

RETHINKING THE BASIN

Unify the fragmentation give value to the diversity



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Introduction

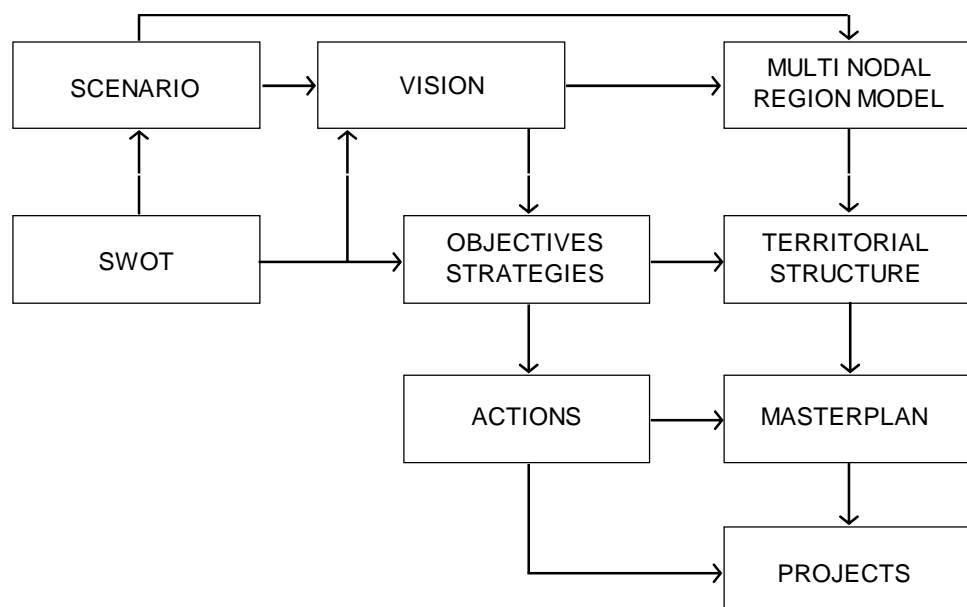
To plan and design our idea of transformation of the Basin area, we have adopted a strategic and flexible approach that could reach some important methodological and procedural results.

Firstly, to make consequent the plan's actions from the objectives and strategies, and these last two from the vision of the future of the area.

Secondly, to improve the capacity to compare and to evaluate the projects with the objectives and strategies.

Thirdly, to review and modify one or more projects without remaking the plan or to review the actions or strategies without changing all the plan.

The planning process is represented in the following diagram.



At first we have analyzed some trends about population, land use, activities, transportation, environment and urban structure and from these trends we have recognized three **scenarios** for the future development of the Cincinnati metropolitan region. At the same time, we have made a **SWOT analysis** which shows the weaknesses and the strengths of the study area.

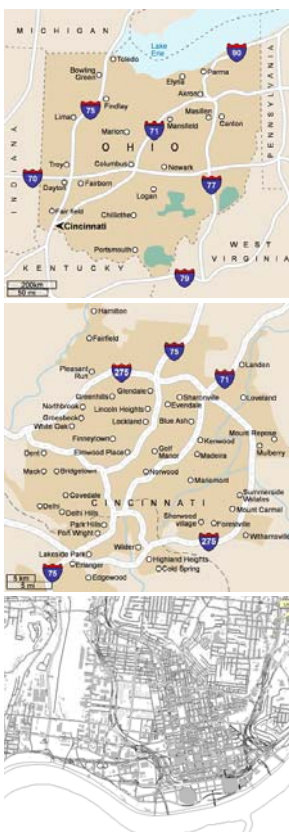
From these analysis we have defined our **vision**, oriented to a **multi nodal region model**, and we have identified **objectives and strategies** to reach.

Starting from this multi nodal region model and from our objectives and strategies we analyze the **territorial structure** on different scales, to find the relationships between our basin area and the context. Then we have the **actions** and the **masterplan**, and from these last we have the **projects**.

1. - Analysis and interpretation of the characters of the area

In this chapter we describe the environmental, territorial, urban and socio-economical characters and we individuate the weaknesses and the strengths from different point of view of the study area and the metropolitan context. From this interpretative phase we have build the vision for the study area.

1.1 – The characters of the area



The characters are analysed at different scale: from the metropolitan scale, that include the Hamilton County, through the scale of the city of Cincinnati, to a local scale, that concern the basin area.

