

# The Penn State College of Agricultural Sciences

## Metro Research and Outreach Center

### Executive Summary - December, 2007

This Executive Summary and Action Plan for the Metro Research and Outreach Center (MROC) reflects the Metro Center study committee's effort to address the Dean of the College of Agricultural Sciences (CAS) charge and the Dean's Council's response to the draft report submitted in September, 2007. We are recommending action focused on three initial topic areas. These topic areas reflect the results of a faculty survey, a stakeholder meeting in Pittsburgh, as well as deliberations with the Dean's staff. In addition, we believe these recommendations will address all three missions of a land grant institution through:

- Enhancement of the recruitment of students to the College of Agricultural Sciences,
- Engagement in applied research in urban communities,
- Strengthening urban Outreach and Extension capabilities, and
- Increasing CAS and PSU relevancy to urban/metro stakeholders.

The committee believes the most effective way to launch the metro initiative is to establish an independent MROC to facilitate a collaboration of the research, resident education, and extension mission of CAS as well as accommodate a relationship with University Outreach (Appendix 1). Leveraging current resources can hasten the establishment of a physical presence at a location closer to downtown Pittsburgh with easy access and provide space for future expansion. Facility cost can be delayed while both the program and political support grow. In the meantime, MROC programming can be initiated in presently available facilities.

#### **The MROC provides an opportunity for CAS to grow within its mission.**

*The mission of the College of Agricultural Sciences is to discover, integrate, and disseminate knowledge to enhance the food and agricultural system, natural resource and environmental stewardship, and economic and social well-being, thereby improving the lives of people in Pennsylvania, the nation, and the world.*

- Goal A - Increase enrollment and enhance student success through better access to metro schools and prospective students.
- Goal B - Enhance knowledge discovery and translation through research in metro related issues.
- Goal C - Strengthen meaningful communication and mutual education with current and new stakeholders through engagement with new local supporters such as, elected officials and policy makers.
- Goal D - Lead and manage the college as a system through nurturing the potential assets of metro areas and ensuring that all residents see CAS as relevant to their lives.

MROC has close relevance to the newly proposed adjustments to the CAS strategic plan including:

- Energy conservation education as part of the alternative energy objectives
- Protection of plant, animal and human health
- Sustainable environments
- Food Safety and Quality
- Regional economic stability
- E-learning and CAS sustainability

MROC can link metro audiences with the traditional Agricultural audience by:

- Creating new regional and neighborhood markets for PA grown crops.
- Sensitizing metro communities to agriculture through formal and non-formal education
- Demonstrating the use of agricultural principles in the Community Green topic areas.
- Demonstrating that integrated pest management principles developed in agriculture can be adapted to urban environments.

## **COURSE OF ACTION**

We believe that the best course of action is to proceed with a three-phase timeline for the establishment of a high-quality, sustainable, and comprehensive Metro Research and Outreach Center (Appendix 2). These phases are: Start-Up, Transitional, and Final.

### **Start-up**

During the Start-Up Phase, a virtual presence will be emphasized utilizing existing resources available through the local Extension office. This phase will establish team membership and identify specific research and outreach activities in line with the three subject matter topic areas. This initial step will include the announcement of a director and the launching of initial program development activities, partnerships, and logistics. Much of this phase will be *virtual*, focusing on establishing the human infrastructure for research, resident education, and outreach programs as well as plan for the development of a physical presence. Initial partnerships, both internal and external, will be developed and plans will be devised to establish a temporary location. This facility will be established as a partnership with the local Extension office leveraging local resources. We suggest that future facilities hold the Allegheny County Extension office and the Metro Research and Outreach Center as separate entities in the same building.

### **Transitional**

The Transitional Phase will include the identification and establishment of a physical presence and continued team building. The facility for this stage would be a leased building that could accommodate all of the activities necessary for the transition period leveraging local funds to help offset costs.

Goals, objectives, and strategic activities will be clearly defined for the research and program teams working in the three initial topic areas. This Phase, spanning a three to five year period, will initiate or accomplish the following:

- Fully develop research, resident education, and outreach activities;
- finalize specific facility needs, requirements, and design specifications;
- develop a strategic capital development plan;
- begin hiring strategic personnel;
- fund research and associated activities; and
- integrate all appropriate Outreach components.

