



Stantec Consulting Ltd 555, René-Lévesque Ouest Blvd, suite 300 Montréal (Québec) H2Z 1B1

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- . REFER TO DRAWING AM08, AM09 AND AM10 FOR LANDSCAPE NOTES.
- . REFER TO DRAWINGS AM06 AND AM07 FOR LANDSCAPE DETAILS. 3. TOPOGRAPHICAL SURVEY PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD
- DATED JANUARY 21, 2016. SITE PLAN PREPARED BY GEIGERHUOT ARCHITECTS, DATED FEBRUARY 2022.
- 6. CIVIL DESIGN PREPARED BY MORRISON HERSHFIELD, DATED DECEMBER 2021.



F	REVISED TREE REMOVAL			2022.03.30
Е	ISSUED FOR SITE PLAN REVIEW		T.L	2022.02.18
D	ISSUED FOR SITE PLAN REVIEW	S.K.	I.L.	2021.12.16
С	ISSUED FOR PERMIT REV 03/COORDINATION	S.K.	I.L.	2021.12.10
В	ISSUED FOR PERMIT REV 02	S.K.	I.L.	2021.10.20
Α	ISSUED FOR COORDINATION	S.K.	I.L.	2021.10.12
SS	ued/Revision	Ву	Appd	YYYY.MM.D

File Name: 159101112-200-AM-D.DWG

SIHED KHADHRAOUI, LANDSCAPE ARCHITECT MARIE-SOLEIL BERGERON, TECH

ISABELLE LALONDE, LANDSCAPE ARCHITECT

Permit-Seal

The owner of the property

**Holloway Lodging** 145 HOBSONS LAKE DRIVE SUITE 106 HALIFAX, NOVA SCOTIA B3S 0H9



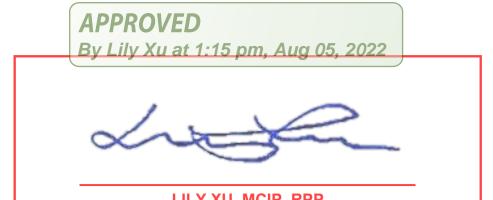
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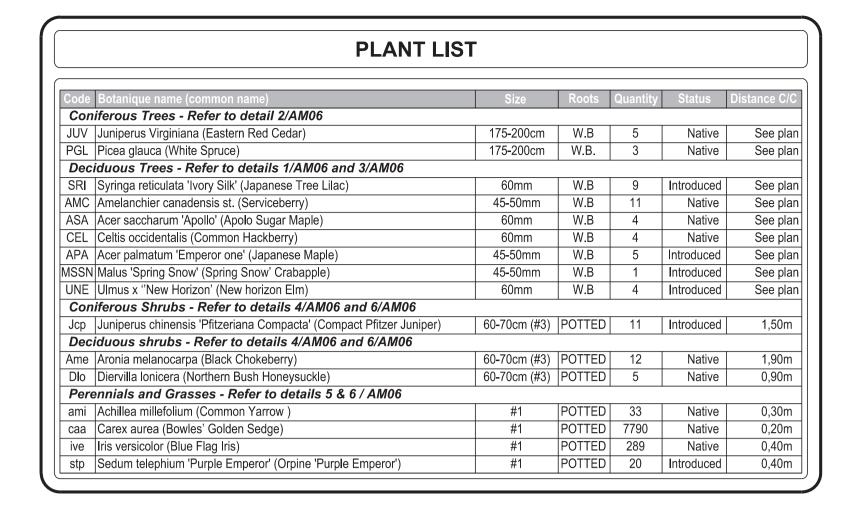
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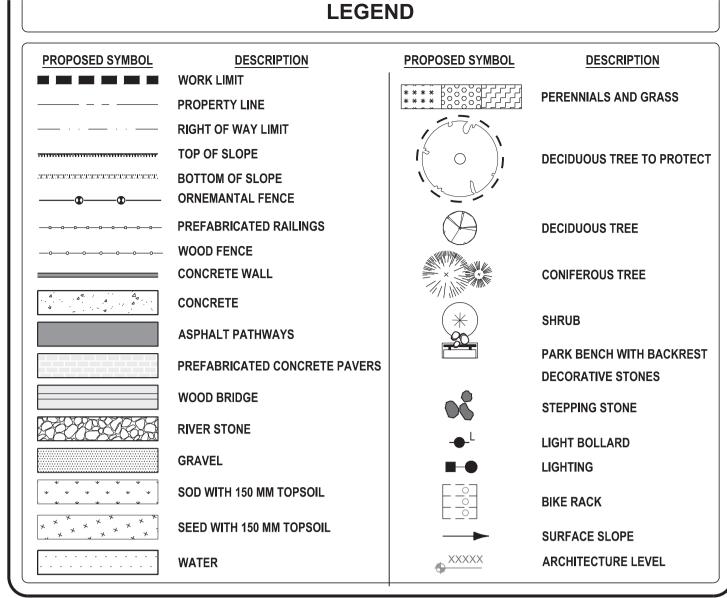
OVERALL LANDSCAPE PLAN

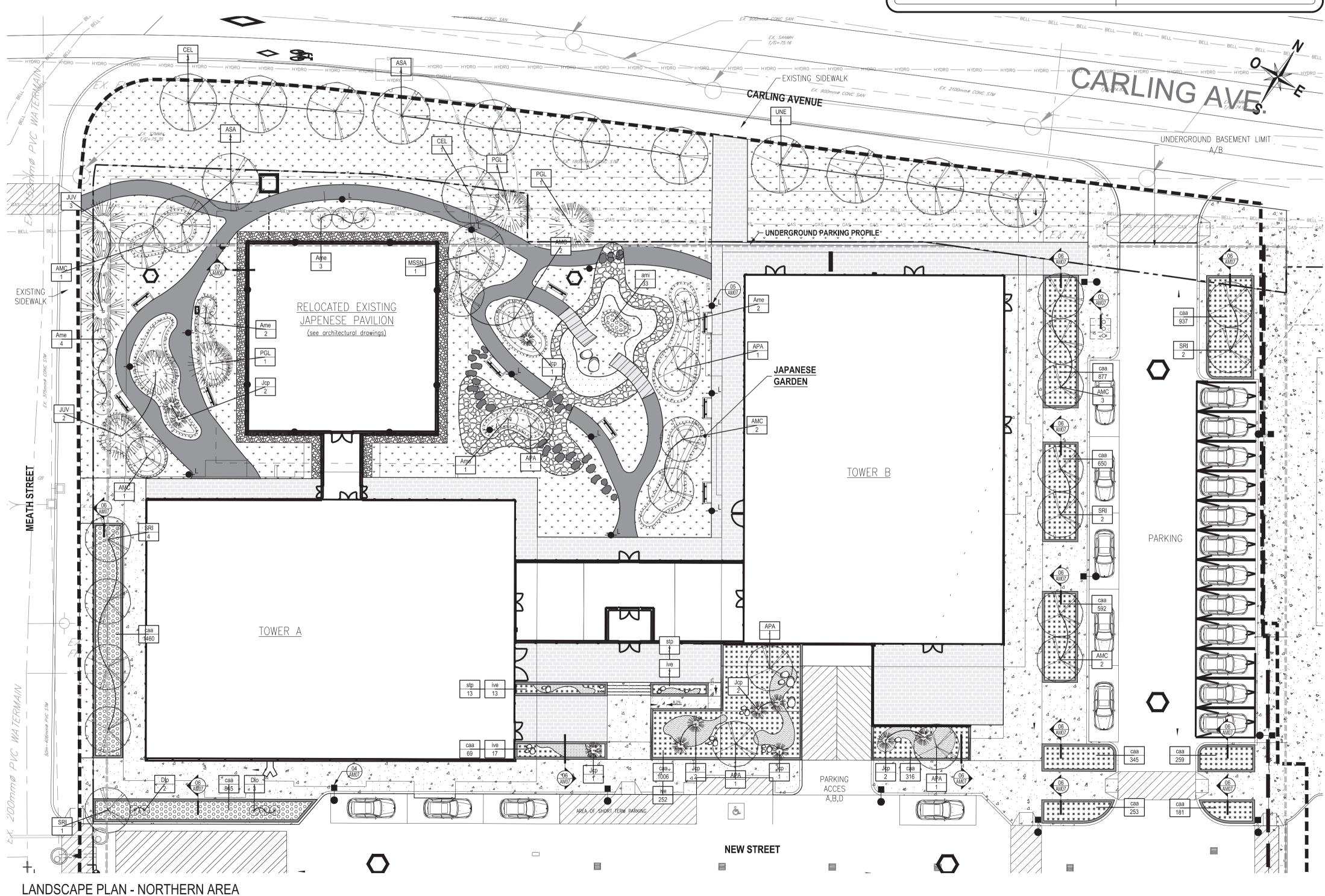
City's Application No. Scale D07-12-21-0092 1:300 Iss./Rev. Sheet Plan No. 3 of 10



