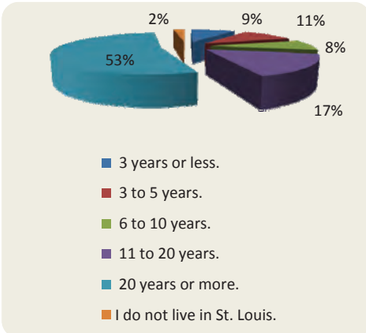
A

APPENDIX

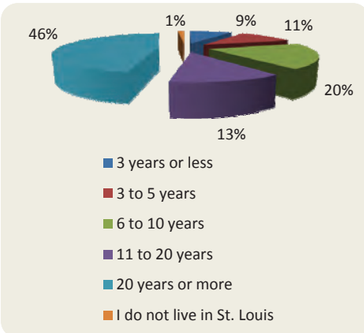
KEYPAD PAD AND ONLINE POLLING | AUGUST 2009

1.) Practice Polling: I have lived in the St. Louis area for…

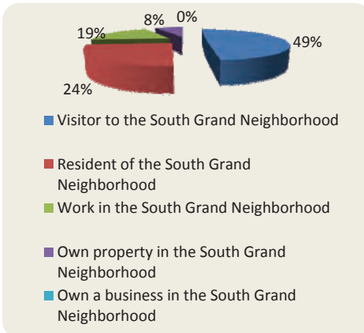
Keypad Polling



Online Polling



Street Survey



(Select one)		Responses	
3 years or less.		8	9.41%
3 to 5 years.		9	10.59%
6 to 10 years.		7	8.24%
11 to 20 years.		14	16.47%
20 years or more.		45	52.94%
I do not live in St. Louis.		2	2.35%
Totals		**85**	**100%**

Answered question	Response Percent	Response Count
3 years or less	9.1%	38
3 to 5 years	11.2%	47
6 to 10 years	19.8%	83
11 to 20 years	12.4%	52
20 years or more	46.3%	194
I do not live in St. Louis	1.2%	5
answered question		**419**
skipped question		**2**

I am a:

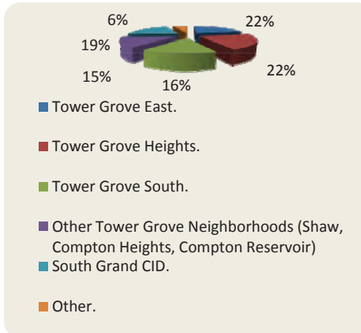
Visitor to the South Grand Neighborhood	26
Resident of the South Grand Neighborhood	13
Work in the South Grand Neighborhood	10
Own property in the South Grand Neighborhood	4
Own a business in the South Grand Neighborhood	0

DESIGNWORKSHOP

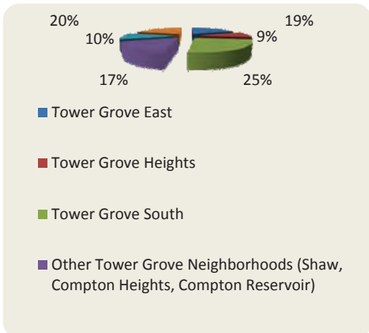
EAST-WEST GATEWAY Council of Governments

2.) The neighborhood district I most associate with is…

Keypad Polling



Online Polling



Street Survey

(Select one)		Responses	
Tower Grove East.		19	21.84%
Tower Grove Heights.		19	21.84%
Tower Grove South.		14	16.09%
Other Tower Grove Neighborhoods (Shaw, Compton Heights, Compton Reservoir)		13	14.94%
South Grand CID.		17	19.54%
Other.		5	5.75%
Totals		**87**	**100%**

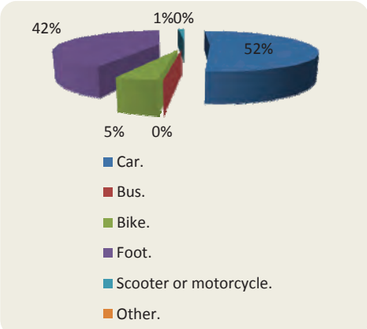
Answer Options		Response Percent	Response Count
Tower Grove East		18.6%	77
Tower Grove Heights		8.7%	36
Tower Grove South		24.9%	103
Other Tower Grove Neighborhoods (Shaw, Compton Heights, Compton Reservoir)		17.2%	71
South Grand CID		10.4%	43
Other (please specify)		20.1%	83
	answered question	***413***	**413**
	skipped question	***8***	**8**

DESIGNWORKSHOP

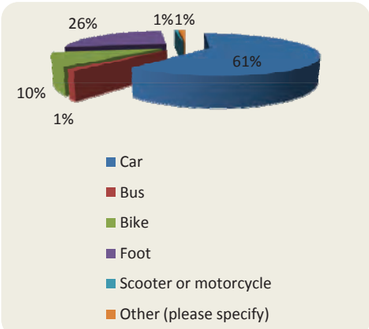
EAST-WEST GATEWAY Council of Governments

3.) I travel most often to South Grand by… (Select one)

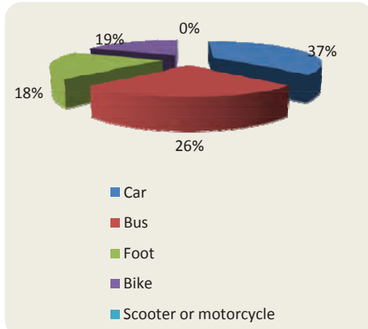
Keypad Polling



Online Polling



Street Survey



(Select one)		Responses
Car	45	51.72%
Bus	0	0%
Bike	4	4.60%
Foot	37	42.53%
Scooter or motorcycle	1	1.15%
Other	0	0%
Totals	**87**	**100%**

Answer Options	Response Percent	Response Count
Car	61.0%	255
Bus	1.4%	6
Bike	9.8%	41
Foot	25.8%	108
Scooter or motorcycle	0.7%	3
Other (please specify)	1.2%	5
answered question		418
skipped question		3

I arrived at South Grand by:

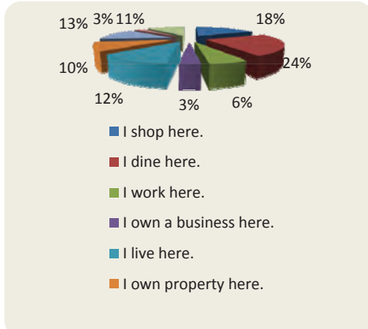
Car	20
Bus	14
Foot	10
Bicycle	10
Scooter or motorcycle	0

DESIGNWORKSHOP

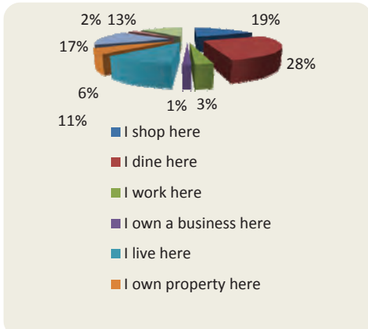
EAST-WEST GATEWAY Council of Governments

4.)I utilize the South Grand District to… (select all that apply)

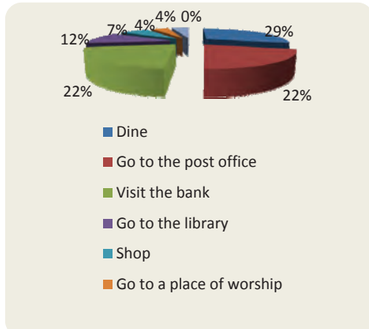
Keypad Polling



Online Polling



Street Survey



(Select all that apply)		Responses
I shop here.	66	17.98%
I dine here.	89	24.25%
I work here.	22	5.99%
I own a business here.	12	3.27%
I live here.	43	11.72%
I own property here.	37	10.08%
I run errands here.	48	13.08%
I worship here.	9	2.45%
I visit the library.	41	11.17%
Totals	**367**	**100%**

Answer Options	Response Percent	Response Count
I shop here	64.8%	269
I dine here	97.1%	403
I work here	9.6%	40
I own a business here	4.6%	19
I live here	40.0%	166
I own property here	20.7%	86
I run errands here	57.6%	239
I worship here	8.0%	33
I visit the library	44.8%	186
answered question		415
skipped question		6

On a typical trip to South Grand I (Identify all that apply)

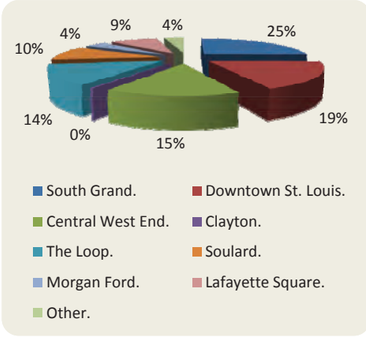
Dine	20
Go to the post office	15
Visit the bank	15
Go to the library	8
Shop	5
Go to a place of worship	3
Visit professional offices	3
All of the above	0

DESIGNWORKSHOP

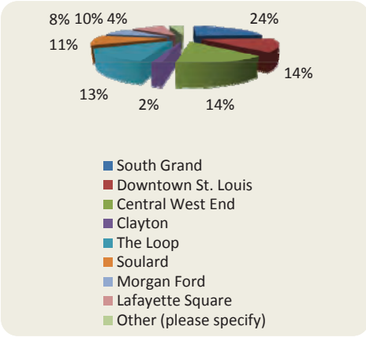
EAST-WEST GATEWAY Council of Governments

5.) When out of town guests arrive, I take them to… (Select three)

Keypad Polling



Online Polling



Street Survey

(Select three)		Responses
South Grand.	67	25.09%
Downtown St. Louis.	50	18.73%
Central West End.	40	14.98%
Clayton.	1	0.37%
The Loop.	37	13.86%
Soulard.	27	10.11%
Morgan Ford.	11	4.12%
Lafayette Square.	24	8.99%
Other.	10	3.75%
Totals	**267**	**100%**

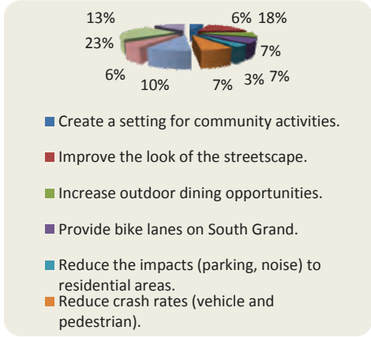
Answer Options	Response Percent	Response Count
South Grand	80.0%	331
Downtown St. Louis	45.7%	189
Central West End	48.1%	199
Clayton	5.3%	22
The Loop	44.2%	183
Soulard	35.0%	145
Morgan Ford	25.6%	106
Lafayette Square	32.9%	136
Other (please specify)	13.5%	56
answered question		414
skipped question		7

DESIGNWORKSHOP

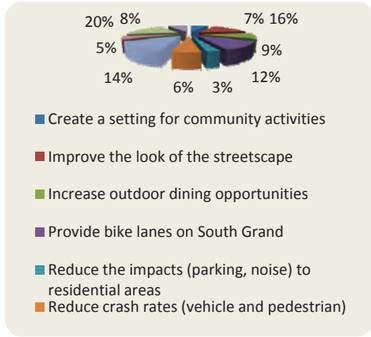
EAST-WEST GATEWAY Council of Governments

6.) Which of these community considerations is most important to the design of South Grand? (Select three)

Keypad Polling



Online Polling



Street Survey

(Select three)		Responses
Create a setting for community activities.	15	5.51%
Improve the look of the streetscape.	50	18.38 %
Increase outdoor dining opportunities.	20	7.35%
Provide bike lanes on South Grand.	19	6.99%
Reduce the impacts (parking, noise) to residential areas	9	3.31%
Reduce crash rates (vehicle and pedestrian).	19	6.99%
Reduce crime.	26	9.56%
Increase the sidewalk widths.	16	5.88%
Improve neighborhood connectivity and pedestrian friendliness	63	23.16 %
Reduce speed.	35	12.87 %
Totals	**272**	**100%**

