

Charleston



Rail Corridor Revitalization A Study in South Carolina

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University of Georgia • Urban Design Studio • Spring 2001

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US more
graphics for 2000,

Charleston cover only

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Charleston

Rail Corridor Revitalization

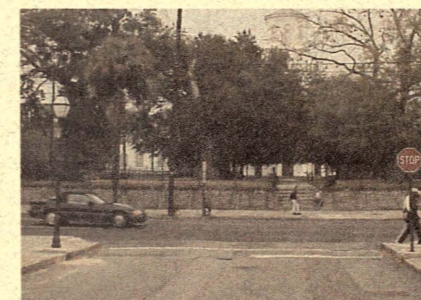
Introduction

This book was assembled as the culmination of a semester long urban design studio, LAND 6040. The studio was designed as an inquiry into concepts of community and place, both in architecture and urban design, and the implications for landscape architecture. Projects were selected and alternative design strategies investigated at a variety of scales and densities for living, from individual units to an entire city.

We chose to look at an eight block area of Charleston, South Carolina, stretching between King and Meeting Streets from Marion Square north to the expressway (see vicinity map). Traditionally the city's main rail corridor, the site is centrally located, but has developed more slowly than surrounding areas. The old rail right of way still exists and creates an open and distinctly different corridor through the center of the site. The train station has been converted into the city's visitor center, but is currently isolated from the tourist attractions in town. Although King Street and the southern portion of the site including the visitors center, has dense retail development, the northern part of the site is characterized by large vacant warehouses, chain retail development and surface parking. Despite the vacancy of buildings, the site is highly used by surrounding African American communities. Upper King Street supports a thriving African American business district. However, the historic district lies directly south of the site and development pressure from expanding tourism is becoming a larger and larger issue. In addition, the College of Charleston owns one block in the center of the site and has proposed a six thousand seat sports arena.

The objective of this project was to envision development over the long term that would allow this corridor to function as a "melting pot" at the center of the city reflecting its industrial history and its African American community, while at the same time addressing development pressures. A second objective was to study scale and density of development to maintain the historic character of Charleston.

Vicinity Map

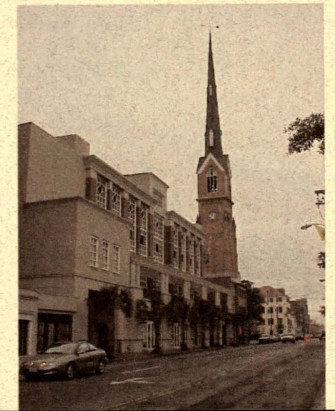
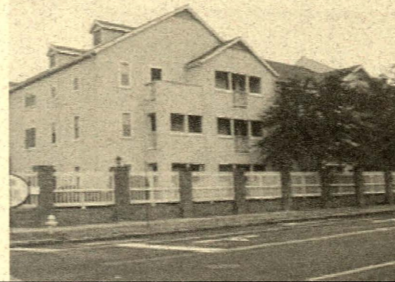


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Introduction

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MEETING STREET

Local

Tourist

Deteriorating urban fabric

Bustling commercial

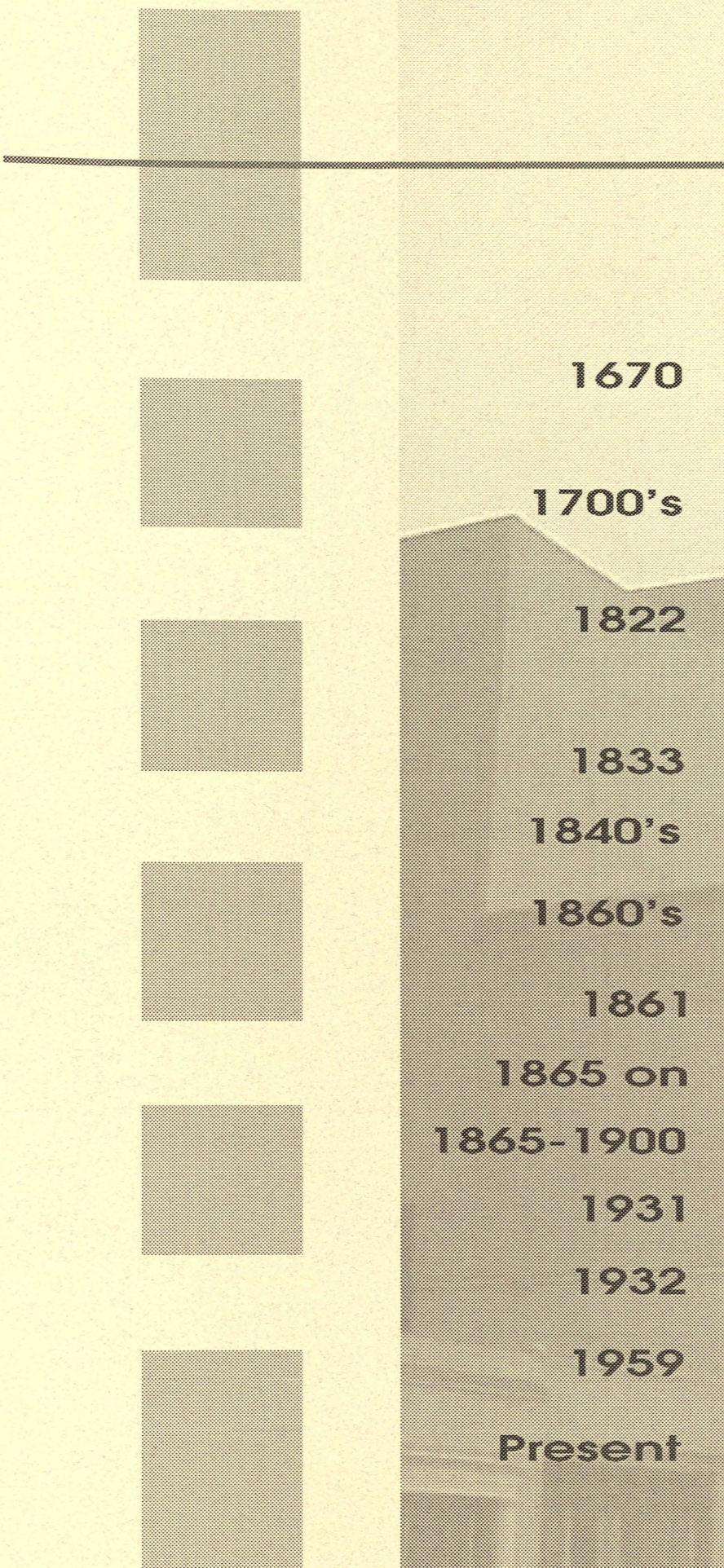


KING STREET

Charleston

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Visual Survey



1670

City founded and named after ruling King of England, Charles II. Three months later, first slave brought to Charles Town. City flourishes with trade of slaves, indigo, rice, and cotton for next two hundred years.

1700's

Unique culture at this time allows slaves working independant of their masters, free blacks, mulatto groups, and poor whites to comprise richly diverse communities in northern areas of city.

1822

Plan for slave uprising spearheaded by Denmark Vessey, a free black, discovered. Vessey and 34 slaves hung. Citadel built immediately afterwards to protect elite white.

1833

First railroads constructed in city.

1840's

New laws increasingly put into place, curtailing non-white freedom.

1860's

Laws persecuting persons of color cause most individuals to put themselves back into slavery or flee the state.

1861

Civil War begins.

1865 on

Many blacks move back into city, often occupying their previous residences.

1865-1900

Charleston integrated.

1931

Professional planners help city adopt the nation's first historic zoning district.

1932

Trolley line ceases to run between northern and southern city districts.

1959

Historic Charleston Foundation begins movement to preserve neighborhoods above Calhoun Street.

Present

Mainstay of Charleston economy is tourism.

Charleston

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General History



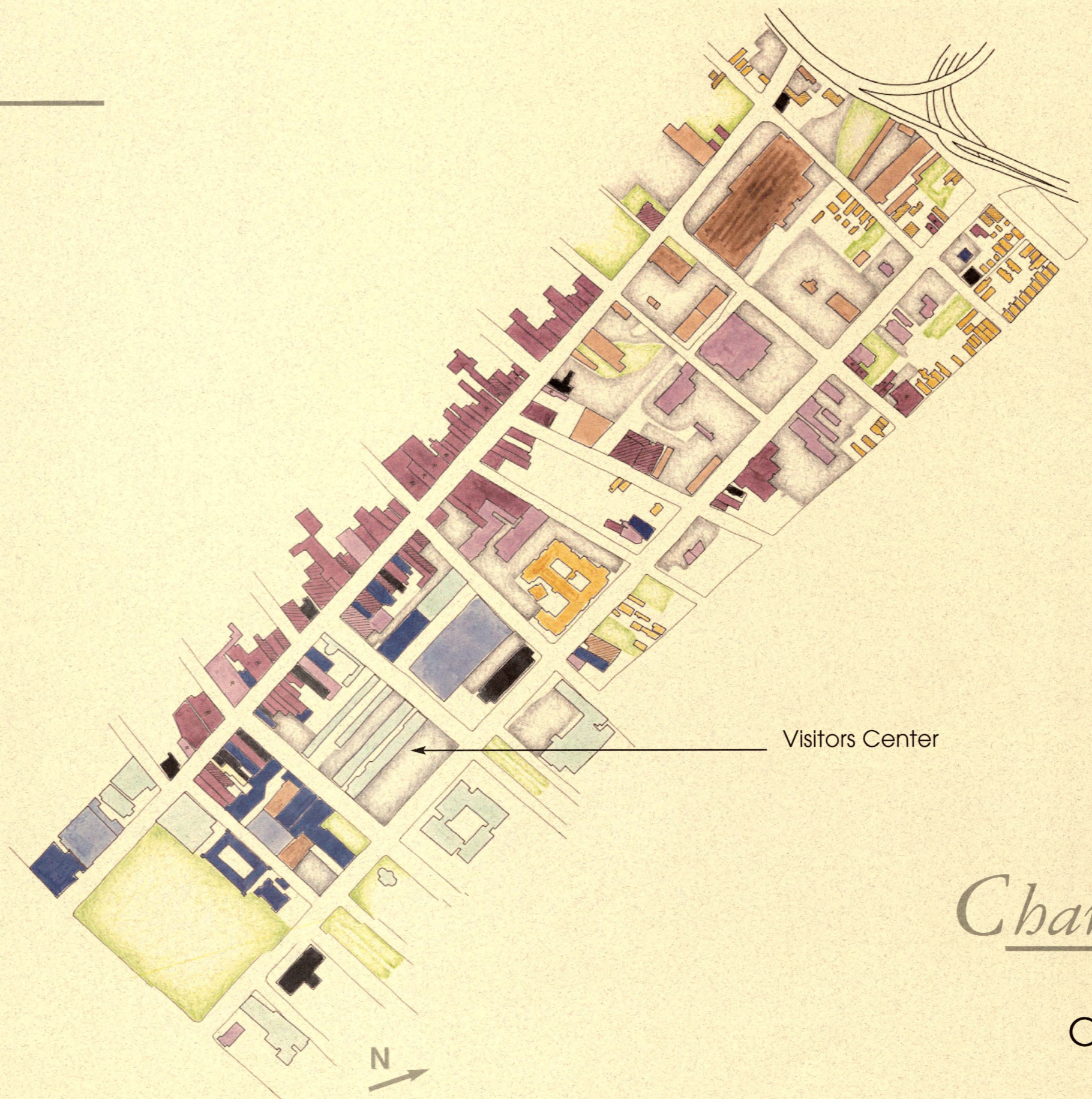
Visitors Center

Charleston

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Figure Ground

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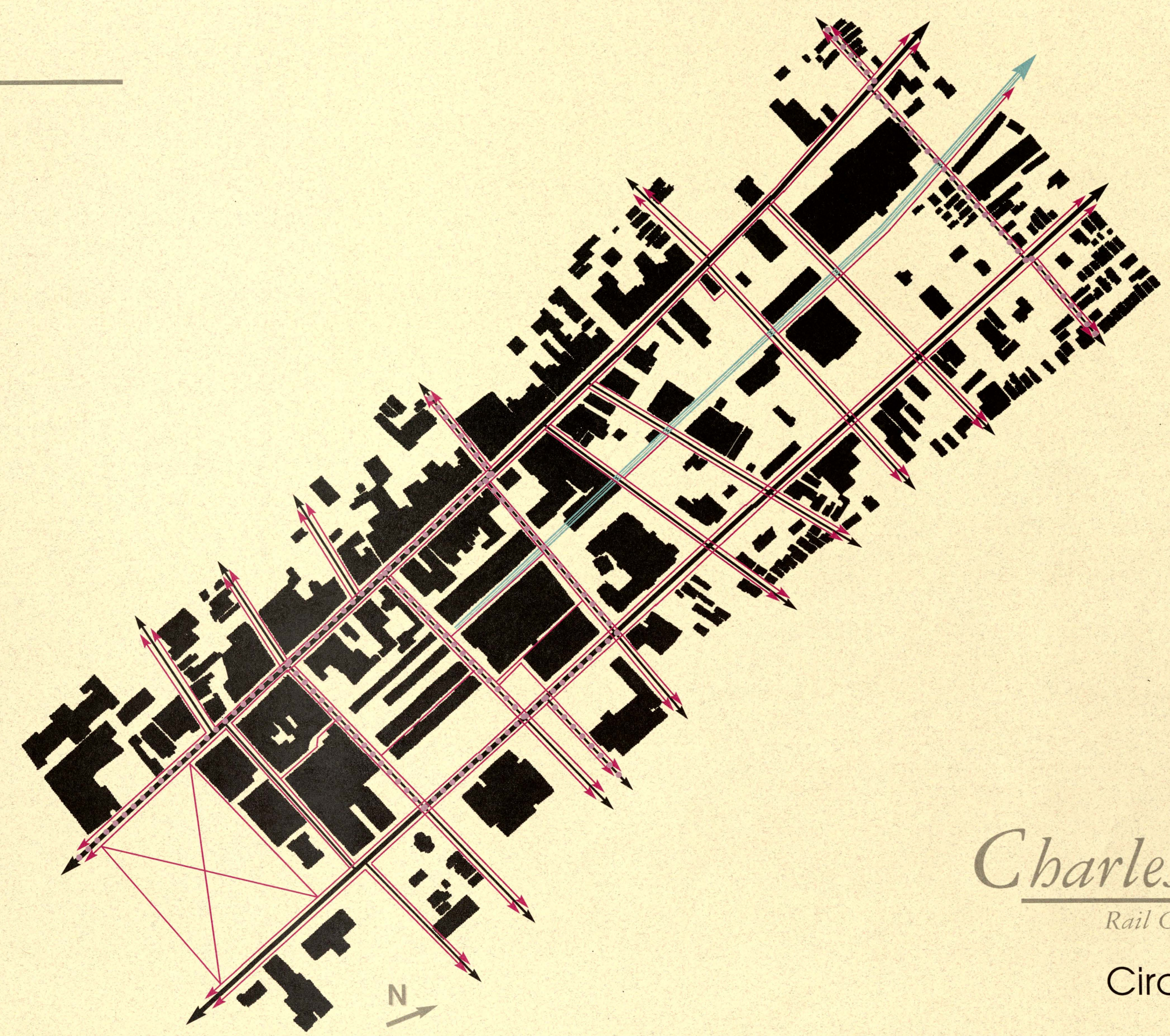
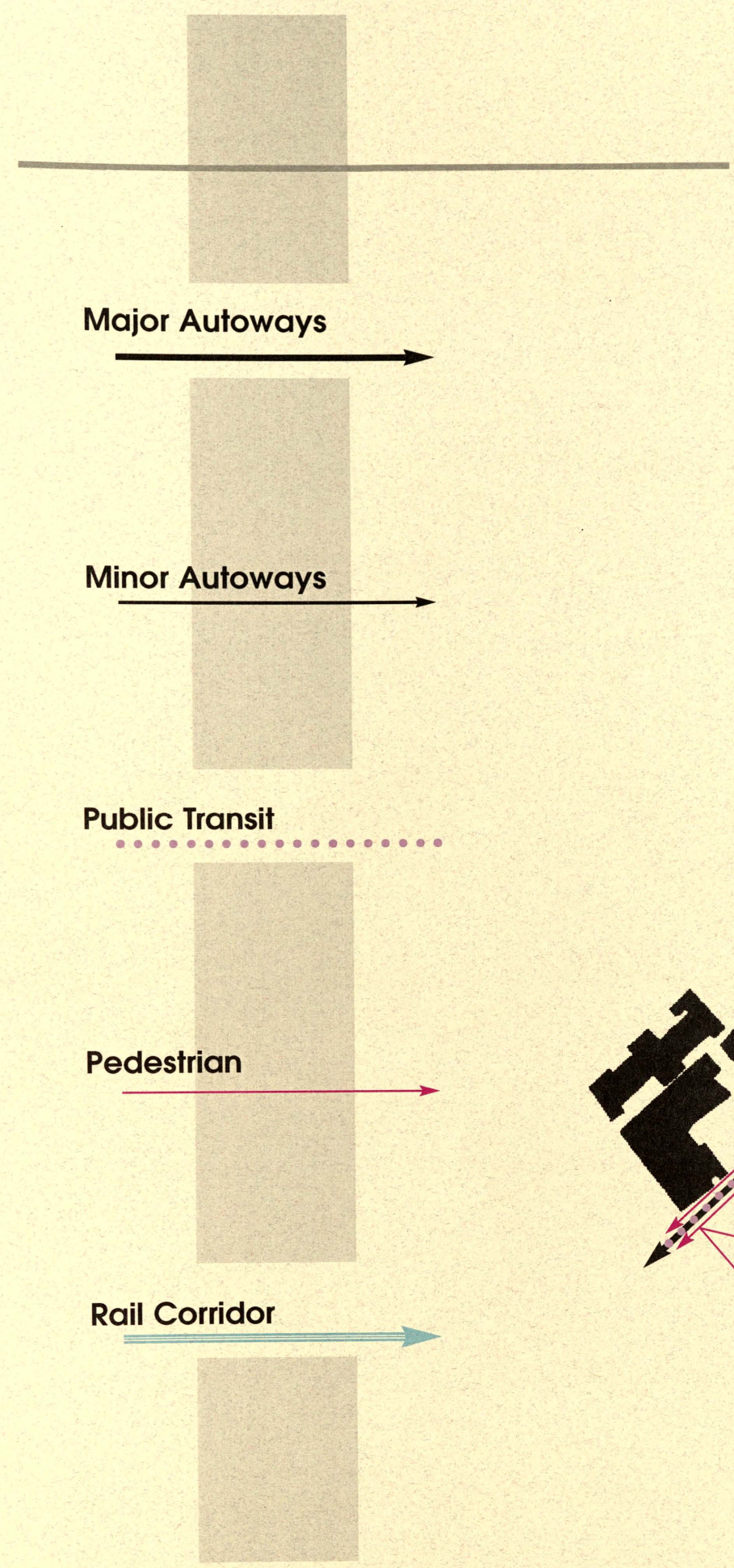
Current Land Use

