CITY OF LANGLEY STREET TREE PROGRAM

Design Guidelines for the Use and Care of Street Trees
October, 1999

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DESIGN GUIDELINES FOR THE USE AND CARE OF STREET TREES

Executive Summary:

The benefits of trees in the urban environment has been well documented. They moderate energy consumption, reduce air pollution, control storm water and provide wildlife habitat. Other benefits include improved physical and mental well being, enhanced aesthetics and increased property values. When viewing Langley from the surrounding hills, one can see and appreciate the contribution trees make to the liveability of the City. While it is apparent that the trees dominate the landscape of the City, only a small fraction of the existing urban forest is actually located along the City boulevards and streets.

The "Street Tree Program" has been developed as an initiative of the Development Services, Parks and Engineering departments to establish a guiding policy for street tree management within the City. It forms the basis for a co-ordinated and comprehensive standard for the care and maintenance of existing and new trees located on public lands along municipal roadways. The document is designed as a technical paper that defines a strategy for the selection of new trees and care of existing specimens that is based on sound, state of the art, arboricultural intelligence. Information is also provided on evaluating sites, selecting and obtaining trees, proper installation techniques, cultural requirements, standards and specifications.

The management program began with an inventory and analysis of existing conditions. At present there is a total of 1,711 trees positioned along the various road right of ways within the City. Of these, 79% are of Deciduous variety and 21% are Coniferous. The inventory has highlighted a number of problems and concerns. Fully 25% (421) of the existing street trees are from the Cherry family (Prunus) of which the majority are in poor condition and will require replacement in the near future. Tree planting in the City is currently restricted to replacement of dead trees with a limited number of new trees added to the inventory in recent years. The actual number of trees along the street of the City is estimated to have decreased over the past few years. The downtown area is dominated by Green Ash (Fraxinus), a selection that has proven to be generally unsatisfactory and maintenance intensive. As a basis for comparison, the City of New Westminster, a community of similar size, currently plants over 400 new trees per year adding to the existing inventory of over 9,000 specimens along their streets.

Staff is now moving to address the various problems and shortcomings of the current situation by planning for an increase in the number of new trees planted along with scheduled replacement of problem trees found throughout the City. Development by law in the City now makes the provision of street trees mandatory for all new development. In order to ensure success, all new street tree planting will be required to comply with the high standards set forth in this document.

The planting of a tree is an act of faith, an initiative that will make our community a better place to live. Trees will improve our environment not just for us, but for our children and our grandchildren. Healthy well kept trees are an expression and a reflection of the pride and spirit of the community in which we live.

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IMPLEMENTING THE STREET TREE PROGRAM

The City of Langley manages all trees located on public lands. Tree management is the responsibility of the City of Langley Parks Department. The establishment of the Street Tree Program is intended as the first step in establishing a program to preserve and enhance the street tree resource in the City. The street tree program is an organised body of information, plans and specifications intended to create and maintain a treed community.

A six step approach is suggested for the implementation of the program.

1. Identify Resources and Issues.
   - The preliminary street tree inventory was completed in the summer of 1999. This data base reflects the current inventory of City street trees. Regular updates and review are necessary to keep inventory information up to date. The inventory is intended to change with all additions and or deletions documented on a regular basis.

2. Establish Goals, Objectives and Overall Tree Policy.
   - A strategy formulated to address the immediate shortcoming of the existing street tree inventory will be developed to provide a vision for the future. Establishing clear goals and objectives enables the public, staff, developers and council to support the direction of the program.

3. Designate Staff
   - As with any program, the street tree program cannot succeed without good management. Knowledgeable personnel should be assigned responsibility related to the necessary tasks. A single individual on staff should be assigned to co ordinate all street tree related issues. Issues related to street trees should flow through this individual and be distributed to others in the City as required to ensure a co-ordinated approach to the issue response. Staff should be provided opportunity to enhance their education and skills related to tree management practices whenever opportunities arise. Employees should be encouraged to join the International Society of Arboriculture and to become certified as an Arborist.

4. Prepare an Action Plan
   - The action plan will outline the actual implementation of the general policies outlined in the Street Tree Program. The action plan will address the specific actions intended within the framework of the overall street tree program over a set period of time (annually). The action plan will vary based on the immediate needs of the community, specific changes to the infrastructure, availability of funding resources and development activity.

5. Prepare a Budget
   - A tree program cannot be operated without cost. Allocation of an annual budget will allow for the action plan to meet with the stated goals and objectives.

6. Review the Program
   - A street tree program should be reviewed periodically to assess its success in achieving stated goals. The following issues should be reviewed:
     * The relevance of the program.
     * The efficiency and cost effectiveness of the program.
     * Changes in tree issues, public perceptions.
     * Staffing and training requirements
   - Changes to the program should be made as required. A complete program review should be conducted every five years.

STREET TREE STRATEGY

Selecting and maintaining the ideal tree for any particular site involves science, art and a measure of luck. Trees have the potential to live a long life and certainly can out live our ability to predict with absolute certainty the long term use of the adjacent site. Good judgement at the time of tree selection is critical to the long term success of the planting.

Trees must be well suited to the specific site conditions if they are to thrive (The right tree in the right place). Prior to selection of the tree type, careful analysis of the site conditions must be completed. Any factors that may affect the tree to be planted or that may be affected by the tree must be considered.

PEOPLE

The attitudes and activities of the people who live in the immediate area are an important part of the site analysis. Without the support and assistance of the local residents, trees will be more vulnerable to the many potential problems related to the establishment of healthy trees. The trees selected must be seen as a benefit to the local residents. Education can play a large role in the changing of attitudes. If every citizen understood the value of the community trees, how they grow and what they need, much less direct action would be necessary. Much can be accomplished by creating an environment where trees are considered a valued community resource. The American model has demonstrated the value of community forestry programs. Community events, such as Arbor Day (date varies) can help increase public awareness of the role of trees and their benefits to the community. The school district should be encouraged to develop a tree education program.

LEGAL AND HISTORIC STATUS

Utility, transportation and other easements will govern where trees can and cannot be installed along many streets. Determination of land jurisdiction must be assured prior to any final decision regarding the installation of trees along municipal roadways.

SELECT QUALITY TREES

Only desirable long - lived tree species that can maintain a good appearance under the varied stress factors of the street-side location should be planted. They must be able to endure un natural growing conditions such as confined space, compacted soil, exposure to carbon dioxide and saline pollution. Specified trees must be free of chronic pest problems. Street trees should be of specimen quality, meaning that the tree exhibits all the best qualities of its type. Specimen quality trees display no structural faults or physical damage.

The form of the tree must be compatible with their intended function and comply with the design intent. Always consider a trees mature form in relation to it's setting. (See recommended street tree lists for estimated mature size)

SELECT TREES APPROPRIATE TO RIGHT OF WAY USES

Trees selected for planting must be compatible with the primary uses of the road right of way; vehicular and pedestrian travel and a utility corridor. Street trees must be free of undesirable characteristics in relationship to these primary uses. Trees with growth characteristics such as low dense growth inhibiting vision or travel and invasive or mounding root systems should not be planted. It must be determined if trees are to emphasise, hide or merely fit in with the site.

VARY THE TREE SELECTION

Care should be taken to vary the selection of tree throughout the community so that there is a sound ecological structure. It is desirable to diversify species and cultivars by planting those types of trees that are not already overly abundant. Disease control and damage control due to loss of a species can be minimized with an appropriate distribution of species. Resistant species and cultivars should be selected for more difficult sites. Tree diversity can be achieved even if some streets contain only one tree type. In some situations, single cultivars may be desirable for purposes of landscape design and managerial efficiency.

Suggested species diversity guideline;

# of Trees on Street	Maximum % of Single Species
10 - 19	50%
20 - 39	33%
40 - 50	25%
60 or more	15%

SPECIES SELECTION CRITERIA

There is a very large number of tree species that are considered to be appropriate for street tree use in the City of Langley. The selection of the right tree can be made easier by elimination of trees with unsuitable traits for any particular location.

Size	(at maturity)
Form	(many trees will change form over time)
Cold hardiness	(City of Langley Street trees should be minimum Zone 6.)
Root structure	(volume soil available / soil quality)
Drought resistance	(irrigation)
Disease / insect problems	(past / present / projected problems, ease of maintenance)
Colour	(design intent)
Texture	(shade / filtered light / blocking of views or signs)
Maintenance	(low maintenance preferred / pruning schedule)
Availability	(area of search / replacement trees)

The preferred species or cultivars may be difficult to locate from local nurseries without adequate lead time or during a tender of bidding process. The pre approved selection of alternative choices may facilitate procurement of acceptable trees. Pre purchase of trees in large quantities from local suppliers can assure supply and achieve a scale of economy not otherwise available.

SITE CRITERIA

For trees to thrive in the community and provide the benefits expected of them, they must be well suited to the site conditions. A thoughtful analysis of each planting site is essential before selecting species and cultivars that have the needed adaptive and appearance traits. This analysis requires that anything important that may affect the trees to be planted or that may be affected by the trees be considered prior to proceeding. In examining a site, always look up, look down, look all around. Consider how the trees will react to the site conditions, especially adverse effects. Take the time to picture how the trees will appear at their potential mature size.

The selection of tree species and their distribution in the community helps define the character of a street or neighbourhood. The importance of street trees to define, reinforce, or create a sense of space cannot be over emphasised. Trees have characteristics typical to their species that can be used as design elements. Their scale, shape, colours, textures and forms become design tools in developing a recognisable identity. By varying the tree selection one can reinforce design elements within the existing streetscape or use trees to amend our experience of the streetscape. Generally strong contrasts within street tree groupings should be avoided. Repetition and supple changes in form, colour, size and texture are desirable. Exceptions to this principle occur at major intersections or at any other are where alertness and viewer attention is desired. By establishing a relationship between the use of an area and the scale and characteristics of the street trees an identifiable order is achieved.

Site criteria to be evaluated in determination of tree planting locations are;

a) Location and visibility of site
b) Probability for long term tree survival (conflict with existing or proposed services)
c) Possibility of private tree installation in immediate area
d) Overall benefit to the community

Only after the site of the proposed planting has been determined do you select the correct tree for the site. The species selection must always conform to the site.

General street tree design guidelines for the four common zoning categories is as follow:

A. **Commercial Areas**

There are two general types of commercial areas, those with ample space in front of building setbacks, and the traditional commercial streets of the downtown core with minimal setback distances and therefore limited space for trees. Tree characteristics for each of these type follow:

1. Commercial areas with ample building setback distances
   - Trees with open branching and light foliage to provide filtered views through the trees.
   - Clean trees, ones that drop only leaves, no fruits or nuts, these are more desirable for maintenance on hard surfaces.
   - Medium to large scale trees with upright branching to have a significant impact on the street and yet avoid conflicts with large vehicles.
   - Broad shade trees adjacent to parking areas to provide shade.
   - Trees adaptable to pruning for high standard height.

2. Commercial areas with minimal building setback distances.
   - Medium scale trees with tight columnar branching varieties to avoid conflict with building facade.
   - Clean trees, ones that drop only leaves, no fruits or nuts these are more desirable for maintenance on hard surfaces.
   - Small trees that can achieve (high branching) standard.
   - Larger, wide spreading trees for feature or contrast trees where space will allow.
   - Strong branch structure. Adaptability to merchants desire for tree lights

B. **Industrial Areas**

The established industrial areas within the City vary greatly. Many of the industrial properties provide attractive, well maintained landscape buffers in front of their properties while others view the boulevard as an extension of their work or parking area. All future industrial development or re development must recognise the need to provide adequate space for the installation of street trees. Trees should be selected to conform to the specific requirements of the site and the intend site use. Up keep of the boulevards in front of industrial sites must be monitored and regulated to ensure the trees installed in areas will remain protected and in good condition.

C. **High density residential areas**

Design considerations are divided into two categories; those with overhead wires and those without.
All future multi family or high density residential development in the city will be required to supply and install street trees to the standards set forth in the street tree program. tree selection by landscape consultant must be reviewed and approved by the City prior to installation.

1. With overhead wires.
   - Trees with small mature height are required.
   - V-shape trees are desirable, branches will arch to form a canopy over streets and sidewalks while staying out of power lines.
   - Plant medium to large upright street trees on private property beside hydro lines.

2. Without over head wires.
   - Medium scale ornamental flowering trees; Flowering trees can be used at entry drives to signal arrival.
   - Medium to large scale trees provide visual control between buildings.
   - Spreading shade trees to provide shade where space allows.

D. **Single Family Residential Areas**

The majority of Langley's single family neighbourhoods have not been developed with formal street trees. It is recognized that the existing informal urban forest provided by the residents provides for a diverse and attractive selection of trees. Formal tree planting (i.e. a tree in front of each home) is not considered to be necessary in many situations. There remain, however, many streets that could be improved with the provision of trees.

- Small to medium scale trees with a variety of blooming seasons, fruiting effects and interesting forms.
- Ornamental flowering trees are appropriate but should be provided only in small quantities and with alternate species to inhibit insect infestations.
- Trees with nuts and fruits to attract birds and squirrels.

In addition to the above guidelines street tree varieties selected within single family neighbourhoods can be based on a theme i.e. one species at intersections throughout a neighbourhood. Large scale trees should be designated for primary connector streets and intersections to scale down the traffic and noise. Medium sized trees should be specified for secondary streets and small scale trees for small cul-de-sacs.

DESIRABLE STREET TREE SPECIES:

The noted desirable street tree species were selected because they are of a size, form and habit appropriate to the specific street use. Recommended species have been selected for their adaptability to the street side condition, resistance to pests, lack of chronic diseases and proven performance in our region. Selected trees are generally available in local nurseries, however, some varieties may require a full search of the Pacific Northwest region. If other trees are found to meet these criteria they may be added to the lists.
New tree species should be tested in small quantities before making a long term, large scale commitment to the variety. Within the varied genus of tree types, numerous cultivars are available that have been developed specific to the conditions of the Pacific Northwest. Over time, experimentation and ongoing monitoring, will allow for the preferred species list to be refined to adjust to the specific conditions found in the City of Langley. Individual planting of new trees types in city parks or on open city owned property will help in the evaluation of tree compatibility under local conditions.

The list of desirable street tree species are listed in 4 categories according to their mature size:

A. **Small Trees:** Trees with a mature height of less than 9 m (30')
B. **Medium Trees:** Trees with a mature height of 9 m - 18 m (30' – 60')
C. **Large Trees:** Trees with a mature height greater than 18 m (60')
D. **Columnar Trees** Trees with a narrow habit, mature width of less than 9m (30')

The schedules provide limited information on each tree species selection: botanical and common names; mature height and spread; a notation of significant features of the tree, i.e. colour, seasonal display, flowering, fruiting and/or, characteristics of growth habit. Further information is available from a variety of sources.

Tree shapes and growth habit change as trees age. Young trees are often more upright, while older specimens of the same cultivar may develop a wide spreading form. The "Mature" size of any tree will vary by climate, site characteristics and longevity. City trees rarely obtain the size of their counterparts in native forest stands. In typical urban situations, few tree live to more than 30 years old and those that do, grow slowly beyond that age. The size ratings indicated in the appended recommended tree tables reflect our estimate of the size and form of a healthy 30 year old tree grown under average city conditions.

SMALL SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer buergeranum	Trident Maple	6m	6m	Round form, can be pruned to a standard height. Glossy green foliage. Red / Orange fall colour
Acer davidii	Snake Bark Maple	7m	8m	Oval form, smooth green and white striped bark. Yellow to red fall colour
Acer ginnala	Amur Maple	6m	6m	Low branched or multi stem tree. medium green, fine textured foliage. Brilliant orange red fall colou
Acer griseum	Paperbark Maple	7.5m	6m	Upright, spreading form. Trifoliate, dark green leaves, Red fall colour. Exfoliating bark,
Acer palmatum	Japanese Maple	varies 4 - 9m	varies 4 - 9m	Numerous varieties in all forms and colours. Upright form best for use as street trees. Can be specified with standard height.
Acer platanoides 'Globosum'	Globe Maple	4.5m	5.5m	Formal, round headed tree (lollipop) Medium green foliage, yellow fall colour
Acer truncatum x platanoides 'Warrenred'	Pacific Sunset Maple	9m	7.5	Upright spreading, round crown. Dark green glossy foliage. Yellow - orange to bright red fall colour.
Betula pendula 'Youngii'	Contorted Weeping Birch	4.5m	6m	Asymmetrical branching structure, twisted trunk, feature tree, dark green foliage. Yellow fall colour
Cercis canadensis	Eastern Redbud	7.5m	9m	Multi stem or low branched, spreading form with flat top. Medium green foliage. Early spring flower Yellow fall colour.
Cornus kousa	Japanese Dogwood	6m	6m	Vase shaped to rounded. White flowers, strawberry like fruit, yellow to red fall colour.
Crataegus x lavallei	Lavalle Hawthorn	8.5m	6m	Irregular vase shape. small dark green leaves. White flower clusters, orange fruit, Bronze fall colour
Halesia carolina	Carolina Silverbell	9m	6m	Broadly pyramidal, Light green foliage, Hanging white flower clusters. Yellow fall colour
Koelreuteria paniculata	Goldenrain Tree	9m	9m	Slightly rounded crown, flattens with age, long clusters of yellow flowers
Magnolia kobus	Kobus Magnolia	9m	6m	Pyramidal when young, rounded at maturity, large white flowers
Prunus blireiana	Flowering plum	7.5m	6m	Broad spreading crown, Reddish purple leaves, no fruit, pink flowers,

Small trees cont.

Prunus x yedoensis 'Akebono	Akebono cherry	7.5m	7.5m	Upright spreading form. Bright glossy leaves, Pink flowers, Yellow fall colour
Prunus virginiana 'Shubert'	Shubert Choke Cherry	7m	6.5m	Oval rounded crown, dense foliage, green at first, turning reddish purple, white flowers
Styrax japonicus	Japanese Snowbell	7.5m	7.5m	Round crown with medium green fine textured foliage, bell shaped white flowers
Styrax obassia	Fragrant Snowbell	7.5m	4.5m	Pyramidal to upright form. Large deep green foliage. White flower clusters
Syringa reticulata	Ivory Silk	7.5m	6m	Ovate crown. Dark green foliage. Late spring, white flower clusters

MEDIUM SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer campestre	Hedge Maple	10m	9m	Dense round form, Dark green glossy leaves, Yellow fall colour
Acer platanoides 'Cleveland'	Cleveland Maple	12m	9m	Upright, oval dense crown. Medium green foliage. Yellow fall colour
Acer platanoides 'Deborah'	Deborah Maple	14m	12m	Broadly oval to rounded crown. Reddish purple in spring, becoming dark green in summer. Bronze fall colour.
Acer pseudoplatanus 'Atropurpureum'	Spaethii Sycamore Maple	12m	9m	Oval with upright branching, Leaves, deep green above, purple underside
Acer rubrum 'Red Sunset'	Red Sunset Maple	14m	10m	Upright, rounded pyramidal tree. Dark green foliage. Red fall colour
Acer rubrum 'Morgan'	Morgan Maple	15m	13m	Broadly oval form. Medium green foliage. Orange - Red fall colour.
Aesculus x carnea 'Briotii'	Ruby Red Horsechestnut	13m	12m	Round crown. Dense green foliage, Red flowers. Yellow fall colour
Betula jacquemontii	Jacquemontii Birch	12m	9m	Upright oval form. Dark green glossy foliage. Bright white bark. Resistant to Birch borer. Yellow fall colour
Carpinus betulus	European Hornbeam	12m	12m	Densely pyramidal becoming broad. Dark foliage. Yellow fall colour
Catalpa bigonioides	Indian Bean Tree	10m	12m	Broad rounded crown. Large heart shaped leaves. Long white flowers turning to long persistent seed pods.
Cercidiphylum japonicum	Katsura Tree	13m	13m	Upright pyramidal when young, round with age, fine textured bluish green foliage. Yellow - orange fall colour
Cladestris lutea	American Yellowood	12m	12m	Broad rounded head. Yellow green foliage in spring turning green in summer. Brilliant yellow fall colour.
Cornus nuttallii 'Eddies White Wonder'	Flowering Dogwood	10m	6m	Upright pyramidal form. Dark green foliage. Large white flowers. Dark red fall colour.
Fraxinus americana 'Autumn Purple'	Autumn Purple Ash	14m	13m	Rounded crown. Green with rough texture. Reddish purple fall colour.
Fraxinus oxycarpa 'Raywood'	Raywood Ash	11m	10m	

Medium Scale Trees Continued

Halsia monticola	Mountain Silverbell	13m	8m	Conical to rounded crown, acceding branches. Medium Green foliage. White flowers. Yellow fall colour.
Gledisia tricanthos inermis 'Skyline'	Skyline Honeylocust	15m	11m	Broadly pyramidal. Fine textured, medium green. Golden fall colour
Gledisia tricanthos inermis 'Shademaster'	Shademaster Honeylocust	18m	13m	Upright compact vase shape. Thornless. Fine textured medium green foliage. Yellow fall colour.
Gledisia tricanthos inermis 'Sunburst'	Sunburst Locust	15m	11m	Irregular crown. Bright yellow new growth, pale green. Brown fall colour
Liquidambar styraciflua 'Worpleston'	Worpleston Sweet Gum	14m	9m	Broadly pyramidal. Green foliage. Corked bark. Orange to purple fall colour
Nyssa sylvatica	Black Tupelo	13m	10m	Pyramidal when young, spreading and irregular with age. Dark green foliage. Copper red fall colour. Tough tree
Paulownia tomentosa	Empress Tree	15m	12m	Dense round head, similar to Catalpa. Large green leaves. High pollution tolerance. Exfoliating bark with age.
Pyrus calleryana 'Aristocrat'	Aristocrat Callery Pear	15m	9m	Strong pyramidal habit. Dark green glossy leaves. White flowers. Red fall colour. Do not plant near Juniper to avoid pear rust trellis.
Pyrus calleryana 'Redspire'	Redspire Pear	13m	10m	Symmetrical pyramidal form. Medium green glossy leaves. White flowers. Yellow to red fall colour.
Robinia x ambigua 'Idahoensis'	Pink Idaho Locust	10m	8m	Upright ascending branches. Medium green foliage. Rose pink flowers.
Sorbus aucuparia 'Cardinal Royal'	European Mountain Ash	10m	6m	Symmetrical oval habit. Dark green foliage above, silver below. Bright red fruit clusters. Rust fall colour.
Tilia americana 'Redmond'	Redmond Linden	10m	8m	Dense upright pyramidal form. Medium green foliage. Deep shade. Yellow fall colour. Aphids can be a problem.
Tilia euchlora	Crimean Linden	13m	9m	Pyramidal with upright branching. Glossy dark green leaves. Yellow - orange fall colour. Resistant to aphids.

LARGE SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer platanoides 'Crimson King'	Crimson King Maple	18m	15m	Oval - round crown. Red / purple foliage
Acer platanoides 'Emerald Queen'	Emerald Queen Maple	20m	18m	Uniform oval crown. Dark green glossy leaves. Golden yellow fall colour.
Acer saccharum 'Legacy'	Legacy Sugar Maple	20m	15m	Upright broadly oval form. Dark green foliage. Orange fall colour.
Aesculus hippocastanum	Common Horse Chestnut	30m	15m	Round crown, fast growing. Dense shade from large medium green leaves. White flowers. Yellow fall colour.
Ailanthus altissima	Tree of Heaven	20m	12m	Broad spreading crown. Large compound green leaves. Yellow green flowers. Very tolerant of pollution.
Betula paperifera	Paper Birch / Canoe Birch	18m	10m	Upright oval form. Dark green leaves. Yellow fall colour. white bark when old
Davidia involucrata	Dove or Handkerchief Tree	25m	18m	Broad pyramidal with vivid green foliage. Long white flower bracts. No fall colour. Attractive specimen tree.
Fagus sylvatica	European Beech	25m	15m	Dense pyramidal when young, round with age. Glossy green foliage. Red / brown fall colour.
Fagus sylvatica purpurea	Copper Beech	25m	18m	Very large upright tree. Copper / purple leaves. Dense shade
Fagus sylvatica pendula	Weeping Beech	18m	15m	Weeping form. Shinny dark green foliage. No two trees the same.
Gingko biloba	Maidenhair Tree	25m	12m	Broadly conical deciduous conifer. Broad pale green leaves. Yellow fall colour. Specify male form only.
Liriodendron tulipifera	Tulip tree	24m	12m	Upright oval form. Medium green. Fast growing. Yellow fall colour.
Nothofagus antarctica	Antarctic Beech	30m	25m	Large round habit with age. Small glossy foliage on twisted open branches.
Platanus x acerfolia 'Bloodgood'	London Plane Tree	20m	18m	Large fast growing tree with exfoliating bark. Pyramidal when young, spreading with age. Dark maple like leaves. Yellow fall colour
Quercus coccinea	Scarlet Oak	16m	12m	Pyramidal tree at youth, oval with age. Dark green glossy leaves. Scarlet fall colour.

