## REVEGETATION SPECIFICATIONS:

1. All contractors must obtain, be familiar with, and adequately implement all relevant project specifications and management plans, including the Construction Environmental Management Plan (CEMP) and Erosion and Sediment Control Plan (ESC).
2. The Contractor must locate and verify the existence of all utilities prior to the commencement of work.
3. All planting and growing medium is to meet British Columbia Society of Landscape Architects/British Columbia Landscape & Nursery Association (BCSLA/BCLNA) standards, latest edition, unless noted otherwise1, 2.
4. The Environmental Monitor (EM) must be notified of the proposed planting schedule at least two weeks prior to commencement of vegetation works.
5. Planting is to occur during the fall after completion of project works and/or invasive plant treatment;
6. Keeping vegetation loss to an absolute minimum (e.g., as much of the existing native riparian vegetation as possible is retained, or salvaged and replanted);
7. Maximizing salvaged materials (e.g., soils, plants) and replanting vegetation to create suitable habitat conditions, improve habitat connectivity and minimize sedimentation effects.
8. For specified areas, as directed by the Qualified Environmental Professional (QEP), a soil assessment may be required prior to planting to determine suitability for revegetation. If deemed necessary, planting medium (topsoil) will be imported and applied where needed, as per current BCSLA/BCLNA standards.
9. Imported topsoil must be clean, seed free, and free of invasive plants and plant parts. Placing a minimum of 30 to 40cm of clean topsoil (free of seeds, invasive species, leaves, etc.) as deemed necessary by the QEP;
10. The Contractor is to supply all plant material shown on the planting plan. Sizes of plants listed are considered a minimum.
11. Any proposed material substitutions must be reviewed by the EM prior to use.
12. Nursery stock root balls, containers, and soil must be free of noxious weeds and/or invasive plants and plant parts (e.g., seeds, stems, roots, etc.).
13. All plant material must be provided by a certified, disease/virus free nursery within the Lower Mainland and/or Fraser Valley of BC - proof of certification required. Removal and replacement of disease/virus-affected plant material will be done so at the Restoration Contractor's expense.
14. Planting prescriptions shown are guidelines and can be "field-fit" based on actual field conditions under consultation/direction of the EM.
15. Plant spacing is to achieve densities noted in plant list tables. Plant spacing to be measured off centre.
16. All planting waste materials (e.g., wraps, containers, labels, etc.) must be removed immediately from the site by the Restoration Contractor.
17. Conducting all instream work under dry conditions and under the supervision of a QEP.
18. Once restoration work is complete, remove any non-biodegradable erosion and sediment control measures such as silt fencing.
19. The Contractor must complete annual maintenance tasks including replacement of failed plant material in the next appropriate planting season for the duration of the monitoring program, as directed by the EM.
20. Restoration success will be monitored annually by an EM for a period of three years and will begin the first growing season after planting completion. Success of the habitat restoration will be based on the following criteria:
    a. Support by a pre- and post-restoration site assessment conducted by a QEP;
    b. Visual counts of dead planted stock trees will be recorded and replaced within one year of the monitoring event to maintain a minimum 80% survival rate.
    c. Measurable improvement in the ecological condition of the restored area;
    d. Indication that the restored ecosystem is self-sustaining; and
    e. No further harm is inflicted on the site.
21. The Contractor will be responsible for replacing any significant mortality in nursery stock (i.e., planted areas with a density significantly less than roughly one plant per square metre) identified within the three-year success monitoring program, as directed by the EM.
22. All monitoring data, observations, and photo-point monitoring collected by the EM and subsequent maintenance recommendations will be summarized in an annual monitoring report and provided to all interested parties (e.g., Aplin&Martin, City of New Westminster, First Nations, etc.).
    a. A Site Instruction must be prepared by a QEP and provided to the Contractor to direct annual maintenance works.

**Specifications relating specifically to MSE Flex Vegetative Wall System (i.e., geobags):**

1. All best practices or specifications provided by the geobag material supplier must be adhered to.
2. The geobag wall must be saturated prior to planting to minimize shock.
3. All plant stock to be installed directly into the geobags by making a small incision in the bag and removing soil (if needed) to place the plug.
    a. Cuts in the geobags should be inverted "T" cuts measuring no more than 3" long in both directions (see detail).
    b. Pilot holes for seedling plugs:
        i. Should be created using a dibble (or similar spiked planting tool);
        ii. Must be installed in the upper third of the geobags; and
        iii. Must be inserted at a 45$^{o}$ angle.
4. Planting density must not exceed three plants per geobag.
5. Cuts, punctures, pilot holes or other holes (including those made by others or accidentally) in the geobags must not exceed three.
    a. Where applicable, existing holes in the geobags should be used for planting.
6. Live-stake planting is preferred for suitable species (e.g., red-osier dogwood and willow).
    a. All live-stakes are to measure between 600 and 750mm in length, be a minimum of 30mm wide at the base, and be free of foliage/branching.
    b. All live-stakes are to be submerged and soaked in water for a minimum of 5 days prior to installation.
    c. All live-stakes are to be installed on a vertical angle (~45$^{o}$) so that they extend through multiple geobags.
    d. All live-stakes are to be installed so that a minimum of ¾'s of the total steak length is buried within the wall.
7. Willow species are not to be planted above 1.5m from the bottom of the wall.
8. All replacement planting must use existing holes in the geobags, wherever possible, and the contractor must ensure that any new holes does not exceed a maximum of three holes/bag.

[1] British Columbia Society of Landscape Architects website. 2020. Available at: https://www.bcsla.org/. Accessed May 2020.
[2] British Columbia Landscape & Nursery Association. 2020. Available: https://bclna.com/bclna-resource/canadian-landscape-standards/. Accessed May 2020.