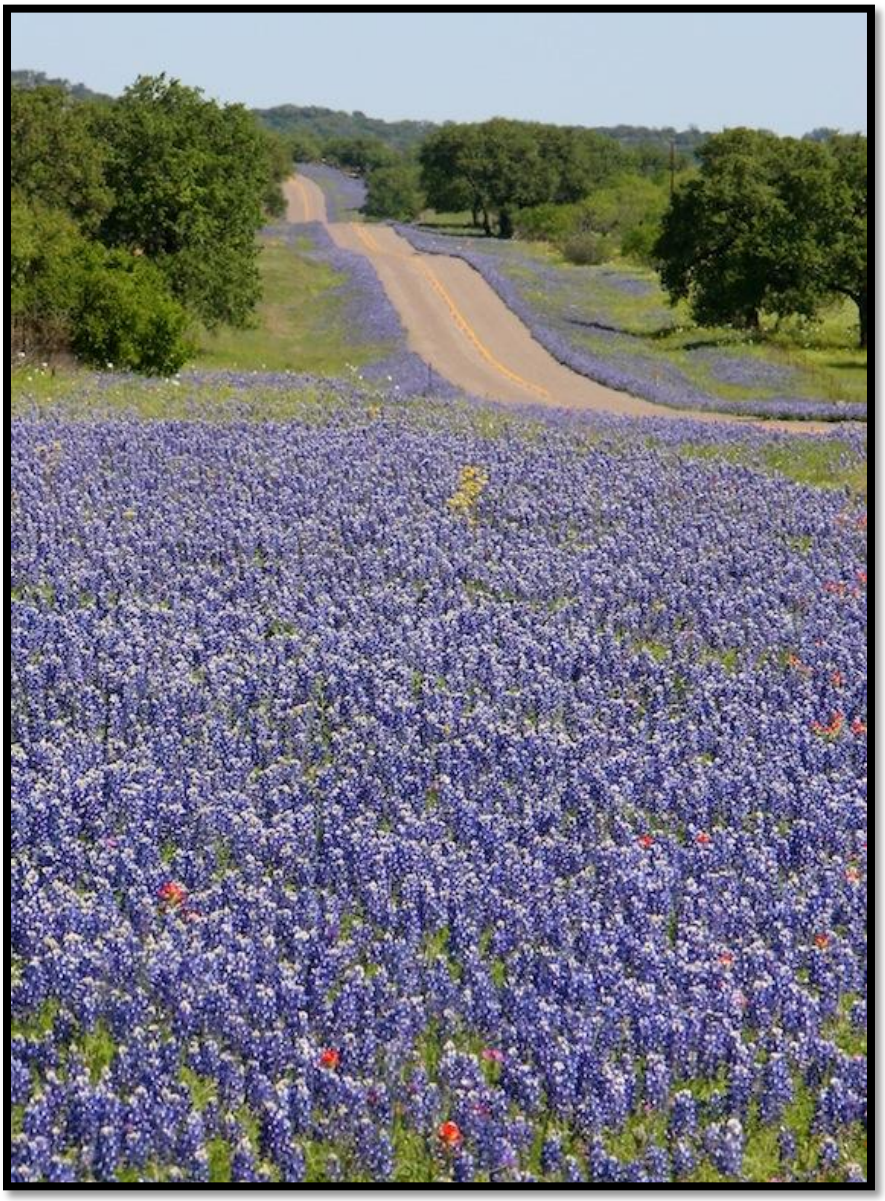
FIRST IMPRESSIONS

For the Muhlenberg Alliance for Progress
Muhlenberg County, Kentucky



April 27, 2012

Pennyrile ADD
300 Hammond Dr
Hopkinsville, KY 42240

FIRST IMPRESSIONS STUDY

For the Muhlenberg Alliance for Progress
Muhlenberg County, Kentucky

April 27, 2012

Pennyrile ADD
300 Hammond Dr
Hopkinsville, KY 42240

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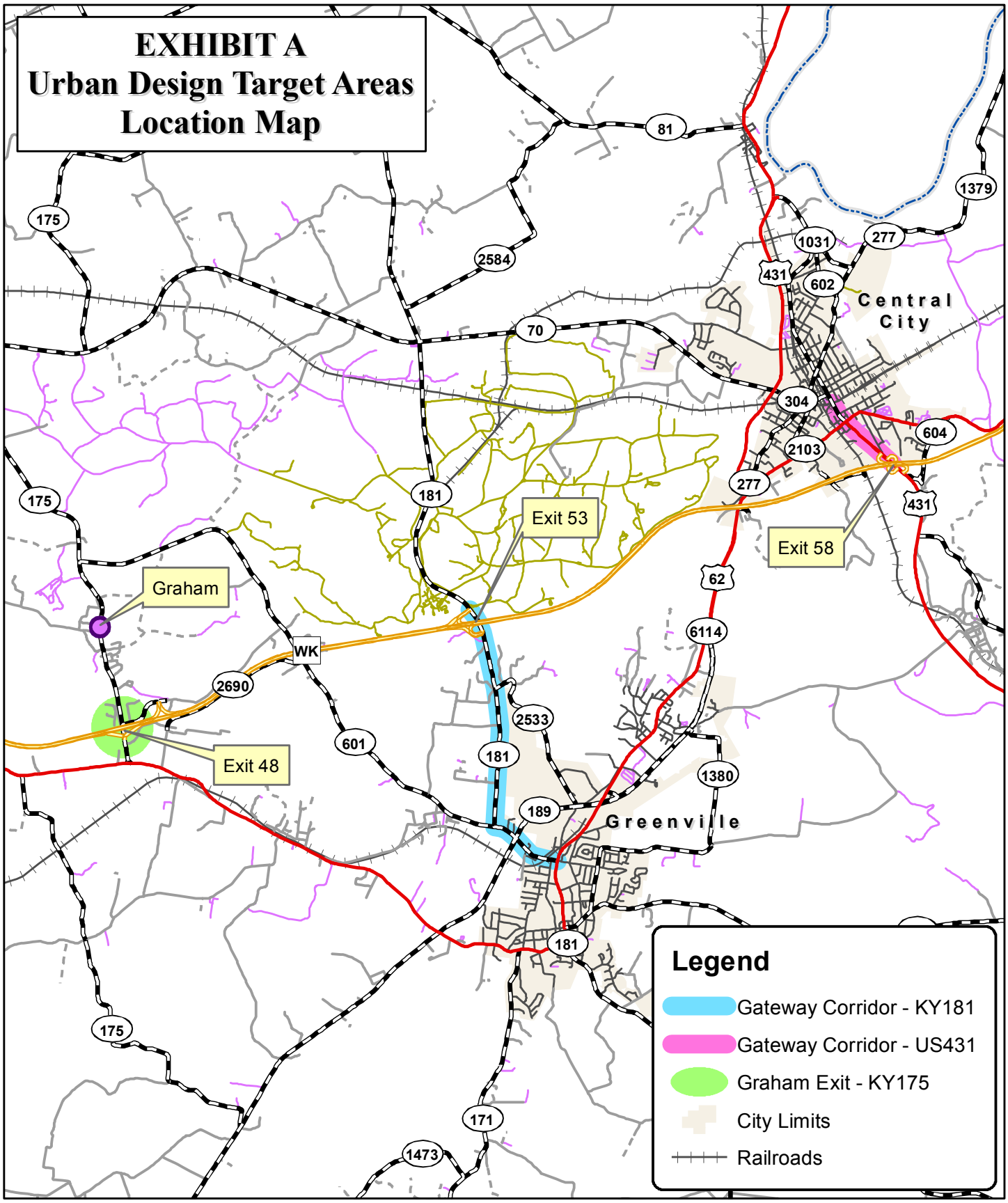
INTRODUCTION

There is an old adage that "*you only have one chance to make a first impression*." This is true for people as well as communities. A common community planning and development "tool" is to improve "Gateways" into communities by using urban design and planning along the main corridors that people use to access the heart of a community.

This study was contracted by the Muhlenberg Alliance for Progress (MAP) to analyze and make recommendations on how the community could make urban design and streetscape improvements that would make a dramatic first impression on anyone that visits it. One goal of this project would be to transform ordinary and common places into something that is extraordinary and would inspire residents and visitors for generations. This would also have the added benefit to help attract new businesses into the community by improving the overall quality of life and making the community more marketable, as well as increase property values along key highway corridors. The scope of the project involves the following three (3) areas:

1) Starting at Exit 58 of the US 431 Western Kentucky Parkway Interchange and going northward along the US 431 corridors into downtown Central City.
2) Starting at Exit 53 of the KY 181 Western Kentucky Parkway Interchange and going southward along the KY 181/KY 601 corridor into downtown Greenville.
3) The Graham, KY 175 Western Kentucky Parkway Interchange.

The two (2) corridors that are part of this study are the two (2) main highway routes that lead into the downtown central business districts of Greenville and Central City. The basic concept of this study is that several small urban design projects done over several years can become a part of an overall and coordinated urban design effort to make a large impact on the appearance of a community. The three (3) areas that are targeted for this study are shown in *Exhibit A, Urban Design Target Areas Location Map*.



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Date: April, 2012
File: Muhlenberg - First Impressions - Exhibit A - Urban Design.mxd

METHODOLOGY

The recommendations that are listed in this study are not intended to be used as a "blueprint" for an urban design plan. It is intended to convey design concepts that could be used on the sites identified in this report, and in most cases, could be interchangeable with other sites.

There are several types of urban design elements that added together can make a dramatic impact on an urban road corridor. This study will recommend several different design elements and make site recommendations on some of the elements. These design elements include landscaping, art, wall murals, monuments, welcome signs, zoning overlay districts and lighting. A large part of this report suggests various landscaping designs. The scope of this project does not involve providing site specific landscape design plans. These specific design plans need to be addressed by the local committees that want to implement them based on their opinions, likes and dislikes, and most of all - their budgets.

Low maintenance landscaping needs to be a major part of all landscape plans. The importance of addressing long term maintenance is **a critical** and often overlooked element of any project. Therefore, the sustainability of any project needs to be determined in advance of implementing the project.

If the community was to implement all of the recommendations in this report, it would cost well over a half million dollars. It is important that the community sets small project goals then builds on them, year after year. This report is intended to provide ideas, recommendations and one possible vision for master conceptual design plan. Community leaders and volunteers can become disillusioned and frustrated if they try to implement too many elements too fast. Small communities only have so many resources and there are always more demands on these resources than money. However, by partnering with local businesses and institutions and having a vision on what the community would like to accomplish, the community could make these concepts in this study into a reality over time.

The following defines terminology used in this report to describe some of the key design elements.

Landscape Nodes: A landscape node is a specific site which was deemed to have good line-of-sight qualities necessary to make a dramatic impact on the visual aesthetics of the corridor. Landscape Nodes can be small, medium or large sites, but these site size qualifiers are only intended to relay a general concept of the proposed size of each site. It is also not the intent of this study to suggest that 100 percent of the spaces within a given site be completely filled with some type of tree, shrub, flower or mulch. For example, if one of the enclosed maps show a one-tenth acre (0.1) landscape node, generally there would be one core area with a focused or concentrated patch of landscaping with ornamental shrubs and/or small trees around the core that are spaced to allow mowing in and around the site.

Landmark Sites: A Landmark Site is the **one location** where the community needs to make their most dramatic impact using several types of urban design elements. To use an analogy, if the other sites chosen for urban design elements are Volkswagens, Buicks or Cadillac's, a

community's Landmark Site needs to be a Ferrari. A Landmark Site is typically located at, or used to create, a Gateway (see Gateway definition below) effect into a community.

Generally, Landmark sites incorporate some type of monument or public art piece. Monuments and public art, as referenced in this report, can be anything ranging from a **LARGE** US flag on a **VERY TALL** flag pole to one or more surplus piece(s) of military equipment (e.g., tank or artillery piece, etc.) to a one-of-a-kind sculpture that represents some important part of the community's history. Typically, there are several different design elements on a landmark site. For example, one landmark site could include all of the following design elements: landscaping, a large US flag, a welcome sign, and an art piece all with special lighting effects to make it visible at night.

The concept ideas and design elements for a landmark site would be greatly enhanced with input and assistance from professionals, which could include landscape architects and members of the art community, etc. For example, the community could propose a contest with prize money that involves college art students to develop concept ideas on sites using the history of the community to help generate ideas. The community could also use on-line surveys to get community input and support for a project.

Different examples of monuments and public art that are used in Landmark and Gateway sites are shown in *Appendix A: Monuments and Public Art Examples*.

Gateways: These are man-made or natural portals between two (2) places. A well designed Gateway gives a person a sense of arrival at a special place, town, commercial district or residential neighborhood. Generally, there are some types of urban design features that emphasize a Gateway as a transition point. It could be a focal point where a commercial area meets a residential neighborhood or a highway interchange. There can be more that one Gateway in a community.

Partnership Sites: In this study, a Partnership Site is a site that is not publicly owned or on a public right-of-way. They are sites that are owned by large companies or institutions and have high visibility locations along a corridor that is being targeted for design improvements. By identifying a Partnership site, it is the general intent to request that these targeted companies or institutions fund the design improvements at these locations. As with all sites, they do not have to completely fund and develop the complete site in any one year, they could develop an overall site concept and spread the costs and site improvements over four (4) or more years – adding to their site each year.