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Historic Neighborhoods



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Circulation Plan

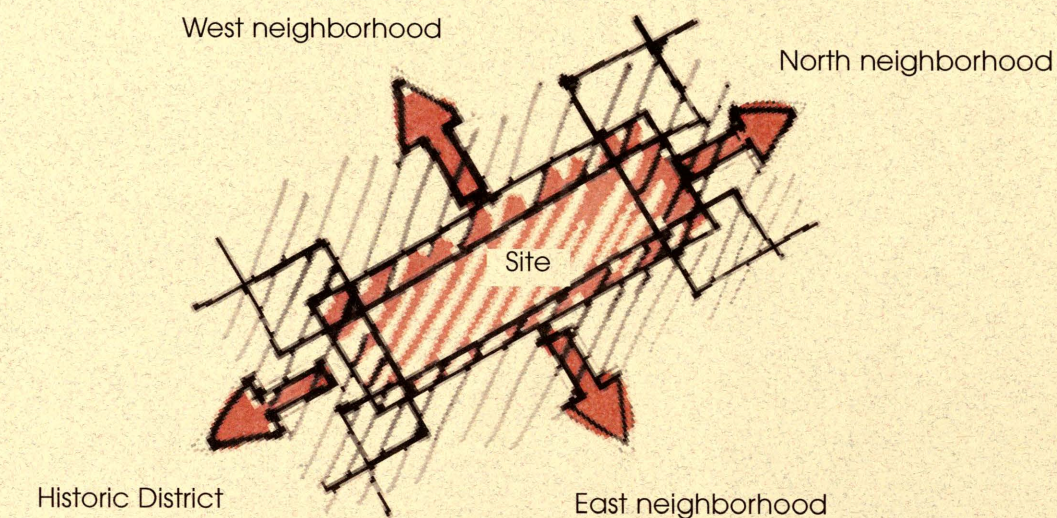
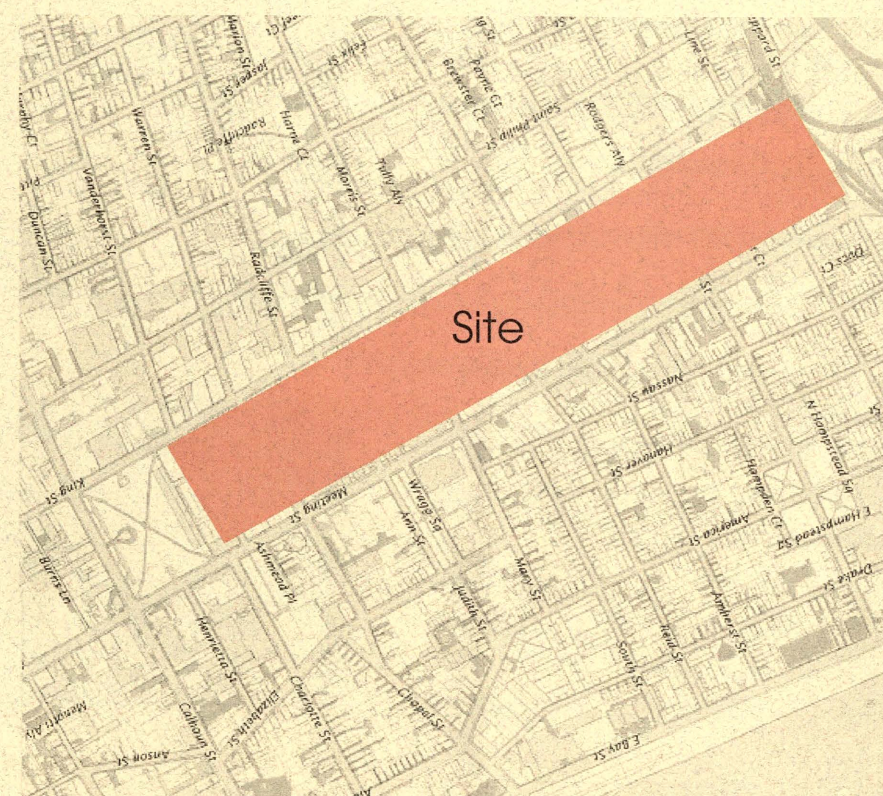
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General Program

The overall program was to capitalize on two hallmarks of Charleston's character, high density mixed use development and a pedestrian friendly atmosphere, to revitalize this site and unite it with surrounding neighborhoods.

The following strategies were used to achieve the program:

- **Community Involvement**
- **Pedestrian Corridor**
- **Activity Centers**
- **High Density Mixed Use Development**



Reknitting the urban fabric: Conceptual diagram

Charleston

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Program

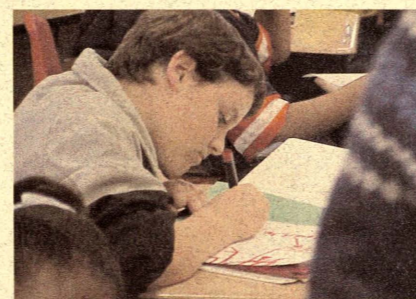
Community Involvement

Community involvement is a key to successfully incorporating new development into an existing neighborhood, and retaining current residents without driving up costs. The more involved and committed local residents are to ownership of this process, the more likely it is that development will be appropriate to the needs of the neighborhood, allowing both residents and new business to prosper. Three basic concepts are recommended as stepping stones to a lively and flourishing community:



Organize community

In Charleston this would involve organizing leadership of surrounding areas which don't currently have neighborhood associations and strengthening the neighborhood associations which do exist. Also, community charrettes provide an excellent opportunity for residents of individual neighborhoods to come together and critically look at ways to improve their area.



Establish a master vision

As a whole, community members should look at assets, needs and services in their area. Broader issues than housing should be addressed when looking at the requirements of the entire neighborhood; services and programs should be included and geared toward all generations. When community members see themselves as key resources for their own neighborhoods, lasting change follows. Setting goals which are measurable and attainable is vital, as well as establishing and adhering to funding priorities.



Avoid gentrification

Charleston currently utilizes eminent domain in order to make low income housing available to local residents. Additionally, the Historic Charleston Foundation sells restored homes to locally invested individuals. Generally, residents can also be encouraged to stay in an area when community land trusts are established, protecting against overwhelmingly commercial development. Strict zoning controls are also a help. Last, imposing a speculator's tax on investment appreciation may help to make an area less desirable to a prospective developer.

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Rail Corridor Revitalization

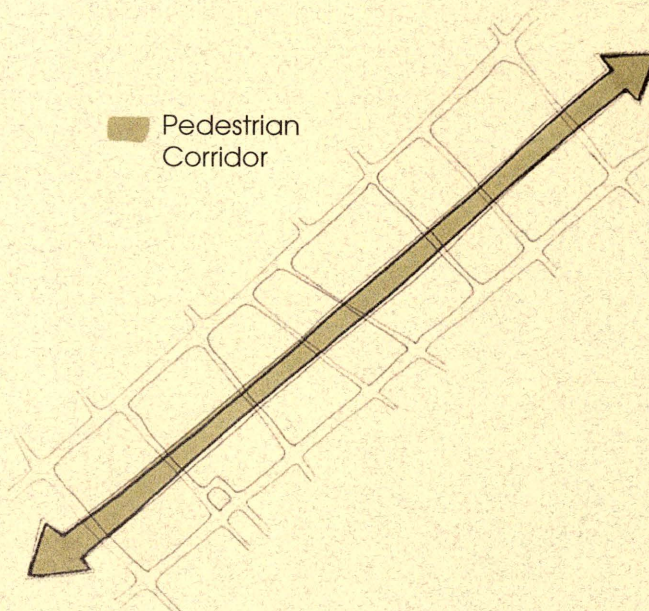
Program

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Pedestrian Corridor

The first objective is to establish a formal pedestrian corridor along the old rail lines running north south between King and Meeting Streets. It is apparent that the rail right of way is already heavily used drawing foot traffic from northern neighborhoods through the site. By developing this corridor we hope to maintain the avenue for interaction while

also creating an attractive option for movement northward from the historic district and Visitors Center. In addition, a light rail system has been proposed for the city to connect the lower peninsula with points north. In our plan we propose re-establishing the old trolley instead, beginning at the Visitors Center, traveling along the pedestrian corridor, and extending northward. Our recommendation would only be appropriate if the trolley could link into the existing public transportation system.



Conceptual Diagram



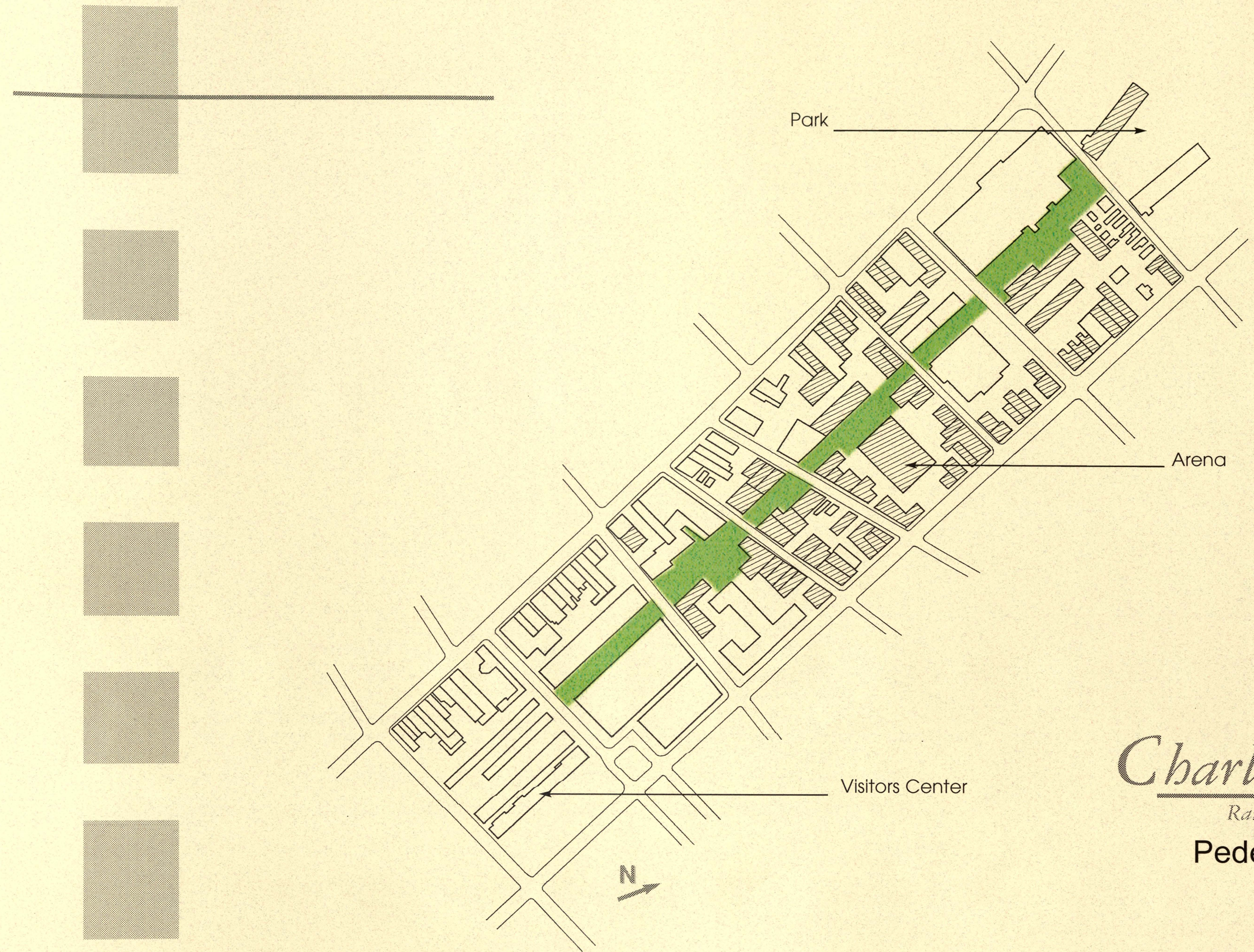
Existing rail right-of-way



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Program

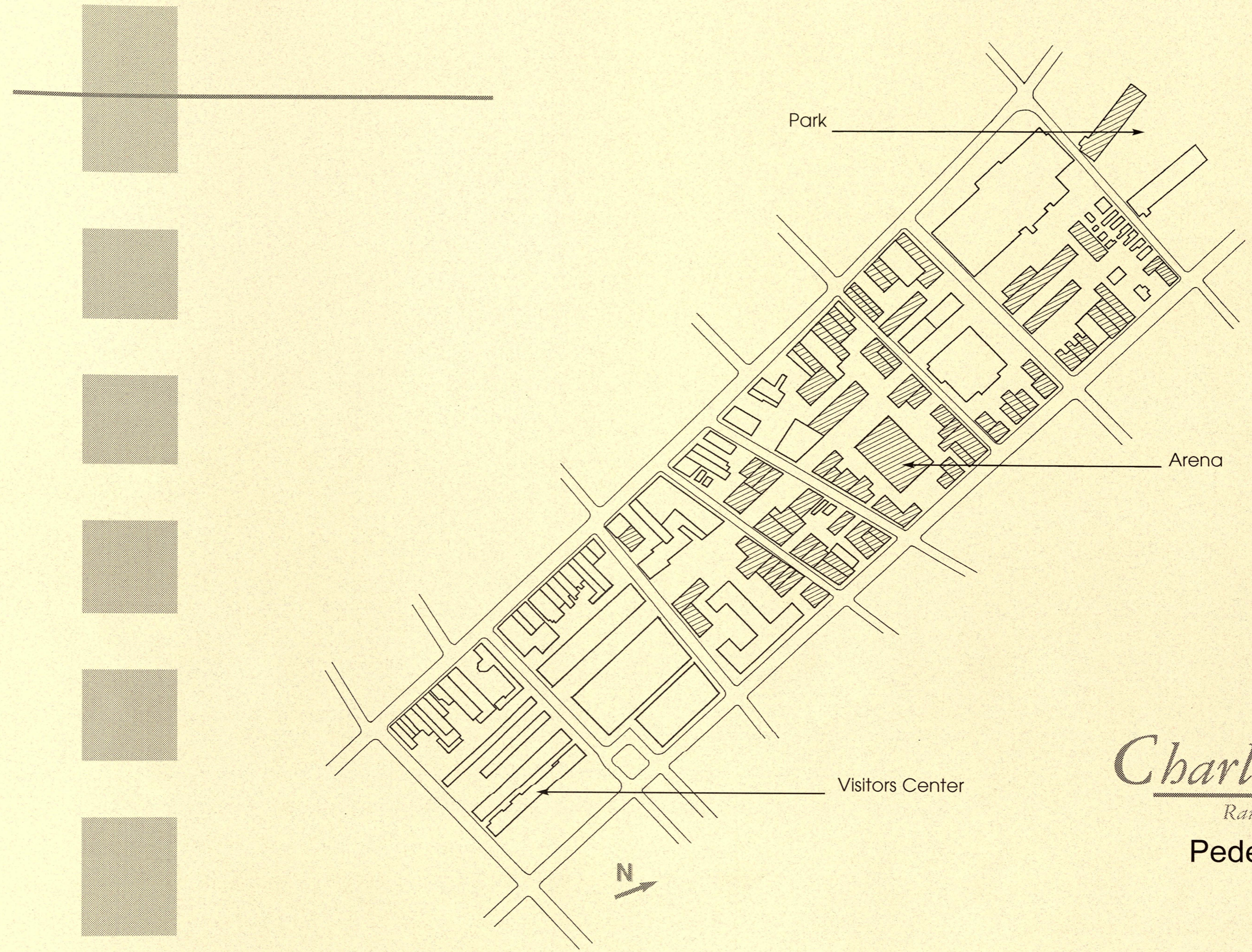


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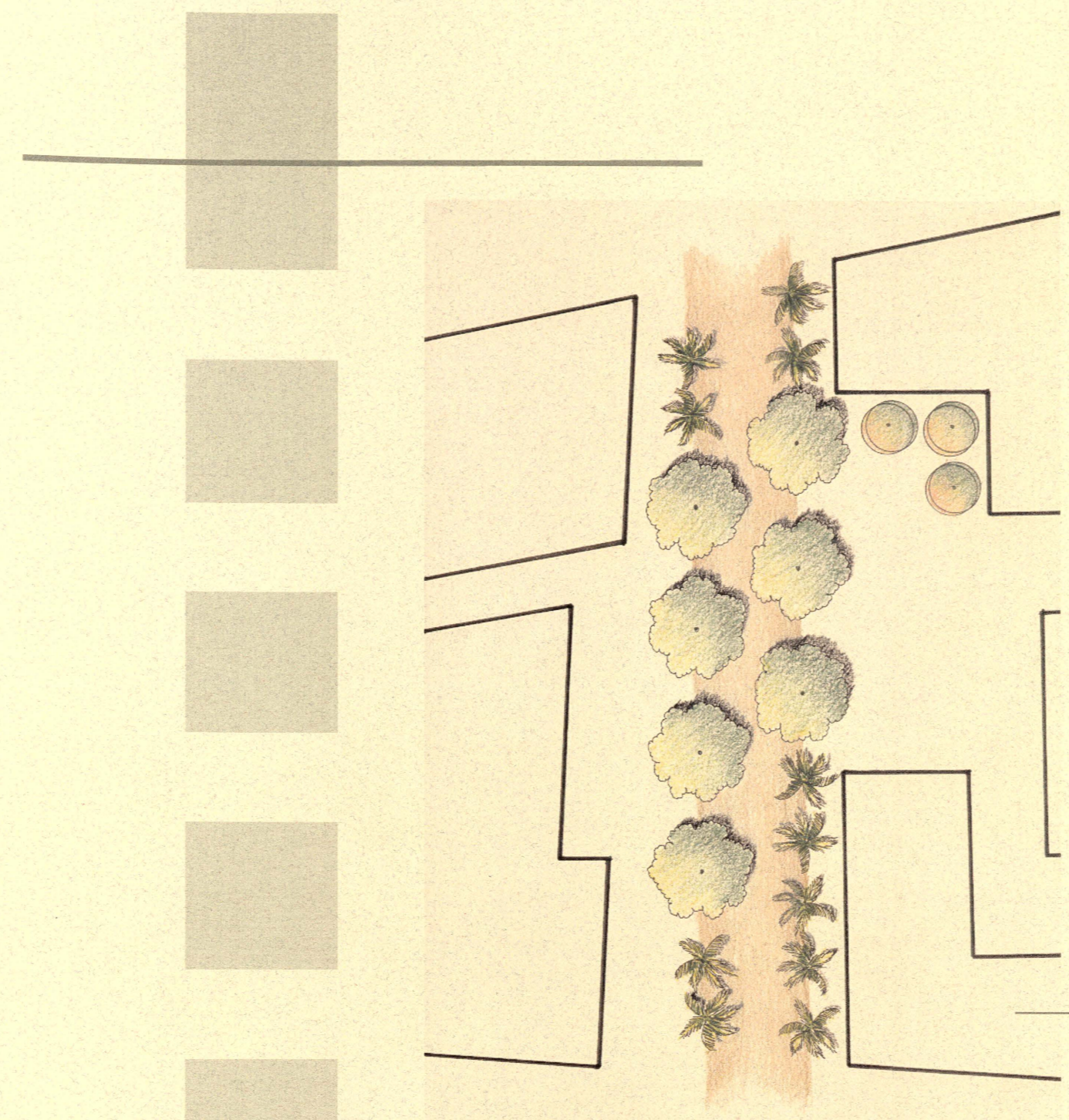
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Pedestrian Corridor

