

CITY OF BOULDER
TRANSPORTATION ADVISORY BOARD
AGENDA ITEM

MEETING DATE: July 13, 2015

AGENDA TITLE: Staff briefing and TAB discussion on Complete Streets Living Lab Phase II corridor projects, including installation schedule, baseline data, and next steps.

PRESENTERS:

Michael Gardner-Sweeney, Acting Director of Public Works for Transportation
Kathleen Bracke, GO Boulder Manager
Dave (DK) Kemp, Senior Transportation Planner
Bill Cowern, Transportation Operations Engineer
Shannon Young, Transportation Engineer

EXECUTIVE SUMMARY

This item provides an opportunity for the Transportation Advisory Board (TAB) to provide input on the Complete Streets Living Laboratory Phase II installation schedule, baseline data, and next steps. On June 8, staff presented to the TAB Phase II recommendations. TAB recommended staff proceed with implementing all four proposed corridors. On June 15, 2015, City Council supported the installation of three pilot projects that include repurposing of vehicle lanes along the following roadway segments:

- Folsom Street from Valmont to Colorado
- Iris Avenue from Folsom to Broadway
- 63rd Street from Lookout Road to Gunbarrel Avenue/Nautilus Drive

Council also considered a proposal to repurpose vehicle lanes along 55th Street between Pearl Parkway and Arapahoe Avenue, but the proposal was tabled. Additional research and more community outreach will be conducted in response to Council feedback regarding 55th Street.

In preparation of the next steps toward project implementation, staff has prepared an installation schedule, an evaluation plan, and a compilation of baseline data for all three corridors. User experience is also a significant part of our evaluation. The city will encourage input from residents, bicyclists, pedestrians and motorists regarding impacts – positive, negative or neutral. Staff is interested in feedback throughout every stage of this project and we've created a variety of ways for the community to share input.

TAB ACTION REQUESTED

Review and provide feedback on the Complete Streets Living Laboratory Phase II installation schedule and evaluation plan.

BACKGROUND

The Living Lab program is intended to test new roadway designs, allow experimentation, and gather community feedback on the user experience. The Phase II Living Lab pilot projects include repurposing vehicle travel lanes within the existing street.

The Complete Streets Living Lab Phase II corridor projects are an early action item of the Transportation Master Plan. The purpose of the Living Lab approach is to achieve the community goals of enhancing safety and travel options for people using all modes of transportation. By fine tuning the system, community members may feel more safe, comfortable and confident in their travel choice whether walking, biking, riding the bus or driving.

On June 15, City Council directed staff to implement the staff recommendations for right-sizing the Folsom Street, Iris Avenue, and 63rd Street corridors. City Council chose to table implementation of the 55th Street project and asked staff to conduct additional research and more community outreach. Specific concerns included the possibility of motorist delays associated with train traffic in this area and the need for more outreach with area businesses and employers. Staff will develop a proposed scope and schedule of this additional work for future TAB and City Council consideration.

STAFF ANALYSIS

Living Lab Phase II Installation Schedule

Based upon City Council direction, the Living Lab Phase II corridor projects will begin installation this summer. They are intended to be in place for 12 to 18 months to allow experimentation and evaluation, including community feedback from people walking, driving, biking, and accessing transit along these corridors.

The city plans to phase in installation at each of the three corridor locations to allow for initial evaluation in between each one. Key milestones are detailed below. Results of the ongoing evaluation will be shared with the Boulder community, TAB, and City Council and used to guide recommendations for the corridor projects.

Folsom Street is the first corridor, scheduled for installation the week of July 13th. Staff will perform an initial evaluation/assessment during the following weeks along the Folsom Street corridor and check in with the TAB (Aug. 8) and Council (Aug. 25) prior to implementing the proposed installations on the Iris Avenue and 63rd Street corridors. This phased approach will allow us to carefully monitor the situation and respond to any unintended consequences. The outcome of the assessment of the Folsom Street corridor will inform potential adjustments or changes to this and other installations. Should we proceed with the other installations, it is anticipated that the Iris Avenue corridor pilot project will be installed the week of August 31st.

The 63rd Street corridor project will be installed approximately four weeks following the Iris Avenue project in mid-late September. The city will coordinate the installations with existing special events and back to school travel needs in order to mitigate potential conflicts.

Evaluation Plan

Technical Analysis

Following the installation of each corridor project, staff has collected “before” data and will collect “after” data and report comparative results at the one month, three month, six month, and twelve month milestones (with an additional eighteen month evaluation if needed). The evaluation criteria are listed below, along with the time periods that it will be collected:

- Crash history including types of collisions by mode (every evaluation);
- Vehicle volume and speed (3 & 12 month evaluation);
- Corridor travel time (every evaluation);
- Traffic displacement/diversion to adjacent residential streets (3 & 12 month evaluation);
- Left turn from side streets on Iris Avenue (3 & 12 month evaluation);
- Level of Service Analysis (12 month evaluation);
- Bicycle volume (every evaluation);
- Pedestrian Crossing Volume (3 & 12 month evaluation);
- Transit operations/interactions (three and twelve month evaluation);
- Overall facility maintenance (six and twelve month evaluations).

