

MINUTES OF THE EVERGREEN MEMORIAL CEMETERY
BOARD OF TRUSTEES MEETING
December 13, 2021

The Board of Trustees for the Evergreen Memorial Cemetery met in the Cemetery maintenance building located at 302 E. Miller St., at 6:00 P.M.

Trustee Gibson directed the Cemetery Manager to call the roll and the following members of the Board answered present:

Trustees: Joseph Gibson, President, Garrett Thalgott, Vice President and Brad Williams, Secretary/Treasurer.

Staff: Misty Porter, Cemetery Manager, Kyle Durlflinger, Ground Supervisor.

“Consent Agenda:

- A. Approval of Minutes of the November 8, 2021, Board Meeting as submitted by Staff. (Recommend that the Minutes of the November 8, 2021, Meeting be approved as presented.)
- B. Approval of Anticipated Expenditures as presented for the month December 2021. (Recommend that the Anticipated Expenditures be approved as presented.)

Motion by Trustee Williams, seconded by Trustee Thalgott to approve the Consent Agenda as presented.

Trustee Gibson directed the Cemetery Manager to call the roll which resulted in the following:

Ayes: Trustees Gibson, Thalgott, and Williams.

Nays: None.

Motion carried.

Approval by Board of Monthly Cemetery Audit for November 2021.

Motion by Trustee Thalgott, seconded by Trustee Williams to approve the Monthly Cemetery Audit for November 2021 as presented and forward on to Township Board for action and approval at their December 13, 2021, meeting.

Trustee Gibson directed the Cemetery Manager to call the roll which resulted in the following:

Ayes: Trustees Gibson, Thalgott, and Williams.

Nays: None.

Motion carried.

Approval by Board to transfer \$50,000.00 from Reserve Account (7782) to Business Checking Account (7774).

Motion by Trustee Thalgott, seconded by Trustee Williams to approve a transfer of \$50,000.00 from Reserve Account (7782) to Business Checking Account (7774).

Trustee Gibson directed the Cemetery Manager to call the roll which resulted in the following:

Ayes: Trustees Gibson, Thalgott, and Williams.

Nays: None.

Motion carried.

Approval that the board make a one-time exception of purchasing back spaces from John McIntyre.

Motion by Trustee Thalgott, seconded by Trustee Williams to approval that the board make a one-time exception of purchasing back spaces from John McIntyre.

Trustee Gibson directed the Cemetery Manager to call the roll which resulted in the following:

Ayes: Trustees Gibson, Thalgott, and Williams.

Nays: None.

Motion carried.

Report by Arborist Robert Murphy presented by Cemetery Staff.

- A. Misty Porter, Cemetery Manager
- B. Kyle Durlinger, Grounds Supervisor

2021 Year to Date Burials: Evergreen Memorial Cemetery - 85
East Lawn Memorial Gardens Cemetery - 99
Park Hill Cemetery - 59
Evergreen Memorial Pet Cemetery - 1

Comments: Brad said he suggests a pad and pillar for the airplane sculpture. The cemetery staff agrees that the airplane needs a pad and new base. Misty said that the Wreath Across America event is this weekend at Noon.

Public Comments: No one came forward to address the Board.

Approval to adjourn the meeting.

Motion by Trustee Thalgott, seconded by Trustee Williams to adjourn. Time: 6:31 P.M.

Trustee Gibson directed the Cemetery Manager to call the roll which resulted in the following:

Ayes: Trustee Gibson, Thalgott and Williams.

Nays: None.

Motion carried.

Respectfully submitted,

Joseph Gibson, President

Garrett Thalgott, Vice President

Brad Williams, Secretary/Treasurer

Passed and approved this 10th day of January 2022.

Attest: _____ President

_____ Vice President

_____ Secretary/Treasurer

MDP

Evergreen Memorial Cemetery Tree Inventory

Consisting of Tree Identification, Statistics, Hazard and AWR trees and Recommendations for future tree and woody plant additions.

Tree Identification and Tree Identification Abbreviation Key

SuM = sugar maple, *Acer saccharum* (89)= 24.2% of population

Includes cv. 'Fall Fiesta'

WP = white pine, *Pinus strobus* (64)= 17.4% of population

SM = silver maple, *Acer saccharinum* (61)= 16.6% of population

BO = bur oak, *Quercus macrocarpa* (38)= 10.3% of population

RM = red maple, *Acer rubrum* (20)= 5.4% of population

'October Glory', 'Autumn Blaze', 'Red Point'

- *Acer xfremanii*, 'Armstrong Gold'

EO = English oak, *Quercus robur* cv. 'Fastigiata' (18)= 4.9% of population

SBH = shagbark hickory, *Carya ovata* (18)= 4.9% of population

HB = common hackberry, *Celtis occidentalis* (11)= 2.99% of population

BW = black walnut, *Juglans nigra* (10)= 2.7% of population

LLL = littleleaf linden, *Tilia cordata* (10)= 2.7% of population

RO = red oak, *Quercus rubra* (9)= 2.45% of population

PNH = pignut hickory, *Carya glabra* (9)= 2.45% of population

GA = giant western arborvitae, *Thuja plicata* cv. 'Green Giant' (9)= 2.45% of population