Additional topic areas will be developed based on stakeholder input, faculty interest, and available resources.

### **Final**

The Final Phase is the realization of a fully functional research and outreach center housed in a state of the art, living building in close proximity to downtown. All MROC activities will transfer to the new facility as will the local Extension office. The operation of this center will include activities in all three areas of the Land Grant mission: Research, Extension/Outreach, and Resident Education. Three to five full time faculty or research associates will be engaged in local research and Extension activities with allowance for expansion based on research and other grant funds for metro opportunities. Frequent interactions with all local partners will develop relationships with new, non-traditional stakeholders and ensure responsiveness to local needs and challenges.

The facility and staffing will be in place to help support MROC activities that are relevant to the Greater Pittsburgh area and beyond as well as collaborating with other successful Metro efforts across the state and country. The facility would be highly visible and attract residents to its outstanding programming. Special classes (both local and distant) would be available for individuals interested in pursuing studies in the CAS. The Extension operation would serve as a major partner, as would Penn State Continuing Education, Penn Tap, Management Development, and other Outreach programming initiatives. MROC will be a direct conduit to the College of Agricultural Sciences, University Outreach and Penn State University allowing for a free, multi-directional flow of resources, information, and influence to better serve the residents of the state and to enhance the standing of Penn State in our metro environments.

More specific, recommendations follow.

**1. Launch the Initiative immediately with program development concentrating on Urban and Community Greening, then expand into the other two areas listed below.** Locally identified community needs and current programming will make the Greening issue the easiest to engage immediately. Initial activities will be carried out by creating interdisciplinary, issue-oriented teams made up of faculty from these disciplines and County Extension educators and staff (Appendix 3). *Activities for Start-Up Stage include: Faculty engagement and commitment to engage in metro activities, funding of team activities, initial implementation activities and searches for new faculty/staff.*

1. Urban and Community Greening \*
2. Urban Agriculture and Food Production \*
3. Entomology and Plant Pathology

\* Activities that can begin immediately include:

- Vacant Lot remediation and greening strategies,
- Varietal trials for turf species and woody ornamental plants best suited to urban environments,
- Lead remediation strategies establishing sound practices base on solid research,
- Community and Economic development modeling and evaluation of sound practices,
- High Tunnel research in communities with high levels of pollution and other variables,
- Marketing and economic development related to urban farming,
- Sound urban farming practices differing from traditional methods.

Integrated teams will coordinate MROC activities. One of the duties of the teams will be to recruit other faculty and extension expertise and identify further gaps. Members of the team can be involved in both research and extension activities and may also help recruit PSU applicants as well as teach local citizens either in person or via the internet. Teams should be funded and team members should receive recognition for their participation. Any faculty based at MROC will be managed similarly to faculty at the Tree Fruit Research and Education Center, answering both to their home department as well as the MROC director.

An MROC Administrative Council will be formed and will include at least one member from each topic area team as well as representation from the Associate Deans of Research, Extension, and Resident Education. A representative from Outreach may also be included. The purpose of the Administrative Council is to provide for communication among the topic area teams, the MROC Director, and CAS administration.

**2. Create incentives for faculty and staff to participate.**

*An incentive structure will be developed during Start-Up and in place during the Transition Stage.*

Incentives can include:

- College seed grant funds to stimulate these team development and stakeholder contacts,
- Modification of job descriptions,
- Acknowledgement of activities during evaluations and in the tenure/promotion process,
- Grad Students stipends/fee waivers,
- Facilities and resources in Pittsburgh,
- The opportunity for improved ties between county staff and UP faculty.

**3. Create the Center Director position and describe administrative responsibilities regarding the Extension office and/or MROC.**

*Center director position and support staff should be placed early in the Start-Up Stage.*

The director would manage MROC operation, assist in development efforts, and help to coordinate all local linkages. The position will report to the CAS as well as to the Outreach System. The Director should participate in the CAS policy and decision making processes at a level equal to a Program Leader.