Line of Sight: The sites recommended for design element in this study were chosen by determining and targeting the best line-of-site locations from the view point of someone traveling from the WK Parkway into Greenville or Central City.

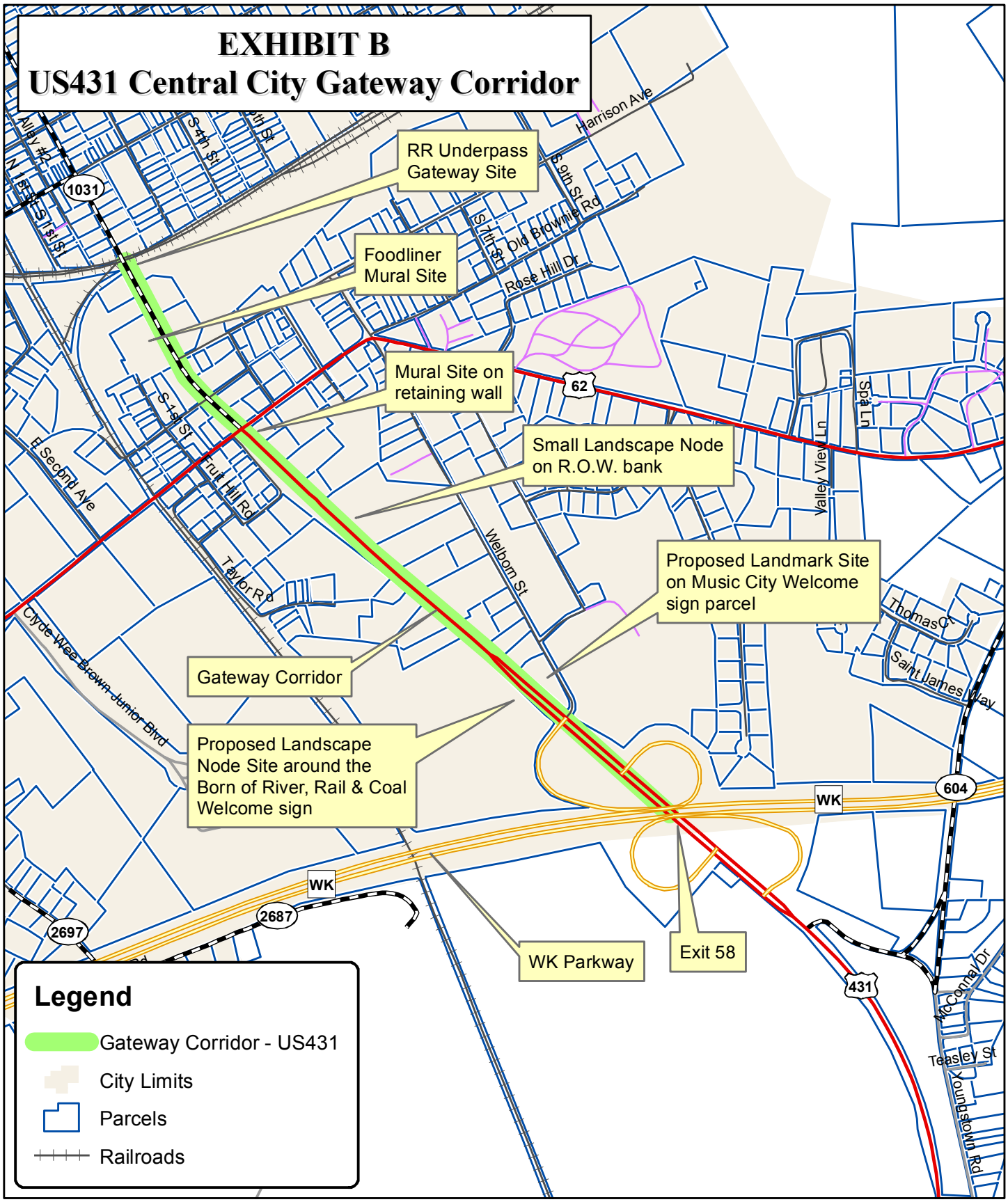
*KYTC Landscaping Policies: A*ll landscaping projects proposed in the State highway right-of-ways must obtain a permit from the District 2 Highway Office in Madisonville. A copy of KYTC right-of-way landscaping policies are in *Appendix B: KYTC Right-of-Way Landscaping Policies*.

US 431 CORRIDOR INTO CENTRAL CITY

As shown in *Exhibit B, US 431 Central City Gateway Corridor*, the section of the US 431 (South 2nd St) corridor that is targeted for this urban design project is indicated on the map. The southern end of this corridor is the WK/US 431 Interchange and the northern end stops at the P&L Railroad underpass. It comprises 1.2 miles of US 431 (South 2nd St).

In most cases, the areas inside the interchange right-of-way would be targeted for some moderate spot Landscaping Nodes. However, it is not recommended in this case because this interchange was designed to support toll booths when the Parkway was originally constructed as a Toll Road. This cloverleaf design has deep elevation drops inside the center of the cloverleaves which create view constraints. Since there is a good possibility that the WK/US 431 interchange will be reconstructed into a modern diamond design interchange within ten (10) years. This study recommends waiting until this interchange is reconstructed and then look for Landscaping Nodes in the new right-of-ways that have good line-of-site opportunities with high visibility locations for the east and west bound ramps that vehicles will use when existing the WK Parkway.

Once a driver leaves the WK Parkway with the current US 431 interchange design, the driver first sees the existing two (2) Central City welcome signs on US 431. These are the ***Music Heritage*** and ***Born of River, Rail and Coal*** welcome signs shown on Figure 1 and Figure 2.



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File: Muhlenberg - First Impressions - Exhibit B - US431 Central City Gateway.mxd

Figure 1
Music Heritage Welcome Sign

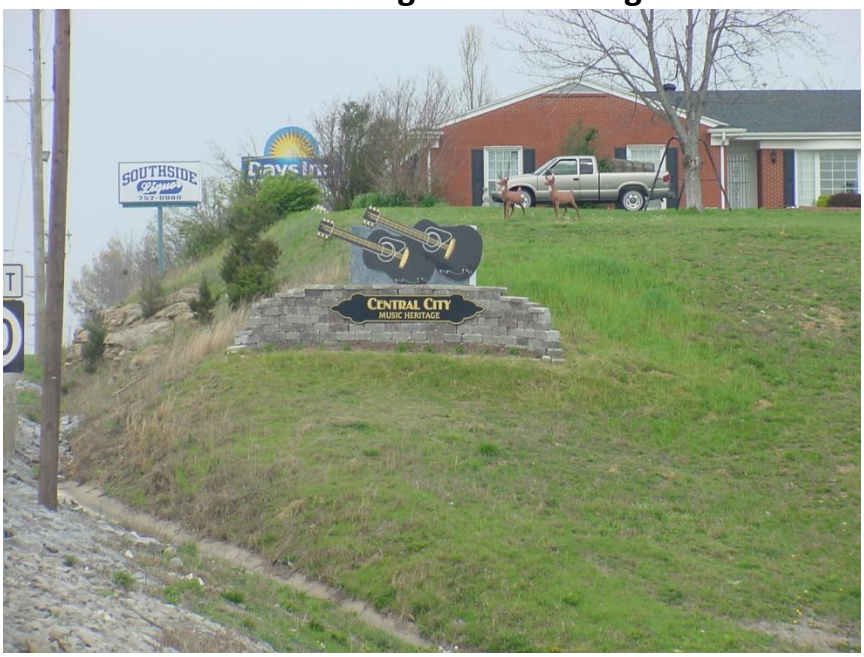

Figure 2
Born of River, Rail and Coal Welcome Sign

Both of these two (2) welcome signs make great focal points, and they also create a *Gateway* affect into Central City. However, the sites could be even more attractive with landscaping, and

the soil erosion on the bank of the *Born of River, Rail and Coal* welcome sign threatens to undercut one edge of the sign.

The *Music Heritage* welcome sign parcel has the greatest potential to be developed into a *Landmark Site* and develop even a stronger Gateway effect as you enter the city. The *Music Heritage* sign sits on a 1.28 acre parcel that is part of the ROW drainage system. This is more than enough property to make a significant visual impact using different design elements and building on the presence of the existing sign. The parcel size, shape and location are shown in *Exhibit C, US 431 Music Heritage Welcome Sign Parcel*.

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Date: April, 2012
File: Muhlenberg - First Impressions - Exhibit C - Music Heritage Sign.mxd

As someone drives north on US 431 (2nd St), toward the US 62 intersection, there is a fairly long corridor that has strip commercial development along it as shown on *Figure 3, 2nd Street Corridor between US 62 and the WK Parkway*.

Figure 3
2nd Street Corridor between US 62 and the WK Parkway

After a survey for the US 431 (2nd St) corridor from the Central City Welcome Signs to the intersection of US 62 for high visibility sites, the large right-of-way bank across the road from the Best Western Hotel was determined to be an excellent location for a Landscape Node. A close-up photo of this proposed site is shown on *Figure 4, US 431 ROW Bank Landscaping Site*. Although most (if not all) of the bank is in the highway right-of-way, the study does not recommend improving this site without the property owner's permission that owns the home that has the road frontage involved with this site. Due to this bank's steep slope, this is a very hard to maintain site. Trees would not be recommended for this site because it is under a power line. However, a very low maintenance mix of landscape plantings would make a large visual impact because the bank acts as a natural platform to view different plantings on the various elevations of the bank.

Figure 4
US 431 (2nd St.) ROW Bank Landscaping Site

It is not the recommendation of this study to landscape the entire bank, but with the permission of the homeowners, landscape a 20 to 30 foot strip starting from a point near the road's ditch to the crown of the bank. Therefore, only a section would be landscaped. This site could turn a maintenance problem for a homeowner into a site that adds a design element along a corridor.

Wall murals are also great design elements to add along a corridor to make a dramatic visual impact. There are two (2) sites identified as possible mural locations due to their high visibility locations along the corridor. The first is the single-family home that is being used commercially just north of the Caronoda Motel near the southeast corner of the US 431/US 62 intersection. As shown in *Figure 5, Possible Wall Mural Site*, this older home has a long retaining wall painted dark brown that is highly visible to north bound traffic.

Figure 5
Possible Wall Mural Site

City and county governments cannot fund improvements on personal property, and with the possible exception of the Felix Martin Foundation, there are not grants that fund this type of project. Therefore, funding for most mural projects are raised through local community non-profit organizations that have fewer restrictions on funding.

The second wall mural site is the on the Foodliner Grocery Store building on US 431 (2nd St). The Foodliner has two (2) walls that would make excellent mural locations. One wall faces southward and is shown in *Figure 6, Possible Foodliner South Wall Mural Site*, and is approximately 12 foot long and 10 feet high. The second Foodliner wall faces east toward 2nd Street as shown on *Figure 7, Possible Foodliner East Wall Mural Site* and is approximately 10 foot long by 10 feet high. The eastern facing wall being recommended is the section of the wall on the left side of the five (5) windows shown in Figure 7.

Not all wall murals need to be on large 2 or 3 story buildings to make a significant impact. Smaller wall murals are generally less expensive and have fewer safety and other factors that

make the job more difficult. No scaffolding is required on these smaller walls so the logistics is less of a factor. Furthermore, not all wall murals need to be a unique and detailed landscape or portray pieces of art. Although those are definitely the "Cadillac" of the wall murals, there are several different concepts for wall murals. Some recreate historical local advertising signs of actual businesses or products that were in the community over 80 to 100 years ago as a reproductive historical billboard. Some example of wall murals are shown in *Appendix A, Monuments and Public Art Examples*.

This study does not recommend that the owners of these buildings pay for the wall murals, and obviously the property owner's permission is needed to undertake any project. Local funds would need to be raised via local non-profits and regional artists need to submit concept sketches based on ideas and recommendations proposed by property owners and the funding group leadership. The property owner would have the ability to approve or reject any proposed design. If possible, murals should be undertaken on both of these two (2) walls of the building. Furthermore, the small lawn between the Foodliner building and the sidewalk would make an excellent small *Landscape Node* site.

Figure 6
Possible Foodliner South Wall Mural Site

Figure 7
Possible Foodliner East Wall Mural Site

One of the most significant *Gateways* in Central City is the US 431 P&L Railroad underpass just south of downtown. This provides a major Gateway from the commercial US 431 corridor into the historic downtown. Although the overpass bridge has a good paint job, staff feels there may still be some additional improvements that could accent this Gateway either by some very small landscaping accents on the ROW bank or some type of accents on the step, like retaining wall front sides/ends. There could also possibly be some different painting designs for the five (5) small "panels" on the main bridge deck that are currently painted black.

