

Master Planning:

How to Create Master Plans for Bicycles & Pedestrians

Overview

Creating a Master Plan for bicycling and pedestrians is one of the first steps in achieving active transportation goals. This module will explore the unique needs of pedestrians and bicyclists and the elements present in a complete Master Plan. Steps to creating the Master Plan and the components that make up a plan will be explained. Example plans from other cities will be explored to highlight these components.

Learning Objective:

- Understand the elements that create a good Bicycle or Pedestrian Master Plan
- Critically evaluate different needs of pedestrians and bicyclists
- Explore reasons behind creating a comprehensive Master Plan

Suggested Use

Professional Development

Graduate Level

Undergraduate

Time Required

Less than 1 hour

1 hour

2-3 hours

Half-day Workshop

Full-day Workshop

Instructions

1. Announce purposes and give brief overview of the day
2. Give lecture “Master Plans for Bicycles and Pedestrians”
3. Assignment
4. Circulate handouts and evaluations

Lecture

“Master Plans for Bicycles and Pedestrians.”

1. Why Plan
2. Types of Pedestrians
3. Types of Bicyclists
4. Creating the plan
5. Elements of a Master Plan
 - a. Vision for the future
 - b. Existing Condition Analysis
 - c. Community Engagement
 - d. Policies
 - e. System Facilities and Design
 - f. Final Plan Recommendations
 - g. Implementation & Funding Strategies
 - h. Appendix
6. Discussion

Materials/Handouts

- Best Practices in Pedestrian Planning
- Community Examples

Assignments and Activities

1. Existing Bicycle and Pedestrian Master Planning Critique
2. Community Engagement for Master Planning
3. Master Plan Vision Statement and Priority Goals

Suggested Readings

Active Living Resource Center. (2009). *Creating a Road Map for Producing and Implementing a Bicycle Master Plan*. Peter Lagerwey.

Victoria Transport Policy Institute. (2006). *Pedestrian and Bicycle Planning, A Guide to Best Practices*. Victoria, BC: Todd Litman, Robin Blair, Bill Demopoulos, et al.

Related Modules

- Context of Other Movements
- Data Collection and Research
- Bicycle Facility Design
- Pedestrian Facility Design



Bicycle & Pedestrian Master Plans



Overview

- Why Plan?
- Types of Pedestrians
- Types of Bicyclists
- Elements of a Good Plan
- Combined or Separate Plans
- Equity Planning

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Why Plan?

- Vision → Results
- Planning less expensive than correcting
- Coordination of infrastructure

City of Norwalk **Bikeway & Pedestrian
Transportation Plan**



Having a vision for how a community will incorporate active transportation is the first step in seeing it implemented. It acts as a blue print and direction to improve walking and bicycling facilities in a community. Having a vision solidified in a plan will allow for the city and citizenry to move forward on seeing a network of bike paths, pedestrian facilities, and access to a wide range of transportation options.

Planning will also allow for implementation that incorporates elements of the plan as development happens. Ultimately this is less expensive than attempting to retrofit areas to have good facilities or access points. The plan will also allow for a coordination between scheduled road projects or new developments, streamlining the process for the city and seeing that improvements get done in a coordinated way.

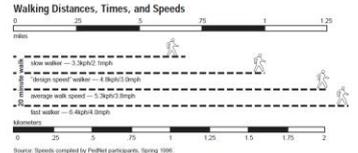
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Types of Pedestrians



- “Everyone is a pedestrian”
- Diverse group
- Slower travel speed

Walking Distances, Times, and Speeds



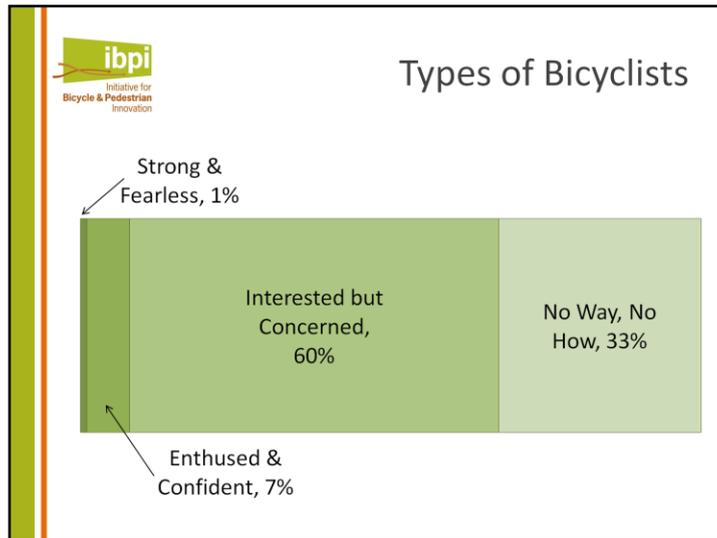
Walking Type	Speed Range (mph)	Speed Range (km/h)
Slow walker	1.5 - 2.0	2.4 - 3.2
Steady-paced walker	2.5 - 3.5	4.0 - 5.6
Average walk speed	3.0 - 4.0	4.8 - 6.4
Fast walker	4.0 - 5.0	6.4 - 8.0

Source: Speeds compiled by Proffitt participants, Spring 1996.

Even vehicles that include an auto trip must begin and end with an element of walking, making “everyone” a pedestrian.

Pedestrians are a diverse group, they are children, adults carrying packages, people with pets, the elderly, and people who need walking assistance. Planning for this diversity of users can be a challenge.

Obviously, it should be noted that walkers move slower than those who bike or other modes of transportation. Even within pedestrians there are varying speeds as you can see in the graphic above.



A study done in Portland showed that within the population that might consider biking, or those who already bike, the population could be broken down into 4 general categories. These percentages represent roughly what studies have shown to be their level of interest or participation in cycling. It is important to know how these types of classifications or categories might break down within your own community.

To increase levels of cycling, the plan needs to address the needs of those who are interested in bicycling but still have reservations, the largest population block at 60%. To get this population on a bicycle will also serve those who are enthused and confident riders as well as those who are fearless. And by planning for this “interested but concerned” group, there is the greatest “bang for the buck” in facilities planning.



Steps in Creating Master Plan

1. Before the Plan
 - Stakeholder engagement and vision
 - Consensus around goals & objectives
 - Data collection
2. Developing Master Plan
 - Dialogue & education with community
 - Preparing draft plan & setting priorities
3. Implementing the Plan
 - Adopt plan
 - Annual work plan & continued outreach

Adapted from "Producing & Implementing the Bicycle Master Plan" (2009)

These steps are adapted from the handout available from The National Center for Bicycling and Walking and Active Living Resource Center “Creating a Roadmap for producing and implementing a Bicycle Master Plan” by Peter Lagerway.

