

Roadways and Walkways

Lake Forest Park City Council Retreat

03.23.24

Overview and Discussion

Roadways

LFP's Roadway Network

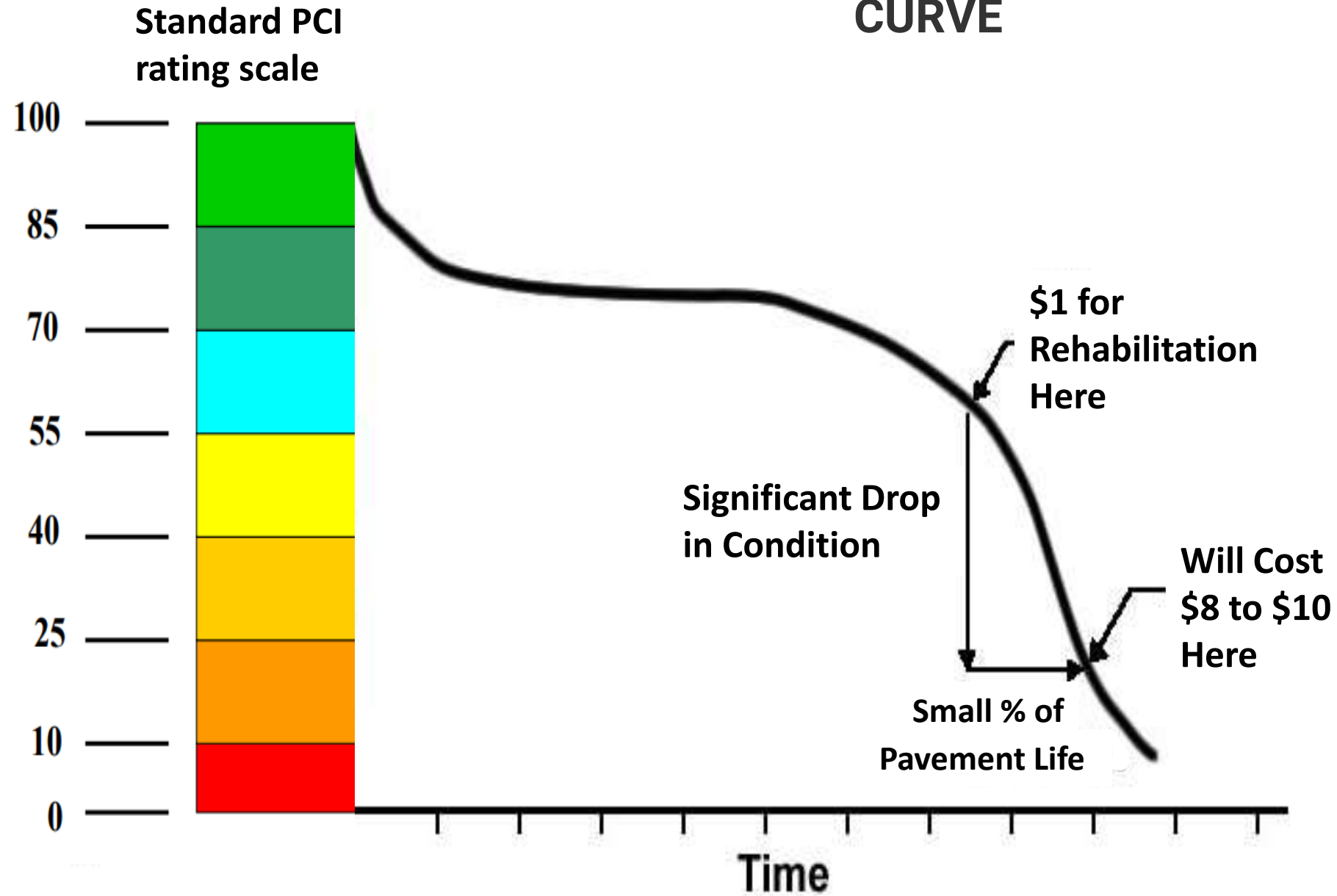
- How large is our network?
- What does it cost to maintain?
- How do we assess the pavement's condition?
- What is the health of our roadway network?