Figure 8
US 431 P&L Railroad Underpass

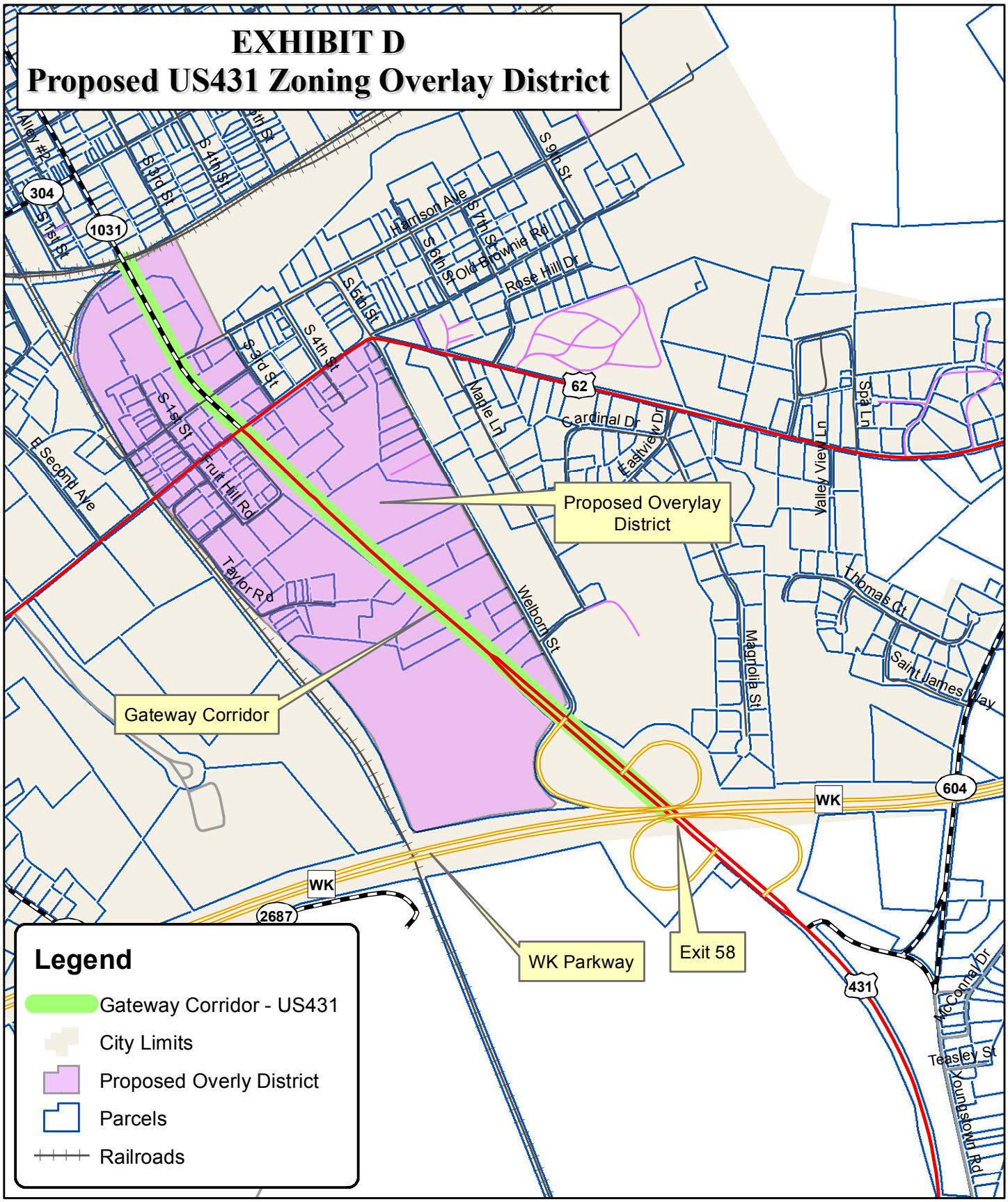
Zoning Overlay District
A portion of the southern US 431 (2nd St.) corridor from the US 431 P&L Railroad underpass to the US 431/WK Parkway interchange should be designated as a Gateway Corridor and have a special zoning overall district that encourages better designs on **new** commercial developments. The area recommended for this zoning overlay district is shown on *Exhibit D, Proposed US 431 Zoning Overlay District*.

This type of zoning overlay district is commonly referred to as a Commercial Landscape Ordinance. Under this type of ordinance, all existing commercial developments are "grandfathered in". Only new commercial developments would be targeted by this type of ordinance. These types of commercial Landscape Ordinances primarily address the screening of parking lots with design techniques. An example Landscape Ordinance is attached in *Appendix C, Example Landscape Ordinance*. This attached example Ordinance is from the City of Kuttawa, Kentucky.

This type of Commercial Landscape Ordinance does not require a commercial developer to plant flowers, which is a common misunderstanding surrounding this type of ordinance. Landscape Ordinances use the term *Vehicle Use Areas* (VUA) which mainly involves parking lots. The following summarizes the two (2) main objectives of this type of ordinance: 1) screen VUA's from the roadway, and 2) use "landscape islands" as a design tool to soften the visual effects of parking lots.

This type of ordinance is best described in a PowerPoint presentation that can provide several examples. However, this report has a few photos to help convey the basic concept. In *Figure 8, Existing Central City US 431 Commercial Corridor*, there is an unsightly and continuous "sea of asphalt" that runs from the roadway into parking areas and from property to adjoining property. The site design requirements of a Commercial Landscape Ordinance are designed to break up this "sea of asphalt". Since existing developments are grandfathered in, it would take 20 to 30 years before the effects and impact of the ordinance would be seen. As old inter-city buildings and sites are redeveloped, the effects of the new ordinance would become noticeable in these older developed areas. However, new sites on undeveloped properties would be the first to be developed under these proposed new design standards.

A Commercial Landscape Ordinance generally adds 3 percent to the cost of developing a new site. Studies have shown that commercial areas that have been developed using these design requirements maintain higher property values than the older strip commercial developments that do not have these landscape requirements. Several examples of these VUA screening designs are shown in this report.



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File: Muhlenberg - First Impressions - Exhibit D - US431 Zoning Overlay.mxd

Figure 9
Existing Central City US 431 Commercial Corridor

Figure 10
Example of VUA Screening Using Hedge

Figure 11
Example of VUA Screening With Landscape Berm

As seen in Figures 10 and 11 above, the VUA screening comes to about the height of the average vehicle's hood. This allows drivers to see over the screen, but helps to block the hard industrial appearance of commercial parking lots. This buffer involves the property in the public right-of-ways, and in developments with larger lots, some additional frontage is incorporated into the buffer. In Figures 13 and 14 below, the interior VUA landscaping helps to break up the appearance of asphalt parking lots and adds a design element that makes the entire commercial area more appealing.

There are several cities in Kentucky that use Landscape Ordinances as design guidelines for all commercial, office and multi-family developments in the city as part of the normal site plan review overseen by their Planning Commissions. Central City could enact this type of Landscape Ordinance as part of a development tool that addresses all new commercial property developed throughout the city, or just have it as an overlay zone that effects only the property along the US 431 corridor shown *on Exhibit D*, *Proposed US 431 Zoning Overlay District.*

Figure 12
Example of VUA's without Landscape Islands

Figure 13
Example of VUA's with Interior Landscape Islands

Figure 14
Standard Design Example of VUA Landscape Island

KY 181/KY 601 CORRIDOR INTO THE CITY OF GREENVILLE

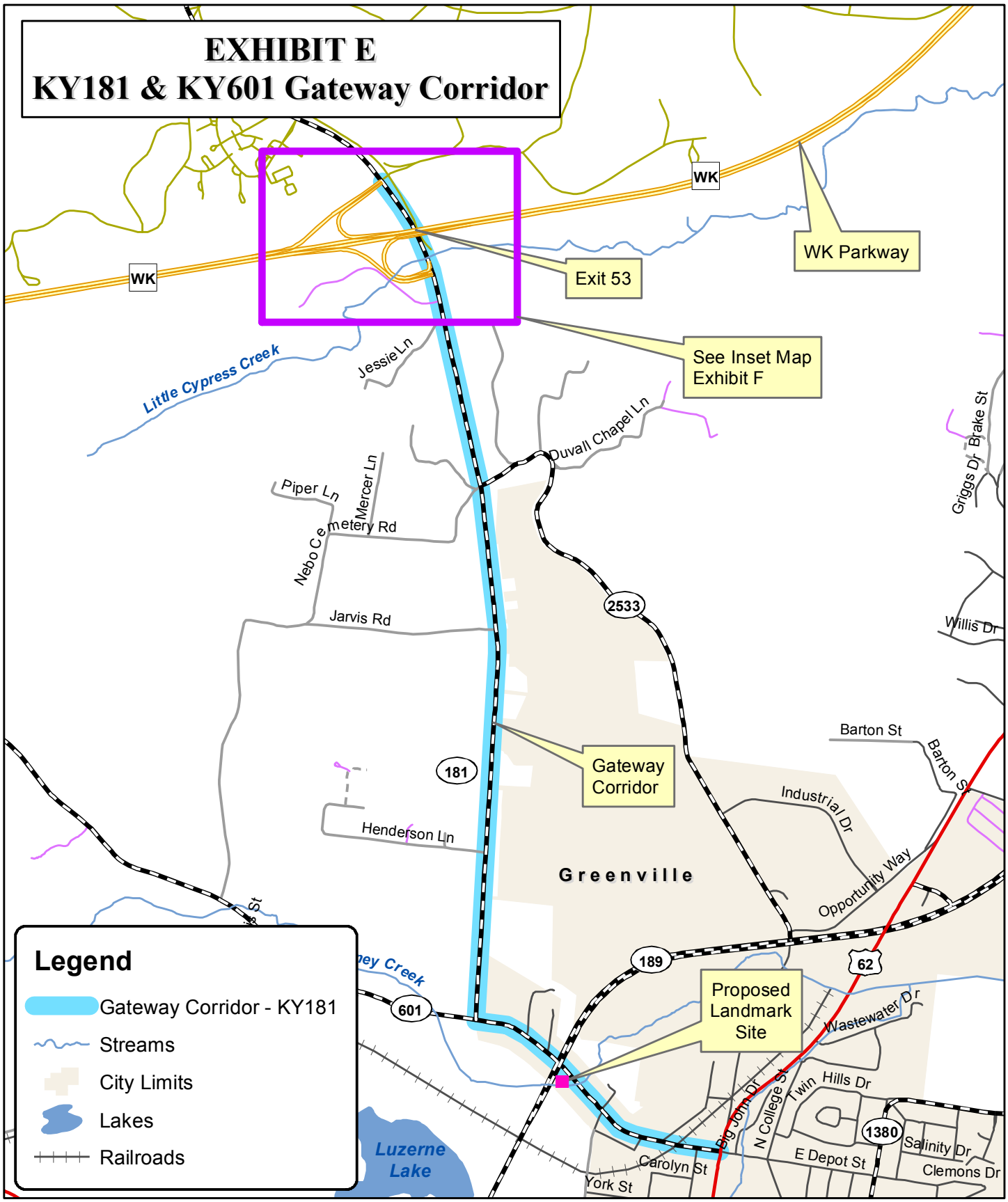
As shown in *Exhibit E, KY 181 and KY 601 Gateway Corridor*, the section of the KY 181 and KY 601 corridor that is targeted for this urban design project is indicated on the map. The northern end of this corridor is the WK/KY 181 Interchange and the southern end stops at the KY 601/US 62 intersection. It comprises 2.4 miles of KY 181 and 0.89 miles of KY 601.

Unlike the Central City US 431/WK Parkway Exit, there are several improvements recommended for the area in and around the KY 181/WK Parkway Exit. Interchange exits are natural *Gateways* into a community, and this interchange has several opportunities to incorporate design elements to make dramatic impact. A map of this area is shown on *Exhibit F, WK/KY 181 Interchange Map* with call-out boxes indicating the location of proposed spot improvements recommended by this study.

West bound vehicles on the WK Parkway use the west bound exit ramp to access KY 181. This ramp right-of-way is contiguous to the Wendell H. Ford Regional Training Center property. The location of this proposed National Guard *Partnership Site* is shown on *Exhibit F*, *KY181/WK Interchange Map.* As with all *Partnership Sites,* the design and funding is being requested to be incurred by the site owner. Currently, the National Guard has some surplus military equipment on KY 181 near their entrance. Under this proposal, the site just inside the ramp right-of-way fence of the National Guard property that is located in the northwest corner of the WK west bound exit ramp is the targeted site. This site has high visibility from vehicles exiting the WK as well as vehicles using KY 181 and is shown in *Figure 15, Proposed National Guard Partnership Site*.

Most military installations have both *Gateway* and *Monument* style sites near their entrance. The Wendell Ford National Guard site already has two (2) surplus tanks on the east side of KY 181 and a few other design elements near their Main Gate. This study is recommending that the site shown on Exhibit E be developed to make a visual impact near the WK interchange with military surplus equipment, with a very large US flag and landscaping. The two (2) tanks could be moved and incorporated into this new site or new surplus military equipment could be obtained. There is a higher traffic count at this intersection than the current site where the two (2) tanks are located. This proposed location is just a high visibility site for all traffic exiting the WK, not just the traffic entering the military base.

One other option for this proposed site would be to target this location for a future Kentucky National Guard Iraq/Afghanistan war memorial site to honor the veterans of these two (2) wars. There is a good possibility that a War Memorial will be developed sometime after the conflicts end. An access road into the site could be developed off of KY 181 to make this site accessible without going through post security at the Main Gate. This would involve relocating the security fence, but it would provide better public access to the Memorial site.



