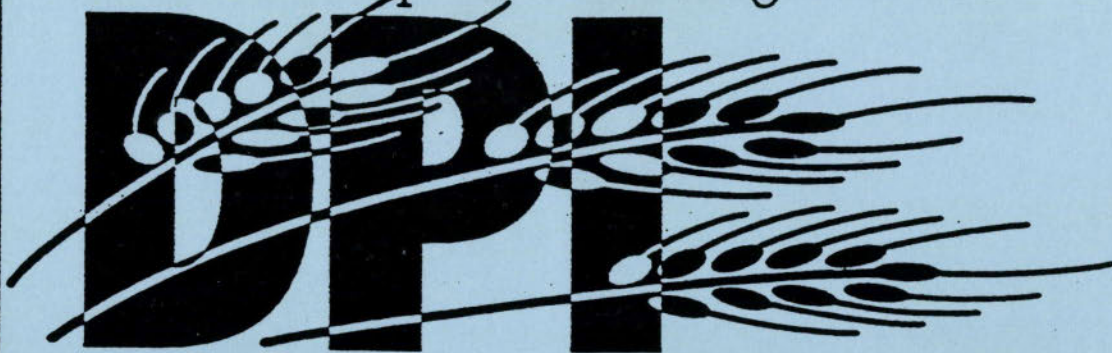


Colorado Department of Agriculture



DIVISION OF PLANT INDUSTRY

RULES AND REGULATIONS

COLORADO NURSERY ACT

COLORADO DEPARTMENT OF AGRICULTURE
Division of Plant Industry
700 Kipling, Suite 4000
Lakewood, Colorado 80215-5894

RULES AND REGULATIONS

PERTAINING TO THE ADMINISTRATION AND ENFORCEMENT OF
THE COLORADO NURSERY ACT

Pursuant to the provisions and requirements of the Colorado Nursery Act to regulate the sale and distribution of nursery stock, and by authority of Title 35, Article 26, Section 111, CRS 1973, the following rules and regulations are hereby promulgated:

26-1.0 DEFINITIONS

26-2.0 GRADING OF NURSERY STOCK

- 26-2.1 DECIDUOUS TREES
- 26-2.2 DECIDUOUS SHRUBS
- 26-2.3 EVERGREENS
- 26-2.4 ROSE GRADES
- 26-2.5 VINES
- 26-2.6 FRUIT TREES
- 26-2.7 FRUIT TREE SEEDLINGS
- 26-2.8 SMALL FRUITS
- 26-2.9 LINING OUT STOCK
- 26-2.10 SEEDLING TREES AND SHRUBS
- 26-2.11 BALLING & BURLAPPING SPECIFICATIONS
- 26-2.12 SPECIFICATIONS FOR BALLED & POTTED STOCK
- 26-2.13 SPECIFICATIONS FOR IN-GROUND FABRIC BAG-GROWN STOCK

- 26-3.0 CONDITION OF NURSERY STOCK
 - 26-3.1 INSECT PESTS AND PLANT DISEASES
 - 26-3.2 CONTAINER STOCK
 - 26-3.3 BARE ROOT STOCK
 - 26-3.4 BALLED STOCK
 - 26-3.5 TURFGRASS SOD
 - 26-3.6 BENCH PACKED STOCK
 - 26-3.7 IN-GROUND FABRIC BAG-GROWN STOCK

- 26-4.0 SPECIAL LABELING REQUIREMENTS
 - 26-4.1 BENCH PACKED STOCK
 - 26-4.2 TURFGRASS SOD
 - 26-4.3 IN-GROUND FABRIC BAG-GROWN STOCK

- 26-5.0 FEEES
 - 26-5.1 INSPECTION FEES - ACTUAL COST
 - 26-5.2 REGISTRATION FEES

- 26-6.0 REQUIREMENTS FOR COLLECTORS
 - 26-6.1 AUTHORIZATION FOR COLLECTION OF NURSERY STOCK

- 26-7.0 STANDARDS AND FEES FOR QUALIFICATION
 OF NURSERY STOCK INSPECTORS
 - 26-7.1 DEMONSTRATION OF KNOWLEDGE
 - 26-7.2 FEE FOR QUALIFYING

- 26-8.0 PROHIBITED WEEDS

26-1.0 DEFINITIONS

- 26-1.1 "Balled and burlapped stock" means that nursery stock which has been removed from the growing site with a ball of soil, containing the root system, left intact and encased in burlap or other similar material to hold the soil in place, and shall also include that nursery stock which has been removed from the growing site by a mechanical spade or other machine with a ball of soil, containing the root system, left intact but not necessarily encased in burlap or other similar material.
- 26-1.2 "Balled and potted stock" means that nursery stock which has been removed from the growing site with a ball of soil, containing the root system, left intact and placed in a container.
- 26-1.3 "Bare root stock" means that nursery stock which has been removed from the growing site with the root system substantially free of soil.
- 26-1.4 "Container grown stock" means that nursery stock which has been planted in a container with the root system in soil, or other potting mixture capable of sustaining normal plant growth, and which has become established in the container and exhibits a well-rooted condition as evidenced by the soil ball remaining intact when removed from said container.
- 26-1.5 "Etiolated growth" means bleached and unnatural growth resulting from the exclusion of sunlight.
- 26-1.6 "Packaged stock" means that bare root nursery stock packed with the roots in peat, shingletow, or other moisture-retaining material encased in plastic film or other material designed to hold the moisture-retaining material in place.
- 26-1.7 "Plantable container" means a container which, when planted in the soil, will allow root penetration within one growing season.
- 26-1.8 "Potted stock" means that nursery stock which has been planted in a container with the roots in soil or other potting mixture capable of sustaining normal plant growth, which has not become established as described in 26-1.4 of these definitions.
- 26-1.9 "Primary bud" means the most vigorous bud at a node.

- 26-1.10 "Prohibited weeds in turfgrass sod" means the following plant species except when any of these species is labeled for sale purposes in accordance with Section 35-26-104 (3), CRS 1973, as amended, and 26-4.2 of these rules and regulations:
1. Bentgrass (Agrostis spp. - except in pure stands)
 2. Bluegrass, rough (Poa trivialis)
 3. Quackgrass (Agropyron repens)
- 26-1.11 "Weeds" means any plant species other than the species labeled in accordance with Section 35-26-104 (1), CRS 1973, and 26-4.2 of these rules and regulations.
- 26-1.12 "Bench packed stock" means that nursery stock with the roots packed in a growing medium mixture to form a ball, and encased in burlap or other similar material to hold the growing medium in place.
- 26-1.13 "Blend" means a combination of varieties of the same species of turfgrass in any percentages.
- 26-1.14 "Mixture" means a combination of two or more different species (kinds) of turfgrasses.
- 26-1.15 "Named blend or mixture" means the sales name which has been given to a particular blend or mixture by the grower. This sales name shall identify the grower and may or may not disclose the varieties or kinds or percentages of each in the blend or mixture.
- 26-1.16 "Sell or offer for sale" and "sale" mean, for the purposes of the Colorado Nursery Act and these rules and regulations, all times in which the person engaged in the business of selling nursery stock has custody or control of the nursery stock, including those acts leading to the transfer, or the transfer of the nursery stock for consideration either in money or its equivalent. For the purposes of the Colorado Nursery Act and these rules and regulations, the transfer shall not be deemed to have occurred until such time that the person engaged in the business of selling nursery stock ceases to have custody or control of the nursery stock.
- 26-1.17 "In-ground fabric bag-grown stock" means that nursery stock which has been planted in a fabric bag with the root system in soil, or other potting mixture capable of sustaining normal plant growth; which, in turn, has been field planted while in the bag; and which has become established in the bag and exhibits a well-rooted condition, as evidenced by the soil ball remaining intact when removed from the bag.

26-2.0 GRADING OF NURSERY STOCK

26-2.1 DECIDUOUS TREES

HEIGHT MEASUREMENT

Height shall be given in single foot units up to 6 ft.; example: 5-6 ft. Over 6 ft. height shall be given in double foot units; example: 6-8 ft., 12-14 ft.

CALIPER MEASUREMENT

Caliper of the trunk shall be taken 6 inches above the ground level up to and including 4 inch caliper size and 12 inches above ground level for the larger sizes. Caliper shall be the determining measurement in grading.

HEIGHT RELATIONSHIP TO CALIPER

Height measurement should be expressed as approved height range. The table in Type 1 shows the approved height range and also the maximum heights permitted. The grades specified are for minimum heights only, for general varieties.

Type 1. Standard Shade Trees

The height relationship to caliper will for most standard shade trees be as follows:

	<u>Caliper</u>		<u>Height Range</u>	<u>Maximum Height</u>
1/2	to 3/4	in.-----	5 to 6 ft.-----	8 ft.
3/4	to 1	in.-----	6 to 8 ft.-----	10 ft.
1	to 1 1/4	in.-----	7 to 9 ft.-----	11 ft.
1 1/4	to 1 1/2	in.-----	8 to 10 ft.-----	12 ft.
1 1/2	to 1 3/4	in.-----	10 to 12 ft.-----	14 ft.
1 3/4	to 2	in.-----	10 to 12 ft.-----	14 ft.
2	to 2 1/2	in.-----	12 to 14 ft.-----	16 ft.
2 1/2	to 3	in.-----	12 to 14 ft.-----	16 ft.
3	to 3 1/2	in.-----	14 to 16 ft.-----	18 ft.
3 1/2	to 4	in.-----	14 to 16 ft.-----	18 ft.
4	to 5	in.-----	16 to 18 ft.-----	22 ft.
5	to 6	in.-----	18 ft. and up----	26 ft.

Type 2. Slower Growing Shade Trees

Trees of slower growth which will not usually attain the height measurement in relation to caliper as in Type 1. The height shall, however, be not less than two-thirds the height relationship given for Type 1.

Type 3. Small Trees

This is a broad group including small trees as well as "standard" forms of plants which may be grown as a clump or shrub. Height shall be the governing measurement. For single stem plants the minimum relationship of caliper and branching will usually be as follows:

2 to 3 ft.,	5/16	in. caliper,	3 or more branches
3 to 4 ft.,	7/16	in. caliper,	4 or more branches
4 to 5 ft.,	9/16	in. caliper,	5 or more branches
5 to 6 ft.,	11/16	in. caliper,	6 or more branches
6 to 8 ft.,	7/8	in. caliper,	6 or more branches

ROOT SPREAD - BARE ROOT NURSERY GROWN

All bare root trees shall have a heavy fibrous root system which has been developed by proper cultural treatment, transplanting and root pruning. The following table represents the minimum root spread for nursery grown shade trees:

	<u>Caliper</u>	<u>Height Range</u>	<u>Min. Root Spread</u>
	1/2 to 3/4	in.----- 5 to 6 ft.-----	12 in.
	3/4 to 1	in.----- 6 to 8 ft.-----	16 in.
1	to 1 1/4	in.----- 7 to 9 ft.-----	18 in.
1	1/4 to 1 1/2	in.----- 8 to 10 ft.-----	20 in.
1	1/2 to 1 3/4	in.-----10 to 12 ft.-----	22 in.
1	3/4 to 2	in.-----10 to 12 ft.-----	24 in.
2	to 2 1/2	in.-----12 to 14 ft.-----	28 in.
2	1/2 to 3	in.-----12 to 14 ft.-----	32 in.
3	to 3 1/2	in.-----14 to 16 ft.-----	38 in.

ROOT SPREAD - BARE ROOT COLLECTED

Trees collected from native stands or established plantings must be so designated. The spread of roots, bare root trees, shall be 1/3 greater than the spread of roots, bare root nursery grown, as tabulated above.

26-2.2 DECIDUOUS SHRUBS

HEIGHT MEASUREMENT

Dwarf and Semi-dwarf Shrubs: State height in inches up to 24 inches, usually in 3 inch series; example: 3-6 in., 6-9 in. Larger than 24 inches state height in feet with 1/2 foot series; example: 2 to 2 1/2 ft., 2 1/2 to 3 ft.

