

City of Carson City
Agenda Report

Item # 13A

Date Submitted: July 24, 2007

Agenda Date Requested: August 2, 2007

Time Requested: 10 minutes

To: Mayor and Board of Supervisors

From: Planning Division

Subject Title: Action to adopt Bill No. 124, on second reading, Ordinance No. _____, an ordinance amending the Carson City Municipal Code Title 18, Zoning, Chapter 18.16, Development Standards, Division 3 Landscaping, adding provisions regarding turf areas, trees and shrubs within the historic district, tree protection measures, riparian corridors, planting details and general landscaping details, and other matters related thereto. (File ZCA-07-023)

Staff Summary: The proposed amendments would modify landscaping requirements that apply to commercial, industrial, institutional and multi-family apartment developments.

Type of Action Requested:

- Resolution Ordinance - Second Reading
 Formal Action/Motion Other (Specify)

Does This Action Require A Business Impact Statement: Yes No

Planning Commission Action: Recommended approval March 28, 2007 by the Carson City Planning Commission by a vote of 6 Ayes, 0 nays, and 1 Absent.

Board of Supervisor's Action: Approved on August 2, 2007 by a vote of 4:0:1.

Recommended Board Action: I move to adopt Bill No. 124, on second reading, Ordinance No. _____, an ordinance amending the Carson City Municipal Code Title 18, Zoning, Chapter 18.16, Development Standards, Division 3 Landscaping, adding provisions regarding turf areas, trees and shrubs within the historic district, tree protection measures, riparian corridors, planting details and general landscaping details, and other matters related thereto.

Explanation for Recommended Board Action: The Board of Supervisors, pursuant to Carson City Municipal Code, is required to take final action on all code amendments. This is the first reading of two readings. Please see the attached staff report to the Planning Commission for more information.

Applicable Statute, Code, Policy, Rule or Regulation: CCMC Title 18, Zoning and Development Standards

Fiscal Impact: N/A

Explanation of Impact: N/A


Funding Source: N/A

Alternatives: 1 Refer the matter back to Planning Commission for further review, or 2) Deny the ordinance


Supporting Material: 1) Ordinance


Prepared By: Donna Fuller, Administrative Services Manager

Reviewed By:


(Walter Sullivan, Planning Director) Date: 8-6-07


(Larry Werner, Development Services Director/City Engineer) Date: 8/2/07


(Linda Ritter, City Manager) Date: 8/1/07


(District Attorney's Office) Date: 8-7-07

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay
2) _____

(Vote Recorded By)

ORDINANCE NO. _____

BILL NO. 124

AN ORDINANCE AMENDING CARSON CITY MUNICIPAL CODE TITLE 18, ZONING, CHAPTER 18.16, DEVELOPMENT STANDARDS, DIVISION 3 LANDSCAPING, ADDING PROVISIONS REGARDING TURF AREAS, TREES AND SHRUBS WITHIN THE HISTORIC DISTRICT, TREE PROTECTION MEASURES, RIPARIAN CORRIDORS, PLANTING DETAILS AND GENERAL LANDSCAPING DETAILS, AND OTHER MATTERS PROPERLY RELATED THERETO.

Fiscal effect: None

The Board of Supervisors of Carson City, do ordain:

SECTION I:

That Division 3 of the Development Standards of the Carson City Municipal Code is hereby amended to read as follows:

3.1 Purpose.

The purpose of this section is to set forth standards for new and expanded development within the City, enhance the aesthetic appearance of the community, including the visual appearance of streets, complement the visual effect of buildings, aid in the enhancement of property values, provide buffers between various land uses, provide protection from intense land use activities, insulate from the effects of weather conditions, including the provision shading for parking lots, and aid in conserving water by encouraging the use of varieties of plants indigenous to arid regions. These standards shall be the minimum requirements necessary for the promotion of the foregoing purposes. Text and diagrams describing landscaping and irrigation requirements, planting details, approved tree and shrub lists and other examples for the requirements of this Division are in the appendix to this section, and available on the Carson City website and on CD at the Planning Division office.

3.2 Applicability.

These landscape standards shall apply to new construction of the following projects:

- Multi-family Residential with three [~~3~~] or more units
- Institutional Uses
- Office Uses
- Commercial Uses
- Industrial Uses
- Public Uses

The Director may approve variations to the standards set out in this Division if they respond more appropriately to a particular site and provide equivalent means of achieving the intent of the landscape standards.

Any expansion of a building [or use] not in compliance with the landscape requirements in this Division and Title 18 of the Carson City Municipal Code must comply with landscape standards by twice the proportion to the expansion pursuant to Table 3.1 (Expansion Compliance).

Table 3.1

Expansion Compliance	
≤ 5% Building Expansion	No Requirements
≤ 10% Building Expansion	20% of Landscape Requirements for entire site
≤ 20% Building Expansion	40% of Landscape Requirements for entire site
≤ 30% Building Expansion	60% of Landscape Requirements for entire site
≤ 40% Building Expansion	80% of Landscape Requirements for entire site
> 40% Building Expansion	100% of Landscape Requirements for entire site

3.3 Landscape and Irrigation Plans.

A landscape and irrigation plan shall be filed with the City and approved by the Director prior to the approval of a site plan or issuance of a building permit. The plan shall be prepared by a landscape architect registered in the State of Nevada, or other person permitted to prepare landscape plans pursuant to Chapter 623A of the Nevada Revised Statutes (NRS). Landscaping on all commercial/industrial projects must be installed or supervised by an individual at the job location with at least one of the following credentials: Certified Landscape Technician, Licensed Landscape Contractor, Certified Landscape Professional, ISA Certified Arborist, Registered Landscape Architect, a C10 Qualified Employee as recognized by the State Contractor's Board, or an equivalent certification, approved by the Parks & Recreation Department.

- 3.3.1 The landscape and irrigation plan shall be *clearly and* neatly drawn in a [convenient] commonly used scale such as Engineers or Architect (i.e., one inch [(1") equals 20 [twenty] feet [(20')] or 1/4 inch equals one foot, [but not to exceed one inch (1") equals 40 forty feet (40')] and shall include a north arrow, owner/developer name, project location, location of adjacent streets, property lines, easements, sidewalks, drives, paved areas, sign and light standard locations, building outlines, eaves, topography and grading, existing trees or other natural features influencing the use of the site, utilities either overhead or underground

and ground-mounted equipment such as vaults, transformers and air conditioning units.

- 3.3.2 The plans shall include landscape calculations relevant to the application of the standards of this section and shall include a plant list in a legend format giving the common and botanical names of each plant with a key number or identifying symbol assigned to each plant, the size of the plant, its spacing and the quantity to be used. [~~as the following example illustrates:~~]

[Table 3.2 Example Plant List]

[No.]	Botanical Name	Common Name	Size	Spacing	Quantit
1	'Vinca minor	Vinca	1-gallon	42	35
2	'Syringa vulgaris	White Common	5-gallons	N/A	40
3	'Robinia ambigua'	Idaho Locust	2-inch	40-feet	5
4	'Pyrus calleryana'	Flowering Pear	2-inch	See	15
5	'Pinus nigra'	Austrian Black	8-feet	30-feet	5]

- 3.3.3 The landscape plans shall include construction details for planting, staking, soil amendments and any special requirements for the project and may be an attachment to the plans.
- 3.3.4 Irrigation plans shall be drawn at the same scale as the landscape plans and include specifications which comply with the most current Uniform Plumbing Code as adopted by the City. On all submitted plans, provide detail showing number of emitters/bubblers and rate or gallons per hour (gph) or gallons per minute (gpm) for all plants and trees. See emitter detail in appendix for example.
- 3.3.5 Identification and description of automatic irrigation components to insure that vegetation is adequately serviced through water conserving features. Overhead sprinkler irrigation is only allowed on turf areas or other areas requiring overhead sprinkler irrigation.
- 3.3.6 All drip and bubbler irrigation systems for trees and shrubs must be on a separate irrigation zone from turf irrigation zones. The utilization of water savings irrigation design is encouraged, and incorporation of separation of irrigation zones based on water needs.
- 3.3.7 Indication of the irrigation system point of connection to the water supply and size, water pressure available, and maximum demand of the system in gallons per hour/minute shall be provided.

- 3.3.8 Irrigation equipment specified must be identified by manufacturer's name and equipment identification number.
- 3.3.9 All equipment locations shall be indicated for irrigation valves, controllers, hydrants, quick coupler valves, sprinkler heads, backflow preventors and pipe sizing.
- 3.3.10 Additional irrigation details may be needed to clarify particular situations as shown in typical irrigation legend in the Appendix.
- 3.3.11 Typical details shall include backflow prevention devices, backflow enclosure valves, irrigation heads and irrigation controllers. Note that ~~only~~ pressure vacuum breakers are allowed for residential applications, and reduced pressure principle backflow prevention devices are required in all other applications.
- 3.3.12 All below ground equipment must be located within boxes of adequate size to protect the components.
- 3.3.13 Schedule 40 PVC pipe is required for all pressure lines and under all paved areas.
- 3.3.14 Piping must be installed a minimum of 18 ~~eighteen~~ inches ~~[(18")]~~ underground for non-pressure irrigation lines and 24 ~~twenty-four~~ inches ~~[(24")]~~ underground for constant pressure irrigation lines.
- 3.3.15 ~~[Adequate]~~ Freeze protection and/or winterization for the irrigation system shall be provided.
- 3.3.16 Schedule 40 PVC pipe or equivalent sleeving under sidewalks or driveways is required.
- 3.3.17 Landscape irrigation water use shall be separately metered or sewer changes shall apply for other than residential uses.

3.4 **Preservation and Protection of Existing Trees and Shrubs.**

Trees and significant shrubs shall be preserved whenever possible and shall be considered part of the required landscape area. Preservation of existing 4-inch caliper (6-8 foot for evergreens) healthy trees will be eligible for a 2:1 credit toward the total tree requirement if approved by the Director, up to a maximum of 25% of the requirement for trees on the site. Provide an overlay on all submitted plans of all existing trees with caliper (deciduous) or height (evergreen) and significant shrubs on the site and clearly mark which will be retained on the site and which are proposed to be removed.

~~[In the proposed parking area, existing trees with a trunk diameter of six inches (6") or greater at a point four and one-half feet (4½') above ground level shall be preserved, unless removal is authorized by prior written approval from the Director. Preservation of existing healthy, mature trees may be eligible for a 2:1 credit toward the total tree requirement if approved by the Director.]~~

3.4.1 Deciduous trees with a trunk diameter of four inch or greater at a point four and one-half foot above ground level or evergreen trees six foot or greater in height or significant shrubs, shall not be removed unless authorized by prior written approval from the Director. The applicant is encouraged to submit a report to the Director prepared by a certified arborist, or licensed design professional detailing a reason for a request to authorize removal of trees and significant shrubs. After consultation with other applicable City divisions, the Director may authorize the removal of existing trees and shrubs if any of the following criteria exist:

1. The health or condition of the tree presents a clear danger to people or property or it constitutes a nuisance.
2. When the tree or shrub is located within the footprint of the building, or when a tree trunk or shrub is so close to the building area that construction would result in irreparable damage or death to the plant.
3. Access is so restricted to the site that removal is necessary and unavoidable.
4. The elevation will be severely changed by grading/building/development. The tree or shrub cannot remain on the site as a result of the change in elevation.
5. Any other instances deemed appropriate by the Director shall be considered.

3.4.1.1 All trees removed from a site, which were not previously approved under the criteria outlined in 3.4.1 above, require replacement by one of the methods listed below. As an example, removal of a six inch diameter tree would require replacement of the tree with four, three inch caliper trees or the equivalent.

- a). Deciduous trees require replacement with a 2:1 caliper ratio tree, with a minimum caliper of two inch and a maximum of three inch per tree.
- b). Evergreen trees require replacement with a 2:1 height ratio, with a height minimum of six foot and maximum of eight foot per replacement tree.
- c). Tree replacement may require off-site mitigation, including planting of trees on public property. Off-site mitigation shall require approval by the Parks and Recreation Director. Payment of fees to purchase and plant trees, as well as associated costs are required, rather than actual planting of trees on public property. Appropriate fees which are based on the placement of

trees in the right-of-way program as periodically updated shall be paid to the Parks and Recreation Department. Provide the Planning Department with a copy of receipt for payment of required tree replacement/mitigation fees. Payment is required prior to the building permit being issued.

3.4.2 Tree Protection. All deviations from the Tree Protection Code must be approved by the Planning Division. Construction activities can severely damage or kill trees. See Tree Retention/Protection, Root Pruning Detail, and Excavation Adjacent to Retained Trees in Appendix for additional requirements and information. The following practices must be followed during all construction activities:

1. Pruning of live branches from trees identified for preservation is prohibited except in conjunction with 3.4.3 Pruning Standards. See Pruning Details in appendix for more requirements and details.
2. Tree protection fencing and protection is required around all trees identified for preservation. See detail in Appendix. Construct protection fencing which complies with the following:
 - a) Protective fencing must be constructed of four foot wide minimum orange netting or chain link. Fencing must be a minimum of five feet outside the tree drip line. Fences must be mounted on above ground concrete footings, which shall not be driven into the ground. Spacing shall be no more than 10 foot. This detail shall be placed on all grading, demolition and improvement plans.
 - b) Protective fencing shall enclose the entire area under the canopy drip line of the tree protection zone throughout the life of the project, or until work within the tree protection zone is completed. The fence shall not be moved during construction phase without prior approval of the qualified site professional utilizing the best management practices. The protective fence may be removed at final grading inspection or at the time final landscaping is installed. Refer to detail in appendix for sample drawing.
 - c) A sign describing the fence as protective tree fencing shall be prominently displayed on each fence. The sign must be a minimum of 8.5 by 11 inches and clearly state: "Tree Protection Zone. This fence shall not be removed and is subject to penalty per Carson City Municipal Code." Refer to detail in appendix for sample drawing.
3. If protective fencing cannot be placed around the entire Tree Protection Zone, then protective fencing shall be placed around the trunk of the tree(s) but only after prior approval of the proposal by

the Planning Division. Two by four (2x4) lumber shall be secured with banding around the trunk of tree(s) to be preserved. Do not attach boards or banding directly into the bark or trunk of the tree.

4. There should be no activity in the Tree Protection zone without prior approval by the Planning Division. The following are prohibited activities within the Tree Protection Zone:
 - Soil disturbance, including excavation, trenching or grade change without prior approval of the Planning Division.
 - Spoils, non-spoils, storage of any equipment, materials or parking.
 - Placement of non-spoil material or equipment.
5. Apply six inches of wood chips or bark over the root zone of trees within the protective barriers. Mulching areas outside of protective barriers will help to minimize compaction from construction traffic adjacent to sensitive root zones.
6. Hand digging shall be required to determine if lateral roots are present on trees in the direction of proposed foundation location. If support roots are found, it is recommended that correct root pruning is performed, so as to not compromise the stability of the tree(s).
7. Correctly and cleanly prune exposed roots that are not to be saved back to the soil horizon in compliance with detail in 3.4.3. Pruning should be supervised by a qualified licensed professional and should be performed to ISA standards (see details in Appendix).
8. Promptly cover exposed roots with damp tarp(s) which are kept moist, or material that will keep roots from drying.
9. Irrigate within the dripline of trees once a week if natural precipitation does not occur during spring, summer and fall.
10. See detail for tree retention, root pruning and excavation adjacent to retained trees in appendix.

3.4.3

Pruning Standards. No trees on commercial or industrial land which is part of required landscaping shall be pruned in a manner that impairs the health of the tree. All pruning performed on required trees shall be in accordance with pruning standards published by the American National Standards Institute (ANSI), per ANSI A300 Part 1 Pruning, and International Society of Arboriculture, Western Chapter. See appendix regarding pruning detail.

1. ANSI pruning standards require in part, the use of certain tools, cutting techniques, and pruning methods to be followed, including

not leaving branch stubs, few or no heading cuts, not cutting off the branch collar (not making a cut flush with the trunk), not topping or lion's tailing ("gutting-out" a tree by removing a large number of the inner branches), not removing more than 25% of the foliage of a single branch, not removing more than 25% of the total tree foliage in a single year, not damaging other parts of the tree during pruning and not using wound paint. Fifty percent of the foliage should remain evenly distributed in the lower 66% of the tree canopy after pruning.

2. All pruned material shall be controlled and removed in a manner to prevent damage to the surrounding plant material and property. Tree topping, tipping and heading back are all terms used to describe severe cutting back of a tree's crown and is prohibited on any tree which is part of required landscaping and strenuously discouraged on any other trees on the site.
3. Trees severely damaged by storms or other causes, or trees under utility wire or other obstructions, where other pruning practices are impractical, may be exempted from the prohibition of topping, tipping and heading back, at the discretion of the Director. A letter of request must be submitted to the Director and approved prior to such severe pruning.

3.5 Landscape Design Standards.

- 3.5.1 All landscaping shall aesthetically enhance and be compatible with the site area. Landscaping shall be installed to enhance the view of the site from public street(s) and adjacent properties.
- 3.5.2 A minimum of [twenty-percent-() 20% ()] of the site's impervious surfaces excluding the building coverage must be pervious areas of landscape material. The area within the public right-of-way adjacent to a site must be landscaped and may be counted for [twenty-five-percent-() 25% ()] of the total required landscaped area. In areas with right-of-ways over [twenty] 20 feet [(20')] in depth, the Director may modify or waive the requirement for landscaping of the right-of-way. The requirement may also be waived by the Director if the public agency denies permission for an encroachment permit or lease of the area to be landscaped.

3.6 Turf.

The following standards for the use of turf in landscaping are intended to conserve water by minimizing the need for water for irrigation and minimizing irrigation water wasting.

- 3.6.1 Turf areas shall not constitute more than [fifty percent (50%) of the] the percentage of the total landscape area as established by the table below [unless approved by the Director] unless approved by Special Use Permit.

Table – Permitted percentage of turf area. Turf area is shown as a percentage of the total landscaped area:

<u>Development Area</u>	<u>Permitted Turf Area</u>
<u>Less than 5 acres (ac.)</u>	<u>50%</u>
<u>5 ac. to less than 10 ac.</u>	<u>40%</u>
<u>10 ac. to less than 15 ac.</u>	<u>30%</u>
<u>15 ac. or larger</u>	<u>25%</u>

3.6.2 Turf shall not be used on slopes greater than 4:1 or in areas less than ~~[six feet (6")]~~ eight feet in width or length.

3.6.3 Where landscape areas abut sidewalks, drive-aisles, parking areas or other hardscape surfaces, a minimum three-foot wide landscape buffer area must be provided between any turf areas and the hardscape to capture irrigation overspray and runoff. The buffer area may be drip-irrigated plant materials or non-living landscape materials.

3.7 Trees.

3.7.1 ~~[At least one (1) tree shall be placed for every forty (40) lineal feet of street frontage. If a selected tree species warrants different spacing, or to allow for visual variety, the Director may modify this standard.]~~ The minimum number of trees shall be one tree per 400 square feet of landscape area. Additional trees are required if the number of trees for parking areas and along right-of-way areas as described in 3.7.1.a and 3.7.1.b exceed this minimum. The Director may modify this standard for public uses such as parks.

a. Included in the minimum required number of trees, [within parking areas on the site:] a minimum of one [(1)] shade tree must be planted for every [ten (1) 10 (1)] parking spaces or fraction thereof, and distributed throughout the parking area surface to provide even shading within the parking lot. For example, [eighteen (1) 18 (1)] parking spaces shall require two [(2)] trees. A minimum of one deciduous tree shall be placed in each standard sized parking island.

b. Included in the minimum required number of trees, at least one tree shall be placed along the right-of-way frontage for every 30 lineal feet of right-of-way at a point not more than 20 feet from the right-of-way. The Director may allow for different spacing or

locations of trees for projects with outside display such as automobile sales lots.