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File: Muhlenberg - First Impressions - Exhibit E - KY181 - KY601 Gateway.mxd

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Date: April, 2012
File: Muhlenberg - First Impressions - Exhibit F - WK-KY181 Interchange.mxd

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GIS SERVICES

Figure 15
Proposed National Guard Partnership Site

One other design element recommended for this site is requesting that the Kentucky Transportation Cabinet develop a *Park and Ride* site on the interchange right-of-way. As shown on *Figure 16, Existing Parking Area on WK/KY 181 Exit Ramp*, there are already vehicles using this site on the west bound exit ramp as a Park and Ride site. The recommendation of this study is to make this an official Park and Ride site with improvements. An example of a Park and Ride facility is show on *Figure 17, Example Park and Ride Facility*. The recommend improvements would include a small (10 to 15 parking space) asphalt parking lot with some low maintenance landscaping. The Park and ride lot could be fully funded by the Kentucky Transportation Cabinet.

One of the high visibility locations that would make good a Landscape Node site with other design elements is shown on *Exhibit F*, *KY181/WK Interchange Map* is the eastern right-of-way of the of KY 181 within the interchange. The chain-linked right-of-way fence could possibly be removed and replaced with a wooden fence with some very small spot Landscaping Nodes along the west side of the wooden fence within the right-of-way. Like all proposed State right-of-way improvement a permit must be obtained from the District Highway Office.

Figure 16
Existing Parking Area on WK/KY 181 Exit Ramp

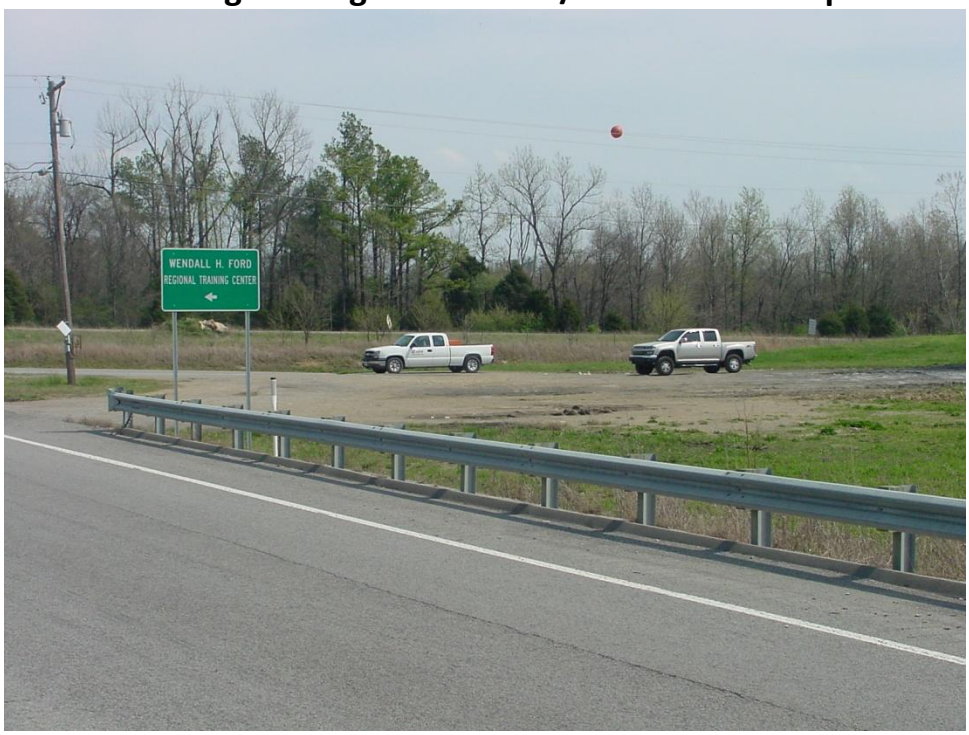

Figure 17
Example for an Improved Park and Ride Facility

This study recommends that two (2) locations on the Muhlenberg Career Development Center property should be explored as possible Partnership Sites. The first would be to develop a small Landscape Node with possibly a large US flag pole around their Welcome Sign on the west side of KY 181 near their entrance road as shown in *Figure 18, Proposed Muhlenberg Career Development Center Partnership Site*. The second Partnership Site would be a medium to large Landscape Node on the Career Development property between their entrance road and the East Bound WK/ KY 181 exit ramp as shown on Exhibit F.

Figure 18
Proposed Muhlenberg Career Development Center Partnership Site

The City of Greenville currently has their Welcome Sign on KY 601 between the KY 181 and KY 189 intersections. This Welcome Sign site was probably located on the City limits at the time of its construction. However, it is not necessary to set Welcome Signs on the exact city limit boundary line. Since new property is generally being annexed over time, this boundary is always moving. A city should locate their Welcome Sign site at a location that makes a natural *Gateway*. Along the KY 181/KY 601 corridor into the City of Greenville, the 4-lane intersection of KY 189 makes a natural transition from a more rural and suburban area into the core of the city's urban center.

This study recommends developing a Landmark Site on the southeast corner of the KY 189/KY 601 intersection as shown on *Exhibit G, Proposed Greenville Landmark Site Map*. This would require purchasing a minimum of 0.2 acres, and preferably 0.4 acres or greater, to make the site. As discussed in the Methodology section, Landmark Sites are intended to include various urban design elements to help create a dramatic impression and create a Gateway into the community. This property is in a flood plain and sits at an elevation several feet below the KY 601 roadway grade. To develop this site, fill dirt would need to be trucked into the site and compacted in layers to avoid future ground settling. The site would need to be elevated to the same elevation of the roadway. This site is private property owned by Mr. and Mrs. Kevin &

Cara Meadows. Therefore, this site would require the current property owners to agree to sell a small portion of their property, which may not be feasible for various reasons.

A second possible *Landmark Site* could possibly involve a portion of a reconstructed intersection of KY 181 and KY 601. Currently, KY 181 "Tees" into KY 601 at the top of a hill in a "blind" curve that has a poor line of sight. This intersection needs to be reconstructed to eliminate this safety hazard. Since KY 181 has the highest traffic count, the reconstructed intersection needs to allow for a gradual curve on a reconstructed section of KY 181 that transitions KY 181 into a through route where east bound KY 601 traffic has to stop at the new reconstructed intersection and north/south KY 181 traffic does not stop. It is possible that enough right-of-way could be planned into the reconstructed intersection to develop a *Landmark Site*.

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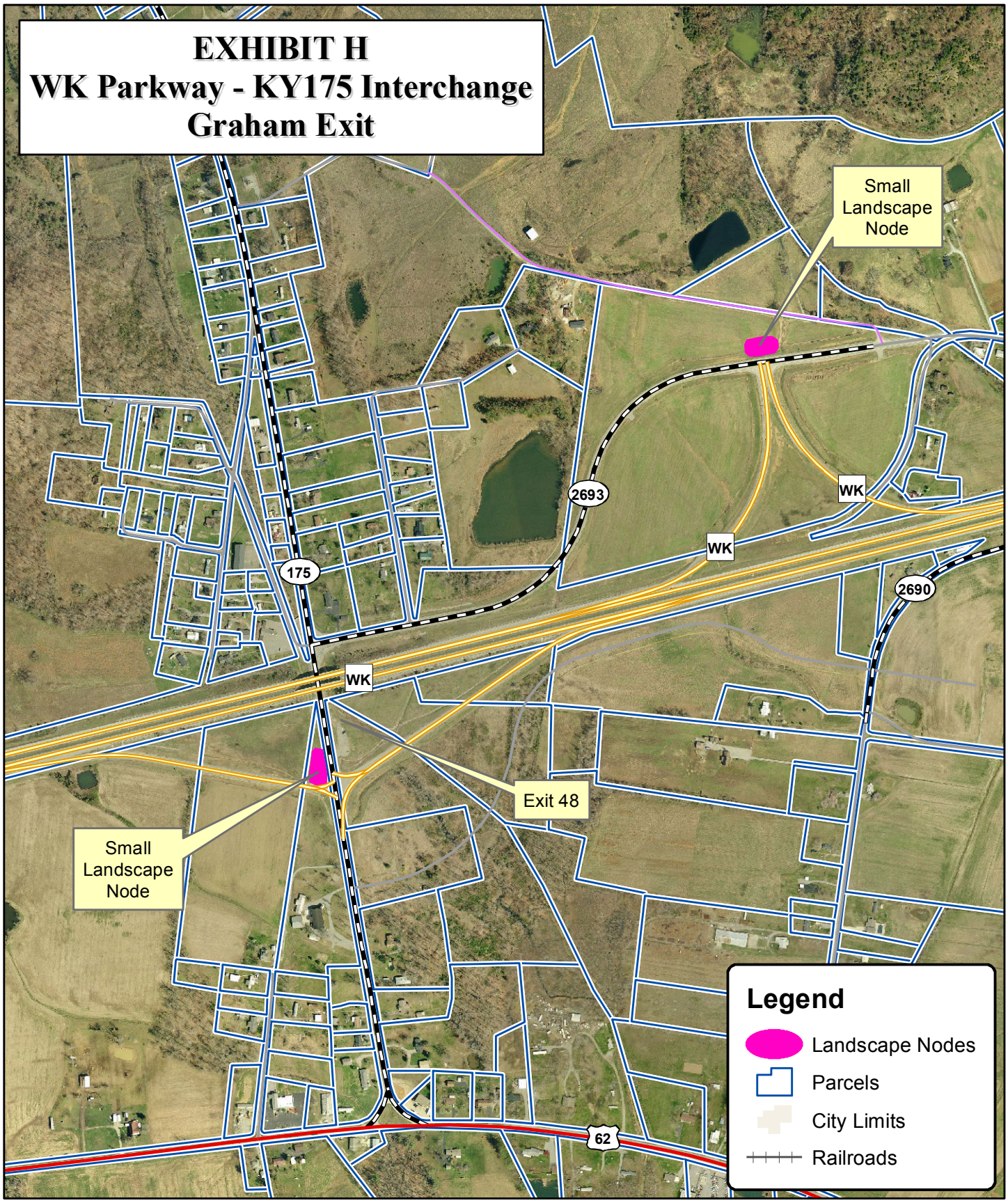
File: Muhlenberg - First Impressions - Exhibit G - Greenville Landmark Site.mxd

GRAHAM INTERCHANGE IMPROVEMENTS

Unlike the Central City and Greenville interchanges, there is no corridor that is part of this Graham (KY 175) interchange study so the design improvements are targeted only to the interchange right-of-way. This is due to the fact the community of Graham sits directly adjacent to this interchange and there is no corridor leading to a downtown business district. However, the Graham Exit on the WK Parkway is still a *Gateway* into the greater Muhlenberg community, as well as the entrance to the new Paradise Industrial Park.

As shown on Exhibit H, WK Parkway/KY 175 Interchange, there are two (2) sites that have been targeted for small to medium Landscape Nodes. These two (2) sites have high visibility for motorists travelling on the east and west bound WK Parkway ramps.



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Date: April, 2012
File: Muhlenberg - First Impressions - Exhibit H - Graham - Exit48.mxd

Implementing and Maintaining the Sites

There are several ways to undertake the development of these sites, but to believe there is some government grant funds that will pay for these sites would be mistaken. One way to start is to develop an "Adopt-a-Site" program. This involves asking local churches and other civic groups to "adopt" one site and develop and maintain it. This would involve them generating the funds, and as with all sites, they can develop a concept for an overall site plan, then develop it in phases over the course of 4 or 5 years. Adopt-a-site programs work better for smaller sites. Larger *Landmark Sites* need to be undertaken by local Chambers or City Governments that have the ability to raise larger amount of funds and need public involvement and planning.

The development and maintenance needs to be leveraged with various partners. For example, the County Jail could provide inmates to help with the initial planting and maintenance. Local stores may provide materials free or at wholesale prices to be invited to ground breakings, etc.

The Kentucky Transportation Cabinet recently was funding some interchange improvements with Transportation Enhancement Grants (TE Grants). Some of these TE Grants were for $100,000 to do landscaping improvements on targeted interchange right-of-ways. Currently, the Cabinet is not funding these types of projects under the TE Grant program, but there is the possibility it could resume the funding in the future.

Appendix A
Monuments and Public Art Examples

Example 1 below is a photo of a old limestone quarry crane that was relocated on the south side of Bedford, Indiana, on their main southern route into the city (US Hwy 37). This is the view as drivers approach the city from the south. Bedford is know as the "*Limestone Capital of the World*" for there quality limestone which has been quarried in Lawrence County for over 100 years. These older cranes were used to carry large blocks of limestone from the quarry using a cable system. This one was reconstructed on this site with the addition of a Welcome Sign to help form a *Gateway* into the southern city limits of Bedford. Example 2 shows a different angle of this structure as you drive by it. This is an example of using a elements of a city's industral past to create a *Gateway* with a monument or public art piece that connects with the community's history and makes a damatic impression.

EXAMPLE 1

Gateway on US 37

City of Bedford, Indiana

EXAMPLE 2
Gateway on US 37 View #2
City of Bedford IN

Example 2 shows the view of this monument and public art piece as drivers pass it on US 37. Drivers can see a limestone block at the bottom of the crane. This is a 200 foot high structure that makes a big impression.

EXAMPLE 3

Military Monument and Public Art
Gander Memorial Park
Hopkinsville, KY

Example 3 is one part of the Gander Memorial Park for 248 soldiers in the 101st Airborn Division that died in a plane crash in Gander, Newfoundland on December 12, 1985 while returning from a peacekeeping mission in the Sinai. This is an example of a *Landmark Site* as described in this Study. It is located in a state highway right-of-way inside one of the cloverleafs of the Pennyrile Parkway/US 41A Interchange. It uses several different design elements which include surplus military equipment, a very large flag pole and flag , as well as landscaping, lighting and other design elements. Due to this site location on a major interchange, it also is a *Gateway* into the southern commercial district of the City of Hopkinsville, Kentucky .