Environmental aspects¹

Environmental concerns in the Cincinnati metropolitan region are generally addressed by interest groups and rarely addressed by developers. Pressures in some areas have led to the clearing of forestland for development, development on hillsides, and development over aquifers and floodplains, primarily. Hamilton County's environmentally compromising development trend has occurred over aquifers, but the most significant trend is development on steep slopes. Consequently, Hamilton County has the second highest landslide per capita costs in the country, second only to Los Angeles, California. Development over floodplains, the majority of which are located in the eastern portion of the region, has been significantly reduced in recent years. The City of Cincinnati purchased, from private owners and businesses, most of the land located in the floodplain; and the majority of that land is vacant and used as green space. In addition to floodplains, aquifers, and steep slopes, poorly drained soils are also an issue for development in the Cincinnati region. Poorly drained soils threaten development because they accelerate the process of soil erosion. Poorly drained soils also deteriorate foundations, which weaken the stability of structures.

Land Use

Projections of future land consumption for the Cincinnati metropolitan region were completed by assessing past land use trends. Baseline land use data was compared for the periods of 1955 to 1965, 1975 to 1985, and 2000 for three land use categories: residential, commercial, and open spaces. Residential spaces consist of single- and multi- family housing

¹ "Region In Crisis: Smart Growth Alternatives for Cincinnati" http://ucplanning.uc.edu/research/Regional_Growth_Studio/home_page.htm

within the region. Commercial land use consists of areas set aside for business activities such as industrial space, retail, institutional, and office space. Open space includes green space, agricultural areas, parks, preserves, and undeveloped areas. Trends suggest that most development will occur along major transportation routes and in vacant land close near environmentally sensitive areas.

Infrastructure

Infrastructure plays a prominent role in the sprawl phenomenon that is occurring in the Cincinnati metropolitan region. Sewer and water lines tend to follow residential, commercial, and industrial growth. Because these types of growth occur along major transportation routes and are contiguous to previously developed areas, sewer and water lines are directly correlated to the growth of urbanized areas. If the current trend continues, extension of sewer and water lines are projected to increase along transportation corridors and will connect previously leapfrog developments. Annexation has also been very influential in the pattern of sprawl that is occurring in the region. Most of the annexation after 1960 has occurred close to transportation routes. Most of the recent growth in the Cincinnati metropolitan region is taking place in townships. Because of this, municipalities actively try to acquire these areas through annexation. This process promotes competition between municipalities and townships; and is not healthy for the region.

Transportation

The Cincinnati metropolitan region has four main transportation routes: Interstates 71, 74, 75, and 275. Because of the accessibility that these interstates provide, residents in this area have many employment and residential options that extend to neighboring counties. Consequently, many do not live close to their work and must make a daily commute. The result is increased congestion on the highways that leads to more air and water pollution, decreases quality of life. There has been an increase in the number of automobile trips per person, VMT per person, and trip length in minutes since 1960. If the current trend continues, the Cincinnati metropolitan region will experience an increase in congestion that will increasingly worsen in the north.

Population

A recent analysis of the total population trend for the Cincinnati metropolitan region reveals an increase in population for the region as a whole, but this analysis paints a bleak picture for the City of Cincinnati and Hamilton County. This type of population decentralization reflects a doughnut effect pattern of development, where the central area of a region is basically empty of both people and commerce. A pattern of racial and economic polarization is evident in both Hamilton County and the City

of Cincinnati. During the 1960-1980 and 1980-2000 time periods, the African-American population for the City of Cincinnati increased to 22% and 43% respectively. The African-American population of Hamilton County increased to 14% and 23% respectively. The City of Cincinnati and Hamilton County are the only areas in the region that have an African-American population of greater than five percent. If the current trend continues, the African-American population for the City of Cincinnati and Hamilton County will be 66% and 28% of the total population, respectively by the year 2020. In contrast, the African-American population in the surrounding twelve counties of the CMSA is not projected to exceed five percent.

Economical aspects

Historically, Cincinnati's downtown has been the major employment center of the Cincinnati metropolitan region. Recently, however, job centers outside of downtown Cincinnati have begun to develop in response to population decentralization in the region. The Cincinnati downtown is still the largest employment center in the region, but is today rivaled by four other employment centers, which are all located on or near the I-275 beltway: the Anderson Township/Union Township Area, the Blue Ash/Kenwood Corridor, the Greater Cincinnati/ Northern Kentucky International Airport/Erlanger/Florence Triangle, and the Springdale/Tri-County/Forest Fair Corridor. These four employment centers are all growing at a significantly faster rate than the Cincinnati downtown.