**4. Create a local advisory board that reflects broad representation.**

*The board should be constituted during the Start-Up Stage and strengthened as the initiative moves forward. This board will reflect a broad representation of local partners and stakeholders (Appendix 4).*

**5. Engage local, state, and federal elected officials regarding the development of the MROC as soon as possible.** All state elected officials should be notified immediately upon appointment of the MROC director. *Personal communication from the director will be sent to state and local officials early in the Start-up Stage.*

Emphasis should be placed on local and state elected officials to bring them into the loop regarding the short and long term plans. This will allow them the opportunity to align themselves with a new, high profile initiative. Significant dialogue should begin prior to the official announcement and continue beyond the start date. These are actions recommended to establish a systemic relationship.

- Encourage CAS political/industrial liaison to form relationships with metro elected officials and business leaders.
- Provide periodic reports of MROC progress and needs to state legislature members in our metro issues
- Establish CAS/University representation on local government commissions, etc.
- Directly engage elected officials to become active in Center activities.

**6. Develop a funded communications and marketing strategy to include in-house and external expertise.**

*An initial, draft marketing plan should be completed early in the Start-Up Stage. Implementation of plan should coincide with the placement of the director. Continued marketing will be significant in all Stages.*

The College should partner with University marketing to build and manage the campaign. The effort will be responsible for developing communication plans and materials that can promote the presence of the MROC to the Pittsburgh community.

**7. Create formal linkages with local universities, community colleges, local school districts, and non-profit organizations and align partnerships to assist in supporting the effort (Appendix 5).**

*Formal linkages should begin in the Start-Up Stage emphasizing major universities first then progressing to other entities (community colleges, NGOs, etc.). Process will carry on into following Stages.*

The Center, on behalf of Penn State, Outreach, and the College of Agricultural Sciences, should establish formal agreements with these entities. These agreements should be in process within six months of the establishment of the Center.

**8. Expand CAS Resident Education presence and resources at undergraduate and graduate levels to provide students with metro experiences by providing increased opportunities to conduct community-driven participatory research.** *The intent is to attract students, both undergraduates and graduate, to apply to the college. Engagement procedures should be developed during the Start-Up Stage and implemented during the Transitional Stage. It is likely that some already may exist and only formal recognition is necessary.*

The College has an opportunity for faculty to utilize the Pittsburgh area as a collaborative learning environment. Examples include offering undergraduate and graduate level courses on-site and/or via distance

education, facilitation of internships and summer employment opportunities, a locale to facilitate student research projects/theses, and a site for youth-based educational programming in the food, agricultural, and natural resource sciences. Physical facilities could be provided as a “dock” in the metro area for use by visiting teaching faculty. Extension staff members and community partners are prepared to facilitate this effort.

The physical facilities of the MROC should accommodate attractive informational displays to inform potential students. These facilities should also include at least 2 conference rooms with high speed data links (Internet II) to campus, a projection unit and computer to facilitate teaching and connectivity to UP campus and other VTC sites. Someone from the Resident Education Office should be assigned to the committee.

**9. Enhance funding and leverage opportunities for urban youth to learn leadership, citizenship, and life skills by participating in CAS educational programs such as 4-H national, state and county events, summer programs, and special events.** *Determine specific science-based, technology-oriented, and career track educational activities for participation and appropriate funding. Develop an approach for promoting educational events to interested youth and leaders during the Start-Up Stage with continued development. Maximize effectiveness of the program delivery strategies and communicate the relevance of youth programming to parents, leaders, and youth.*

**10. Provide an easily accessible, high profile presence within a half mile of downtown.**

*Utilize the two development stages to establish a long term presence in the Pittsburgh market. Begin with the Start-Up Stage.*

