Ambler Borough
Downtown Tree Management Policy Initiative

In 2008, State Representative Rick Taylor supported the Ambler Environmental Advisory Council (EAC) in receiving a Pennsylvania Department of Community and Economic Development (DCED) grant to develop a downtown tree management policy for the Borough. The primary objectives were identifying immediate needs, protection and restoration of the tree canopy, encouraging beautification, and providing direction for tree care. Susan Curry, Ron Ayres and David Morgan (members of the Ambler EAC-Shade Tree Subcommittee) coordinated the project. Four consultant arborists were interviewed, and Bill Graham III was contracted to prepare the following report.

Assignment:

To assess the street trees of the Business District of Ambler to evaluate the general health of the trees, discover opportunities for street tree enhancement / replacement, and create a plan for optimal maintenance of Ambler's public trees.

Purpose:

The benefits of trees are documented by scientific studies that outline their inherent qualities for environmental impact. An attractive tree canopy directly affects Ambler and its Business District.

Environmental Benefits:

- Cleans water
- Lessens runoff and erosion
- Cleans air
- Makes Oxygen – 1 tree sustains 4 people

Aesthetic and Health Benefits:

- Noise buffer
- Calming effects
- Reduces road rage
- Induces socialization under them
- Attractive setting / Positive message
- Up to 11 degrees cooler during Summer

Monetary Benefits:

- Increases property value up to 20%
- Attracts new business and tourism
- Shoppers shop more often and longer
- Apartments rent more quickly and tenants stay longer
- Air conditioning costs reduced up to 50%
- Heating costs reduced especially with trees on north facing sides

Trees are a significant benefit and help create a community feel. A tree lined setting creates images of hope, home, and thriving business. Trees soften the starkness of concrete. The question becomes not should we have trees, but how do we incorporate them more effectively into our vision of what Ambler can be.

Map of Ambler's Downtown Streets and Lots-- Assessed Fall/Winter 2008-2009

Downtown was defined as Butler Avenue from Lindenwold to Main Street, and Lots 1 and 2

Consultant Procedure:

Step 1 – **Determine which trees are worth maintaining and which are structural risks** through a walking assessment and inventory of all street trees noting immediate needs and future work

Step 2 - **Determine what is causing the decline in these trees,** and then create standards in order to set trees up for successful long term viability

Step 3 - **Determine who will maintain these trees.** Develop a protocol for determining future tree needs and procedures for ensuring quality prescribed work

Notes: Regular proactive care of trees prevents costly lawsuits and needless emergency response while increasing aesthetics, value, and tree longevity

Step 4 - **Determine who will make decisions about Ambler trees**. Recommendations include form a Shade Tree Committee, upgrade tree ordinances and tree preservation recommendations, hire a Certified Arborist either part-time or on-staff

Notes: Assigning responsibility and chain of command will ensure the trees don't get whatever is left of the budget as an afterthought

Step 5 - **Estimate a projected a budget** for tree management over the next four years to implement the recommendations of this report.

Step 1 – Evaluate which trees are worth maintaining and which are structural risks, also, what is the cause of the declining trees?

The species, health, and structure of each tree were assessed to determine its needs along with the associated risk factors for the tree in its location. Knowing the species of a tree tells what the health and structural tendency should look like. A tree's health is compared to one of the same species of good growth patterns and color. Health can be affected by cultural conditions (care practices), stressors (location complications), insects, and disease. A tree's structural integrity is based on what a normal tree of its species looks like, then observing the critical junctions of trunk to root, trunk to trunk, branch to trunk, and branch to branch. Structural integrity relates to risk and liability; it indicates the likelihood of the tree falling in part or whole, and if it is near a target of value that it could hit if it fell.

(See *Appendix A*: Tree Biology Basics)

Cause of Declining Trees:

(See *Appendix B*: Photos of Typical Issues)
(See *Appendix C*: Chart of Assessed Ambler Trees)

TREE PIT SIZE INADEQUATE -- A recurring theme throughout the Ambler street tree evaluation was constriction of roots due to the inadequate size of the planting pits. Roots are vital to a tree's development and longevity. (See Figure 1: Tree Roots). The size of Ambler's tree pits on average is one fourth of what they should be, i.e. too small. This scenario has limited the trees' life spans and imposes unnecessary increased costs in the borough budget for removal and replacement. In fact, most of the older street trees within the borough are already past their prime for the size pits they have. Now, proper tree care requires planning to expand pits for those that are salvageable, and for any that will be replaced.