~~For the balance of the landscaped area of the site not within parking areas or along the site frontage, the minimum number of trees shall be one (1) tree per six hundred (600) square feet of landscape area. The Director may allow for different spacing or locations of trees for projects with outside display such as automobile sales lots. This standard may be waived for public uses such as parks.~~

3.7.2 Where more than 10 deciduous trees are provided as a part of the landscape plan, a minimum of 50% of the trees shall be of a different species to ensure diversity. Additional species may be required on larger projects.

3.8 Groundcover (including shrubs).

3.8.1 Groundcover shall be used to prevent erosion, inhibit weed growth, and present an aesthetically pleasing appearance when mature. Groundcover may include living plants such as turf, shrubs, vines, meadow grasses, flowers or other living covers. Ground cover and shrubs shall be incorporated into all landscape plans in a balanced manner.

3.8.2 Non-planted, non-living materials such as wood chips, bark, decorative rock, mulch, stone or other non-living materials may be used as groundcover, ~~[, but may not comprise more than twenty-percent (20%) of the total landscaped area,]~~ and shall be distributed throughout the site. ~~[The intention is to avoid large concentrations of non-living areas.]~~ All landscape areas shall be covered with materials suitable for reducing dust and evaporation and shall be designed to improve the aesthetic appearance of the area. An attractive mix of organic and non-organic materials is encouraged. Products which appear to be dirt shall not be used.

3.8.3 A ratio of at least six shrubs is required for each tree placed or retained on the site. If a large quantity of turf is proposed for the site, the required shrub count may be reduced after review and approval of the submitted landscaping plans by the Planning Division.

3.9 Streetscape.

On arterial streets, minimum ~~[ten]~~ 10 foot ~~[(40')]~~ wide landscape areas shall be provided along the frontage of the site adjacent to the street. On all other streets, a minimum of six foot ~~[(6')]~~ wide landscape area shall be provided along the frontage of the site adjacent to the street. On sites with unique constraints, the Director may approve an alternative dimension if the alternative does not compromise the integrity of the landscape plan.

3.10 Plant Materials.

- 3.10.1 The latest edition of the American Standard for Nursery Stock by the American Association of Nurserymen shall be the criteria for sizes and grades of plant materials. ~~[Plants shall meet all provisions of NRS 555 and the current ANSI Z60 standards. Trees shall be Grade #1, shall stand upright with no artificial support, shall have an intact and viable central leader, tree trunks shall be free of wounds and damage and shall have proper crown structure and trunk taper. Grafted specimens shall have healthy graft unions with trunk diameter greater below the union than above the union. Roots, bark and shoot growth shall show evidence of good vigor, absence of circling, girdling or kinked roots and shall have proper root ball size. All plants are to be insect and disease free, and rodent and mechanical damage free.]~~ No artificial plants are allowed unless approved by the Director.

All trees to be #1 grade nursery stock and meet current industry quality standards adopted by the American Association of Nurserymen, American National Standards Institute (ANSI) Z60 and NRS 555 (Regulations of Nursery and Nursery Stock). All trees must comply with the following:

No girdling, kinked, circling or "J" roots.

No trees that have been topped.

No wounds in the trunk, bark or on limbs.

Insect and disease free, rodent and mechanical damage free.

No trees that have large nursery stakes through rootball or have been grown on a nursery stake.

Rootball to be appropriate to caliper and crown size.

Trunk/crown structure and trunk taper to be appropriate for the species.

All graft unions to be healthy with trunk diameter below union larger than above union.

All trees to stand upright without stakes.

Roots, bark and shoot growth to give evidence of good tree vigor.

Any replacement of plant stock to be equal to original specification and approved by the owner's representative.

Any substitution of plant material must be submitted in writing for approval by the landscape architect or design professional and the Planning Division.

- 3.10.2 Container grown shrubs shall be minimum five [(5)] gallon size at the time of planting excluding trees and those plants grown in flats. Perennials shall be a minimum one [(1)] gallon size at the time of planting.

- 3.10.3 Required evergreen trees shall be a minimum of six [five] feet [(5')] in height at the time of planting and shall not comprise more than [forty percent (40%)] of the total number of trees or as dictated by the site and approved by the Director.

- 3.10.4 Required deciduous trees shall be a minimum caliper of two inches [~~(2")~~] at the time of planting. [~~Provision of~~] Using three inch [~~(3")~~] or larger minimum] maximum caliper new trees shall reduce the number of required trees by [~~ten percent (~~] 10% [~~)]~~] or as approved by the Director. This does not refer to required replacement trees as shown in 3.4.1.1, for trees removed without permission.
- 3.10.5 If additional trees beyond the minimum requirement are proposed, they may be smaller in size. The required number of trees in each category and total for the project must be clearly marked on the plan, with additional trees noted as supplemental.
- 3.10.~~[5]~~6 Trees which overhang sidewalks, parking lots or streets shall be free of thorns or fruit types that litter the ground. Evergreen trees are not permitted in standard sized parking islands.
- 3.10.~~[6]~~7 Within an urban setting, the following types of trees shall not be [~~used~~] installed because of undesirable characteristics: 'Populus genus' (aspens, poplars and cottonwoods), 'Salix genus' (willows), and 'Ulmus genus' (elms). New species which do not exhibit undesirable characteristics are acceptable. Requests for waiver of this requirement may be considered by the Director in appropriate instances. Developers are encouraged to protect and preserve existing healthy trees on site.
- 3.10.8 [~~Trees shall be planted in accordance with City tree planting standards: (See Standard Details in the Appendix)]~~ Tree selection for projects will be guided by the approved Carson City Tree List for Commercial Projects. Trees planted in the City will be installed according to the City's tree planting standards. The approved tree list and standard planting details are located in the appendix.
- 3.10.9 Riparian Areas. Areas along established riparian corridors may utilize native riparian trees and shrubs which are identified on the Carson City Riparian Area List. These materials may be planted along river/stream corridors within Carson City after approval of the intended choices and locations by the Director. Request for use of riparian trees and shrubs outside of a riparian or wetland zone within the urban setting may be considered by the Director in appropriate instances. The approved Riparian area tree and shrub lists are located in the appendix.
- 3.10.10 Historic District properties. Areas within the Historic District are encouraged to utilize trees and shrubs shown as noted on the Carson City Tree List for Commercial Projects, further noted as Carson City Historic District preferred trees. The approved tree list with Historic District preferred trees noted is located in the appendix.

3.11 Details.

- 3.11.1 Parking and driveway areas shall include concrete curbs or similar improvements as approved by the Director for protection of landscaping. Vehicle overhangs into landscaped areas shall not exceed two feet [(2')]. Planter areas shall not be less than [seventy-two (-) 72 (')] square feet in size and shall have a minimum width of six feet.
- 3.11.2 Drainage basins, when required, shall be incorporated into the landscape[ed] design, utilize non-buoyant landscape materials, and shall be irrigated if landscaped. Access shall be provided for maintenance. The landscaped basin area may count as [ten-percent (-) 10% (')] of the total landscape requirement if the basin is not fenced with sight-obscuring materials and is landscaped along the perimeter to enhance the appearance.
- 3.11.3 Snow storage should be incorporated within the design of projects and should be oriented for maximum sun exposure for acceleration of melting. Driveways, drive aisles, sidewalks and landscape areas, [except rocked areas], cannot be used for snow storage. Drainage and run-off from snow storage areas shall be considered in the design.
- 3.11.4 Soil in planted areas should be mechanically loosened to a minimum depth of [twelve] 12 inches [(12")] and/or to the depth of the root ball and [twice] three times the diameter for trees and shrubs. Tests of soils, based upon one test per site (sites over 25,000 square feet in landscape area may require additional tests as required by the Director), shall be conducted and appropriate soil amendments recommended. Soils should be improved by incorporating the recommended soil amendments into the loosened soil prior to planting.
- 3.11.5 All non-planted landscape areas shall be covered with materials such as mulch. Products which appear to be dirt shall not be used. A weed barrier fabric is required under all rock and cobble mulches and pre-emergent herbicide is recommended.
- a. Planted areas should be mulched to a minimum depth of three inches [(4")] for organic mulches. [and three inches (3") for rock] No fabric shall be used under wood mulch.
- b. Sufficient quantity of rock mulch shall be installed to completely cover all weed control fabric. Fabric shall be trimmed back in compliance with landscaping details to allow for future growth of plants. All rock mulch must be washed and cleaned prior to installation. Large cobble mulch[es] should include top dressing of smaller [mulch] matching cobble or similar material. Nonporous material such as plastic sheeting shall not be placed under the mulch.

3.11.6 All debris, including concrete, asphalt, wire, wood, steel and other foreign matter, must be removed from a planting area prior to soil preparation or planting and prior to request for a final inspection of the site.

3.11.7 Conflicts shall be avoided in design of landscape improvements by considering the size and breadth of mature landscaping. Show existing and proposed overhead and underground power lines, utility poles, light standards and utility easements on submitted landscape plans. Fire hydrants, fire connections, water boxes (three feet [(3')] clearance required), water and sewer service lines ([ten] 10 feet [(10')] clearance required for trees), overhead utilities, signs, roof overhangs, light standards etc., shall be taken into consideration in design of landscaping. Show all proposed and existing signage for the site.

3.12 Inspection, Certifications and Security.

3.12.1 Upon installation of landscaping and irrigation systems, the registered design professional, licensed design professional, general contractor, certified landscape contractor, registered landscape architect, or others as allowed per Nevada Revised Statutes (NRS) who created, stamped and signed the landscaping and irrigation plans, or who has been authorized by that person, shall certify that the installation was completed per the approved plans, including review of installation of correct plant materials, planting was according to diagrams and instructions included in the plan, emitter location and detail, etc. A letter attesting to this inspection and compliance shall be submitted to the Planning Division. The Director shall check the installation to verify compliance with the approved plans. Plant tags are to be left on plants until after approval of the landscaping plan by the authorized professional and shall be removed upon approval. The Planning Division retains the right to inspect projects, and if not in compliance with submitted plans, require compliance prior to issuance of a final certificate of occupancy.

3.12.2 It is understood that minor deviations and/or plant substitutions may be necessary during the course of the project. These deviations may be done if approved by the registered design professional or others as allowed per NRS, and if consistent with the original approved design and plants selected are similar to the original plan and intended purpose. Notification in writing to the Director is required for these instances. Approval is required from the Director prior to installation. Upon completion, as-built landscape plans shall be submitted. Major design revisions require a new fee and additional staff resources.

3.12.3 If, due to weather constraints, all landscaping is not completed prior to the final inspection, financial security in a form acceptable to the City in the amount of [~~one hundred fifty percent (150%)~~] of the estimated cost of installation of remaining landscape improvements shall be filed with the City guaranteeing installation within nine [(9)] months of final

inspection. The estimated cost of the landscaping improvements not completed must be verified by the City. Installation of plant materials during times when the ground is likely to be frozen is discouraged due to high mortality of plants. Delay of planting, and providing financial security in a form acceptable to the City, as described in 3.13.1, is recommended during these times.

3.13 Maintenance.

3.13.1 All landscape areas must be maintained by the property owners, including using the most current pruning standards accepted by the ANSI International Society of Arboriculture and/or the National Arborist Association. Any damaged or dead plant(s) must be replaced or repaired by the property owners within 30 days following notification by the Director. If the season of the year makes this repair or replacement within a 30 day period impractical, the person responsible for landscaping shall schedule an appropriate time for the completion of the accomplishment of this work as required and approved by the Director. Property owner shall provide a financial security in a form acceptable to the City, in the amount of 150% of the estimated cost of installation of remaining landscape improvements, which shall be filed with the City guaranteeing installation. The estimated cost of the landscaping improvements not yet completed must be verified by the City.

3.13.2 Maintenance must include the checking of the sprinkler pattern and drip systems, plant condition, weeding, fertilization, pest control, replacement of mulches, weed barrier and dead material, or other debris, proper pruning and use of proper mowing heights. Radical pruning or trimming such as topping shall require replacement of the plant material.

The required [A] maintenance schedule for both the planting and the irrigation system shall be shown on the landscape plan provided to the owner by the registered design professional or others as allowed by NRS.

3.13.3 An acknowledgment by the property owner of the required maintenance for a project must be submitted to the City as a part of landscape and irrigation plan submittals.

3.14 Revisions to Landscape Plans.

3.14.1 If a revision to a landscape plan results in a change to the approved plans of more than [~~twenty-five percent~~] 25% [)], a new landscape plan and review fee are required. Variations to the plan include, but are not limited to, change in species, type (e.g. rock, mulch, turf, etc.), and change in location.

3.15 Design Standards.

Diagrams, text and examples are located in the appendix, including, but not limited to, general landscape and irrigation notes, irrigation legend detail, typical plant list legend example, tree and shrub planting details, emitter layout and staking, bubbler, tree protection, flushing end cap, drip, spray and coupling valves, rotor/pop-up head, irrigation trench wall section, rock wall, wood and pipe bollards, approved tree, shrub, riparian and Historic District lists, pruning, tree retention/protection, root pruning and excavation adjacent to retained tree details.

SECTION II:

That no other provisions of Title 18 of the Carson City Municipal Code are affected by this ordinance.

PROPOSED on _____, 2007.

PROPOSED BY Supervisor _____

PASSED _____, 2007.

VOTE: AYES:

NAYS:

ABSENT:

MARV TEIXEIRA, Mayor

ATTEST:

ALAN GLOVER, Clerk-Recorder

This ordinance shall be in force and effect from and after the _____ day of the month of _____ of the year 2007.

GENERAL LANDSCAPE NOTES:

02/2007

ALL LAWN AREAS SHALL BE CONTOURED AND ROLLED WITH A WEIGHTED HAND ROLLER PRIOR TO SODDING OPERATIONS.

CONTRACTOR MAY PROVIDE PHOTOGRAPHS OR SAMPLES OF ALL TREE PLANT MATERIAL FOR APPROVAL BY THE DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE TO SEE IF SPECIFICATIONS ARE MET. THIS DOES NOT GUARANTEE ACCEPTANCE OF ALL TREES UPON DELIVERY TO PROJECT SITE.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION. THE ACQUISITION OF ALL NECESSARY PERMITS ASSOCIATED WITH CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING ALL NOTES, CHECKING PLANT NAMES AND CONFIRMING ALL NUMBERS, SIZES, AND PLANT AVAILABILITY PRIOR TO SUBMITTING BID.

IF QUANTITIES LISTED IN THE PLANTING SCHEDULES DO NOT CORRELATE WITH THE QUANTITIES INDICATED ON THE PLANS, THEN PLAN QUANTITIES SHALL GOVERN.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO INSTALL ALL MATERIALS COMPLETE AND IN PLACE AS SHOWN AND/OR SPECIFIED.

FINISH GRADES IN ALL LAWN AREAS SHALL BE ESTABLISHED BEFORE INSPECTION BY THE DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF SOD.

ROUGH GRADE, FINISH GRADE AND ALL BERM LOCATION/SHAPES SHALL BE ESTABLISHED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE BEFORE INSTALLATION OF THE IRRIGATION SYSTEM, SITE ELEMENTS OR ANY SOD.

SOIL AMENDMENTS IN COMPLIANCE WITH DEVELOPMENT STANDARDS 3.11 SHALL BE INCORPORATED INTO THE TOP 8" TO 10" (MIN) OF THE ROUGH GRADE OF ALL LAWN AREAS PRIOR TO SODDING.

ROUGH GRADE IN ALL LAWN AND PLANTING BED AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 8"-10" (MIN.) PRIOR TO INSTALLATION OF PLANT MATERIAL, BERMS AND SOD.

ALL SOD AND PLANT MATERIALS SHALL BE #1 GRADE NURSERY STOCK AND WARRANTED FOR ONE YEAR AFTER FINAL PROJECT ACCEPTANCE. REPLACE ANY PLANT WHICH DIES WITHIN 30 DAYS AFTER NOTIFICATION, EXCEPT DURING WINTER, WHEN REPLANTING MAY BE DELAYED, WITH PLANTS EQUAL TO ORIGINAL MATERIALS.

THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE ALL LAWN & PLANTING BED AREAS TO ESTABLISH ROUGH GRADE AND INSTALL REQUIRED SOIL AMENDMENTS. (4 1/2" BELOW TOP OF CURBS IN PLANTING AREAS & 1 1/2" BELOW SIDEWALKS IN LAWN AREAS.)

ANY IMPORTED TOPSOIL REQUIRED FOR INSTALLATION OF THE BERMS OR ESTABLISHMENT OF ROUGH GRADE OR FINISH GRADE SHALL BE TOPSOIL MIX APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL PRIOR TO INSTALLATION.

TREE STAKING SHALL BE DONE ON ALL TREES. CONTRACTOR SHALL STAKE AS PER DETAIL. ORIGINAL NURSERY STAKES ON TREES SHALL BE REMOVED BEFORE INSTALLATION. TREES MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE.

INSTALL A PROFESSIONAL GRADE LANDSCAPE FABRIC UNDER ALL ROCK MULCH AREAS. SECURE TO ROUGH GRADE. DO NOT LEAVE EXPOSED. (SEE DEV ST 3.11) NO PLASTIC SHEETING CAN BE PLACED UNDER ROCK MULCH

ROCK MULCH SHALL BE WASHED AND CLEANED. MULCH DEPTH TO BE 4"-6" MIN. AND BE INSTALLED IN ALL PLANTING AREAS AND OVER ALL BERMS AS SHOWN ON APPROVED LANDSCAPE PLANS. WEED FABRIC SHOULD BE COVERED BY MULCH AND NOT VISIBLE.

ALL PLANTING PITS SHALL BE EITHER HAND OR BACKHOE DUG (NO AUGER). THE BOTTOM AND SIDES OF THE PLANTING PITS SHALL BE SCARIFIED BEFORE INSTALLATION OF THE PLANT MATERIAL, HOLES SHALL BE THREE TIMES AS WIDE AS THE ROOTBALL DIAMETER, THE SAME DEPTH AS THE ROOTBALL AND BACKFILLED WITH AN APPROVED SOIL MIX.

ALL PLANTING BEDS AND SOD AREAS SHALL BE STRIPPED AND CLEARED OF ALL LAWN, ROOTS, WEEDS, AND DEBRIS AND SHALL BE RAKED TO A SMOOTH AND EVEN GRADE PRIOR TO PLANT MATERIAL OR SOD INSTALLATION.

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INSTALL IBDU WATER SOLUBLE STARTER PLANT FERTILIZER BAGS/TABLETS OR AN APPROVED EQUAL IN ALL PLANTING PITS. USE 1 PER 1-GALLON CONTAINER, 3 PER 5-GALLON CONTAINER, AND 5 PER 15-GALLON CONTAINER/ 2" CAL. OR LARGER TREE.

CONTRACTOR TO APPLY A PRE-EMERGENT HERBICIDE AND PERMEABLE LANDSCAPE FABRIC THROUGHOUT ALL ROCK MULCH AREAS PRIOR TO PLACING MULCH. NO PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN PERENNIAL, GROUNDCOVER, BULB AND ANNUAL AREAS. ADD GRANULAR PRE-EMERGENT HERBICIDE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS PRIOR TO INSTALLING LANDSCAPE FABRIC AND ROCK MULCH.

FINAL LOCATION OF ALL LANDSCAPE PLANT MATERIAL SHALL BE SET BY THE CONTRACTOR ACCORDING TO THE PLANS AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REP BEFORE INSTALLATION.

NO PLANTS SHALL BE PLACED TO CONFLICT OR CREATE CONFLICT W/ SIGNS, LIGHTS, UTILITIES, ETC. IF PLANT LOCATION WILL CAUSE A CONFLICT, CONTACT THE LANDSCAPE ARCHITECT.

ALL PERENNIAL & GROUNDCOVER AREAS SHALL BE HAND SET BY THE CONTRACTOR IN AREAS SHOWN ON DRAWINGS AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REP BEFORE INSTALLATION.

