**City of Richmond – 9th and 10th Street**

**Post-construction Establishment and Maintenance Notes for Bioretention Planters**

**ESTABLISHMENT PERIOD** (to begin at end of contract establishment period)

Post-installation establishment of plant material to ensure the long term health and appearance of rain garden plantings is to be performed by the City of Richmond, Department of Public Utilities – Stormwater Utility division.

TWO YEAR ESTABLISHMENT PERIOD: RAIN GARDEN PLANT MATERIAL WILL REQUIRE CLOSE OBSERVATION AND ATTENTION FOR THE FIRST TWO YEARS FOLLOWING THE END OF THE THREE MONTH ‘ESTABLISHMENT AND MAINTENANCE’ CONTRACT PERIOD AS REQUIRED BY THE INSTALLATION CONTRACTOR. DURING THE TWO YEAR ESTABLISHMENT PERIOD, CITY STAFF SHALL BE RESPONSIBLE FOR THE SURVIVAL AND HEALTH OF ALL TREES, SHRUBS, AND GROUND COVERS WITHIN THE RAIN GARDENS.

WATERING:­ REGULAR WATERING WILL BE REQUIRED DURING PERIODS OF LOW RAINFALL TO OBTAIN PROPER PLANT ESTABLISHMENT. WATER A MINIMUM OF ONCE PER WEEK DURING THE ESTABLISHMENT PERIOD IF THERE IS NO NATURAL RAINFALL. HAND-WATER BY CONNECTING TO A NEARBY HYDRANT OR BY USING AWATER TRUCK. OPENING OF UP-STREAM FIRE HYDRANTS THAT FLOW INTO THE STREET ALONG THE CURBLINE INTO THE RAIN GARDENS FOR A TO ALLOW ADEQUATE WATERING TO ALL PLANTS IS AN ALTERNATIVE TO HAND-WATERING. PERMANENT IRRIGATION SYSTEMS WILL NOT BE INSTALLED IN THE RAINGARDENS.

MULCHING: REPLENISH MULCH TO A 2-3” LAYER IN ALL PLANTING AREAS ANNUALLY IN THE SPRING. MULCH IS TO BE SHREDDED HARDWOOD OR HARDWOOD BARK, SEASONED FOR A MINIMUM OF SIX MONTHS. MULCH TO BE FREE OF TRASH OR DEBRIS AND NOT TO CONTAIN PIECES LARGER THAN 4” LENGTH. FINE, FULLY COMPOSTED LEAF MATERIAL MAY BE MIXED WITH MULCH FOR ADDED ORGANIC CONTENT.

WEEDING: ALL RAIN GARDEN PLANTINGS SHALL BE KEPT FREE OF WEEDS DURING THE ESTABLISHMENT PERIOD. AS PLANTINGS MATURE AND GROW TOGETHER, LESS WEEDING WILL BE REQUIRED.

REPLACEMENTS: AFTER THE INSTALLATION CONTRACT WARRANTY PERIOD OF ONE YEAR, THE REPLACEMENT OF DEAD PLANTS MAY BE REQUIRED. REFER TO THE PLANT SCHEDULE ON FILE TO OBTAIN ORIGINALLY SPECIFIED PLANT VARIETIES. IF A PARTICULAR PLANT SPECIES PROVES TO BE PERFORMING POORLY IN THE CURRENT LOCATION, CONTACT THE LANDSCAPE ARCHITECT TO COORDINATE AN ALTERNATIVE SELECTION.

SEDIMENT AND TRASH REMOVAL: INSPECT RAIN GARDENS AFTER LARGE STORM EVENTS AND ON A REGULAR BASIS FOR SEDIMENT BUILD-UP AND TRASH/DEBRIS THAT MAY HAVE ACCUMULATED ON THE CONCRETE SPLASH PAD AREAS AT EACH CURB INLET. HAND SHOVEL SEDIMENT AND DISPOSE OF OFF SITE. COLLECT AND DISCARD TRASH AND DEBRIS.

**REGULAR MAINTENANCE** (long term – after 2 year establishment period)   
  
Regular maintenance to ensure the long term health and appearance of rain garden plantings is to be performed by the City of Richmond, Department of Public Utilities – Stormwater Utility division.

SEDIMENT AND TRASH REMOVAL: INSPECT RAIN GARDENS AFTER LARGE STORM EVENTS AND ON A REGULAR BASIS FOR SEDIMENT BUILD-UP AND TRASH/DEBRIS THAT MAY HAVE ACCUMULATED ON THE CONCRETE SPLASH PAD AREAS AT EACH CURB INLET. HAND SHOVEL SEDIMENT AND DISPOSE OF OFF SITE. COLLECT AND DISCARD TRASH AND DEBRIS.

WATERING: HAND-WATER PLANTINGS DURING PERIODS OF DROUGHT WHERE RAINFALL AVERAGES LESS THAN ¼” PER WEEK FOR TWO OR MORE CONSECUTIVE WEEKS. HAND-WATER BY CONNECTING TO A NEARBY HYDRANT OR BY USING AWATER TRUCK. OPENING OF UP-STREAM FIRE HYDRANTS THAT FLOW INTO THE STREET ALONG THE CURBLINE INTO THE RAINGARDENS TO ALLOW ADEQUATE WATERING TO ALL PLANTS IS AN ALTERNATIVE TO HAND-WATERING. PERMANENT IRRIGATION SYSTEMS WILL NOT BE INSTALLED IN THE RAINGARDENS.

MULCHING: REPLENISH MULCH TO A 2-3” LAYER IN ALL PLANTING AREAS ANNUALLY IN THE SPRING. MULCH IS TO BE SHREDDED HARDWOOD OR HARDWOOD BARK, SEASONED FOR A MINIMUM OF SIX MONTHS. MULCH TO BE FREE OF TRASH OR DEBRIS AND NOT TO CONTAIN PIECES LARGER THAN 4” LENGTH. FINE, FULLY COMPOSTED LEAF MATERIAL MAY BE MIXED WITH MULCH FOR ADDED ORGANIC CONTENT.

WEEDING: HAND WEED AS NEEDED TO MAINTAIN WEED-FREE PLANTINGS. AS PLANTING DENSITY INCREASES WITH PLANT GROWTH OVER TIME, LESS WEEDING WILL BE REQUIRED.

­PRUNING AND CUTTING-BACK: REGULAR PRUNING OF PLANTINGS IS NOT REQUIRED. PLANT VARIETIES HAVE BEEN SELECTED THAT MAINTAIN APPROPRIATE SIZE FOR THE PLANTING SPACE AT MATURITY. PRUNE SHRUBS OR CUT-BACK GRASSES/PERENNIALS ONLY AS NEEDED FOR GROWTH BEYOND PLANTER BOUNDARY.

REPLACEMENTS: REPLACE DEAD PLANTS AS NEEDED TO MAINTAIN PROPER PLANTING DENSITY AND BIORETENTION FUNCTIONALITY. REFER TO THE PLANT SCHEDULE ON FILE TO OBTAIN ORIGINALLY SPECIFIED PLANT VARIETIES. IF A PARTICULAR PLANT SPECIES PROVES TO BE PERFORMING POORLY IN THE CURRENT LOCATION, CONTACT THE LANDSCAPE ARCHITECT TO COORDINATE AN ALTERNATIVE SELECTION.