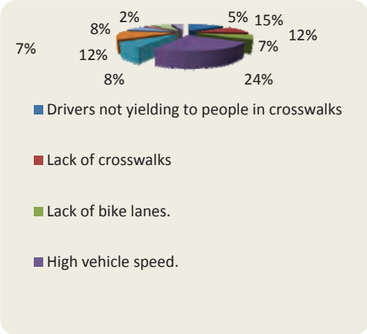
Answer Options	Response Percent	Response Count
Create a setting for community activities	22.3%	93
Improve the look of the streetscape	50.1%	209
Increase outdoor dining opportunities	28.3%	118
Provide bike lanes on South Grand	38.1%	159
Reduce the impacts (parking, noise) to residential areas	9.1%	38
Reduce crash rates (vehicle and pedestrian)	19.2%	80
Reduce crime	44.1%	184
Increase the sidewalk widths	16.3%	68
Improve neighborhood connectivity and pedestrian friendliness	60.2%	251
Reduce speed	24.5%	102
answered question		417
skipped question		4

DESIGNWORKSHOP

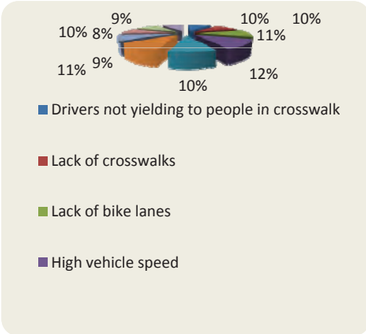
EAST-WEST GATEWAY Council of Governments

7.) Which traffic issues concern you most along South Grand? (Rank your top three)

Keypad Polling



Online Polling



Street Survey

(Rank your top three)		Responses
Drivers not yielding to people in crosswalks	40	14.98%
Lack of crosswalks	31	11.61%
Lack of bike lanes.	19	7.12%
High vehicle speed.	64	23.97%
High vehicle volume.	21	7.87%
Finding parking.	33	12.36%
Long wait for pedestrian signals.	21	7.87%
Lack of bike parking.	6	2.25%
Not being able to turn left.	19	7.12%
One-way streets, which force me to drive around the block.	13	4.87%
Totals	**267**	**100%**

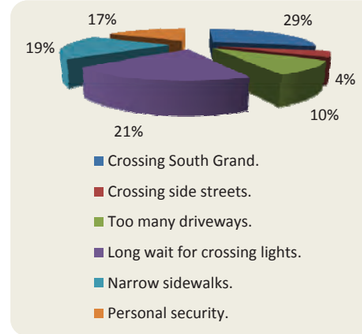
Answer Options	First choice	Second choice	Third choice	Rating Average	Response Count
Drivers not yielding to people in crosswalk	49	57	75	1.86	181
Lack of crosswalks	28	37	42	1.87	107
Lack of bike lanes	63	43	37	2.18	143
High vehicle speed	144	76	41	2.39	261
High vehicle volume	45	55	49	1.97	149
Finding parking	47	51	35	2.09	133
Long wait for pedestrian signals	13	29	33	1.73	75
Lack of bike parking	2	22	29	1.49	53
Not being able to turn left	18	27	32	1.82	77
One-way streets, which force me to drive around the block.	9	14	28	1.63	51
answered question					**415**
skipped question					**6**

DESIGNWORKSHOP

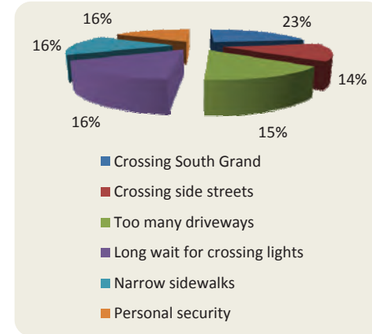
EAST-WEST GATEWAY Council of Governments

8.) When you are walking on South Grand, what concerns you most? (Rank three)

Keypad Polling



Online Polling



Street Survey

(Rank three)		Responses
Crossing South Grand	75	28.63%
Crossing side streets	12	4.58%
Too many driveways	26	9.92%
Long wait for crossing lights	55	20.99%
Narrow sidewalks	50	19.08%
Personal security	44	16.79%
Totals	**262**	**100%**

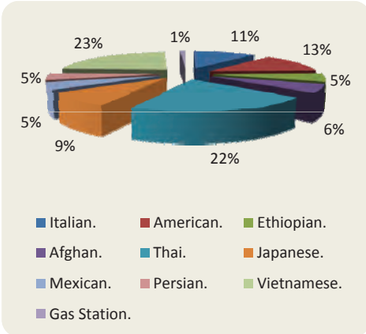
Answer Options	First choice	Second choice	Third choice	Rating Average	Response Count
Crossing South Grand	242	87	43	2.53	372
Crossing side streets	9	31	50	1.54	90
Too many driveways	8	17	23	1.69	48
Long wait for crossing lights	33	106	63	1.85	202
Narrow sidewalks	48	89	80	1.85	217
Personal security	72	68	113	1.84	253
answered question					**410**
skipped question					**11**

DESIGNWORKSHOP

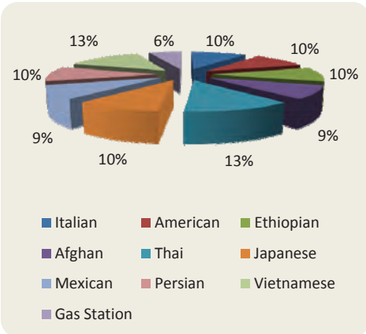
EAST-WEST GATEWAY Council of Governments

9.) Practice Question: My favorite type of food available on South Grand is… (Rank your top 4 choices)

Keypad Polling



Online Polling



Street Survey

(Rank your top 4 choices)	Responses	
Italian.	37	11.42%
American.	42	12.96%
Ethiopian.	18	5.56%
Afghan.	18	5.56%
Thai.	71	21.91%
Japanese.	28	8.64%
Mexican.	16	4.94%
Persian.	15	4.63%
Vietnamese.	76	23.46%
Gas Station.	3	0.93%
Totals	**324**	**100%**

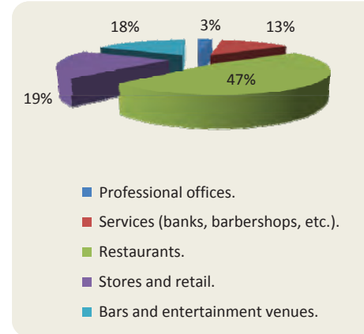
Answer Options	1st choice	2nd	3rd	4th	5th	Total Count
Italian	31	48	78	48	2.30	205
American	42	37	49	70	2.26	198
Ethiopian	19	23	19	39	2.22	100
Afghan	9	12	40	30	2.00	91
Thai	98	125	55	32	2.93	310
Japanese	17	29	30	29	2.32	105
Mexican	6	18	36	29	2.01	89
Persian	21	30	39	34	2.31	124
Vietnamese	163	82	46	38	3.12	329
Gas Station	0	1	0	5	1.33	6
					answered question	**410**
					skipped question	**11**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

10.) I think South Grand is the ideal neighborhood for… (Select your top 2 choices)

Keypad Polling



Online Polling

Street Survey

(Select your top 2 choices)	Responses	
Professional offices.	5	2.76%
Services (banks, barbershops, etc.).	24	13.26%
Restaurants.	85	46.96%
Stores and retail.	35	19.34%
Bars and entertainment venues.	32	17.68%
Totals	**181**	**100%**

Answer Options	Response Percent	Response Count
Professional offices	3.6%	15
Services (banks, barbershops, etc.)	21.1%	87
Restaurants	88.9%	367
Stores and retail	53.0%	219
Bars and entertainment venues	34.1%	141
	answered question	**413**
	skipped question	**8**

DESIGNWORKSHOP

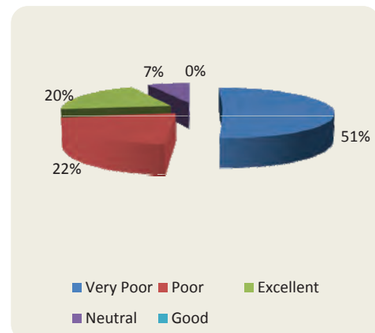
EAST-WEST GATEWAY Council of Governments

On a scale of 1-5 (1 being very poor, 5 being excellent) I find the choice of retail shops:

Keypad Polling

Online Polling

Street Survey



On a scale of 1-5 (1 being very poor, 5 being excellent) I find the choice of retail shops:

Very Poor	28
Poor	12
Excellent	11
Neutral	4
Good	0

DESIGNWORKSHOP

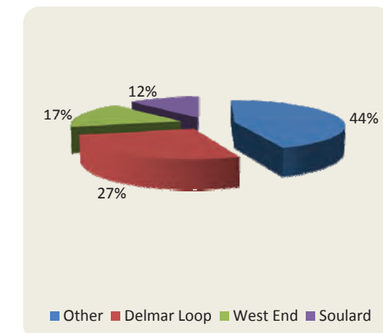
EAST-WEST GATEWAY Council of Governments

I also shop frequently at (Identify all that apply):

Keypad Polling

Online Polling

Street Survey



I also shop frequently at (Identify all that apply):

Other	37
Delmar Loop	23
West End	14
Soulard	10

DESIGNWORKSHOP

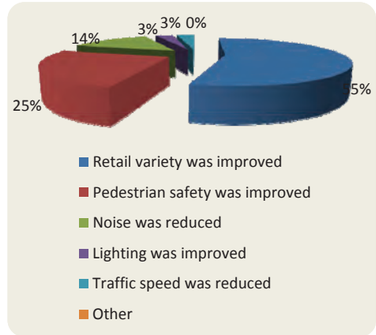
EAST-WEST GATEWAY Council of Governments

I would shop here more often if (RANK):

Keypad Polling

Online Polling

Street Survey



I would shop here more often if (RANK):

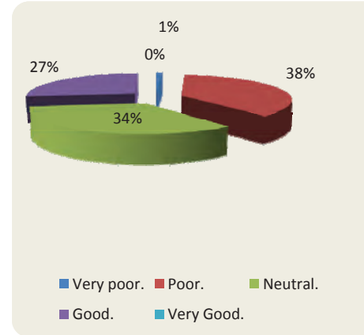
Retail variety was improved	35
Pedestrian safety was improved	16
Noise was reduced	9
Lighting was improved	2
Traffic speed was reduced	2
Other	0

DESIGNWORKSHOP

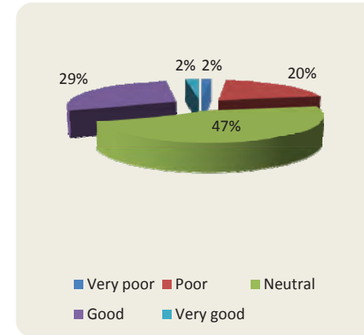
EAST-WEST GATEWAY Council of Governments

11.) How do you rate the appearance of South Grand today? (Select one)

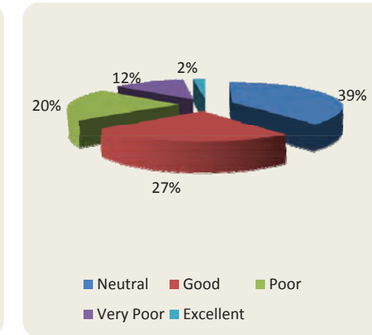
Keypad Polling



Online Polling



Street Survey



(Select one)		Responses
Very poor.	1	1.08%
Poor.	35	37.63%
Neutral.	32	34.41%
Good.	25	26.88%
Very Good.	0	0%
Totals	**93**	**100%**

Answer Options	Response Percent	Response Count
Very poor	1.7%	7
Poor	20.4%	85
Neutral	47.0%	196
Good	28.8%	120
Very good	2.2%	9
answered question		417
skipped question		4

On a scale of 1-5 (1 being very poor, 5 being excellent) I would rate the aesthetic quality of South Grand to be:

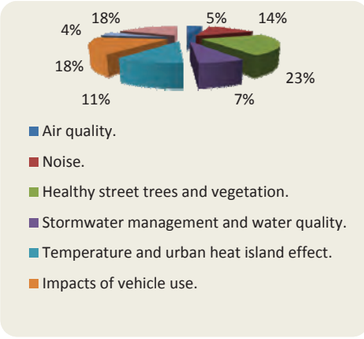
Neutral : 3	19
Good: 4	13
Poor: 2	10
Very Poor: 1	6
Excellent: 5	1

