

**Landscape  
Design  
Criteria  
Manual**

*City of* **Littleton**

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## 1. INTRODUCTION

This manual is authorized under the landscaping requirements of the Littleton City Zoning Ordinance and contains guidelines which include landscape design, installation and maintenance standards as well as plan review procedures. The purpose of the guidelines is to ensure quality landscaping while encouraging creativity and water conservation.

This manual contains several acronyms and terms which may be unfamiliar to you. Appendix A at the end of this manual contains definitions which will be helpful in understanding the landscape requirements.

Provisions from Title 10, Chapter 5, of the City Code (Landscaping Regulations) are included in this manual and indicated in the shaded areas and denoted by the pertinent section number of the City Code. The following is an explanation of the various references made throughout these excerpts:

- A. "this Chapter" refers to Title 10, Chapter 5 (Landscaping Regulations) of the City Code.
- B. "Title 10, Chapter 7" refers to Chapter 7 of the City's Zoning Ordinance, etc.
- C. "Section 10-5-7" refers to a specific section of Title 10 of the City Code (Zoning Ordinance).
- D. "Landscape Manual" refers to this manual, Landscape Design Criteria Manual.
- E. "this Title" refers to the City's Zoning Ordinance.

Approved:

  
Director of Community Development

May 14, 1992  
Date

## 2. APPLICABILITY

10-5-3(A) A landscape plan, prepared in conformance with this Chapter shall be submitted for:

1. The parking areas and unobstructed open space in all multiple family, business and industrial development proposed within the City requiring approval of a SDP prior to the issuance of a building permit. [See Title 10, Chapter 7].

2. The parking areas, unobstructed open space and common open space on all final PD plans required under the PD Zone District [See Title 10, Chapter 2]. All general PD plans which are submitted prior to the final PD plans, shall include a general landscaping plan drawn in conformance with Section 10-5-7.

10-5-3(B) A landscaping plan submitted with a final PD plan must comply with the landscaping requirements of the approved general PD plan, even if such requirements are more restrictive than this Chapter. Landscaping plans for single family residential developments shall be required for common open space areas only, and not for individually owned lots.

10-5-3(C) Unobstructed open space and common open space shall include, but are not limited to, landscaping, patios, plazas, arcades, pedestrian and/or bicycle pathways, fences, retaining walls, benches, fountains, statuary, kiosks, light fixtures, and picnic shelters. Such improvements shall not be deemed to violate the prohibition against structures in unobstructed open space.

## 3. THE LANDSCAPE PLAN

All landscape plans shall contain the information listed under "Submission Requirements" on pages 31-33 of this manual.

The sample landscape plan on page 34 is intended as a guide in preparing a submittal to the City of Littleton. It contains the information required in a neat and clear format. Although the content of a landscape plan is primary in importance, the City of Littleton requires a complete and legible presentation for review purposes. The use of sections, elevations and details to illustrate screening and general appearance is encouraged.

#### 4. PROCEDURE

10-5-4(A) The procedure for review of a proposed landscape plan shall be as specified in Title 10, Chapter 2, for general PD plans and in Title 10, Chapter 7, for SDPs.

10-5-4(B) The DRC shall review the proposed landscape plan as a component of the SDP or final PD plan. Approval or disapproval of such plan shall be based on its conformance with the stated intent of this Chapter and the Landscape Manual.

10-5-4(C) Recording: A landscape plan, including all required modifications and all necessary signatures, shall be recorded in the office of the County Clerk and Recorder. Two (2) reproducible mylar copies of the approved plan shall be provided to the Planning Division for recording by the Division, along with the recording fee, prior to issuance of a building permit.

The procedure for review of landscape plans is the same as for SDPs. This procedure may be found either in the City's Zoning Ordinance or in the SDP application packet. Once approved, the landscape plan will be recorded with the SDP in the office of the County Clerk and Recorder.

#### 5. XERISCAPING

The City of Littleton strongly encourages the practice of Xeriscaping, which is landscaping to conserve water. Xeriscaping is a simple seven step approach to landscaping which will result in substantial water savings without the loss of aesthetic appeal. The seven steps are:

1. **PLANNING AND DESIGN-** A careful site analysis and logical design process should result in a good landscape plan. Solar orientation, prevailing winds, the location of structures, existing vegetation, snow drifting patterns, storm water retention and other site factors should be considered when preparing landscape designs. Providing shade, diverting winds and maximizing the use of natural precipitation are a few of the ways that proper design can minimize the irrigation needs of a landscape.

2. **SOIL IMPROVEMENTS-** The incorporation of a proper organic material into the top eight inches of a soil will improve both absorption and the water holding capacity of the soil. Soil amendment prior to planting and a maintenance program that includes regular aeration and fertilization will minimize the water requirements and maximize plant health.

3. **LIMITED TURF AREAS-** Turf areas, especially Kentucky Bluegrass, require a substantial amount of supplemental irrigation compared with other types of landscaping. Turf should be limited to pedestrian traffic zones and areas of maximum recreational or aesthetic benefit.

4. **EFFICIENT IRRIGATION-** A well designed, monitored and adjusted irrigation system will result in dramatic water savings. The use of proper irrigation methods, head types, spacing and zoning, combined with regular observation and adjustment will maximize the benefits provided by an automatic irrigation system.

5. **MULCHES-** Mulched planting beds minimize weed growth, erosion and evaporation. When combined with breathable weed control fabrics, they provide an attractive minimum maintenance ground cover while new plantings gradually establish themselves in such areas.

6. **LOW WATER DEMAND PLANTINGS-** Xeriscape trees and shrubs are identified as requiring low or very low water in the plant lists on pages 10-13 of this document. It is important to remember that a single plant species, Kentucky Bluegrass, is responsible for an overwhelming majority of all the water used for landscape irrigation in this area.

7. **APPROPRIATE MAINTENANCE-** Correct and regular mowing, pruning, weeding, fertilization, pest control and irrigation adjustment will maximize the health and appearance of a landscape while further reducing water consumption. Irrigation amounts should be adjusted according to season, exposure, plant needs and current soil moisture conditions.

While Xeriscaping may require some initial extra thought, effort and expenditure, the long range benefits include savings of both water and money.

## 6. IRRIGATION

10-5-6(A) Underground automatic irrigation systems are required for landscaping which cannot survive on natural precipitation except for temporarily seeded areas as stated below. The use of drip, trickle, subterranean and other water conserving irrigation methods is encouraged, as is the use of organic mulches and other water conserving design features. The overall irrigation system design should emphasize efficient water use and conservation.

10-5-6(B) Developments with seeded areas shall provide an erosion control plan with irrigation provisions as required in the City's Storm Drainage Design and Technical Criteria Manual.

An automatic underground irrigation system is required for all landscaped projects. An irrigation plan at the same scale as the landscape plan shall be submitted. This plan shall be prepared by a qualified irrigation designer. The plan shall show the size, location and type of all controllers, water taps, backflow preventers, pressure lines, valves, sleeving, heads and piping. The installer of the system must meet the licensing and permitting requirements of the City prior to the commencement of work.

The only types of backflow prevention devices allowed are pressure and reduced pressure vacuum breakers. Both must be installed at least 12" above the highest sprinkler head. Irrigation controllers should have multiple programming capabilities and an emergency power supply. Pressure lines and wiring shall be installed at a minimum depth of 18". Lateral lines shall have a minimum cover of 12".

Turf areas shall be irrigated efficiently and precisely by using the proper type of heads at proper spacings. The system shall be zoned to allow for the most efficient watering of turf areas with different slopes, orientations and exposures.

Trees and shrub beds shall be watered by drip or bubbler irrigation zoned separately from turf areas. Flower and ground cover areas may be watered by spray heads or a combination of drip, bubbler and microjet applications. Spray irrigation of entire shrub beds will not be allowed except in cases where a substantial majority of the bed is planted with some type of ground cover.

A properly designed, installed, maintained and monitored irrigation system will result in substantial water savings. It is essential that watering times be adjusted seasonally, that watering cycles be skipped during periods of natural precipitation, and leaks and broken heads be repaired promptly. Drip irrigation zones may be used sparingly once trees and shrubs are established. A healthy landscape and water conservation are the benefits of maintaining an irrigation system.

## 7. LANDSCAPING DESIGN CRITERIA

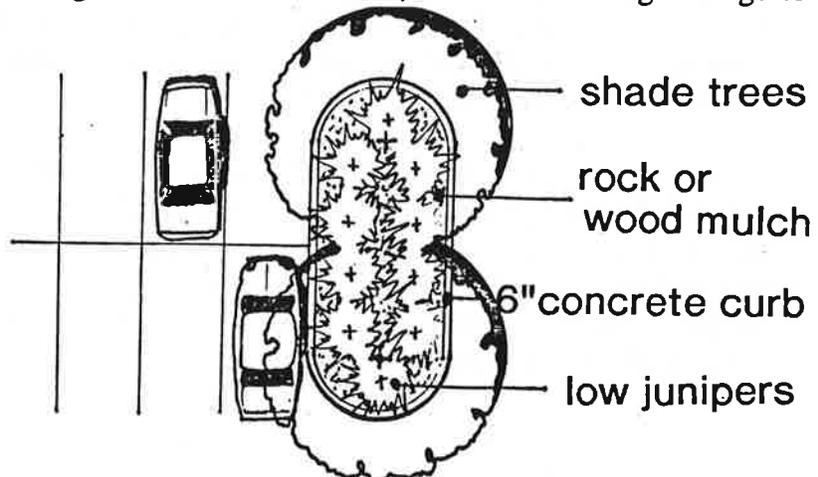
10-5-7 All landscaping plans shall comply with the applicable design standards of this Chapter and the Landscape Manual.