ADDITIONAL INJURY -- Many of these trees have sustained physical injury through the years:

- Improper planting depth
- Mishandling during installation
- Over mulching
- Improper pruning
- Under watering
- Mechanical damage from vehicles hitting them

SPECIES SELECTION -- One goal of street trees is to enhance the interests of the businesses that operate in downtown Ambler. Store signs that are blocked by trees are a major concern for merchants. For many merchants, their sign is their advertising, and without visibility their business can be reduced. Choosing appropriate species of trees, followed by appropriate routine maintenance, can result in both optimal health of the trees and optimal visibility for the businesses.

IMPROPER MAINTENANCE -- Maintenance, when proactively performed, increases longevity, catches issues before they become problems, and enhances the aesthetic benefits of trees. Ambler's downtown tree pruning has been inconsistent, and sometimes incorrect or incomplete arboriculture. Tree mulching is piled too thick and is harmfully piled against the tree trunks.

Estimated implementation budget
Projected for next four years

Note: Cost of a certified arborist hired part-time or shared with another municipality has not been included.

Year	Work	Approx. Cost	Notes
Year 1	Prune the trees listed in assessment chart as needing work	$10,640	Basis: 152 hours @ $70/hour (6 – 7 days)
	5 Tree removals; 7 Sylva Cell Pit Improvements* and 7 replants	$35,000	$5,000 per Sylva Cell See note below
Year 2	Re-evaluation of trees by Certified Arborist	$700 + $1,800	Additional funds if issues found ($1,800)
	7 Pit improvements (simply expanding existing pits)	$7,000	
Year 3	Re-evaluation of trees by Certified Arborist	$700 + $1,800	Additional funds if issues found ($1,800)
	8 Tree removals; 8 Sylva Cell Pit Improvements* and 8 Replants	$40,000	$5,000 per Sylva Cell See note below
Year 4	Re-evaluation of trees by Certified Arborist	$700 + $1,800	Additional funds if issues found ($1,800)
	9 Tree removals; 9 Sylva Cell Pit Improvements* and 9 Replants	$45,000	$5,000 per Sylva Cell See note below

*** $5,000 estimate per Sylva Cell Pit Improvement** includes the following expected cost items:

- Remove existing sidewalk and cobblestone border to nearest concrete seam to create a pit 12' by 4'
- Dig existing underlayment to 3.5' depth (remove soil, tree roots, and other fill)
- Install 6" of gravel compacted in the bottom of pit, and a drainage pipe at bottom linked to storm water drain
- Install 10 Sylva Cells by Deeproot with five decks in each pit (See page 19)
- Mix soil amendments into existing soils
- Cement sidewalk and curb poured
- Tree watered and mulched at planting time
- Oversight by a Consulting Arborist
- Replacement trees; species chosen from ***Appendix J:*** List of Suggested Species

Step 2 –Create standards for site preparation, planting, and maintenance procedures

Notes: Make sure that from this point forward trees are set up for successful long term viability

As discussed above, most of the issues regarding the decline of Ambler trees are directly correlated to the tree pit sizes and maintenance procedures. The goal of the Ambler Downtown Tree Management Policy is to set up processes that will ensure future tree longevity. The following standards should be adopted and enacted as procedure for creating the best long term tree success.

1) Site Preparation Standards: (*See *Appendix D*)

1. Tree pits to be a minimum of 5' x 10' (An equivalent of 48 sq. ft is acceptable)
2. Sylva Cell* system is recommended (refer to pp. 19-20)
3. Loam soil should be installed in the pits from a reputable source
4. The soil should be compacted with foot pressure under where the tree's root ball will be placed and then around the edges to secure the root ball as planting. Do not use machinery to tamp.

