BMP OPERATION AND MAINTENANCE INSTRUCTIONS (BY OWNER)

OWNER INFORMATION

CHICAGO PUBLIC SCHOOLS 125 S. CLARK STREET, FLOOR 17 CHICAGO, IL 60603 CONTACT: LESLIE NORGEN, DIRECTOR OF ASSET MANAGEMENT (773)553-5727

UPON COMPLETION OF THE PROJECT CONSTRUCTION THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES SHALL TAKE EFFECT AND BE CONDUCTED FOR THE BEST MANAGEMENT PRACTICES FOR A MINIMUM OF TEN (10 YEARS FROM THE DATE THAT IMPLEMENTATION WAS COMPLETED.

OPERATION AND MAINTENANCE PRACTICES

-O&M PLAN PROCEDURES AND PRACTICES MUST BE REVIEWED AND ASSESSED ANNUALLY. -DRAINAGE STRUCTURES AND FLOW RESTRICTORS MUST BE INSPECTED AND CLEANED SEMI-ANNUALLY. -VOLUME CONTROL BMPS SHALL BE INSPECTED SEMI-ANNUALLY AND AFTER SIGNIFICANT RAINFALL EVENTS EXCEEDING 1.5 INCHES

THE OWNER SHALL KEEP AN UPDATED LOG BOOK DOCUMENTING THE PERFORMANCE OF THE REQUIRED 0&M ACTIVITIES FOR PERPETUITY. LOG BOOKS MUST BE PRODUCED UPON THE REQUEST OF A CITY INSPECTOR. IN GENERAL, THE LOGBOOK SHOULD NOTE ALL INSPECTION DATES, FACILITY COMPONENTS INSPECTED, AND ANY MAINTENANCE

PERFORMED AND REPAIRS MADE. ALL INSPECTIONS AND MAINTENANCE, BOTH ROUTINE AND EMERGENCY, SHOULD BE RECORDED IN THE LOGBOOK

-VEGETATION SHALL BE MAINTAINED ON A REGULAR BASIS

-PEST CONTROL MEASURES SHALL BE IMPLEMENTED TO ADDRESS INSECTS AND RODENTS. SIGNAGE AND FENCING SHALL BE INSTALLED AND MAINTAINED WHERE NECESSARY TO PROTECT PROPERTY AND THE

ACTIVITY SCHEDULE (STRUCTURE MAINTENANCE) BIORETENTION BASINS, STORMWATER STRUCTURES, AND CLEANOUTS ARE DESIGNED SO THAT THE STRUCTURE CAN HAVE EASY ACCESS FOR INSPECTION AND MAINTENANCE. STRUCTURE MAINTENANCE PROCEDURES MUST MEET OSHA CONFINED SPACE ENTRY REQUIREMENTS.

AS NEEDED

-REMOVAL OF SEDIMENT AND DEBRIS FROM STRUCTURES WHEN THE SEDIMENT ZONE IS FULL AS WELL AS FROM ILLET AND OUTLET PIPES. SEDIMENTS SHOULD BE TESTED FOR TOXICANTS IN COMPLIANCE WITH APPLICABLE DISPOSAL REQUIREMENTS IF LAND USES IN THE CATCHMENT INCLUDE COMMERCIAL OR INDUSTRIAL ZONES, OR IF INDICATIONS OF POLLUTION ARE NOTICED.

OUARTERLY

-FLOATING DEBRIS SHOULD BE REMOVED. SEMI-ANNUALLY

-INSPECTION OF DRAINAGE STRUCTURES.

MAINTENANCE GUIDELINES

POURED IN PLACE PLAYGROUND SURFACES

-BRUSH SURFACE TO KEEP CLEAN OF MOSS, LEAVES, OR OTHER LITTER AS NEEDED. -REMOVE CHEWING GUM, WEEDS, MOSS, AND ALGAE. REMOVE ANY MUD THAT HAS BEEN TRACKED ON TO THE SURFACE. ENSURE PRODUCTS USED ARE ACCEPTABLE FOR USE ON POURED IN PLACE SURFACE. -ANNUALLY INSPECT FOR ANY SIGNS OF DETERIORATION TO THE SURFACE. CONTACT POURED IN PLACE VENDOR IF DAMAGED AND REOUIRING REPAIR

BIORETENTION MAINTENANCE

LIKE ANY GARDEN WEEDING WILL BE ONE OF THE MOST IMPORTANT TASKS TO MAINTAINING THE BIORETENTION AREAS, IT VILL BE IMPORTANT FOR THOSE WEEDING THESE AREAS TO BE FAMILIAR WITH THE APPEARANCE OF EACH PLANT USED IN THE DESIGN IN ALL STAGES OF GROWTH. AS THE PLANTS FLOWER AND RELEASE SEED THEY MAY BEGIN TO GROW IN NEW LOCATIONS. COMPARING THE LOCATION OF THE PLANTS OBSERVED IN THE BIORETENTION AREAS WITH THE PLANTING PLANS WILL BE A VALUABLE AID IN LEARNING THEIR IDENTIFICATION.