Strong Growing Shrubs: Grade in a 6 inch series up to 24 inches; example: 12 to 18 in.; over 24 inches by single feet up to 6 feet; then in double feet above 6 feet; example: 8-10 ft.

DEFINITION OF CANE AND CLUMP

A cane shall be considered a primary stem which starts from the ground or close to the ground at a point not higher than one-fourth the height of the plant.

A clump indicates a plant with at least double the number of canes required for standard material.

ROOT SPREAD - BARE ROOT NURSERY GROWN

Roots of deciduous shrubs shall be well branched and fibrous and bare root shrubs shall have a minimum root spread as follows:

Size of Plant-	18 to 24 in.	2-3 ft.	3-4 ft.	4-5 ft.
Min. Root Spread-	10 in.	11 in.	14 in.	16 in.
Size of Plant-	5 to 6 ft.	6 to 8 ft.		
Min. Root Spread-	18 in.	20 in.		

ROOT SPREAD - BARE ROOT COLLECTED

Shrubs collected from native stands or established plantings must be so designated. The spread of roots, bare root collected, shall be 1/3 greater than the spread of roots of nursery grown shrubs as tabulated above.

Type 1 - Shrubs: Dwarf and Semi-dwarf

12-15 in. and up	shrubs shall have not less than 4 canes, 12 in. and up
15-18 in. and up	shrubs shall have not less than 4 canes, 15 in. and up
18-24 in. and up	shrubs shall have not less than 5 canes, 18 in. and up
2-2 1/2 ft. and up	shrubs shall have not less than 6 canes, 2 ft. and up
2 1/2-3 1/2 ft. and up	shrubs shall have not less than 7 canes, 2 1/2 ft. and up

Examples:

Berberis thunbergi minor
Philadelphus coronarius aureus
Potentilla fruticosa
Ribes alpinum

Rosa rugosa
Spiraea bumalda
'Anthony Waterer'

Type 2

1 1/2-2 ft. shrubs shall have not less than 3 canes, 1 1/2 ft. and up
2-3 ft. shrubs shall have not less than 4 canes, 2 ft. and up
3-4 ft. shrubs shall have not less than 6 canes, 4 ft and up

Examples:

Cornus alba, sibirica, stolonifera	Ligustrum ibota, vulgare Philadelphus lemoinei
Kolkwitzia amabilis	Rosa multiflora, setigera
Ligustrum amurense, ibolium	Spiraea, tall varieties

Type 3

1 1/2-2 ft. shrubs shall have not less than 3 canes, 1 1/2 ft. and up
2-3 ft. shrubs shall have not less than 3 canes, 2 ft. and up
3-4 ft. shrubs shall have not less than 4 canes, 3 ft. and up
4-5 ft. shrubs shall have not less than 5 canes, 4 ft. and up

Examples:

Acanthopanax sieboldianus
Alnus rugosa
Amelchier
Aronia arbutifolia, melanocarpa
Cornus sanguinea
Corylus americana
Cotoneaster acutifolia
Euonymus americana
Forsythia, all varieties
Hamamelis
Hibiscus, bush form
Hydrangea paniculata grandiflora 'Snowhill'
Hydrangea paniculata grandiflora PG
Kedrria japonica
Ligustrum obtusifolium
Philadelphus, all standard var.
Prunus triloba, bush form
Prunus cistena
Rhamnus cathartica, frangula
Rosa blanda
Sambucus canadensis cutleaf Gold
Sorbaria aitchisoni, arborea, sorbifolia
Symphoricarpos chennaulti, mollis, occidentalis, albus,
 orbiculatus
Syringa chinensis, amurensis, japonica, josikea, persica,
 villosa
Viburnum dentatum, lantana, molle, opulus, tomentosum,
 trilobum, cassinoides

Type 4

- 1 1/2-2 ft. shrubs shall have not less than 2 canes,
1 1/2 ft. and up
- 2-3 ft. shrubs shall have not less than 2 canes, 2
ft. and up
- 3-4 ft. shrubs shall have not less than 3 canes, 3
ft. and up
- 4-5 ft. shrubs shall have not less than 4 canes, 4
ft. and up

Examples:

Amorpha fruticosa	Euonymus alata,
Baccharis halimifolia	atropurpurea,
Caragana arborescens	europaea
Chioanthus virginica	Lespedeza bicolor
Colutea arborescens	Rhamnus cathartica,
Cornus alternifolia, mas	frangula
Cotinus americanus,	Syringa vulgaris, alba
cogygria	Tamarix
Eleagnus, angustifolia,	Viburnum lentagoeuropaeus
commutata, umbellata	

Type 5

- 1 1/2-2 ft. shrubs with 1 or more canes 1 1/2 ft. and up
in height 5/16 in. cal.
- 2-3 ft. shrubs with 1 or more canes 2 ft. and up in height
3/8 in. cal.
- 3-4 ft. shrubs with 1 or more canes 3 ft. and up in height
1/2 in. cal.
- 4-5 ft. shrubs with 1 or more canes 4 ft. and up in height
5/8 in. cal.
- 5-6 ft. shrubs with 1 or more canes 5 ft. and up in height
7/8 in. cal.

Examples:

Rhus glabra, glabra laciniata, typhina, typhina laciniata

Type 6 - Barberry

- 12-15 in. Berberis thunbergi, 3 canes or more, 12 in. and
up
- 15-18 in. Berberis thunbergi, 3 canes or more, 15 in. and
up
- 1 1/2-2 ft. Berberis thunbergi, 4 canes or more, 1 1/2 ft.
and up
- 2-2 1/2 ft. Berberis thunbergi, 4 canes or more, 2 ft. and
up
- 2 1/2-3 ft. Berberis thunbergi, 5 canes or more, 2 1/2 ft.
and up
- 3 ft. Berberis thunbergi, 6 canes or more, 3 ft. and
up

Type 7 - Privet (Hedging)

- 1 1/2-2 ft Ligustrum in variety shall have 3 canes or more
1 1/2 ft. and up
- 2-3 ft. Ligustrum in variety shall have 4 canes or more 2
ft. and up
- 3-4 ft. Ligustrum in variety shall have 5 canes or more 3
ft. and up
- 4-5 ft. Ligustrum in variety shall have 6 canes or more 4
ft. and up

Note: For other species see Type 2 and 3.

26-2.3

EVERGREENS

QUALITY DEFINITIONS

The quality of evergreens offered is assumed to be normal for the species of variety unless otherwise designated as:

Specimen. (Spec.) This designation may be used to indicate exceptionally heavy, well shaped plants and is usually applied to the larger commercial sizes and plants which have been cut back and trimmed to form a perfectly symmetrical, tightly knit plant.

Collected. (Coll.) Natural seedling plants dug from native stands or forest plantings must be so designated.

EVERGREENS - CONIFERS

Type 1 - Spreading

Measurement designates spread (height not considered). Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches up to 4 feet. Use 1 foot intervals from 4 feet up.

Measurement shall be average of plant and not the greatest diameter. Plants properly trimmed and transplanted should measure the same in any direction. If a plant is uneven, for example, 15 inches the widest way and 9 the narrowest, it should be classified as 12 inch stock.

Examples:

Juniperus horizontalis and varieties.

Type 2 - Semi-Spreading

Measurement designates spread. Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches up to 4 feet. Use 1 foot intervals from 4 feet up. Measurement shall be average as in Type 1.

Height of material will be at least one half the spread. Above 3 feet the height will be less than the spread, varying somewhat according to the natural growth of the particular species and method of handling.

<u>Spread</u>	<u>Height</u>
6 to 9 in.	up to 3 ft.---same as spread
3 to 4 ft.	----- 2 1/2 to 3 1/2 ft.
4 to 5 ft.	----- 3 to 4 ft.

Examples:

Juniperus chinensis 'Pfitzer', sabina 'Tammy'

Type 3 - Globe or Dwarf

Measurement designates height. Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches up to 4 feet. Use 1 foot intervals from 4 feet up.

<u>Height</u>	<u>Spread</u>
6 to 9 in.	up to 12 in. min. spread, same
12 to 15 in.	----- min. spread, 10 in.
15 to 18 in.	----- min. spread, 12 in.
18 to 24 in.	----- min. spread, 15 in.
2 to 2 1/2 ft.	----- min. spread, 18 in.
2 1/2 to 3 ft.	----- min. spread, 21 in.
3 to 3 1/2 ft.	----- min. spread, 24 in.

Examples:

Juniperus virginiana 'Globe', Picea (Dwarf ball shaped types)
Juniperus squamata 'Meyer'

Type 4 - Cone (Pyramidal)

Measurement designates height. Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches up to 5 feet. Use 1 foot intervals from 5 to 8 feet. Use 2 foot intervals from 8 feet up.

In determining height, measurement shall begin at the soil line and end at a point midway between the uppermost whorl of branches and the tip of the leader.

<u>Height</u>	<u>Spread</u>
12 to 15 in.	-----8 to 12 in.
15 to 18 in.	-----9 to 15 in.
18 to 24 in.	-----12 to 18 in.
2 to 2 1/2 ft.	-----15 to 21 in.
2 1/2 to 3 ft.	-----18 to 24 in.
3 to 4 ft.	-----21 to 30 in.
4 to 5 ft.	-----2 1/2 to 3 ft.
5 to 6 ft.	-----3 to 4 ft.

Examples:

Abies, Picea, Pseudotsuga menzesii, Pinus
(except dwarf types)

Type 5 - Broad Upright

Measurement designates height. Use same intervals as in Type 4. This group includes all the broader, upright growing evergreens which develop a straight-sided form with many upright branches or "leaders."

<u>Height</u>	<u>Spread</u>
12 to 15 in.	8 to 12 in.
15 to 18 in.	9 to 15 in.
18 to 24 in.	12 to 18 in.
2 to 2 1/2 ft.	15 to 21 in.
2 1/2 to 3 ft.	18 to 24 in.
3 to 4 ft.	21 to 30 in.
4 to 5 ft.	2 1/2 to 3 ft.
5 to 6 ft.	3 to 4 ft.

Examples:

Taxus media 'Hicks', 'Hatfield'

Type 6 - Columnar

Measurement designates height. Use same intervals as in Type 4. This group includes all the upright growing evergreens which naturally develop a straight-sided form or one that tapers only slightly from the ground to a point more than half the height.

<u>Height</u>	<u>Spread</u>
12 to 15 in.	3 to 6 in.
15 to 18 in.	4 to 7 in.
18 to 24 in.	5 to 8 in.
2 to 2 1/2 ft.	6 to 9 in.
2 1/2 to 3 ft.	7 to 10 in.
3 to 4 ft.	9 to 12 in.
4 to 5 ft.	12 to 15 in.
5 to 6 ft.	15 to 18 in.
6 to 7 ft.	18 to 21 in.
7 to 8 ft.	21 to 24 in.
8 to 10 ft.	24 to 30 in.

Examples:

Juniperus virginiana (columnar varieties)

EVERGREENS - BROADLEAF

Five general types or groups are considered separately as follows:

Type 1 - Spreading

Measurement designates spread (height not considered). Use 3 inch intervals up to 24 inches. Use 6 inch intervals from 24 inches to 4 feet. Use 1 foot intervals from 4 feet up.

Examples:

Berberis verruculosa

Type 3 - Globe or Dwarf

Measurement designates height. Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches to 4 feet. Use 1 foot intervals from 4 feet up.

<u>Height</u>	<u>Spread</u>
6 to 9 in.-----min.	spread 5 in.
9 to 12 in.-----min.	spread 6 in.
12 to 15 in.-----min.	spread 7 in.
15 to 18 in.-----min.	spread 9 in.
18 to 24 in.-----min.	spread 10 in.
2 to 2 1/2 ft.-----min.	spread 14 in.