The SWOT analysis: Strengths Weaknesses Opportunities and Threats

The next table represent the Strengths, Weaknesses, Opportunities and Threats related with physico-natural, socio-economical, urban structural, landscape and relation between activities and settlements aspects. Strengths and Weaknesses concern the basin scale, Opportunities and Threatens concern the upper scales

	Strengths	Weaknesses
Phisico-natural aspects	<ul style="list-style-type: none"> ➤ River: natural resources ➤ Mill Creek projects of restoration: nodes of hypothetical ecological network 	<ul style="list-style-type: none"> ➤ Water, air, soil pollution ➤ Landslides ➤ Waste of land ➤ Coal warehouse along Ohio river
Socio-economical aspects	<ul style="list-style-type: none"> ➤ Amount of business in the BDC ➤ Cultural institutions in Downtown 	<ul style="list-style-type: none"> ➤ Segregation of residential areas (closed neighbourhoods) ➤ Low income medium ➤ Lack of social mix
Urban structure	<ul style="list-style-type: none"> ➤ Historic structures/buildings in OtR and WE ➤ Empty areas 	<ul style="list-style-type: none"> ➤ Separation between land uses ➤ Low presence of mixed use ➤ Lack of green spaces ➤ Areas underused
Landscape aspects	<ul style="list-style-type: none"> ➤ Physical appearance of the BDC ➤ Physical appearance of hill ➤ Riverfront ➤ Highway and skyscape like point of view 	<ul style="list-style-type: none"> ➤ Low quality landscape in railway complex ➤ Highway like visual barrier ➤ Coal warehouse along Ohio river
Infrastructure	<ul style="list-style-type: none"> ➤ Highway ➤ Railway complex ➤ Presence of airport ➤ Port activities 	<ul style="list-style-type: none"> ➤ Highway congested

	Opportunities	Threats
Phisico-natural aspects	<ul style="list-style-type: none"> ➤ Governmental support for clean up brownfield ➤ River and Hills: corridor of hypothetical ecological network 	<ul style="list-style-type: none"> ➤ Activities that generate water Mill Creek pollution ➤ Earthquakes ➤ River floods
Socio-economical aspects	<ul style="list-style-type: none"> ➤ Gentrification (reinvestment into area) ➤ Proposed NAFTA-network 	<ul style="list-style-type: none"> ➤ Gentrification (displacing the poor) ➤ Alarming rate of unemployment ➤ Local approach to Mill Creek pollution problem ➤ Public investments addressed to high income people (housing)
Urban structure		<ul style="list-style-type: none"> ➤ Abandonment of downtown and development residential neighbourhood
Infrastructure	<ul style="list-style-type: none"> ➤ Highspeed railway project ➤ New Ohio bridge project 	<ul style="list-style-type: none"> ➤ Traffic highway that go through the city ➤ Lack of alternative public transportation

1.2 – The vision for the area: unify the fragmentation and give value to the diversity

The vision starts from the analyses of the territorial scenarios and from a SWOT analysis which shows the weaknesses and the strengths of the study area.

The development scenarios

At first we analyzed some trends about population, land use, activities, transportation, environment and urban structure.

About **population** we have:

- decentralization of the upper-middle classes;
- concentration of the African American People;
- return of young professional and empty nester family.

About **land use** we have:

- diffusion of the residential and commercial use in all the region around the central city.

About **activities** we have:

- development of others employment centres outside of downtown

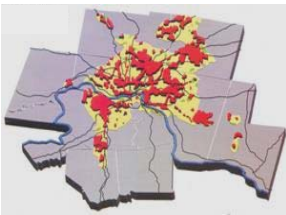
About transportation and environment we have:

- increased congestion traffic on the highways;
- more air and water pollution and decrease of the urban life quality.

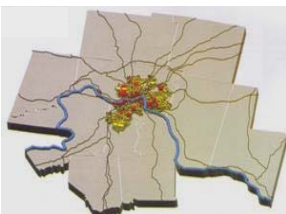
About **urban structure** we have:

- lacking of connections;
- raising of fragmentation.

From these trends there are three scenarios for the future development of the Cincinnati metropolitan region.