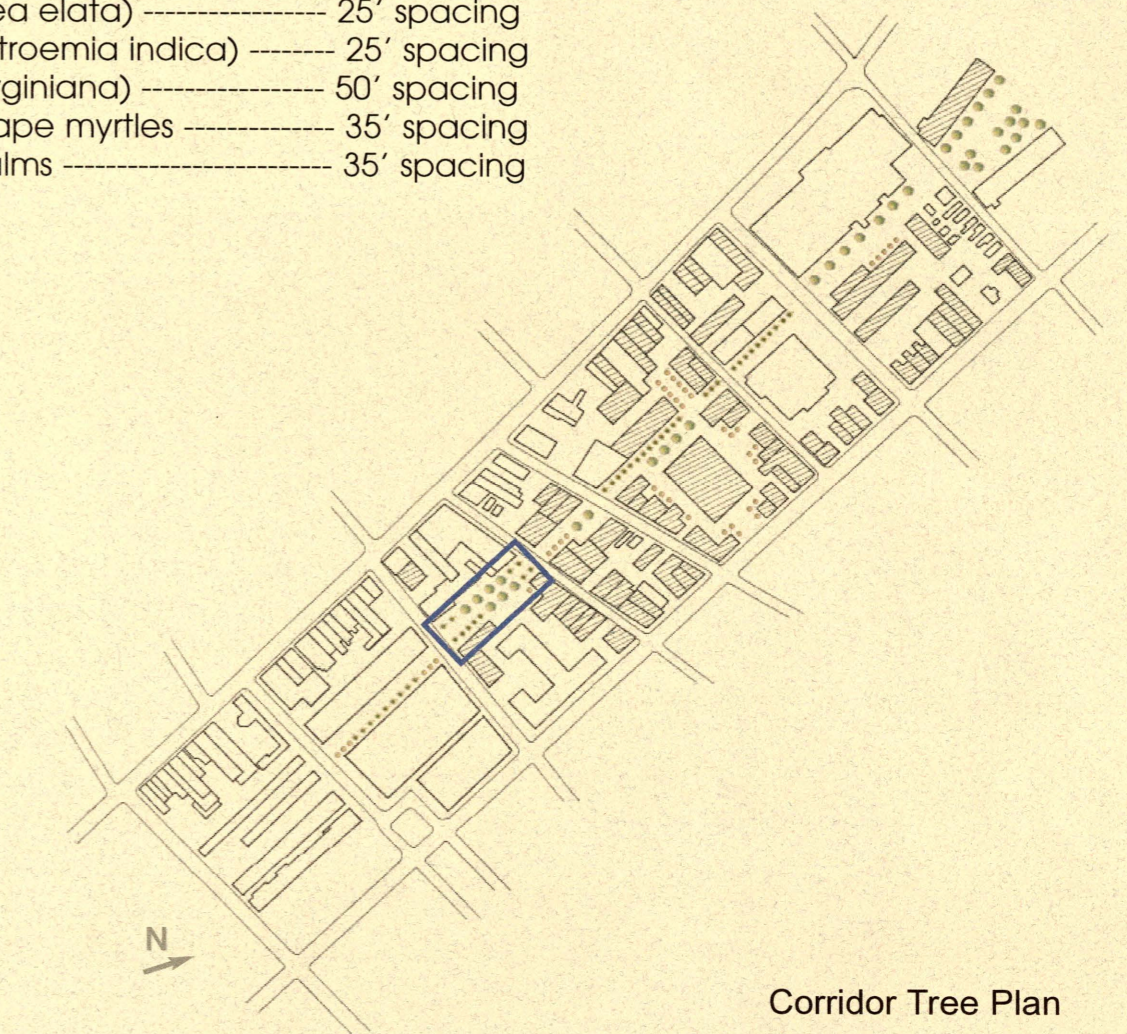
Scale: 1" = 300'



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Pedestrian Corridor
Scale: 1" = 300'



Royal Palms (*Roystonea elata*) ----- 25' spacing
 Crape Myrtles (*Lagerstroemia indica*) ----- 25' spacing
 Live Oaks (*Quercus virginiana*) ----- 50' spacing
 Between oaks and crape myrtles ----- 35' spacing
 Between oaks and palms ----- 35' spacing



Corridor Tree Plan

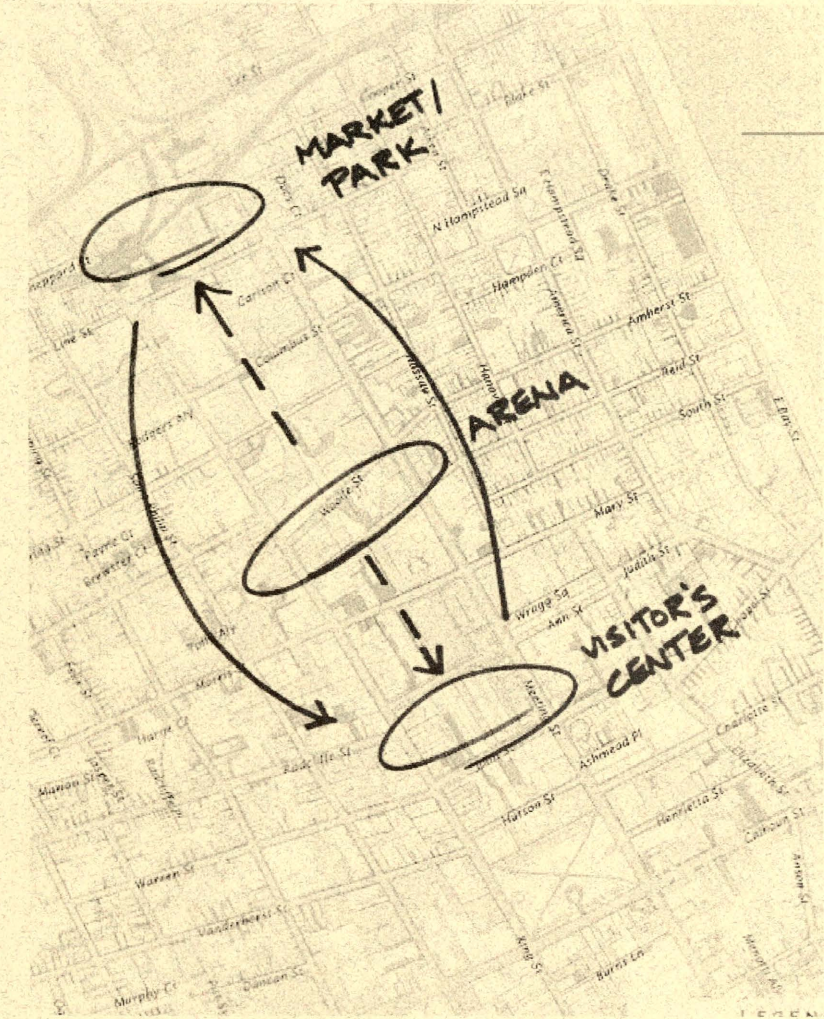
Street trees promote pedestrian movement.
 Plantings move from formal at the southern end of the corridor to informal at northern end.

- Palms begin progression where movement is rigid and linear like rail buildings.
- Oaks are predominant at northern end where use is mainly local rather than tourist..
- Oaks predominant near gathering areas like the arena and residential complexes.
- Crape Myrtle appears in semi-private spaces along the corridor.

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 Pedestrian Corridor
 NTS

Activity Centers

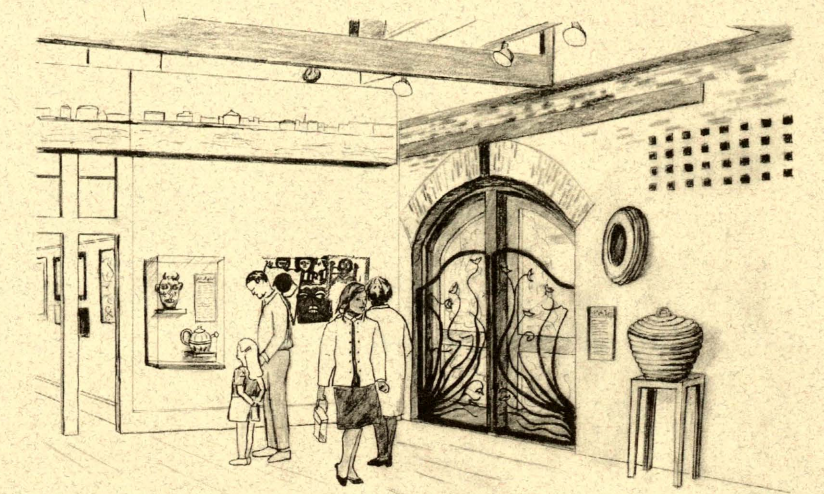
In order to solidify the presence of the pedestrian corridor, we propose three activity centers that would provide a destination for pedestrians, both local and tourist.



Visitors Center

The current Visitors Center is located in the old train station situated at the southern end of the site and at the base of the proposed pedestrian corridor. At present the large space provides a gift shop and tourist information booth for hotel and entertainment reservations. However, the space is underutilized and reflects little of the character of Charleston. Our proposal is to create a cultural center that serves the same functions as the Visitors Center but provides a more comprehensive and personal

introduction to the city. The idea is to give visitors a more in depth look at the history and local culture, providing local artisan display space and a city history exhibit. For those visitors that want even more exposure, the other rail buildings adjacent to the train station would be used as studio and classroom space for local artisans to teach their trades and display their work. In addition, maps would be available noting different artisan workshops around the city for viewing work in progress and purchasing local wares.



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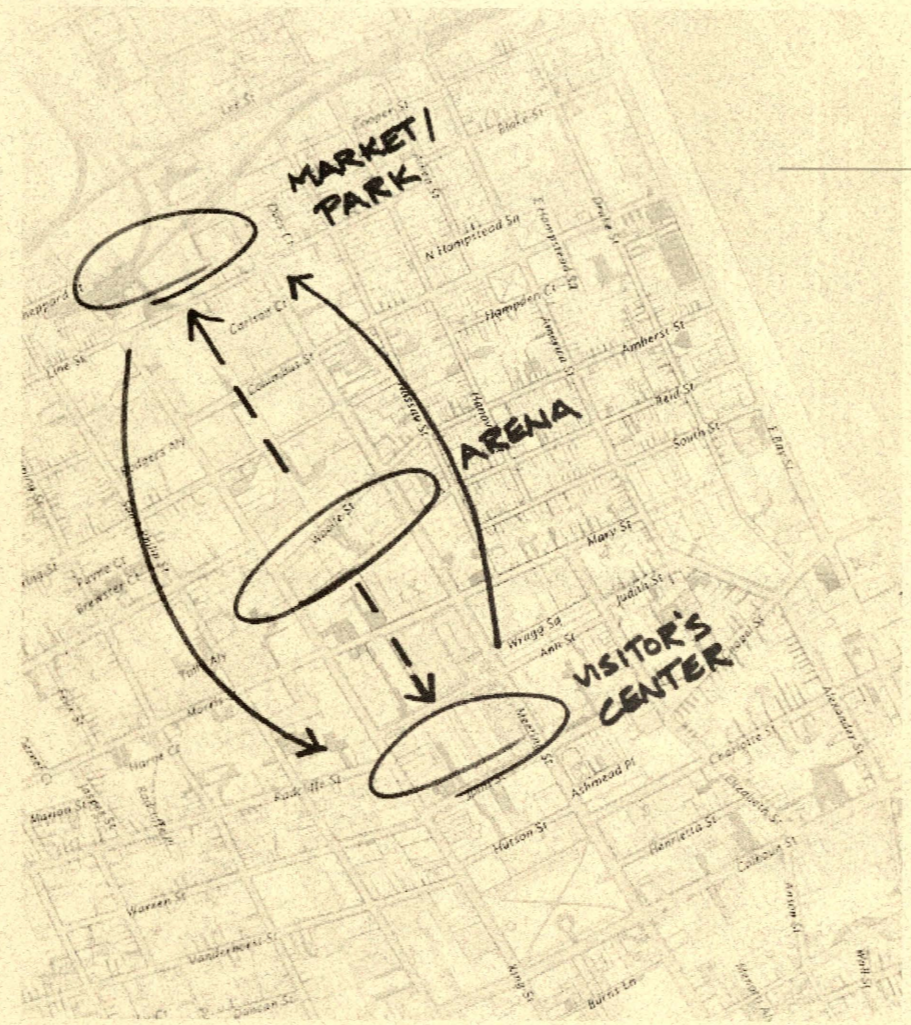
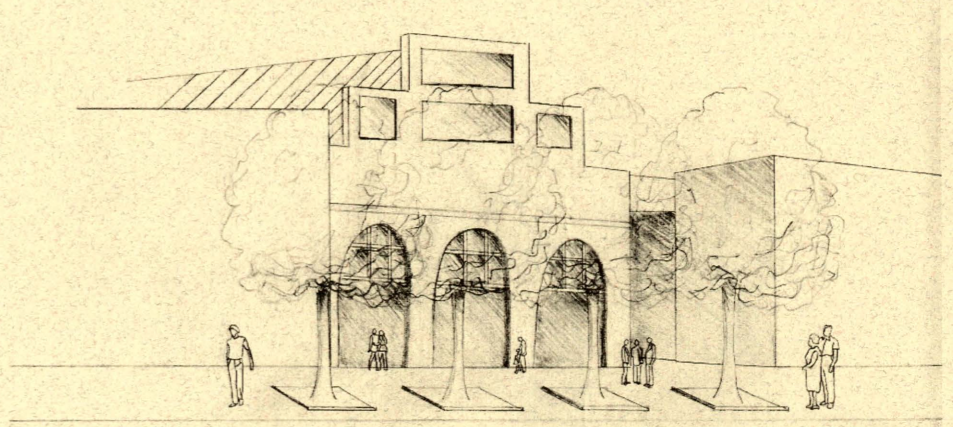
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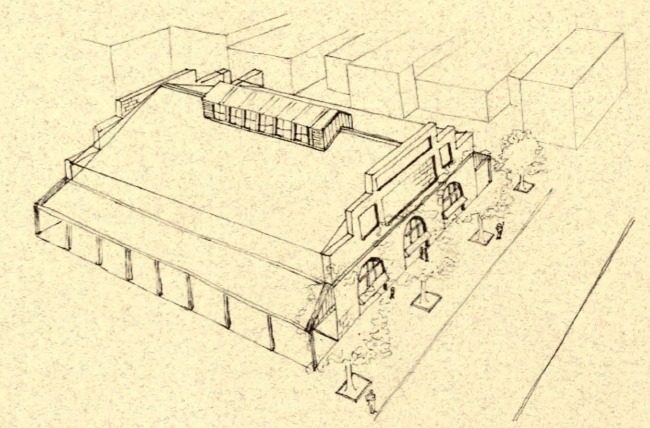
Activity Centers

The second of the activity centers is a sports arena, proposed by the University of Charleston.



Arena

The six thousand seat arena would be located between Woolfe and Spring Streets. The arena has the potential to divide the existing neighborhood due to its size, central location, and need for parking. However, if designed conscientiously, it could instigate the redevelopment of our site (much like the aquarium in Chattanooga, Tennessee) and could serve as a hub of activity at the center of the pedestrian corridor. By building in keeping with surrounding architectural styles, the large scale of the building could be mitigated and a sense of intimacy enhanced. Patrons could park in an existing parking garage a block away near the Visitors Center, thereby alleviating the need for vast expanses of surface parking.