Examples:

Mahonia aquifolium 'Compact'

Type 4 - Broad Upright

Measurement designates height. Use 3 inch intervals up to 18 inches. Use 6 inch intervals from 18 inches to 3 feet. Use 1 foot intervals from 3 feet up.

<u>Height</u>	<u>Spread</u>
12 to 15 in.-----min.	spread 8 in.
15 to 18 in.-----min.	spread 10 in.
18 to 24 in.-----min.	spread 12 in.
2 to 2 1/2 ft.-----min.	spread 16 in.
3 to 4 ft.-----min.	spread 24 in.
4 to 5 ft.-----min.	spread 28 in.

Examples:

Mahonia aquifolium

Type 5 - Conical

Specifications identical to Type 4. This type includes all upright growing broadleaf evergreens which naturally develop into a conical form. Well grown material will have a ratio of height to spread of 3 to 2. A greater spread is acceptable.

GENERAL

Measurement of height shall begin where the branches start rather than at the ground, if the plant is leggy. It shall stop where the main part of the plant ends and not at the tip of a thin shoot.

26-2.4 ROSE GRADES

GENERAL

The standards specified apply to field grown two year roses when sold either bare root or individually wrapped and packaged, or in cartons.

All grades of roses must have a well developed root system and have proportionate weight and caliper according to grade and variety. Roses shall be graded by size, number and length of canes, and proper consideration should be given to weight and caliper of canes, depending upon grade and variety.

TEA, HYBRID TEA AND GRANDIFLORA; HYBRID PERPETUALS, MOSS AND MISCELLANEOUS BUSH ROSES

- Grade No. 1 - 3 or more strong canes, two of which are to be 18 inches and up, with the exception of a few of the light growing sorts, which are to have 3 or more canes, two of which are to be 16 inches and up, and one cane to be 18 inches and up, branched not higher than 3 inches above the bud union.
- Grade No. 1 1/2 - 2 or more strong canes to be 15 inches and up, with the exception of a few of the light growing sorts which are to have 2 strong canes 13 inches and up, branched not higher than 3 inches above the bud union.
- Grade No. 2 - 2 or more strong canes 12 inches and up, with the exception of a few of the light growing sorts which are to have 2 or more canes 10 inches and up, branched not higher than 3 inches above the bud union.

FLORIBUNDA ROSES

- Grade No. 1 - 3 or more strong canes, 2 of which are to be 15 inches and up and branched not higher than 3 inches above the bud union.
- Grade No. 1 1/2 - 2 or more strong canes to be 14 inches and up, branched not higher than 3 inches above the bud union.
- Grade No. 2 - 2 or more strong canes to be 12 inches and up, branched not higher than 3 inches above the bud union.

POLYANTHA BABY ROSES; DWARF AND LIGHT GROWING
FLORIBUNDA ROSES

- Grade No. 1 - 4 or more canes, all to be 12 inches and up and branched not higher than 3 inches above the bud union.
- Grade No. 1 1/2 - 3 or more canes, all to be 10 inches and up and branched not higher than 3 inches above the bud union.
- Grade No. 2 - 2 or more strong canes, all to be 10 inches and up and branched not higher than 3 inches above the bud union.

CLIMBING ROSES

- Grade No. 1 - 3 or more strong canes 24 inches and up with the exception of Wichuraiana and Wichuraiana types. These are to have 4 strong canes 24 inches and up, branched not higher than 3 inches above the bud union or crown.
- Grade No. 1 1/2 - 2 strong canes 18 inches and up, with the exception of Wichuraiana and Wichuraiana types which are to have 3 strong canes 18 inches and up and branched not higher than 3 inches above the bud union or crown.
- Grade No. 2 - 2 strong canes each 14 inches and up with the exception of Wichuraiana and Wichuraiana types which are to have 3 strong canes 16 inches and up and branched not higher than 3 inches above the bud union or crown.

VINES

TYPE 1 - FAST GROWING

The fast growing vines which normally produce a number of vigorous woody runners in one or two years shall be graded and designated as follows:

2 Year No. 1 - shall have heavy well branched tops with not less than 3 runners 18 inches and up and a vigorous well developed root system.

2 Year No. 2 - lighter grade than Number 1 but without serious defects. 3 runners 12 inches and up with a root system commensurate with the top.

Older vines shall be designated according to age, heavy or light grade, length of runners and other characteristics such as standard, grafted, potted or tubbed.

Examples:

Celastrus scandens, Lonicera, Parthenocissus quinquefolia engelmanni

TYPE 2 - MEDIUM GROWING

Woody vines usually starting with a single cane or runner shall be designated by age and grade, heavy or light.

2 Year No. 1 - shall have a heavy well branched top and a vigorous well developed root system.

2 Year No. 2 - lighter grade than the above without serious defects, top not as well branched. Root system must be in proportion to the top.

Older vines shall be designated according to age, heavy or light grades, length of runners, and other characteristics such as standard, grafted, potted or tubbed.

Examples:

Aristolochia, Campsis radicans, Parthenocissus tricuspidata, Euonymus radicans and varieties, Hedera helix, Vitis

TYPE 3 - CLUMP

Clump types shall be designated by age and heavy or light grade. Dormant plants may or may not have live runners. In this group a well developed root system and a healthy well developed crown are the important considerations.

Examples:

Clematis

TYPE 4 - GROUND COVERS

Dwarf vines and ground covers are to be designated by age, size of clump and length of runners and other characteristics peculiar to the particular species offered.

Examples:

Arctostaphylos, Vinca minor, Hedera helix, Euonymus radicans

GROUND COVERS - CONTAINER GROWN

Ground covers sold in pots or similar containers shall be established in the container and shall exhibit a well rooted condition. The following are suggested minimum specifications:

<u>Variety</u>	<u>Pot Size</u>	<u>Min. No. of Runners</u>	<u>Min. Length of Runners</u>
Lonicera jap. halliana	2 1/4 in.	2 to 3	4 to 6"
Lonicera jap. halliana	3 in.	3 to 6	6 to 8"
Lonicera jap. halliana	4 in.	4 to 8	8 to 12"
Hedera helix and baltica	2 1/4 in.	2	4 to 6"
Hedera helix and baltica	3 in.	3	6 to 8"
Hedera helix and baltica	4 in.	4	8 to 12"
Vinca minor	2 1/4 in.	6 to 8	4 to 6"
Vinca minor	3 in.	8 to 12	4 to 6"

Collected (Coll.) - Plants collected from the wild must be so designated.

26-2.6 FRUIT TREES

All trees shall have reasonably straight bodies according to habit of growth. All grades 5/16 and larger shall be branched, except one year Sweet Cherry, and well rooted. The 9/16 and 11/16 shall have 3 or more side branches. Caliper shall be taken two inches above the collar or bud. Height shall be taken from the collar if grafted or from the union of the bud and stock if budded.

The caliper shall govern grading, height being intended to represent average height of most varieties. Slow growing kinds may fall short of height specified. Age shall be given as 1 year, 2 year, etc.

All fruit trees are tied 11/16 - 9/16, ten per bundle; 7/16 - 5/16, twenty per bundle and have two printed labels per bundle.

Minimum
Caliper (in inches) Heights

APPLE - STANDARD

11/16 to 1 in.--4 1/2 ft. and up
9/16 to 11/16 in.-- 4 ft. and up
7/16 to 9/16 in.----3 ft. and up
5/16 to 7/16 in.----2 ft. and up

APPLE - DWARF

9/16 and up-----3 1/2 ft. and up
7/16 to 9/16----2 1/2 ft. and up
5/16 to 7/16-----2 ft. and up

APRICOT

11/16 and up-----4 ft. and up
9/16 to 11/16-----3 ft. and up
7/16 to 9/16-----2 1/2 ft. and up
5/16 to 7/16-----2 ft. and up

CHERRY - SWEET

11/16 and up, 1 & 2 yr. 4 1/2 ft. & up
9/16 to 11/16, 1 & 2 yr. 4 ft. and up
7/16 to 9/16, 1 & 2 yr. 3 ft. and up

CHERRY - SOUR

11/16 and up, 2 year-----4 ft. and up
9/16 to 11/16, 2 year---3 1/2 ft. and up
7/16 to 9/16, 2 year-----3 ft. and up
5/16 to 7/16, 2 year-----2 ft. and up
11/16 and up, 1 year----3 1/2 ft. and up
9/16 to 11/16, 1 year-----3 ft. and up
7/16 to 9/16, 1 year----2 1/2 ft. and up
5/16 to 7/16, 1 year-----2 ft. and up

PEACH

11/16 and up---4 1/2 ft. and up
9/16 to 11/16--4 ft. and up
7/16 to 9/16---3 ft. and up
5/16 to 7/16---2 ft. and up

PEAR - STANDARD

11/16 and up---4 1/2 ft. and up
9/16 to 11/16-----4 ft. and up
7/16 to 9/16-----3 ft. and up
5/16 to 7/16-----2 ft. and up

PEAR - DWARF

9/16-----3 1/2 ft. and up
7/16-----3 ft. and up
5/16-----2 ft. and up

PLUM

11/16 and up-----4 1/2 ft. and up
9/16 to 11/16----4 ft. and up
7/16 to 9/16----3 ft. and up
5/16 to 7/16----2 ft. and up

QUINCE

9/16 and up-----3 1/2 ft. and up-
7/16 to 9/16-----3 ft. and up
5/16 to 7/16-----2 ft. and up

ONE YEAR STANDARD

One year old fruit tree stock (apples, pears, cherries, plums, peaches, nectarines, apricot and quince) from the three West Coast states, Washington, Oregon and California, graded in 1/8 inch intervals as follows shall be accepted:

1 yr. 3/4 inch and up
1 yr. 5/8 inch and up
1 yr. 1/2 inch to 5/8 inch
1 yr. 3/8 inch to 1/2 inch
1 yr. 1/4 inch to 3/8 inch

26-2.7 FRUIT TREE SEEDLINGS

CALIPER MEASUREMENT

Caliper shall be taken at the collar or ground line and grade numbers shall correspond to the following calipers:

3/8-----3/8 to 7/16 tied 50 per bundle
1/4-----1/4 to 3/8 tied 100 per bundle
No. 1-----3/16 to 1/4 tied 100 per bundle
No. 2-----1/8 to 3/16 tied 200 per bundle
No. 3-----3/32 to 2/16 tied 200 per bundle
No. 4-----1/16 to 3/32 tied 200 per bundle

Exception: Grade No. 1 "straight" apple seedlings shall be graded from 3/16 to 5/16 caliper.

SPECIAL SPECIFICATIONS

In case of seedlings with limbs there shall be at least 2 inches above the collar free of limbs for one half the circumference of the seedling.

In case of apple or pear seedlings where the root description is given as branched or straight, the following shall apply:

Branched Root - not less than 3 root branches. Point of branching shall not be more than 4 inches from the collar.

Straight Root - the root shall carry the caliper of the grade for not less than 6 inches from the collar.

In case of cutting grown stock, the caliper shall be taken on the original cutting at the collar.

26-2.8

SMALL FRUITS

All small fruit plants must be well rooted. No injured, dwarfed or odd shaped plants shall be included in any grade.

RASPBERRIES

Grade No. 1 - sucker and root cutting plants, and also tip plants, shall be graded 3/16 inch and up in caliper at the collar; sucker plants shall have 10 inches or more of live top; tip plants shall have 8 inches or more of live top; plants to be tied 25 per bundle.

Grade No. 2 - sucker and root cutting plants, and also tip plants, shall be graded 2/16 inch and up in caliper at the collar; sucker and root cutting plants to have 8 inches or more of live top; tip plants, 6 inches or more live top. Tied 25 per bundle.