### 10-5-7(A) Parking Areas:

1. Coverage: At least five (5) percent of the interior area of a parking lot shall be landscaped if the lot contains fifteen (15) or more spaces. This requirement shall be counted toward the unobstructed open space requirements of each zone district. At least 75% of the required landscaped area shall include living plant material. (This 75% living plant material coverage requirement shall be met within three years of planting.)

2. Islands: Landscaped parking lot islands must be delineated by a clear physical barrier such as concrete curbs or set landscaping timbers to protect the plant material from vehicular damage. All islands shall be irrigated in conformance with Section 10-5-6.

If parking lot islands are used, they shall be designed with consideration towards safety, year round appearance and ease of maintenance. They should be a minimum of eight feet in width and 120 square feet in area to allow adequate space for tree roots. The use of turf is discouraged on islands unless they are at least 20' in width. In general a traffic island should contain a shade tree (or several if appropriately spaced), low evergreen shrubs or ground cover, and a mulch installed over a weed barrier fabric. Ornamental shrubs, boulders, and flower areas may be added as accents where appropriate. Islands should be spaced so as to maximize the amount of shade afforded by trees while minimizing large expanses of uninterrupted pavement. Adequate clear space for door opening and vehicle overhang should be maintained at the perimeter of all parking areas. Snow removal ease and storage should be considered in the design of all parking lots. Adequate snow storage areas shall be designated on all Landscape Plans, allowing for proper drainage and solar orientation, while minimizing damage to adjacent landscaping.

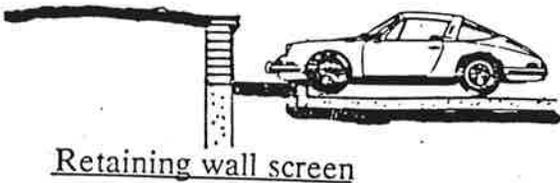


Typical parking lot island

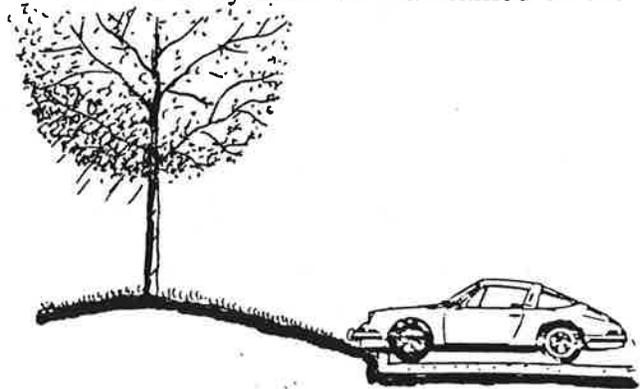
3. **Parking Lot Screening:** To permit more flexible site design, parking may be located within the front setback if fully screened. Berms, walls, fences, plants, planters, or combinations thereof, shall be used to screen the parking lot. All perimeter areas of the parking lot shall be landscaped to provide visual relief to large expanses of paving and to provide ample shading to reduce heat build-up. Whenever structures such as walls or fences are used to create a screen, plants shall be located on the sides of the structure which are visible from adjacent public rights-of-way. The top of the landscape screen around the parking area shall be at least 3 feet higher than the surface of the parking area, except where clear visibility must be maintained as provided in Section 10-4-1(A)4, due to traffic or pedestrian safety considerations.

When trees and shrubs are used for screening purposes, they must be predominantly evergreens. They should be appropriately spaced to achieve a dense screen of the specified height within three years of planting date.

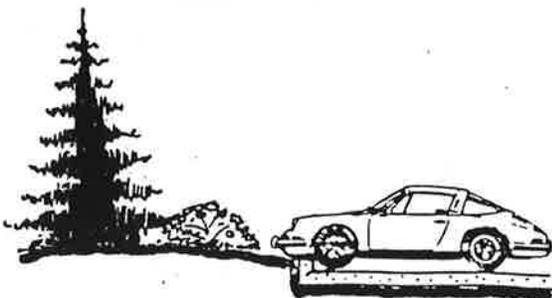
Berms should have a natural appearance with no slopes to exceed 4:1. Fences, planters and walls should match other site structures in color, style and material. Screening requirements do not apply in areas where clear visibility must be maintained in the interest of safety.



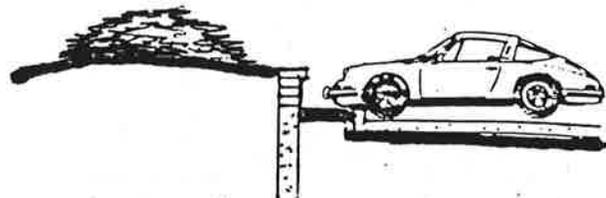
Retaining wall screen



Berm screen



Landscape screen



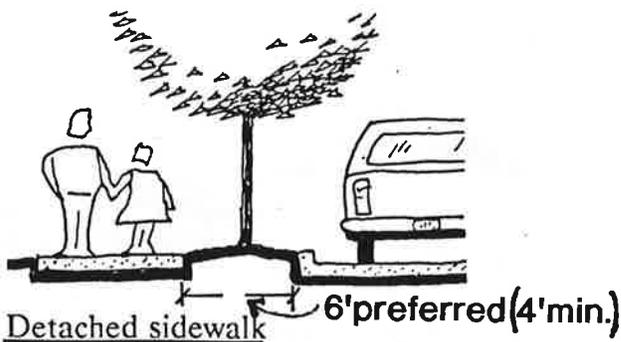
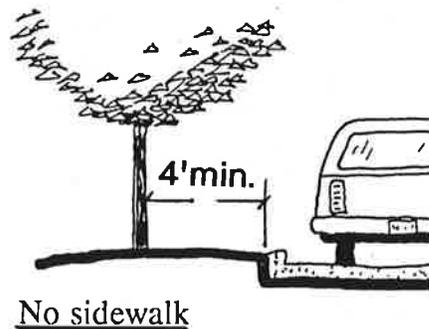
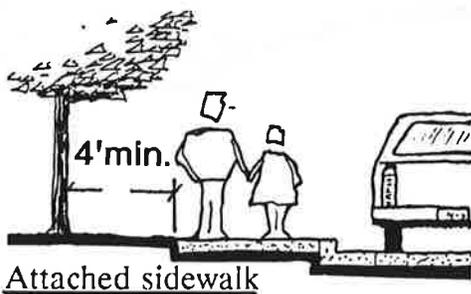
Combination screen

10-5-7(C) Public Rights-of-Way and Street Trees:

1. Public Rights-of-Way: Landscaping shall be provided in the street right-of-way to the curb (when there is a detached sidewalk or no sidewalk); or extend to the back of sidewalk (when the sidewalk is attached to the curb). Landscaping in public rights-of-way shall be maintained as provided in Section 10-5-10.

2. Street Trees: The street tree requirements for multiple family residential, business and industrial developments are in addition to the requirements for minimum living landscape material. Street trees shall be located within the public right-of-way, but shall not encroach upon existing and planned utility lines or easements. The number of trees required for each property depends on the length of the property frontage and the spacing requirements for the species to be planted as specified in the Landscape Manual.