THE CONTRACTOR SHALL REMOVE ALL BURLAP, TWINE, TIES, CONTAINERS AND WIRE BASKETS FROM ALL PLANT MATERIAL. DO NOT DISTURB ROOTBALLS. REMOVE ANY EXCESS SOIL ON TREES OR SHRUBS THAT HAS ACCUMULATED DURING THE PACKAGING & SHIPPING PROCESS, (B&B STOCK - ESPECIALLY) IN ORDER TO DETERMINE PROPER PLANTING DEPTH IN ORDER TO PLACE ROOTBALL AT 1" ABOVE GRADE. CLEAN DOWN TO THE TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROVIDE EFFECTIVE DUST CONTROL OF ALL PREPARED SOIL AREAS.

ALL TREES TO BE #1 GRADE NURSERY STOCK AND MEET CURRENT INDUSTRY QUALITY STANDARDS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) Z60 AND NEVADA REVISED STATES (NRS) 555 (REGULATIONS OF NURSERY AND NURSERY STOCK). ALL TREES MUST COMPLY WITH:

- NO GIRDLING, KINKED, CIRCLING OR "J" ROOTS.
- NO TREES THAT HAVE BEEN TOPPED.
- NO WOUNDS IN THE TRUNK BARK OR ON LIMBS.
- INSECT AND DISEASE FREE, RODENT AND MECHANICAL DAMAGE FREE.
- NO TREES THAT HAVE LARGE NURSERY STAKES THROUGH ROOTBALL OR HAVE BEEN GROWN ON A NURSERY STAKE.
- ROOTBALL TO BE APPROPRIATE TO CALIPER AND CROWN SIZE.
- TRUNK/ CROWN STRUCTURE AND TRUNK TAPER TO BE APPROPRIATE FOR THE SPECIES.
- ALL GRAFT UNIONS TO BE HEALTHY WITH TRUNK DIAMETER BELOW UNION LARGER THAN ABOVE UNION.
- ALL TREES TO STAND UPRIGHT WITHOUT STAKES.
- ROOTS, BARK AND SHOOT GROWTH TO GIVE EVIDENCE OF GOOD TREE VIGOR.
- ANY REPLACEMENT OF PLANT STOCK TO BE EQUAL TO ORIGINAL SPECIFICATION AND APPROVED BY THE OWNER'S REPRESENTATIVE OR DESIGN PROFESSIONAL AND THE COMMUNITY DEVELOPMENT PLANNING DEPARTMENT.

ALL PLANTING BEDS AND SOD AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.

ALL BOX TREES TO BE STAKE FREE NURSERY STOCK, NO LARGE STAKES THROUGH ROOTBALL.

THE CONTRACTOR SHALL SPACE PLANT MATERIALS TO ACCOMMODATE EVERGREEN TREE GROWTH. SPACE ALL SHRUBS/ GROUND COVERS/ PERENNIALS A MINIMUM OF 8' AWAY FROM ANY EVERGREEN TREE TRUNK.

ANY SUBSTITUTION OF PLANT MATERIAL MUST BE SUBMITTED IN WRITING FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL AND THE COMMUNITY DEVELOPMENT DEPARTMENT.

THE CONTRACTOR SHALL INSPECT THE SITE REGULARLY TO REVIEW THE CONDITION OF ALL PLANTINGS. IF ANY CHANGES IN THE OVERALL MAINTENANCE PROGRAM ARE REQUIRED TO IMPROVE THE CONDITIONS TO AN ACCEPTABLE STANDARD, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING. OTHERWISE THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR THE CONDITION OF THE PLANTINGS AND MUST HONOR THE GUARANTEE. ANY PLANTS REPLACED UNDER THIS GUARANTEE SHALL BE GUARANTEED FOR ONE FULL YEAR FROM THE DATE OF REPLACEMENT.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE MAINTENANCE OF THE ENTIRE IRRIGATION SYSTEM & ALL LANDSCAPING UNTIL FINAL PROJECT ACCEPTANCE. AFTER FINAL PROJECT ACCEPTANCE ALL PROJECT MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER.

THE CONTRACTOR SHALL TOP DRESS ROUGH GRADE OF ALL LAWN AREAS WITH 2" OF PROFESSIONAL GRADE TOP SOIL MIX, APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL. SCARIFY ALL LAWN AREAS INCORPORATING TOPSOIL INTO ROUGH GRADE.

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UPON INSTALLATION OF LANDSCAPING AND THE IRRIGATION SYSTEM, THE REGISTERED DESIGN PROFESSIONAL OR LANDSCAPE ARCHITECT OR OTHERS AS ALLOWED PER NRS SHALL CERTIFY THAT THE INSTALLATION WAS COMPLETED PER THE APPROVED PLANS. THE REGISTERED DESIGN PROFESSIONAL SHALL CHECK THE INSTALLATION TO VERIFY COMPLIANCE WITH APPROVED PLANS. THEN THE PLANNING DEPARTMENT SHALL INSPECT FOR FINAL APPROVAL. PLANT SPECIES IDENTIFICATION TAGS ARE TO BE LEFT ON PLANTS UNTIL AFTER APPROVAL OF THE LANDSCAPING AND THEN REMOVED.

IT IS UNDERSTOOD THAT MINOR DEVIATION AND/OR PLANT SUBSTITUTIONS MAY BE NECESSARY DURING THE COURSE OF THE PROJECT. THESE DEVIATIONS MAY BE DONE IF APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL OR OTHERS AS ALLOWED PER NRS, AND IF CONSISTENT WITH THE ORIGINAL APPROVED DESIGN AND PLANTS SELECTED ARE SIMILAR TO THE ORIGINAL PLAN AND INTENDED PURPOSE. NOTIFICATION IN WRITING TO THE COMMUNITY DEVELOPMENT PLANNING DEPARTMENT IS REQUIRED FOR THESE INSTANCES. APPROVAL IS REQUIRED FROM THE DIRECTOR PRIOR TO INSTALLATION. UPON COMPLETION, AS-BUILT LANDSCAPE PLANS SHALL BE SUBMITTED TO COMMUNITY DEVELOPMENT PLANNING DEPARTMENT. MAJOR DESIGN REVISIONS MAY REQUIRE NEW FEES AND ADDITIONAL STAFF RESOURCES.

ALL LANDSCAPE AREAS MUST BE MAINTAINED BY THE PROPERTY OWNERS, INCLUDING USING THE MOST CURRENT PRUNING STANDARDS ACCEPTED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE AND/OR THE NATIONAL ARBORIST ASSOCIATION. ANY DAMAGED OR DEAD PLANT MUST BE REPLACED OR REPAIRED BY THE PROPERTY OWNERS WITHIN 30 DAYS FOLLOWING NOTIFICATION BY THE DIRECTOR. IF THE SEASON OF THE YEAR MAKES THIS REPAIR OR REPLACEMENT WITHIN A 30 DAY PERIOD IMPRACTICAL, THE PERSON RESPONSIBLE FOR LANDSCAPING SHALL SCHEDULE AN APPROPRIATE TIME FOR THE COMPLETION OF THE ACCOMPLISHMENT OF THIS WORK AS REQUIRED BY THE DIRECTOR.

MAINTENANCE MUST INCLUDE THE CHECKING OF THE SPRINKLER PATTERN AND DRIP SYSTEMS, PLANT CONDITION, WEEDING, FERTILIZATION, PEST CONTROL, REPLACEMENT OF MULCHES, WEED BARRIER AND CLEAR AWAY DEBRIS, PROPER PRUNING AND USE OF PROPER MOWING HEIGHTS. RADICAL PRUNING OR TRIMMING SUCH AS AS TOPPING SHALL REQUIRE REPLACEMENT OF THE PLANT MATERIAL.

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GENERAL IRRIGATION NOTES:

2/2007

ALL PLUMBING AND ELECTRICAL WORK SHALL BE COMPLETED AS PER ALL LOCAL CODES.

INSTALLATION OF MATERIALS SHALL BE PER MANUFACTURERS RECOMMENDATIONS OR AS SPECIFIED. SPRINKLER HEADS ARE EXACT. NO EXTRA PAYMENT WILL BE MADE WHERE PIPING MUST BE OFFSET TO AVOID EXISTING CONDITIONS, OTHER WORK OR WHERE CHANGES ARE NECESSARY TO FACILITATE INSTALLATION.

THE IRRIGATION SYSTEM SHALL BE CONSTRUCTED FOR WINTERIZATION BY THE CONTRACTOR.

ALL MATERIALS SHALL BE NEW, WITHOUT FLAWS AND CONSIDERED THE BEST AVAILABLE IN STOCK. THE COMPLETE SYSTEM SHALL HAVE A ONE-YEAR WARRANTY AFTER FINAL PROJECT ACCEPTANCE ON ALL PARTS AND LABOR.

PRIOR TO FINAL PROJECT ACCEPTANCE, THE CONTRACTOR SHALL INSTRUCT THE OWNER, OR HIS REPRESENTATIVE, IN THE PROPER OPERATION, MAINTENANCE, AND WINTERIZATION OF THE ENTIRE IRRIGATION SYSTEM.

THE CONTRACTOR SHALL PROVIDE AND KEEP CURRENT A COMPLETE SET OF RECORD DRAWINGS WHICH SHALL BE CORRECTED DAILY TO SHOW CHANGES IN THE ORIGINAL DRAWINGS. ALL MAINLINE PIPING AND VALVE LOCATIONS SHALL BE SHOWN WITH ACTUAL MEASUREMENTS TO REFERENCE POINTS.

WHEN THE SYSTEM IS COMPLETE, THE CONTRACTOR SHALL PERFORM A COVERAGE TEST. THE IRRIGATION SYSTEM SHALL PROVIDE 100% COVERAGE OF ALL LAWN & LANDSCAPE PLANTING AREAS.

ALL IRRIGATION MAINLINE PIPING & LATERAL PIPING SHALL BE SCHEDULE 40 PVC PIPE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SETTLING IN THE IRRIGATION TRENCHES OR ASSOCIATED IRRIGATION WORK AS A WARRANTY ITEM.

ALL IRRIGATION VALVES SHALL BE LOCATED IN PROFESSIONAL GRADE VALVE BOXES. SIZE OF VALVE BOXES SHALL VARY WITH NUMBER OF VALVES LOCATED IN BOX. ALL VALVE BOX LID ELEVATIONS SHALL BE SET FLUSH WITH FINISHED GRADE. PROVIDE BOX SIZE THAT WILL ALLOW 6" CLEARANCE AROUND ALL SIDES OF VALVES. PROVIDE BOLTS PER MANUFACTURER'S RECOMMENDATIONS AND SECURE EACH VALVE BOX.

ON ALL THREADED JOINTS WITHIN THE IRRIGATION SYSTEM, THE CONTRACTOR SHALL USE 2-3 FULL TURNS OF TEFLON TAPE AT EACH CONNECTION.

WIRE CONNECTORS SHALL BE USED ON ALL FIELD WIRE SPLICES AND CONNECTIONS.

ALL CONTROL WIRE SHALL BEAR A U/L APPROVED LABEL FOR DIRECT UNDERGROUND BURIAL IN NATIONAL ELECTRIC CODE CLASS IT CIRCUITS. AWG SIZES. ALL CONTROL WIRE RUNS LESS THAN 1000' SHALL HAVE NO SPLICES. IF A SPLICE OCCURS ON A FIELD CONTROL WIRE, THE CONTRACTOR SHALL INSTALL THE SPLICE IN A 6" ROUND VALVE BOX USING APPROVED WATERTIGHT CONNECTORS. IF APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL. OTHERWISE THE ENTIRE FIELD CONTROL WIRE SHALL BE REMOVED & REPLACED.

TAPE AND BUNDLE ALL CONTROL WIRE TO BOTTOM OF MAINLINE PIPE AT 10' O.C.

THE IRRIGATION CONTROLLER SHALL BE INSTALLED IN A LOCATION AS SHOWN ON THE PLANS. THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR THE OWNER'S REPRESENTATIVE WILL APPROVE FINAL CONTROLLER LOCATION.

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IRRIGATION VALVE BOXES ARE TO BE INSTALLED IN LANDSCAPE PLANTING AREAS OR OTHER PROTECTED SPACES. VALVE BOXES SHALL NOT BE INSTALLED IN LAWN AREAS.

THE CONTRACTOR SHALL INSTALL SCHEDULE 40 GALVANIZED PIPING 5' ON EITHER SIDE OF THE BACK FLOW PREVENTER, AS DEPICTED IN THE STANDARD CITY'S DETAIL.

FILTER FABRIC FOR ABOVE ALL ROCK SUMPS SHALL BE PROFESSIONAL GRADE WEED BARRIER OR AN APPROVED EQUAL.

IRRIGATION MAINLINE TO BE BURIED 24" BELOW FINISHED GRADE AND ALL SPRAY SYSTEM LATERAL LINE PIPING TO BE BURIED 18" BELOW FINISH GRADE. ALL 3/4" DRIP IRRIGATION TUBING TO BE BURIED 4" - 6" BELOW FINISH GRADE.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. THE ACQUISITION OF ALL NECESSARY PERMITS ASSOCIATED WITH CONSTRUCTION SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL GALVANIZED PIPE IN CONTACT WITH SOIL SHALL BE COVERED WITH PVC TAPE TO PREVENT PIPE CORROSION (PER UNIFORM PLUMBING CODE).

THE CONTRACTOR SHALL INSTALL A CURB STOP AND WASTE VALVE AT THE BACKFLOW PREVENTER (SIZE TO MATCH MAINLINE) (AS PER CITY'S PUBLIC WORKS DEPARTMENT DETAIL).

PIPE DOPE SHALL NOT BE USED ANYWHERE ON THE IRRIGATION SYSTEM.

NO 3/4" PIPE SHALL BE USED ANYWHERE ON THE SPRAY IRRIGATION SYSTEM. (EXCEPT FOR 3/4" SWING JOINT ASSEMBLIES FOR ROTOR OR POP-UP SPRAY HEADS).

THE CONTRACTOR SHALL EXPOSE ENDS OF ALL IRRIGATION SLEEVES. ANY BROKEN OR SHATTERED ENDS OF THE IRRIGATION SLEEVES SHALL BE CUT TO A CLEAN END BEFORE INSTALLATION OF EITHER MAINLINE PIPE, LATERAL LINES OR DRIP IRRIGATION TUBING. ALL SLEEVE ENDS SHALL BE INSPECTED BY THE LA/DESIGN PROFESSIONAL BEFORE BURYING.

FINAL CONNECTION OF THE VALVE WIRES TO THE CONTROLLER SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND UTILITIES WHICH MAY EFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE SAME.

THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER AND/OR TELEPHONE, WATER, GAS AND SEWER FACILITIES SO AS TO SAFELY PROTECT ALL UTILITIES, PERSONNEL, AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

ALL MAINLINES SHALL BE PRESSURE TESTED AT 1.5 TIMES THE STATIC PRESSURE FOR A MINIMUM 2 HOUR PERIOD PRIOR TO BACKFILLING OF TRENCHES. TEST WILL BE CONSIDERED SUCCESSFUL IF NO PRESSURE LOSS OCCURS DURING THE TWO HOURS. IF ANY LEAKS ARE PRESENT THEY SHALL BE CORRECTED AND LINES SHALL BE RE-TESTED PRIOR TO BACKFILLING TRENCHES.

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PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

THE CONTRACTOR SHALL FLUSH ALL LATERALS AND EMITTER LINES PRIOR TO INSTALLING EMITTERS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS, FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER SIDEWALKS AND PAVING.

SHOULD DISCREPANCIES ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS WHICH REQUIRE FIELD MODIFICATIONS OR PLAN REVISIONS, THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR OWNER'S REPRESENTATIVE SHALL BE CONTACTED PRIOR TO CONSTRUCTION FOR RESOLUTION OR PLAN REVISION.

DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR THE OWNERS REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

THE IRRIGATION CONTROLLER SHALL BE WIRED DIRECTLY TO A 110 VOLT POWER SOURCE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE IRRIGATION CONTROLLER WIRING TO THE POWER SOURCE. CONNECTING THE CONTROLLER TO THE POWER SOURCE SHALL BE THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY LOCAL CODES OR ORDINANCES THAT APPLY. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE POWER SOURCE AND EXACT LOCATION OF THE CONTROLLER WITH OWNER'S REPRESENTATIVE.

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TYPICAL PLANT LIST EXAMPLE

5/2006

TREE LEGEND

QUANTITY	SYMBOL	COMMON/ BOTANICAL NAME	SIZE	SPACING
9	A	CHANTICLEER FLOWERING PEAR <i>Pyrus calleryana</i> 'Chanticleer'	2" CAL	40 FEET ON CENTER
4	B	BLOODGOOD JAPANESE MAPLE <i>Acer palmatum</i> 'Bloodgood'	2" CAL	AS PER PLANS
16	C	NORTHERN RED OAK <i>Quercus rubra</i>	2" CAL	40 FEET ON CENTER
5	D	BLUE ASH <i>Fraxinus quadrangulata</i>	2" CAL	40 FEET ON CENTER
3	E	BACHERI BLUE SPRUCE <i>Picea pungens</i> 'Bacheri'	6" TALL (MIN.)	15 FEET ON CENTER
1	F	BLUE HAVEN JUNIPER <i>Juniperus scopulorum</i>	6" TALL (MIN.)	8 FEET ON CENTER

TYPICAL PLANT LIST EXAMPLE

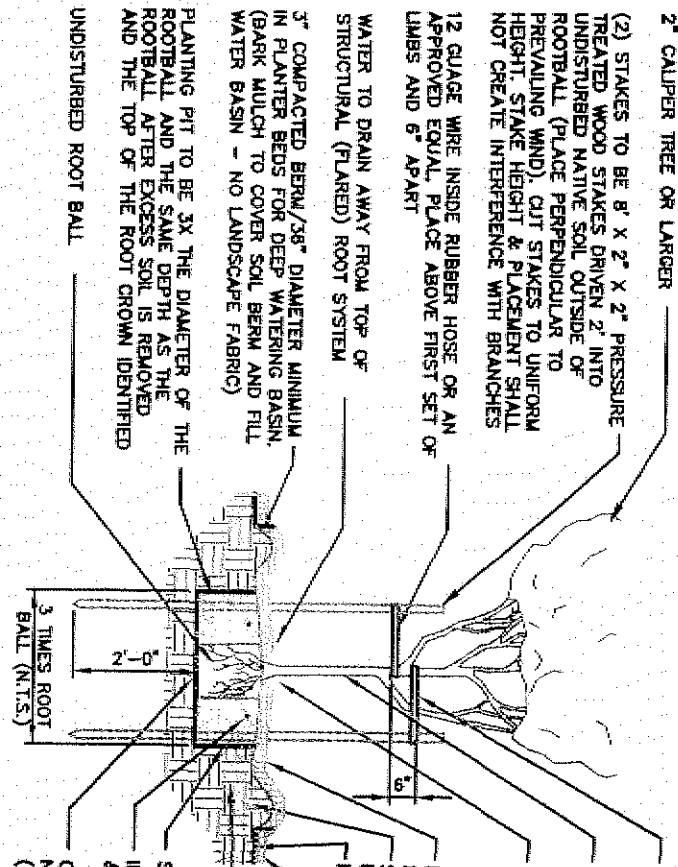
5/2006

SHRUB/ PERENNIAL LEGEND

QUANTITY	SYMBOL	COMMON/ BOTANICAL NAME	SIZE	SPACING
120	AA	JAPANESE REDLEAF BARBERRY <i>Berberis thunbergii</i> 'Atropurpurea'	5 GAL	6 FEET ON CENTER
15	BB	ROCK COTONEASTER <i>Cotoneaster horizontalis</i>	5 GAL	6 FEET ON CENTER
207	CC	DWARF OREGON GRAPE <i>Mahonia aquifolium</i> 'Compacta'	5 GAL	4 FEET ON CENTER
109	DD	SUTTER'S GOLD POTENTILLA <i>Potentilla fruticosa</i> 'Sutter's Gold'	5 GAL	4 FEET ON CENTER
11	EE	VANHOUTTE SPIREA <i>Spiraea vanhouttei</i>	5 GAL	6 FEET ON CENTER
3	FF	DWARF MUGHO PINE <i>Pinus mugo</i> 'mugo'	5 GAL	5 FEET ON CENTER
55	GG	RED-HOT POKER <i>Kniphofia uvaria</i>	1 GAL	3 FEET ON CENTER
30	HH	MOONBEAM COREOPSIS <i>Coreopsis lanceolata</i> 'Moonbeam'	1 GAL	2 FEET ON CENTER
27		DAY LILIES (MIXED COLORS) <i>Hemerocallis</i> spp.	1 GAL	3 FEET ON CENTER
24	JJ	BALTIC IVY <i>Hedera helix</i> 'Baltica'	1 GAL	18 INCHES ON CENTER

SCALE: NTS

NO.	REVISION	DATE	TYPICAL PLANT LIST	File Name:
				J:\Landscape details\PLANTING LEGEND.dwg
				Landscape Detail Number: L-XX
				Date: 5/2006 Page: 3



2" GALVPER TREE OR LARGER

(2) STAKES TO BE 8' X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2" INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND), CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES

12 GAUGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL, PLACE ABOVE FIRST SET OF LIMBS AND 6" APART

WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM

3" COMPACTED BERM/3/8" DIAMETER MINIMUM IN PLANTER BEDS FOR DEEP WATERING BASIN. (BARK MULCH TO COVER SOIL BERM AND FILL WATER BASIN - NO LANDSCAPE FABRIC)

PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IDENTIFIED UNDISTURBED ROOT BALL

12 GAUGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL, PLACE ABOVE FIRST SET OF LIMBS AND 6" APART

ORIGINAL NURSERY STAKES TO BE REMOVED. TREE MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE

PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE DIRECT GRAFT POINT AWAY FROM DIRECT SOUTH OR WEST SUN.