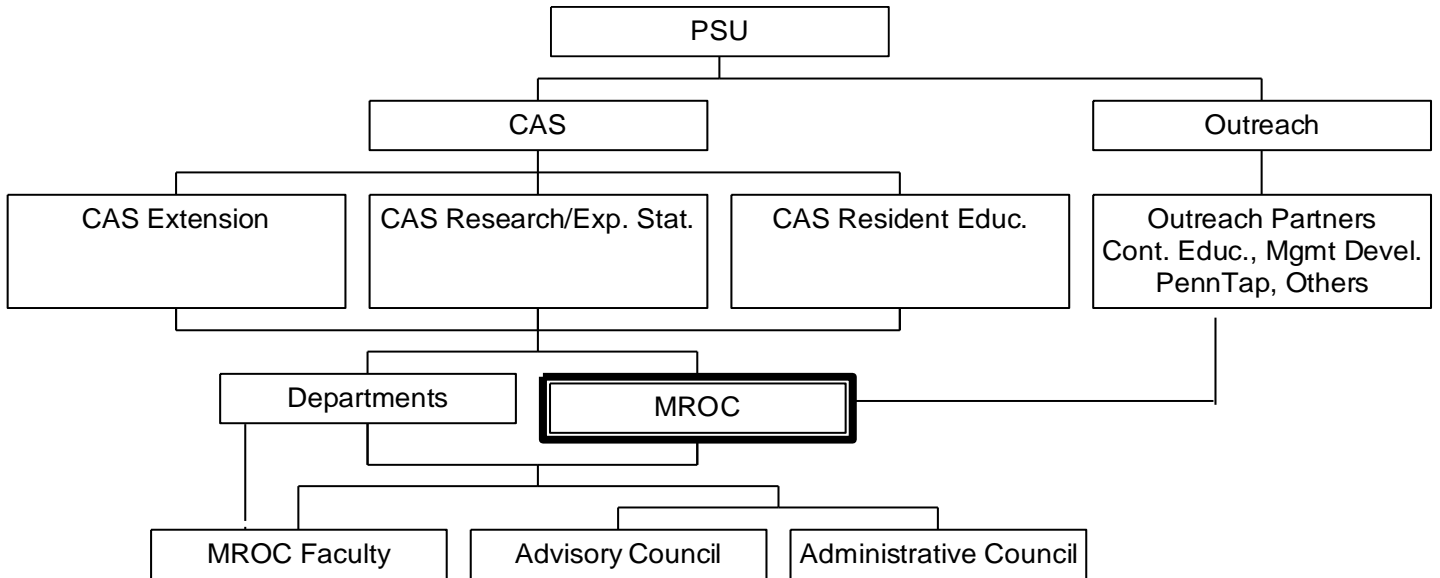
This will establish a combined space for the Extension office and the metro initiative to form the Metro Research and Outreach Center. These facilities can begin as virtual facilities where services are developed first and delivered from the existing county Extension office. As MROC grows to the Transition Stage, physical facilities can be expanded/obtained. This facility, while meeting many of the identified needs will be used only as a temporary space since it may have some limitations. The Transitional Stage will leverage current resources to expand available space for the permanent housing of all metro initiative activities. The Transition and long term facility costs could be kept at a reasonable rate while both the program and political support grow. This facility must have the following: easy accessibility, street level entrance with high visibility, sufficient flexible space for conference / classrooms and labs, and offices for both visiting faculty and those assigned to the center. Further, there should be a reasonable amount of ground. These are to be used for research, demonstration, and education. If grounds are not available on site, efforts should be made to secure access to reasonable land within a short walking distance (Appendices 6 & 7).