Additional criteria will be evaluated following project installation, including:

- Emergency response times (every evaluation)
- Right turn treatment and turning conflicts (3 & 12 month evaluation)
- Transit operations and bicycle interactions (3 & 12 month evaluation)

Along with the technical evaluation, community input will be used to determine whether these corridors are an effective way for the community to achieve its goals related to safer streets and a sustainable transportation system.

What constitutes success or failure will be determined collectively based on the results shared from the community feedback and from the ongoing technical analysis. These results will be reviewed by the city’s TAB and City Council throughout the Living Lab Phase II program (2015-16). Staff anticipates general increases in bicycle ridership and overall safety, decreases in traffic collisions, minimal travel delay for motor vehicles, and improvements to the pedestrian experience. Success may amount to any combination of the above characteristics, and will be measured holistically and in comparison with the [TMP goals and measurable objectives](#).

Technical data was gathered as part of the initial assessment of the candidate corridors considered for Phase II lane repurposing projects. This data is presented in a [Multimodal Technical Analysis Memo](#). This analysis, coupled with community input received during the spring 2015 public engagement process, shaped the Project evaluation Criteria and Data Collection Plan. For more information regarding the Living Lab analysis, please website: www.BoulderLivingLab.net

Community Input

User experience is a significant part of our evaluation. The city encourages input from residents, bicyclists, pedestrians and motorists about impacts – positive, negative or neutral. Staff is interested in feedback throughout every stage of this project. Some of the ways people can provide input are listed below:

- Sharing input on the city's [Inspire Boulder \(MindMixer\)](#) website– the city's 24-hour digital town hall, which allows community members to share and discuss ideas about city projects, issues and programs.
- Uploading a photo and comment on [Boulder Commonplace](#) – a geographically based community engagement tool that allows you to share your thoughts about getting around Boulder. All methods of transportation, like bicycle, car, public transit or as a pedestrian, are covered.
- Signing up for the [Boulder Living Lab eNewsletter](#) – Stakeholders interested in receiving e-mails with periodic updates will receive one or two messages a month regarding the Living Lab program, including upcoming engagement opportunities throughout the pilot project duration.
- Participating in a Walk, Bike or Drive Audit – These interactive forums offer an opportunity to experience the various conditions present for each user during the pilot project. Participants travel along the pilot project corridor and make occasional stops to discuss and share their user experience with each other.
- Attending a stakeholder meeting – The project team is working to schedule stakeholder meetings in August and September 2015 to gather initial feedback on user experience.

Community members may also visit the www.BoulderLivingLab.net project website for more details, Frequently Asked Questions (FAQs), a schedule of events, and additional opportunities to provide input. Community input, along with the technical transportation analysis, will be used to determine whether these corridors are an effective way for the community to achieve its goals related to safer streets and a sustainable transportation system.

Key Questions for TAB:

1. Does TAB have input regarding the project installation schedule?
2. Does TAB have input regarding the evaluation criteria or collection plan?
3. Does the TAB have input regarding the proposed public engagement opportunities?

NEXT STEPS

Planned Updates to TAB and Council

Throughout the duration of the Living Lab Phase II pilot projects, staff will provide monthly updates to the TAB at its regular meeting. Council will receive a copy of the materials provided to the TAB, as well as meeting minutes.

Additionally, staff will update council on the Living Lab Phase II projects at study sessions scheduled for Aug. 25, 2015 and the first quarter of 2016 as part of the check-in on the Transportation Master Plan implementation. Below is a list of scheduled installations should the projects continue to move forward as planned:

- Week of July 13th – Folsom Street
- Week of August 31st – Iris Avenue
- Week of September 28th – 63rd Street

Final results of the pilot projects are expected to be presented to the TAB and council in fall 2016. However, it is recognized that the ongoing evaluation, community feedback, and reporting of performance measures will help guide decision-making about whether the pilot projects are working as planned and/or if they would benefit from refinement or discontinuation.

Please visit www.BoulderLivingLab.net for more information.

