PLANT SCHEDULE

M2 JOB NUMBER: 25 049

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
SHRUB				
B	7	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#2 POT; 25CM
AZ	119	CAMELLIA JAPONICA 'KRAMER'S SUPREME'	CAMELLIA; RICH RED	1.5M B&B @THE TIME OF INSTALLATION
I	79	MAHONIA NERVOSA	LONGLEAF MAHONIA	#2 POT; 40CM
S	98	OSMANTHUS BURKWOODII	FALSE HOLLY; FRAGRANT WHITE	#3 POT; 50CM
PIJ	11	PIERIS JAPONICA 'MOUNTAIN FIRE'	JAPANESE ANDROMEDA	#3 POT; 50CM
PM	94	PINUS NIGRA 'ARNOLD SENTINEL'	ARNOLD SENTINEL AUSTRIAN PINE	#3 POT; 50CM
P	56	PRUNUS LUSITANICA	PORTUGESE LAUREL	1.5M B&B @THE TIME OF INSTALLATION
R	73	ROSA NUTKANA	NOOTKA ROSE	#3 POT; 60CM
T	78	TAXUS X MEDIA 'HICKSII'	HICK'S YEW	1.5M B&B @THE TIME OF INSTALLATION
V	73	VIBURNUM DAVIDII	DAVID'S VIBURNUM	#3 POT; 50CM
GC				
A	622	ARCTOSTAPHYLOS UVA-URSI 'VANCOUVER JADE'	KINNIKINNICK	#1 POT; 20CM
AJ	41	COTONEASTER LOWFAST	LOWFAST COTONEASTER	#1 POT; 25CM
PI	113	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 60CM O.C.

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PLANT SCHEDULE

M2 JOB NUMBER: 25 049

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	2	ACER PALMATUM 'BLOODGOOD'	JAPANESE MAPLE	2.5M HT; B&B; UPRIGHT FORM
	1	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	6CM CAL; 1.8M STD; B&B
	6	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	3M HT; B&B
	6	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	6CM CAL; 2.0M STD; B&B

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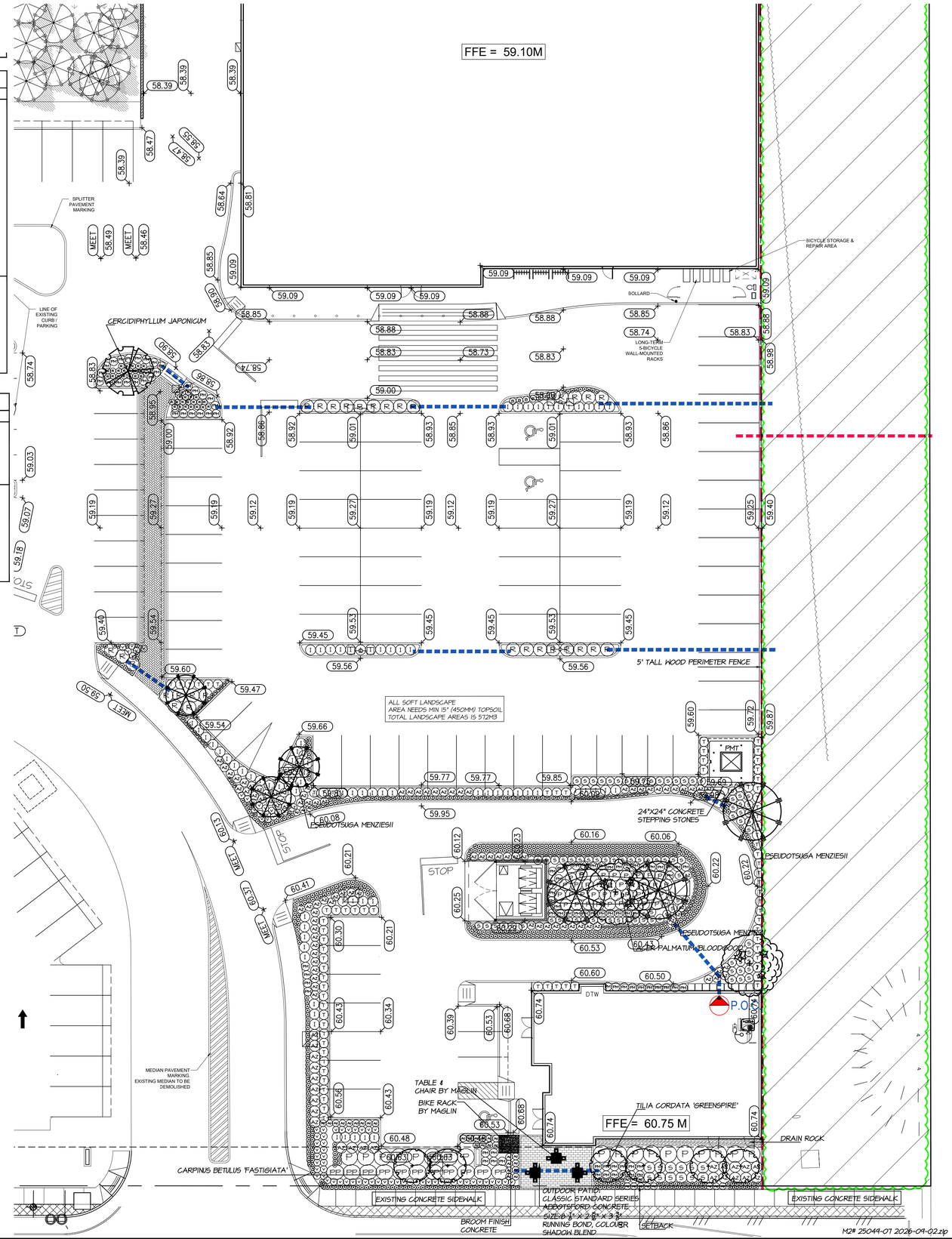

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M2 LANDSCAPE ARCHITECTURE

#220 - 26 Lorne Mews
New Westminster, British Columbia
V3M 3L7
Tel: 604.553.0044
Fax: 604.553.0045
Email: office@m2la.com

NO.	DATE	REVISION DESCRIPTION	DR.
5	03.SEP.2026	UPDATE ON ALR AREA	BN
4	07.AUG.2026	REV AS PER CITY COMMENTS/ALR	BN
3	14.APR.2026	DP SUBMISSION	BN
2	16.MAR.2026	REV AS PER NEW SITE PLAN DP	BN
1	15.JAN.2026	PRELIMINARY DESIGN	BN

SEAL:

PROJECT:

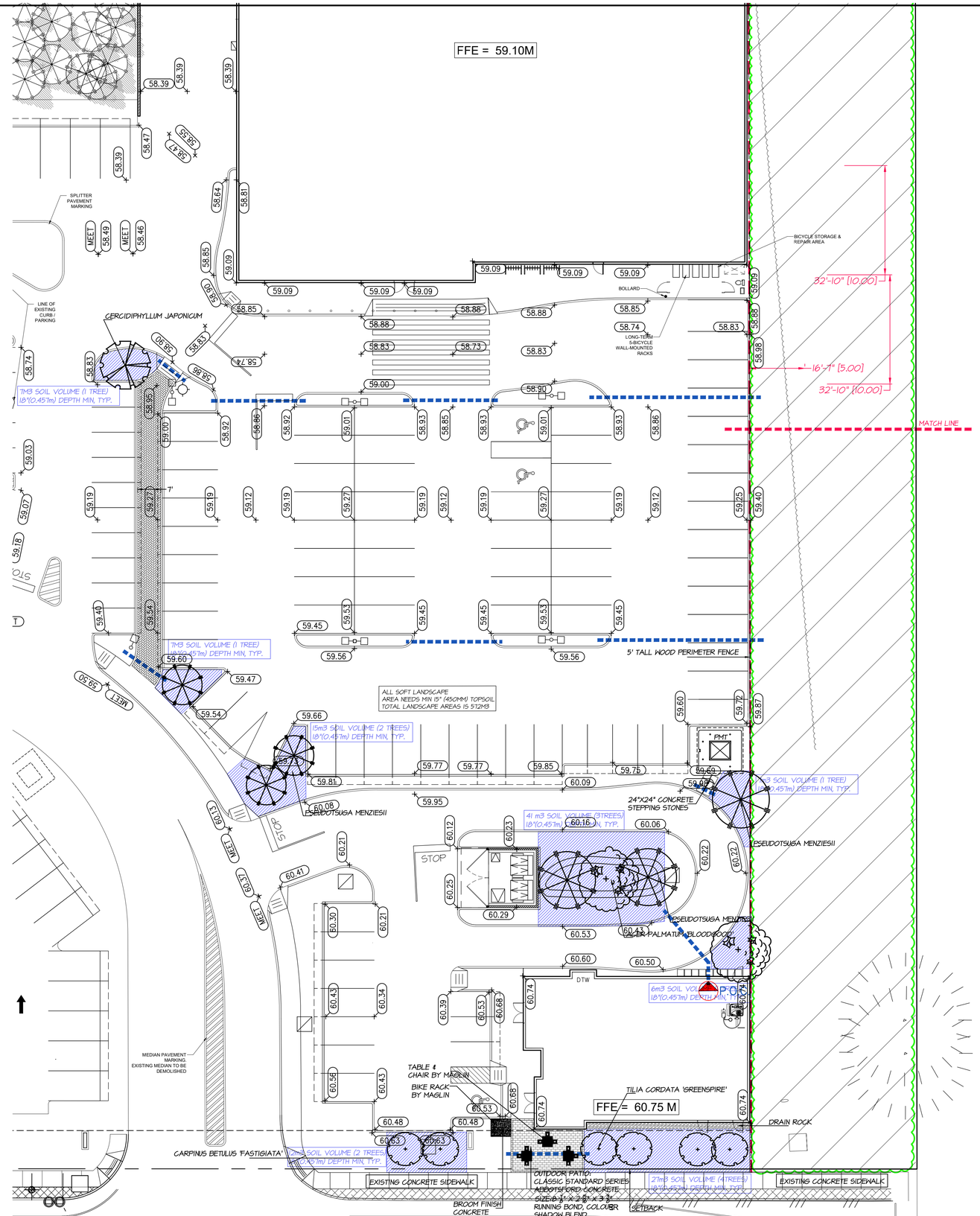
1966 GUTHRIE ROAD, COMOX, BC

CITY PROJECT#:

DRAWING TITLE:

KEY PLAN

DATE: 12.JAN.2025	DRAWING NUMBER:
SCALE: 1/16"=1'-0"	L1
DRAWN: BN	
DESIGN: BN	
CHK'D: MM	OF 6
M2LA PROJECT NUMBER:	25 049



M2# 25044-07 2026-04-02.zip

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#220 - 26 Lorne Mews
New Westminster, British Columbia
V3M 3L7
Tel: 604.553.0044
Fax: 604.553.0045
Email: office@m2la.com

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3	14.APR.2026	DP SUBMISSION	BN
2	16.MAR.2026	REV AS PER NEW SITE PLAN DP	BN
1	15.JAN.2026	PRELIMINARY DESIGN	BN

SEAL:

PROJECT:

1966 GUTHRIE ROAD, COMOX, BC

CITY PROJECT#:

DRAWING TITLE:

SOIL CALCULATION PLAN

DATE:	12.JAN.2025	DRAWING NUMBER:	L2
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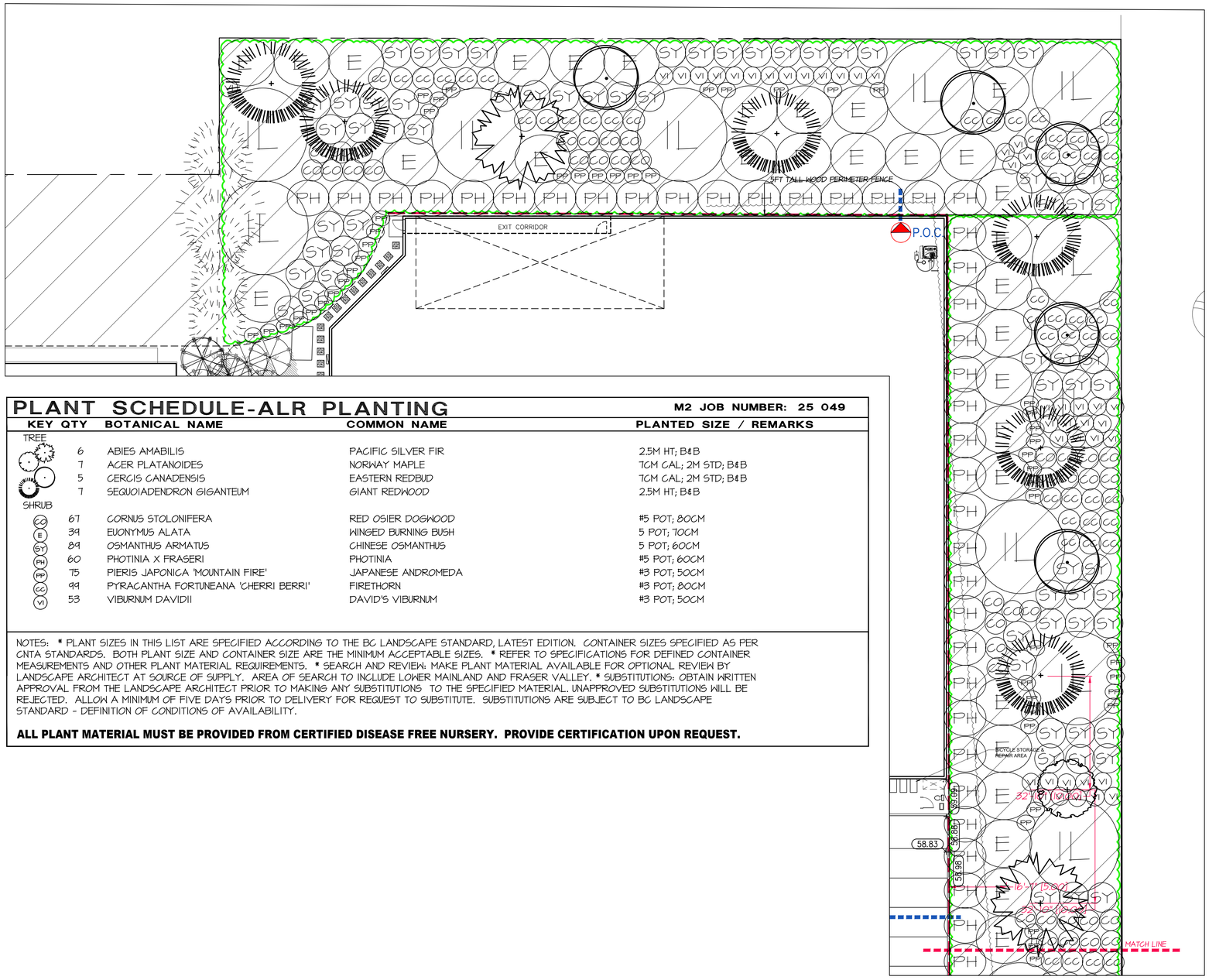
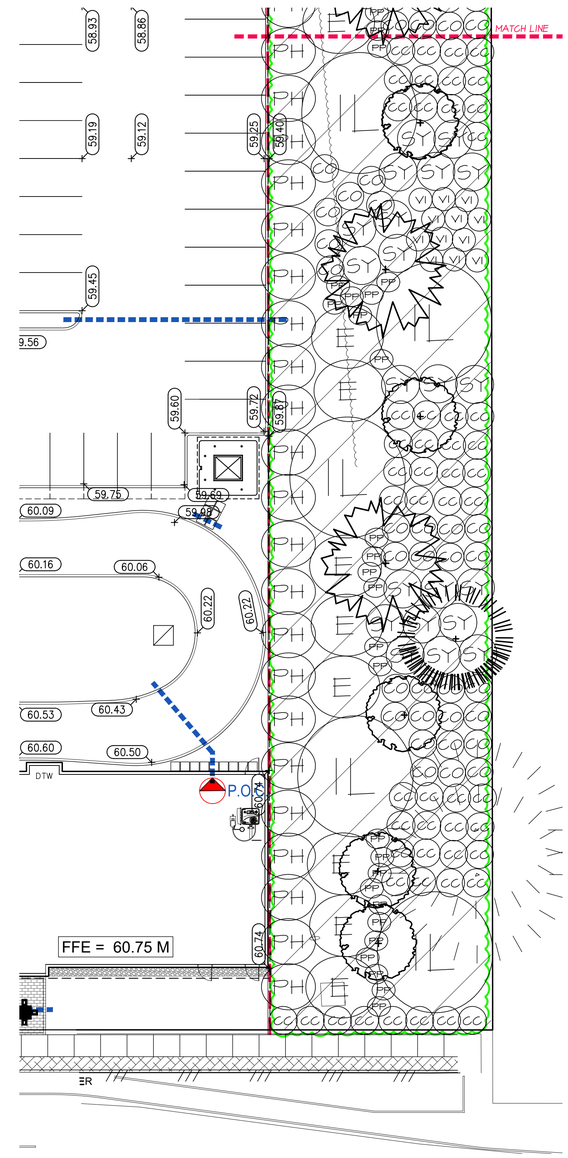
DRAWN:	BN		
DESIGN:	BN		
CHK'D:	MM		OF 6