Respectfully Submitted

Members of the Metro Center Study Committee 2007

# Appendix 1

MROC in PSU Organization



## Appendix 2

### Metro Research and Outreach Center Timeline

Step	Action	Evidence of implementation
1	Establish Center transitions costs with justification for expenditures	Negotiated, finalized budget with expenses justified
2	ID Center resident faculty and focus area  Create incentive plan for prolonged, sustained faculty and student involvement in Center activities	List of ID'd faculty and focus area with documented agreement to participate  Documented incentive plan
3	ID existing available Extension staff & program area	List of staff and program area
4	Official placement of Director with development/implementation of marketing plan  Develop CAS metro programming leadership team to participate in College policy and decision making processes	CAS announcement of placement of Director and documented marketing activities  Documented team membership list and schedule of participatory activities (meetings, etc.) for 2008
5	Develop descriptions for needed Center faculty/staff Advertise position openings Hire new staff Conduct orientation	Written job descriptions Ads taken out by HR and locally New staff on board Documentation of orientation schedule
6	Plan for move to downtown facility	Documentation of facility address options, contact information; Transition plan (notifications, etc.)
7	Develop advisory board	List of confirmed board members
8	Faculty engagement commitments finalized	Documented engagement agreements
9	Conduct inaugural advisory board meeting	Documentation of agenda and minutes
10	Educate local/State political leaders on Center development	Documentation of communication activities with political leaders
11	Begin implementation of program/research/outreach plans	Documentation of implementation activities
12	Develop plan with identified funding streams to engage youth in UP summer experiences and pipeline recruitment programs for encouraging application to PSU	Written plan specifying funding opportunities, available summer activities, participation requirements, funds receipt procedures, etc.
13	ID downtown Center location: Permanent Space ID and facility planning	Documentation of permanent address Written plan with full facility specs (specific office detail)
14	Engage local colleges/universities for development of MOU's for collaborative activities	Documentation of engagement activities with specific institutions and copies of completed MOU's
15	Identify specific opportunities for engaging local public schools and non-profits in Center activities	Documentation of engagement opportunities with specific contacts
16	Conduct enhanced needs assessment with stakeholders/community residents	Documentation of enhanced needs assessment meetings/focus groups with contacts

## Appendix 3

### Key Allegheny County Extension Personnel for all three focus areas

The following are existing Allegheny County staff who have knowledge in one or more of the three topic areas. Additional personnel needed for the three topic areas are listed below as ‘new hires required.’ If possible, educators from surrounding counties can also join teams.

Mike Masiuk, Senior Extension Educator - Local team leader

Sandy Feather, Associate Extension Educator

John Shea, Extension Project Associate

Mark Remcheck, Regional Extension Urban Forester

F. Joseph McCarthy, Extension Program Assistant

Support in Leadership and Youth will also be available as necessary.

### University Faculty

About 80 faculty expressed a high degree of interest in metro extension, education, and outreach in a recent web-based survey in various capacities. Faculty members on these lists have been approached and have expressed an interest in this project. A follow up process is being completed to confirm faculty willing to begin actively collaborating upon formal initiation of MROC.

### Topic Area Teams

#### *Urban and Community Greening*

Urban greening is broadly defined as activities that engage local residents and transform unsightly, unhealthy, vacant lots that are considered liabilities to communities into well designed, very low maintenance, landscapes that are considered assets to communities. There is a substantial urban and community greening project already underway in Allegheny County. This will allow this topic area to start immediately and show near-term results.

Rob Berghage	Horticulture	Green roof
Jim Selmer	Horticulture	Arboriculture
Jim Savage	Horticulture	Arboriculture
Pete Landschoot	Crop & Soil	Turf management
Al Turgeon	Crop & Soil	Turf management
Jim Findley	Forestry	Forest management
Bill Elmendorf	Forestry	Urban and community forestry
Sandy Smith	Forestry	Forestry and youth outreach
John Carlson	Forestry	Tree and genetic research
Bryan Swistock	Forestry	Well Water/ponds
Rick Stehouwer	Crop & Soil	Soil remediation
Gary Moorman	Plant Path.	Diseases of ornamentals
Greg Hoover	Entomology	Ornamental IPM
Claudia Mincemoyer	Ag & Ext Ed	4H and youth programming
Al Luloff	Ag Eco/R. Soc	Policy and development

#### **Identified GAPS in expertise:**

Brownfield Remediation Researcher (placed at MROC) – new faculty hire

Storm water / water management - Faculty from other colleges can be recruited such as from landscape architecture and civil engineering.

### ***Urban Agriculture and Food Production***

Urban Agriculture is defined as a small, economically stable agricultural efforts in the urban area dedicated to providing healthy produce to area residents, increasing local food security, and remediating the land. It also includes the establishment of local markets that can connect rural farms with urban retail opportunities.