NM = Norway maple, *Acer platanoides* (8)= 2.17% of population

DF = Douglasfir, *Pseudotsuga menziesii* (5)= 1.36% of population

SWO = swamp white oak, *Quercus bicolor* (4)= 1.08% of population

VRC = Eastern redcedar, *Juniperus virginiana* (4)= 1.08% of population

HN = cockspur hawthorn, *Crataegus crusgalli* (4)= 1.08% of population

TA = American arborvitae, *Thuja occidentalis* cv. 'Techny' (4)= 1.08% of population

SP = Colorado spruce, *Picea pungens* (3)= .81% of population

SY = Sycamore, *Platanus occidentalis* (3)= .81% of population

CBS = Colorado blue spruce, *Picea pungens* cv. 'Glauca' (2)= .54% of population

SS = Serbian spruce, *Picea omorika* (2)= .54% of population

PS = Scotch pine, *Pinus sylvestris* (2)= .54% of population

LN = silver linden, *Tilia tomentosa* (2)= .54% of population

ELM = Chinese elm, *Ulmus parviflora* (2)= .54% of population

GK = ginkgo, *Ginkgo biloba* (1)= .27% of population

AP = apple, *Malus*, species and cv. Unknown (1)= .27% of population

BC = black cherry, *Prunus serotina* (1)= .27% of population

PA = white ash / purple ash, *Fraxinus americana* cv. 'Autumn Purple' (1)= .27% of population

HL = thornless common honey locust, *Gledista triacanthos var. inermis* (1)= .27% of population

AL = American linden, *Tilia americana* (1)= .27% of population

RHC = red horsechestnut, *Aesculus xcarnea* (1)= .27% of population

JM = Japanese maple, *Acer palmatum* (1)= .27% of population

PBM = paper bark maple, *Acer griseum* (1)= .27% of population

HK = Canadian hemlock, *Tsuga canadensis* (1)= .27% of population
ShH = shellbark hickory, *Carya laciniosa* (1)= .27% of population

Total number of existing trees = 367

Sapindaceae (maples)= 48.9%, Pinaceae (pines-firs-spruce-hemlock)= 20%, Fagaceae (oaks)=18.73%, Juglandaceae (hickory & walnut)=10.32%,
Ulmaceae (hackberry & elms)= 3.53%, Tiliaceae (lindens)= 3.51%,
Cupressaceae (arborvitae & juniper)= 4.61%, Rosaceae (apple-hawthorn)=1.35%,
Platanaceae (sycamore)= .81%, Ginkgoaceae (ginkgo)= .27%,

Total number of TREE 'Families' represented = 10

Acer (maples)=48.9%, Pinus (pines)=17.4%, Quercus (oaks)=18.73%, Carya (hickory)=7.62%,
Celtis (hackberry)=2.99%, Juglans (walnut)=2.7%, Tilia (linden)=3.51%,
Thuja (arborvitae)=3.53%, Juniperus (juniper)=1.08%, Crataegus (hawthorn)=1.08%,
Picea (spruce)=1.89%, Platanus (sycamore)=.81%, Pinus (pine)=17.4%, Ulmus (elm)=.54%,
Ginkgo (ginkgo)=.27%, Malus (apple)=.27%, Prunus (cherry)=.27%, Fraxinus (ash)=.27%,
Gleditsia (locust)=.27%, Aesculus (horsechestnut)=.27%, Tsuga (hemlock)=.27%

Total number of TREE 'Genus' represented = 21

saccharum-saccharinum-rubrum-xfreemanii-platanoides-griseum-palmatum-strobus-
macrocarpa-robur-rubra-bicolor-ovata-glabra-laciniosa-C.occidentalis-nigra-cordata-tomentosa-
americana-plicata-T.occidentalis- T.americana-menziesii-virginiana-crugalli-pungens-omirika-
P.occidentalis-sylvestris-parviflora-biloba-serotina-F.americana-tricanthos-xcarnea-canadensis

Total number of TREE 'Species' represented= 37 *(% listed with initial tree list above)

A consideration toward EMC evolving into a public garden or arboretum is the 10-20-30 rule created by Dr. Frank Santamour from the U.S. National Arboretum. The rule represents a standard of measure for no more than 10 % of a tree family, no more than 20% of a tree genus and no more than 30% of a species. The EMC diversity percentages show a strong representation of Acer (maple) species and to a lesser degree Quercus (oak) species. EMC has a lot of options toward creating a diverse tree and woody plant population otherwise. The addition of sugar maples and bur oak would be moving away from creating more diversity. Sugar maples are going to continue to decline but many will remain as a good representation of this native maple. Most of the hazard trees on the high ground areas of EMC are sugar maple. Drought conditions combined with sap sucker and weather-related damage are also reasons to curtail planting any additional sugar maple. The same can be said for planting additional bur oak on high ground in EMC.