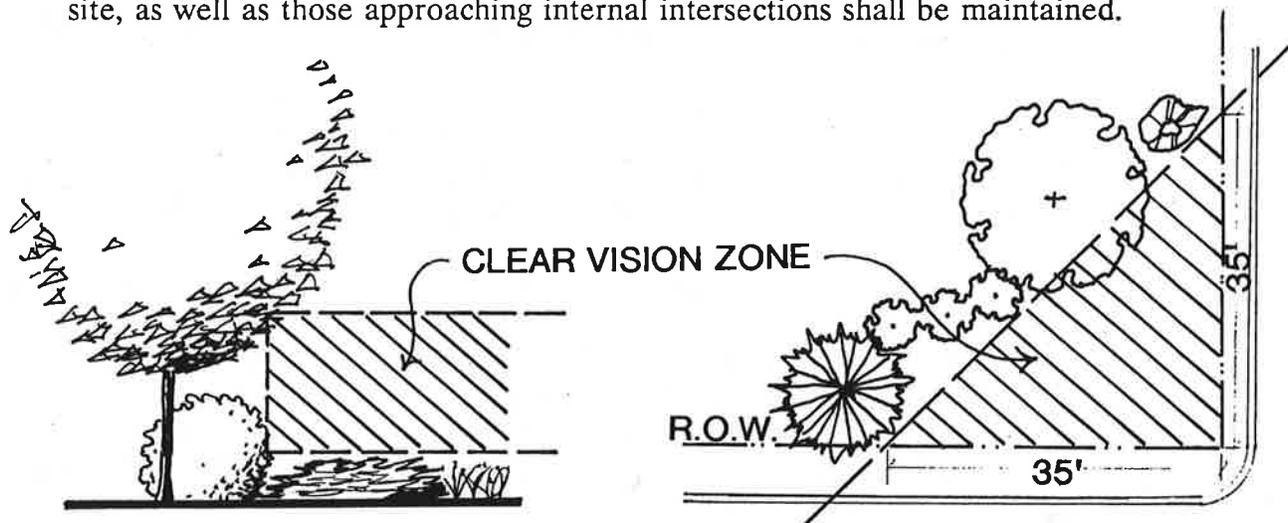
Trees shall be planted along all rights-of-way at a maximum spacing of 40 feet except in cases where this would conflict with recognized view corridors. Species approved for right-of-way planting are so indicated in the "R.O.W." column in the City of Littleton Tree List (see Appendix B on pages 26 and 27). Evergreen trees shall only be allowed in rights-of-way when they are planted on the north side of a street or in situations where wintertime shadows will not result in icy patches on public thoroughfares. Trees shall be planted a minimum of 10' from any alley or vehicular entrance. Species should be selected according to size and shape of canopy, site and soil suitability, and continuity with any existing streetscape. The desired locations of right-of-way trees in various situations are illustrated below.



10-5-7(D) Sight Distance Triangles: For safety and visibility purposes, a sight distance triangle, as defined in Section 10-4-1(A)4, shall be created and maintained in which no landscape materials, earth berms or other visual obstructions are present between a height of 2 1/2 feet and 10 feet above the adjoining street level, except as permitted by Section 8-1-6(B) of this Code.

In the interest of traffic safety, a 35-foot clear vision triangle must be maintained from the edge of the right-of-way at all street intersections. A clear space must be maintained in this triangle between 2½ and 10 feet above the adjacent street elevation. Exceptions to this requirement include public utility poles; ornamental fences not exceeding four feet in height providing that the ratio of the solid portion of the fence to the open shall not exceed 1 to 4 (see below); traffic signs or signals; and signs mounted seven feet or more above the ground whose supports are so constructed as to minimize the obstruction of view. Properties that adjoin State highways are subject to more stringent Colorado Department of Transportation regulations.

All motor vehicle access points to a site must be designed with traffic, bicycle and pedestrian safety in mind. Appropriate sight lines for vehicles entering and exiting a site, as well as those approaching internal intersections shall be maintained.



Sight triangle details



Detail of fencing within a sight triangle

10-5-7(E) Existing Landscaping:

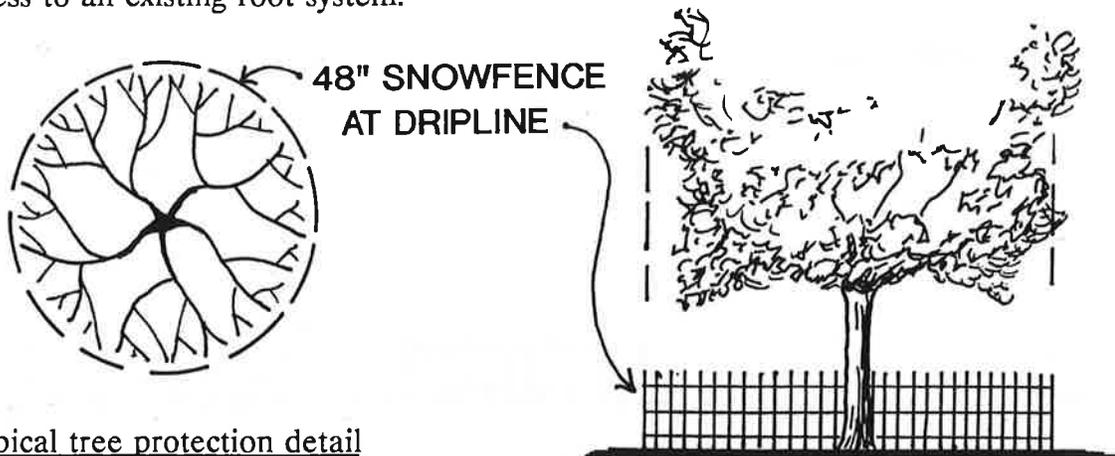
1. The owner or developer shall, to the extent possible, incorporate existing healthy mature trees and shrubs into the landscape design. Existing trees and other plants in reasonably healthy condition may be removed only if the owner or developer has satisfactorily demonstrated to the City that site design restrictions necessitate their removal. An evaluation of the existing landscaping proposed to be removed may be required. If development requires removal of healthy mature trees, new trees of not less than the minimum caliper sizes specified in Section 10-5-8(E) shall be installed at a ratio of two new trees planted for every one tree removed.

All existing trees on a site that are 4" caliper or larger must be located and identified on the landscape plan. Every effort to save existing healthy trees shall be made in site planning activities. Trees that are to be removed shall be clearly identified on the landscape plan along with a note stating the reasons for their removal.

2. All existing trees and plants that are incorporated into the landscape design must be adequately protected by means of temporary fencing and be properly maintained during construction to insure their survival.

Existing trees shall be protected from root, trunk and crown damage during construction. Such protection shall include the installation and maintenance of a sturdy temporary fence at least 4 feet in height, around the outer dripline of the tree.

In situations where the roots of an existing tree must be disturbed by cut, fill, trenching, compacting or paving activities, the landscape plan shall note compensatory measures to minimize the effects of such disturbances. Topsoil stripping activities should be kept to a minimum around existing trees. The natural grade should be preserved within the dripline of these trees through the use of retaining walls and careful site planning. Aeration and irrigation systems installed under newly paved areas will minimize the stress to an existing root system.



Typical tree protection detail

10-5-7(F) Screening of Site: In addition to the screening of parking areas required by Section 10-5-76(A)3, outside trash receptacles, loading docks, open storage areas, and utility boxes shall be screened from public sidewalks, streets and other areas from which the property is visible. Screening for such areas shall be opaque and be provided for by means of walls, solid fences, or Evergreen plantings. The following are special requirements for utility boxes and trash receptacles:

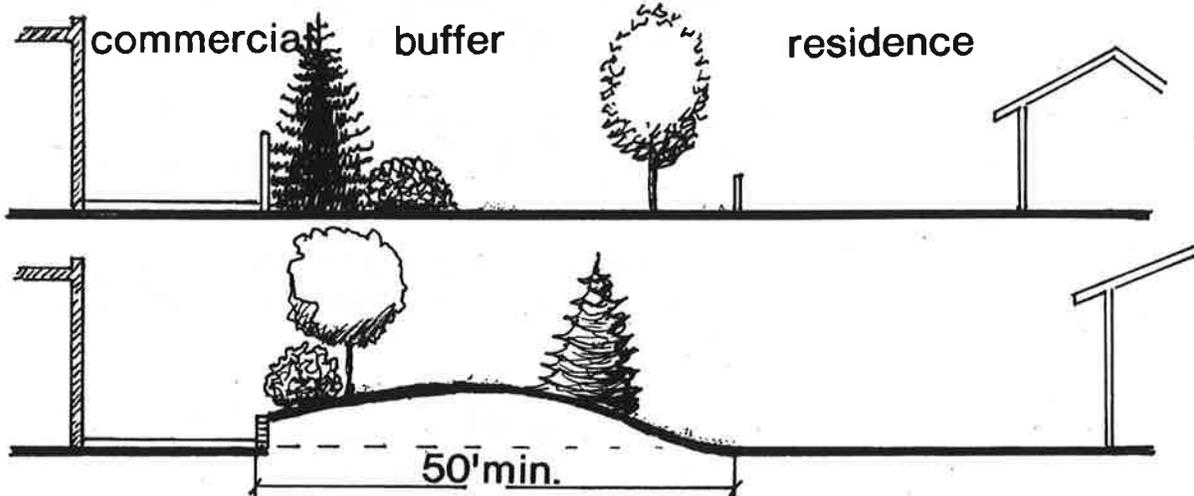
1. Utility Boxes: All utility boxes, which include electric transformers, switch gearboxes, cable television boxes, telephone pedestals and boxes, shall be screened on the sides visible from the public rights-of-way that are not used for service access.

Appropriately sized evergreen or dense deciduous shrubs should be installed to provide screening. The clustering of utility boxes is encouraged to minimize the need for such screening. Compatible walls, planters or fences may be used to screen utility purposes in cases where they are used elsewhere on site to screen trash storage or parking.

2. Trash Receptacles: Trash receptacles and dumpsters shall be entirely screened from view and enclosed by an solid, gated wall at least six feet in height. The trash enclosure shall be sited so the service vehicle can conveniently access the enclosure and maneuver without backing onto a public right-of-way.

The enclosures should be of a material and color matching other site structures. The use of plant material to further screen trash storage enclosures is encouraged wherever possible.

