ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		**Arterial Name**	Langston Blvd	**Study Period**	**Standard K**
Date Prepared	10/15/2018 8:12:48 AM	**From**		**Modal Analysis**	Multimodal
Agency		**To**		**Program**	ARTPLAN 2012
Area Type	Transitioning/Urban	**Peak Direction**	Eastbound	**Version Date**	12/12/2012
Arterial Class	1				
File Name	Y:\City_of_Mont_Belvieu\6228-00_HGAC_TIP_Application_Support\04_ENGR\03_Documents\3. Langston Blvd\Langston.xap				
User Notes					

Arterial Data

K	0.09	**PHF**	1	**Control Type**	FullyActuated
D	0.57	**% Heavy Vehicles**	3	**Base Sat. Flow Rate**	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
	120	0.44	3	2	12	12	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to)	4300	8435	433	1	35	40	None	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to)	381	2852	0.304	21.77	C	0.17	30.13	C

Arterial Length	0.8212	Weighted g/C	0.44	FFS Delay	24.83	Threshold Delay	0.00	Auto Speed	30.13	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	**	120	740	***	***
2	**	250	1500	***	***
3	**	390	2260	***	***
4	**	520	3020	***	***
*	**	200	1500	***	***
Lanes	**Hourly Volume In Both Directions**				
2	**	220	1300	***	***
4	**	440	2630	***	***
6	**	690	3970	***	***
8	**	920	5300	***	***
*	**	360	2630	***	***
Lanes	**Annual Average Daily Traffic**				
2	**	2400	14400	***	***
4	**	4900	29300	***	***
6	**	7700	44100	***	***
8	**	10200	58900	***	***
*	**	3900	29300	***	***

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to)	Typical	Typical	No	Yes	20.00	Yes	Typical	No	0	0.4	Fair	None

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to)	4.39	E	1.82	B				2.99	C	0.00	F

Bicycle LOS	1.82	B	Pedestrian LOS	2.99	C	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	80	130	150	370	1000
2	110	160	310	730	2000
3	**	160	460	1080	3000
4	**	**	620	1460	4000
*	80	130	150	370	1000
Lanes	**Hourly Volume In Both Directions**				
2	150	220	260	640	1760
4	190	290	550	1280	3510
6	**	290	810	1900	5270
8	**	**	1090	2560	7020
*	150	220	260	640	1760
Lanes	**Annual Average Daily Traffic**				
2	1600	2500	2900	7100	19500
4	2100	3200	6100	14200	39000
6	**	3200	9000	21100	58500
8	**	**	12100	28400	78000
*	1600	2500	2900	7100	19500

Pedestrian

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	1000	> 1000	***	***	***
2	2000	> 2000	***	***	***
3	3000	> 3000	***	***	***
4	4000	> 4000	***	***	***
*	1000	> 1000	***	***	***
Lanes	**Hourly Volume In Both Directions**				
2	1760	> 1760	***	***	***
4	3510	> 3510	***	***	***
6	5270	> 5270	***	***	***
8	7020	> 7020	***	***	***
*	1760	> 1760	***	***	***
Lanes	**Annual Average Daily Traffic**				
2	19500	> 19500	***	***	***
4	39000	> 39000	***	***	***
6	58500	> 58500	***	***	***
8	78000	> 78000	***	***	***
*	19500	> 19500	***	***	***

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 7	>= 5	>= 4	>= 3	>= 2
Buses in Study Hour in Peak Direction (Daily)				

>= 6.07	>= 4.05	>= 3.04	>= 2.03	>= 1.02

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.