Large Scale Trees Continued.

Quercus palustris	Pin Oak	16m	12m	Strong pyramidal growth with drooping lower branches. Dark green foliage. orange / red fall colour.
Quercus rubra	Red Oak	18m	16m	Broad round crown. Dark green leaves. Dark red / orange fall colour.
Robinia pseudoacacia 'Frisia	Golden Leaf Black Locust	20m	18m	Upright tree. Spines. Compound bright yellow foliage. Drought tolerant.
Robinia pseudoacacia 'Purple Robe'	Purple Robe locust	25m	20m	Open outward acceding branches. New growth has purple tint, turning medium green. Purple flower bracts. Yellow fall colour.
Ulmus 'Homestead'	Homestead Elm	18m	15m	Upright arching, narrow. Dark green foliage. Yellow fall colour. Resistant to Dutch elm disease.
Zelkova serrata	Japanese Zelkova	17m	14m	Vase shape, similar to American elm. Dark green foliage. Brown fall colour.

COLUMNAR TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer platanoides 'Crimson Sentry'	Crimson Sentry Maple	13m	6m	Columnar shaped crown. Deep purple foliage.
Acer rubrum 'Armstrong'	Armstrong Maple	15m	4m	Upright columnar habit. Light green foliage. Yellow to orange fall colour.
Acer rubrum 'Bowhall'	Bowhall Maple	15m	5m	Upright columnar habit, more formal than Armstrong. Medium green foliage. Orange fall colour.
Acer rubrum 'Karpick'	Karpick Maple	13m	6m	Narrow oval tree, dense foliage. Yellow / orange fall colour.
Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	12m	8m	Very dense compact conical habit. Formal appearance. Dark green foliage. Yellow fall colour.
Fagus sylvatica 'Dawyck'	Fastigiate Dawyck Beech	20m	3m	Tall narrow upright columnar form. Dark green foliage.
Fagus sylvatica 'Dawyck Purple'	Purple Dawyck Beech	10m	2m	Tall narrow, slightly open, Purple foliage.
Fagus sylvatica 'Dawyck Gold'	Gold Leaf Beech	10m	2m	Narrow columnar habit with new golden foliage.
Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	20m	4.5m	Narrow pyramidal. Green foliage. Yellow fall colour. Specify male only.
Liriodendron 'Fastigiatum'	Fastigiate Tulip tree	20m	6m	Narrow with upright lateral branching. Medium green foliage. Yellow fall colour.
Magnolia 'Galaxy'	Galaxy Magnolia	15m	4m	Pyramidal to oval. Green foliage. Giant reddish purple flowers.
Prunus x hillieri 'Spire'	Spire Cherry	15m	2.5m	Upright columnar to narrowly vase shaped. Dark green foliage. Orange fall colour.
Prunus serrulata 'Amanogawa'	Amanogawa Cherry	6m	2m	Fastigiate upright branching. Pink flowers. Bronze fall colour.
Quercus robur 'Fastigiata'	Fastigate English Oak	18m	8m	Tight upright branching. Dark green foliage. Persistent brown leaves in fall.

SPACING BETWEEN TREES

Standard spacing between street trees should range between 6 m (20') to 18 m (60'). This range of spacing is appropriate for long range health and well being of the types of trees generally recommended for use as street trees. Over planting is aesthetically tempting when trees are young but usually generate problems once the trees have matured. The problems associated with over planting; ease of disease transfer; deformed or stunted growth; excessive shade; excessive leaf clean-up; and blockage of views of signs, addresses, show windows increase dramatically with tight spacing.

As a general rule, smaller trees or trees with an upright columnar form should be planted closer together while large spreading varieties should be planted further apart. Street trees should be placed so they may develop freely without crowding each other, adjacent buildings, or utility lines. Locations should be planned to maximize the number of trees within the spacing constraints. It is not necessary for trees to be regimented to a strict spacing format repeated down the street. Minimum offset requirements described in this document should be followed, but leniency in spacing recommendations according the size of the trees should be applied as required to fit appropriate trees into the streetscape.

SPACING CHART

The following chart sets out spacing recommendations according to the mature size of the trees. Sizes of trees species can be referenced from the street tree list.

Tree Type	Spacing
Large Spreading Trees	15 m - 18m (50'- 60') on centre
Medium Sized Trees	8 - 13 m (26-45') on centre
Small Trees	4.5 - 9 m (15-30') on centre

Columnar trees can be spaced to conform to local conditions and natural mature tree width.

LOCATION OF TREES WITHIN THE PUBLIC RIGHT OF WAY

Street trees are considered a requirement for new development within the City. The location and spacing of trees must be integrated and planned for along with all other infrastructure elements. Co-ordination of proposed tree location must be reviewed for potential conflict with sidewalks, underground utilities, light standards, signs, safety and the predicted pedestrian/vehicular use.
There are four general location categories with potential for street trees in the roadside right of way.

1) In a landscape boulevard (grass boulevard between the back of curb and separated sidewalk)
   - No tree planting is recommended where the distance between a curb and a detached sidewalk is less than 1.2m.
   - Trees should be centred in the planting strip between the walk and the curb.
   - No street trees are to be installed closer than 75cm from the back of the curb.
2) Behind the sidewalk (sidewalk immediate to back of curb, grass strip in public R.O.W.)
   - Street trees should be planted no closer than .9m back of the sidewalk. Tree must be located on the public R.O.W.
3) Within a median or cul-du-sac.
   - Spacing will be dependant upon the size and width of the planting area available.
4) Within designated tree pits or channels with root development under hard surface.
   - Trees installed in sidewalks should have a minimum of 4.8 sq. metres of cut-out area.
   - Trees in sidewalks should not be installed closer than 1.6m from a building.
   - Trees shall be set back a uniform distance from the back of curb with the minimum standard of 75cm.
   - Trees known to develop shall, invasive root structure should be avoided.
   - Opportunity to allow for access to adequate volumes of growing medium to support long term tree development should be explored wherever possible (i.e. structural soil / break out channels, larger tree pits etc.).

Where circumstances will not allow for tree installation on public property, placement of street trees just into the adjacent private property can be considered.

The City of Langley will plan for combining planting of trees with underground utilities where feasible. Many utilities and services share the roadside right of way. Water, gas, street light ducting, fire hydrants, telephone, cable and hydro ducts as well as property connections for water, storm sewer, sanitary sewer, gas and hydro are undergrounded in dedicated or shared corridors.

MINIMUM TREE PLANTING CLEARANCES

Trees can represent safety concerns in transportation corridors. Clearance is required for pedestrians, vehicles and utility lines (above and below ground).Tree should not impair visibility at intersections and traffic signs, or interfere with lighting at night. These factors will influence the choice of trees, as well as initial planting size, placement and maintenance.

Tree locations must be governed by the location of functional encumbrances sharing the right of way. Separation restrictions are listed as minimum tree location offsets. All measures are from the centre of the tree trunk to the edge of the object.

Overhead Utilities

BC Hydro has defined three planting zones in connection with overhead power lines.

Low Zone; The area directly under the power lines and extends 5 meters on either side of the hydro pole. Trees planted in this area should have a maximum height of 6 meters or less.

Medium Zone; The area that extends from the edge of the low zone to a distance of 20 meters from the hydro pole. Trees in this zone cause the majority of tree related power outages. The maximum tree height in the medium zone should be 12 meters.

Tall Zone; The area more than 20 meters from the power lines. There are no planting restrictions applied to this area.

Transmission Lines

No trees are allowed to be planted under high voltage lines

- Branches from neighbouring trees should retain clearance of 4.5 m from distribution lines
- Branches from neighbouring trees should retain clearance of 7.6 m from transmission lines

Poles

Minimum offset to:

-	Lamp standards	6m	(20')
-	Steel/wood hydro poles	3m	(10')
-	Regulatory Street Signage (oncoming traffic)	6m	(20')
-	Parking meters	0.9m	(3')

Underground Utilities

Minimum Offset to:

-	Service connections/manholes and valves	1.2m	(4')
-	Catch Basins	2.0m	(6.5')
-	Sewer Services	1.5m	(5')
-	Utility Mains	0.9m	(3')
	Hydrants	1.5m	(5')

ROAD ELEMENTS

Minimum offset to:

-	Curb face	0.75m	(2.5')
-	Sidewalk	0.6m	(2.0')
-	Driveway Crossings	1.8m	(6.0')
-	Corner 8.0m	(26.0')	
-	Buildings - (may vary according to species)	3.0m	(10.0')
-	Bus Stops - clearance is from curb face	2.0m	(6.5')

DO NOT PLANT TREES

- Under high voltage transmission lines
- Under existing canopies or overhead signs
- In loading zones, taxi pick up zones, police/emergency access zones.

STANDARDS AND SPECIFICATIONS

1. General Specifications
   - 1.1 The following specifications are to serve as a standard for the planting and maintenance of all public street tree within the City of Langley. The standards shall apply whether work is performed by City forces or by individual contractors. All exceptions must be approved in advance by the City of Langley Parks department.
   - 1.2 Permission must be obtained from the City before any person plants, removes or otherwise undertakes any activity that may affect the health and welfare of a tree located on city property. No person shall engage in the planting, cutting, trimming, pruning, spraying or otherwise treating trees located on City property without first obtaining permission from the City. Electrical utility companies shall notify the City before any trees are trimmed or pruned and all such work must be completed following accepted arboricultural standards.
   - 1.3 Authorized work on City trees neither expresses or implies the right to violate any law of the land while in the process of performing such work.
   - 1.4 All tree work shall be completed in a manner as to cause the least possible interference or disruption to others.
   - 1.5 Any injury to persons or damage to any improvement while working on City trees shall be promptly report to the City.
   - 1.6 Whenever service lines of any type or other improvements, public or private, may be affect by proposed tree work, all affected persons or authorities must be contact before beginning work.
   - 1.7 Adequate barricades and warning devices shall be in place and flag persons shall be stationed as necessary for the safety of all vehicles and persons.

2. General Standards
   - 2.1 Street trees are defined as any tree located on public right of way between the curb or edge of road and the property line along the sides of streets or in medians of all streets, avenues or ways within the City boundaries.
   - 2.2 Street trees are the responsibility of the City Parks Department.
   - 2.3 Public projects, i.e. parks, street, median, plazas and public buildings shall provide for street trees as part of the development process. The landscape plan for such projects shall be reviewed and approved by the City Parks Department and shall adhere to these standards.
   - 2.4 Private projects shall provided for street tree planting as part of the development process. Street trees shall be located on the public right of way and adhere to the design objectives and spacing and location guidelines of this document. Species selection will be taken from the recommend species list. All tree planting on the municipal right of way shall be approved by the City Parks Department.
   - 2.5 All plants, planting, workmanship and materials shall meet or exceed the guidelines set forth in the BC Landscape Standard (latest edition) unless superseded by this document or directed by the City.
   - 2.6 Street trees shall provided by ball and burlap, tree spade or container grown methods. Bare root are not allowed without written permission from the City. All trees shall meet or exceed the requirements of the Canadian Standards for Nursery Stock (latest edition). Trees shall be of standard quality, true to name and type and representative of their species or variety.

2.7 All street trees shall be provided at the following minimum size;

Shade trees	6cm calliper
Ornamental trees	5cm calliper
Coniferous trees	3.0 metres height

2.8 No single species shall comprise more than 15% of the total city tree inventory.

2.9 Trees shall have normal, well developed branch structure and vigorous root systems. They shall be vigorous plants free from defects, decay, sun scald, abrasions of the bark, insects and all forms of infestations or objectionable disfigurements.

2.10 All trees installed are subject to rejection if they fail to comply with the standards referenced in this document.

3. Tree Planting Methods and Techniques.

3.1 Obtain approval of tree species and planting location from City of Langley Parks Department by means of submitting a complete tree selection form (page 28) for each project application. Verify the location of all underground services before proceeding.

3.2 The area surrounding the planting site shall be prepared and cultivated to the depth of the root ball (+/- 60cm). Pits shall be circular with sloping sides. All pits shall be a minimum of twice the diameter of the root ball. Larger pits may be required in areas of poor quality, compacted or poorly drained soils. Scarify edges of the pit prior to installation of tree and backfill material. Refer to Tree Planting Details, appended to this document for further information.

3.3 If planting site is in an area of existing grass, remove sod and set aside for re use.

3.4 The City shall determine if existing site soils may be used for backfill. Recommendation for amendments to the soil shall vary to meet the requirements of the BC Landscape Standard. Imported backfill must be supported with representative soil test report.

3.5 Trees shall be installed on the day they arrive at the site. Set tree in the centre of the planting pit on compacted base. Tree shall be lifted by the root ball, never by the trunk. Ensure tree is placed at the correct planting grade. Root ball shall be placed so that the finished planting grade will be similar as to the original nursery grown grade. Untie all binding material and remove or bury top half of the burlap wrap. Properly fitted wire baskets may remain in place. Over sized baskets will require adjustment as specified in the BC Landscape Standard.

3.6 Backfill soil shall be tamped to remove all air pockets. Install soil in lifts not to exceed 25cm. Finished grade is to be even with adjacent existing grades. Finished grading shall include a 10cm water dike (well) around the outside edge of the tree pit, minimum diameter, 1.2m. Restore all disturbed areas surrounding the tree pit to original condition.

3.7 Apply a 5 - 7.5cm layer of mulch around the base of the tree. Keep mulch away from the base of the tree.

3.8 Stake all trees. Use two pressure treated wooden round stakes per tree, align parallel to the roadway. Ensure stakes are firm and secure from easy movement in the soil. Do not drive the stakes through the root ball. Secure to tree with wide (5cm), flexible, soft banding material. Attached banding material at a point along the trunk no higher than necessary to secure the root ball from movement. Wire encased in hose is not permitted.

3.9 Cleanup of any soil, branches or other debris. Work area shall remain safe at all times until the cleanup is completed.

3.10 Water shall be applied to the finished planting pit in quantity sufficient to ensure the entire root ball is moist. Newly installed trees should be watered twice within 24 hours of planting. Afterwards, a thorough watering once a week is recommended unless significant rainfall occurs.

4. Maintenance

4.1 All public deciduous trees located within road allowances shall be reviewed on a rotational basis of not more than ten (10) years.

4.2 Public trees shall be managed in such a manner as to promote general health through the provision of cultural practices which may include insect and disease control, fertilization, irrigation, staking, and pruning. Trees shall be maintained in such a manner as to not endanger, interfere, or otherwise conflict with requirements of safe public use of an area.

4.3 Any public street tree that because of it's habit, growth, age, condition or disease becomes a hazard to public safety shall be maintained to correct the problem. Trees that obstruct clear views of street intersections, signs, signals or other street views that may affect safety shall be maintained to correct the problem.

4.4 Owners of trees located on private property that overhang any street or right of way within the City shall prune the branches so that such branches shall not interfere with the safe use of the street or sidewalk or obstruct the view of any street intersection.

4.5 All tree pruning shall be completed to accepted arboricultural practices and standards (ANSI - A300). No tree shall be cut back in such a manner that it's health will be affected. All tree cuts shall be made in such a manner as to favour the earliest possible covering of the wound by natural tree callus growth. Pruning cuts should be made just outside the branch collar. The use of tree climbing spurs is prohibited on City trees.

4.6 All newly installed trees shall be maintained for two years after installation to ensure survival. Application of regular water during extended periods of dry weather is critical to the success of the new tree.

4.7 Remove all trees stakes within 12 to 18 months after installation.

4.8 The City does not permit the removal or topping of healthy trees for reasons of view preservation, shade or litter complaints. Trees so damaged shall be replaced by person responsible at an equivalent size or up to a 10 cm calliper.

4.9 The maintenance standard for street trees shall be Level Three; "Medium" of the BCSLA/BCLNA Landscape Standard. Maintenance Level Three's "main objective is generally neat, moderately-groomed appearance with some tolerance for the effects of "wear and tear". Within this standard maintenance is routine and of moderate frequency and intensity, with regular monitoring to avoid serious deterioration".

Recommended frequencies of maintenance procedures are as follows:

Fertilization	- yearly
Water	- weekly (as required)
Mulch/cultivate	- yearly
Pest Control	- as required to keep trees healthy
Prune	- as required.

4.10 All pruning shall be done by, or in consultation with an Arborist certified by the International Society of Arboriculture.

4.11 Handling and application of all chemicals, including but not limited to herbicides, pesticides, fungicides and insecticides shall be done in accordance with provincial and federal regulations. Pesticide handling and application of schedule 1, 2 & 3 chemicals as defined by the pesticide requirements shall be done by applicators holding current certification under the BC Pesticide Control Act. Proper advance notification to all residents in the immediate are, including the posting of visible notices, shall be carried our prior to any spraying.

4.12 Any conditions observed that require immediate attention shall be brought to the attention of Parks staff immediately.

5. Tree Removal Criteria

5.1 It is the long term objective of the City to ensure the ongoing tree planting program will provide many more new trees than must be removed. Trees may be from City street only when one or more of the following criteria has been met.

- The tree is infected with an epidemic insect or disease where the recommended control is not applicable and the removal is the recommended practice to prevent further transmission.
- The tree poses an extreme public nuisance due to it's species, size, location or condition.
- The tree poses a severe safety hazard that cannot be corrected by pruning, transplanting or other treatments.
- The tree is interfering with the normal development and growth of a more desirable tree.
- The aesthetic value of the tree is considered to be so low or negative that the site will be enhanced by the removal of the tree.
- Work improvements required in the immediate area of the tree are so extensive that the tree will be destroyed or render it hazardous.
- Preservation of the tree during the development of the adjacent property is not considered to be cost effective. The monetary value of the tree should be established and compared to the cost of preserving the tree.

5.2 Value assessment of public trees shall be based on the "Guide for Plant Appraisal" system as prepared by the Council of Landscape and Tree Appraisers. Appraisals must be completed by a certified Arborist with specific training in the use of the method prescribed.

5.3 All tree removals shall be completed so that the remaining stumps will be at least 25cm below ground level unless exemption is allowed by the City.

5.4 Excavations resulting from tree removals must be filled with soil to a level consistent with surrounding grades. All fill material must be clean and free of debris.

6.0 Protection and Preservation

The following specifications are intended to protect City street trees from unnecessary damage;

6.1 Attachment of signs, cables, wires or other matter foreign to the natural form of the tree is prohibited.

6.2 No excavations within the natural drip line of a tree shall be allowed without the consent and approval of the City.

6.3 No foreign materials of any type that may affect the soil quality in ant manner within the drip line area of the tree is permitted.

6.4 All Landscape plans submitted to the City involving public property shall clearly show all existing trees. Any trees to be preserved or removed shall be clearly indicated on the plan. Preservation of existing trees should be given a high priority with all proposed development.

6.5 During construction periods responsible management and maintenance of adjacent street trees will be required. All trees adjacent to development sites must be protected by means of a solid and durable protection fence prior to any development activity occurring on the site. Tree protection shall remain in place and in good order throughout the development process. Operation of equipment or the storage of materials within designated tree protection areas is prohibited.

6.6 New sidewalks through areas of existing trees shall be constructed in a manner sensitive to the protection of tree roots. The following should be used as a guideline. For trees up to 10cm calliper, 2.4 sq. meters of porous area is required. For each additional 5cm of tree calliper, 10 more square feet of open space is required.

6.8 Do not change the exiting grades in the immediate area of the tree. Where an increase in grade is required the same area as noted in item 6.7 shall be provided by means of an tree well. Design of the tree well must be submitted to the City for approval prior to proceeding. Under no circumstances shall tree grades be lowered without permission of the City.

STREET TREE INVENTORY

A preliminary street tree inventory has been completed in association with this report. The inventory has been documented in a digital format (Auto cad 14). The inventory was completed between May and July 1999 and reflects, with reasonable accuracy, the current compliment of all trees located on public land along the streets of Langley.

The inventory provides tree location based on visual assessment only. No tree locations have been confirmed by actual survey and as such the inventory cannot be used as a determinant in disputes over ownership.

The completed inventory provides only preliminary information with reference to species, location, present land use and general site characteristics. As time and resources become available, it is recommended that the inventory be expanded to include greater detail in a number of areas.
A expanded inventory should include.

- Date of survey update.
- Number of street address adjacent to the tree.
- Location of tree in relation to surrounding site.
- Height, diameter, crown spread.
- Species of tree to be expanded to include identification of specific variety.
- Condition of tree and maintenance required.
- Rating of immediacy for required maintenance.
- Need to remove tree
- Location and spacing where planting is required or recommended.

The inventory must be kept current as tree maintenance, removal and planting work is done.

SEE APPENDIX # 2 FOR COMPLETE INVENTORY INFORMATION

ACTION PLAN

Implementation of the master plan for street trees will require a plan of action. Opportunities to plant exist throughout the city as documented on the Master Plan. Other opportunities may arise where energy is directed and the momentum and interest is generated on specific streets or within neighbourhoods. Any action plan will need to adapt and respond to both physical changes in the City and the dynamics in the urban forest over time. The following are general tree planting initiatives are considered to be of higher priority.

1. Replacement street trees for those damaged, diseased or destroyed.
   - as trees are removed they should be replaced.

2. Correct Street Tree Deficiencies in the Urban Centre of Langley.*
   *may require reconstruction of infrastructure to complete properly.
   - replacement of Green Ash on Fraser Highway through the commercial centre
   - 204th Park and Douglas,
   - 203rd, Fraser Hwy. to Logan; Median West of 200th

3. Address Planting Requirements for Areas of the City currently known to be in transition.
   It is prudent to plan those areas currently in transition
   - 56th Avenue (site at 199th, and at Production Way, at Douglas)
   - Langley By-Pass
   - Gateway
   - City Hall and Library Site
   - 206th Street, 207th Street

4. Deal with street tree proposals as part of isolated Development Permit Applications
   To address street tree selections as isolated development permit applications come forward.
   - Street tree selection form to be submitted with the DP application to the Planning and Development Department
     The form will identify decision factors for street tree selection and provide notice on trees planted. Sample form follows.

5. Fulfil the potential of tree plantings called for in the inventory / master plan.

STREET TREE SELECTION FORM
PROPOSED DEVELOPMENT

ADDRESS

NEIGHBORING STREET TREES:

R.O.W. CONFIGURATION , UTILITIES

PROPOSED STREET TREES

BOTANICAL NAME	COMMON NAME	HEIGHT/ SPREAD	QTY	SPACING/ PATTERN

Contact Engineering Department, City of Langley with specific date of planting: 514-2800

SOURCES

"The Right Tree Book", Seattle City Light 1988.

"Species Evaluation List" Pacific Northwest Chapter, International Society of Arboriculture, June, 1990.

"Matsqui Street Tree Program" - DMG Landscape Architects, 1993

"New Tree Planting" - International Society of Arboriculture.
"Landscaping Near Overhead Power Lines" - B.C. Hydro

B.C. Landscape Standard, 1997 edition - BCSLA/BCLNA

"Canadian Standards for Nursery Stock" - Canadian Nursery Trades Association

"American Standard for Nursery Stock" (ANSI Z60.1 1996) - American Association of Nurserymen

"Selecting Trees, A guide to the purchasing of Quality Trees as a Wise Investment." - American Forests

"Street Tree Fact Sheets" - A USDA Forest Service publication

"Municipal Tree Manual" - International Society of Arboriculture.

