Rules and Regulations for the Landscaping of Parking Areas

Adopted by the Denver Planning Board
May 10, 1989 Revised 5/17/91

Prepared by
The Planning and Community Development Office
City and County of Denver
OUTLINE OF RULES & REGULATIONS FOR THE LANDSCAPING OF PARKING AREA

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1. INTENT

The intent of these Rules and Regulations is to improve the appearance of off-street parking areas, to protect the appearance and value of the surrounding properties and neighborhoods, to protect the users of parking areas, and to improve environmental conditions. This is to be achieved by providing for the installation and maintenance of landscaping and lighting for screening, aesthetic qualities, and security.

2. APPLICABILITY

These Rules and Regulations have been adopted pursuant to Section 59-585(10) of the Revised Municipal Code. These Rules and Regulations apply to surface parking areas including the following:

a. Off-street parking areas meeting the requirements of Section 59-586 of the Zoning code provided in conjunction with a use by right (NOTE: A "Parking Area" shall herein mean all parts of the zone lot used for the open parking of vehicles, whether in contiguous areas or not, and shall include access drives adjacent to a public right-of-way, and driving aisles adjacent to and serving open parking stalls);

![Diagram](image_url)

illus. 1\(x\) y z calculable frontage

\(w+x+y+z\) -25 no. of trees required

b. Planned Unit Developments and Planned Building Groups reviewed and approved after the adoption of these Rules and Regulations;

c. Off-street parking areas not being provided to meet the off-street parking requirements of the zoning code, with the exception of parking areas in the B-7 and B-8 zone districts, and the B-5 zone district where Section 59-586 does not apply; and

d. Off-street parking areas on a P-1 zone lot, where one or more property lines abuts a zone lot in any zone district other than B-5, B-7, B-8 or P-1.
The following are excluded:

a. Parking areas containing fewer than fifteen (15) parking spaces (calculated using 300 square feet gross per space); and

b. Parking garages and structures.

3. PERMIT AND APPROVAL REQUIREMENTS

a. Applicable parking areas not part of a Planned Unit Development (PUD) or a Planned Building Group (PBG): A "Parking Lot Landscaping Permit" is required for:
   (1) a new parking area;
   (2) expansion of an existing parking area;
   (3) a change in the use of a structure that changes the off-street parking requirement; or
   (4) a change in the gross floor area of a structure that changes the off-street parking requirement.

   The Parking Lot Landscaping permit is issued by the Zoning Administration only after the approval of a Landscape Plan. The Landscape Plan review and approval procedure is described in Section 6 of these Rules and Regulations.

b. Applicable parking areas that are a part of a PUD or a PBG: A landscape plan must be approved as part of the PUD or PBG site plan approval process.

4. LANDSCAPE REQUIREMENTS

a. Street Frontage Landscaped Planting Strips

   (1) A planting strip will be provided along all property lines where street rights-of-way are adjacent to the parking area (illus. 2, 3). "Street frontage landscaped planting strips" may (as appropriate for streetscape character) include earth berms, planter boxes, fences, walls or hedges in combination with trees and plantings, and must be provided within the property boundaries, except as provided for under point (4) of this subsection. Fences, walls and hedges need not be solid.

![Typical Detached Walkway Condition Diagram](illus. 2)
(2) The following are required minimum widths of the "street frontage landscaped planting strip":

- In all residential zone districts, the P-1 zone district, and the B-A-1, B-A-2, B-A-3 and B-A-4 zone districts, the minimum width of the "street frontage landscaped planting strip" is the same as the applicable minimum front setback requirement for the zone district in which the parking area is located, except that the "street frontage landscaped planting strip" must not be less than ten (10) feet in zone districts having smaller minimum front or side yard setback requirements. (illus. 4)

- In the B-1, B-2, B-3, B-4, B-8, I-O, I-1, and I-2 zones, regardless of the required setback for structures, the minimum width of the "street frontage landscaped planting strip" is ten (10) feet between the right-of-way and the parking area, except where point (4) below applies. (illus. 4)

- In a PUD zone, the minimum width of the "street frontage landscaped planting strip" is controlled by the PUD district plan.
• In the B-7 zone, regardless of the required setback for structures, the "street frontage landscaped planting strip" requirement can be met by either; (illus. 5)
  — A landscaped planting strip with a minimum width of five (5) feet between the right-of-way and the parking area; or
  — A fence or wall of a height not to exceed four (4) feet, and one shade or canopy tree for every twenty-five (25) linear feet of property line abutting a public right-of-way. Trees may be grouped and existing trees may be counted towards satisfying this requirement.
  — All planting, fences, or walls meeting the above requirements must be within the property boundaries except as provided in (4) below.

(3) For every twenty-five (25) linear feet of right-of-way frontage (of parking area) or part thereof, at least one shade, ornamental or canopy tree will be planted within the "street frontage landscaped planting strip." Existing trees may be counted towards this, and spacing of trees may be varied; however, the spacing between trees or groupings of trees shall not exceed forty (40) linear feet. (illus. 6)

(4) With the exception of the I-O zone district, the "right-of-way planting strip" (see illus. 2, 3) may be used to meet the requirement for the "street frontage landscaped planting strip."

All planting in the "right-of-way planting strip" must be consistent with the rules and regulations established by the City Forester of the Parks and Recreation Department, and the Transportation Division (see attachment). The rules and regulations of the City Forester may
increase the required minimum spacing between trees in the public right-of-way. Tree spacing within the right-of-way must relate to street light and intersection/curb cut spacing.

If the "right-of-way planting strip" is used exclusively to satisfy the requirements of this section, a fence, wall or hedge must be provided along the property line, for the length of the property line that the right-of-way planting strip is being used to meet the requirement of the "street frontage landscaped planting strip." This fence, wall or hedge must conform to the requirements of Section 5 of these Rules and Regulations.

If the "right-of-way planting strip" is used in combination with a planting area on the property, the latter must have a minimum width of five (5) feet.

If the right-of-way is not used, the applicant must indicate an acceptable method in which the right-of-way will be maintained.

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**b. Perimeter Boundary Landscaping or Screening**

(1) All parking areas will have a visual screen on each perimeter property line abutting a residential zone district or use (unless separated by an alley). (illus. 9)

A visual screen means:

- a fence or wall; or
- an earth berm and plantings; or
- plantings of trees and shrubs; or
- any combination of the above.
(2) Fences or walls must be accompanied by at least one tree per twenty-five (25) linear feet of fence or wall. These trees may be grouped, and existing trees counted towards satisfying this requirement as approved by the Zoning Administration.

(3) All edges of parking areas which are adjacent to residential buildings shall have a landscaped strip at least five (5) feet wide, planted, bermed and/or fenced in such a manner as to protect ground, and/or below ground level windows from headlight glare and the direct emission of vehicle exhaust; provided, however, that if the adjacent residential building is on a separate zone lot and is five (5) feet or more from the common zone lot line, the provisions of b(1) and b(2) above shall be sufficient. (illus. 10)

c. Internal Parking Area Landscaping

(1) Parking areas with 20 or fewer spaces.