Since Master Plans will vary depending on community needs, this resource looks at what the steps have been for implementing a successful plan. **Creating a plan** begins early with developing stakeholder buy in for the need of a plan, and is anticipated to take 6 months to a year to develop. This step is thought to be one of the more difficult steps as it requires consensus on goals, budget, objectives, content and timing of the plan. The authors of the document stress that collaboration is key to any successful Master Plan and this first phase is beginning to create these partnerships with stakeholders and creating avenues for community participation, such as through a Citizen Advisory Committee. In this phase, the community will decide if they will work with a consultant.

The **second phase** is focused on actually developing the Master Plan with a recommended timeline of 9-18 months. This phase relies heavily on the partnerships created in the first phase. This phase will have multiple community engagement opportunities and work on preparing a draft plan that includes a description of existing conditions, and lays out the priorities of the plan (including how these were reached), the network that will be developed, any encouragement activities, and a strategy for implementation (which will be discussed next). These drafts will be reviewed internally and by the Citizen Advisory Committee, and the draft should support the agreed upon goals and objectives of the plan. The draft should also include a discussion on priorities for the short and long term implementation plan.



Elements of Master Plan

1. Vision for the future
2. Existing Condition Analysis
3. Input from Community and Stakeholders
4. Policies
5. System Facilities and Design
6. Final Plan Recommendations
7. Implementation & Funding Strategies
8. Appendices

These are the elements that will be present in the Master Plan itself, the step 2 (Developing the Master Plan) from the previous slide.



1. Vision

Sets the direction, motivates action and helps guide future decisions

- Easily communicated
- Strategic, future-oriented
- Source of inspiration for leaders and community

Strategic vision possesses real power in setting directions, motivating action, and guiding decisions. It should reflect community values and aspirations and be built upon achievable facts.

The final vision should be easily communicated, remembered, and understood. At the same time, it needs to be future oriented and measurable as the community and staff works to achieve that goal. Not only is this goal a practical component of the Master Plan, but it should act as a source of inspiration to continue working towards that goal.



1. Vision

CITY WITH A VISION

BIKE 2015 PLAN CITY OF CHICAGO

The Bike 2015 Plan is the City of Chicago's vision to make bicycling an integral part of daily life in Chicago. The plan recommends projects, programs and policies for the next ten years to encourage use of this practical, non-polluting and affordable mode of transportation.



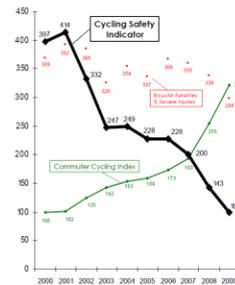
This is a clear vision that includes a specific, measurable goal and the “how” to reach the goal.

2. Existing Conditions

Evaluates existing facilities & deficiencies

- Miles of bikeways
- Collision data
- Commute rate
- Existing programs
- Mapped facilities
- Current rates of walking & cycling
- Identify underserved areas

New York City Cycling Safety Indicator



An analysis of existing conditions is important to lay the groundwork for where the city needs to go with the Master Plan. The existing conditions analysis will help make recommendations for needed actions. Some common metrics in an existing condition analysis are collision data and a survey of existing programs within the city and region. Communities need to evaluate data desired and time and funding available.

This is a good opportunity to also identify underserved and high risk areas.

For more on metrics, refer to the Module on Data Collection & Research (#7).

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2. Existing Conditions

Bellevue, Washington

Staff Assessment

- Field Assessments
- Crash data
- Traffic Volume
- Land Uses
- Existing Facilities

Community Engagement

- Flickr stream
- Interactive maps
- Workshops
- Photo visualization



The City of Bellevue began development of a new bicycle and pedestrian master plan in 2009. In order to assess current conditions, the city staff looked at conducting an internal assessment and reached out the community to see how the existing network was working in practice.

The staff assessment included trips to the field to evaluate existing roadway widths; location of sidewalks and other objects that may occur within or adjacent to the road right-of-way and may restrict improvements; existing posted speed for motor vehicles; and, adjacent land uses. By creating GIS maps with overlays of crash data, vehicular volumes, and types of land uses, the city could get a snapshot of high priority areas that may need to be prioritized in the plan.

The community engagement strategy to understand current network conditions included many online and in-person strategies. Online interactive maps, and flickr photo streams to upload photos of problem areas or make comments on facilities were utilized. More traditional workshops and photo visualization for before and after were also utilized.



3. Community Engagement

Helps understand user's needs, builds stakeholder buy in, and gets local knowledge.

- “Early & Often”
- Diverse groups
- Problem solving
- User knowledge
- Identify equity issues



Community engagement will help determine constraints and opportunities within the community of users (or potential users). It is an incredible opportunity to take advantage of users' knowledge and get a better understanding of on-the-ground conditions. This is also an important step to build stakeholder support for a particular program as discussed in the “Steps in Master Plan”. The community can work with the practitioners to help brainstorm potential solutions to problems the community has identified.

The general rule of thumb for community engagement is to do it early and often in the planning process. It should make an effort to reach diverse groups of stakeholders and potential users of the final bike or pedestrian plan.



3. Community Engagement

- Steering Committee
- Bike Rides/Walks
- Interactive Open Houses
- Neighborhood Visits
- Workshops
- Public Comment on Draft
- Social Media
- Interactive Websites



There are many creative ways to engage communities for their input on a bike or pedestrian plan. For Portland’s community engagement they did a number of strategies to reach a diverse population in different geographies of the city and engage people in different ways, such as:

- Throughout the process we have sorted through advice from the community – both individuals and groups, from our working groups for the plan, from the City’s modal advisors – the Bicycle, Pedestrian and Freight committees, from our Steering Committee and Technical Advisory Committee, and from Portland’s Planning Commission.
- Bike tours and walking through different neighborhoods let residents point out areas of concern or try biking for the first time with a large, safe group.
- Pin the tail on the problem allowed people to identify where there were access problems by looking on a map of their neighborhood.
- Traditional open houses also allowed for the city to give out information and get feedback from interested residents.
- Went out to different neighborhood coalitions to get feedback
- It is often best to bring the meeting to the people instead of having them come to you.
- Social media and plan-specific websites with opportunities for direct feedback help get feedback from people who



4. Policies

Understand context of existing plans & policies

Policies	Other Plans
<ul style="list-style-type: none">• Strategies to reach vision• Complement other efforts• Identify opportunities to implement and integrate• Recommendations for policy	<ul style="list-style-type: none">• Comprehensive Plan• Transportation Master Plan• Engineering Policies• Municipal law• Neighborhood and Business Associations

It's important to have nonmotorized transportation elements integrated into your citywide policy. The policies identify strategies to reach the vision that was created and lay out the relationship between the Master Plan and other planning efforts affecting the city or region.