Roadway Network

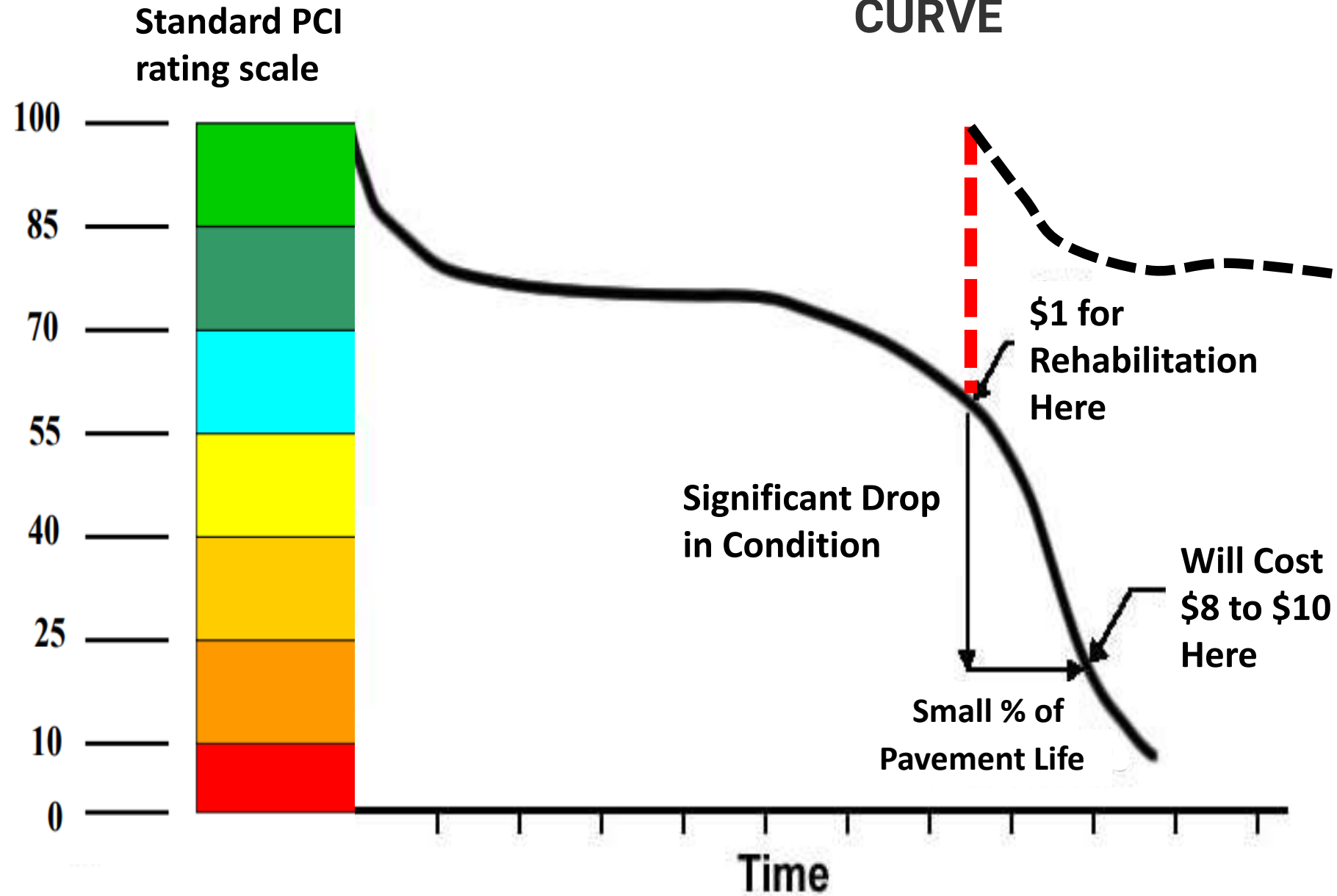
Lake Forest Park's Pavement Statistics

- 55 – Number of center lane miles of pavement
- 20 years – Expected time between resurfacing cycles
- \$1M - Actual (2023) cost to resurface 1 mile of pavement
- \$6M to \$9M – Estimated cost to reconstruct 1 mile of roadway
- +/- \$500,000 – Current annual budget for pavement resurfacing