#### **University Faculty**

Bill Lamont	Horticulture	High Tunnel and Urban Development
Luke Laborde	Food Science	Food Safety
Kathy Cutter	Food Sci	Food Safety
Joan Thompson	Ag Ext Ed	Local food choice & systems
Linda Moist	Ag Eco/R. Soc	Sust. Ag.
Carolyn Sachs	Ag Eco/R. Soc	Women in Ag.
Elsa San Chez	Horticulture	Specialty Crops
Kathleen Kelley	Horticulture	
Claudia Mincemoyer	Ag & Ext Ed	After School Programs
Tim Kelsey*	Ag Eco/R. Soc	Econ Development
Ted Alter	Ag Eco/R. Soc	Economic Development
Jeff Hyde	Ag Eco/R. Soc	Production Economics/Marketing

#### **Identified GAPS in expertise:**

County hires:

Urban Farming and Economic Development Faculty Specialist (placed at MROC) – new hire

Urban and Sustainable Farming Educator (Economic Development background) - new hire

### ***Integrated Pest Management (Entomology and Plant Pathology)***

Integrated Pest Management (IPM) suppresses pest populations to acceptable levels in an economic way with special attention to minimizing environmental degradation and protecting human health. IPM includes the pest sciences of entomology, plant pathology, weed science, microbial management and others. IPM in a metro environment mainly addresses pests in buildings (roaches, rats, mice, termites, hyperallergenic molds, etc.) as well as pests in exterior landscapes (trees, shrubs, lawns, etc.)

#### **University Faculty**

Mary Ann Frazier	Entomology	Outreach
Lyn Garling	IPM Program	Community IPM
Nichole Webster	Ag & Ext Ed	Service Learning
Michelle Niedermeier	IPM Program	Community IPM
Kerry Richards	Pesticide Ed	Pesticide Safety
Greg Hoover	Entomology	Ornamental IPM
Rick Johnnosn	IPM Program	
Eileen Wheeler	Ag Engin.	HVAC expertise for Indoor air quality
Ed Rajotte	Entomology	Entomology/IPM research and extension
Steve Jacobs	Entomology	Insect IPM

#### **Identified GAPS in expertise:**

Urban entomologist (placed at MROC) – new hire – research and extension support for urban IPM

Environmental Health Educator - new hire – county staff

## **Appendix 4**

### **Recommended Advisory Board Membership (partial list)**

- Many of the members of this board are involved in the political environment in Pittsburgh and the state legislature. This board will serve at least three functions:
  - Provide guidance for MROC, especially in light of city, county and state policy
  - Represent PSU CAS in political deliberations that affect MROC
  - Educate peers and constituents about the value of MROC
- Mary Esther Van Shura, Special Assistant - Office of Chief Executive Dan Onorato
- Paul Svboda, Special Assistant - Office of Senator Jim Ferlo
- Kim Graziani, Director of Community Initiatives,
  - Office of Pittsburgh Mayor Luke Ravenstahl
- Allegheny County Council Member representative
- Roy Kranyk, Executive Director - Allegheny Land Trust;
- Dan Eichenlaub, Principal - Eichenlaub Landscaping
- Phil Gruzka, Director of Operations - Pittsburgh Parks Conservancy;
- Urban Ecological Collaborative, Mary Beth Steisslinger
- Carnegie Mellon University Representative
- University of Pittsburgh Representative
- Community College of Allegheny County

# Appendix 5

MROC stakeholders may include members from traditional CAS stakeholder groups, however developing membership for new types of stakeholders will be a major focus. Stakeholders will be consulted to help determine the strategy for MROC as well as the services MROC is to provide. In addition, stakeholders will advocate for MROC in local, state, and federal government as well as in NGO's and community organizations. An overarching goal will be to increase the value of Penn State CAS and Outreach in the eyes of the Pittsburgh community and the metro portions of the state in general. MROC will develop a plan for strong stakeholder buy-in.

## Current Extension Support Partnership Listing

This list is not exhaustive and is meant to exemplify the list of potential supporters of the Metro Research and Outreach Center effort.