Charleston

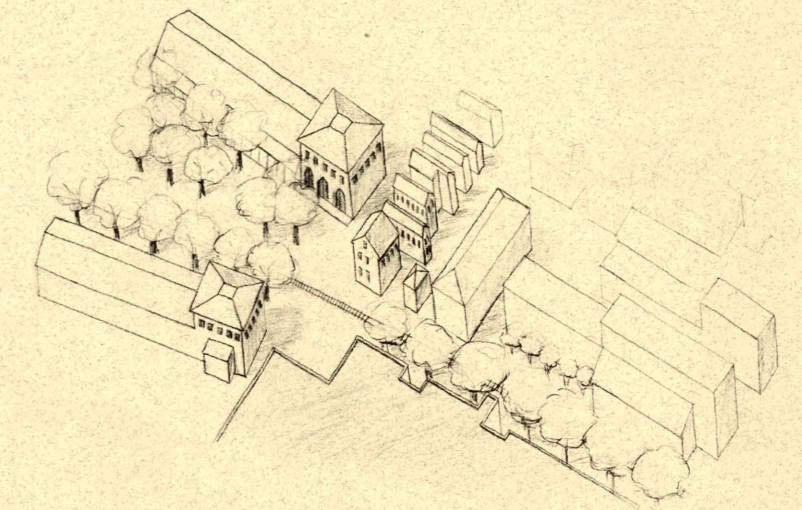
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Program

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Activity Centers

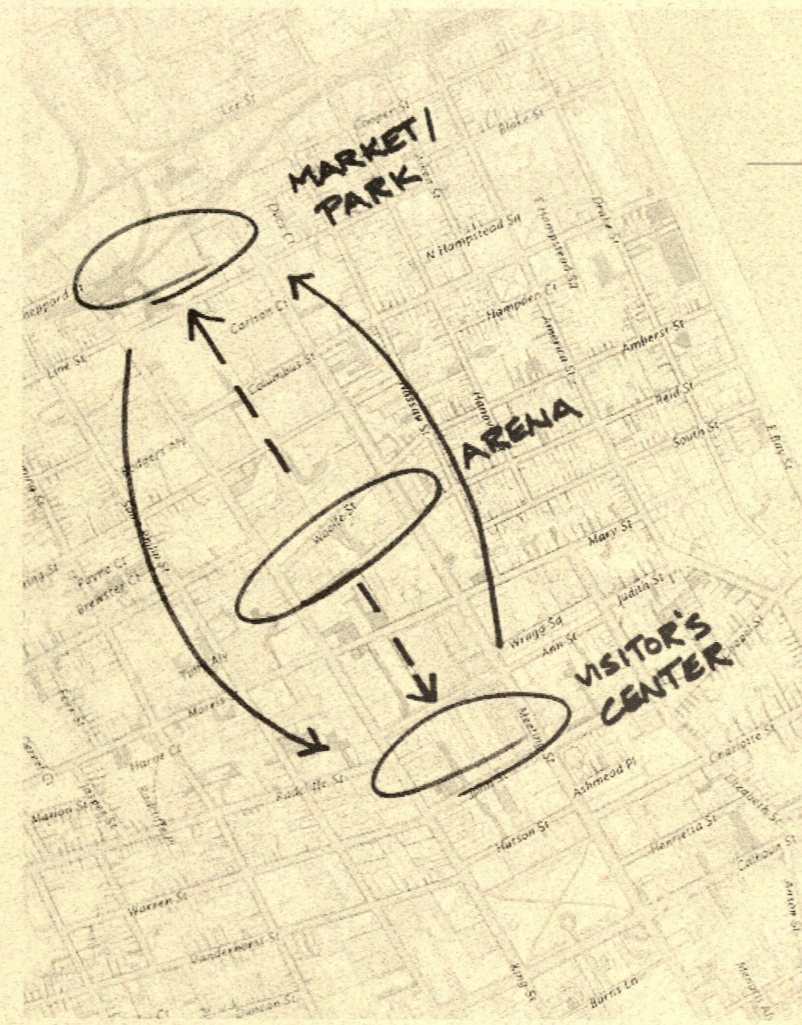
The third activity center is a combination market and park. This space would be a gathering place for surrounding neighborhoods and an informal market, attractive to both local residents and tourists.



Market/Park

There is a need at the terminus of the formal pedestrian corridor for both a focus and an invitation to enter from the northern neighborhoods; however, this portion of our site abuts the expressway and consists mainly of vacant lots. As in many cities, the construction of this raised expressway fractured an existing neighborhood. It is our goal to begin to reconnect the two sides by bridging the gap. With this in mind, we propose a park space that would extend under-

neath the expressway. In addition, an existing brick warehouse and a matching constructed building would provide adaptable space for local markets or other community activities. Since a critical mass of people is necessary to support this type of project, we recommend the park be part of a later development phase. The community's input is especially important in this case to ensure that security issues do not arise.

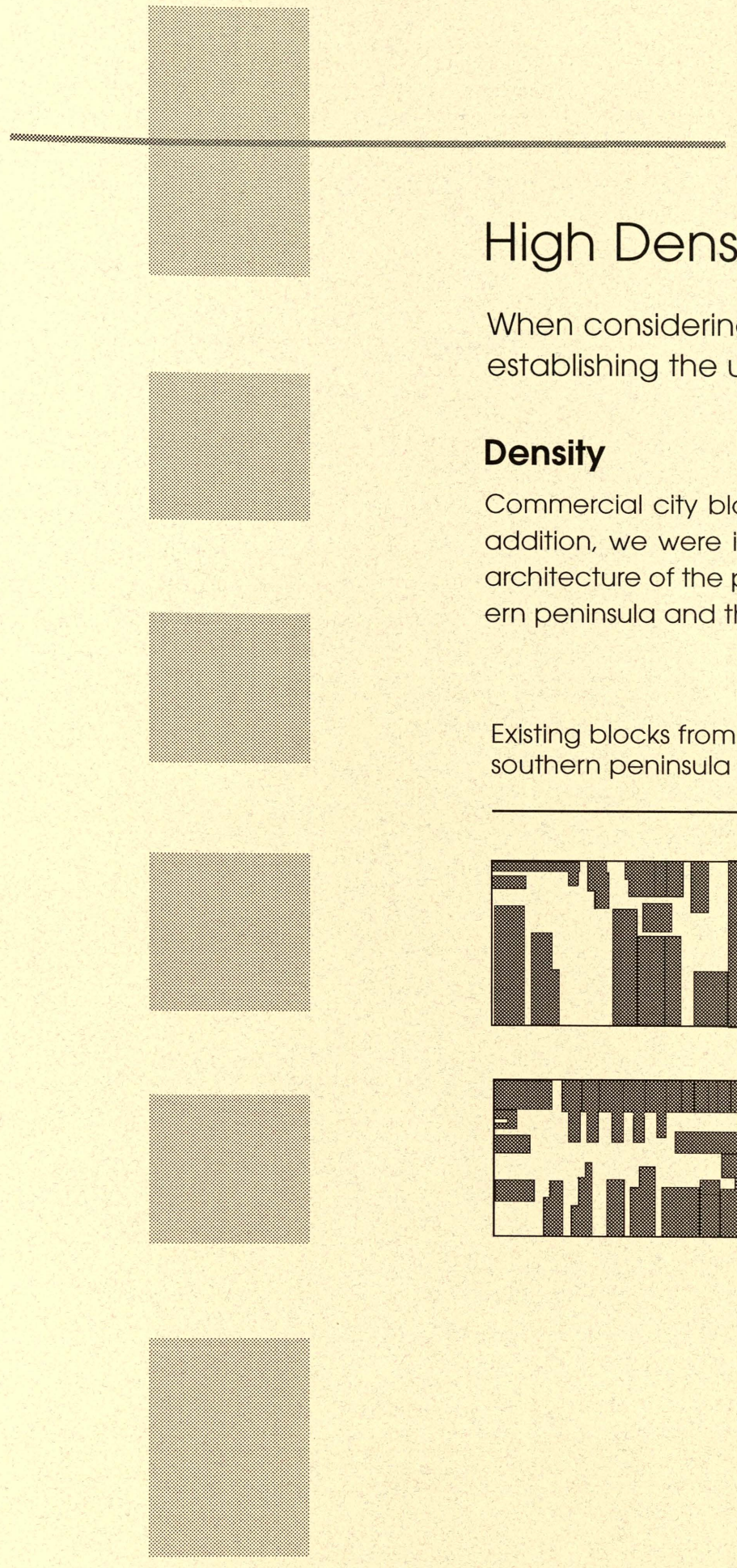
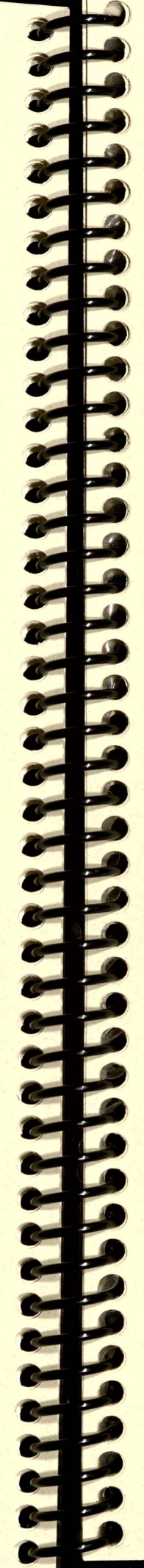


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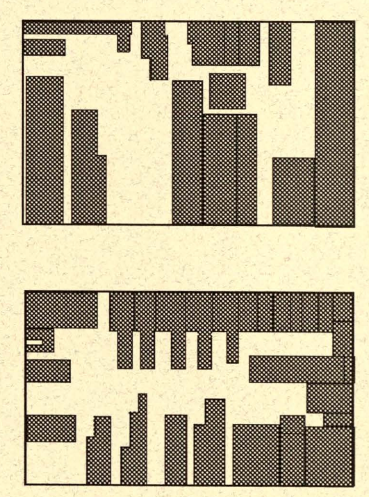
High Density Mixed Use Development

When considering infill development, preservation of existing structures was a priority as well as re-establishing the unique structural pattern that characterizes Charleston.

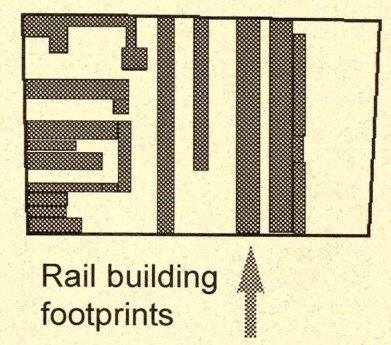
Density

Commercial city blocks in the historic district provided clues to deciding the density of new development. In addition, we were interested in maintaining the industrial history of the site, especially as it is reflected in the architecture of the period. Planned infill would result then, in a combination of the density of blocks in the southern peninsula and the shape and style of buildings from the industrial sites.

Existing blocks from southern peninsula



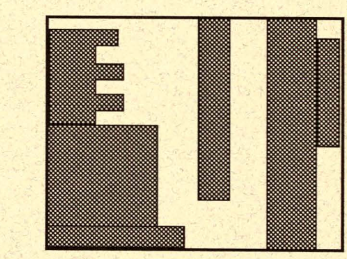
Existing blocks from industrial area



+

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Combined infill

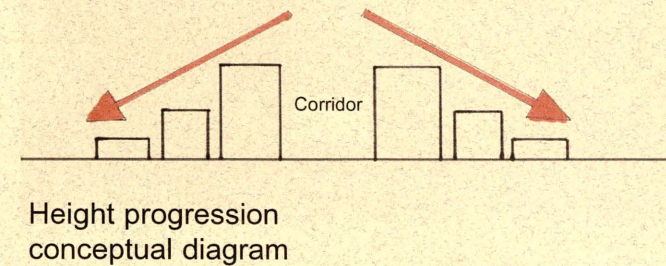
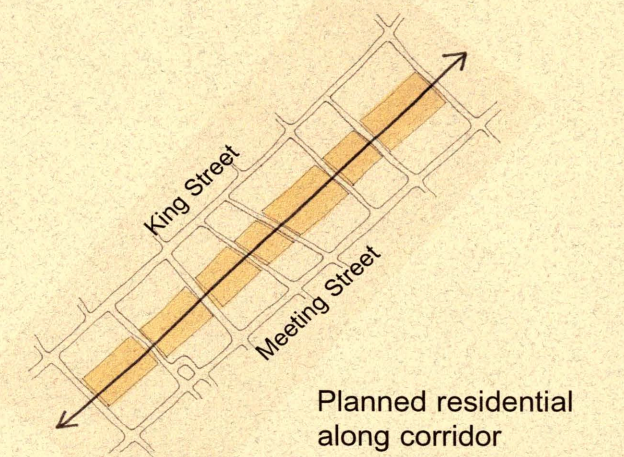
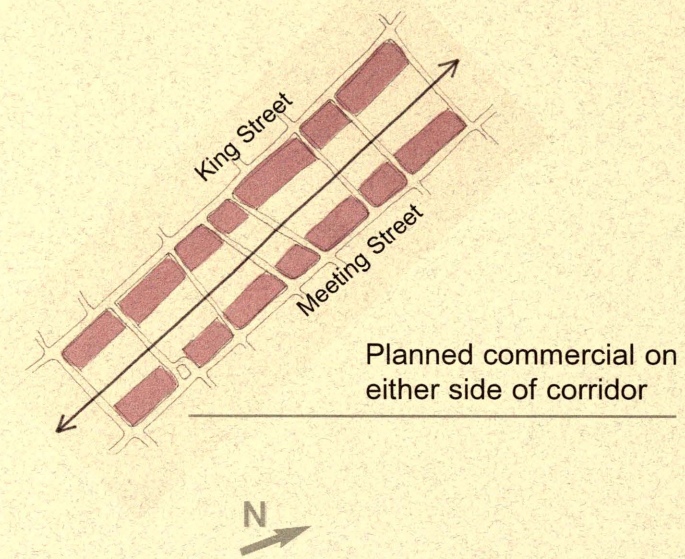


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Rail Corridor Revitalization
Program

High Density Mixed Use Development

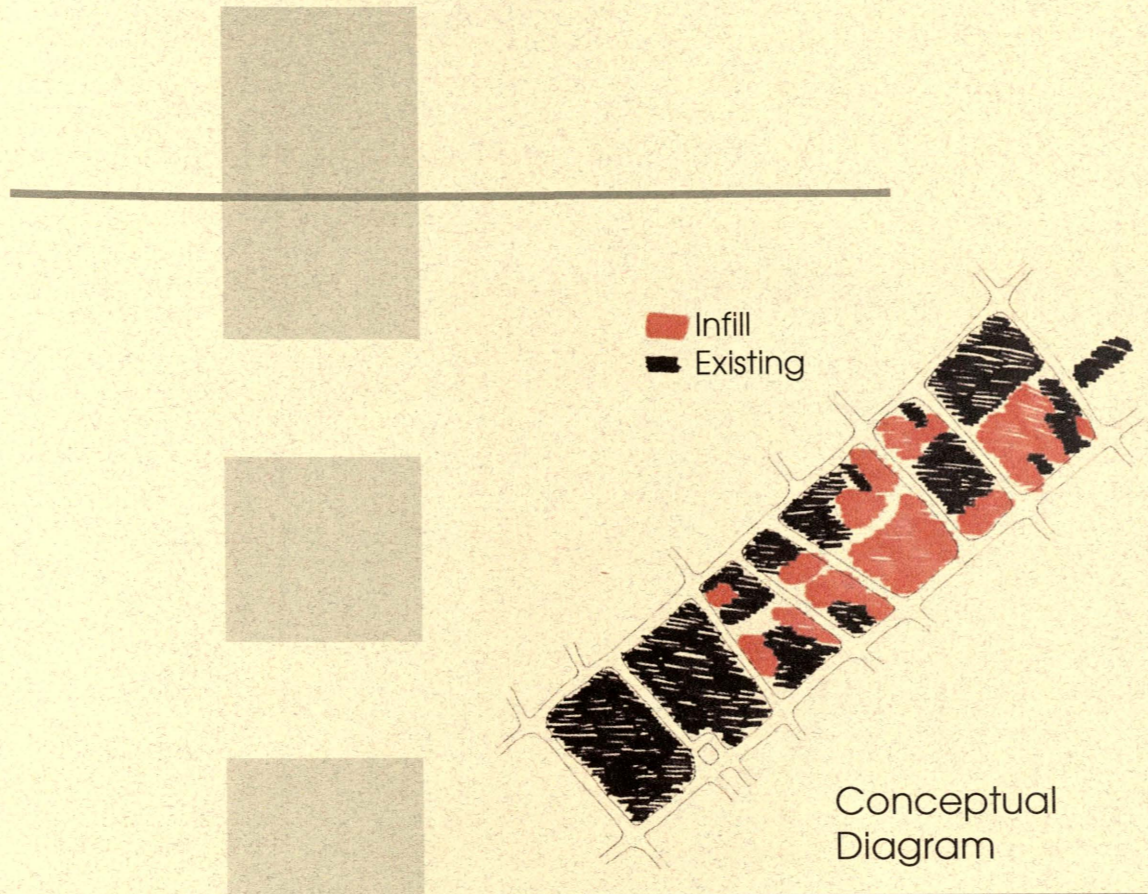
Land Use

Charleston's unique and thriving community is partially formed by a dense multiple land use pattern. Mixed use development is appropriate on this site to maintain Charleston's unique character. Careful attention to massing residential sites along the corridor, interspersed with retail, should encourage a vital street life and sense of community. Residential clusters face the pedestrian corridor with back alley vehicular access. Nodes of commercial activity are designated at main intersections and along Meeting and King Streets for visual and vehicular accessibility; along the corridor, retail stores and offices with street access provide a bottom story for the residences placed above.



Height / Scale

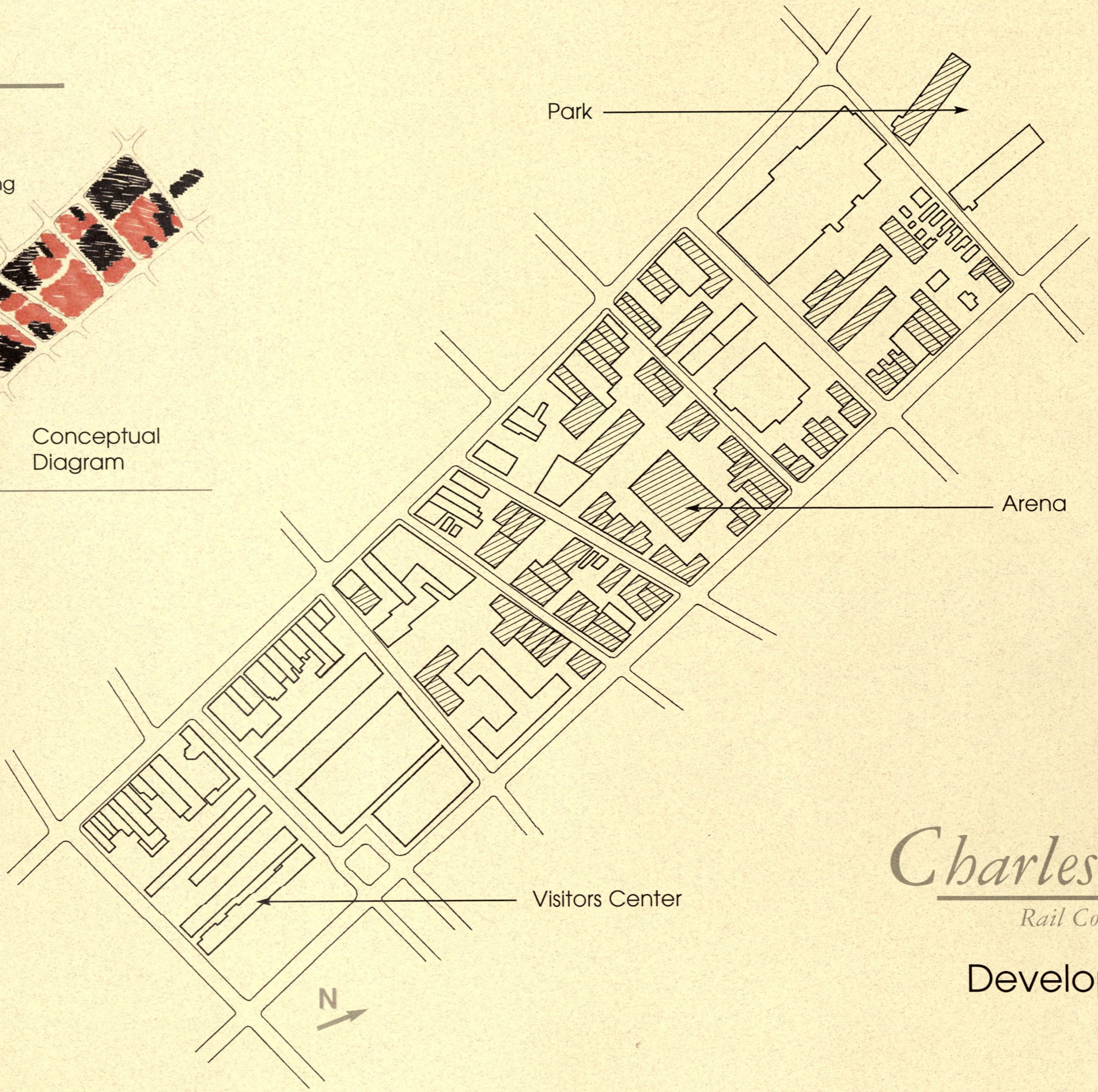
Because the proposed pedestrian corridor ranges from 40 - 150 feet in width, we chose to put taller (3 to 4 story) buildings along this stretch to provide a stronger sense of closure. This is appropriate since the industrial corridor traditionally supported larger buildings than surrounding areas. As one moves away from the corridor, one-to-two story buildings become more prominent, reflecting the more intimate feel of the surrounding neighborhoods.