"Trees and Towns" - British Columbia Heritage Trust, Technical Paper Series #5

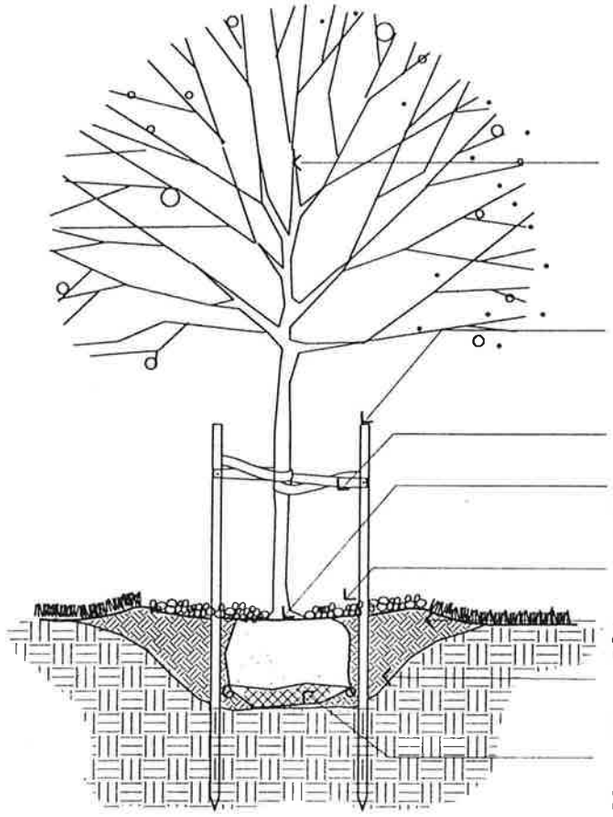
"A Technical Guide to Urban and Community Forestry" - US Department of Agriculture / Forest Service

ACKNOWLEDGEMENTS

The Street Tree Program was prepared by DMG Landscape Architects in consultation with City of Langley staff:

Gerald Minchuck	Development Services Department
Bob Hummel	Engineering Department
Len Walters	Parks Department

- DMG Landscape Architects
  - Patricia Campbell, BCSLA, Principal, Landscape Architect
  - Michael Mills, Landscape Technician, Certified Arborist



D-01 **SECTION** N.T.S

STANDARD OPEN SPACE TREE PLANTING DETAIL

NOTES:

ENSURE SURROUNDING SOILS HAVE NOT BEEN GRADED OR COMPACTED PRIOR TO PLANTING

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS

GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT. IF PROBLEM NOTED

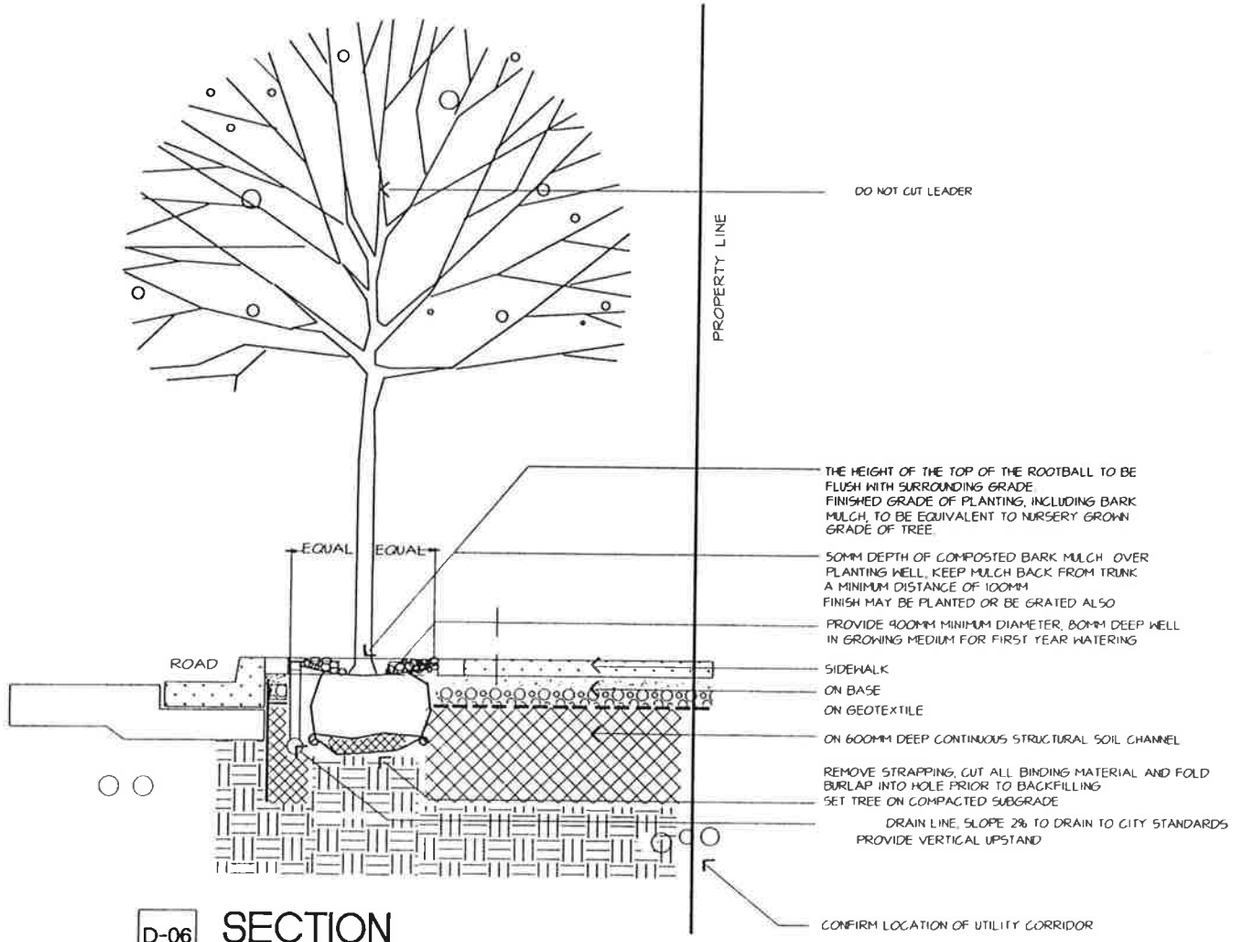
	REVISION DATE
1	

DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

DRAWING NUMBER D-01

TITLE STANDARD TREE PLANTING DETAIL OPEN SPACE

THE CITY OF LANGLEY
STREET TREE PROGRAM



D-06

SECTION

STRUCTURAL SOIL PLANTING CHANNEL UNDER PAVED SIDEWALK, STREET TREE PLANTING DETAIL

NOTES:

FOR USE IN BOULEVARD AREAS WHERE SIDEWALKS ARE SEPARATED FROM CURB

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS. GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT IF PROBLEM NOTED.

	REVISION	DATE
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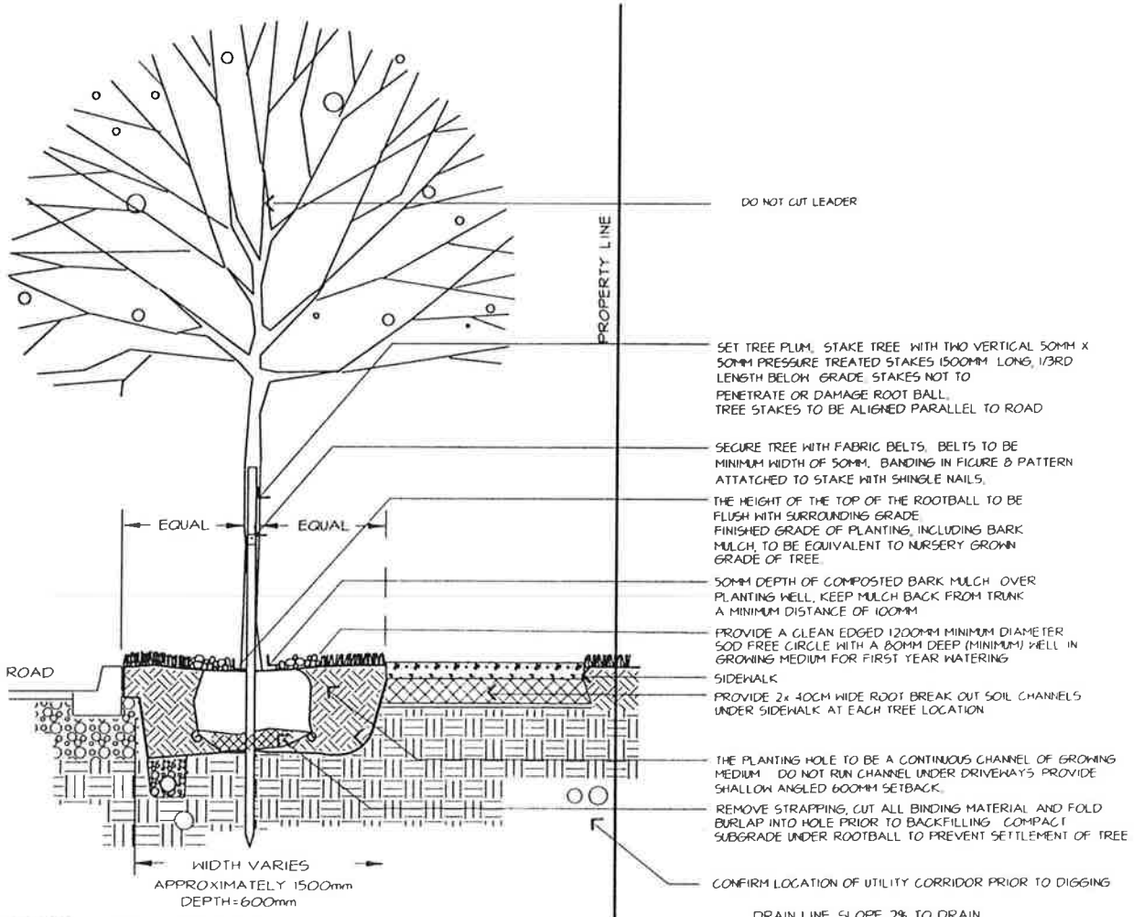
TITLE: STANDARD TREE PLANTING DETAIL
STRUCTURAL SOIL CHANNEL

THE CITY OF LANGLEY
STREET TREE PROGRAM

DATE: 10/99
DRAWN BY: PCM
DWG: 99-045

DRAWING NUMBER
D-06



D-05

SECTION N.T.S.

LINEAR PLANTING CHANNEL WITH BREAK OUT ZONES TREE PLANTING DETAIL

NOTES:

FOR USE IN BOULEVARD AREAS WHERE SIDEWALKS ARE SEPARATED FROM CURB

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS

GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT IF PROBLEM NOTED

TITLE STANDARD TREE PLANTING DETAIL
LINEAR CHANNEL W/ BREAK OUT ZONES

	REVISION DATE
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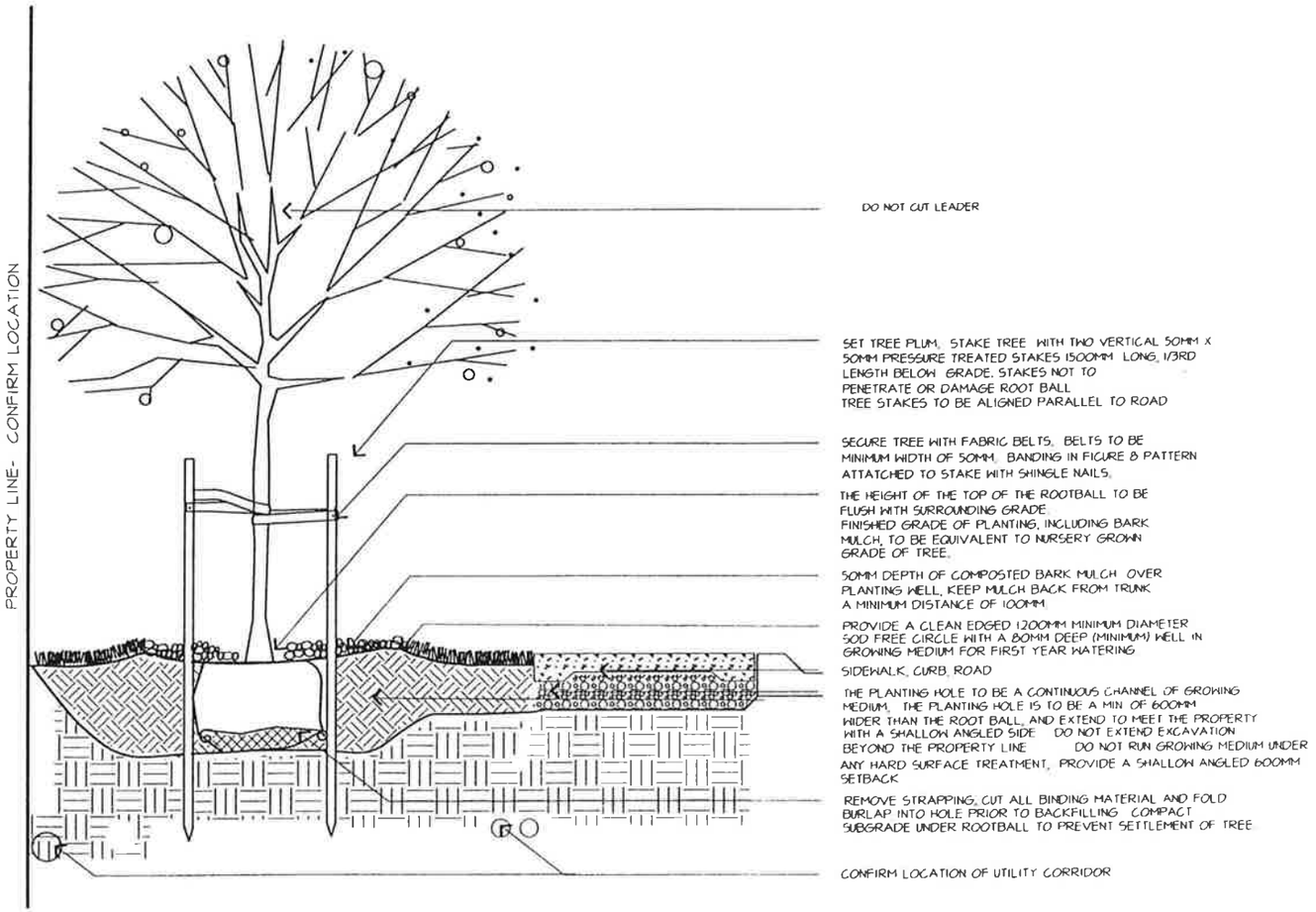
DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

DRAWING NUMBER D-05

THE CITY OF LANGLEY
STREET TREE PROGRAM



D-04

SECTION N.T.S.

LINEAR PLANTING CHANNEL TREE PLANTING DETAIL

NOTES:

FOR USE IN COMPACTED AREAS WHERE SIDEWALK IS INTEGRATED WITH CURB.

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT AMEND BACKFILL TOPSOIL WITH ORGANICS GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS.

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT IF PROBLEM NOTED.

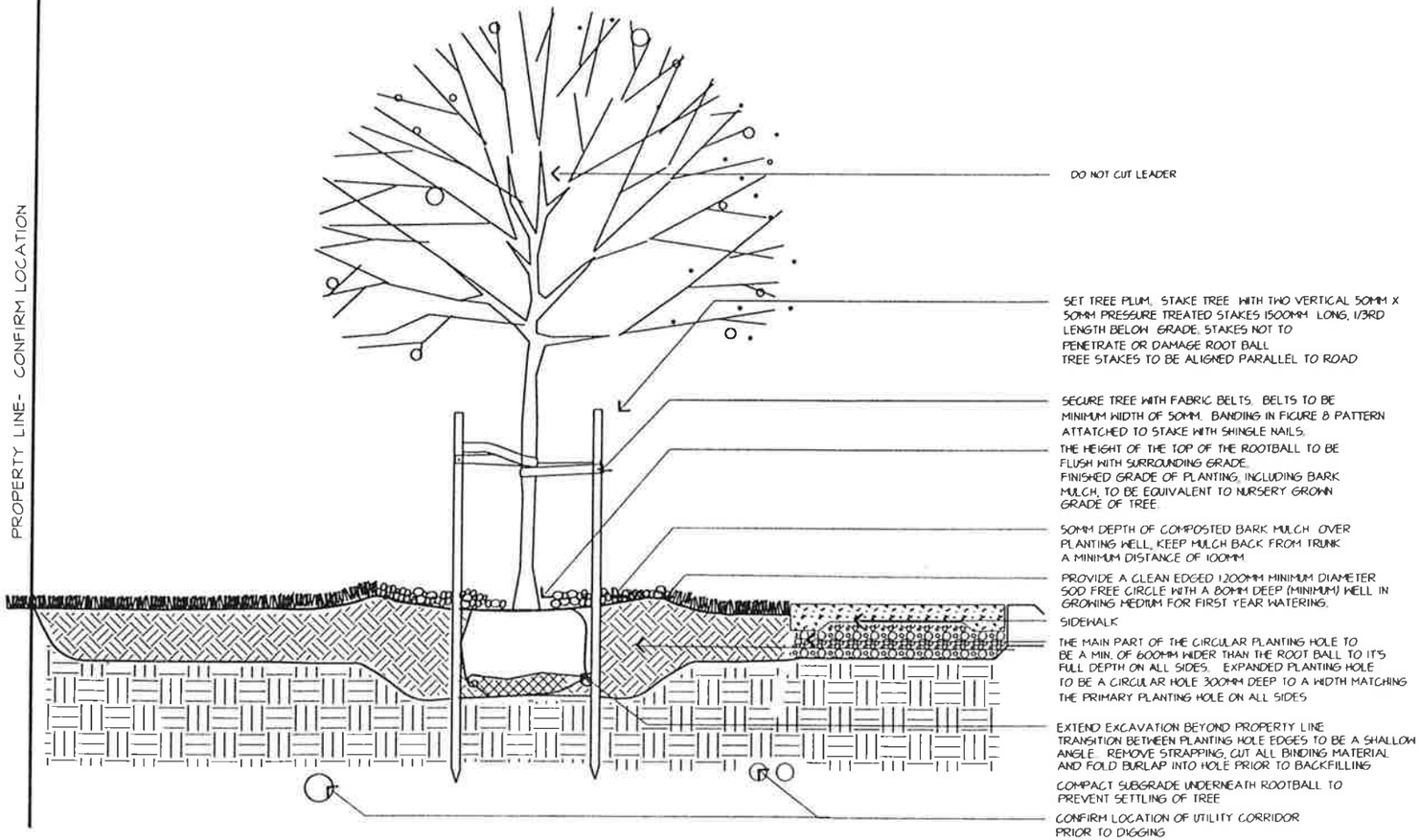
TITLE STANDARD TREE PLANTING DETAIL
LINEAR PLANTING CHANNEL

REVISION DATE

DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

DRAWING NUMBER D-04

THE CITY OF LANGLEY
STREET TREE PROGRAM



D-03

SECTION N.T.S.

STANDARD TREE PLANTING DETAIL

NOTES:

FOR USE IN OPEN SPACE AREAS WHERE SOILS HAVE BEEN COMPACTED PRIOR TO PLANTING.

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST.

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS

GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT. IF PROBLEM NOTED.

NOTE:

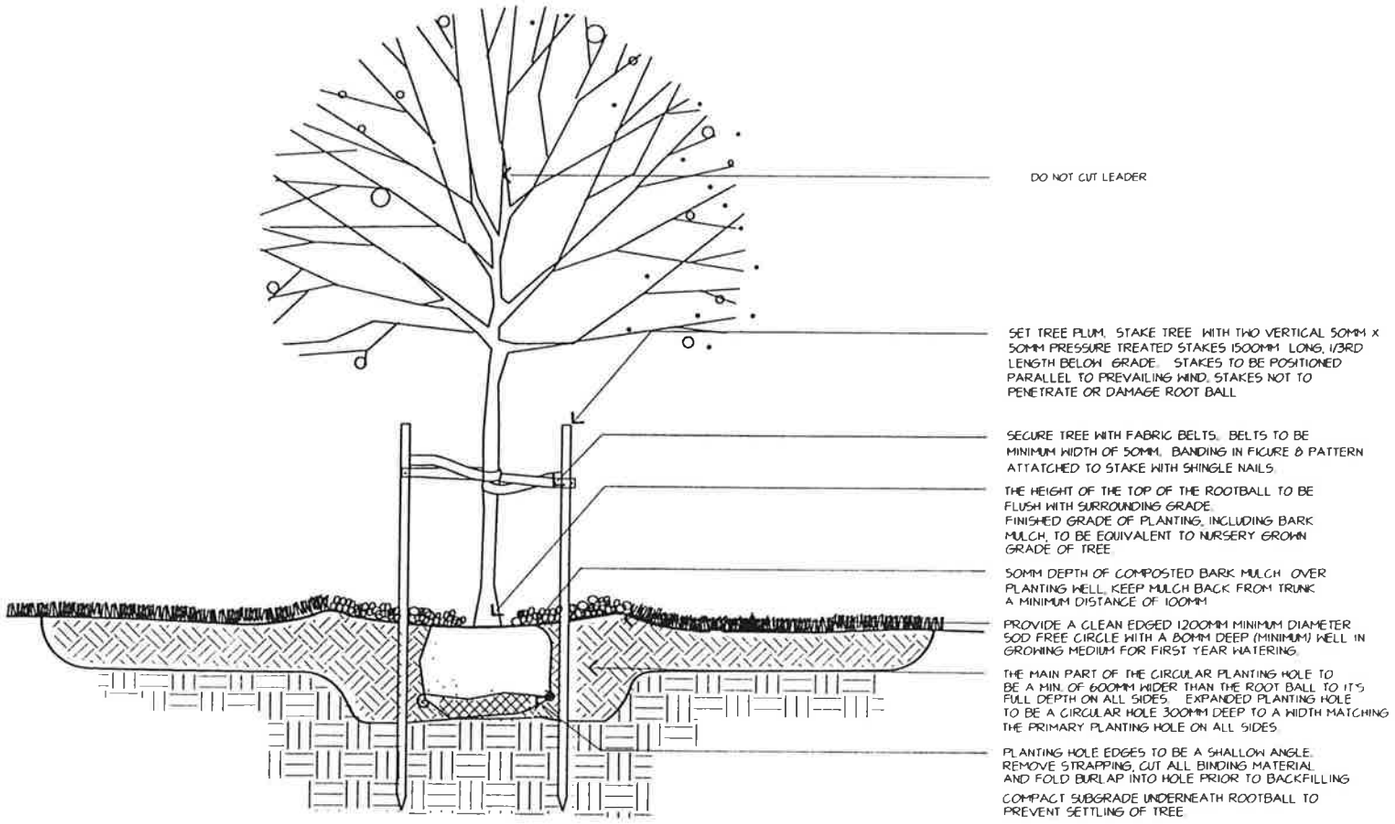
	REVISION DATE
1	

TITLE: STANDARD TREE PLANTING DETAIL
STANDARD

DATE: 10/99
DRAWN BY: PCM
DMG: 99-045

DRAWING NUMBER D-03

THE CITY OF LANGLEY
STREET TREE PROGRAM



D-02

SECTION N.T.S

COMPACTED OPEN SPACE TREE PLANTING DETAIL

NOTES:

FOR USE IN OPEN SPACE AREAS WHERE SOILS HAVE BEEN COMPACTED PRIOR TO PLANTING

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS. GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT IF PROBLEM NOTED