M2LA PROJECT NUMBER: 25 049





PLANT SCHEDULE-ALR PLANTING

M2 JOB NUMBER: 25 049

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	6	ABIES AMABILIS	PACIFIC SILVER FIR	2.5M HT; B&B
	7	ACER PLATANOIDES	NORWAY MAPLE	7CM CAL; 2M STD; B&B
	5	CERCIS CANADENSIS	EASTERN REDBUD	7CM CAL; 2M STD; B&B
	7	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD	2.5M HT; B&B
SHRUB				
CC	67	CORNUS STOLONIFERA	RED OSIER DOGWOOD	#5 POT; 80CM
E	39	EUONYMUS ALATA	WINGED BURNING BUSH	5 POT; 70CM
SY	89	OSMANTHUS ARMATUS	CHINESE OSMANTHUS	5 POT; 60CM
PH	60	PHOTINIA X FRASERI	PHOTINIA	#5 POT; 60CM
PJ	75	PIERIS JAPONICA 'MOUNTAIN FIRE'	JAPANESE ANDROMEDA	#3 POT; 50CM
PP	99	PYRACANTHA FORTUNEANA 'CHERRI BERRI'	FIRETHORN	#3 POT; 80CM
VI	53	VIBURNUM DAVIDII	DAVID'S VIBURNUM	#3 POT; 50CM

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V3M 3L7
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Fax: 604.553.0045
Email: office@m2la.com

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3	4.APR.2026	DP SUBMISSION	BN
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1	15.JAN.2026	PRELIMINARY DESIGN	BN

SEAL:

PROJECT:

1966 GUTHRIE ROAD, COMOX, BC

CITY PROJECT#:

DRAWING TITLE:

ALR LANDSCAPE PLAN

DATE: 12.JAN.2025	DRAWING NUMBER:
SCALE: 1/16"=1'-0"	L3
DRAWN: BN	
DESIGN: BN	
CHK'D: MM	OF 6
M2LA PROJECT NUMBER:	25 049

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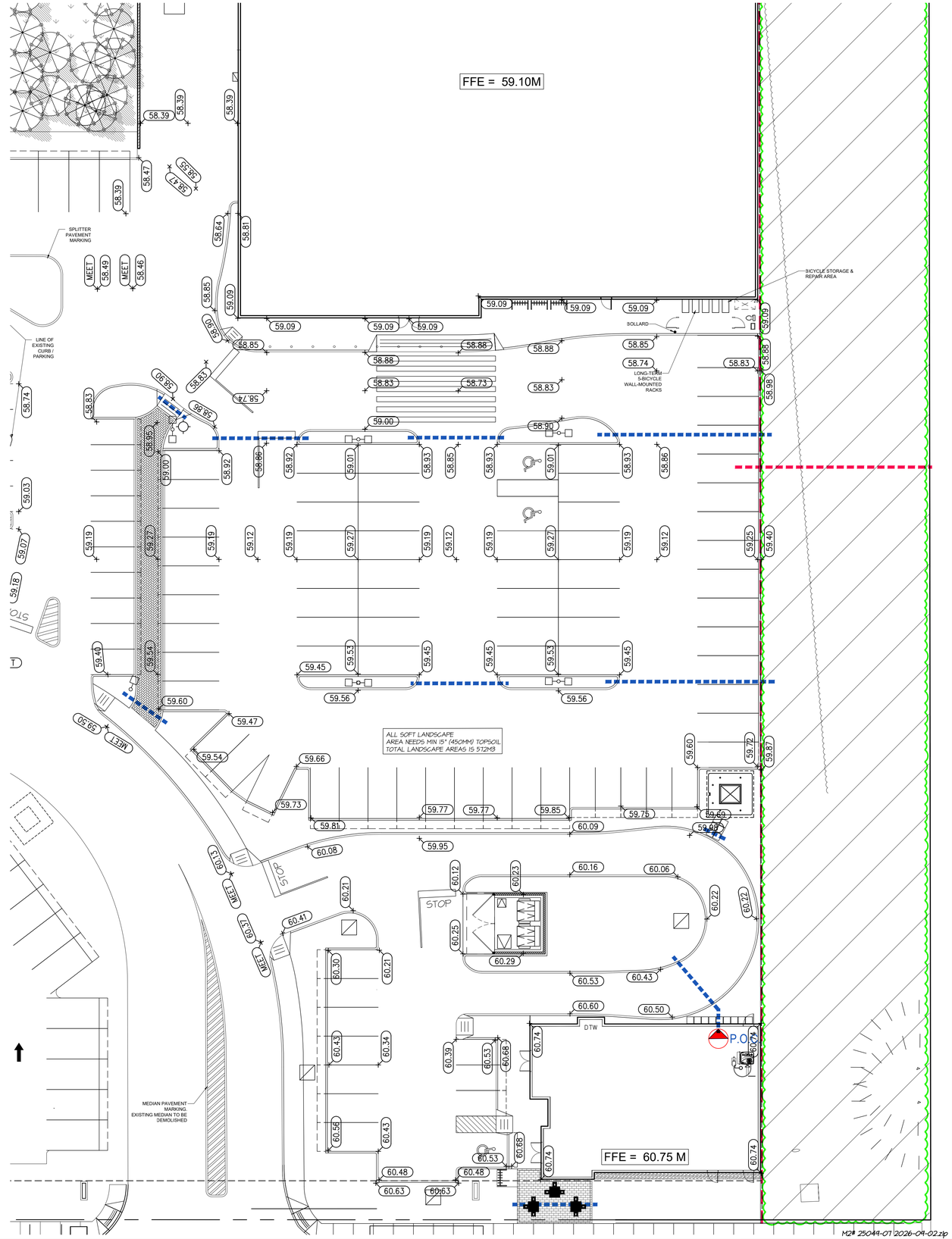
IRRIGATION LEGEND:

P.O.C. POINT OF CONNECTION

SLEEVING

AUTOMATIC IRRIGATION CONTROLLER



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SEAL:

PROJECT:

1966 GUTHRIE ROAD, COMOX, BC

CITY PROJECT#:

DRAWING TITLE:

IRRIGATION INFORMATION

DATE:	12.JAN.2025	DRAWING NUMBER:
SCALE:	1/16"=1'-0"	L4
DRAWN:	BN	
DESIGN:	BN	
CHK'D:	MM	OF 6

M2LA PROJECT NUMBER: 25 049

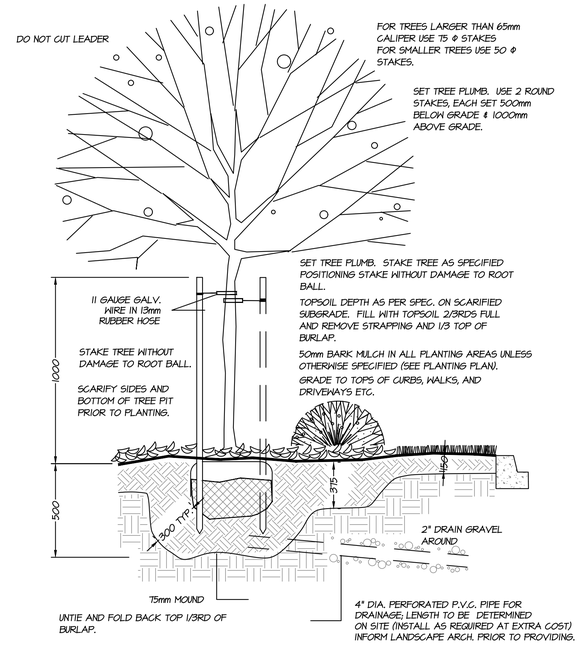
M2# 25049-01 2026-09-02.zip

1 / L5 TABLE AND CHAIR

BY MAGLIN - 400 CLUSTER SEATING
QUANTITY: 3

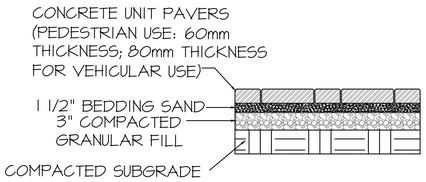
2 / L5 BIKE RACK

BY MAGLIN - 300 BIKE RACKS
QUANTITY: 3



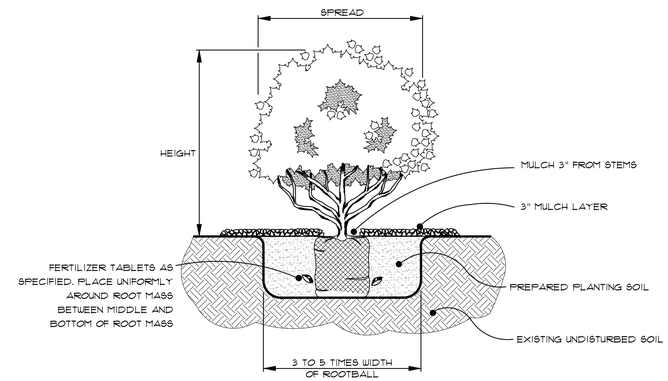
3 / L5 TREE PLANTING

SCALE : 1/2"=1'-0"