DESIGNWORKSHOP

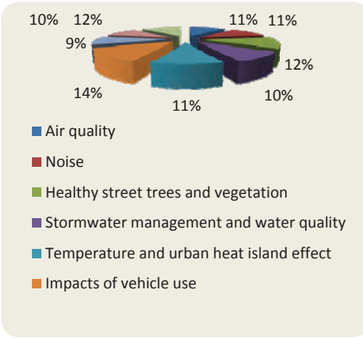
EAST-WEST GATEWAY Council of Governments

12.) The most important environmental issues to address on South Grand are… (Rank your top 3)

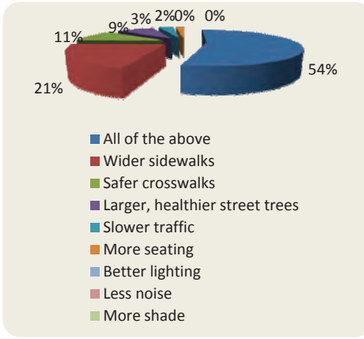
Keypad Polling



Online Polling



Street Survey



(Rank your top 3)	Responses	
Air quality.	13	4.69%
Noise.	40	14.44%
Healthy street trees and vegetation.	63	22.74%
Stormwater management and water quality.	20	7.22%
Temperature and urban heat island effect.	29	10.47%
Impacts of vehicle use.	49	17.69%
Lighting impacts on the night sky.	12	4.33%
Trash and sanitation issues.	51	18.41%
Totals	**277**	**100%**

Answer Options	First choice	Second choice	Third choice	Rating Avg.	Final Count
Air quality	22	38	40	1.82	100
Noise	41	63	57	1.90	161
Healthy street trees and vegetation	100	87	82	2.07	269
Stormwater management and water quality	5	26	22	1.68	53
Temperature and urban heat island effect	16	29	24	1.88	69
Impacts of vehicle use	133	69	59	2.28	261
Impacts of buildings	6	13	23	1.60	42
Lighting impacts on the night sky	5	5	13	1.65	23
Trash and sanitation issues	83	78	81	2.01	242
				answered question	**411**
				skipped question	**10**

I think the pedestrian environment on South Grand would be most improved by:

All of the above	31
Wider sidewalks	12
Safer crosswalks	6
Larger, healthier street trees	5
Slower traffic	2
More seating	1
Better lighting	0
Less noise	0
More shade	0

DESIGNWORKSHOP

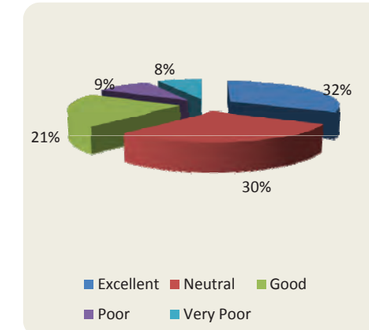
EAST-WEST GATEWAY Council of Governments

On a scale of 1-5 (1 being very poor, 5 being excellent) I find the lighting on South Grand to be:

Keypad Polling

Online Polling

Street Survey



On a scale of 1-5 (1 being very poor, 5 being excellent) I find the lighting on South Grand to be:

Excellent	17
Neutral	16
Good	11
Poor	5
Very Poor	4

DESIGNWORKSHOP

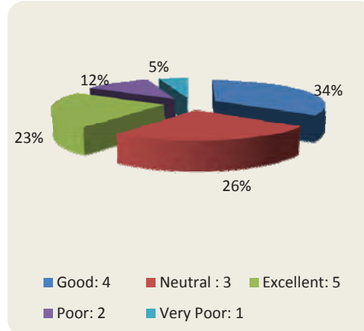
EAST-WEST GATEWAY Council of Governments

On a scale of 1-5 (One being very poor, 5 being excellent) I find the noise of South Grand to be:

Keypad Polling

Online Polling

Street Survey



On a scale of 1-5 (One being very poor, 5 being excellent) I find the noise of South Grand to be:

Good	21
Neutral	16
Excellent	14
Poor	7
Very Poor	3

DESIGNWORKSHOP

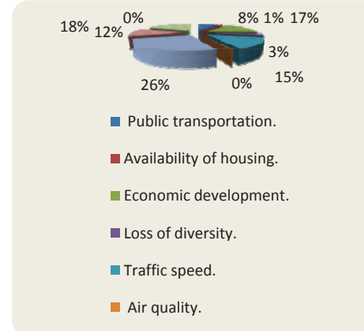
EAST-WEST GATEWAY Council of Governments

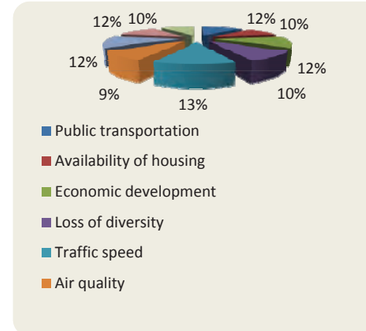
13.) The most important issues to address along South Grand are… (Rank your top 3 choices)

Keypad Polling

Online Polling

Street Survey





(Rank your top 3 choices)	Responses	
Public transportation.	24	8.36%
Availability of housing.	2	0.70%
Economic development.	48	16.72%
Loss of diversity.	9	3.14%
Traffic speed.	42	14.63%
Air quality.	1	0.35%
Pedestrian friendliness of streets/crosswalks.	74	25.78%
Public safety/crime.	34	11.85%
Visual appearance.	53	18.47%
Other.	0	0%
Totals	**287**	**100%**

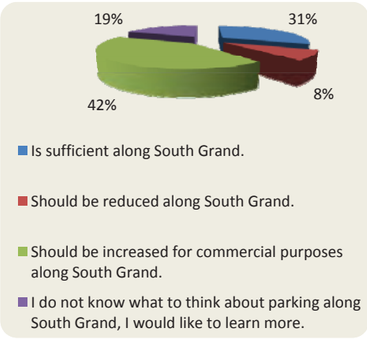
Answer Options	First choice	Second choice	Third choice	Rating Average	Response Count
Public transportation	38	28	27	2.12	93
Availability of housing	1	3	4	1.63	8
Economic development	69	50	62	2.04	181
Loss of diversity	11	18	24	1.75	53
Traffic speed	62	53	39	2.15	154
Air quality	2	5	8	1.60	15
Pedestrian friendliness of streets/crosswalks	89	105	60	2.11	254
Public safety/crime	83	79	77	2.03	239
Visual appearance	31	51	87	1.67	169
Other (please specify)					13
				answered question	**394**
				skipped question	**27**

DESIGNWORKSHOP

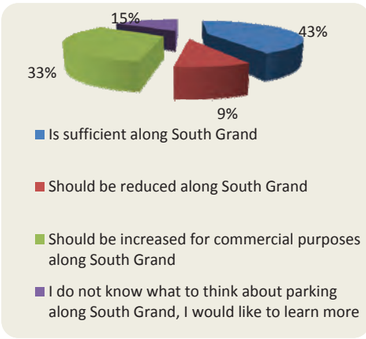
EAST-WEST GATEWAY Council of Governments

14.) For the South Grand Business Improvement District, I feel the quantity of parking…(Select one)

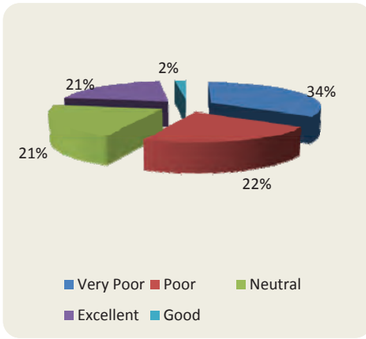
Keypad Polling



Online Polling



Street Survey



(Select one)	Responses	
Is sufficient along South Grand.	30	31.25%
Should be reduced along South Grand.	8	8.33%
Should be increased for commercial purposes along South Grand	40	41.67%
I do not know what to think about parking along South Grand, I would like to learn more	18	18.75%
Totals	**96**	**100%**

Answer Options	Response Percent	Response Count
Is sufficient along South Grand	43.0%	168
Should be reduced along South Grand	9.0%	35
Should be increased for commercial purposes along South Grand	33.0%	129
I do not know what to think about parking along South Grand, I would like to learn more	15.1%	59
answered question		**391**
skipped question		**30**

On a scale of 1-5 (1 being very poor, 5 being excellent) I find the parking in the district to be:

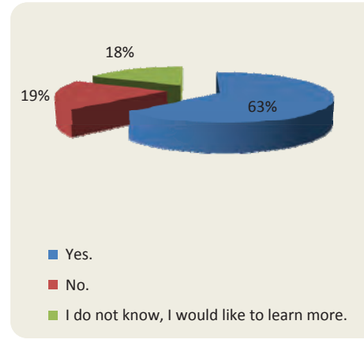
Very Poor	18
Poor	12
Neutral	11
Excellent	11
Good	1

DESIGNWORKSHOP

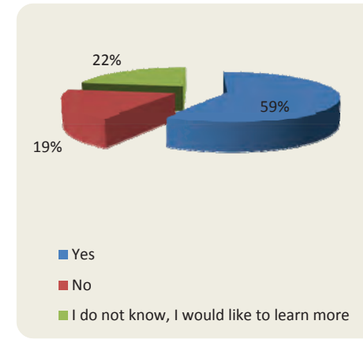
EAST-WEST GATEWAY Council of Governments

15.) Should parallel parking remain on South Grand? (Select one)

Keypad Polling



Online Polling



Street Survey

(Select one)	Responses	
Yes.	61	63.54%
No.	18	18.75%
I do not know, I would like to learn more.	17	17.71%
Totals	**96**	**100%**

Answer Options	Response Percent	Response Count
Yes	58.5%	228
No	19.2%	75
I do not know, I would like to learn more	22.3%	87
answered question		**390**
skipped question		**31**

DESIGNWORKSHOP

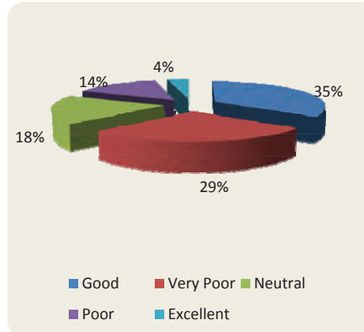
EAST-WEST GATEWAY Council of Governments

I find the traffic on South Grand to be:

Keypad Polling

Online Polling

Street Survey



On a scale of 1-5 (1 being very poor, 5 being excellent) I find the traffic on South Grand to be:

Good	19
Very Poor:	16
Neutral	10
Poor	8
Excellent	2

DESIGNWORKSHOP

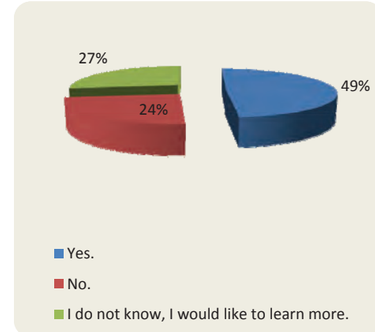
EAST-WEST GATEWAY Council of Governments

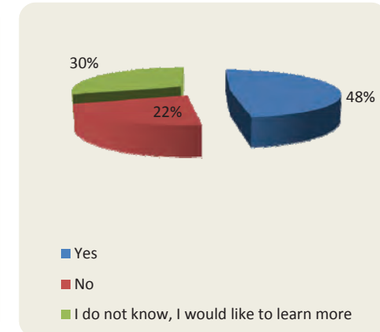
16.) To increase the amount of parking, should parallel parking be converted to free angled parking on Arkansas Street? (Select one)

Keypad Polling

Online Polling

Street Survey





(Select one)		Responses
Yes.	47	48.96%
No.	23	23.96%
I do not know, I would like to learn more.	26	27.08%
Totals	**96**	**100%**