Adding more maples, oaks, pines, hickory along with new additions of trees from a list included with this assessment is recommended. Numerous trees not found at EMC are easy to locate and fit a good criterion for additional tree plantings at EMC. A criterion for trees could

include selecting trees that are known for being rather clean regarding how much falling debris, nuts, twigs, branches, limbs, fruit and nuts fall to the ground. Shade and ornamental trees are good additions to consider in that EMC is its own microclimate / habitat with so many large shade trees already standing. Consider these large trees as mentors to understory ornamental trees that will thrive in the company of the existing EMC large trees. Many EMC areas will also afford the addition of new large shade and ornamental trees as sugar maples and other trees fail or are removed proactively. While conducting the field work at EMC it was evident the internal tree planting and irrigation practices will lead to successful planting on new trees. It is best to plant only what can be managed and nurtured successfully while caring for existing trees.

EMC management and grounds activity will dictate where and what to plant. Mowing and ground control practices around monument stones should not be made more difficult by planting where it makes that task more difficult. The ground control practices of mowing and leaf control are complimentary to good arboricultural practices. Mowing and equipment movement can cause damage to trees when they are planted in the wrong location. Avoid making the mistake of planting trees and woody plants based on their juvenile size at purchase. A good setback for any tree is a minimum of 25 feet from another tree, roadway or structure ground will need to clear in their maintenance paths. The distance also mitigates disease spread from like varieties of trees. Adding trees with various forms will add to the aesthetic diversity too. Weeping, columnar, vase shaped, and globe forms of trees, ornamental trees and large woody plants will create a beautiful presentation. Large trees, ornamental trees and woody plants will all need to have the proper judgement applied to type, site selection and care requirements to ensure good return on investment while EMC continues to care for its existing trees.

All the existing trees identified as hazard trees or AWR (additional work required) are best pruned during dormancy. 1 November through 1 March is the best time to conduct dormant pruning. Dormant pruning allows for the removal of dead and unwanted tree parts while growth and sap flow are essentially paused. Pruning during the growing season is often required making the quality of each cut more important. Good pruning cuts should always be outside the branch collar. When making topping cuts, slant the final cut in a way that allows for moisture to run off and position the slant so that it is exposed to the south or west to allow for the sun to aid in drying any moisture to prevent decay. There is much to say about the judgement involved with pruning storm, age or disease damage in large trees versus just cutting the tree down proactively. Similarly, if aerial tree work is being performed where other trees have a need for pruning, it is often best to take care of both during the same mission, and as budget allows. Adding large shrubs to EMC has pros and cons. Large flowering shrubs require longer initial irrigation and are more prone to disease and instead problems. Large flowering shrubs also break up the long open lines of site along the ground plane. The ground plane at EMC is largely occupied with different styles and sizes of monument stones. Use large flowering shrubs to highlight seating areas, conceal buildings or service areas and to fill the place where there is not sufficient room for shade trees or ornamental trees.

Recommended shade trees for EMC. (Large shade trees)

Miyabe maple- *Acer miyabei*

Black Maple- *Acer nigrum*

Tatarian maple-*Acer tataricum*

Paperbark maple-*Acer griseum*

Balsam fir-*Abies balsamea*

Fraser fir-*Abies fraseri*

Nordmann fir- *Abies nordmannia*

Common Alder-*Alnus glutinosa*

Sugar hackberry-*Celtis laevigata*

Katsura tree- *Cercidiphyllum japonicum*

American Filbert-*Corylus americana*

Turkish Filbert-*Corylus colurna*

Sweet birch- *Betula lenta*

American beech-*Fagus grandiflora*

European beech-*Fagus sylvatica* (weeping form of same)

Ginkgo- (weeping / columnar / multistem forms of same)

American Holly-*Ilex opaca*

Butternut-*Juglans cinerea*

English Walnut-*Juglans regia*

Bigleaf Magnolia-*Magnolia macrophylla*

Dawn Redwood- *Metasequoia glyptostroboides*

Blackgum-*Nyssa sylvatica*

Persian Parrotia-*Parrotia persica* (columnar tree)

Lacebark Pine-*Pinus bungeana*

Swiss Stone Pine-*Pinus cembra*

Limber Pine-*Pinus flexilis*

Korean Pine-*Pinus koraiensis*

Weeping white pine- *Pinus strobus* cv. 'pendulas'

Quaking Aspen- *Populus tremuloides*

Sawtooth oak- *Quercus acutissima*

White oak- *Quercus alba* (Illinois State Tree)

Chinkapin oak- *Quercus muehlenbergii*

Japanese Tree Lilac- *Syringa reticulata*

Pekin Lilac- *Syringa pekinensis* (weeping form of same)

Pondcypress-*Taxodium ascendens*

Common Baldcypress-*Taxodium distichum* ('Shawnee Brave' narrow form)

Eastern Arborvitae- *Thuja occidentalis* cv. 'Pendula' (weeping form)

American Yellowwood-*Cladrastis kentuckia*

Weeping White Mulberry-*Morus alba* cv. 'Pendula' (fruitless weeping form)

Woody Plant Identification and Woody Plant Identification Abbreviation Key

Sp= Bumald spirea, *Spirea xbumald* cv. 'Anthony Waterer' (2)

Bridalwreath spirea, *Spirea prunifolia* (6)

BuX = boxwood, *Buxus microphylla* var. koreana cv. Unknown (78)