2) Basic Planting Guidelines: (See *Appendix E* for more details)

Proper planting procedures are critical for a healthy tree to become well-established. The recommended procedure when planting a tree is as follows:

OVERSIGHT: --A company with verified credentials related to arboriculture, or a Certified Arborist, or a trained staff who has taken at least one documented planting course, or volunteers with documented education in Horticulture or a related field must oversee the planting of the trees.

PREPARATION:

i. Take a soil test
ii. Amend soil and / or schedule after-planting maintenance applications
iii. Choose species suitable to the conditions where the tree will be growing
iv. Dig the hole three times the diameter of the root ball, at least a shovel's width beyond the root ball all the way around, more if soil is clay or compacted
v. Unwrap the burlap at the top of the root ball; remove extra soil off the top to uncover the root flare (where the trunk tapers into the first structural root)

PLANTING THE TREE

vi. Move the tree by holding onto the ball, not onto the trunk
vii. Place on tamped ground at the bottom of the hole so that root flare is level with ground level
viii. Remove metal cages and burlap as much as possible with wire cutters and scissors
ix. Fill in and foot tamp soil and amendments, check often that the trunk is still vertical
x. No staking is needed
xi. Place 2"– 4" of mulch on all exposed soil surfaces – not more, not less (See next section for recommendations)
xii. Water at least 15 gallons at end of planting. (See ***Appendix G*:** water guidelines)

3) Tree Maintenance Standards:

Ideally, tree maintenance is performed as a proactive, prescriptive program. There is a misunderstanding that trees are self-sustaining and grow only in a way that is in their best interest.

In urban settings, we buy trees from a nursery where it is standard to cut off up to 90% of the roots in order to ball and burlap the tree for shipment to the site. At its new site, we tend to give a tree a planting area that is less than one fourth of what size area it will need when it is full size. We surround the tree with heat radiating pavement and impervious surfaces that don't allow enough water or air infiltration. We plant them too deep; or we place too much mulch around their bases (if we give them any at all), and then often neglect pro-active pruning cycles.

It is no wonder why on average an urban street tree only lasts eight years instead of their normal life span of 25 to 150 years.

See *Appendix F:* Mulching Guidelines

See *Appendix G*: Watering Guidelines

See *Appendix H*: Pruning Guidelines

Step 3 - Determine who will maintain the trees. Develop protocols to address future tree needs and procedures

Note: Regular proactive care of trees (ensuring quality prescribed work) prevents costly lawsuits and needless emergency response while increasing aesthetics and value

Inspections, maintenance and plantings can be performed by a combination of certified contractors, trained borough staff, arboriculture companies, and volunteers. The ideal is to build toward having a borough staff person who possesses Certified Arborist qualifications assigned (at least part-time) to tree management responsibilities.

1) When to use a Certified Arborist:

(See ***Appendix K***: Arborist Job Description)

Tree longevity depends on optimal tree health and structure. These will benefit from a prescriptive care program designed and implemented by a Certified Arborist.

1. A Certified Arborist must always be consulted in order to obtain qualified expert advice on tree related issues.
2. Recommended situations to bring in a Certified Arborist are:
    a. Evaluating a collection of trees for maintenance one to two times a year
    b. Evaluating noticed changes in the status of health or structures of certain trees
    c. Advising proper procedures for construction work performed around trees
    d. Community related programs such as educational events and borough staff training
    e. Shade Tree Commission Advisor

The borough's future Arborist can be: a) an outside consultant that is hired part-time, or b) someone shared with other municipalities, or c) preferably, a salaried borough Arborist / parks maintenance supervisor who would provide consistency and continuity in advice and programs.

2) Guidelines for tree work done by Borough Public Works staff:

1. Crew led by a Certified Arborist (when mulching, planting, pruning)
2. Anyone touching a tree needs 3 documented pruning courses and 1 planting course
3. No work shall be performed by leaving the ground (includes no work from ladders or backs of trucks). Such work is for professionals who are licensed and insured.
4. Annual 3 hour refresher course in mulching, planting, and pruning

3) Criteria for choosing a qualified company when professional work is needed:

1. Certified Arborist provides oversight of their crew performing work
2. Licensed and insured
3. Someone who speaks English for proper communication
4. Willingness to plan around parked cars, or to coordinate with police/public works to close parking spots, or else to come on less busy designated days
5. All work accomplished conforms to ANSI A300 standards
6. OSHA safety practices are enforced

4) *Priority tasks for professionals*:

The current immediate needs of trees in Ambler suggest the following ranking of priorities for professional attention. Future conditions may require a different prioritization.