LEARNING THE APPEARANCE OF EACH SPECIES AS IT OPENS IN THE SPRING, WILL MAKE IT EASIER TO IDENTIFY NEW NATIVE SEEDLINGS AND DIFFERENTIATE THEM FROM UNWANTED WEEDS. WEEDS, E.G. UNWANTED OR UNDESIRABLE PLANTS, SHOULD BE PULLED BEFORE THEIR ROOTS BECOME WELL ESTABLISHED. IT IS EASIEST TO PULL THEM WHEN THE SOIL IS SOFT AFTER A RAIN. AT A MINIMUM, THE FLOWERS OF THESE UNDESIRABLE SPECIES SHOULD BE CUT AND REMOVED BEFORE THEY SET SEED. AS THE PLANTINGS MATURE THEY SHOULD BECOME MORE ROBUST AND THE UNWANTED WEEDS SHOULD BE REDUCED.

WEEDING THE PERENNIAL BEDS IN THE BIORETENTION AREAS WILL TAKE APPROXIMATELY 90 MINUTES FOR EVERY 1,000 SQUARE FEET OF PLANTING (USING A PUSH HOE). THE WEEDING SHOULD BE DONE 3 TO 4 TIMES BETWEEN APRIL AND MID-JUNE AND ON AN AS-NEEDED BASIS BETWEEN MID-JUNE TO NOV.

WHEN UNCERTAIN ABOUT WHETHER A PLANT IS A WEED OR NOT, IT MAY BE HELPFUL TO LET IT GROW FOR A PERIOD OF TIME. AS THE LEAVES MATURE IT WILL BE EASIER TO MATCH IT TO THE PLANTS THAT WERE PLANTED DELIBERATELY AS PART OF THE DESIGN. IT MAY BE HELPFUL TO MAINTAIN A •••••••DENTIFICATION PICTURE ••••••••DF•THE WEEDS THAT ARE COMMONLY FOUND. IOWA STATE UNIVERSITY IS A GOOD SOURCE FOR WEED IDENTIFICATION RESOURCES. SEE <u>HTTP://WWW.WEEDS.IASTATE.EDU/MGMT/QTR97-1/WEEDID.HTM</u>.

THE FOLLOWING SPECIFICATIONS MAY BE USED AS THE BASIS FOR PROVIDING LANDSCAPE MAINTENANCE SERVICES TO THE PLANTINGS IN THE NEW STREETSCAPE

SOIL MAINTENANCE SPECIFICATIONS

- 1) INSPECT BIORETENTION AREAS TO IDENTIFY ACCUMULATION OF SEDIMENT AND MATTED ORGANIC DEBRIS THAT COULD SEAL THE SURFACE AS WELL AS EXTENDED DURATION OF PONDING (PONDING FOR MORE THAN 24 HOURS AFTER CESSATION OF RAIN). INSPECTIONS SHOULD BE CONDUCTED SEMI-ANNUALLY AND AFTER RAINFALL EVENTS
- 2) REMOVE. AS NEEDED. MATTED ORGANIC DEBRIS SUCH AS LARGE LEAVES AND OTHER LAYERED MATTER THAT PREVENTS TRANSMISSION OF WATER INTO THE BIORETENTION SOI

3) RAKE ACCUMULATED SEDIMENT FROM THE BIORETENTION SURFACE, TAKING CARE TO PROTECT PLANTS. MINOR ACCUMULATIONS MAY BE RAKED INTO THE BIORETENTION SOIL

4) IDENTIFY THE SOURCE OF PONDING WHEN EXTENDED PERIODS OF PONDING OCCUR WITHIN THE BIORETENTION

- a) INSPECT CLEANOUTS TO DETERMINE IF THE UNDERDRAIN OR DOWNSTREAM STORM LINE ARE CLOGGED AS EVIDENCED BY STANDING WATER IN THE CLEANOUTS TO THE ELEVATION OF THE SURFACE PONDING IN THE BIORETENTION AREA.
- b) IF NO WATER IS STANDING IN THE CLEANOUTS, THE BIORETENTION SURFACE IS CLOGGED. THE CLOGGED SOIL SHOULD BE REMEDIATED BY REMOVING THE TOP ONE TO TWO INCHES OF BIORETENTION SOIL UNTIL THE AREA DRAINS, REMOVED SOIL SHOULD BE REPLACED WITH NEW BIORETENTION SOIL MEETING PROJECT SPECIFICATIONS.