No internal landscaping is required for parking areas with 20 or fewer spaces, calculated using 300 square feet (gross) per space.
(2) Parking Areas with 100 or fewer spaces.
Internal landscaping is required only if there is at least one double loaded row of parking spaces. Double loading means two rows of parking adjacent to one another and not separated by circulation aisles, as shown in the following diagram. (illus. 11):

![Diagram of double loaded rows]

An area equal to at least 5% of the square footage of the surface area of parking stalls in the double loaded rows (exclusive of circulation) must be landscaped, including at least one shade or canopy tree for every 50 linear feet of double loaded row(s).
Planting must be within or immediately adjacent to the double loaded rows and may be:
- In a strip along the center between rows (illus. 12A) and/or
- In one or more islands at the end or in the middle of the rows (illus. 12B), and/or
- In pockets interspersed between rows and vehicles. (illus. 12C)

![Diagram of various planting options]

\[\text{Landscaped area must be at least } 5\% \text{ of area within dashed line}\]
(3) Parking Areas with more than 100 spaces.
   (a) At least five percent of the parking area, as calculated in (3)b below, must be
       landscaped.
   (b) The average width, multiplied by the average length of the parking area, shall be
       used to compute the size of the parking area. All measurements will be made
       between the edges of the parking area surfacing adjoining a planting strip or
       perimeter landscaping, and will not include structures.
   (c) Up to thirty-three percent (33%) of the internal planting area may be transferred and
       planted along the front or perimeter edges of the parking area. This planting is in
       addition to the requirements for frontage and perimeter landscaping above.
   (d) For every two hundred (200) square feet or part thereof of required landscaping, at
       least one (1) shade or canopy tree and six (6) shrubs must be planted. Every planting
       area shall be covered by ground cover (exclusive of trees and shrubs).
   (e) Landscaped islands at least six (6) feet in width must be provided at maximum
       intervals of every fifteen (15) contiguous parking spaces in a row. (Illus. 13)

   ![Diagram showing 15 car spaces maximum and planting areas]

   Illus. 13

   All parking islands must be protected from vehicle damage by a continuous concrete
   curb, use of planter boxes, wheelstops, headers, bollards or other means.

   d. SPECIAL REQUIREMENTS for use by right parking in certain
   business zone districts. Notwithstanding the requirements
   stated in subsection 4, above, use by right parking in the
   B-5, B-7 and B-8 zones shall be landscaped according to the
   following provisions: (Adopted by Planning Board 5-17-91)

   1. Requirement for all three zones: Street trees shall be
      required on all street frontages for all proposed new
      parking areas. Such trees shall be located on the
      public right-of-way where the available space between
      the flow line (face of curb) and the right-of-way/priv-
      ate property line is at least 10 feet wide and where
      no unusual problem or physical constraint exists. If
      such problem or constraint does occur in this situation,
      then the trees shall be located on private property.
      The number of street trees required shall be determined
      by Section 4.a.(3).
2. **B-5 and B-7 zone requirements:** Street trees as listed in §1, above. In addition, a decorative screening device is required which conforms to city design concepts or a similar screening device as may be acceptable to the planning office. The height of such device may vary between two feet eight inches (2'8") and three (3) feet. Such screening device shall be located on private property (see illustration §1). No tree lawn, landscaping or interior landscaping is required; however, owners may submit for Planning Office review proposals for alternative designs which incorporate landscaping (sod and/or shrubs) with the screening device.

3. **B-8 zone requirements:**

a. Street trees as listed in §1 above; and

b. Street front landscaping. A street front tree lawn at least 8 feet wide shall be required between the flow line and the parking lot (see illustrations §2 and §3). If the space between the flow line and the property line is inadequate to install an 8-foot wide tree lawn, the width of such tree lawn may be reduced; however, in no case shall it be reduced to less than 5 feet in width (see illustration §4 and §5). Further, if such five foot wide tree lawn is located partially on private property, that portion on private property shall be counted toward the satisfaction of the 5% area requirement of subsection 3.c., below. Tree lawn is defined as a linear strip of ground which contains trees as required by subsection 3.a., above, and plant material as explained in subsection 5.a., plant material standards, located in the main portion of these rules and regulations. A tree lawn is generally located on the public right-of-way, but may in some cases be partially located on private property; and

c. **Additional requirement.** An area of landscaping equal to five percent (5%) of the parking area. This landscaped area may be located:

1) In the interior of the parking area in the form of islands and corners not less than 6 feet in width; or

2) along the street front as an addition to the tree lawn in the case of attached sidewalks (see illustration §4); or
3) with detached sidewalks, this area may be in
the form of a planting strip with a minimum
width of three (3) feet located between the
sidewalk and the parking area (see illustra-
tion §5); or

4) in the form of a widened tree lawn located
between the curb or step-out strip and the
detached sidewalk; or

5) in the form of a raised concrete island with
post and cables barrier located between the
detached sidewalk and the parking area (see:
d.1, below).

d. Pedestrian/vehicle separation. In cases where the
sidewalk is located immediately adjacent to the
parking area, a minimum physical separation shall
be established which shall consist of:

1) Posts and cables constructed on top of a
raised concrete island (minimum 6" high by two
feet wide) with a paver insert; or

2) closely spaced bollards, railing, or other
device as approved by the public works depart-
ment and planning office to create a physical
separation between pedestrians and automo-
biles.

e. Pedestrian access. A three foot wide opening for
pedestrians shall be located a maximum of 80' apart
along all sections of a post and cable barrier;

f. Variations in the arrangement or location of the
tree lawn may be allowed depending on the location
of existing sidewalks or on the quality of design
proposals made by the developer according to the
minimum widths set forth in 3.b.
ILLUSTRATION 1: B-5 AND B-7 ZONES

ILLUSTRATION 2: B-8 ZONE

Applicable lining right-of-way (flown line to property line) to 11' G on slope and sidewalk is attached.
ILLUSTRATION 3: B-B ZONE

Applicable where right-of-way (flow line to property line) is 15.5' or more and sidewalk is detached.

ILLUSTRATION 4: B-B ZONE

Applicable where right-of-way (flow line to property line) is at least 13.5' and sidewalk is attached.
5. STANDARDS

a. Plant Material Standards

(1) No artificial trees, shrubs, turf or plants may be used to fulfill the landscaping requirements of these Rules and Regulations.

(2) Planting areas must be covered by ground covers or low growing shrubs.

(3) Non-live ground covers in right-of-way planting areas may include brick pavers, interlocking pavers or colored, decorative (patterned) concrete, provided such materials are consistent with adopted neighborhood plans and streetscape design standards. Non-live ground covers in planting areas not in a right-of-way may include the materials allowed in right-of-way planting areas, plus gravel, tree bark, bark mulch, or materials approved by the Zoning Administration. No more than 50% of the right-of-way planting areas, and no more than 50% of the total required landscaped area, may be surfaced with non-live ground covers. Plain concrete and asphalt paving are not acceptable non-live ground covers.
Where live ground covers are used exclusive of non-live ground covers, herbaceous ground covers must be planted no more than 24 inches on center, and shrubs no more than five (5) feet on center.

(4) All material must be planted in accordance with industry standards.

(5) All materials planted under the provisions of these Rules and Regulations must meet the following conditions:
   - Deciduous trees are at least two inch caliper measured four inches above the ground;
   - Ornamental and flowering trees are at least one and one-half inches caliper measured four inches above the ground;
   - Evergreen trees are at least five feet tall;
   - Evergreen spreaders and broadleaf evergreens are five gallon size minimum, with spreads no less than 18" to 24";
   - Shrub are five gallon size minimum, with heights no less than two to three feet; and
   - Vines are one gallon in size, minimum.

In addition to the above requirements, all plant materials must meet the current standards of the American Association of Nurseriesmen.

(6) No existing live trees of a caliper size of four (4) inches or greater may be removed from the site without the permission of the Zoning Administration.

(7) Planting strips or areas, walkways, fences, walls or hedges must be protected from vehicles and maintenance equipment by curbs, bollards, wheelstops, headers or other means.

b. Recommended Plant Materials

All planting in the public right-of-way will be done in accordance with the applicable rules and regulations of the Parks and Recreation Department, and the Transportation Division (see attachment).

Plant materials specified must be suited to the Denver climate and suitable for the conditions of the parking area.