4 / L5 CONCRETE UNIT PAVERS AT GRADE

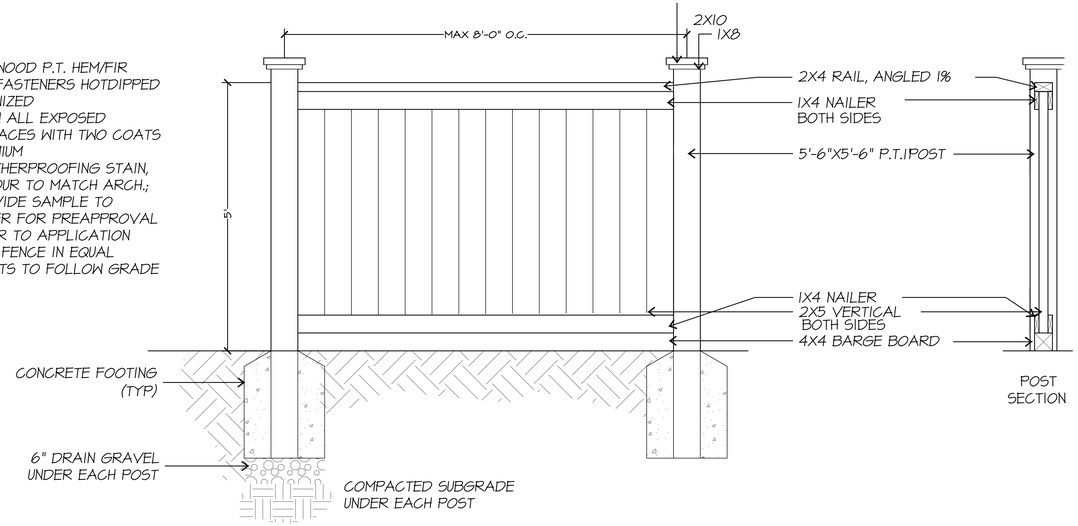
SCALE : 1"=1'-0"



5 / L5 SHRUBS & GROUNDCOVER

SCALE : 1/2"=1'-0"

NOTES:
1. ALL WOOD P.T. HEM/FIR
2. ALL FASTENERS HOTDIPPED GALVANIZED
3. STAIN ALL EXPOSED SURFACES WITH TWO COATS PREMIUM WEATHERPROOFING STAIN, COLOUR TO MATCH ARCH.; PROVIDE SAMPLE TO OWNER FOR PREAPPROVAL PRIOR TO APPLICATION
4. STEP FENCE IN EQUAL SEGMENTS TO FOLLOW GRADE



6 / L5 5' TALL WOOD PERIMETER FENCE

SCALE: 3/4:=1-0"

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SEAL:

PROJECT:

1966 GUTHRIE ROAD, COMOX, BC

CITY PROJECT#:

DRAWING TITLE:

LANDSCAPE DETAILS

DATE: 12.JAN.2025
SCALE:
DRAWN: BN
DESIGN: BN
CHK'D: MM

DRAWING NUMBER: L5 OF 6

M2LA PROJECT NUMBER: 25 049

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PART ONE GENERAL REQUIREMENTS

1.1 REFERENCES

.1 CCDC Doc 2 1994
Comply with all articles in the General Conditions of Contract in conjunction with this section unless superseded by other Contract Documents.

.2 B.C. Landscape Standard, 1997 prepared by the B.C. Society of Landscape Architects and the B.C. Landscape & Nursery Association, jointly. All work and materials shall meet standards as set out in the B.C. Landscape Standard unless superseded by this specification or as directed by Landscape Architect with written instruction.

.3 MASTER MUNICIPAL SPECIFICATIONS & STANDARD DETAILS, DEC. 1996 prepared by the Consulting Engineers of British Columbia, Roadbuilders and Heavy Construction Association, and the Municipal Engineers Division

.4 STANDARD FOR LANDSCAPE IRRIGATION SYSTEM, MARCH 1997: Prepared by the Irrigation Industry Association of British Columbia.

.5 MUNICIPAL BYLAWS AND ENGINEERING SPECIFICATIONS WHERE NOTED.

1.2 TESTING

.1 A current (not more than one month) test for all growing medium to be used on this site is required. Provide and pay for testing by an independent testing facility pre-approved by the Landscape Architect. Deliver growing medium test results to Landscape Architect for review and approval prior to placement. Refer to Section 3.4 Growing Medium Testing for procedure.

.2 Owner reserves the right to test or re-test materials. Contractor responsible to pay for testing if materials do not meet specification.

1.3 SUBMITTALS

.1 Any alternate products differing from that contained in the contract documents must be pre-approved by the Landscape Architect.

.2 Submittals to consist of product sample or manufacturer's product description.

1.4 SITE REVIEW

.1 Under the terms of the Landscape Architect's Contract with the Owner and where the Landscape Architect is the designated reviewer, the Landscape Architect will observe construction as is necessary in their opinion to confirm conformance to the plans and specifications. Contact Owners Representative to arrange for site observation at the appropriate times. Allow two days notice. Observation schedule may include but will not be limited to the following:
.1.1 Start Up Site Meeting, General Contract: Prior to any site disturbance, a meeting with the general contractor to review tree preservation issues, general landscape issues and municipal requirements.
.1.2 Start Up Site Meeting, Landscape Contract (if separate): At the start of work with Owner's Representative, Site Superintendent and Landscape Contractor; a meeting is to be held to review expected work and to verify the acceptability of the subgrade and general site conditions to the Landscape Contractor. Provide growing medium test results for this meeting.
.1.3 Progress Site Visits: To observe materials and workmanship as necessary through the course of the work. Review of different aspects of the work may be dealt with on any single visit. Such elements may include: Site Layout, Rough Grading, Growing Medium – quality, depths, finish grading; Drainage and Drainage Materials; Lawns or Grass areas; Planting –plant material including negotiations with suppliers, nursery inspections, plant sizes, quality, quantity, planting practice and layout, tree support; Mulch; Irrigation Systems; Play Equipment; Site Furniture; and other elements of the site development where the Landscape Architect is the designated reviewer such as: Pedestrian Paving, Fencing, Non-structural walls and slabs, Unit Paving.
.1.4 Substantial Performance: Review of all work, accounting of all substitutions, deletions; plant counts, preparations of deficiency list, and recommendations for completion.
.1.5 Certificate of Completion: Upon the declaration of Substantial Performance, a recommendation for the issuance of the Certificate of Completion will be made to the Payment Certifier as defined in the contract.
.1.6 Deficiency Review: Prior to the completion of the holdback period, check for completion of deficiencies. Once completed, a Schedule 'C' will be issed where required.
.1.7 Warranty Review: Prior to the completion of the waranty period (+/- 11 months after issuance of the Certificate of Completion), review all waranty material and report recommendations for warranty replacement.

1.5 WORKMANSHIP

.1 Unless otherwise instructed in the Contract Documents, the preparation of the subgrade shall be the responsibility of the General Contractor. Placement of growing medium constitutes acceptance of the subgrade by the Landscape Contractor. Any subsequent corrections to the subgrade required are the responsibility of the Landscape Contractor.

.2 All work and superintendence shall be performed by personnel skilled in landscape contracting. In addition, all personnel applying herbicides and/or pesticides shall hold a current license issued by the appropriate authorities.

.3 A site visit is required to become familiar with site conditions before bidding and before start of work.

.4 Confirm location of all services before proceeding with any work.

.5 Notify Landscape Architect of any discrepancies. Obtain approval from Landscape Architect prior to deviating from the plans.

.6 Take appropriate measures to avoid environmental damage. Do not dump any waste materials into water bodies. Conform with all federal, provincial and local statutes and guidelines.

.7 Collect and dispose of all debris and/or excess material from landscape operations. Keep paved surfaces clean and repair damage resulting from landscape work. Repairs are to be completed prior to final acceptance.