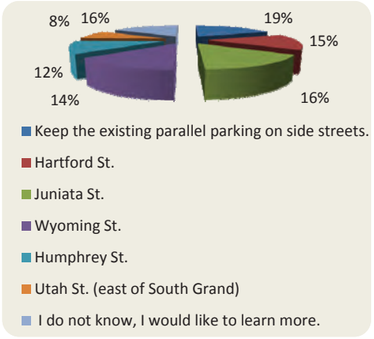
Answer Options	Response Percent	Response Count
Yes	48.0%	189
No	21.8%	86
I do not know, I would like to learn more	30.2%	119
answered question		**394**
skipped question		**27**

DESIGNWORKSHOP

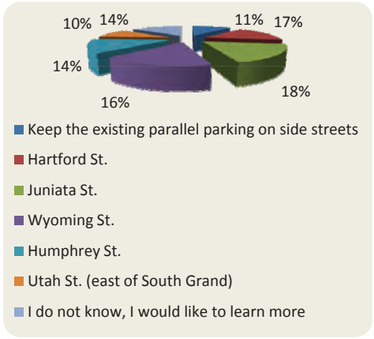
EAST-WEST GATEWAY Council of Governments

17.) In the event that additional parking is needed, I favor replacing parallel parking with angled parking along these side streets … (Select all that apply)

Keypad Polling



Online Polling



Street Survey

(Select all that apply)		Responses
Keep the existing parallel parking on side streets	35	19.13%
Hartford St.	27	14.75%
Juniata St.	29	15.85%
Wyoming St.	26	14.21%
Humphrey St.	21	11.48%
Utah St. (east of South Grand)	15	8.20%
I do not know, I would like to learn more.	30	16.39%
Totals	**183**	**100%**

Answered question	Response Percent	Response Count
Keep the existing parallel parking on side streets	24.7%	96
Hartford St.	37.4%	145
Juniata St.	40.2%	156
Wyoming St.	36.9%	143
Humphrey St.	30.9%	120
Utah St. (east of South Grand)	21.6%	84
I do not know, I would like to learn more	32.2%	125
answered question		388
skipped question		33

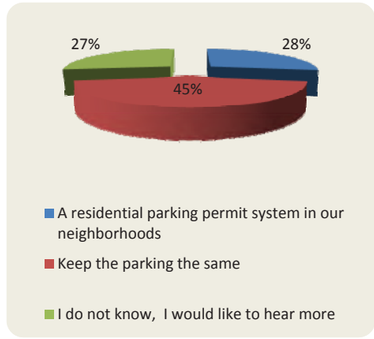
DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

18.)In order to regulate parking in the residential neighborhoods I prefer… (Select one)

Keypad Polling

Online Polling



Street Survey

(Select one)		Responses
A residential parking permit system in our neighborhoods	19	19.59%
Keep the parking the same.	50	51.55%
I do not know. I would like to learn more.	28	28.87%
Totals	**97**	**100%**

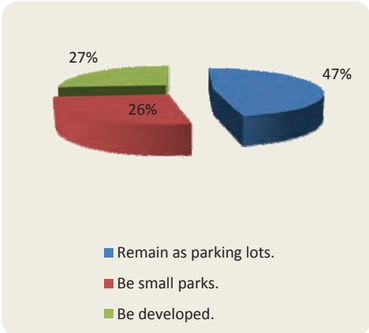
Answer Options	Response Percent	Response Count
A residential parking permit system in our neighborhoods	27.9%	109
Keep the parking the same	44.8%	175
I do not know, I would like to hear more	27.4%	107
answered question		391
skipped question		30

DESIGNWORKSHOP

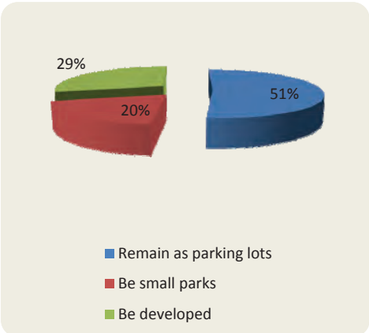
EAST-WEST GATEWAY Council of Governments

19.)I prefer the city parking lots to… (Select one)

Keypad Polling



Online Polling



Street Survey

(Select one)	Responses	
Remain as parking lots.	46	46.94%
Be small parks.	26	26.53%
Be developed.	26	26.53%
Totals	**98**	**100%**

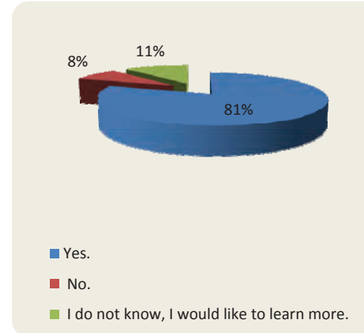
Answer Options	Response Percent	Response Count
Remain as parking lots	51.4%	197
Be small parks	19.6%	75
Be developed	29.0%	111
answered question		383
skipped question		38

DESIGNWORKSHOP

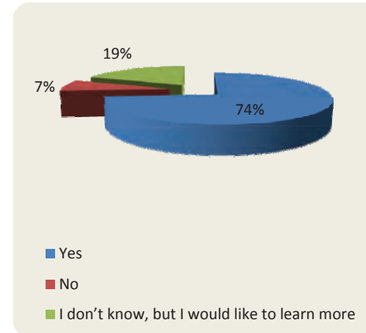
EAST-WEST GATEWAY Council of Governments

20.)I think there should be a dining plaza on the west side of South Grand between Connecticut and Juniata to enhance the dining experience…

Keypad Polling



Online Polling



Street Survey

(Select One)	Responses	
Yes.	78	80.41%
No.	8	8.25%
I do not know, I would like to learn more.	11	11.34%
Totals	**97**	**100%**

Answer Options	Response Percent	Response Count
Yes	73.9%	291
No	7.4%	29
I don't know, but I would like to learn more	18.8%	74
answered question		394
skipped question		27

DESIGNWORKSHOP

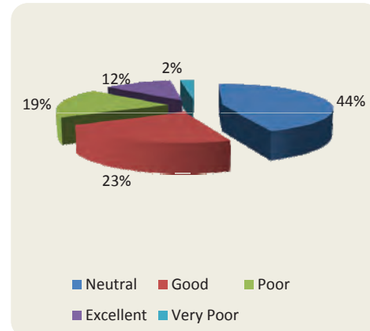
EAST-WEST GATEWAY Council of Governments

On a scale of 1-5 (One being very poor, 5 being excellent) I find the quality of the outdoor dining experience of South Grand to be:

Keypad Polling

Online Polling

Street Survey



On a scale of 1-5 (1 being very poor, 5 being excellent) I find the quality of the outdoor dining experience of South Grand to be:

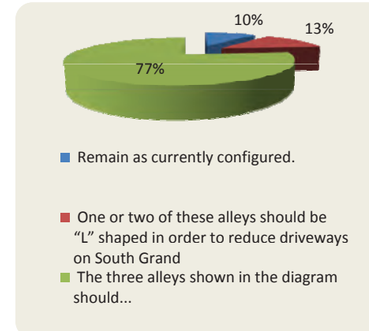
Neutral	19	57
Good	10	40
Poor	8	16
Excellent	5	25
Very Poor	1	1

DESIGNWORKSHOP

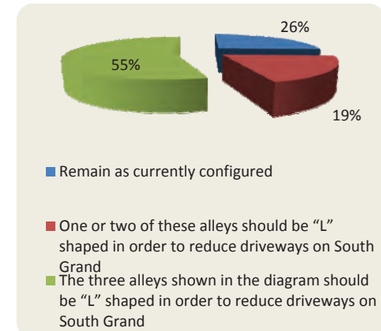
EAST-WEST GATEWAY Council of Governments

The alleys should…

Keypad Polling



Online Polling



Street Survey

(Select one)	Responses	
Remain as currently configured.	10	10.20%
One or two of these alleys should be "L" shaped in order to reduce driveways on South Grand	13	13.27%
The three alleys shown in the diagram should be "L" shaped in order to reduce driveways on South Grand	75	76.53%
Totals	**98**	**100%**

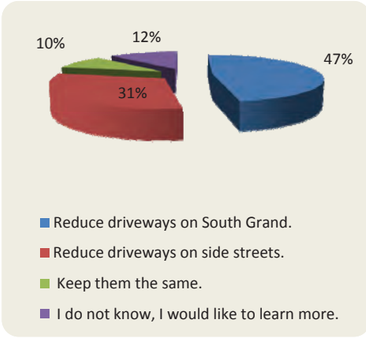
Answer Options	Response Percent	Response Count
Remain as currently configured	25.7%	96
One or two of these alleys should be "L" shaped in order to reduce driveways on South Grand	19.5%	73
The three alleys shown in the diagram should be "L" shaped in order to reduce driveways on South Grand	54.8%	205
answered question		**374**
skipped question		**47**

DESIGNWORKSHOP

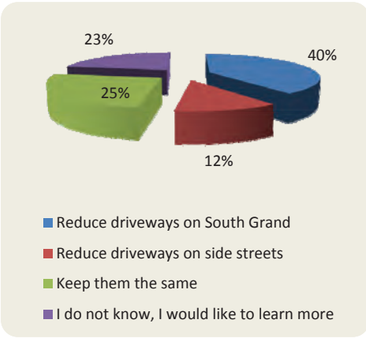
EAST-WEST GATEWAY Council of Governments

21.)Concerning the gas station driveways, I would… (Select all that apply)

Keypad Polling



Online Polling



Street Survey

(Select all that apply)		Responses
Reduce driveways on South Grand.	65	47.45%
Reduce driveways on side streets.	42	30.66%
Keep them the same.	13	9.49%
I do not know, I would like to learn more.	17	12.41%
Totals	**137**	**100%**

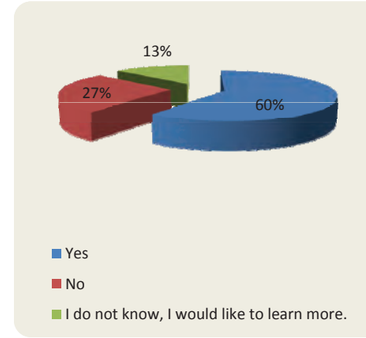
Answer Options	Response Percent	Response Count
Reduce driveways on South Grand	44.0%	171
Reduce driveways on side streets	13.4%	52
Keep them the same	28.0%	109
I do not know, I would like to learn more	24.7%	96
answered question		389
skipped question		32

DESIGNWORKSHOP

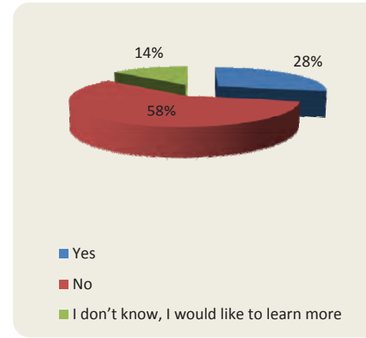
EAST-WEST GATEWAY Council of Governments

23.)Do you support fewer bus stops along South Grand?(Select one)

Keypad Polling



Online Polling



Street Survey

Select one)		Responses
Yes	59	60.20%
No	26	26.53%
I do not know, I would like to learn more.	13	13.27%
Totals	**98**	**100%**

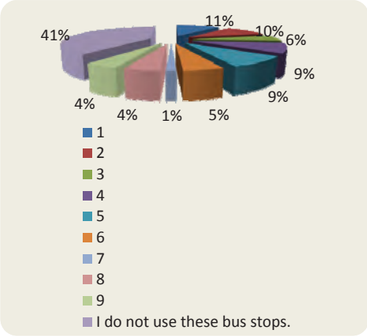
Answer Options	Response Percent	Response Count
Yes	28.2%	111
No	58.1%	229
I don't know, I would like to learn more	13.7%	54
answered question		394
skipped question		27

DESIGNWORKSHOP

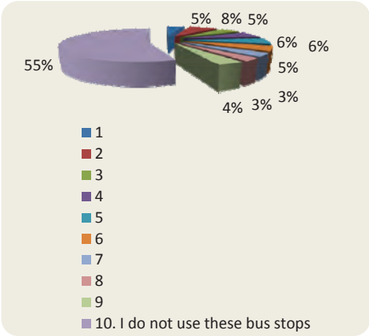
EAST-WEST GATEWAY Council of Governments