A shade or canopy tree means a deciduous tree which branches high enough to not obstruct vehicle movement.

c. Fences, Planter Boxes and Walls

Fences, planter boxes and walls must be of wood, brick, masonry, textured or aggregate concrete; corrugated or sheet metal, tires, car doors, or other discarded materials are not permitted. Chain link or wire mesh may be used only in combination with plant material of sufficient density to create a screen. Other materials may be used upon approval by the Zoning Administration.

d. Heights

Except as otherwise provided in the zoning code, and with the approval of the Chief of Police, the following heights will be applied to plantings (excluding trees for the first three (3) years after installation) fences, planter boxes, walls, hedges and earth berms:
   - At least three (3) feet in height but not to exceed four (4) feet along all lot lines abutting street rights-of-ways (exclusive of alleys);
• At least three (3) feet in height, but not to exceed six (6) feet along lot lines not abutting street rights-of-ways;
• At least three (3) feet in height, but not to exceed three feet six inches (42") within the triangle measured from the point of intersection of the lot lines abutting intersecting streets, a distance of twenty-five (25) feet along each lot line abutting a street right-of-way, unless otherwise specified by the Transportation Division. (illus. 14)

![Heights of Screens Diagram]

• Solid fences, hedges or walls along lot lines abutting street rights-of-ways must not exceed three (3) feet in height.

e. Visual Screens and "Street Frontage Landscaped Planting Strips"

Visual screens and "street frontage landscaped planting strips" must be of a design and density to screen adjacent residences and rights-of-ways from headlight glare and movement of traffic generated by vehicles using the parking area.

f. Walkways

Walkways must have a minimum effective (i.e. exclusive of vehicle overhang) width of four (4) feet. (illus. 15, 16)
g. Irrigation

Landscaped areas must have a properly designed irrigation system providing full coverage on all plant material areas from impulse sprinklers, pop-up and surface spray sprinklers, or other means appropriate for the area to be irrigated, as determined by the Zoning Administration. The applicant for the parking lot landscaping permit, or a qualified irrigation specialist, must certify, either on the required landscape plan or in a written statement attached to the plan, that the proposed irrigation system is adequate.

h. Maintenance

The owner of the property, his successors, heirs and assignees are responsible for the proper maintenance of the landscaped area and parking lot subject to the approved landscape plan.

Landscaping must be continuously maintained including necessary watering, weeding, pruning, pest control and replacement of dead or diseased plant material. Replacement of dead or diseased plant material shall be of the same type of plant material as set forth in the approved landscape plan. Replacement shall occur in the next planting season, but in any event, replacement time must not exceed one (1) year.

i. Lighting

(1) Parking areas must have a properly designed lighting system providing at least the following horizontal illuminances by activity level:

<table>
<thead>
<tr>
<th>Level of traffic and pedestrian activity</th>
<th>Footcandles (minimum on pavement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.9</td>
</tr>
<tr>
<td>Medium</td>
<td>0.6</td>
</tr>
<tr>
<td>Low</td>
<td>0.2</td>
</tr>
</tbody>
</table>

The levels of activity are illustrated by, but not limited to, the following examples:
High:  Regional shopping centers (over 30 acres) fast food facilities
Medium: Community shopping centers (10-30 acres) office parking areas; hospital parking areas; residential developments
Low: Neighborhood shopping facilities (under 10 acres) industrial employee parking; educational facility parking; church parking

If the level of activity of a specific use involves a large number of vehicles at night, the examples given above for "Low" and "Medium" belong more appropriately in the next higher level.

A qualified lighting specialist or the property owner must certify that the proposed lighting system will produce the minimum required footcandle levels, consistent with (3) and (4) below. Such certification must be on the landscaping or lighting plan or in an attachment to one of those plans.

(2) Light fixtures must be of a cutoff type, capable of being equipped with house side guards. Other fixtures may be used upon approval of the Zoning Administration.

(3) The backlight from any light fixture must not exceed 0.1 footcandle when measured on adjacent residential properties. This minimum does not apply to public rights-of-ways.

(4) It shall be the responsibility of the owner to maintain lighting fixtures and light levels as shown above to illuminate the parking areas from dusk until midnight or one (1) hour after the end of business hours, whichever is the later of the two. Thereafter, illumination may be reduced to a minimum of a 0.20 average horizontal footcandle over the parking area for security reasons until dawn.

6. LANDSCAPE PLAN REVIEW PROCEDURE

a. Permits or Approval Required

(1) All applications for landscape plans not part of a PUD or PBG will be reviewed for completeness by the Department of Zoning Administration. If found to be complete and in compliance with Section 6c(2) of the Rules and Regulations, the Zoning Administration will send a copy of the application to the following for review: the Planning office; the Transportation Division; the Department of Parks and Recreation; the City Forester, (if the plan proposes plantings in the public right-of-way other than sod); and any other agencies determined by the Zoning Administration to have an interest. Within ten (10) working days of the submittal date of a completed application, any agency to which the plan has been referred shall return a notice of recommendation to the Department of Zoning Administration. If any agency recommends disapproval of an application, the notice will contain an explanation of what revisions would be required for approval. The Zoning Administration shall forward a copy of the notice of recommendation to the applicant within five (5) working days of receipt of the notice. The applicant must revise the plan as required and resubmit the revised plan to the Department of Zoning Administration for a subsequent review. Upon receipt of a notice of approval from each agency referred a copy of the application, the Zoning Administrator will sign the application and the department will register a copy of the approved documents among its records and shall record a copy of the certification.
statement required under Section 6c(2) of these rules and regulations in the office of the City Clerk.

(2) All landscape improvements indicated on an approved landscape plan must be completed prior to the approval by the Zoning Administration of a Certificate of Occupancy or, if a Certificate of Occupancy is not required, prior to the use or reuse of the parking area. However, if all the conditions necessary for approval of a Certificate of Occupancy are met except landscape improvements, and the reason for not completing the landscape improvements is because construction was completed outside the planting season, a Temporary Certificate of Occupancy will be issued. In this situation, all landscape improvements must be completed by the next planting season within a timeframe established by the Zoning Administration but in no case can it exceed six (6) months after issuance of the Temporary Certificate of Occupancy.

b. Improvement Guarantees

If the Zoning Administrator determines that the use of the Certificate of Occupancy or the Temporary Certificate of Occupancy may not assure the timely completion of the landscaping improvements, the Zoning Administrator may require that, prior to final landscape plan approval, the owner or agent must provide the City with an improvement guarantee approved by the Zoning Administrator.

c. Landscape Plan Submittal Requirements

(1) Preliminary Landscape Plan

Applicants for PUD site plans and PBG’s must submit a preliminary landscape plan at the preliminary plan review phase.

Applicants for other permits (e.g., zoning permit, etc.) may submit a preliminary landscape plan if they wish.

A preliminary landscape plan must be prepared in accordance with the requirements of the PUD/PBG Rules and Regulations for submittals and must show: general location, design and height of walls or fences; general tree types (shade, ornamental, or evergreen), approximate location, spacing and relative size of plant materials; approximate location and number of parking spaces and access points; and shall include a preliminary list of plans being used, including shrubs and ground covers.

(2) Final Landscape Plan

Every request for landscape plan approval must include the completed form, "Application for a Parking Lot Landscaping Permit," and a minimum of four (4) sets of the final landscape plan, with one additional set for each of the following situations:

- Landscaping in the public right-of-way
- Adjacency to a designated parkway or boulevard
- Adjacency to a state highway
- Structures, boulders, street furniture, etc., in the public right-of-way

The final landscape plan shall be on one or more sheets of paper measuring twenty-four (24) by thirty-six (36) inches and drawn to a minimum scale of one inch equals 50 feet (1"=50') and signed by the owner or agent. For sites of one acre or less, the final plan may be submitted on 8 1/2" x 11" or 8 1/2" x 14" sheets.
The landscape plan must contain the following information:

- Vicinity Map
- Date
- North Arrow
- Written and graphic scale
- Surveyed location of lot lines and existing improvements on property under review. Location of property boundaries and adjacent buildings within 50 feet of the property; zoning and use of all adjacent properties.
- Existing and finished grades with contours of two foot intervals, and/or spot elevations.
- Size and location of all existing and proposed public and private utility easements and rights-of-way.
- The building envelope of all proposed structures and the building outline of all existing structures on the zone lot.
- The location, dimension and names of adjacent streets, proposed location and dimensions of entrances, exits, and curb cuts.
- The proposed layout of the parking lot including location and dimensions of parking spaces, curb islands, interior planting, bike paths and pedestrian walkways, maneuvering aisles with an indication of direction of travel.
- The location of all existing trees of four (4) inch or greater caliper which the applicant proposes to remove from the property; the location of all existing trees of a caliper greater than 1 1/2" which are to be counted towards the minimum requirements; the location and dimension of all landscaped areas including perimeter boundary landscaping or screening, street frontage landscaped planting strips, and interior landscaping; location, botanical names and sizes of all plant material and ground cover; and the location of other pertinent landscape features.
- The location, specifications and dimensions of the proposed irrigation system.
- The location of existing and proposed street lights and fire hydrants in public right-of-way adjacent to a parking area.
- Location, design, height and building materials of all proposed walls, planter boxes and fences.
- Certification statement, signed by the owner: "I (we) the undersigned shall complete and maintain the landscape improvements shown on this plan and shall comply with Chapter 59, Article V, Section 59-585(10) of the Revised Municipal Code of the City and County of Denver and associated Rules and Regulations."
- A lighting plan including the location and height of all fixtures, with manufacturers specifications or isolux footcandle level curves that adequately demonstrate the light levels that will be produced by the proposed fixtures.
- Certification Statements for the adequacy of irrigation (see Section 5g) and lighting (see Section 5i).