.8 Where new work connects with existing, and where existing work is altered, make good to match existing undisturbed condition.

1.6 WARRANTIES

.1 Guarantee all materials and workmanship for a minimum period of one full year from the date of Certificate of Completion.

.2 Refer to individual sections for specific warranties.

PART TWO SCOPE OF WORK

2.1 SCOPE OF WORK

.1 Other conditions of Contract may apply. Confirm Scope of Work at time of tender.

.2 Work includes supply of all related items and performing all operations necessary to complete the work in accordance with the drawings and specifications and generally consists of the following:

2.1 Retention of Existing Trees where shown on drawings.
2.2 Finish Grading and Landscape Drainage.
2.3 Supply and placement of growing medium.
2.4 Testing of imported growing medium and/or site topsoil.
2.5 Supply and incorporation of additives to meet requirements of soil test and Table One.
2.6 Preparation of planting beds, supply of plant material and planting.
2.7 Preparation of rough grass areas, supply of materials and seeding.
2.8 Preparation of lawn areas, supply of materials and sodding.
2.9 Supply and placement of bark mulch.
2.10 Maintenance of planted and seeded/sodded areas until accepted by Owner.
2.11 SEPARATE PRICE: Establishment Maintenance, Section 3.11.
2.12 Other work: Work other than this list, not specified by Landscape Architect.

2.2 MATERIALS

.1 Growing Medium: Conform to BC Landscape Standard for definitions of imported and on-site topsoil. Refer to Table One below.

TABLE ONE: PROPERTIES OF GROWING MEDIUM FOR LEVEL 2 GROOMED AND LEVEL 3 MODERATE AREAS
Canadian System of Soil Classification Textural Class: "Loamy Sand" to "Sandy Loam".

Applications	Low Traffic Areas. Trees and Large Shrubs	High Traffic Lawn Areas	Planting Areas and Planters
Growing Medium Types	2L	2H	2P
Texture	Percent Of Dry Weight of Total Growing Medium		
Coarse Gravel: larger than 25mm	0 – 1%	0 – 1%	0 – 1%
All Gravel: larger than 2mm	0 – 5%	0 – 5%	0 – 5%
	Percent Of Dry Weight of Growing Medium Excluding Gravel		
Sand: larger than 0.05mm smaller than 2.0mm	50 – 80%	70 – 90%	40 – 80%
Silt: larger than 0.002mm smaller than 0.05mm	10 – 25%	0 – 15%	10 – 25%
Clay: smaller than 0.002mm	0 – 25%	0 – 15%	0 – 25%
Clay and Silt Combined	maximum 35%	maximum 15%	maximum 35%
Organic Content (coast):	3 – 10%	3 – 5%	10 – 20%
Organic Content (interior):	3 – 5%	3 – 5%	15 – 20%
Acidity (pH):	6.0 – 7.0	6.0 – 7.0	4.5 – 6.5
Drainage:	Percolation shall be such that no standing water is visible 60 minutes after at least 10 minutes of moderate to heavy rain or irrigation.		

.2 Fertilizer: An organic and/or inorganic compound containing Nitrogen (N), Phosphate (2S), and Potash (soluble 2) in proportions required by soil test.

.3 Lime: Ground agricultural limestone. Meet requirements of the B.C. Landscape Standard.

.4 Organic Additive: Commercial compost product to the requirements of the B.C. Landscape Standard, 6th edition and pre-approved by the Landscape Architect. Recommended suppliers: The Answer Garden Products, Fraser Richmond Soils & Fibre, Stream Organics Management.

.5 Sand: Clean, washed pump sand to meet requirements of the B.C. Landscape Standard.

.6 Composted Bark Mulch: 10mm (3/8") minus Fir/Hemlock bark chips and fines, free of chunks and sticks, dark brown in colour and free of all soil, stones, roots or other extraneous matter. Fresh orange in colour bark will be rejected.

.7 Herbicides and Pesticides: If used, must conform to all federal, provincial and local statutes. Appliers must hold current licenses issued by the appropriate authorities in the area.

.8 Filter Fabric: A non biodegradable blanket or other filtering membrane that will allow the passage of water but not fine soil particles. (Such as MIRAFI 140 NL, GEOLON N40 OR AMOCO 4545 or alternate product pre-approved by the Landscape Architect.)

.9 Drainage Piping if required: Schedule 40 PVC nominal sizes.

.10 Drain Rock: Clean, round, inert, durable, and have a maximum size of 19mm and containing no material smaller than 10mm.

.11 Plant Material: To the requirements of the B.C. Landscape Standard. Refer to 3.9, Plants and Planting. All plant material must be provided from a certified disease free nursery. Provide proof of certification.

.12 Sod: Refer to individual sections in this specification.

.13 Supplier and installers of segmental block walls to provide engineered drawings for all walls: signed and sealed drawings for all walls, individually, in excess of 1.2m, or combinations of walls collectively in excess of 1.2m. Installations must be reviewed and signed off by Certified Professional Engineer; include cost of engineering services in Tender price.

.14 Miscellaneous: Any other material necessary to complete the project as shown on the drawings and described herein.

PART THREE SOFT LANDSCAPE DEVELOPMENT

3.1 RETENTION OF EXISTING TREES

.1 Prior to any work on site – protect individual trees or plant groupings indicated as retained on landscape plans as vegetation retention areas.
.1.1 In some instances the Landscape Architect will tag trees or areas to remain. Discuss tree retention areas at a start-up meeting with the Landscape Architect.

.2 A physical barrier must be installed to delineate clearing boundaries. Refer to physical barrier detail. If detail not provided, comply with local municipal requirements.

.3 No machine travel through or within vegetation retention areas or under crowns of trees to be retained is allowed.

.4 Do not stockpile soil, construction materials, or excavated materials within vegetation retention areas.

.5 Do not park, fuel or service vehicles within vegetation retention areas.

.6 No debris fires, clearing fires or trash burning shall be permitted within vegetation retention areas.

.7 No excavations, drain or service trenches nor any other disruption shall be permitted within vegetation retention areas without a review of the proposed encroachment by the Landscape Architect.

.8 Do not cut branches or roots of retained trees without the approval of the Landscape Architect.

.9 Any damage to existing vegetation intended for preservation will be subject to evaluation by an I.S.A. Certified Arborist using the "Guide for Plant Appraisal", Eighth Edition, 1992.
.9.1 Replacement planting of equivalent value to the disturbance will be required. The cost of the evaluation and of the replacement planting will be the responsibility of the General Contractor and or the person(s) responsible for the disturbance.

.10 In municipalities with specific tree retention/replacement bylaws ensure compliance to bylaws.

.11 In situations where required construction may disturb existing vegetation intended for preservation, contact Landscape Architect for review prior to commencing construction.

3.2 GRADES:

.1 Ensure subgrade is prepared to conform to depths specified in Section 3.5, Growing Medium Supply, below. Where planting is indicated close to existing trees, prepare suitable planting pockets for material indicated on the planting plan. Shape subgrade to eliminate free standing water and conform to the site grading and drainage plan.

.2 On slopes in excess of 3:1 trench subgrade across slope to 150mm (6") minimum at 1.5m (5 ft.) intervals minimum.

.3 Scarify the entire subgrade immediately prior to placing growing medium. Re-cultivate where vehicular traffic results in compaction during the construction procedures. Ensure that all planting areas are smoothly contoured after light compaction to finished grades.

.4 Eliminate standing water from all finished grades. Provide a smooth, firm and even surface and conform to grades shown on the Landscape Drawings. Do not exceed maximum and minimum gradients defined by the B.C. Landscape Standard.

.5 Construct swales true to line and grade, smooth and free of sags or high points. Minimum slope 2%, maximum side slopes 10%. Assure positive drainage to collection points.

.6 Slope not to exceed the following maximums: Rough Grass 3:1, Lawn 4:1, Landscape plantings 2:1.

.7 Finished soil/mulch elevation at building to comply with municipal requirements.

.8 Inform Landscape Architect of completion of finish grade prior to placement of seed, sod, plants or mulch.

3.3 LANDSCAPE DRAINAGE

.1 Related Work: Growing medium and Finish Grading, Grass areas, Trees Shrubs and Groundcovers, Planters, Crib Walls.

.2 Work Included: Site finish grading and surface drainage. Installation of any drainage systems detailed on landscape plans. Note: Catch basins shown on landscape plans for coordination only, confirm scope of work prior to bid.
.2.1 Coordinate all landscape drainage work with rest of site drainage, Refer to engineering drawings and specifications for connections and other drainage work.
.2.2 Determine exact location of all existing utilities and structures and underground utilities prior to commencing work, which may not be located on drawings and conduct work so as to prevent interruption of service or damage to them. Protect existing structures and utility services and be responsible for damage caused.
.2.3 Planter drains on slab: Refer to Section 3.10, Installing Landscapes on Structures.