A recommendation may be to make policies for standardizing bicycle and pedestrian improvements through the regular activities of local, regional, and state governments. For example, some communities have made it standard transportation policy to include bicycle and pedestrian concerns during all transportation improvement studies and to provide bicycle facilities and sidewalks whenever streets are constructed or resurfaced.

From here, with an understanding of current policies, it will be possible to make policy recommendations that can be incorporated in updates of the above plans or included in the master plan.

4. Policies

Chapel Hill, North Carolina

Existing policies not being upheld

1. Assess gaps
2. Prioritize actions to meet policy standards
3. Recommend additional policies to fill gaps in current system



Example: Chapel Hill first looked at the existing policies that had been created through disparate plans. This was a way for them to assess gaps in their current planning to help move forward. The Chapel Hill Plan then looked at the existing systems where the policies were not being upheld in order to make recommendations for priority actions and as a way to create a baseline measurement against goals. (See <http://www.ci.chapel-hill.nc.us/index.aspx?page=553> for more info)

The plan also recommended new policies or ways the city should improve the bike and pedestrian plan.

5. System Facilities Design

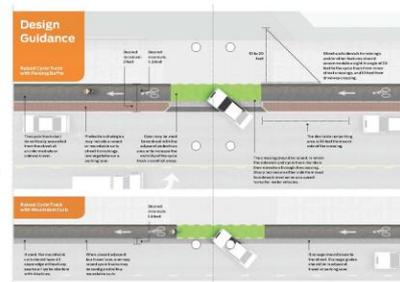
Lay out the types of facilities for plan

Design Principles:

- Safety
- Comfort
- Attractiveness
- Direct routes
- Connected system

Facility Types:

- Car Free Areas
- Shared Roadway
- Separated-in-Roadway



The design of the system facilities should be laid out in the Master Plan. The facilities should incorporate both design elements and they types of facilities that should be present for implementation.

Prioritize facility types and locations based on community input, data analysis

(NACTO example--<http://nacto.org/> for more info)



Portland's Bicycle Master Plan lays out the network of the plan and the types of facilities for this network.



6. Final Plan Recommendations

Provide recommendations based on research, and analysis

- Connects to vision to goals and actions
- Complements policy



These final recommendations should connect to the vision and tie in goals and specific policy actions that will help reach that vision.

Clarity is important to the success of the recommendations and should be clearly tied to the research and existing conditions that have been established.



6. Final Plan Recommendations

Oakland, California

Goal: *Create a street environment that strives to ensure pedestrian safety.*

Policy 1.1. Crossing Safety:

Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue.

Action 1.1.1.

Consider the full range of design elements – including bulb outs and refuge islands – to improve pedestrian safety.

Oakland, California's pedestrian plan makes recommendations for each of the plans overarching goals. Here is just one example of a recommendation they make to achieve the goal of pedestrian safety. The policy and actions are clearly defined and further supported by other action items and existing policies.

(<http://www2.oaklandnet.com/Government/o/PWA/o/EC/s/BicycleandPedestrianProgram/OAK024597>)

7. Implementation & Funding

How and when the plan will be executed

- Next steps
- Short and long term goals
- Timeline & prioritization
- Identification of funding sources

Appendix D. Project Evaluation Matrix

A system of ●, ○, ◐, and ◑ are used to rate each project. A ● indicates the project fully meets the criterion under focus, a ◐ indicates mixed or mixed conditions, while a ◑ indicates that the project minimally fulfills or does not fulfill the criterion. These ratings were combined together to generate project. Projects fulfilling the greatest number of evaluation criteria received higher scores, correspondingly leading to higher rankings within the overall list.

Project	Intersection Improvements									
	Deerfield Ave/1st	Deerfield Ave/2nd	Deerfield Ave/3rd	Deerfield Ave/4th	Deerfield Ave/5th	Deerfield Ave/6th	Deerfield Ave/7th	Deerfield Ave/8th	Deerfield Ave/9th	Deerfield Ave/10th
Complete Trail north-south segment (existing crossing)	●	●	●	●	●	●	●	●	●	●
Historic Parkway at Park Street	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Historic Parkway at Jackson Drive	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
College Avenue at Green Avenue	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Historic Parkway at Market Avenue	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Historic Parkway at Parkway Plaza St	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Historic Parkway at Shepard Road	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Highway 101 at Green Avenue	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
Parkside Road at Honey Avenue	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐

The Master Plan must include steps on how the goals and design should be implemented. These guidelines will help set timelines and should lay out potential funding sources.



7. Implementation & Funding

Denver, Colorado

Project Type	Examples	Funding Sources
Small to medium improvements to existing or construction of new pedestrian infrastructure	<ul style="list-style-type: none">- Expanding 3' to 5' sidewalks- Striping and signing an intersection- Installation of sidewalks where they are missing- New bulb outs and pedestrian refuges at an intersection- Block long pedestrian route improvements	<ul style="list-style-type: none">- Redeveloping property owner- Districts- <i>CIP</i>- <i>Sidewalk Fee</i>- <i>Adjacent property owners (PW Mgr authority)</i>
Construction of new large infrastructure	<ul style="list-style-type: none">- New pedestrian bridges- Corridor long pedestrian route improvements	<ul style="list-style-type: none">- CIP- Bonds- Districts

Funding sources in italics are proposed or not currently used.

In the city of Denver's Pedestrian Master plan, they lay out potential funding sources for the different types of projects they may implement to meet their goals. This table represents the methods they currently use to fund projects, and potential sources in the future.

8. Appendices

Support and implement plan

- Maps of planned and current facilities
- In depth data & resources
- Summary of community engagement and input
- Design guidelines



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Combined or Separate Plans

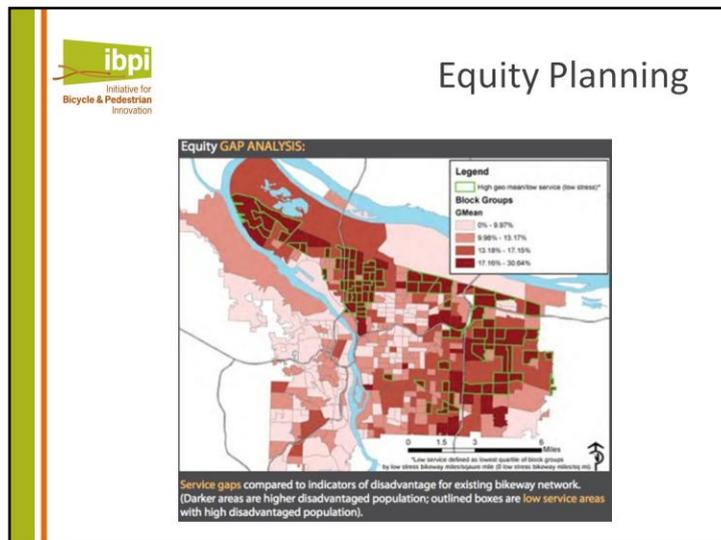
- Different needs & populations
- Streamlining resources
- Scale of Plan
- Community Vision



Deciding on whether or not to do a Bike Master Plan, a Pedestrian Master Plan, or a combined Bicycle and Pedestrian Plan will depend on the context you are planning in.