Other information which is required but need not be designated on the site plan includes:

- A metes and bounds legal description of the property, signed by a land surveyor registered in the State of Colorado; or a lot and block description of the property;
- Statement of the present zoning and the intended use of the property;
- Site data in written form including:
  * total area of the property (sq. ft.);
• parking lot coverage (sq. ft.);
• parking lot landscape area in square feet and percent of parking lot size; and
• number of parking stalls required and provided.
• Improvement guarantees as required in 6b above, including cost estimates of materials and installation.

The Zoning Administration may waive the requirement for submission of any information that the Zoning Administrator deems unnecessary for landscape plan review.

7. EXCEPTIONS

a. Physical Limitations

If the Zoning Administrator determines that, because of physical limitations imposed by the location and arrangement of existing buildings or by site dimensions, it is impossible or impractical to meet the requirements for street frontage landscaped strips and/or perimeter boundary landscaping, the Zoning Administrator may:

(1) Allow part or all of the area required for street frontage landscaped strips and/or perimeter boundary landscaping to be provided instead in the interior of the parking area; or

(2) Waive part or all of such requirements altogether, provided that the Rules and Regulations are implemented to the fullest extent possible, given the physical limitations.

b. Excessive Improvement Costs

If the Zoning Permit for Parking Use and the corresponding landscape plan are necessitated by an addition to the gross floor area of an existing building, the Zoning Administrator may waive certain of the landscape requirements of Section 4 of these Rules and Regulations on the basis that the cost of meeting such requirements exceeds fifty percent (50%) of the cost of constructing the building addition. This waiver may be granted only if the applicant for the Zoning Permit for Parking Use provides the Zoning Administrator with an itemization of the landscape improvements and costs necessary to meet the requirements, together with an estimate prepared by a licensed contractor, of the construction cost of the building addition.

c. Shared Parking

The Zoning Administrator may waive certain of the landscaping requirements associated with a change to or the addition of a single building or a single use within a zone lot subject to an approved PBG or business district development plan provided that:

(1) The zone lot involves multiple buildings, multiple occupancies or multiple uses; and

(2) The parking area of the zone lot is shared in common by multiple buildings, multiple occupancies or multiple uses; and

(3) The change to or addition of the single building or single use involves no more than 30% of the total existing and proposed floor area on the zone lot.

If all of these conditions exist, the Zoning Administrator may limit the extent of required
landscape improvements to the frontage, perimeter or surface area associated with the single building or single use and to that proportion of the total parking area required and/or provided for that single building or single use.

d. Preservation of Existing Trees
If, in order to comply with both 1) the Rules and Regulations for the landscaping of parking areas, and 2) the off-street parking requirements, it would be necessary to remove mature, existing trees, the Zoning Administrator may allow reasonable reductions in either 1) the size of required landscaped areas (for the purpose of accommodating the required parking), or 2) the number of required parking spaces.
ATTACHMENTS TO THE
"RULES AND REGULATIONS FOR THE
LANDSCAPING OF PARKING AREAS"

City and County of Denver
December, 1986

Attachment A: Locational requirements for trees planted in public street rights-of-way (Except state highway rights-of-way).

Attachment B: Locational requirements for trees planted in the rights-of-way of designated state highways.

Attachment C: Plants and landscape materials not permitted in public street rights-of-way.

Attachment D: Trees recommended for planting in public street rights-of-way.
LOCATIONAL REQUIREMENTS FOR TREES
PLANTED IN PUBLIC STREET RIGHTS-OF-WAY
(Except State Highway Rights-of-Way)
in the City and County of Denver

The following requirements were established by the City Forestry Department for the location and spacing of trees in public street rights-of-way in the City and County of Denver. These requirements do not apply to trees planted in the rights-of-way of designated state highways.

Partial List of Large Trees
1. Maples
2. Oaks
3. American Lindens
4. Hackberry
5. Ash
6. Thornless Honey Lucust

Partial List of Small Trees
1. Little Leaf Lindens
2. European Mountain Ash
3. Ohio Buckeyes

No trees or shrubs shall be planted these areas.

Trees must be centered between the sidewalk and street.

Minimum vertical clearance over pedestrian area

Minimum spacing - large trees

Minimum vertical clearance over street

No tree will be planted closer than 5' to any driveway or alley.

Minimum spacing - small trees

Permits must be obtained before planting by contacting the City Forestry
Permits Office - 575-3139.
LOCATIONAL REQUIREMENTS FOR TREES
PLANTED IN THE RIGHTS-OF-WAY OF
DESIGNATED STATE HIGHWAYS
within the City and County of Denver

The following requirements were established by the Colorado Department of Highways for the location of trees in the rights-of-way of state highways within the Denver metropolitan area:

Highways with speed limits 40 miles per hour or less:

- Trees must be located at least 10 feet behind the curb and gutter of the highway. In situations where a slope-median barrier exists adjacent to the highway, trees may be planted directly behind the barrier.

- Shrub heights must be limited to 30 inches within site triangles of intersecting streets.

Highways with speed limits of 45 miles per hour or more:

- Trees with calipers over 4 inches at maturity must be located at least 30 feet from the edge of the through-lane (or curb and gutter). In situations where a guard rail exists adjacent to the highway, trees must be located at least 20 feet behind the guard rail.

- Shrubs and small trees may not be planted within 6 feet of the curb and gutter.
PLANTS AND LANDSCAPE MATERIALS NOT PERMITTED IN PUBLIC STREET RIGHTS-OF-WAY in the City and County of Denver

The plants and landscape materials listed below are not permitted in public street rights-of-way in the City and County of Denver.

Trees:

- Any of the poplar species (Populus sp.)
- Any of the willow species (Salix sp.)
- The box elder tree (Acer negundo)
- The Siberian (chinese) elm (Ulmus pumila)
- Any weeping or pendulous type tree
- Any tree with bushy growth habit which cannot be maintained to a single leader or trunk
- Any shrub or hedge growth which by its habit of growth would obstruct, restrict, or conflict with necessary and safe use of the public right-of-ways.

Shrubs and hedges: shrubs and hedges over 18" mature height are not permitted in public street rights-of-way.

Landscape materials:

- bark
- bark mulch
- boulders (unless a revocable permit is issued)
- gravel
- rock
- walls, fences, planter boxes, or structures (unless a revocable permit is issued)
PRUNE ALL DAMAGED OR DEAD WOOD IMMEDIATELY PRIOR TO PLANTING

PLANT SHRUBS MIN. 4'-0' BEHIND CURB IN FRONT END PARKING SITUATIONS.