Attachments:

Attachment A: Living Lab - Phase II Evaluation Matrix & Baseline Data

Living Lab - Phase II Corridor Evaluation
"Before" Data Summary
June 2015





Living Lab – Phase II Corridor Evaluation

Evaluation Criteria	Data Collection	Data Collection Method	Data Analyzed	Before Data	After Data 1 month	After Data 3 months	After Data 6 months	After Data 12 months
SAFETY								
Crash History	Intersections and segments along Iris, Folsom, 63rd	Review City of Boulder Accident Reports	<ul style="list-style-type: none"> Fatal & serious injury crashes Crashes involving bicyclist or pedestrian Crash types (rear end, approach turn, right angle, etc.) 	Yes	✓	✓	✓	✓
Right Turn Treatments & Turning Movement Conflicts	Iris & Broadway Folsom & Canyon Folsom & Pearl 63 rd & Spine	Video Observation (AM & PM Peak Hour)	<ul style="list-style-type: none"> Bicycle, pedestrian, and vehicle interactions in right turn treatments Turning motorist failure to yield to pedestrian or bicycle Compliance with signage and striping treatment 	No		✓		✓
VEHICLES								
Volume	Iris e/o 19 th Folsom w/o Canyon Folsom & Pearl Folsom n/o Bluff 63 rd s/o Longbow	Jamar, Miovision, Wavetronix	<ul style="list-style-type: none"> Counts of traffic volume: 24 hour, AM, Noon or PM peak hour 	Yes		✓		✓
Speed	Iris e/o 19 th Folsom n/o Bluff 63 rd s/o Longbow	Jamar, Miovision, Wavetronix	<ul style="list-style-type: none"> Average daily speed of vehicles 85th Percentile speed Speed limit 	Yes		✓		✓

Evaluation Criteria	Data Collection	Data Collection Method	Data Analyzed	Before Data	After Data 1 month	After Data 3 months	After Data 6 months	After Data 12 months
VEHICLES – cont'd								
Traffic Neighborhood Diversion	Iris Corridor: Broadway, 14 th , 15 th , 16 th , Iris Ct., 17 th , 19 th , Hermosa/22 nd , 25 th , Folsom <i>To be collected:</i> Glenwood, Grape, Hawthorne, Kalmia, Linden, Twin Lakes	Jamar, Miovision, Wavetronix	<ul style="list-style-type: none"> Counts of traffic volume: 24 hour, AM, Noon or PM peak hour 	Yes		✓		✓
Left Turn from Side Streets	Iris & 16 th Iris & 22 nd	Video Observation and Turning Movement Counts	<ul style="list-style-type: none"> Measure of delay in executing left turn movements from side streets along Iris corridor 	Yes		✓		✓
Corridor Travel Time	Iris Corridor Folsom Corridor 63 rd Corridor	Field Data Collection or Acyclica Data	<ul style="list-style-type: none"> Average AM & PM peak driving time by segment for each corridor 	Yes	✓	✓	✓	✓
Level of Service (LOS) Analysis	Iris Corridor Folsom Corridor 63 rd Corridor	Turning Count Movement Data (AM & PM Peak Hour)	<ul style="list-style-type: none"> Synchro capacity analysis for each intersection turning movement using data collected during City turning movement counts 	Yes				✓
Left Turn Queue Length	Iris & Broadway Folsom & Canyon Folsom & Pearl	Video Observation (PM Peak Hour)	<ul style="list-style-type: none"> Average & maximum queue Number of times left-turn queue blocks through lane 	Yes		✓		✓
BICYCLES								
Volume	Iris & Broadway 1400 Block Iris* Iris & 19 th Iris & Folsom Kalmia & 16 th * Folsom s/o Arapahoe* Folsom & Arapahoe Folsom s/o South* Folsom & Canyon Folsom & Pearl Folsom & Pine Folsom s/o Canyon* Folsom & Valmont 63 rd s/o Spine*	<p>Before: Miovision counters (AM, Noon, PM Peak and Daylight* Hours) Video Observation (AM & PM Peak Hour)</p> <p>After: 24 Hour Counters* Video Observation (AM & PM Peak Hour)</p>	<ul style="list-style-type: none"> Bicycle volume by direction, time of day, and location within right of way 	Yes	✓	✓	✓	✓