1. **Hazardous:** Whole tree is in imminent danger of falling over at the base, and there is a significant target of value that can be hit - **therefore remove it**

2. **Large parts** of the tree are in danger of falling apart, and there is a significant target of value that can be hit

3. **Deadwood**
    a. Large dead branches overhanging sidewalks and streets (3" and larger)
    b. Small dead branches overhanging sidewalks and streets (3" and smaller)

4. Where further testing is needed to formulate recommendations (evidence is inconclusive)

5. Tree pit preparation

6. Planting

7. Plant health care applications (nutrients, fungicides, insect abatement) based on confirmed on-site evidence or testing

8. Clearance pruning

9. Cabling and bracing

10. Structure and juvenile pruning

11. Mulching (See detail on proper mulching technique *Appendix H*)

Step 4 - Recommendations for assigning future responsibility and chain of command for decision making:

1. **Establish a Shade Tree Committee (interim – engage the EAC shade tree subcommittee)**
2. **Upgrade tree ordinances; include tree preservation during redevelopment**
3. **Build toward hiring a part-time borough staff who is a Certified Arborist**

Note: Assigning responsibility and chain of command will ensure that tree care is an integral part of the borough's business and that trees don't get whatever is left of the budget.

Often Tree Ordinances and Shade Tree Committees are resisted. Homeowners sometimes perceive infringement of their right to do whatever they want to do on their property. Most of this sentiment comes from lack of understanding of what ordinances and Shade Tree Committees are designed to do. A tree ordinance is designed to protect the Borough from being denuded of the trees that help make downtowns into pleasant shopping areas and neighborhoods into attractive home sites.

Tree ordinances and Shade Tree Committees work for the borough to:

- ❖ protect the feel of communities through preservation of trees worth keeping
- ❖ protect neighbors from clearing their whole lot -- removing all screening between houses and habitat for birds
- ❖ encourage education on correct pruning, so people are not taken advantage of, and keep trees worth keeping.

Seen in this light, having the Borough have a say in the fate of certain sized trees makes perfect sense. The sample requirements below are not written in legalese. They offer suggestions about important issues.

1) Shade Tree Committee:

The purpose of a Shade Tree Committee is to help guide the borough and the citizens within it to preserve the feel of community through landscaping beautification and preservation. Committees are usually comprised of interested citizens who have a passion for landscapes, a vested interest in the community, and who wish to work within the local government to accomplish goals and objectives. Shade Tree Committees advise their municipalities to help formulate and enforce ordinances that guide its citizenry and those who affect the borough's tree and land cover. It is strongly recommended to pioneer a Shade Tree Committee within Ambler.

The following are typical tasks that a Shade Tree Committee may address:

1. Create and mold a tree ordinance to reflect the needs of Ambler to ensure the community feel.
2. Review construction documents along with a Consulting Arborist to make recommendations to the Borough on permitting issues related to trees.
3. Review building sites to ensure adherence to tree preservation requirements.
4. Create fund raising and educational events that raise awareness of the street and park trees within Ambler.
5. Help lead tree and landscape clean-ups, and coordinate volunteer planting events.
6. Perform community outreach to schools especially for events such as Arbor Day and Earth Day.

2) Tree Ordinance Recommendations:

Sample Requirements:

1. Any tree 12" in diameter and larger requires a permit to have work performed on it or to be removed
2. Permits will be issued after evaluating the tree(s) by the Borough Arborist. If none exists, by the Shade Tree Committee, or by the Planning Commission.
3. Only 2/3 of trees 12"- 23" in diameter may be removed on a property at one time within a 5 year period unless a tree is deemed hazardous, dead, or dying by a qualified borough approved arborist
4. Trees 24" and larger may not be removed if healthy and structurally sound as deemed by a qualified borough approved arborist
5. Exceptions: only if there are other trees on the site and it is proven there is no other alternative to preserve the tree (judgment call from borough)
6. Those home owners found negligent in obtaining the proper permits will be fined the valuation of the tree according to the ISA 2000 Tree Valuation Method as interpreted by a Master Certified Arborist familiar with performing this task.