.3 Execution
.3.1 Do trenching and backfilling in accordance with engineering details and specifications.
.3.2 Lay drains on prepared bed, true to line and grade with inverts smooth and free of sags or high points. Ensure barrel of each pipe is in contact with bed throughout full length.
.3.3 Commence laying pipe at outlet and proceed in upstream direction.
.3.4 Lay perforated pipes with perforations at 8pm and 4pm positions.
.3.5 Make joints tight in accordance with manufacturer's directions.
.3.6 Do not allow water to flow through the pipes during construction except as approved by Engineer.
.3.7 Make watertight connections to existing drains, new or existing manholes or catchbasins where indicated or as directed by Landscape Architect.
.3.8 Plug upstream ends of pipe with watertight clean cut caps.
.3.9 Surround and cover pipe with drain rock in uniform 150mm layers to various depths as shown in details, minimum 100mm.
.3.10 Cover drain rock with non-woven filter cloth lap all edges and seams minimum 150mm.
.3.11 Assure positive drainage.
.3.12 Back fill remainder of trench as indicated.
.3.13 Protect subdrains from floatation during installation.

3.4 GROWING MEDIUM TESTING

.1 Submit representative sample of growing medium proposed for use on this project to an independent laboratory. Provide test results to Landscape Architect prior to placing. Test results to include:
.1.1 Physical properties, % content of gravel, sand, silt, clay and organics.
.1.2 Acidity PH and quantities of lime or sulphur required to bring within specified range.
.1.3 Nutrient levels of principle and trace elements and recommendations for required soil amendments.
.1.4 Carbon/Nitrogen level.

3.5 GROWING MEDIUM SUPPLY AND PLACEMENT

.1 Supply all growing medium required for the performance of the Contract. Do not load, transport or spread growing medium when it is so wet that its structure is likely to be damaged.

.2 Supply all growing medium admixtures as required by the soil test. Amended growing medium must meet the specification for growing medium as defined in Table One for the various areas.
.2.1 Thoroughly mix required amendments into the full depth of the growing medium.
.2.2 Special mixes may be required for various situations. Refer to drawing notes for instructions.

.3 Place the amended growing medium in all grass and planting areas. Spread growing medium in uniform layers not exceeding 6" (150mm), over unfrozen subgrade free of standing water.

.4 Minimum depths of growing medium placed and compacted to 80%:
.4.1 On-grade:
.4.1.1 Seeded and sodded lawn.....6" (150mm)
.4.1.2 Mass planted shrubs & groundcovers.....15" (400mm)
.4.1.3 Groundcover only areas, if defined on plan.....9" (225mm)
.4.1.4 Tree & large shrub pits.....depth to conform to depth of rootball. – width shall be at least twice the width of the root ball with saucer shaped sides.
.4.2 On-Slab:
.4.2.1 Irrigated lawn.....9" (210mm)
.4.2.2 Groundcover areas.....12" (300mm)
.4.2.3 Lawn without automatic irrigation.....12" (300mm)
.4.2.4 Shrub & groundcover areas.....15" (380mm)
.4.2.5 Trees and specimen shrubs×.....30" (760mm) over columns and/or edge of slab (verify column locations on-site for tree locations.)
.4.2.6 Depth noted includes 1" to 2" (25-50mm) sand over filter fabric
.4.2.7 Maximum 18" depth growing medium except where mounded for trees over column points.

.5 Manually spread growing medium/planting soil around existing trees, shrubs and obstacles.

.6 In perimeter seeded grass areas, feather growing medium out to nothing at edges and blend into existing grades.

.7 Finished grades shall conform to the elevations shown on landscape and site plans.

3.6 ROUGH GRASS AREA – SEEDING

.1 General: Rough grass areas are noted on the drawings as "Rough Grass". Treat all areas defined as rough grass between all property lines of the project including all boulevards to edge of roads and lanes.

.2 Preparation of Surfaces: To B.C. Landscape Standard Class 3 Areas (Rough grass) Section 7.1.1.3
.2.1 Clean existing soil by mechanical means of debris over 50mm in any dimension.
.2.2 Roughly grade surfaces to allow for maintenance specified and for positive drainage.

.3 Time of Seeding: Seed from early spring (generally April 1st) to late fall (September 15th) of each year. Further extensions may be obtained on concurrence of the Landscape Architect.

.4 Seed Supply & Testing: All seed must be obtained from a recognized seed supplier and shall be No. 1 grass mixture delivered in containers bearing the following information:
.4.1 Analysis of the seed mixture
.4.2 Percentage of each seed type

.5 Seed Mixture: All varieties shall be rated as strong performers in the Pacific Northwest and are subject to client approval.
70% Creeping Red Fescue
20% Annual Rye
5% Saturn Perennial Rye
5% Kentucky Bluegrass
For Wildflower Areas use a mixture of Wildflowers with Hard Fescues (R.S. Coastal Wildflowers with Hard Fescue or pre-approved alternate.

.6 Fertilizer: Mechanical seeding: Apply a complete synthetic slow-release fertilizer with maximum 35% water soluble nitrogen and a formulation ratio of 18-18-18 – 50% sulphur urea coated , 112 kg/ha(100lbs/acre) using a mechanical spreader.

.7 Seeding: Apply seed at a rate of 112k/H (100lbs /acre) with a mechanical spreader. Incorporate seed into the top 1/4" (6mm) of soil and lightly compact.

.8 Acceptance: Provide adequate protection of the seeded areas until conditions of acceptance have been met. Comply with Section 3.7 Hydroseeding.

3.7 HYDROSEEDING

.1 May be used as an alternate to mechanical seeding in rough grass areas.

.2 May not be used in areas of lawn unless pre-approved by the Landscape Architect prior to bidding.

.3 Preparation and Growing Medium:
.3.1 In areas of Rough Grass: Comply with Section 3.6 Rough Grass.
.3.2 Where approved for use in areas of lawn, comply with Section 3.8 Lawn Areas: Sodding.

.4 Protection: Ensure that fertilizer in solution does not come in contact with the foliage of any trees, shrubs, or other susceptible vegetation. Do not spray seed or mulch on objects not expected to grow grass. Protect existing site equipment, roadways, landscaping, reference points, monuments, markers and structures from damage. Where contamination occurs, remove seeding slurry to satisfaction of and by means approved by the Landscape Architect

.5 Mulch shall consist of virgin wood fibre or recycled paper fibre designed for hydraulic seeding and dyed for ease of monitoring application. If using recycled paper material for wood fibre substitute use 135% (by weight). Conform to B.C. Landscape Standard for mulch requirements.

.6 Water: Shall be free of any impurities that may have an injurious effect on the success of seeding or may be harmful to the environment.

.7 Equipment: Use industry standard hydraulic seeder/mulcher equipment with the tank volume certified by an identification plate or sticker affixed in plain view on the equipment. The hydraulic seeder/mulcher shall be capable of sufficient agitation to mix the material into a homogenous slurry and to maintain the slurry in a homogenous state until it is applied. The discharge pumps and gun nozzles shall be capable of applying the materials uniformly over the designated area.

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.8 Application Rate:
.8.1 Seed Mixture: 136 kg/ha (125 lbs/acre)
.8.2 Fertilizer: 112 kg/ha (100 lbs/acre)
.8.3 Coastal Wildflower Mix: Where specified, apply (31 lbs/acre) (1/4 lb.: 1 lb. of grass seed)
.8.4 Notes:
.8.4.1 At the time of Tender provide a complete chart of all components of the mix proposed including mulch, tackifier, water etc. Sloped sites require tackifier.
.8.4.2 Fertilizer:
.8.4.2.1 Rough Grass: If a soil analysis is available, comply with results.
.8.4.2.2 Lawn: Where hydroseeding is approved, comply with soil analysis recommendations.

.9 Accurately measure the quantities of each of the materials to be charged into the tank either by mass or by a commonly accepted system of mass-calibrated volume measurements. The materials shall be added to the tank while it is being filled with water, in the following sequence; seed, fertilizer. Thoroughly mix into a homogenous slurry. After charging, add no water or other material to the mixture. Do not leave slurry in the tank for more than four (4) hours.

.10 Distribute slurry uniformly over the surface of the area to be hydroseeded. Blend application into previous applications and existing grass areas to form uniform surfaces.

.11 Clean up: Remove all materials and other debris resulting from seeding operations from the job site.