YEW = Anglojap yew, *Taxus xmdiea* cv. 'Densiformis', 'Hicksii' and others (42)

PH = panicle hydrangea, *Hydrangea panniculata* cv. 'Tardiva' & 'Floribunda' (7)

ABH= Annabelle hydrangea, *Hydrangea arborescens* cv. 'Annabelle' (7)

PJ = Chinese juniper, *Juniperus chinensis* cv. 'Pfitzeriana' (4)

TL = littleleaf lilac (topiary), *Syringa microphylla* (1)

HB = Rose-of-Sharon / shrub Althea, *Hibiscus syriacus* (1)

SC = western sand cherry, *Prunus bessyi* (1)

PJM = Rhododendron, *Rhododendron carolinianum xdauricum* var. sempervirens (1)

DS= Dwarf Alberta Spruce, *Picea glauca* var. 'Albertiana'

Total number of existing woody plants = 152

Recommended Ornamental Tree and woody plants for EMC

PawPaw- *Asminia triloba*

3-Flower Maple- *Acer triflorum*

Downy Serviceberry- *Amelanchier arborea*

Allegheny Serviceberry- *Amelanchier laevis*

Carolina Allspice- *Calycanthus floridus*

White Fringe Tree- *Chionanthus virginicu*

Pagoda Dogwood- *Cornus alternifolia*

Flowering Dogwood- *Cornus florida*

Kousa Dogwood- *Cornus kousa*

Corneliacherry Dogwood- *Cornus mas*

Vernal Witchhazel- *Hammamelis vernalis*

Comman Witchhazel- *Hammamelis virginiana*

Hybrid Witchhazels- *Hammamelis xintermedia*

Amur Maackia- *Maackia amurensis*

Loebner Magnolia- *Magnolia xloebneri*

Saucer Magnolia- *Magnolia xsoulangiana*

Star Magnolia- *Magnolia stellate*

Umbrella Magnolia- *Magnolia tripetala*

Koreanspice Viburnum- *Viburnum carlesii*

David Viburnum- *Viburnum davidii*

Wayfaring Tree Viburnum- *Viburnum lantana*

Blackhaw Viburnum- *Viburnum prunifolium*

EMC ornamental tree and woody plant collection is modest. Consider these ornamental trees and large flowering shrubs to accent, add color, fragrance and to fill sites to small for shade trees. These selections are hardy, clean and easy to care for. EMC microclimate and setting are well suited to display these plants as maintenance and budget allows.

Evergreen Memorial Cemetery

Tree Inventory by area with Hazard and AWR tree ID.

Sec. 1. 7-SM+3-WP+1 (Bridalwreath spirea)

Sec. 2. 2-SM+8-WP

Sec. 3. 3-WP+8-SuM+2-LLL

Sec. 4. 3-SM+1-NM+2-WP+1-BO+1 (Bridalwreath spirea)

Sec. 5. 5-SM+1-GA

Sec. 6. 2-WP+1-SuM+1-SM+1-SP (Serbian Spruce)

Sec. 7. 6-SM+2-WP+1-ELM+1-AP

Sec. 8. 2-WP+1-SP (Colo Blue Spruce) +2-SBH

Sec. 9. 1-WP+1-VRC+1-GA+1RM (A.xfreemanii'Armstrong GOLD') +1-SuM

Sec. 10. 1-SuM+ 1-BO+1-WP+1-RM ('October Glory') + 1 (Bridalwreath spirea)

Sec. 11. 4-SM+2-BW+2-WP+1-HB+1-LLL+1-RM ('Autumn Blaze') + 5 Yews

Free Ground / Scattered Ground

Sec. 12. 8-SM+1-NM+2-SuM+1-LLL+1-RM ('October Glory') +1-BW+1-BO+2-BO+1-RO+1VRC

Center westerly Section(s)

Sec. 4. 1-BO+1-HB+1-PNH+1-SuM+1-WP+1-RO+1-SM

Dorothy Gage/Pet Cemetery/Office

2-WP+3-EO+3-HB+1-LLL+1-SuM(carved)+1-BW+1-RO+1-BC+1-DF+1-GK+1-RM('Autmn Blaze)

1-TL(Topiary) +39-BuX+7-ABH+2PJ(topiary / pom pom)

Mausoleum

15-EO+1-SuM+12-BuX+1-PJM+35 YEW (twin hedges)

Section A (east of office)

1-WP+ 1-SBH+ 1-PNH+ 1-DF+ 1SP (Colo. Blue spruce) + 1-BuX+ 3 (Bridalwreath spirea) +1-PH

Section B (east of office kidney bean shape area)

3-WP+ 4-BO+ 1-LLL+ 3-SuM+ 1-PNH+ 1-PA+ 2-DF+ 3-BW+ 1-SBH+ 1-SM+ 4-HN+ 1-GA+ 1-RM (A. xfreemanii 'Armstrong Gold')+ 1-(Bridalwreath spirea)+ 19-BuX

Section C (east of Masuleum and gravel park lot)

1-HL+ 1-WP+ 1-Sum+ 2-SuM+ 3-SBH+ 1-SP (Colo spruce)+ 1-SM+ 1PH

Section D (triangular area east of Sec. C)