Existing Buildings



Infill Buildings

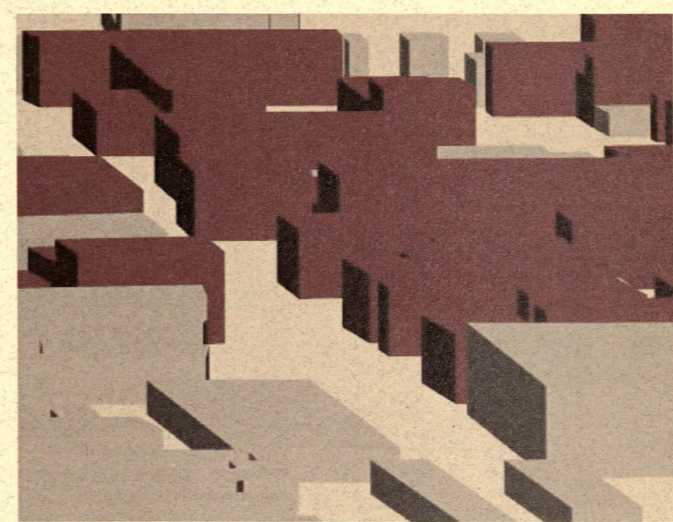
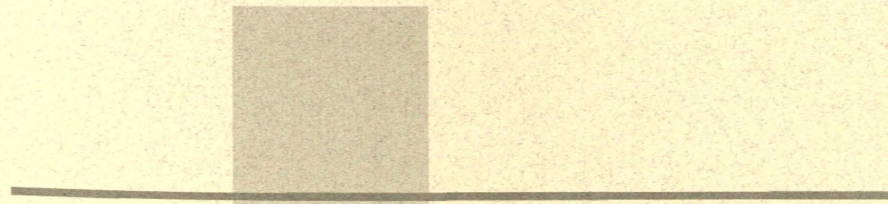


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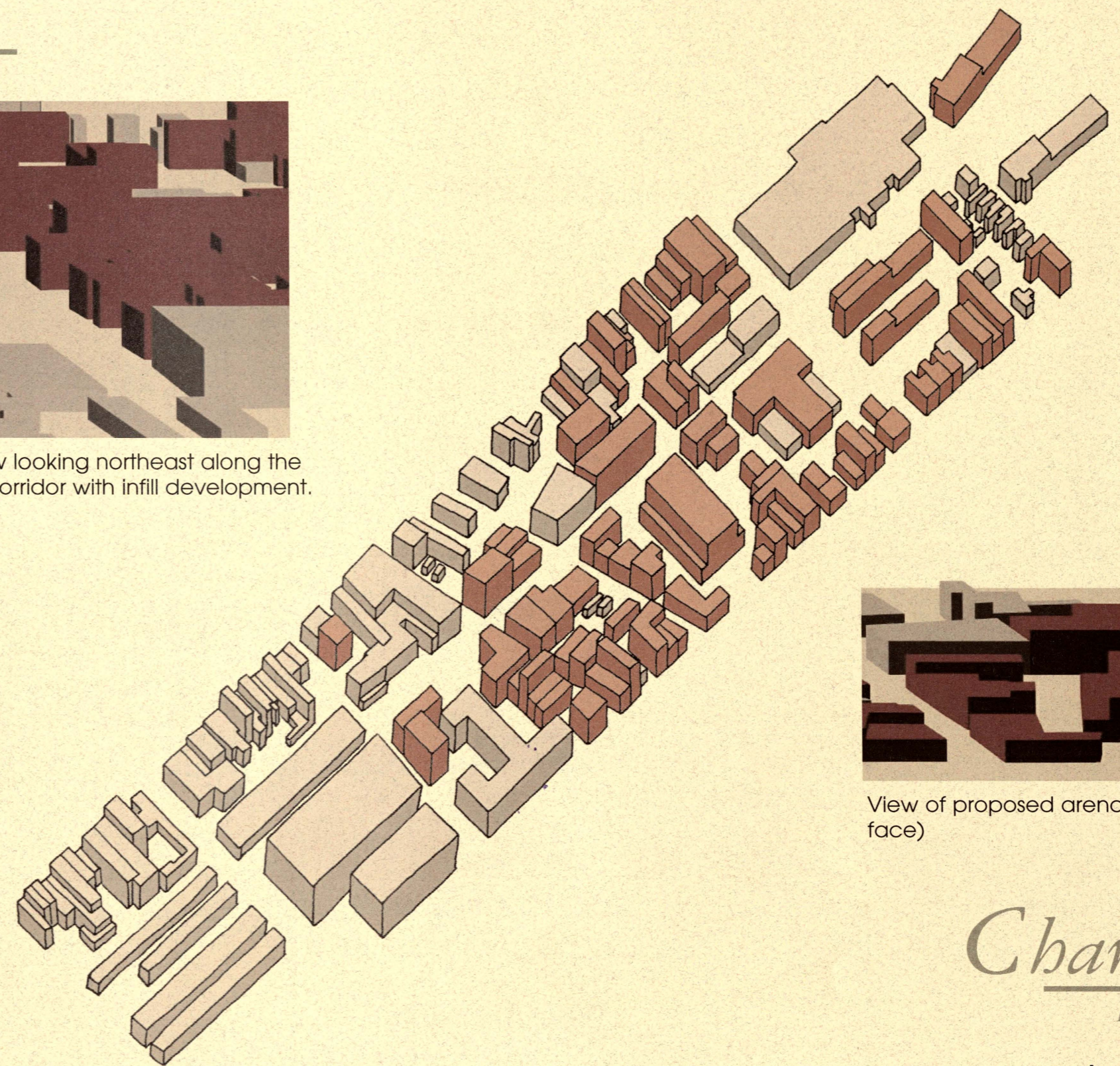
Rail Corridor Revitalization

Development Plan

Scale: 1" = 300'



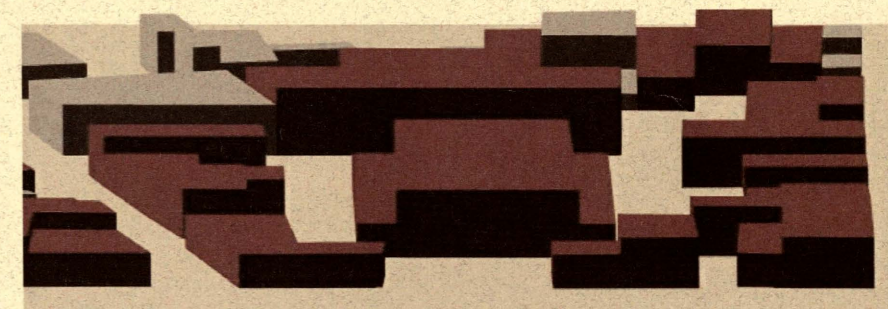
Birdseye view looking northeast along the pedestrian corridor with infill development.



Existing Structures



Proposed Structures



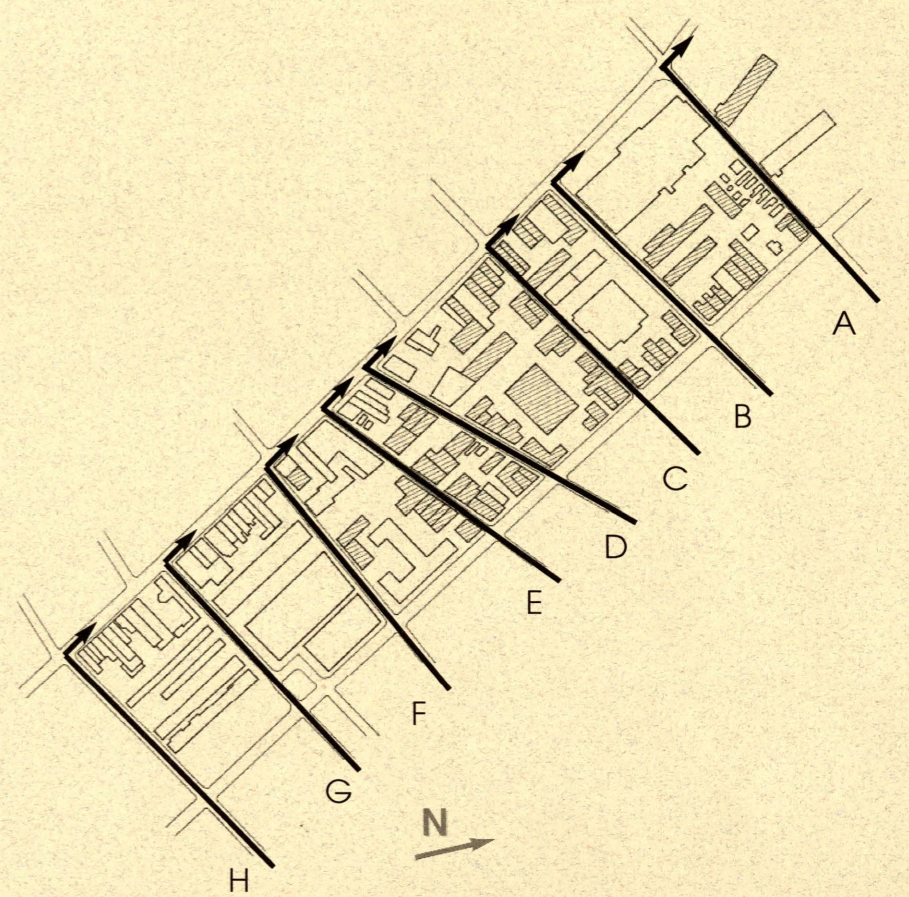
View of proposed arena from Meeting Street (East face)

Charleston

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Infill Axonometric

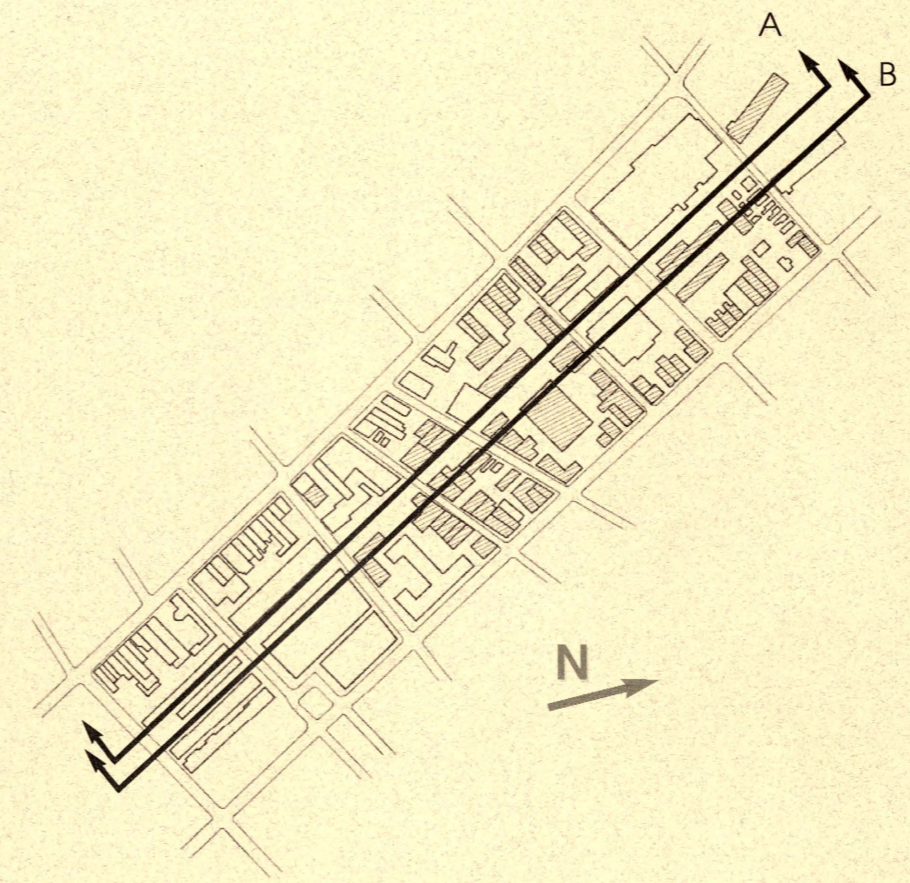
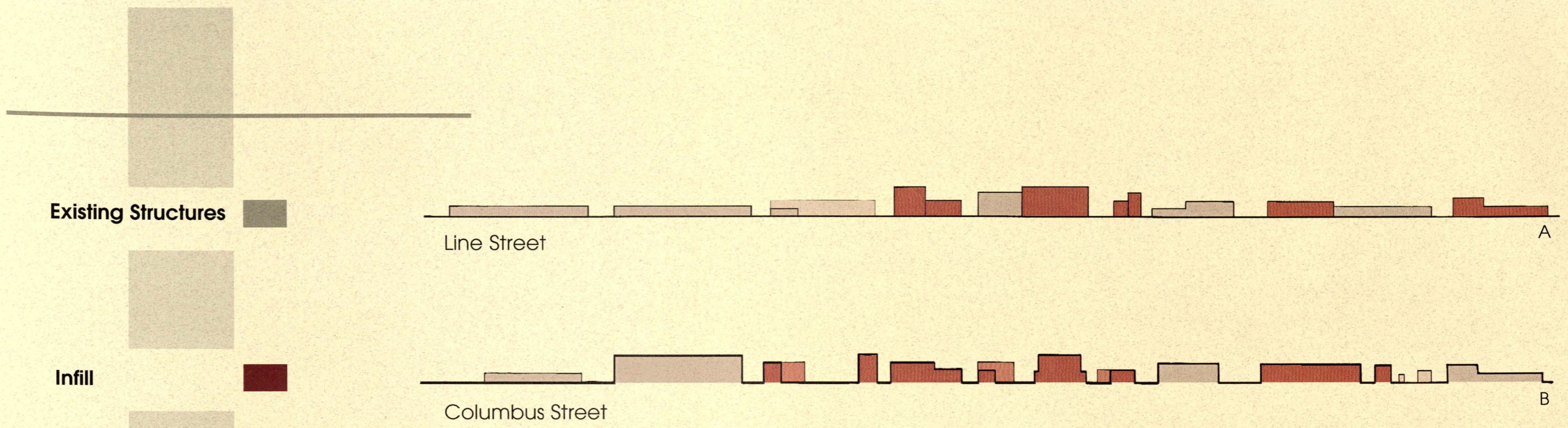
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Vertical Exaggeration: 2x



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North Sections

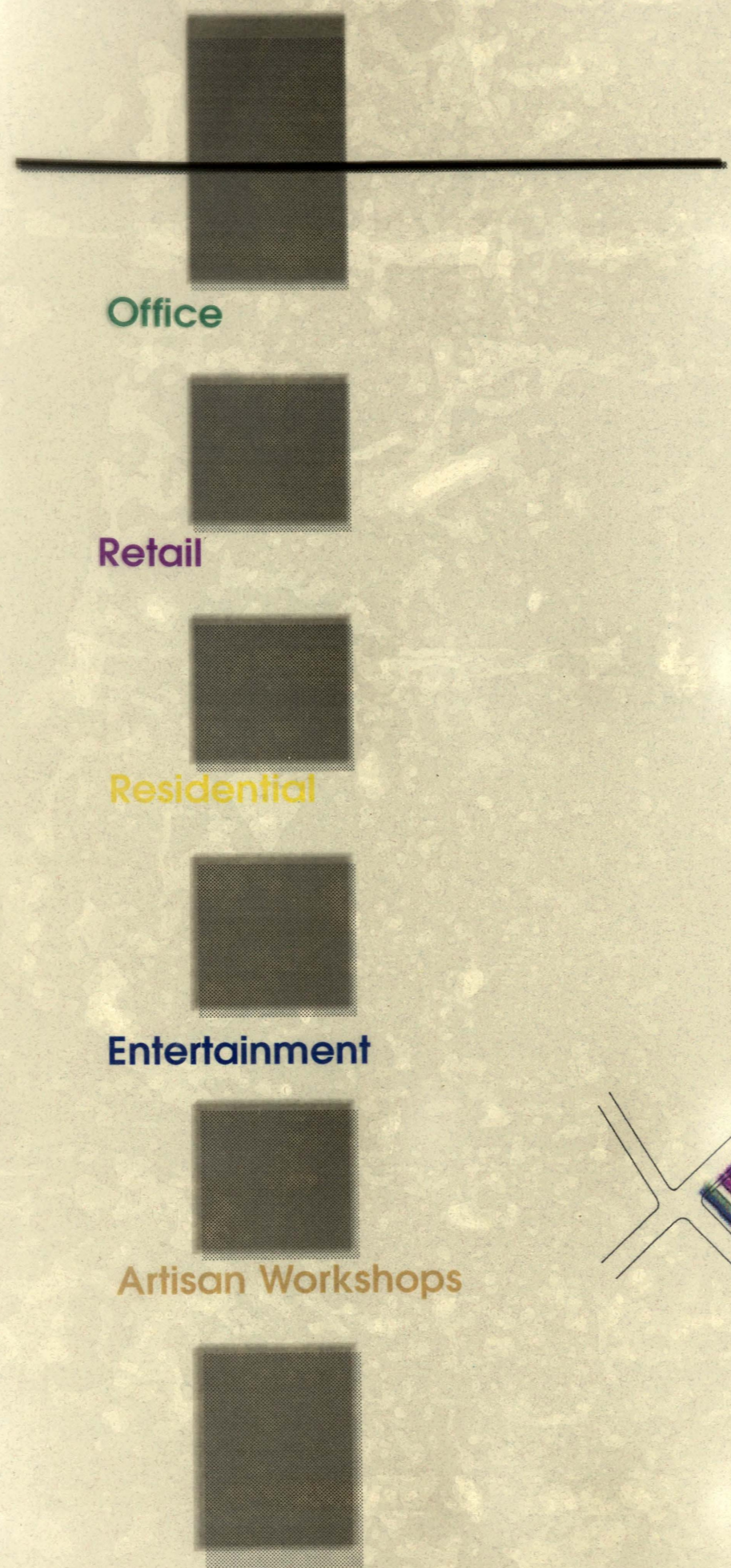
Scale: 1" = 200'



