

Source: Parks and Recreation *AMH*

Agenda Item No: REP 164-12

To: City Council  
From: City Manager and Staff *MM*

Council Meeting Date: November 5th, 2012

Re: Hazardous Tree Removal Report: Nifong, Westwinds & Stephens Lake Parks

#### **EXECUTIVE SUMMARY:**

The Columbia Parks & Recreation Department is proposing to remove hazardous trees located at three locations within the park system due to their current state of decline and the hazard potential for park users. The first tree that is scheduled for removal is a Black Walnut tree located at Nifong park on the west side of the Maplewood Home. It qualifies as a large tree due to its 34-inch Diameter at Breast Height (DBH) and is suggested for removal due to a live crown ratio of less than 20% and an increasing amount of deadwood throughout the tree. The second tree is a White Oak located within Westwinds Park on the west side of the main park entrance. The Oak tree has a 35-inch DBH and the tree has no visible living crown and has several types of fungus growing on the tree. The final tree is a Hackberry tree located within Stephens Lake Park with a 32-inch Diameter at Breast Height. The tree has exhibited signs of decline for multiple years and the current location next to Walnut St. and the walking trail poses a safety hazard for park patrons and citizens on Walnut Street. All three trees present a high risk of public safety as a large portion of each tree crown has expired and each tree is located within areas frequented by park users. Copies of the Tree Hazard Evaluation Forms and photos are attached.

#### **DISCUSSION:**

In February of 2009, the Columbia Parks & Recreation Department was asked by the City Council to develop a report relating to the removal of larger trees within the park system which may be perceived as significant to the public and/or the use of the park. The report recommended a policy which outlined the procedures to be followed whenever large trees were to be removed due to either being a public safety hazard or due to park development. The 2009 report is attached and in summary, the P&R tree removal procedure for hazardous trees now includes the following key elements:

1. Tree Hazard Evaluation Forms will be completed by the Department's certified International Society of Arboriculture Forester.
2. Trees larger than 20-inch Diameter at Breast Height (DBH) but smaller than 30-inch DBH must have the approval of the Park Development Superintendent and the Park Services Manager to be removed.
3. Trees larger than 30-inch DBH must have the approval of the P&R Director who will notify Council that the tree or trees will be removed.
4. Any size tree that presents an immediate danger to the public shall be removed immediately.

The Black Walnut tree that the Parks and Recreation Forestry staff is proposing to remove is located in Nifong Park along the curve of the service road west of the Maplewood Home. The 34-inch DBH tree has wounds throughout the trunk, and has a live crown of less than 20% possessing a high potential for falling scaffolding branches and dead limbs from the crown and canopy. Forestry Staff has tracked the decline of the tree for 5 years and removed a large amount of deadwood from the tree two years ago. Staff has observed the continual decline of the tree and the potential for failure is the key factor for the determination of removal due to the high traffic use of the park area during festivals and events.

The second tree recommended for removal is a White Oak tree located along Westwinds road west of the main park entrance. The Oak tree has grown to a mature height of 45 feet with a 35" diameter at breast height. The tree has no living crown and is classified as over-mature within park guidelines. Staff has observed a large amount of Hypoxylon Canker and Armillaria which is a known cause of root failure. The tree is located near city streets and power lines on the north side and a sidewalk and basketball court within the park on the north side of the tree. Staff is requesting permission to remove the dead tree due to the risk of failure and public safety due to the recorded loss of root stability and live crown.

The final tree recommended for removal by Forestry staff is a mature Hackberry tree located between Walnut St. and the hard surface trail at Stephens Lake Park. The tree has a 32" diameter at breast height and a height of 50 feet. The Hackberry currently has a live crown of approximately 10% and exhibit signs of decay, rot and borers throughout the trunk and main scaffolding branches. The tree sits approximately two feet from the hard surface trail. Staff has monitored the tree for 5 years and has witnessed a steady failure of the tree canopy and have started to see a number of branches falling from the tree. The removal of the tree is necessary due to the weakened state of the tree and the potential for falling directly on the hard surface trail or Walnut Street.