24.) Which bus stops do you use? (Select all that apply)

Keypad Polling



Online Polling



Street Survey

(Select all that apply)	Responses	
1	17	10.76%
2	16	10.13%
3	9	5.70%
4	14	8.86%
5	14	8.86%
6	8	5.06%
7	2	1.27%
8	7	4.43%
9	7	4.43%
I do not use these bus stops.	64	40.51%
Totals	**158**	**100%**

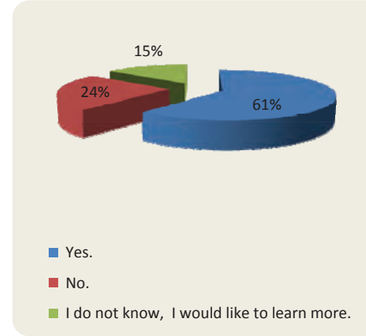
Answer Options	Response Percent	Response Count
1	6.6%	26
2	11.0%	43
3	7.2%	28
4	9.2%	36
5	8.2%	32
6	7.4%	29
7	5.1%	20
8	4.1%	16
9	5.6%	22
10. I do not use these bus stops	80.3%	314
answered question		**391**
skipped question		**30**

DESIGNWORKSHOP

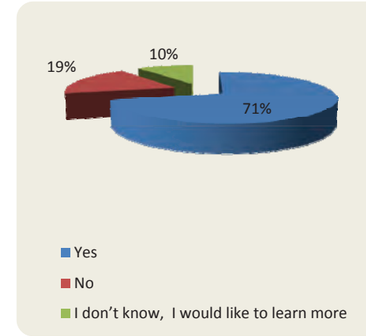
EAST-WEST GATEWAY Council of Governments

25.)I prefer to see a designated bike lane on South Grand. (Select one)

Keypad Polling



Online Polling



Street Survey

(Select one)	Responses	
Yes.	59	61.46%
No.	23	23.96%
I do not know, I would like to learn more.	14	14.58%
Totals	**96**	**100%**

Answer Options	Response Percent	Response Count
Yes	71.0%	279
No	19.1%	75
I don't know, I would like to learn more	9.9%	39
answered question		**393**
skipped question		**28**

DESIGNWORKSHOP

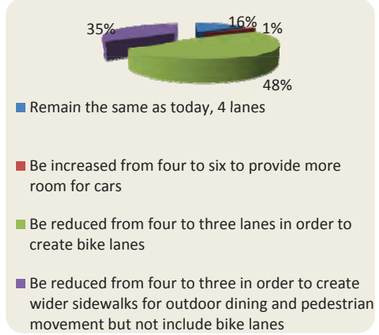
EAST-WEST GATEWAY Council of Governments

26.)The total number of travel lanes on South Grand should… (Select one)

Keypad Polling

(Select one)	Responses	
Remain the same as today, 4 lanes.	18	18.18%
Be increased from four to six to provide more room for cars	0	0%
Be reduced from four to three lanes in order to create bike lanes	25	25.25%
Be reduced from four to three in order to create wider sidewalks for outdoor dining and pedestrian movement but not include bike lanes	56	56.57%
Totals	**99**	**100%**

Online Polling



Answer Options	Response Percent	Response Count
Remain the same as today, 4 lanes	15.9%	61
Be increased from four to six to provide more room for cars	1.3%	5
Be reduced from four to three lanes in order to create bike lanes	48.0%	184
Be reduced from four to three in order to create wider sidewalks for outdoor dining and pedestrian movement but not include bike lanes	34.7%	133
answered question		383
skipped question		38

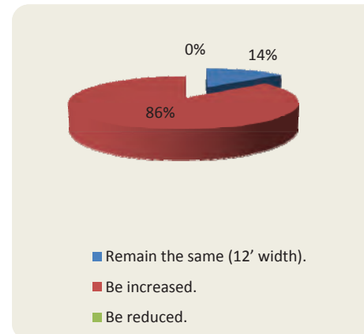
Street Survey

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

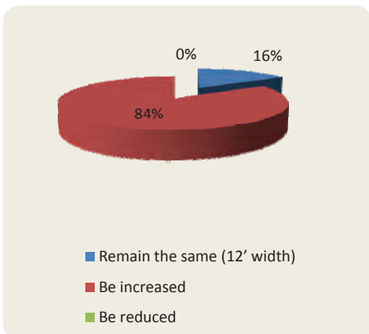
27.)The width of the sidewalks on South Grand should… (Select one)

Keypad Polling



(Select one)	Responses	
Remain the same (12' width).	14	14.29%
Be increased.	84	85.71%
Be reduced.	0	0%
Totals	**98**	**100%**

Online Polling



Answer Options	Response Percent	Response Count
Remain the same (12' width)	16.3%	63
Be increased	83.7%	324
Be reduced	0.0%	0
answered question		387
skipped question		34

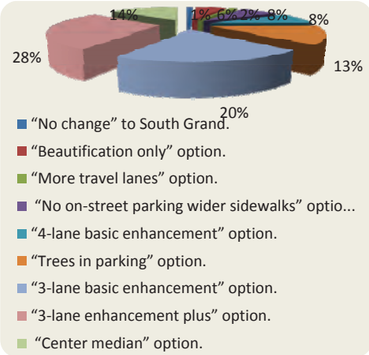
Street Survey

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

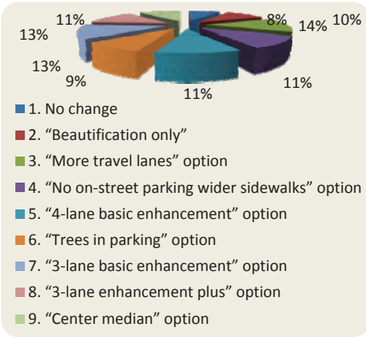
28.)I prefer the following future street… (Rank your top 3)

Keypad Polling



(Rank your top 3)		Responses
"No change" to South Grand.	3	1.14%
"Beautification only" option.	16	6.06%
"More travel lanes" option.	4	1.52%
"No on-street parking wider sidewalks" option	20	7.58%
"4-lane basic enhancement" option.	22	8.33%
"Trees in parking" option.	34	12.88%
"3-lane basic enhancement" option.	54	20.45%
"3-lane enhancement plus" option.	74	28.03%
"Center median" option.	37	14.02%
Totals	**264**	**100%**

Online Polling



Answer Options	First choice	Second choice	Third choice	Rating Average	Response Count
1. No change	4	5	22	1.42	31
2. "Beautification only"	16	19	30	1.78	65
3. "More travel lanes" option	4	7	0	2.36	11
4. "No on-street parking wider sidewalks" option	41	32	44	1.97	117
5. "4-lane basic enhancement" option	16	21	17	1.98	54
6. "Trees in parking" option	15	25	56	1.57	96
7. "3-lane basic enhancement" option	104	69	53	2.23	226
8. "3-lane enhancement plus" option	107	107	41	2.26	255
9. "Center median" option	57	66	71	1.93	194
				answered question	366
				skipped question	55

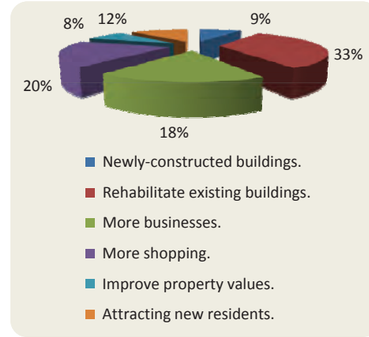
Street Survey

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

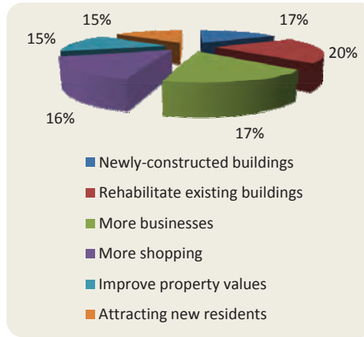
29.)Which of the following things would make the Great Street project on South Grand successful? (Rank your top 2)

Keypad Polling



(Rank your top 2)		Responses
Newly-constructed buildings.	17	8.95%
Rehabilitate existing buildings.	63	33.16%
More businesses.	35	18.42%
More shopping.	37	19.47%
Improve property values.	15	7.89%
Attracting new residents.	23	12.11%
Totals	**190**	**100%**

Online Polling



Answer Options	First choice	Second choice	Rating Average	Response Count
Newly-constructed buildings	10	12	1.45	22
Rehabilitate existing buildings	197	62	1.76	259
More businesses	71	89	1.44	160
More shopping	60	92	1.39	152
Improve property values	21	47	1.31	68
Attracting new residents	24	73	1.25	97
			answered question	383
			skipped question	38

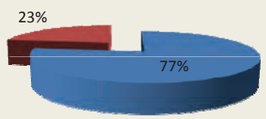
Street Survey

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

30.)If funding is inadequate to build out the entire corridor, I would prefer to spend the construction dollars… (Select one)

Keypad Polling



- Uniformly across all 7 blocks in order to complete some level of improvements across the entire area and build out the other blocks as funding becomes available
- Complete 2 blocks now to the desired level a...Complete 2 blocks now to the desired level and build out the other blocks as funding becomes available

Online Polling

- Uniformly across all 7 blocks in order to complete some level of improvements across the entire area and build out the other blocks as funding becomes available
- Complete 2 blocks now to the desired level and build out the other blocks as funding becomes available

Street Survey

(Select one)		Responses
Uniformly across all 7 blocks in order to complete some level of improvements across the entire area and build out the other blocks as funding becomes available	75	77.32%
Complete 2 blocks now to the desired level and build out the other blocks as funding becomes available	22	22.68%
Totals	**97**	**100%**

Answer Options	Response Percent	Response Count
Uniformly across all 7 blocks in order to complete some level of improvements across the entire area and build out the other blocks as funding becomes available	59.3%	224
Complete 2 blocks now to the desired level and build out the other blocks as funding becomes available	40.7%	154
answered question		378
skipped question		43

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary of Direction

- The majority of participants in the keypad polling and online polling lived in the St. Louis area for over 20 years.
- The keypad polling and online polling had representation from all neighborhoods.
- High vehicle speed is the issue that concerns people the most.
- South Grand is ideal for restaurants, followed by stores and retail.
- People would shop more often on South Grand if the retail variety was improved and pedestrian safety was improved.
- Parallel parking should remain on South Grand.
- People feel that parallel parking should be converted to free angled parking on Arkansas Street, or would like to learn more.
- There should be no regulation of residential parking.
- The city owned parking lots should remain parking lots.
- There should be a dining plaza on the west side of South Grand between Connecticut and Juniata to enhance the dining experience.
- The three alleys (shown in the diagram) should be “L” shaped in order to reduce driveways on South Grand.
- People would like to see a designated bike lane on South Grand.
- The total number of travel lanes on South Grand should either be reduced from 4 to 3 lanes in order to create bike lanes; or be reduced from 4 to 3 in order to create wider sidewalks for outdoor dining and pedestrian movement but not include bike lanes.
- The width of the sidewalks on South Grand should be increased.
- People would prefer to uniformly improve across all 7 blocks in order to complete some level of improvements rather than complete 2 blocks now to the desired level.
- Rehabilitating existing buildings, adding more shopping, adding more businesses, and adding newly constructed buildings would make the Great Street project a success.
- The majority of people prefer either of the 3-lane options.