Evaluation Criteria	Data Collection	Data Collection Method	Data Analyzed	Before Data	After Data 1 month	After Data 3 months	After Data 6 months	After Data 12 months
BICYCLES – cont'd								
Demographics	Folsom & Pearl Iris & Broadway 63 rd & Spine	Video Observation (AM & PM Peak Hour)	<ul style="list-style-type: none"> Ratio of male, female, and children cycling on the road 	Yes		✓		✓
PEDESTRIANS								
Crossing Volume	Folsom & Arapahoe Folsom & Canyon Folsom & Pearl Folsom & Pine Folsom & Valmont Iris & Broadway Iris & 19 th Iris & Folsom 63 rd & Spine	Miovision counters (AM, Noon, PM Peak Hour) Video Observation (AM & PM Peak Hour)	<ul style="list-style-type: none"> Number of crossing pedestrians by direction and time of day 	Yes		✓		✓
TRANSIT								
Ridership	Transit Stops on Iris, Folsom, and 63 rd Corridors	RTD data	<ul style="list-style-type: none"> Number of passengers boarding and alighting at stops along rightsized corridors 	Yes				✓
Bus Transition From Buffer to Travel Lane	Iris & 22 nd /Hermosa RTD stop	Observation (PM peak)	<ul style="list-style-type: none"> Maximum and average length of time buses wait to merge 	No		✓		✓
Transit and Bicycle Interactions	Iris & 22 nd /Hermosa RTD stop	Observation (PM Peak)	<ul style="list-style-type: none"> Interactions and yielding behaviors of cyclists, transit vehicles in buffer, and motorists in travel lane 	No		✓		✓
FACILITY DESIGN								
Overall Maintenance	Iris Corridor Folsom Corridor 63 rd Corridor	Public Works Department	<ul style="list-style-type: none"> Snow, ice, and debris removal along corridors 	No		✓	✓	✓
Emergency Response Times	Iris Corridor Folsom Corridor 63 rd Corridor	Input from Boulder Fire-Rescue Department	<ul style="list-style-type: none"> Response time of emergency vehicles along corridors Ability of emergency vehicles to maneuver within corridors 	No	✓	✓	✓	✓
PUBLIC FEEDBACK								
Public Feedback	All Corridors	Open Houses, Online Feedback, Popup Demonstrations	<ul style="list-style-type: none"> Online and community feedback 	Yes	✓	✓	✓	✓

Evaluation Criteria: Crash History

Folsom Street Crash Summary

Intersection/Segment	Total Crashes				Correctable Crashes	Ped	Bike	Fatal	Serious Injury	
	2012	2013	2014	Total						
Folsom St and Valmont Rd	6	5	6	17	2	12%	0	2	0	0
Folsom St and Bluff St	1	0	3	4	0	0%	0	0	0	0
Folsom St and Mapleton Ave	0	0	1	1	0	0%	0	1	0	0
Folsom St and Pine St	9	8	4	21	2	10%	0	2	0	1
Folsom St and Spruce St	5	5	0	10	0	0%	0	1	0	0
Folsom St and Pearl St	11	7	8	26	3	12%	0	4	0	0
Folsom St and Walnut St	1	3	1	5	0	0%	1	0	0	0
Subtotal	33	28	23	84	7	8%	1	10	0	1
Folsom St and South St	1	2	0	3	1	33%	0	2	0	0
Folsom St: South St to Canyon	3	1	0	4	1	25%	0	2	0	0
Subtotal	37	31	23	91	9	10%	1	14	0	1
Folsom St and Canyon Blvd	16	28	25	69	0	0%	3	6	0	2
Folsom St: Canyon Blvd to Goss St	1	2	0	3	1	33%	0	1	0	0
Folsom St and Goss St	5	0	0	5	1	20%	0	0	0	0
Folsom St and Grove St	2	2	2	6	0	0%	0	2	0	0
Folsom St and Arapahoe Ave	24	21	23	68	5	7%	1	6	0	0
Total	85	84	73	242	16	7%	5	29	0	3
Folsom St: Arapahoe to Colorado	7	3	1	11	0	0%	2	5	0	1
Total	92	87	74	253	16	6%	7	34	0	4

Evaluation Criteria: Crash History

Iris Avenue Crash Summary

Intersection/Segment	Total Crashes				Correctable Crashes	Ped	Bike	Fatal	Serious Injury	
	2012	2013	2014	Total						
Iris Ave and 13th St	3	0	1	4	2	50%	0	0	0	
Iris Ave and 14th St	1	1	0	2	0	0%	0	0	0	
Iris Ave and 15th St	1	1	1	3	1	33%	1	0	0	
Iris Ave and 16th St	2	5	4	11	4	36%	0	0	0	
Iris Ave and Iris Ct	0	1	1	2	0	0%	0	0	0	
Iris Ave and 17th St	1	0	0	1	1	100%	0	0	0	
Iris Ave and 19th St	4	2	1	7	0	0%	0	2	0	
Iris Ave and 22nd St	1	0	0	1	0	0%	0	0	0	
Iris Ave and Hermosa Dr	0	0	2	2	1	50%	0	0	0	
Iris Ave and 25th St	1	0	1	2	0	0%	0	1	0	
Iris Ave and Folsom St	4	12	8	24	3	13%	0	6	0	
Total	18	22	19	59	12	20%	1	9	0	1