CONCRETE CURB OR SIDEWALK
HOLD GRADE 1 IN. BELOW EDGE

SET SHRUB 1 IN. HIGHER THAN THE GRADE AT WHICH IT GREW

DIG PLANT PIT TWICE AS WIDE AS THE CONTAINER

SPECIFIED MULCH 4" DEEP

FINISHED GRADE
(ALL JUNIPER PLANTS SHOULD BE PLANTED SO TOP OF ROOT MASS OCCURS AT FINISH GRADE OF MULCH LAYER)

LOosen SIDES OF PLANT PIT AND ROOTBALL

REMOVE CONTAINER

SPECIFIED BACKFILL MIXTURE

ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED. REMOVING THE CONTAINER WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALL

Shrub Planting Detail
NOT TO SCALE
Evergreen Tree Planting Detail

NOT TO SCALE

DO NOT CUT OR DAMAGE LEADER

12" NYLON TREE STRAP ON GUY WIRE TO PROTECT TREE

1/2" DIA. WHITE PVC PIPE SECTION ON ENTIRE LENGTH OF EACH WIRE

#14 GALVANIZED WIRE, TWISTED DOUBLE STRAND.

6' STEEL T-POST (3 SPACED EQUALLY AROUND TREE) DRIVE MIN. 24" INTO UNDISTURBED SOIL

SET ROOT COLLAR 3" HIGHER THAN GRADE AT WHICH TREE GREW.

APPLY SPECIFIED BARK MULCH 4" DEEP IN 48" DIA. CIRCLE AROUND TREE

FINISHED GRADE

FORM SAUCER AROUND EDGE OF TREE PIT

SLOPE SIDES OF PIT AS SHOWN. ROUGHEN SIDES PRIOR TO BACKFILLING.

SPECIFIED BACKFILL MIXTURE

REMOVE BURLAP FROM TOP 2/3 OF ROOTBALL REMOVE WIRE BASKET AND TWINE COMPLETELY.

UNDISTURBED SUBGRADE
DO NOT CUT SINGLE LEADER, PRUNE DAMAGED OR DEAD WOOD AND CO-DOMINANT LEADERS AT LANDSCAPE ARCHITECT’S DIRECTION ONLY.

12" NYLON TREE STRAP ON GUY WIRE AND AROUND TREE TRUNK.

1/2" DIAM. WHITE PVC PIPE SECTION ON ENTIRE LENGTH OF EACH WIRE.

14 GAUGE GALVANIZED WIRE, DOUBLE STRAND TWISTED.

6" STEEL T-POST (2 MIN.) (4" EXPOSED)

WRAP ENTIRE SURFACE OF TRUNK TO SECOND BRANCH WITH SPECIFIED TREE WRAP MATERIAL SECURED AT TOP AND BOTTOM & AT 2-FT. INTERVALS. RE. SPECS FOR TIMING.

SET ROOT COLLAR 3" HIGHER THAN GRADE AT WHICH TREE GREW.

48" CIRCLE OF SHREDDED BARK MULCH (4" DEEP) AROUND BASE OF TREES IN GRASS AREAS.

FORM SAUCER AROUND EDGE OF TREE PIT

FINISH GRADE

REMOVE ALL TWINE AND WIRE BASKET ENTIRELY. PULL BURLAP BACK 2/3 MINIMUM.

SLOPE SIDES OF PIT AS SHOWN. ROUGHEN SIDES PRIOR TO BACKFILLING.

SPECIFIED BACKFILL MIXTURE

STAKE TO EXTEND MIN. 24" INTO UNDISTURBED SOIL.

UNDISTURBED SUBGRADE

ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED. REMOVING THE WIRE WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS.

Deciduous Tree Planting Detail
NOT TO SCALE.
Tree Grate (with removable rings)
Designed to withstand HS-20 loading.
Max. size drain opening in grate = 1/4"

5'-0" Sidewalk Joint Pattern

1/2" Sidewalk Expansion Joint

Min. clear walking distance 5'-0" or 10'-0" Downtown or as directed by the Engineer.

6" Curb

1 1/4" X 1 1/4" X 1/4" Steel Frame

1/4" (Typ.)

5 1/2" (min.)

I.D. of Frame (min 4'-1 1/2"

5 1/2" (min.)

O.D. of Tree Grate (min. 4'-0" Sq.)

#30 "J" Anchor x 6", 2 each per side

O.D. of Concrete Tree Pit (min. 4' - 11 1/2" +/-)

4" Conc. Sidewalk

1/2" Sidewalk Expansion Joint (Typ.)

5'-0" Sidewalk Opening

NOTES:
1. If sidewalk jointing pattern is larger than 5', a larger tree grate can be used.
2. Trees: Min. Caliper - 3" dia. at 4'-6" above ground level. 16" min. dia. tree opening.
3. Lowest Limb: 8'-0" Pedestrian side; 13'-0" Traffic side.
4. Revocable Permit Required for irrigation or electrical crossing streets or controllers in right-of-way from Public Works.
5. Tree or Planting Permits are required. For tree and plant selections and planting requirements see:

City Forester
2300 15th Street
(303) 964-2481

DATE: 04/00

CITY & COUNTY OF DENVER
PUBLIC WORKS
STD. DWG NO. 13.0
APPLICANT'S INSTRUCTIONS FOR OBTAINING A PARKING LOT LANDSCAPING PERMIT

(Not part of a planned unit development, P.U.D., Or planned building group, P.B.G.)

The procedure outlined below applies to the preparation, review and approval of landscape plans as required by Section 59-585 (10) of the Revised Municipal Code and the associated “Rules and Regulations for Landscaping Parking Areas.”

**Determine whether or not a landscape plan is required.** A landscape plan is required under the following conditions:

a. There is a new parking area and/or an expansion of an existing parking area and/or a change of use or gross floor area of a structure that increases the off-street parking requirements; and

b. The parking area is 15 spaces or more in size (either required or provided), calculated using 300 gross square feet per space.

If a landscape plan is required, follow the procedures set forth below:

**Review the landscaping requirements.** Obtain a copy of the associated “Rules and Regulations for Landscaping Parking Areas” from the cashier at 201 W Colfax Ave. Review these rules and regulations to determine their application to your site. The fee for these regulations is $10.00.

**Determine whether or not a street development agreement is required.** Contact Transportation Engineering (720-865-3150) if any change or work is proposed in the public right-of-way or if there is any proposed change that affects the use of the right-of-way. Typical changes which impact right-of-way include landscaping in the right-of-way, change of driveway, expansion of parking area or change of land use. Transportation Engineering may require a street development agreement prior to recommending that your landscape plan be approved.

**Schedule a pre-application conference (optional).** Schedule a pre-application conference with the staff of the Zoning Administration to discuss the landscaping requirements and the format and content of the landscaping plan.

**Prepare a landscape plan.** Prepare a landscape plan in accordance with the “Rules and Regulations for Landscaping Parking Areas.” Use the landscape plan check list to prepare the drawings for submittal. If the landscape plan proposes any plantings in the public right-of-way other than sod, contact the City Forester (720-913-0651) to determine acceptable plant materials, locations and spacing.
Submit the completed landscape plan. A completed “Parking Lot Landscaping Permit,” the application fee of $250.00 (either in cash or check made payable to “Manager of Revenue”), and a minimum of four (4) sets of the final landscape plan and associated attachments are submitted to the Zoning Administration for review. One (1) additional set of the final landscape plan and associated attachments is required for each of the following situations: landscaping in the public right-of-way; structures, boulders, street furniture, etc. in the public right-of-way; property is adjacent to a designated parkway or boulevard; property is adjacent to a state highway; parking areas with no buildings on the property or parking areas with no work proposed on buildings on the property.

Await a written notice of approval or denial. All applications will be reviewed by the Zoning Administration for compliance with the requirements of the “Rules and Regulations for the Landscaping of Parking Areas.” Landscape plans which do not conform with these requirements will result in unnecessary delays for the applicant. The Zoning Administration will also transmit a copy of the plans and associated attachments to the following agencies for review: the Planning Office, Police Department, Traffic Engineering and such other agencies as may be deemed by Zoning Administration to have an interest. A copy of the review comments from each agency referred a copy of such application will be sent to the applicant. Agencies are expected to respond within fifteen (15) working days of the submittal date of a completed application.

Revise plan if necessary. If any agency recommends disapproval of an application, the notice will contain an explanation of what revisions would be required for approval. Further clarifications of the exact requirements may be obtained by contacting the dissenting agency directly. The applicant must revise the plan as required and resubmit the revised plans and/or associated attachments to the Zoning Administration for a subsequent review.