All three trees have reached a mature growing age and the majority of the dieback and canopy loss is due to reaching the mature growing age in conjunction with two straight summers with excessive heat and drought conditions. The forestry staff has already made arrangements to replace the Black Walnut tree at Nifong Park with a Burr Oak in the same location as soon as the existing tree is removed. The White Oak at Westwinds Park is located in a buffer between the road and the park and will not be replaced due to the high volume of existing trees and vegetation in the growing radius. Staff has already planned and planted the tree replacements for the Hackberry at Stephens Lake Park. There are several trees located between Walnut Street and the Stephens trail that will eventually be lost to age, storms, disease, or other acts of nature, so additional trees have been planted as a replacement and investment toward the future. An early example of this investment is the 82 trees that were planted as part of a TRIM grant in 2004. Another 81 trees have been planted as a result of the community donating memorial and heritage trees to the park. Approximately 150 more trees have been planted as part of shoreline stabilization, tree collections (Maple, Nut, Oak, conifers) and other landscaping projects.

**FISCAL IMPACT:**

There is no fiscal impact to this report.

**VISION IMPACT:**

**<http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php>**

There is no vision impact to this report.

**SUGGESTED COUNCIL ACTIONS:**

**Unless Council directs otherwise, park staff will proceed with the tree removal as outlined in this report.**

<b>FISCAL and VISION NOTES:</b>					
<b>City Fiscal Impact</b> Enter all that apply		<b>Program Impact</b>		<b>Mandates</b>	
City's current net FY cost	\$0.00	New Program/ Agency?	No	Federal or State mandated?	No
Amount of funds already appropriated	\$0.00	Duplicates/Epands an existing program?	No	<b>Vision Implementation impact</b>	
Amount of budget amendment needed	\$0.00	Fiscal Impact on any local political subdivision?	No	Enter all that apply: Refer to Web site	
Estimated 2 year net costs:		<b>Resources Required</b>		Vision Impact?	No
One Time	\$0.00	Requires add'l FTE Personnel?	No	Primary Vision, Strategy and/or Goal Item #	
Operating/ Ongoing	\$0.00	Requires add'l facilities?	No	Secondary Vision, Strategy and/or Goal Item #	
		Requires add'l capital equipment?	No	Fiscal year implementation Task #	

**Parks Services Natural Resources  
Tree Hazard Evaluation Form**

Site/Address: Nifong Park

Map/Location: Along curve on service road west of house.

Owner:  public  private  unknown  other

Date: 10/8/2012 Inspector: Eric Schmittel, Nick, Emma

Date of last inspection: \_\_\_\_\_

<b>HAZARD RATING:</b>				
2	+	2	+	3 = 7
Failure + Size +		Target	= Hazard	
Potential of part		Rating	Rating	
<input checked="" type="checkbox"/> Immediate action needed <input type="checkbox"/> Needs further inspection <input type="checkbox"/> Dead tree				

**TREE CHARACTERISTICS** \_\_\_\_\_

Tree#: \_\_\_\_\_ Species: Black Walnut

DBH: 34" # of trunks: 1 Height: 60' Spread: 50'

Form:  generally symmetric  minor asymmetry  major asymmetry  stump sprout  stag-headed

Crown class:  dominant  co-dominant  intermediate  suppressed

Live crown ration: 20 % Age class:  young  mature  over-mature

Pruning history:  crown cleaned  excessively thinned  topped  crown raised  pollarded  crown reduced  none

Special Value:  specimen  heritage/historic  wildlife  unusual  street tree  screen  shade  indigenous  other

**TREE HEALTH** \_\_\_\_\_

Foliage color:  normal  chlorotic  necrotic Epicormics?  Y  N

Foliage density:  normal  sparse Leaf Size:  normal  small

Annual shoot growth:  excellent  average  poor Twig dieback?  Y  N

Callus development:  excellent  average  poor  none

Major pests/diseases: Signs of borers were present.

**SITE CONDITIONS** \_\_\_\_\_

Site character:  residence  commercial  industrial  park  open space  natural

Landscape type:  parkway  raised bed  container  open

Irrigation:  none  adequate  inadequate  excessive  trunk wetted

% dripline paved:  0%  10-25%  25-50%  75-100% Lifted?  Y  N

% dripline w/fill soil:  0%  10-25%  25-50%  75-100%

% dripline grade lowered:  0%  10-25%  25-50%  75-100%

Soil problems:  drainage  shallow  compacted  droughty  saline  alkaline  acidic  small volume  disease center  history of fail

Obstructions:  lights  signage  line-of-site  view  overhead lines  underground utilities  traffic  adjacent veg.