EXAMPLE 4

Monument and Public Art

Gander Memorial Hopkinsville, KY

The approximately 60 to 70 foot high flag pole and large US Flag in Example 4 is also part of the Gander Memorial Site which is lit at night from the ground. This adds one more design element to this memorial site. Flag poles with large US Flags are examples of public monuments.

Example 5 on the following page is an additional design element of the Gander Memorial site. This is a medium sized *Landscape Node* on the site with a *Fort Campbell Memorial Park Sign* located inside the landscaping. This entire site is also an example of a *Partnership Site*. Fort Campbell paid for 100 percent of the improvements to this site even though it is located 10 miles from the Fort.

EXAMPLE 5

Landscape Node

Gander Memorial Hopkinsville, KY

EXAMPLE 6

Wall Mural

Hopkinsville Environment and Water Authority Building

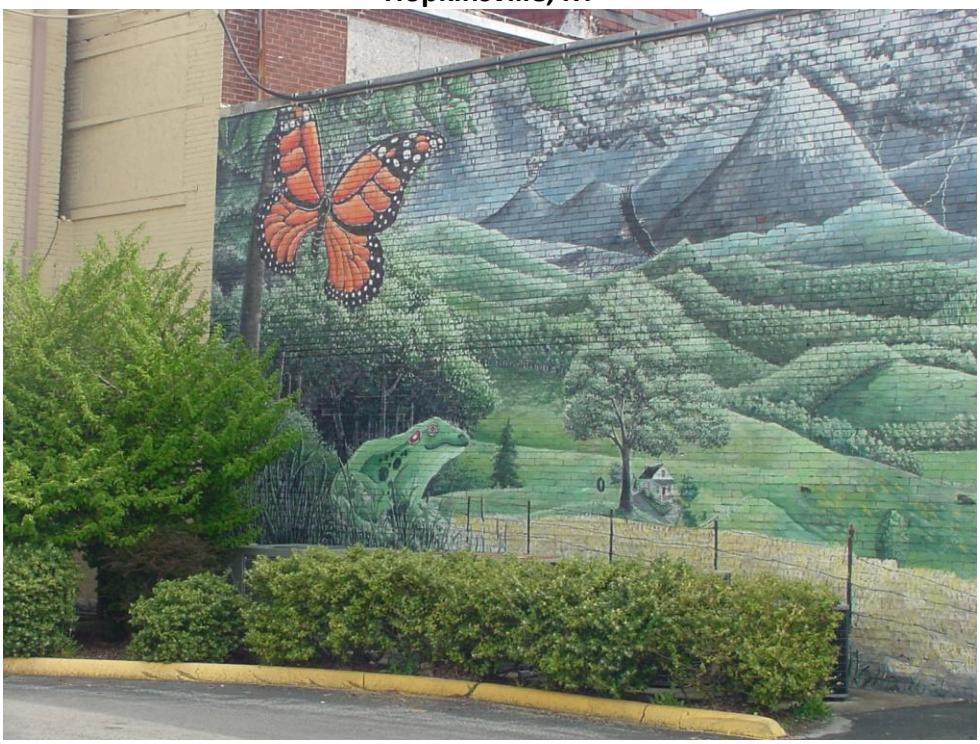
Hopkinsville, KY

EXAMPLE 7

Wall Mural

Hopkinsville Enviorment and Water Authority Building

Hopkinsville, KY



EXAMPLE 8

Wall Mural

Commercial Building on 7th Street

Hopkinsville, KY

EXAMPLE 9

Wall Murals with Vintage Reproduction Advertising Signs
Commercial Building on 7th Street
Hopkinsville, KY

EXAMPLE 10

Wall Murals with Vintage Reproduction Advertising Signs
Commercial Building on 7th Street
Hopkinsville, KY

EXAMPLE 11

Wall Mural with Nostalgic Art Scenes

French Lick, Indiana

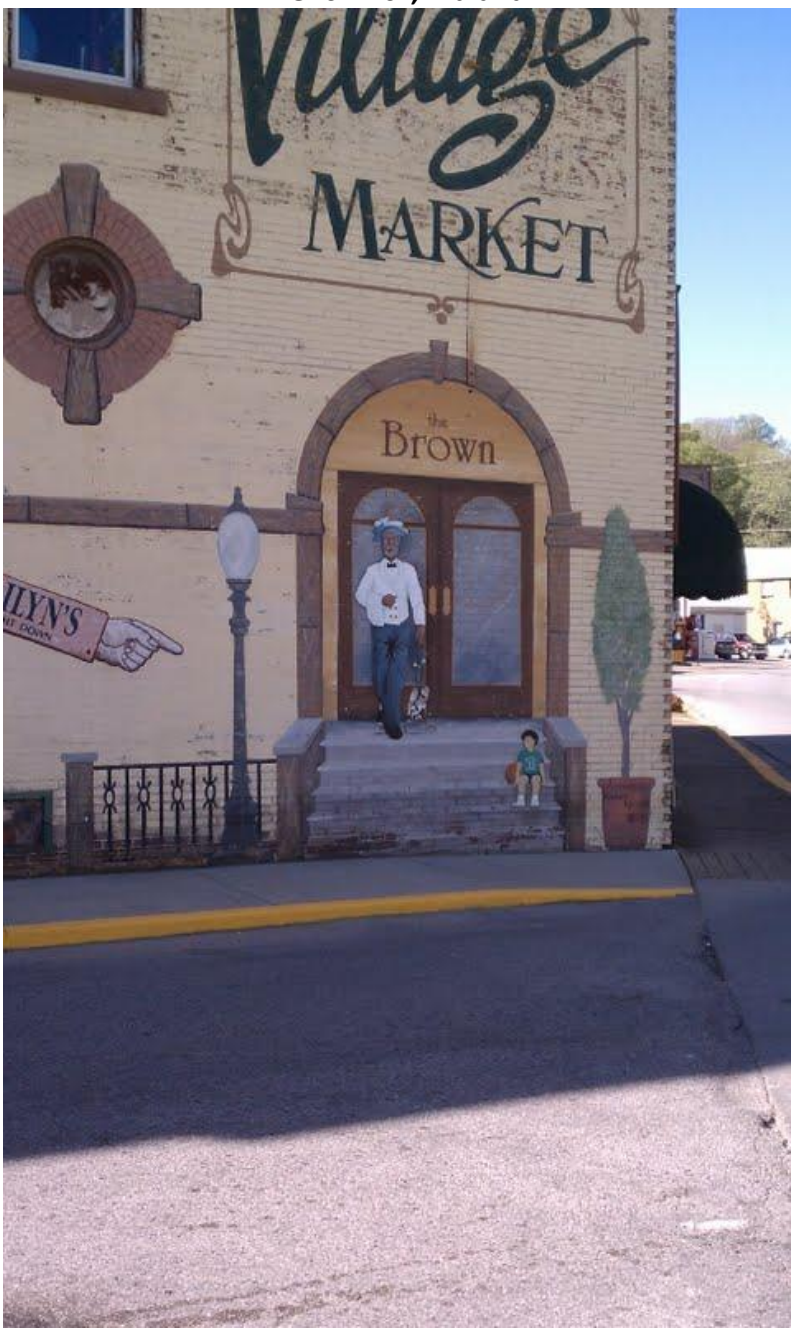
The building above in Example 11 is one long wall on a commercial building constructed in the late 1800's. The mural makes the wall look like four (4) different store fronts. Each of these four (4) mural scenes depicts an old business that was in operation in this town during the 1920's to 1950's. The intent is to create a nostalgic art mural with local businesses and residents that were well known in the community years ago.

Close up photos of this mural are shown in Example 12 and 13 below. In Example 12, the entrance painted in this one sub-panel mural is that of the Brown gambling casino that was lost to a fire in the 1940's. The two figures are painted on plywood and affixed to the wall to create a 3-dimensional effect to the mural. The waiter leaving the Brown is a well know and liked local figure who never worked at the Brown, and the child sitting on the steps with a basketball and the "number 33" Celtic basketball jersey is a depiction of Larry Bird who is from French Lick. So the artist incorporated local personalities from different time periods in this mural panel.

EXAMPLE 12

Wall Mural with Nostalgic Art Senes

French Lick, Indiana



In Example 13 below, this mural panel depicts the husband and wife owners of Springs Valley Theater. The artist uses photos of the two owners to create their likeness in this mural. The husband and broom he's holding are painted on plywood and affixed to the wall to create the 3-dimensional effect. You can see how the artist incorporated architectural features of the wall into the mural.

EXAMPLE 13

Wall Mural with Nostalgic Art Scenes
French Lick, Indiana

EXAMPLE 14

Old Power Plant Capacitors Public Art

Columbus, Ohio

In Example 14, these giant capacitors were part of an old power plant used by the Columbus Power and Light Company in Columbus, Ohio. These were made into public art pieces and placed in front of their new building. Not all public art or monuments need to be status or other pieces intended as art. Like the limestone crane in Bedford Indiana, Muhlenberg may be able to reuse some drag-line bucket or other piece of mining equipment or other element of the coal mining industry and incorporate it into a *Landmark Site*.

EXAMPLE 15

Small Landscape Node With Adopt-a-Site program

Hopkinsville, KY

In Example 15 above, this site is part of the Hopkinsville Chamber's Adopt-A-Site Program where different civic groups agree to plant and maintain a small landscape site. This is an example of how one small site can make an impression. In some cases, inmates in the County Jail help to maintain these sites, but at least one (1) or two (2) members of the civic club need to supervise, supply a few basic tools, etc. The sign in this site says "Kiwanis Club" which is a way for their club to get some recognition for the site.

Example 16 below shows a pedal powered cart that is allowed on the bike and walking trails in French Lick, Indiana. This cart is rented out by the French Lick Casino Hotel. As long as there are one (1) or two (2) persons in the cart that can pedal, it allows the very young, elderly and handicapped to enjoy the bike trail as ride-along passengers. It also adds an element of urban design to the community. Not all elements of urban design involve fixed location *Landmark Sites* or *Landscaping Node*. Some of the most unique examples of urban design elements are when a community "thinks outside the box."

EXAMPLE 16

Pedal Cart for Bike and Walking Trails
French Lick Cacino
Frenck Lick, Indiana

Appendix B
KYTC Right-of-Way Landscaping Policies

PERMITS	Section: LANDSCAPING
	Subject: Policy & General Information

Summary: This subject discusses policies of the Transportation Cabinet as they relate to landscaping on and around Kentucky's roadways.

GENERAL INFORMATION:

POLICY - Requests by adjacent landowners to place planting upon the right-of-way will be considered when there is no adverse effect. In general, their motive is to enhance the appearance and create a more aesthetic area adjacent to their property. The Department recognizes this; however, the applicant's desires can not have precedence over the Department's objectives.

CONDITIONS AND REQUIREMENTS:

INCLUDE - Generally, all permits concerning landscaping should be reviewed and subject to the following:

A. Plantings can not infringe on the frontage rights of an abutting property owner without written consent of the property owner.

B. Plantings can not be placed where they will adversely affect drainage.

C. Planting can not restrict sight distance, or traffic control devices, as required by local, state, and federal standards.

D. Planting placement must allow for a minimum of six seconds sight distance in all directions from the stop position for all access points and for all turning movements.

E. Maximum mature height of median and island plantings can not exceed twelve inches and can be no closer than eight feet to edge of pavement.

F. No plantings can be placed on the right-of-way closer than fifteen feet from the outside edge of pavement or between the outside edge of pavement and normal roadway ditch line.

CONDITIONS AND REQUIREMENTS (Cont.) . . . p. 2

CONDITIONS AND REQUIREMENTS (Cont.):

INCLUDE (Cont.) -

G. Only plantings of a shrub variety which will not exceed a maximum mature stem or trunk diameter of three inches, measured six inches above plant base, are permitted within the right-of-way area between fifteen feet and thirty feet from the outside edge of pavement or between the normal roadway ditch line and thirty feet from the outside edge of pavement, whichever is applicable.

H. Plantings can not exceed a maximum mature base trunk diameter of twelve inches within the right-of-way area between thirty feet and forty-five feet from the outside edge of pavement.

I. In areas protected by existing guardrail, other than the twenty feet of protected area from both ends, planting size restrictions may be waived, provided there is no conflict with other restrictions.

J. In roadway cut sections where the back slope is 2:1 or greater, planting size restrictions may be waived provided there is no conflict with other restrictions.

K. A separate Maintenance Agreement may be required.

L. Specific details for distances as it relates to speed, slopes, etc. must be according to the "Roadside Design Guide". If this reference requires a barrier, the encroachment will not be permitted.

M. The following conditions will apply to wildflower planting sites only:

1. Cooperative participation by service clubs, garden clubs, or other civic groups will be allowed only under an approved landscape permit.

2. Wildflower planting sites for cooperating groups will be located on major arterial routes that lead into populated areas. Sites will not be permitted on fully controlled access facilities.