Recording of approved landscape plan. Upon receipt of a notice of approval from each agency referred a copy of the landscape application, the Zoning Administrator will approve the “Parking Lot landscape Permit.” The Zoning Administration will then register a copy of the approved documents with the Clerk and Recorder’s Office and maintain a recorded document in the Zoning Administration records.

Complete landscape improvements. All landscape improvements must be completed prior to the approval by the Zoning Administration of a Certificate of Occupancy or as provided under Section 6a(2) of the “Rules and Regulations for Landscaping of Parking Areas.” Any substitutions, amendments and/or alterations require an amended landscape plan. The amended landscape plan must be submitted and approved by the Department of Zoning Administration prior to installation of the landscape elements.

If you have questions about the procedure or requirements, contact the Zoning Administration at 720-865-2988.
Landscape Plan Check List

This list has been prepared to assist you in preparing a COMPLETE landscape/site plan application. Omission of any of the required information listed below will result in unnecessary delays.

____  1) A completed "Parking Lot landscape Permit".
____  2) The $250.00 application fee.
____  3) The landscape plans must be submitted on regulation size (24" x 36") paper. Sites of one (1) acre or less may be submitted on 8½" x 11" or 8½" x 14".
____  4) A minimum of four (4) sets of the landscape plan and associated documentation, plus one (1) additional plan for each of the following situations: landscaping in the right-of-way; structures, boulders, street furniture, etc. in the right-of-way; adjacency to the designated parkway or boulevard; and adjacency to a state highway.
____  5) A date.
____  6) A North arrow.
____  7) A written scale.
____  8) A graphic scale.
____  9) The surveyed location of lot lines.
____ 10) The location of property boundaries.
____ 11) A metes and bounds legal description of the property, signed by a land surveyor registered in the State of Colorado, or a lot and block legal description of the property.
____ 12) A vicinity map of suitable scale.
____ 13) A statement of the present zoning and the intended use of the property.
____ 14) The existing improvements on the subject property.
____ 15) The building outline of all existing structures and building envelope of all proposed structures.
____ 16) The zoning use of all adjacent properties.
____ 17) Adjacent buildings within fifty (50) feet of the subject property.
____ 18) The size and location of all existing public and private utility assessments.
____ 19) The size and location of all proposed public and private utility assessments.
____ 20) The location, dimension and names of all adjacent streets.
____ 21) The size and location of all proposed rights-of-way.
____ 22) The location of all existing street lights and fire hydrants in the right-of-way.
____ 23) The location of all proposed street lights and fire hydrants in the right-of-way.
____ 24) The proposed location and dimensions of all entrances.
____ 25) The proposed location and dimensions of all exits.
____ 26) The proposed location and dimensions of all curb cuts.
____ 27) The proposed layout of the parking lot.
____ 28) The location and dimensions of all parking spaces.
____ 29) The location and dimensions of all curb islands.
____ 30) The location and dimensions of all maneuvering aisles.
____ 31) An indication as to the direction of travel within the parking lot.
____ 32) The location and dimensions of all pedestrian walkways.
____ 33) The location and dimensions of all bike paths.
____ 34) The location, design, height, and building materials of all proposed walls.
Landscape Plan Check List

___ 35) The location, design, height, and building materials of all proposed planterboxes.

___ 36) The location, design, height, and building materials of all proposed fences.

___ 37) The location of other pertinent landscape features.

___ 38) The location and dimensions of all street frontage landscaped planting strips.

___ 39) The location and dimension of all perimeter boundary landscaping or screening.

___ 40) The location and dimension of all interior planting areas.

___ 41) The location of all existing trees four (4) inch or greater caliper, which the applicant proposes to remove.

___ 42) The location of all existing trees one and one-half (1½) inches or greater caliper, which the applicant proposes to count towards the minimum requirements.

___ 43) The location, botanical names, and size of all plant material and ground cover.

___ 44) The existing grades and finished grades with contours of two (2) foot intervals, and/or spot elevations.

___ 45) The location, specifications, and dimensions of the proposed irrigation system.

___ 46) The location and height of all the lighting fixtures of the proposed lighting system.

___ 47) The manufacturers specifications and/or insolux foot candle curves for all lighting fixtures.

___ 48) Pertinent site data including total area of the property in square feet, parking lot coverage in square feet, parking lot landscape area in square feet, percentage of parking lot that is landscaping, number of parking stalls required and number of parking stalls provided.

___ 49) The required certification statements for maintenance of landscape improvements, lighting and irrigation plans.

_____50) Street address assignment sheet from the Right of Way desk on the 2nd Floor of 201 W Colfax Ave.

_____51) Building elevations of all proposed structures including bulk plane drawings if applicable

If you should have any further questions regarding these matters, please contact Karen Callaway at 720-865-2988 between 7:00 AM and 4:00 PM.
Maintenance Certification to be included on Landscape Plan

I (we) the undersigned do hereby certify that the fixtures utilized in this plan will produce the following light levels:

(1) a minimum of ________ ( ) horizontal foot candles over the parking area;

(2) a maximum backlight of one tenth (0.1) foot candles when measured on adjacent residential properties, not including public rights of way;

(3) and a minimum of two tenths (0.2) average horizontal foot candles over the parking area during those time periods mandated by the "Rules and Regulations for the Landscaping of Parking Areas."

__________________________  ____________________
Signature                    Date

__________________________
Print Name

__________________________
Identification

I (we) the undersigned do hereby certify that the irrigation system shall provide full coverage of all plant material areas and is adequate to meet the requirements of Section 5g of the "Rules and Regulations for the Landscaping of Parking Areas."

__________________________  ____________________
Signature                    Date

__________________________
Print Name

__________________________
Identification

I (we) the undersigned shall complete and maintain the landscape improvements shown on this plan and shall comply with Chapter 59, Article V, Section 59-585(10) of the Revised Municipal Code of the City and County of Denver and associated with the Rules and Regulations.

__________________________  ____________________
Signature                    Date

__________________________
Print Name

__________________________
Identification

za67(4/97)
Please include this data as requested and these general notes on this plan.

1. Site statistics, including:
   a. gross floor area (gfa);
   b. height of structures (feet and stories);
   c. land area;
   d. ground coverage by all accessory structures;
   e. ground coverage by all parking;
   f. ground coverage by all landscaping;
   g. number of off-street parking spaces required;
   h. number of off-street parking spaces provided;
   i. number of off-street loading spaces required;
   j. number of off-street loading spaces provided;
   k. number of handicap parking spaces required;
   l. number of handicap parking spaces provided;
   m. number of bicycle spaces required;
   n. number of bicycle spaces provides;
   o. a plant materials list; including common and botanical names and the size and spacing of materials as necessary.

General Notes

1. Site is Zoned
2. Minimum spacing between buildings is
3. Fences, walls, signs, and accessory structures are subject to separate reviews and permits.
4. Angles not shown are either 90 degrees or a supplement of the angle indicated.
5. Private roadways will be posted with “Fire Lane” signs as required by the Denver Fire Department
6. This plan is subject to a landscape [plan as part of and approved in this document.
7. Parking spaces for persons with disabilities will be clearly delineated with upright signs.
8. Approval of this plan does not constitute or imply compliance with ADA requirements.
9. This site shall be landscaped prior to issuance of a final certificate of occupancy during the growing season of April 1 to October 1, all other times this site shall be landscaped within forty-five (45) days of the start of the following growing season.
10. All landscape areas shall be irrigated with an underground automatic irrigation system. Trees and shrubs will be irrigated by a separate zone from sod/grass; this includes trees planted in sod/grass area. The irrigation system is to have a rain sensor shutoff.
11. An access easement for emergency services is hereby granted on and across all areas for police, fire, medical and other emergency vehicles and for the provision of emergency services.
PARKING LOT LANDSCAPING PERMIT
OR
INDUSTRIAL SITE PLAN REVIEW

FUND/ORG. #0101-0810  ACCT. #3784

FEE: $250.00  RECEIPT #  DATE

Zone District: _______ (if P-1, does zone lot abut a zone district other than B-5, B-7, B-8 or P-1)?
Address or Location: ________________________________________________________________