Remember the very different types of populations that make up bicyclists and pedestrians. This diversity amongst the facilities you are planning for could make a combined plan more difficult to implement. However, every plan will need to have similar elements of community engagement, analysis of current conditions, and a strategy for funding. These overlapping areas can save significant resources in the planning process. If thoughtfully approached, a combined plan could work in many jurisdictions.

The scale of the Master Plan (city, region, state) will also be something to consider when determining the type of plan you will create. Finally, any plan should tie back to the original community vision for active transportation in the area.



Children, women, immigrants, seniors and other populations that have historically not bicycled in large numbers and have not been the focus of most bike and pedestrian plans. In the U.S., men’s cycling trips surpass women’s by at least 2:1. In the Netherlands, 27% of all trips are made by bike, and 55% of all riders are women. Some studies have suggested that seeing if infrastructure is appropriate to encourage more riders, you should look at the rate of women cyclists. Women tend to want more protected or “safe” bicycle facilities. Planning and encouraging this demographic in a bike plan could increase rates across the board. Planning for this population will meet the needs of other cyclists, even those other underrepresented groups like seniors. (“How to Get More Bicyclists on the Road,” Scientific American, 2009).

Not only are the populations underrepresented in community engagement efforts, but their neighborhoods are often underserved. The Community Cycling Center in Portland (www.communitycyclingcenter.com) also found that lower income neighborhoods had less access to facilities such as bicycle boulevards, bike lanes, or connected sidewalks.

As the Bicycle Master Plan for 2030 was being drafted in Portland, a working group requested a network gap analysis to see if equity issues needed to be incorporated. The results revealed that the network was weakest where the highest percentages of communities of color reside. The darker the area, the higher the disadvantaged population. Those blocks that are outlined in green are the areas with limited facilities and are “higher stress” environments for cyclists. As a result, facilities in these areas received higher priority in the implementation strategy. See <http://www.portlandoregon.gov/transportation/article/264747> for more info on Equity Gap Analysis

Questions & Discussion



Bicycle & Pedestrian Master Plans

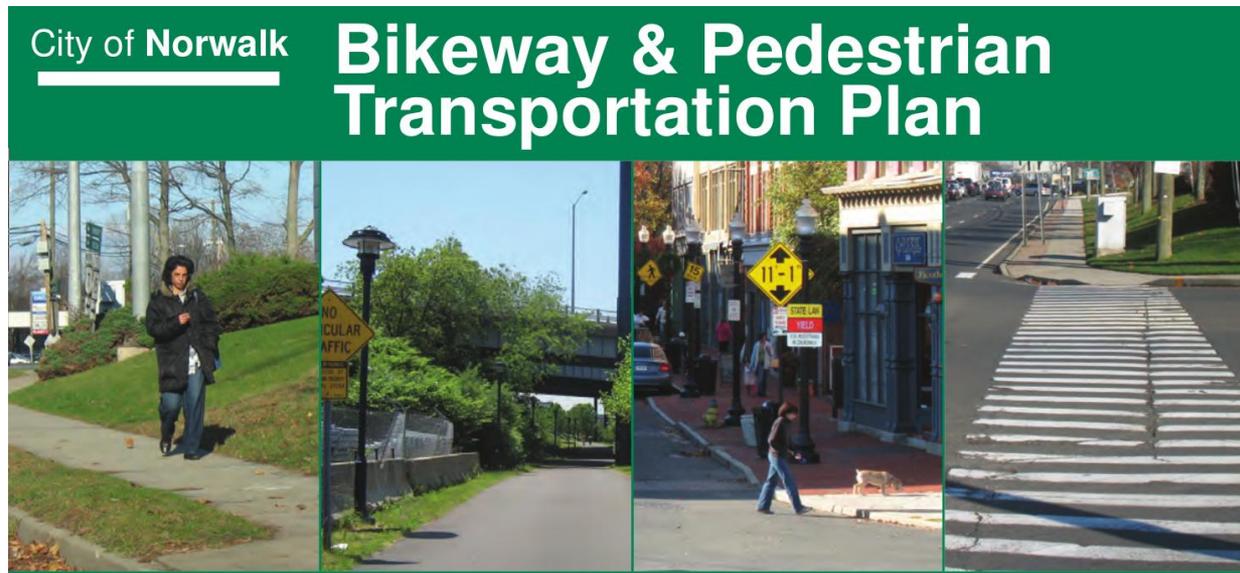


Overview

- Why Plan?
- Types of Pedestrians
- Types of Bicyclists
- Elements of a Good Plan
- Combined or Separate Plans
- Equity Planning

Why Plan?

- Vision → Results
- Planning less expensive than correcting
 - Coordination of infrastructure

