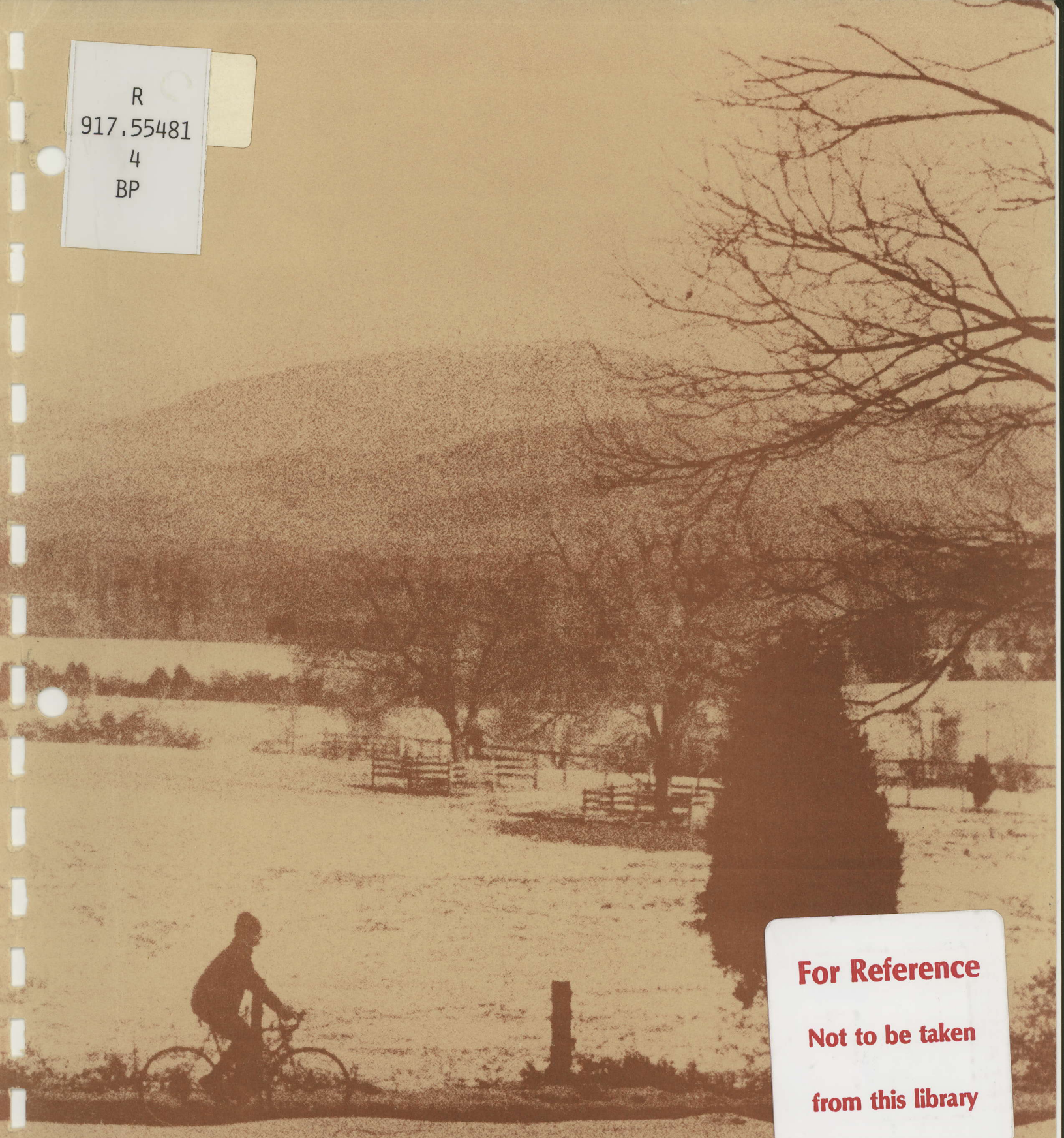


BICYCLE PLAN

CHARLOTTESVILLE, VIRGINIA

BICYCLE PLAN

CHARLOTTESVILLE, VIRGINIA

PREPARED BY

DEPARTMENT OF COMMUNITY DEVELOPMENT

JUNE, 1976

ADOPTED BY

PLANNING COMMISSION
MAY 18, 1976

CITY COUNCIL
NOVEMBER 15, 1976

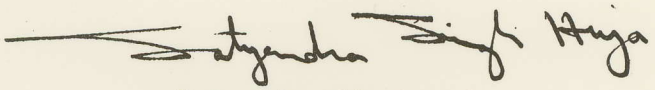
PREFACE

The bicycle has a potential for becoming an important part of a balanced transportation and recreational system. The adoption of this plan by the City of Charlottesville is a commitment to this concept of balance.

Bicycle riding has many major advantages over other modes of transportation, some of which are:

1. Energy Conservation
2. Nonpollution
3. Economical
4. Limited Space Requirements
5. Minimum Congestion
6. Healthful Form of Individual Exercise, etc...

Potentially, there are many bicycle riders in this community, but before this potential is realized, a major change in attitude as well as a significant financial investment will be required. The adoption of the "Bicycle Plan" is just an initial step and will require interest and participation of many residents of the community to make the bicycle a major mode of transportation in the City of Charlottesville.



Satyendra Singh Huja
Director of Planning
and
Community Development

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Note: Colored pages will become part of the Comprehensive Plan

I. INTRODUCTION

The use of the bicycle both as a mode of transportation and as a recreational vehicle has increased rapidly in Charlottesville. In response to this interest bicycling and their expressed concern for bicycle safety, the Charlottesville Planning Commission appointed a Bicycle Task Force, composed of interested citizens and cyclists, to work with the Department of Community Development to develop a "Bicycle Plan" for the City of Charlottesville. This document, with some modification by the Planning Commission, is the product of the efforts of the Bicycle Task Force. It is hoped that it will become a major part of the transportation planning process in Charlottesville, and that it will serve to guide future decisions to make bicycling a safer mode of transportation and a more popular recreational activity.

This plan reflects some of the previous attempts at bicycle planning in Charlottesville. In 1971, the City Council appointed a Bicycle Safety Committee which developed plans for safe neighborhood routes. This committee also developed a mandatory bicycle registration ordinance which was adopted by the City Council, but is not widely known. In 1972 "Parks and open spaces" study outlined recreational bicycle routes along Moore's and Meadow Creek and along Rivanna River. In 1973 a newly created Department of Community Development started work on this latest bicycle plan in an attempt to make bicycle a safe and enjoyable mode of transportation and a part of overall transportation system for the City of Charlottesville.

It has been a policy of the City to encourage development of a balanced transportation system. This involves giving due consideration to all potential major modes of transportation, which are automobile, mass transit, bicycle and pedestrian. At present, the major mode of transportation is automobile. The other three modes play relatively minor roles. This has resulted in an imbalanced transportation system and a variety of physical, social and economic concerns. To achieve a balanced transportation system, the community will need to make conscious and hard choices which might involve new ways of transportation thought and action, and thus, changing some of our future modes of movement.

The City is approximately 3.5 miles across and is located on the foothills of the Blue Ridge Mountains. This size and location of the city is ideal for bicycling. Even more important, the bicycle offers no pollution, no noise, non-congestion, resource economy, limited space requirements and an enjoyable and healthful form of individual exercise. In a time when there is growing ecological concern in the nation, the bicycle's qualities reinforce the fact that it is a viable and necessary mode of urban transportation.

The "Bicycle Plan" also attempts to integrate the functional and recreational needs of the bicyclist within a realistic framework of natural, physical and economic constraints. The plan presents the concept of linking the four major activity nodes of the City (Downtown, University, Barracks Road Shopping Center, and Charlottesville High School) with a loop system of bike routes. Additional radial routes connect the residential neighborhoods to these major activity generators. The radial neighborhood links also provide access to the neighborhood parks, schools and community facilities. No attempt was made to designate internal neighborhood bike trails. It was felt that the residents would ride on the safest streets and that their safety would be improved by education on safe riding techniques and responsibilities. This then is the framework of the Bicycle Plan.

II. HISTORY OF THE BICYCLE AND BICYCLE PLANNING IN CHARLOTTESVILLE

The origin of the bicycle is not clearly established, but it is generally agreed that its invention occurred in 1816. The first machine was called a "Draisine" after its inventor, Baron Von Drais. This invention came to the fore in a period of time between the development of the steam railroad and the electric trolley. The "Draisine" was quickly followed by the "Curricle" invented by Johnson of England. It was known by the familiar name of "Hobby Horse" or "Dandy Horse." Both machines were propelled by riders alternately kicking the ground with the right and left foot. Their construction was simple: two wheels connected by a bar. A system of pedalling, the first design improvement, was developed 24 years later by a Scotchman, Kirkpatrick McMillan.

In 1885, a wooden frame velocipede invented by Ernest Michaux of France made it appearance. This machine was propelled by pedals attached to the front wheel, and was the vehicle that introduced Americans to the bicycle in 1866. It remained popular until 1876 when the high wheel bicycle or "Ordinary" came on the scene at the Philadelphia Exposition. A decade later the modern bicycle much as we know it today, was introduced.