Wind (tree position)  single tree  below canopy  above canopy  recently exposed  windward, canopy edge  area prone to windthrow

**TARGET** \_\_\_\_\_

Use under tree:  building  parking  traffic  pedestrian  recreation  landscape  hardscape  small features

Can target be moved?  Y  N

Occupancy:  occasional use  medium, intermittent use  frequent use

**TREE DEFECTS:** \_\_\_\_\_

Rate defect severity:  S severe defect, high potential for failure  
 M defect of moderate severity  
 L defect of low severity

LEAN: 25 deg. From vertical  natural  unnatural Soil heaving:  Y  N  
 Decay in plane of lean:  Y  N Roots exposed:  Y  N Soil cracking:  Y  N  
 Compounding factors: \_\_\_\_\_ Lean severity:  S  M  L

**ROOT DEFECTS:**

Suspect root rot:  Y  N Mushroom/conk present:  Y  N ID: \_\_\_\_\_  
 Exposed roots:  S  M  L Undetermined:  S  M  L  
 Root pruned: \_\_\_\_\_ ft from trunk Root area affected: \_\_\_\_\_ % Buttress wounded:  Y  N When: Overtime  
 Restricted root area:  S  M  L Potential for root failure:  S  M  L

**CROWN DEFECTS:**

DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP
Poor taper	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Codominants/forks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Multiple attachments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Included bark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cracks/Splits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Girdling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wounds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Decay	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cavity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Conks/Mushrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Deadwood/stubs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Borers/termites/ants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cankers/galls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Previous failure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**HAZARD RATING** \_\_\_\_\_

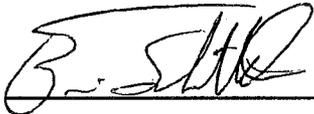
Part most likely to fail: Branches  
 Failure Potential:  1  2  3 Size of Part:  1  2  3 Target:  1  2  3  
 Hazard Rating:  1  2  3  4  5  6  7  8  9

**HAZARD ABATEMENT** \_\_\_\_\_

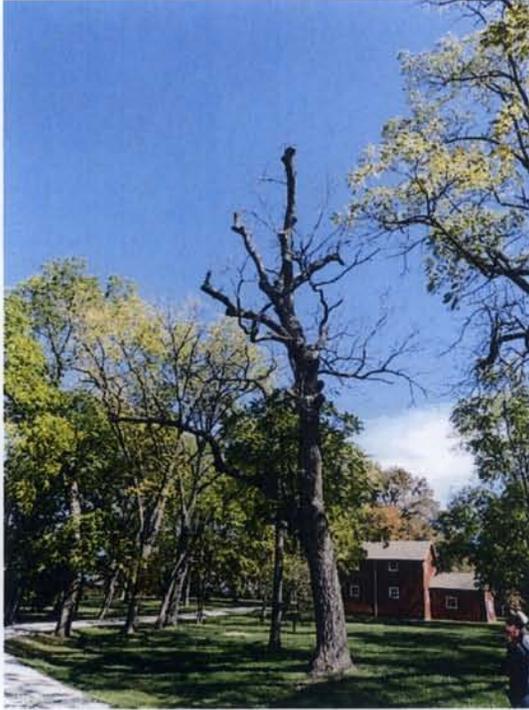
Prune:  remove defective part  reduce end weight  crown clean  thin  raise canopy  crown reduce  restructure  shape  
 Cable/Brace: \_\_\_\_\_ Inspect further:  root crown  decay  aerial  monitor  
 Remove tree:  Y  N Replace?  Y  N Move target:  Y  N  
 Other: \_\_\_\_\_  
 Effect on adjacent trees:  none  evaluate

**COMMENTS**

This mature black walnut has been in decline for the past 5 years. Two years ago a large amount of deadwood was removed from this tree. Since this pruning was done more of the branches have died creating more of a hazard. On a day to day basis this park sees little use, however, it hosts several festivals and events when there are hundreds of people in the park and under this tree. I recommend that this tree be removed in the near future because of its past history of limb failure and because there are events that bring hundreds of people to this park.