TRANSPLANTED RASPBERRIES

Grade No. 1 - all transplanted raspberries shall caliper 1/4 inch and up at the collar and have 15 inches or more of live top. Tied 25 per bundle.

Grade No. 2 - transplanted raspberries shall caliper 3/16 inch and up at the collar and have 12 inches or more of live top. Tied 25 per bundle.

DEWBERRIES, BLACKBERRIES,
BOYSENBERRIES, YOUNGBERRIES

Grade No. 1 - root cuttings shall caliper 2/16 inch and sucker plants shall caliper 3/16 inch and up at the collar and have 12 inches or more of live top. Tied 50 per bundle.

Grade No. 2 - root cuttings shall caliper 3/32 inch and sucker plants shall caliper 2/16 inch and up at the collar and have 8 inches or more of live top. Tied 50 per bundle.

TRANSPLANTED BLACKBERRIES

Grade No. 1 - shall caliper 1/4 inch and up at the collar and have 12 inches or more of live top. Tied 25 per bundle.

CURRENTS

Grade 2 Yr. No. 1 - 12 inches and up in height with 2 or more branches. Tied 25 per bundle.

Grade 1 Yr. No. 1 - 9 inches and up in height; if single cane plants, to be 12 inches high. Tied 50 per bundle.

Grade 2 Yr. No. 2 - same specifications as 1 Yr. No. 1.

BLUEBERRIES

All measurements to indicate overall height of plant from crown to tip. All to be well rooted and well branched in proportion to height.

1 year rooted cuttings-----	3 to 6 in.
2 year No. 1-----	9 to 12 in.
2 year No. 2-----	6 to 9 in.
3 year No. 1-----	12 to 18 in.
4 year No. 1-----	18 to 24 in.

GOOSEBERRIES

Grade 2 Yr. No. 1 - shall measure 12 inches or more in height with 3 or more canes, or equivalent side branches, and shall be tied 25 per bundle.

Grade 1 Yr. No. 1 - shall measure 8 inches or more in height with 2 or more canes, or equivalent side branches, and shall be tied 50 per bundle.

Grade 2 Yr. No. 2 - same specifications as 1 Yr. No. 1.

GRAPE VINES

Grading of grape vines is based mainly on the root system.

Grade 2 Yr. No.1 - the lighter growing varieties shall have 12 inches or more of live top; stronger growing varieties shall be proportionately larger. Tied 50 per bundle.

Grade 1 Yr. No. 1 - lightest growers shall have 6 inches or more of live top; stronger growers shall be proportionately larger. Tied 100 per bundle.

Grade 2 Yr. No. 2 - same specifications as 1 Yr. No. 1

STRAWBERRY PLANTS

There shall be at least 10 main roots, not less than 3 inches long, and a minimum crown diameter of 5/16 inch measured at the base.

26-2.9

LINING OUT STOCK

GENERAL

Lining out stock shall include all plant material coming from propagating houses, beds or frames and young material of suitable size to plant out in nursery rows.

DESIGNATION

Age-- Shall be given by number of years since propagated or in the case of seedlings, since growth started.

Transplanted-- The number of times transplanted to be represented by using for each transplanting the letter "T".

Seedling--Stock to be represented by the letter "S".

Cuttings--To be represented by the letter "C".

Grafted--Stock to be represented by the letter "G".

Size--Shall be given in accordance with the intervals recommended for each plant class.

Examples:

Koster Spruce G, 6-8", 4 Yr. TT means Koster Spruce graft, 6 to 8 inches high, 4 years old and twice transplanted.

SIZE DESIGNATION

In grading use 2" intervals up to 12", 3" intervals up to 24"; 6" intervals for larger sizes.

EVERGREEN LINING OUT STOCK

Evergreens shall be transplanted frequently enough to create a good root system, which will insure a minimum of transplanting loss, and to give the top room enough to start the branch framework properly, making a well-shaped specimen when placed in the nursery stock row.

26-2.10 SEEDLING TREES AND SHRUBS

DECIDUOUS OR HARDWOODS

Caliper measurements are taken at root collar or ground line.

<u>Caliper</u>	<u>Min. Height</u>	<u>Min. Root Length</u>
7/32 in. and up	-----12 in.	-----10 in.
3/16 in. to 7/32 in.	---10 in.	-----10 in.
5/32 in. to 3/16 in.	--- 8 in.	----- 8 in.
3/32 in. to 5/32 in.	--- 6 in.	----- 8 in.

Tops or roots will not be trimmed unless specified by grower or requested by purchaser.

When height is important measurements are taken from root or ground line.

<u>Height</u>	<u>Min. Caliper</u>	<u>Min. Root Length</u>
24 to 36 in.	-----7/32 in.	-----12 in.
18 to 24 in.	-----3/16 in.	-----10 in.
12 to 18 in.	-----5/32 in.	-----10 in.
6 to 12 in.	-----3/32 in.	----- 8 in.

Suggested for commercial nurseries furnishing or purchasing stock for the retail trade, and still comply with demand for calipered stock.

It shall be understood that when heights are to govern, caliper specification is minimum and when caliper is to govern, the height specification is minimum.

CONIFERS OR EVERGREENS

<u>Height</u>	<u>Min. Caliper</u>
12 to 15 in.	-----3/16 in.
9 to 12 in.	-----5/32 in.
6 to 9 in.	-----3/32 in.

Age is not important when height or caliper is specified. However it may be used in listings or when demanded by purchaser.

KEY for use in indicating seedling, root pruned or transplants:

S----seedling

RP---root pruned (shall not be root pruned deeper than 6 inches when applying to conifers)

T----one T for each time transplanted

GENERAL

All plants are to have well developed root systems, to be free of insects and diseases as well as mechanical injuries, and in all respects be suitable for fieldplanting. All conifers must have dormant buds and secondary needles.

26-2.11 BALLING AND BURLAPPING SPECIFICATIONS

BALL DIAMETERS FOR NURSERY GROWN STOCK

Balled and burlapped nursery stock which has been nursery grown shall meet the minimum ball diameter requirements stated in the following tables. Ball diameters shall be measured six inches below the original soil line on stock dug by a mechanical spade or other machine.

Type 1 - Spreading Coniferous and Broadleaf Evergreens (e.g., Spreading Juniper and Mugho Pine)

<u>Spread</u>	<u>Min. Ball Diameter</u>
1 1/2 to 2 ft.-----	11 in.
2 to 2 1/2 ft.-----	14 in.
2 1/2 to 3 ft.-----	18 in.
3 to 3 1/2 ft.-----	22 in.
3 1/2 to 4 ft.-----	26 in.
4 to 5 ft.-----	30 in.

Type 2 - Broad Coniferous and Broadleaf Evergreens (e.g., Pine and Spruce)

The minimum ball diameter for Type 2 shall be determined by measuring both the height and caliper of the tree and determining the minimum ball diameter from each of the following two tables. The required minimum ball diameter for the tree shall be the larger of these two diameters.

<u>Height</u>	<u>Min. Ball Diameter</u>
1 1/2 to 2 ft.-----	12 in.
2 to 3 ft.-----	14 in.
3 to 4 ft.-----	16 in.
4 to 5 ft.-----	18 in.
5 to 6 ft.-----	20 in.

6 to 7 ft.	-----	24 in.
7 to 8 ft.	-----	26 in.
8 to 9 ft.	-----	28 in.
9 to 10 ft.	-----	32 in.
10 to 12 ft.	-----	36 in.
12 to 14 ft.	-----	40 in.
14 to 16 ft.	-----	54 in.
16 to 18 ft.	-----	70 in.
18 to 20 ft.	-----	84 in.

Caliper Min. Ball Diameter

1/2 to 3/4 in.	-----	12 in.
3/4 to 1 in.	-----	14 in.
1 to 1 1/4 in.	-----	16 in.
1 1/4 to 1 1/2 in.	-----	18 in.
1 1/2 to 1 3/4 in.	-----	20 in.
1 3/4 to 2 in.	-----	24 in.
2 to 2 1/2 in.	-----	26 in.
2 1/2 to 3 in.	-----	28 in.
3 to 3 1/2 in.	-----	32 in.
3 1/2 to 4 in.	-----	36 in.
4 to 4 1/2 in.	-----	42 in.
4 1/2 to 5 in.	-----	48 in.
5 to 5 1/2 in.	-----	54 in.
5 1/2 to 6 in.	-----	57 in.
6 to 7 in.	-----	60 in.
7 to 8 in.	-----	70 in.
8 to 9 in.	-----	80 in.

Type 3 - Columnar Coniferous Evergreens (e.g., Upright Juniper)

Height Min. Ball Diameter

1 1/2 to 2 ft.	-----	11 in.
2 to 3 ft.	-----	12 in.
3 to 4 ft.	-----	13 in.
4 to 5 ft.	-----	14 in.
5 to 6 ft.	-----	16 in.
6 to 7 ft.	-----	18 in.
7 to 8 ft.	-----	20 in.
8 to 9 ft.	-----	22 in.
9 to 10 ft.	-----	24 in.

Type 4 - Deciduous Shrubs (e.g., Service-berry and Purpleleaf Sand Cherry)

Height Min. Ball Diameter

1 to 1 1/2 ft.	-----	8 in.
1 1/2 to 2 ft.	-----	10 in.
2 to 3 ft.	-----	12 in.
3 to 4 ft.	-----	14 in.

4 to 5 ft.-----	18 in.
5 to 6 ft.-----	20 in.
6 to 8 ft.-----	24 in.
8 to 10 ft.-----	28 in.
10 to 12 ft.-----	32 in.

Type 5 - Shade and Ornamental Trees (e.g., Maple, Honeylocust and Flowering Crabapple)

<u>Caliper</u>	<u>Min. Ball Diameter</u>
1/2 to 3/4 in.-----	12 in.
3/4 to 1 in.-----	14 in.
1 to 1 1/4 in.-----	16 in.
1 1/4 to 1 1/2 in.-----	18 in.
1 1/2 to 1 3/4 in.-----	20 in.
1 3/4 to 2 in.-----	24 in.
2 to 2 1/2 in.-----	26 in.
2 1/2 to 3 in.-----	28 in.
3 to 3 1/2 in.-----	32 in.
3 1/2 to 4 in.-----	36 in.
4 to 4 1/2 in.-----	42 in.
4 1/2 to 5 in.-----	48 in.
5 to 5 1/2 in.-----	54 in.
5 1/2 to 6 in.-----	57 in.
6 to 7 in.-----	60 in.
7 to 8 in.-----	70 in.
8 to 9 in.-----	80 in.

BALL DIAMETERS FOR COLLECTED NURSERY STOCK

Balled and burlapped nursery stock which has been collected from its original native habitat shall meet the minimum ball diameter requirements stated in the following tables. Caliper measurements shall be taken six inches above the soil line. Ball diameter measurements shall be taken six inches below the soil line on stock dug by a mechanical spade or other machine.

Type 6 - Collected Pinyon Pine

<u>Caliper</u>	<u>Min. Ball Diameter</u>
1 to 1 1/2 in.-----	16 in.
1 1/2 to 2 in.-----	18 in.
2 to 2 1/2 in.-----	20 in.
2 1/2 to 3 in.-----	24 in.
3 to 3 1/2 in.-----	26 in.
3 1/2 to 4 in.-----	28 in.
4 to 4 1/2 in.-----	32 in.
4 1/2 to 5 in.-----	36 in.

Type 7 - Collected Aspen

<u>Height</u>	<u>Min. Ball Diameter</u>
5 to 6 ft.-----	8 in.
6 to 8 ft.-----	10 in.

Caliper

1 to 1 1/2 in.-----	12 in.
1 1/2 to 2 in.-----	14 in.
2 to 2 1/2 in.-----	18 in.
2 1/2 to 3 in.-----	22 in.

Clump aspen trees shall be measured by the largest stem.