It is interesting to note that the development of the bicycle required the development of new mass production techniques. These techniques, developed in the 1880's allow the mass production of bicycles, and caused the first bicycle "boom" in the United States. Ironically, when these same techniques were applied to the development of the automobile, the first bicycle "boom" was over.

Up until 1900, the bicycle was used mainly for sport and pleasure. However, at that point, it came into use as a business conveyance and competed with the horse and buggy and automobile as a means of transportation. In the growth period of bicycles, many innovations--some serious, some silly -- were introduced. Coaster brakes, chain drive, and pneumatic tires were improvements that are still basic to today's machines. Bicycles in the days preceeding the automobile shared the streets mainly with pedestrians and horse drawn vehicles moving at slow speeds. In fact, so numerous were bicycles on streets, that restrictions were placed upon cyclists to curb their danger and nuisance to others. Licenses were required, speed was regulated, and controls placed on cyclists and their machines.

Before and after the turn of the century, the bicycle played an important role in people's lives. Aside from business use, amateur and professional bicycle clubs were formed for racing and leisure, weekend excursions or holidays. Many a popular song developed from the bicycle as its use became the American Way of life. "Pon a Bicycle Built for Two" was typical. Bikes built as "two-seaters" with extra pedals and handlebars for couples to ride together for leisure was a common sight.

Bicycle parades were exciting events in many cities. One of the largest occurred in 1883 in New York City. The League of American Wheelmen, which is still in existence, staged a parade down Fifth Avenue. Ten thousand people watched 900 bicyclists from 55 Wheelmen League affiliates parade down the Avenue. Bicycle Club outings were very popular, and their close order drill and martial formations at these functions was an event to behold.

With the surge of automobile usage in the early 1900's, the bicycle became a slow speed vehicle. Its importance as a transportation mode decreased while the development of the automobile as a transportation mode increased.

During the next fifty years, the bicycle experienced three new revivals. The first, during the depression, developed due to the low cost of the bicycle as a means of travel. The second, during World War II, developed due to gasoline rationing. The third, the one we are experiencing today, is due to the bicycle's economy, both in operating cost and in energy utilization, and an increased concern for protecting the natural environment from pollution.

In Charlottesville, bicycle planning got its start with the report "Parks and Open Spaces". This report recommended that a system of pedestrian/bike trails be developed along the three rivers which border the City: Moore's Cree, Rivanna River and Meadow Creek. These river basins were generally free of development and had gradual grades ideal for the bicycle. Such a system would serve as an additional green space link for the existing recreational system of the City.

In 1971, the City Council appointed a Bicycle Safety Committee. This group met and developed a plan for neighborhood bike routes. Through the designation of neighborhood biek routes, it was hoped that increased bicycle safety would evolve. This group also developed a mandatory bicycle registration ordinance. Upon its adoption, numerous bicycles were registered, but the system was not maintained and is currently not widely known or enforced.

The current planning efforts stem from an overall re-examination of the City's Transportation System. All segments of the City's transportation system are being examined in hopes of updating the City's transportation plan as part of the overall comprehensive plan of Charlottesville. To date, the City has examined its mass transit system and has taken over a failing private bus system; has reworked and revised its sidewalk plan; and is currently working with Albemarle County and the State Highway Department to update the City's thoroughfare plan. This "Bicycle Plan" will join the other transportation planning efforts, in guiding future decisions leading to a balanced transportation system in Charlottesville.

III. GOALS, OBJECTIVES, AND POLICIES

For any plan to be effective, it must set forth goals, objectives, and policies to guide future decisions. The goals outline desirable future conditions; objectives establish specific measurable steps to achieve the goal; policies are the procedures by which the objectives will be implemented. This plan sets forth three major goals dealing with the Bicycle Network and its coordination, Route Design for Safety and Convenience, and Public Information and Education. These goals, objectives and policies are not listed in order of priority.

BICYCLE NETWORK AND ITS COORDINATION

Goal 1: To plan and implement a comprehensive and coordinated bicycle route network for transportational and recreational use so as to provide safe and convenient access to major activity nodes, natural areas, parks, schools and community facilities.

Objective 1: To coordinate City routes with national, regional and county routes.

Policy: City shall have a bi-annual review with county, region and the University to coordinate bicycle routes and implementation program.

Policy: Whenever possible, the City, shall follow the State of Virginia bicycle standards.

Objective 2: To coordinate bicycle route planning and implementation with other transportation modes, e.g. pedestrians, transit, and streets.

Policy: Bicycle routes shall be jointly designed with pedestrian transit and auto routes. Designs for all modes shall be reviewed to see that they coordinate with other modes of transportation.

Policy: To provide space for bicycle routes within public right-of-ways on all new or upgraded roadways, where bicycle plan shows bike route, with special emphasis on collector and arterial routes and route linking major community facilities, with appropriate provision for safety.

Objective 3: To achieve balance and coordination between transportation and recreational uses within available community resources.

Policy: Whenever possible, utilize existing public right-of-ways to provide bicycle routes.

Objective 4: Establish a central loop route system linking the University, Downtown, Barracks Road Shopping Center and McIntire Park - Charlottesville High School by 1980.

Policy: It shall be the policy of the City to give high priority in funding to bicycle routes segments which fall in the loop system linking major activity nodes.

Objective 5: Provide safe and convenient access to schools, parks, natural areas and community facilities.

Policy: Safety consideration for bicycle routes to schools shall be given priority.

Policy: The City shall utilize floodways and parks for bicycle routes and shall encourage the acquisition and donation of such right-of-ways and easements.

ROUTE DESIGN FOR SAFETY AND CONVENIENCE

Goal II: To design a bicycle system so that it is safe, convenient and pleasurable for all users.

Objective 1: To establish a unified or at least a coordinated bicycle registration system between City, County and University to reduce bicycle theft.

Policy: The City shall encourage registration of all bicycles in Charlottesville.

Objective 2: To provide safe and convenient locations of bicycle storage facilities.

Policy: It shall be the policy of the City to provide bicycle storage facilities at safe and convenient locations at public buildings.

Policy: It shall be the policy of the City to encourage provision of bicycle storage facilities at convenient locations near major private buildings through a site plan review process.

Objective 3: To develop a consistent and attractive sign system to inform cyclists and motorists, and thus, reduce conflicts and damages.

Policy: To appropriately sign and mark the pavement of all routes to increase motorists' awareness of cyclist on the route and to help cycling traffic to minimize potential auto/bicycle conflicts.

Objective 4: To reduce significantly bicycle and auto accidents.

Policy: To provide adequate signing, route markings and lighting so that all routes are easy and safe to follow.

Policy: Design all routes with continuous riding surfaces free from obstructions such as grates, curbs, potholes, etc. and to remove such obstructions on existing routes.

Policy: To maintain all routes after construction in order to keep them clean, free of gravel, glass and other such obstacles.

Objective 5: To develop and adopt comprehensive bicycle safety ordinance for the City of Charlottesville.

Policy: It shall be the policy of the City to enforce the bicycle ordinance.

Policy: To maintain complete and retrievable record system on bicycle accidents.

Objective 6: To design and locate bicycle routes which are safe and convenient to riders.

Policy: It shall be the policy of the City to provide minimum gradient routes where possible.

Objective 7: Construct at least one route segment (not less than one mile) per year.

Policy: The City shall commit approximately $50,000 per year for the construction of bicycle routes.

Objective 8: Sign all heavily traveled bicycle routes on existing right-of-ways, as soon as possible.

Policy: City shall appropriate sufficient funds to sign all bicycle routes on existing right-of-ways.

PUBLIC INFORMATION AND EDUCATION

Goal III: To encourage and assist in the development of a comprehensive public information and education program, to make the community aware of bicycle riding and make bicycle riding safer and more enjoyable.

Objective 1: To inform the general public of bicycle advantages, bicycle facilities, routes and regulations.

Policy: Use the media of television, radio, newspapers, poster and others to familiarize the public with advantages of bicycle riding and rules.

Policy: To promote a speakers bureau with audio-visual material on bicycling for general public information.

Policy: To encourage neighborhood organizations, civic clubs, YMCA, etc. to sponsor bicycle rider education programs to educate potential cyclists of safe riding techniques and of route locations.

Policy: To consider an annual appropriation for bicycle education. Bicycle registration fees may be one source of funds.

Objective 2: To effectively inform motorists and pedestrians of their responsibility in relation to bicycle traffic.

Policy: Request the Highway Department to include questions relating to bicycle safety and the motor vehicle operator's relationship to bicycles in traffic on motor vehicle operators license examination.

Policy: Request that a section be included dealing with motorists responsibility to bicyclist as part of drivers' education classes at the Charlottesville High School and Albemarle High School.

Objective 3: To inform present and potential cyclists of routes, storage facilities and regulations.

Policy: Encourage the use of public safety personnel in elementary schools to help educate the young cyclist of proper cycling techniques and safety precautions.

Policy: The City shall provide all cyclists with an information package at the time of registration, consisting of bicycle rules, practices, routes and facilities.

IV. BICYCLE ROUTE LOCATION CRITERIA

In determining locations of bike routes in an overall City system, many factors come into play. Each specific route in the system should be chosen to satisfy these criteria. Preliminary studies indicate the following to be crucial variables in the location of bike routes. Following criteria are presented in order of priority.