The first scenario could be the URBAN SERVICE BOUNDARY (USB). It means curtail the haphazard growth and sprawling development of rural areas through the establishment of service boundaries within which growth is supported. The boundary is determined by the existing limits of infrastructure, as the goal to avoid extending these services further in the rural land. The USB strategy maximizes urban growth within or near land that is already developed. In this development no increased infrastructure must be provided.



The second scenario could be the COMPACT CITY. It emphasizes a spatial pattern of development that is oriented to the central city (urban core), versus a polycentric or dispersed form of expansion. This development is characterized by high density and mixed land use. This scenario concentrates new development into historically urban spaces, without using open rural lands. A compact city uses existing infrastructure and facilities.



The last scenario could be the MULTI NODAL REGION, made by multiple centres. Each node is a compact community, it develops only inside itself and utilizes existing infrastructure.

Toward a multiple nodes model of the region

From the analysis of the trends and of these scenarios we have our vision, which is: UNIFY THE FRAGMENTATION, GIVE VALUE TO THE

DIVERSITY. With this vision we want to solve the barriers between the different parts of Cincinnati, finding connections and developing relationships between them, but also giving value to their diversity and identities.

From this vision we arrive to our MULTI NODAL MODEL. This model emphasizes the creation and the development of multiple centres in the region. These centres named nodes have mixed use, they are open nodes and they use infrastructure to be connecting. The model avoids urban transformations without planning and projects, and it gives value to the potentiality of each different node and to their connections. In this way the development of the future Cincinnati will be not concentrate into a single locality of the city and it will reduce the spread of development on open and underdeveloped lands. The nodes are connected through an efficient private and public transportation system. With our model we want above all to make efficient this territory shifting a large part of the mobility on the public transport, such as the subway.

Starting from this multi nodal region model and from our objectives and strategies we analyze the territorial structure on different scales, to find the relationships between our basin area and the context. Then we have the actions and the masterplan, and from these last we have the projects.

2. - Design criteria and projects

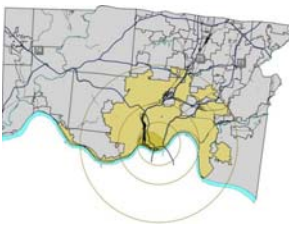
In this chapter we describe the territorial structure scheme, made on three conceptual levels, from the deeply structure to the masterplan, that support and link all the projects suggested for the study area.

2.1 – The territorial structure and the Masterplan

The territorial structure is studied at two different scales: the Greater Cincinnati metro region scale and the highway-ring scale.

The actions suggested at local scale, related with territorial structure, are represented in a Masterplan of the basin area.

Territorial structure



The analysis of the territorial structure started from the Greater Cincinnati metro region scale. It marks three distinct rings of development, each of these rings has a specific meaning in the urban structures. The first ring is about the urban core and it is a two-mile ring. The second ring is the form-mile one and it means the first expansion on the urban core. The last ring is the eight-mile one and it represents the first ring of suburban growth beyond the core city.



The second analysis of territorial structure is on the highway-ring scale. It shows the knots and the corridors at the upper scale.

The nodes could be mobility, attraction and physical and functional connection.