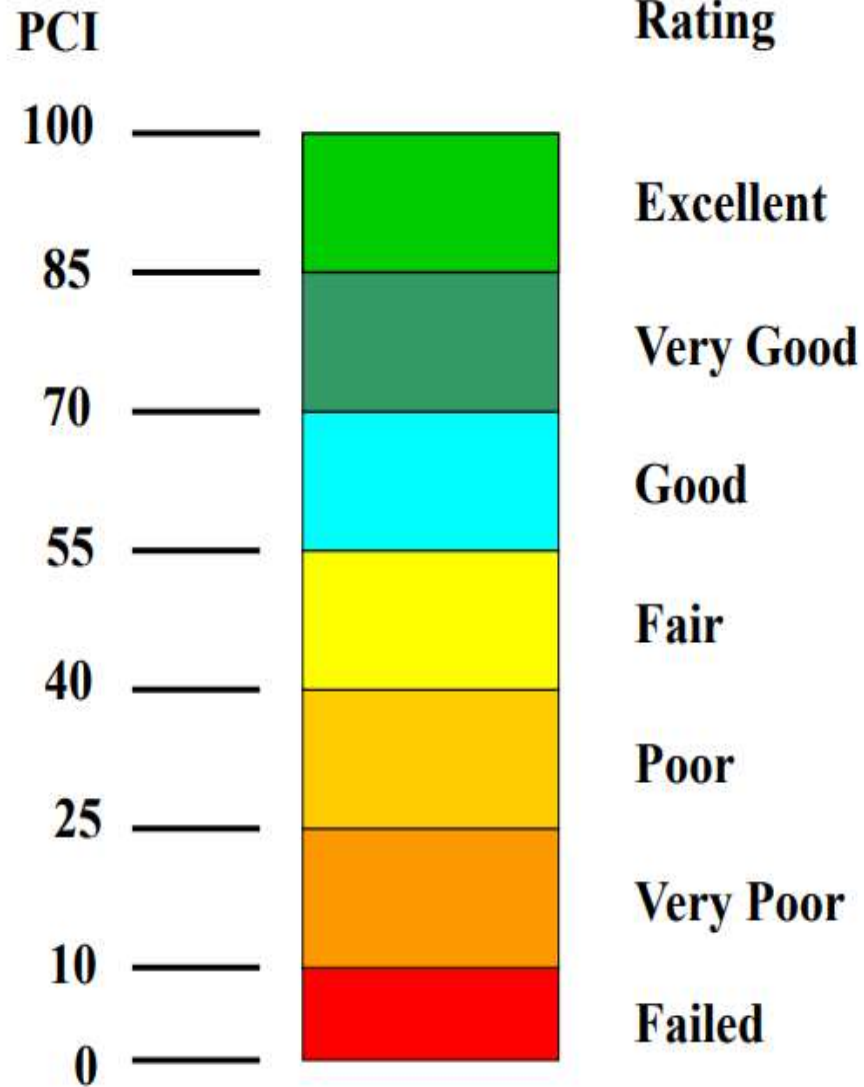
PAVEMENT DEGRADATION CURVE



PAVEMENT DEGRADATION CURVE

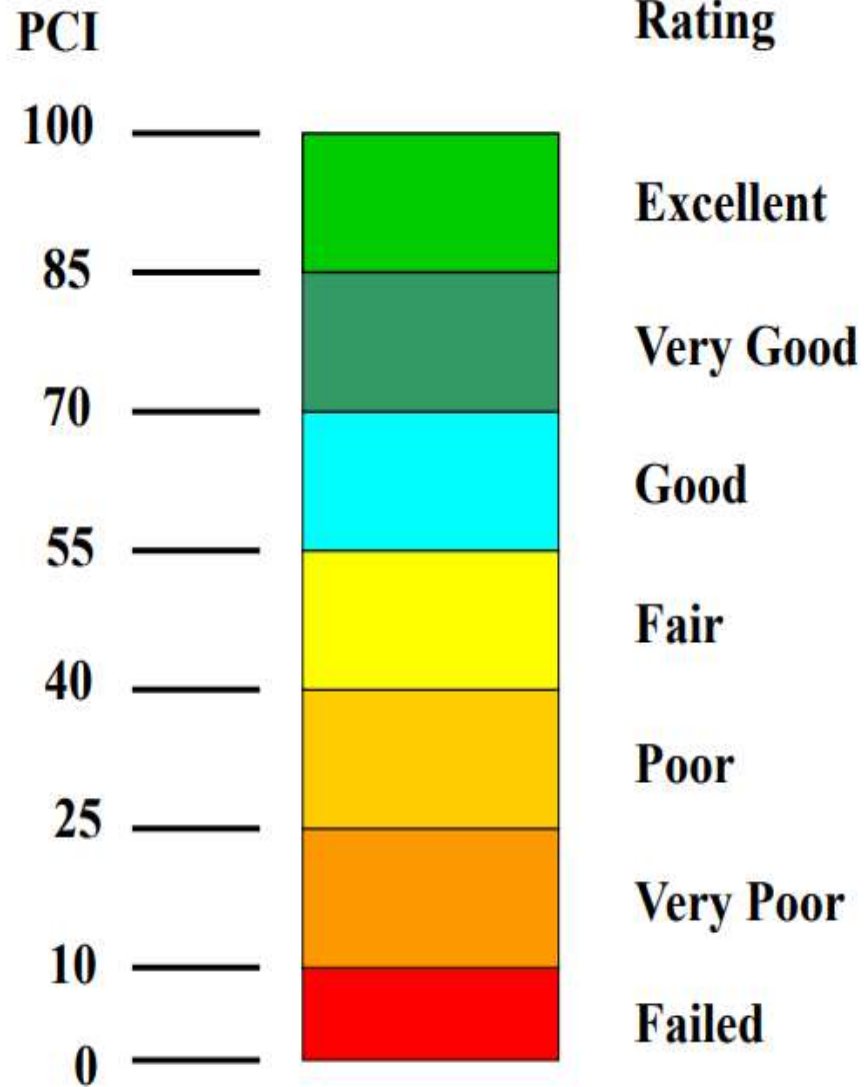


PAVEMENT CONDITION INDEX SCORES



CONDITION	RATING INDEX	DEFINITION
Excellent	86-100	Stable, no cracking, no patching, and no deformation. Very good riding qualities.
Very Good	71-85	Stable, minor cracking, generally hairline and hard to detect. Minor patching and possibly some minor deformation evident. Dry or light-colored appearance. Good riding qualities. Rutting less than ½".
Good	56-70	Generally stable, minor areas of structural weakness evident. Cracking is easier to detect, patches evident, patched but not excessively. Deformation more pronounced and easily noticed. Ride qualities are good to acceptable.
Fair	41-55	Areas of instability marked evidence of structural deficiency, large crack patterns (alligating) heavy and numerous patches, deformation very noticeable. Riding qualities range from acceptable to poor.
Poor	26-40	Pavement in extremely deteriorated condition. Numerous areas of instability. Majority of section showing structural deficiency. Ride quality is poor.
Very Poor	11-25	Pavement in extremely deteriorated condition. Extensive potholes. Numerous areas of instability. All of section showing structural deficiency. Ride quality is very poor.
Failed	0-10	Pavement structure failed. All of section showing severe structural deficiency.

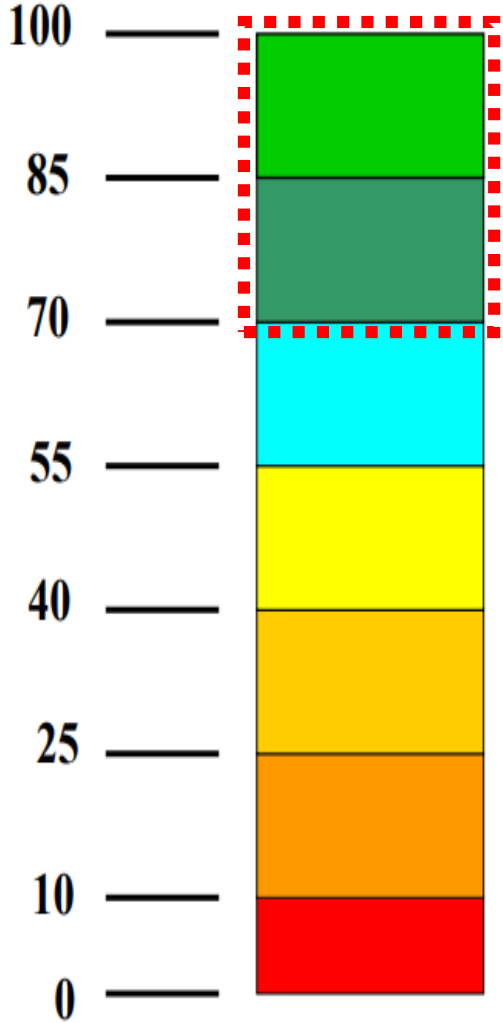
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PAVEMENT CONDITION INDEX EXAMPLES

