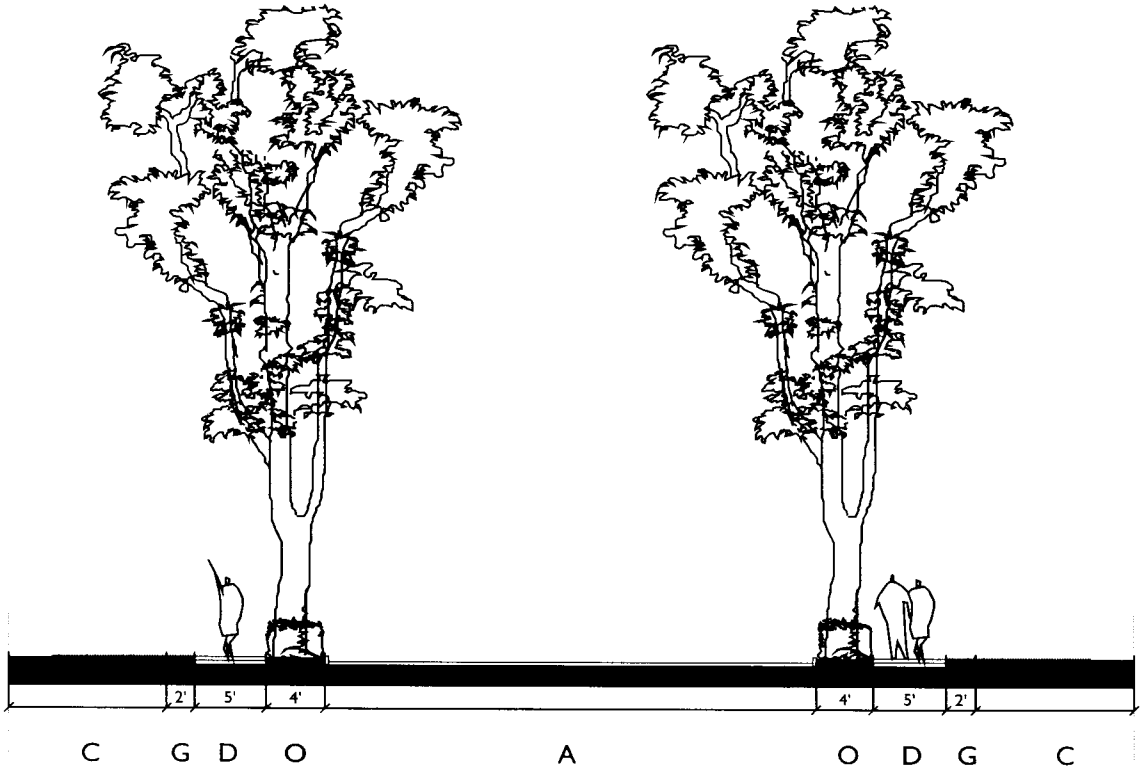


Figure 11

KEY

A Existing Pavement Section
B Pavement Section
C R.O.W.
D Walk
E Crushed Stone Shoulder
F Marked Bike Path
(width determined by Traffic or City Engineer)
G Underground Utility Trench Location
H Hedge
J Tree Wells / Grating
K R.O.W. & Landscape Buffer
(planted with approved native species)
L Building Area
M Community Park
N Storm Water Management Zone within R.O.W.
O Street Yard
P Proposed Re-use of Median Strip
Q Level Edge
R Compacted Gravel Bike Path Shoulder

Highway 50 @ Schwagel
N.T.S.