3/yr

63rd Street Crash Summary

Intersection/Segment	Total Crashes				Correctable Crashes	Ped	Bike	Fatal	Serious Injury
	2012	2013	2014	Total					
63rd St and Lookout Rd	11	4	8	23	0	0%	1	0	0
63rd St and Spine Rd	6	7	5	18	0	0%	0	1	0
63rd St and Longbow Dr	2	0	1	3	0	0%	0	0	0
63rd and Gunbarrel/Nautilus	2	0	1	3	3	100%	0	0	0
Total	21	11	15	47	3	6%	1	1	0

Additional data:

Safety Analysis for Phase II Projects (5-19-15)

Evaluation Criteria: Vehicle Volume and Speed

Corridor Volumes and Speed

Count Location			Month-Year	ADT Weekday (vpd)	Average Speed (mph)	85th Percentile Speed (mph)	Speed Limit (mph)	AM Peak (vph)	Noon (vph)	PM (vph)
Iris Avenue	e/o	19th Street	Mar-15	22,900	35	39	35			
Iris Avenue	w/o	16th Street	<i>Jul-15 (to be collected)</i>							
Folsom Street	n/o	Bluff Street	Apr-15	15,780	35	39	30			
Folsom Street	s/o	Pearl Street	Apr-15					1,218	1,298	1,601
Folsom Street	n/o	Canyon Blvd	<i>Jun-15 (to be collected)</i>							
63rd Street	s/o	Longbow Drive	May-15	11,090	41	45	40			

ADT = average daily traffic

vpd = vehicles per day

mph = miles per hour

vph = vehicles per hour

Evaluation Criteria: Traffic Neighborhood Diversion

Iris - Nearby Street Volumes and Speed

Count Location			Month-Year	ADT-Weekday (vpd)	Average Speed (mph)	85th Percentile Speed (mph)	Speed Limit (mph)	
Broadway	n/o	Iris Ave	May-15	22,600	33	37	35	
Broadway	s/o	Iris Ave	Mar-15	24,260	33	38	30	
16th Street	n/o	Iris Ave	May-15	1,240	20	24	25	
19th Street	n/o	Iris Ave	May-15	6,830	27	32	30	
19th Street	s/o	Iris Ave	May-15	4,900	26	29	30	
Folsom Street	s/o	Iris Ave	May-15	10,680	29	31	30	
Glenwood	w/o	Folsom St	<i>Jul-15 to be collected</i>					
Grape	w/o	Folsom St	<i>Jul-15 to be collected</i>					
Hawthorne	w/o	Folsom St	<i>Jul-15 to be collected</i>					
Kalmia	w/o	16th St	<i>Jul-15 to be collected</i>					
Kalmia	w/o	Catalpa Wy	<i>Jul-15 to be collected</i>					
Linden	w/o	26th St	<i>Jul-15 to be collected</i>					
Twin Lakes	n/o	Idylwild Ct.	<i>Jul-15 to be collected</i>					

Count Location			Month-Year	AM Peak (vph)	Noon (vph)	PM (vph)
13th Street	s/o	Iris Avenue	Jan-15	14	--	22
14th Street	s/o	Iris Avenue	Jan-15	7	--	17
15th Street	s/o	Iris Avenue	Jan-15	17	--	23
16th Street	n/o	Iris Avenue	Jan-15	106	--	101
16th Street	s/o	Iris Avenue	Jan-15	25	--	27
Iris Ct.	n/o	Iris Avenue	Jan-15	11	--	12
17th Street	n/o	Iris Avenue	Jan-15	6	--	11
22nd Street	n/o	Iris Avenue	Jan-15	27	--	41
Hermosa Street	s/o	Iris Avenue	Jan-15	10	--	13
25th Street	s/o	Iris Avenue	Jan-15	12	--	13