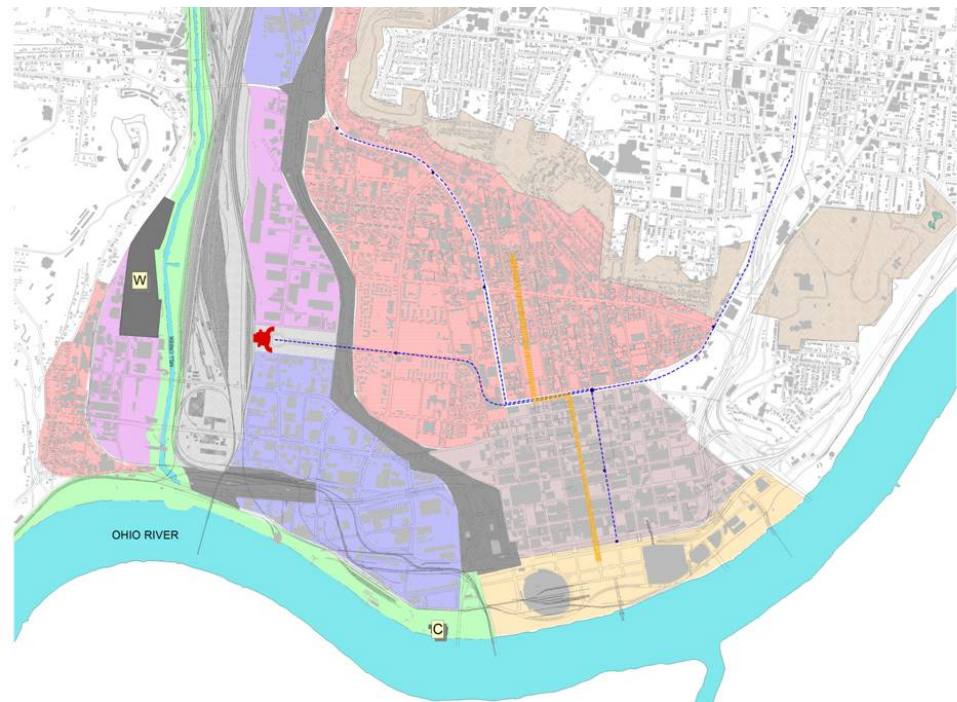
The first nodes are the highway exit which connect the infrastructural system with the local area; the second nodes are the playground area, the University campus and the Hospital centre; the third nodes are the Union Station, the intersection between the Ohio river and the Mill Creek, the intersection area of the two subway lines. The future development of these last nodes could create in the basin area physical and functional connections.

At the upper scale there are environmental corridors and infrastructure. The first connections are the Ohio river, the green corridor along the Mill Creek and the morphological corridor represented by the foot of the hills and the most important green open spaces around the urban core.

The infrastructural corridors are the highway and the subway. The highway lines connect Cincinnati to the north and the south of the metropolitan region, but they make a sort of ring around the basin area.

The Masterplan

The Masterplan is composed by land uses, mobility and transport infrastructures, corridors and technological facilities.



About the land uses there are the residential areas, the industrial areas, the central business district, the mix use areas and the sport and events area.

There are also nodes and natural, infrastructural, cultural connections. The first connections are the Mill Creek green area and the ecotone zone along the Ohio river. Moving from the mouth of the Mill Creek to the foot of the hills along the Ohio river front there is the passage from natural green areas to recreational a more artificial green areas (events and sports area).

The second connections are the highway lines, the subway lines and the railway lines. In our masterplan we want to improve the public transport versus the private one. The subway lines connect both the west part of the city (Union Station and railway complex) with the north-east part (University and Hospital centre) and the north part of the city with the south part (events and sports area). In this infrastructural system there are three different nodes improved or created with our project: the Union Station, the intersection between the two subway lines in the central part of the basin area, the intersection between the highway and the north-south subway line. In this last node we believe to realize an inter-modal platform in which it could be possible to leave the car and to take the public transport.

There is also the cultural stream which connect Over the Rhine, West End, Central Business District and events and sports area. Moving along this

stream from the south to the north we pass from urban cultural facilities (museum, library, Music Hall etc.) to neighbourhood cultural ones (schools or community centres). The cultural stream stops in Findlay market. Along this axis it could be possible to create other cultural facilities which could become new attractive nodes for the basin area. We think also to create in the Central Business District near the cultural axis a low speed area with an improvement of the pedestrian paths.

The action in masterplan give value to some areas that represent in some case existing or potential nodes of multi nodal region and in other case are or can become nodes at the local scale. Besides, the action in masterplan support the relation between nodes and areas improving the public transportation system and the connections for unify the fragmentation of the basin area.

2.2 – The projects of intervention

We suggest four projects of intervention for the basin area, which are all strongly related and supported from the public transportation network.

The first one, ***The railway complex***, interest the Union station, the railway and the industrial area along the railway.

The second one, ***The Ohio water front***, interest the ecological corridors of Mill Creek, Ohio river and the hills surrounding the basin area.

The third one, ***The cultural stream***, interest the central corridor between the playground, the BDC, OtR and Westend, along the subway network.

The last one, ***The view from the highway***, interest the highway system, considered from the visual point of view like a corridor or like a barrier of perception of the basin area.

The new role of public transportation network

The public transportation network proposal consists of two levels, the regional and the local.