1. Optimize the Safety for Users

   To encourage use, safe routes must be developed which include considerations of:

   A. Minimal Conflict with Automobiles and Pedestrians
   B. Personal Safety
   C. Street Hazards - Manhole covers, pot holes, non-continuous surfaces, grills

2. Locate in areas of Maximum Need

   The bike riding population of the City presently uses certain streets more than others. These streets, where no provisions have been made for bike riders, should be high on the list for improvements and inclusion in a City-wide system. This also includes areas of potential use based upon socio-economic characteristics of the area.

3. Locate to use Existing City Easements, Right-of-Ways, and Streets

   This criteria is for economy of establishing a route system.

4. Locate to connect major Activity Areas of the City

   To be effective, a bike route should start and end at points where people want to go. Preliminary studies show the following to be major activity centers of Charlottesville.

   A. Downtown Business District
   B. The University
   C. Barracks Road Shopping Center
   D. McIntire Park and Charlottesville High School

5. Locate to Link Neighborhoods with Community Facilities and Schools

   While starting and ending at major activity nodes, the route should also connect the secondary neighborhood activity centers, which include parks, open spaces, schools, community facilities and community services.

6. Design Routes for the Convenience of the user

   A. Travel time and Distance
   B. Road Grades
   C. Bike Storage facilities
   D. Linkage with other Transportation Modes

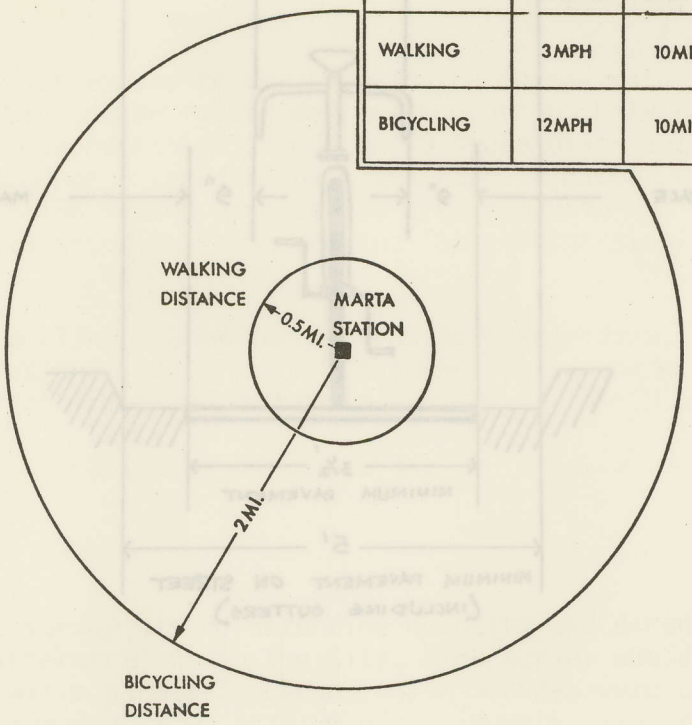
7. Locate to make Optimum Use of Natural Environment

Where use of the flood plain is feasible, it offers many advantages to an on or near street system. The flood plain offers minimal auto conflict, easy grades, low land costs, and open space contact for the users. The system should take considerations of natural vistas, grades and other relevant variables.

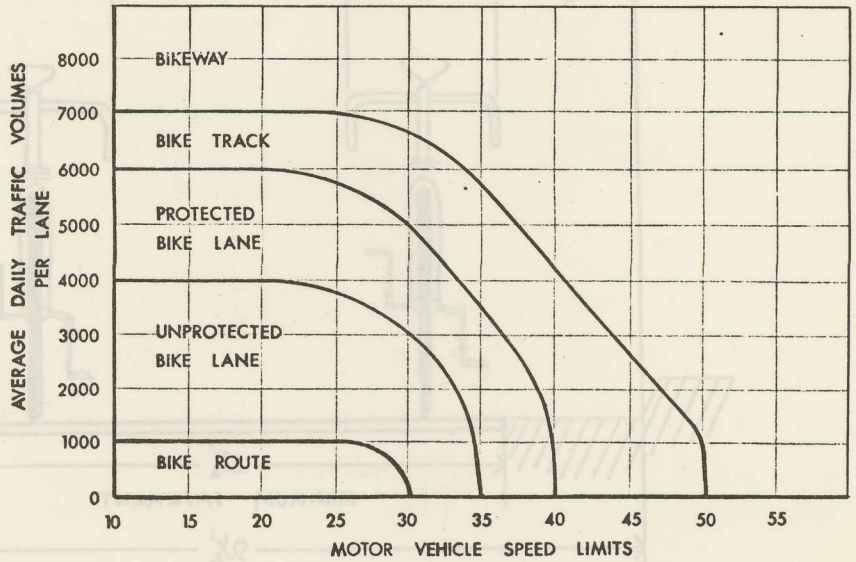
V. BICYCLE PLANNING STANDARDS

WALKING VS. BIKING ACCESS TO TRANSIT STATIONS

MODE OF TRAVEL	ASSUMED OPERATING SPEED	OPERATING TIME TOLERANCE	CAPTURE RADIUS	CAPTURE AREA
WALKING	3 MPH	10 MIN.	0.5 MI.	0.8 SQ. MI.
BICYCLING	12 MPH	10 MIN.	2 MI.	12.6 SQ. MI.