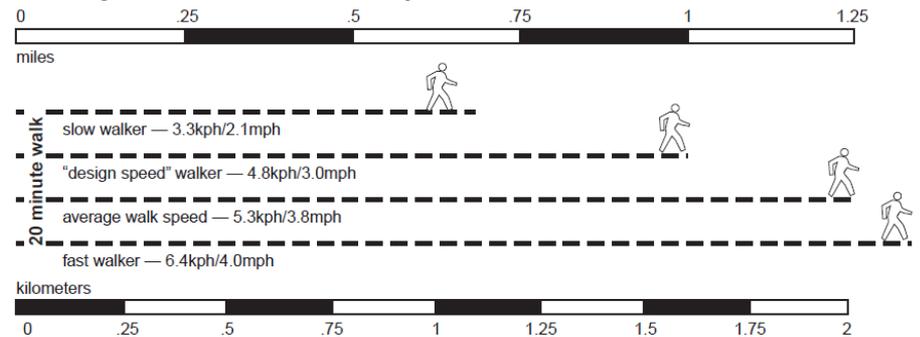


Types of Pedestrians

- “Everyone is a pedestrian”
- Diverse group
- Slower travel speed

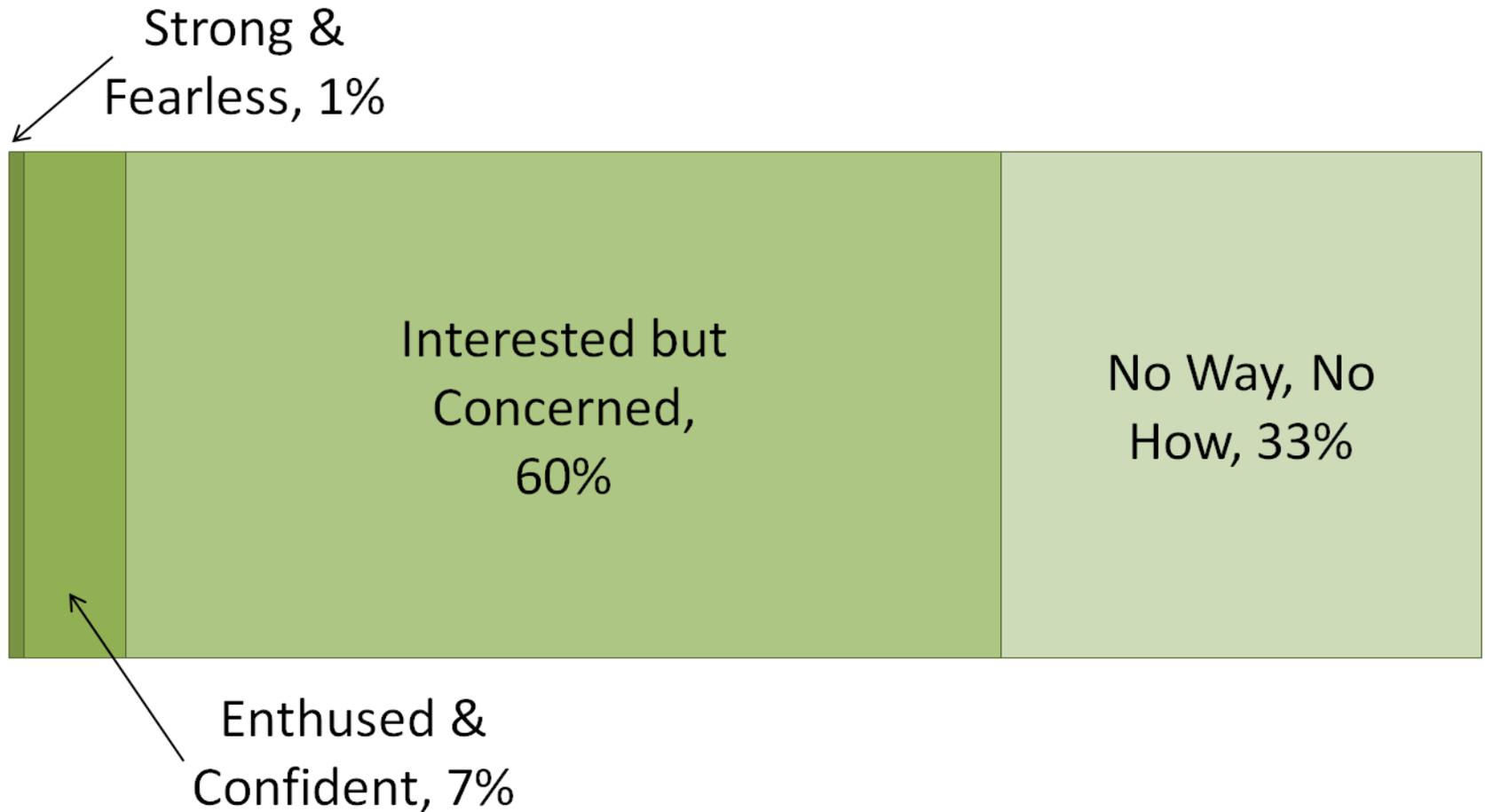


Walking Distances, Times, and Speeds



Source: Speeds compiled by PedNet participants, Spring 1996.

Types of Bicyclists



Steps in Creating Master Plan

1. Before the Plan

- Stakeholder engagement and vision
- Consensus around goals & objectives
- Data collection

2. Developing Master Plan

- Dialogue & education with community
- Preparing draft plan & setting priorities

3. Implementing the Plan

- Adopt plan
- Annual work plan & continued outreach



Elements of Master Plan

1. Vision for the future
2. Existing Condition Analysis
3. Input from Community and Stakeholders
4. Policies
5. System Facilities and Design
6. Final Plan Recommendations
7. Implementation & Funding Strategies
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1. Vision

Sets the direction, motivates action and helps guide future decisions

- Easily communicated
- Strategic, future-oriented
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1. Vision

CITY WITH A VISION

BIKE 2015 PLAN CITY OF CHICAGO

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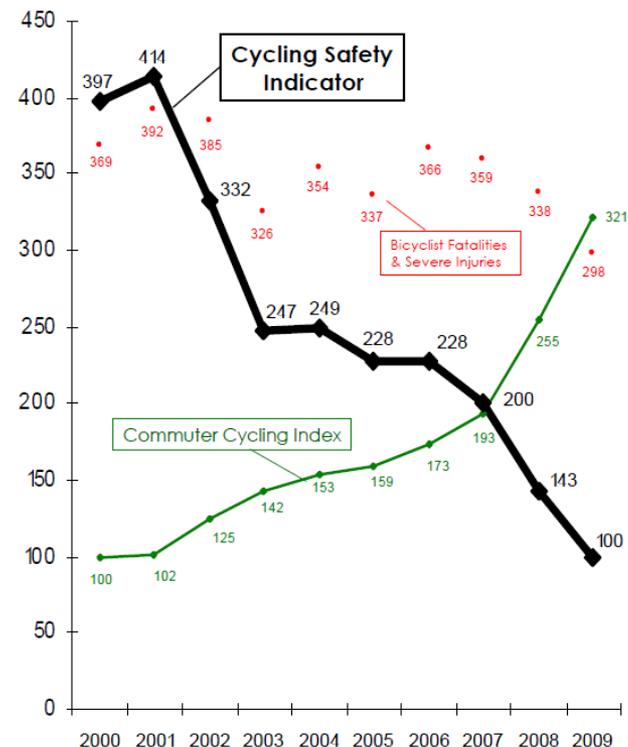


2. Existing Conditions

Evaluates existing facilities & deficiencies

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- Commute rate
- Existing programs
- Mapped facilities
- Current rates of walking & cycling
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New York City Cycling Safety Indicator