Type 8 - All Collected Plants other than Pinyon Pine and Aspen

<u>Caliper</u>	<u>Min. Ball Diameter</u>
1 to 1 1/2 in.-----	14 in.
1 1/2 to 2 in.-----	16 in.
2 to 2 1/2 in.-----	20 in.
2 1/2 to 3 in.-----	24 in.
3 to 3 1/2 in.-----	28 in.
3 1/2 to 4 in.-----	32 in.
4 to 4 1/2 in.-----	36 in.
4 1/2 to 5 in.-----	40 in.

For caliper sizes larger than those given under Type 8 the ratio of ball diameter to caliper shall be 8 to 1.

BALL DEPTHS

Ball depths shall carry the following ratios for both nursery grown stock and collected nursery stock:

Balls with diameters less than 20 inches-depth not less than 75% of diameter-except for on collected aspen, not less than 40% of diameter.

Balls with diameters of 20 inches to 30 inches incl.-depth not less than 66 2/3% of diameter-except for on collected aspen, not less than 40% of diameter.

Balls with diameters of 31 inches to 48 inches incl.-depth not less than 60% of diameter.

Percentage of depth of larger balls will scale down proportionately.

26-2.12 SPECIFICATIONS FOR BALLED AND POTTED STOCK

"Balled and potted" stock shall meet the balling and burlapping specifications in 26-2.11 of these rules and regulations.

SPECIFICATIONS FOR IN-GROUND FABRIC BAG-GROWN STOCK

FABRIC BAG DIAMETERS FOR BAG-GROWN STOCK

In-ground fabric bag-grown stock shall meet the minimum fabric bag diameters stated in the following tables:

Type 1 - Faster Growing Coniferous Evergreens (e.g., Pinus strobus, Juniperus scopulorum, and Juniperus chinensis)

<u>Height</u>	<u>Minimum Bag Diameter</u>
4 ft.....	10 in.
5 ft.....	12 in.
6 ft.....	14 in.
8 ft.....	16 in.
10 ft.....	18 in.
12 ft.....	20 in.
14 ft.....	22 in.
16 ft.....	24 in.

Type 2 - Slower Growing Coniferous Evergreens (e.g., Pinus nigra, Pinus edulis, and Picea pungens)

<u>Height</u>	<u>Minimum Bag Diameter</u>
3 ft.....	10 in.
4 ft.....	12 in.
5 ft.....	14 in.
6 ft.....	16 in.
7 ft.....	18 in.
8 ft.....	20 in.
10 ft.....	22 in.
12 ft.....	24 in.

Type 3 - Broadleaf Evergreens (e.g., Pyracantha coccinea and Euonymus fortunei)

<u>Height</u>	<u>Minimum Bag Diameter</u>
3 ft.....	10 in.
4 ft.....	12 in.
4 ft.....	14 in.
5 ft.....	16 in.
6 ft.....	18 in.
8 ft.....	18 in.
9 ft.....	20 in.
10 ft.....	22 in.
12 ft.....	24 in.

Type 4 - Deciduous Shrubs (e.g., Cotoneaster acutifolius, Berberus thunbergi and Prunus cistena)

<u>Height</u>	<u>Minimum Bag Diameter</u>
3 ft.....	10 in.
4 ft.....	12 in.
5 ft.....	14 in.
6 ft.....	16 in.
8 ft.....	18 in.
10 ft.....	22 in.
12 ft.....	24 in.

Type 5 - Shade and Ornamental Trees (e.g., Acer saccharinum, Gleditsia triacanthos and Prunus virginiana schubert)

<u>Caliper</u>	<u>Minimum Bag Diameter</u>
1 1/4 in.....	10 in.
1 1/2 in.....	12 in.
1 3/4 in.....	14 in.
2 in.....	16 in.
2 1/2 in.....	18 in.
3 in.....	20 in.
3 1/2 in.....	22 in.
4 in.....	24 in.

FABRIC BAG DEPTHS

Fabric bag depths shall have the following relationship to fabric bag diameter:

<u>Bag Diameter</u>	<u>Bag Depth</u>
10 in.....	11 in.
12 in.....	11 in.
14 in.....	13 in.
16 in.....	13 in.
18 in.....	15 in.
20 in.....	15 in.
22 in.....	17 in.
24 in.....	17 in.

26-3.0 CONDITION OF NURSERY STOCK

26-3.1 INSECT PESTS AND PLANT DISEASES

All nursery stock shall be free of insect pests and plant diseases.

26-3.2 CONTAINER STOCK

GENERAL

All container stock shall be kept and displayed under conditions of temperature, light and moisture sufficient to maintain the continuing viability and vigor of the stock so that it might grow in a form characteristic of the species when planted and given reasonable care.

CONTAINER GROWN STOCK

Container grown stock shall be established in the container and shall exhibit a well-rooted condition as evidenced by the soil ball of such stock remaining intact upon removing it from the container.

POTTED STOCK

Potted stock shall be placed only in a plantable container so that the root system and growing medium need not be removed from the container when planting the stock.

Evergreens shall not be sold as potted stock, excepting seedlings and transplants 12 inches or under. Root systems for potted stock shall conform to descriptions given under 26-2.1 and 26-2.2 of these rules and regulations, and shall be placed in a container of a size adequate to contain the root system without crowding.

26-3.3 BARE ROOT STOCK

GENERAL

Packaged and unpackaged bare root stock shall be kept and displayed under conditions of temperature and moisture sufficient to maintain the continuing viability and vigor of the stock so that it might grow in a form characteristic of the species when planted and given reasonable care. Such bare root stock shall also be kept and displayed under conditions that will retard etiolated or otherwise abnormal growth. Removal of primary buds and/or shoots on bare root stock reduces the vigor of the plants and is prohibited. Evergreens shall not be sold as bare root stock, excepting seedlings and transplants 12 inches or under.

WAXING

Colored waxes or other materials which coat the aerial parts of the plant and change the appearance of the plant surface so as to prevent adequate inspection are prohibited.

26-3.4 BALLED STOCK

GENERAL

All balled stock shall be kept and displayed under conditions of temperature, light and moisture sufficient to maintain the continuing viability and vigor of the stock so that it might grow in a form characteristic of the species when planted and given reasonable care.

BALLED AND BURLAPPED STOCK

Balled and burlapped stock shall be kept and displayed with the soil ball surrounded by a moisture-retaining material to prevent desiccation of the root system, and handled in such a manner that the soil ball will not become broken or loose. Balled and burlapped stock with broken or loose earth balls shall not be offered for sale.

BALLED AND POTTED STOCK

Balled and potted stock shall be kept and displayed in such a manner that the soil ball will not become broken or loose. Balled and potted stock with broken or loose earth balls shall not be offered for sale.

26-3.5 TURFGRASS SOD

SPECIFICATIONS

Turfgrass sod, when delivered or offered for sale, shall be free of prohibited weeds, as given under 26-1.10 of these rules and regulations, and shall contain no more than three percent (3%) of other weeds, including annual bluegrass (Poa annua), per one thousand square feet.

DISPLAY CONDITIONS

Harvested turfgrass sod shall, when offered or exposed for sale, be kept and displayed in such a manner as to maintain the continuing viability of the sod.

26-3.6 BENCH PACKED STOCK

Bench packed stock shall be kept and displayed under conditions of temperature, light and moisture sufficient to maintain the continuing viability and vigor of the stock so that it might grow in a form characteristic of the species when planted and given reasonable care. The balls shall be surrounded by a moisture-retaining material to prevent desiccation of the root systems. Root systems for bench packed stock shall conform to descriptions given under 26-2.1 and 26-2.2 of these rules and regulations. Evergreens shall not be sold as bench packed stock.

26-3.7 IN-GROUND FABRIC BAG-GROWN STOCK

In-ground fabric bag-grown stock shall be kept and displayed under conditions of temperature, light, and moisture sufficient to maintain the continuing viability and vigor of the stock so that it might grow in a form characteristic of the species when planted and given reasonable care. The bags shall be surrounded by a moisture-retaining material to prevent desiccation of the root systems.

26-4.0 SPECIAL LABELING REQUIREMENTS

26-4.1 BENCH PACKED STOCK

Bench packed stock shall bear a special label to read as follows:

BENCH PACKED NURSERY STOCK

This plant has been removed from the growing site in a bare root condition. A growing medium mixture has been packed around the root system to form a ball.

This label shall be printed on a separate tag of sufficient size to be openly conspicuous. The title of the label shall be in 18 point or larger bold face type and text of the label shall be in 14 point or larger type on a contrasting background so as to be clearly legible.

The above described label shall be securely attached to each item of bench packed nursery stock when offered for sale.

26-4.2 TURFGRASS SOD

A seller of turfgrass sod shall be required to state on the sales contract, invoice or bill of lading the variety, named blend or mixture of turfgrasses involved in the transaction. Each different lot of harvested turfgrass sod shall, when offered or exposed for sale, be identified by a sign stating the variety, kinds, or named blend or mixture as stated on the invoice or bill of lading from the grower.

26-4.3 IN-GROUND FABRIC BAG-GROWN STOCK

In-ground fabric bag-grown stock shall bear a special label to read as follows:

FABRIC BAG-GROWN NURSERY STOCK

The root system of this plant must be removed from the bag, with the soil ball intact, before planting.

This label shall be printed on a separate tag of sufficient size to be openly conspicuous. The title of the label shall be in 18 point or larger type on a contrasting background so as to be clearly legible.

The above-described label shall be securely attached to each item of in-ground fabric bag-grown nursery stock when offered for sale.

26-5.0 FEES

26-5.1 INSPECTION FEES - ACTUAL COST

A charge of twenty-six dollars per hour per inspector for actual inspection time shall be collected to defray the costs of inspections made pursuant to the statute. The minimum charge for each inspection made shall be the charge for one-half hour of inspection time.

26-5.2 REGISTRATION FEES

The fee for a registration shall be seventy-five dollars for each place of business, effective January 1, 1992.

26-6.0 REQUIREMENTS FOR COLLECTORS

26-6.1 AUTHORIZATION FOR COLLECTION OF NURSERY STOCK

Evidence of authorization to have collected any and all nursery stock held or offered for sale shall consist of the following information:

Bill of sale or other document attesting to sale of trees, shrubs or other nursery stock, issued by the owner of a property, either private or public, from which the nursery stock was collected; or

Written contract or agreement between a collector and a property owner authorizing the collection of nursery stock from the property.

26-7.0 STANDARDS AND FEES FOR QUALIFICATION OF NURSERY STOCK INSPECTORS

26-7.1 DEMONSTRATION OF KNOWLEDGE

Persons who seek to contract with the Department of Agriculture to perform nursery stock inspections shall

demonstrate knowledge suitable to perform inspections of nursery stock concerning plant viability, root systems, insect pests, plant diseases, plant identification and other aspects of nursery stock. Such persons shall also demonstrate knowledge of the requirements of the Colorado Nursery Act and all rules and regulations. Such knowledge shall be demonstrated by successfully passing an examination, written and/or oral, administered by the Department of Agriculture.

26-7.2 FEE FOR QUALIFYING

Persons who seek to contract with the Department of Agriculture to perform nursery stock inspections shall pay actual cost for the time spent by Department personnel and material utilized in qualifying such persons.