BARK MULCH DEPTH TO BE 4"-6". KEEP MULCH 4" AWAY FROM TRUNK.

SCARIFY PLANTING AREA TO A MIN. 8"-10" DEPTH

NATURAL GRADE/FINISHED GRADE

CLEANED & WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC

BACKFILL MATERIAL TO BE SCREENED, FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION (BACKFILL MIX - 3/4 PART NATIVE SOIL AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).

INSTALL 180 WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER, PLACE 6" OUTSIDE & 2" - 3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.

CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).

NOTE: REMOVE ALL BURRAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL FOR ALL TREES & SHRUBS. REMOVE ALL TWINE, FLAGGING & TAGS FROM CROWN, TRUNK & BRANCHES. LEAVE ONLY SPECIES ID TAG. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL & ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER. ONLY TREES W/ APPROPRIATE TRUNK TAPER WILL BE ACCEPTED. THE LARGER CAL. AT BASE AND SMALLER CAL. AT THE FIRST BRANCH.

REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.

IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.

SCALE: NTS

Standard Landscape Detail			File Name:	
NO.	REVISION	DATE	[H:\landscape details\12106.dwg]	
<h1 style="text-align: center;">DECIDUOUS TREE</h1> <p style="text-align: center;">TYPICAL PLANTING DETAIL IN LANDSCAPE AREAS</p>			Landscape Detail Number: L-XX	
			Date: 2/2007	Page: 4

NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL. FOR ALL TREES & SHRUBS: REMOVE ALL TWINE, FLAGGING & TAGS FROM CROWN, TRUNK & BRANCHES. LEAVE ONLY SPECIES ID TAG, SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL AND ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER.

REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.

IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.

PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE. WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.

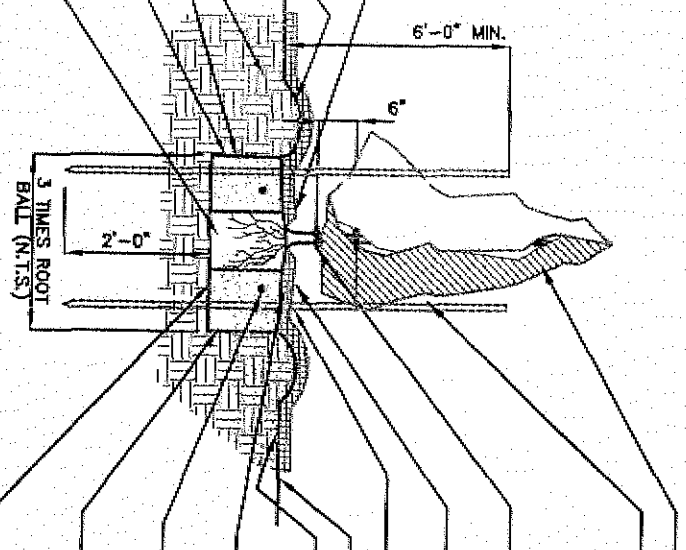
3" COMPACTED BERM/36" DIAMETER MINIMUM IN PLANTER BEDS FOR DEEP WATERING BASIN. MULCH TO COVER SOIL BERM AND FILL WATER BASIN - NO LANDSCAPE FABRIC.

SCARIFY PLANTING AREA TO A MIN. 12" DEPTH

SCARIFY SIDES OF PLANTING PIT

PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IS IDENTIFIED.

UNDISTURBED ROOT BALL



6' TALL EVERGREEN TREE OR LARGER

(2) STAKES TO BE 8' X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2' INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND). CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES

12 GAUGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL PLACE ABOVE FIRST SET OF LIMBS AND 6" APART

3" DEEP WATERING BASIN - FILL WITH BARK MULCH AS SPECIFIED ON PLANS.

BARK MULCH DEPTH TO BE 4"-8". KEEP MULCH 4" AWAY FROM TRUNK.

NATURAL GRADE/FINISHED GRADE

SCARIFY PLANTING AREA TO A MIN. 8"-10" DEPTH, CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC.

CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC.

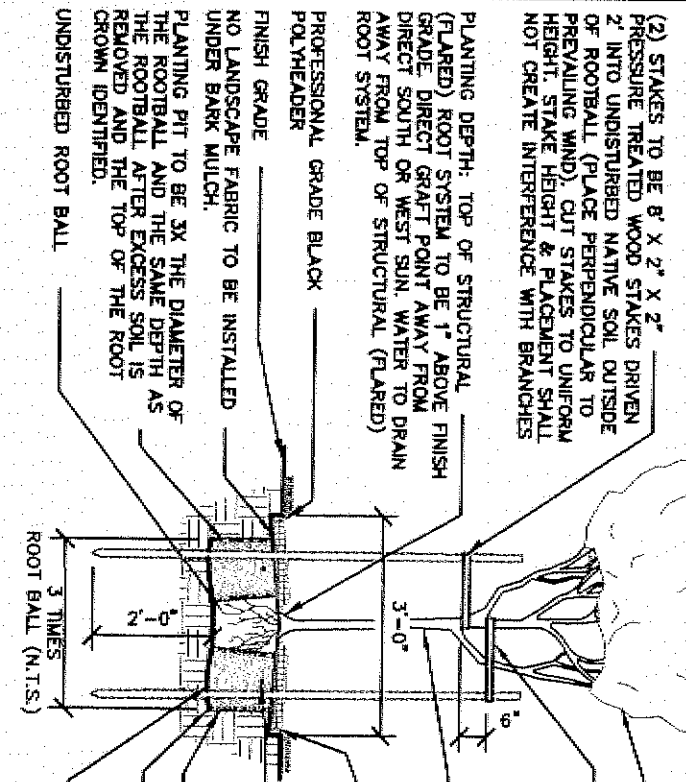
INSTALL IBDU WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2"-3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.

BACKFILL MATERIAL TO BE SCREENED, FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION (BACKFILL MIX - 3/4 PART NATIVE SOIL AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).

CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).

SCALE: NTS

Standard Landscape Detail			File Name:
NO.	REVISION	DATE	[H:\landscape details\12f05.dwg]
			Landscape Detail Number: L-XX
EVERGREEN TREE TYPICAL PLANTING DETAIL IN LANDSCAPING AREA			Date: 2/2007
			Page: 5



(2) STAKES TO BE 8" X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2' INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND). CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES

PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE. DIRECT GRAFT POINT AWAY FROM DIRECT SOUTH OR WEST SUN. WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.

PROFESSIONAL GRADE BLACK POLYHEADER

FINISH GRADE NO LANDSCAPE FABRIC TO BE INSTALLED UNDER BARK MULCH.

PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IDENTIFIED.

UNDISTURBED ROOT BALL

2" CALIBER TREE OR LARGER 12 GAUGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL - PLACE ABOVE FIRST SET OF LIMBS AND 6" APART.

ORIGINAL NURSERY STAKES TO BE REMOVED. TREE MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE

3" DIA AROUND TREE TRUNK FILL W/ 4"-6" DEPTH BARK MULCH - KEEP MULCH 4"-6" AWAY FROM TRUNK

INSTALL 1,800 WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2"-3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.

SCARIFY SIDES OF PLANTING PIT

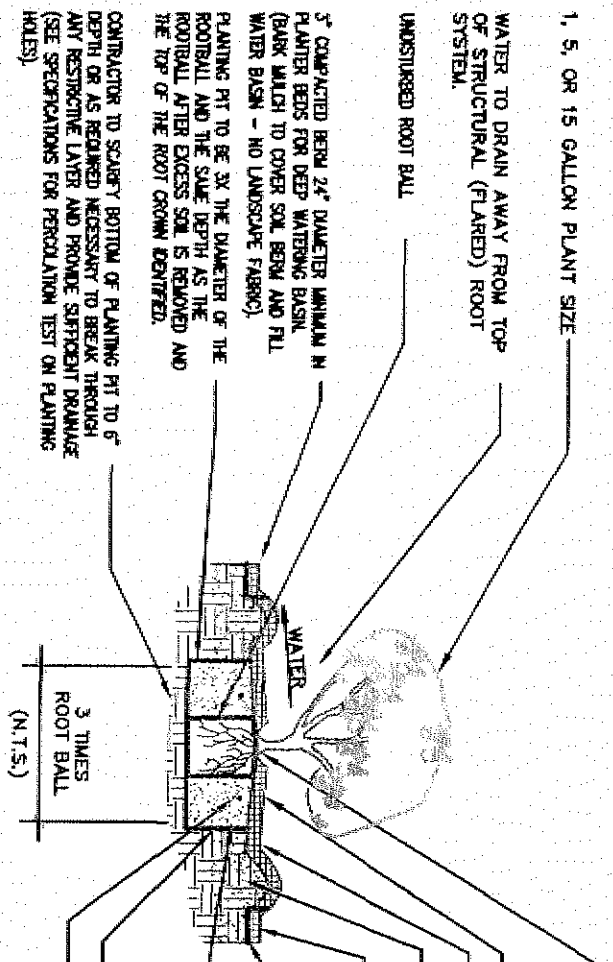
BACKFILL MATERIAL TO BE SCREENED FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION. (BACKFILL MIX - 3/4 PART NATIVE SOIL, AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).

CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).

NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL FOR ALL TREES AND SHRUBS. REMOVE ALL TWINE, FLAGGING AND TAGS FROM CROWN, TRUNK AND BRANCHES. LEAVE ONLY SPECIES ID TAG. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL AND ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER. ONLY TREES WITH APPROPRIATE TRUNK TAPER WILL BE ACCEPTED IE LARGER CAL AT BASE AND SMALLER CAL AT THE FIRST BRANCH. REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS. IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION. ONLY BARK MULCH SHALL BE INSTALLED INSIDE THE 3" DIA. BLACK POLYHEADER.

SCALE: NTS

Standard Landscape Detail			File Name: (H:\landscaping details\2007.dwg)	
DECIDUOUS TREE			Landscape Detail Number: L-XX	
			Date: 2/2007	Page: 6
TYPICAL PLANTING DETAIL IN LAWN AREA				



1, 5, OR 15 GALLON PLANT SIZE

WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.

UNDISTURBED ROOT BALL

3\"/>

PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1\"/>

WATERING BASIN

BARK MULCH DEPTH TO BE 4\"/>

SCAFFRY PLANTING AREA TO A MIN. 8\"/>

CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC

FINISHED GRADE/ NATURAL GRADE

BACKFILL MATERIAL TO BE SCREENED FREE OF ROCKS LARGER THAN 1\"/>

AND MOISTENED BEFORE INSTALLATION. (BACKFILL MIX - 3/4 PART NATIVE SOIL, AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).

SCAFFRY SIDES OF PLANTING PIT.

INSTALL I.B.D.U. WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER, PLACE 6\"/>

NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOTBALL SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL & ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER.

***REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.**

IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.

FOR ALL TREES AND SHRUBS: REMOVE ALL TWINE, FLAGGING AND TAGS FROM CROWN, TRUNK AND BRANCHES LEAVE ONLY SPECIES ID TAG

SCALE: NTS

Standard Landscape Detail			File Name:	
NO.	REVISION	DATE	[H:\landscape details\12f03.dwg]	
DECIDUOUS/EVERGREEN SHRUB			Landscape Detail Number:	
			L-XX	
TYPICAL PLANTING DETAIL IN LANDSCAPE AREAS			Date: 2/2007	Page: 7
			35	

IRRIGATION LEGEND**

2/2007

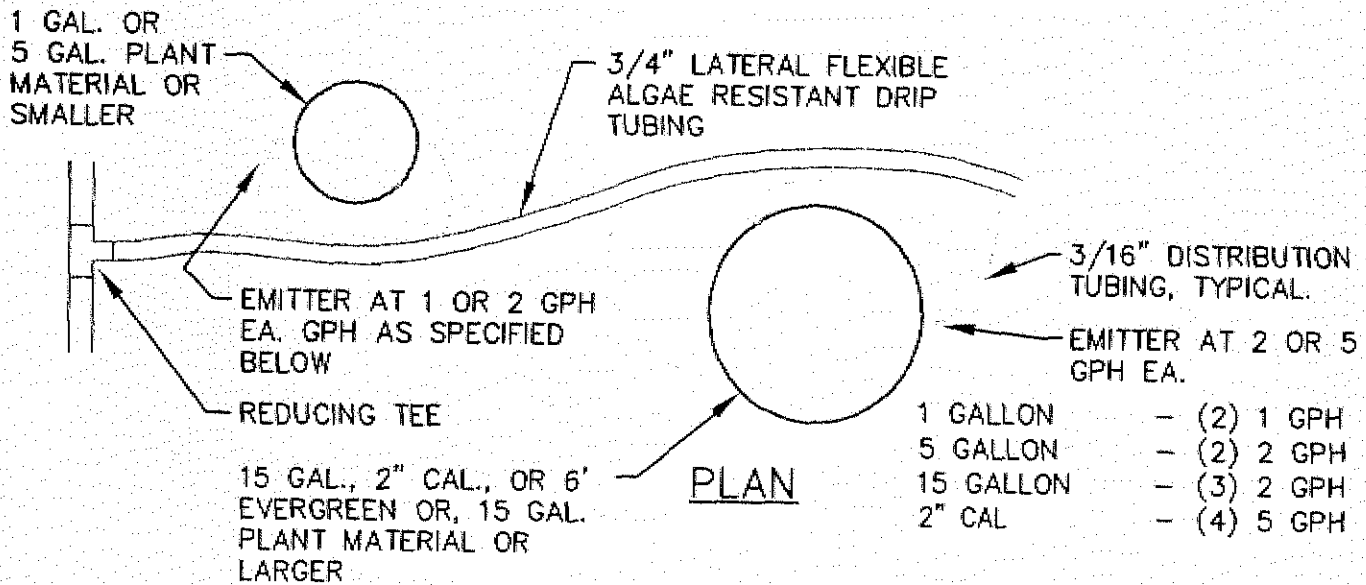
SYMBOL	BRAND	MODEL NUMBER	P.S.I.	G.P.M.	RADIUS	COMMENTS
	RAINBIRD	1804-8Q-FLT	30	.39	8'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-8H-FLT	30	.79	8'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10Q-LA	30	.39	10'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10H-LA	30	.79	10'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10F-LA	30	.57	10'	4" POP-UP SPRAY HEAD
	WILKINS	BACKFLOW PREVENTER				BACKFLOW PREVENTER (INSTALL IN STRONG BOX INSULATED BACKFLOW COVER)
	STRONG BOX	SBBC-45 ALI				45" LONG, 29.5" HIGH, 16" WIDE, (ALUMINUM INSULATED COVER, LOW PROFILE).
	WATOORS	ISOLATION VALVE/GATE VALVE				1 1/2" OR 2" GATE VALVE (MATCH TO MAINLINE SIZE)
	MUELLER	CURB AND STOP WASTE VALVE				1" VALVE (MATCH TO MAINLINE SIZE)
	WILKINS	500 SERIES				2" PRESSURE REDUCING VALVE
	RAINBIRD	150-PEB				1 1/2" ELECTRIC PLASTIC VALVE (SPRAY SYSTEM)
	RAINBIRD	44RC				1" QUICK COUPLING VALVE
	--	PVC MAINLINE - SIZE INDICATED ON DRAWINGS				SCHEDULE 40 PIPE
	--	1" - 2" DIAM. PVC LATERAL LINES - SIZE INDICATED ON DRAWINGS				SCHEDULE 40 PIPE
	--	EXISTING PVC IRR. SLEEVES (NEW SLEEVES INDICATED ON DRAWINGS)				
	--	VALVE NUMBER GALLONS				
DRIP IRRIGATION SYSTEM **						
	RAINBIRD	XCZ-100				CONTROL ZONE KIT W/ 1" DV ELECTRIC PLASTIC VALVE (DRIP SYSTEM) (USE CARSON INDUSTRIES, INC. VALVE BOX OR AN APPROVED EQUAL - SIZE 13 3/4" x 23 1/4")
	PEPCO	3/4" DRIP TUBING				
	PEPCO	FLUSHING END CAP				
	RAINBIRD	XB-10 OR XB-10-6 EMITTERS				SINGLE OR MULTI OUTLET PRESSURE COMPENSATING - INSTALL DRIP TO ALL PLANTS
** IDENTIFIED BRANDS ARE FOR ILLUSTRATION PURPOSES ONLY. THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL IS RESPONSIBLE FOR SPECIFYING THE PROPER EQUIPMENT FOR THE IRRIGATION SYSTEM.						

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name: <small>[R:\landscape detail\IRR-LEGEND.dwg]</small>
			TYPICAL IRRIGATION LEGEND	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 8

NOTES:

1. STAKE DISTRIBUTION TUBING IN PLACE AT SURFACE OF EACH EMITTER.
2. ALL PLANTS LOCATED ON SLOPES SHALL HAVE EMITTERS PLACED UP HILL FROM PLANT.
3. DO NOT WRAP DISTRIBUTION TUBING AROUND PLANT STEM OR TREE TRUNK.
4. DO NOT PLACE EMITTERS AGAINST PLANT STEM OR TREE TRUNK.
5. PLACE EMITTERS AROUND PLANT FOR EQUAL DISTRIBUTION OF WATER.
6. CONTRACTOR IS RESPONSIBLE TO ESTABLISH WATERING TIMES AND DURATIONS.
7. EMITTER (GPH) WATER RATE MAY BE ALTERED DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.