Signature  ISA# MW47754 Date \_\_\_\_\_

Nifong Park Black Walnut



Black Walnut—Trunk Collar Wounds

**Parks Services Natural Resources  
Tree Hazard Evaluation Form**

Site/Address: Westwinds Park

Map/Location: Along Westwinds road west of main park entrance.

Owner:  public  private  unknown  other

Date: 10/8/12 Inspector: Eric Schmittel, Nick, Emma

Date of last inspection: \_\_\_\_\_

<b>HAZARD RATING:</b>						
3	+	3	+	3	=	9
Failure + Size +		Target		=		Hazard
Potential of part		Rating		Rating		Rating
<input type="checkbox"/> Immediate action needed <input type="checkbox"/> Needs further inspection <input checked="" type="checkbox"/> Dead tree						

**TREE CHARACTERISTICS** \_\_\_\_\_

Tree#: \_\_\_\_\_ Species: White Oak

DBH: 35" # of trunks: 1 Height: 45' Spread: 30'

Form:  generally symmetric  minor asymmetry  major asymmetry  stump sprout  stag-headed

Crown class:  dominant  co-dominant  intermediate  suppressed

Live crown ration: 0 % Age class:  young  mature  over-mature

Pruning history:  crown cleaned  excessively thinned  topped  crown raised  pollarded  crown reduced  none

Special Value:  specimen  heritage/historic  wildlife  unusual  street tree  screen  shade  indigenous  other

**TREE HEALTH** \_\_\_\_\_

Foliage color:  normal  chlorotic  necrotic Epicormics?  Y  N

Foliage density:  normal  sparse Leaf Size:  normal  small

Annual shoot growth:  excellent  average  poor Twig dieback?  Y  N

Callus development:  excellent  average  poor  none

Major pests/diseases: Hyponxylon canker and armillaria were both present.

**SITE CONDITIONS** \_\_\_\_\_

Site character:  residence  commercial  industrial  park  open space  natural

Landscape type:  parkway  raised bed  container  open

Irrigation:  none  adequate  inadequate  excessive  trunk wetted

% dripline paved:  0%  10-25%  25-50%  75-100% Lifted?  Y  N

% dripline w/fill soil:  0%  10-25%  25-50%  75-100%

% dripline grade lowered:  0%  10-25%  25-50%  75-100%

Soil problems:  drainage  shallow  compacted  droughty  saline  alkaline  acidic  small volume  disease center  history of fail

Obstructions:  lights  signage  line-of-site  view  overhead lines  underground utilities  traffic  adjacent veg.

Wind (tree position)  single tree  below canopy  above canopy  recently exposed  windward, canopy edge  area prone to windthrow

**TARGET** \_\_\_\_\_

Use under tree:  building  parking  traffic  pedestrian  recreation  landscape  hardscape  small features

Can target be moved?  Y  N

Occupancy:  occasional use  medium, intermittent use  frequent use

**TREE DEFECTS:** \_\_\_\_\_

Rate defect severity:  S severe defect, high potential for failure  
 M defect of moderate severity  
 L defect of low severity

LEAN: 0 deg. From vertical  natural  unnatural Soil heaving:  Y  N  
 Decay in plane of lean:  Y  N Roots exposed:  Y  N Soil cracking:  Y  N  
 Compounding factors: 99% of this tree is dead and rotten. Lean severity:  S  M  L

**ROOT DEFECTS:**

Suspect root rot:  Y  N Mushroom/conk present:  Y  N ID: Armillaria and hypoxylon  
 Exposed roots:  S  M  L Undetermined:  S  M  L  
 Root pruned: 1 ft from trunk Root area affected: 50 % Buttress wounded:  Y  N When: \_\_\_\_\_  
 Restricted root area:  S  M  L Potential for root failure:  S  M  L

**CROWN DEFECTS:**

DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP
Poor taper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Codominants/forks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Multiple attachments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Included bark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cracks/Splits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Girdling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wounds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Decay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cavity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Conks/Mushrooms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Deadwood/stubs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Borers/termites/ants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cankers/galls	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Previous failure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