LILY XU, MCIP, RPP MANAGER, DEVELOPMENT REVIEW SOUTH PLANNING, INFRASTRUCTURE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA









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SIHED KHADHRAOUI, LANDSCAPE ARCHITECT MARIE-SOLEIL BERGERON, TECH

ISABELLE LALONDE, LANDSCAPE ARCHITECT ISABELLE LALONDE, LANDSCAPE ARCHITECT

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LANDSCAPE PLAN - NORTHERN AREA

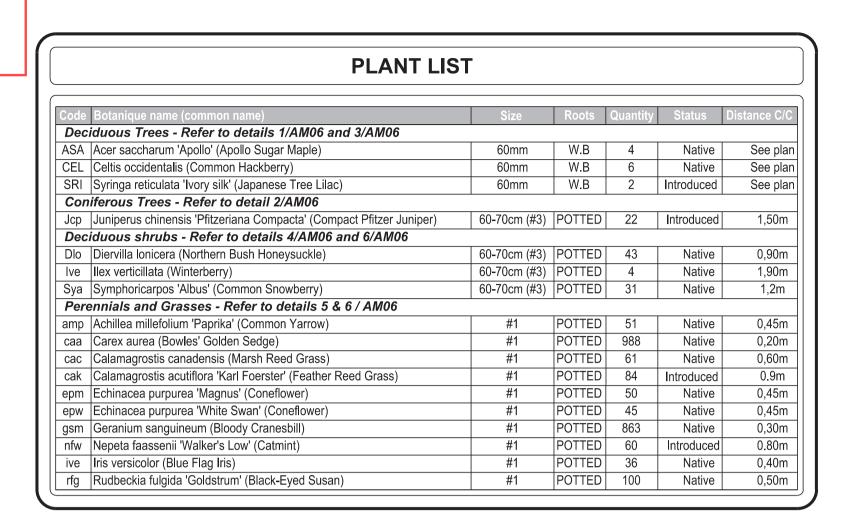
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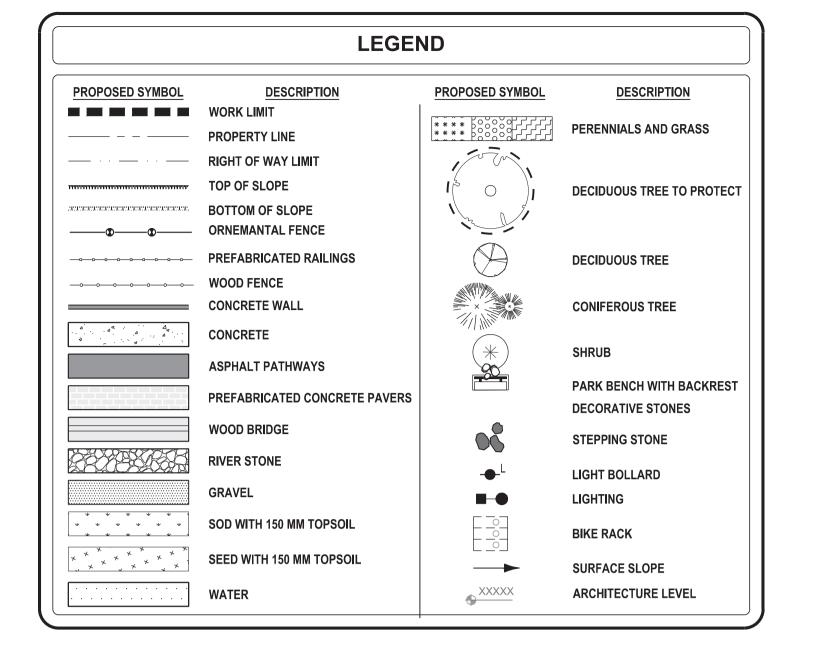
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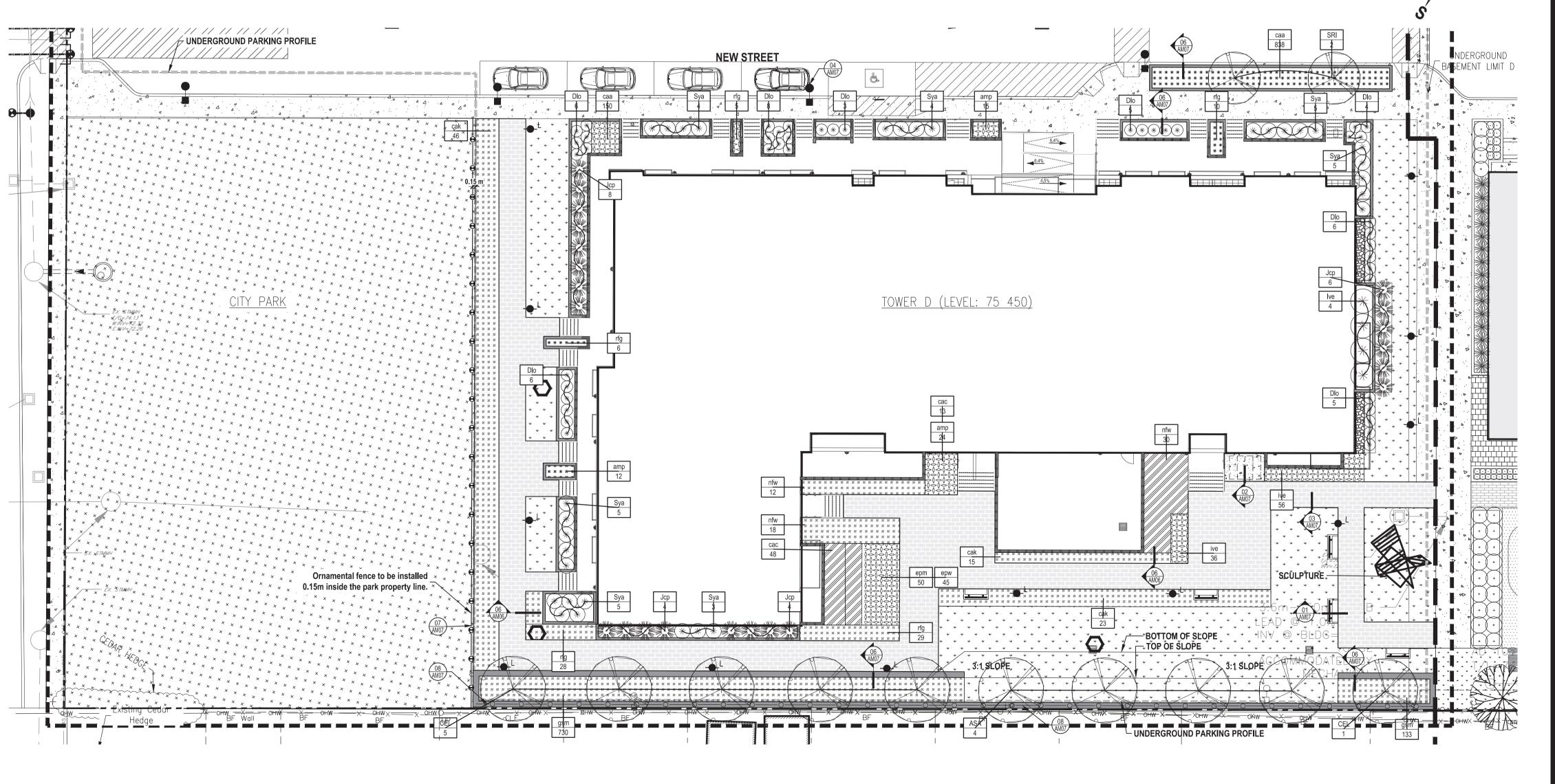
APPROVED