3. Wildflower planting sites will not be permitted in medians or islands.

CONDITIONS AND REQUIREMENTS (Cont.) . . . p. 3

CONDITIONS AND REQUIREMENTS (Cont.):

INCLUDE (Cont.) -

4. Wildflower planting sites will be located in areas of high visual impact to motorists.

5. Wildflower planting sites will be small in nature; a maximum of three acres in size.

6. The selection of seed for wildflower plantings must be from the list of species approved by the University of Kentucky and the Division of Operations. (See Exhibit 55)

7. The selection of wildflower planting sites and seed selection shall be approved by an encroachment permit from the District Office Permit Engineer with input from the Operations Branch of the District Office, at the request of the Adopt-A-Highway Coordinator, if applicable.

8. Should the group neglect maintenance of the site so that it becomes a nuisance or an "eyesore", the Department will take action to eliminate the site.

INDEMNITY - The indemnity for this type of permit will be determined by the Chief District Engineer.

SAFETY:

SAFETY CONSIDERATIONS - The permittee must provide signing and safety precautions in accordance with the permit and the Manual on Uniform Traffic Control Devices (MUTCD).

MAINTENANCE:

MAINTENANCE BY THE DEPARTMENT OF HIGHWAYS - The maintenance of the right-of-way will remain with the Department unless it is otherwise specified under the conditions of the permit.

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PERMITS	Chapter LANDSCAPING
	Subject Application Documentation and Processing Procedures

Summary: This subject details the documentation necessary when applying for a landscaping permit and the procedures that are followed when processing an application request.

PROCESSING RESPONSIBILITY:

DISTRICT PERMIT ENGINEER - The District Permit Engineer reviews and processes all landscaping permit applications. This responsibility includes, but is not limited to, assigning the application a permit number, distributing copies for review through applicable District Offices, and final processing of the application after appropriate signatures, recommendations and/or comments are obtained.

Wildflower plantings shall be coordinated with Adopt-A-Highway Coordinator, if along a current adopted section of highway.

REDA - The District REDA reviews all applications and discusses pertinent information with the applicants to properly locate the planting areas. The District REDA advises the District Permit Engineer on all requirements.

CHIEF DISTRICT ENGINEER - Responsible for reviewing permit requests, furnishing recommendations and/or comments, and making the final decision on the applications approval or disapproval. After the final signing of the application by the Chief District Engineer, the application becomes a permit.

APPLICATION DOCUMENTATION:

MUST INCLUDE THE FOLLOWING:

A. Vicinity Map

B. Encroachment Permit Form - TC 99-1 (Completed)

C. Applicant's Plan Sheets

D. Roadway Plan Sheets

E. Cross Sections

F. Other pertinent information and data as required by the Chief District Engineer.

G. Agreement, if applicable.

APPLICATION DOCUMENTATION: (Cont.)

REQUIRED NUMBER OF COPIES FOR LANDSCAPING PERMIT APPLICATIONS (TC 99-1) - Applications approved at the District Office require four (4) copies.

PERMIT APPROVAL:

DISTRICT OFFICE - The Chief District Engineer has the authority to approve or disapprove all applications for right-of-way encroachments.

DISTRIBUTION:

See Chapter PE-105-4

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PERMITS

Chapter

RIGHT-OF-WAY FENCE REPLACEMENT

Subject

Policy and General Information

Summary: This subject discusses some of the specifications and requirements concerning right-of-way fence replacement.

GENERAL INFORMATION:

POLICY - The Department will consider permit applications to replace existing right-of-way fence with ornamental or "security" type fencing.

CONDITIONS AND REQUIREMENTS:

INCLUDE - The following information gives some general guidelines for considering permit requests to replace right-of-way fencing:

Replacement Fence -

A. Must be at least 48" tall and strong enough to contain animals, if applicable;

B. Must be constructed a minimum of one foot and a maximum of two feet outside the right-of-way line;

C. The fence materials and design must meet accepted industry standards and be treated or paintable;

D. The permittee is required to maintain the fence in a high state of repair. A separate maintenance agreement may be required.

E. The existing fence must be removed by the permittee and delivered to the Department's maintenance storage yard for future re-use by the Department. If not, the Department must be reimbursed for the cost of the fence removed from the site;

F. The permittee will be required to state, in writing, that control of access will not be diminished as a result of the replacement fence.

Fabric Replacement - The replacement of fence fabric is considered maintenance and no central office review is necessary.

Use of Other Materials - Other fence replacement materials will be considered but no replacement can be approved unless it is a physical, visible barrier that will prevent a breach of access control.

INDEMNITY . . . p. 2

Appendix C
Example Landscape Ordinance

Last Revised May 18, 2011

DRAFT

LANDSCAPE AND LAND USE BUFFERING

Content and Format Standards

City of Kuttawa Zoning Ordinance

Addendum

Adopted: ____, 2011

TABLE OF CONTENTS

LANDSCAPE AND LAND USE BUFFERING

PURPOSE.

The intent of this chapter is to improve the appearance of properties, vehicular use areas (VUA's), and property abutting public right of ways; to provide standards for buffering between non-compatible land uses, and to protect, preserve, and promote aesthetic appeal of properties, character, and value of the surrounding neighborhoods; to promote public health and safety through the reduction of noise pollution.

SITES AFFECTED.

This chapter applies to all new developments subject to site plan review, to include all new commercial and multi-family developments, as well as all Planned Unit Developments (P.U.D.). Industrial and one and two-family developments which are not P.U.D.'s or Zero Lot Line (Z.L.L.) developments, are exempt from these requirements. The requirements stated in this section shall be addressed during the applicable site plan review process. The provisions of this section shall apply to:

1. New sites currently undeveloped: No new site development, building, or structure shall be constructed or vehicular use area created unless landscaping is provided as required by the provisions of this section.

2. Existing sites currently developed are exempt, but any expansion of these sites that meet the following guidelines will be required to meet the provisions of this section. They are as follows:
   a. Improvements to an existing site that include building additions and/or vehicular use area expansions of less than 25% of the existing site shall not be required to provide landscaping in accordance with this section.
   b. Improvements to an existing site that include building additions and/or vehicular use area expansions of greater than 25% but less than 50% of the existing site shall be required to bring only the new improvements into compliance with the requirements of this section.
   c. Improvements to an existing site that include building additions and/or vehicular use area expansions of greater than 50% of the existing site shall be required to bring the entire site into compliance with the requirements of this section.

PROPERTY PERIMETER LANDSCAPE REQUIREMENTS, VEHICULAR USE AREAS AND NON-COMPATIBLE USE BUFFERS.

1. ***Property Perimeter Landscape Requirements***: A landscape easement is required as part of a perimeter landscape on all sites. The perimeter landscape easement shall meet the following guidelines:
   a. ***Front Yard***: A minimum front yard landscape easement with an average of 10 feet with a minimum of 5 feet shall be provided in the required front yard of structures.

This front yard landscape easement does not include the right-of-way of any public or private street. The landscape materials shall include a combination of grass, low ground cover, shrubs, and trees.

b. ***Side Yards***: A minimum side yard landscape easement of 3 feet shall be provided in the required side yard of structures. If parking spaces abut the side yard landscape easement, the side yard landscape easement shall be 5 feet with curbs or wheel stops that prohibit the front of vehicles from overhanging into the side yard landscape easement no more than 2 feet. This front yard landscape easement does not include the right-of-way of any public or private street. The landscape materials shall include a combination of grass, low ground cover, shrubs, and trees.

c. ***Rear Yard***: A minimum rear yard landscape easement with an average of 10 feet with a minimum of 5 feet shall be provided in the required rear yard of structures. This rear yard landscape easement does not include the right-of-way of any public or private street. The landscape materials shall include a combination of grass, low ground cover, shrubs, and trees.

2. ***Vehicular Use Area (V.U.A.) Landscaping***: V.U.A's for the purposes of this section, refers to any area occupied in whole or in part by motorized vehicles, including, but not limited to, parking lots, parking stalls, driveways and service areas. For the purpose of this section, Vehicular Use Area (V.U.A.) does not include areas devoted to the sole purpose of the display of merchandise for sale (IE, auto sales lots). V.U.A. landscaping is required in the form of a continuous hedge that will reach between a maximum 2 ½ and 3 feet tall to screen the VUA from all public streets. This hedge must reach this maximum height within 3-4 years of planting. Plant materials shall be at least 2 feet tall at the time of installation. VUA screening hedges must be of a type of shrub that has an 80% opaque screen year-round (e.g., evergreen). An earth mound with a maximum height of 2 ½ to 3 feet high could be used to substitute for a hedge. If used, an earth mound must be sodded and have slopes not greater that 1/3 for easy maintenance. For sites that are planning more than 20 parking spaces, five (5) percent of the interior of the VUA must be landscaped with landscaping islands or landscaping peninsulas as explained in this section.

3. ***Land Use Buffer Screening Requirements***: The necessity of screening non-conforming land uses and the type of screening required varies greatly with each particular situation. Therefore, it is the intent of this section to provide a discretionary measure in deciding the appropriate height, width and type of screening necessary. The majority of new sites being developed will be surrounded by other commercial properties and would not require buffer screening. However, for those adjacent to residential zones or sensitive areas, screening shall be required and adequately maintained in the following situations:
   a. Where a business or service zone abuts a residential zone, a buffer landscape screen will be required along the boundary of the adjacent residential zone
   b. Where a business or service zone abuts a Lake Resort Zone, a screen will be required along the boundary of the business property adjacent to the Lake Resort property.
   c. When a planned unit development (P.U.D.) or zero lot line (Z.L.L.) development abuts any residential zone containing single-family dwelling units.
   d. Uses specified above as requiring buffer screening shall provide a visual obstruction from adjacent properties in conformance with the following standards: The screen may be composed of view-obscuring vegetation, wall or fence. The items may be used individually or in combination. Fences constructed of chain link, barbed wire,

stock wire, chicken wire or other similar type fences are not permitted when used for screening. The result shall be opaque 80% screen, which obscures views from the ground to a height of the object being screened; however, the screen is not required to exceed 8 feet. Plant materials shall be at least 2 feet tall at the time of installation and reach the desired height within 3 to 5 years. When a combination of features is proposed, ¼ of the surface area of walls or fences that face off-site must be covered with plant material within 3 to 5 years. Additionally, screen areas shall be sufficient to allow for the mature growth of plant materials when used.

LANDSCAPE STANDARDS AND SPECIFICATIONS.

1. All landscaping materials shall be installed in a sound manner and according to accepted good construction and planting procedures. Any landscape material, which fails to meet the minimum requirements of this chapter at the time of installation, shall be removed and replaced with acceptable materials. A list of suggested and undesirable plant material is available in Appendix A.

2. Kuttawa, Kentucky is located within the Plant Hardiness Zone 6b.

3. Existing landscape features shall be preserved where possible or feasible. Existing landscape features which are preserved may be used to fulfill the landscape requirements. The landscape elements to be preserved must be illustrated on the Landscape Plan and approved by the Planning Commission as part of the Development Plan approval process.

4. Surfaces denuded of vegetation shall be seeded or sodded to prevent soil erosion.

5. Landscape materials placed near street intersections shall meet the following requirements:
   a. Obstruction of vision at street intersections is prohibited. Additionally, lots adjacent to an intersection shall not obstruct vision of the intersection within a 30-foot sight triangle. The 30-foot sight triangle is defined as a triangle consisting of the edge of street pavements intersecting at a point forming the outer boundaries of the lot and an imaginary line drawn 30 feet from the point of intersection in either direction. No obstruction to vision between a height of 2 ½ feet and 12 feet above the imaginary plane defined by those three points of intersection are permitted.
   b. No structure, wall, fence, shrubbery, or trees shall be erected, maintained, or planted on any lot which will obstruct the view of the driver of a vehicle approaching an intersection, except that shade trees will be permitted where all branches are not less than eight feet above street level.
   c. No obstruction shall be placed in the right-of-way.

6. The person in charge of or in control of the property whether as owner, lessee, tenant, occupant, or otherwise shall be responsible for the continued proper maintenance of all landscaping materials and shall keep them in a proper, neat, and orderly appearance free from refuse, debris, noxious weeds, and unwanted grass at all times. All unhealthy or dead plant material shall be replaced within four months or by the next planting season, whichever comes first; while other defective landscape material shall be replaced or

repaired within two months. All plant material shall be maintained according to accepted horticultural practices.

7. All shade trees shall be a minimum of 2.0" caliper; ornamental trees shall be 1.0" caliper; evergreen trees shall be 5' tall, when planted. Tree type shall be approved by the Zoning Administrator.

8. Only a small tree that reaches a mature height no greater than 25 feet may be planted within 20 lateral feet of overhead utility lines.

9. Soil in tree, shrub, or plant zones (defined as twice the diameter of the rootball) must be free of asphalt, construction and trash material. Soil must be at least 50% desirable planting topsoil or media thoroughly mixed with existing soil. If previously undisturbed natural topsoil is available, no amendments are necessary. Subsoil is not acceptable for planting.

10. Staking is not required on any trees.

11. Plastic or other impervious materials shall not be used in landscaped areas as weed control barriers.

12. Mulch shall be applied to all non-turf, landscaped areas at planting. Mulch is not required on groundcover after it becomes fully established. The desirable recommendation for mulch is composed wood chips, pine bark, pine straw, and shredded hardwood bark. Mulch shall be applied and maintained at 2 to 4 inches deep and with no more than one inch touching any part of the plant. Other organic and non-organic materials may be used as long as they are pervious to air and water. Crushed limestone is not acceptable.