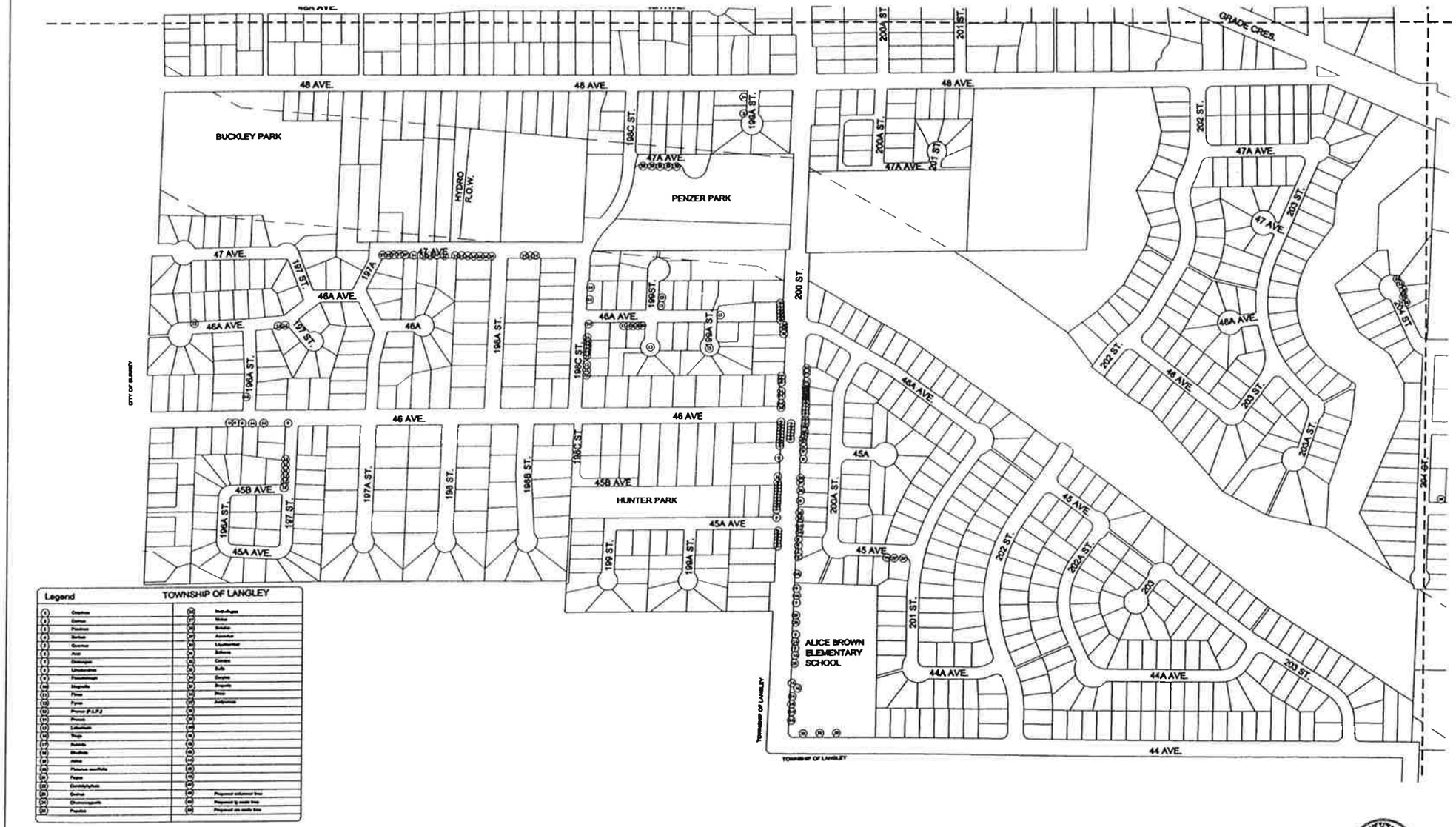
	REVISION DATE
1	

DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

DRAWING NUMBER D-02

TITLE STANDARD TREE PLANTING DETAIL COMPACTED OPEN SPACE

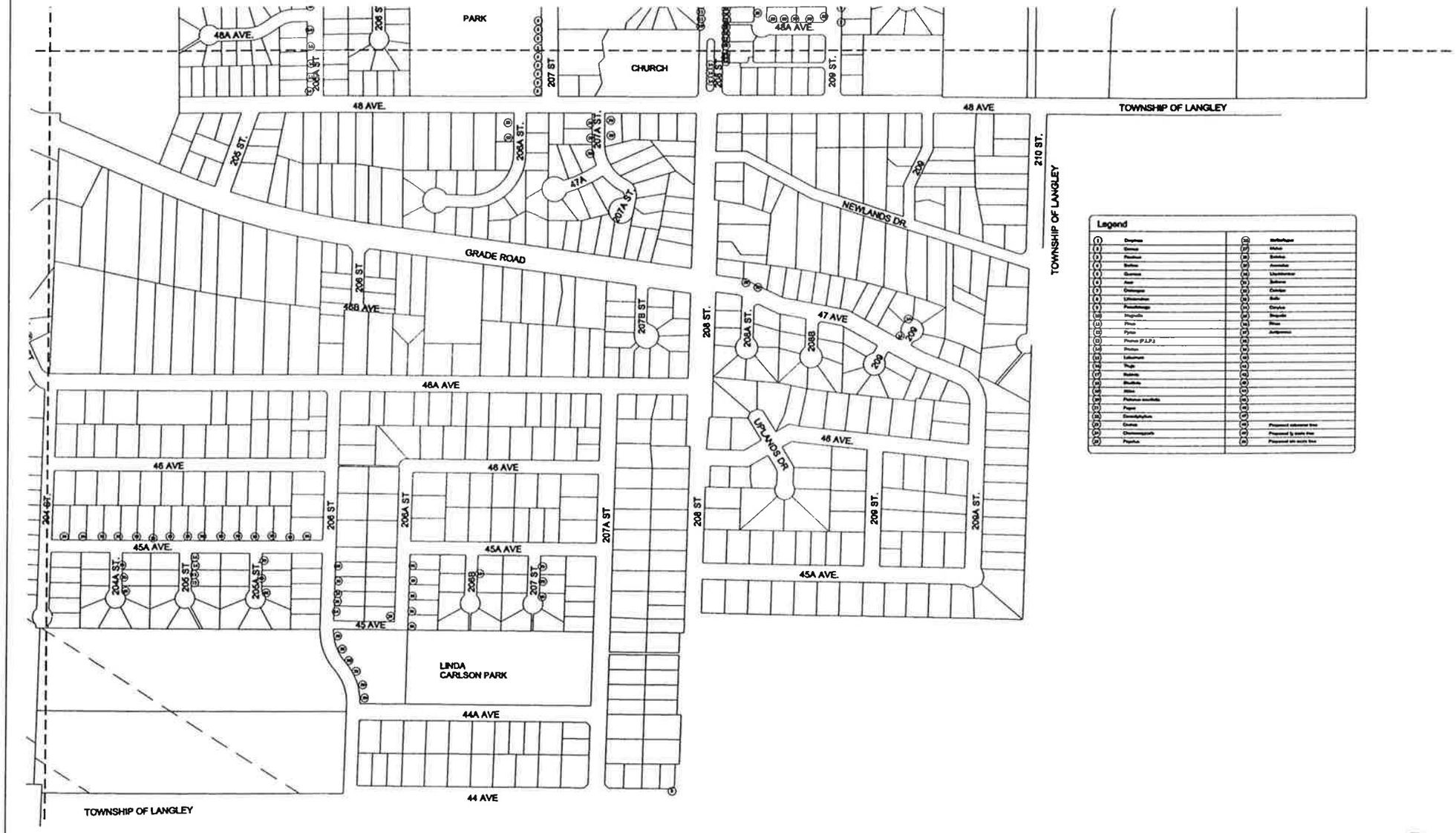
THE CITY OF LANGLEY
STREET TREE PROGRAM



CITY OF LANGLEY STREET TREE PROGRAM

MAP 1: INVENTORY OF EXISTING STREET TREES

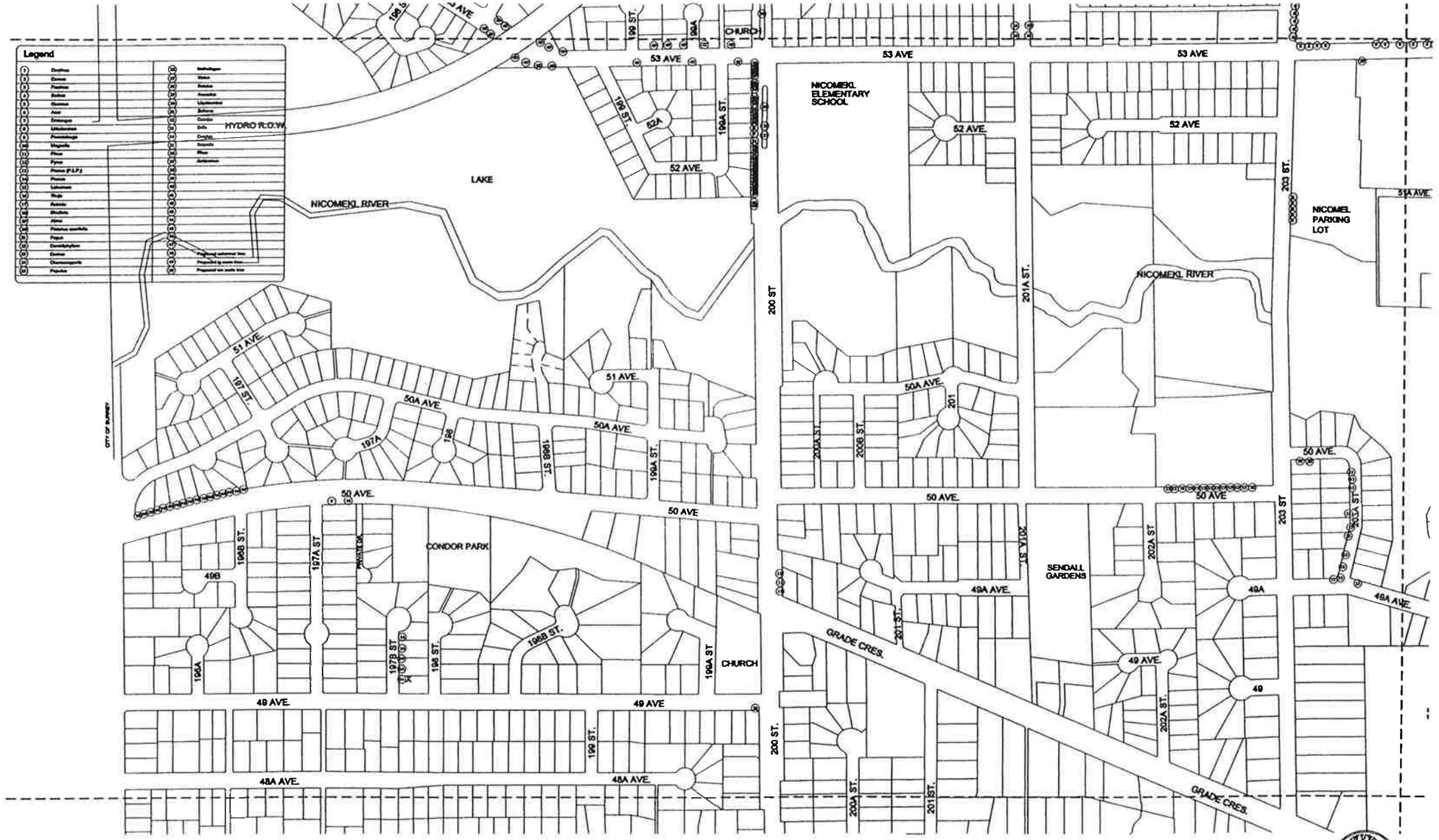
THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS



CITY OF LANGLEY STREET TREE PROGRAM

MAP 2: INVENTORY OF EXISTING STREET TREES

THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS



CITY OF LANGLEY STREET TREE PROGRAM

MAP 3: INVENTORY OF EXISTING STREET TREES

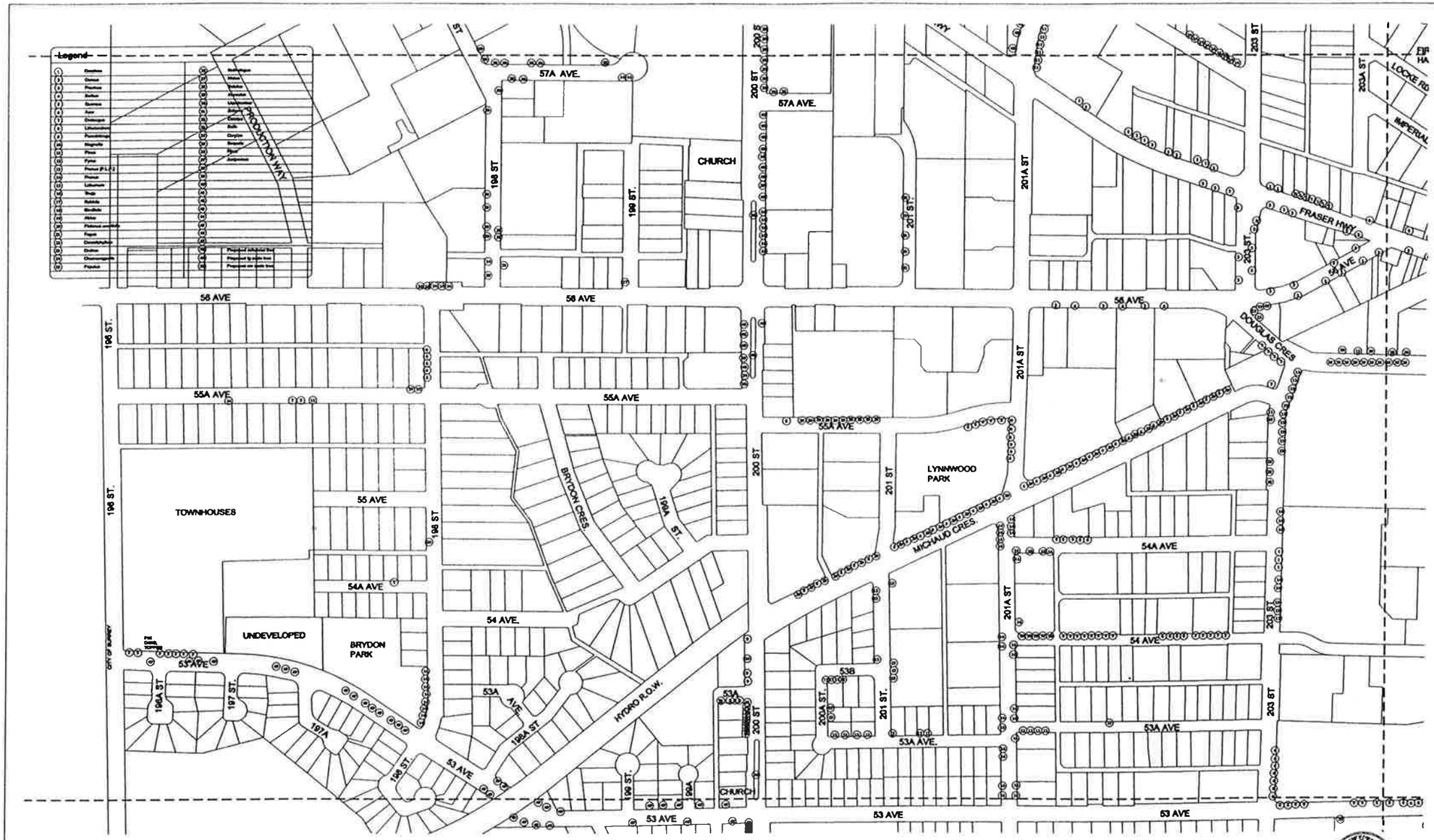
THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS

CITY OF LANGLEY STREET TREE PROGRAM

MAP 4: INVENTORY OF EXISTING STREET TREES

N

THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS

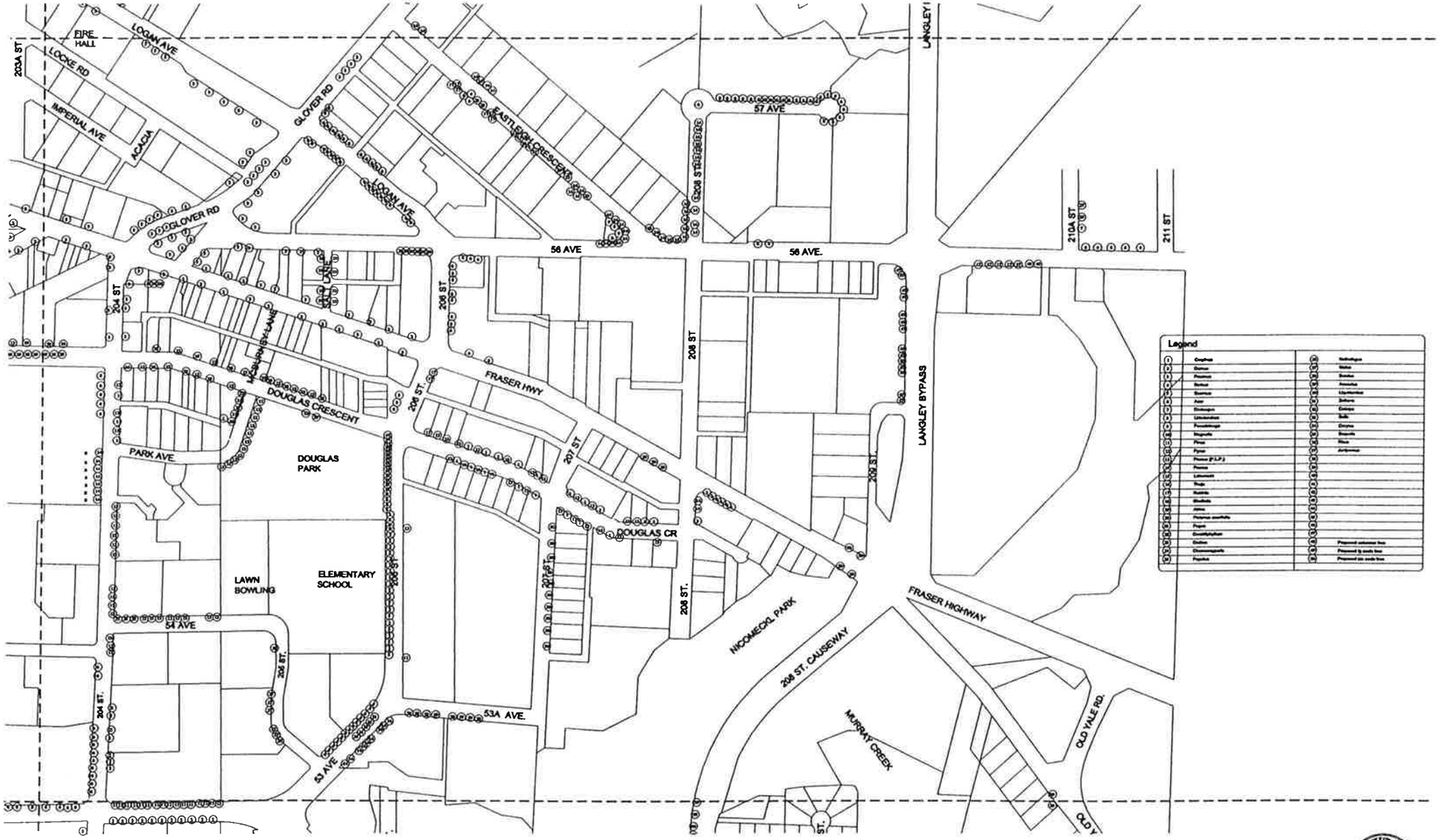


CITY OF LANGLEY STREET TREE PROGRAM

MAP 5: INVENTORY OF EXISTING STREET TREES

N

THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS

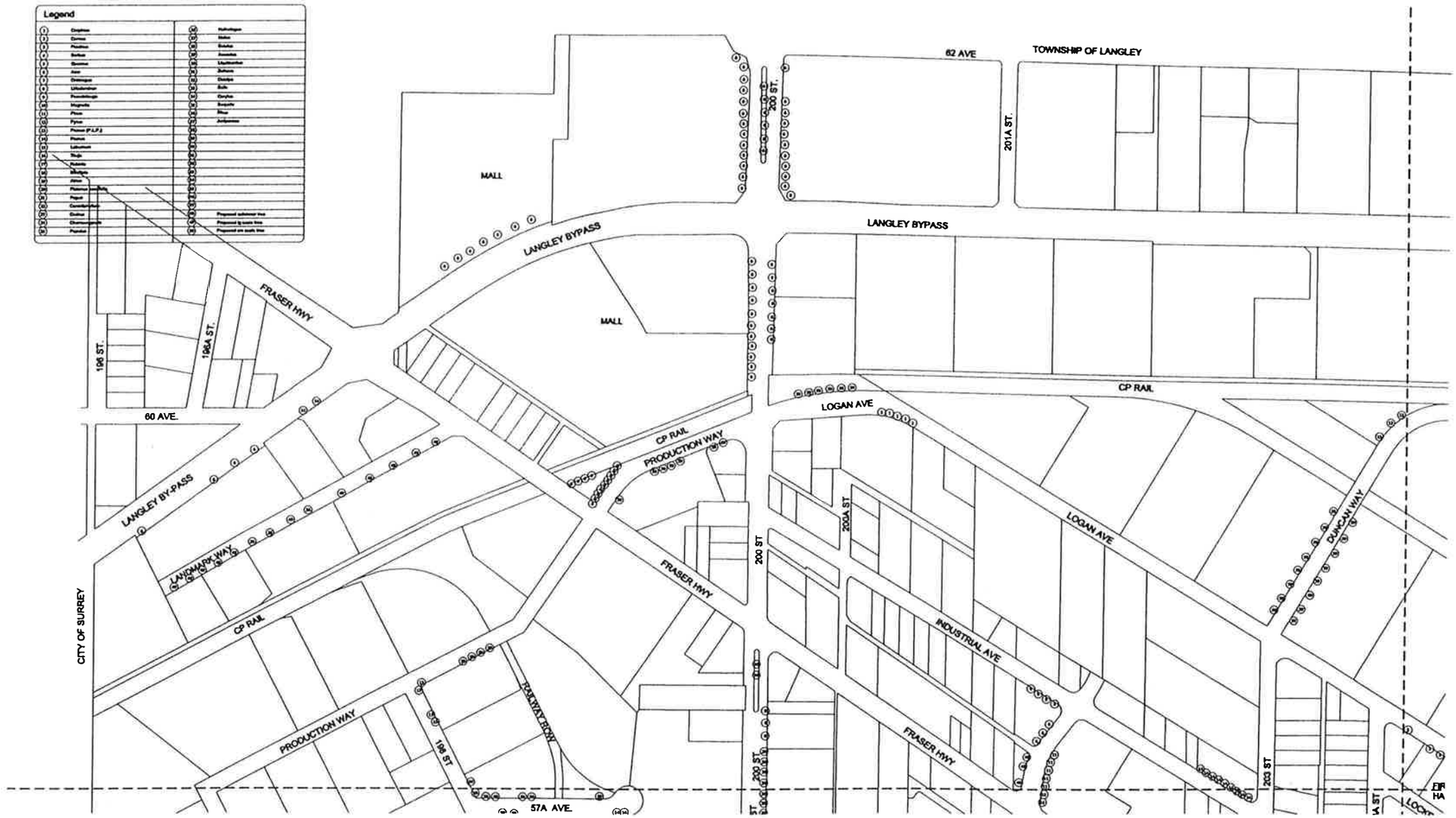


CITY OF LANGLEY STREET TREE PROGRAM

MAP 6: INVENTORY OF EXISTING STREET TREES

N

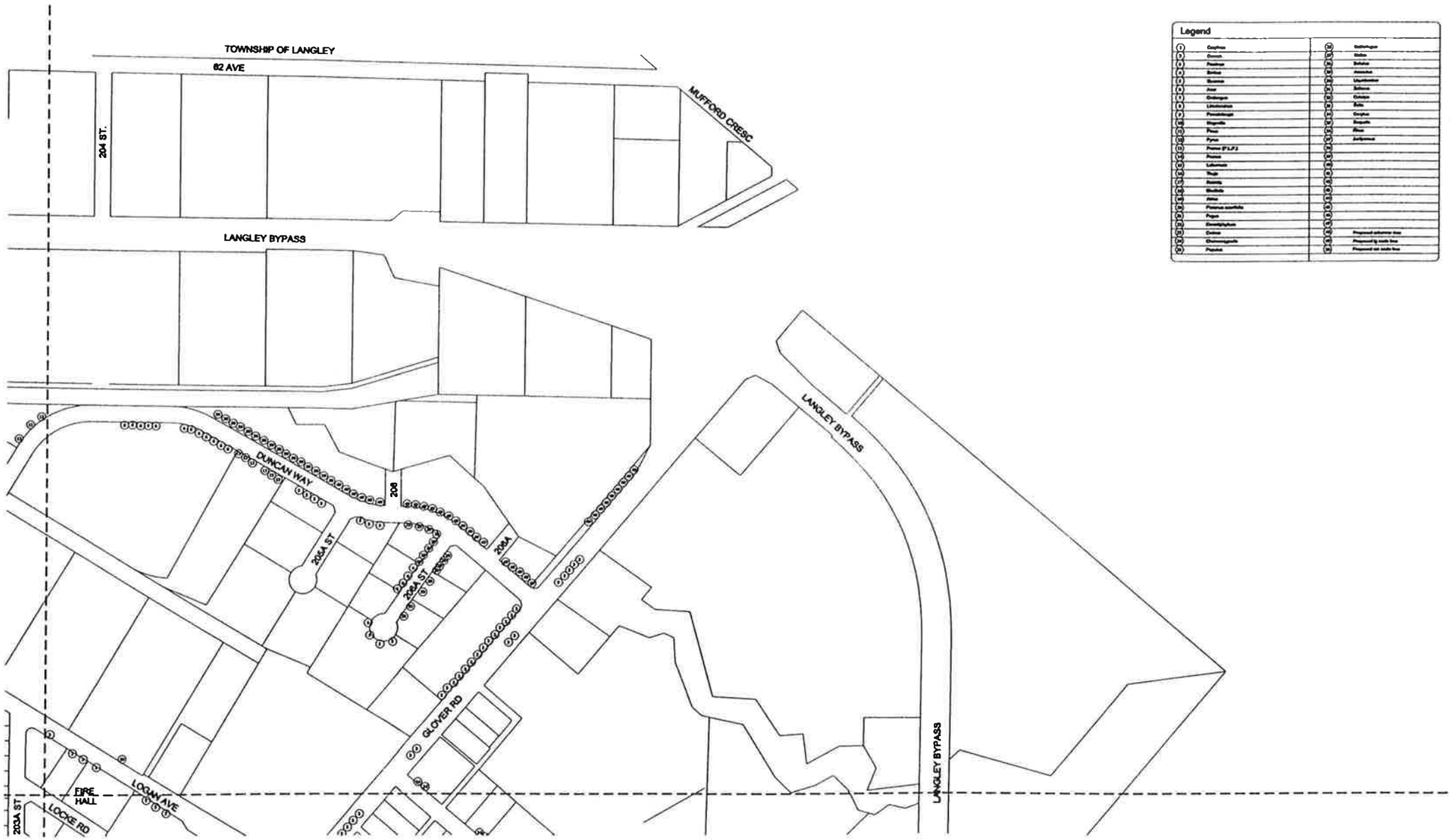
THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS



CITY OF LANGLEY STREET TREE PROGRAM

MAP 7: INVENTORY OF EXISTING STREET TREES

THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS



CITY OF LANGLEY STREET TREE PROGRAM

MAP 8: INVENTORY OF EXISTING STREET TREES

N

THE CITY OF LANGLEY
BY DMG LANDSCAPE ARCHITECTS

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	28- Aesculus	32 - Catalpa	Street Character	Comments
1	44	A	20100	*																												Residential	Curb & SW south side, No OHW - No trees required
1	44	A	20200	*																												Residential	Curb & SW north side, No OHW, No trees required
1	44	A	20300																													Residential	No SW
2	44	A	20600	*																												Residential - south / Park - north	SW, curb, north side only, OHW south side
2	44	A	20700	*																												Residential - south / Park - north	SW, curb, north side only, OHW south side
1	44		20000	*																												Residential & School	Curb & SW north side/ no opportunity for St.Trees
1	44		20100																													Residential / Twp. south	
1	44		20200																													Residential / Twp. south	
1	44		20300																													Residential / Twp. south	
2	44		20600	*																												Residential / Twp. south	OHW and SW north side only
1	44		20700											1																		Residential / Twp. south	OHW and SW north side only
1	45	A	19600	*																												Good Existing Residential Trees	Some opportunity for selective planting
1	45	A	19900																													Hunter Park	5'wide grass boulevard, - SW, no OHW
1	45	A	20000	*																												Residential Cul-du-sac-small	Good residential tree planting
2	45	A	20400	*																												Residential	No OHW 5' grass blvd. north side opp

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Carcidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
2	45	A	20500	*																												Residential	No OHW 5' grass blvd. north side
2	45	A	20600	*																												Residential	OHW north side. Roc., SW south side
2	45	A	20700	*																												Residential	OHW north side. Roc., SW south side
2	45	A	20800	*																												Residential	No OHW. No SW or curbs. Shallow grass ditches
2	45	A	20900	*																												Residential	No OHW. No SW or curbs. Shallow grass ditches
1	45	B	19600	*																												Residential	Some opportunity for selective planting
1	45	B	19900	*																												Residential	OK, too narrow for street trees
1	45		20000	*	2															1												Residential	Curb & SW north side / Other 2 Lombardy Poplar
1	45		20200	*																												Residential	Roc. & SW north side could plant south side
2	45		20600	*																												Residential north / Park south	No OHW, SW north side only
1	46	A	19600	*																												Residential	Grass boulevard north side, trees recommended
1	46	A	19700	*																												Residential	No OHW, SW
1	46	A	19800															5								1						Residential	
1	46	A	19900	*																												Residential	
1	46	A	20000	*																												Residential	Curb & SW south side, No OHW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robina	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
1	46	A	20200	*																												Residential	Cul-du-sac
2	46	A	20400	*																												Residential	Unimproved rough blvd., OHW on north side
2	46	A	20500	*																												Residential	Some curb, some unimproved, OHW north side, forested blvd.
2	46	A	20600	*																												Residential	OHW north. No curb or SW Grass shoulders both sides.
2	46	A	20700	*																												Residential	OHW north. No curb or SW Grass shoulders both sides
2	46	B	20600	*																												Residential	Small dead end street off 206
1	46		19600	*							4			1					2													Residential	No curb from 200 - 196A
1	46		19700	*																												Residential	
1	46		19800	*																												Residential	
1	46		19900	*																												Residential	
1	46		20200	*																												Residential	SW both sides, no OHW
2	46		20400	*																												Residential	No curb & SW, OHW on north side - no trees required
2	46		20500	*																												Residential	No curb & SW, OHW on north side - no trees required
2	46		20600	*																												Residential	OHW north side. SW both sides
2	46		20700	*																												Residential	OHW north side. SW both sides

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
2	46		20800	*																												Residential	No OHW, curbs or SW
2	46		20900	*																												Residential	No OHW, curbs or SW
1	47	A	19900																													Residential north, Park south	
1	47	A	20000	*																												Residential	No curbs south side, curb & SW north side
1	47	A	20200	*																												Residential	SW both sides, no OHW
1	47	A	20700	*																												Residential	Cul-du-sac / No OHW. Roc., SW north side only
1	47		19600	*																												Residential	
1	47		19700																4										5			Residential	
1	47		19800																10										1				
1	47		20200	*																												Residential	Cul-du-sac
2	47		20800		2																											Residential	No OHW. SW south side / Other 2 Liquidambar
2	47		20900	*																												Residential	No OHW. SW south side only
3	48	A	19600	*																												Residential	
3	48	A	19700	*																												Residential	

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Lirodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
3	48	A	19800	*																												Residential	
3	48	A	19900	*																												Residential	
4	48	A	20500	*																												Residential	No SW, no OHW, - St. trees not required
4	48	A	20800	*																												Residential	Roc. No OHW. SW south side only
4	48	B	20400	*																												Residential	Cul-du-sac
4	48	B	20500	*																												Residential	No OHW. No SW. Roc.
1	48		19600	*																												Residential north / Buckley Park south	
1	48		19700	*																												Residential	Needs landscape trees in Hydro Parking Area to direct traffic
1	48		19800	*																												Residential	North side wide boulevard
1	48		19900	*																												Residential	
1	48		20000	*																												Residential	Curb & SW south side, OHW, north side, unimproved
1	48		20100	*																												Residential	Curb & SW south side OHW, unimproved north side
1	48		20200	*																												Residential	Curb & SW south side, OHW, unimproved north side
2	48		20400	*																												Residential	Open ditches both side, SW, OHW north side
2	48		20500	*																												Residential	OHW north side, open ditches, gravel shoulders

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
2	48		20600	*																												Park north / residential south	Park parking north, open ditches south, OHW north side
2	48		20700	*																												Church north / residential south	OHW north side, open ditches w gravel shoulders
2	48		20800	*																												Residential	SW south side, OHW north side
2	48		20900	*																												Residential south / Institutional north	SW south side, OHW north side
3	49	A	20000	*																												Residential	Cul-du-sac, Curb & SW south side, no OHW
3	49	A	20200	*																												Residential	Short Cul-du-sac, sidewalks south side, no OHW
3	49	A	20300															4														Residential	5' w blvd. n side; 4-6" PLP on 4 lots, no OHW
4	49	A	20400															11														Residential	5' w blvd. north side; 4-6" PLP - 1-2 per lot, no OHW
4	49	A	20500															3														Residential	5' w blvd. north side; 4-6" PLP - 1 per lot, no OHW
4	49	A	20800	*																												Residential	No OHW. Roc. SW south side only
4	49	A	20900		1													2	4			2										Residential	No OHW. Roc. SW south side only. / Other - 1 Juniper
3	49	B	20600	*																												Residential	
4	49	B	20800	*																												Residential Lane	No OHW. SW north side only
3	49		20600	*																												Residential	OHW north side

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
3	49		19700	*																												Residential	OHW north side
3	49		19800	*																												Residential	OHW north side
3	49		19900	*																												Residential	Ditches both sides No formal ST.
3	49		20200	*																												Residential	Cul-du-sac, SW south side, no OHW
4	49		20200	*																												Residential	Cul-du-sac, SW south side, no OHW,
4	49		20400	*																												Residential	4' grass blvd. north side - no OHW
4	49		20900					3										1														Residential	No OHW. Roc. SW south side only
3	50	A	19600																													Residential	
3	50	A	19700																													Residential	
3	50	A	19800																													Residential	
3	50	A	19900																													Residential	
3	50	A	20000	*																												Residential	Curb & SW south side, no OHW, lots of private trees
3	50	A	20100	*																												Residential	Curb & SW south side, no OHW, lots of private trees
4	50	A	20500	*																												Residential	SW north side, no blvd., no OHW
4	50	A	20700																1													Residential,	Cul-du-sac, No OHW. Roc. SW south side. 2 Islands for trees
4	50	A	20800																				1									Residential	No OHW. SW north side

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Plananus	21 - Fagus	22 - Carcidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
4	50	A	20900		1																						1					Residential	Cul-du-sac, No OHW. / Other 1 Sumac
4	50	B	20700																2													Residential	No OHW. Roc. SW north.
4	50	B	20900	*																												Residential	Cul-du-sac, No OHW. No SW. Roc.
3	50		19600	*																												Residential	Existing Cedar Hedge, SW north side
3	50		19700	*																												Candor Park south / Residential north	Existing Cedar Hedge, SW north side
3	50		19800																													Candor Park south / Residential north	
3	50		19900																													Residential	
3	50		20000	*																												Residential	Curb & SW north side, OHW south side
3	50		20100	*																												Residential-north / Park south side	OHW south side, curb & SW both sides
3	50		20200															12		2												Residential-north / Park south side	OHW south side, curb & SW both sides: St. trees north side
3	50		20300															1														Residential	Curb & 3' grass blvd. with SW south side, no OHW
4	50		20400	*																												Residential	Cul-du-sac, no SW, no OHW
4	50		20500	*																												Residential	4' grass blvd. north side, room for trees, no OHW
4	50		20700	*																												Residential	No OHW. Roc. SW south side only
4	50		20900	*																												Residential, dead end street	No OHW. Roc. SW north side only

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulea	29- Aesculus	32 - Catalpa	Street Character	Comments
4	51	A	20300	*																												MF Res. north, Nicomekl Park south	Trees in Park site, no sw, no OHW
4	51	A	20500	*																												Residential	SW south side, no OHW
4	51	A	20700		1						1							1					1										Residential	No OHW. SW south side. Roc. / Other 1 Sumac
4	51	B	20500	*																												Residential / Seniors Centre / Bridge	No OHW. Sidewalk both sides, room for trees
4	51	B	20600						10																							School south, Nicomekl River north	No OHW. SW both sides. Ash trees in poor cond
4	51	B	20700						11									1					18						1				Residential	No OHW. SW both sides
4	51	B	20800								1										1												Residential	No OHW. SW north side only
4	51	B	20900	*																												Residential	No OHW. SW north side only
3	51		19600																													Residential	
3	51		19700																													Residential	
3	51		19900	*																												Residential	
4	51		20700																2													Residential	Cul-du-sac, No OHW. No SW. Roc.
4	51		20800											1				1	3	1												Residential Dead end street	No OHW. SW w blvd. south side. Roc.
4	51		20900																3													Residential Dead end street	No OHW. SW w blvd. south side. roc.

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Lirhodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
3	52	A	19900																													Residential	Cul-du-sac
4	52	A	20800																		3											Residential	No OHW. SW north side. Roc.
4	52	A	20900	*																												Residential	No OHW. SW north side. Roc.
3	52		19900																													Residential	
3	52		20000	*																												Residential	SW north side, no OHW
3	52		20100	*																												Residential	Curb & SW both sides, OHW north side
3	52		20200	*																												Residential	Curb & SW both sides, OHW north side
4	52		20700	*																												Residential	No OHW. SW w grass blvd. north side. Roc.
4	52		20800											1																		Residential	OHW north side. SW north side. Roc.
4	52		20900	*																												Residential	OHW north side. SW north side. Roc. 1 Juniper
5	53	A	19800																													Residential	
5	53	A	19900		1									3																		MF Res., small dead end St. off 200	No SW / OHW, gravel & grass shoulders. Other, 1 Willow
5	53	A	20000															1														Residential	5' grass blvd. north side, no OHW - room for trees here
5	53	A	20100															7	2													Residential MF	Curb & SW north side, no OHW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
5	53	A	20200	*																												Residential MF	Curb & SW both sides, OHW north side
6	53	A	20600	*																												Residential MF	No OHW. SW both sides
5	53	B	20000															4														Residential SF	Curb & SW both sides, OHW north side
5	53		19600																													Residential	Grass Blvd. / Room for trees
5	53		19700																													Residential south / Park north	Grass Blvd. / Room for trees
5	53		19800																													Residential	Grass Blvd. / Room for trees
3	53		19900																													Residential	Grass Blvd. / Room for trees
3	53		20000																													Residential	Grass Blvd. / Room for trees
3	53		20000	*																												Residential north, School south	Curb & SW south side, No OHW
3	53		20100	*																												Residential SF	Curb & SW south side, no OHW until 202 then OHW north side
3	53		20300								11													1								Residential MF	Curb & SW both sides, no OHW 4 Crimson k, 6 Plat, 1 rubrum
4	53		20400													27																Residential MF	Curb & SW both sides, Pinus strobus north side
6	53		20500		5				13										9													Residential MF east / Nicomekl west	No OHW. SW both sides / Other 5 Zelkova
5	54	A	19700																													Residential	

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
5	54	A	20100								5								4													Residential / MF - SF	Curb & SW south side, OHW north side
5	54	A	20200	*																												Residential / MF - SF	Curb & SW south side, OHW north side
5	54		19800	*																												Residential / MF	
5	54		20100								8				5																	Residential SF & MF	Curb & SW both sides,-OHW north side - trees under wires
5	54		20200							5	4																					Residential SF & MF	Curb & SW both sides,-OHW north side - trees under wires
5	54		20300	*																												Residential MF	Curb & SW both sides, no OHW
6	54		20400															8							3								Residential MF	Curb & SW south side, OHW south side, trees on north side
5	55	A	19600																													Residential	
5	55	A	19700									2				1			3													Residential	Wide asphalt
5	55	A	19800																													Residential	
5	55	A	19900																													Residential	
5	55	A	20000							1														10								Residential MF	SW north side, no OHW
5	55	A	20100								5																					Residential MF north - Park south	trees in Park
5	55		19700																													Residential	

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Lirodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
5	56		19600	*																												Commercial / Residential	No curb or SW
5	56		19700	*																												Commercial / Residential	No curb or SW
5	56		19800																5													MF Residential	
5	56		19900																													Commercial / Residential	
5	56		20000	*																												Residential MF	SW both sides, OHW both sides
5	56		20100					2	1																							Commercial	SW both sides, OHW both sides
5	56		20200					2	2																							Commercial	SW both sides, OHW both sides
5	56		20300					9										3														Commercial	SW both sides, OHW both sides
6	56		20400					4																								Commercial	SW both sides, OHW both sides
6	56		20500					4											1					6								Commercial	OHW & SW both sides
6	56		20600								3																					Commercial	OHW & SW both sides
6	56		20700																10													Commercial	OHW & SW both sides
6	56		20800								2																					Residential, SF & MF	OHW north side, SW both sides
6	56		20900																		5											Residential, MF	OHW north side, SW both sides
6	56		21000						5																							MF north / Ind. south	OHW north side, SW both sides

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
5	57	A	19800																2													Industrial	
5	57	A	20000																					2								Residential MF	SW both sides, No OHW
6	57		20800								23																					Residential MF	No OHW, SW both sides
7	60		19600	*																												Commercial / Industrial	
7	62		20100	*																												Commercial south / Twp.. north	No SW or OHW Street trees on private property
7	62		20200	*																												Commercial, east of 201A vacant	No SW or OHW open ditch
7	62		20300	*																												Commercial south / Twp.. north	No SW or OHW open ditch
8	62		20400	*																												Commercial south / Twp.. north	No SW or OHW open ditch
8	62		20500	*																												Commercial south / Twp. north	No SW or OHW open ditch
8	62		20700	*																												Commercial south / Twp. north	Gravel Ind. road. dead end
1	196	A	4500	*																												Residential	Roc.
1	196	A	4600	*																												Residential	5' grass boulevard on east side, trees recommended
3	196	A	4900	*																												Residential / Institutional	Cul du Sac, Gravel Shoulders

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
5	196	A	5200	*																												Residential	Cul-du-sac
7	196	A	6000	*																												Industrial / commercial	
1	196		4800	*																												Residential / Surrey west	
3	196		4900	*																												Residential / Surrey west	
7	196		6000	*																												Industrial / commercial	
1	197	A	4500	*																												Residential	Some opportunity to introduce trees-
1	197	A	4600	*																												Residential	Some opportunity to introduce trees-
3	197	A	4900	*																												Residential	SW east side
3	197	A	5000																													Residential	Cul-du-sac
5	197	A	5200																													Residential	Cul-du-sac
3	197	B	4900																5													Residential	1st tree almost dead
1	197		4500												2				6													Residential	Roc. OHW north side,
1	197		4600	*																												Residential	St. recommended at 46A gateway to street

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
3	197		5000	*																												Residential	
5	197		5200	*																												Residential	
1	198	A	4600	*																												Residential	No curbs or sidewalks
5	198	A	5300																													Residential MF	
1	198	B	4500	*																												Residential	Some opportunity to introduce trees-none urgent
3	198	B	4900	*																												Residential	Some opportunity to introduce trees-none urgent
3	198	B	5000																													Residential	
1	198	C	4500	*																												Residential	OK, too narrow for street trees
1	198	C	4600															3	10													Residential	Trees various sizes 3"-10" generally poor
1	198	C	4700	*																												Penzer Park	
1	198		4500	*																												Residential	Some opportunity to introduce trees-none urgent
3	198		4900																						6							Residential	Cluster of 6 Multi-stem trees corner 49-198, No Formal ST.
3	198		5000																													Residential	Cul-du-sac

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
5	198		5300																8													Brydon Park west / Res. east	
5	198		5400																								1					Residential	
5	198		5500								5																					Residential	
5	198		5600																1										2			Industrial / Commercial	
5	198		5700															3														Industrial / Commercial	
1	199	A	4500	*																												Residential	Cul-de-sac SW east side w 5' blvd. No OHW
1	199	A	4600															1														Residential	Cul-du-Sac Grass Median
1	199	A	4700		1														1													Residential	Cul-du-Sac Grass Median / Other - 1 Laburnum
3	199	A	4900	*																												Residential west / Church east	No Formal ST., recommended for tree
3	199	A	5000	*																												Residential	Boulevard east side, Trees recommended east side only
3	199	A	5200	*																												Residential	
5	199	A	5300	*																												Residential	
5	199	A	5400	*																												Residential	Cul-du-sac
1	199		4500	*																												Residential	Cul-du-sac SW East side only, No OHW
1	199		4600															3														Residential	Double Cul-du-sac, Grass Median

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
3	199		4800	*																												Residential	Room for trees
3	199		5200	*																												Residential	
5	199		5300	*																												Residential	Cul-du-sac
5	199		5400	*																												Residential	
5	199		5600																		1											Residential	
1	200	A	4500	*																												Residential	Curb & SW e side, no OHW
1	200	A	4700	*																												Residential	SW both sides, no OHW
1	200	A	4800	*																												Residential	Curbs, no SW, no OHW
3	200	A	5000	*																												Residential	Very narrow, no OHW, no room to plant
5	200	A	5300															2														Residential SF	mix some blvd., some SW, some OHW west side, trees east side
7	200	A	5800	*																												Light Industrial	No curb or SW, OHW west side
3	200	B	5000	*																												Residential	Curb & SW east side, no OHW
1	200		4400											9					4	2									4	3		School East / Twp. of Langley west side	SW and OHW both sides, 12' blvd. east side,
1	200		4500					3	1					62					2	3									3	3		Residential	

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
1	200		4600											12		1			3	2										5	2		Residential	SW & OHW both sides.
1	200		4700	*																													Residential / Powerline	SW & OHW both sides. Hydro transmission lines.
3	200		4800																												1		Residential	SW & OHW both sides
3	200		4900												3																		Residential	SW & OHW both sides
3	200		5000	*																													Residential	SW & OHW both sides
3	200		5100	*																													Nicomekl	
3	200		5200		2									2		4				31													Residential west / School east	SW & OHW both / 5' blvd. west side / Other - 2 Laburnum
5	200		5300		2									6						7								1					Residential	SW & OHW both sides. Other 1 Willow & 1 Redwood
5	200		5400																									1					Single / MF Residential	SW & OHW both sides
5	200		5500	*																													Single / MF Residential	SW & OHW both sides
5	200		5600																7	1									1				Single / MF Residential / church	SW both. OHW west only.
5	200		5700										2										6										MF east / Ind. west	SW & OHW both sides
7	200		5800											1																			MF east, Ind. / Comm. west	
7	200		5900								5																						Comm. / Ind.	SW & OHW both sides
7	200		6000								6																						Comm. / Ind.	SW & OHW both sides
7	200		6100								24																						Commercial	SW both OHW east 6 trees in median

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robina	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
3	201	A	4900	*																												Res. west, Sendall Gardens Park east	Narrow, no OHW, lots of park trees
3	201	A	5000	*																												Residential	Curb & SW east side, no curb west side, OHW east side
3	201	A	5100	*																												Nicomekl River	
3	201	A	5200	*																												Residential	Unimproved, no curbs or SW
5	201	A	5300																14													Residential MF	Curb & SW west, OHW west- Kwanzan Cherries
5	201	A	5400																10													Residential MF	Curb & SW west, OHW west - Kwanzan Cherries
5	201	A	5500								6																					Park & Res. MF west, MF & vacant east	SW both sides, no OHW, Trees along park only
5	201	A	5600	*																												Residential MF & Commercial	SW both sides, OHW east side
7	201	A	5700										3			7																Light Industrial	No OHW no SW
7	201	A	6100	*																												Commercial West vacant east	No OHW or SW open ditch east
1	201		4400	*																												Residential	Curb & SW west side, no OHW
1	201		4500	*																												Residential	curb & SW west side, no OHW
1	201		4700	*																												Residential	Cul-du-sac, no SW, no OHW
1	201		4800	*																												Residential	SW west side, OHW east side
3	201		4900	*																												Residential lane, not open	
3	201		5000	*																												Residential	Short Cul-du-sac, no OHW