Charleston
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North Sections

Scale: 1" = 300'



Office:
Dispersed throughout site with vehicular access

Retail:
Clustered at intersections with vehicular access

Residential:
Clustered along pedestrian corridor with alley access

Entertainment:
Dispersed throughout site with vehicular access

Artisan Workshops:
Dispersed throughout site

Charleston
Rail Corridor Revitalization

Proposed Land Use Plan

Scale: 1" = 300'

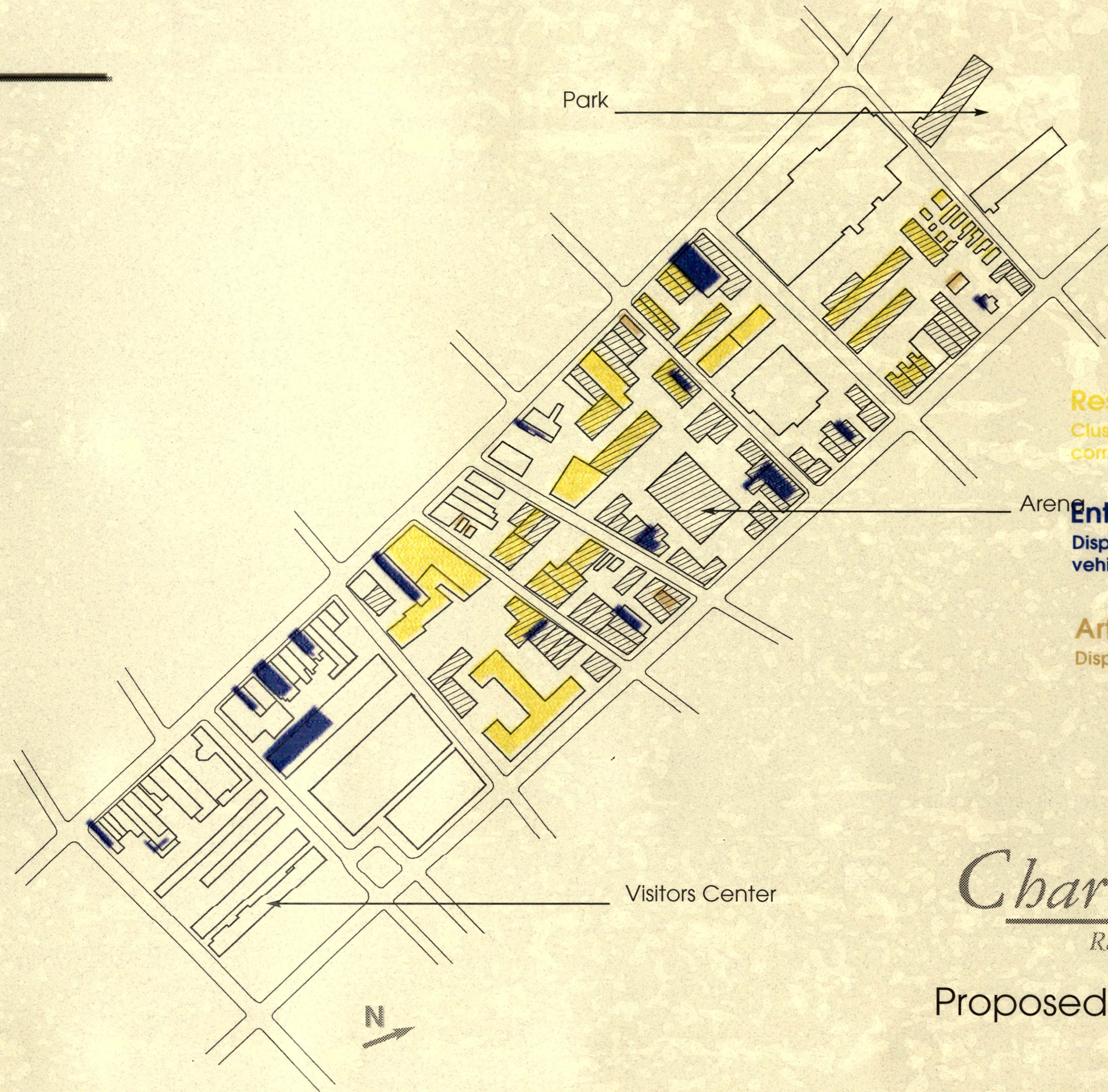
Office

Retail

Residential

Entertainment

Artisan Workshops



Residential:
Clustered along pedestrian
corridor with alley access

Entertainment:
Dispersed throughout site with
vehicular access

Artisan Workshops:
Dispersed throughout site

Charleston
Rail Corridor Revitalization

Proposed Land Use Plan

Scale: 1" = 300'

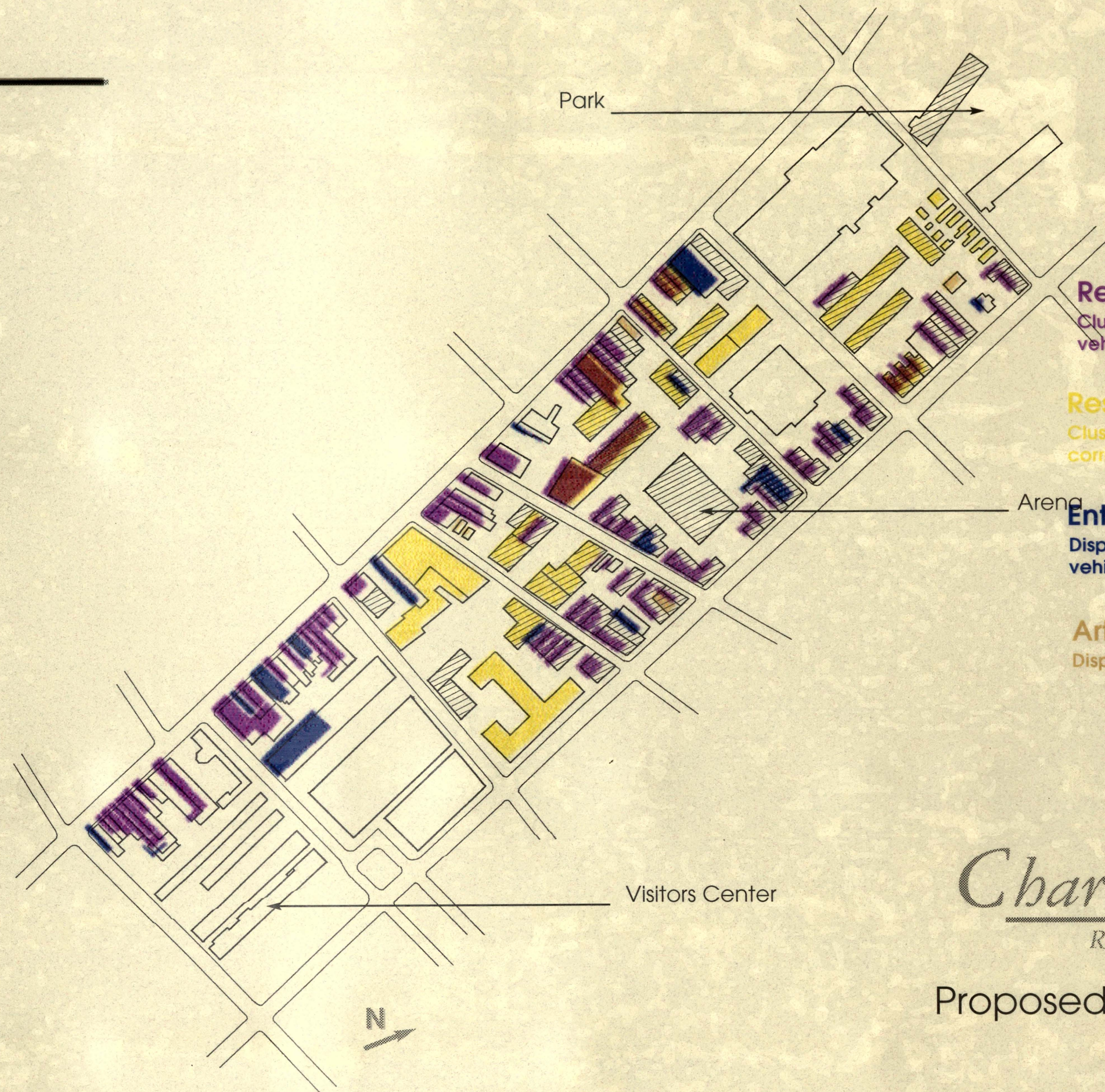
Office

Retail

Residential

Entertainment

Artisan Workshops



Park

Retail:
Clustered at intersections with vehicular access

Residential:
Clustered along pedestrian corridor with alley access

Entertainment:
Dispersed throughout site with vehicular access

Artisan Workshops:
Dispersed throughout site

Arena

Visitors Center

Charleston

Rail Corridor Revitalization

Proposed Land Use Plan

Scale: 1" = 300'

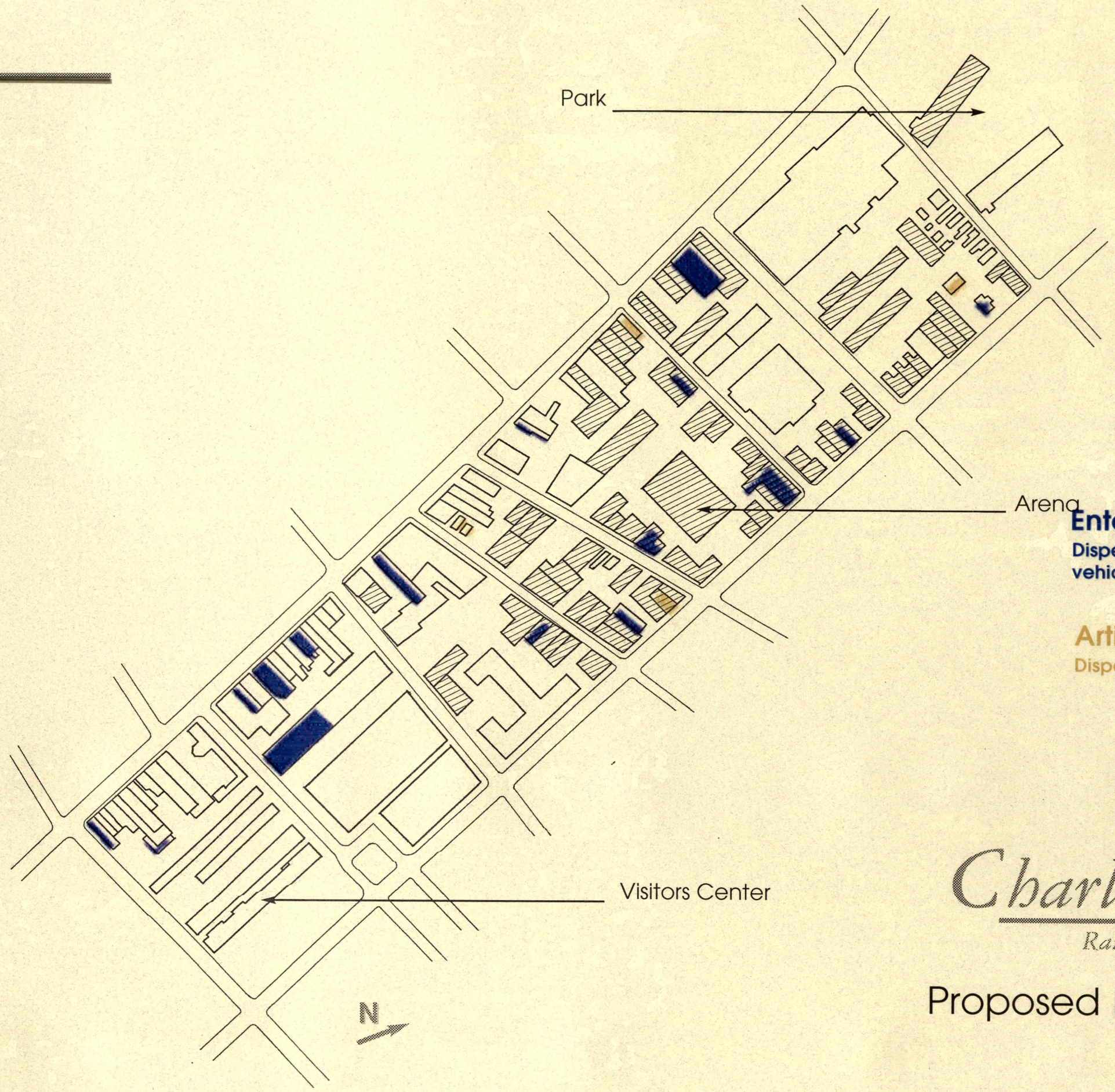
Office

Retail

Residential

Entertainment

Artisan Workshops



Entertainment:
Dispersed throughout site with vehicular access

Artisan Workshops:
Dispersed throughout site

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Proposed Land Use Plan

Scale: 1" = 300'

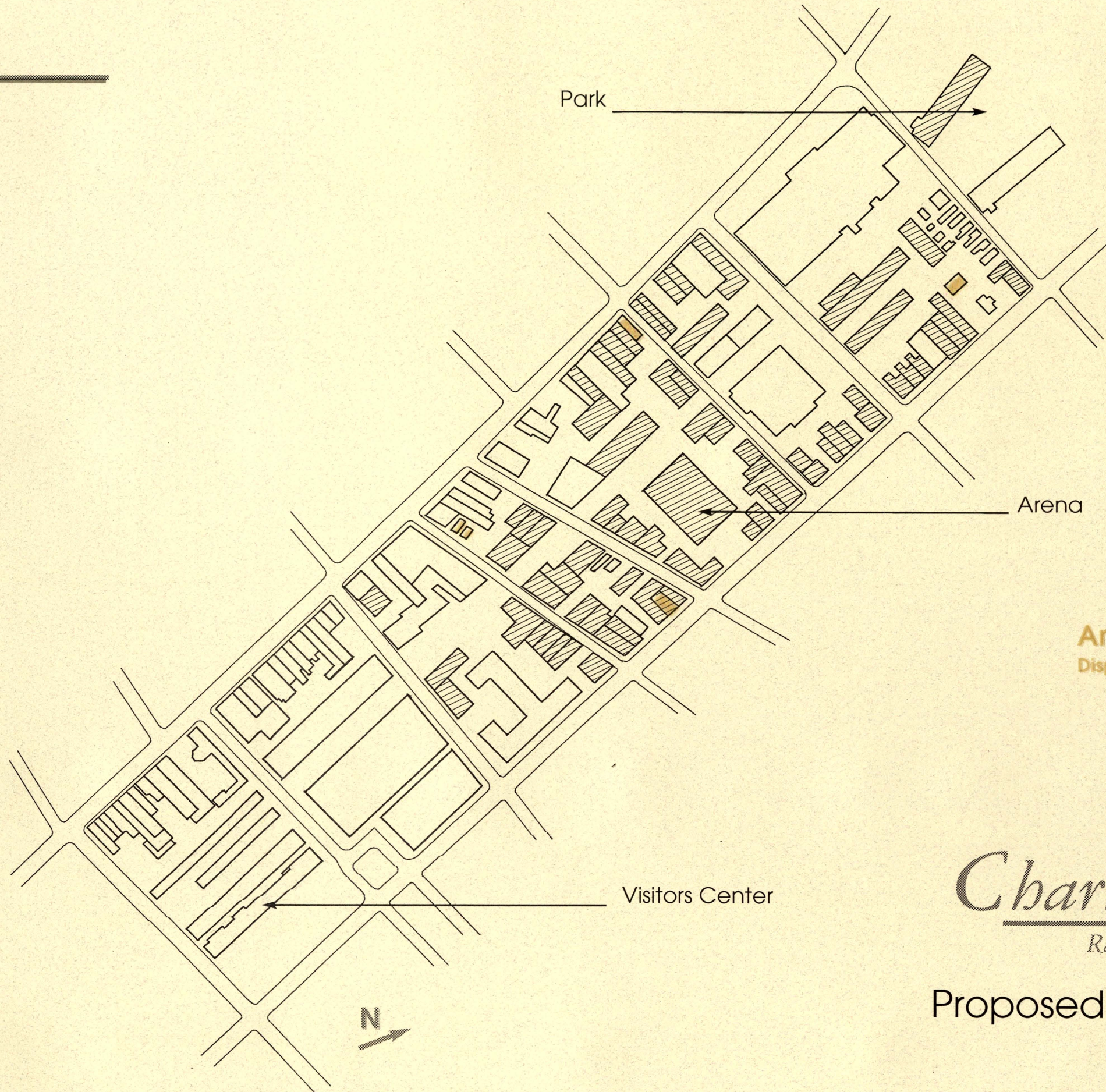
Office

Retail

Residential

Entertainment

Artisan Workshops



Artisan Workshops:
Dispersed throughout site

Charleston

Rail Corridor Revitalization

Proposed Land Use Plan

Scale: 1" = 300'