SCALE: NTS

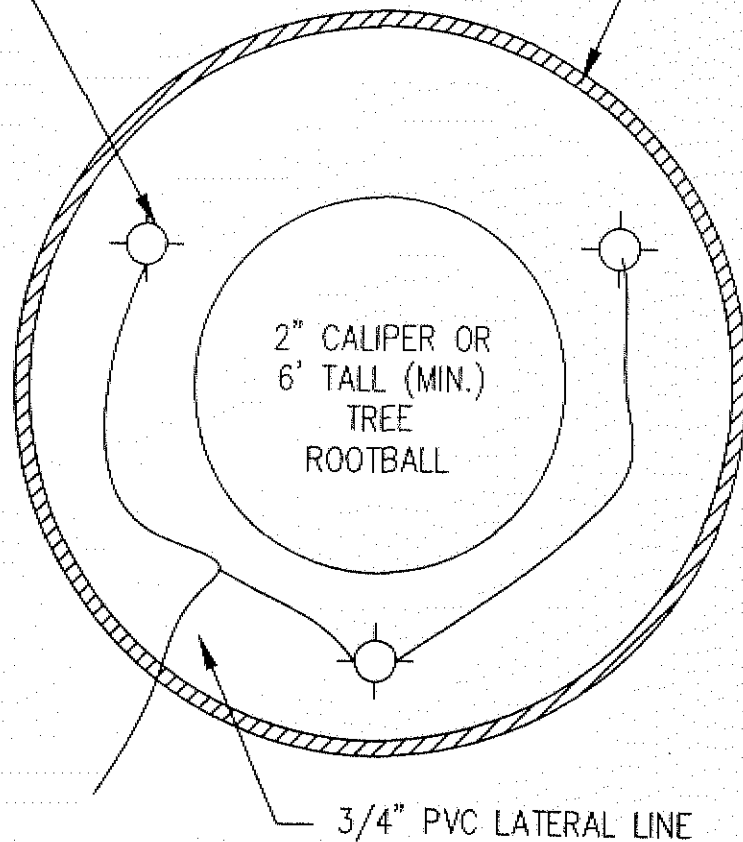
NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\landscape details\DRIP.dwg]
			TYPICAL DRIP EMITTER DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 9

3" COMPACTED BERM / 36" DIAMETER MINIMUM

LOW BUBBLER (TYP.)

PLAN VIEW

REFER TO DECIDUOUS OR
EVERGREEN TREE/TYPICAL
PLANTING DETAIL IN
LANDSCAPE AREA



NOTES:

1. TREES SHALL HAVE 3 BUBBLERS PER TREE, EQUALLY DISTRIBUTED AROUND ROOTBALL.
2. DRAWING IS DIAGRAMMATIC ONLY.
3. REFER TO IRRIGATION PLAN FOR BUBBLER ZONES.
4. 3 BUBBLER PER TREE, BUT QUANTITY MAY BE ALTERED (2 MINIMUM - 4 MAXIMUM) DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.

SCALE: NTS

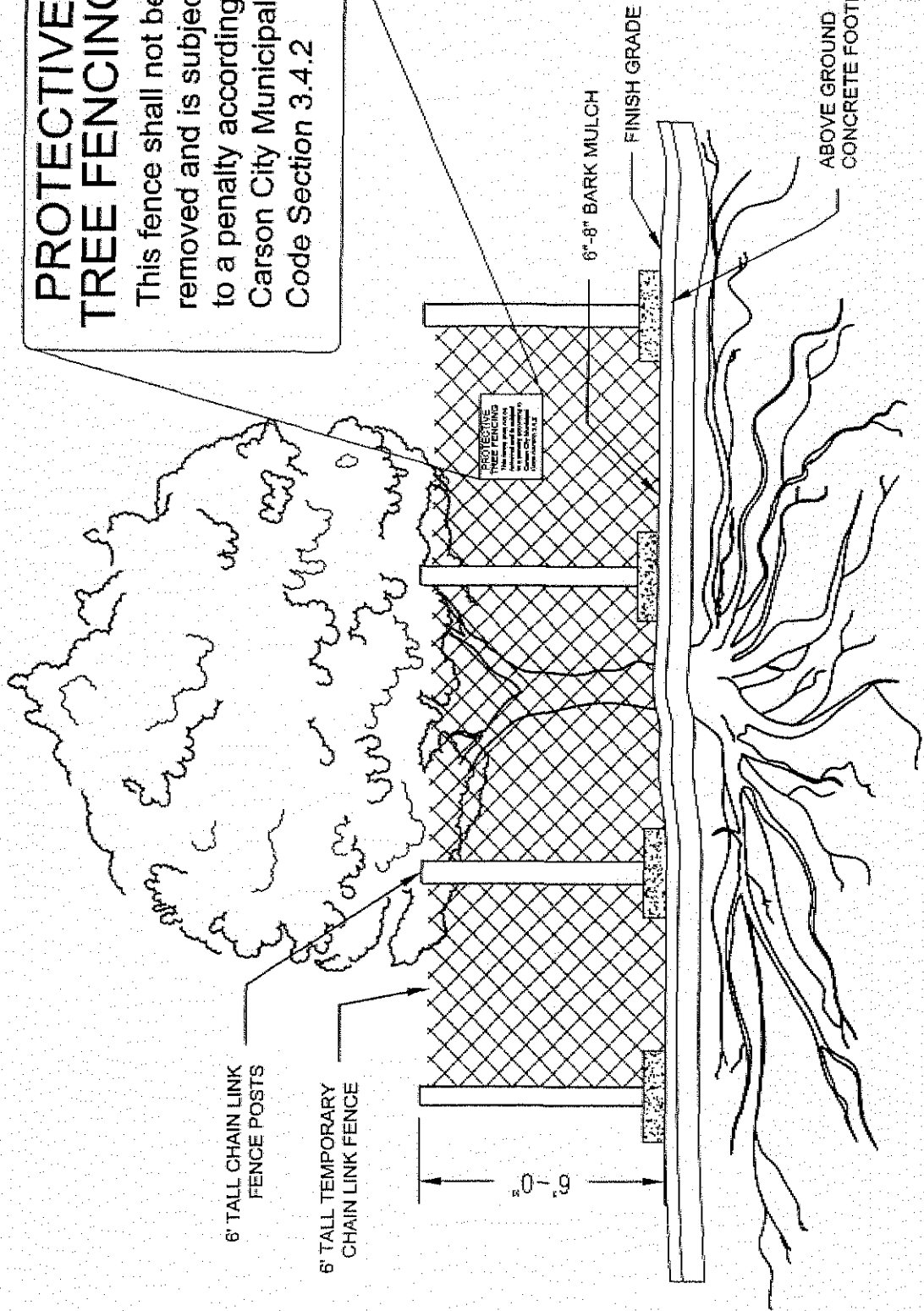
NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL TREE BUBBLER LAYOUT DETAIL	[H:\landscape detail\BUBBLER2.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 10

NOTE:
FENCE SHALL BE LOCATED A
MINIMUM OF 5' AWAY FROM
THE TREE'S DRIP LINE

**TREE PROTECTION ZONE
THIS FENCE SHALL NOT BE REMOVED
UNTIL PROJECT HAS BEEN COMPLETED**

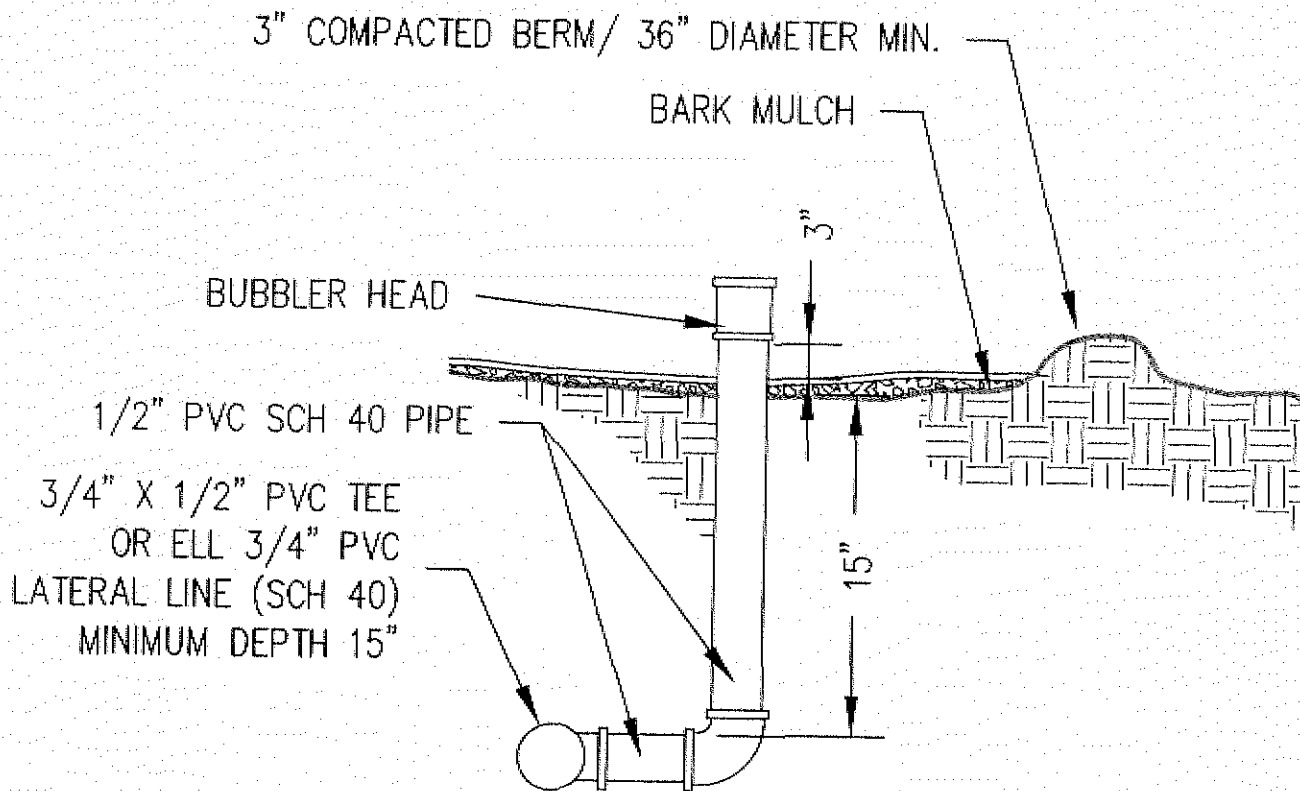
**PROTECTIVE
TREE FENCING**

This fence shall not be removed and is subject to a penalty according to Carson City Municipal Code Section 3.4.2



SCALE: NTS

NO.	REVISION	DATE	Standard Site Amenity Detail	File Name: [H:\landscape details\TPZ.dwg]
			TYPICAL TREE PROTECTION FENCE DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 11

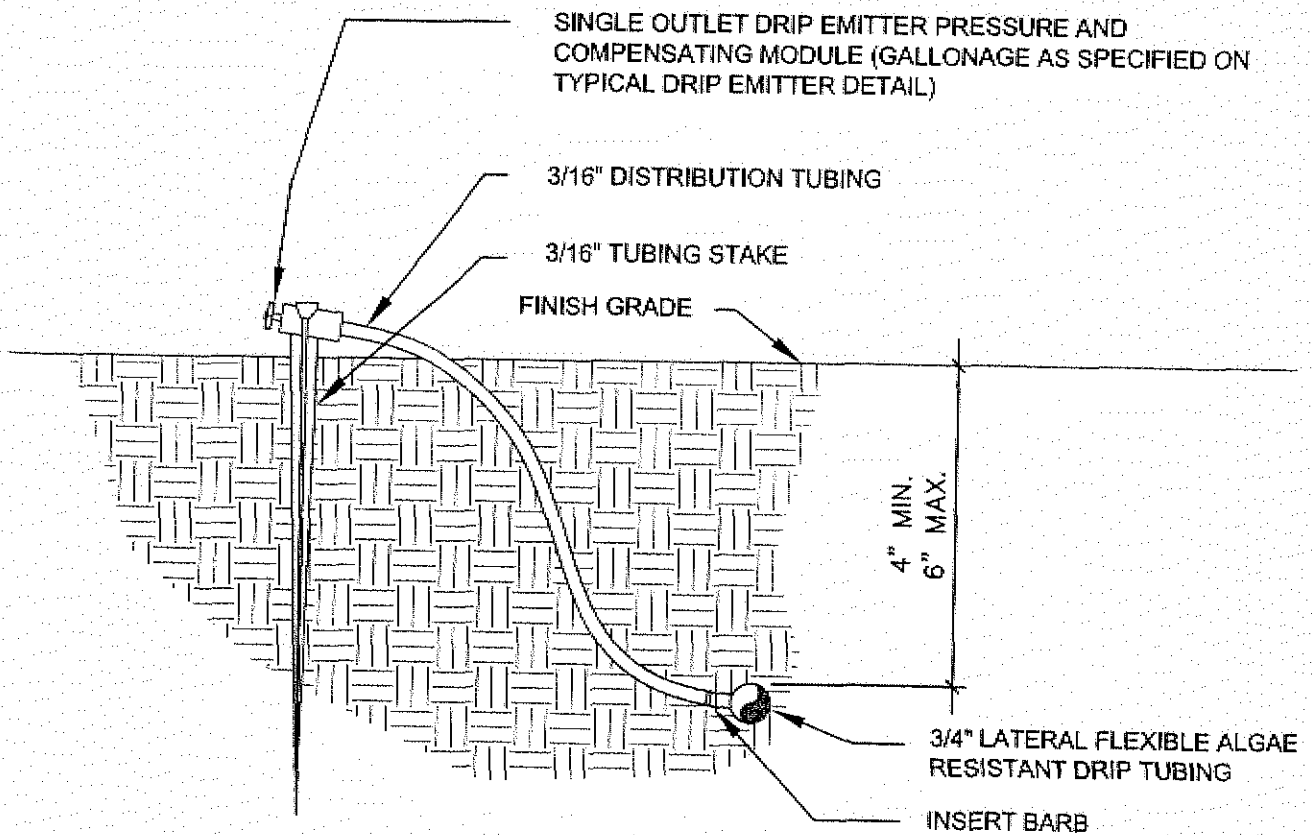


NOTES

1. TREES SHALL HAVE 3 BUBBLERS PER TREE, EQUALLY DISTRIBUTED AROUND ROOTBALL.
2. IN LANDSCAPE PLANTING AREA BUBBLER HEADS NEED TO BE 3" ABOVE BARK MULCH
3. 3 BUBBLER PER TREE QUANTITY MAY BE ALTERED (2 MIN. / 4 MAX.) DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL TREE BUBBLER DETAIL	[H:\landscape details\BUBBLER1.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 12



NOTES:

1. INSERT BARB DIRECTLY INTO FLEXIBLE DRIP TUBING FOR INSTALLATION OF DISTRIBUTION TUBING.
2. PLACE EMITTERS ON OUTER EDGE OF ROOT BALL AND SOIL OUTSIDE OF ROOT BALL SO PLANT MATERIAL WILL RECEIVE WATER. DO NOT PLACE EMITTER AT BASE OF TRUNK OR STEM PLANTS.

SCALE: NTS

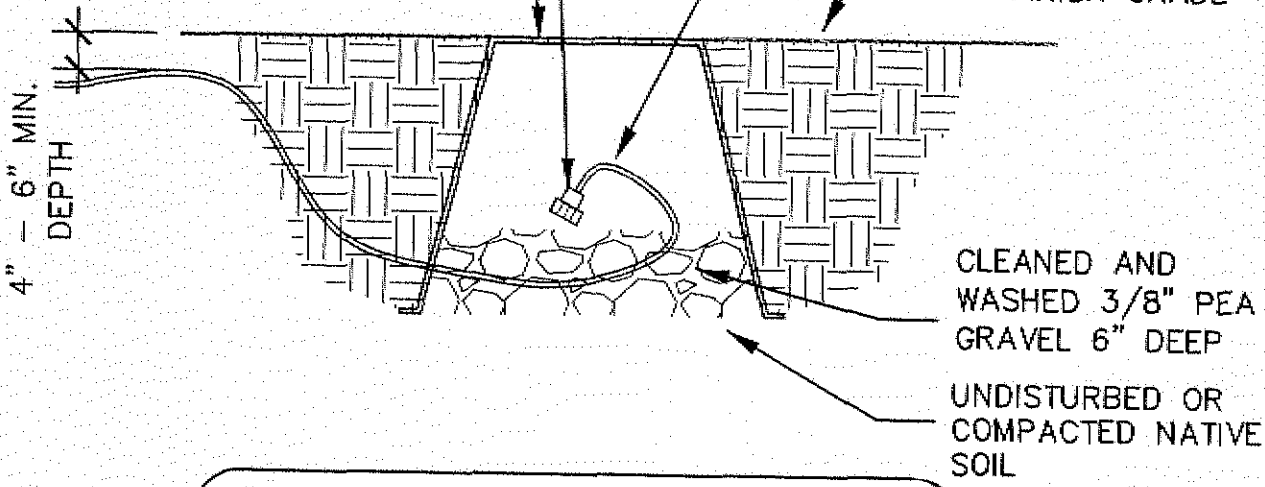
NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL DRIP EMITTER STAKING DETAIL	[H:\Landscape details\ldripam.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 13

FLUSHING END CAP

10" DIAM. ROUND VALVE BOX TO BE FLUSH AND LEVEL WITH FINISH GRADE. BOX TO HAVE BOLT DOWN LID LABELED "IRRIGATION" (BURN 'F' INTO LID) (PROVIDE BOLTS AND SECURE PER MANUFACTURER'S RECOMMENDATIONS).

FLEXIBLE DRIP TUBING LINE. PROVIDE ENOUGH SLACK SO END CAN BE AIMED OUTSIDE OF BOX - 3/4" FLEXIBLE ALGAE RESISTANT TUBING

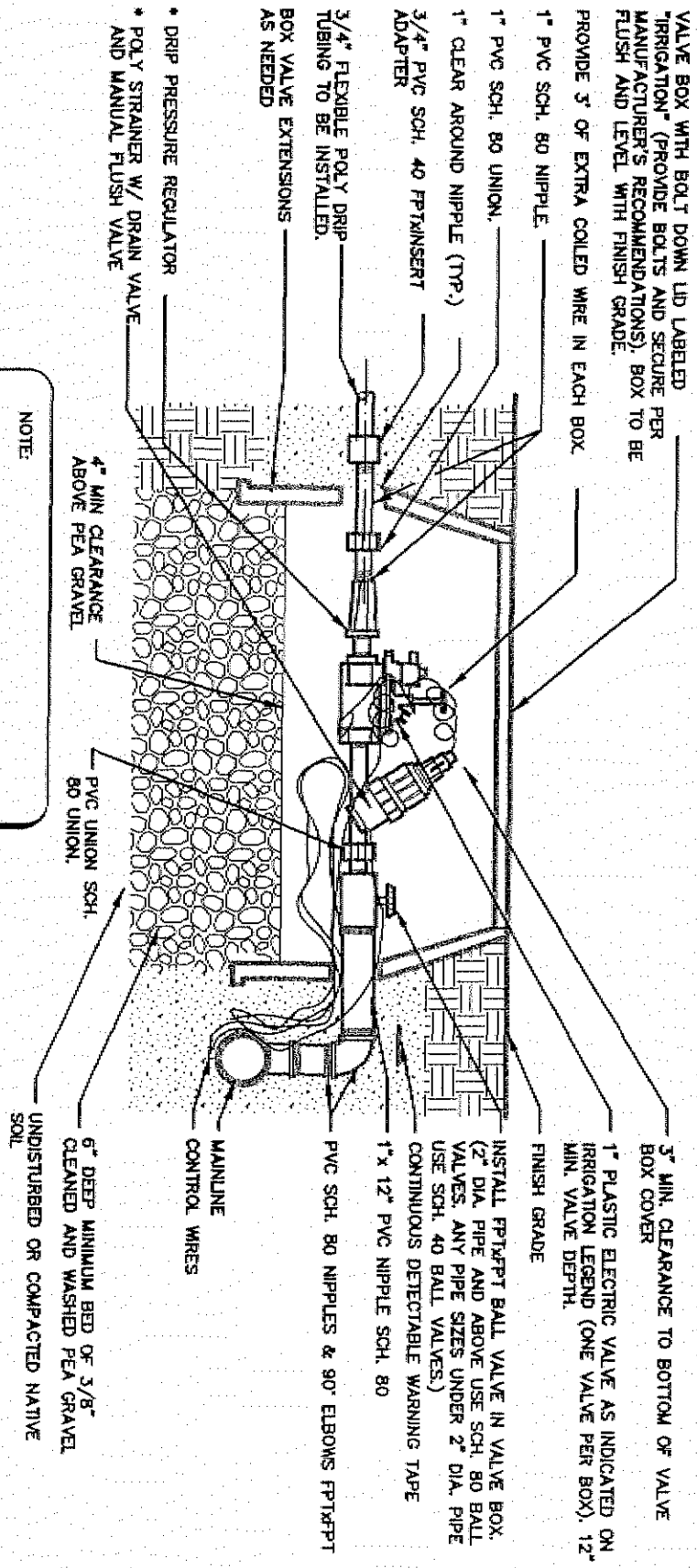
FINISH GRADE



NOTE:
 1. ALL DRAIN ROCK IN VALVE BOXES TO BE 3/8" CLEANED AND WASHED PEA GRAVEL

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL FLUSHING END CAP DETAIL	[H:\landscape details\FLUSHING.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 14