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
5	201		5300															5														Residential SF	Mix curb & SW
5	201		5400															3														Residential MF west, Park east	Curb & SW west, gravel shoulder east, OHW east
5	201		5500	*																												Residential MF west, Park east	Curb & SW west, gravel shoulder east, OHW east
5	201		5600																					5								Residential MF short dead end	SW both sides, no OHW, narrow grass blvd. & trees west side
1	202	A	4400	*																												Residential	Curb & SW east side
3	202	A	4800	*																												Residential	SW with 4' grass blvd. west side, no OHW
3	202	A	4900	*																												Residential	Unimproved cul-du-sac, OHW east side
1	202		4400	*																												Residential	Curb & SW both sides- no opportunity to plant
1	202		4500	*																												Residential	Curb & SW both sides- no opportunity to plant
1	202		4600	*																												Residential	
1	202		4700	*																												Residential	
1	203	A	4600	*																												Residential	
3	203	A	4900															9														Residential	Blvd. grass strip west side, 1 PLP /lot, no OHW
5	203	A	5700	*																												Light Industrial	No curbs or SW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cednus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
1	203		4400	*																												Residential	Curb & SW south side, no OHW - no trees required
1	203		4600	*																												Residential	SW both sides, no OHW
1	203		4700	*																												Residential	SW both sides, no OHW
3	203		4800	*																												Residential Arterial Route	Curb & SW both sides, OHW west side
3	203		4900	*																												Residential	Curb & SW both sides, OHW west side
3	203		5000	*																												Residential	Curb & SW both sides, OHW west side
3	203		5100								5																					Nicomekl River	All trees at Nikomekl River Parking Lot
3	203		5200	*																												Residential	
5	203		5300								7																					Residential MF	Curb & SW both sides OHW west, trees east
5	203		5400															3	5													Residential MF & Commercial	SW both sides, some blvd., OHW west side
5	203		5500									1						2	14						3							Residential MF & Commercial	
5	203		5600					7																								Commercial	SW both, No OHW
5	203		5700	*																												Commercial	SW both, No OHW
5	203		5800	*																												Industrial	SW both, No OHW
2	204	A	4500	*																												Residential	Cul-du-sac, SW & grass blvd. east side, no OHW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
2	204		4500	*																												Residential	SW & 4' grass blvd. west side, good private trees
1	204		4600																2			3										Residential	Cul-du-sac, curbs, no SW, no OHW
4	204		4900	*																												Residential	SW west side, no OHW
4	204		5000	*																												Residential	SW west side, no OHW
4	204		5100								2																					Residential MF	5' grass blvd. w trees west, curb & SW, OHW east
4	204		5200								5																					Residential MF	5' grass blvd. w trees west, curb & SW, OHW east
4	204		5300				7				11							3														Residential MF	Curb & SW w, trees in ROW, 3' blvd. with PLP's & OHW
4	204		5400															10	7													Residential Apartments	4' blvd. & OHW & PLP east side; cherries in SW near park
4	204		5500			3		8			5							3														Commercial	west side-5sml A plat, east side-alt PLP & Carpinus, OHW east
8	204		6100	*																												Industrial	No SW or OHW open ditches
2	205	A	4500	*																												Residential	Cul-du-sac, 4' grass blvd. east side, no OHW - could plant trees
4-Jan	205	A	4800																11				1									Residential	All trees in 5' grass blvd. east side, no OHW
4	205	A	4900								3								10													Residential	All trees in 5' grass blvd. east side, no OHW
4	205	A	5000		1																											Residential	SW both sides, no OHW / Other 1 Willow
8	205	A	5900	*																												Industrial	No OHW. No SW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
4	205	B	5000	*																												Residential	Cul-du-sac, No OHW. SW east side. Roc.
2	205		4500															2	2													Residential	Cul-du-sac 4' grass blvd. east side, no OHW
2	205		4700	*																												Residential	Open ditches both sides, no OHW, no curbs or SW
4	205		4800	*																												Residential	4' grass blvd. west side, no OHW - room to plant trees
4	205		4900	*																												Residential	4' grass blvd. west side, no OHW - room to plant trees
4	205		5000	*																												Residential	4' grass blvd. west side, no OHW - room to plant trees
6	205		5300																									6	1			Residential / MF	No OHW. SW both sides
2	206	A	4500																							1						Residential	No OHW. Blvd. east side, room for trees
2	206	A	4700	*																												Residential	No OHW. SW west side. Roc.
8	206	A	5700							4	3												7									Industrial	No OHW. No SW
2	206	B	4500															1														Residential Cul-du-sac	No OHW. SW east side
2	206		4400	*																												Park east side / Old dump site west	No OHW. No SW

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
2	206		4500																1						1			1					Residential	No OHW. SW east side. Roc.
2	206		4600	*																													Residential	Gravel shoulders w ditches. OHW east side
2	206		4600	*																													Residential dead end off Grade	No OHW. curbs, no SW
4	206		4800	*																													Residential dead end off 48B	No OHW. No SW. Roc.
4	206		5100	*																													School east / residential west	No OHW. SW both sides
6	206		5300					5		6																							School west / MF east & west	No OHW. SW both sides
6	206		5400					6		11	4									14													Park / School west / MF east	No OHW. SW both sides
6	206		5500							1	8		2					5			2												Commercial	OHW east side. SW both sides
8	206		5800	*																													Industrial	Unimproved drive No curb or SW
2	207	A	4400	*																													School west / Residential east	OHW & SW west side
2	207	A	4500	*																													Residential	OHW & SW west side mix of open ditches gravel shoulders
2	207	A	4700	*																													Residential (south of Grade)	No OHW. SW west side. Roc.
4	207	A	4800	*																													Residential, duplex	No OHW. Roc. SW east side.
4	207	A	4900																							1							Residential, duplex	No OHW. Roc. SW east side.
4	207	A	5000	*																													Residential, duplex	No OHW. Roc. SW east side.

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
2	207	B	4600	*																												Residential	Cul-du-sac, no OHW or SW. Roc.
4	207	B	5000	*																												Residential	Cul-du-sac, no OHW or SW. Roc.
4	207	B	5100	*																												Residential	No OHW. SW west side. Roc.
2	207		4500	*																												Residential Cul-du-sac	No OHW. SW east side
4	207		4800							9					1																	Park west / Residential MF	OHW east side. SW both sides
4	207		4900								5																					Park west / Residential east	No OHW. SW both sides. Misc. trees in park
4	207		5000								15	2																				Park west / Residential east	No OHW. SW both sides.
4	207		5100	*																												School west / Residential east	No OHW. SW both sides
6	207		5300	*																												Residential, single and MF	No OHW. SW west side
6	207		5400	*																												Residential S & MF	No OHW. SW west side
2	208	A	4600	*																												Residential	Cul-du-sac No OHW or SW. Roc.
4	208	A	4800	*																												Residential	No OHW. SW west side. Roc.
4	208	A	4900																7													Residential	No OHW. SW west side. Roc.
4	208	A	5000																2													Residential	No OHW. SW west side. Roc.
4	208	A	5100								1																					Residential	Cul-du-sac, no OHW. Roc.

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
2	208	B	4600	*																												Residential	Cul-du-sac, no OHW or SW. Roc.
2	208		4400	*																												Residential / Arterial route	OHW & SW west side
2	208		4500	*																												Residential / Arterial route	OHW west side. SW both sides
2	208		4600	*																												Residential / Arterial route	OHW west side. SW both sides
2	208		4700	*																												Residential / Arterial route	OHW west side. SW both sides
4	208		4800		2									1		7		1	3	7			5		1								Residential / Arterial route	Other 2 Corylus var. purpurea
4	208		4900		1			3						1		9		8		46			3		1						5		Residential / Arterial route	OHW east side / Other 1 Thujopsis
4	208		5000					1					5	1		12				6			4				3						Residential / Arterial route	
4	208		5100								3		1			2				11			4		1		4		2				Residential / Arterial route	
4	208		5200						3										2											1		Residential / Arterial route	
6	208		5300	*																												Res. S & MF South of Douglas	OHW & SW both sides
6	208		5400				1												2													Residential MF	OHW east side. SW both sides
6	208		5500	*																												Residential MF	OHW east side. SW both sides
6	208		5600								1								11													Commercial	SW both sides. No OHW
6	208			*																												The Causeway	No OHW. SW both sides

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
2	209	A	4500	*																												Residential	No OHW. no curbs or SW
2	209	A	4600	*																												Residential	No OHW. no curbs or SW
4	209	A	4800					1											1													Residential Cul-du-sac off 49	No OHW. SW west side, Roc.
4	209	A	5100	*																												Residential	No OHW. SW west side
2	209		4500	*																												Residential	No OHW. Gravel shoulders
2	209		4600	*																												Residential	Cul-du-sac, no OHW or SW. Roc.
2	209		4700																2													Residential	Cul-du-sac, no OHW or SW. Roc.
2	209		4700	*																												Residential	OHW west side. gravel shoulders
4	209		4800					3																								Residential	No OHW. SW west side
4	209		4900															6		3								7				Residential	No OHW. SW west side
4	209		5000															7	1				1									Residential	No OHW. SW west side
4	209		5100	*																												Residential	Cul-du-sac, no OHW. no SW Roc.
4	209		5200	*																												Residential	Cul-du-sac, no OHW. no SW Roc.
6	209		5500	*																												Residential off Fraser @ by pass	OHW east side. No curb or SW

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robina	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
6	210	A	5600									1																2				Residential MF dead end	SW & curb east, unfinished on west side. OHW west side
2	210		4700	*																												Residential / Twp.. of Langley	
6	ACACIA																	3														Industrial / Parking Lot	No curb or SW, OHW west: trees may be on private land
5	BRYDON CRES			*																												Residential	
5	DOUGLAS CR		20200									4						1														Commercial	SW both sides, no OHW, no blvd.
5	DOUGLAS CR		20300															1			10											Commercial	SW both sides, no OHW, grass median with trees
6	DOUGLAS CR		20400														7				7											Commercial	8 trees s, 5 trees north, species alternating
6	DOUGLAS CR		20500														5				5				2							Park south, Commercial north	New St. improv. 8 trees north, 2 trees south alternating
6	DOUGLAS CR.		20600			10											2	11			1											Residential	OHW north side. SW both sides.
6	DOUGLAS CR.		20700			9												8														Residential SF & MF	OHW north side. SW both sides
6	DOUGLAS CR.		20800	*																												Residential MF	No curb or SW. Short dead end street
7	DUNCAN WAY		20300															3														Industrial	No SW, no OHW, mix of industr. landscapes
8	DUNCAN WAY		20400								12																					Industrial / vacant	No OHW or SW
8	DUNCAN WAY		20500							7								6														Industrial / vacant	No OHW or SW
8	DUNCAN WAY		20600																				4									Industrial / vacant	No OHW or SW

City of Langley Street Tree Inventory

Map #	Street	Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
6	EASTLEIGH CR.	20600			1					3					1			10		7			4									Residential MF & Commercial	SW south side. Poor tree installation
7	FRASER HWY.	19600	*																													Commercial / TWP. of Langley north	
7	FRASER HWY.	19700	*																													Commercial	
7	FRASER HWY.	19800	*																													Commercial	
7	FRASER HWY.	19900	*																													Commercial	
7	FRASER HWY.	20000	*																													Commercial	OHW south side, SW both sides
7	FRASER HWY.	20100			2																											Commercial	OHW south side, SW both sides
5	FRASER HWY.	20200			9		3																									Commercial	OHW & SW both sides
5	FRASER HWY.	20300			9		10																									Commercial	OHW & SW both / no OHW east of56th
6	FRASER HWY.	20400					11																									Commercial	OHW north side. SW both sides
6	FRASER HWY.	20500					14						1																			Commercial	OHW north side. SW both sides
6	FRASER HWY.	20600								2																						Commercial / Church	OHW north side. SW both sides
6	FRASER HWY.	20700	*																													Residential MF / SF	OHW north side. SW both sides
6	FRASER HWY.	20800					6																									Residential MF / SF	OHW north side. SW both sides
6	FRASER HWY.	20900	*																													Commercial /Residential	
6	FRASER HWY.	21000	*																													Hwy. east of By pass	OHW south side. gravel shoulders
6	GLOVER RD	5600					19	1	4																							Commercial	No OHW. SW both sides

Map #	Street	Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
8	GLOVER RD	5700					18																								Commercial	No OHW. SW both sides
8	GLOVER RD	5800					5																								Institutional	No OHW. SW both sides
8	GLOVER RD	5900	*																												Institutional	No OHW. SW both sides
3	GRADE CRES	20000																													Residential	
3	GRADE CRES	20100	*																												Residential	Open ditch south side, gravel shoulder north side, OHW south
1	GRADE CRES	20200	*																												Residential	Open ditch south side, gravel shoulder north side, OHW south
1	GRADE CRES	20300	*																												Park	Forested both sides, OHW south side
2	GRADE CRES	20400	*																												Residential & School	Open ditches both sides, OHW south side - mix of SW alignment
2	GRADE CRES	20500	*																												Residential & School	open ditches both sides, OHW s side - mix of SW alignment
2	GRADE CRES	20600	*																												Residential / Arterial route	Asphalt walk, north side. Open ditches. OHW south side
2	GRADE CRES	20700	*																												Residential / Arterial route	Asphalt walk, north side. Open ditches. OHW south side
6	IMPERIAL AVE	20300	*																												Vacant Lots	No curbs or SW
7	INDUSTRIAL	20000	*																												Industrial	No SW. OHW north
7	INDUSTRIAL	20100										4																			Industrial	No SW. OHW north
7	INDUSTRIAL	20200																9													Industrial / Commercial / Residential	No SW. OHW north
7	LANDMARK	19700		3																											Industrial	Other - 3 Nothofagus
7	BYPASS	19600								4																					Industrial / Commercial	

Map #	Street	Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
7	BYPASS	19700																2														Industrial / Commercial	
7	BYPASS	19800								7																						Commercial	
7	BYPASS	19900	*																													Commercial	
7	BYPASS	20000	*																													Commercial	
7	BYPASS	20100	*																													Langley by pass	OHW north side, no SW, open ditch south side
7	BYPASS	20200	*																													Langley by pass	OHW north side, no SW, open ditch south side
7	BYPASS	20300	*																													Langley by pass	OHW north side, no SW, open ditch south side
8	BYPASS	20400	*																													Langley by pass	OHW north side, no SW, open ditch south side
8	BYPASS	20500	*																													Langley by pass	OHW north side, no SW, open ditch south side
8	BYPASS	20600	*																													Langley by pass	OHW north side, no SW, open ditch south side
6	BYPASS	5400	*																													Langley by pass	No OHW, No curb or SW, open ditches
6	BYPASS	5500																										14				Langley by pass	No OHW or SW, open ditches,AI35+AI53
6	BYPASS	5600	*																													Langley by pass	No OHW, No curb or SW, open ditches
6	BYPASS	5700	*																													Langley by pass	No OHW, No curb or SW, open ditches
8	BYPASS	5800	*																													Langley by pass	No OHW, No curb or SW, open ditches
8	BYPASS	5900	*																													Langley by pass	No OHW, No curb or SW, open ditches
6	LOCKE RD	20300	*																													Industrial / Vacant lots	OHW south side. No SW or curbs

Map #	Street	Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphylum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulas	29- Aesculus	32 - Catalpa	Street Character	Comments
7	LOGAN	20000	*																												Industrial	No SW. No OHW
7	LOGAN	20100			5																										Industrial	OHW south side. Open ditches
7	LOGAN	20200	*																												Industrial	OHW south side. Open ditches
8	LOGAN	20300					4																								Industrial / Commercial	OHW & SW south side
6	LOGAN	20400					8																								Industrial / Commercial	OHW south. SW both sides
6	LOGAN	20500								27																					Commercial	No OHW. SW both sides
6	McBURNEY LANE																				8	1									Commercial	Small public lane. Pedestrian use only
5	MICHAUD CR	20000								14																				15	Residential SF south / MF north	OHW & SW south side
5	MICHAUD CR	20100								8																				7	Residential MF	OHW & SW south side
5	MICHAUD CR	20200								7																				8	Residential MF	OHW south side. SW both sides
8	MUFFORD CRES	20600	*																												Commercial, Twp. of Langley north side	
8	MUFFORD CRES	20700	*																												Industrial, Twp. of Langley north side	
2	EWLANDS DRIVE	20800	*																												Residential	OHW & SW north side
2	EWLANDS DRIVE	20900	*																												Residential	OHW & SW north side
6	OLD YALE RD	20900	*																												Nicomekl River	Old bridge closed.
6	OLD YALE RD	21000		2																											Church north / SF south	No curb or SW. OHW north side / Other / 2 Redwoods
6	PARK AVE	20400														11								7							Park / Residential MF & SF	No OHW. SW both sides

City of Langley Street Tree Inventory

Map #	Street		Block	Street Trees - None	Other	1 - Carpinus	2 - Cornus	3 - Fraxinus	4 - Sorbus	5 - Quercus	6 - Acer	7 - Crataegus	8 - Liriodendron	9 - Pseudotsuga	10 - Magnolia	11 - Pinus	12 - Pyrus	13 - Plum, Purple Leaf	14 - Prunus	16 - Thuja	17 - Robinia	18 - Gleditsia	19 - Abies	20 - Platanus	21 - Fagus	22 - Cercidiphyllum	23 - Cedrus	24 - Chamaecyparis	27 - Malus	28 - Betulus	29- Aesculus	32 - Catalpa	Street Character	Comments
6	PRODUCTION WY		19700	*																												Industrial	
6	PRODUCTION WY		19800															1															Industrial	
6	PRODUCTION WY		19900								13																						Industrial / vacant	trees in small park area
5	PRODUCTION WY		5600	*																													Industrial	No SW NO OHW gravel shoulders
6	SALT LANE																					8											Commercial, small downtown lane	OHW east side
2	UPLANDS DRIVE		4500	*																													Residential Cul-du-sac off 46	No curb, SW or OHW
2	UPLANDS DRIVE		4600	*																													Residential Cul-du-sac off 46	No curb, SW or OHW
					27	48	8	159	47	48	288	10	17	103	9	73	25	179	242	123	56	21	39	40	21	9	10	5	24	27	40	8	**Total # of Street Trees = 1711**	
					other	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	27	28	29	32	**Inventory Map Reference #**	

CITY OF LANGLEY STREET TREE PROGRAM

DESIGN GUIDELINES FOR THE USE AND CARE OF STREET TREES

Executive Summary:

The benefits of trees in the urban environment has been well documented. They moderate energy consumption, reduce air pollution, control storm water and provide wildlife habitat. Other benefits include improved physical and mental well being, enhanced aesthetics and increased property values. When viewing Langley from the surrounding hills, one can see and appreciate the contribution trees make to the liveability of the City. While it is apparent that the trees dominate the landscape of the City, only a small fraction of the existing urban forest is actually located along the City boulevards and streets.

The "Street Tree Program" has been developed as an initiative of the Development Services, Parks and Engineering departments to establish a guiding policy for street tree management within the City. It forms the basis for a co-ordinated and comprehensive standard for the care and maintenance of existing and new trees located on public lands along municipal roadways. The document is designed as a technical paper that defines a strategy for the selection of new trees and care of existing specimens that is based on sound, state of the art, arboricultural intelligence. Information is also provided on evaluating sites, selecting and obtaining trees, proper installation techniques, cultural requirements, standards and specifications.

The management program began with an inventory and analysis of existing conditions. At present, there is a total of 1,711 trees positioned along the various road right of ways within the City. Of these, 79% are of Deciduous variety and 21% are Coniferous. The inventory information has highlighted a number of problems and concerns. Fully 25% (421) of the existing street trees are from the Cherry family (Prunus) of which many are in poor condition and will require replacement in the near future. Tree planting in the City is currently restricted to replacement of dead trees with a limited number of new trees added to the inventory in recent years. The actual number of trees along the street of the City is estimated to have decreased over the past few years. The downtown area is dominated by Green Ash (Fraxinus), a selection that has proven to be generally unsatisfactory and maintenance intensive. As a basis for comparison, the City of New Westminster, a community of similar size, currently plants over 400 new trees per year adding to the existing inventory of over 9,000 specimens along their streets.

Staff is now moving to address the various problems and shortcomings of the current situation by planning for an increase in the number of new trees planted along with scheduled replacement of problem trees found throughout the City. Development by law in the City now makes the provision of street trees mandatory for all new development. In order to ensure success, all new street tree planting will be required to comply with the high standards set forth in the Street Tree Program document.

The planting of a tree is an act of faith, an initiative that will make our community a better place to live. Trees will improve our environment not just for us, but for our children and our grandchildren. Healthy, well kept trees are an expression and a reflection of the pride and spirit of the community in which we live.

INTRODUCTION

The City of Langley has developed the "Street Tree Program" to assist in the implementation of city wide street tree management policy. The program forms the basis for a co-ordinated and comprehensive management standard for the care and maintenance of existing and new trees located on public lands along municipal roadways. The Street Tree Program has been developed by the City to control the planting and care of trees to the end purpose of enhancing the general health and welfare of it's citizens.

The following guidelines, recommendations and specifications outline selected portions of the Street Tree Program for distribution to individuals, designers or organisations who require information with regard to the selection, installation and care of street trees within the City of Langley.

The provision of street trees is considered a requirement for all new development within the City. New tree installations along municipal right of ways are required to comply with all applicable sections of this document.

Additional information is available from City Hall upon request.

SITE CRITERIA

For trees to thrive in the community and provide the benefits expected of them, they must be well suited to the site conditions. A thoughtful analysis of each planting site is essential before selecting species and cultivars that have the needed adaptive and appearance traits. This analysis requires that anything important that may affect the trees to be planted or that may be affected by the trees be considered prior to proceeding. Consider how the trees will react to the site conditions, especially adverse effects. Take the time to picture how the trees will appear at their potential mature size.

The selection of tree species and their distribution in the community helps define the character of a street or neighbourhood. The importance of street trees to define, reinforce, or create a sense of space cannot be over emphasised. Trees have characteristics typical to their species that can be used as design elements. Their scale, shape, colours, textures and forms become design tools in developing a recognisable identity. By varying the tree selection one can reinforce design elements within the existing streetscape or use trees to amend our experience of the streetscape. Generally strong contrasts within street tree groupings should be avoided. Repetition and supple changes in form, colour, size and texture are desirable. Exceptions to this principle occur at major intersections or at any other are where alertness and viewer attention is desired. By establishing a relationship between the use of an area and the scale and characteristics of the street trees, an identifiable order can be achieved.
Site criteria to be evaluated in determination of tree planting locations are;

a) Location and visibility of site
b) Probability for long term tree survival (conflict with existing or proposed services)
c) Possibility of private tree installation in immediate area
d) Overall benefit to the community

General street tree design guidelines for the four common zoning categories is as follow:

A. **Commercial Areas**

There are two general types of commercial areas, those with ample space in front of building setbacks, and the traditional commercial streets of the downtown core with minimal setback distances and therefore limited space for trees. Tree characteristics for each of these type follow:

1. Commercial areas with ample building setback distances
   - Trees with open branching and light foliage to provide filtered views through the trees.
   - Clean trees, ones that drop only leaves, no fruits or nuts, these are more desirable for maintenance on hard surfaces.
   - Medium to large scale trees with upright branching to have a significant impact on the street and yet avoid conflicts with large vehicles.
   - Broad shade trees adjacent to parking areas to provide shade.
     Trees adaptable to pruning for high standard height.

2. Commercial areas with minimal building setback distances.
   - Medium scale trees with tight columnar branching varieties to avoid conflict with building facade.
   - Clean trees, ones that drop only leaves, no fruits or nuts these are more desirable for maintenance on hard surfaces.
   - Small trees that can achieve (high branching) standard.

   Larger, wide spreading trees for feature or contrast trees where space will allow.
   Strong branch structure. Adaptability to merchants desire for tree lights

B. **Industrial Areas**

The established industrial areas within the City vary greatly. Many of the industrial properties provide attractive, well maintained landscape buffers in front of their properties while others view the boulevard as an extension of their work or parking area. All future industrial development or re development must recognise the need to provide adequate space for the installation of street trees. Trees should be selected to conform to the specific requirements of the site and the intend site use.

C. **High density residential areas**

Design considerations are divided into two categories; those with overhead wires and those without.
All multi family or high density residential development in the city are required to supply and install street trees to the standards set forth in the street tree program. Tree selection by landscape consultant must be reviewed and approved by the City prior to installation.

1. With overhead wires.
   - Trees with small mature height are required.
   - V-shape trees are desirable, branches will arch to form a canopy over streets and sidewalks while staying out of power lines.
   - Plant medium to large upright street trees on private property beside hydro lines.

2. Without over head wires.
   - Medium scale ornamental flowering trees; Flowering trees can be used at entry drives to signal arrival.
   - Medium to large scale trees provide visual control between buildings.
   - Spreading shade trees to provide shade where space allows.

D. **Single Family Residential Areas**

The majority of Langley's single family neighbourhoods have not been developed with formal street trees. It is recognized that the existing informal urban forest provided by the residents provides for a diverse and attractive selection of trees. New housing projects will provide a minimum of one tree per lot.

LOCATION OF TREES WITHIN THE PUBLIC RIGHT OF WAY

The location and spacing of trees must be integrated and planned for along with all other infrastructure elements. Co-ordination of proposed tree location must be reviewed for potential conflict with sidewalks, underground utilities, light standards, signs, safety and the predicted pedestrian/vehicular use.
There are four general location categories with potential for street trees in the roadside right of way.