By Lily Xu at 1:16 pm, Aug 05, 2022



LANDSCAPE PLAN - SOUTHERN AREA







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ISABELLE LALONDE, LANDSCAPE ARCHITECT

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The owner of the property

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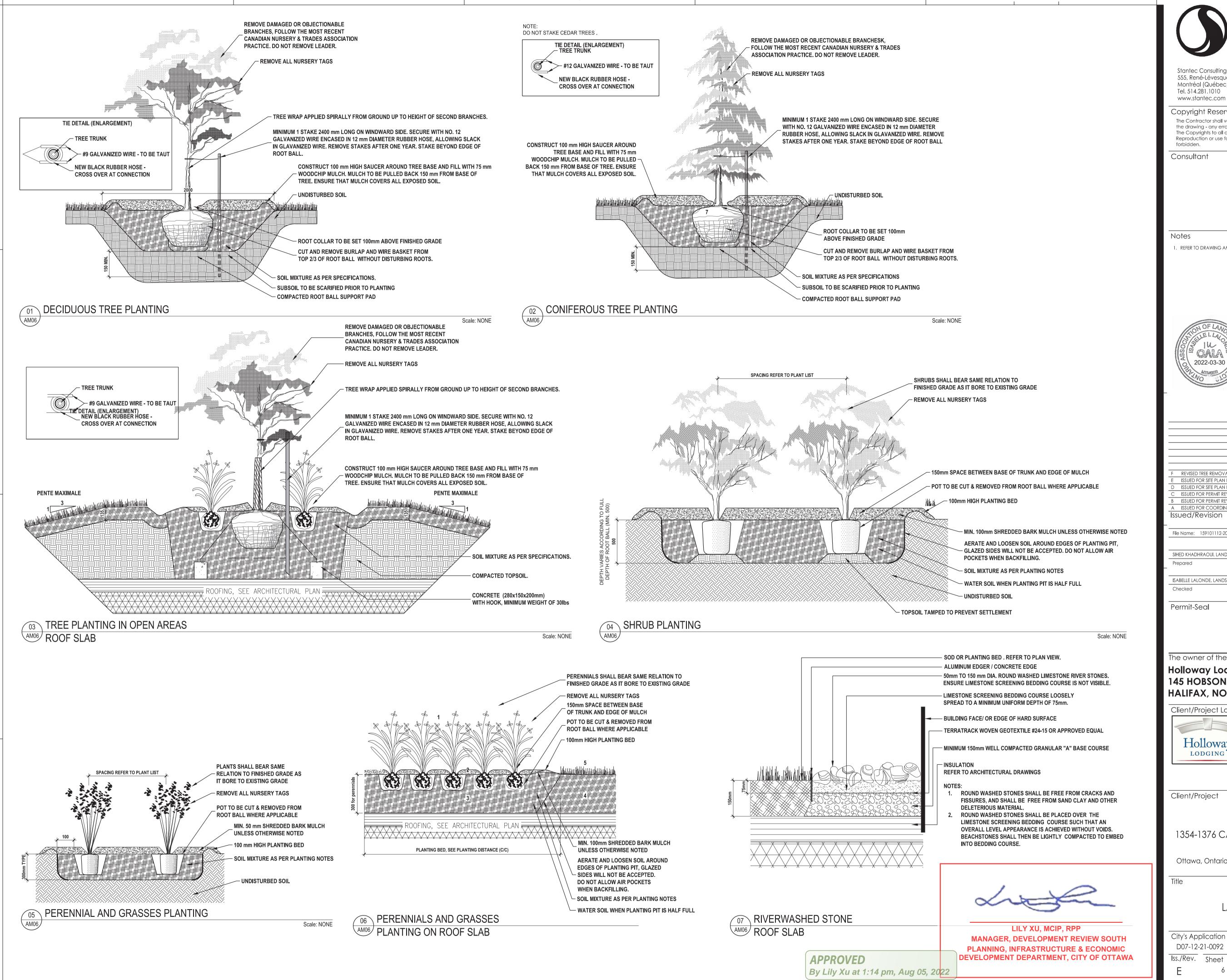
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LANDSCAPE PLAN - SOUTHERN AREA

City's Application No. Scale D07-12-21-0092 1:200 Iss./Rev. Sheet Plan No. 5 of 10

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YYYY.MM.DD SIHED KHADHRAOUI, LANDSCAPE ARCHITECT MARIE-SOLEIL BERGERON, TECH Drawn

2021.10.20

ISABELLE LALONDE, LANDSCAPE ARCHITECT ISABELLE LALONDE, LANDSCAPE ARCHITECT

Project Manager

Permit-Seal

The owner of the property

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Client/Project Logo Holloway LODGING