3. Buffer Areas: The 50' of unobstructed open space required to buffer adjacent residential areas from B-P, PD-C, and PD-I zoned sites should be appropriately landscaped to screen such uses from view. Where possible, berms, fences, walls and plant material should be combined to accomplish this. Some examples of appropriate buffering are shown below:



10-5-7(G) Public and Private Open Space, Detention Areas and Drainage Channels. All public and private open space, storm water detention areas, and drainage channels, not designated as natural areas in accordance with Section 7-4-2 of this Code must be designed and landscaped in such a manner as to blend properly with the property and adjacent areas. Slopes shall not exceed 4:1, except upon the approval of the DRC, which approval may be granted in such instances where the natural topography is to be retained. Wetlands on public and private property shall be maintained in their natural state and may be credited, in kind, to a portion of the open space, public land dedication and floodplain requirements. An overall grading plan must be submitted for the review and approval by the City's Director of Public Services prior to the construction or landscaping of any public and private open space, storm water detention areas or drainage channels not designated as natural areas.

1. Landscaping Materials: The following types and quantities of landscaping materials or other improvements shall be required within any public and private open space or storm water detention area, except in natural areas or wetlands:

a. All types of trees, shrubs, grass or other ground cover of a variety or blend of varieties and quantities as listed in the Landscape Manual.

b. Natural and/or structural landscaping features of types, sizes, quantities and in locations approved by the DRC.

c. In instances where public and private open space, storm water detention areas or drainage channels are located within a 100-year floodplain, landscaping material quantities may be adjusted by the City Floodplain Administrator or by the Planning Commission after referral comments are received from the Urban Drainage and Flood Control District.

d. Placement of floatable, erodible landscape materials shall not be permitted in drainage, storm water detention, or 100-year floodplain areas.

2. Irrigation: The landscaping located in public or private open space and storm water detention areas shall be irrigated in the same manner as described in Section 10-5-6.

3. Maintenance: Landscaped public and private open space and storm water detention areas shall be maintained as required in Section

10-5-10, except for designated natural areas and wetlands which shall be maintained as required in Section 7-4-2. Failure to maintain these areas shall be unlawful and subject to penalties as set forth in Section 1-4-1 of this Code.

## 8. LANDSCAPE MATERIALS

10-5-8 Except for all designated natural areas and wetlands, landscaping materials shall be placed or planted according to the provisions of this Chapter. In addition, Section 10-5-12 provides criteria for xeriscape plans. Only those species which are healthy and compatible with the local climate and the site soil characteristics, drainage and water supply shall be planted. The following criteria are applicable to both traditional and xeriscape plans.

10-5-8(A) Type of Material: The quality and quantity of landscaping materials shall comply with the requirements of the Landscape Manual. The landscaping materials recommended to meet the requirements of this Chapter for traditional landscaping and for xeriscape plans are listed in the Landscape Manual.

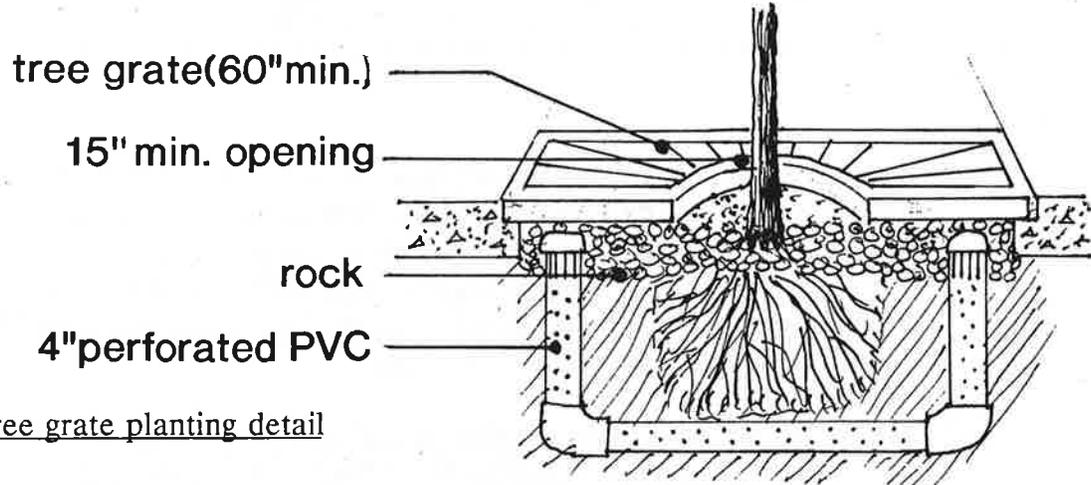
The plant materials listed in Appendixes B, C and D are recommended and approved for use in the City of Littleton. Xeriscape plants are identified as low water (LW) and very low water (VLW) requiring species. Approval for use in rights-of-way (R) and minimum spacings are also indicated in the tree lists. The minimum planting sizes for each type of plant are specified in the headings. Where a size range is specified on a landscape plan, the average size of the plant material installed shall equal or exceed the median of the specified range. For example: if 10-15' spruce are specified, the trees planted shall average at least 12½' in height.

Due to the extensive variety of trees, shrubs, perennials and ground covers available at local nurseries, non-prohibited species that are not on the City lists may be planted provided that they be replaced by an appropriate approved species should they fail to survive. The person preparing the landscape plan should use appropriate plant selections and spacings for specific locations and purposes.

Designing a landscape which has color, interest and diversity in all seasons should be the goal in preparing a plan. In general, a minimum of one third of the plant material on any site should be evergreen. On large sites the selection of shade trees should include both slow and fast growing species. Plans which have several species of shade trees, while maintaining the continuity of the neighboring streetscape are desired. The

predominant or exclusive use of any one plant species should be avoided to aid in disease control and prevent catastrophic epidemics similar to Dutch Elm Disease.

Proper excavation, planting depth, backfilling and guying are required to improve plant health and survival. All plant material shall be installed in accordance with the recommendations of the Colorado Nurseryman's Association (CNA). CNA planting guides are available at member nurseries. Trees planted in grates within paved areas and in planters shall have adequate aeration, irrigation and drainage systems.



Typical tree grate planting detail

**10-5-7(B) Use of Non-Living Materials:** No artificial trees, shrubs, turf or plants shall be used. Non-living landscaping such as decorative or pattern concrete, brick pavers, wood chips, decorative rock or other similar materials, may be used to meet the requirements for landscaping but shall not exceed 50% of the total required landscaped area. Paved areas used for motor vehicle access and parking shall not be included in the land area required to fulfill the unobstructed open space requirements of this Title.

Non-living landscaping shall be integrated into the living landscape. Clusters of plantings and other vertical elements should be used to break up large expanses of wood or rock mulch.

**10-5-8(B) Plants Prohibited Near Sidewalks, Streets, and Utility Lines:** Plants selected shall not by their growth habits obstruct, restrict, or conflict with the safe use of any roadway, sidewalk, alley or utilities.

1. **Trees:** Salix trees and all fruit trees, except for Crab Apple, shall not be planted within 25 feet of a public right-of-way. This restriction is due to the safety hazard created by fruit and twigs dropping onto the

streets and sidewalks. No trees shall be planted within 12 feet of overhead utility lines.

2. Shrubs and Other Plant Material: Plants which have thorns, spines or prickles shall not be planted or maintained upon public rights-of-way, or be closer than 12 inches, measured horizontally, from walks or other pedestrian areas.

10-5-8(C) Prohibited Species: The planting of Chinese and Siberian elms is prohibited. Such elms tend to be prone to disease, weak branches, suckering and the uncontrollable spread of seeds. American elms are excluded from the prohibition. Cotton bearing cottonwoods (female populus species), Russian Olive and box elders are prohibited due to the uncontrollable spread of seeds.

10-5-8(D) Grasses: No more than 15% of multiple family and non-residential sites shall be planted in bluegrass. Bluegrass shall be limited to the pedestrian traffic areas of both multiple family and non-residential sites. Any additional turf shall be of varieties with lower water requirements. Appropriate seed mixes for grass types and details of proper soil preparation are provided in the Landscape Manual.

Soil preparation is required in all turf areas. It is recommended that a soil analysis be used to determine the appropriate amount and types of amendments to be added. In general three yards of organic material per 1000 sq.ft. should be incorporated into the top eight inches of existing soil by means of thoroughly cross ripping or rototilling. Nutrient and pH abnormalities should be addressed by applications of chemical fertilizers. Most dryland and native seed areas do not require as extensive soil preparation.

Tall Fescue sod is an attractive alternative to bluegrass that requires significantly less supplemental irrigation. The use of Tall Fescue or other more drought tolerant types of sod which may become available is strongly encouraged. In order to promote mowing safety and efficient irrigation, the maximum slope that shall be allowed in any turf area is 4:1.

Due to the predominance of expansive soils in this region, irrigated turf should be kept a minimum distance of five feet from any building foundation. To protect trunks from wounds and promote a healthy root system, trees planted in turf areas should have a minimum 48" diameter mulch ring surrounding the trunk. All sod should be installed within 36 hours of cutting and shall be rolled, fertilized and irrigated immediately after installation.