Concerning to the regional network we are considered the proposal of revival of the public railway, by the improvement and extension of the existing rails. The proposed high-speed railway primarily connects Cincinnati with the International Airport and the major cities of the north, Dayton, Columbus and Cleveland. The existing Union Terminal will be reused for the initial purpose it was built, but at the same time it will keep its function as a cultural center. This will be achieved by the extension of the building with two new wings, north and south of the existing, preserving its architectural features. Our focus is on the connection with the International Airport to create an alternative option of transportation



to it and reduce the congestion of the Interstate Highways. The Union Terminal becomes a major node of transportation, preserving its cultural purposes. Besides it will be the terminal of the proposed subway and become the node of transition from the regional transportation network to the local.

The proposal for the local network consists of three levels of transportation means, the subway, the trams and the buses. The priority is given to the improvement, completion and extension of the existing subway tunnel and the addition of a new subway line which begins from the Union Terminal as mentioned above.

The first line connects the Western Hills with the riverfront, through Central Parkway and Walnut Street. Western Hills Terminal is considered as a major node, which in addition with Union Terminal will change the form of the city. Western Hills exit of I-75 has to be upgraded and indicate the importance of the transition from the car to the public transportation. For this purpose, Western Hills node will include free parking lots and multi-purpose facilities as well as a connection to the Mill Creek Green Corridor. This subway line will be an effort to prevent congestion and usage of cars for the city center and enable rapid accessibility to important sites of the city center, like Findlay Market, Music Hall and Washington Park, CBD and the redeveloped riverfront recreation area.

The second line connects the regional transportation node of Union Terminal and the intersection of Liberty Street and Reading Road with the ability of a future extension through Reading Road and Martin Luther King Drive, back to Central Parkway, Western Hills Terminal and finally Union Terminal. This subway line will enable passengers to approach West End proposed center, Music Hall and Washington Park, the roots of Mount Adams and in the future the University Campuses. Washington Park is upgraded by the intersection of the two lines, indicating the importance of its location as a cultural and recreation node, between Over The Rhine District and CBD. This importance is enhanced by the future ability of a transition from the subway to the tram. The subway network will provide a regular transport circulation in the basin and an integration of the most important nodes of the city.

The revival of the tram is a future transportation proposal, which will connect some of the major subway stations and circulate in the city center in a form of a ring. The ring consists of the riverfront, the newly redeveloped industrial zone, Liberty Street and back to the riverfront. It will be subdivided in two rings by the Race Street tram line. The tram will provide a safe, friendly environment and stable transportation, enhanced by the existing and new bus routes.

2.2.1 – The railway complex

Besides from the 3 new levels of transport: the subways, the trams and the busses, we also laid down a **new pedestrian and bike path**.

This path connects downtown Cincinnati with the Mill Creek. The path makes a loop so that it connects everything on its way. The new green landscape, the logistic and industrial area and Union Station which is an important node for all kinds of transportation. The path will be passing the important node that takes away a lot of traffic of the highway. It passes a new bridge and goes back along the Mill Creek to the Ohio riverfront.

On almost every place along its route the pedestrian/bike path accompanies it with a green border.

Union Terminal becomes a new node in the city. The renewal contains not only a more intensive use of the transportation network, but also makes the place a node of mixed use. The central plaza will be upgraded and bordered by new residential buildings with the opportunity for small scaled retail on the ground floor. Union Terminal remains a museum but will also become the central station for the whole node.

The New **industrial zone** is based on making the whole area more dense. We gathered all the occupied space in the area on a smaller zone. On the smaller zone we put together the existing buildings, new buildings, parking lots and free spaces. With making certain areas more dense we had space left in the surrounding to establish new building area, but most of all is the newly liberated space is used to give a green buffer to the industrial zone to keep the area away from the highway.

The newly developed **logistic area** is designed as the existing industrial building that remains on the site as a building used by artists. The buildings are linearly placed and the streets run parallel with them. The pedestrian/bike path runs perpendicular to the buildings and automobile traffic. The whole area is perfect to be penetrated on all different kind of ways.

The implementation of the **container terminal** will make the use of the railway area more efficient. By stapeling the containers the station can be used in a more efficient way. The station can work on a smaller area or can increase its occupation. The use of modern technology can lead to the growth of the whole railway zone.

2.2.2 – The Ohio water front

The project interest the corridor “**from the mouth of Mill Creek to the foot of hills**”, including the Mill Creek, the Ohio river front and the hills surrounding the basin area., where the empty and green areas can have different important function, from nature to recreation.

We suggest to maintain the **existing green area** and improve them with a **new zones of vegetation**, located in portion of not-used on under-used areas most connected with existing green areas.