3) Tree Preservation during Redevelopment Requirements:

(See *Appendix L*)

New construction, renovations, and even re-landscaping can have a huge impact on the health and structure of existing trees. Along with the above ordinance suggestions, proper management of construction activity can preserve worthy trees. Tree Preservation during Redevelopment Ordinances help protect a homeowner who wishes to keep their trees, but who doesn't know how to ensure that happens, and guide developers who often think that the only way to prepare their site is to bulldoze all the trees and level the site. See *Appendix L* for detailed suggestions using the latest tree preservation techniques.

Report Summation:

The intent of this DCED funded consultation was to ascertain the current status of the trees in the downtown areas of Ambler, to assess methods of enhancing their present condition, and to make recommendations to the borough of measures that will increase future beautification and tree longevity.

Recommendations include:
• widen tree pits and install Sylva Cells • follow best practices while planting • limit mulching to under 4" • water during the first two years of newly planted trees • provide annual training to borough public works staff (planting, pruning, maintenance) • use professionals when needed • form a Shade Tree Committee • upgrade tree preservation ordinances • build toward hiring an on-staff Certified Arborist

Adopting the suggestions above will give Ambler managers and staff a great start at creating and sustaining an attractive downtown business district. It is hoped that this report will stimulate a proactive approach for the care and maintenance of Ambler's natural resources, and the borough will adopt these guidelines, as well as look into further programs that will round out the environmental assets of Ambler.