Evaluation Criteria: Corridor Travel Time

Travel Time by Corridor

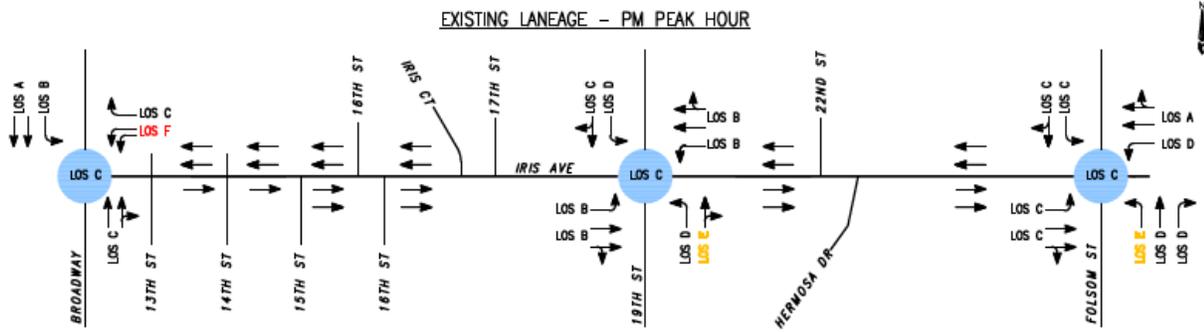
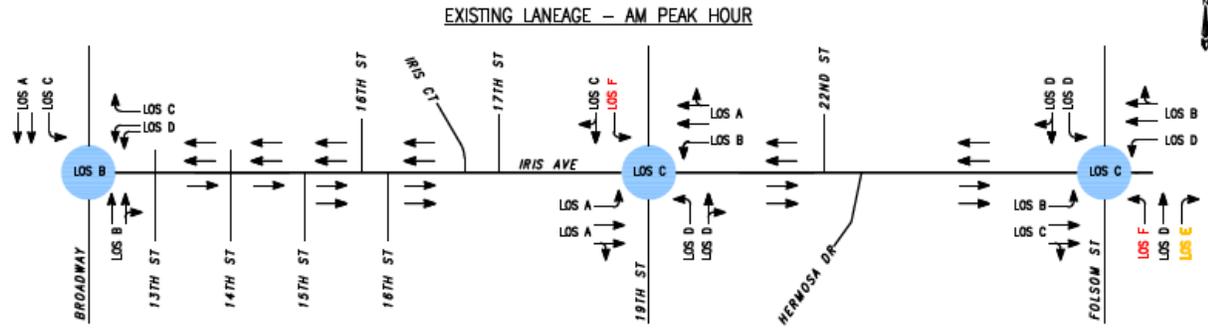
Corridor	Direction	Existing Average Travel Time (minutes)	
		AM	PM
Iris (Broadway - Folsom)	eastbound	2:33	2:26
	westbound	2:42	2:54
Folsom (Arapahoe - Valmont)	northbound	2:25	3:31
	southbound	2:56	3:12
63rd (Lookout to Gunbarrel)	northbound	<i>collection in process</i>	
	southbound	<i>collection in process</i>	

Additional data:

Technical Analysis Memo 4-29-15

Evaluation Criteria: Level of Service (LOS)

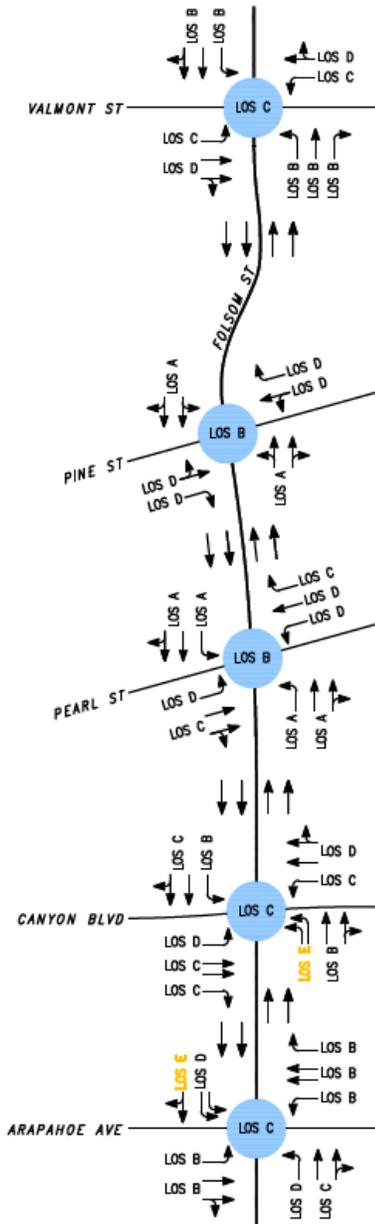
Iris Ave - Broadway to 19th St



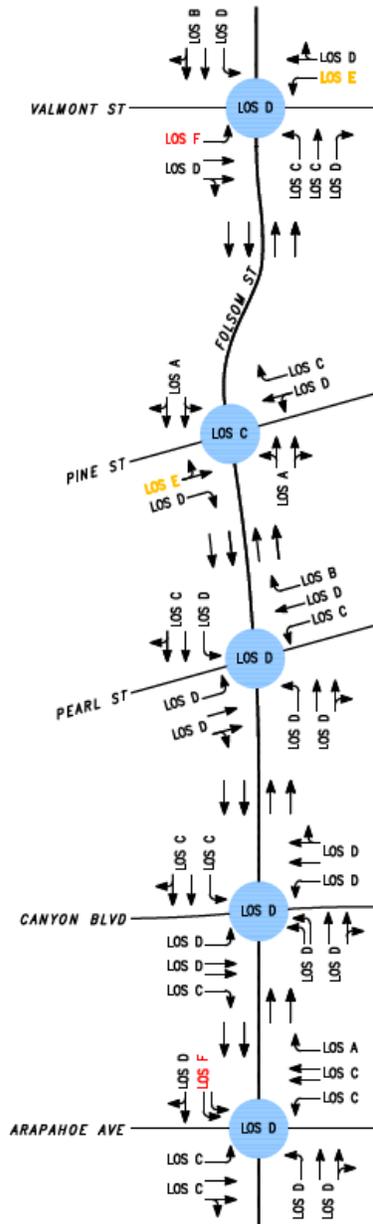
Evaluation Criteria: Level of Service (LOS)