PCI



**Pavement Condition
86 – 100 (Excellent)**

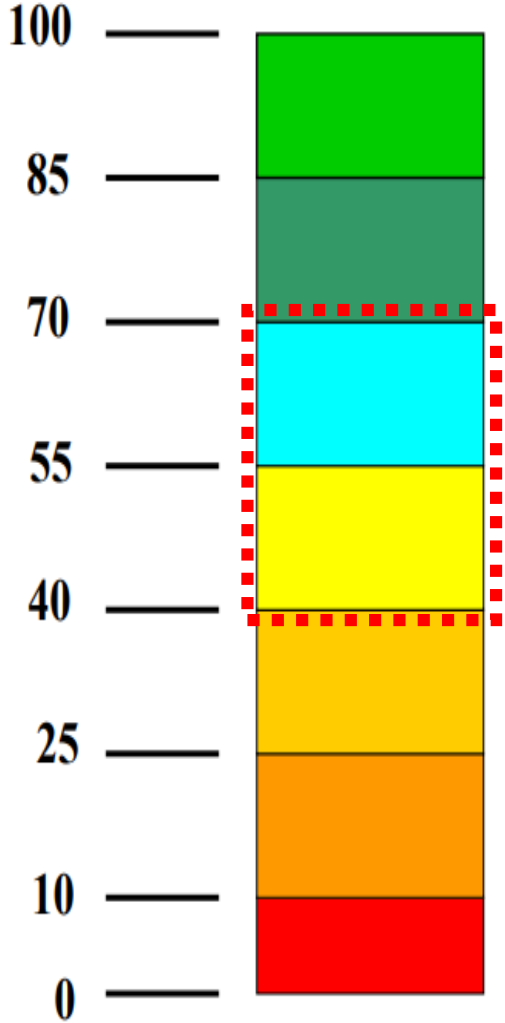


**Pavement Condition
71 – 85 (Very Good)**



PAVEMENT CONDITION INDEX EXAMPLES

PCI



**Pavement Condition
56 – 70 (Good)**

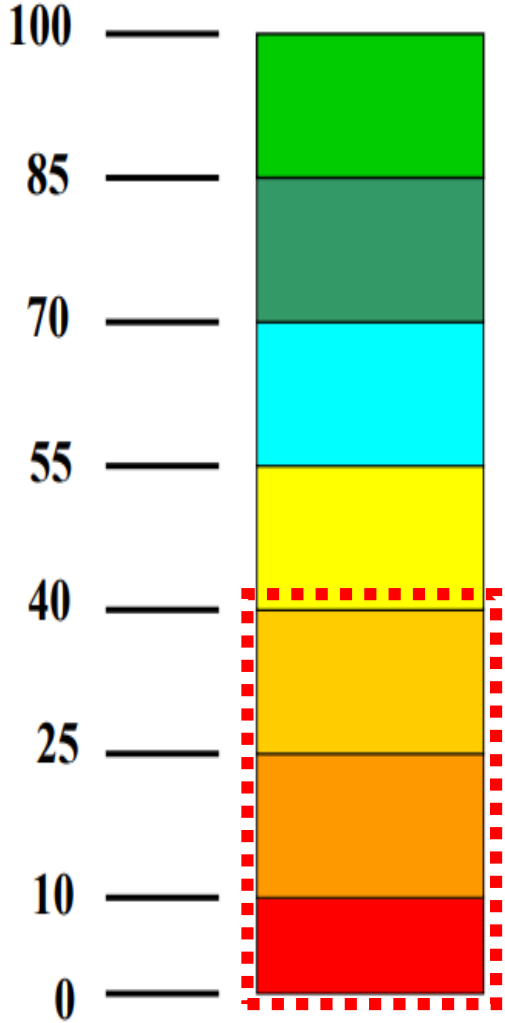


**Pavement Condition
41 – 55 (Fair)**



PAVEMENT CONDITION INDEX EXAMPLES

PCI



**Pavement Condition
11 – 40 (Poor/Very Poor)**



**Pavement Condition
0 – 10 (Failed)**





Pavement Condition Index (PCI)