APPENDICES

Appendix

Ambler's Downtown Trees

Tree Assessment and Recommendations

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Tree #	Quantity	DBH (Diameter at 4.5 feet above grade)	Common Name	Closest Cross Street	Closest Landmark	Priority Rating & Year for Action in Budget	Pruning Specifications: Remove Year 1	Crown Clean Dead 2" and Larger	Structure prune: remove crossing & overcrowded branch unions	End weight - reduce over-extended limbs likely to fail	Remove Broken Leads, Hangers, Stubs	Thin 30% watersprouts	Crown Raise to Approx. 12' over Roadway and Parking	Crown Raise to Approx. 8-8' over Sidewalk / Lawn / Roof Edge / Lights	Reduce Spread towards Bldg/Sign Approach trees by Approx 4'-6'	Ornamental Prune: shape/contain branches outside average canopy	Subordinate co-dominant lead(s)	Root Crown Excavation	Growth Regulator	Soil Enhancement	Open Planting Pit Size: Width	Length of Pit availability	Height Restrictions	Planting Pit Expansion Needed	Tree Problems: Broken Leads, Hangers, Stubs	Major Health Decline/Dead	Decay, Hollow, and/or Large Canker Detected	Parasitic Fungal Fruiting Structures Visible	Overgrown Planting Pit Size (Heaving Sidewalk)	No visible root flare	Abnormal Trunk Development (flat trunk)	Scarred Roots / Root Decay	Additional Notes	Date Completed	Completed Put "X" here
1	1	0	empty pit	Butler Ave and Hendricks St.	CVS	B.1													x	x	5	15	15	x									Open Pit		
2	1	6	red maple	Butler Ave and Hendricks St.	CVS	B			x									x	x	x	5	15	15	x						x					
3	1	0	empty pit	Butler Ave and Race St.	Zina's Kitchen	B.1													x	x	4	15	15	x									Open Pit		
4	1	3	crabapple	Butler Ave and Race St.	Kiesers Tire	B			x									x	x	x	3	15	15	x	x					x					
5	1	4	fruitless sweetgum	Butler Ave and Race St.	Kiesers Tire	B											x	x	x	x	3	10	15	x						x					
6	1	3	tree lilac	Butler Ave and Race St.	Kiesers Tire	B			x									x	x	x	3	20	15	x						x					
7	1	3	black locust	Butler Ave and Race St.	Kiesers Tire	B			x											x	3	10	u	x											
8	1	12	black locust	Butler Ave and Lindenwold Ave	Parking Area	B			x					x						x	6	15	u	x											
9	1	12	red maple	Butler Ave and Lindenwold Ave	Parking Area	B.2		1	x						x					x	8	10	u	x					x	x			No Pit Sylva Cell Improvement		
10	1	22	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		2	x											x	16	16	u	x					x	x			No Pit Sylva Cell Improvement		
11	1	22	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		2	x						x					x	14	14	u	x					x	x			No Pit Sylva Cell Improvement		
12	1	8	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		1												x	4	20	u	x					x	x			No Pit Sylva Cell Improvement		
13	1	10	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		1												x	4	20	u	x					x	x			No Pit Sylva Cell Improvement		
14	1	8	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		1												x	4	20	u	x					x	x			No Pit Sylva Cell Improvement		
15	1	18	zelkova	Butler Ave and Lindenwold Ave	Parking Area	B.2		2	x											x	15	20	u	x					x	x			No Pit Sylva Cell Improvement		
16	1	6	tree lilac	Butler Ave and Lindenwold Ave	Parking Area	B			x											x	4	4	u	x											
17	1	24	ginko	Butler Ave and Lindenwold Ave	Parking Area	B			x											x	4	0	u												
18	1	12	black locust	Butler Ave and Lindenwold Ave	Weldon Auto Parts	B			x			x								x	4	15	u	x											
19	1	12	black locust	Butler Ave and Lindenwold Ave	Ambler Savings Bank	B.3			x											x	6	10	u	x					x						
20	1	12	black locust	Butler Ave and Lindenwold Ave	Ambler Savings Bank	A.1	x													x	5	9	u	x		x			x			x			
21	1	14	black locust	Butler Ave and Lindenwold Ave	Ambler Savings Bank	B.3			x											x	5	9	u	x					x						
22	1	9	black locust	Butler Ave and Lindenwold Ave	Wine and Spirit	B			x											x	4	10	u	x											
23	1	20	sophora	Butler Ave and Lindenwold Ave	Wine and Spirit	B						x	x					x		x	7	0	u	x				x		x					
24	1	12	black locust	Butler Ave and Lindenwold Ave	Ambler Savings Bank	B.3		1	x											x	7	10	u	x					x						
25	1	4	zelkova	Butler Ave and Lindenwold Ave	Ambler Savings Bank	B			x									x		x	7	10	u	x						x					
26	1	10	black locust	Butler Ave and Lindenwold Ave	Municipal Building	B.3			x									x		x	8	10	u	x					x	x					
27	1	18	sophora	Butler Ave and Lindenwold Ave	Ralphs Barber Styling	B			x		x	x	x	x						x	6	5	u	x											