1) In a landscape boulevard (grass boulevard between the back of curb and separated sidewalk)
   - No tree planting is recommended where the distance between a curb and a detached sidewalk is less than 1.2m.
   - Trees should be centred in the planting strip between the walk and the curb.
   - No street trees are to be installed closer than 75cm from the back of the curb.
2) Behind the sidewalk (sidewalk immediate to back of curb, grass strip in public R.O.W.)
   - Street trees should be planted no closer than .9m back of the sidewalk. Tree must be located on the public R.O.W.
3) Within a median or cul-du-sac.
   - Spacing will be dependant upon the size and width of the planting area available.
4) Within designated tree pits or channels with root development under hard surface.
   - Trees installed in sidewalks should have a minimum of 4.8 sq. metres of cut-out area.
   - Trees in sidewalks should not be installed closer than 1.6m from a building.
   - Trees shall be set back a uniform distance from the back of curb with the minimum standard of 75cm.
   - Trees known to develop shall, invasive root structure should be avoided.
   - Opportunity to allow for access to adequate volumes of growing medium to support long term tree development should be explored wherever possible (i.e. structural soil / break out channels, larger tree pits etc.).

Where circumstances will not allow for tree installation on public property, placement of street trees just into the adjacent private property can be considered.

The City of Langley will plan for combining planting of trees with underground utilities where feasible. Many utilities and services share the roadside right of way. Water, gas, street light ducting, fire hydrants, telephone, cable and hydro ducts as well as property connections for water, storm sewer, sanitary sewer, gas and hydro are undergrounded in dedicated or shared corridors.

MINIMUM TREE PLANTING CLEARANCES

Trees can represent safety concerns in transportation corridors. Clearance is required for pedestrians, vehicles and utility lines (above and below ground).Tree should not impair visibility at intersections and traffic signs, or interfere with lighting at night. These factors will influence the choice of trees, as well as initial planting size, placement and maintenance.

Tree locations must be governed by the location of functional encumbrances sharing the right of way. Separation restrictions are listed as minimum tree location offsets. All measures are from the centre of the tree trunk to the edge of the object.

Overhead Utilities

BC Hydro has defined three planting zones in connection with overhead power lines.

Low Zone; The area directly under the power lines and extends 5 meters on either side of the hydro pole. Trees planted in this area should have a maximum height of 6 meters or less.

Medium Zone; The area that extends from the edge of the low zone to a distance of 20 meters from the hydro pole. Trees in this zone cause the majority of tree related power outages. The maximum tree height in the medium zone should be 12 meters.

Tall Zone; The area more than 20 meters from the power lines. There are no planting restrictions applied to this area.

Transmission Lines

No trees are allowed to be planted under high voltage lines

- Branches from neighbouring trees should retain clearance of 4.5 m from distribution lines
- Branches from neighbouring trees should retain clearance of 7.6 m from transmission lines

Poles

Minimum offset to:

-	Lamp standards	6m	(20')
-	Steel/wood hydro poles	3m	(10')
-	Regulatory Street Signage (oncoming traffic)	6m	(20')
-	Parking meters	0.9m	(3')

Underground Utilities

Minimum Offset to:

-	Service connections/manholes and valves	1.2m	(4')
-	Catch Basins	2.0m	(6.5')
-	Sewer Services	1.5m	(5')
-	Utility Mains	0.9m	(3')
	Hydrants	1.5m	(5')

ROAD ELEMENTS

Minimum offset to:

- Curb face	0.75m	(2.5')
- Sidewalk	0.6m	(2.0')
- Driveway Crossings	1.8m	(6.0')
- Corner 8.0m	(26.0')	
- Buildings - (may vary according to species)	3.0m	(10.0')
- Bus Stops - clearance is from curb face	2.0m	(6.5')

DO NOT PLANT TREES

- Under high voltage transmission lines
- Under existing canopies or overhead signs
- In loading zones, taxi pick up zones, police/emergency access zones.

SPACING BETWEEN TREES

Standard spacing between street trees should range between 4.5m (15') to 18 m (60'). This range of spacing is appropriate for long range health and well being of the types of trees generally recommended for use as street trees. Over planting is aesthetically tempting when trees are young but usually generate problems for the City once the trees have matured.

As a general rule, smaller trees or trees with an upright columnar form should be planted closer together while large spreading varieties should be planted further apart. Street trees should be placed so they may develop freely without crowding each other, adjacent buildings, or utility lines. Locations should be planned to maximize the number of trees within the spacing constraints. It is not necessary for trees to be regimented to a strict spacing format repeated down the street. Minimum offset requirements described in this document should be followed, but some degree of leniency in spacing may be applied as required to fit appropriate trees into the streetscape.

SPACING CHART

The following chart sets out spacing recommendations according to the mature size of the trees. Sizes of trees species can be referenced from the street tree list.

Tree Type	Spacing
Large Spreading Trees	15 m - 18m (50'- 60') on centre
Medium Sized Trees	8 - 13 m (26-45') on centre
Small Trees	4.5 - 9 m (15-30') on centre

Columnar trees can be spaced to conform to local conditions and natural mature tree width.

SPECIES SELECTION CRITERIA

There is a very large number of tree species that are considered to be appropriate for street tree use in the City of Langley. The selection of the right tree can be made easier by eliminating the trees with known traits that are unsuitable for any particular location.

Size	(at maturity)
Form	(many trees will change form over time)
Cold hardiness	(City of Langley Street trees should be minimum Zone 6.)
Root structure	(volume soil available / soil quality)
Drought resistance	(irrigation)
Disease / insect problems	(past / present / projected problems, ease of maintenance)
Colour	(design intent)
Texture	(shade / filtered light / blocking of views or signs)
Maintenance	(low maintenance preferred / pruning schedule)
Availability	(area of search / replacement trees)

The preferred species or cultivars may be difficult to locate from local nurseries without adequate lead time or during a tender of bidding process. Pre purchase of trees from local suppliers can assure supply and achieve a scale of economy not otherwise available. All substitutions require approval from the City.

- Small to medium scale trees with a variety of blooming seasons, fruiting effects and interesting forms.
- Ornamental flowering trees are appropriate but should be provided only in small quantities and with alternate species to inhibit insect infestations.
- Trees with nuts and fruits to attract birds and squirrels.

In addition to the above guidelines street tree varieties selected within single family neighbourhoods can be based on a theme i.e. one species at intersections throughout a neighbourhood. Large scale trees should be designated for primary connector streets and intersections to scale down the traffic and noise. Medium sized trees should be specified for secondary streets and small scale trees for small cul-de-sacs.

DESIRABLE STREET TREE SPECIES:

The noted desirable street tree species schedules were selected because they are of a size, form and habit specific to street use. Recommended species have been selected for their adaptability to the street side condition, resistance to pests, lack of chronic diseases and proven performance in our region. Selected trees are generally available in local nurseries, however, some varieties may require a full search of the Pacific Northwest region. If other trees are found to meet these criteria they may be added to the lists. Within the varied genus of tree types, numerous cultivars are available that have been developed specific to the conditions of the Pacific Northwest.

The list of desirable street tree species are listed in 4 categories according to their mature size:

A.	**Small Trees:**	Trees with a mature height of less than 9 m (30')
B.	**Medium Trees:**	Trees with a mature height of 9 m - 18 m (30' – 60')
C.	**Large Trees:**	Trees with a mature height greater than 18 m (60')
D.	**Columnar Trees**	Trees with a narrow habit, mature width of less than 9m (30')

The schedules provide limited information on each tree species selection: botanical and common names; mature height and spread; a notation of significant features of the tree, i.e. colour, seasonal display, flowering, fruiting and/or, characteristics of growth habit. Further information is available from a variety of sources.

Tree shapes and growth habit change as trees age. Young trees are often more upright, while older specimens of the same cultivar may develop a wide spreading form. The "Mature" size of any tree will vary by climate, site characteristics and longevity. City trees rarely obtain the size of their counterparts in native forest stands. In typical urban situations, few tree live to more than 30 years old and those that do, grow slowly beyond that age. The size ratings indicated in the appended recommended tree tables reflect an estimate of the size and form of a healthy 30 year old tree grown under average city conditions.

RECOMMENDED SPECIES SCHEDULE
SMALL SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer buergeranum	Trident Maple	6m	6m	Round form, can be pruned to a standard height. Glossy green foliage. Red / Orange fall colour
Acer davidii	Snake Bark Maple	7m	8m	Oval form, smooth green and white striped bark. Yellow to red fall colour
Acer ginnala	Amur Maple	6m	6m	Low branched or multi stem tree. medium green, fine textured foliage. Brilliant orange red fall colou
Acer griseum	Paperbark Maple	7.5m	6m	Upright, spreading form. Trifoliate, dark green leaves, Red fall colour. Exfoliating bark,
Acer palmatum	Japanese Maple	varies 4 - 9m	varies 4 - 9m	Numerous varieties in all forms and colours. Upright form best for use as street trees. Can be specified with standard height.
Acer platanoides 'Globosum'	Globe Maple	4.5m	5.5m	Formal, round headed tree (lollipop) Medium green foliage, yellow fall colour
Acer truncatum x platanoides 'Warrenred'	Pacific Sunset Maple	9m	7.5	Upright spreading, round crown. Dark green glossy foliage. Yellow - orange to bright red fall colour.
Betula pendula 'Youngii'	Contorted Weeping Birch	4.5m	6m	Asymmetrical branching structure, twisted trunk, feature tree, dark green foliage. Yellow fall colour
Cercis canadensis	Eastern Redbud	7.5m	9m	Multi stem or low branched, spreading form with flat top. Medium green foliage. Early spring flower Yellow fall colour.
Cornus kousa	Japanese Dogwood	6m	6m	Vase shaped to rounded. White flowers, strawberry like fruit, yellow to red fall colour.
Crataegus x lavallei	Lavalle Hawthorn	8.5m	6m	Irregular vase shape. small dark green leaves. White flower clusters, orange fruit, Bronze fall colour
Halesia carolina	Carolina Silverbell	9m	6m	Broadly pyramidal, Light green foliage, Hanging white flower clusters. Yellow fall colour
Koelreuteria paniculata	Goldenrain Tree	9m	9m	Slightly rounded crown, flattens with age, long clusters of yellow flowers
Magnolia kobus	Kobus Magnolia	9m	6m	Pyramidal when young, rounded at maturity, large white flowers

Small trees cont.				
Prunus blireiana	Flowering plum	7.5m	6m	Broad spreading crown, Reddish purple leaves, no fruit, pink flowers,
Prunus x yedoensis 'Akebono	Akebono cherry	7.5m	7.5m	Upright spreading form. Bright glossy leaves, Pink flowers, Yellow fall colour
Prunus virginiana 'Shubert'	Shubert Choke Cherry	7m	6.5m	Oval rounded crown, dense foliage, green at first, turning reddish purple, white flowers
Styrax japonicus	Japanese Snowbell	7.5m	7.5m	Round crown with medium green fine textured foliage, bell shaped white flowers
Styrax obassia	Fragrant Snowbell	7.5m	4.5m	Pyramidal to upright form. Large deep green foliage. White flower clusters
Syringa reticulata	Ivory Silk	7.5m	6m	Ovate crown. Dark green foliage. Late spring, white flower clusters

RECOMMENDED SPECIES SCHEDULE
MEDIUM SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer campestre	Hedge Maple	10m	9m	Dense round form, Dark green glossy leaves, Yellow fall colour
Acer platanoides 'Cleveland'	Cleveland Maple	12m	9m	Upright, oval dense crown. Medium green foliage. Yellow fall colour
Acer platanoides 'Deborah'	Deborah Maple	14m	12m	Broadly oval to rounded crown. Reddish purple in spring, becoming dark green in summer. Bronze fall colour.
Acer pseudoplatanus 'Atropurpureum'	Spaethii Sycamore Maple	12m	9m	Oval with upright branching, Leaves, deep green above, purple underside
Acer rubrum 'Red Sunset'	Red Sunset Maple	14m	10m	Upright, rounded pyramidal tree. Dark green foliage. Red fall colour
Acer rubrum 'Morgan'	Morgan Maple	15m	13m	Broadly oval form. Medium green foliage. Orange - Red fall colour.
Aesculus x carnea 'Briotii'	Ruby Red Horsechestnut	13m	12m	Round crown. Dense green foliage, Red flowers. Yellow fall colour
Betula jacquemontii	Jacquemontii Birch	12m	9m	Upright oval form. Dark green glossy foliage. Bright white bark. Resistant to Birch borer. Yellow fall colour
Carpinus betulus	European Hornbeam	12m	12m	Densely pyramidal becoming broad. Dark foliage. Yellow fall colour
Catalpa bigonioides	Indian Bean Tree	10m	12m	Broad rounded crown. Large heart shaped leaves. Long white flowers turning to long persistent seed pods.
Cercidiphylum japonicum	Katsura Tree	13m	13m	Upright pyramidal when young, round with age, fine textured bluish green foliage. Yellow - orange fall colour
Cladestris lutea	American Yellowood	12m	12m	Broad rounded head. Yellow green foliage in spring turning green in summer. Brilliant yellow fall colour.
Cornus nuttallii 'Eddies White Wonder'	Flowering Dogwood	10m	6m	Upright pyramidal form. Dark green foliage. Large white flowers. Dark red fall colour.
Fraxinus americana 'Autumn Purple'	Autumn Purple Ash	14m	13m	Rounded crown. Green with rough texture. Reddish purple fall colour.
Fraxinus oxycarpa 'Raywood'	Raywood Ash	11m	10m	

Medium Scale Trees Continued

Halsia monticola	Mountain Silverbell	13m	8m	Conical to rounded crown, acceding branches. Medium Green foliage. White flowers. Yellow fall colour.
Gledisia tricanthos inermis 'Skyline'	Skyline Honeylocust	15m	11m	Broadly pyramidal. Fine textured, medium green. Golden fall colour
Gledisia tricanthos inermis 'Shademaster'	Shademaster Honeylocust	18m	13m	Upright compact vase shape. Thornless. Fine textured medium green foliage. Yellow fall colour.
Gledisia tricanthos inermis 'Sunburst'	Sunburst Locust	15m	11m	Irregular crown. Bright yellow new growth, pale green. Brown fall colour
Liquidambar styraciflua 'Worpleston'	Worpleston Sweet Gum	14m	9m	Broadly pyramidal. Green foliage. Corked bark. Orange to purple fall colour
Nyssa sylvatica	Black Tupelo	13m	10m	Pyramidal when young, spreading and irregular with age. Dark green foliage. Copper red fall colour. Tough tree
Paulownia tomentosa	Empress Tree	15m	12m	Dense round head, similar to Catalpa. Large green leaves. High pollution tolerance. Exfoliating bark with age.
Pyrus calleryana 'Aristocrat'	Aristocrat Callery Pear	15m	9m	Strong pyramidal habit. Dark green glossy leaves. White flowers. Red fall colour. Do not plant near Juniper to avoid pear rust trellis.
Pyrus calleryana 'Redspire'	Redspire Pear	13m	10m	Symmetrical pyramidal form. Medium green glossy leaves. White flowers. Yellow to red fall colour.
Robinia x ambigua 'Idahoensis'	Pink Idaho Locust	10m	8m	Upright ascending branches. Medium green foliage. Rose pink flowers.
Sorbus aucuparia 'Cardinal Royal'	European Mountain Ash	10m	6m	Symmetrical oval habit. Dark green foliage above, silver below. Bright red fruit clusters. Rust fall colour.
Tilia americana 'Redmond'	Redmond Linden	10m	8m	Dense upright pyramidal form. Medium green foliage. Deep shade. Yellow fall colour. Aphids can be a problem.
Tilia euchlora	Crimean Linden	13m	9m	Pyramidal with upright branching. Glossy dark green leaves. Yellow - orange fall colour. Resistant to aphids.

RECOMMENDED SPECIES SCHEDULE
LARGE SCALE TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer platanoides 'Crimson King'	Crimson King Maple	18m	15m	Oval - round crown. Red / purple foliage
Acer platanoides 'Emerald Queen'	Emerald Queen Maple	20m	18m	Uniform oval crown. Dark green glossy leaves. Golden yellow fall colour.
Acer saccharum 'Legacy'	Legacy Sugar Maple	20m	15m	Upright broadly oval form. Dark green foliage. Orange fall colour.
Aesculus hippocastanum	Common Horse Chestnut	30m	15m	Round crown, fast growing. Dense shade from large medium green leaves. White flowers. Yellow fall colour.
Ailanthus altissima	Tree of Heaven	20m	12m	Broad spreading crown. Large compound green leaves. Yellow green flowers. Very tolerant of pollution.
Betula paperifera	Paper Birch / Canoe Birch	18m	10m	Upright oval form. Dark green leaves. Yellow fall colour. white bark when old
Davidia involucrata	Dove or Handkerchief Tree	25m	18m	Broad pyramidal with vivid green foliage. Long white flower bracts. No fall colour. Attractive specimen tree.
Fagus sylvatica	European Beech	25m	15m	Dense pyramidal when young, round with age. Glossy green foliage. Red / brown fall colour.
Fagus sylvatica purpurea	Copper Beech	25m	18m	Very large upright tree. Copper / purple leaves. Dense shade
Fagus sylvatica pendula	Weeping Beech	18m	15m	Weeping form. Shinny dark green foliage. No two trees the same.
Gingko biloba	Maidenhair Tree	25m	12m	Broadly conical deciduous conifer. Broad pale green leaves. Yellow fall colour. Specify male form only.
Liriodendron tulipifera	Tulip tree	24m	12m	Upright oval form. Medium green. Fast growing. Yellow fall colour.
Nothofagus antarctica	Antarctic Beech	30m	25m	Large round habit with age. Small glossy foliage on twisted open branches.
Platanus x acerfolia 'Bloodgood'	London Plane Tree	20m	18m	Large fast growing tree with exfoliating bark. Pyramidal when young, spreading with age. Dark maple like leaves. Yellow fall colour
Quercus coccinea	Scarlet Oak	16m	12m	Pyramidal tree at youth, oval with age. Dark green glossy leaves. Scarlet fall colour.

Large Scale Trees Continued.

Quercus palustris	Pin Oak	16m	12m	Strong pyramidal growth with drooping lower branches. Dark green foliage. orange / red fall colour.
Quercus rubra	Red Oak	18m	16m	Broad round crown. Dark green leaves. Dark red / orange fall colour.
Robinia pseudoacacia 'Frisia	Golden Leaf Black Locust	20m	18m	Upright tree. Spines. Compound bright yellow foliage. Drought tolerant.
Robinia pseudoacacia 'Purple Robe'	Purple Robe locust	25m	20m	Open outward acceding branches. New growth has purple tint, turning medium green. Purple flower bracts. Yellow fall colour.
Ulmus 'Homestead'	Homestead Elm	18m	15m	Upright arching, narrow. Dark green foliage. Yellow fall colour. Resistant to Dutch elm disease.
Zelkova serrata	Japanese Zelkova	17m	14m	Vase shape, similar to American elm. Dark green foliage. Brown fall colour.

RECOMMENDED SPECIES SCHEDULE
COLUMNAR TREE SPECIES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	SPREAD	FEATURES
Acer platanoides 'Crimson Sentry'	Crimson Sentry Maple	13m	6m	Columnar shaped crown. Deep purple foliage.
Acer rubrum 'Armstrong'	Armstrong Maple	15m	4m	Upright columnar habit. Light green foliage. Yellow to orange fall colour.
Acer rubrum 'Bowhall'	Bowhall Maple	15m	5m	Upright columnar habit, more formal than Armstrong. Medium green foliage. Orange fall colour.
Acer rubrum 'Karpick'	Karpick Maple	13m	6m	Narrow oval tree, dense foliage. Yellow / orange fall colour.
Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	12m	8m	Very dense compact conical habit. Formal appearance. Dark green foliage. Yellow fall colour.
Fagus sylvatica 'Dawyck'	Fastigiate Dawyck Beech	20m	3m	Tall narrow upright columnar form. Dark green foliage.
Fagus sylvatica 'Dawyck Purple'	Purple Dawyck Beech	10m	2m	Tall narrow, slightly open, Purple foliage.
Fagus sylvatica 'Dawyck Gold'	Gold Leaf Beech	10m	2m	Narrow columnar habit with new golden foliage.
Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	20m	4.5m	Narrow pyramidal. Green foliage. Yellow fall colour. Specify male only.
Liriodendron 'Fastigiatum'	Fastigiate Tulip tree	20m	6m	Narrow with upright lateral branching. Medium green foliage. Yellow fall colour.
Magnolia 'Galaxy'	Galaxy Magnolia	15m	4m	Pyramidal to oval. Green foliage. Giant reddish purple flowers.
Prunus x hillieri 'Spire'	Spire Cherry	15m	2.5m	Upright columnar to narrowly vase shaped. Dark green foliage. Orange fall colour.
Prunus serrulata 'Amanogawa'	Amanogawa Cherry	6m	2m	Fastigiate upright branching. Pink flowers. Bronze fall colour.
Quercus robur 'Fastigiata'	Fastigate English Oak	18m	8m	Tight upright branching. Dark green foliage. Persistent brown leaves in fall.

STANDARDS AND SPECIFICATIONS

1. General Specifications

1.1 The following specifications are to serve as a standard for the planting and maintenance of all public street tree within the City of Langley. The standards shall apply whether work is performed by City forces or by individual contractors. All exceptions must be approved in advance by the City of Langley Parks department.

1.2 Permission must be obtained from the City before any person plants, removes or otherwise undertakes any activity that may affect the health and welfare of a tree located on city property. No person shall engage in the planting, cutting, trimming, pruning, spraying or otherwise treating trees located on City property without first obtaining permission from the City. Electrical utility companies shall notify the City before any trees are trimmed or pruned and all such work must be completed following accepted arboricultural standards.

1.3 Authorized work on City trees neither expresses or implies the right to violate any law of the land while in the process of performing such work.

1.4 All tree work shall be completed in a manner as to cause the least possible interference or disruption to others.

1.5 Any injury to persons or damage to any improvement while working on City trees shall be promptly report to the City.

1.6 Whenever service lines of any type or other improvements, public or private, may be affect by proposed tree work, all affected persons or authorities must be contact before beginning work.

1.7 Adequate barricades and warning devices shall be in place and flag persons shall be stationed as necessary for the safety of all vehicles and persons.

2. General Standards

2.1 Street trees are defined as any tree located on public right of way between the curb or edge of road and the property line along the sides of streets or in medians of all streets, avenues or ways within the City boundaries.

2.2 Street trees are the responsibility of the City Parks Department.

2.3 Public projects, i.e. parks, street, median, plazas and public buildings shall provide for street trees as part of the development process. The landscape plan for such projects shall be reviewed and approved by the City Parks Department and shall adhere to these standards and the City of Langley Street Tree Program.

2.4 Private projects shall provided for street tree planting as part of the development process. Street trees shall be located on the public right of way and adhere to the design objectives and spacing and location guidelines of the City of Langley Street Tree Program. Species selection will be taken from the recommend species list. All tree planting on the municipal right of way shall be approved by the City Parks Department.

2.5 All plants, planting, workmanship and materials shall meet or exceed the guidelines set forth in the BC Landscape Standard (latest edition) unless superseded by this document or directed by the City.

2.6 Street trees shall be provided by ball and burlap, tree spade or container grown methods. Bare root specimens are not allowed without permission from the City. All trees shall meet or exceed the requirements of the Canadian Standards for Nursery Stock (latest edition). Trees shall be of standard quality, true to name and type and representative of their species or variety.

2.7 All street trees shall be provided at the following minimum size;

Shade trees	6cm calliper
Ornamental trees	5cm calliper
Coniferous trees	3.0 metres height

2.8 No single species shall comprise more than 15% of the total city tree inventory. Refer to street tree inventory for further information.

2.9 Trees shall have normal, well developed branch structure and vigorous root systems. They shall be vigorous plants free from defects, decay, sun scald, abrasions of the bark, insects and all forms of infestations or objectionable disfigurements.

2.10 All trees installed are subject to rejection if they fail to comply with the standards referenced in this document.

3. Tree Planting Methods and Techniques.

3.1 Obtain approval of tree species and planting location from City of Langley, Parks Department by means of submitting a complete tree selection form for each project application.