PLANT MAINTENANCE SPECIFICATIONS

1) SCOPE OF WORK

ii)BASIC MAINTENANCE SERVICES SHOULD INCLUDE THE MAINTENANCE OF TREES, SHRUBS AND ORNAMENTAL PERENNIALS. THE SCHEDULE FOR MAINTENANCE ACTIVITIES SHOULD BE DESIGNED TO PROMOTE THE HEALTHY GROWTH AND ENHANCE THE NATURAL BEAUTY OF THESE AREAS AND WILL INCLUDE MOWING, WEED CONTROL,

PEST MANAGEMENT, MULCHING, PRUNING, WATERING AND FERTILIZATION

ij) MANAGEMENT ACTIVITIES SHOULD BE PROVIDED EACH YEAR BETWEEN APRIL 1ST AND NOVEMBER 30TH. A PRING CLEAN UP SHOULD OCCUR IN APRIL AND A FALL CLEANUP SHOULD OCCUR IN NOVEMBER

i) THE SPRING CLEAN UP SHOULD BE PERFORMED TO REMOVE ACCUMULATED WINTER DEBRIS FROM PLANT BEDS, AND PAVEMENT AREAS, CLEAN UP SHOULD INCLUDE CUTTING BACK ORNAMENTAL GRASSES AND FLOWER STALKS FROM HERBACEOUS PLANTS FROM THE PREVIOUS SEASON'S GROWTH. CLEAN UP SHOULD BE COMPLETED BY APRIL 30 EACH YEAR.

ii)SPRING CLEAN SHOULD INCLUDE THE REMOVAL OF WINTER PROTECTION DEVICES SUCH AS TREE WRAPPING AND BURLAP SNOW FENCE

iii) ONE GENERAL FALL CLEANUP SHOULD BE PERFORMED IN NOVEMBER TO REMOVE LEAVES, BRANCHES AND SPENT PLANT MATERIAL, FROM PLANT AND COBBLE BED AREAS. WINTER PROTECTION MEASURES AS REQUIRED HEREIN SHALL ALSO BE INSTALLED

2) SHRUBS, ORNAMENTAL GRASSES, AND FLOWERING PERENNIALS

- a) BASIC MAINTENANCE SERVICES FOR SHRUBS, ORNAMENTAL GRASSES, AND FLOWERING PERENNIALS SHOULD INCLUDE CUTTING, WEEDING, FERTILIZING, PEST MANAGEMENT, AND MULCHING
- b) CUTTING
- i) NON-HARDY WOODY SHRUBS THAT INCUR FREQUENT DIE-BACK OF STEMS OVER THE WINTER SHOULD BE PRUN BACK TO WITHIN 6 TO 12 INCHES FROM THE GROUND EACH YEAR IN LATE WINTER (MID-FEBRUARY TO LA MARCH). THIS INCLUDES PLANTS IN THE FOLLOWING GENUS'S: *ROSA, SPIREA, POTENTILLA* AND *DIERVILLA*.
- ii) PERENNIALS AND BULBS, EXCEPT AS IDENTIFIED IN PART 2.D., SHOULD BE DEADHEADED AFTER BLOOMING, A SPENT FOLIAGE SHOULD BE REMOVED.
- iii) ALL ORNAMENTAL GRASSES AND CERTAIN LATE-FLOWERING ORNAMENTAL PERENNIALS WITH DECORATI SEED HEADS, SUCH AS ASTER, ECHINACEA, RUDBECKIA, AND SEDUM, SHOULD BE ALLOWED TO KEEP THEIR SPENT FOLIAGE AND FLOWER HEADS THROUGH THE WINTER. ANY REMAINING VEGETATION FROM THESE PLANTS SHOULD BE PRUNED TO THE GROUND IN MARCH, OR EARLY APRIL AND REMOVED.