26-8.0 PROHIBITED WEEDS

Effective July 1, 2000 (except for Dame's rocket as noted below), the following plant species shall not be sold as nursery stock within the State of Colorado or contaminate nursery stock (except that this provision does not apply to turfgrass), as evidenced by plants or plant parts visible above the ground in nursery stock prepared for sale within the State of Colorado:

ORNAMENTAL VARIETIES

Bouncingbet (*Saponaria officinalis*)
Chinese clematis (*Clematis orientalis*)
Common St. Johnswort (*Hypericum perforatum*)
Common tansy (*Tanacetum vulgare*)
Cypress spurge (*Euphorbia cyparissias*)
Dame's rocket (*Hesperis matronalis*)¹
Myrtle spurge (*Euphorbia myrsinites*)
Oxeye daisy (*Chrysanthemum leucanthemum*)
Purple loosestrife (*Lythrum salicaria*) and (*Lythrum virgatum*)
Saltcedar (*Tamarix parviflora*)
Saltcedar (*Tamarix ramosissima*)
Scentless chamomile (*Anthemis arvensis*)
Yellow toadflax (*Linaria vulgaris*)

OTHER VARIETIES

African rue (*Peganum harmala*)
Black henbane (*Hyoscyamus niger*)
Black knapweed (*Centaurea nigra*)
Black nightshade (*Solanum nigrum*)

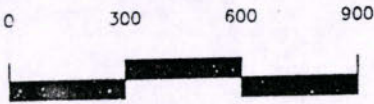
¹ Dame's rocket shall not be considered a prohibited weed until January 1, 2001.

Blue mustard (*Chorispora tenella*)
Bull thistle (*Cirsium vulgare*)
Camelthorn (*Alhagi pseudalhagi*)
Canada thistle (*Cirsium arvense*)
Chicory (*Cichorium intybus*)
Coast tarweed (*Madia sativa*)
Common burdock (*Arctium minus*)
Common groundsel (*Senecio vulgaris*)
Common mullein (*Verbascum thapsus*)
Common teasel (*Dipsacus fullonum*)
Dalmatian toadflax (*Linaria dalmatica*)
Diffuse knapweed (*Centaurea diffusa*)
Downy brome (*Bromus tectorum*)
Dyer's woad (*Isatis tinctoria*)
Field bindweed (*Convolvulus arvensis*)
Field sandbur (*Cenchrus pauciflorus*)
Flixweed (*Descurainia sophia*)
Green foxtail (*Setaria viridis*)
Hairy nightshade (*Solanum sarrachoides*)
Halogeton (*Halogeton glomeratus*)
Hoary cress (*Cardaria draba*)
Houndstongue (*Cynoglossum officinale*)
Johnsongrass (*Sorghum halepense*)
Jointed goatgrass (*Aegilops cylindrica*)
Kochia (*Kochia scoparia*)
Leafy spurge (*Euphorbia esula*)
Longspine sandbur (*Cenchrus longispinus*)
Mayweed chamomile (*Anthemis cotula*)
Mediterranean sage (*Salvia aethiopsis*)
Musk thistle (*Carduus nutans*)
Perennial pepperweed (*Lepidium latifolium*)
Plumeless thistle (*Carduus acanthoides*)
Poison hemlock (*Conium maculatum*)
Puncturevine (*Tribulus terrestris*)
Quackgrass (*Elytrigia repens*)
Redstem filaree (*Erodium cicutarium*)
Rush skeletonweed (*Chondrilla juncea*)
Russian knapweed (*Centaurea repens*)
Russian thistle (*Salsola collina*)
Russian thistle (*Salsola iberica*)

Scotch thistle (*Onopordum acanthium*)
Scotch thistle (*Onopordum tauricum*)
Spotted knapweed (*Centaurea maculosa*)
Squarrose knapweed (*Centaurea virgata*)
Sulfur cinquefoil (*Potentilla recta*)
Velvetleaf (*Abutilon theophrasti*)
Wild caraway (*Carum carvi*)
Wild mustard (*Brassica kaber*)
Wild proso millet (*Panicum miliaceum*)
Yellow foxtail (*Setaria glauca*)
Yellow nutsedge (*Cyperus esculentus*)
Yellow starthistle (*Centaurea solstitialis*)

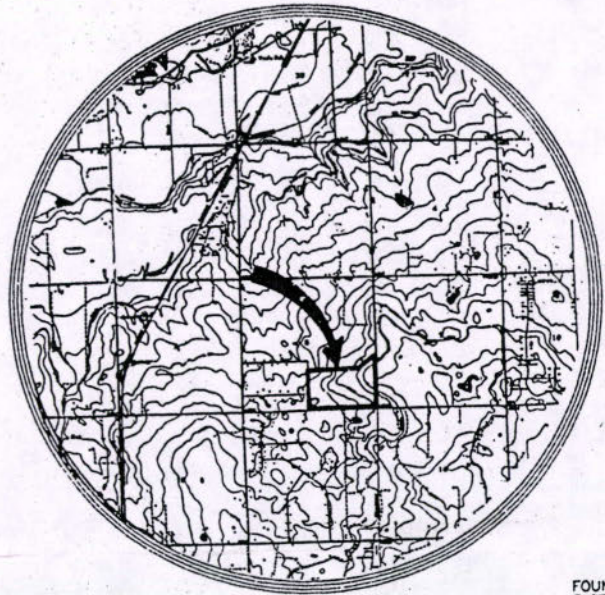
AR2418956

ENV 3791



NORTH

TOTAL ACRES = 85.866



VICINITY MAP

FOUND 2" IRON POST UNDER 1/2" REBAR AS PER RECORD TIES. NORTH 1/4 CORNER SECTION 8 T2N, R67W, 6th, P.M. UPGRADED WITH MONUMENT BOX.

FOUND 2" IRON PIPE EAST 1/4 CORNER SECTION 8 T2N, R67W, 6th, P.M.

SET 30" No. 6 REBAR WITH 2" ALUM CAP CENTER SECTION B, T2N, R67W, 5th, P.M. LS 23500

S 89°42'05" E

N 00°43'05" E

FOUND 3 1/4" U.S.B.L.M. BRASS CAP AS PER RECORD TIES WEST 1/4 CORNER SECTION 8 T2N, R67W, 6th, P.M. UPGRADED WITH A MONUMENT BOX.

2178
 93

 2084

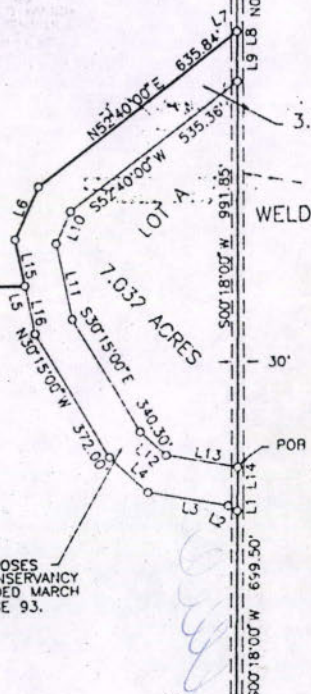
LINE	BEARING	DISTANCE
L1	S07°18'00" W	39.80'
L2	N61°17'00" W	27.80'
L3	N79°43'00" W	206.22'
L4	N47°25'00" W	132.70'
L5	N1°21'00" W	250.10'
L6	N2°41'00" E	148.10'
L7	N88°30'00" E	1.75'
L8	S07°18'00" W	43.50'
L9	S07°18'00" W	82.08'
L10	S2°41'00" W	90.70'
L11	S17°21'00" E	201.50'
L12	S47°25'00" E	88.70'
L13	S79°43'00" E	184.20'
L14	S07°18'00" W	70.80'
L15	N17°21'00" W	123.09'
L16	N17°21'00" E	127.01'

SET No. 5 REBAR WITH PLASTIC CAP UNLESS OTHERWISE NOTED LS 23500

N89°45'24" E 2176.79'

SOUTHEAST QUARTER SECTION 8

75.745 ACRES



RIGHT-OF-WAY FOR CANAL PURPOSES NORTHERN COLORADO WATER CONSERVANCY DISTRICT BY INSTRUMENT RECORDED MARCH 12, 1956 IN BOOK 1445 AT PAGE 93.

RIGHT-OF-WAY EASEMENT FOR PIPELINE PURPOSES INTERSTATE GAS COMPANY BY INSTRUMENT RECORDED NOVEMBER 8, 1976 IN BOOK 781 AS RN. 1703007.

NOTICE:
 According to Colorado law you MUST commence any legal action bearing on this survey within three years after you find any defect in this survey. In no event, may any action be brought on any defect in this survey be commenced more than ten years from the date of the certification shown herein.

FOUND 2" IRON POST WITH BRASS CAP AS PER RECORD TIES SOUTH 1/4 CORNER SECTION 8 T2N, R67W, 6th, P.M. WELD COUNTY ROAD #22

FOUND 2" IRON POST AS PER RECORD TIES SECTION 8 T2N, R67W,

LEGAL DESCRIPTION:

LOTS LOCATED IN THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 2 NORTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN WELD COUNTY, STATE OF COLORADO, SAID LOTS BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

LOT A

A LOT LOCATED IN THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 2 NORTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN WELD COUNTY, STATE OF COLORADO, SAID LOT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 8, FROM WHENCE THE SOUTHEAST CORNER OF SAID SECTION BEARS S00°18'00"W, 809.90 FEET AND WITH ALL OTHER BEARINGS CONTAINED HEREIN RELATIVE THERETO:

THENCE ALONG THE EAST LINE OF A CANAL RIGHT-OF-WAY GRANTED TO NORTHERN COLORADO CONSERVANCY DISTRICT BY INSTRUMENT RECORDED MARCH 12, 1956, IN BOOK 1445 AT PAGE 93 THE FOLLOWING COURSES AND DISTANCES:

N79°43'00"W, 184.20 FEET; N47°25'00"W, 88.70 FEET; N30°15'00"W, 340.30 FEET; N11°21'00"W, 201.50 FEET; N24°11'00"E, 90.70 FEET; N52°40'00"E, 535.36 FEET; TO THE EAST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 8; THENCE ALONG SAID EAST LINE S00°18'00"W, 991.85 FEET TO THE POINT OF BEGINNING.

THUS DESCRIBED LOT BEING 7.032 ACRES MORE OR LESS.

LOT B

A LOT LOCATED IN THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 2 NORTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN WELD COUNTY, STATE OF COLORADO, SAID LOT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 8, TOWNSHIP 2 NORTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, FROM WHENCE THE NORTHEAST CORNER OF SAID SECTION BEARS N00°18'00"E, 2646.93 FEET AND WITH ALL OTHER BEARINGS CONTAINED HEREIN RELATIVE THERETO:

THENCE ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, S89°45'24"W, 2726.46 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER OF SECTION 8; THENCE ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER, N00°43'05"E, 1287.66 FEET; THENCE N89°45'24"E, 2176.79 FEET TO A POINT ON THE WEST LINE OF A CANAL RIGHT-OF-WAY GRANTED TO NORTHERN COLORADO CONSERVANCY DISTRICT BY INSTRUMENT RECORDED MARCH 12, 1956 IN BOOK 1445 AT PAGE 93; THENCE ALONG SAID WEST RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES: S11°21'00"E, 127.01 FEET; S30°15'00"E, 372.00 FEET; S47°25'00"E, 132.70 FEET; S79°43'00"E, 206.20 FEET; S61°17'00"E, 27.60 FEET TO THE EAST LINE OF SAID SOUTHEAST QUARTER OF SECTION 8; THENCE ALONG SAID EAST LINE S00°18'00"W, 699.50 FEET TO THE POINT OF BEGINNING.

THUS DESCRIBED LOT BEING 75.145 ACRES MORE OR LESS.

PROPERTY OWNER'S CERTIFICATE:

I (We), the undersigned, being the sole owner(s) in fee of the hereon described property do hereby subdivide the same as shown on the attached map. I (We) understand this property is located in the Weld County zone district "A" and is also intended to provide areas for the conduct of other uses by right, accessory uses, and uses by special review.

David Lees
DAVID LEES

The foregoing certification was acknowledged before me this 9th day of December, A.D., 1997.

my commission expires MY COMMISSION EXPIRES: December 20, 1997
Notary Public *Jane M. [Signature]*
Witness my Hand and Seal

DEPARTMENT OF PLANNING SERVICES
ADMINISTRATIVE REVIEW CERTIFICATE:

This plat is accepted and approved for filing.