National Average: +/- 70

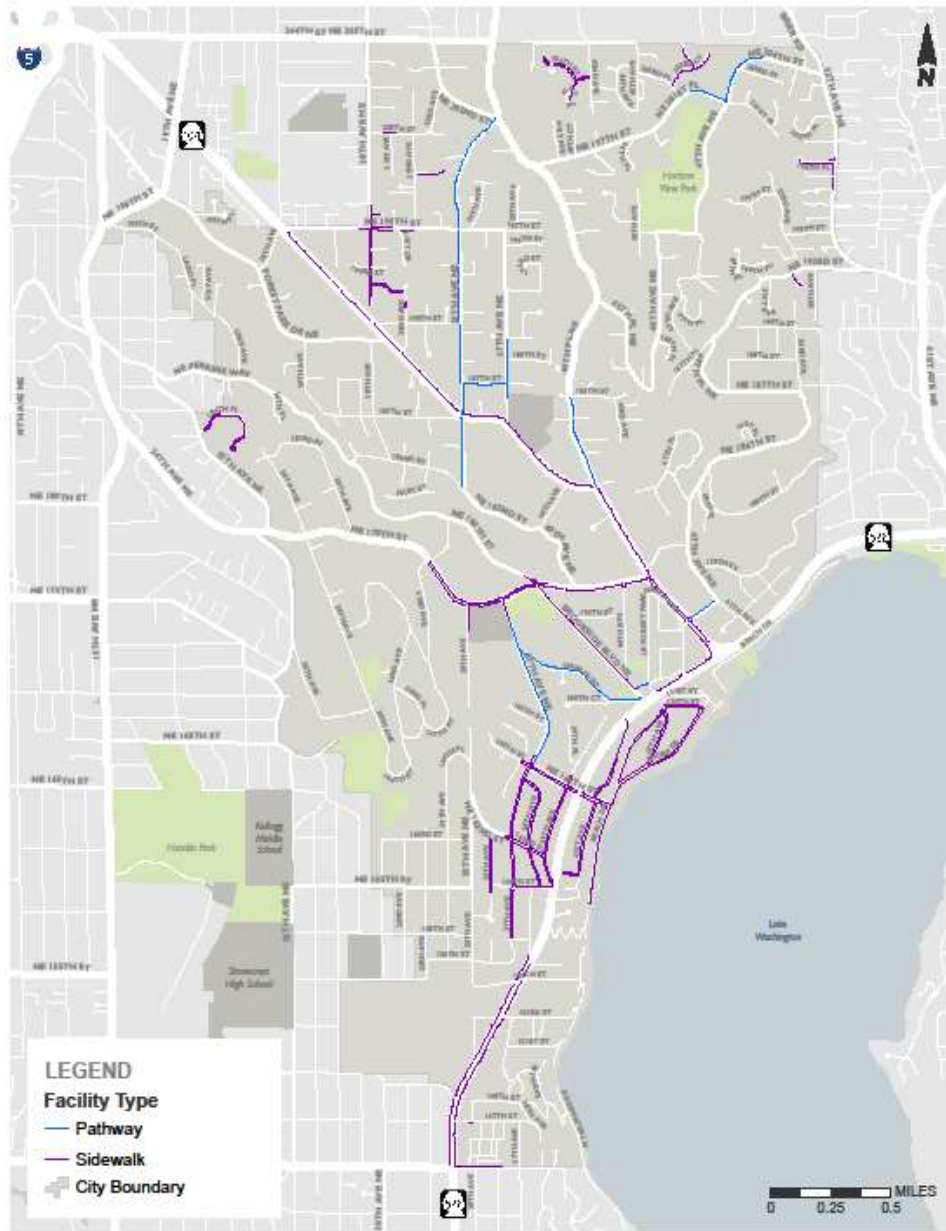
Lake Forest Park: **80**

Overview and Discussion

Walkways

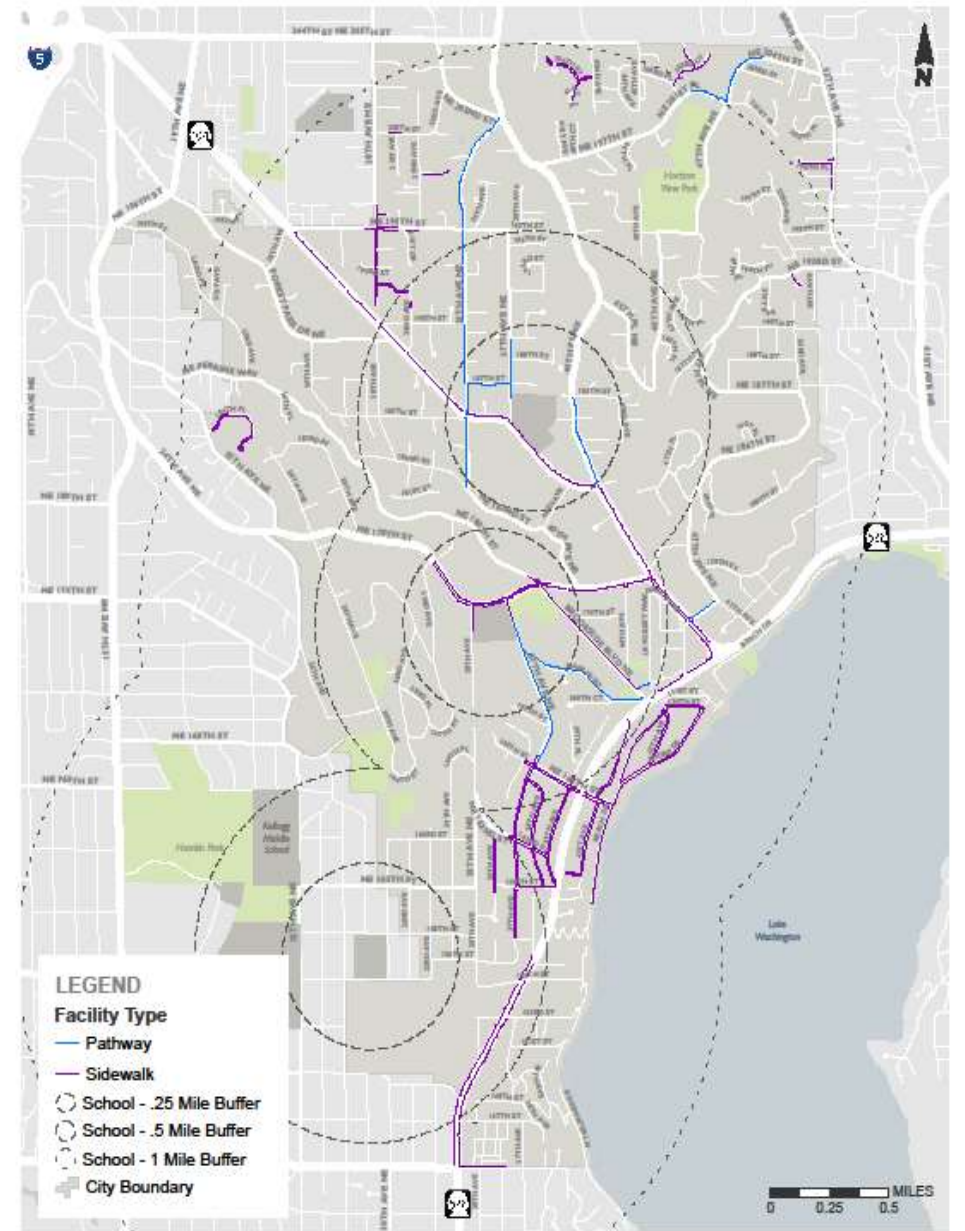
Walkways in LFP

- Where do we have walkways and sidewalks?
- How do we improve our walkway and sidewalk network?



Existing
Pedestrian
Facilities

Walkways and
Sidewalks



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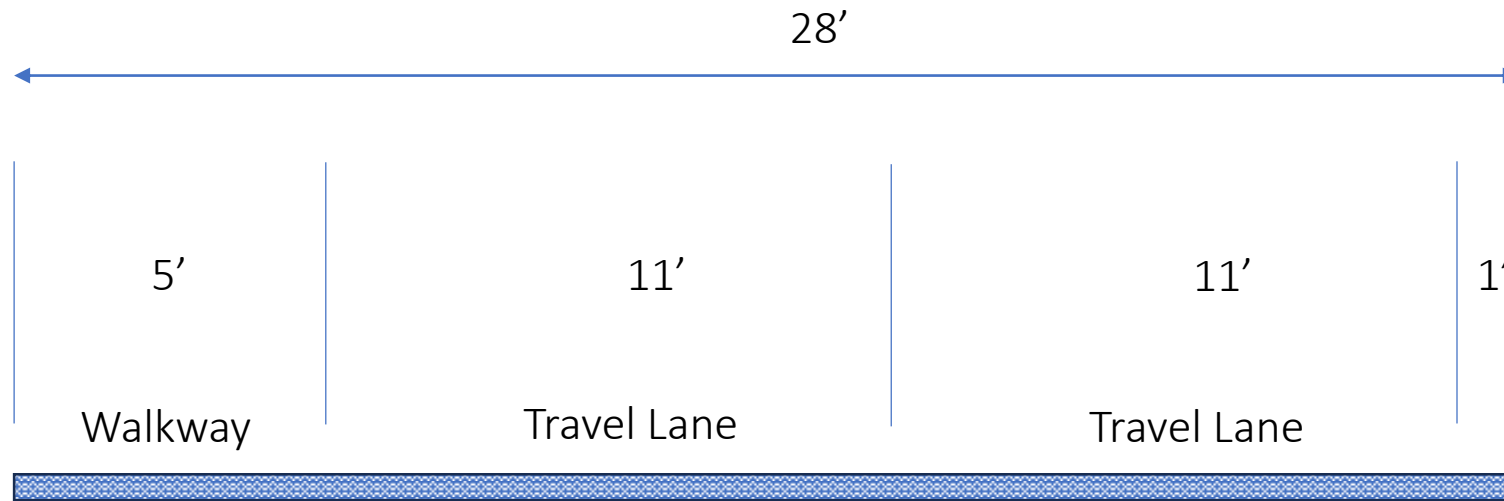
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2.03(B) Urban Local Access Streets - (Curb Roadway Section)

