

Appendix B

Pedestrian and Bicycle Report Cards

- 1: Pedestrian Report Card Assessment
- 2: Bicycle Report Card Assessment

Part 1: Pedestrian Report Card Assessment



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Pedestrian Report Card Assessment (PRCA): Roadway Segment

Roadway Segment Location

Route 1 in Norwood: Existing Conditions

Grading Categories ^[1]	Score	Rating
Safety	1.2	Poor
System Preservation	1.0	Poor
Capacity Management and Mobility	1.0	Poor
Economic Vitality	2.0	Fair

Transportation Equity^[2]

High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

[1] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[2] **Low** = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors



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Grading Categories: Scoring Breakdown Roadway Segment

Capacity Management and Mobility			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	1	Poor
Crosswalk Presence	33%	1	Poor
Walkway Width	17%	1	Poor
GRADING CATEGORY TOTAL^[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	100%	1.0	Poor

Economic Vitality			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2	Fair
Adjacent Bicycle Accommodations	50%	2	Fair
GRADING CATEGORY TOTAL^[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	100%	2.0	Fair

Safety			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	1	Poor
Pedestrian-Vehicle Buffer	20%	2	Fair
Vehicle Travel Speed	20%	1	Poor
GRADING CATEGORY TOTAL^[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	100%	1.2	Poor

System Preservation			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Factors ^[3]	
Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	Yes
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

[1] Poor = 1.0; Fair = 2.0; Good = 3.0

[2] Poor = 0 to 1.7; Fair = 1.7 < 2.3; Good = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Large gaps in sidewalk network
	Crosswalk Presence	Roadway with fewer than seven crosswalk per mile
	Walkway Width	Roadway segment with less than half of the sidewalks measuring at least five feet wide
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour
	Adjacent Bicycle Accommodations	Roadway segments without space for bicycle travel
Safety	Pedestrian Crashes	Roadway segment with two pedestrian crashes
	Pedestrian-Vehicle Buffer	Roadway segments with a 5- to 10-foot buffer
	Vehicle Travel Speed	Roadway segments where average vehicle travel speed is 45 miles per hour or more
System Preservation	Sidewalk Condition	Roadway segments with less than half of sidewalks in good condition



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Pedestrian Report Card Assessment (PRCA): Roadway Segment

Roadway Segment Location

Route 1 in Norwood: With improvements

Grading Categories ^[1]	Score	Rating
Safety	2.0	Fair
System Preservation	3.0	Good
Capacity Management and Mobility	2.7	Good
Economic Vitality	3.0	Good

Transportation Equity^[2]

High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

[1] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[2] **Low** = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown Roadway Segment

Capacity Management and Mobility			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	3	Good
Crosswalk Presence	33%	2	Fair
Walkway Width	17%	3	Good
GRADING CATEGORY TOTAL^[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	100%	2.7	Good

Economic Vitality			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	3	Good
Adjacent Bicycle Accommodations	50%	3	Good
GRADING CATEGORY TOTAL^[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	100%	3.0	Good

Safety			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	2	Fair
Pedestrian-Vehicle Buffer	20%	3	Good
Vehicle Travel Speed	20%	1	Poor
GRADING CATEGORY TOTAL^[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	100%	2.0	Fair

System Preservation			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	3.0	Good

Transportation Equity Factors ^[3]	
Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	Yes
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

[1] Poor = 1.0; Fair = 2.0; Good = 3.0

[2] Poor = 0 to 1.7; Fair = 1.7 < 2.3; Good = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Propose improvements close all gaps in sidewalk network
	Crosswalk Presence	Propose improvements adds new crossing opportunities where needed
	Walkway Width	Proposed improvements recommend upgrading sidewalks to MassDOT standards
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour
	Adjacent Bicycle Accommodations	Proposed improvements add sidewalk-level or street-level separated bike lanes in the study corridor
Safety	Pedestrian Crashes	Proposed improvements improves accommodations for people who walk or bike
	Pedestrian-Vehicle Buffer	Proposed improvements add separated bike lanes on Route 1
	Vehicle Travel Speed	Roadway segments where average vehicle travel speed is 45 miles per hour or more
System Preservation	Sidewalk Condition	Proposed improvements add new sidewalks on Route 1

Part 2: Bicycle Report Card Assessment



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Bicycle Report Card

Roadway Segment Location

Route 1 in Norwood: Existing Conditions

Grading Categories	Score	Grade
Safety	38	F
System Preservation	0	F
Capacity Management and Mobility	17	F
Economic Vitality	50	F

Transportation Equity

High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

Grading

- A: 90–100 *Excellent*
- B: 80–89 *Satisfactory*
- C: 70–79 *Acceptable*
- D: 60–69 *Needs Improvement*
- F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority

- High:** Four (4) or Five (5) Factors
- Moderate:** Two (2) or Three (3) Factors
- Low:** Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	0	F
Proximity to Bike Network	33%	0	F
Proximity to Transit	17%	100	A
Total	100%	17	F

Economic Vitality			
Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	100%	50	F

Grading

- A: 90–100 *Excellent*
- B: 80–89 *Satisfactory*
- C: 70–79 *Acceptable*
- D: 60–69 *Needs Improvement*
- F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority

- High:** Four (4) or Five (5) Factors
- Moderate:** Two (2) or Three (3) Factors
- Low:** Zero (0) or One (1) Factor

Safety			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	0	F
Absence of Bicycle Crashes	33%	40	F
Bicyclist Operating Space	17%	70	C
Number of Travel Lanes	17%	75	C
Total	100%	38	F

System Preservation			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	0	F
Bicycle Facility Condition	50%	0	F
Total	100%	0	F

Transportation Equity Priority	
Area Condition	Yes/No
Low-income Population => 32.32%	No
Minority Population => 28.19%	Yes
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	None in the corridor, people biking mostly stay on the shoulder
	Proximity to Bike Network	No bicycle facility within one-quarter mile
	Proximity to Transit	Yes, bus route 34E, commuter rail stations Norwood Center, Norwood Depot, and University Station are within one-half mile of the study area
Economic Vitality	Bike Rack Presence	None in the corridor
	Land Use	Land uses in the corridor, including commercial and retail, residential, and recreational, would support biking
Safety	Bicycle Facility Presence	None in the corridor
	Absence of Bicycle Crashes	Two bicycle crashes in five years (2014–19)
	Bicyclist Operating Space	People biking mostly stay on the shoulder, but sometimes have to share lane with vehicles at locations where a right-turn lane uses up the shoulder
	Number of Travel Lanes	Two travel lanes each direction
System Preservation	Bicycle Facility Continuity	No bicycle facility
	Bicycle Facility Condition	No bicycle facility



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Bicycle Report Card

Roadway Segment Location

Route 1 in Norwood: With Improvements

Grading Categories	Score	Grade
Safety	89	B
System Preservation	100	A
Capacity Management and Mobility	93	A
Economic Vitality	100	A

Transportation Equity

High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

Grading

- A: 90–100 *Excellent*
- B: 80–89 *Satisfactory*
- C: 70–79 *Acceptable*
- D: 60–69 *Needs Improvement*
- F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority

- High:** Four (4) or Five (5) Factors
- Moderate:** Two (2) or Three (3) Factors
- Low:** Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	100	A
Proximity to Bike Network	33%	80	B
Proximity to Transit	17%	100	A
Total	100%	93	A

Economic Vitality			
Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	100	A
Land Use	50%	100	A
Total	100%	100	A

Grading

A: 90–100 *Excellent*

B: 80–89 *Satisfactory*

C: 70–79 *Acceptable*

D: 60–69 *Needs Improvement*

F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority

High: Four (4) or Five (5) Factors

Moderate: Two (2) or Three (3) Factors

Low: Zero (0) or One (1) Factor

Safety			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	100	A
Absence of Bicycle Crashes	33%	80	B
Bicyclist Operating Space	17%	100	A
Number of Travel Lanes	17%	75	C
Total	100%	89	B

System Preservation			
Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	100	A
Bicycle Facility Condition	50%	100	A
Total	100%	100	A

Transportation Equity Priority	
Area Condition	Yes/No
Low-income Population => 32.32%	No
Minority Population => 28.19%	Yes
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	Proposed improvements has sidewalk- or street-level separated bike lanes
	Proximity to Bike Network	No bicycle facility within one-quarter mile
	Proximity to Transit	Yes, bus route 34E, commuter rail stations Norwood Center, Norwood Depot, and University Station are within one-half mile of the study area
Economic Vitality	Bike Rack Presence	Proposed improvements include bike sharing in the corridor
	Land Use	Land uses in the corridor, including commercial and retail, residential, and recreational, would support biking
Safety	Bicycle Facility Presence	Proposed improvements has sidewalk- or street-level separated bike lanes
	Absence of Bicycle Crashes	Proposed sidewalk- or street-level separated bike lanes will improve safety for people who bike
	Bicyclist Operating Space	Proposed improvements has sidewalk- or street-level separated bike lanes
	Number of Travel Lanes	Two travel lanes each direction
System Preservation	Bicycle Facility Continuity	Proposed improvements has sidewalk- or street-level separated bike lanes in the entire corridor
	Bicycle Facility Condition	New sidewalk- or street-level separated bike lanes