In many cases seeding is an acceptable alternative to installing sod as it greatly increases the types of lawn grasses available for use. The following types of cool season grasses are acceptable as turf grasses provided that several types are combined into an

appropriate mixture: Tall Fescue, Hard Fescue, Chewings Fescue, Creeping Red Fescue, Perennial Ryegrass, and Crested Wheatgrass. A blend of the warm season species Blue Grama and Buffalo Grass make an attractive and drought tolerant lawn. Warm season grasses will generally "green up" 3-4 weeks later in the spring and "brown out" 3-4 weeks sooner in the fall than cool season species.

10-5-7(H) Seeding: All future development phases within a site shall be seeded with an appropriate seed mixture to prevent wind and water erosion during the time the site remains undeveloped. A guarantee required under Section 10-5-9(C) for seeding in storm water detention areas and future development phases shall not be released until the grass required to comply with these standards has become established in a manner which prevents erosion.

To provide a natural cover for large non-irrigated areas a seed mixture should be specified that allows for soil type, time of planting, exposure, slope and maintenance schedule. Some species to consider include: Canada Bluegrass, Annual Ryegrass, Side Oats Grama, Sheep Fescue, Smooth Brome, Sand Dropseed, and Intermediate, Western and Slender Wheatgrasses. The inclusion of wildflowers in these dryland seed mixtures is encouraged. Depending upon site conditions and size, these grass mixtures may be drilled, broadcast or hydroseeded.

In most cases seeded and non-irrigated areas are addressed in a project's Erosion Control Plan which is submitted along with the Final Drainage Study. The Landscape Plan shall be consistent with this Erosion Control Plan. Hydromulch, soil sealants, crimped straw mulch and erosion control mats are all acceptable methods for stabilizing seed beds and steep slopes. The method selected should be dependent upon soil, seasonal, slope and site factors. While an irrigation system is not required in dryland seed areas, erosion control and continual maintenance during establishment are. This may involve reseeding, mowing, temporary irrigation and remulching.

10-5-8(E) Minimum Landscape Material Sizes: Trees and shrubs shall at a minimum be the following sizes at the time of planting:

1. Large Deciduous Trees (shade trees): All shade trees shall be a minimum of two (2) inches in caliper. The caliper shall be measured six (6) inches above the soil line.

2. Ornamental Deciduous Trees: All ornamental trees shall be a minimum of one and one-half (1 1/2) inches in caliper. The caliper shall be measured six (6) inches above the soil line.

3. Coniferous (evergreen) Trees: Coniferous trees shall be minimum of six (6) feet in height, with the exception of the mugho pine, which shall have a 24-inch minimum branch spread.

4. Shrubs (evergreen and deciduous): All shrubs shall be of a size generally known in the nursery industry requiring a five (5) gallon container.

5. Rock or Stone: All rock and stone used in the landscape design shall be a minimum of 3/4 inch in size, and installed to a minimum depth of 2 inches over a water permeable landscape fabric except where horizontally spreading shrubs or groundcovers are planted. A nonpermeable landscape fabric shall be permitted if the building foundation design requires soil moisture protection at the perimeter.

6. Mulch: There is no minimum size requirement for mulch used in the landscape design. However, the mulch shall be fibrous so that it binds together to prevent erosion.

In order to control weeds and aid in moisture retention all shrub beds should be covered with some type of wood or rock mulch. A water permeable landscape fabric must be used under rock in shrub beds. Polyethelene sheets prevent air and water from reaching the roots of plants and may only be used adjacent to building foundations when recommended by the foundation engineer's report. No plants should be located in areas where such non-permeable weed barriers are required.

Large expanses of uninterrupted rock should be avoided. Naturally rounded rock (cobblestone and river rock) should not be installed on slopes where foot traffic or gravity will cause it to accumulate at the bottom of the slope. Quarried rocks with irregular and angular shapes ("rip rap") tend to hold better on slopes. Larger size rock (3" or larger in diameter) should be used in drainage areas. Cobblestone is preferred over rip rap in these areas.

Weed control fabric is not required under wood mulches but is still recommended. This allows for the planting of flowers and ground covers in beds. It is important to note that wood mulches will require more intensive maintenance than rock. Mulches should be installed at least 4" deep and will require replenishment every 3-4 years. Larger size bark and fibrous mulches are preferred as they are less susceptible to displacement by wind or water.

Turf areas and shrub beds must be separated by some type of edging or border. Where steel edging is used it shall be a minimum of 14 gauge by 4" deep and secured by pins at least every 5 feet. It is important that steel edging be installed properly and reset to the proper depth every spring for safety purposes. Brick or concrete mowing strips make an attractive border that is easily maintained. The use of wood or plastic edging is strongly discouraged due to rapid deterioration and maintenance problems.

## 9. COMPLETION

- 10-5-9(A) Substitutions: All substitutions of plant material on an approved landscape plan must be in accordance with the plant lists included in the Landscape Manual and approved by the Planning Division.
- 10-5-9(B) Inspections: Landscaping shall be installed and completed in compliance with the approved landscape plan. Upon completion, the owner or developer shall submit a letter certifying that the landscaping installation is in compliance with the approved plans and that no substitutions have been made without receiving approval from the Planning Division. All trees and shrubs shall be identified by tags prior to inspection. A Certificate of Occupancy shall not be issued until the improvements are inspected and approved by the City's Planning Division, unless an assurance is provided and approved according to Section 10-5-9(C).
- 10-5-9(C) Assurance Required Prior to Issuance of Certificate of Occupancy: In extenuating circumstances, such as adverse weather, where occupancy is requested prior to completion of landscaping, the owner or developer shall enter into an agreement with the City guaranteeing that the required landscaping will be completed within the next planting season at a date specified by the Planning Division staff. The owner/developer shall provide a cost estimate, from a qualified individual or firm, for any landscaping not installed at the time the certificate of occupancy is requested. The cost estimate shall include landscaping, irrigation system, and labor. Assurance equal to 125% of the estimated landscaping costs, including installation, shall be provided by the owner or developer. The assurance shall be in the form of an irrevocable letter of credit, escrow account, performance bond, or cash, or such other form as may be acceptable to the City Attorney, and shall not be released until all landscaping and irrigation systems shown on the approved landscape plan are installed and accepted by the Planning Division.
- 10-5-9(D) Completion of Landscape Improvements Using Guarantee: If the installation of the landscaping is not completed within the period specified in the agreement, or within an extension time authorized by the Planning Division, the guarantee may be used by the City to complete the installation.

## 10. MAINTENANCE

10-5-10(A) Maintenance of Required Landscaping on Private Property and Public Rights-of-way: The owner(s) of multiple family residential, business and industrial property shall be responsible for the proper maintenance of the landscaping and the irrigation systems on their property and on that portion of the public right-of-way between the curb line and the adjoining property line in which landscaping has been placed. The landscaping in public rights-of-way shall be maintained to meet the following standards, except that those areas designated as natural areas or large tracts of vacant land shall be maintained as provided in Section 7-4-3.

1. Unless exempted under the provisions of Section 7-4-3, grass shall not exceed eight inches (8") in height and shall be kept free of weeds. Grass shall not encroach into any public right-of-way intended for pedestrian or vehicular use.

Turf areas should be mowed regularly to a proper height using a mulching type mower with a sharpened blade. Bagging grass clippings is discouraged. Regular edging will preserve a neat appearance and allow for easier snow removal. Regular fertilization of turf areas will improve their health and appearance and reduce watering requirements. Aeration will improve soil permeability and turf root systems.

2. Rock, mulch, or ground cover areas shall be kept free of weeds.

Regular control of weeds by pulling or spraying will improve the appearance and health of a landscape. Weed control barriers and continual replenishment of wood mulches should minimize this problem.

3. Trees and shrubs shall not overhang or encroach upon walkways, drives, parking areas, and traffic signs to the extent that they interfere with the intended use of those facilities. More specifically, tree limbs which overhang the public sidewalk shall be kept trimmed to a height of at least ten feet (10') above the sidewalk level. Tree limbs which overhang the public street shall be kept trimmed to a height of at least thirteen feet (13') above the street level.

Regular pruning of trees and shrubs will promote both their health and appearance. Natural control of disease and insects is preferred over chemical control wherever possible.

10-5-10(B) Replacement of Materials: Dead or diseased plant material shall be replaced with the same type of plant material and placed in substantially

the same location as shown on the approved SDP. Substitutions may be allowed as replacement material provided the material is included in the plant lists of the Landscape Manual and is approved for conformance by the Planning Division. Replacement of plants may be delayed whenever the Planning Division determines that extenuating circumstances, beyond the owner's control, prevent the immediate replacement of dead or unhealthy plants. The provisions of Section 10-5-9, Subsections (C) and (D) regarding completion guarantees shall apply in any instance where replacement plantings are delayed.

10-5-10(C) Failure to Maintain: The provisions of Section 10-1-4 regarding violations shall apply if it is found that adequate maintenance is not being performed according to this Section.