A part of this not-used on under-used areas can be used for a rational **relocation of parking** for trucks, to concentrate this function in areas most far from natural corridors.

The existing and new green areas can have two functions: firstly for **environmental protection** from air, water and soil polluting agents, secondly for **landscape and visual point of view generation**, also with new parkways project.

An important proposal concern the **coal shipping area** now located along the Ohio river and sometime interested from floods: a more suitable location can be found nearest to the new logistic zone, where innovative technological solutions can permit the connection between coal warehouse and port along the river.



2.2.3 – The cultural stream

The cultural stream is a local level linear network of pedestrian, low speed zones and important cultural and recreation sites. It connects Findlay Market redeveloped center with the riverfront, through Pleasant Street in the core of Over the Rhine District, Music Hall and Washington Park, Central Parkway and finally Vine Street in CBD. Public transportation provides easy accessibility, while landscape improvements, urban furniture, pedestrian zones, low speed zones, renovated parks and integrated network of museums, art and cultural centers will indicate it. It is not just a path or a single zone, but a network which will provide the challenge to improve its surrounding areas and functions and integrate areas which are currently segregated. Its north-south direction underlines the purpose of integration, of Over The Rhine District and CBD.

The cultural network consists of two parts with different formation and architectural features.

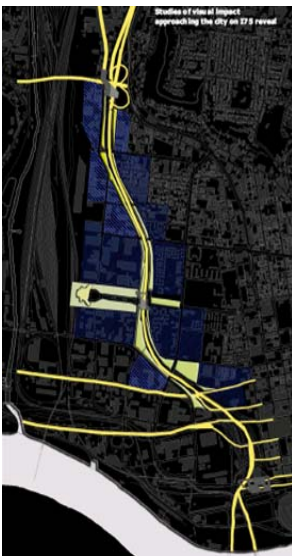
The **Over The Rhine** part, which integrates Findlay Market, Pleasant Street with its unique architectural heritage, extended Washington Park and Music Hall and the new Arts School (SCPA). They all become unified and accessible by pedestrians. Public transportation enhances the purpose of integration and accessibility. The district becomes more safe and friendly to all citizens, while the stream initiates functions and activities for all. In addition, the transition from OTR to CBD will not be one between two segregated areas; the intersection of the two subway lines is located in the middle of the cultural stream, on the former “borderline” of the two districts, indicating and enabling their integration.

The **CBD** part connects OTR with the riverfront through Vine Street. Major cultural places are integrated, while the CBD becomes much more friendly for pedestrians than vehicles. All the surrounding vertical and parallel streets are affected; Race Street, Walnut Street, Garfield Place, Seventh,

Sixth, Fifth and Fourth Streets. Arts and culture become more familiar for inhabitants and visitors; Hamilton Public Library, Aronoff Center and Gallery, Contemporary Arts Museum, Fountain Park, Taft Museums and Fourth Street historic buildings are all part of the same tour. The zone between Central Parkway, Race street, Third Street and Walnut Street will become a low speed zone, with the widening of sidewalks, speed limit for vehicles, signs and stops indicating the places of interest. Riverfront Subway Terminal the end of the cultural stream becomes a place of attraction, as a large platform covering I-71 between Race and Walnut Streets will be used as a park and a transition node from the subway to the tram, while it becomes the entrance to the riverfront recreation zone.

The occupation of vacant lots throughout the cultural zone for cultural and leisure purposes is also considered as necessary, to transform the urban grid to a friendly environment for people and an interesting area for pedestrians, rather than cars. The cultural zone can revitalize the heart of the city and significantly improve the quality of living.

2.2.4 – The view from the highway



The study on the highway starts from the analysis of the six existing alternatives project on the I-75 Mill Creek Expressway. This project aims to improve the traffic congestion on this infrastructure adding new lanes. We choose the zero alternative which means no improvement of this highway in the part between the first north subway exit and the events and sports area. In this way it is possible to let people to use the inter-modal platform and to replace the private transport with the public one.

With our project we want to give to this highway a more urban role with the insertion of new green areas made by artificial hills or with tree-lined roads .

The role of these green areas is :

- to **protect** the urban core **against** the air and noise **pollution**;
- to **reduce the visual impact** on the urban landscape;
- to **protect the cycle path** from the high speed traffic on the highway;
- to let the **vision of some important points or areas** (such as the union station) along this path.