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

A

APPENDIX

KEYPAD PAD AND ONLINE POLLING | SEPTEMBER 2009

Community Input

Polling for public opinion

Note: Number of responses for the keypad polling is not shown due to software failure. Below is a breakdown of each session's attendees:

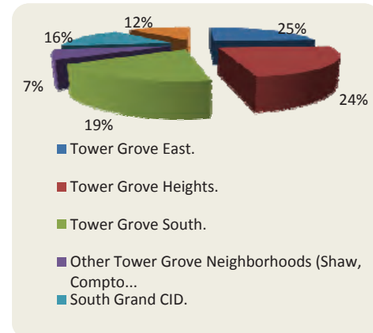
A.M. Session- 14 Participants
Lunch Session- 30 Participants
P.M. Session- 96 Participants

DESIGNWORKSHOP

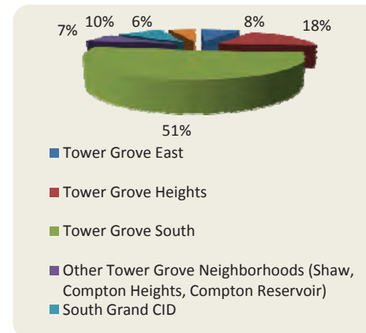
EAST-WEST GATEWAY Council of Governments

1.) The neighborhood district I most associate with is... (Select one)

Keypad Polling



Online Polling



Practice Polling: The neighborhood district I most associate with is... (Select one)	Responses
Tower Grove East.	25%
Tower Grove Heights.	24%
Tower Grove South.	19%
Other Tower Grove Neighborhoods (Shaw, Compton)...	7%
South Grand CID.	16%
Other.	12%
Totals	**100%**

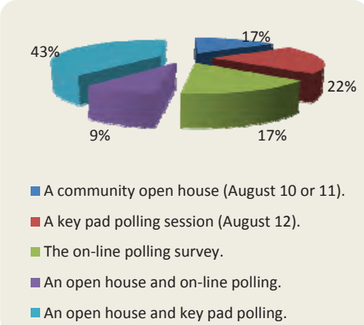
Answer Options	Response Percent	Response Count
Tower Grove East	8%	6
Tower Grove Heights	18%	13
Tower Grove South	51%	37
Other Tower Grove Neighborhoods (Shaw, Compton Heights, Compton Reservoir)	7%	5
South Grand CID	10%	7
Other (please specify)	6%	4
answered question		72
skipped question		1

DESIGNWORKSHOP

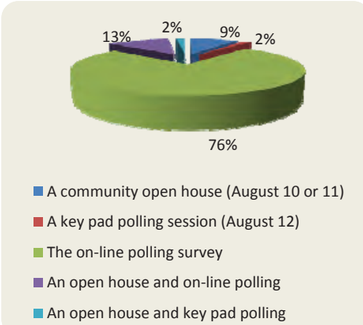
EAST-WEST GATEWAY Council of Governments

2.In the Great Streets Initiative so far I have participated in…(Select one)

Keypad Polling



Online Polling



Practice Polling: In the Great Streets Initiative so far I have participated in…(Select one)	Responses
A community open house (August 10 or 11).	17%
A key pad polling session (August 12).	22%
The on-line polling survey.	17%
An open house and on-line polling.	9%
An open house and key pad polling.	43%
Totals	**100%**

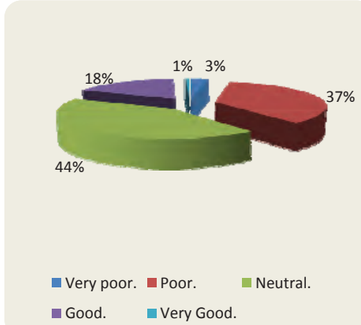
Answer Options	Response Percent	Response Count
A community open house (August 10 or 11)	9%	6
A key pad polling session (August 12)	2%	1
The on-line polling survey	76%	51
An open house and on-line polling	13%	8
An open house and key pad polling	2%	1
answered question		**67**
skipped question		**6**

DESIGNWORKSHOP

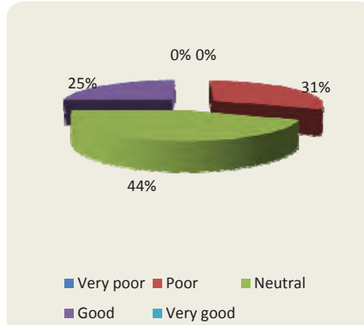
EAST-WEST GATEWAY Council of Governments

3. How do you rate the appearance of South Grand today? (Select one)

Keypad Polling



Online Polling



How do you rate the appearance of South Grand today? (Select one)	Responses
Very poor.	3%
Poor.	37%
Neutral.	44%
Good.	18%
Very Good.	1%
Totals	**100%**

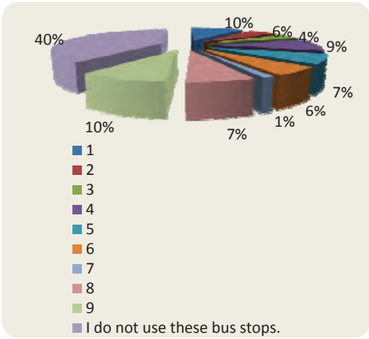
Answer Options	Response Percent	Response Count
Very poor	0%	0
Poor	31%	22
Neutral	44%	32
Good	25%	18
Very good	0%	0
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

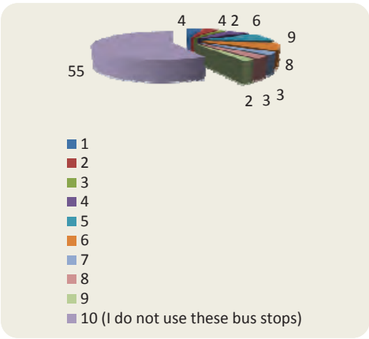
EAST-WEST GATEWAY Council of Governments

4. Which bus stops do you use? (Select all that apply)

Keypad Polling



Online Polling



Which bus stops do you use? (Select all that apply)	Responses
1	10%
2	6%
3	4%
4	9%
5	7%
6	6%
7	1%
8	7%
9	9%
I do not use these bus stops.	40%
Totals	**100%**

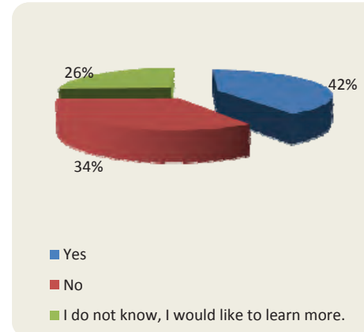
Answer Options	Response Count
1	4
2	4
3	2
4	6
5	9
6	8
7	3
8	3
9	2
10 (I do not use these bus stops)	55
answered question	**71**
skipped question	**2**

DESIGNWORKSHOP

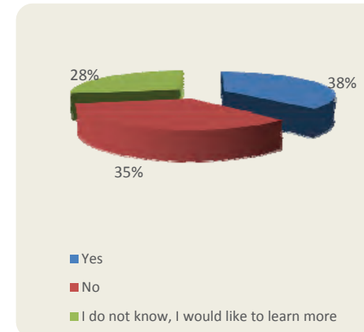
EAST-WEST GATEWAY Council of Governments

5. Do you support fewer bus stops along South Grand?(Select one)

Keypad Polling



Online Polling



Do you support fewer bus stops along South Grand?(Select one)	Responses
Yes	42%
No	34%
I do not know, I would like to learn more.	26%
Totals	**100%**

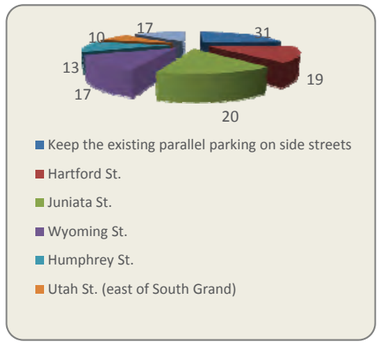
Answer Options	Response Percent	Response Count
Yes	37.5%	27
No	34.7%	25
I do not know, I would like to learn more	27.8%	20
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

6. To increase the amount of parking, I favor replacing parallel parking with angled parking along the following side streets … (Select all that apply)

Online Polling



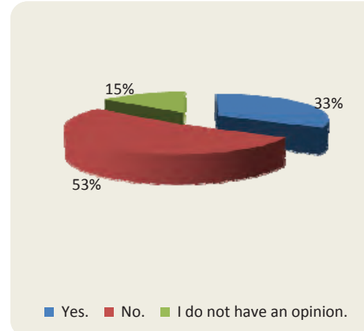
Answer Options	Response Count
Keep the existing parallel parking on side streets	31
Hartford St.	19
Juniata St.	20
Wyoming St.	17
Humphrey St.	13
Utah St. (east of South Grand)	10
I do not know, I would like to learn more	17
answered question	**71**
skipped question	**2**

DESIGNWORKSHOP

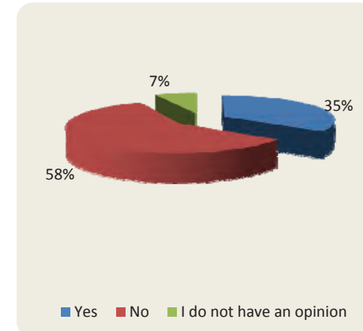
EAST-WEST GATEWAY Council of Governments

7. Is the current availability of shade on South Grand adequate for your shopping and dining experience?(Select one)

Keypad Polling



Online Polling



Is the current availability of shade on South Grand adequate for your shopping and dining experience? (Select one)	Responses
Yes.	33%
No.	53%
I do not have an opinion.	15%
Totals	**100%**

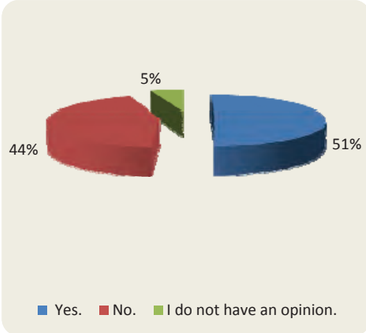
Answer Options	Response Percent	Response Count
Yes	34.7%	25
No	58.3%	42
I do not have an opinion	6.9%	5
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

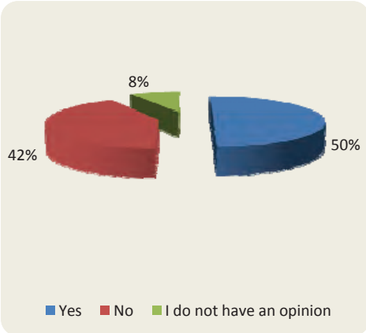
EAST-WEST GATEWAY Council of Governments

8. Does the current noise level on South Grand negatively impact your shopping and dining experience? (Select one)

Keypad Polling



Online Polling



Does the current noise level on South Grand negatively impact your shopping and dining experience? (Select one)	Responses
Yes.	51%
No.	44%
I do not have an opinion.	5%
Totals	**100%**

Answer Options	Response Percent	Response Count
Yes	50.0%	36
No	41.7%	30
I do not have an opinion	8.3%	6
answered question		**72**
skipped question		**1**

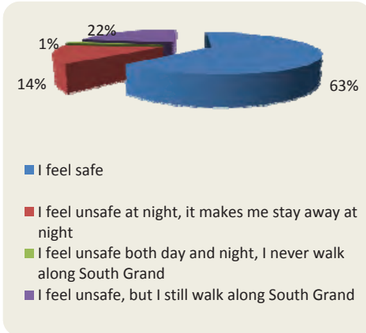
DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

9. How safe do you feel when walking along South Grand? (Select one)

Keypad Polling

Online Polling



How safe do you feel when walking along South Grand? (Select one)	Responses
I feel safe.	48%
I feel unsafe at night, it makes me stay away at night	23%
I feel unsafe both day and night, I never walk along South Grand	3%
I feel unsafe, but I still walk along South Grand	33%
Totals	**100%**

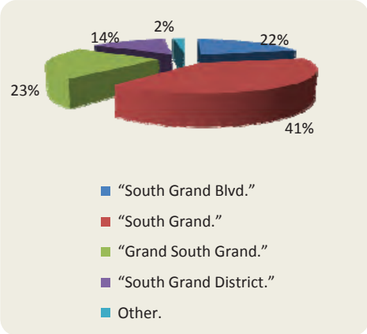
Answer Options	Response Percent	Response Count
I feel safe	62.5%	45
I feel unsafe at night, it makes me stay away at night	13.9%	10
I feel unsafe both day and night, I never walk along South Grand	1.4%	1
I feel unsafe, but I still walk along South Grand	22.2%	16
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