28	1	12	black locust	Butler Ave and Lindenwold Ave	Municipal Building	B			x						x					x	7	5	u	x				x		x					
29	1	12	black locust	Butler Ave and York Ave	Movie Theater	B.3			x				x							x	8	5	u	x					x						
30	1	12	black locust	Butler Ave and Ridge Ave	Liz-El Jewel Box	A.1	x													x	8	6	u	x		x	x		x		x		x		
31	1	10	black locust	Butler Ave and Ridge Ave	Caffe Maida	A.1	x													x	10	5	u	x		x	x	x	x						
32	1	18	black locust	Butler Ave and Ridge Ave	First Presbyterian Church	B.3			x											x	5	10	u	x					x						
33	1	12	black locust	Butler Ave and Ridge Ave	Final Touch	C.3														x	5	15	u	x					x						
34	1	10	black locust	Butler Ave and Ridge Ave	First Presbyterian Church	B.3												x		x	5	10	u	x					x	x					
35	1	10	black locust	Butler Ave and Ridge Ave	Ambler Travel	B			x									x		x	5	10	u	x						x					
36	1	12	black locust	Butler Ave and Ridge Ave	Act II Playhouse	B			x									x		x	7	15	u	x						x					
37	1	10	black locust	Butler Ave and Ridge Ave	Gravity	B		1	x									x		x	5	10	u	x						x					
38	1	12	black locust	Along Cavalier Dr		B			x									x		x	7	10	u	x						x					
39	2	3	hawthorn	Along Cavalier Dr		B		1	x						x					x	5	2	u	x									Clearance of Bldg by 6-12"		
40	1	3	tree lilac	Along Cavalier Dr		B			x									x		x	6	5	u	x						x					
41	1	12	sophora	Along Cavalier Dr	Mantis Computers	B.4		1	x					x						x	6	10	u	x					x						
42	1	18	sophora	Along Cavalier Dr	Mantis Computers	B		1	x					x						x	7	10	u	x											
43	7	14	Chinese elm	Along Cavalier Dr	Parking Area	B		1	x				x							x	9	7	u	x											
44	6	14	bradford pear	Along Cavalier Dr	Parking Area	B		1	x	x										x	0	0	u												
45	1	24	bradford pear	Along Cavalier Dr	Parking Area	B		1	x	x										x	0	0	u												
46	1	10	black locust	Cavalier Ave and Butler Ave	Vision	B.4		1			x									x	6	10	u	x					x	x					
47	1	12	black locust	Cavalier Ave and Butler Ave	Denney Electric Supply	B			x											x	6	10	u	x											
48	1	14	sophora	Cavalier Ave and Butler Ave	Vision	B		1	x											x	7	4	u	x									Remove girdling root		
49	1	16	sophora	Cavalier Ave and Butler Ave	Denney Electric Supply	B.4		1	x					x						x	5	5	u	x					x						
50	1	16	sophora	Cavalier Ave and Butler Ave	Shermin Williams Paint	B.4			x											x	5	5	u	x					x						
51	1	16	sophora	Cavalier Ave and Butler Ave	Ambler Dept. Store Front	B.4		1	x	x										x	7	6	u	x					x		x				
52	1	12	black locust	Cavalier Ave and Butler Ave	Candidas Pizzeria	B			x						x			x		x	7	15	u	x						x					
53	1	10	black locust	Spring Garden and Butler Ave		B		1	x					x				x		x	5	15	u	x						x					
54	1	10	black locust	Spring Garden and Butler Ave	Fine Things Antiques	B.4			x						x					x	5	6	u	x					x				Remove suckers from base		
55	1	4	tree lilac	Spring Garden and Butler Ave	Marcs Floors	B		1	x											x	7	5	u	x											
56	1	6	tree lilac	Spring Garden and Butler Ave	Kimmel and Silverman	B			x									x		x	7	4	u	x						x					
57	1	18	sophora	Spring Garden and Butler Ave	Ambler Plaza	B.4			x					x						x	7	5	u	x					x						
58	1	18	sophora	Spring Garden and Butler Ave	Verde Home	A.1	x													x	6	10	u	x	x		x			x		x			
59	1	3	tree lilac	Spring Garden and Butler Ave	Touch of the Old Country	A.1	x													x	5	10	u	x	x		x		x			x			
60	1	10	black locust	Spring Garden and Butler Ave	Free Shop	B.4			x						x					x	5	10	u	x					x						
61	2	16	sophora	Main St and Butler Ave		C.4														x	4	10	u	x					x						
62	1	3	tree lilac	Main St and Butler Ave	Bridgets at 8 West	B		1	x											x	4	15	u	x						x					
63	3	10	bradford pear	Main St and Butler Ave	Parking Area	B			x											x	5	15	u	x									Remove plastic from base		
64	2	3	tree lilac	Main St and Butler Ave	Parking Area	B			x											x	2	15	u												
65	1	3	ash	Main St and Butler Ave		B											x	x		x	4	4	u	x						x					
66	2	6	sophora	Across tracks	BP Station	B			x				x	x						x	4	4	u												
67	1	10	cherry	Maple Ave and Butler Ave	McDonalds	B			x											x	3	10	u												
68	6	10	bradford pear	Maple Ave and Butler Ave	McDonalds	B			x											x	5	10	u												
					Totals From Categories		5	19	51	3	1	2	3	10	9	0	2	27	6	all				61	4	0	3	0	28	28	2	4			0

See Appendix M for Definitions of Terminology

Tree # color code: Year 1 Year 2 Year 3 Year 4

Performed winter of 2008-2009