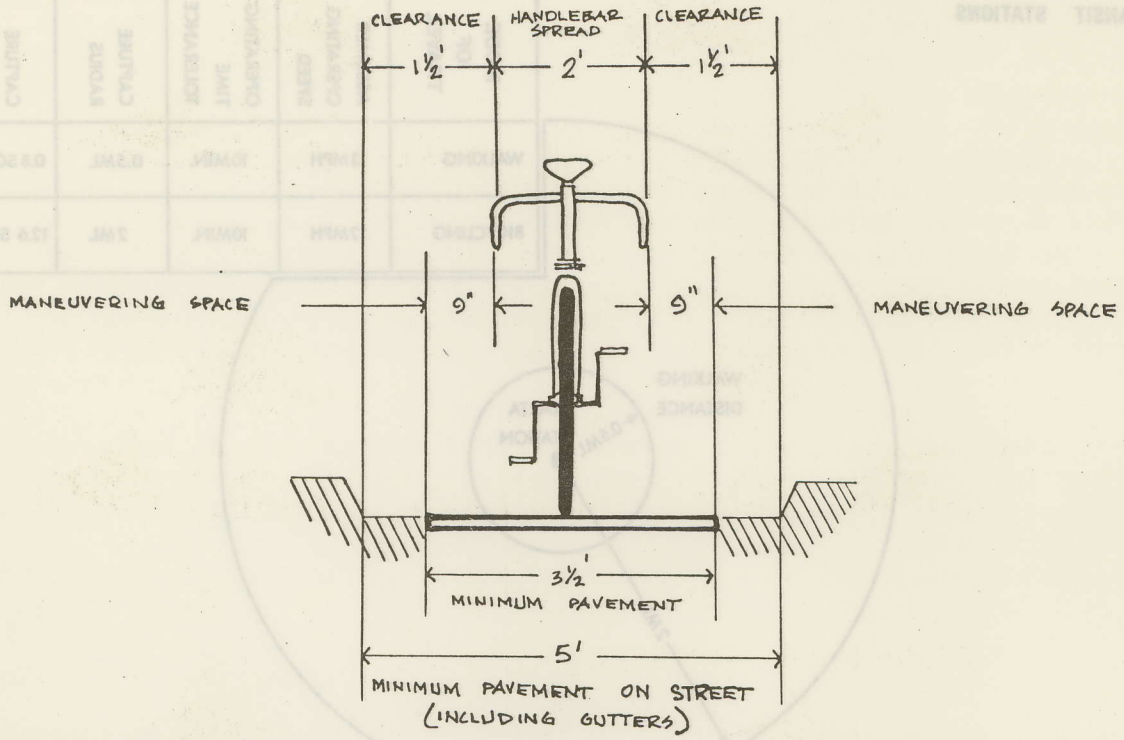


RELATIONSHIP OF TRAFFIC SPEED & VOLUME TO BICYCLE FACILITY DESIGN

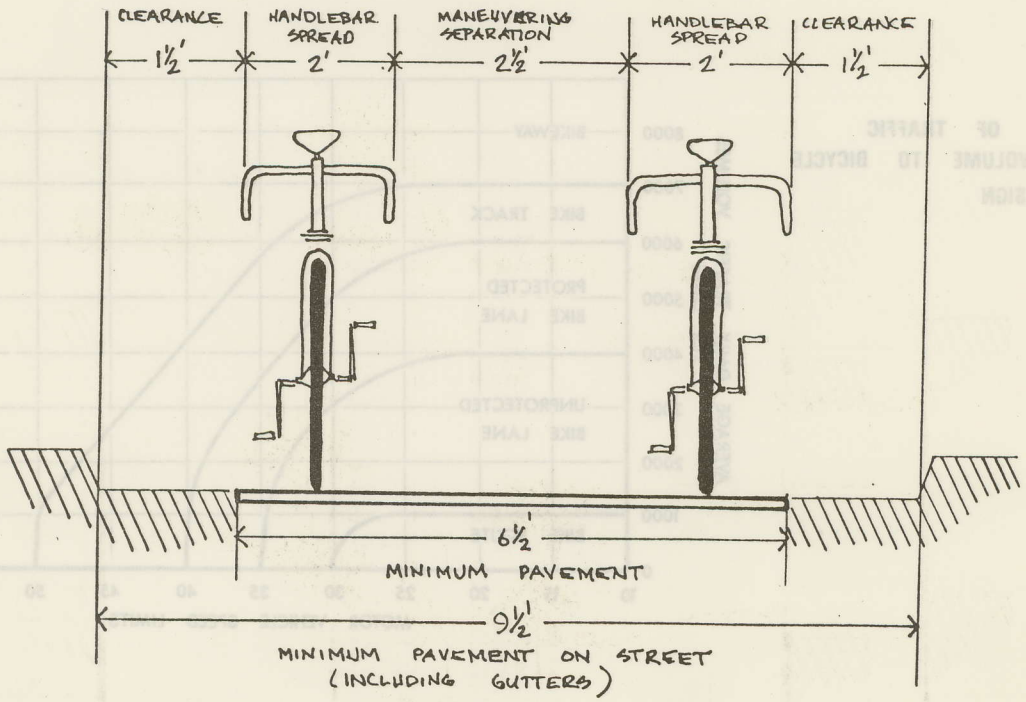


MINIMUM BICYCLE MOVEMENT FACILITY WIDTHS

ONE LANE FACILITY

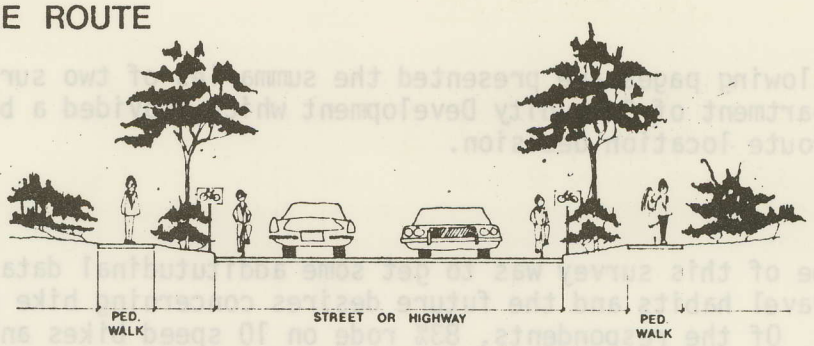


TWO LANE FACILITY

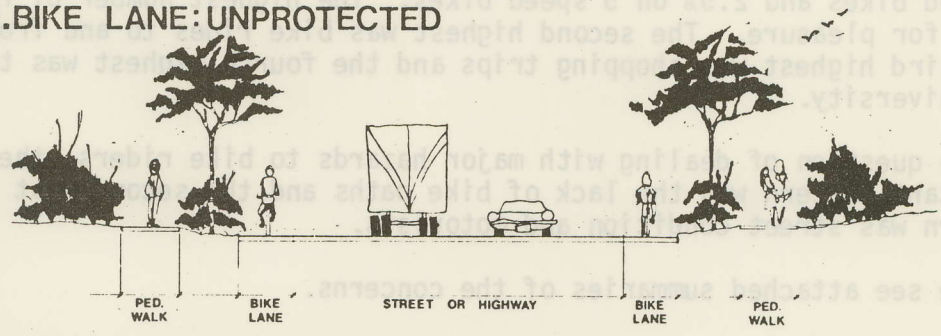


BICYCLE FACILITY ALTERNATIVES

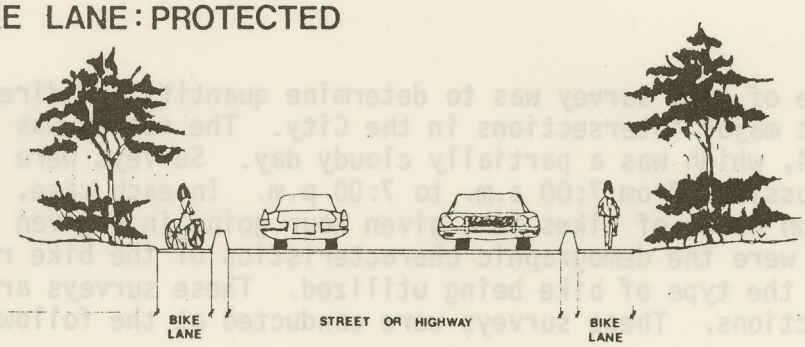
1. BIKE ROUTE



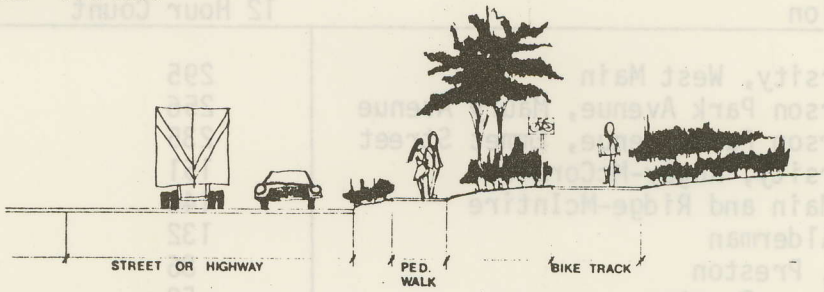
2. BIKE LANE: UNPROTECTED



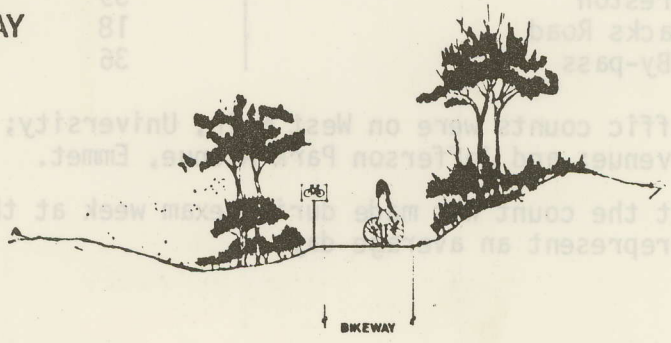
3. BIKE LANE: PROTECTED



4. BIKE TRACK



5. BIKEWAY



VI. BICYCLE ROUTE SURVEY SUMMARIES

On the following pages are presented the summaries of two surveys conducted by the Department of Community Development which provided a basis for preliminary route location decision.

Survey I:

The purpsoe of this survey was to get some addititudinal data and to get the present travel habits and the future desires concerning bike routes in the community. Of the respondents, 83% rode on 10 speed bikes and 14.5% on 3 speed bikes and 2.5% on 5 speed bikes. The highest number of riders rode bikes for pleasure. The second highest was bike rides to and from work. The third highest was shopping trips and the fourth highest was to and from the University.

On the question of dealing with major hazards to bike riders, the most important concern was the lack of bike paths and the second most important concern was street condition and motorists.

Please see attached summaries of the concerns.

Survey II:

The purpose of this survey was to determine quantity and direction of bike movement at major intersections in the City. The survey was conducted on May 3, 1974, whidh was a partially cloudy day. Surveys were conducted whenever possible from 7:00 a.m. to 7:00 p.m. In each case, the data was collected on numer of bikes in a given hour going in a given direction. Also noted were the demographic characteristics of the bike riders and the nature and the type of bike being utilized. These surveys are summarized by intersections. These surveys were conducted at the following ten intersections.

Intersection	12 Hour Count
1. University, West Main	295
2. Jefferson Park Avenue, Maury Avenue	256
3. Jefferson Park Avenue, Emmet Street	235
4. University, Rugby-McCormick	151
5. West Main and Ridge-McIntire	146
6. Ivy, Alderman	132
7. Rugby, Preston	86
8. McIntire, Preston	59
9. Emmet, Barracks Road	18
10. Dairy, 250 By-pass	36

The highest traffic counts were on West Main, University; Jefferson Park Avenue, Maury Avenue; and Jefferson Park Avenue, Emmet.

Please note that the count was made during exam week at the University and may not accurately represent an average day.

VII. BICYCLE ROUTES

While a network of streets and roads have been built to accommodate vehicular traffic in Charlottesville, this only marginally provides for the needs of the bicycle. This situation causes considerable conflict between these two modes of transportation, recent conditions such as the "energy crisis", increased environmental awareness, and inflation will tend to cause biycle ridership to increase. These conditions, plus the fact that bicycle numbers have been increasing lead us to believe that bicycles are not only here to stay, but that there will probably be more in the future.

Three likely solutions to the bicycle-auto conflict are: restrict bicycles from the streets, leave conditions as they are, provide a bicycle system which will allow the two modes of transportation to co-exist with a minimum of conflict. We reject the first solution as this would limit the transportation choices available in Charlottesville and may be a hardship on the young and the poor who can most benefit from bicycle travel. The second solution is suitable only where there is not sufficient demand to warrant the expenditure necessary to implement a bikeway system. We feel that in Charlottesville, there is enough demand to warrant a bikeway system. Such a system would include the bicycle rider, the bicycle, a bicycle lane or trail, and the supporting body of regulations that allow the bicyclist to function in the system with a minimum of conflict between himself and fellow travelers. This section of the "Bicycle Plan" deals with the location of bike routes in Charlottesville.