Folsom St - Arapahoe Ave to Valmont St

EXISTING LANEAGE - AM PEAK HOUR



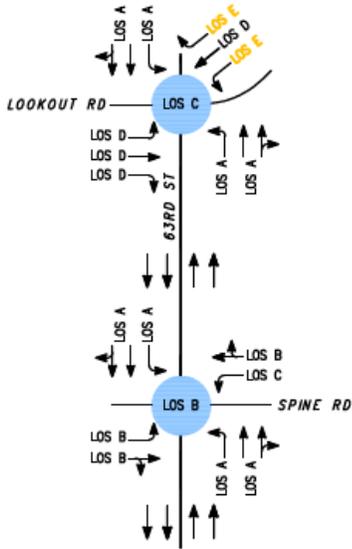
EXISTING LANEAGE - PM PEAK HOUR



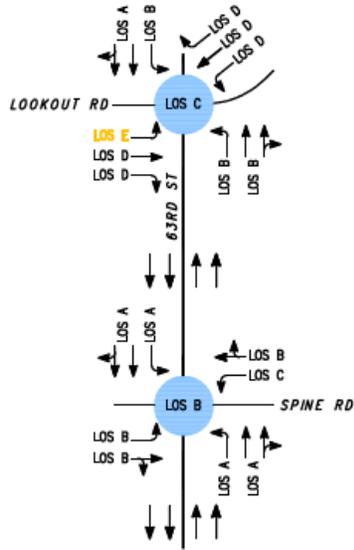
Evaluation Criteria: Level of Service (LOS)

63rd St - Lookout Rd to Spine Rd

EXISTING LANEAGE - AM PEAK HOUR



EXISTING LANEAGE - PM PEAK HOUR



Evaluation Criteria: Left Turn Queue Length

PM Peak Hour Left Turn Queue Length

Intersection	Direction	Date	Number Left Turn Lanes	# of Vehicles in Left Turn Queue		% Through Lane Blocked by LT Lane	% of PM Peak Hour Left Turn Lane Did Not Clear During Cycle
				Average	Maximum		
Folsom St and Canyon Blvd	NB	Apr-15	2	4.5	11	0%	0%
Folsom St and Canyon Blvd	SB	Apr-15	1	3.7	9	16%	20%
Folsom St and Pearl St	NB	Apr-15	1	2.3	8	32%	0%
Iris Ave and Broadway Ave	WB	May-15	2	18.5	26	0%	89%

NB = northbound

SB = southbound

WB = westbound

Evaluation Criteria: Bicyclist Volume and Demographics

Bicyclists Riding on Roadways During "Daylight" Hours (6am -9pm)

Iris Avenue

Location	Date	Eastbound Bicycles	Westbound Bicycles	Total Bicycles
1400 Block Iris	7/1/15	89	72	161

Folsom Street

Location	Date	Northbound Bicycles	Southbound Bicycles	Total Bicycles
Folsom north of Pine	6/30/15	394	422	816
Folsom south of South	6/30/15	366	368	734

Note: Counts to be collected in July 2015 for 63rd and Kalmia

24 Hour Automated Eco-Counter Bicyclist Volume

Location	
Folsom s/o Canyon	<i>collected, analysis in process</i>

Bicyclists Riding on Roadways by Intersection

Intersection	Date	Cyclists on the Road		
		Total AM	Total PM	Total Noon
Iris @ Folsom	6/11/14	14	13	8
Iris @ 19th	5/29/14	16	10	8
Iris @ Broadway	5/26/15	<i>collected, analysis in process</i>		
Folsom @ Valmont	7/9/13	75	82	34
Folsom @ Pine	6/10/14	88	94	48
Folsom @ Pearl	4/28/15	61	102	34
Folsom @ Canyon	8/7/14	55	107	39
Folsom @ Arapahoe	10/21/14	85	148	63
63rd @ Spine	6/26/15	16	6	--