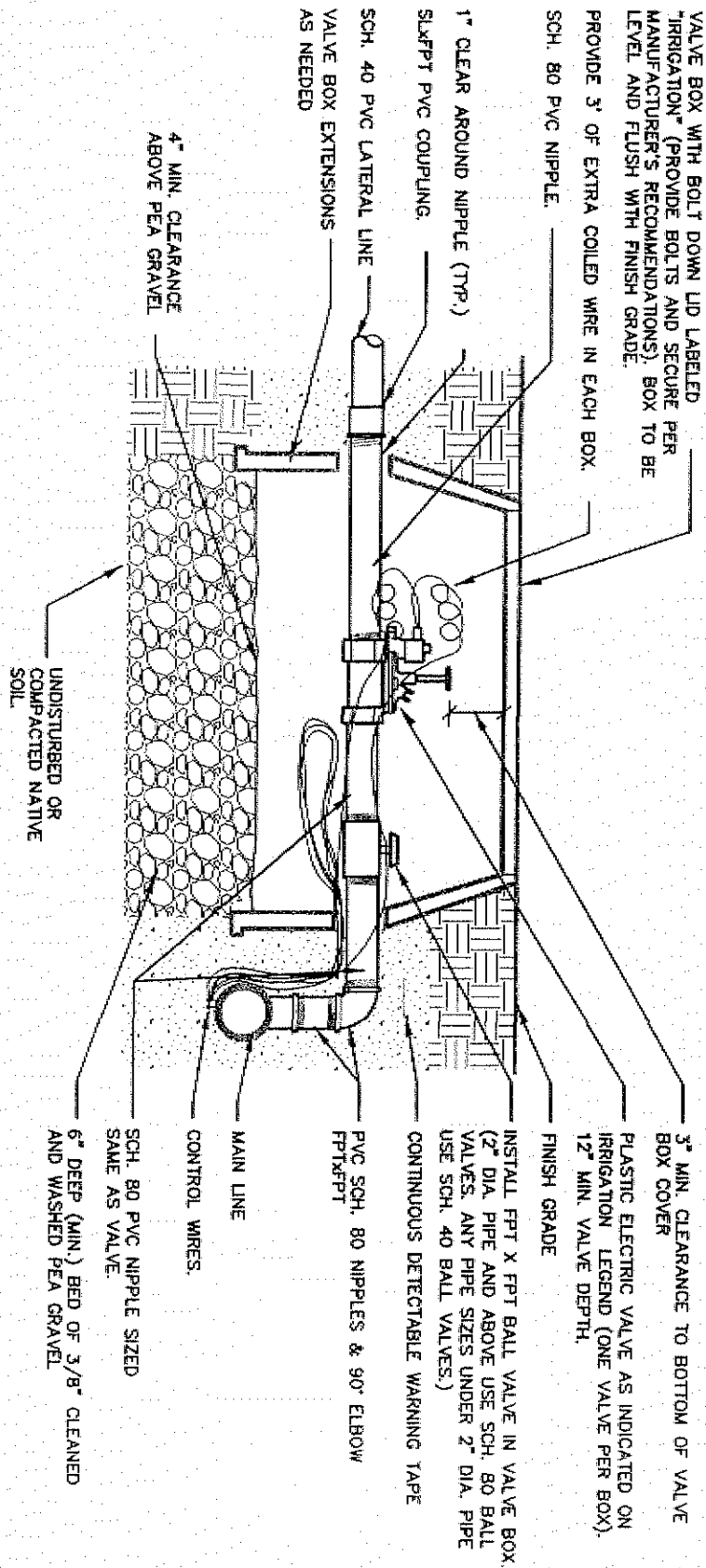
SCALE: NTS

Standard Irrigation Detail

TYPICAL DRIP VALVE DETAIL

NO.	REVISION	DATE

File Name: [H:\landscape detail\drp-valve.dwg]	
Landscape Detail Number: L-XX	
Date: 2/2007	Page: 15



SCALE: NTS

Standard Irrigation Detail

TYPICAL SPRAY VALVE DETAIL

File Name:

[H:\landscape details\spray-valve.dwg]

Landscape Detail Number:
L-XX

Date: 2/2007

Page: 16

#5 REBAR, 16" LONG
CLAMPED TO QUICK
COUPLER WITH STAINLESS
STEEL CLAMP.

10" DIAM. ROUND VALVE BOX. WITH BOLT DOWN LID
LABELED "IRRIGATION". (BURN "Q" INTO LID)
(PROVIDE BOLTS AND SECURE PER
MANUFACTURER'S RECOMMENDATIONS). BOX TO BE
FLUSH AND LEVEL WITH FINISH GRADE.

1" MIN
CLEAR

FINISH GRADE

QUICK COUPLING VALVE
CENTERED IN BOX.

3/8" CLEANED AND WASHED
PEA GRAVEL 6" DEEP (MIN)

PVC SCH 80 NIPPLE 1" x 12"

SCREENED SOIL BACK FILL
(FREE OF ROCKS LARGER
THAN 1")

90° TXT PVC SCH. 80 FPTxFT

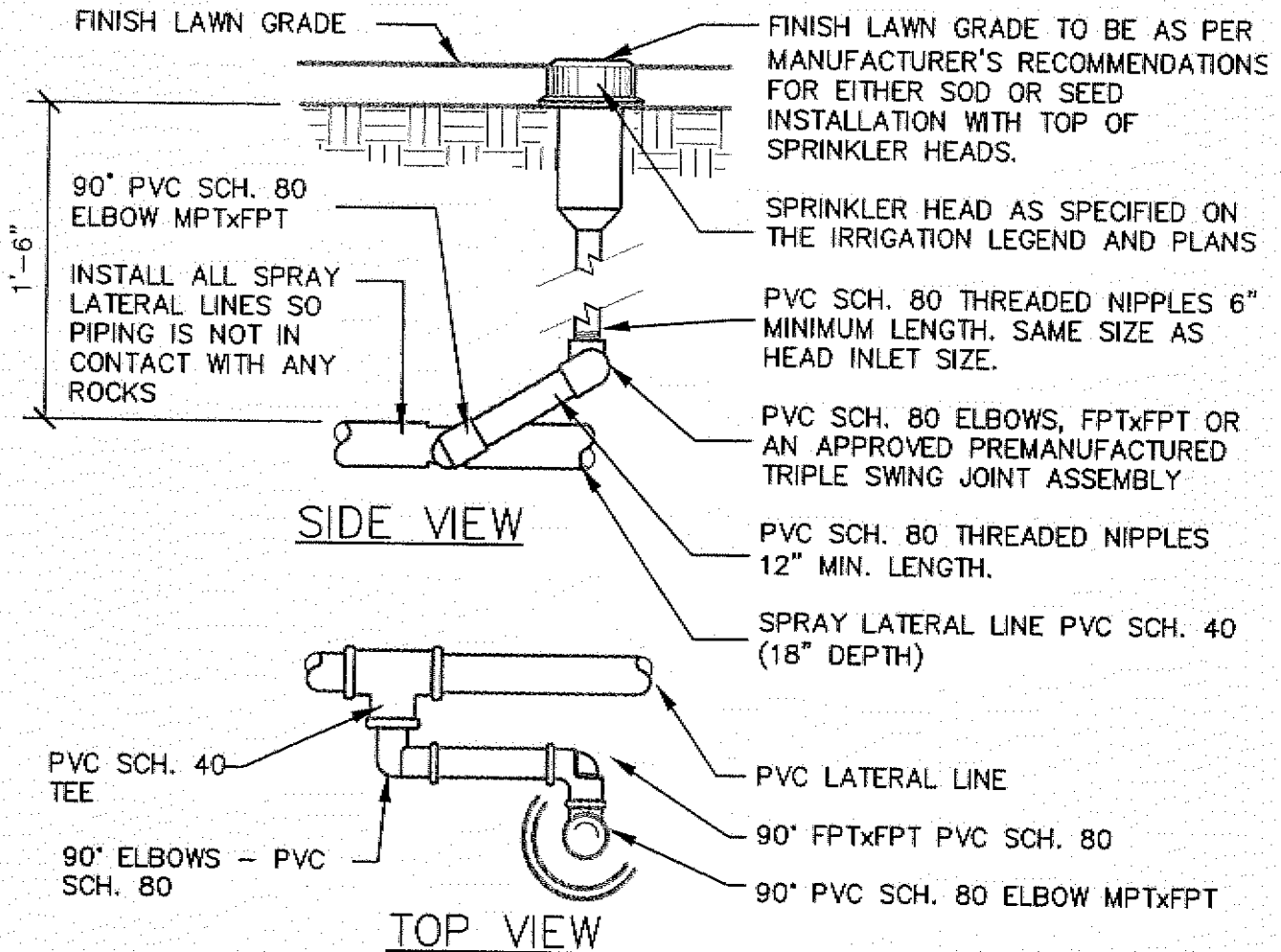
PVC SCH 80 NIPPLE 1" x 12"

(2) PVC STREET ELBOW MPTxFT
(PVC SCH. 80)

MAIN LINE

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL QUICK COUPLING VALVE DETAIL	[H:\landscape detail\QUICKVALVE.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 17

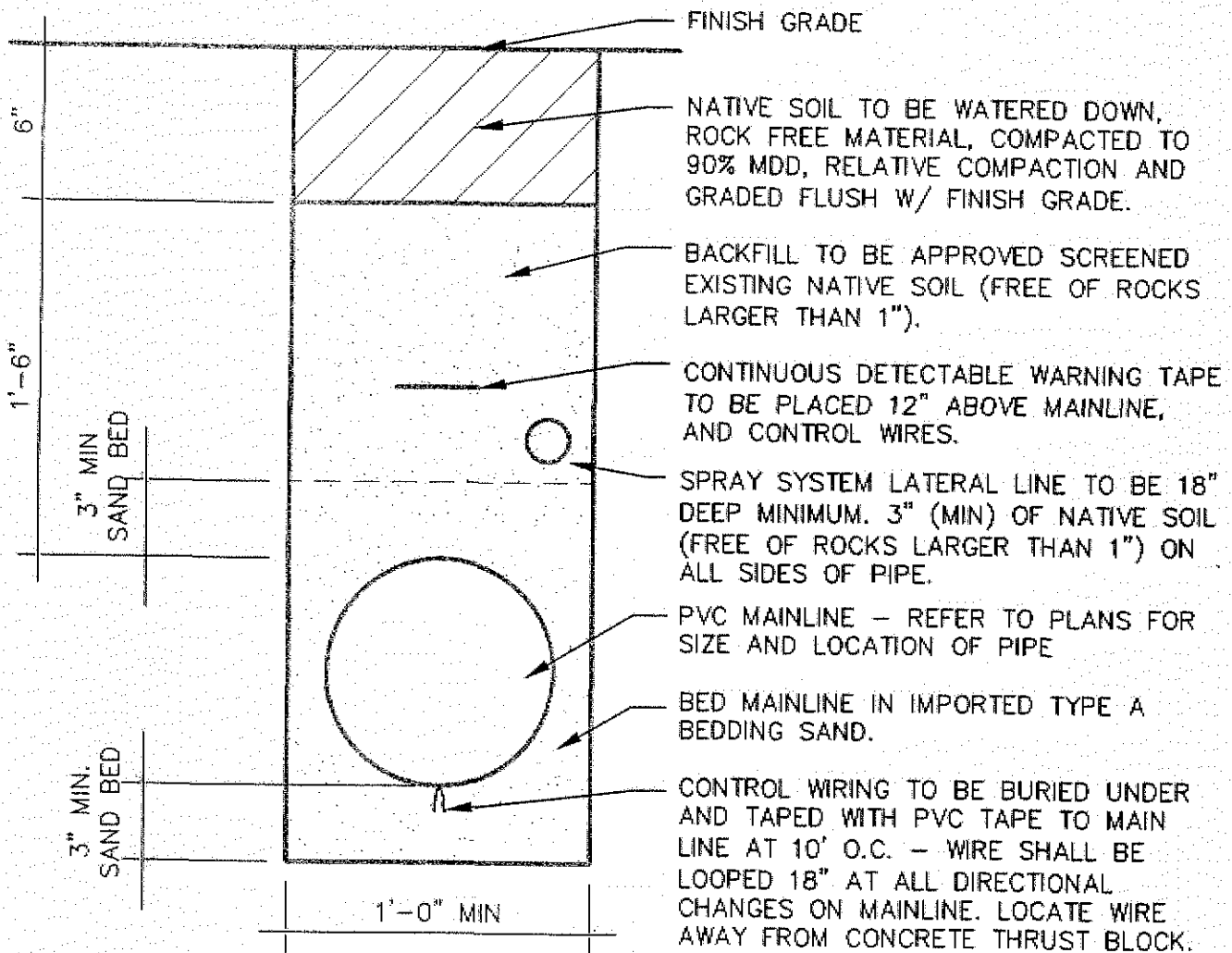


NOTE:

1. MARLEX STREET ELBOWS MAY BE SUBSTITUED FOR 90° PVC SCH. 80 ELBOWS.

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL ROTOR/POP-UP HEAD DETAIL	[H:\Landscape details\ROTOR.dwg]
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 18

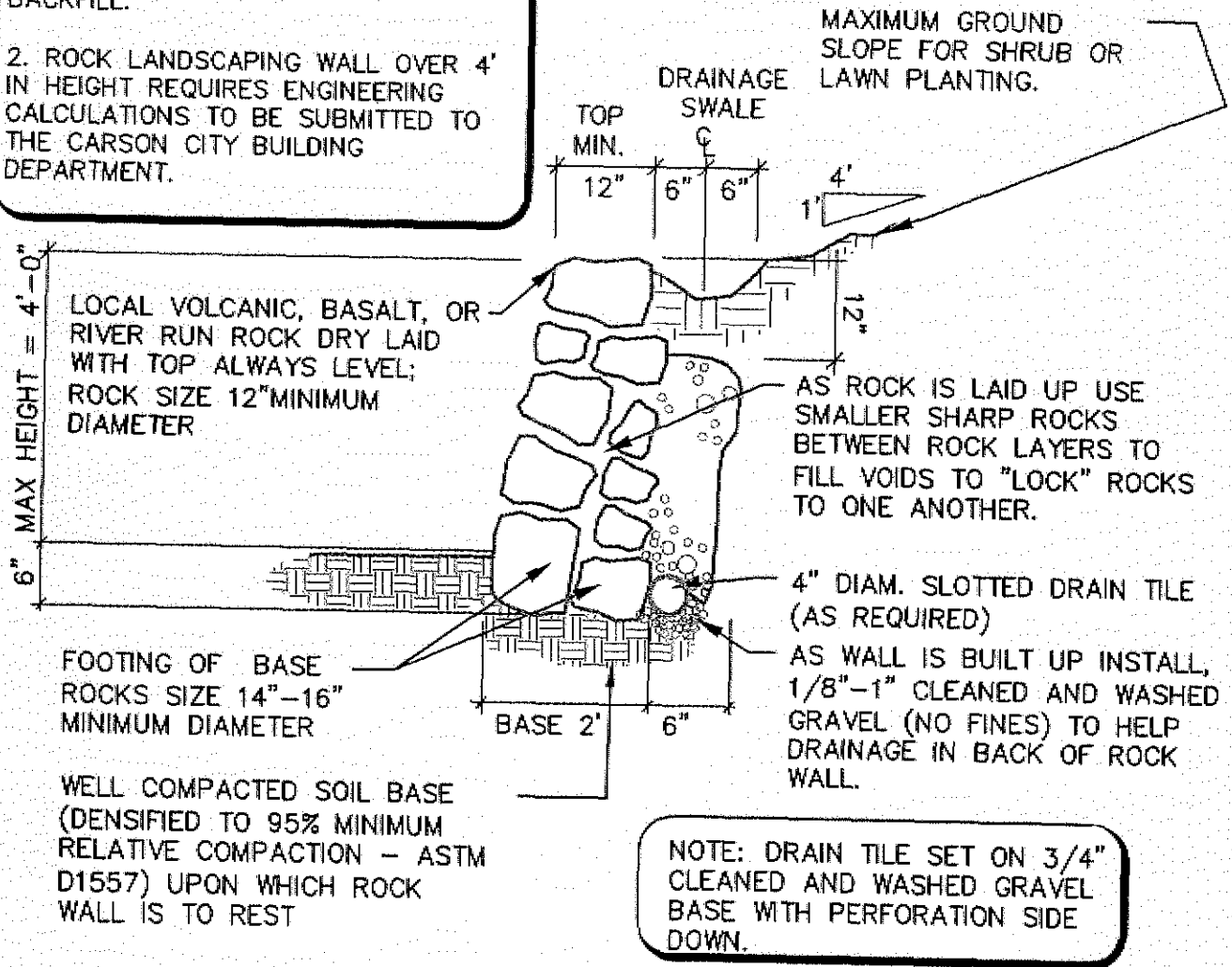


SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name:
			TYPICAL IRRIGATION TRENCH WALL SECTION DETAIL	H:\Landscape detail\TRENCH1.dwg
				Landscape Detail Number: L-XX
				Date: 2/2007 Page: 19

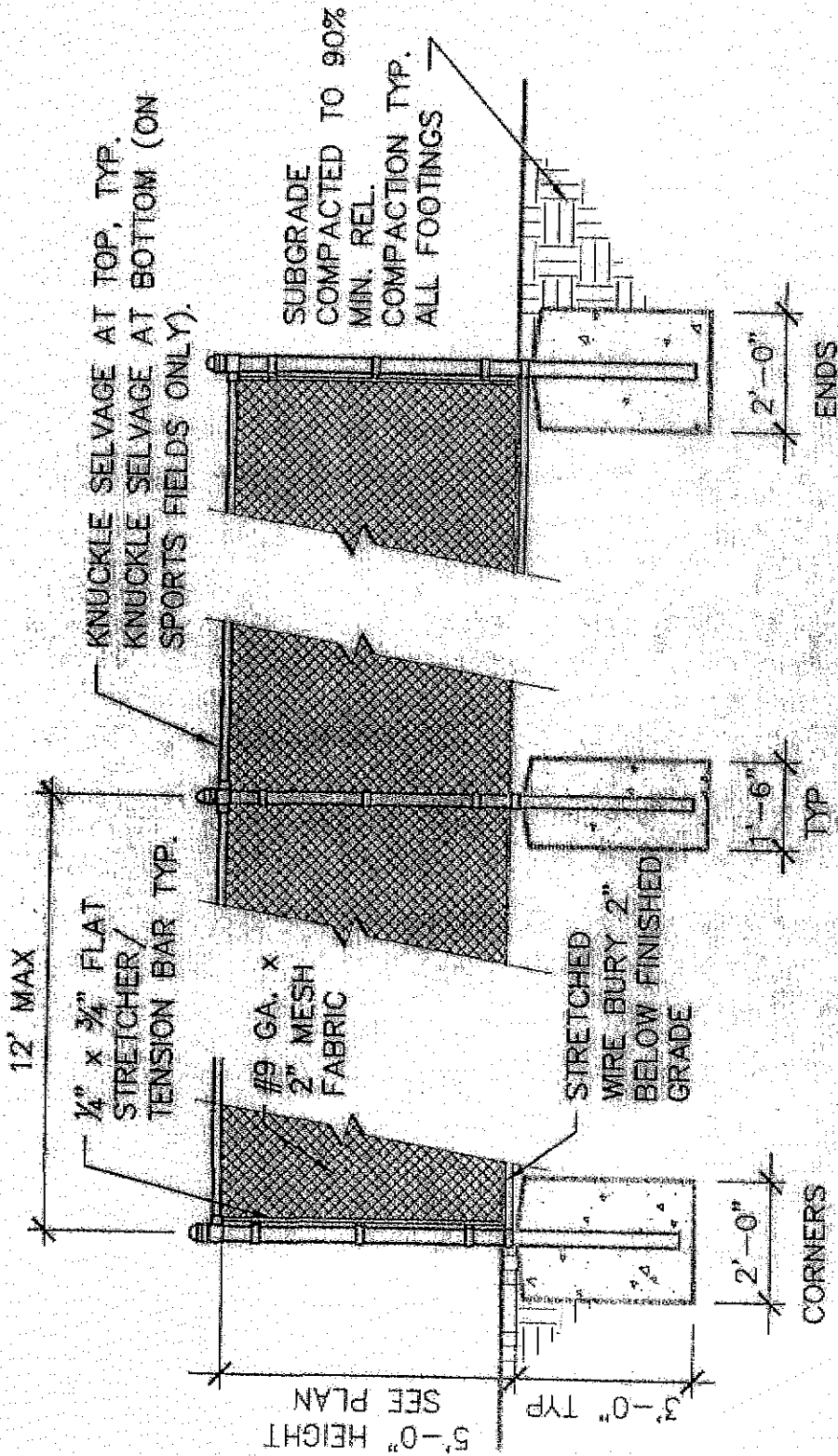
NOTES:

1. THERE MUST ALWAYS BE A MINIMUM OF 10" OF TOP SOIL OVER THE GRAVEL BACKFILL.
2. ROCK LANDSCAPING WALL OVER 4' IN HEIGHT REQUIRES ENGINEERING CALCULATIONS TO BE SUBMITTED TO THE CARSON CITY BUILDING DEPARTMENT.