c) WEEDING

i) WEEDING OF THE PERENNIAL BEDS SHOULD BE PERFORMED A MINIMUM OF 6 TIMES EACH GROWING SEASON. WEEDS SHOULD BE REMOVED BEFORE THEY ARE ALLOWED TO SET SEED. HAND-PULLING OF THE WEEDS, TAKING CARE TO REMOVE THE ENTIRE ROOT MASS AND SHAKE ANY LOOSE SOIL BACK INTO THE PLANTING BED, IS PREFERRED. IF HERBICIDE APPLICATIONS ARE USED, CARE SHOULD BE TAKEN TO AVOID CONTACT WITH NON-WEED PLANTS

d) FERTILIZING

i) SHRUBS, GROUNDCOVER, AND PERENNIALS IN PLANT BEDS SHOULD BE FERTILIZED IN THE SPRING, FERTILIZER SHALL BE OF A 1:1:1 RATIO, SHOULD CONSIST OF AT LEAST 50% SLOW RELEASE NITROGEN, SHOULD BE ACIDIC IN SOIL REACTION, AND SHOULD BE APPLIED AT A RATE OF THREE POUNDS OF NITROGEN PER 1000 SQ. FT.

e) PEST MANAGEMENT.

i) INTEGRATED PEST MANAGEMENT (IPM) PROCEDURES SHOULD BE FOLLOWED TO CONTROL INSECTS AND DISEASES WITHIN SHRUB AND ORNAMENTAL PERENNIAL PLANT BEDS. IPM METHODS SHALL INCLUDE ESTABLISHING ACTION THRESHOLDS FOR CERTAIN DISEASES/PESTS, MONITORING DISEASE/PEST LEVELS, DEVELOPING PREVENTION STRATEGIES, AND IDENTIFYING CONTROL STRATEGIES. CONTROL METHODS MAY INCLUDI MECHANICAL REMOVAL (TRAPPING), OR HIGHLY TARGETED CHEMICAL TREATMENTS, SUCH AS PHEROMONI APPLICATIONS. BROADCAST SPRAYING OF NON-SELECTIVE PESTICIDES SHOULD BE AVOIDED AND USED ONLY AS A LAST RESORT.

f) MULCHING

i) PARTIALLY DECOMPOSED LEAF MULCH SHOULD BE APPLIED IN A 2 INCH LAYER TO ALL BARE AREAS IN MAY OF EACH YEAR.

3) TREE CARE

a) BASIC MAINTENANCE SERVICES FOR TREES SHOULD INCLUDE PRUNING, MULCHING, STAKING, PEST MANAGEMENT, AND WINTER PROTECTION AND REPAIR MEASURES.

b) PRUNING.

i) PRUNING SHOULD BE PERFORMED TO REMOVE DISEASED, OR DAMAGED WOOD AND TO MAINTAIN GENERAL FORM AND HABIT. IT SHOULD INCLUDE THE FOLLOWING

- (1) REMOVAL OF DISEASED, OR DAMAGED WOOD
- (2) REMOVAL OF SUCKER GROWTHS AT THE BASE OF TREES.

(3) REMOVAL OF WATERSPROUTS FROM DORMANT OR ADVENTITIOUS BUDS ON THE TRUNKS OR MAIN BRANCHES OF TREES

(4) REMOVAL OF FORKED, OR COMPETING LEADERS ON SMALLER TREES.

ii) PRUNING SHOULD BE PRIMARILY PERFORMED DURING THE WINTER SEASON BETWEEN DECEMBER 1ST AND MARCH 1ST WHEN PLANTS ARE DORMANT. PRUNING OF DAMAGED, OR DISEASED WOOD SHOULD BE PERFORMED AS SOON AS IT IS OBSERVED. TO AVOID EXPOSURE TO OAK WILT DISEASE, OAK TREES (ALL VARIETIES) SHOULD ONLY BE PRUNED WHEN THE PLANTS ARE DORMANT (NOV-MARCH).

iii) ANY PRUNING EQUIPMENT USED TO REMOVED DISEASED WOOD SHOULD BE CLEANED WITH A BLEACH SOLUTION BEFORE USING IT ON OTHER PLANTS, OR NON-DISEASED WOOD FROM THE SAME PLANT

iv) ALL DEBRIS FROM PRUNING ACTIVITIES SHALL BE REMOVED AND DISPOSED OF OFF-SITE. SERVICE PERSONNEL SHOULD TAKE CARE TO SWEEP WALKS AND DRIVES AFTER ACTIVITIES ARE COMPLETED.