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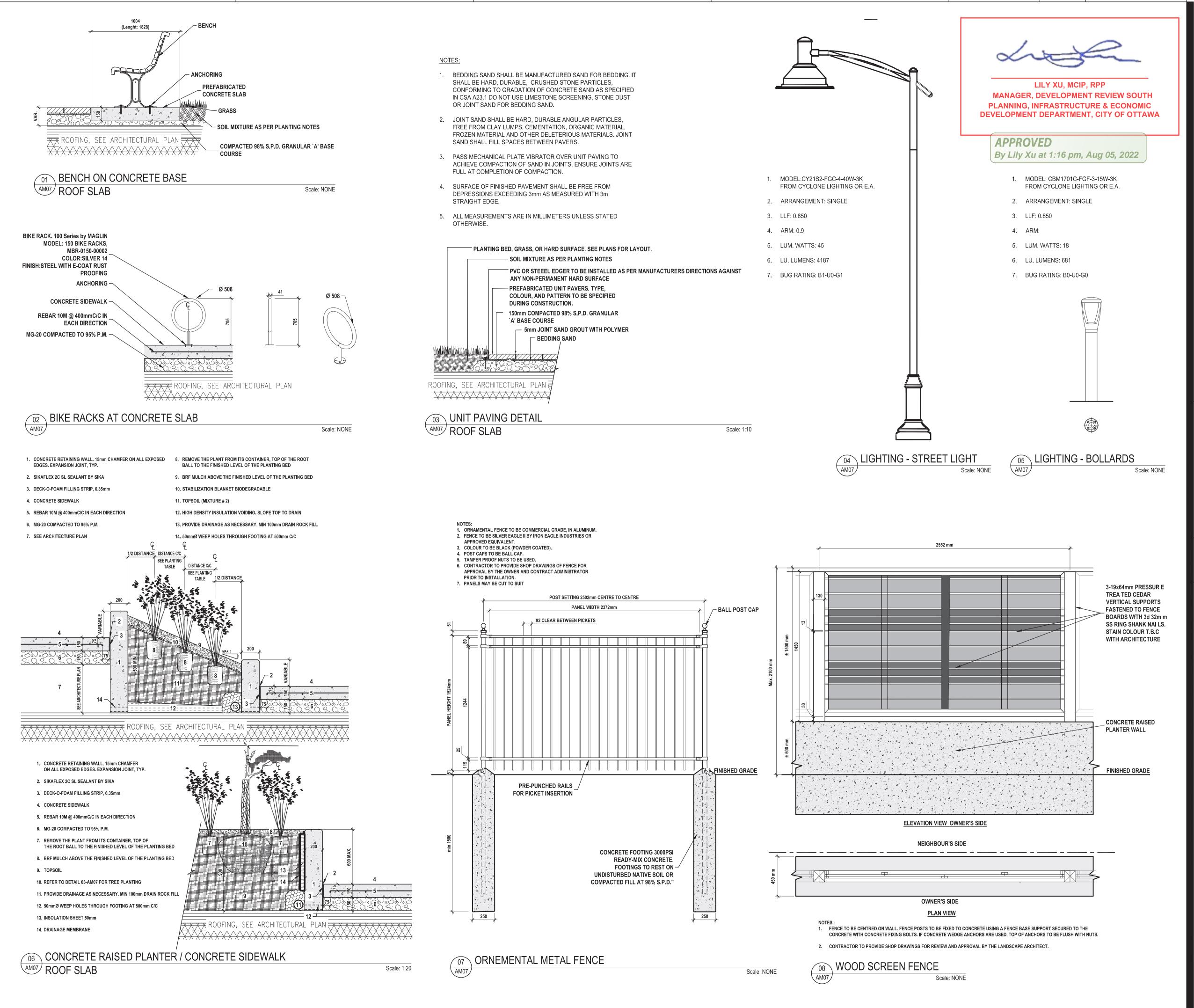
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SIHED KHADHRAOUI, LANDSCAPE ARCHITECT
Prepared

MARIE-SOLEIL BERGERON, TECH
Drawn

ISABELLE LALONDE, LANDSCAPE ARCHITECT

ISABELLE LALONDE, LANDSCAPE ARCHITECT

YYYY.MM.DD

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- 2. Refer to engineering drawings for proposed grading.
- 3. Refer to engineering drawings for proposed site servicing.
- 4. Existing vegetated areas on adjacent properties shall remain and be protected before, during, and after
- 5. Sod shall be kentucky bluegrass sod installed over 135mm of topsoil, sod shall be installed throughout within limit of work and in all disturbed areas outside the limit of work except where indicated. sod shall be installed as per opss 803.
- 6. Contractor to locate and stake all utilities prior to any work on the site. do not plant directly above underground utilities. report any discrepancies to the landscape architect for direction.
- 7. No trees shall be planted under overhead wires.
- 8. The landscape architect may adjust the location of planting prior to planting to minimize conflicts with utilities, driveways and intersection visibility.
- 9. Contractor shall supply all materials in quantities sufficient to complete work shown on these drawings. any discrepancies shall be reported to the landscape architect for direction.
- 10. Do not make substitutions of materials, products or quantities without prior written permission of the landscape architect.
- 11. The contractor to make good to the satisfaction of the landscape architect any areas damaged by the work.
- 12. Upon the completion of work each day, remove all debris, garbage and surplus materials from the site. keep the site clean and useable at all times.
- 13. All workmanship and materials (including plants) to be guaranteed for one full year following final acceptance of the project by the landscape architect.
- 14. The contractor shall remove all t-bar and wooden tree stakes prior to assumption by the owner.
- 15. At the time of inspection for acceptance all tree pits shall be cultivated, free or weeds, leaves, broken branches and debris.

# PLANTING NOTES

- 1. The details on this sheet do not represent any particular species.
- 2. Trees and shrubs as indicated in the details represent both coniferous and deciduous species.
- 3. Material planted in group shall be set in continuous planting beds.
- 4. Pruning to suit species prune branches by 1/3 to remove damaged or objectionable branches following proper horticultural practice. do not prune leaders.
- 5. Firmly compact backfilled planting mixture to eliminate air pockets or prevent settlement.
- 6. PLANTING MATERIAL QUALITY STANDARDS:
  - All plant materials to conform to the canadian nursery landscape association for variety, size and

  - plant material collected from wild sources will not be accepted;
  - Landscape architect reserves the right to refuse acceptance of any plant displaying poor growth
  - Any plants that do not conform to the above standards will be promptly removed from the site by the contractor and replaced with material of acceptable quality at no additional cost to the
- 7. MULCH: Mulch shall be shredded wood varying in size from 25-125mm in length from coniferous trees.

# TOPSOIL PLACEMENT AND GRADING SPECIFICATIONS

#### General Part 1

#### REFERENCES 1.1

- Agriculture and Agri-Food Canada
  - .1 The Canadian System of Soil Classification, Third Edition, 1998.
- .2 Canadian Council of Ministers of the Environment (CCME)
  - .1 PN1340-2005, Guidelines for Compost Quality.
  - Soil. Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. 2009.
- Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), 2012 Sampling and Analysis Protocol for Ontario Regulation 267/03, under the Nutrient Management Act. 2002.
- Ontario Provincial Standard Specifications (OPSS)
  - .1 OPSS 802, Construction Specification for Topsoil
  - City of Ottawa Standard Specifications
  - .1 F-8021, Topsoil, Imported

### **DEFINITIONS** 1.2

- Compost:
  - .1 Mixture of soil and decomposing organic matter used as fertilizer, mulch, or soil conditioner.
  - Compost is processed organic matter containing 40% or more organic matter as determined by Walkley-Black or Loss On Ignition (LOI) test.
  - Product must be sufficiently decomposed (i.e. stable) so that any further decomposition does not adversely affect plant growth (C:N ratio below 25), and contain no toxic or growth inhibiting contaminates.
  - Composed bio-solids to: CCME Guidelines for Compost Quality, Category
- Qualified Person is defined as a Professional Engineer or Geoscientist, as specified by Ontario Regulation 153/04 Records of Site Condition - Part XV.1 of the Environmental Protection Act.

