Complete Streets Technical Assistance Program

Garwood Bicycle Network Plan August 10, 2020

Housekeeping Notes: Mute your microphone/telephone Use the chat for assistance with technical problems This presentation will be recorded

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Agenda

- Background
- Introductions
- Complete Streets Overview
- Bicycle Network Plan Overview
- Draft Proposal Review
- Questions and Next Steps





Background

- NJTPA Complete Streets Technical Assistance Program
- 9 communities in 2019
- 8 communities in 2020



Introductions

- How long have you lived in Garwood?
- How often do you bike around town?
- What barriers to bicycling do you encounter?

Example:

Aashna Jain, lived 0 years in Garwood and does not bike in the town. Heavy traffic.







Complete Streets Overview



What is a Complete Street?

Complete streets are for <u>everyone!</u>

- Pedestrians
- Bicyclists
- Motorists
- Freight
- Public Transit Users





A Complete Street...

- Offers many travel choices
- Connects to a wider network
- Is fully accessible to all
- Varies according to context
- Improves safety for all







Benefits of Implementation

- Promote healthy lifestyles
- Provides important connections
- Create more livable communities
- Reduces traffic congestion
- Reduce reliance on fuel
- Makes fiscal sense





Building a Place You Want

- Design affects what we do and how we do it (and how happy we are doing it)
- Build for cars...you get cars
- Build for people...you get people





Building a Place You Want

• Would you bicycle with your kids here?

• What about here?

• Design matters!







Who bicycles?

- 1% of population is <u>strong and fearless</u>. Will ride anywhere, regardless of conditions.
- 5% 10% are <u>enthused and confident</u>. Fairly comfortable on most roads, but prefers multi-use pathways and low traffic streets.
- 60% are <u>interested but concerned</u>. Most comfortable on multi-use pathways and quiet streets away from cars. Can become enthused and confident with improved facilities, encouragement, education, and experience.
- Approximately 30% are **not interested** in cycling regardless of the infrastructure.



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Bicycle Level of Comfort in Garwood





What is a Bicycle Network Plan?

- Bicycle network plans enables all those who want to bicycle to do so safely.
 - Especially the "interested but concerned"
- Provides connections between neighborhoods and destinations such as:
 - Work, school, transit, shops, recreation, health care, services

Trip distance in miles				
Mileage	Percent	Cumulative Percent		
1 mile or less	28	28		
1.1 - 2 miles	13	40		
2.1 - 3 miles	9	50		
3.1 - 4 miles	6	56		
4.1 - 5 miles	7	63		
>5 miles	37	100		



Components of a Bicycle Network Plan

- Shows what kind of facilities work best for each individual road segment
 - Taking into account: road width, speed limit, parking uses, and unique circumstances
- A good bicycle network is...

Convenient	Comfortable
Continuous	Intuitive
Connected	Safe
Complete	Visible



For ALL ages and abilities



Bicycle Infrastructure Fundamentals







Design for bicycle should focus on:





Shared-Lane Markings (Sharrows)





Super Sharrow







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Bicycle Boulevard

- For quiet residential streets
- Combined with traffic calming









Bicycle Lane



- 4-feet minimum by curb
- 5-feet standard
- 6-feet preferred

NJTPA

- 7-feet for contra-flow
- Buffer, even better!

Protected Bicycle Lane

- 5 feet bike lane + 3 feet buffer minimum
- Not optimal if there are many driveways or close intersections
- Need to think about loading areas, bus stops, and turning vehicles









Bicycle Path

- Two-way
- Minimum 8-feet, preferred 10-feet, best 12-feet+
- Best with minimal intersections and driveways



Other Bicycle Infrastructure

- Bicycle box at intersections
- Bike signal
- Bike parking









Garwood Draft Concepts



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Study Area

- Center Street
- Walnut Street
- Second Avenue
- Spruce Avenue
- Fourth Avenue
- Pine Avenue





• From Unami Park to Willow Ave

Speed Limit	25mph	Low
85 th Percentile Speed	32mph (Northbound) 24mph (Southbound)	
% Speed Limit Violations	72% (Northbound)	
Daily Vehicles	2,900 – 3,100 in either direction	Moderate
Width	48 – 50 feet	Wide
Land Use	Residential	



* Garwood P.D. – Pole Mounted Signs Data

* Garwood P.D. – Mobile Trailer Data with mixed speed feedback





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Center Street











Existing Design







Proposed Design



• Between Willow Ave to South Ave

Speed Limit	25mph	Low
85 th Percentile Speed	32mph (Northbound) 24mph (Southbound)	
% Speed Limit Violations	72% (Northbound)	
Daily Vehicles	2,900 – 3,100 in either direction	Moderate
Width	50 feet	Wide
Land Use	Commercial	



* Garwood P.D. – Pole Mounted Signs Data

* Garwood P.D. – Mobile Trailer Data with mixed speed feedback









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Existing Design









Proposed Design – Alternative I (With a Bicycle Lane in both directions)







Proposed Design – Alternative II (Bicycle Lane on Northbound Side Only)

• From South Ave to North Ave

Speed Limit	25mph	Low
85 th Percentile Speed	32mph (Northbound) 24mph (Southbound)	
% Speed Limit Violations	72% (Northbound)	
Daily Vehicles	2,900 – 3,100 in either direction	Moderate
Width	50 feet	Wide
Land Use	Mixed Use/Transportation	