Phase 1

Phase 2

Phase 3

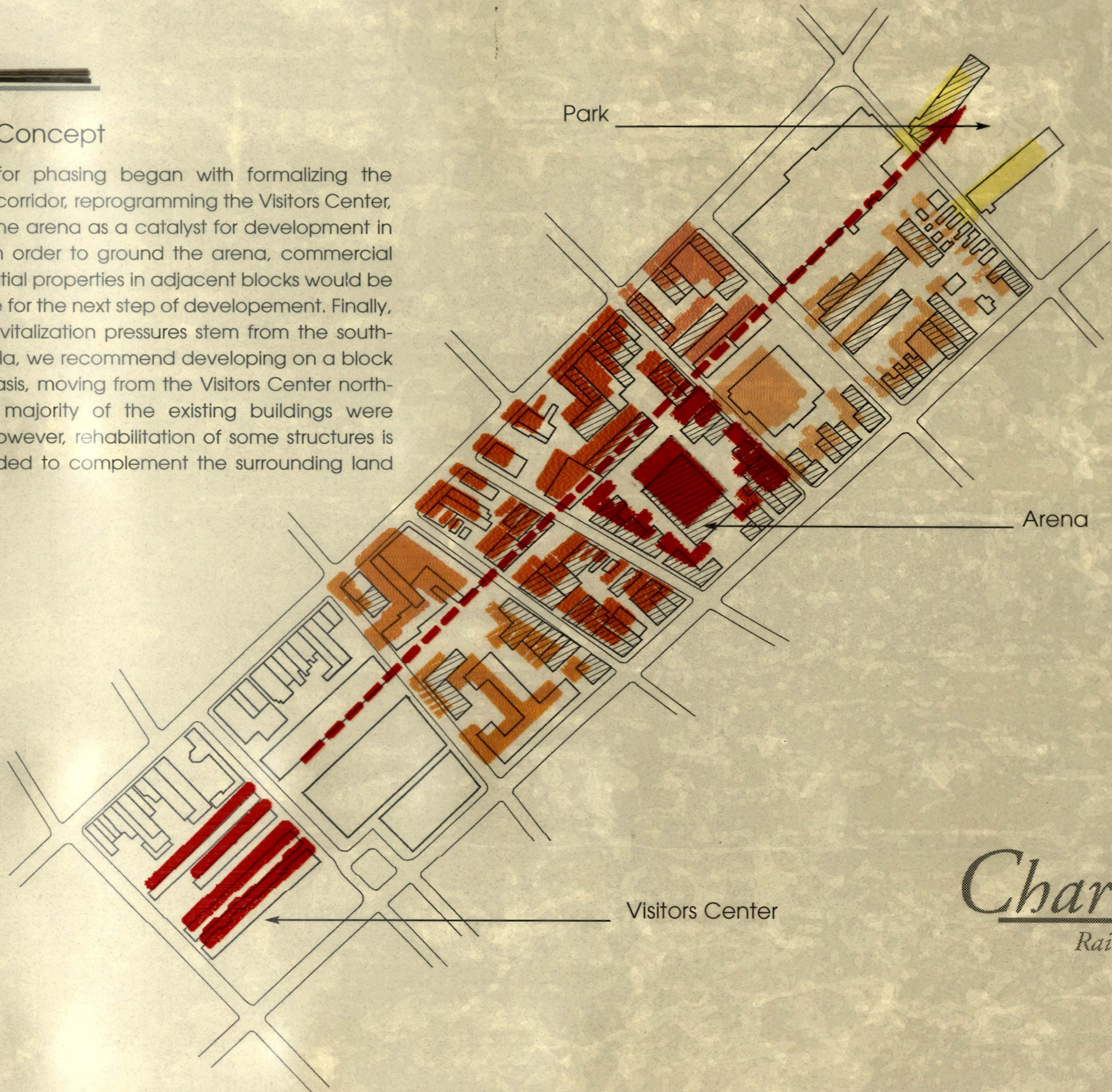
Phase 4

Phase 5

Phase 6

Phasing Concept

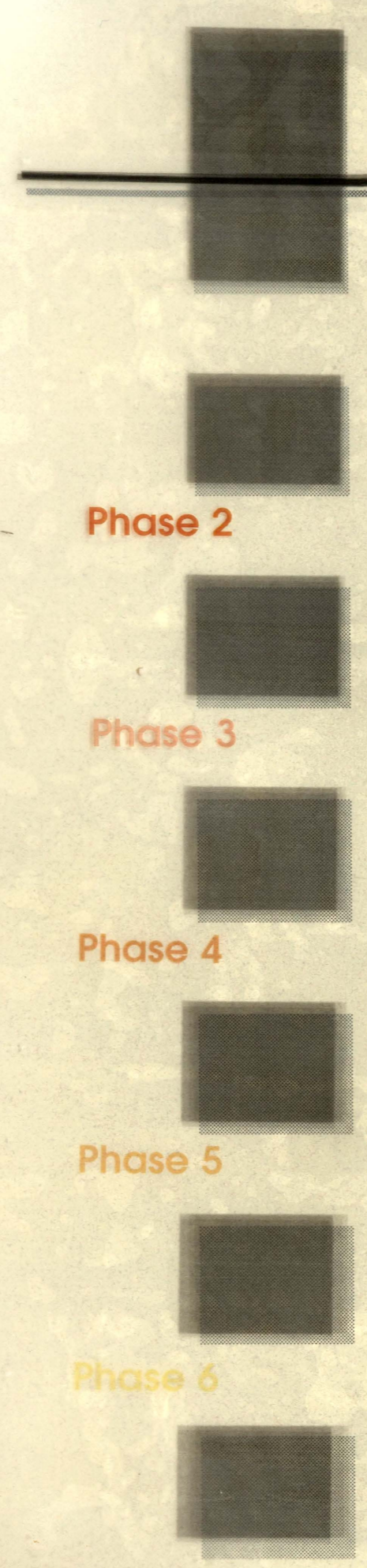
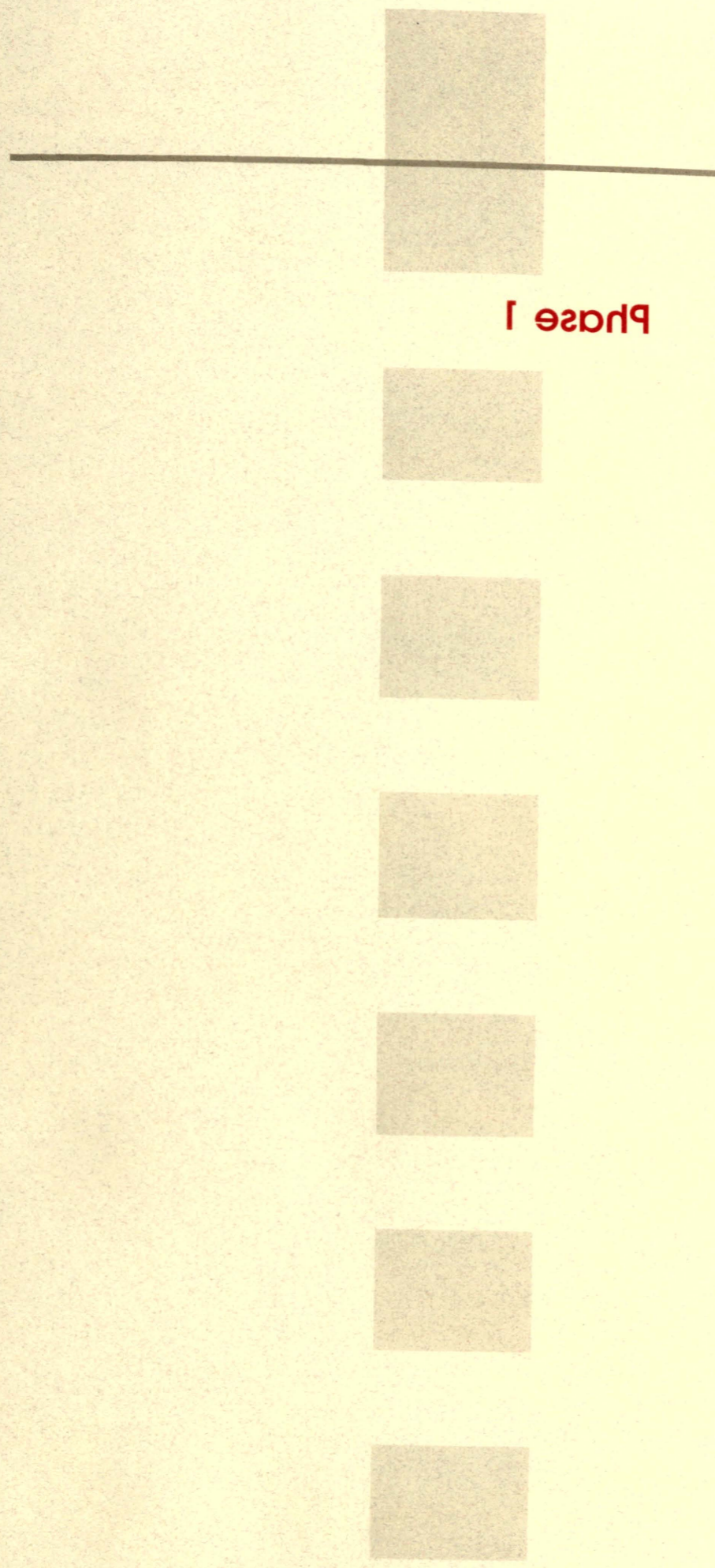
Concepts for phasing began with formalizing the pedestrian corridor, reprogramming the Visitors Center, and using the arena as a catalyst for development in the area. In order to ground the arena, commercial and residential properties in adjacent blocks would be appropriate for the next step of development. Finally, because revitalization pressures stem from the southern peninsula, we recommend developing on a block by block basis, moving from the Visitors Center northward. The majority of the existing buildings were retained; however, rehabilitation of some structures is recommended to complement the surrounding land uses.



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Rail Corridor Revitalization

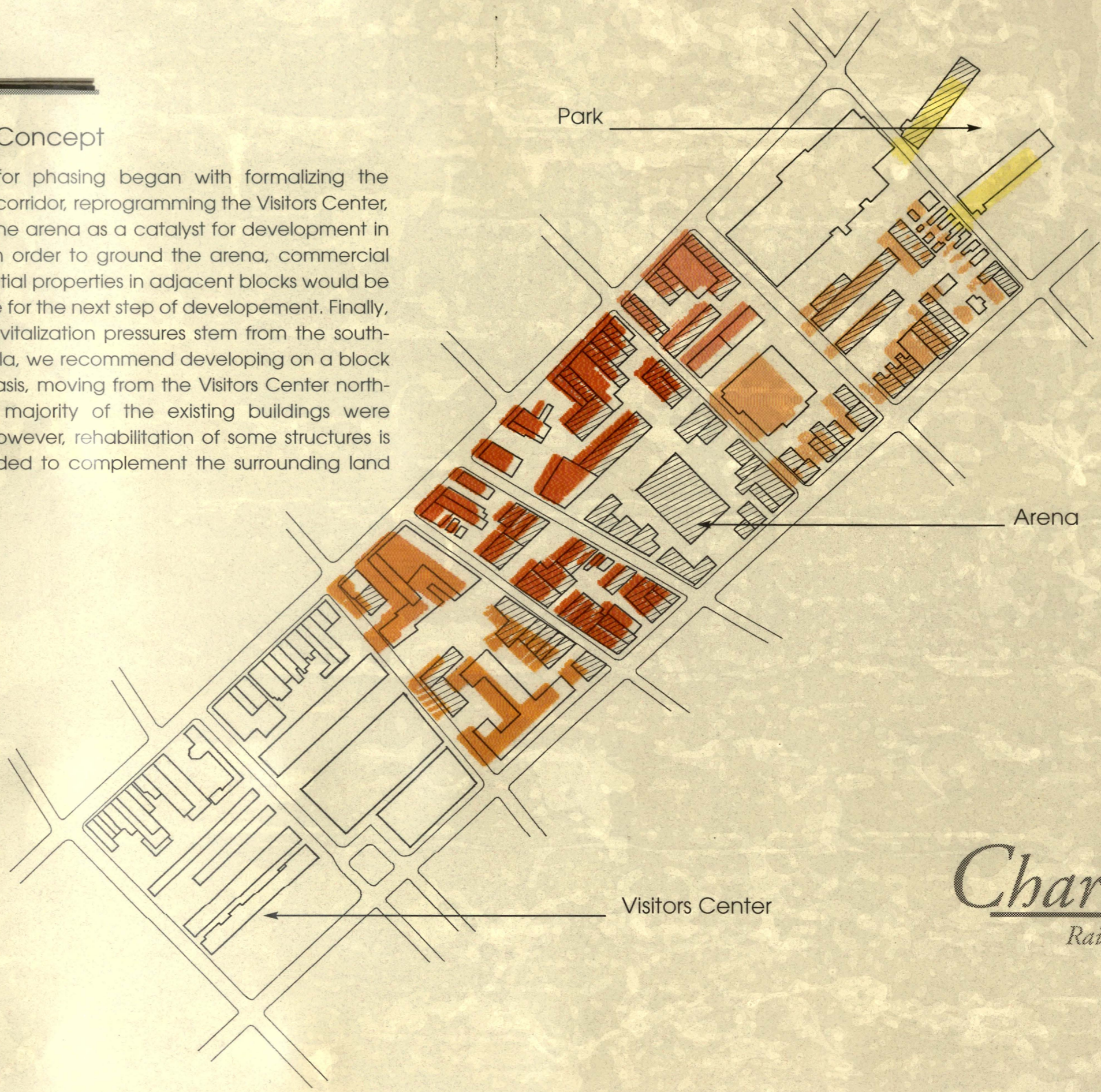
Phasing Plan

Scale: 1" = 300'



Phasing Concept

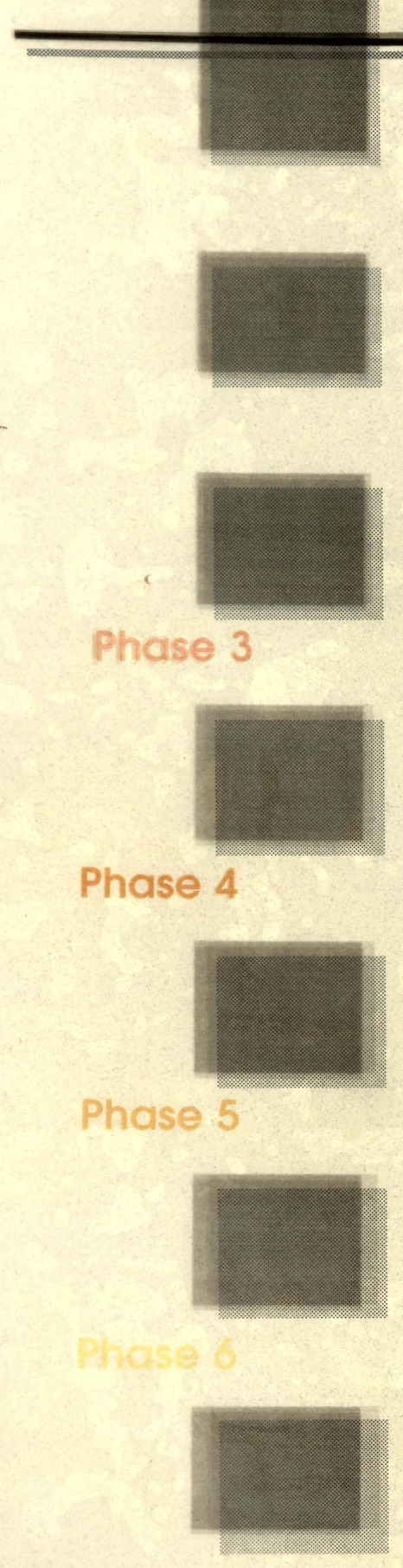
Concepts for phasing began with formalizing the pedestrian corridor, reprogramming the Visitors Center, and using the arena as a catalyst for development in the area. In order to ground the arena, commercial and residential properties in adjacent blocks would be appropriate for the next step of development. Finally, because revitalization pressures stem from the southern peninsula, we recommend developing on a block by block basis, moving from the Visitors Center northward. The majority of the existing buildings were retained; however, rehabilitation of some structures is recommended to complement the surrounding land uses.