#### **ACTION AND INFORMATIONAL SUBMITTALS** 1.3

- Quality control submittals for Topsoil:
  - .1 The Contractor is to have the source for the topsoil approved by the Contract Administrator and City of Ottawa. As part of the approval process, the Contractor shall provide written documentation demonstrating that the Contractor has fulfilled the following requirements:
    - A minimum of three representative soil samples of every proposed source of imported topsoil shall be collected by or under the supervision of a Qualified Person.

- A minimum of three representative soil samples of native soils to be re-used on site are also required to be tested.
- The collection of soil samples to be in accordance with the OMAFRA Field Quality Control methods outlined in the 2012 Sampling and Analysis Protocol for Ontario Regulation 267/03 Made under the Nutrient Management Act, 2002.
- .4 Mix samples together thoroughly before submitting for testing.
- Soil samples are to be tested by an accredited analytical laboratory designated by the Contract Administrator. The contractor is responsible for the cost of this testing. Testing is to be done to the following parameters:
- .1 Concentration of contaminants: Typical contaminants parameters shall include, as a minimum, metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons (PHCs), and organochloride pesticides. Any additional contaminant parameters to be tested shall be identified by the Qualified Person based on the historic or present use of the property from which the topsoil is sourced, any potentially contaminating activities that may have taken place thereon, or known environmental conditions that may impact the quality of the topsoil.
- The condition of the proposed topsoil source compared to the appropriate Site Condition Standards established by the Ontario Ministry of the Environment and Climate Change as provided by the Ontario Soil, Ground Water and Sediment Standards for Use under part XV.1 of the Environmental Protection Act dated April 15, 2011 and as may be amended from time to time and in effect at the time the park construction is begun. The Site Condition Standards shall be those applicable to the receiving property (park is Table 3) as determined based on ground water use, soil texture and land use.
- Soil structure and composition: clay, sand and silt content through particle size distribution, Saturated hydraulic conductivity, bulk density, actual CEC, organic matter percentage, concentration of N, P, K, Mg, soluble salt content, pH value, growth inhibitors and soil sterilants, to meet City of Ottawa F-8021, Imported Topsoil.
- Submit two copies of soil analysis prepared by a Qualified Person and recommendations for corrections if required, to the Contract Administrator.
- Topsoil failing to meet the applicable Site condition standards for the receiving site shall not be imported under any circumstances.
- Native topsoil failing to meet the applicable standards, may not be re-used in the park construction.
- The Testing Agency may make suitability recommendations to the Contract Administrator based on the physical analyses of composite samples ideally possessing organic matter content greater than five percent (5%), a bulk density less than 1.4 g/cm<sup>3</sup> and a saturated hydraulic conductivity no less than 50 mm/hour. Pre-plant amendment recommendations may also be made by the Testing Agency based on chemical testing. All recommendations will be submitted to the Contract Administrator prior to hauling and spreading topsoil on the work site, and only implemented at the discretion of the Contract Administrator.

# **QUALITY ASSURANCE**

Pre-installation meetings: conduct pre-installation meeting to verify topsoil testing results project requirements, installation instructions and warranty requirements.

# **WASTE MANAGEMENT AND DISPOSAL**

- Divert unused soil amendments from landfill to official hazardous material collections site.
- Do not dispose of unused soil amendments into sewer systems, into lakes. streams, onto ground or in locations where it will pose health or environmental hazard.

#### Part 2 **Products**

#### 2.1 **TOPSOIL**

- All topsoil for Park use must meet the requirements and contain the characteristics as indicated in City of Ottawa specification F-8021.
- Final acidity value shall range from pH 6.0 to pH 7.5 for turfgrass, trees and shrubs and shall be capable of sustaining vigorous plant growth, to the
- satisfaction of the Contract Administrator. Water infiltration shall be no less than 50mm/hr and not greater than 200mm per
- No stones or clods greater than 13mm.

# **SOIL AMENDMENTS**

- Fertilizer:
- Fertility: major soil nutrients present in following amounts:
- Nitrogen (N): 20 to 40 micrograms of available N per gram of topsoil.
- Phosphorus (P): 40 to 50 micrograms of phosphate per gram of topsoil.
- Potassium (K): 75 to 110 micrograms of potassium per gram of topsoil.
- Calcium, magnesium, sulfur and micro-nutrients present in balanced ratios to support germination and/or establishment of intended vegetation.

# Peat moss:

.2

- Derived from partially decomposed species of Sphagnum Mosses.
- Elastic and homogeneous, brown in colour.
- Free of wood and deleterious material which could prohibit growth.
- Shredded particle minimum size: 5 mm.
- Sand: washed coarse silica sand, medium to course textured.
- Organic matter: compost Category A in accordance with CCME PN1340, unprocessed organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements at 4-6% by weight.

- Limestone:
  - .1 Ground agricultural limestone.
  - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
- Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and other micro-nutrients suitable to specific plant species or application or defined by soil test.

#### Part 3 Execution

#### STRIPPING OF TOPSOIL 3.1

- Begin topsoil stripping of areas after grubbing has been completed and material removed from site.
- Strip topsoil to depths as directed by Contract Administrator.
  - .1 Avoid mixing topsoil with subsoil where textural quality will be moved outside acceptable range of intended application.
- Stockpile in locations as indicated.
- .1 Stockpile height not to exceed 2m.
- Disposal of unused topsoil is to be in an environmentally responsible manner but not used as landfill, as directed by Contract Administrator.
- Protect stockpiles from contamination and compaction.

#### 3.2 PREPARATION OF EXISTING GRADE

- Verify that grades are correct.
  - .1 If discrepancies occur, notify Contract Administrator and do not commence work until instructed.
- Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.
- Remove debris, roots, branches, stones in excess of 13mm diameter and other deleterious materials.
  - .1 Remove soil contaminated with calcium chloride, toxic materials and
  - petroleum products. The area should be sufficiently free of debris to ensure topsoil depth is consistent across all areas of the field to the minimum depth as required in the contract.
  - Dispose of removed material off site. Dispose contamination in
- responsible manner at the appropriate facility. .4 Cultivate general landscape area which is to receive topsoil to the minimum depth of 25 mm.
  - .1 Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.

#### 3.3 PLACING AND SPREADING OF TOPSOIL/PLANTING SOIL

- Place topsoil after Contract Administrator has accepted subgrade.
- Spread topsoil in uniform layers not exceeding 50mm to a minimum of 150mm.
- For sodded and seeded areas keep topsoil 15mm below finished grade.

.5 Manually spread topsoil/planting soil around trees, shrubs and obstacles.