1-GA+ 4-WP+ 2-Sum+ 3-SuM+ 1-WO+ 1-SM+ 2-SM+ 1-LLL+ 7-BuX

Section E (smaller triangular area east of Sec. D)

1-DF+ 1-Sum+ 2-SuM+ 1-BO

Section F (trapezoid shaped area east of Sec. E)

1-SuM+ 1-SuM+ 2-WP+ 1-BO+ 1-PNH+ 1-RM+ 2-(Dwarf Alberta Spruce)+ 2-Yews

ALLIN Circle (small circular area east of Sec. F)

1-WP

Section G (large quarter circle shaped area east of ALLIN Circle)

1-NM+ 3-SuM+ 2-SuM+ 1-SM+ 2-BO+ 2-BW+ 1-RO

Section H (smaller trapezoid shaped area south of Sec.G)

2-SBH+ 1-BO+ 1-PNH+ 1-RO+ 2-WP+ 1-SuM+ 1-PH

Section JN (small trapezoid shaped area east of Sec.G)

1-BW+ 1-BO

Porter Circle (small circular area southeast of Sec. JN)

1-BO+ 1-SBH+ 1-RM (A. xfreemanii)

Section JS (small trapezoid shaped area south of Porter Circle)

1-SuM+ 1-WP+ 1-Hibiscus

Section 3 (northeast of Sec. G)

1-RO

Section 1 (south of Sec. 3)

1-HB

Section 6 (east of Sections 3 & 1)

2-BO+ 3-HB+ 1-SuM+ 1-SuM

Section 7 (south of Sec. 6 west of Constitution Trail)

2-SuM+ 4-SuM+ 1-GA+ 2-BuX

Section 8 (trapezoid shaped area south of Sec. 7)

1-SM+ 2-VRC+ 1-SuM+ 5-SuM+ 1-PNH+ 1-RM+ 1-PH+ 1-(Bridalwreath spirea)+ 1-BuX

Section 9 (west of Sec. 8)

1-WP+ 1-SuM+ 1-BO+ 1-PNH+ 1-SM

Section 10 (west of Sec. 9)

1-RO+ 1-SP(Serbian Spruce)+ 1-WP+ 1-SuM+ 3-SuM+ 2-JF(Pfitzer Junipers)

Section 11 (west of section 10)

3-WP+ 3-SuM+ 2-SBH+ 2-PNH+ 1-AL+ 1-NM

Big Circle Section (oval area north of Sec.11)

1-SuM+ 3-WP+ 1-BO+ 2-TA+ 2- (Anthony Waterer Spirea)

Section 12 (east of Sec.13)

1-WP+ 1-**SuM**+ 1-SuM+ 1-BO+ 1-GA+ 1-SBH

Section 13 (west edge of EMC south of Sec. C)

1-**SuM**+ 3-SuM+ 1-BO+ 1-GA

Section 14 (south of section 13 into Southwest corner EMC)

3-BO+ 1-**SuM**+ 2-SuM+ 1-SC+ 2-SBH+ 1-WP+ 1-RHC+ 2-PH

Section 15 (east of Sec. 14)

3-**SuM**+ 4-SuM+ 2-SWO+ 1-SP (Colo. Blue spruce)+ 4-BO+ 1-WP+ 1-SBH+ 1-PH

Section 16

6- **SuM**+ 2-SuM+ 2-SM+ 1-WP+ 1-LLL+ 3-BO+ 2-TA

Section 17

6-WP+ 2-SM+ 1-HB+ 1-DF+ 2-SuM+ 1-LLL+ 1-RM (A. xfreemanii 'Armstron Gold')+ 1-**BO**+ 7-BuX

Section 18

3-SuM+ 1-RM (A. xfreemanii)+ 1-SWO+ 1-HB+ 1-BO

Section 19 (small triangular area)

1-WP+ 2-BO

Section 20

1-RO+ 3-RM (A. xfreemanii)+ 1-**SuM**+ 3-SuM+ 1-SuM ('Fall Fiesta')+ 1-SBH

Section 21

1-**BO**+ 1-BO+ 1-JM+ 2-GA+ 2-RM+ 1-RM (A.xfreemanii)+ 5-WP+ 1-LLL+ 1-PBM+ 1-HK+ 2-Yews

Section 22

3-WP+ 1-RO+ 1-PNH+ 3-RM (A. xfreemanii) 1-RM ('October Glory')+ 1-RM (A.xfreemanii 'Armstrong Gold)+ 2-BO+ 1-ELM+ 2-PS+ 9-SM+ 2-AL+ 3-SY+ 15-BuX

Hazard and AWR tree descriptions and recommendations

Section 4- Norway Maple eastward, lower trunk defect with included bark- lower scaffold limbs with decay- mid scaffold limbs with structural defects from weather damage- multiple vintage Memorial Stones & pathway targets- lower trunk and damaged limb failure likely-inevitable- moderate to high priority removal candidate.

Section 7- Elm westward, diseased tree, lower trunk defect with included bark, die back decline throughout-tree in overall decline-multiple vintage Memorial Stones & pathway targets-trunk and limb failure likely-inevitable-moderate to high priority removal candidate.