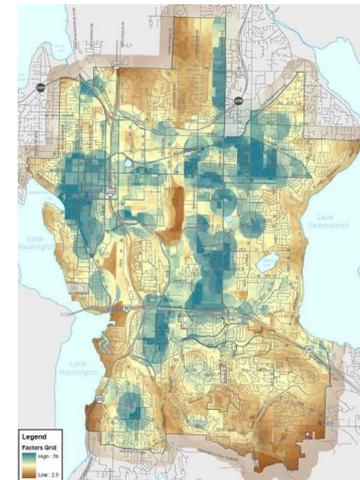


2. Existing Conditions

Bellevue, Washington

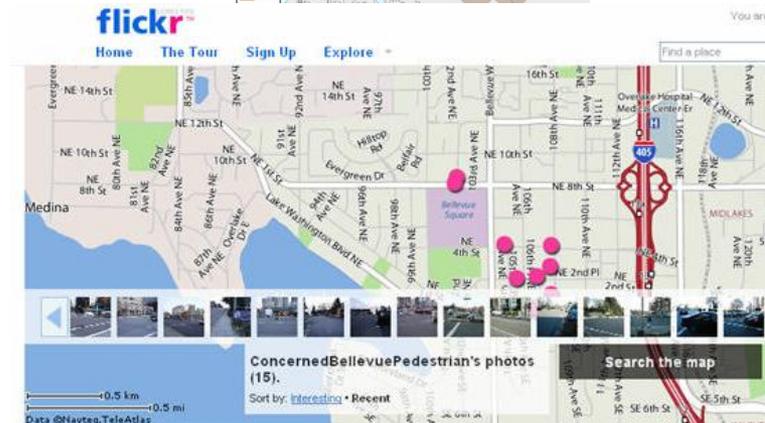
Staff Assessment

- Field Assessments
- Crash data
- Traffic Volume
- Land Uses
- Existing Facilities



Community Engagement

- Flickr stream
- Interactive maps
- Workshops
- Photo visualization



3. Community Engagement

Helps understand user's needs, builds stakeholder buy in, and gets local knowledge.

- “Early & Often”
- Diverse groups
- Problem solving
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- Identify equity issues



3. Community Engagement

- Steering Committee
- Bike Rides/Walks
- Interactive Open Houses
- Neighborhood Visits
- Workshops
- Public Comment on Draft
- Social Media
- Interactive Websites



4. Policies

Understand context of existing plans & policies

Policies

- Strategies to reach vision
- Complement other efforts
- Identify opportunities to implement and integrate
- Recommendations for policy

Other Plans

- Comprehensive Plan
- Transportation Master Plan
- Engineering Policies
- Municipal law
- Neighborhood and Business Associations

4. Policies

Chapel Hill, North Carolina

Existing policies not being upheld

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5. System Facilities Design

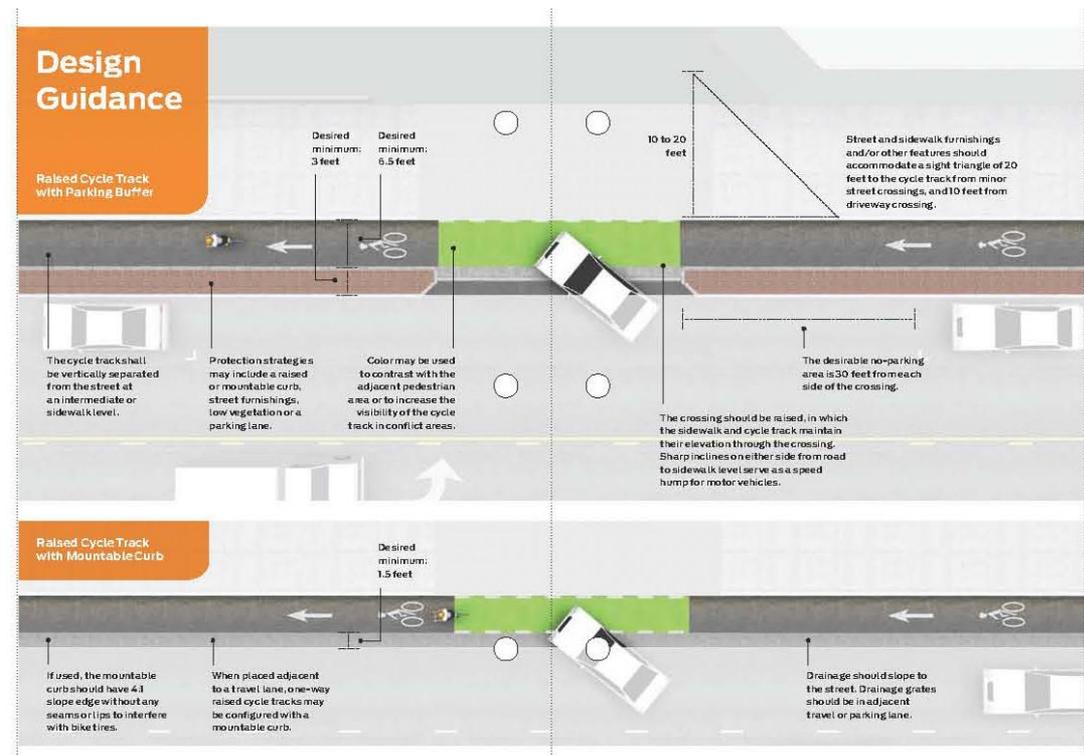
Lay out the types of facilities for plan

Design Principles:

- Safety
- Comfort
- Attractiveness
- Direct routes
- Connected system

Facility Types:

- Car Free Areas
- Shared Roadway
- Separated-in-Roadway



5. System Facilities Design

Portland, Oregon



6. Final Plan Recommendations

**Provide recommendations based on research,
and analysis**

- Connects to vision to goals and actions
- Complements policy





6. Final Plan Recommendations

Oakland, California

Goal: *Create a street environment that strives to ensure pedestrian safety.*

Policy 1.1. Crossing Safety:

Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue.

Action 1.1.1.

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7. Implementation & Funding

How and when the plan will be executed

- Next steps
- Short and long term goals
- Timeline & prioritization
- Identification of funding sources

Appendix D. Project Evaluation Matrix

A system of “●”, “◐”, and “○” was used to rate each project. A “●” indicates the project fully meets the criterion under focus, a “◐” indicates mixed or neutral conditions, while a “○” indicates that the project minimally fulfills or does not fulfill the criterion. These ratings were considered together to prioritize projects. Projects fulfilling the greatest number of evaluation criteria received higher scores, correspondingly leading to higher rankings within the overall list.