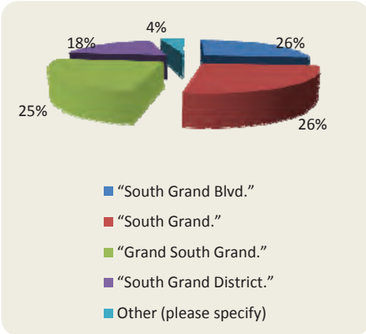
EAST-WEST GATEWAY Council of Governments

10. To create a stronger identity for South Grand Blvd., signage should consistently use the name… (Select one)

Keypad Polling



Online Polling



To create a stronger identity for South Grand Blvd., signage should consistently use the name… (Select one)	Responses
"South Grand Blvd."	22%
"South Grand."	41%
"Grand South Grand."	23%
"South Grand District."	14%
Other.	2%
Totals	**100%**

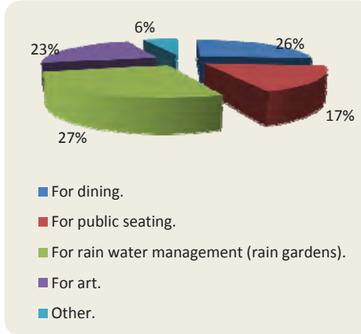
Answer Options	Response Percent	Response Count
"South Grand Blvd."	26.4%	19
"South Grand."	26.4%	19
"Grand South Grand."	25.0%	18
"South Grand District."	18.1%	13
Other (please specify)	4.2%	3
	answered question	**72**
	skipped question	**1**

DESIGNWORKSHOP

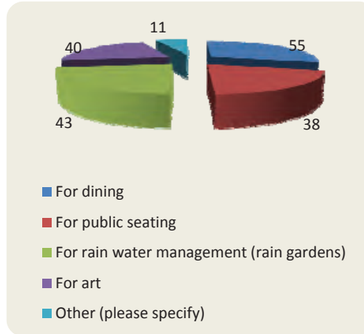
EAST-WEST GATEWAY Council of Governments

11.How should the proposed "closed alleys" be utilized? (Select all that apply)

Keypad Polling



Online Polling



How should the proposed "closed alleys" be utilized? (Select all that apply)	Responses
For dining.	26%
For public seating.	17%
For rain water management (rain gardens).	27%
For art.	23%
Other.	6%
Totals	**100%**

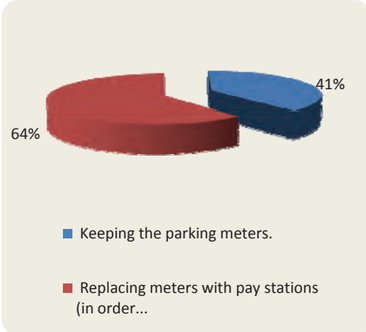
Answer Options	Response Count
For dining	55
For public seating	38
For rain water management (rain gardens)	43
For art	40
Other (please specify)	11
answered question	**72**
skipped question	**1**

DESIGNWORKSHOP

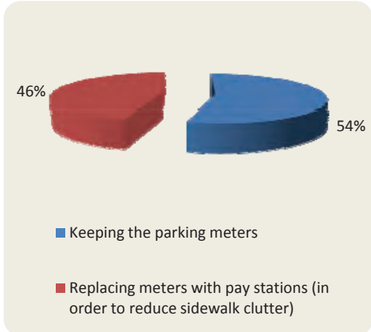
EAST-WEST GATEWAY Council of Governments

12. Parallel parking on South Grand should be paid by… (Select one)

Keypad Polling



Online Polling



Parallel parking on South Grand should be paid by… (Select one)	Responses
Keeping the parking meters.	41%
Replacing meters with pay stations (in order to reduce sidewalk clutter)	64%
Totals	**100%**

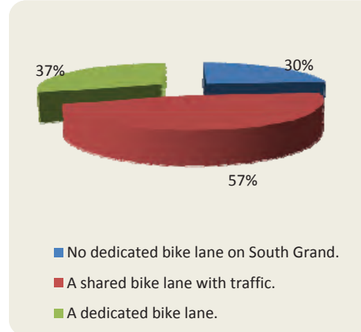
Answer Options	Response Percent	Response Count
Keeping the parking meters	54.2%	39
Replacing meters with pay stations (in order to reduce sidewalk clutter)	45.8%	33
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

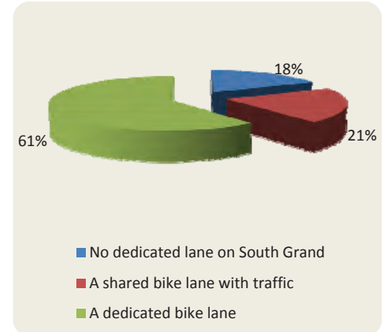
EAST-WEST GATEWAY Council of Governments

13. I would rather have... (Select one)

Keypad Polling



Online Polling



I would rather have…(Select one)	Responses
No dedicated bike lane on South Grand.	30%
A shared bike lane with traffic.	57%
A dedicated bike lane.	37%
Totals	**100%**

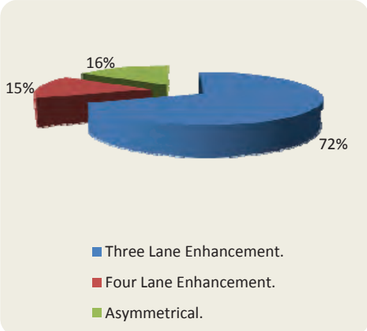
Answer Options	Response Percent	Response Count
No dedicated lane on South Grand	18.1%	13
A shared bike lane with traffic	20.8%	15
A dedicated bike lane	61.1%	44
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

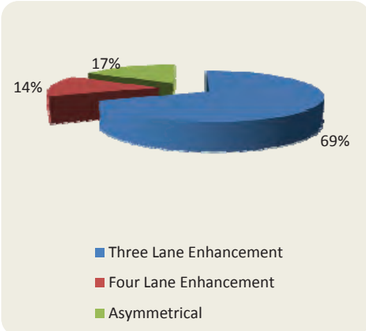
EAST-WEST GATEWAY Council of Governments

14. The plan for South Grand I prefer is: (Select one)

Keypad Polling



Online Polling



The plan for South Grand I prefer is: (Select one)	Responses
Three Lane Enhancement.	72%
Four Lane Enhancement.	15%
Asymmetrical.	16%
Totals	**100%**

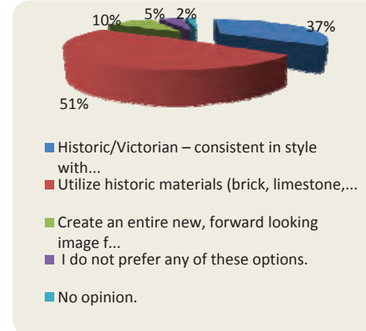
Answer Options	Response Percent	Response Count
Three Lane Enhancement	69.4%	50
Four Lane Enhancement	13.9%	10
Asymmetrical	16.7%	12
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

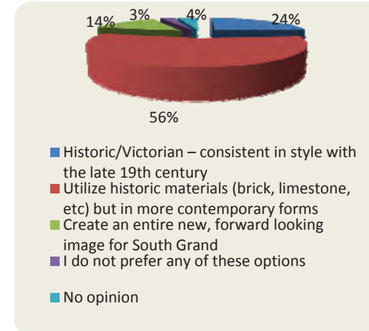
EAST-WEST GATEWAY Council of Governments

15. As a way of defining the street identity, select the style you prefer:

Keypad Polling



Online Polling



As a way of defining the street identity, select the style you prefer:	Responses
Historic/Victorian – consistent in style with the late 19th century	37%
Utilize historic materials (brick, limestone, etc) but in more contemporary forms	51%
Create an entire new, forward looking image for South Grand	10%
I do not prefer any of these options.	5%
No opinion.	2%
Totals	**100%**

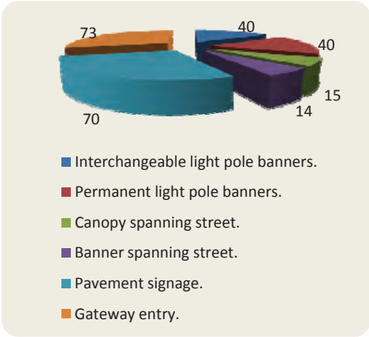
Answer Options	Response Percent	Response Count
Historic/Victorian – consistent in style with the late 19th century	23.6%	17
Utilize historic materials (brick, limestone, etc) but in more contemporary forms	55.6%	40
Create an entire new, forward looking image for South Grand	13.9%	10
I do not prefer any of these options	2.8%	2
No opinion	4.2%	3
answered question		**72**
skipped question		**1**

DESIGNWORKSHOP

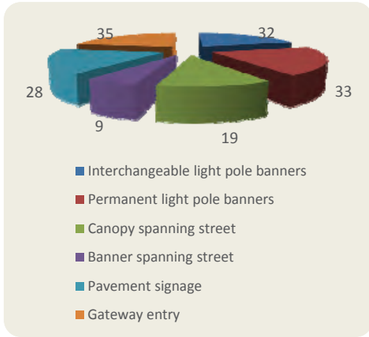
EAST-WEST GATEWAY Council of Governments

16. As a way of creating street identity, select the signage approach you prefer. (Select all that apply)

Keypad Polling



Online Polling



As a way of creating street identity, select the signage approach you prefer. (Select all that apply)	Responses
Interchangeable light pole banners.	40
Permanent light pole banners.	40
Canopy spanning street.	15
Banner spanning street.	14
Pavement signage.	70
Gateway entry.	73
Totals	**148**

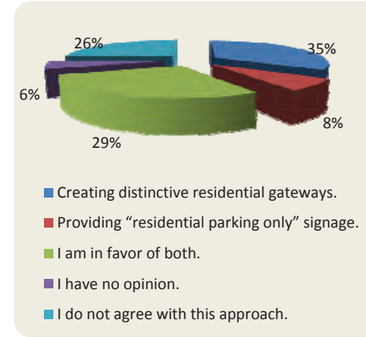
Answer Options	Response Count
Interchangeable light pole banners	32
Permanent light pole banners	33
Canopy spanning street	19
Banner spanning street	9
Pavement signage	28
Gateway entry	35
answered question	**70**
skipped question	**3**

DESIGNWORKSHOP

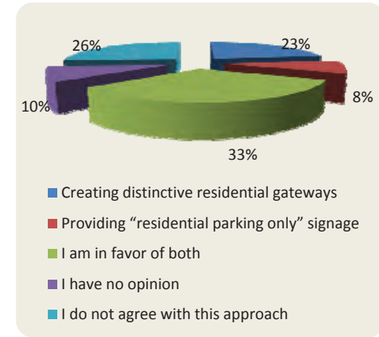
EAST-WEST GATEWAY Council of Governments

17. As a way of defining the neighborhoods and ensure private parking for residences, I am in favor of: (Select one)

Keypad Polling



Online Polling



As a way of defining the neighborhoods and ensure private parking for residences, I am in favor of: (Select one)	Responses
Creating distinctive residential gateways.	35%
Providing "residential parking only" signage.	8%
I am in favor of both.	29%
I have no opinion.	6%
I do not agree with this approach.	26%
Totals	**100%**

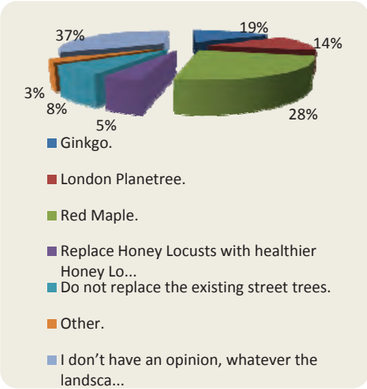
Answer Options	Response Percent	Response Count
Creating distinctive residential gateways	22.9%	16
Providing "residential parking only" signage	8.6%	6
I am in favor of both	32.9%	23
I have no opinion	10.0%	7
I do not agree with this approach	25.7%	18
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