Section 9- Sugar maple westward, borer/sapsucker damage from ground to 10 feet+ overhead-CODIT and fruiting bodies evidence in same areas and at basal flare- trunk and large limb failure possible to likely while tree is in overall decline- vintage Memorial Stones & pathway obstruction targets- medium to high priority removal candidate.

Section 10- Bur oak westward, oak wilt diseased, overall hard decline with abnormal large limb growth evident (epicormic leaf growth along large limb stems indicates hard decline)-failure of upper limbs likely- inevitable- vintage Memorial Stones, newly planted maple tree are targets- high priority removal candidate.

Section 10- Sugar maple westward, upper lead/trunk damage with water infiltration-CODIT and overall decline throughout- fruiting bodies at basal flare, on trunk and 10+ feet overhead- deadwood stubs throughout-failure of trunk, upper trunk and large limbs likely-inevitable- multiple vintage Memorial Stone targets- moderate- high priority removal candidate.

Section 10- 2 x Black walnut northerly, lower trunk defects, included bark, storm weather damage to west edge of root shelf & both trees unbalanced and off center as a result- CODIT @ lower trunk-borer evidence-deadwood stubs throughout- mitigate by pruning out deadwood and stubs-low- monitor tree conditions after weather events- moderate priority removal candidates.

Scattering Grounds- Red oak southerly, mitigate spread of decay and increase vigor by dormant pruning of deadwood and stubs- falling deadwood targets primarily on west side of tree-AWR- not a removal candidate.

Free Ground- Bur oak westward, mitigate large limb failure and spread of decay by dormant pruning of deadwood, stubs and downward arching branches at limb ends to reduce limb end weight- multiple vintage Memorial Stones/pathway targets related to limb failure-AWR- not a removal candidate.

Section 4- Hackberry southeasterly, storm damaged trunk defect with decay- south side crotch defect with weak attachment- deadwood and multiple stubs- overall tree decline- fruiting bodies- large limb and trunk failure likely- inevitable-vintage Memorial Stones/Vault/pathway targets- high priority removal candidate.

Section 4- Red oak northwesterly, dormant prune deadwood, stubs and downward arching branches to mitigate large limb end weight, reduce spread of decay and increase vigor-large & medium limb failure moderate- likely- multiple vintage Memorial Stones/vault targets- AWR- not a removal candidate.

Section 4- Pignut hickory southerly, large upper trunk defect with decay- dormant prune defective upper trunk and deadwood stubs to mitigate failures-hickory trees very stout and tree could stand for the future- pruning cut at upper trunk should be made to shed water and expose to south or west sunlight to aid in drying at pruning cut to prevent water infiltration which leads to decay-AWR- not a removal candidate.

Section 4-Bur oak westerly, dormant prune deadwood, stubs from old weather damage- dormant prune downward arching branches from lower crown to reduce large limb end weight- moderate-likely large limb failure- multiple vintage Memorial Stones targets-AWR- not a removal candidate.

Section 4- Sugar maple westerly, sap sucker/borer damage from trunk at ground to 10+ feet overhead-CODIT- fruiting bodies but tree in fair health and can stand for the future- monitor for decline signals like die back- leaf drop during growing season hot weather and small to medium limb dropping- not a removal candidate.

Section B- Bur oak x 4 northerly, westerly, northwesterly & northerly- dormant prune deadwood, stubs, downward arching branches under the lower crown to mitigate limb end weight and increase tree vigor- limb failure moderate with multiple vintage obelisk and steeple Memorial Stone targets-AWR-not a removal candidate.

Section B- Sugar maple west end center, lower trunk defect/decay-overall tree decline/verticillium wilt/drought damage-tree and large limb failure likely-inevitable-high priority removal candidate.

Section B- Sugar maple south edge center, upper trunk old weather damage-sap sucker damage-prune out deadwood, stubs to mitigate by reducing decay and increasing vigor-large limb and upper trunk failure moderate- low-moderate priority removal candidate.

Section B-Sugar maple south edge east end, lower trunk damage, decay, CODIT- overall decline with verticillium wilt/drought damage-large limb & upper trunk failure moderate-low to moderate priority removal candidate-dormant prune to extend tree life by reducing decay and increasing vigor if unable to justify expense of removal.

Section 6- Bur oak, no image required (see map for tree location)- dormant prune deadwood stubs and downward arching branches to mitigate large limb end weight-dormant prune water sprouts from the tops of lower crown limbs to reduce limb end weight and increase vigor-limb failure unlikely-low-AWR, not a removal candidate.

Section 6- Sugar maple, no image required (see map for tree location)- dormant prune deadwood stubs to mitigate spread of decay and increase vigor- tree in early stages of decline-CODIT-Verticillium wilt- monitor for growing season leaf drop and branch drop-sap sucker damage- limb failure low-moderate-AWR- not a removal candidate.

Section 6- Bur oak, no image required (see map for tree location)-dormant prune deadwood stubs, downward arching branches and water sprouts from the top of lower crown limbs to reduce limb end weight and increase vigor-large limb failure low-AWR- not a removal candidate.