.12 Maintenance: Begin maintenance immediately after seeding and continue for 60 days after Substantial Completion and until accepted by the Owner. Re-seed at three week intervals where germination has failed. Protect seeded areas from damage with temporary wire or twine fences complete with signage until grass area is taken over by the Owner. Water in sufficient quantities to ensure deep penetration and at frequent intervals to maintain vigorous growth until grass is taken over by the Owner. It is the Owner's responsibility to supply water at no extra cost to the Contract.

.13 Acceptance of the Rough Grass Areas: Proper germination of all specified grass species is the responsibility of the Landscape Contractor. The grass shall be reasonably well established, with no apparent dead or bare spots and shall be reasonably free of weeds (to B.C. Landscape Standard, Section 13 Maintenance Level 4 (Open sage). Sixty days after substantial completion, areas meeting the conditions above will be taken over by the Owner. Areas seeded in Fall will be accepted in Spring one month after start of growing season, provided that the above conditions for acceptance are fulfilled.

3.8 LAWN AREAS – SODDING

.1 General: Treat all areas defined as lawn areas on the landscape plan between all property lines of the project including all boulevards to edge of roads and lanes.

.2 Growing Medium: Comply with Section 2.2.1, Growing Medium. Prior to sodding, request an inspection of the finished grade, and depth and condition of growing medium by the Landscape Architect.

.3 Time of Sodding: Sod from April 1st to October 1st. Further extensions may be obtained on concurrence of the Landscape Architect.

.4 Sod Supply: Conform to all conditions of B.C. Landscape Standard, Section 8, B.C. Standard for Turfgrass Sod.

.5 Specified Turfgrass by area: Refer to Table 2 below.

TABLE 2 SPECIFIED TURFGRASS BY AREA

Area	Description	Quality Grade	Major Species
CLASS 1	Lawn, all areas noted on drawings as lawn in urban development sites including boulevard grass	No. 1 Premium	Kentucky Blue for sun, Fescues for shade
CLASS 2	Grass – public parks, industrial and institutional sites	No. 2 Standard	same
CLASS 3	Rough Grass	see hydroseeding	
SPECIAL			

.6 Lime: The lime shall be as defined in Section 2.2.3, Materials. Apply at rates recommended in required soil test. Refer to Section 3.4 for method.

.7 Fertilizer: Refer to Section 2.2.2 Materials. Apply specified fertilizer at rates shown in the required soil test. Apply with a mechanical spreader. Cultivate into growing medium 48 hours prior to sodding. Apply separately from lime.

.8 Sodding: Prepare a smooth, firm, even surface for laying sod. Lay sod staggered with sections closely butted, without overlapping or gaps, smooth and even with adjoining areas and roll lightly. Water to obtain moisture penetration of 3" to 4" (7 – 10cm). Comply with requirements of BC Landscape Standard Section 8, BC Standard for Turfgrass Sod.

.9 Maintenance: Begin maintenance immediately after sodding and continue for 60 days after Substantial Completion and until accepted by the Owner. Protect sodded areas from damage with temporary wire or twine fences complete with signage until lawn is taken over by the Owner. Water to obtain moisture penetration of 3" to 4" (7-10cm) at intervals necessary to maintain sufficient growth. Keep grass cut at height of between 1-1/2" (4cm) and 2" (5cm). Provide adequate protection of sodded areas against damage until the turf has been taken over by Owner. Repair any damaged areas, re-grade as necessary. Aeration may be required if in the Landscape Architect's opinion, drainage through the sod base medium is impaired.

.10 Acceptance of Lawn Areas: The turf shall be reasonably well established, with no apparent dead spots or bare spots and shall be reasonably free of weeds (to B.C. Landscape Standard, Section 13 Maintenance Level 2 (Appearance). Use herbicides if necessary for weed removal unless other conditions of contract forbid their use. After the lawn has been cut at least twice, areas meeting the conditions above will be taken over by the Owner.

3.9 PLANTS AND PLANTING

.1 Conform to planting layout as shown on Landscape Plans.

.2 Obtain approval of Landscape Architect for layout and preparation of planting prior to commencement of planting operations.

.3 Make edge of beds with smooth clean defined lines.

.4 Time of Planting:
.4.1 Plant trees, shrubs and groundcovers only during periods that are normal for such work as determined by local weather conditions when seasonal conditions are likely to ensure successful adaptation of plants to their new location.

.5 Standards:
.5.1 All plant material shall conform to the requirements of the B.C. Landscape Standard, 1997 edition, unless exceeded by drawing Plant Schedule or this specification.
.5.1.1 Refer to B.C. Landscape Standard, Section 9, Plants and Planting and in Section 12, BCLNA Standard for Container Grown Plants for minimum standards.
.5.1.2 Refer to Plant Schedule for specific plant and container sizes and comply with requirements.
.5.2 Plant material obtained from areas with less severe climatic conditions shall be grown to withstand the site climate.

.6 Review:
.6.1 Review at the source of supply and/or collection point does not prevent subsequent rejection of any or all planting stock at the site.

.7 Availability:
.7.1 Area of search includes the Lower Mainland and Fraser Valley. Refer to Plant Schedule for any extension of area.
.7.2 Supply proof of the availability of the specified plant material within 30 days of the award of the Contract.

.8 Substitution:
.8.1 Obtain written approval of the Landscape Architect prior ro making any substitutions to the specified material. Non-approved substitutions will be rejected.
.8.2 Allow a minimum of 5 days prior to delivery for request to substitute.
.8.3 Substitutions are subject to BC Landscape Standard – definition of Conditions of Availability.

.9 Plant Species & Location:
.9.1 Plants shall be true to name and of the height, caliper and size of root ball as shown on the landscape/site plan plant schedule. Caliper of trees is to be taken 6" (15cm) above grade.
.9.2 Plant all specified species in the location as shown on the landscape drawings. Notify Landscape Architect if conflicting rock or underground/overhead services are encountered.
.9.3 Deviation of given planting location will only be allowed after review of the proposed deviation by the Landscape Architect.

.10 Excavation:
.10.1 Trees and large shrubs: Excavate a saucer shaped tree pit to the depth of the rootball and to at least twice the width of the rootball. Assure that finished grade is at the original grade the tree was grown at.

.11 Drainage of Planting Holes:
.11.1 Provide drainage of planting pits where required, ie. on sloped conditions, break out the side of the planting pit to allow drainage down slope; and in flat conditions, mound to raise the rootball above impervious layer. Notify the Landscape Architect where the drainage of planting holes is limited.

.12 Planting and Fertilizing Procedures:
.12.1 Plant all trees and shrubs with the roots placed in their natural growing position. If burlapped, loosen around the top of the ball and cut away or fold under. Do not pull burlap from under the ball. Carefully remove containers without injuring the rootballs. After settled in place, cut twine. For wire baskets, clip and remove top three rows of wire.
.12.2 Fillthe planting holes by gently firming the growing medium around the root system in 6" (15cm) layers. Settle the soil with water. Add soil as required to meet finish grade. Leave no air voids. When 2/3 of the topsoil has been placed, apply fertilizer as recommended by the required soil test at the specified rates.
.12.3 Where planting is indicated adjacent to existing trees, use special care to avoid disturbance of the root system or natural grades of such trees.
.12.4 Where trees are in lawn areas, provide a clean cut mulched 900mm (3 ft.) diameter circle centered on the tree.

.13 Staking of Trees:
.13.1 Use two 2"x2"x5' stakes, unless superseded by municipal requirements. Set stakes minimum 2 ft. in soil. Do not drive stake through rootball.
.13.2 Leave the tree carefully vertical.
.13.3 Tie with pre-approved commercial, flat woven polypropylene fabric belt, minimum width 19mm (3/4"). Approved product: ArborTie – available from DeepRoot.
.13.4 Coniferous Trees over 6 ft. height: Guy with three 2-strand wires (11 gauge). Drive three stakes equidistant around the tree completely below grade.
.13.5 Trees 6 ft.+ on Wood or Concrete Decks: Guy as above using three deadmen (min. 2"x2"x4") buried to the maximum possible depth instead of stakes.
.13.6 Mark all guy wires with visible flagging material.

.14 Pruning:
.14.1 Limit pruning to the minimum necessary to remove dead or injured branches. Preserve the natural character of the plants, do not cut the leader. Use only clean, sharp tools. Make all cuts clean and cut to the branch collar leaving no stubs. Shape affected areas so as not to retain water. Remove damaged material.

.15 Mulching:
.15.1 Mulch all planting areas with an even layer of mulch to 2-1/2 – 3" (65 – 75mm) depth. Confirm placement of mulch in areas labeled "Groundcover Area" on drawings. Mulch a 3 ft. (900mm) diameter circle around trees in lawn areas, leave a clean edge.