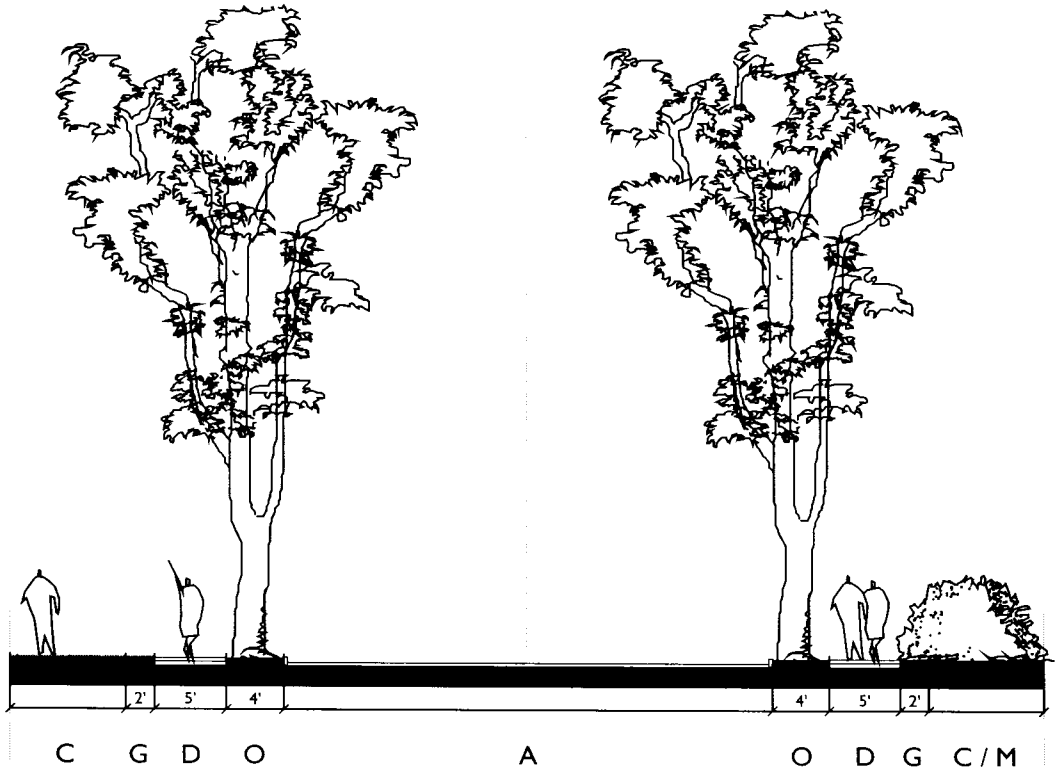


Figure 12

KEY

A Existing Pavement Section
B Pavement Section
C R.O.W.
D Walk
E Crushed Stone Shoulder
F Marked Bike Path
(width determined by Traffic or City Engineer)
G Underground Utility Trench Location
H Hedge
J Tree Wells / Grating
K R.O.W. & Landscape Buffer
(planted with approved native species)
L Building Area
M Community Park
N Storm Water Management Zone within R.O.W.
O Street Yard
P Proposed Re-use of Median Strip
Q Level Edge
R Compacted Gravel Bike Path Shoulder

Highway 50 @ Community Park
N.T.S.

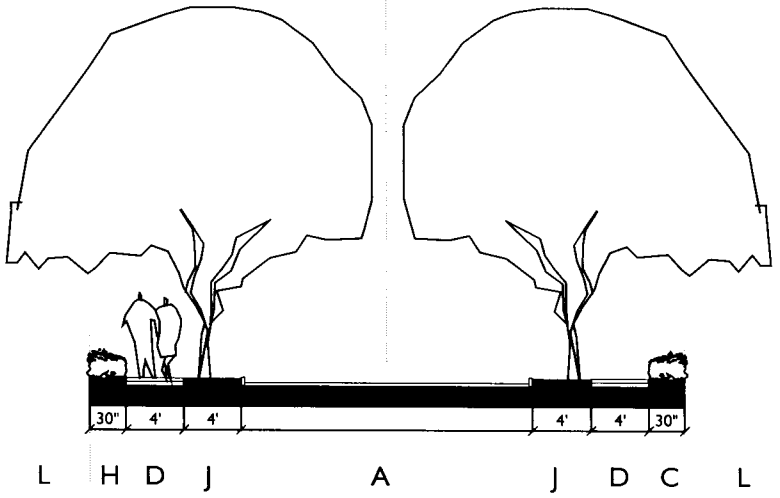


Figure 13

KEY

A	Existing Pavement Section
B	Pavement Section
C	R.O.W.
D	Walk
E	Crushed Stone Shoulder
F	Marked Bike Path (width determined by Traffic or City Engineer)
G	Underground Utility Trench Location
H	Hedge
J	Tree Wells / Grating
K	R.O.W. & Landscape Buffer (planted with approved native species)
L	Building Area
M	Community Park
N	Storm Water Management Zone within R.O.W.
O	Street Yard
P	Proposed Re-use of Median Strip
Q	Level Edge
R	Compacted Gravel Bike Path Shoulder

Lincoln @ 4th
N.T.S.