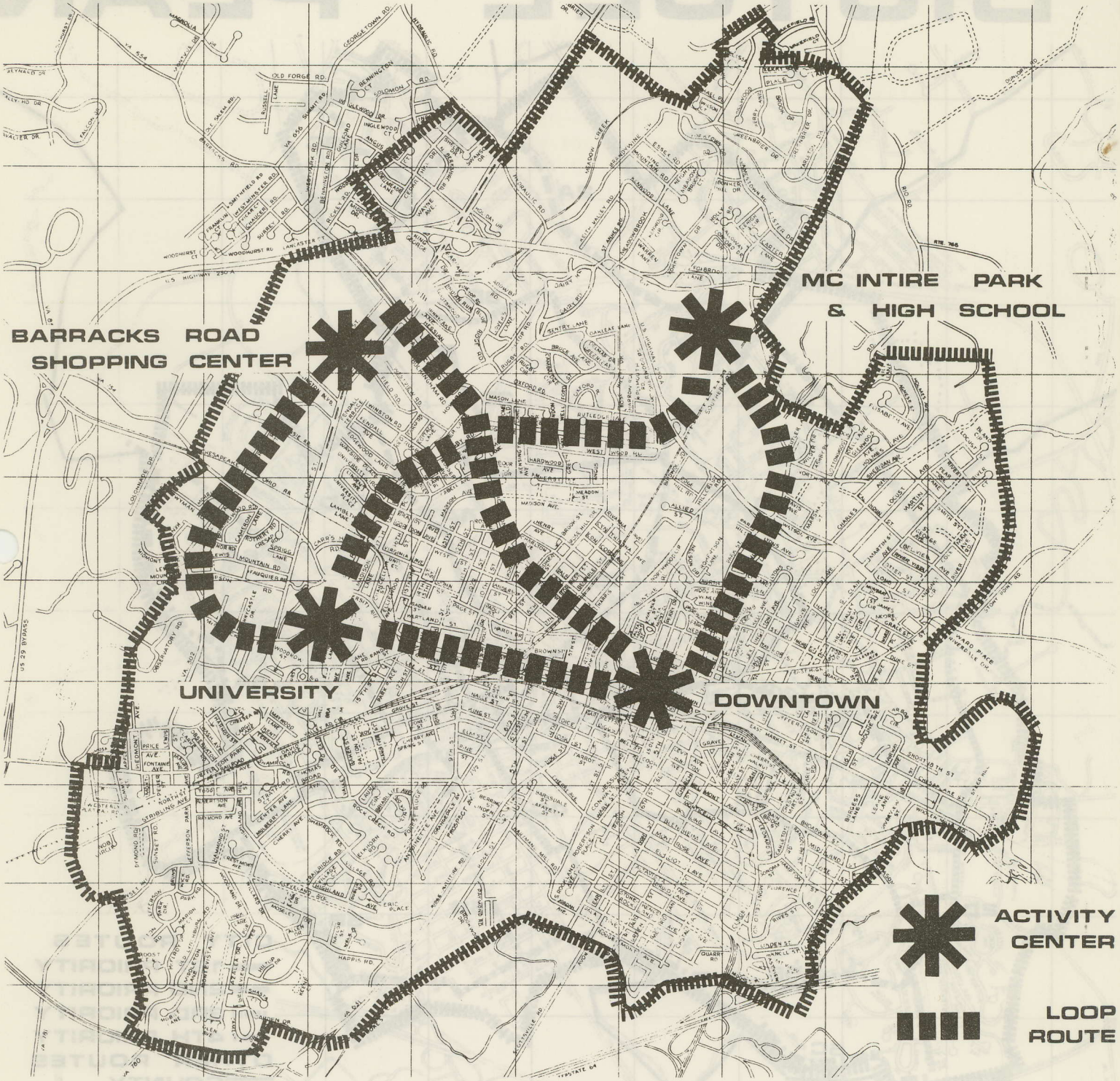
The first priority expressed in the goals and in route location criteria was to link all major activity centers in the City (Downtown, University, Barracks Road Shopping Center, and McIntire Park - Charlottesville High School). This initial "loop system" would become the basis for future route development. (See Map #) From this "loop system" there would be additional radial routes linking the major residential neighborhoods to the activity centers. These radial routes were located in response to the Bicycle Route location criteria outlined in Section IV. Together with the loop routes, these routes comprise the Bike Route plan (See Map #).

In addition to the Bike Routes planned for Charlottesville, Albemarle County and the university of Virginia both have plans dealing with the bicycle. The Albemarle County Board of Supervisors adopted a bicycle plan in March 1976. This plan calls for the linking of the major residential developments in the urban area with the City's bike route system. (Also included is the Bikecentennial 76 Route and other recreational routes (See Map #). The University of Virginia has some internal bike routes planned in their master plan. These routes would be for use by the students and visitors to the campus (See Map #).

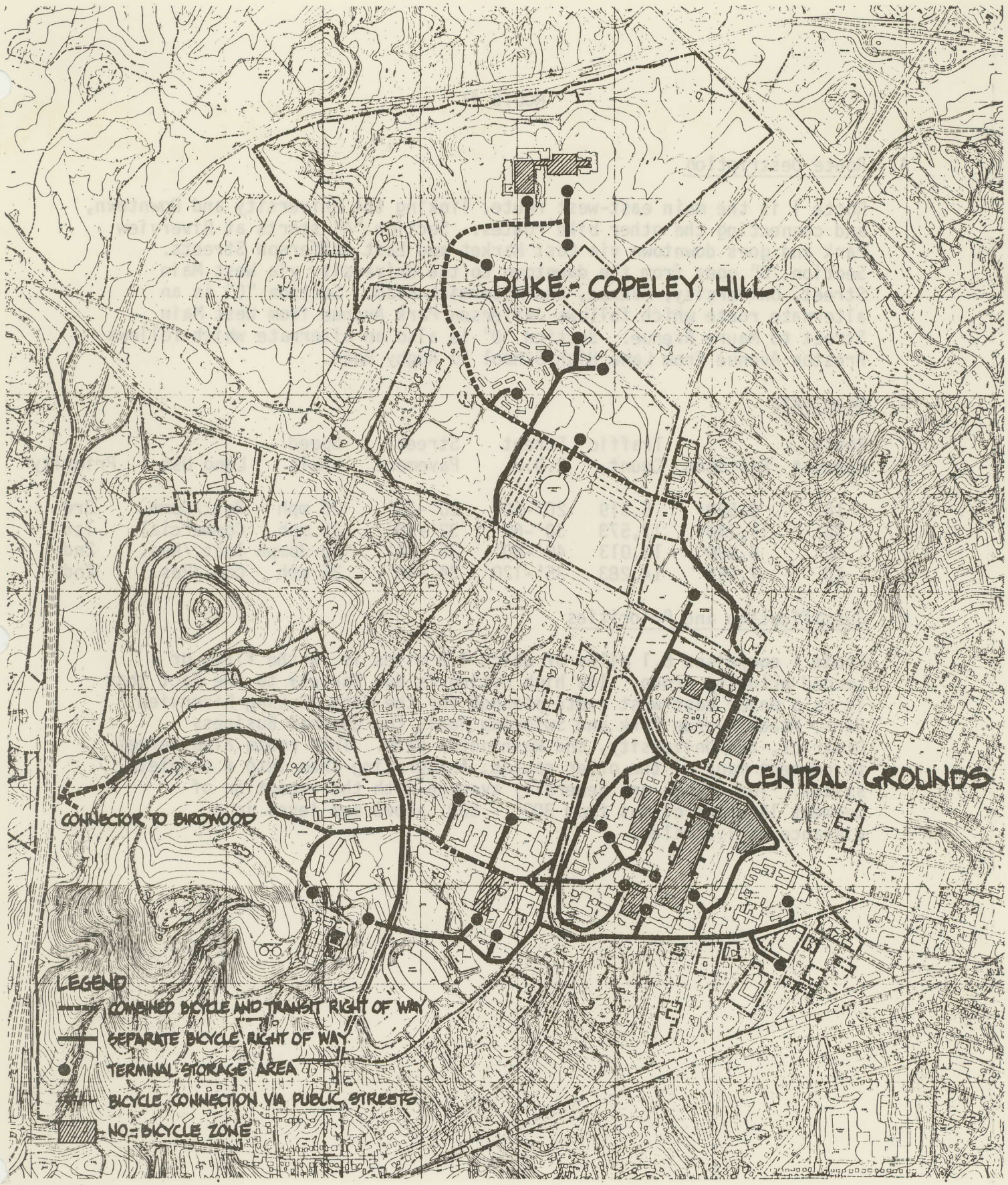
For each route in the city, there is a route description, base data chart, location drawing, cross section, and comments on justification and priorities. Route priorities were determined by the Bicycle Task Force by completing an evaluation matrix. Each route was rated for its ability to meet the selection criteria outlined in Section IV. These ratings were compiled and grouped into four priority groups.