3.2 Verify the location of all underground services before proceeding.

3.3 The area surrounding the planting site shall be prepared and cultivated to the depth of the root ball (+/- 60cm). Pits shall be circular with sloping sides. All pits shall be a minimum of twice the diameter of the root ball. Larger pits may be required in areas of poor quality, compacted or poorly drained soils. Scarify edges of the pit prior to installation of tree and backfill material. Refer to Tree Planting Details, appended to this document for further information.

3.4 If planting site is in an area of existing grass, remove sod and set aside for re use.

3.5 The City shall determine if existing site soils may be used for backfill. Recommendation for amendments to the soil shall vary to meet the requirements of the BC Landscape Standard. Imported backfill must be supported with representative soil test report.

3.6 Trees shall be installed on the day they arrive at the site. Set tree in the centre of the planting pit on compacted base. Tree shall be lifted by the root ball, never by the trunk. Ensure tree is placed at the correct planting grade. Root ball shall be placed so that the finished planting grade will be similar as to the original nursery grown grade. Untie all binding material and remove or bury top half of the burlap wrap. Properly fitted wire baskets may remain in place. Over sized baskets will require adjustment as specified in the BC Landscape Standard.

3.7 Backfill soil shall be tamped to remove all air pockets. Install soil in lifts not to exceed 25cm. Finished grade is to be even with adjacent existing grades. Finished grading shall include a 10cm water dike (well) around the outside edge of the tree pit, minimum diameter, 1.2m. Restore all disturbed areas surrounding the tree pit to original condition.

3.8 Apply a 5 - 7.5cm layer of mulch around the base of the tree. Keep mulch away from direct contact with the trunk of the tree.

3.9 Stake all trees. Use two pressure treated wooden round stakes per tree, align parallel to the roadway. Ensure stakes are firm and secure from easy movement in the soil. Do not drive the stakes through the root ball. Secure to tree with wide (5cm), flexible, soft banding material. Attached banding material at a point along the trunk no higher than necessary to secure the root ball from movement. Wire encased in hose is not permitted.

3.10 Cleanup of any soil, branches or other debris. Work area shall remain safe at all times until the cleanup is completed.

3.11 Water shall be applied to the finished planting pit in quantity sufficient to ensure the entire root ball is moist. Newly installed trees should be watered twice within 24 hours of planting. Afterwards, a thorough watering once a week is recommended unless significant rainfall occurs.

4. Maintenance

4.1 Public trees shall be managed in such a manner as to promote general health through the provision of cultural practices which may include insect and disease control, fertilization, irrigation, staking, and pruning. Trees shall be maintained in such a manner as to not endanger, interfere, or otherwise conflict with requirements of safe public use of an area.

4.2 Any public street tree that because of it's habit, growth, age, condition or disease becomes a hazard to public safety shall be maintained to correct the problem. Trees that obstruct clear views of street intersections, signs, signals or other street views that may affect safety shall be maintained to correct the problem.

4.3 Owners of trees located on private property that overhang any street or right of way within the City shall prune the branches so that such branches shall not interfere with the safe use of the street or sidewalk or obstruct the view of any street intersection.

4.4 All tree pruning shall be completed to accepted arboricultural practices and standards (ANSI - A300). No tree shall be cut back in such a manner that it's health will be affected. All tree cuts shall be made in such a manner as to favour the earliest possible covering of the wound by natural tree callus growth. Pruning cuts should be made just outside the branch collar. The use of tree climbing spurs is prohibited on City trees.

4.5 All newly installed trees shall be maintained for two years after installation to ensure survival. Application of regular water during extended periods of dry weather is critical to the success of the new tree.

4.6 Remove all trees stakes within 12 to 18 months after installation.

4.7 The City does not permit the removal or topping of healthy trees for reasons of view preservation, shade or litter complaints. Trees so damaged shall be replaced by person responsible at an equivalent size or up to 10 cm calliper.

4.8 The maintenance standard for street trees shall be Level Three; "Medium" of the BCSLA/BCLNA Landscape Standard (1997 edition). Maintenance Level Three's "main objective is generally neat, moderately-groomed appearance with some tolerance for the effects of "wear and tear". Within this standard maintenance is routine and of moderate frequency and intensity, with regular monitoring to avoid serious deterioration".

Recommended frequencies of maintenance procedures are as follows:

Fertilization	- yearly
Water	- weekly (as required)
Mulch/cultivate	- yearly
Pest Control	- as required to keep trees healthy
Prune	- as required.

4.9 All pruning shall be done by, or in consultation with an Arborist certified by the International Society of Arboriculture.

4.10 Handling and application of all chemicals, including but not limited to herbicides, pesticides, fungicides and insecticides shall be done in accordance with provincial and federal regulations. Pesticide handling and application of schedule 1, 2 & 3 chemicals as defined by the pesticide requirements shall be done by applicators holding current certification under the BC Pesticide Control Act. Proper advance notification to all residents in the immediate are, including the posting of visible notices, shall be carried our prior to any spraying.

4.11 Any conditions observed that require immediate attention shall be brought to the attention of Parks staff immediately.

5. Tree Removal Criteria

5.1 It is the long term objective of the City to ensure the ongoing tree planting program will provide many more new trees than must be removed. Preservation of existing street trees is considered a priority. Trees may be removed from a City street only when one or more of the following criteria has been met.

- The tree is infected with an epidemic insect or disease where the recommended control is not applicable and the removal is the recommended practice to prevent further transmission.
- The tree poses an extreme public nuisance due to it's species, size, location or condition.
- The tree poses a severe safety hazard that cannot be corrected by pruning, transplanting or other treatments.
- The tree is interfering with the normal development and growth of a more desirable tree.
- The aesthetic value of the tree is considered to be so low or negative that the site will be enhanced by the removal of the tree.
- Work improvements required in the immediate area of the tree are so extensive that the tree will be destroyed or render it hazardous.
- Preservation of the tree during the development of the adjacent property is not considered to be cost effective. The monetary value of the tree should be established and compared to the cost of preserving the tree.

5.2 Value assessment of public trees shall be based on the "Guide for Plant Appraisal" system as prepared by the Council of Landscape and Tree Appraisers. Appraisals must be completed by a certified Arborist with specific training in the use of the method prescribed.

5.3 All tree removals shall be completed so that the remaining stumps will be at least 25cm below ground level unless exemption is allowed by the City.

5.4 Excavations resulting from tree removals must be filled with soil to a level consistent with surrounding grades. All fill material must be clean and free of debris.

6.0 Protection and Preservation

The following specifications are intended to protect City street trees from unnecessary damage;

6.1 Attachment of signs, cables, wires or other matter foreign to the natural form of the tree is prohibited.

6.2 No excavations within the natural drip line of a tree shall be allowed without the consent and approval of the City.

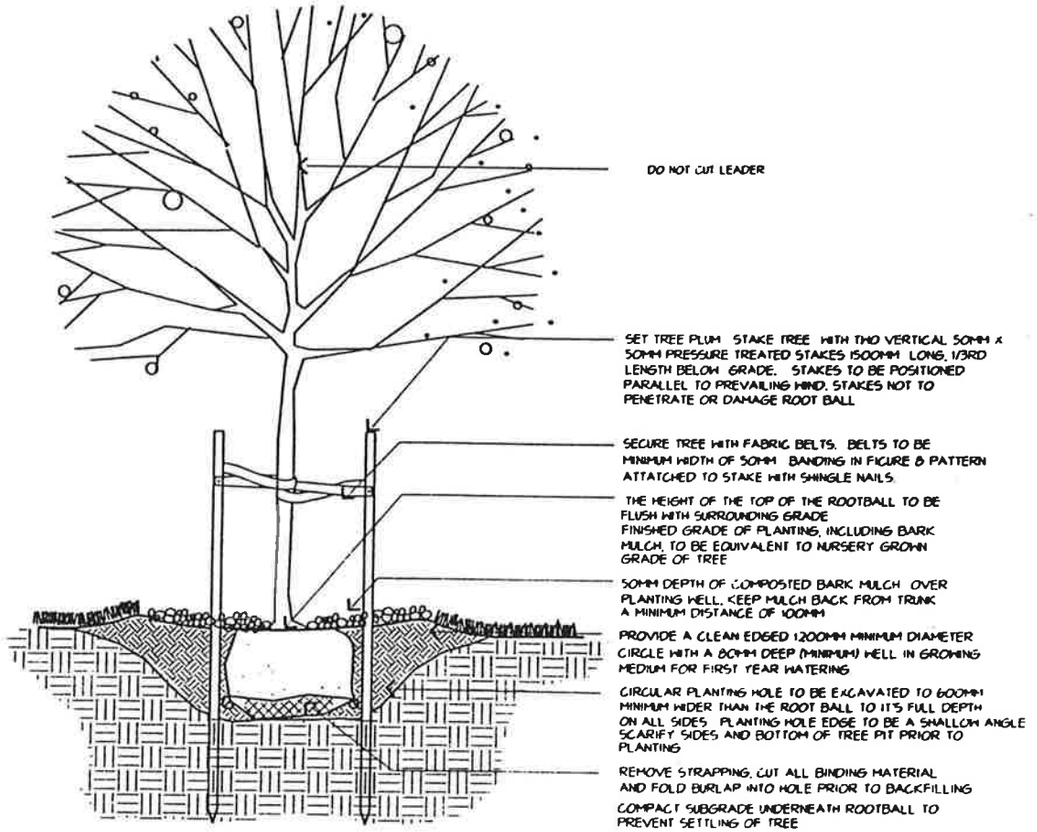
6.3 No foreign materials of any type that may affect the soil quality in ant manner within the drip line area of the tree is permitted.

6.4 All Landscape plans submitted to the City involving public property shall clearly show all existing trees. Any trees to be preserved or removed shall be clearly indicated on the plan. Preservation of existing trees should be given a high priority with all proposed development.

6.5 During construction periods responsible management and maintenance of adjacent street trees will be required. All trees adjacent to development sites must be protected by means of a solid and durable protection fence prior to any development activity occurring on the site. Tree protection shall remain in place and in good order throughout the development process. Operation of equipment or the storage of materials within designated tree protection areas is prohibited.

6.6 New sidewalks through areas of existing trees shall be constructed in a manner sensitive to the protection of tree roots. The following should be used as a guideline. For trees up to 10cm calliper, 2.4 sq. meters of porous area is required. For each additional 5cm of tree calliper, 10 more square feet of open space is required.

6.8 Do not change the exiting grades in the immediate area of the tree. Where an increase in grade is required the same area as noted in item 6.7 shall be provided by means of an tree well. Design of the tree well must be submitted to the City for approval prior to proceeding. Under no circumstances shall tree grades be lowered without permission of the City.



D-01 **SECTION** N.T.S

STANDARD OPEN SPACE TREE PLANTING DETAIL

NOTES:

ENSURE SURROUNDING SOILS HAVE NOT BEEN GRADED OR COMPACTED PRIOR TO PLANTING

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS

GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT IF PROBLEM NOTED

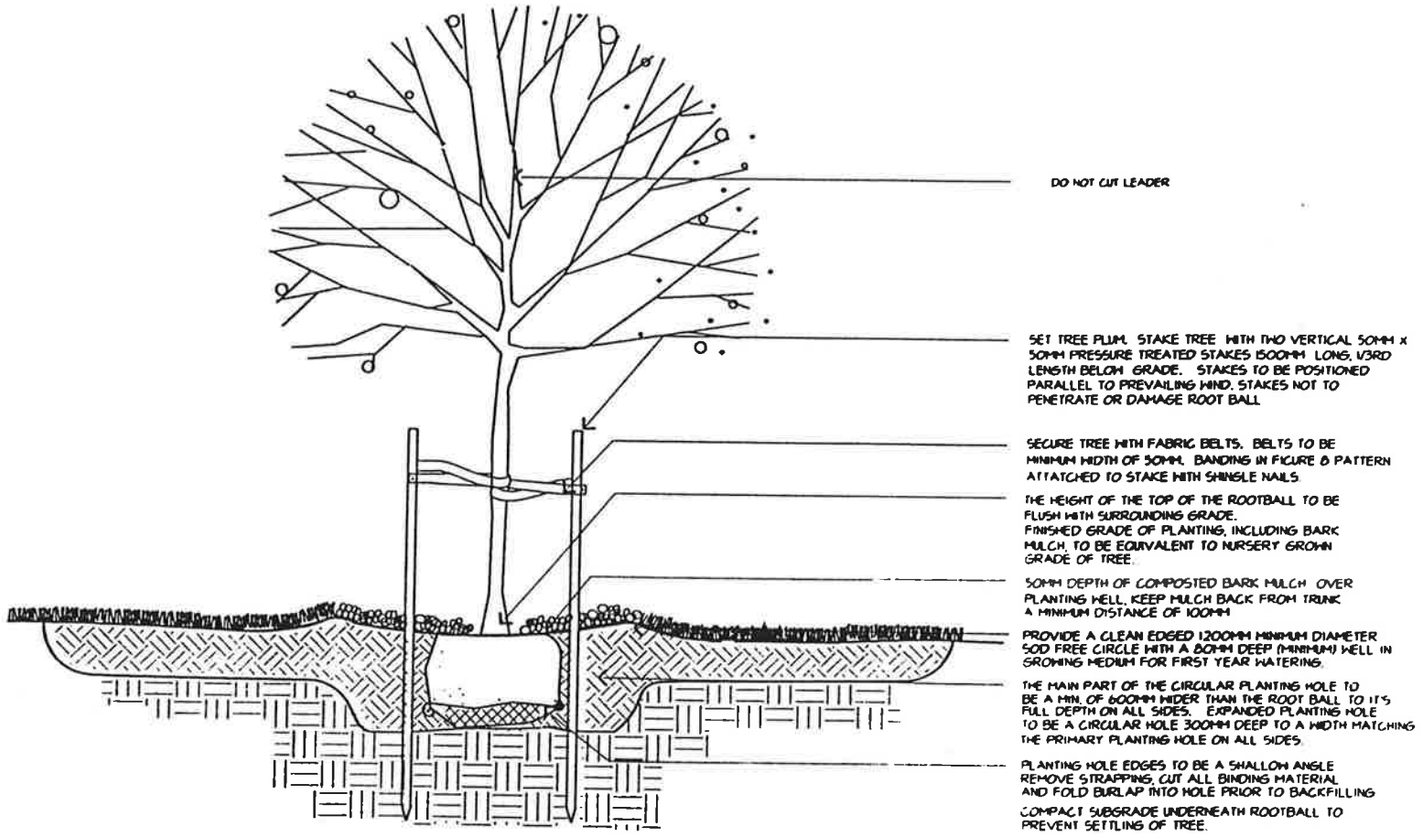
	REVISION DATE
1	

DATE: 10/99
DRAWN BY : PCM
DWG: 99-045

DRAWING NUMBER D-01

THE CITY OF LANGLEY
STREET TREE PROGRAM

TITLE STANDARD TREE PLANTING DETAIL
OPEN SPACE



D-02

SECTION N.T.S

COMPACTED OPEN SPACE TREE PLANTING DETAIL

NOTES:

FOR USE IN OPEN SPACE AREAS WHERE SOILS HAVE BEEN COMPACTED PRIOR TO PLANTING

PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST

CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS

ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST.

CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS. GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS

CONFIRM FREE DRAINING SUBSOIL

CONTACT PARKS DEPT. IF PROBLEM NOTED

	REVISION DATE
1	

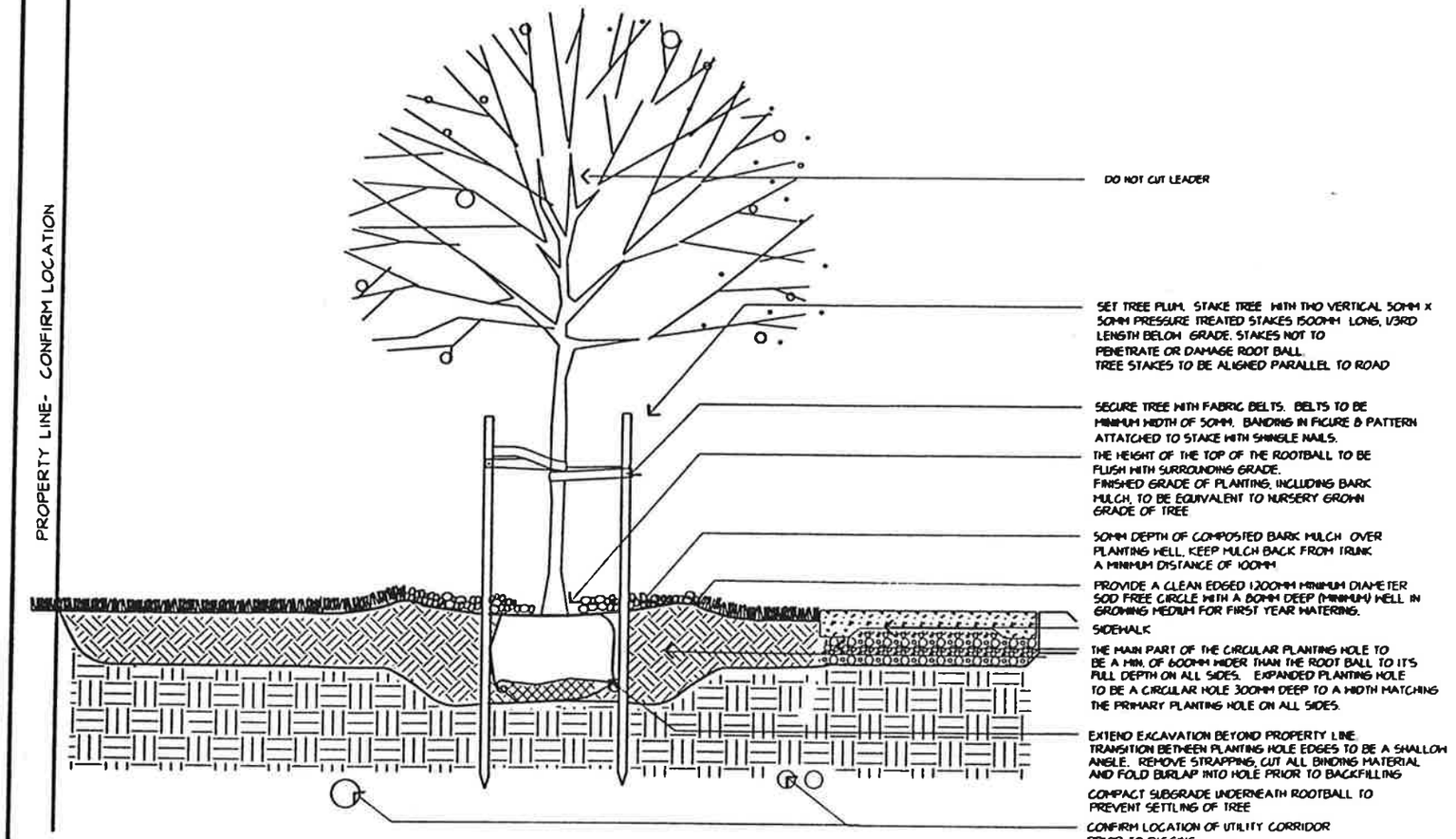
DRAWING NUMBER D-02

DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

THE CITY OF LANGLEY
STREET TREE PROGRAM

TITLE STANDARD TREE PLANTING DETAIL
COMPACTED OPEN SPACE

PROPERTY LINE- CONFIRM LOCATION



D-03

SECTION N.T.S.

STANDARD TREE PLANTING DETAIL

NOTES:

- FOR USE IN OPEN SPACE AREAS WHERE SOILS HAVE BEEN COMPACTED PRIOR TO PLANTING.
- PROTECT TREE FROM DAMAGE DURING TRANSPORT AND PLANTING. TREE ROOTS NOT TO BE EXPOSED TO SUN OR FROST
- CONFIRM TREE LOCATION AGAINST ALL REQUIRED OFFSETS
- ALL STREET TREE PLANTING PITS SHALL BE DUG BY HAND AS UNDERGROUND SERVICES MAY EXIST.
- CONFIRM EXISTING TOPSOIL IS SUITABLE FOR REUSE AS GROWING MEDIUM. DISPOSE OF AND REPLACE IF NOT. AMEND BACKFILL TOPSOIL WITH ORGANICS. GROWING MEDIUM TO BE COMPACTED WHEN BACKFILLED TO ELIMATE AIR POCKETS
- CONFIRM FREE DRAINING SUBSOIL
- CONTACT PARKS DEPT IF PROBLEM NOTED.

NOTE:

	REVISION DATE
1	

TITLE STANDARD TREE PLANTING DETAIL
STANDARD

THE CITY OF LANGLEY
STREET TREE PROGRAM

DATE: 10/99
DRAWN BY : PCM
DMG: 99-045

DRAWING NUMBER D-03

CITY OF LANGLEY, STREET TREE PROGRAM
GUIDELINES AND SPECIFICATIONS

STREET TREE SELECTION FORM

PROPOSED DEVELOPMENT

ADDRESS

NEIGHBORING STREET TREES:

R.O.W. CONFIGURATION , UTILITIES

PROPOSED STREET TREES

BOTANICAL NAME	COMMON NAME	HEIGHT/ SPREAD	QTY	SPACING/ PATTERN

Contact Engineering Department, City of Langley with specific date of planting: 514-2800

Urban Street Trees: Making The Right Selection For Your Downtown

Certain trees just don't belong downtown.

That's the scoop from Paul Walters, forestry crew leader at York City Parks in York, PA. But before any readers get their tree-hugging sensibilities in a twist, please realize that nobody likes trees more than Walters. It's just that some trees need too much maintenance and cause too much damage to work well in an urban environment.

That's why York City Parks was very careful in selecting the most suitable trees for the South George Street urban and street tree renewal project. For this project, sidewalks and 15 trees were removed along four blocks of South George Street, York's main thoroughfare; then, they were replaced with new patterned sidewalks and 80 new trees.

Why were the old trees removed? Many of them were the kind of trees (Norway maples, pin oaks) that "have the potential to get absolutely monstrous." These trees top out at heights of 80 feet plus. And the trees in York were already ripping up the sidewalks.

What trees should you plant? "What we try to tell people now is to stay away from the species that are going to get huge," says Walters. He explains that there are several alternatives to the popular but overly large species: "The little leaf linden is in the same species class as the bass wood, but doesn't get as big." In addition, there are maples that are "different growing," such as columnar Norway maples — meaning that they grow straight up, which keeps their branches from spanning out and blocking signs, lights, views and breaking off in storms. (Keep in mind that you'll also need to consider your regional climate when selecting suitable street trees.)

Walters warns that although the Bradford pear is one of the hardiest trees for surviving heat and fumes in downtowns with seasonal climates, "they fall apart when they get older." In York, the parks department has cabled many of the city's Bradford pears to hold them together.

Besides considering the qualities of the tree, there are several other important criteria that you need to consider when planting trees downtown. The following criteria require that you think several years down the road to the time when trees get larger — and more troublesome.

1 — Do you have wires overhead? If cable, phone and/or primary and secondary electrical wires are overhead, maybe it's not a good idea to plant there. "In some situations," says Walters, "it's not even in your best interest to plant a tree."

2 — Do you have street lamps/light poles nearby? A tree might block the lights, defeating their entire purpose of illumination. In fact, says Walters, "no matter how you trim the tree, you're losing light."

3 — Do you have underground lines nearby? Find out where gas, water and sewer lines are underground. Stay at least 10 feet away. Confides Walters, "That's the problem when you're working within an urban environment. A lot of times you don't have 10 feet to move around in."

4 — Check the proximity to a corner. People driving cars, in particular, may need to see around the corner to make turns and avoid accidents. A tree could diminish visibility.

5 — Can you allow room around the base of the tree? You need to be able to cut at least a 4' x 4' square in the concrete around the tree. This allows more water to get to the roots. And it also makes sidewalks less susceptible to being ripped up by tree routes (or at least puts those repairs off for a few more years). Then you need to fill in the square with mulch, plantings or something to "keep people from breaking their ankles in it," says Walters. York is placing grates over the 5' x 5' cutouts around its new trees. This allows water to get through and keeps the surface smooth for pedestrians walking down the street. The grates also allow York City Parks to cut out portions as the trees' diameters increase.

Another tip: Don't plant trees with trunks of less than a 4" to 6" diameter. Otherwise, they're too small to withstand the treatment they're going to get in an urban environment. Unfortunately, Walters reports, "when you put a tree in a downtown area, people tend to damage them."

Once you've planted the trees, don't scrimp on taking care of them. Walters explains that hiring cheap tree companies to trim the tree is often counterproductive. Make sure you've got someone