Spread topsoil to minimum depths as indicated on contract drawings

### 3.4 **FINISH GRADING**

- Grade to eliminate rough spots and low areas and ensure positive drainage.
- .1 Prepare loose friable bed by means of cultivation and subsequent raking. .2 Leave surfaces smooth, uniform and firm against deep footprinting.

# 3.5

- Once all topsoil is installed on the site, the Contract Administrator shall:
- Confirm topsoil depths using a soil probe.
- Visually inspect the grades, surface quality and condition of the soils.
- Collect a minimum of 4 topsoil samples from throughout the park site for
  - The topsoil samples from the park may be mixed together to form a 'representative sample'.
  - .2 The Contract Administrator shall submit each sample to the same accredited analytical laboratory, to test for structure (clay, sand and silt), N, P, K, Mg, soluble salt content, pH value.
  - Conditions for acceptance include the following:
  - .1 The soils must meet the requirements of City of Ottawa specification F-8021 and the parameters identified in this specification. Failure to meet the requirements will result in rejection of the product.
  - The soils must not deviate more than 10% from the source testing results. Deviations greater than 10% will result in a need for further contaminant testing.
- Where proper testing, review and acceptance has not been provided the contractor may be required to perform additional testing to prove the soil conditions meet these specifications and if unsuccessful may be required to remove and replace with an acceptable topsoil to the depth or quantities directed by the contract administrator.

# 3.6

**SURPLUS MATERIAL** Dispose of materials except topsoil not required off site.

### 3.7 CLEANING

Upon completion of installation, remove surplus materials, rubbish, tools 4 PROVED equipment barriers. By Lily Xu at 1:17 pm, Aug 05, 2022

LILY XU. MCIP. RPP MANAGER, DEVELOPMENT REVIEW SOUTH PLANNING, INFRASTRUCTURE & ECONOMIC **DEVELOPMENT DEPARTMENT, CITY OF OTTAWA** 



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ISSUED FOR SITE PLAN REVIEW 2022.02.18 ISSUED FOR SITE PLAN REVIEW ISSUED FOR PERMIT REV 03/COORDINATION ISSUED FOR PERMIT REV 02 ISSUED FOR COORDINATION Issued/Revision Appd YYYY.MM.DD

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Project Manager

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Ottawa, Ontario./Canada

Title

LANDSCAPE NOTES

Scale

NONE

City's Application No. D07-12-21-0092 Iss./Rev. Sheet

Plan No.

#### 1.1 **REFERENCES**

- Ontario Provincial Standard Specifications (OPSS)
  - OPSS 802, Construction Specification for Topsoil
  - OPSS 804, Construction Specification for Seed and Cover
- City of Ottawa Standard Specifications:
- City of Ottawa SP F-8021, Topsoil, Imported
- City of Ottawa SP F-8041, Seeding and Mulching

## **ACTION AND INFORMATIONAL SUBMITTALS**

Product Data:

1.2

- Submit manufacturer's instructions, printed product literature and data sheets for seed, and fertilizer.
- Submit 2 copies of WHMIS MSDS.
- Submit a Certificate of Seed Analysis that stipulates the seed supplier's lot designation numbers.
  - .1 Test results from the Certificate of Seed Analysis shall specify germination and purity for each seed species of the mix as well as the seed mix composition expressed as a percentage of each seed species by mass for each seed mix specified in the Contract Documents.
- Samples:
  - .1 Submit 0.5 kg container of each type of fertilizer used.
- Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical
- Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.

#### 1.3 **OPERATIONAL CONSTRAINTS**

- .1 Mechanical seeding, using a Brillion seeder or equivalent is the preferred method for all park seeding. All other methods shall only be considered in areas where mechanical seeding is not possible, and must be authorized as a seeding method by the Contract Administrator.
- Seeding and mulching operations shall only be carried within the following periods, where soil humidity allows germination and growth:
  - Spring period: May 1st to June 15
  - Fall period: August 15 to October 31

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- Delivery and Acceptance Requirements:
  - .1 All seed and seed mixes shall be in the original factory sealed package with the original legible label securely attached. Labelling shall be according to the requirements of the Canada Seeds Act and Regulations. Each package shall be labelled to show:
    - .1 The name and address of the seed supplier,
    - The name of the seed mix and the various individual seed species that comprise the seed mix and the percentage by mass of each,
    - The grade of the seed or seed mix,
    - The supplier's lot designation number corresponding to the Certificate of Seed Analysis,
  - .5 Mass in kilograms of the seed mix,
  - .6 The inoculant type, strain, and expiry date.
  - Labelled bags of fertilizer identifying mass in kg, mix components and percentages, year of production, date of bagging, supplier's name and lot
  - Fertilizer must be dry.
  - Storage and Handling Requirements:
  - All seed and inoculant shall be stored in cool, dry locations until use. Inoculant is only required for seed mixes containing Crown Vetch or
  - Store fertilizer in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - Replace defective or damaged materials with new.
  - No seed or cover shall come in contact with the foliage of any trees, shrubs, or other vegetation, except as specified in the Seeding subsection. No seed or cover shall come in contact with waterbodies

### **Products** Part 2

### 2.1 **MULCH, COVER, & MEDIUM**

- Hydraulic Mulch: Hydraulic mulch shall be capable of dispersing rapidly in water to form a homogeneous slurry and remain in such a state when agitated or mixed with other specified materials. When applied, hydraulic mulch shall be capable of forming a uniform, cohesive mat. Hydraulic mulch shall not inhibit growth or germination of the seed mix. Hydraulic mulch shall be dry, free of weeds and other foreign materials, and shall be supplied in factory sealed packages bearing the manufacturer's label indicating product name and mass.
- Bonded Fibre Matrix: Bonded Fibre Matrix (BFM) shall be a hydraulically applied, 100% biodegradable product, which after application is capable of adhering to the soil. In a dry state, BFM shall be comprised of not less than 70% by weight of long stranded wood fibres held together by organic or mineral bonding agents or both. The hydrated BFM shall form a viscous material that creates a high strength, porous, and erosion-resistant uniform, cohesive mat, when applied and dried. The bonding agent shall not dissolve or disperse upon re-wetting. BFM shall not inhibit the germination or growth of plant material.
- Erosion Control Blanket (ECB): Erosion control blanket (ECB) shall be of a consistent thickness with a 100% biodegradable even fibre distribution. The ECB shall be covered on top with a biodegradable and photodegradable plastic mesh. ECB may also be sewn together with cotton thread. ECB shall be supplied in a dry, rolled mat protected with an outer waterproof wrap bearing the manufacturer's original label indicating product name and application instructions. Staples shall be U-shaped, constructed of wire with a diameter of at least 2,5 mm with legs at least 150 mm long and 25 mm apart

- For terra-seeding, growing medium shall be pre-mixed and consist of a minimum 60% compost material. The growing medium may be amended by the additional of sand and peat loam. Both amendments shall be added at the discretion of the Contractor to ensure that the growing medium meets the material specification and is suited for distribution by a pneumatic blower.
- Compost and Sand to Section 32 91 19.13, Topsoil Placement and Grading.