Detailed designs of the routes will have to be made prior to construction of each route segment. During this design phase, route type will be determined in conjunction with the other critieria such as right of way, width, costs, demand, etc...

LOOP ROUTES


MC INTIRE PARK
& HIGH SCHOOL
BARRACKS ROAD
SHOPPING CENTER
UNIVERSITY
DOWNTOWN
ACTIVITY CENTER
LOOP ROUTE

BICYCLE PLAN



DEVELOPMENT PLAN

Bicycle Circulation

THE UNIVERSITY OF VIRGINIA
Charlottesville

SASAKI, DAWSON, DeMAY ASSOCIATES, INC.
PLANNING LANDSCAPE ARCHITECTURE ARCHITECTURE CIVIL ENGINEERING
23 MAIN STREET WATERTOWN, MASSACHUSETTS 02172

NORTH 200' 400' 1000' 1/4 m. 2000'

FIGURE 8

ROUTE #1

A. Route Description

Route 1 is the main east-west route, linking the University and Downtown, and connecting the other bike routes. Section "A" starts at Riverview Park and goes downtown via East Market and East Jefferson Streets. Section "B" goes from the downtown to the University via West Main Street, University, Avenue, and McCormick Road. Section "C" is an alternate route which follows Jefferson Park Avenue from West Main Street to Maury Avenue. Section "D" is also an alternate which follows Preston Avenue from Lane High School to Rugby Road.

B. Base Data

Route Segment	Distance	Traffic Count	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
1A	9,530'	5,619	20'-50'	20'-35'	25 mph	Res./Comm.	3rd
1B	11,240'	17,573	30'-60'	32'-40'	25 mph	Commercial	1st
1C	6,060'	13,013	40'-80'	35'-44'	25-35mph	Inst./Res.	2nd
1D	7,150'	14,283	35'-120'	24'-44'	25 mph	Com./Res.	2nd

C. Justification and Priorities

Route 1 comprises 6.1 miles of which 4.3 miles is in the first or second priority group. Its high rating is due largely to the fact that it is a major east-west route planned for the City linking Riverview Park, Meade Avenue Park and Swimming Pool, the Central Business District, the University, and Washington Park. This route also serves to connect many of the other routes, integrating them into a complete system. The grades are generally average with the exception of Segment 1A which climbs from 300' - 500' above sea level in a distance of 1.8 miles.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

REVISED JANUARY 1, 1968

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #1

ROUTE #2

A. Route Description

Route #2 is a primarily north-south route, linking the University and Barracks Road Shopping Center. Section "A" follows the Meadow Creek Riverbed from Greenbrier Park to Hydraulic Road; Hydraulic Road across the By-pass; along the riverbed to Meadowbrook Road to Barracks Road. Section "B" uses Milmont Lane from Barracks Road to Arlington Boulevard, then continues through to Alderman Roadand along Alderman Road to McCormick Road. Section "C" continues along Alderman Road to Maury Avenue; along Maury Avenue to Jefferson Park Avenue; along Jefferson Park Avenue to Azalea Road; and along Azalea Road to Azalea Park.

B. Base Data

Route Segment	Distance	Traffic Count	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
2A	9,900'	Not Avl.	25'-56'	18'-36'	25 mph	Openspace/Res.	2nd
2B	9,580'	8,991	50'-75'	22'-50'	25 mph	Comm./Insti.	2nd
2C	8,840'	10,790	50'-80'	22'-40'	25 mph	Residential	3rd

C. Justification and Priorities

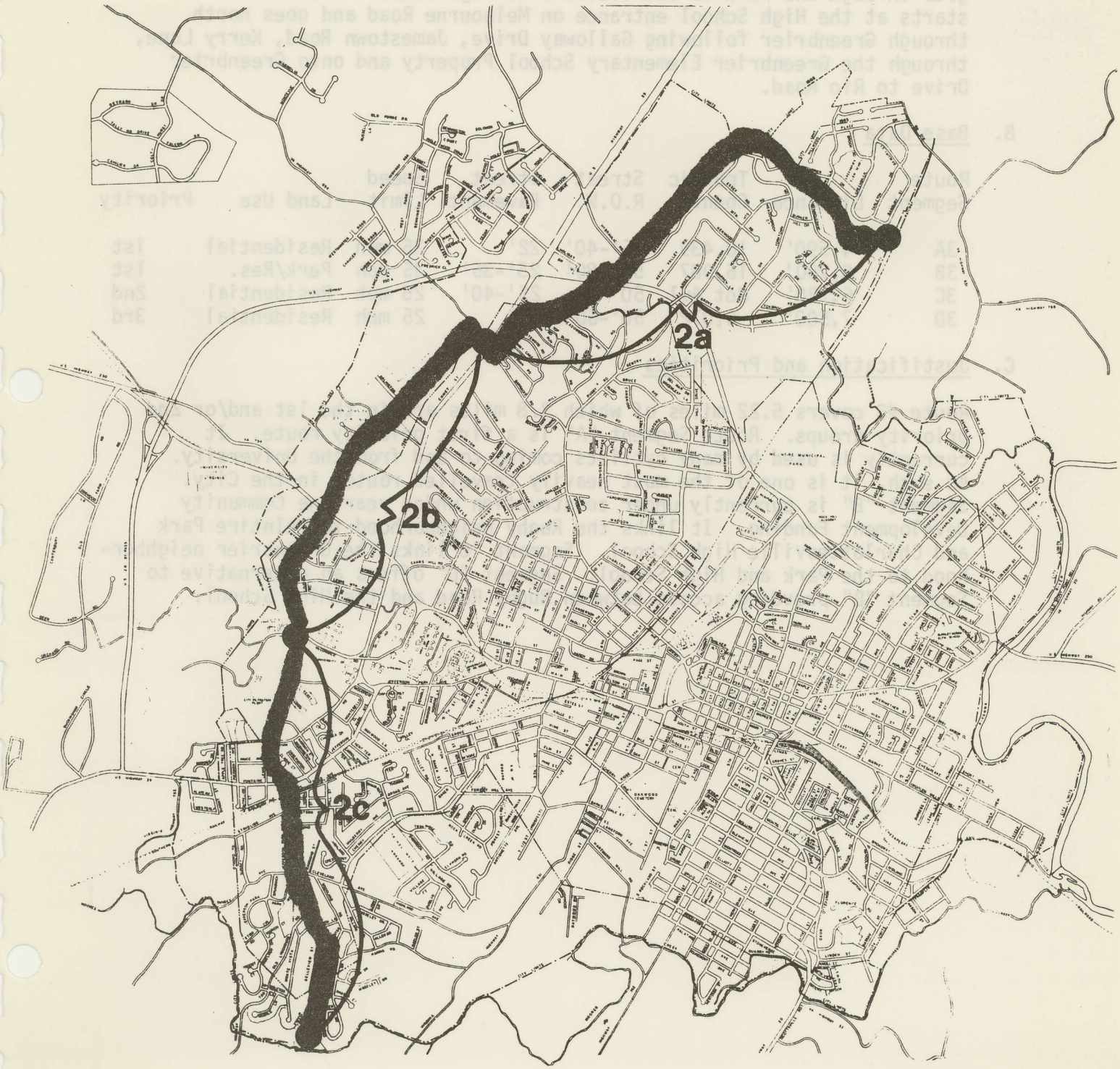
Route #2 covers 5.36 miles of which 3.69 miles are in the second priority group. Route Segment A utilizes the Meadwocreek stream bed to provide access from the north of the City to Barracks Road Shopping Center. It would also link into a proposed county route connecting to Four Seasons. Route Segment B offers an alternative link between the University and Barracks Road Shopping Center. This would remove most of the bicycle-auto conflict now occurring on Emmet Street. Route Segment C links the residential neighborhood south of the C & O railroad tracks with the University.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

REVISED JANUARY 1968

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #2



ROUTE #3

A. Route Description

Route #3 is primarily a north-south route linking the University to McIntire Park and Charlottesville. Section "A" starts at the University on Rugby Road and follows Rugby Road to Preston Avenue. Section "B" starts at Preston Avenue and follows Rugby Avenue to McIntire Park and goes through the Park to Charlottesville High School. Section"C" starts at the High School entrance on Melbourne Road and goes north through Greenbrier following Galloway Drive, Jamestown Road, Kerry Lane, through the Greenbrier Elementary School Property and onto Greenbrier Drive to Rio Road.