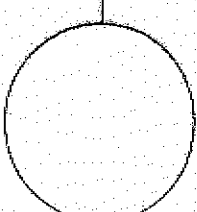
SCALE: NTS

NO.	REVISION	DATE	Standard Site Amenity Detail		File Name:
			<h2>TYPICAL DRY-LAID ROCK LANDSCAPING WALL DETAIL</h2>		[H:\landscaping details\2002.dwg]
					Landscape Detail Number:
					L-XX
			Date: 2/2007	Page: 20	



NOTES:

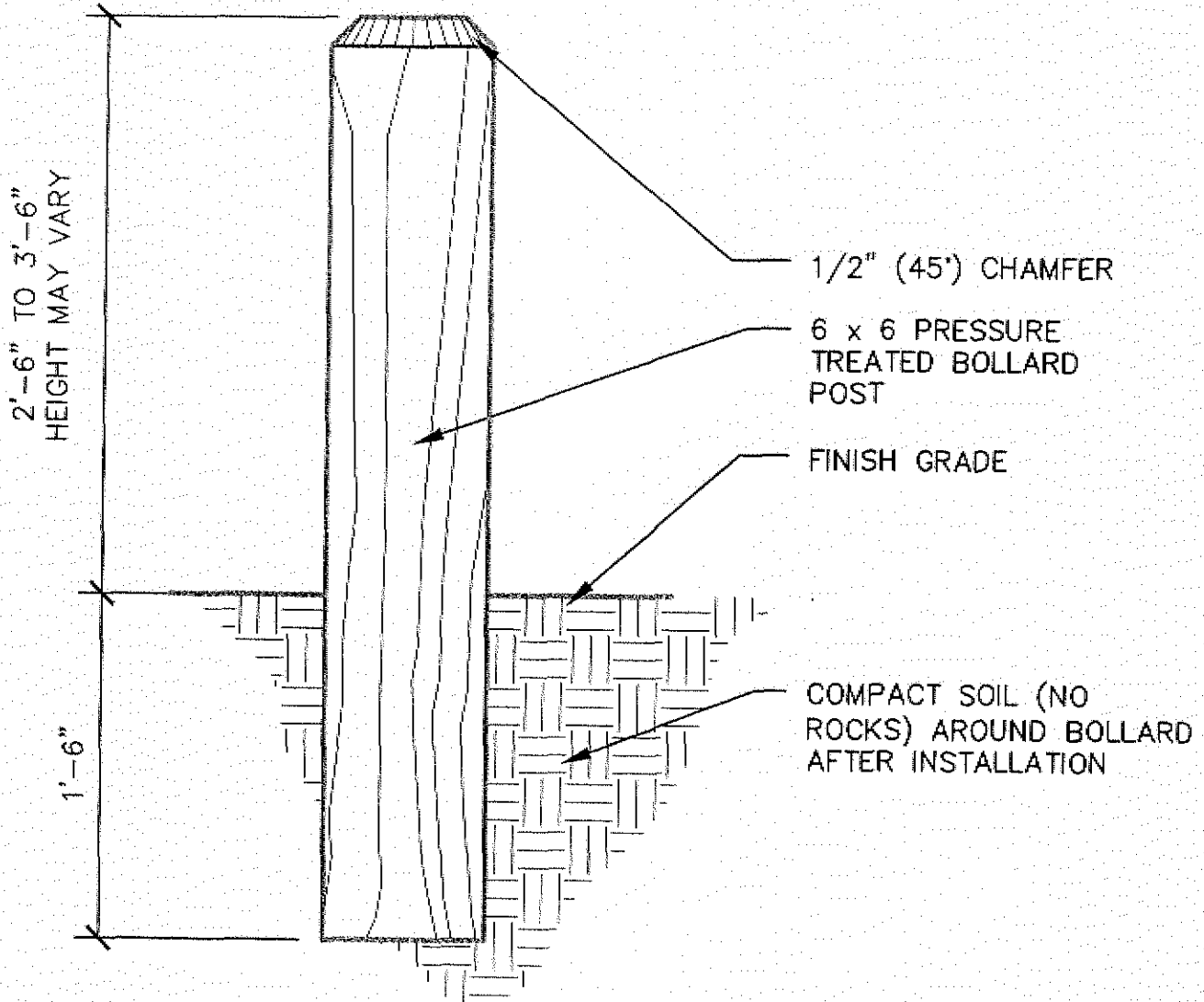
1. TOP RAIL SHALL BE 1 5/8" O.D. SCH 40 STEEL
2. FENCES 8' OR HIGHER SHALL HAVE 1 5/8" O.D. MID RAIL
3. CORNER AND END POSTS SHALL BE 3" O.D. AT 6' AND 4' HIGH FENCE.
4. INTERMEDIATE POSTS SHALL BE 2 1/2" O.D. AT 6' AND 4' HIGH FENCE, 3" O.D. AT 8' OR HIGHER FENCE.
5. FENCING FABRIC, POSTS, RAILS AND HARDWARE SHALL BE GALVANIZED.



CHAIN LINK FENCE

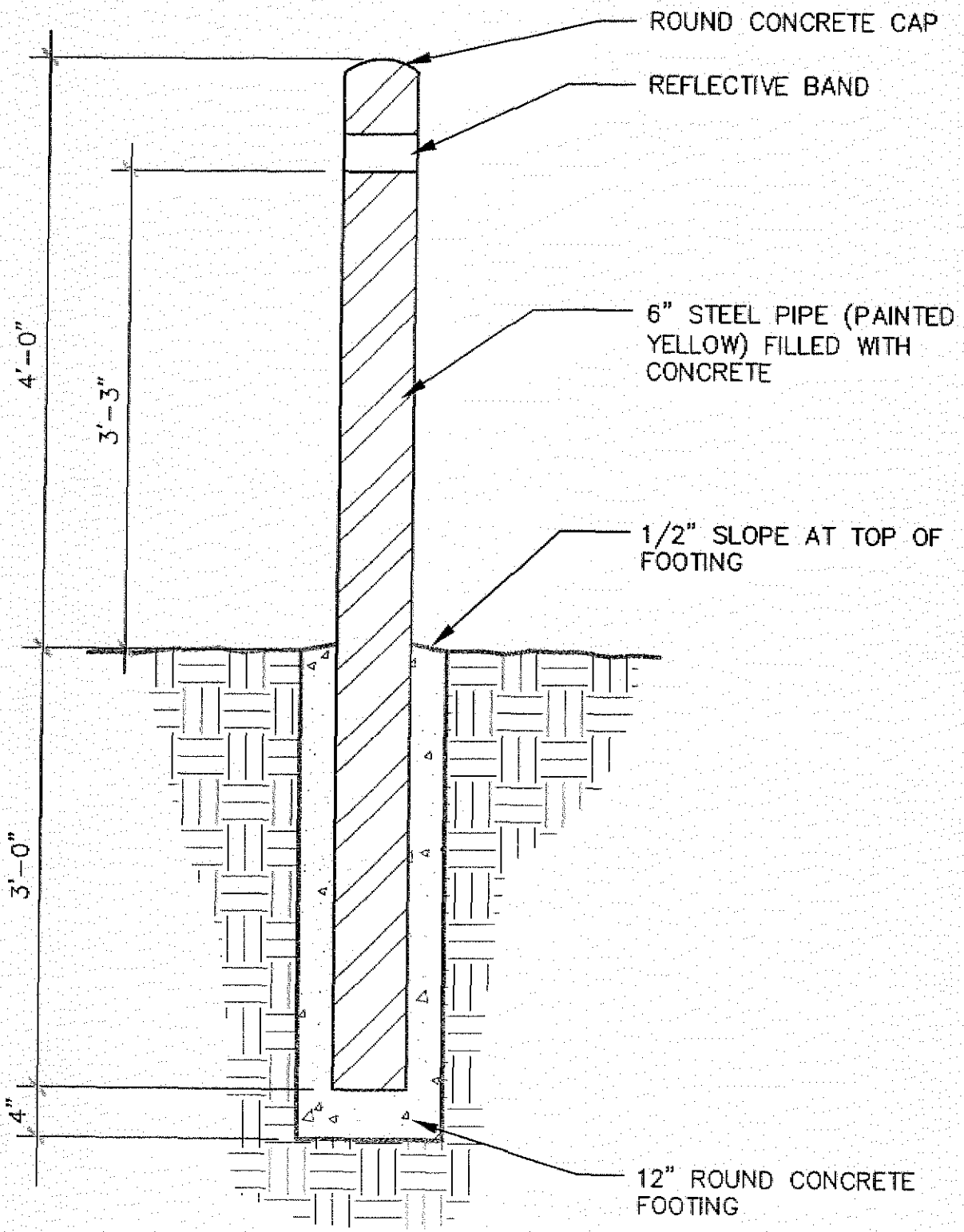
CHAINLINKFENCE

1/4" = 1'-0"



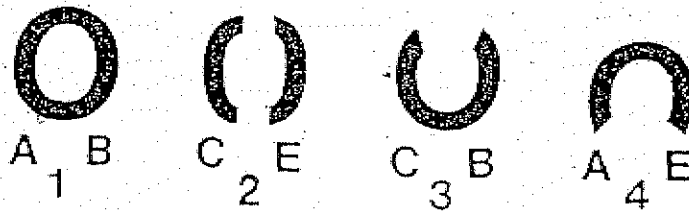
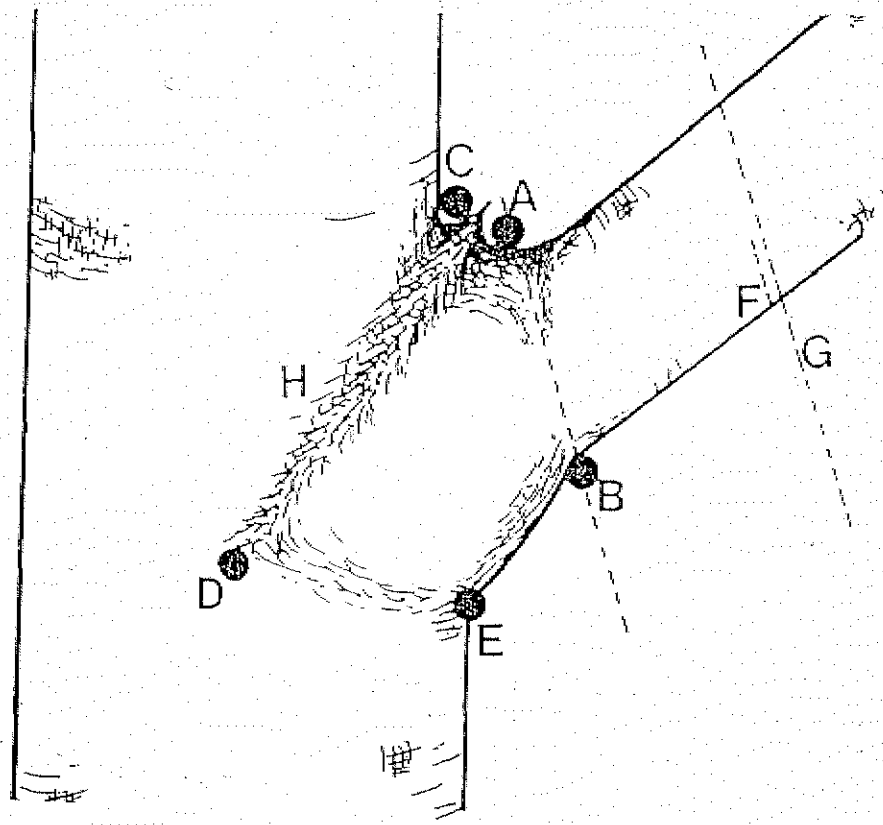
SCALE: NTS

NO.	REVISION	DATE	Standard Landscape Site Amenity Detail	File Name: (H:\landscape details\L2601.dwg)
			TYPICAL WOOD BOLLARD DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 22



SCALE: NTS

NO.			REVISION			DATE			Standard Landscape Detail			File Name:		
									PIPE BOLLARD DETAIL			[H:\landscape detail\pipebollard.dwg]		
												Landscape Detail Number: L-XX		
									Date: 5/2006			Page: 23		



NATURAL TARGET PRUNING

- Locate the branch bark ridge (H) and the branch collar (E to B).
- Stub cut the branch (up F, down G).
- Locate points A and B where the branch meets the branch collar.
- Cut from A to B, or from B to A with care.
- If position of B is uncertain, draw a line in your mind from A to E.
- Angle EAD is approximately the same as angle EAB.
- Point D is the beginning of the branch bark ridge (H).
- A proper cut will result in woundwood pattern 1.
- Improper cuts will result in patterns 2, 3, and 4.
- Do not leave stubs.
- Do not make flush cuts.
- Do not paint the wounds.



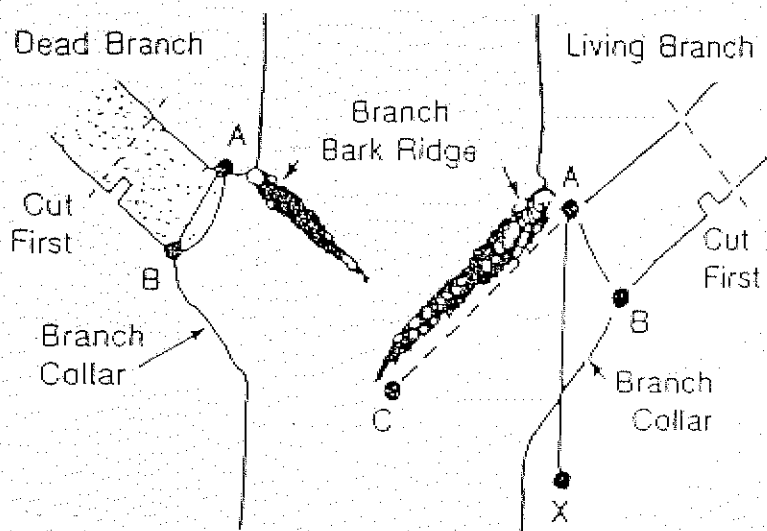
COOPERATIVE EXTENSION
Bringing the University to You

Wendy Hanson
 Horticulture Assistant
 Master Gardener Program Coordinator

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 Reno (775) 784-4942 FAX (775) 784-4981
 Carson City (775) 867-2252 FAX (775) 867-2065
 Gardnerville (775) 782-9969 FAX (775) 752-9968
 E-mail: hansonw@uncc.unr.edu
 Web site: www.uncc.unr.edu

Natural Target Pruning

Hardwoods



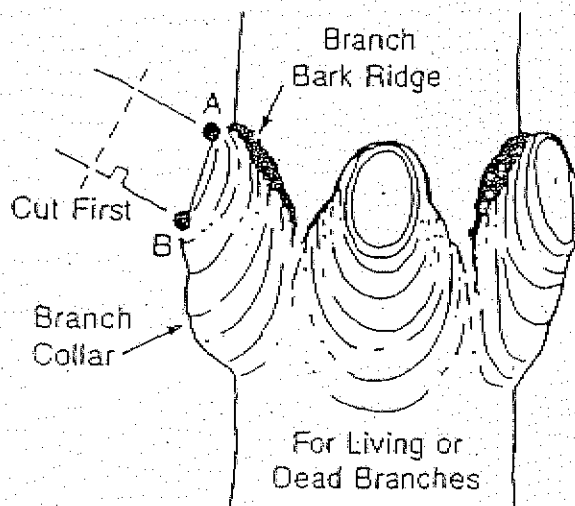
Natural Pruning Steps

1. Locate the branch bark ridge
2. Find TARGET A—outside of branch bark ridge
3. Find TARGET B—swelling where branch meets branch collar
4. If B is hard to find—drop a line at AX. Angle XAC=to angle XAB
5. Stub branch to be pruned
6. Make cut at line AB

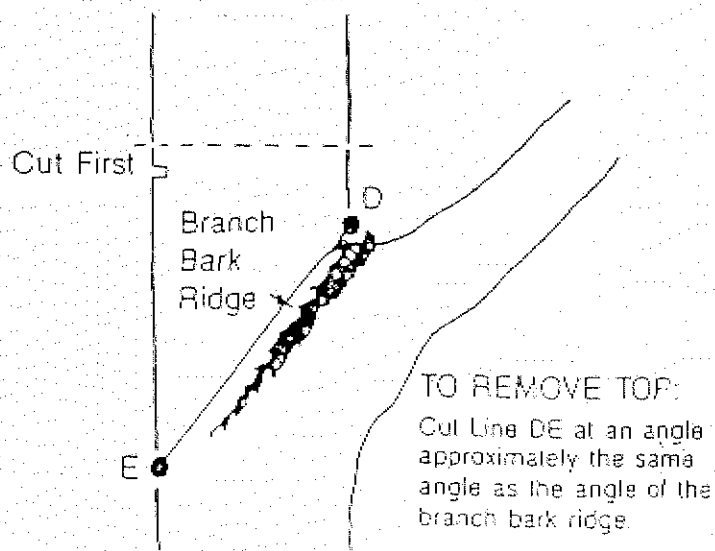
Do Not

- Cut behind the branch bark ridge
- Leave stubs
- Cut branch collar
- Paint cuts—except for cosmetics
- Leave flat top when topping

Conifers



Topping



BEST TIME TO PRUNE

Late dormant season or EARLY spring before leaves form

FOR MORE INFORMATION WRITE:

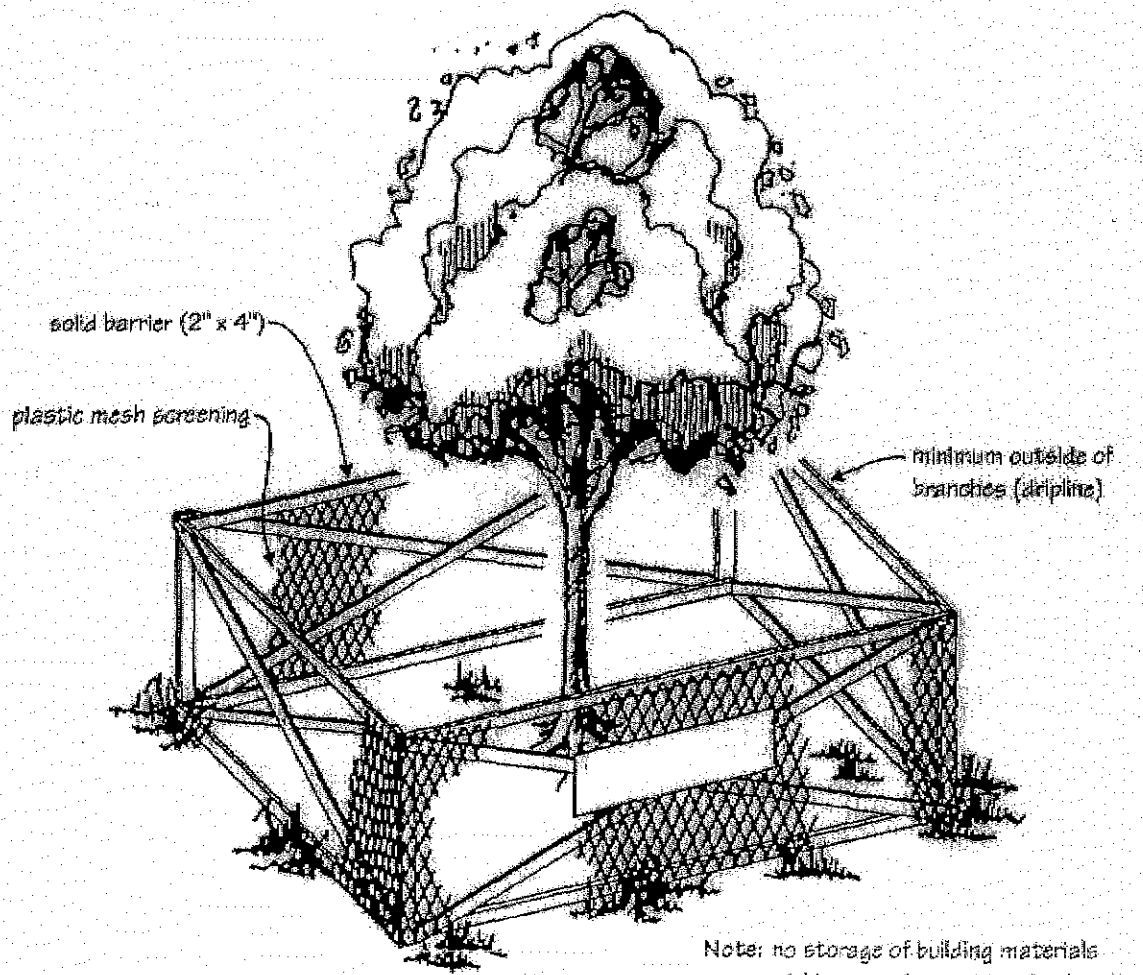
Northeastern Forest
Experiment Station
P.O. Box 640
Durham NH 03824

or

your local State Forestry or
USDA Forest Service Office

TREE RETENTION/PROTECTION

- 1) Where trees are to be retained on a site, protection barriers must be installed as specified in 3.4.2.
- 2) Any required excavation in or around the protection barrier to accommodate underground services, footing, etc. should be indicated on the plan and completed by hand.
- 3) Trees inside the protection zone should be cared for throughout the construction process, i.e., they must be watered sufficiently if a portion of the tree's root system has been disturbed by excavation.
- 4) Root and branch pruning, where necessary, must be done in accordance with 3.4.2.



Tree Retention Guideline

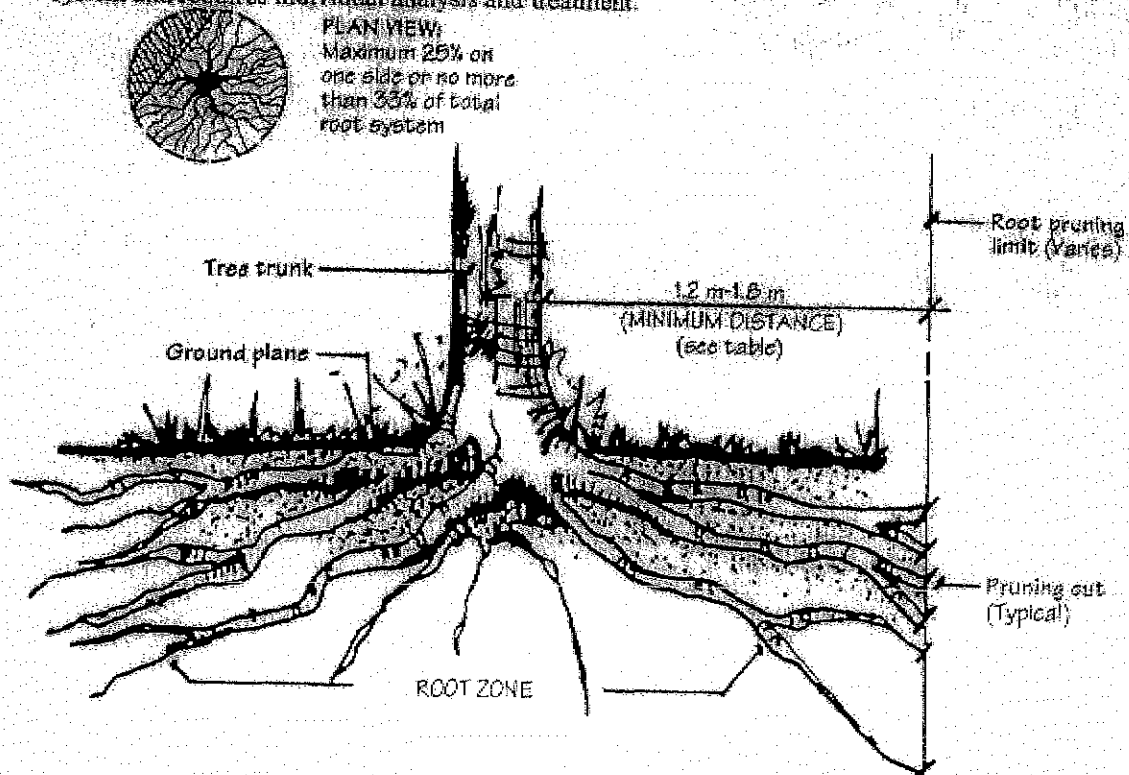
Root Pruning

Root pruning is the practice of removing a portion of a tree's root system. As a first alternative, adding soil and reseeded is recommended to prevent the removal of key structural roots. However, root pruning sometimes becomes necessary in order to accommodate landscape features such as walks, retaining walls, drains or utilities. Root pruning may also be necessary when existing roots begin to interfere with the routine maintenance of surrounding lawns and shrub beds. For example, it would be better to remove a surface root which is continually wounded by a lawn mower blade rather than to increase potential for disease through open wounds in the root. Other reasons for root pruning may include transplanting and undesirable growth patterns.

The circumstances necessitating root pruning vary, but the objective of tree root pruning is always to ensure the health, stability and longevity of the tree. Therefore, major root pruning should only be done by, or in consultation with, an Arborist or other qualified landscape professional.

The following general guidelines for root pruning are provided for your convenience:

- A tree should be root pruned only if the problem can be solved by removing less than 33 percent of the tree's roots, with no more than 25 percent from one side.
- For trees 30 cm in diameter and less, roots should not be removed within 1.2 m of the outer edge of the tree base. Trees with diameters over 30 cm should be allowed an additional 30 cm for every extra 7.5 cm of trunk diameter measured at a point 1.4 m above ground. For example, a tree with a 37.5 cm diameter trunk measured 1.4 m above the ground would require a minimum 1.55 m allowance around it.
- Cut roots cleanly after excavation with clean, sharp tools, to promote callous formation and wound closure. Wounds may be dressed with a tree rooting hormone compound that is available at garden centres.
- Backfill the excavation as soon as possible and water the soil around roots to avoid leaving air pockets.
- Mix soil improvements (e.g. peat moss) with fill soil to promote new root growth, especially if the existing soil is of poor quality. The soil quality can be easily determined by using a basic soil testing kit which is readily available at most nursery supply stores. Do not add fertilizers until improved tree growth is noticed, generally after 6 to 8 weeks during a growing season. Soil testing will better determine soil deficiencies and additional amendment requirements.
- Surface roots which interfere with other elements in the landscape can be removed under the supervision of an Arborist or other qualified landscape professional. Each tree has a different root system and requires individual analysis and treatment.



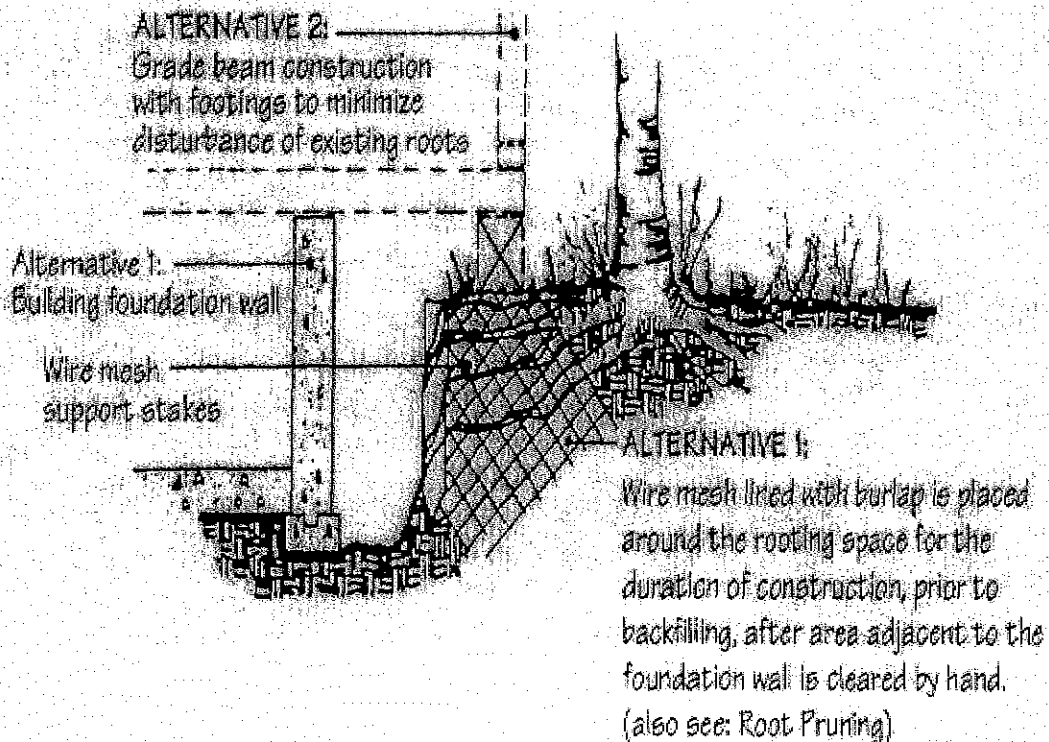
Root Pruning Guideline

Page 27 Root Pruning Detail

Excavation Adjacent to Retained Trees

In cases where proposed building excavation will affect existing trees to be retained, special attention should be given to proper root pruning and care for the remaining root system. Alternatively, a post and beam structure for the building may be considered to retain the rooting space (see diagram, Alternative 2). It is important to note that most roots are located in the top 60 cm of soil, with the major roots for water and nutrients absorption in the top 20 to 30 cm.

- In order to minimize root damage, soil erosion and tree disturbance, a temporary root curtain² should be wrapped around the root zone to retain and protect the exposed area. The root curtain should consist of heavy wire mesh or similar material lined with burlap (to retain moisture) and supported by posts. Backfill should be used as required to ensure that none of the roots are left exposed. Only hand excavation should be used in the root zone area.
- It is critical that the root zone system (or roots of the tree) be kept moist by watering as required throughout the construction process.
- Once the foundation is ready to be backfilled, the root curtain can be carefully removed. It is of utmost importance that the area surrounding the tree be kept free of building materials, as well as pedestrian and vehicular traffic, to avoid soil compaction.
- Tunnelling rather than trenching should be considered when installing underground utilities and drainage lines to minimize damage to existing trees. This technique entails boring a hole under or through the root system with minimum disturbance. To ensure that the work is undertaken in the appropriate manner, a certified Arborist or similarly qualified landscape professional should be consulted if the applicant decides to use this technique.



² A root curtain is a material such as wire mesh that helps retain the roots and soil in place.

Owner Maintenance Agreement

All landscaping, irrigation and screening shall be maintained at all times to conform to the regulations of Development Standards Division 3 Landscaping. Landscaping and related equipment including, but not limited to, trees, shrubs, plants, screens, walkways, benches, fountains and irrigation systems shall be maintained by the present or subsequent owner of the property. The owner of the property is responsible for maintaining or assuring the ongoing maintenance of installed landscaping so that the landscaping continues to thrive. Each owner shall be required at all times to keep all landscaping materials in good health, repair and maintenance.

The City may require the immediate replacement of any and all dead or damaged plant materials at any time. If any portion of the landscaping material or irrigation equipment is dead, dying, damaged, destroyed or otherwise affected, the owner of the development project shall replace or repair the damaged or affected material within thirty days following notification from the Director. If the season of the year makes this repair or replacement impractical within the thirty-day period, the person responsible for the landscaping shall submit a letter of request to the Director asking for a delay to replace materials and shall submit a time frame for the accomplishment of this work. If the repair or replacement is not accomplished in a timely fashion the Director may initiate proceedings to revoke the special use permit or business license for the subject use.

Signature of Owner

Date

Carson City Tree List for Commercial Projects

USDA Zone: 5 (Plant Material)

Sunset Zone: 3

Species and Varieties Appropriate for Proposed Site That Are Not on This List Are Subject to Approval, Not Including Accent Trees

Deciduous

Small Tree - Less than 30 feet (single stem)

- | | |
|---|--------------------------------------|
| ACER ginnala 'Flame' | Amur Maple |
| * AMELANCHIER species varieties | Serviceberry |
| CARPINUS caroliniana | American Hornbeam |
| CATALPA bignonioides 'Nana' | Umbrella Catalpa |
| * CRATAEGUS species thornless varieties | Hawthorn |
| FRAXINUS pennsylvanica 'Johnson' | Leprechaun Green Ash |
| KOELREUTERIA paniculata | Goldenrain Tree |
| * MALUS species varieties | Flowering Crabapple (<1" size fruit) |
| * PRUNUS maackii | Amur Chokecherry |
| * PRUNUS padus | European Bird Cherry |
| * PRUNUS virginiana 'Canada Red' | Canada Red Chokecherry |
| SORBUS americana 'Dwarfcrowm' | Red Cascade Mountain Ash |

Medium Tree - 30 feet to less than 50 feet tall

- | | |
|---|-----------------------|
| ACER fremanii 'Jeffersred' | Autumn Blaze Maple |
| * ACER negundo 'Sensation' | Sensation Box Elder |
| ACER nigrum 'Greencolumn' | Greencolumn Maple |
| * ACER platanoides varieties | Norway Maple |
| ACER pseudoplatanus varieties | Sycamore Maple |
| * ACER rubrum varieties | Red Maple |
| ACER saccharum 'Green Mountain' | Sugar Maple |
| CARPINUS betulus varieties | European Hornbeam |
| CATALPA speciosa | Northern Catalpa |
| CELTIS occidentalis | Common Hackberry |
| CELTIS reticulata | Western Hackberry |
| * FRAXINUS americana varieties | White Ash |
| FRAXINUS excelsior | European Ash |
| FRAXINUS ornus | Flowering Ash |
| * FRAXINUS pennsylvanica varieties | Green Ash |
| FRAXINUS quadrangulata | Blue Ash |
| * GLEDITSIA triacanthos inermis varieties | Thornless Honeylocust |
| GYMNOCLADUS dioicus | Kentucky Coffeetree |
| * PYRUS calleryana varieties | Callery Pear |

* - Carson City Historic District Preferred Tree

- QUERCUS lobata
- QUERCUS robur 'Fastigiata'
- * ROBINIA x ambigua 'Idaho'
- * SORBUS aucuparia varieties
- * TILIA cordata varieties
- TILIA tomentosa varieties

- Valley Oak
- Skyrocket English Oak
- Idaho Locust
- Mountain Ash
- Littleleaf Linden
- Silver Linden

Large Tree - 50 feet or greater

- * PLATANUS occidentalis
- * PLATANUS x acerifolia 'Bloodgood'
- * QUERCUS coccinea
- QUERCUS douglasii
- QUERCUS macrocarpa
- QUERCUS robur 'Fastigiata'
- * QUERCUS rubra
- TILIA americana varieties
- ZELKOVA serrata

- American Sycamore
- London Planetree
- Scarlet Oak
- Blue Oak
- Bur Oak
- Columnar English Oak
- Red Oak
- American Linden
- Sawleaf Zelkova

Evergreen

Small Tree - Less than 30 feet (single stem)

- * PINUS mugo
- PINUS thumbergiana

- Swiss Mountain Pine
- Japanese Black Pine

Medium Tree - 30 feet to less than 50 feet tall

- * JUNIPERUS species varieties
- * PICEA pungens varieties
- PINUS aristata
- PINUS edulis
- PINUS monophylla
- PINUS nigra
- PINUS sylverstris

- Juniper tree
- Spruce
- Bristlecone Pine
- Two-Needle Pinyon Pine
- Single-Leaf Pinyon Pine
- Austrian Pine
- Scotch Pine

Large Tree - 50 feet or greater

- * ABIES concolor
- * CALOCEDRUS decurrens
- CEDRUS atlantica
- * PICEA pungens
- PINUS contorta latifolia
- * PINUS jeffreyi
- * PINUS ponderosa
- SEQUOIA DENDRON giganteum

- White Fir
- Incense Cedar
- Atlas Cedar
- Colorado Spruce
- Lodgepole Pine
- Jeffrey Pine
- Ponderosa Pine
- Giant Sequoia

* - Carson City Historic District Preferred Tree

Carson City Riparian Area List

Scientific Name

Common Name

Tree

ACER negundo	Boxelder
ALNUS incana spp. tenuifolia	Thinleaf Alder
ALNUS rubra	Red Alder
ALNUS sinuata	Sitka Alder
BETULA occidentalis	Water (Black) Birch
CRATAEGUS douglasii	Black/Douglas Hawthorn
POPULOUS fremontii	Cottonwood
POPULUS angustifolia	Narrowleaf Cottonwood
POPULUS balsamifera spp. Trichocarpa	Black Cottonwood
POPULUS tremulides	Quaking Aspen
PRUNUS virginiana 'Canada Red'	Canada Red Chokecherry
SALIX alba	White Willow
SALIX amygdaloides	Peachleaf Willow
SALIX nigra	Black Willow
SALIX prolixa	Mackenzie Willow
SAMBUCUS coerulea	Blue Elderberry

Carson City Riparian Area List

Scientific Name

Common Name

Shrub

CORNUS sericea	Redosier Dogwood
ELAEGNUS commutata	Silverberry
PENTAPHYLLOIDES floribunda	Shrubby Cinquefoil
PHILADELPHUS lewisii	(Mockorange) Syringa
RHUS tribobata	Skunkbush Sumac
RIBES aureum	Golden Current
RIBES cereum	Wax (Squaw) Current
ROSA woodsii	Wood's Rose
SALIX bebbiana	Bebb Willow
SALIX boothii	Booth Willow
SALIX drummondiana	Drummond Willow
SALIX exigua ssp. Exigua	Coyote Willow
SALIX exigua ssp. Melanopsis	Coyote Willow
SALIX geyeriana	Geyer Willow
SALIX lemmonii	Lemmon Willow
SALIX lutea	Yellow Willow
SALIX lutea ssp. Lasiandra	Pacific (Whiplash) Willow
SALIX planifolia var. planifolia	Planeleaf Willow
SALIX scouleriana	Scouler Willow
SALIX sitchensis	Sitka Willow
SAMBUCUS racemosa ssp. Pubens	Red Elderberry
SHEPHERDIA argentea	Silver Buffaloberry
SYMPHORICARPOS albus	Common Snowberry