Legal Description: LOT(S) ______ BLK _______ SUBDIV. ________________________________

☐ Attached

Contact’s e-mail ________________________________

☐ Owner  Contact’s FAX ________________________________

☐ Agent  Contact’s Name ________________________________

Applicant’s Name (Print) ________________________________

Phone ________________________________

City ________________________________  State _______________  ZIP __________________

Existing Use(s) of Zone Lot: __________________________ Number of existing parking spaces: ____________

Proposed Use(s): __________________________ Number of proposed parking spaces: ____________

Location of required off-street parking spaces:

1. In a structure
   If yes, number of spaces __________________________
   ☐ Yes  ☐ No

2. Lot has more than fifteen (15) spaces or 4,500 sq. ft. of area
   If yes, number of spaces __________________________
   ☐ Yes  ☐ No

3. Lot has more than 100 spaces
   ☐ Yes  ☐ No

4. Double loaded rows
   ☐ Yes  ☐ No

5. Additional off-street parking not required by Ordinance
   ☐ Yes  ☐ No

APPROVED IN ACCORDANCE WITH ATTACHED PLAN  ☐ DENIED

ZONING ADMINISTRATION SIGNATURE ___________________________ DATE ____________

REASON FOR DENIAL:

__________________________

EXCEPTIONS:

__________________________

NOTE:

ZA66 (4/97)
COLORADO FRONT RANGE LANDSCAPES

RELATIVE PLANT MATERIAL WATER NEEDS*
IN ADDITION TO NATURAL PRECIPITATION
(Gallons per square foot per year)

18 gal
Bluegrass

12 gal
Tall Fescue
Smooth Bromegrass

7 gal
Wheat Grasses

5 gal
Highest Water Requiring

3 gal
Moderate Water Requiring

1 gal
Low Water Requiring

COOL SEASON GRASSES

WARM SEASON GRASSES
BUFFALO, BLUE GRAMA

* Actual water needs may vary according to on-site conditions, soils, irrigation practices, etc. The graph provides a general visual reference of landscape industry rules of thumb and experiences encountered in the Denver Water Department Landscape Garden.

NOTES:

a. Bluegrass at 1" to 1.25"/wk. for 28 weeks
b. Tall fescue at approx. 66% of bluegrass.
c. Wheat grasses at approx. 40% of bluegrass.
d. Highest water users with approx. 6" of supplemental.
e. Lowest water users with approx. 1.8" of supplemental irrigation.
Parks and Recreation Requirements & Guidelines

PLANTINGS WITHIN THE RIGHT-OF-WAYS (R.O.W.) AND WITHIN DEVELOPMENT

- Plans need to show the following:
  - Species clearly identified
  - Caliper listed
  - Spacing labeled
  - All R.O.W. plantings to have automated irrigation. Trees and shrubs are irrigated by separate zones from grass areas, including trees planted in grass areas. Note to read as follows: All landscape areas shall be irrigated with an underground automatic irrigation system. Trees and shrubs must be irrigated by a separate zone from sod/grass; this includes trees planted in sod/grass area. The irrigation system is to have a rain sensor shutoff installed.
  - Planting details shown
  - Tree grate details shown (if applicable)
  - All existing trees must be shown on plans and labeled as “remove”, “relocate”, or “remain”.

- Existing trees to remain must be protected during construction. Follow Denver’s Tree Retention & Protection specifications. These specifications should be included as part of the construction documents.

- Existing trees to be removed or relocated must be evaluated and permitted by Denver Forestry prior to design approval.

- Trees that are damaged or destroyed are subject to penalties outlined in the Denver Revised Municipal Code. Appraised value of tree will be assessed and owner will be charged. A copy of this ordinance can be obtained through the City Web Site or the City Forestry Office (720.913.0651) and should be included as part of the construction documents.

- The following trees will not be accepted in the R.O.W.; Siberian Elm, Willows, Russian Olive, Box Elders, any Poplar species, evergreens, weeping trees, trees that produce fleshy fruit, or multi-stemmed trees.

- Spacing requirements within the R.O.W.:
  - 35' between shade trees
  - 25' between ornamental trees (only allowed if overhead utility lines are present or in medians)
  - 30' from curb at intersections
  - 20' from streetlights & stop signs
  - 10' from alleys, driveways, & fire hydrants
  - 4' from attached walks

- City has the right to specify tree species within the R.O.W.

- All trees to be planted within the R.O.W. need to be permitted after design approval and can be obtained through Forestry.

- Contact Maureen VanNorden, Denver Forestry Office, 720.913.0646, for any further information regarding planting in R.O.W.

Revised 11/26/02
PLANS NEEDED

- Survey (showing all existing conditions and trees)
- Layout Plan
- Grading & Drainage Plan
- Planting Plan
- Elevations

DEVELOPMENT ALONG PARKWAYS

- Identify any nearby parkways
- Maintain integrity of all parkways
- Minimize or eliminate construction activity near parkways
- Parkway rules and regulations need to be followed. Contact Trent Hart, Park Planning Office, 720.913.0616
- Each parkway has different setback requirements for structures, dumpster enclosures, fences, walls, signs, etc.
- Label all setbacks along parkways
- The following list are the designated historic parkways within the City of Denver:
  East Alameda Ave., Bonnie Brae Blvd., Buchtel Blvd., City Park Esplanade, Cherry Creek Drive, Clermont St., Colorado Blvd., Downing St., Federal Blvd., Forest St., Franklin St., Gilpin St., Hale Pkwy., High St., S. Irving St., Martin Luther King Blvd., Magnolia St., S. Marion St., Monaco St., Montview Blvd., Park Ave., Richthofen Place, Speer Blvd., University Blvd., Williams St., East 1st Ave., East 3rd Ave., East 4th Ave., East 6th Ave., East 7th Ave., West 14th Ave., East 17th Ave., East 26th Ave., and West 46th Ave. (See map)
PARK IMPACTS
- Identify any nearby parks
- Maintain integrity of all parks
- Minimize or eliminate construction activity near parks
- What drainage impacts occur?
  - Are park trees being affected?
  - What new traffic patterns are being created?
  - Is parking being impacted?
  - Are permitted activities inside the park being impacted?
  - Maintain historical, scenic, or prominent views to and from the parks
  - Show proposed and existing connections to adjacent parks

TRAILS (ON ROAD & OFF ROAD)
- Identify all nearby trails existing and proposed. Contact Dick Gannon, Park Planning Office, 720.913.0611
- Maintain integrity and alignment of all trails
- Follow approved design guidelines as found in the 1993 Denver Bicycle Master Plan and Denver Bicycle Master Plan Update 2001
- All trails must meet ADA requirements
- All trails must be accessible to the general public, i.e.; no gates, barriers, etc.
- Minimize or eliminate construction activity that would disrupt trail usage
- Show connections to all nearby trails

NATURAL AREAS GUIDELINES
- For all natural area improvements contact Gayle Weinstein at 303.341.0115

DEVELOPMENT WITHIN PARK MAINTAINED AREAS
- For any development, access, staging, or disturbance occurring within Parks or Park maintained areas a permit is required please contact Jim Tenorio at 303.698.4902

Revised 11/26/02
RULES & REGULATIONS ESTABLISHING THE
DIMENSIONAL AND EQUIPMENT STANDARDS
FOR BICYCLE PARKING AREAS

Community Planning & Development Agency
200 W. 14th Ave. Room 203
Denver, Colorado 80204-2700

Jennifer T. Moulton  FAIA
Director

Department of Public Works
Transportation Division
200 W. 14th Ave. Room 302
Denver, Colorado 80204-2700

Stephanie A. Foote
Manager
October 11, 2001
MEMORANDUM

TO: Department of Public Works Staff
   Community Planning and Development Agency Staff

FROM: Jennifer T. Moulton
       Director of Community Planning and Development

Stephanie A. Foote
Manager of Public Works

SUBJECT: Rules and Regulations Establishing the Dimensional and Equipment Standards for Bicycle Parking Areas

DATE: October 11, 2001

Via this memo, the City of Denver is re-issuing the attached “Rules and Regulations Establishing the Dimensional and Equipment Standards for Bicycle Parking Areas” as a city standard for all bicycle parking rack applications. This will apply to all non-residential development sites, including Planned Unit Developments (PUDs) that have an off-street automobile parking requirement of fifteen (15) or more spaces.