## 11. NONCONFORMING USES

10-5-12 There may exist developments of land which were legal prior to the adoption of this Chapter, but which under the terms hereof, are now prohibited, restricted, or regulated. Nonconforming landscaping shall be permitted to continue until development or modification of the property requires submission and approval of an SDP, at which time the property shall be brought into compliance with this Chapter.

## 12. VARIANCES

10-5-13(A) All Zone Districts, except for PD and PD Overlay Zones: The DRC may grant administrative variances to the unobstructed open space requirements of Chapter 2 and to the requirements of this Chapter provided the following conditions are met:

1. All applications for variances shall be filed, processed and reviewed in conformance with Title 10, Chapter 7.
2. The strict application of the regulation in question is unreasonable given the development proposal or the property has extraordinary or exceptional physical conditions which prohibit strict compliance with this Chapter.
3. The essential character of the neighborhood in which the property is located will not be altered.
4. Adequate screening of conflicting land uses will be preserved.

5. All landscaping materials which were prescribed to be planted in the landscape areas, that were reduced or eliminated, shall be relocated to other areas within the site.

6. The size of plants to be planted or relocated shall be increased by doubling the minimum sizes required by Section 10-5-8(E).

10-5-13(B) PD and PD Overlay Zones: Amendments pertaining to landscape plans submitted with a general PD plan or final PD plan shall be processed in conformance with Sections 10-2-23, Subsections (H) and (I) of this Title. In the event an administrative amendment is granted, the provisions of Section 10-5-13(A) shall also apply.

APPENDIX A  
DEFINITIONS

**BUFFER AREAS:** A landscaped area which physically separates and visually screens adjacent land uses. Specific buffer area standards are established in the B-P, T and PD Zone Districts.

**COMMUNITY DEVELOPMENT:** The City's Department of Community Development.

**DRC:** The City's Development Review Committee.

**DWELLING, MULTIPLE FAMILY:** Any building structurally divided into two (2) or more separate dwelling units.

**FENCE:** A structure designed or intended to constitute an enclosure or barrier, either physical or visual, including a wall or a planter not exceeding twenty four inches (24") in width, or other similar structure.

**GRADE:** The average finished ground level of the land immediately adjacent to and surrounding the building.

**LANDSCAPE DESIGN CRITERIA MANUAL:** Administrative guidelines authorized by Section 10-5-3 and which shall include landscape design, installation and maintenance standards as well as plan review procedures. This Landscape Manual shall control landscape installation and landscape maintenance in the City.

**LANDSCAPE MANUAL:** The City's Landscape Design Criteria Manual.

**LANDSCAPE MAINTENANCE:** The necessary watering, weeding, pruning, pest control, fertilization, mowing and replacement of dead or diseased plant materials; and the proper maintenance of irrigation systems including adjustments, replacements, repairs and cleaning.

**LANDSCAPE PLAN:** A scaled plan which illustrates the location and types of landscaping to be installed. A landscape plan is a component of an SDP or a final PD plan.

**LANDSCAPING:** A combination of living plants such as trees, shrubs, vines, ground cover, flowers, or grass; natural features such as rock, stone, or mulch; and structural features such as fountains, reflecting pools, art works, screen walls, fences, benches, decorative paving, ornamental concrete or stonework areas. Weeds and artificial plants shall not be considered landscaping.

**LANDSCAPING, TRADITIONAL:** Landscaping characterized by the predominant use of bluegrass turf and other plant materials which are high in water consumption.

**OPEN SPACE, COMMON:** A parcel of land, an area of water, or a combination of land and water within a development which is designed and intended primarily for the use and enjoyment of occupants and owners of the development. In agricultural zone districts, land areas used for pasturage, row crops, orchards and other similar uses shall be considered unobstructed open space.

**OPEN SPACE, UNOBSTRUCTED:** An area upon which no structure may be erected or surface area utilized for storage or for vehicular movement or parking.

**PD:** Planned Development.

**PLANNED DEVELOPMENT.** A zone district granted for a parcel of land originally owned by a single owner or entity involving a unified site design for all elements of the development including, but not limited to: residential, commercial, industrial and mixed uses; public and private open spaces; and transportation patterns.

**PLANNED DEVELOPMENT PLAN:** A plan containing the provisions for the development of any area zoned planned development, binding on the property owner, including, but not limited to, easements, covenants, and restrictions relating to use, location and bulk of buildings and other structures; intensity of use or density of development; utilities, private and public streets, ways and roads, pedestrian ways and area; parking facilities; common open space; drainage provisions, and other public facilities. As used in this Section, "provisions for development" means the written and graphic materials referred to in this Title.

**RETAINING WALL:** A wall used or intended to be used to resist the lateral displacement of earth.

**SDP:** Site Development Plan.

**SITE DEVELOPMENT PLAN:** A detailed site plan which is required to be submitted prior to the issuance of a building permit for any new structures to be located in any zone district, except single family dwellings.

**STREET TREES:** Defined in Section 8-4-1 of the City Code.

**WETLANDS:** Those areas that inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and other similar areas.

**XERISCAPE:** Landscaping which is specifically intended to achieve water conservation.

APPENDIX B

SHADE TREES Minimum spacing: 30 feet Minimum size: 2" caliper B&B			
BOTANICAL NAME	COMMON NAME	VARIETIES	R.O.W./ Xeriscape
<i>Acer platanoides</i>	NORWAY MAPLE	Schwedler, Emerald Queen, Jade Glen	R
<i>Acer rubrum</i>	RED MAPLE	Red Sunset	R
<i>Acer saccharinum</i>	SILVER MAPLE		
<i>Aesculus hippocastanum</i>	HORSECHESTNUT		R
<i>Catalpa speciosa</i>	WESTERN CATALPA		R/LW
<i>Celtis occidentalis</i>	HACKBERRY		R/LW
<i>Fraxinus americana</i>	WHITE ASH	Autumn Purple, Rosehill	R
<i>Fraxinus pennsylvanica lanceolata</i>	GREEN ASH	Marshall Seedless, Summit, Patmore	R/LW
<i>Gleditsia triancanthos inermis</i>	HONEYLOCUST	Skyline, Sunburst, Moraine, Imperial, Shademaster	R/LW
<i>Gymnocladus dioicus</i>	KENTUCKY COFFEETREE		R/LW
<i>Platanus occidentalis</i>	SYCAMORE		R
<i>Populus acuminata</i>	LANCELEAF COTTONWOOD		
<i>Quercus borealis</i>	NORTHERN RED OAK		R
<i>Quercus macrocarpa</i>	BUR OAK		R/VLW
<i>Quercus robur</i>	ENGLISH OAK		R
<i>Tilia americana</i>	AMERICAN LINDEN		R

ORNAMENTAL TREES Minimum spacing: 20 feet Minimum size: 1½" caliper			
BOTANICAL NAME	COMMON NAME	VARIETIES	R.O.W./ Xeriscape
<i>Acer ginnala</i>	AMUR MAPLE		
<i>Aesculus glabra</i>	OHIO BUCKEYE		R
<i>Catalpa ovata</i>	CHINESE CATALPA		
<i>Cercis canadensis</i>	REDBUD		
<i>Crataegus species</i>	HAWTHORN	Washington, Downy, Cockspur	
<i>Koelreutaria paniculata</i>	GOLDEN RAIN TREE		R/LW
<i>Malus species</i>	CRABAPPLE ( varieties resistant to fire blight)	Dolga, Royalty, Radiant, Etc.	
<i>Populus tremuloides</i>	ASPEN		
<i>Prunus newport</i>	NEWPORT PLUM		
<i>Prunus virginiana melanocarpa</i>	CANADA RED CHERRY		R
<i>Sorbus aucuparia</i>	EUROPEAN MTN. ASH		R
<i>Tilia cordata</i>	LITTLELEAF LINDEN	Greenspire, Glen Leven	R
EVERGREEN TREES Minimum spacing: 20 ft.(or 10 ft.*) Minimum size: 6 ft.			
<i>Abies concolor</i>	WHITE FIR		
<i>Juniperus scopulorum</i>	ROCKY MOUNTAIN JUNIPER *		LW
<i>Picea pungens glauca</i>	COLORADO BLUE SPRUCE		
<i>Pinus aristata</i>	BRISTLECONE PINE *		
<i>Pinus cembroides edulis</i>	PINYON PINE *		VLW
<i>Pinus nigra</i>	AUSTRIAN PINE		R
<i>Pinus ponderosa</i>	PONDEROSA PINE		R/LW
<i>Pinus sylvestris</i>	SCOTCH PINE		