Classification	Neighborhood Collectors	Subcollectors	Subaccess	Minor Access
Access	Restricted, Lots front on local access street where feasible.	As needed with some restrictions. ¹	Subaccess streets are not supportive of through traffic. Generally permanent cul-de-sacs or short loop ² streets that connect to subcollectors.	Permanent cul-de-sacs or short loops with low traffic volumes that provide circulation and access to off-street parking within residential development limits.
Public or Private	Public	Public	Public or Private	Public or Private (See Section 2.06)
Serving Potential Number of Lots or Dwelling Units	Over 100 ³	100 Maximum ⁴	50 Maximum	16 Maximum
Design Speed ⁵	35 mph	30 mph	Low Speed Curve (See Section 2.10)	Low Speed Curve (See Section 2.10)
Max Superelevation	See Section 2.04B	See Section 2.04B	See Section 2.04B	See Section 2.04B
Horizontal Curvature	See Table 2.2	See Table 2.2	Low Speed Curve (See Section 2.10)	Low Speed Curve (See Section 2.10)
Maximum Grade ⁶	11%	12%	12%	12%
Minimum Stopping Sight Distance	See Table 2.2	See Table 2.2	150 feet	150 feet
Minimum Entering Sight Distance	See Table 2.2	-	-	-
Typical Traveled Way ⁷	22 feet ¹⁷	22 feet	22 feet	22 feet
Typical Roadway Width ⁸	32 feet ⁷	28 feet	24 feet	22 feet
Minimum Right-of-Way Width ⁸	56 feet	48 feet	40 feet	40 feet
Minimum Half Street Width	20 feet	20 feet	20 feet	20 feet
Minimum One Way Paved Width	20 feet	20 feet	20 feet	20 feet
Minimum Sidewalk Width	See Section 3.02	See Section 3.02	See Section 3.02	See Section 3.02
Curb Type	Vertical	Vertical/Rolled	Vertical/Rolled	Vertical/Rolled

6. Sidewalks shall be constructed next to the curb except in those situations where the County Road Engineer approves the construction of a planting strip adjacent to the curb.
7. Sidewalks shall be a minimum width of five feet on residential access streets and arterials. Minimum sidewalk width shall be six and one-half feet on arterials if curb is next to traveled lane. Sidewalks shall be a minimum width of eight feet on commercial access streets.
8. At least eight feet wide:
 - a. Where the street frontage has the characteristics of a business/commercial district and where the building frontage is within 80 feet of the street right-of-way.
 - b. Within the curb radius returns of all arterial intersections where curb ramps are required.
 - c. Within designated bus zones to provide a landing area for wheelchair access to transit services.
9. With specified width greater than eight feet where the County Road Engineer or Development Engineer determines this is warranted by expected pedestrian traffic volume.
10. With Portland cement concrete surfacing as provided in Sections 3.03 and 4.01. See specifications for joints in Section 3.04 and figure 3-001.
11. A minimum of one foot of gravel or native material shall be provided back of and immediately adjacent to the sidewalk. The material shall be flushed with the top of sidewalk.