B. Base Data

Route Segment	Distance	Traffic Count	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
3A	4,590'	10,439	35'-40'	22'	25 mph	Residential	1st
3B	8,750'	16,987	50'-80'	25'-35'	35 mph	Park/Res.	1st
3C	6,720'	Not Avl.	50'	25'-40'	25 mph	Residential	2nd
3D	7,500'	5,072	50'-60'	30'	25 mph	Residential	3rd

C. Justification and Priorities

Route #3 covers 5.22 miles of which 3.8 miles are in the 1st and/or 2nd priority groups. Route Segment "A" is a first priority route. It currently is used by many cyclists coming to and from the University. As such, it is one of the most heavily travelled routes in the City. Segment "B" is currently under construction under year one Community Development Funding. It links the Rugby neighborhood to McIntire Park and Charlottesville High School. Segment "C"links the Greenbrier neighborhood to the Park and High School. Segment "D" offers an alternative to Segment "B" provding access between Rugby Road and the High School.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

REVISED JANUARY 1, 1968

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #3

ROUTE #4

A. Route Description

Route #4 is a north-south route going from Charlottesville High School, south along Melbourne Road and cutting through McIntire Park to McIntire Road. This route would then follow McIntire Road, go behind Lane High School and up 4th Street to West Main. From here, the route would follow 5th Street, S.W. to Tonsler Park, and go through Tonsler Park to Forest Hills Avenue. The route would go along Forrest Hills Avenue, to Cherry Avenue; along Cherry Avenue to Cleveland Avenue, and along Cleveland Avenue terminating at Jefferson Park Avenue.

There would also be a section running up 3rd Street, N.E. through downtown, and ousth on Ware Street to Cherry Avenue. From here, the route would take 1st Street, South to Hartman's Mill Road, south to Jordan Park.

B. Base Data

Route Segment	Distance	Traffic Count	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
4A	11,670	11,615	40'-50'	30'-40'	35 mph	Park/Openspace/Res.	2nd
4B	9,650		30'-60'	18'-35'	25 mph	Comm./Residen.	3rd
4C	8,950	Not Avl.			25 mph	Comm./Residen.	3rd
4D	(Alternative to Route 4A)						4th

C. Justification and Priorities

Route #4 covers 5.73 miles of which only 2.2 miles are in the 2nd priority group. Segment "A" provides a link along McIntire Roadthrough the park between the Central Business District and Charlottesville High School. Segment "B" connects the Central Business District and some of the low income neighborhoods along Cherry Avenue. Segment "C" links the 1st Street - Garrett Street area with the downtown. Segment "D" provides on alternative to Segment A and would not be necessary when "A" is developed.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

REVISED JANUARY 1, 1968

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #4

ROUTE #5

A. Route Description

Route #5 is a north-south route which follows the Rivanna River from the new Pen Park, past the Free Bridge, and on down to the Woolen Mills and the proposed Riverview Park. From here, the route follows City streets, going south on Franklin Street to Nassau Street; Nassau Street to Linden Street; Linden Street to Quarry Roadand Palatine Avenue. There also exists the possibility of creating a route extending down Route 20 to the new Bicentennial Center and Piedmont Virginia Community College. Then, the routes would follow Moores Creek ending in Azalea Park.

B. Base Data

Route Segment	Distance	Traffic Count	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
5A	13,500'	Not Avl.	Off-street	- -	--	Open space	4th
5B	18,300	Not Avl.	30'-50'	18'-22'	25 mph	Residential	4th
5C	3,000	Not Avl.	Off-street	- -	--	Open space	4th

C. Justification and Priority

Route 5 covers 6.43 miles all of which is fourth priority. Development of this route would serve recreational purpose and could be combined with a hiking trail system. The route would start at Pen Park and follow the Rivanna River south to the new Riverview Park land and the Woolen Mills. From here, it would follow Moore's Creek upstream to Azalea Park. The low priority is due to the fact that the route cannot be used as a commuter route. If funds were available it could become a major recreational trail following the flat riverbeds and open space corridors. Its 6.43 mile length would provide for a pleasant 13 mile round trip from Pen Park to Azalea Park and back again.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

REVISED JANUARY 1, 1968

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #5

ROUTE #6

A. Route Description

Route #6 is a north-south route which follows Locust Avenue from the northern part of the City to downtown, then crosses the Belmont Bridge. The route then uses Monticello Road to Rialto Street. The southern portion of the route follows Rialto Street, past Belmont Park to Rougemont Avenue.

B. Base Data

Route Segment	Distance	Traffic Counts	Street R.O.W.	Street Pavement	Speed Limit	Land Use	Priority
6A	7,000'	4,647	50'	18'-35'	25 mph	Residential	4th
6B	6,250'	13,000	24'-50'	20'-50'	25 mph	Res./Comm.	4th

C. Justification and Priorities

Route 6 covers 2.5 miles all of which is in the fourth priority group. Segment "A" would link the northeast neighborhoods with the Central Business District. Segment B would link Belmont with the Central Business District. The low priority rating is due mainly to the low demand for facilities in these areas.

CITY PLANNING COMMISSION
CHARLOTTESVILLE VIRGINIA

CITY OF CHARLOTTESVILLE VIRGINIA

ROUTE #6

VIII. PUBLIC INFORMATION AND EDUCATION

In order to insure the successful attainment of the goals and objectives dealing with Public Information and Education about bicycle riding, a package of information resources, on-going programs, and annual events needs to be developed and implemented. In addition to the development of this package, there must be cooperation between the City, neighborhood organizations, and interest groups, to insure continuous community participation and high interest levels in bicycle safety and education.

A. Information Resources

1. The City shall develop an information handout, dealing with the location of designated and developed bike routes in the City, the local laws and regulations pertaining to the bicyclist, and other useful information such as the location of bike shops, safe riding techniques, and contact persons for further information. This handout should be available for distribution at the time of registration, at the local bike shops, at the Chamber of Commerce, etc...

2. The City shall develop a special information handout for touring cyclists who pass through the City. Such a handout should include the location of the "Bikecentennial 76" route, local bike shops, points of interest, overnight accommodations, etc...

3. The City shall encourage the development of a mass media program dealing with bicycles, bicycle safety, and bicycle education. This program should include slides, movies, newspaper articles, posters, etc... Also, a weekly or daily newspaper column dealing with bike routes, maintenance, and education should be developed.

B. On-Going Programs

1. There should be established a bicycle speakers bureau who would be available for lectures and talks to civic groups, neighborhood organizations, and interest groups. The bureau should have speakers from the Department of Community Development, local bike shops, and other bike riders and enthusiasts. The bureau should also be able to provide a tour leader, in the event a local group desired a small tour.

2. The City's Police Resource Officers should develop a program in the City Schools to educate youth on safe bike riding techniques, city laws, and bike maintenance.

3. There should be educational efforts to make motorist aware of the bicycle as a legitimate mode of transportation and safety needs of the bicyclist.

4. The City's Parks and Recreation Department shall sponsor bike programs during the summer months, using part-time group leaders. The programs should be structured for these age groups:

   a. 8 - 12 years - This group would emphasize short rides around town, to parks, etc., and should teach kids how to ride on the street. They should also learn about bike repair, traffic laws, etc... The Group should provide a fun, educational experience.

   b. 12 - 16 years - This group should emphasize riding safety on busier City streets, and should increase the teen's skill, endurance, and responsibility. There should be short trips out into the County of 15 - 20 mile lengths to such places as Chris Green Lake, Monticello, etc... The group should prepare the young cyclist for full time commuter riding.

   c. Adults - This would be a group for grown-ups who are just getting interested in recreational cycling and short commuter trips. There should be mephasis on health, safety and recreation.

   d. It is hoped that a group of experienced adult cyclists will form and sponsor longer tours (80 - 120 miles) racing events, and other bicycle programs. Thus, there is no specific Parks and Recreation group for this purpose.

C. Annual Events

1. There should be bicycle events such as races, etc... sponsored during a "Bicycle Week". This week would be proclaimed by the Mayor and would be a time for concentrated education efforts. People would be encouraged to ride to work, to shopping centers, etc... There could be special speakers from state agencies on bike planning, etc... There could also be a manufacturer's display set up showing new equipment and safety devices. It may be possible to coordinate part of this activity during the Dogwood Festival during April.

2. Annual events should include a Bike Day at schools where there would be skill riding events, small races, registrations, etc., and where the youngsters would be cnouraged to ride their bikes to school.

3. During fall class registration, University students, and Piedmont Virginia Community College students should receive an information package dealing with the location of designated routes, local laws and regulations, and contact persons for further information.

IX. RECOMMENDATIONS

The following are the recommendations of the Bicycle Task Force in order of priority.

1. Signs to mark all priority bike routes in the City.

2. To develop and initiate a comprehensive public information and education program in order to make the community aware of bike riding and make bike riding safer and more enjoyable. This should include a pamphlet, slide show, etc...

3. The immediate removal of safety hazards on bike routes provided in the Bicycle Plan.

4. To construct at least one segment of bicycle route per year. To this end, the City shall commit approximately $50,000 per year.

5. To develop bike routes in order of priority recommended by the Task Force. The priorities are as follows:

First Priority:	Route 1B - West Main Street
	Route 3A - Rugby Road
	Route 3B - Rugby Avenue-McIntire Road
Second Priority:	Route 1C - J.P.A.
	Route 1D - Preston Avenue-Barracks Road
	Route 2A - Meadow Creek
	Route 2B - Alderman Road
	Route 3C - Charlottesville High School-Rio Road
	Route 4A - McIntire Road
Third Priority:	Route 1A - E. Market St.-E. Jefferson St.
	Route 2C - Alderman Road - J.P.A. South
	Route 3D - Rugby-Dairy Road-Grove Road
	Route 4B - Cherry Avenue
	Route 4C - Pollocks Branch
Fourth Priority:	Route 4D - Park Street
	Route 5A - Rivanna River
	Route 5B - Belmont-Harris Road
	Route 5C - Moore's Creek
	Route 6A - Locust Avenue
	Route 6B - Rialto Street

For location of routes, see Page 17.