APPENDIX C

DECIDUOUS SHRUBS Minimum size: #5 container			
BOTANICAL NAME	COMMON NAME	SIZE	XERISCAPE
Amelanchier	SERVICEBERRY	T	LW
Berberis thunbergia	JAPANESE BARBERRY	M,S	LW
Caragana arborescens	SIBERIAN PEASHRUB	T	LW
Caryopteris clandonensis	BLUEMIST SPIREA	S	LW
Cercocarpus montanus	MOUNTAIN MAHOGANY	M	LW
Cornus stolonifera	RED & YELLOWTWIG DOGWOOD	T	
Cornus alba	VARIEGATED DOGWOOD	M	
Cotoneaster acutifolia	PEKING COTONEASTER	M	
Cotoneaster divaricata	SPREADING COTONEASTER	S	LW
Euonymus alatus	BURNING BUSH	M	
Forsythia intermedia	FORSYTHIA	T	
Hibiscus syriacus	ALTHEA(ROSE-OF-SHARON)	T	
Hydrangea paniculata	PEEGEE HYDRANGEA	S	
Ligustrum vulgare	COMMON PRIVET	M	
Lonicera compacta nana	DWARF HONEYSUCKLE	S	
Lonicera zabeli	ZABEL'S HONEYSUCKLE	T	
Philadelphus sp.	MOCKORANGE	M,T	
Physocarpus sp.	NINEBARK	M,T	
Potentilla sp.	POTENTILLA(CINQUEFOIL)	S	LW
Prunus americana	AMERICAN PLUM	T	LW
Prunus besseyi	SAND CHERRY	M	LW
Prunus cistena	CISTENA PLUM	M	
Rhamnus sp.	BUCKTHORN	T	
Rhus sp.	SUMAC	M,T	LW
Ribes alpinum	ALPINE CURRANT	S	

Ribes aureum	GOLDEN CURRENT	M	LW
Rosa foetida	SHRUB ROSE	M	LW
Salix sp.	WILLOW	M,T	
Sambucus sp.	ELDER	T	
Shepherdia argentea	SILVER BUFFALOBERRY	T	LW
Spiraea sp.	SPIREA	S,M	
Symphocarpus sp.	SNOW & CORALBERRY	S	
Syringa sp.	LILAC	T	
Viburnum sp.	VIBURNUM	T	
<b>EVERGREEN SHRUBS</b> Minimum size: #5 container			
Euonymus manhattan	MANHATTAN EUONYMUS	M	
Euonymus sarcoxie	SARCOXIE EUONYMUS	T	
Juniperus chinensis	PFITZER & GOLD TIP JUNIPER	M,T	LW
Juniperus horizontalis	SPREADING JUNIPERS	S	LW
Juniperus sabina	TAMMY, BUFFALO & BROADMOOR JUNIPER	M	LW
Mahonia aquifolium	OREGONGRAPE	S,M	
Picea glauca albertiana	ALBERTA SPRUCE	M	
Pinus mugo	MUGHO PINE	M	LW
Pyracantha sp.	PYRACANTHA	M,T	
Yucca sp.	YUCCA	S	VLW

APPENDIX D

GROUND COVERS			
BOTANICAL NAME	COMMON NAME	XERISCAPE	NOTES
<i>Arctostaphylos uva-ursi</i>	KINNIKINNICK		Evergreen
<i>Ajuga reptans</i>	AJUGA		Evergreen
<i>Antennaria rosea</i>	PUSSYTOES	VLW	
<i>Artemesia</i>	SILVERMOUND	VLW	
<i>Cerastium tomentosum</i>	SNOW-IN-SUMMER	VLW	Evergreen
<i>Convallaria majalis</i>	LILY OF THE VALLEY		Shaded areas
<i>Dianthus deltoides</i>	MAIDEN PINK		
<i>Delosperma nubigenum</i>	HARDY ICEPLANT	VLW	
<i>Euonymus fortunei</i>	WINTERCREEPER		Evergreen
<i>Mahonia repens</i>	CREEPING GRAPEHOLLY	LW	Evergreen
<i>Phlox sublata</i>	CREEPING PHLOX		
<i>Polygonum affine</i>	HIMALAYAN BORDER JEWEL	LW	
<i>Sedum species</i>	SEDUM (STONECROP)	VLW	Evergreen
<i>Thymus pseudolanuginosus</i>	WOOLY THYME	VLW	
<i>Vinca minor</i>	PERIWINKLE		Evergreen, shaded areas

LEGEND:

R.O.W.: "R" indicates a tree approved for planting in a Right-of-way.

Xeriscape: "LW" indicates a low water requiring species.  
 "VLW" indicates a very low water requiring species.

Size: "B&B" indicates a tree that is balled and burlapped.  
 "S" indicates a small shrub (less than 4 feet in height).  
 "M" indicates a medium sized shrub (4 to 7 feet in height).  
 "T" indicates a tall shrub (over 7 feet in height).

## APPENDIX E

### SUBMISSION REQUIREMENTS

#### LANDSCAPE PLAN

- A. A landscape plan on one or more 24" x 36" sheets of paper. The drawing shall include the following information:
1. Identification and Description:
    - \_\_\_ a. Written and graphic indication of the scale, which shall not be smaller than 1"=50' (1"=20' is preferable).
    - \_\_\_ b. North arrow.
    - \_\_\_ c. Date of preparation.
    - \_\_\_ d. Name, address, and telephone number of the person and/or firm who prepared the landscape plan. (A landscape plan prepared by a landscape architect or designer is preferred, but is not required).
  2. Landscape plan details:
    - \_\_\_ a. Topographic contours and necessary spot elevations adequately identifying areas needing erosion protection, and berms, slopes, and walls which provide screening.
    - \_\_\_ b. Location, size, material and color of all existing and proposed structures on the site, including buildings, fences and walls.
    - \_\_\_ c. Location of all property boundaries.
    - \_\_\_ d. Existing and proposed utility easements and above-ground and underground facilities, including water, storm water, sanitary sewer, telephone, cable television, electrical and gas facilities.
    - \_\_\_ e. The location of all adjacent streets and rights-of-way.
    - \_\_\_ f. Location of all streets and rights-of-way within the site.
    - \_\_\_ g. Sight distance triangles, as defined in Section 10-4-1(A) 4 and illustrated on page 5 of this manual.

- \_\_\_\_\_ h. Adjacent land uses and zoning.
- \_\_\_\_\_ i. Location and description of all landscaping and structures on adjacent properties located within 25 feet of the site.
- \_\_\_\_\_ j. Location, quantity, type, and size of all existing and proposed plants. (The size shown for plants shall reflect their estimated size upon maturity.)
- \_\_\_\_\_ k. A key and legend listing all existing and proposed plants indicating both common and botanical names.
- \_\_\_\_\_ l. Location, quantity, type and size of all existing landscaping proposed for removal or relocation.
- \_\_\_\_\_ m. A key and legend listing the plants proposed for removal or relocation using both common and botanical names.
- \_\_\_\_\_ n. Location, size and treatment of all non-living landscaping (i.e., mulch, rock, paving, ornamental concrete, etc.).
- \_\_\_\_\_ o. A table of land area calculations in square feet which include the total site area, the unobstructed open space, parking, and landscaped areas, and non-living landscaped areas.
- \_\_\_\_\_ p. Description of seed mixture application method and erosion control program for areas to be seeded.
- \_\_\_\_\_ q. A description of soil preparation in turf areas.
- \_\_\_\_\_ r. Location of snow storage areas for parking lot plowing.

3. Certification:

- \_\_\_\_\_ a. The following signature block signed by the owner or designated agent:

"I, \_\_\_\_\_, owner, or designated agent thereof, shall complete the landscape improvements shown on this plan. Maintenance of the landscape improvements shall comply with Title 10, Chapter 5 of the Littleton City Code. It is hereby acknowledged that maintenance of the landscape improvements is not personal to the developer, but runs with the land and shall be the responsibility of all current and future owners/occupants.

\_\_\_\_\_  
Signature of Owner or Agent"

IRRIGATION PLAN

B. An irrigation plan drawn at the same scale as the landscape plan on one or more 24" x 36" sheets of paper. The drawing shall include the following information:

1. Identification and Description:

- \_\_\_\_\_ a. Written and graphic indication of the scale, which shall not be smaller than 1"=50' (1"=20' is preferable).
- \_\_\_\_\_ b. North arrow.
- \_\_\_\_\_ c. Date of preparation.
- \_\_\_\_\_ d. Name, address, and telephone number of the person and/or firm who prepared the irrigation plan. (The design of the system shall be certified by a qualified irrigation designer and installed by an individual meeting the licensing and permitting requirements of the City.)

2. Irrigation plan details:

- \_\_\_\_\_ a. Details of an automatic underground irrigation system, such as type and sizes of controllers, backflow preventers, valves, sprinkler heads and piping.

3. Certification:

- \_\_\_\_\_ a. The following signature block signed by the system designer:

"I (We), the undersigned, do hereby certify that the irrigation system shall provide full coverage on all plant material areas, and is adequate to meet the requirements of Section 10-5-6 of the Littleton City Code.

\_\_\_\_\_  
Signature of Designer"

PHASED DEVELOPMENTS

C. For all developments containing more than one phase, a phase development plan including a time schedule for installation of landscaping and street trees shall be submitted for all phases and adjacent rights-of-way.

