



Complete Streets

TOUCH Initiative

Technical Advisory Committee

MMLOS Demo Project Results

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Alternative LOS Methodologies

Purpose

- The Broward Complete Streets Guidelines emphasize the limitations of the traditional level of service (LOS) tool
 - Considers quality of service for only automobiles
- Identify a tool that:
 - Is appropriate for Broward County
 - Reflects all users





Alternative LOS Methodologies

- Pedestrian
- Bicycle
- Transit
- Automobile





Proposed Identified Tool

ARTPLAN component of LOSPLAN 2012 software

- Demonstrates the interaction between the four modes
- Shows the effects of different design features on each mode
- Utilizes the accepted State of Florida methodologies
- Available free of charge

Adjustment Factors

- Additional walkability elements added
- Urban form adjustment factors added



Walkability Adjustment Factors

Source: HPE's Walkability Index

- Pedestrian Connectivity
 - Distance between Intersections or Mid-Block Crossings
- Presence and Quality of Pedestrian Features
 - Sidewalk Surface Conditions
 - Obstacles
 - ADA Compliance
 - Shade Trees
 - Street Furniture
 - Lighting

5 Pedestrian Connectivity: Distance between intersections or mid-block crossings

300' or less	5
301' to 400'	4
401' to 500'	3
501' to 600'	2
Over 600'	0

		0
		0
		0
		0
		0
	Segment Total	0

5 Presence and quality of pedestrian features (good sidewalk condition; lack of obstacles; ADA compliance; shade trees; street furniture)

High quality	5
Moderate quality	3
Low quality	2
Poor quality or no features	0

		0
		0
		0
		0
	Segment Total	0



Urban Form Adjustment Factors

Source: Multimodal Mobility Strategy Assessment for Northern Broward & Southwestern Palm Beach

- Building Setbacks
- Spacing Between Buildings
- Physical Barriers Between Sidewalks and Buildings
- Off-Street Parking Locations

Urban Form Rating	Bicycle/Pedestrian Adjustment Factor	Transit Adjustment Factor ¹
Good	0.80	1.2
Fair	0.95	0.95
Poor	1.2	0.80

¹The transit adjustment factor is inverse to the bicycle and pedestrian adjustment factor due to the inverse scoring scale used in ARTPLAN.

MULTIMODAL MOBILITY STRATEGY ASSESSMENT
FOR
NORTHERN BROWARD & SOUTHWESTERN PALM BEACH

Prepared for:
FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT 4
AND
STATE ROAD 7 COORDINATING COMMITTEE

Prepared by:
 RENAISSANCE PLANNING GROUP

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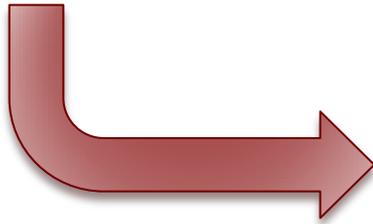


Demo Projects

- Hollywood Boulevard
 - City Hall Circle to Dixie Highway / FEC Railroad Corridor
- Sunset Strip
 - NW 72nd Avenue to NW 19th Street
- Scoping Meetings
 - City of Hollywood
 - City of Sunrise
 - Broward MPO
 - FDOT



Sunset Strip





MMLOS Results

- Hollywood Boulevard

MMLOS Metric	Existing	Proposed
Pedestrian LOS	A, 1.75	A, 1.60
Bicycle LOS	D, 3.94	C, 2.87
Bus LOS	C, 3.41	B, 4.16
Automobile LOS	D	D



MMLOS Results

- Sunset Strip

MMLOS Metric	Existing	Proposed
Pedestrian LOS	B, 2.55	C, 3.16
Bicycle LOS	D, 4.21	B, 2.65
Bus LOS	D, 2.90	D, 2.87
Automobile LOS	D	D



Effects of Adjustment Factors

- Pedestrian Connectivity
 - More frequent crosswalks in the proposed condition lead to 6% betterment of Ped LOS score on Hollywood Boulevard
- Urban Form Adjustment Factors
 - Resulted in no difference between existing and proposed because land use does not change
 - Favorable building spacing and lack of barriers on Hollywood Boulevard leads to 4% betterment in both the existing and the proposed conditions
 - Favorable building setbacks on Sunset Strip between NW 68th Avenue and NW 64th Avenue leads to 5% betterment in both the existing and the proposed conditions



MMLOS Findings

- Pedestrian LOS

- Modifications to sidewalk width were negligible according to LOSPLAN data entry module
- LOSPLAN roughly replicates the PLOS formula published in the Highway Capacity Manual (2010) Equations 17-31 through 17-34
- PLOS Score highly impacted by motor vehicle volume per lane
 - Sunset Strip road diet from 4 lanes to 2 lanes is interpreted as doubling the traffic volume by the PLOS equation



MMLOS Findings

- Bicycle LOS
 - Most straightforward of the four MMLOS measures
 - Bike lanes added to both streets increases the BLOS letter grade



MMLOS Findings

- Bus LOS
 - Primary score difference comes from opportunity to upgrade bus stop amenities
 - No difference in frequency of service was assumed



MMLOS Findings

- Automobile LOS
 - Unreliable output from LOSPLAN due to few signalized intersections
 - LOSPLAN analysis especially problematic for future conditions on Sunset Strip due to proposed roundabouts
 - Utilized FDOT Generalized LOS Tables instead to report results
 - Sunset Strip road diet (4 lanes to 2 lanes) was found to have acceptable impacts on capacity due to increased capacity of intersection treatments (roundabouts)



MMLOS Findings

- MMLOS Benefits

- Evaluates several modes of transportation, not just motor vehicle flow
- Good for evaluating roadway reconstruction
- Good for evaluating geographic differences between different areas of the County

- MMLOS Drawbacks

- Computer software not always detailed enough to evaluate small tolerances
- “Per lane traffic volume” metric makes evaluating the effects of road diets problematic



Thank you for assisting us in Transforming Our Community's Health (TOUCH)!

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