13. Trees shall be protected from potential damage by vehicles.

14. Thirty percent of required trees shall be placed within the perimeter of the actual parking surface area in those parking lots of over 20 spaces.

15. All parking lots of more than 5 parking spaces shall include planted trees in accordance with *Table 1, Tree Planting Requirements*, below:

Table 1
Tree Planting Requirements

Parking Spaces	Requirements	# of Required Trees	Minimum Required Variety of Trees	Maximum of Any One Variety
1 to 5	no trees	n/a	n/a	n/a
6 to 30	1 tree for each 6 spaces or fraction thereof up to 30 spaces	1 to 5	n/a	n/a
31 to 100	5 trees for the first 30 spaces, plus 1 tree for each additional 7 spaces or fraction thereof	5 to 15	2	65%
101 to 196	15 trees for the first 100 spaces, plus 1 tree for each additional 8 spaces or fraction thereof	15 to 27	3	50%
197 to 304	27 trees for the first 196 spaces, plus 1 tree for each additional 9 spaces or fraction thereof	27 to 39	4	40%
305 to 504	39 trees for the first 305 spaces plus, 1 tree for each additional 10 spaces or fraction thereof	39 to 59	5	35%
505 or more	59 trees for the first 505 spaces plus, 1 tree for each additional 11 spaces or fraction thereof	59+ 6	30%	

Interior landscaping for vehicular use areas (VUA's): Landscaping shall be provided for vehicular use areas in accordance with the following standards:

1. A minimum of 5% of the total VUA shall be landscaped and the landscaping shall be dispersed throughout the paved area. The VUA landscaping shall only be required for uses that have more than 20 parking spaces. This section shall not apply to parking lots used for the sole purpose of displaying merchandise for sale.
2. The VUA landscaping shall contain a variety of plant materials and be dispersed in the form of planting islands or peninsulas throughout the VUA. The minimum size of planting areas shall be 80 square feet.
3. Planting islands within the VUA shall be required within every other parking row, when parking rows are provided in the interior portions of the parking lot. Planting islands may be placed in a staggered or linear design.
4. All planting islands shall be planted with grass, low ground cover, shrubs, flowers, trees, or any combination of these. Hard surfaces or gravel are not permitted.
5. All planting islands shall have a minimum of 6 inch curbs installed to protect the planting area from vehicular traffic.
6. All plant material (other than grass, or ground cover) located within landscape islands where vehicle overhangs are needed shall be setback a minimum of 2 feet 6 inches from the edge of pavement or face of curb.

7. Landscaping materials shall be located between the structure and all common boundaries including the side yard and frontage of parking lots.
8. Trees used in planting islands 2 to 4 feet wide are restricted to mature height of 10 to 25 feet and defined as small sized trees. Trees used in planting islands 4 to 8 feet wide may use small trees or trees that reach a mature height of 25 to 50 feet and defined as medium sized trees. Trees used in planting islands greater than 8 feet wide are not restricted by size.

Sign landscaping. Landscaping shall be located around the base of freestanding signs. The landscaping shall be ornamental in nature with shrubs, flowers, and other ornamental plant materials. Sign landscaping is not required for free-standing signs permitted before the adoption of this ordinance. The amount of landscape area required shall be 1 square foot of landscape area per 1 square foot of sign area. At least 50% of the required landscaping area shall be planted with small size trees and/or shrubs.

TREE REQUIREMENTS

The required perimeter landscape easements shall be used to determine the number of large shade trees required for the site. The site must contain a minimum of one large shade tree per 40 feet of linear boundary, or fraction thereof. Trees do not have to be equally spaced, but may be grouped. Existing trees shall be preserved where possible. Tree type shall be approved by the Zoning Administrator and shall be protected from potential damage by vehicles. All shade trees shall be a minimum of 2.0" caliper when planted. See Appendix A for suggested tree sizes and types.

LANDSCAPING AT DRIVEWAYS AND STREET INTERSECTIONS

To insure that landscape materials do not constitute a driving hazard, a sight triangle shall be observed at all street intersections or intersections of driveways or alleys with streets. Within this sight triangle no landscape material nor other fixed object shall obstruct vision between a height of three feet and a height of 12 feet above the average elevation of the existing surfaces at the center line of each street, driveway, or alley.

Within the sight triangle, trees shall be permitted as long as, except during early growth stages, only the tree trunk (no limbs, leaves, or the like) is visible between the three- and 12-foot limitations mentioned above. A similar exemption is allowed for utility poles and traffic signs or lights.

LANDSCAPE MATERIALS.

The landscaping materials to be utilized shall consist of the following:

1. **Walls and fences**. Walls shall be constructed of natural stone, brick, or artificial materials arranged in a linear, serpentine, or other alignment; fences shall be constructed of wood. There shall be a three-foot height restriction for walls or fences in front yards, and an eight-foot height restriction in all other required yards. All walls or fences shall have a minimum opacity of 80%.
2. **Earth mounds**. Earth mounds shall be constructed with proper slopes and adequate plant material to prevent erosion.

3. **Plants**. All plant materials shall be living plants (artificial plants are prohibited). If plant material not included in the adopted list is to be used, the developer shall receive prior approval from the Zoning Administrator.
4. **Quality**. Plant materials used in conformance with the provision of this chapter shall conform to the standards of the American Association of Nurserymen.
5. **Deciduous trees** (trees which normally shed their leaves in the fall). Deciduous trees should be a species having an average mature crown spread of greater than 15 feet and having trunks which can be maintained with over five feet of clear wood in areas which have visibility requirements.
6. **Evergreen trees**. Evergreen trees shall be a minimum of five (5) feet high with a minimum caliber of one and one-half inches and a minimum spread of three (3) feet immediately after planting.
7. **Shrubs and hedges**. Shrubs and hedges shall be at least two (2) feet to three feet in average height or spread when planted and shall conform to opacity and other requirements within three (3) to four (4) years after planting.
8. **Vines**. Vines shall be at least 12 to 15 inches high at planting and are generally used in conjunction with walls or fences.
9. **Grass or ground cover**. Grass (of common mixtures of Fescues, Bluegrass, and Rye) shall be planted in species normally grown as permanent lawns in the city, and may be sodded, plugged, sprigged, or seeded; except in swales or other areas subject to erosion where solid sod, erosion-reducing net, or suitable mulch shall be used.
10. A minimum of 20% of the landscape planting required shall be of evergreen trees and shrubs.

MAINTENANCE AND INSTALLATION.

All landscaping materials shall be installed in a sound, workmanlike manner, and according to accepted good construction and planting procedures. Any landscape material, which fails to meet the requirements of this chapter at the time of installation, shall be removed and replaced with acceptable materials. Inspections will be conducted by the Zoning Administrator after installation of landscaping to assure compliance with the submitted and approved site plan.

The person in charge of or in control of the property whether as owner, lessee, tenant, occupant, or otherwise shall be responsible for the continued proper maintenance of all landscaping materials and shall keep them in a proper, neat, and orderly appearance free from refuse, debris, noxious weeds, and unwanted grass at all times. All unhealthy or dead plant material shall be replaced within four months or by the next planting period, whichever comes first; while other defective landscape material shall be replaced or repaired within two months. Plant material shall not be severely pruned such that the natural growth pattern or characteristic form is significantly altered. Surfaces denuded of vegetation shall be seeded or sodded to prevent soil erosion. The removal or destruction of landscape material previously approved by the Planning Commission shall constitute a violation of the Zoning Ordinance. Replacement of landscape material shall be of like type as that which was removed or destroyed. Surety bond or irrevocable letter of credit for the landscaping will be submitted as a part of the public improvements for 125 percent of the landscaping improvements.

Violation of these installation and maintenance provisions shall be grounds for the Zoning Administrator to refuse a certificate of occupancy permit, require replacement of landscape material, and will subject those in violation to established fines and penalties of this chapter.

PLAN SUBMISSION AND APPROVAL.

Whenever any property is affected by these landscaping requirements, the property owner or developer shall prepare a landscape plan for submittal to, and approval by, the Planning Commission. The Planning Commission shall follow the requirements of this chapter in approving or disapproving any landscape plan required by this chapter. Landscape plans also may be submitted as part of any plan review required by the Planning Commission. The property owner or developer shall submit the Landscape Plan to the Planning Commission as part of the Site Plan Review process.

PLAN REVIEW.

The contents of the Landscape Plan shall include the following:

1. Site plan, drawn to a scale not to exceed one inch to fifty feet, showing the labeling by name and dimensions all existing and proposed property lines, easements, buildings, and other structures, vehicular use areas (including parking stalls, driveways, service areas, square footage, etc.), water outlets, landscape material (tree, wall, fence, hedge, or earth mound locations), and existing topography, proposed grading at a minimum of two-foot contours.
2. Typical elevations as may be required.
3. Title box with the names and addresses the property owner, and the person drawing plan, and person installing landscape material), scale, date, north arrow (generally orient plan so that north is to top of plan), and zoning classification.
4. Planting schedule and plat list including common name, botanic name, cultivar size and quantity, condition (balled and burlaped, container size or bare root), and planting details using the standards of the American Society of Landscape Architects.

VARIANCE

The Planning Commission shall have the authority to grant a waiver of any of the requirements in this section upon written request, which outlines the rationale for the waiver. The Planning Commission shall review each written request and grant a waiver only; under unusual or extreme circumstances which cause an unreasonable hardship such as the size of the lot; or, when an innovative or alternative approach can be made which still meets the intent and purpose of this section.

Appendix A

ACCEPTABLE PLANT LIST

ACCEPTABLE PLANT LIST

Suggested Woody Plants				
SUGGESTED LARGE TREES (Over 50 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Abies concolor	White Fir	E	30’ to 50’	15’ to 30’
Acer rubrum	Red Maple (spp., cvs)	D	40’ to 60’	30’ to 40’
Acer saccharum	Sugar Maple (spp., cvs, hybrids)	D	60’ to 75’	50’ to 60’
Alnus glutinosa	Black Alder	D	40’ to 60’	20’ to 40’
Betula nigra	River Birch	D	40’ to 70’	40’ to 60’
Carpinus betulus	European Hornbeam	D	40’ to 60’	30’ to 50’
Cercidiphyllum japonicum	Katsura Tree	D	40’ to 60’	30’ to 50’
Chamaecyparis pisifera	Sawara Falsecypress	E	50’ to 70’	10’ to 20’
Eucommia ulmoides	Hardy Rubber Tree	D	40’ to 60’	40’ to 50’
Ginkgo biloba	(Male) Ginkgo	D	50’ to 80’	30’ to 50’
Gymnocladus dioicus	Kentucky Coffeetree	D	60’ to 75’	40’ to 50’
Ilex opaca	American Holly	E	40’ to 70’	20’ to 40’
Larix deciduas	European Larch	D	70’ to 75’	25’ to 30’
Liriodendron tulipifera	Tulip or Yellow Poplar	D	70’ to 90’	35’ to 50’
Magnolia acuminate	Cucumbertree Magnolia	D	50’ to 80’	50’ to 80’
Metasequoia glyptostroboides	Dawn Redwood	D	70’ to 100’	25’
Picea abies	Norway Spruce	E	40’ to 60’	25’ to 30’
Picea glauca	White Spruce	E	40’ to 60’	10’ to 20’
Picea omorika	Serbian Spruce	E	50’ to 60’	20’ to 25’
Picea orientalis	Oriental Spruce	E	50’ to 60’	20’ to 30’
Picea pungens	Colorado Spruce	E	50’ to 70’	20’ to 30’
Pinus resinosa	Red Pine	E	50’ to 80’	20’ to 40’
Pinus strobes	White Pine	E	50’ to 80’	20’ to 40’
Pinus sylvestris	Scotch Pine	E	30’ to 60’	30’ to 40’
Pinus thunbergii	Japanese Black Pine	E	20’ to 50’	var.
Platanus x acerifolia	London Planetree	D	70’ to 100’	60’ to 80’
Plantanus occidentalis	American Sycamore	D	75’ to 100’	75’ to 100’
Quercus alba	White Oak	D	60’ to 100’	50’ to 80’
Quercus bicolor	Swamp White Oak	D	50’ to 60’	50’
Quercus coccinea	Scarlet Oak	D	70’ to 75’	40’ to 50’
Quercus imbricaria	Shingle Oak	D	50’ to 60’	40’ to 60’
Quercus muehlenbergii	Chinkapin Oak	D	70’ to 80’	80’to100’
Quercus nigra	Water Oak	D	50’ to 80’	40’ to 60’
Quercus phellos	Willow Oak	D	40’ to 60’	40’ to 50’
Quercus rubra	Northern Red Oak	D	60’ to 75’	40’ to 50’
Quercus shumardii	Shumard Oak	D	40’ to 60’	40’ to 50’
Stephanolobium japonicum	Japanese Pagoda	D	50’ to 70’	40’ to 60’
Taxodium distichum	Bald Cypress	D	50’ to 70’	20’ to 30’
Thuja occidentalis	American Arborvatae	E	40’ to 60’	10’ to 15’
Tilia cordata	Littleleaf Linden	D	60’ to 70’	30’ to 50’
Tilia tomentosa	Silver Linden	D	50’ to 70’	30’ to 50’
Tsuga canadensis	Eastern Hemlock	E	40’ to 70’	25’ to 35’
Tsuga caroliniana	Carolina Hemlock	E	45’ to 60’	20’ to 25’