**HAZARD RATING** \_\_\_\_\_

Part most likely to fail: Entire tree, especially limbs.  
 Failure Potential:  1  2  3 Size of Part:  1  2  3 Target:  1  2  3  
 Hazard Rating:  1  2  3  4  5  6  7  8  9

**HAZARD ABATEMENT** \_\_\_\_\_

Prune:  remove defective part  reduce end weight  crown clean  thin  raise canopy  crown reduce  restructure  shape  
 Cable/Brace: \_\_\_\_\_ Inspect further:  root crown  decay  aerial  monitor  
 Remove tree:  Y  N Replace?  Y  N Move target:  Y  N  
 Other: \_\_\_\_\_  
 Effect on adjacent trees:  none  evaluate

**COMMENTS**

This tree is mostly dead and has several types of fungus growing on it. The first fungus is hypoxylon canker which has infected the entire tree making the majority of the dead wood very brittle and prone to failure. The second fungus observed is Armillaria which feeds off of the rotting roots of the tree leading to a high potential for root failure. This tree is located near a city street and power lines on the north side and a sidewalk and basketball court on the south side. I recommend that this dead tree be removed to prevent damage to any of these surrounding targets.

Signature 

ISA# MW4775A Date \_\_\_\_\_

Westwinds Park White Oak



Westwinds Park—White Oak Hypoxylon Canker



Westwinds Park—White Oak Armillaria Root Rot

**Parks Services Natural Resources  
Tree Hazard Evaluation Form**

Site/Address: Stephens Park

Map/Location: Between Walnut St. and the hard surface trail north of the Amphitheater.

Owner:  public  private  unknown  other

Date: 10/8/2012 Inspector: Eric Schmittel, Nick, and Emma

Date of last inspection: \_\_\_\_\_

<b>HAZARD RATING:</b>						
3	+	3	+	3	=	9
Failure + Size +		Target		= Hazard		
Potential of part		Rating		Rating		
<input checked="" type="checkbox"/> Immediate action needed <input type="checkbox"/> Needs further inspection <input type="checkbox"/> Dead tree						

**TREE CHARACTERISTICS** \_\_\_\_\_

Tree#: \_\_\_\_\_ Species: Hackberry

DBH: 32" # of trunks: 1 Height: 50' Spread: 45'

Form:  generally symmetric  minor asymmetry  major asymmetry  stump sprout  stag-headed

Crown class:  dominant  co-dominant  intermediate  suppressed

Live crown ration: 10 % Age class:  young  mature  over-mature

Pruning history:  crown cleaned  excessively thinned  topped  crown raised  pollarded  crown reduced  none

Special Value:  specimen  heritage/historic  wildlife  unusual  street tree  screen  shade  indigenous  other

**TREE HEALTH** \_\_\_\_\_

Foliage color:  normal  chlorotic  necrotic Epicormics?  Y  N

Foliage density:  normal  sparse Leaf Size:  normal  small

Annual shoot growth:  excellent  average  poor Twig dieback?  Y  N

Callus development:  excellent  average  poor  none

Major pests/diseases: Signs of borers present.

**SITE CONDITIONS** \_\_\_\_\_

Site character:  residence  commercial  industrial  park  open space  natural

Landscape type:  parkway  raised bed  container  open Hillside by road \_\_\_\_\_

Irrigation:  none  adequate  inadequate  excessive  trunk wetted

% dripline paved:  0%  10-25%  25-50%  75-100% Lifted?  Y  N

% dripline w/fill soil:  0%  10-25%  25-50%  75-100%

% dripline grade lowered:  0%  10-25%  25-50%  75-100%

Soil problems:  drainage  shallow  compacted  troughy  saline  alkaline  acidic  small volume  disease center  history of fail.