Section 3 / 1- Red oak, (see map for tree location), dormant prune deadwood stubs, downward arching branches and water sprouts from the tops of lower crown limbs to reduce limb end weight and increase vigor- AWR- not a removal candidate.

Section G- Sugar maple westerly, to mitigate upper trunk and limb failure dormant prune large upper trunk, limb defect deadwood stubs to improve crown balance, reduce decay and increase vigor-sap sucker damage-unworked defects are likely to inevitable to fail-moderate priority removal candidate versus mitigation pruning.

Section G- Red oak southerly, mitigate failure of large upper trunk weather damage by dormant pruning to repair open stub- moderate priority removal candidate without AWR dormant pruning- tree can stand into the future with AWR dormant pruning.

Section G- Sugar maple west edge southerly, already pruned storm damage combined with off center unbalanced crown, drought stress/general decline- likely to inevitable large limb/upper trunk failure- moderate to high priority removal candidate.

Section G- Sugar maple south center end, lower trunk defect with decay- drought stress and verticillium wilt- tree failure likely to inevitable- opportunistic moderate-high priority removal candidate-trees condition will only decline- unable to mitigate otherwise.

Section 7- Sugar maple southwest edge southerly, dormant prune multiple lower trunk deadwood stubs to reduce spread of decay and increase vigor- combined work opportunity with other Section 7 hazard/AWR trees- AWR-not a removal candidate.

Section 7- Sugar maple south center edge southerly, lower and overhead trunk damage and decay- CODIT- tree in overall decline- trunk failure inevitable- multiple vintage Memorial Stone targets-high priority removal candidate.

Section 7- Sugar maple southeast edge westerly, lower trunk defect-CODIT-moderate to lower trunk failure- tree in general decline- fewer Monument Stone targets while pathway also a target- moderate priority removal candidate.

Section JS- Sugar maple south edge southerly, middle and upper trunk decay at old pruning cuts-general decline and drought stress-multiple deadwood stubs and hangers- limb failure moderate-likely- dormant prune to mitigate spread of decay by removing deadwood stubs and clear hanger(s)- AWR- not a removal candidate if tree worked- moderate priority removal candidate as is.

Section H- Bur oak (see map for tree location) opportunistic dormant pruning of large stubs while working additional Section H tree-low hazard- AWR- not a removal candidate.

Section H- Sugar maple south edge southerly, dormant prune large stubs and deadwood- upper trunk 5-way crotch decay-CODIT near north facing old pruning cuts-mitigate limb failure by dormant pruning of the crotch and deadwood stubs- moderate large limb failure without pruning- AWR- not a removal candidate.

Section F- Sugar maple northeast corner northeasterly, dormant prune multiple deadwood stubs to mitigate spread of decay and increase vigor-AWR-not a removal candidate.

Section F- Sugar maple southeast edge westerly, same as above-AWR-not a removal candidate.

Section F- Bur oak southeast edge westerly, same as above- AWR- not a removal candidate.

Section E- Sugar maple northeast corner southerly- dormant prune deadwood stubs and large upper crown main lead to preserve tree, mitigate spread of decay and increase vigor- AWR- not a removal candidate.

Section D- Sugar maple northwest corner northeasterly, dormant prune upper trunk defect and deadwood stubs to preserve tree by reducing spread of decay-large limb failure likely to inevitable without pruning-AWR-not a removal candidate.

Section D- Sugar maple northeast southerly, large upper trunk deadwood stub decaying- failure likely-inevitable-tree in general decline-CODIT- unlikely tree will survive with mitigation pruning-moderate-high priority removal with multiple Memorial Stone targets.

Section D- Silver maple southwest easterly, lower trunk defect with included bark-notorious failure soft maple with multiple vintage Memorial Stones and pathway target(s)-prone to split at base due to weather- moderate priority removal candidate- opportunistic removal tree of tree that is well represented in EMC.

Section C- Thornless honeylocust near EMC entry, (see map for tree location), dormant prune deadwood stubs to reduce decay and increase vigor- HL prone to termites, carpenter ants and carpenter bees through deadwood and decay cavities-AWR to preserve- do not plant additional HL-AWR- no other hazard and not a removal candidate.

Section C- Sugar maple east of Mausoleum park lot, (see map for tree location)-top center deadwood & lower crown deadwood- dormant prune to mitigate spread of decay and increase vigor to preserve-AWR-not a removal candidate.

Section 13- Sugar maple east edge center, multiple storm damaged deadwood stubs and large limb decay-large limb failure likely-inevitable-multiple Memorial Stones and pathway target(s)- tree in overall decline- moderate priority removal candidate.

Big Circle Section- Bur oak south edge, (see map for tree location), dormant prune large deadwood stub to mitigate decay and increase vigor-low hazard-AWR-not a removal candidate.

Section 10- Sugar maple west center southerly, overall decline-upper trunk & large limb decay near branch collar-drought stress-moderate-upper trunk and large limb failure likely-inevitable-high priority removal candidate.

Section 9- Sugar maple northwest corner southerly AND Bur oak center southerly, dormant prune large deadwood stubs to mitigate spread of decay and increase tree vigor to preserve both trees-AWR-not removal candidates.