* Garwood P.D. – Pole Mounted Signs Data

* Garwood P.D. – Mobile Trailer Data with mixed speed feedback











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Center Street











Proposed Design



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Center Street

Intersection at South Ave

	Center St	South Ave
Speed Limit	25mph	35mph
Number of Lanes	4 (North) 3 (South)	3
Width	50 feet	40 feet
Land Use	Commercial/Mixed Use	





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Center Street







Center Street







Existing Design

Proposed Design



Center Street















Questions/Comments Time





• From North Ave to Second Ave

Speed Limit	25mph	Low
Width	38 feet	Moderate
Land Use	Commercial	









FOURTH AVE

n Park

Church



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FOURTH AVE

Public Libr

n Dark

Church







FOURTH AVE



Proposed Design – Alternative I (Bicycle Lane on the Northbound Side)





FOURTH AVE



Proposed Design – Alternative II (With Sharrows in Both Directions)



• From Second Ave to Fourth Ave

Speed Limit	25mph	Low
Width	38 feet	Moderate
Land Use	Residential/School	













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FOURTH AVE

Church of

0

pugh Public Libr

Hartman Park







FOURTH

NJTPA

Proposed Design – Alternative I (With Bicycle Lanes in Both Directions)





FOURTHA

Proposed Design – Alternative II (With Sharows in Both Directions)







Questions/Comments Time



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Second Avenue



• From Maple St to Walnut St

Speed Limit	25mph	Low
85th Percentile Speed	25mph (Westbound)	
Maximum Speed	68mph (Westbound)	
Daily Vehicles	1,000 – 1,200 in either direction	Low
Width	38, 54, 38 feet	Changes
Land Use	Residential/School	





Garwood P.D. – Mobile Trailer Data with speed feedback













NJTPA

Second Avenue





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Proposed Design









Proposed Design









Proposed Design









Proposed Design



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Second Avenue



• Between Walnut St to Gallows Hill Rd

Speed Limit	25mph	Low
85th Percentile Speed	29mph (Eastbound) 25mph (Westbound)*	
Maximum Speed	70mph (Eastbound) 68mph (Westbound)*	
Daily Vehicles	1,000 – 1,200 in either direction	Low
Width	38 – 40 feet	Moderate
Land Use	Residential/Church	





Garwood P.D. – Mobile Trailer Data * With speed feedback

















Figure 2-10. Motorists travel in the center two-way travel lane. When passing a bicyclist, no lane change is necessary.



Figure 2-11. When two motor vehicles meet, motorists may need to encroach into the advisory shoulder space.

























Existing Design

Proposed Design



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NJTPA

Second Avenue





MARKINGS

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Speed Limit	25mph	Low
85th Percentile Speed	29mph (Eastbound) 25mph (Westbound)*	
Maximum Speed	70mph (Eastbound) 68mph (Westbound)*	
Daily Vehicles	1,000 – 1,200 in either direction	Low
Width	38 – 54 feet	Changes
Land Use	Residential/Institutional	





Garwood P.D. – Mobile Trailer Data * With speed feedback

















Existing Design



Proposed Design









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https://goo.gl/maps/xcjuL8PaK1wzdqUQ6



FOURTH AVE

FOURTH AVE







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Second Avenue



Questions/Comments Time



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Spruce Avenue



• From Columbus Ave to Center St

Speed Limit	25mph	Low
85th Percentile Speed	32mph (Eastbound)	
% Speed Violations	78% (Eastbound)	
Daily Vehicles	1,200 (Eastbound)	Low
Width	36 feet	Moderate
Land Use	Residential	





* Garwood P.D. – Pole Mounted Signs Data

Spruce Avenue









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Spruce Avenue





Existing Design





Spruce Avenue





Proposed Design



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Spruce Avenue



• From Center St to Garwood Park

Speed Limit	25mph	Low
85th Percentile Speed	32mph (Eastbound)	
% Speed Violations	78% (Eastbound)	
Daily Vehicles	1,200 (Eastbound)	Low
Width	34 feet	Moderate
Land Use	Residential	





* Garwood P.D. – Pole Mounted Signs Data

Spruce Avenue







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Spruce Avenue





Existing Design



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Spruce Avenue





Proposed Design



Speed Limit	25mph	Low
85th Percentile Speed	32mph (Eastbound)	
% Speed Violations	78% (Eastbound)	
Daily Vehicles	1,200 (Eastbound)	Low
Width	34 – 36 feet	Moderate
Land Use	Residential	



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PINE AVE

SPRUCE AVE



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https://goo.gl/maps/xcjuL8PaK1wzdqUQ6







Existing Design

Proposed Design





SPRUCE AVE

PINE AVE













Questions/Comments Time



Fourth Ave.: Bicycle Boulevard

Speed Limit	25mph	Low
85th Percentile Speed	30mph (Eastbound) 28mph (Westbound)	
Maximum Speed	61mph (Eastbound) 100mph (Westbound)	
Daily Vehicles	2,100 – 2,270 in either direction	Moderate
Width	34, 31 – 32, 34 feet	Moderate
Land Use	Residential	



FOURTH AVE

SECOND AVE



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* Garwood P.D. – Pole Mounted Signs Data

* Garwood P.D. – Mobile Trailer Data with speed feedback







Fourth Ave.: Bicycle Boulevard





Existing Design



Entrance to the New Development

Proposed Design



Complete Streets Technical Assistance Program

Garwood Bicycle Network Plan August 10, 2020

Send additional comments and suggestions to: <u>heaslya@tcnj.edu</u>

Comments due by August 25, 2020