## **GRASS SEED**

2.2

- General Purpose: City of Ottawa Special Provision F-8041.
- Alternative varieties must be scientifically demonstrated for salt tolerance and cold hardiness equal or greater than the varieties specified above. This information shall be submitted in writing from the seed producer on the Contract Administrator for review prior to the start of seeding operations.
- Nurse Crop: Nurse crop will be Annual Ryegrass at a rate of 0.5kg per 100m2, unless otherwise approved by the Contract Administrator.
- Alternative varieties must be scientifically demonstrated for salt tolerance and cold hardiness equal or greater than the varieties specified above. This information shall be submitted in writing from the seed producer on the Contract Administrator for review prior to the start of seeding operations.
- Nurse Crop: Nurse crop seed shall be either Rye Grass, Fall Rye Grain or Winter Wheat Grain, unless otherwise approved by the Contract Administrator.
- Low Maintenance Seed Mixture
  - Acceptable mixture: Mixture as described below or approved equal.
    - 35% Chewings Fescue (Festuca rubra spp. fallax)
    - 35% Hard Fescue (Festuca ovina)
    - 20% Creeping Red Fescue (Festuca rubra spp. rubra)
  - 10% Perennial Ryegrass (Lolium perenne)
  - Sow at a rate of 180kg per hectare.

#### 2.3 WATER

- Free of impurities that would inhibit germination and growth or vegetation.
- Supplied by Contract Administrator at designated source. dried. The bonding agent shall not dissolve or disperse upon re-wetting. BFM shall not inhibit the germination or growth of plant material.
- Erosion Control Blanket (ECB): Erosion control blanket (ECB) shall be of a consistent thickness with a 100% biodegradable even fibre distribution. The ECB shall be covered on top with a biodegradable and photodegradable plastic mesh. ECB may also be sewn together with cotton thread. ECB shall be supplied in a dry, rolled mat protected with an outer waterproof wrap bearing the manufacturer's original label indicating product name and application instructions. Staples shall be U-shaped, constructed of wire with a diameter of at least 2.5 mm with legs at least 150 mm long and 25 mm apart
- For terra-seeding, growing medium shall be pre-mixed and consist of a minimum 60% compost material. The growing medium may be amended by the additional of sand and peat loam. Both amendments shall be added at the discretion of the Contractor to ensure that the growing medium meets the material specification and is suited for distribution by a pneumatic blower.
- Compost and Sand to Section 32 91 19.13, Topsoil Placement and Grading.

# 2.4

- Fertilizer shall comply with the provisions of the Canada Fertilizers Act and
- Fertilizer shall be supplied in original factory sealed bags bearing the manufacturer's original label indicating mass and analysis.
- All fertilizer shall be in granular form: dry, free flowing, and free from lumps.
- Fertilizer shall be applied at a rate which will provide 0.75kg N/100m2 at two
- month intervals.

# Execution

#### **EXAMINATION** 3.1

- Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts are acceptable for mechanical seeding installation in accordance with manufacturer's written instructions.
  - Visually inspect substrate in presence of Contract Administrator.
  - Inform Contract Administrator of unacceptable conditions immediately
  - Topsoil depth to be test and approved by Contract Administrator prior to seed placement.
  - Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator.

### **SEED BED PREPARATION** 3.2

- Remove and dispose of weeds; debris; stones; soil contaminated by oil, gasoline and other deleterious materials; to a licensed contaminated soils disposal site.
  - Verify that grades are correct. If discrepancies occur, notify Contract Administrator and commence work when instructed by Contract Administrator.
- Soil shall be loosened, fine graded and uniform so as to assure a properly granulated surface or not less than 50 mm depth, with no sign of erosion. Before seed installation, the topsoil shall be friable, free from extraneous material, debris and stones and/or foreign matter or weeds.
- Fine grade surface free of humps and hollows to smooth, even grade, to elevations indicated to tolerance of plus or minus 15 mm, surface draining
- immediately prior to seeding. The surface to be seeded shall be prepared not more than 7 Days before the

Cultivate fine graded surface approved by Contract Administrator to 25 mm depth

### 3.3 **SEED PLACEMENT**

seeding operation.

The locations and limits of the different permanent seed mixes and different cover types as specified in the Contract Documents shall be staked out on the ground surface.

- .2 Mechanical seeding, using a Brillion seeder or equivalent is the preferred method for all park seeding. All other methods shall only be considered in areas where mechanical seeding is not possible, and must be authorized as a seeding method by the contract administrator.
- Seed and cover application or re-application shall not be carried out under adverse weather conditions such as high wind or heavy rain or when field conditions are not conducive to seed germination such as frozen soil or soil covered with snow, ice, or standing water.
- The legume seed shall be inoculated within not more than 30 minutes prior to application, using the recommended inoculant for each variety. Sufficient dry mulch material shall be added to the legume seed to provide a colour trace to aid in attaining an even distribution of the seed.
- For manual seeding:
- .1 Use manually operated drop seeder ("Cyclone" type or equivalent).
- The cyclone spreader shall be capable of distributing seed and fertilizer uniformly in a dry state.
- For Mechanical seeding:
  - Broadcast seeding ('Brillion' grass seeder) shall be used under appropriate conditions and slopes as indicated by the equipment manufacturer.
  - The Contractor shall ensure the area is suitably prepared for the seed application and that the seed is uniformly dispersed over the entire area.

# For hydraulic seeding:

- Hydraulic seeding shall only be considered in areas where mechanical seeding is not possible, and must be authorized as a seeding method by the contract administrator.
- Seed, fertilizer, and water shall be thoroughly mixed in the hydraulic seeder and mulcher into a homogeneous water slurry. When thoroughly mixed, the water slurry shall be applied to the prepared earth areas by the nozzle sprayer or extension hose,
- The Contractor shall ensure there is a uniform dispersal of the mixed material over the entire area designated for seeding and that the spray does not dislodge soil or cause erosion.

# For terra-seeding:

- The application shall only be used in areas where mechanical seeding is not possible. Seed shall be uniformly applied directly at the soil surface with a pneumatic blower.
- The pneumatic blower truck shall be equipped with a computer-calibrated seed injection system and shall be capable of uniformly applying composted topsoil and seed at a rate greater than 0.25 cubic meters of material per minute. The blower truck shall also be equipped with hoses of sufficient length to reach the seeding area.
- .3 Depth of growing medium and seed shall vary based on slope of seed application area. Depth shall be to seed supplier's recommendations.
- Blend applications 300 mm into adjacent grass areas to form uniform surfaces, where applicable.
- .10 Sow half of required amount of seed in one direction and remainder at right angles as applicable.
- .11 Incorporate seed by light raking in cross directions.
- .12 Consolidate mechanically seeded areas by rolling area if soil conditions warrant or if directed by Contract Administrator with equipment approved by Contract Administrator immediately after seeding
- .13 Sow during the period of May 15 to June 15 and August 15 to October 15.
- .14 Protect all seeded areas from damage by water erosion, pedestrians and

#### **MULCHING** 3.4

- Immediately after seeding on the same day, mulch seeded area by approved
- The Contractor shall ensure that the hydraulic seeder and mulcher is properly calibrated to provide the coverage as specified for each of the hydraulically applied cover materials.
- Apply mulch evenly and uniformly at such a rate that the average depth is between 19 mm and 25 mm maximum.
- Bonded Fibre Matrix (BFM): shall be installed by a Contractor certified and trained by the manufacturer in the proper mixing and installation of the product. To ensure a suitable drying and curing period, BFM shall not be applied when rainfall is expected, during rainfall, or immediately after rainfall.
- Hydraulic Mulch: Hydraulic mulch shall be applied at the rate as per drawings or as recommended by the supplier. Hydraulic mulch shall be thoroughly mixed with water into a homogenous slurry. When thoroughly mixed, the hydraulic mulch slurry shall be applied to the seeded earth areas by nozzle sprayer or extension hose. The mixed material shall be evenly dispersed over the entire seeded earth area to form a uniform, cohesive mat. The spray shall not dislodge soil or cause