Charleston
 Rail Corridor Revitalization

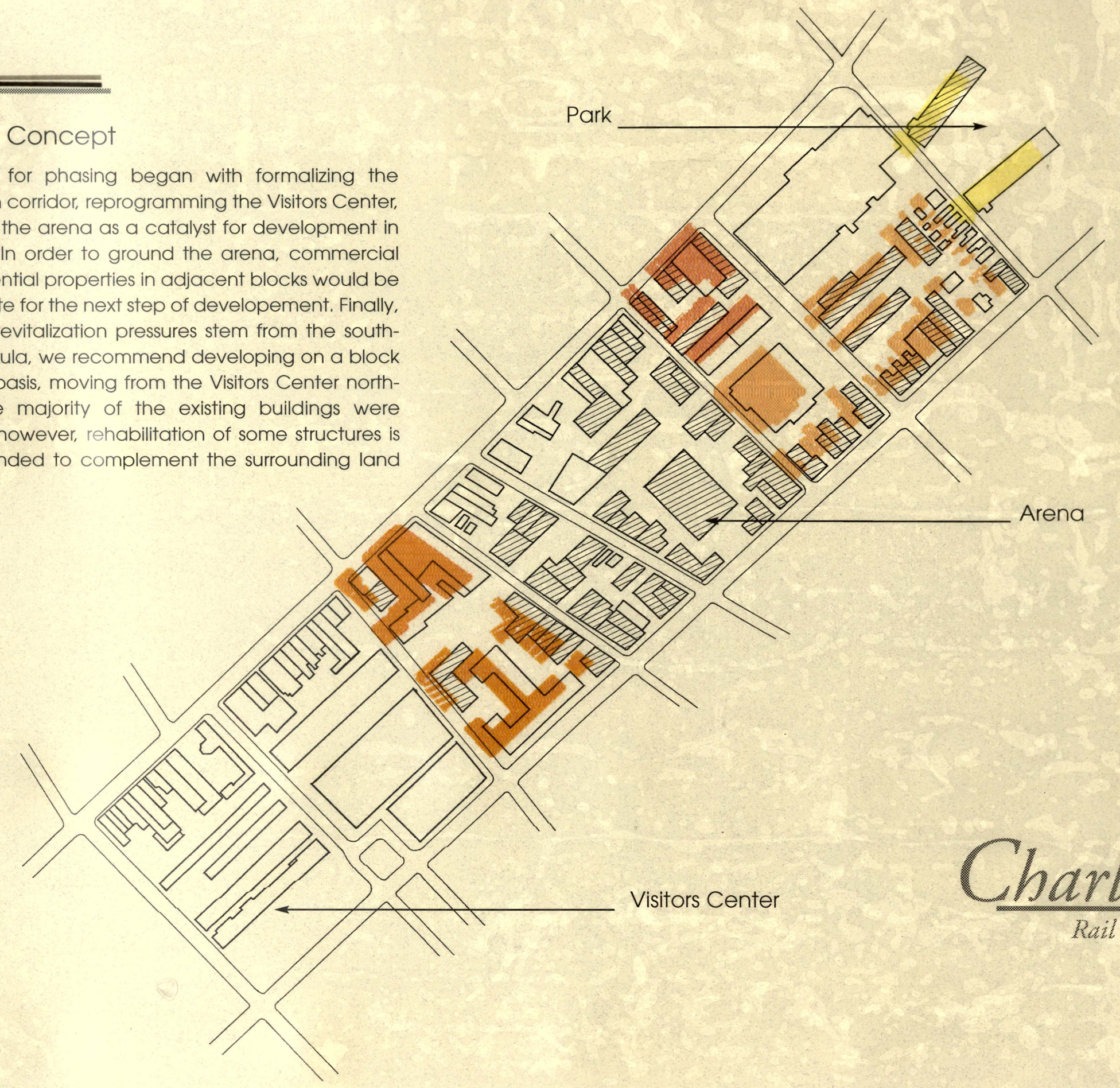
Phasing Plan

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Phasing Concept

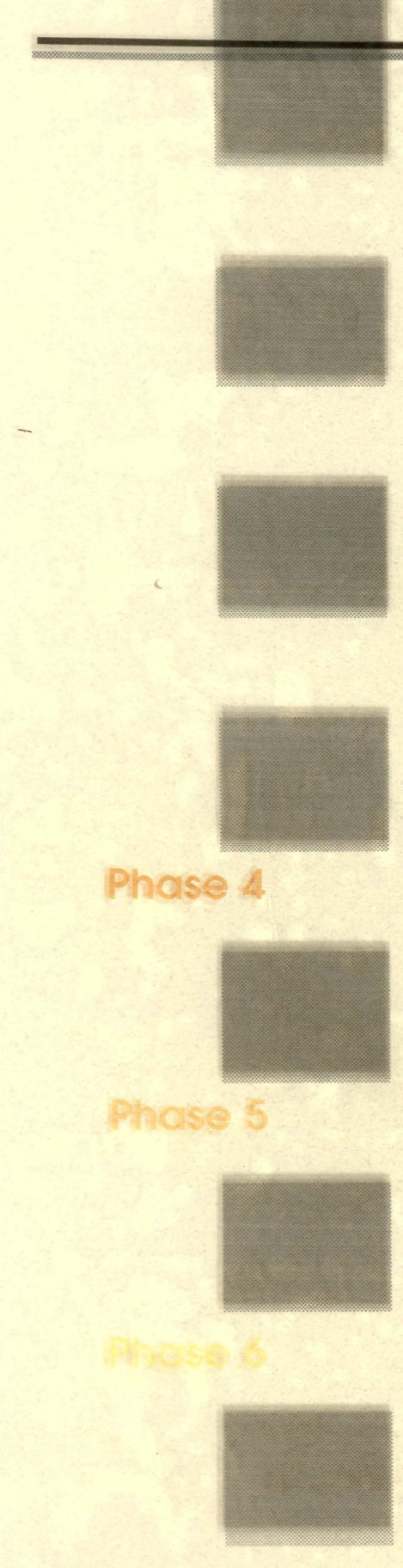
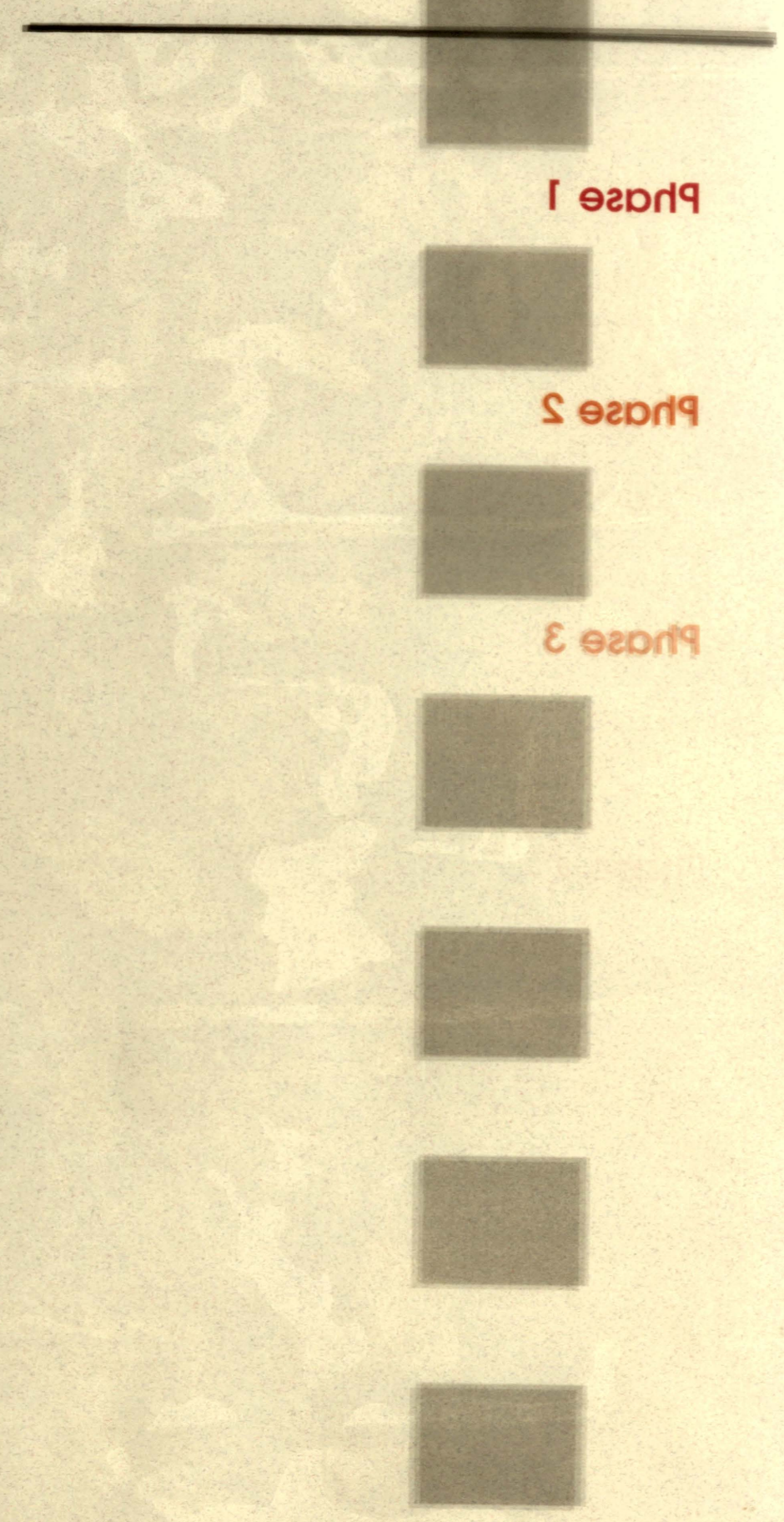
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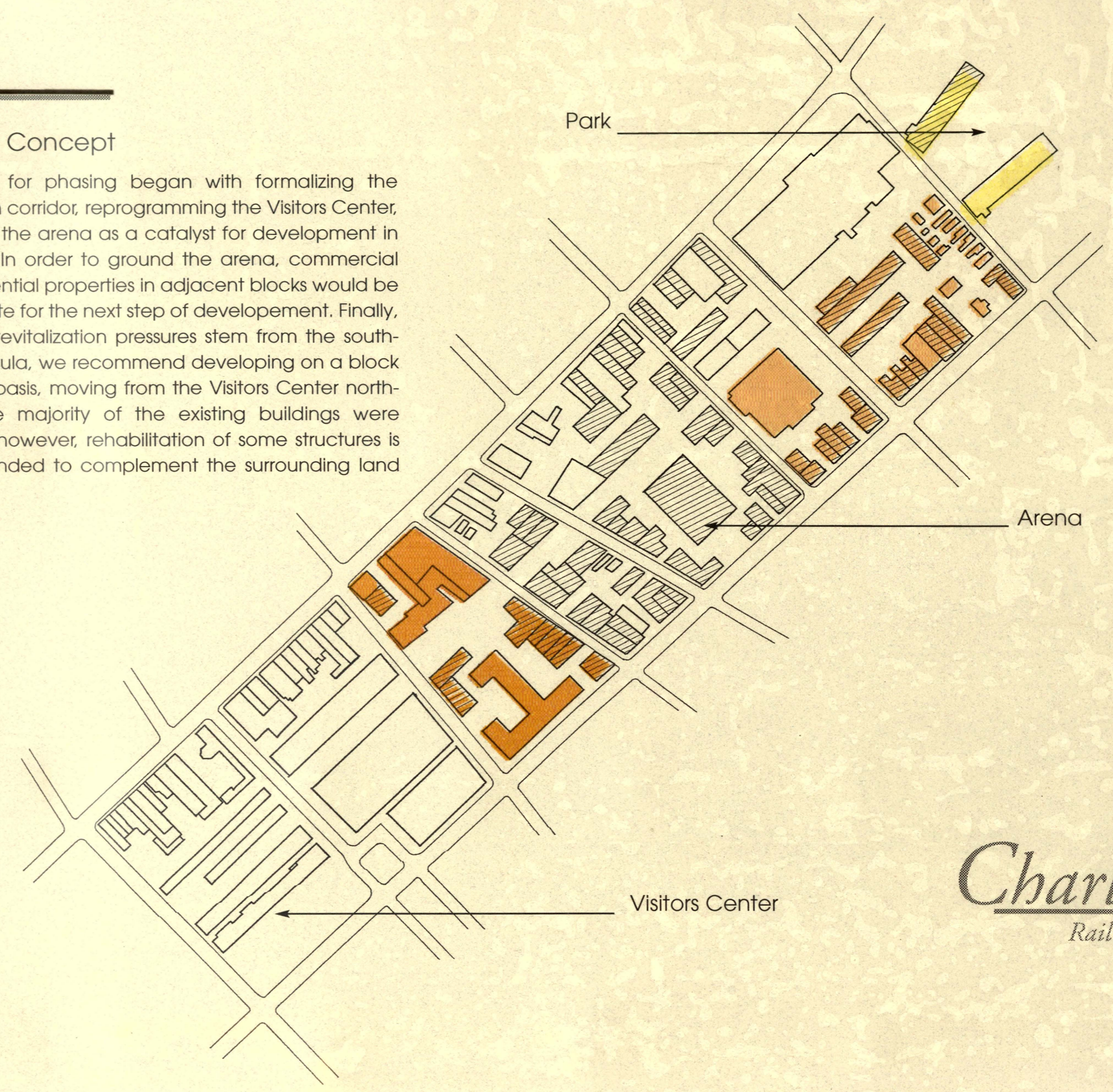
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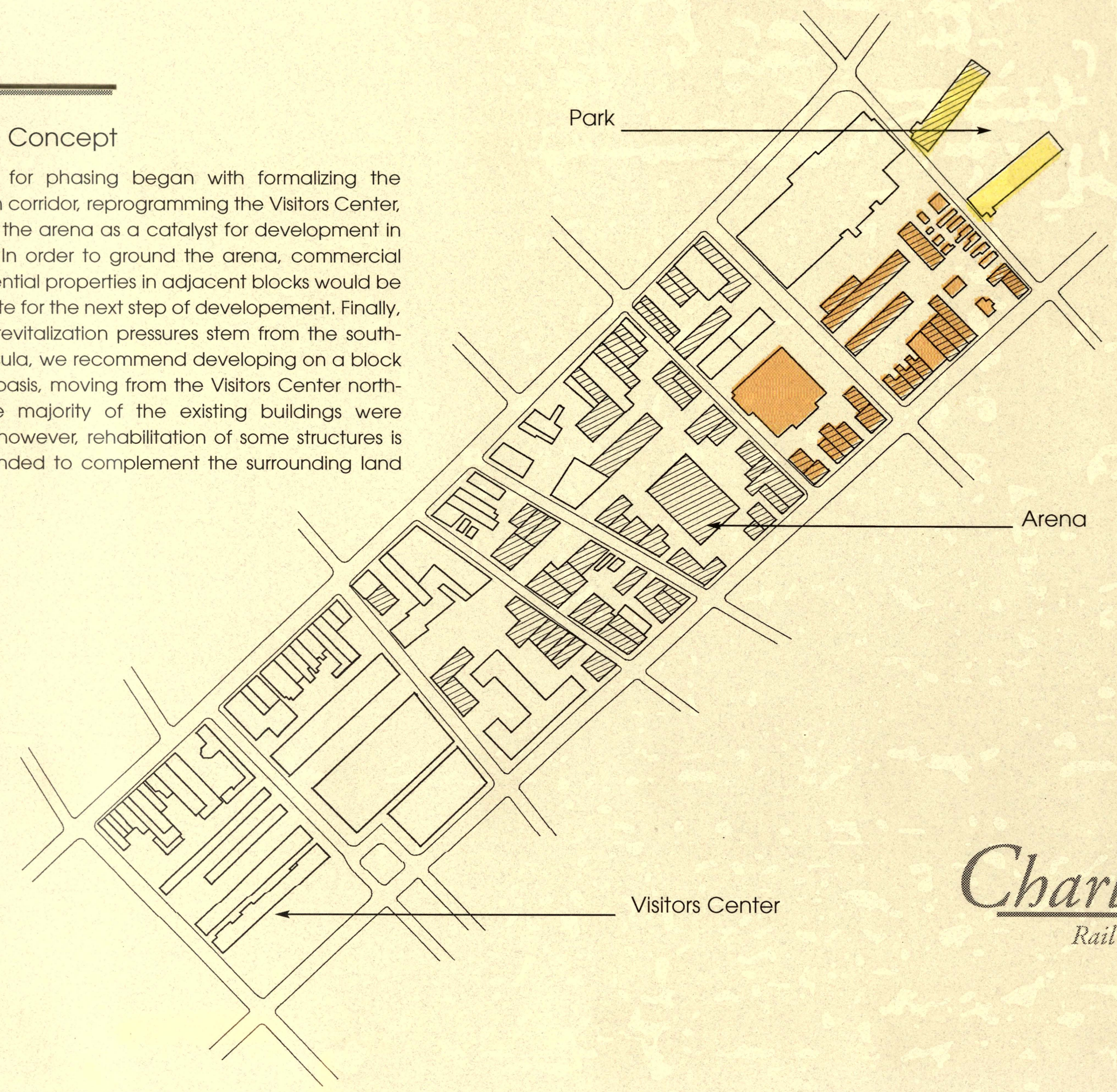
Charleston
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Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Phase 6

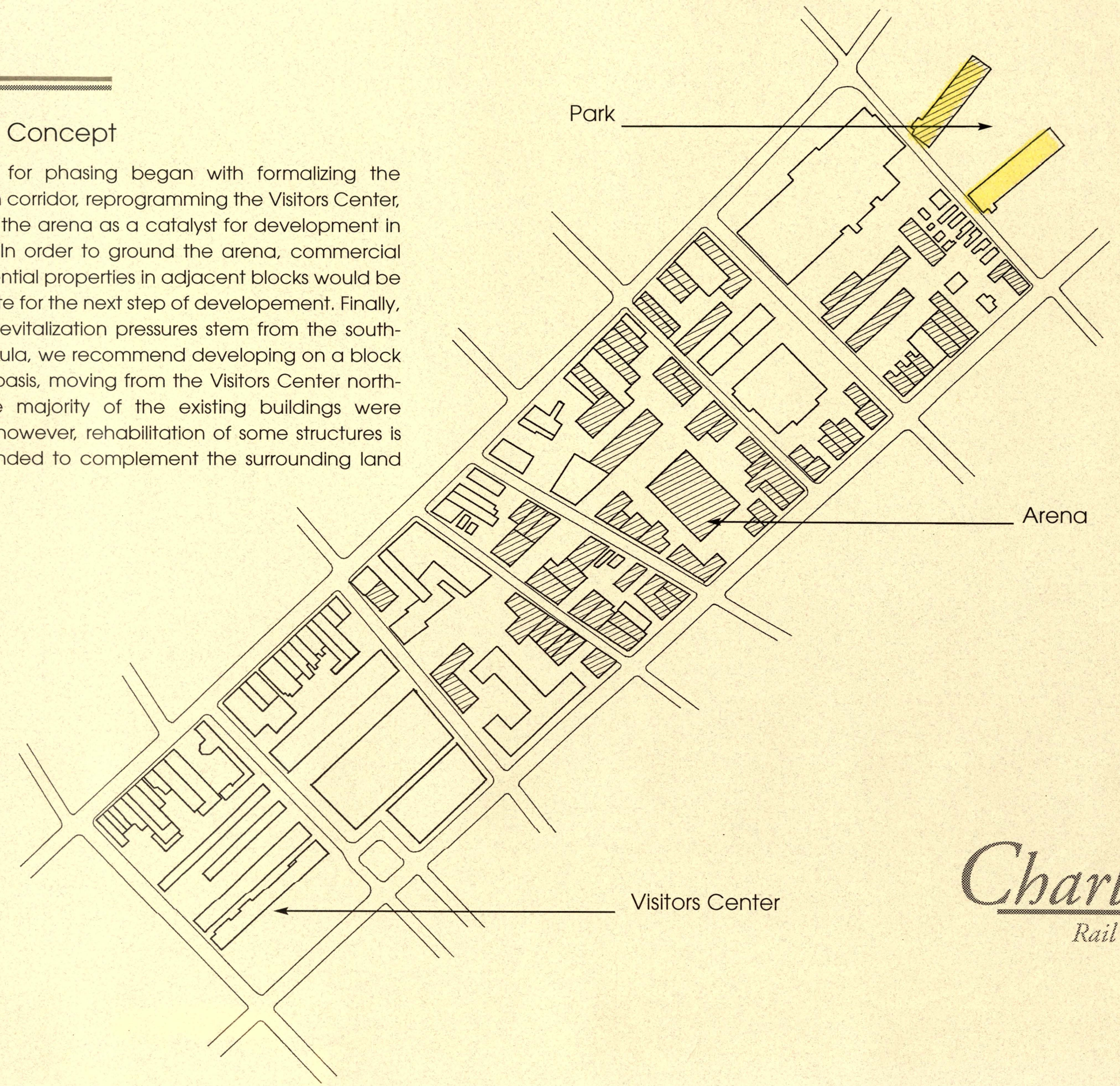
Charleston
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