Ulmus Americana	American Elm (hybrid resistant to Dutch Elm Disease)	D	60’ to 80’	40’ to 55’
Ulmus parvifolia	Lacebark Elm	D	40’ to 50’	40’ to 50’
Zelkova serrata	Japanese Zelkova	D	50’ to 80’	40’ to 70’

SUGGESTED MEDIUM TREES (25 to 50 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Acer campestre	Hedge Maple	D	25’ to 35’	25’ to 35’
Amelanchier arborea	Downy Serviceberry	D	15’ to 25’	10’ to 15’
Carpinus caroliniana	American Hornbeam	D	20’ to 30’	20’ to 30’
Cladrastis kentukea	Yellowwood	D	30’ to 50’	40’ to 50’
Corylus colurna	Turkish Filbert	D	40’ to 50’	20’ to 30’
Gleditisia tricanthos var. *intermis*	Thornless Honey Locust	D	30’ to 50’	30’ to 50’
Halesia tetraptera	Carolina Silverbell	D	30’ to 40’	20’ to 35’
Ilex opaca	American Holly	E	40’ to 50’	18’ to 40’
Juniperus virginiana	Eastern Redcedar	E	40’ to 50’	10’ to 20’
Koelreutearia paniculata	Golden Raintree	D	30’ to 40’	30’ to 40’
Nyssa sylvatica	Tupelo, Black Gum	D	30’ to 50’	20’ to 30’
Ostrya virginiana	Hophornbeam	D	25’ to 40’	20’ to 30’
Oxydendrum arboretum	Sourwood	D	25’ to 30’	20’ to 25’
Parrotia persica	Persian Parrotia	D	20’ to 40’	15’ to 30’
Phellodendron amurense	Cork Tree	D	30’ to 45’	30’ to 40’
Pinus cembra	Swiss Stone Pine	E	30’ to 40’	15’ to 25’
Pinus parviflora	Japanese White Pine	E	25’ to 50’	25’ to 50’
Prunus sargentii	Sargent Cherry	D	40’ to 50’	30’ to 50’
Prunus subhirtella	Higaen Cherry	D	20’ to 40’	15’ to 30’
Prunus yedoensis	Yoshino Cherry	D	20’ to 40’	20’ to 40’
Pyrus calleryana	Callery Pear (cultivars only except ‘Bradford’)	D	30’ to 50’	20’ to 35’
Quercus acutissima	Sawtooth Oak	D	35’ to 45’	30’ to 40’
Stewartia pseudo>camellia	Japanese Stewartia	D	20’ to 35’	20’ to 30’
Syringa reticulate	Japanese Tree Lilac	D	20’ to 30’	15’ to 25’

SUGGESTED LARGE SHRUBS OR SMALL TREES (10 to 25 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Acer tataricum var. *ginnala*	Amur Maple	D	15’ to 18’	15’ to 20’
Acer palmatum	Japanese Maple	D	15’ to 25’	15’ to 25’
Acer pensylvanicum	Striped Maple	D	15’ to 20’	12’ to 20’
Aesculus parviflora	Bottlebrush Buckeye	D	8’ to 12’	8’ to 15’
Aesculus pavia	Red Buckeye	D	10’ to 20’	10’ to 20’
Amelanchier laevis	Allegheny Serviceberry	D	15’ to 25’	15’ to 25’
Cercis Canadensis	Eastern Redbud	D	20’ to 25’	20’ to 30’
Chionanthus virginicus	White Fringetree	D	15’ to 30’	15’ to 30’
Cornus alternifolia	Pagoda Dogwood	D	15’ to 25’	20’ to 30’
Cornus florida	Flowering Dogwood	D	20’ to 25’	20’ to 30’
Cornus kousa	Kousa Dogwood	D	15’ to 20’	15’ to 20’

Cornus mas	Corneliancherry Dogwood	D	20’ to 25’	15’ to 20’
Crataegus phaenopyrum	Washington Hawthorn	D	20’ to 30’	20’ to 25’
Cratategus viridus	Green Hawthorne	D	20’ to 30’	20’ to 30’
Crataegus x lavallei	LaValle Hawthorne	D	15’ to 25’	10’ to 20’
Forsythia x intermedia	Border Forsythia	D	8’ to 10’	10’ to 12’
Hamamelis virginiana	Common Witchhazel	D	20’ to 30’	20’ to 25’
Hydrangea paniculata	Panicle Hydrangea	D	15’ to 25’	10’ to 20’
Ilex x attenuate	‘Fosteri’ Foster Holly	E	10’ to 20’	5’ to 10’
Juniperus chinensis	Chinese Juniper (cultivars)	E	12’ to 25’	var.
Magnolia stellata	Star Magnolia	D	15’ to 20’	10’ to 15’
Magnolia virginiana	Sweetbay Magnolia	D	10’ to 20’	10’ to 20’
Magnolia x soulangiana	Saucer Magnolia	D	20’ to 25’	20’ to 30’
Malus	(varieties) Crabapple (must be cultivar with disease resistance)	D	10’ to 25’	10’ to 30’
Pinus densiflora	Japanese Red Pine	E	10’ to 15’	10’ to 15’
Pinus mugo	Mugho Pine	E	15’ to 20’	20’ to 30’
Platycladus orientalis	Oriental Arborvitae	E	15’ to 25’	10’ to 12’
Prunus serrulata	Oriental Cherry (cultivars)	D	15’ to 20’	15’ to 20’
Ptelea trifoliate	Hoptree	D	15’ to 20’	15’ to 20’
Taxus cuspidate	Japanese Yew (cultivars)	E	10’ to 20’	10’ to 30’
Viburnum lentago	Nannyberry	D	15’ to 18’	6’ to 10’
Viburnum opulus	Cranberrybush Viburnum	D	8’ to 10’	10’ to 15’
Viburnum prunifolium	Blackhaw Viburnum	D	12’ to 15’	8’ to 12’
Viburnum rhytidophyllum	Leatherleaf Viburnum	E	10’ to 15’	10’ to 15’
Viburnum rufidulum	Southern or Rusty Blackhaw	D	12’ to 15’	8’ to 12’
Viburnum sieboldii	Siebold Viburnum	D	15’ to 20’	10’ to 15’
Viburnum trilobum	American Cranberrybush	D	8’ to 12’	8’ to 12’

SUGGESTED MEDIUM SHRUBS (6 to 10 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Acanthopanax sieboldian	Fiveleaf Aralia	D	8’ to 10’	8’ to 10’
Aronia arbutifolia	Red Chokeberry	D	6’ to 10’	3’ to 5’
Aronia melanocarpa	Black Chokeberry	D	3’ to 5’	3’ to 5’
Calycanthus floridus	Carolina Allspice	D	6’ to 9’	6’ to 12’
Chamecyparis pisifera	Sawara falsecypress (selected cultivars)	E 6’ to 8’	6’ to 7’	
Cornus serica	Redosier Dogwood	D	7’ to 9’	10’+
Cotoneaster lucidus	Hedge Cotoneaster	D	5’ to 10’	6’ to 10’
Cotoneaster multiflora	Many Flowered Cotoneaster	D	8’ to 12’	12’ to 15’
Forsythia suspense	Weeping Forsythia	D	8’ to 10’	10’ to 15’
Fothergilla major	Large Fothergilla	D	6’ to 10’	5’ to 8’
Hamamelis vernalis	Vernal Witchhazel	D	6’ to 10’	6’ to 10’
Ilex crenata	Japanese Holly	E	5’ to 8’	5’ to 8’
Ilex glabra	Inkberry	D	6’ to 8’	8’ to 10’
Ilex verticillata	Winterberry	D	6’ to 9’	6’ to 9’
Ilex x meserve	Meserve Holly	E	6’ to 10’	6’ to 10’
Juniperus communis	Common Juniper	E	5’ to 10’	8’ to 12’
Kalmia latifolia	Mountain Laurel	E	7’ to 10’	7’ to 10’
Lindera benzoin	Spicebush	D	6’ to 12’	6’ to 12’
Myrica pennsylvanica	Northern Bayberry	D	5’ to 12’	5’ to 12’

Pieris japonica	Japanese Pieris	E	9’ to 12’	6’ to 8’
Rhododendron (varieties)	Rhodondendron (varieties)	E	var.	var.
Taxus x media	Anglojap Yew	E	5’ to 12’	var.
Viburnum dentatum	Arrowwood Viburnum	D	6’ to 8’	6’ to 12’
Viburnum x burkwoodii	Burkwood Viburnum	D	8’ to 10’	6’ to 8’

SUGGESTED SMALL SHRUBS (4 to 6 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Berberis koreana	Korean Barberry	D	4’ to 6’	3’ to 5’
Berberis thunbergii	Japanese Barberry	D	4’ to 5’	5’ to 7’
Berberis x mentorensis	Mentor Barberry	D	5’ to 7’	5’ to 7’
Chamaecyparis obtuse	Hinoki Falsecypress (cultivars)	E	5’ to 7’	5’ to 7’
Clethra alnifolia	Summersweet Clethra	D	5’ to 7’	5’ to 7’
Leucothoe fontanesiana	Dropping Leucothoe	E	5’ to 7’	5’ to 7’
Pinus mugho	Mugho Pine (cultivars)	E	5’ to 7’	5’ to 7’

SUGGESTED LOW SHRUBS (1 ½ to 4 feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Abelia x grandiflora	Glossy Abelia	D	3’ to 5’	3’ to 5’
Abeliophyllum distichum	Korean Abelialeaf	D	3’ to 5’	3’ to 4’
Berberis thunbergii	Japanese Barberry (cultivars)	D	3’ to 5’	4’ to 7’
Buxus microphylla	Littleleaf Boxwood	E	3’ to 4’	3’ to 4’
Cotoneaster horizontalis	Rock Cotoneaster	D	2’ to 3’	5’ to 8’
Deutzia gracillis	Slender Deutzia	D	2’ to 4’	3’ to 4’
Fothergilla gardenia	Dwarf Fothergilla	D	2’ to 4’	3’ to 4’
Hypericum frondosum	Golden St. Johnswort	D	3’ to 4’	3’ to 4’
Hypericum prolificum	Shrubby St. Johnswort	D	2’ to 4’	2’ to 4’
Ilex crenata	Japanese Holly	E	2’ to 4’	2’ to 4’
Juniperus chinesis var. *sargentii* Sargents	Chinese Juniper	E	1.5’ to 2.5’	7’ to 9’
Juniperus horizontalis	Creeping Juniper	E	2’ to 2.5’	6’ to 10’
Potentilla fruticosa	Bush Cinquefoil	D	1’ to 4’	2’ to 4’
Spiraea x bumalda	Bumalda Spirea	D	2’ to 3’	3’ to 5’
Taxus baccata	English Yew	E	2’ to 4’	3’ to 5’

SUGGESTED GROUND COVER (Below 1 ½ feet in Height)				
SCIENTIFIC NAME	**COMMON NAME**	**PLANT TYPE**	**HEIGHT**	**SPREAD**
Ajuga reptans	Carpet Bugle	E	4” to 12”	var.
Arctostaphylos uva-ursi	Bearberry	D	6” to 12”	2’ to 4’
Cotoneaster adpressa	Creeping Cotoneaster	D	12” to 18”	4’ to 6’
Cotoneaster dammeri	Bearberry Cotoneaster	D	12” to 18”	6’ to 8’
Hedera helix	English Ivy	E	6” to 8”	var.
Hypericum calycinum	St. Johnswort	D	12” to 18”	18” to 24”
Juniperus conferta	Shore Juniper	E	12” to 18”	6’ to 9’
Juniperus horizontalis	Creeping Juniper (cultivars)	E	12” to 24”	4’ to 8’
Juniperus Sabina	Savin Juniper (cultivars)	E	12” to 18”	3’ to 5’

Liriope muscari	Liriope	E	12” to 18”	var.
Pachysandra terminalis	Japanese Spurge	E	1” to 10”	var.
Vinca minor	Periwinkle	D	3” to 6”	var.
Xanthorhiza simplicissima	Yellowroot	D	12” to 24”	var.

spp.=species; cvs=cultivars; E=evergreen; D=deciduous; var.=varies

UNDESIREABLE PLANT LIST

Undesirable Plant List	
SCIENTIFIC NAME	**COMMON NAME**
Acer negundo	Boxelder
Acer platanoides	Norway Maple
Acer saccharinum	Silver Maple

Ailanthus altissima	Tree of Heaven
Albizia julibrissin	Mimosa
Betula papyrifera	White Birch
Betula pendula	European White Birch
Celtis occidentalis	Hackberry
Elaeagnus angustifolia	Russian Olive
Elaeagnus umbellate	Autumn Olive
Fraxinus (all)	Ash
Ginkgo biloba (female)	Ginkgo (except for male)
Ligustrum (all)	Privets (all)
Liquidambar styraciflua	Sweetgum
Maclura pomifera	Osage Orange
Paulownia tomentosa	Empress Tree
Populus alba	Silver-leafed Poplar
Populus nigra	Lombardy Poplar
Pyrus calleryana	‘Bradford’ Bradford Pear
Robinia psuedoaacia	Black Locust
Salix babylonica	Weeping Willow
Ulmus Americana	American Elm (except for Dutch Elm resistant hybrids)
Ulmus pumila	Siberian Elm