.16 Acceptance:
.16.1 The establishment of all plant material is the responsibility of the Landscape Contractor.

.17 Plant Material Maintenance:
.17.1 Maintain all plant material for 60 days after landscape work has received a Certificate of Completion.
.17.2 Watering: Conform to B.C. Landscape Standard, Section 13.3.2 – Watering and generally as follows:
.17.2.1 Water to supplement natural rainfall such that the soil moisture content is kept to 50% to 100% of field capacity. Water to the full depth of the root zone each time. The Owner is responsible to supply water at no extra cost to the Contract. Confirm source of water prior to beginning work.
.17.3 Use appropriate measures to combat pests or diseases damaging plant material. Comply with all local governing statutes and guidelines for chemical control.
.17.4 Plant material which fails to survive shall be replaced in the next appropriate season as determined by the Landscape Architect.
.17.5 Repair tree guards, stakes, and guy wires, when necessary.
.17.6 Maintain areas relatively weed free. (Appearance level 2, B.C. Landscape Standard, Chapter 13).
.17.7 Maintain mulch to specified depths.

.18 Plant Warranty:
.18.1 Replace all unsatisfactory plant material except those designated "Specimen" for a period of one (1) year after the Certificate of Completion. Replace all unsatisfactory plant material designated "Specimen" for a period of two (2) years after the Certificate of Completion. Replace all unsatisfactory trees and shrubs and continue to replace these until the specified number is complete and satisfactory to the Landscape Architect. Such replacement shall be subject to the notification, inspection and approval as specified for the original planting, and shall not constitute an extra to the Contract.
.18.2 Those Plants, identified as hardy within one zone of the Canada Department of Agriculture tonal class for the area, specified by the Landscape Architect and installed by the Landscape Contractor which are killed through below normal temperatures (below the average of the extreme minimum temperatures officially recorded in the area concerned, in the last 10 years), will not be replaced without cost of replacement borne by the Owner.
.18.3 A review may be requested during the latter part of the warranty growing season. All plant material showing well developed foliage, healthy growth and bud forming, will then be taken over.

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.18.4 For all plant material, the Landscape Architect reserves the right to extend the Contractor's responsibility for another growing season if, in his opinion, leaf development and growth is not sufficient to ensure future satisfactory growth.
.18.5 Where the Owner is responsible for plant maintenance and has not provided adequate maintenance, the plant replacement section of the contract may be declared void. The Landscape Architect shall determine whether maintenance has been satisfactory using the B.C. Landscape Standard, Section 13, Maintenance as the guide. The required maintenance standard is a minimum of Level Three – Medium. Refer to Section 3.11, Establishment Maintenance.
.18.6 The Landscape Contractor is responsible to replace any plant material or repair any construction included in the Contract that is damaged or stolen until the issuance of the Certificate of Completion.
.18.7 Deviation from the specifications may require extension of the Warranty Period as determined by the Landscape Architect.

3.10 INSTALLING LANDSCAPE ON STRUCTURES

.1 Verify that drainage and protection material is completely installed and acceptable before beginning work. Contact Landscape Architect for instructions if not in place.

.2 Coordinate work with construction of planters and planter drainage.
.2.1 Verify that planter drains are in place and positive drainage to roof drains is present prior to placing any drain rock or soil.

.3 Provide clean out at all through-slab drain locations . Use 300mm min. dia. PVC Pipe filled with drain rock unless specific drawing detail shown.

.4 Install drain rock evenly to a minimum depth of 4" (100mm)or alternate sheet drain if specified. Install sheet drain as per manufacturer's recommendations.

.5 Cover drain rock (or alternate sheet drain if specified on drawing details) with filter fabric lapping 6" (150mm) at all edges. Obtain approval of drainage system prior to placing growing medium.

.6 Place an even layer of 25 – 50mm clean washed pump sand over filter fabric.

.7 Place growing medium to depths specified in Section 3.5 above for various surface treatments. Refer to Drawing details for any light weight filler required to alter grade. Use Styrofoam block over drain rock shaped to provide smooth surface transition at edges. Butt each piece tightly together and cover with filter fabric to prevent soil from migrating downward.

3.11 ESTABLISHMENT MAINTENANCE (Provide a separate price for this section)

.1 Intent: The intent of "establishment" maintenance is to provide sufficient care to newly installed plant material for a relatively short period of time to ensure or increase the long term success of the planting. The objective is the adaptation of plants to a new site in order to obtain the desired effect from the planting while reducing the rate of failure and unnecessary work associated with improper establishment. Establishment of maintenance procedures apply to all new and retained vegetation including cultivated turfgrass areas and new trees and shrubs.

.2 Maintenance Period: Provide maintenance of installed landscaping for 12 months following substantial completion.

.3 Related Standards and Legislation: B.C. Landscape Standard, latest edition; Fertilizer Code., B.C. Pesticide Control Act.

.4 Site Review: In addition to the inspections at substantial completion, at final progress draw application, and at the end of the guarantee period, there should be three other reviews during the 12 months attended by the Contractor and a designated representative of the Owner. Maintain a logbook and reporting procedures and submit to the designated representative.

.5 Scheduling: Prepare a schedule of anticipated visits and submit to designated representative at start-up. Maintenance operations shall be carried out predominately during the growing season between March 1st and November 30th, however visits at other times of the year may be required.

.6 Maintenance Level: Comply with B. C. Landscape Standard, Section 13, Table 7, Maintenance Level "Medium".

.7 Materials: Comply with Part Two of this specification.
.7.1 Fertilizers: To the requirements of the B.C. Landscape Standard. Formulations and rates as required by soil testing.

.8 Plant Material Establishment:
.8.1 Watering: During the first growing season, water new plants at least every ten (10) days between April 1st and July 31st, and every twenty (20) days between August 1st and September 15th. Minimum 25 gallons per tree per application. During the second growing season, water new plants at least every twenty days between April 1 and July 31 and once between August 1st and September 31st. Apply water at a rate and duration such that the water content reaches field capacity to the full depth of the growing medium. Apply water again when the water content reaches 25% of field capacity. Provide and irrigate with water in the event that any automatic irrigation system malfunctions or has not been completely installed. Scheduled applications of water shall be missed only when rainfall has penetrated the soil fully as required.
.8.2 Mulch: Maintain mulches in the original areas and to the original depths.
.8.3 Weed Control: Remove all weeds from all areas at least once per month during the growing season by hoeing or cultivation to a maximum depth of 80mm, hand-pulling, or, if necessary, by the use of herbicides.
.8.4 Pest and Disease Control: Inspect all planted areas for pests and diseases periodically and at least every two months during the growing season by an experienced person. Carry out treatment for pests or diseases promptly and consistently for maximum effectiveness. Comply with all B.C. Pesticide Control Act and municipal requirements.
.8.5 Tree Support: Maintain stakes, guy wires and ties one full growing season. Check ties at least every two months to ensure that they are not causing a depression in the bark. Loosen, repair or replace ties as necessary. Remove all stakes guy wires and ties after the first growing season except where large trees require continuing support in the opinion of the Landscape Architect. All flagging of guy wires shall be visible and in good repair.
.8.6 Pruning: Inspect all trees and shrubs at least every two months during the growing season; prune to remove all dead, weak or diseased wood. Maintain the natural shape of the plant. Carry out clipping or shaping only if required in the maintenance contract for specific varieties or conditions.
.8.7 Fertilizing: Once during the twelve month period of establishment maintenance fertilize shrubs, trees and groundcovers according to soil analysis requirements.

.9 Grass Areas Establishment:
.9.1 Watering: Use hoses and sprinklers, irrigation systems or other methods to apply water to Class 1 and Class 2 grassed areas (B.C. Landscape Standard, Section 7, Lawns and Grasses) such that the grass is maintained in a turgid condition. Supply and irrigate with water in the event of any irrigation system malfunction, or incomplete installation at no expense to the owner. Apply water to prevent packing or erosion of the soil. Apply water at a rate and duration so that the water content in the growing medium reaches field capacity to the full depth of the growing medium. Apply water again when the water content reaches 25% of field capacity.
.9.2 Weed, Insect and Disease Control: Inspect grass areas each time they are moved for weeds, insect pests, and diseases and treat promptly when necessary by appropriate manual methods, or by the use of chemicals in compliance with the B.C.S.L.A./B.C.L.N.A. Landscape Standards latest edition. Kill broadleafed weeds in grassed areas by a general application of a suitable herbicide if the weed population exceeds 10 Broadleaf weeds or 50 annual weeds or weedy grasses per 40