Typical Roadway Section with Walkway





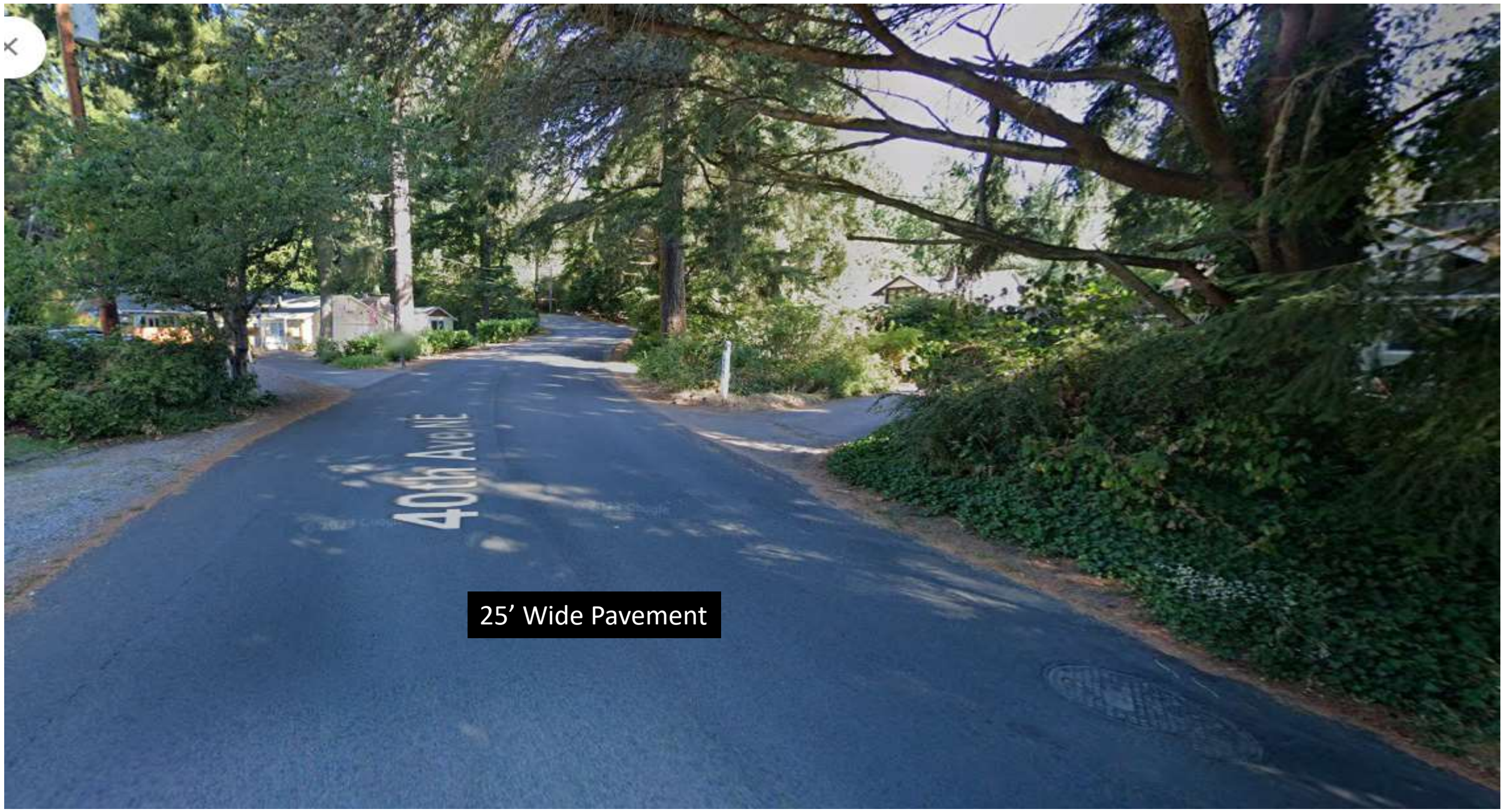
23' Wide Pavement

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32nd Avenue

17' Wide Pavement





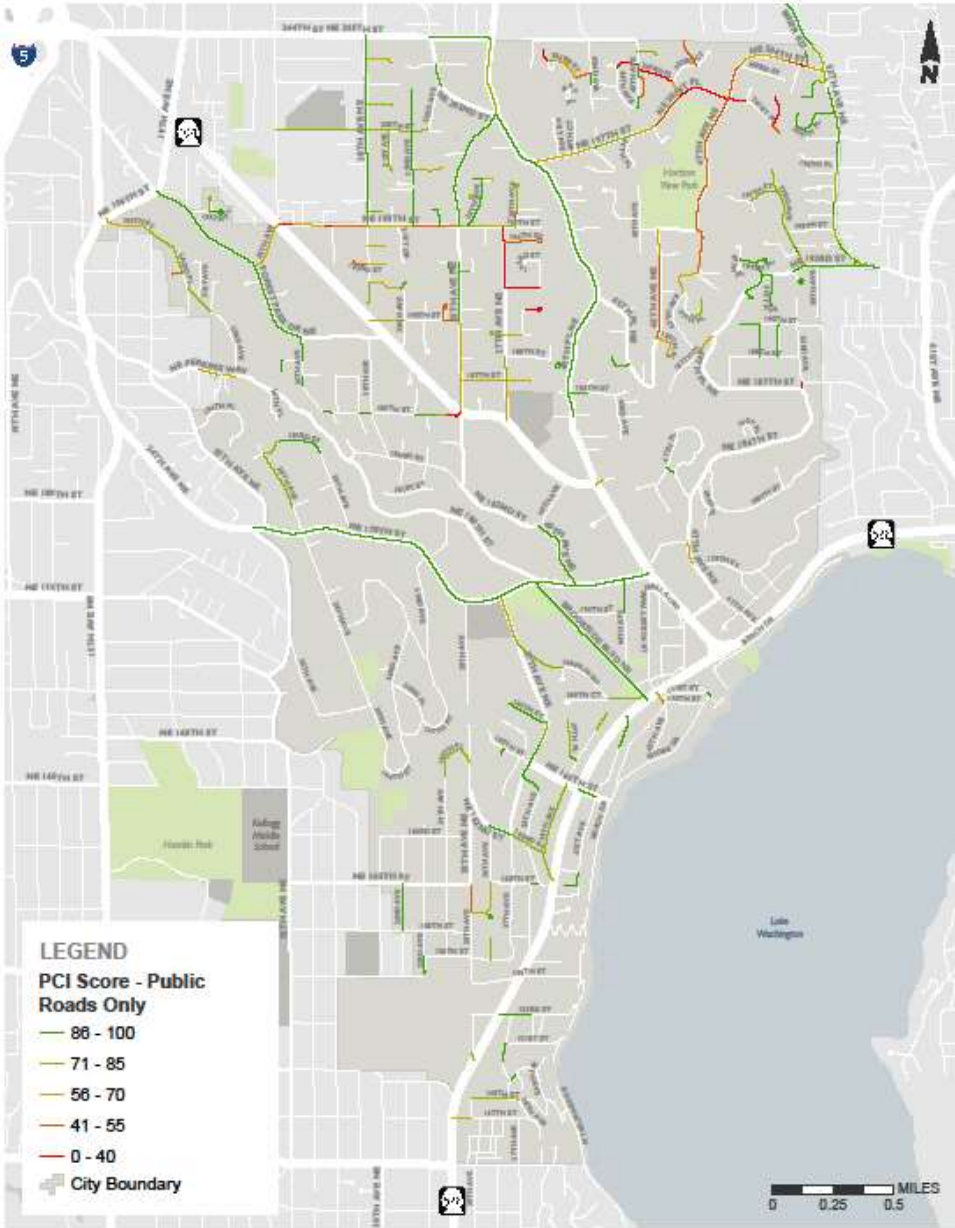
40th Avenue

25' Wide Pavement



28' Wide Pavement

Roadway
Segments Wide
Enough to
Support a
Walkway



LAKE FOREST PARK **PCI Score and Roads 28' or Wider**
 Lake Forest Park - On Call