Chuck Anlife
Department of Planning Services Director
The foregoing certification was acknowledged before me this 15th day of December, A.D., 1997

my commission expires Nov. 21, 1995
Notary Public *Sharon Rupp*
Witness my Hand and Seal

SURVEYOR'S CERTIFICATE:

A. MICHAEL HASCALL, a Registered professional Land Surveyor in the State of Colorado do hereby certify that this Recorded Exemption plat was prepared under my personal supervision, and that this plat is an accurate representation thereof. I further certify that the survey and this plat complies with all applicable rules, regulations, and provisions of the State of Colorado, State Board of Registration of Professional Engineers and Professional Land Surveyors, Weld County.

A. Michael Hascall
A. MICHAEL HASCALL, L.S. #1500 12-9-97

HASCALL SURVEYS INC

DESIGN: [Blank]
CHECKED: [Blank]
DATE: 12/09/94
REVISED: [Blank]

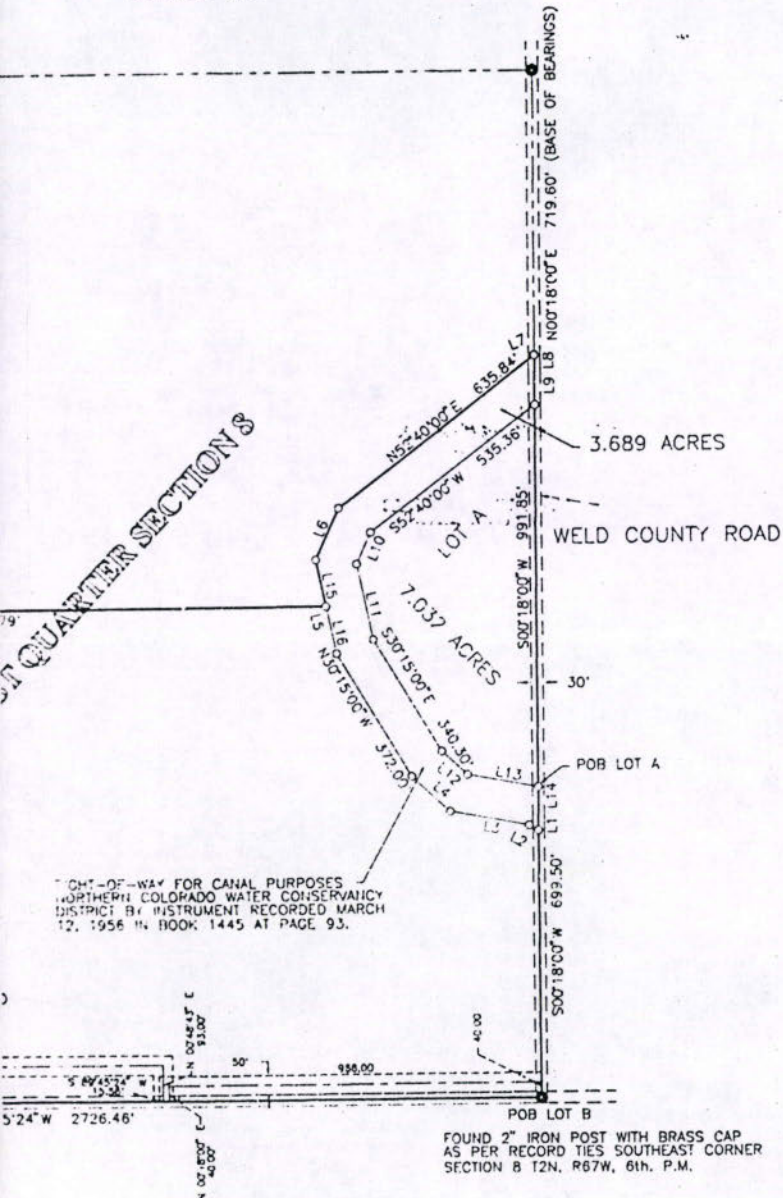
1132 NORTH MAIN ST
LONGMONT CO 80501
•• (303) 678-8324 ••

SCALE: 1" = 300'
DRAWN: DJJ
SHEET: 1 OF 1
JOB NO: D55EXEMP



VICINITY MAP

FOUND 2" IRON PIPE WITH BRASS CAP
EAST 1/4 CORNER SECTION 8 T2N, R69W,
6th. P.M.



RIGHT-OF-WAY FOR CANAL PURPOSES
NORTHERN COLORADO WATER CONSERVANCY
DISTRICT BY INSTRUMENT RECORDED MARCH
12, 1956 IN BOOK 1445 AT PAGE 93.

FOUND 2" IRON POST WITH BRASS CAP
AS PER RECORD TIES SOUTHEAST CORNER
SECTION 8 T2N, R67W, 6th. P.M.

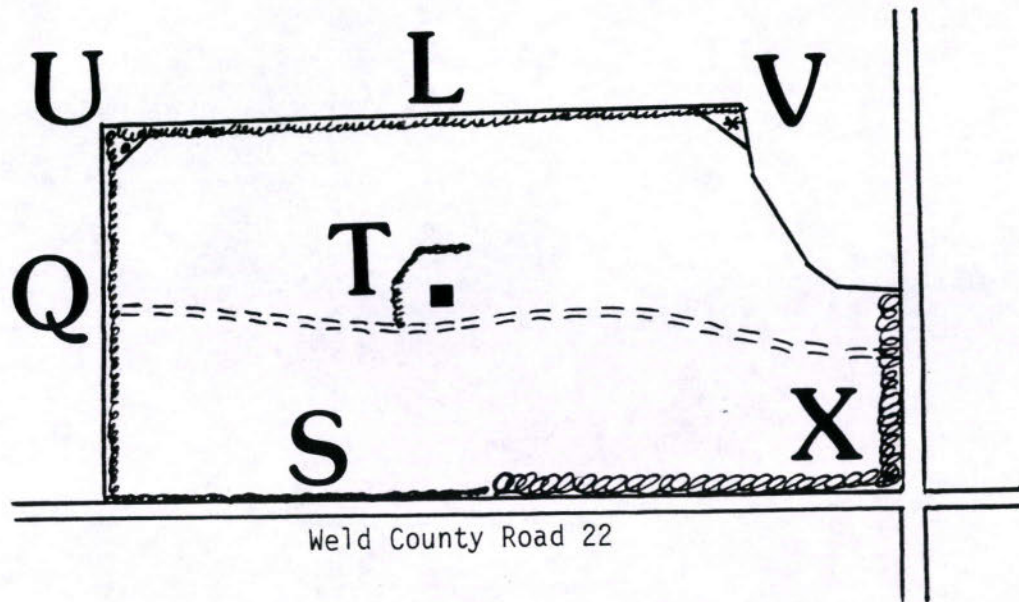
Craig Owen



660 Feet



10 Chains



- Property Line
- == Road, Improved
- === Road, Unimproved
- ~~~~ Windbreak (Planned; L, Q, S, T)
- ~~~~~ Windbreak (Existing; X)
- △ Pine Thicket (V)
- △ Shrub Thicket (U)
- House

Drawn By:

Douglas J. Stevenson

December 10, 1995

30 Oct 1998

From:
Craig Owen
7751 WCR 22
Longmont, CO 80504

To:
Farmers Insurance Group
Boulder Branch Claims Office
4820 N. 63rd St. Suite 104
Boulder, Co 80301
Attn: Billy Johnson
Ref: Claim #Y430264

Dear Ms. Johnson:

It was back in August that I received your Company's check in the amount of \$3,961.00. As you may recall, I voided the check, returned it to you, and followed up with a phone call requesting justification for the large gap between the replacement value of the damaged tree planting and the value of the settlement proposed by Farmers. After returning back from an extended business trip, I was surprised to find in my incoming mail pile yet another check from Farmers **for the same \$3,961.00 amount**. I have voided it, and returned it to you as an enclosure to this letter. Justification: the settlement amount proposed by Farmers is no more adequate to replace the lost trees in October than it was in August.

In addition to satisfying my business travel obligations, I have thoroughly reviewed the breakdown of costs provided by your landscape appraisal consultant, Mr. Stephen Day, since I received his report dated August 17th, 1998. Although Mr. Day's educational credentials are impressive, it is clear that many assumptions underlying his analysis and subsequent valuation are flawed. In conjunction with information, advice, and assistance from professionals at the Colorado State Forest Service (CSFS) and from the Colorado Department of Agriculture-Plant Industry Division (CDA-DPI), I have assembled a more complete, accurate, and defensible assessment of the replacement costs of the lost planting than that reflected in Mr. Day's walk-through. The remainder of this letter provides the details of that assessment in a format that permits "apples-to-apples" comparison with the analysis and valuation data contained in Mr. Day's report.

Planting Parameter	Day Report	Owen Response	Incremental Cost Estimate
Size/Unit Cost of Replacement Trees	#2/??		\$ /tree
Cost per tree for planting & 1 st watering			
Cost per cubic foot of wood chip mulch	??		
Initial volume of wood chip mulch/tree	1 ft ³		
Frequency of post-plant near-trunk weeding and mulch replacement	never		
Frequency of post-plant watering	never		
Frequency of post-plant soil cultivation	never		
Frequency of grasshopper control	never		
Frequency of pocket gopher/rabbit control	never		
Frequency of whole planting weed control (mowing and/or cultivation)	never		
Anticipated survival rate of replacement seedlings	100%		
Risk of loss due to late frost or other force majeure	claimant		
Pruning of large cottonwood tree	\$192		
Compensation for lost green ash and honey locust "volunteers"	none		
Risk of land erosion of east 30 acres of Vona loamy sand due to burning away of covering vegetation	claimant		
Excavation of concrete irrigation ditch filled by eroding sand from burned area	claimant		
Research and publishing fees required for claimant to formulate response letter	claimant		
Preparation, arbitration, legal, and expert witness fees (if necessary) to arrive at a good faith settlement	Not addressed		

Table 1-Planting Replacement Data Complete With Cost Estimates – Day Report Contrast Format

Table 1 contains a wealth of information. Perhaps the most striking conclusions can be drawn by first scanning the "Planting Parameter" column followed by the "Day Report" column down as far as the "Anticipated Survival Rate..." row entry. It is hard to believe that an experienced professional such as Mr. Day would project a 100% survival rate using a "plant and forget" approach in Vona Loamy Sand in the semi-arid climate of Colorado. Yet, this is exactly the set of underlying assumptions presented in the Day Report. As a knowledgeable and experienced Colorado tree farmer, I must formally, through distribution of this letter, inform Mr. Day, Ms. Johnson, and Farmers Insurance Group, that the position you have taken is not realistic. As attested by the fact that the CSFS will not, for reasons of high and continuing tree mortality, cost-share a single project that does not incorporate fabric mulch and staples and reasonable follow-on care, a plant and forget approach in this case would realistically result in a survival rate considerably lower than 100%. Furthermore, depending on year-to-year climate conditions, pocket gopher populations, grasshopper populations, and other factors, would the survival rate 5 years after planting (the CSFS' established and published benchmark for a planting to be considered established) be ½ of Day's 100% assumption? 1/3? How about ¼?