APPENDIX A

ALTERNATIVE ROUTES-DISTANCE SUMMARY

Section Route	A	B	C	D	E
1	9,530	11,240	6,060	7,150	33,980
2	9,900	9,580	8,840	-----	28,320
3	4,590	8,750	6,720	7,500	27,560
4	11,670	9,650	8,950	7,500	37,740
5	13,500	18,300	3,000	-----	34,800
6	7,000	6,250	----	-----	13,500

CITY WIDE TOTAL 175,900 or 33.3 miles

Note - Loop of Route Sections - 1B, 3A, 3B, 4A = 36,250 or 6.86 miles

APPENDIX B

POTENTIAL RIDERSHIP

	Population	Bicycles	Users
U.S.	203,000,000	50,000,000 or .25 bicycles/ capita	73,000,000 or .37 bicycles/ capita
Ch'ville	40,000	10,000	14,800

Source - "Planning and Design of Bikeways"
by Virginia Dept. of Highways and Transportation
October 1974

APPENDIX C

COST ESTIMATES BY TYPE OF BICYCLE FACILITY

Type 1. Bike Route[1] .....$375/1000 ft./Lane

Type 2. Bike Lane - Unprotected[2] .....$2500/1000 ft./Lane

Type 3. Bike Lane - Protected[3]
A. 2' high Concrete Barrier .....$12,300/1000 ft./Lane
B. 6" high Bumper Blocks .....$4,300/1000 ft./Lane

Type 4. Bike Track[4] .....$4,320/1000 ft./Lane

Type 5. Bikeway[5] .....$4,230/1000 ft./Lane

Notes - The above prices are based on present construction costs and include the following:

1. Lines and Signs On Existing Pavement.

2. Excavation, Stone, Pavement, Lines and Signs.

3. Excavation, Stone, Pavement, Concrete Barrier, Lines and Signs. (Barrier will not allow adjacent parking)

4. Clearing, Grading Surface, Stone, Pavement and Signs.

5. Claring, Grading Surface, Stone, Pavement and Signs.

Noteworthy Items Not Included In Estimates:

a. Right-Of-Way Acquisition (This will be necessary for bike facility type 4&5)
b. Traffic Control Signals for Changes
c. Storm Drain Facilities
d. Bridges
e. Grading For Vertical Alignment

Source - Department of Public Works (Approximate cost estimates - Dec. 1974)

APPENDIX D
BICYCLE ORDINANCE

AN ORDINANCE TO AMEND AND REORDAIN ARTICLE IV OF CHAPTER 16 OF THE CODE OF THE CITY OF CHARLOTTESVILLE, 1976, BY REPEALING SECTIONS 16-58 THROUGH 16-63 AND ENACTING IN LIEU THEREOF SECTIONS NUMBERED 16-63.1 THROUGH 16-63.9 RELATING TO THE REGISTRATION, INSPECTION AND OPERATION OF BICYCLES.

BE IT ORDAINED by the Council of the City of Charlottesville:

1. That §§16-58 through 16-63 of the Code of the City of Charlottesville, 1976, be repealed.

2. That Article IV of Chapter 16 of said Code be amended by the addition of §§16-63.1 through 16-63.9 as follows:

§16-63.1. Definition.

For purposes of this article the term bicycle shall mean a vehicle upon which a person may ride, propelled by human power through a belt, chain or gears and having two wheels in tandem. Such terms shall include pedal bicycles, with helper motors rated less than one brake horsepower, which produce only ordinary pedaling speeds up to a maximum of twenty miles per hour, provided such bicycles so equipped shall not be operated upon any highway, street or public vehicular area of this city by any person under the age of sixteen years.

§16-63.2. Registration and Inspection.

Any bicycle owner residing in the city who desires to do so, may register his vehicle with the city fire department and present the same for inspection as to its safe operating conditions, during such times and according to such procedures as may be established by the fire chief or his designee. Such inspection shall include any examination of the operational safety of the wheels, tires, frame, fork, seat, brakes, pedals, chain, handlebars, lights, reflectors and other working parts or safety features of such bicycle. Upon such inspection and approval the fire chief or his designee shall issue to the owner of the bicycle a registration device or seal and a registration card, at no cost to the owner. The registration device shall be attached to the frame of the bicyle. The registration card shall show the registration number, the bicycle identification number and the name and address of the owner. Such registration shall remain in effect during the period such bicycle is operated within the city. The fire chief shall establish appropriate

keeping at least one hand upon the handlebars.

(f) No person riding upon any bicycle shall attach the same or himself to anyother vehicle on the roadway.

(g) No person riding a bicycle on a street, highway or other public vehicular area shall permit any person to ride on the handlebars.

(h) No person shall ride a bicycle on any sidewalk or other area designated exclusively for pedestrian traffic including without limitation, the pedestrian mall area between 1st Street and 6th Street, N.E.

§16-63.6. Required Bicycle Equipment.

(a) Every bicycle when in use between sunset and sunrise shall be equipped with a lamp on the front which shall emit a white light visible in clear weather from a distance of at least 500 feet to the front and with a red reflector on the rear of a type approved for use on the highways of this State by the Superintendent of State Police, which shall be visible in clear weather from all distances from 50 feet to 300 feet to the rear, when directly in front of lawful upper beams of headlamps on a motor vehicle. A lamp emitting a red light visible in clear weather from a distance of 500 to the rear may be used in lieu of or in addition to the red reflector.

(b) Every bicycle when operated upon a street or highway shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement.

§16-63.8. Accident Reports.

It shall be the responsibility of the rider to report any bicycle accident involving bodily injury or damage of $50.00 or more to the chief of police within 48 hours of such accident. The chief of police shall keep complete and retrievable records of all such accidents involving bicycle. Such records shall include the location and nature of the accident.

§16-63.9. Penalties for Violations.

Any person violating any provision of this article shall be guilty of a misdemeanor and shall upon conviction thereof, be fined not less than $5.00 nor more than $25.00. In lieu of or in addition to such fine the court may require that any bicycle operated by the owner or other person lawfully in control thereof, in violation of the provisions of this article, be removed from the streets of the city, and that the person operating the same in violation of this article shall not be permitted to operate such bicycle on the streets of this city for a period not exceeding thirty days, in the discretion of the trial judge.

procedures for the transfer of such registration upon sale or transfer of the bicycle.

§16-63.3. Police Record.

Upon registration of any bicycle with the fire department the fire chief shall transfer to the chief of police, and the chief of police shall keep a permanent file of the registration number, bicycle identification number, bicycle owner, address, age, bicycle make, type and approximate value of each bicycle so registered.

§16-63.4. Removal, Destruction or Alteration of Registration Number Device or Card; Bicycle Without Legible Serial Number.

It shall be unlawful for any person willfully or maliciously to remove, destroy, mutilate or alter the serial number on any bicycle frame. It shall also be unlawful for any person willfully or maliciously to remove, destroy, mutilate or alter any registration device or registration card issued pursuant to the provisions of this article during the time in which the bicycle for which such registration device or card was issued is operated in the city. Nothing in this section shall prohibit the fire department from stamping or engraving a number on the frame of the bicycle on which no serial number can be found or on which such number is illegible or insufficient for identification purposes.

§16-63.5. Operation of Bicycles.

(a) Every person riding a bicycle upon a street, roadway or other public vehicular area shall be subject to the provisions of this code and the provisions of Chapter 4 of Title 46.1 of the Code of Virginia applicable to drivers of motor vehicles, unless the context of any such provision clearly indicates otherwise.

(b) Every person operating a bicycle upon a street or highway shall ride as near to the right side thereof as practicable, exercising due care when passing a standing vehicle or one proceeding in the same direction.

(c) Persons riding bicycles upon streets or highways shall not ride two or more abreast except on paths or parts of highways or streets set aside for the exclusive use of bicycles.

(d) Wherever a useable path for bicycles has been provided adjacent to a roadway, bicycle riders shall use such path and shall not use the roadway.

(e) No person operating a bicycle upon a highway or street shall carry any package, bundle or article which prevents the driver from

APPENDIX E
RESOLUTION

A RESOLUTION
ADOPTING THE BICYCLE PLAN
AS AN ELEMENT OF THE
COMPREHENSIVE PLAN FOR THE
CITY OF CHARLOTTESVILLE.

WHEREAS, on April 14, 1976, the Planning Commission held a public hearing to receive recommendations from the public and to consider adoption of the Bicycle Plan as an element of the City's Comprehensive Plan; and

WHEREAS, the Planning Commission has recommended that the sections of the Bicycle Plan entitled Introduction; Goals, Objectives and Policies; Bicycle Location Criteria; and the Bicycle Plan Map be adopted as an element of the City's Comprehensive Plan; and

WHEREAS, the Planning Commission has now certified its report to the City Council;

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Charlottesville, that the recommended sections of the Bicycle Plan are hereby adopted as an element of the City's Comprehensive Plan.

Adopted by the Council
November 15, 1976

Copy Teste:

J. T. Lush Jr.
Clerk