Section 8- Sugar maple southerly AND Red maple center northerly, upper and lower trunk defects-CODIT- drought stress and Chlorosis in RM-tree and limb failure likely-cannot be preserved by dormant pruning as both trees already structurally damaged from weather-multiple Memorial Stone and nearby tree targets-moderate priority removal candidates.

Section 18- Sugar maple close to fence (see map for tree location), observe after weather events- within trim zone of electric conductors- verticillium wilt/drought stress with early stages of decline-few targets- low hazard-not a removal candidate.

Section 17- Bur oak center southerly, observe tree after weather events- lower trunk fruiting bodies indicate some internal decay- dormant prune old storm damage at deadwood stubs-low hazard-AWR-not a removal candidate.

Section 16- Sugar maples x 6 (see map for trees locations), dormant prune deadwood stubs to preserve-opportunistic grouping of 6 trees all needing deadwood cleared to mitigate the spread of decay and increase vigor to preserve-low hazard with multiple Memorial Stones and pathway targets-AWR- not removal candidates.

Section 15- Sugar maples x 3 (see map for trees locations), same scenario and opportunity as the sugar maples in Section 16-AWR-not removal candidates.

Section 14- Sugar maple, (see map for tree location), same scenario as Sections 16 & 15- 3 section aerial work scenario to conduct aerial dormant pruning to mitigate and preserve-AWR-not a removal candidate.

Section 21- Bur oak, tree has early-stage oak wilt, **observe** after weather events and over time- any work conducted on the tree could spread oak wilt if tools not cleaned between trees being worked. Avoid planting any new trees particularly oaks proximate or down wind of this tree. Oak wilt cannot be effectively treated for in large specimen oaks such as this one-drought stress will compound the development of the disease- plant other trees besides oaks well beyond the fall zone of this tree-no hazard otherwise-not a removal candidate at this time.

Section 22- Sycamore x 3 AND American Linden x 2 already identified by EMC as removal candidates and within minimum separation distance of energized conductors.

Trees typically die from a death of 1000 cuts. They die when they are unable to continue growth. Trees with defects that remove large portions of the upper or side of crowns lets in sunlight and wind exposure that was not there before. Sugar maples with this type of damage are like several found at EMC. A word about oak wilt includes the understanding of how the disease spreads and, some oaks species are more vulnerable than others. Oak wilt is spread by roots that touch the roots of an affected oak wilt tree, spread by wind into open wounds' of unaffected trees from affected oak wilt trees and by tools. When dormant or emergency pruning oak trees, it is important to clean the tools and or sterilize them with spray LYSOL disinfectant before moving to work another oak tree. The same practice aids in preventing the spread of disease with any tree and the practice is common within professional arboricultural services.

Many of the trees identified as removal candidates are those close to pathways. A degree of practicality was considered to present a reasonable scenario for safe and productive removal and AWR work on many but, not all trees. There are a couple trees within the high ground areas central to EMC that are not close to the pathways but will require removal at some point in the future. In the future it would be helpful to conduct soil testing. It is inexpensive and can be conducted by EMC staff. McLean County Extension has the envelopes with instructions for submitting them free of charge. It is unlikely that fertilization is needed to foster the tree population, rather it may reveal elevated ph levels consistent with areas where

turf mowing and the chopping of leaves in fall (which is a type of organic compost) has lead to the evaluated ph. Non lime agricultural sulfur is often broadcast to temper ph to favor tree populations, FYI.

Once you have taken the time to look over the inventory, statistics, assessments, images and map, please feel comfortable contacting me with questions or for help otherwise. EMC can become a noteworthy Public Garden, Arboretum (with a nursery) then Botanic Garden by using the information from the EMC Tree Project to assemble your board of directors, tree advisory council and mission statement that help EMC climb the ladder to reach its goals.

The groundskeeping practices seem exceptional while observing them during field time visits. I would like to leave you with some advice shared during a groundskeeping convention at Augusta National Golf Course in Augusta GA. *"The best path to beautiful turf is not fertilizer and pesticide its grass seed, the more grass plants the denser the grass and the trees love it while the grass plants temper the ph. Healthy strong grass with lots of grass plants (from the seed) push out the weeds in no time"*. The beneficial relationship between the monoculture of turfgrass and trees is such that both are made stronger and more resilient from the chemical free cultural practice of spring and early fall sewing of grass seed over existing turf. The trees return the favor by shading the ground and dropping lots of leaves that ultimately improve the soils for the grass plants and promotes a beneficial layer of mold that exists in the shallow soils where tree and grass roots meet. The beneficial mold is called mycelium and it is found 2-6 inches below the surface where the grass roots and root fiber meet. Lastly, turf grasses in residential settings are often mowed quite short. Slightly taller turf grass does a better job of shading the ground and controlling moisture loss from heat and sunlight. Slightly taller grass once decided upon, has the same or better-groomed appearance as tightly mowed turf grass. When practiced this also aids in suppressing broadleaf weeds and even vining weeds like creeping Charlie. EMC is the perfect place for this tree nurturing practice to take place.

Best,

Patrick Murphy
Landscape Design and Management
ISA Certified Arborist
309.838.4898
PatrickJudy@protonmail.com