To illustrate my point, look at empirical survival rate data of 43% I experienced in this very planting in the context of the ongoing care and maintenance provided. In April and May of 1995, the subject planting was installed. 250 seedlings of each of three species of shrubs totaling 750 trees was

installed. Each seedling was surrounded by a heaping bushel, approximately 8 ft², of wood chip mulch, as recommended by CSFS professionals. In the first year, each tree was provided 1 gallon of water weekly through the growing season (25 watering cycles) and once again monthly through the winter (6 additional watering cycles) for a total of 31 watering cycles annually. In the second year, the volume of water was increased to two gallons per tree per cycle, 4 in the 3rd year, and 5 in this 4th year (1998). Spring care was comprised of cultivating and remulching at an average rate of 2 ft³ per tree. Also in the spring of the first and second years, the years of greatest mortality, dead trees in the interior were replaced with survivors from the west end of the planting to preserve the integrity of the planting. In addition to weekly watering, summer care included hand weeding of the mulch basins around the trunks, 3 mowing cycles for weed and rabbit control, two applications of rodenticide for pocket gopher control, and 2 or 3 applications of insecticide for grasshopper control depending on the severity of the infestation. Fall care consisted of a low till cultivation cycle to sever the roots of moisture robbing perennial plants like volunteer wheat, rye, and cheat. Did these operations represent a lot of time and expense? Yes they did. Did they result in 100% survival rates? Not even close. Assuming Mr. Day's post-loss inventory numbers are correct, the Caragana, lilac, and honeysuckle survival rates associated with these practices through this period were $142/250=59\%$, $97/250=39\%$, and $87/250=35\%$, respectively. This equates to an average survival rate of 43%. The bottom line is that the risks associated with a plant and forget approach are unpredictable, certainly under 43%, let alone 100% will not be accepted by this claimant in this case.

Under the careful guidance of professionals at the CSFS, I have undertaken planting projects totaling in excess of 4,000 trees at the 7751 WCR 22 site. Through the process, I have learned firsthand of the benefits of fabric mulch and staple approaches to establishing tree plantings. The benefits include higher survival rates (approaching 90%) increased growth rates, less frequent watering requirements, and dramatically reduced pest control and soil maintenance requirements. If desired by Farmers Insurance Group, I would accept the risks of a plant and forget settlement based on an 85% survival rate of 7 gallon replacement shrubs with 8 watering cycles annually and 3 pesticide applications annually for grasshopper control. Cost estimates for such an alternative strategy are based on other planting projects previously undertaken at the 7751 WCR 22 site are contained in Appendix 1.

The second most glaring flaw contained in the Day report can be seen by scanning across the row entry titled "Size/Unit Cost of Replacement Trees".



**DAY
&
ASSOCIATES**

Tree and Landscape Consultants

Billy Johnson, Claims Representative
Farmers Insurance Company
4820 N. 63rd St., Suite 104
Boulder, CO 80301

August 17, 1998

Via fax @ 303.530.7740 and regular mail

RE: Fire damage shrub appraisal—Claim # Y430264

Dear Ms. Johnson:

At your request, on August 14, 1998 I evaluated and appraised the fire damage casualty loss to shrubs at the farm property of Craig Owen, 7751 Weld County Road 22, east of Longmont, Colorado. It is my understanding that the fire occurred on or about July 3, 1998. I walked the perimeter of the burn area and determined that the shrub loss was confined to the area described below.

The loss includes three east/west rows of assorted shrubs at the southeast corner of his property, near the intersection of county roads 22 and 17. The shrubs appear to function as a developing privacy and/or windbreak screen. In addition, there was minor fire damage to one cottonwood tree at the northeast corner of his property.

There were likely several small, volunteer trees (e.g. honey locust, green ash) burned by the fire; however, these have no appraised monetary value and were not included in this report. Photographs attached show the nature of the burn and the affected shrubs and tree.

In my opinion, a fair and reasonable monetary value of the casualty loss and associated cost to cure and/or repair in this case is: **three thousand, nine hundred and sixty-one dollars (\$3,961.00).**

If you have any questions or request clarification of any part of this report, please give me a call.

Sincerely,

Steven J. Day, ASCA, CPPP
Registered Consulting Arborist
Certified Professional Plant Pathologist
Tree and Landscape Appraiser

enc Certification of Appraisal
Biography

FARMERS INSURANCE
GROUP

AUG 18 1998

BOULDER BCO Y4

Technical, Research, Appraisal, Forensic, and Educational Services

BIOGRAPHY

Steven J. Day

Education

1977: Bachelor of Science -- Plant Pathology and Botany, Colorado State University, Fort Collins, CO.

1980: Master of Science -- Plant Pathology and Botany, University of Maine, Orono, ME. Emphasis on vascular wilt diseases and decay of forest and landscape amenity trees.

1995: Graduate (#0007) -- Arboricultural Consulting Academy, American Society of Consulting Arborists, Rockville, MD.

1983-present: Adjunct Instructor of Basic Arboriculture course, Urban Horticulture program, Front Range Community College, Westminster, CO.

History of academic and educational engagements available upon request.

Experience

1976-'78: Held labor and supervisory positions with Colorado State and U.S. Forest Services' projects for the evaluation and control of insects and diseases of forest and landscape amenity trees.

1980-'87: Held positions in field labor, supervisory, sales, managerial, and consulting roles with private sector tree and landscape management firms.

1980-present: Presented numerous workshops, seminars, and classes to private sector and government professionals, trade associations, and the general public. List of presentations available upon request.

1987-present: Principal of independent tree and landscape consulting firm offering technical, diagnostic, research, appraisal, educational, forensic, dispute-resolution, and support services to business, government, academic and research institutions, professional and trade associations, and the general public. Fields of specialty include plant pathology, arboriculture, forest and landscape amenity trees / shrubs, and related topics.

History of professional employment available upon request.

History of major projects and engagements available upon request.

Professional Affiliations—Active

1. American Society of Consulting Arborists (ASCA) -- Registered Member #285
 - Immediate Past President, Board of Directors
 - President -- 1997; have held board and committee positions since 1990.
2. International Society of Arboriculture (ISA) and Rocky Mountain Chapter (RMC)
 - President (RMC) -- 1987; have held ISA and RMC board and committee positions since 1980.
 - Received Award of Merit (RMC) -- 1985
3. American Phytopathological Society (APS)
 - Member, Private Practice Committee
4. American College of Forensic Examiners (ACFE) -- Registered Member #2238
5. Associated Landscape Contractors of Colorado (ALCC)
6. Member, Technical Staff, TELTECH, Inc. -- Expert ID #903294347767

History of professional affiliations available upon request.

Select Qualifications and Certifications

1. 1988-present: Vocational Credential as Instructor for Post Secondary / Adult level program areas of Agriculture / Horticulture, from the Colorado State Board for Community Colleges and Occupational Education.
2. 1996-present: Certified Professional Plant Pathologist of the American Registry of Certified Professionals in Agronomy, Crops and Soils (ARCPACS) -- #16527. ARCPACS is a federation of certifying boards in agriculture, biology, earth and environmental sciences.
3. 1996-present: Board Certified Forensic Examiner (BCFE); Diplomate of the American Board of Forensic Examiners (DABFE); and Fellow of the American College of Forensic Examiners (FACFE) -- #2238.
4. 1988-present: Expert witness qualification.

History of dispute-resolution consulting and expert witnessing available upon request.

Publications

Have authored and coauthored research papers, articles and columns in scientific, trade and special interest publications. List available upon request.

BOULDER BOOY

AUG 18

CERTIFICATION OF APPRAISAL

I, **Steven J. Day**, certify to the best of my knowledge and belief:

That the statements of fact contained in this report are true and correct.

That I have made an evaluation / appraisal of the plant(s) that is the subject of this report, and that no one provided significant professional assistance to the person signing this report unless so indicated.

That the report analyses, opinions and conclusions are limited only to the attached Assumptions and Limiting Conditions, and represent my personal unbiased analyses, opinions and conclusions.

That I have no present or prospective interest in the plant(s) or property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.

That my analyses, opinions and conclusions were developed, and this report has been prepared, in general accordance with guidelines described in the "Guide for Plant Appraisal" (8th Edition), authored by the Council of Tree and Landscape Appraisers, Rockville, MD; and commonly accepted standards of professional practice.

That my compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of stipulated results, or the occurrence of a subsequent event.

That, as a result of my evaluation / appraisal of the plant(s) as described in the attached report, and all of the data pertinent thereto, the monetary value of the plant(s) and any reasonable associated costs to cure and/or repair, as of August 14, 1998, is determined to be:

\$3,961.00



Signature of Consultant / Appraiser

August 17, 1998

Date

STATE OF COLORADO
AUG 18 1998
BOULDER COUNTY

COSTS TO REPLANT AND RESTORE THE SUBJECT PLANTS AND PLANTING SITE:

1.	Pygmy Siberian peashrub (<i>Caragana pygmaea</i>)—#2 size. 142 shrubs.	\$2,130.00
2.	Common purple lilac (<i>Syringa vulgaris</i>)—#2 size. 97 shrubs.	\$800.00
3.	Honeysuckle (<i>Lonicera</i> sp.)—#2 size. 87 shrubs.	\$718.00
4.	Prune dead branches from subject cottonwood tree.	\$192.00
5.	Replace 326 cubic feet of wood chip mulch around base of subject shrubs.	\$121.00
GRAND TOTAL OF THIS CLAIM:		\$3,961.00

FARMERS INSURANCE
GROUP

AUG 18 1

BOULDER COO Y

DAY & ASSOCIATES - Tree and Landscape Consultants

PHOTO MOUNTING FORM

PHOTO 1



CLIENT
Farmers Insurance Co.

CONTACT
Billy Johnson

CLAIM NO.
Y430264

DATE TAKEN
8/14/98

TIME
A.M.
P.M.

PROPERTY ADDRESS
7751 WCR 22--Weld County, CO

RE: Craig Owen

DESCRIPTION - PHOTO 1
Partial area of burn, showing Owen residence in background. View looking west.

DESCRIPTION - PHOTO 2
Burn area near southeast quadrant of subject property, showing three rows of burned shrubs. View looking west.

PHOTO 2



PHOTO 1 -TOP
PHOTO 2 -BOTTOM

OWEN & ASSOCIATES
GROUP
13 1998
JULDER BCO Y4

DAY & ASSOCIATES - Tree and Landscape Consultants

PHOTO MOUNTING FORM

PHOTO 1



CLIENT Farmers Insurance Co.
 CONTACT Billy Johnson
 CLAIM NO. Y430264
 DATE TAKEN 8/14/98 TIME A.M. P.M.
 PROPERTY ADDRESS 7751 WCR 22--Weld County, CO
 RE: Craig Owen

DESCRIPTION - PHOTO 1
 Typical condition of
 burned shrub (lilac). Note wood
 chip at base of plant.

DESCRIPTION - PHOTO 2
 Typical condition of
 burned shrub (pea shrub). Note wood
 chip at base of plant.

PHOTO 2



PHOTO 1 -TOP
 PHOTO 2 -BOTTOM

FARMERS INSURANCE
 GROUP
 AUG 13 1998
 BOULDER 800 Y4

DAY & ASSOCIATES - Tree and Landscape Consultants

PHOTO MOUNTING FORM

PHOTO 1



CLIENT Farmers Insurance Co.
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 DATE TAKEN 8/14/98 TIME A.M. P.M.
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DESCRIPTION - PHOTO 1
 Burn injury to cotton-wood tree at northeast corner of subject property. View is toward northwest.

DESCRIPTION - PHOTO 2
 Burn injury to cotton-wood tree at northeast corner of subject property. View is toward west.

PHOTO 2



PHOTO 1 - TOP
PHOTO 2 - BOTTOM

FARMERS INSURANCE GROUP
 AUG 18 1998
 BOULDER BC00Y4

DAY & ASSOCIATES - Tree and Landscape Consultants

PHOTO MOUNTING FORM

PHOTO 1



CLIENT Farmers Insurance Co.
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CLAIM NO. Y430264
DATE TAKEN 8/14/98 TIME A.M. P.M.
PROPERTY ADDRESS 7751 WCR 22--Weld County, CO
RE: Craig Owen

DESCRIPTION - PHOTO 1
Typical condition of
burned shrub (honeysuckle). Note
wood chip mulch at base of plant.

DESCRIPTION - PHOTO 2
Pile of wood chip
mulch (unburned) at east end of
shrub rows.

PHOTO 2



PHOTO 1 - TOP
PHOTO 2 - BOTTOM