### **Governmental and non-governmental organizations**

- County of Allegheny – County Chief Executive, Dan Onorato
- Redevelopment Authority of Allegheny County (RAAC)
- Several state elected officials
- City of Pittsburgh – Mayor Luke Ravenstahl
- Bidwell Training Center
- Braddock Municipality – Mayor Fetterman
- Steel Valley Council of Government
- Urban Redevelopment Authority (URA)
- Allegheny County Council Members
- Allegheny Land Trust
- Carnegie Mellon University
- Chatham University
- Community College of Allegheny County
- Community Development Corporations
- East Liberty
- Larimer
- Manchester
- Sheradon
- Bloomfield/Garfield
- GTECH
- Heinz Endowments
- Hill House Association
- Kingsley Association

- Phipps Conservancy and Garden Center
- Pittsburgh Friends of the Urban Forest
- Pittsburgh Parks Conservancy
- Pittsburgh Shade Tree Commission
- Sustainable Pittsburgh
- Urban Ecological Collaborative
- Western Pennsylvania Conservancy
- Western Pennsylvania Botanical Garden
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### **School Districts**

- Clairton
- Pittsburgh Public Schools
- Sto-Rox
- Wilkinsburg

### **Private Companies**

- Bartlett Tree Experts
- Best Feeds
- Eichenlaub
- Quality Gardens
- LMS Garden Center
- Reilly's Summerseat Farm
- Soergel's
- Sugar Run Nursery
- Trax Farm
- The Urban Gardener

# Appendix 6

## **Facility Specifics in longer-term vision**

- a) *Facility should reflect Pittsburgh's revitalization effort.*
- b) *Partner with existing Extension office.*
- c) *Define the Outreach/Extension partnership in terms of facilities and operations.*

The final size of the building should take into consideration the above recommendations with sufficient space for expansion. The facility should be one of high quality, green design and function. There should be, at a minimum, the characteristics listed below

- Integrated facilities for the County Extension office.
- A variety of differing sized conference areas with appropriate technical assets.
- Office expansion space for at least five faculty members with the opportunity to eventually double or triple this number.
- Three classrooms -- these could be somewhat interchangeable with conference rooms.
- At least three open offices with technology assets for use by visiting faculty.
- Laboratory facilities
- State-of-the-art connectivity throughout the facility,
- An exterior that includes sufficient green space for horticultural, forestry, and other environmental demonstration and/or research activities, or property that can be incorporated within a very short walking distance.
- Sufficient parking utilizing current permeable surfaces technologies.
- Opportunities for the use of alternative energies should also be considered.

Due to various political and economic factors, consideration should be given to the northeast corridor adjacent to the Allegheny River.

# Appendix 7

## Metro Research and Outreach Center Estimated Transition Costs

The following estimate is based on utilization of a space that doubles the size of the current Extension office in Allegheny County. It also assumes that the Extension office will move into those facilities in a 50% / 50% initial partnership.

<u>Item</u>	<u>CAS Funds</u>	<u>Local</u>	<u>Total</u>
Office Space			
100% increase in current Extension Office Space	\$40,000	\$45,000	\$85,000
Telephones			
12 additional telephones	\$4,000	\$9,900	\$13,900
Clerical Personnel			
1 @ \$36,000 plus benefits @ 29%	\$46,440		\$46,440
1 Office Receptionist	\$35,000		\$35,000
Computing Equipment			
1 laptop @ \$560 per/yr	\$560		\$560
5 desktops @ 400 ea. per/yr	\$2,000		\$2,000
Communication Technology			
VTC, TV, Projector, screen, etc.	0	\$12,000	\$12,000
Office Supplies	\$1,000	\$5,000	\$6,000
Postage	\$500	\$13,000	\$13,500
Copy Machine Lease	\$6,000	\$9,000	\$11,000
Printing	<u>\$2,000</u>	<u>\$3,000</u>	<u>\$5,000</u>
<b>TOTAL</b>	<b>\$102,500</b>	<b>\$134,900</b>	<b>\$237,400</b>

***Not included:***

***Faculty and local Extension position(s) costs, lab and related research equipment & supplies, travel, specialized computer software, miscellaneous expenses.***