These authority for these rules and regulations is defined in Section 59-582(e) of the Denver Revised Municipal Code.

If you have any questions, please do not hesitate to contact our city Bicycle Planner, James Mackay, at 720-865-3171.

JM/

Attachment

Cc: Mayor Webb’s Bicycle Advisory Committee

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RULES AND REGULATIONS ESTABLISHING THE DIMENSIONAL AND EQUIPMENT STANDARDS FOR BICYCLE PARKING AREAS

I. Objectives for Bicycle Parking Areas.

1) To encourage the use of bicycles for personal transportation as an alternative to motor vehicles.

2) To provide for bicycle access to employment, commercial, and other transportation and travel destinations.

II. Bicycle Parking Standards.

Per the 1993 Denver Bicycle Master Plan, the "Inverted U" type bike rack is the required bicycle parking rack. Any other type proposed rack would be subject to approval by the Transportation Office.

III. Required Provision of Bicycle Parking Areas (Refr: Section 59-582(c) Denver Revised Mun. Code)

For proposed non-residential sites having an off-street parking requirement of fifteen (15) spaces or more, a number of off-street bicycle parking spaces shall be provided equal to five (5) percent of the automobile parking space requirement. Each Inverted-U provided will count as two (2) bicycle parking spaces.

Subject to the approval by the Transportation Office of the proposed parking area design, location and security features, required automobile parking spaces may be reduced at the ratio of one (1) automobile parking space for each six (6) bicycle parking spaces provided, except that under no circumstances may the required number be reduced by more than five (5) percent.

IV. Description - The "Inverted U" Type Bicycle Rack

The Inverted U's shall be fabricated from 1 ¼" Schedule 40 Pipe, in accordance with ASTM F 1083, 48.26 mm O.D. x 3.683 mm wall (1.90" x 0.145" wall). The U's shall measure 914.4 mm high x 457.2 mm wide (36" high, 18" wide). The bicycle racks shall not be welded in sections. Only the base plate shall be welded to the steel pipe with two (2) 3mm (1/8") vent holes - one on the inside of each upright where the pipe is welded to the baseplate. After fabrication, the rack shall be coated with a Thermoplastic (polyethylene copolymer based) powder coating (polyarmor) to a thickness 200-250 micrometers (8 - 12 mils). Racks installed Downtown must be "Federal Green" - Color #14056 as specified in the Federal Paint Specifications 595B. Racks shall be mounted to concrete via 190 mm (7 ½") diameter baseplates 10mm (3/8") thick steel in accordance with ASTM A 36, with three 11 mm diameter (7/16") mounting holes on each base plate, spaced equidistant between the upright pipe and edge of the baseplate. Expansion anchor to be carbon steel mushroom head, 10 mm x 76 mm (3/8" x 3") "spike" #5550 as manufactured by Rawl or approved equal manufactured in the U.S. made from grade 8.2 materials exhibiting equivalent theft-proof performance. Racks shall be set firm and aligned with a tolerance of plus or minus ¼" from plumb. Where required, steel tapered shims shall be installed prior to anchoring in place. Any departure of base plate from grade by more than 3/8" shall require the separation to be filled with high-strength epoxy non-shrinking grout and made level.
V. Description - "Inverted U" (Baserail Array) Alternate.

Inverted U bike racks shall consist of two to five inverted U's as specified above, mounted 30" on-center via baseplate rails. Racks shall be mounted to concrete via baseplate rails 12.7 mm x 76.2 mm (1/2" x 3") steel in accordance with ASTM A 36 to create a free-standing array. Only the base rails shall be welded to the steel pipe. The baserails shall have 11 mm diameter (7/16") mounting holes located as shown on the city bicycle rack details (mounted via the same expansion anchors as described above.)

VI. Location of Bicycle Parking Racks.

Racks should either be installed in the public Right-Of-Way, or on private sites in conformance with front setback requirements. Whenever possible, the racks should be placed within 50' of building entrances where bicyclists would naturally transition to pedestrian mode. The rack placement would ideally allow for visual monitoring by people within the building and/or people entering the building. The placement of the racks should minimize conflicts with both pedestrians and motorized traffic. All bicycle parking provided should be on concrete, and located a minimum of 24" from a parallel wall, and 30" from a perpendicular wall (as measured to the closest inverted U).

VII. Use of Alternative (Non-Inverted U) Bicycle Parking Racks.

As stated above, the Inverted U is the required rack for all applications. At the discretion of the City Transportation Office, other bicycle security devices may be approved for use in unusual circumstances. Any such alternate security device submitted for approval must provide for:

1) Supporting the bike frame at two locations (not just a wheel);

2) Allowing both the frame and at least one wheel to be locked to the rack (without requiring that the lock be placed near the bicycle chain);

3) Allowing the use of either a cable or "U-type" lock;

4) Bicycles which are equipped with water bottle cages;

5) Bicycles which are not equipped with kickstands; and

6) All types and sizes of bicycles, including various types and sizes of frames, wheel sizes, and tire widths.

VIII Availability of Bicycle Parking Racks:

These racks can be produced by local fabricators, or supplied by vendors listed in the Metro-Denver telephone directory yellow pages: see “Bicycle Racks and Security Systems”.

IX Bicycle Parking Lockers.

Bicycle parking lockers are specifically encouraged for assigned use by employees and bicycle commuters. Bicycle parking capacity provided via lockers will be considered as being in compliance with these rules. Lockers are to be placed in accordance with site setback requirements.

X. Additional Bicycle Parking Information: For additional information on all bicycle parking topics, including bicycle parking lockers, contact James Mackay, P.E. Bicycle Planner at (720)865-BIKE (865-2453).
INVERTED "U" DIMENSIONS

Wall or Obstruction

24"
36"
30"
30"
18"

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

Inverted U Bike Rack
Dimensions
GENERAL CONSTRUCTION NOTES:
"INVERTED U" RACKS

1. BICYCLE RACKS SHALL NOT BE LOCATED WITHIN BUS STOPS, LOADING ZONES, OR OTHER CURB SPACE WHERE ON-STREET PARKING IS PERMITTED UNLESS APPROVED BY THE CITY TRAFFIC ENGINEER.

2. BICYCLE RACKS MUST BE PLACED A MINIMUM OF 4'-0" FROM EXISTING STREET FURNITURE (I.E. MAILBOXES, LIGHT POLES)

3. BICYCLE RACKS MUST HAVE A 12' CLEARANCE FROM EDGE OF FIRE HYDRANTS.

4. BICYCLE RACKS SHOULD BE PLACED A MINIMUM OF 6 FEET FROM EACH OTHER.

5. BICYCLE RACKS SHOULD ONLY BE INSTALLED ON SIDEWALKS WITH A WIDTH OF 10 FEET OR GREATER AND SHALL ALLOW A MINIMUM 5 FOOT WIDE CLEAR, UNOBSSTRUCTED PATH TO REMAIN FOR PEDESTRIANS.

6. ANY BICYCLE RACKS INSTALLED IN AREAS ZONED B5 OR GREATER SHALL HAVE LOCATION APPROVED BY CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION.

7. BICYCLE RACKS SHALL BE INSTALLED 3 FEET FROM FACE OF CURB UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
Our bike rack standards are on a page of the city website.

Denver Bike Rack Standards:
http://www.denvergov.org/Bicycle_Program/template2606.asp

Since it includes photos of the racks and anchor fastners I am confident that you will find this to be a useful resource to easily define to people what our requirements are.

James Mackay, P.E.
Denver Bicycle Planner
200 West 14th Ave., Room 302
Denver, Colorado 80220-2700
James.Mackay@ci.denver.co.us
Ph. 720-865-BIKE Fax 720-865-3282
WWW.Denvergov.org

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