Obstructions  lights  signage  line-of-site  view  overhead lines  underground utilities  traffic  adjacent veg. \_\_\_\_\_

Wind (tree position)  single tree  below canopy  above canopy  recently exposed  windward, canopy edge  area prone to windthrow

**TARGET** \_\_\_\_\_

Use under tree:  building  parking  traffic  pedestrian  recreation  landscape  hardscape  small features

Can target be moved?  Y  N

Occupancy:  occasional use  medium, intermittent use  frequent use

**TREE DEFECTS:** \_\_\_\_\_

Rate defect severity:  S severe defect, high potential for failure  
 M defect of moderate severity  
 L defect of low severity

LEAN: 10 deg. From vertical  natural  unnatural Soil heaving:  Y  N  
 Decay in plane of lean:  Y  N Roots exposed:  Y  N Soil cracking:  Y  N  
 Compounding factors: Roots on weak side were cut/destroyed for sidewalk Lean severity:  S  M  L

**ROOT DEFECTS:**

Suspect root rot:  Y  N Mushroom/conk present:  Y  N ID: \_\_\_\_\_  
 Exposed roots:  S  M  L Undetermined:  S  M  L  
 Root pruned: 2 ft from trunk Root area affected: 50 % Buttress wounded:  Y  N When: 10 years ago  
 Restricted root area:  S  M  L Potential for root failure:  S  M  L

**CROWN DEFECTS:**

DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP
Poor taper	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Codominants/forks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Multiple attachments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Included bark	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cracks/Splits	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Girdling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wounds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Decay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cavity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Conks/Mushrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bleeding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Deadwood/stubs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Borers/termites/ants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cankers/galls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Previous failure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**HAZARD RATING** \_\_\_\_\_

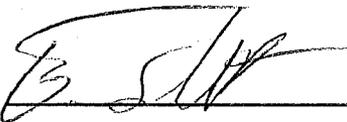
Part most likely to fail: Branches  
 Failure Potential:  1  2  3 Size of Part:  1  2  3 Target:  1  2  3  
 Hazard Rating:  1  2  3  4  5  6  7  8  9

**HAZARD ABATEMENT** \_\_\_\_\_

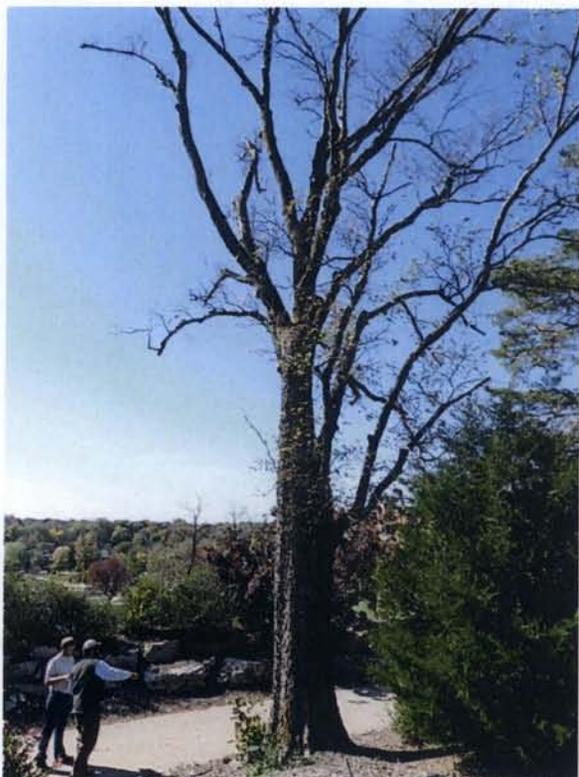
Prune:  remove defective part  reduce end weight  crown clean  thin  raise canopy  crown reduce  restructure  shape  
 Cable/Brace: \_\_\_\_\_ Inspect further:  root crown  decay  aerial  monitor  
 Remove tree:  Y  N Replace?  Y  N Move target:  Y  N  
 Other: \_\_\_\_\_  
 Effect on adjacent trees:  none  evaluate

**COMMENTS**

During construction of Stephens Lake Park a concrete trail was build two feet from the base of this tree. This construction could have destroyed roughly half of the trees root system. Over the past 5 years this tree has been in a steady decline and now more than half of the canopy is dead. The dead branches of this tree have a high potential of falling on either the heavily used recreation trail, or on Walnut street. Due to the high likelihood of failure and the targets mentioned earlier I recommend that this tree be removed.

Signature  \_\_\_\_\_ ISA# MW4775A Date \_\_\_\_\_

Stephens Lake Park Hackberry



Root Rot