Intersection Improvements									
Project	Overcomes Barriers	System Connectivity	Community Support	User Generator	Land Uses	Safety/ Comfort	Cost	Regional Benefit	Ease of Implementation
Constitution Trail (north/south segment) roadway crossings	●	●	●	◐	◐	●	○	●	●
Veterans Parkway at Fort Jesse Road	◐	◐	◐	◐	○	◐	◐	○	○
Veterans Parkway at Juniper Drive	◐	○	◐	◐	○	◐	◐	◐	○
Cottage Avenue at Hovey Avenue	○	◐	○	◐	○	◐	●	○	●
Veterans Parkway at Vernon Avenue	◐	○	●	○	○	◐	◐	◐	○
Veterans Parkway at Parkway Plaza Dr	●	○	◐	◐	○	◐	○	○	○
Veterans Parkway at Shepard Road	◐	○	◐	○	○	◐	○	◐	◐
Kingsley Street at Hovey Avenue	◐	◐	○	○	○	◐	○	○	○
Parkside Road at Hovey Avenue	○	◐	○	○	○	◐	●	○	●

7. Implementation & Funding

Denver, Colorado

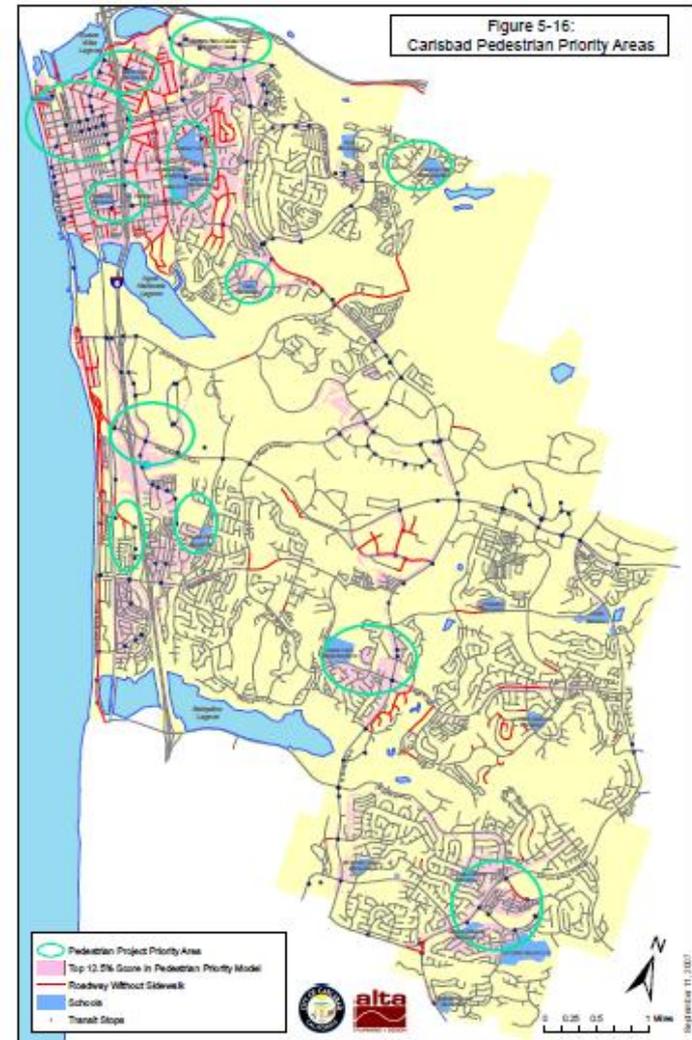
Project Type	Examples	Funding Sources
Small to medium improvements to existing or construction of new pedestrian infrastructure	<ul style="list-style-type: none"> · Expanding 3' to 5' sidewalks · Striping and signing an intersection · Installation of sidewalks where they are missing · New bulb outs and pedestrian refuges at an intersection · Block long pedestrian route improvements 	<ul style="list-style-type: none"> · Redeveloping property owner · Districts · <i>CIP</i> · <i>Sidewalk Fee</i> · <i>Adjacent property owners (PW Mgr authority)</i>
Construction of new large infrastructure	<ul style="list-style-type: none"> · New pedestrian bridges · Corridor long pedestrian route improvements 	<ul style="list-style-type: none"> · CIP · Bonds · Districts

Funding sources in italics are proposed or not currently used.

8. Appendices

Support and implement plan

- Maps of planned and current facilities
- In depth data & resources
- Summary of community engagement and input
- Design guidelines