**PLANT LIST**

KEY	UDAN	CIVILIAN NAME/ BOTANICAL NAME	SIZE & SPACING
TREES			
AP	14	AUSTRIAN PINE <i>Pinus nigra</i>	8" I/B/B
BS	8	COLORADO BLUE SPRUCE <i>Prinos piceus glauca</i>	8" I/B/B
CR	5	CANADA RED CHERRY <i>Prinos nigropurpurea - Shubertii</i>	7" Caliper B/B
CL	9	GLENEVINK LINDBEN <i>Tilia cordata - 'Silva nitida'</i>	3" Caliper B/B M O C
MA	12	MARSHALL SEEDLESS ASH <i>Fraxinus (eximio-jamaica) lanceolata</i>	2 1/2" Caliper B/B
MO	6	NORTHERN RED OAK <i>Quercus borealis</i>	2 1/2" Caliper B/B
RM	7	RED SUNGUM MAPLE <i>Acer rubrum - 'Red Sunray'</i>	3" Caliper B/B M O C
SHRUBS			
BU	16	BUFFALO JUNIPER <i>Juniperus sibirica - 'Sibirica'</i>	4" Container 3 D.C.
JP	20	JACQUAN ROSE-HILLIA <i>Photinia floribunda - 'Jacquan'</i>	4" Container 4 D.C.
PD	25	RED TWIG DOGWOOD <i>Cornus sericea</i>	4" Container 6 D.C.
RS	24	ROCKY MOUNTAIN SUMAC <i>Rhus typhina - 'compacta'</i>	4" Container 6 D.C.
SI	30	SEAGRASS JUNIPER <i>Juniperus chinensis - 'Sagrees'</i>	4" Container 3 D.C.
TI	48	TAMMAY JUNIPER <i>Juniperus sibirica - 'Lamar-medialis'</i>	4" Container 3 D.C.
AF	28-40	ANNUAL FLOWERS	BY OWNER
TF	TRUCK	TALL FESCUE SOD	SEE NOTE #8
DS	6100/L	DRYLAND SEED	SEE NOTE #9

**NOTES**

- 1) If proposed Shopping Center building to be a single story used colored brick structure with 4 inch concrete floor. (See building plans)
- 2) Entry paving to be "Chaska Tan" (Davis Concrete Colors) colored stamped concrete in a running bond pattern.
- 3) Retaining wall to be sand colored brick to match building (See Section B)
- 4) Trunk cavities to be encased by a solid 6" concrete filler with 1/2" rebar, 2x4 rails and a 2x6 cap. Matching price will allow access.
- 5) All soil, seed and plantings to be installed by an automatic underground irrigation system. (See Irrigation Plan)
- 6) Soil mix to be prepared by mixing in a depth of 8 inches and thoroughly blending existing soil with 3 parts of a grade compost per 1000 square feet.
- 7) All shrub beds to be covered with a 4 inch layer of peat shavings over a synthetic weed barrier (Kialis 140 or equivalent).
- 8) All plantings to be installed, watered and pruned in accordance with the recommendations of the Colorado Nurserymen's Association. Contractor to guarantee all plantings for one year from date of installation.
- 9) Slope along north property line to be topped in a depth of 6" and fine graded before woodchipping of applied grass seed. After broadcasting seed at the rate of 25 pounds per acre the surface shall be lightly raked to cover the seed. Unseeded pure mats shall then be removed. The contractor shall be responsible for the maintenance of the seed bed until the seed has been established along the property line at the base of the hill to capture a dry seed that is eroded during the establishment of the grass seed. (See Erosion Control Plan)

10) 1/2" Gypsum Seed Mixtures: broadcast at 25 lbs. per acre Pure Live Seed

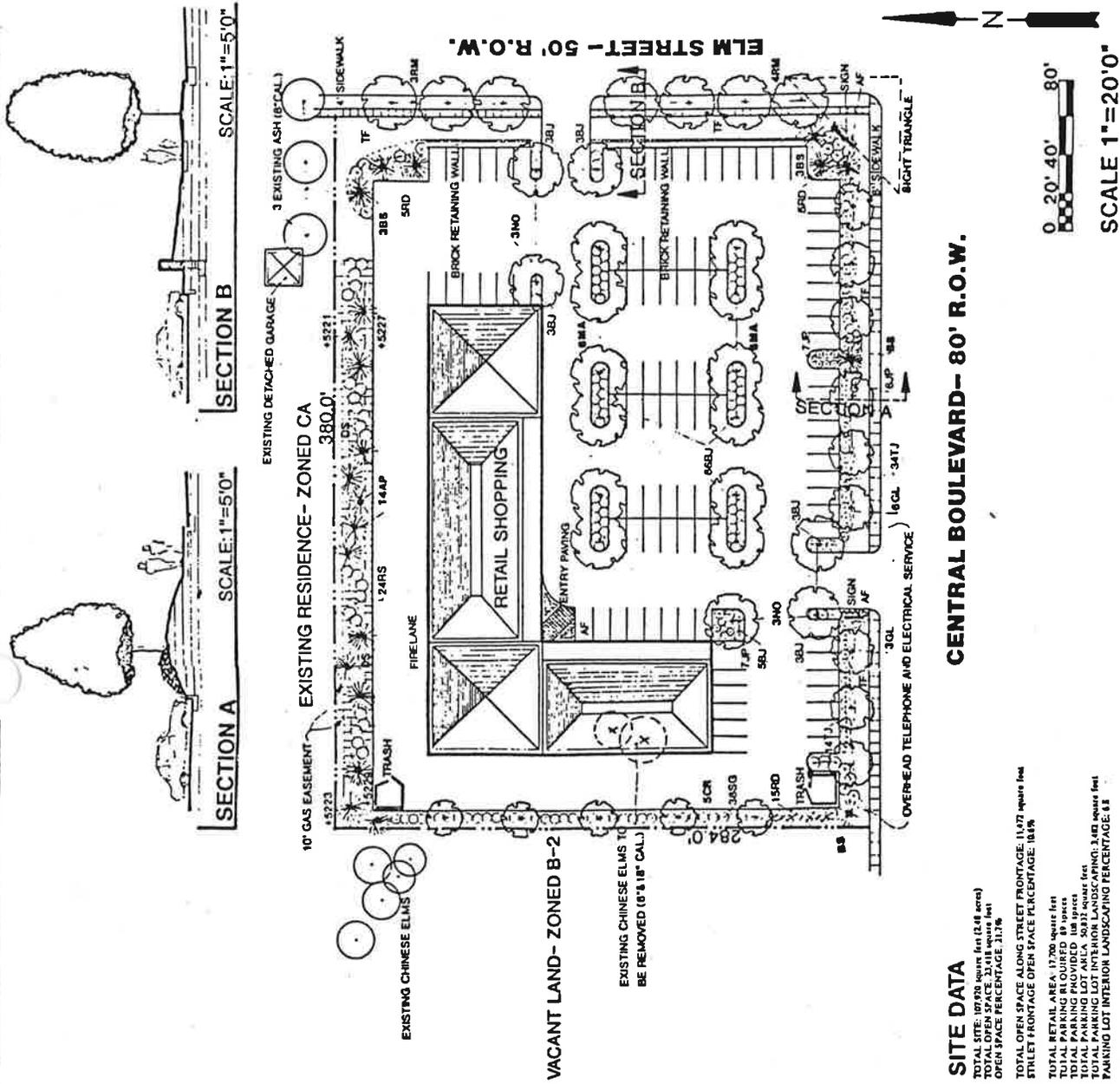
- 25% Crested Wheatgrass
- 15% Perennial Ryegrass
- 15% Intermediate Wheatgrass
- 10% Annual Ryegrass
- 10% Orchard Grass

10) 1/2" to be installed Tall Fescue.

1. All B. S. Slick owner, or designated agent thereof, shall complete and maintain the landscape improvements shown on this plan and shall comply with Title 18, Chapter 2 of the Larimer City Code.

*[Signature]*  
Signature of Owner or Agent

**APPENDIX F: SAMPLE LANDSCAPE PLAN**



**CENTRAL BOULEVARD - 80' R.O.W.**

**SITE DATA**

- TOTAL SITE: 107,800 square feet (2.48 acres)
- TOTAL OPEN SPACE: 33,018 square feet
- OPEN SPACE PERCENTAGE: 31.7%
- TOTAL OPEN SPACE ALONG STREET FRONTAGE: 11,827 square feet
- STREET FRONTAGE OPEN SPACE PERCENTAGE: 10.6%
- TOTAL RETAIL AREA: 17,700 square feet
- TOTAL PARKING: 107,800 square feet
- TOTAL PARKING PROVIDED: 107,800 square feet
- TOTAL PARKING LOT AREA: 50,911 square feet
- TOTAL PARKING LOT INTERIOR LANDSCAPING: 3,422 square feet
- PARKING LOT INTERIOR LANDSCAPING PERCENTAGE: 6.5%

DATE: 11/20/91  
REVISIONS:

LANDSCAPE ARCHITECT:  
JANE SMITH  
BRAVE HORIZONS DESIGNS  
17 OAK STREET  
LITTLETON, CO 80165  
795-3766

OWNER: BIG DEAL INC.  
JOHN SLICK (555-4555)  
1775 BROADWAY  
DENVER, CO 80202

**LANDSCAPE PLAN**  
**CENTRAL PLAZA**  
412 CENTRAL BOULEVARD  
LITTLETON, CO 80165