c) STAKING.

i) TEMPORARY STAKING SHOULD BE PROVIDED TO YOUNG TREES THAT ARE VULNERABLE TO WIND DAMAGE ii)STAKING METHODS SHOULD INCLUDE THE USE OF ADJUSTABLE, FLEXIBLE TREE LOOPS MADE OF PLASTIC, OR

RUBBER, ROPE AND WIRE CAN BE USED AS TIE-DOWNS, BUT SHOULD NOT BE IN CONTACT WITH THE TREE

iii) STAKING SHOULD BE INSTALLED AND INSPECTED DURING THE SPRING AND FALL CLEANUPS.

- iv) ONCE TREES ARE ESTABLISHED THE STAKING SHOULD BE REMOVED.
- d) PEST MANAGEMENT.
- i) INTEGRATED PEST MANAGEMENT (IPM) PROCEDURES SHOULD BE FOLLOWED TO CONTROL INSECTS AND DISEASES ON TREES AND LARGE SHRUBS. IPM METHODS SHALL INCLUDE ESTABLISHING ACTION THRESHOLDS FOR CERTAIN DISEASES/PESTS, MONITORING DISEASE/PEST LEVELS, DEVELOPING PREVENTION STRATEGIES, AND IDENTIFYING CONTROL STRATEGIES. CONTROL METHODS MAY INCLUDE MECHANICAL REMOVAL (TRAPPING), OR HIGHLY TARGETED CHEMICAL TREATMENTS, SUCH AS PHEROMONE APPLICATIONS. BROADCAST SPRAYING OF NON-SELECTIVE PESTICIDES SHOULD BE AVOIDED AND USED ONLY AS A LAST RESORT.
- e) WINTER PROTECTION AND REPAIR METHODS.
- i) COMMERCIAL-GRADE TREE WRAPS SHOULD BE INSTALLED ON ALL YOUNG TREES THAT ARE SUSCEPTIBLE TO SUN SCALD IN THE WINTER. THIS INCLUDES PLANTS OF THE FOLLOWING GENUS'S: PRUNUS, MALUS, GLEDITSIA, TILIA, ACER, AND PLATANUS.
- ii) TREE WRAPS SHALL BE INSTALLED DURING THE FALL CLEANUP IN NOVEMBER AND REMOVED DURING THE SPRING CLEANUP IN APRIL
- iii) ANY SUN SCALD DAMAGE OCCURRING TO THE OUTER BARK OF YOUNG TREES SHOULD BE REMOVED WITH A SHARP CLEAN KNIFE

Operation and Maintenance Plan Owner's Certification Statement

Property Name: Propert Address:

UPON COMPLETION OF THE PROJECT CONSTRUCTION THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES. SHALL TAKE EFFECT AND BE CONDUCTED FOR THE BEST MANAGEMENT PRACTICES FOR A MINIMUM OF TEN (10) YEARS FROM THE DATE THAT IMPLEMENTATION WAS COMPLETED.

In the event that I/we were to sell this property, I/we agree to give a copy of the Plan to the new owner(s) and this Owner's Certification Statement for signature. This signed Certification Statement must be submitted to the City's Department of Buildings upon transfer of ownership.

I/we further agree to adhere to the maintenance schedule of the best management practices included in this plan and in the event that I were to sell this property, I agree to give a copy of this plan tothe new owner and explain to him/her the requirements of this plan (according to the 2009 sen in property, rugge to give to by or mis pain total new owner and explain to main to the departments in mis plan (according to the 20%). Regulations for Sewer Construction and Stormwater Management, Chapter 3, Section 6.2). I/we also acknowledge that if I/we do not maintain the measures shown on this plan, upon City inspection, I/we could be liable for a violation of the City's Municipal Code Stormwater Management Ordinance (according to Stormwater Management Ordinance Section 11-18-030).

Initial Owner(s) Printed Name	;	
Initial Owner(s) Signature	Date	Notary Public

2nd Owner(s) Printed Name

2nd Owner(s) Signature Date Notary Public

As the owner(s) of the subject property, by signing this document I/we acknowledge that I/we have received and reviewed the Operation and Maintenance Plan, dated______, (required by the Stormwater Management Ordinance, Section 11-18-030) and understand its contents, (as required by the Stormwater Management Ordinance, Section 11-18-030).