Evaluation Criteria: Bicyclist Volume and Demographics

Iris Avenue

Intersection	Date	Hour	Bicycles on Road		Total
			Eastbound	Westbound	
Iris @ Folsom	6/11/14	AM	9	5	14
		Noon	2	6	8
		PM	8	5	13
		Total	19	16	35
Iris @ 19th	5/29/14	AM	9	7	16
		Noon	6	2	8
		PM	8	2	10
		Total	23	11	34
Iris @ Broadway	5/26/15	AM	<i>collected, analysis in process</i>		
		PM			
		Total			

Folsom Street

Intersection	Date	Hour	Bicycles on Road		Total
			Northbound	Southbound	
Folsom @ Valmont	7/9/13	AM	14	61	75
		Noon	17	17	34
		PM	55	27	82
		Total	86	105	191
Folsom @ Pine	6/10/14	AM	23	65	88
		Noon	26	22	48
		PM	62	32	94
		Total	111	119	230
Folsom @ Pearl	4/28/15	AM	10	51	61
		Noon	18	16	34
		PM	76	26	102
		Total	104	93	197
Folsom @ Canyon	8/7/14	AM	18	37	55
		Noon	19	20	39
		PM	62	45	107
		Total	99	102	201
Folsom @ Arapahoe	10/21/14	AM	17	68	85
		Noon	36	27	63
		PM	113	35	148
		Total	166	130	296

Evaluation Criteria: Bicyclist Volume and Demographics

63rd Street

Intersection	Date	Hour	Bicycles on Road		
			Northbound	Southbound	Total
63rd @ Spine	6/26/15	AM	11	5	16
		PM	3	3	6
		Total	14	8	22

Demographics

Corridor	Male	Female	Family
Iris (e/o 19th)	<i>collected, analysis in process</i>		
Folsom (n/o Pine)	72%	28%	4%
63rd (s/o Spine)	73%	27%	0%

Evaluation Criteria: Pedestrian Crossing Volume

Crossing Pedestrians by Intersection - Summary

Intersection	Date	Total AM	Total PM	Total Noon
Iris @ Folsom	6/11/14	14	7	13
Iris @ 19th	5/29/14	15	14	5
Iris @ Broadway	5/26/15	69	33	--
Folsom @ Valmont	7/9/13	14	18	10
Folsom @ Pine	6/10/14	7	15	4
Folsom @ Pearl	4/28/15	21	38	13
Folsom @ Canyon	8/7/14	14	57	23
Folsom @ Canyon	4/28/15	<i>data collected, to be analyzed</i>		
Folsom @ Arapahoe	10/21/14	35	91	59
Folsom @ Arapahoe	4/29/15	<i>data collected, to be analyzed</i>		
63rd @ Spine	6/25/15	31	6	--

Evaluation Criteria: Pedestrian Crossing Volume

Iris Avenue

Intersection	Date	Hour	Pedestrians				Total
			Southbound	Westbound	Northbound	Eastbound	
Iris @ Folsom	6/11/14	AM	5	2	5	2	14
		Noon	3	3	7	0	13
		PM	2	1	1	3	7
		Total	10	6	13	5	34
Iris @ 19th	5/29/14	AM	4	5	4	2	15
		Noon	2	2	0	1	5
		PM	4	4	1	5	14
		Total	10	11	5	8	34
Iris @ Broadway	5/26/15	AM	24	18	12	15	69
		PM	8	8	12	5	33
		Total	32	26	24	20	102

Evaluation Criteria: Pedestrian Crossing Volume

Folsom Street

Intersection	Date	Hour	Pedestrians				Total
			Southbound	Westbound	Northbound	Eastbound	
Folsom @ Valmont	7/9/13	AM	8	6	7	6	14
		Noon	2	8	5	3	10
		PM	12	6	13	6	18
		Total	22	20	25	15	42
Folsom @ Pine	6/10/14	AM	4	3	2	4	7
		Noon	1	3	2	5	4
		PM	8	7	2	3	15
		Total	13	13	6	12	26
Folsom @ Pearl	4/28/15	AM	10	11	10	11	21
		Noon	8	5	6	20	13
		PM	24	14	15	43	38
		Total	42	30	31	74	72
Folsom @ Canyon	8/7/14	AM	9	5	12	10	14
		Noon	7	16	19	12	23
		PM	22	35	17	40	57
		Total	38	56	48	62	94
Folsom @ Arapahoe	10/21/14	AM	16	19	7	38	35
		Noon	23	36	37	55	59
		PM	39	52	38	81	91
		Total	78	107	82	174	185

Evaluation Criteria: Pedestrian Crossing Volume

63rd Street

Intersection	Date	Hour	Pedestrians				Total
			Southbound	Westbound	Northbound	Eastbound	
63rd @ Spine	6/25/15	AM	14	2	3	12	31
		PM	1	3	1	1	6
		Total	15	5	4	13	37

Evaluation Criteria: Transit Ridership

Collected, analysis in process