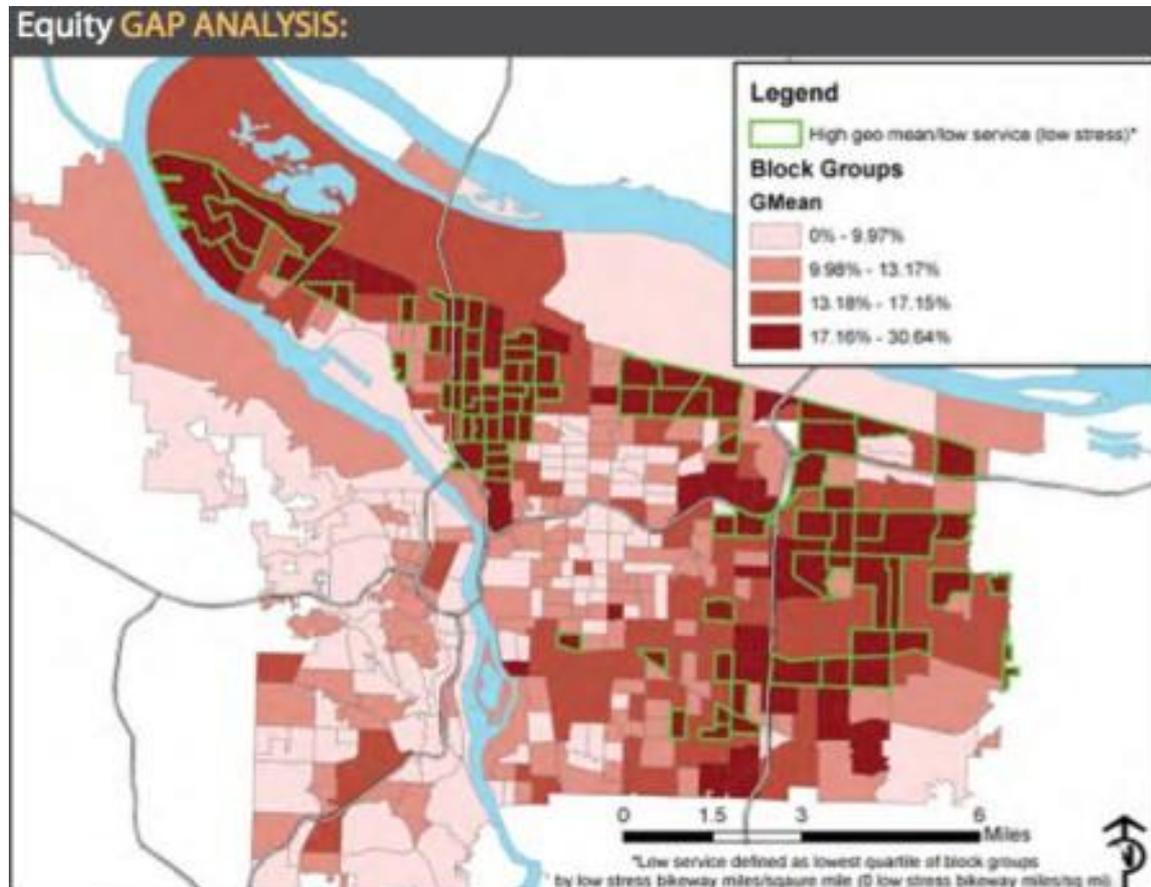


Combined or Separate Plans

- Different needs & populations
- Streamlining resources
- Scale of Plan
- Community Vision



Equity Planning



Service gaps compared to indicators of disadvantage for existing bikeway network. (Darker areas are higher disadvantaged population; outlined boxes are **low service areas** with high disadvantaged population).



Questions & Discussion

Master Planning *for Bicycles and Pedestrians*

Assignment 1: Master Plan Critique

Assignment Description for *Instructor*:

Reflecting on how other communities have implemented bicycle and pedestrian plans will give students a chance to think critically about the elements of a Master Plan. This assignment will help familiarize students with Master Plans from other communities. They will be able to critique the elements of the plan and have a better understanding of what should be included in an adopted Master Plan.

Things to consider

- How the scale of the plan (city, region, state) affects the recommendations
- Strengths of the plan
- How the plan could be improved
- The role of technical information and community input in the creation of the plan
- How the vision is connected to recommendations and suggested policies

Instructor Prep Work:

Investigate existing bike and pedestrian plans to suggest city and regional plans to students. Choose a cross selection of city sizes and master plan types (combined and separate) for the students to select from.

Time Required for Students:

- Review Master Plans outside of class, write a description and critique on their assigned plan.

Assignment:

500-word write up on the elements of the plan and a critique on the strengths and weaknesses of the particular plan investigated.

Master Planning

for Bicycles and Pedestrians

Assignment 1: Master Plan Critique

Assignment Description for Students:

This assignment will help familiarize you with Master Plans from other communities. After reviewing the plans, you will critique the elements of the plan and have a better understanding of what should be included in an adopted Master Plan.

Things to consider

- How the scale of the plan (city, region, state) affects the recommendations
- Strengths of the plan
- How the plan could be improved
- The role of technical information and community input in the creation of the plan
- How the vision is connected to recommendations and suggested policies

Time Required:

- Review your chosen Master Plan outside of class, and write a description and critique on your assigned plan.

Assignment:

500-word write up on the elements of the plan and a critique on the strengths and weaknesses of the particular plan investigated. Paper should clearly outline the elements that were included in the plan (the vision, community engagement techniques, facilities planning, network maps, etc) and any innovative elements that were included in the particular plan.

Master Planning *for Bicycles and Pedestrians*

Assignment 2: Public Engagement

Assignment Description for *Instructor*:

This assignment will have a student groups create community engagement strategies for a specific phase of a Master Plan creation. Groups should discuss at what points in the Master Planning process community engagement should be included and how it should be approached.

Instructor Prep Work:

Groups should be familiarized with the Master Plan lecture. Select several Master Planning phases, and assign each group a phase to plan a public engagement strategy around. Provide relevant Master Plan examples for students to review, and provide relevant community details for the populations the students may engage with.

Time Required for Students:

- 20-30 minutes for group work
- 5 minutes for individual group presentations and questions

Assignment:

Each group will propose a community engagement strategy for a specific period of the Master Plan Process. This will include a clear explanation of how data will be used to inform the plan.

Master Planning *for Bicycles and Pedestrians*

Assignment 2: Public Engagement

Assignment Description for Students:

This assignment will have your group create a community engagement strategy for a specific phase of the Master Plan creation. Groups should discuss at what points in the Master Planning process community engagement should be included and how it should be approached.

Things to consider

- Potential stakeholder groups and underrepresented populations
- Types of engagement methods for different audiences
- Timing of engagement
- How information will be used to draft the plan

Time Required:

- 20-30 minutes for group work
- 5 minutes for individual group presentations and questions

Assignment:

Each group will propose a community engagement strategy for a specific period of the Master Plan Process. This will include a clear explanation of how data will be used to inform the plan.

Master Planning *for Bicycles and Pedestrians*

Assignment 3: Vision Statement and Goals

Assignment Description for *Instructor*:

Creating a vision statement is an important part of any Master Plan. Students should work in a team and create a vision for a community they are familiar with. It can be for either a pedestrian or bicycle plan. Once the vision statement has been drafted, students should come up with 2 or 3 high priority goals that will help the community reach their vision. The vision and goals will then be presented.

Instructor Prep Work:

Have a variety of Master Plan vision statements available for the student groups to review. Include Bike, Ped, and Combined Plan vision statements. Review the community(ies) the students will work on and their current relationship with bicycle and pedestrian transportation.

Time Required for Students:

- 30 minute for group work
- 5 minute for individual group presentations and questions

Assignment:

Create a vision statement and a few, suggested high-priority goals to reach the vision.

Master Planning

for Bicycles and Pedestrians

Assignment 3: Vision Statement and Goals

Assignment Description for Students:

Creating a vision statement is an important part of any Master Plan. You will work in a team and create a vision for a community you are familiar with. It can be for either a pedestrian or bicycle plan. Once the vision statement has been drafted, come up with 2 or 3 high priority goals that will help the community reach their vision. The vision and goals will then be presented.

Things to consider

A vision statement should be:

- Easily communicated
- Strategic, future-oriented
- Measurable
- Source of inspiration for leaders and community

Prep Work:

Discuss what you know about the community and its relationship with bicycle and pedestrian transportation. As a group, brainstorm potential vision statements and what goals could help the community reach this vision.

Time Required:

- 30 minute for group discussion and vision statement and goals creation
- 5 minute for individual group presentations and questions

Assignment:

Create a vision statement and a few, suggested high-priority goals to reach the vision. Discuss your new vision statements and goals in class.