#### 3.5 **EROSION CONTROL BLANKET**

3.6

- Install erosion control blanket on slopes only as and where directed by the Contract Administrator.
- Erosion control blanket shall be placed and stapled into position as per the manufacturer's installation instructions over the entire designated surface area. Blankets shall be installed in direct contact with the ground surface to form a uniform, cohesive mat over the seeded earth area. The Contractor shall ensure
- that the ECB is anchored to the soil and that tenting of the ECB does not occur. On slopes, the uppermost edge of the ECB shall be anchored in a 150 mm wide by 150 mm deep trench when the ECB cannot be extended and anchored over the crest of the slope. The trench shall be backfilled with earth and compacted.
- When seed and cover materials are applied to the foliage of trees, shrubs, other susceptible plant material, or waterbodies, the Contract remove the seed and cover materials from the areas and wash the areas with
- When seed and cover materials are applied to areas or designated, the Contractor shall remove the seed and

MAINTENANCE DURING ESTABLISHMENT PERIO Ensure maintenance is carried out under supervision of Maintenance Supervisor.

> MANAGER, DEVELOPMENT REVIEW SOUTH PLANNING. INFRASTRUCTURE & ECONOMIC **APPROVED DEVELOPMENT DEPARTMENT, CITY OF OTTAWA** By Lily Xu at 1:17 pm, Aug 05, 2022

LILY XU, MCIP, RPP

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SIHED KHADHRAOUI, LANDSCAPE ARCHITECT MARIE-SOLEIL BERGERON, TECH

ISABELLE LALONDE, LANDSCAPE ARCHITECT ISABELLE LALONDE, LANDSCAPE ARCHITECT Project Manage

2021.10.20

YYYY.MM.DD

Permit-Seal

The owner of the property

File Name: 159101112-200-AM-D.DWG

**Holloway Lodging** 145 HOBSONS LAKE DRIVE SUITE 106 HALIFAX, NOVA SCOTIA B3S 0H9



Client/Project

1354-1376 CARLING COMPLEX

Ottawa, Ontario./Canada

Title

LANDSCAPE NOTES

Scale

City's Application No. D07-12-21-0092 Iss./Rev. Sheet 9 of 10

NONE Plan No.

- No maintenance equipment, materials or other miscellaneous items may be stored on site unless approved by the Contract Administrator.
- The Contractor shall ensure that the application of seed and mulching is maintained in a horticulturally acceptable manner and that erosion control is maintained until the vegetative cover is established and accepted by the Contract Administrator. The Contractor shall ensure that the soil is kept humid during the germination period. The Contractor shall re-seed and mulch areas of poor
- Perform following operations from time of seed application until acceptance by Contract Administrator:
  - Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent
  - Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
  - Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Contract Administrator. Grass cutting not required for naturalized seed areas.
  - Fertilize seeded areas after first cutting in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
  - Control weeds by mechanical means utilizing approved integrated pest management practices.
  - Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent
  - Adjust protection barrier as necessary to protect against deterioration due to pedestrian or other traffic as needed.
- Submit monthly written reports to Contract Administrator identifying:
  - .1 Maintenance work carried out (every 2 weeks).
  - Development and condition of seeded areas.

  - Preventative or corrective measures required which are outside Contractor's responsibility.
- Standard Seed Mix areas only:
  - Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Contract Administrator.
  - .2 Control weeds by mechanical means utilizing approved integrated pest management practices.

#### 3.7 **CLEANING**

- Progress Cleaning:
- Leave Work area clean at end of each day.
- Keep pavement and area adjacent to site clean and free from mud, dirt, and debris at all times.
- Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.
  - Clean and reinstate areas affected by Work.

### 3.8 **PROTECTION**

Erect plastic snow fence around newly seeded areas sufficient to protect against deterioration due to pedestrian or other traffic.

#### **INSPECTIONS & FINAL ACCEPTANCE** 3.9

- All completed work will be inspected by the Contract Administrator until the end of the maintenance and warranty period. Inspections will be held at the end of 30, 60 and 90- Day periods following the seeding and mulch operation. A final inspection will be held at the end of the maintenance and warranty period. No inspections will be held during the winter dormant period or when the site conditions prohibit a visual inspection. The timing intervals between inspections will be suspended during the winter dormant period.
- At the 30-day inspection within the seeded area;
  - .1 The applied mulch shall be visually intact and shall form a uniform cohesive mat;
  - Germination of the nurse crop shall be visually evident in a uniform 100%
- At the 60-Day inspection within the seeded area;
  - .1 The nurse crop shall be at mature height in a uniform 100% cover
  - Germination of the specified, primary seed species shall be visually evident in a uniform cover;
  - There shall not be any significant bare areas, both in terms of quantity
  - Non-seeded, non-specified vegetation shall not exceed 20% of the
- At the 90-day inspection period within the seeded area;
  - The permanent seed species shall be at an average height of 50mm in a uniform 100% cover, representative of the specified, permanent seed
  - There shall not be any significant bare areas;
  - Non-seeded, non-specified vegetation shall not exceed 20% of the
- At the end of the Maintenance and Warranty Period (six months after the completion of the seeding and mulching operations);
  - .1 The permanent seed species shall be at an average height of 50mm in a uniform 100% cover, representative of the specified, permanent seed
  - There shall not be any bare areas;
  - Non-seeded, non-specified vegetation shall not exceed 20% of the seeded area.

- Seeded areas will be accepted by the Landscape Architect at the end of the maintenance period provided that:
  - Seeded areas are showing a state of healthy growth.
  - Seeded areas are free of eroded surfaces.
- There shall not be any bare areas.
- Turf areas have been cut no less than twice, the last cut being carried out within 72 hours prior to the acceptance inspection.
- The duration of the Maintenance Period shall be six months, beginning immediately following the seeding and mulching operation. The duration of the maintenance period shall be suspended during the winter dormant period, from October 30 to May 1st of the following year.
- If the completed work does not meet the performance criteria for seeded areas as specified above, the Contract Administrator will notify the Contractor in writing and the Contractor shall re-apply the specified materials in conformance with OPSS 804 and the Special Provisions within 14 calendar days of receiving written notification.
- If the Contractor cannot apply or re-apply the seed and mulch due to site conditions or for any other reason, the Contractor shall maintain the site and control erosion until conditions permit application of the seed and mulch.
- .10 All replaced seed and mulch shall be subject to a further six-month maintenance and warranty period.

**APPROVED** By Lily Xu at 1:17 pm, Aug 05, 2022



LILY XU, MCIP, RPP MANAGER, DEVELOPMENT REVIEW SOUTH PLANNING, INFRASTRUCTURE & ECONOMIC **DEVELOPMENT DEPARTMENT, CITY OF OTTAWA** 



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