FIGURE
XX

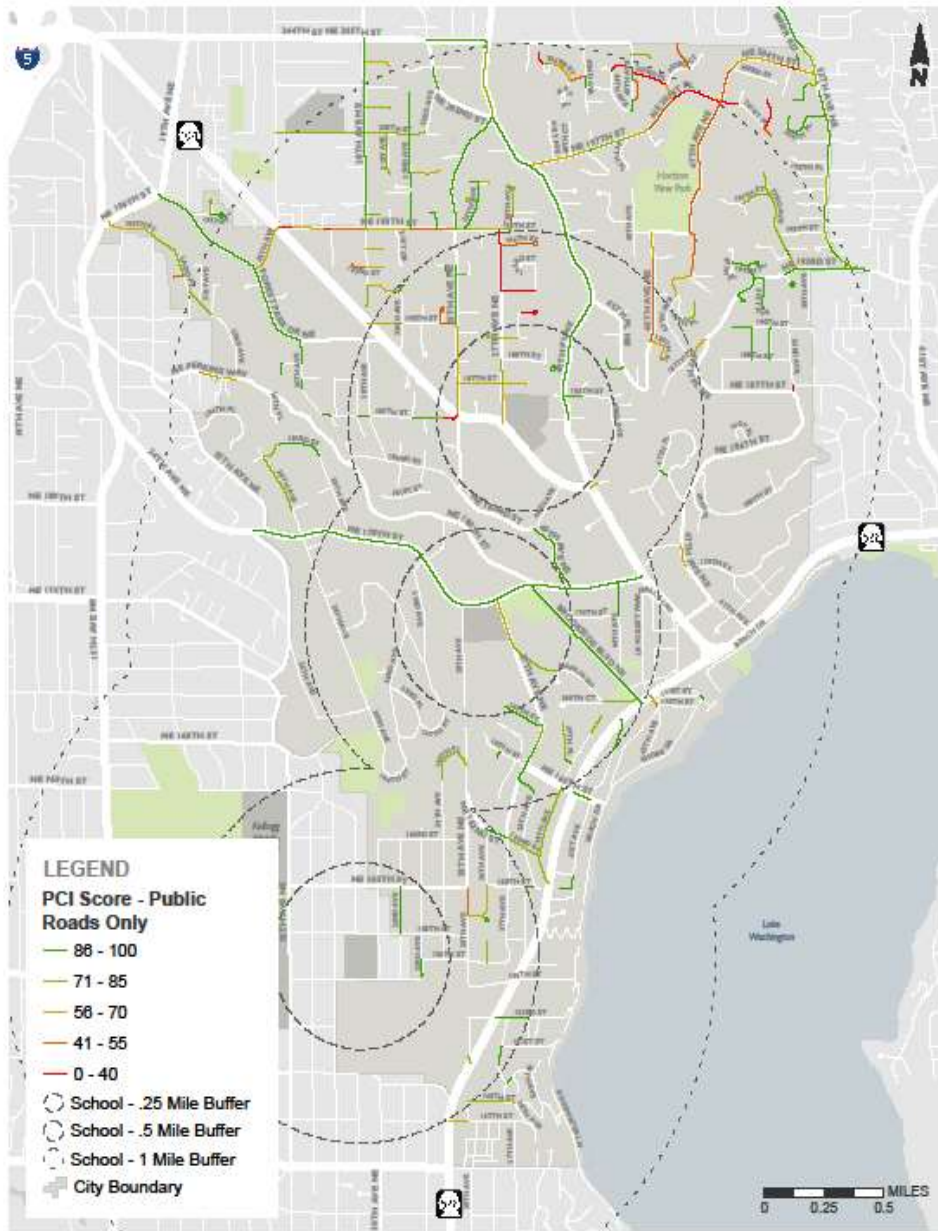
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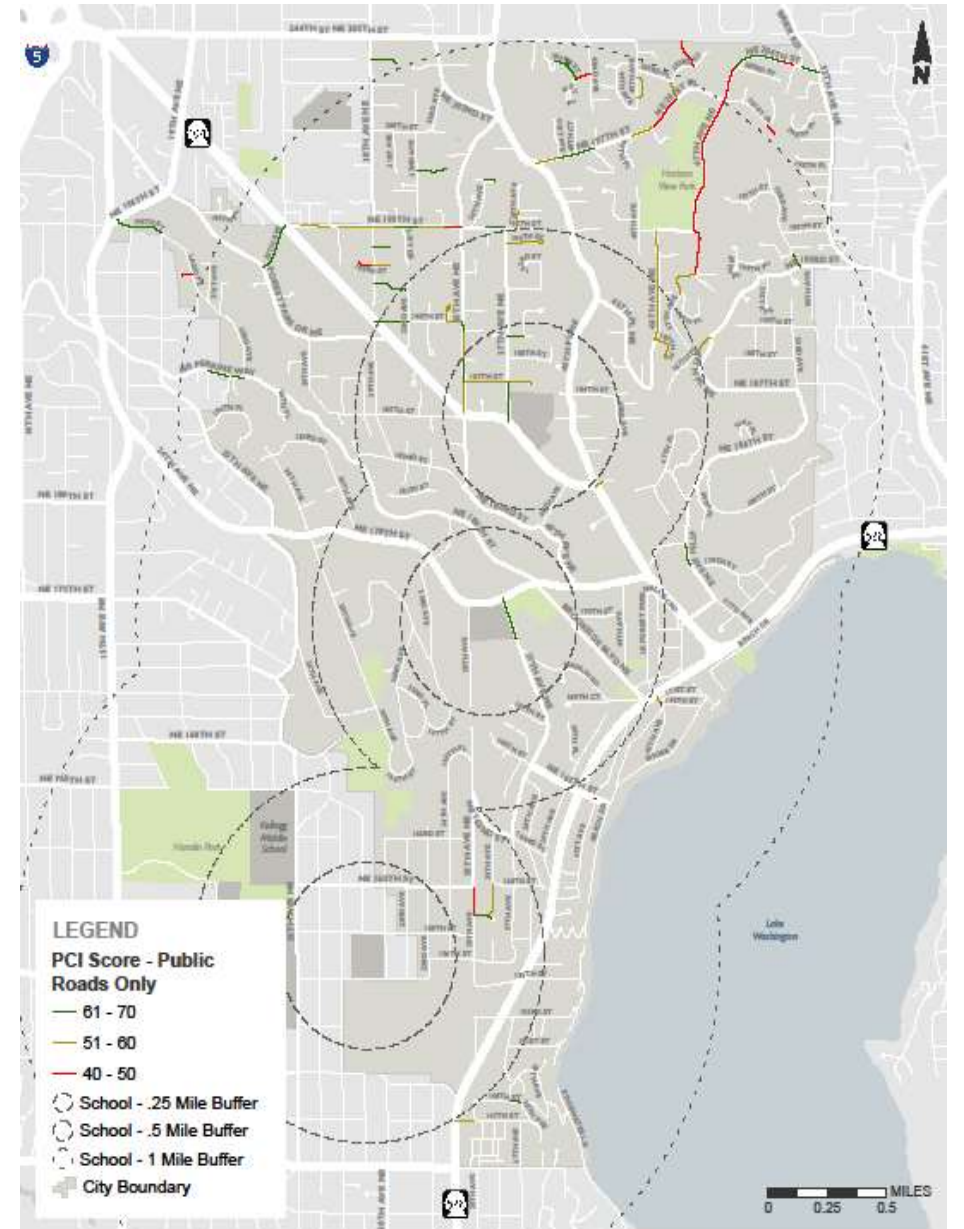
LAKE FOREST PARK **PCI Between 40 and 70, Road 28' or Wider**
 Lake Forest Park - On Call - Task 19

FIGURE
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Roadway
 Segments Wide
 Enough to
 Support a
 Walkway
 Relative to
 Schools



LAKE FOREST PARK **PCI Score and Roads 28' or Wider**

Lake Forest Park - On Call

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FIGURE

XX

LAKE FOREST PARK **PCI Between 40 and 70, Road Wider than 28'**

Lake Forest Park - On Call - Task 19

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FIGURE

XX

Roadways and Walkways

Continued Work

- Validate Pavement Data
- Identify Viable Candidate Roadways for Walkways
- Investigate Alternative Solutions