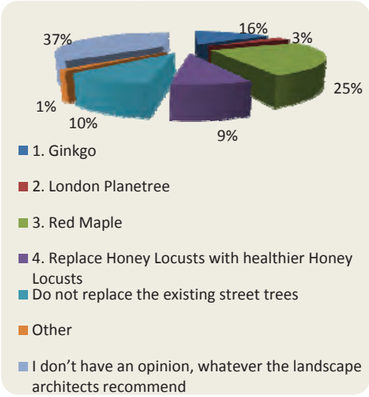
EAST-WEST GATEWAY Council of Governments

18. Of the recommended street trees, I prefer… (Select one)

Keypad Polling



Online Polling



Of the recommended street trees, I prefer… (Select one)	Responses
Ginkgo.	19%
London Planetree.	14%
Red Maple.	28%
Replace Honey Locusts with healthier Honey Lo...	5%
Do not replace the existing street trees.	8%
Other.	3%
I don't have an opinion, whatever the landscape architects recommend	37%
Totals	**100%**

Answer Options	Response Percent	Response Count
Ginkgo	15.5%	11
London Planetree	2.8%	2
Red Maple	25.4%	18
Replace Honey Locusts with healthier Honey Locusts	8.5%	6
Do not replace the existing street trees	9.9%	7
Other	1.4%	1
I don't have an opinion, whatever the landscape architects recommend	36.6%	26
answered question		**71**
skipped question		**2**

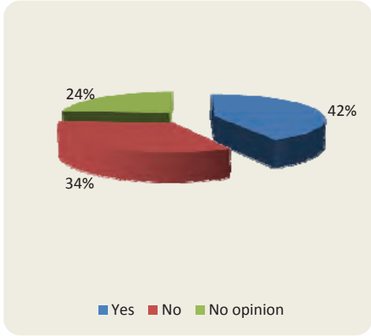
DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

19. Is night sky preservation important to you? (Select one)

Keypad Polling

Online Polling



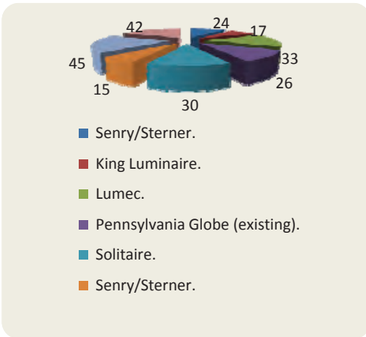
Answer Options	Response Percent	Response Count
Yes	42.3%	30
No	33.8%	24
No opinion	23.9%	17
answered question		**71**
skipped question		**2**

DESIGNWORKSHOP

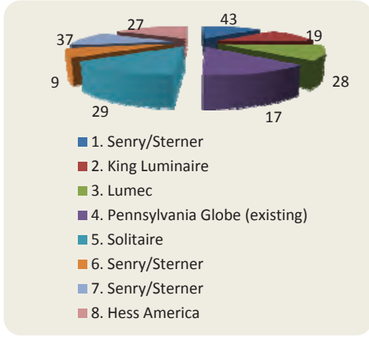
EAST-WEST GATEWAY Council of Governments

20. If a city-approved lighting fixture is your only option, which do you favor? (Select your top 3)

Keypad Polling



Online Polling

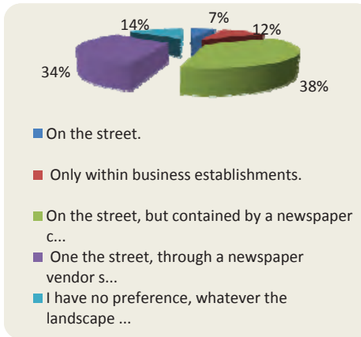


If a city-approved lighting fixture is your only option, which do you favor? (Select your top 3)	Responses
Senry/Sterner.	24
King Luminaire.	17
Lumec.	33
Pennsylvania Globe (existing).	26
Solitaire.	30
Senry/Sterner.	15
Senry/Sterner.	45
Hess America.	42
Totals	**144**

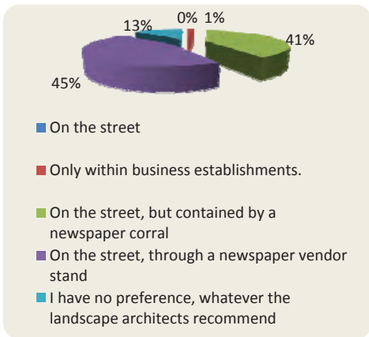
Answer Options	1st	2nd	3rdc	Rating Avg.	Count
Senry/Sterner	13	19	11	2.05	43
King Luminaire	5	7	7	1.89	19
Lumec	7	11	10	1.89	28
Pennsylvania Globe (existing)	7	3	7	2.00	17
Solitaire	11	11	7	2.14	29
Senry/Sterner	0	1	8	1.11	9
Senry/Sterner	10	12	15	1.86	37
Hess America	18	5	4	2.52	27
			answered question		**71**
			skipped question		**2**

21. Where should newspaper racks be provided? (Select one)

Keypad Polling



Online Polling

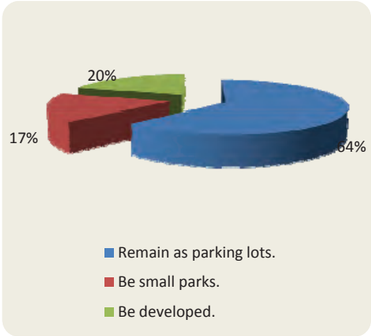


Where should newspaper racks be provided? (Select one)	Responses
On the street.	7%
Only within business establishments.	12%
On the street, but contained by a newspaper c...	38%
One the street, through a newspaper vendor s...	34%
I have no preference, whatever the landscape ...	14%
Totals	**100%**

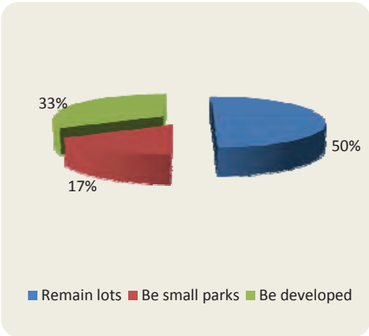
Answer Options	Response Percent	Response Count
On the street	0.0%	0
Only within business establishments.	1.4%	1
On the street, but contained by a newspaper corral	40.6%	28
On the street, through a newspaper vendor stand	44.9%	31
I have no preference, whatever the landscape architects recommend	13.0%	9
	answered question	**69**
	skipped question	**4**

22. I prefer the city parking lots to...(Select one)

Keypad Polling



Online Polling



I prefer the city parking lots to... (Select one)	Responses
Remain as parking lots.	64%
Be small parks.	17%
Be developed.	20%
Totals	**100%**

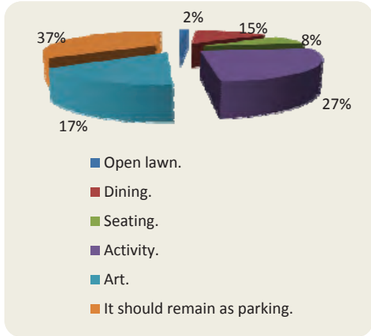
Answer Options	Response Percent	Response Count
Remain lots	50.0%	35
Be small parks	17.1%	12
Be developed	32.9%	23
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

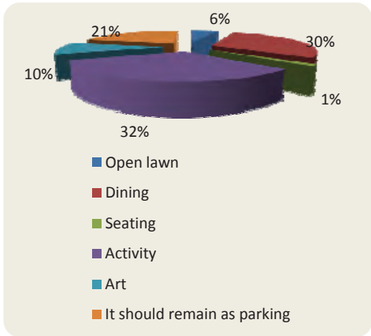
EAST-WEST GATEWAY Council of Governments

23. In anticipation of the master plan for South Grand, the parking lot adjacent to Mangia Italiano should become... (Select one)

Keypad Polling



Online Polling



In anticipation of the master plan for South Grand, the parking lot adjacent to Mangia Italiano should become... (Select one)	Responses
Open lawn.	2%
Dining.	15%
Seating.	8%
Activity.	27%
Art.	17%
It should remain as parking.	37%
Totals	**100%**

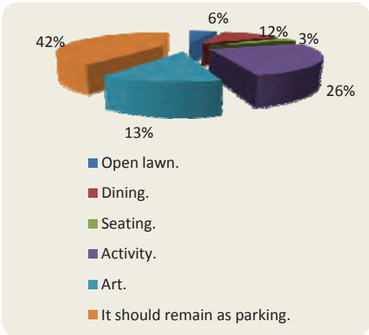
Answer Options	Response Percent	Response Count
Open lawn	5.6%	4
Dining	29.6%	21
Seating	1.4%	1
Activity	32.4%	23
Art	9.9%	7
It should remain as parking	21.1%	15
answered question		**71**
skipped question		**2**

DESIGNWORKSHOP

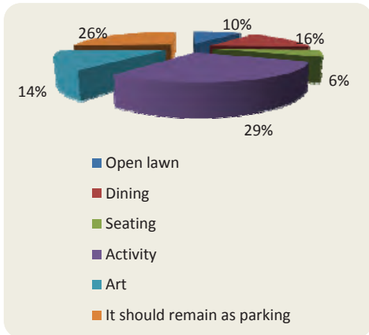
EAST-WEST GATEWAY Council of Governments

24. In anticipation of the master plan for South Grand, the parking lot adjacent to Café Mochi should become… (Select one)

Keypad Polling



Online Polling



In anticipation of the master plan for South Grand, the parking lot adjacent to Café Mochi should become… (Select one)	Responses
Open lawn.	6%
Dining.	12%
Seating.	3%
Activity.	26%
Art.	13%
It should remain as parking.	42%
Totals	**100%**

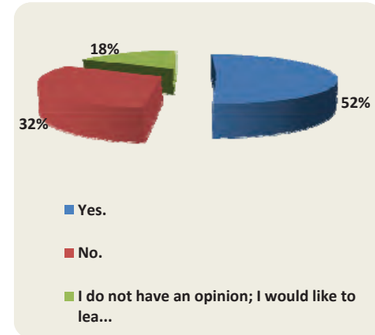
Answer Options	Response Percent	Response Count
Open lawn	10.0%	7
Dining	15.7%	11
Seating	5.7%	4
Activity	28.6%	20
Art	14.3%	10
It should remain as parking	25.7%	18
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

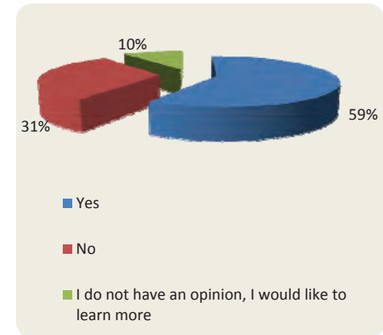
EAST-WEST GATEWAY Council of Governments

25. Should one of the existing city lots be utilized as a farmer's market to help energize the street? (Select one)

Keypad Polling



Online Polling



Should one of the existing city lots be utilized as a farmer's market to help energize the street? (Select one)	Responses
Yes.	52%
No.	32%
I do not have an opinion; I would like to lea...	18%
Totals	**100%**

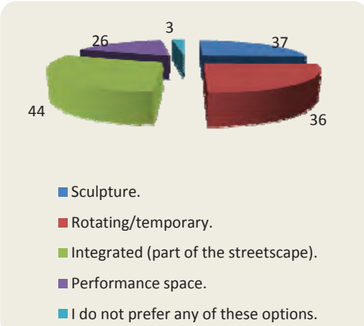
Answer Options	Response Percent	Response Count
Yes	58.6%	41
No	31.4%	22
I do not have an opinion, I would like to learn more	10.0%	7
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

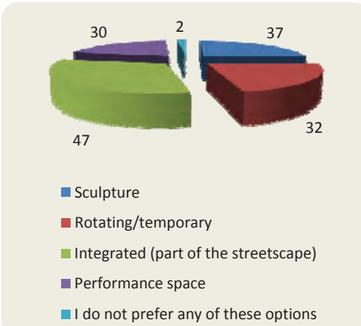
EAST-WEST GATEWAY Council of Governments

26. Select the type of art you would like to see on South Grand. (Select one or more)

Keypad Polling



Online Polling



Select the type of art you would like to see on South Grand. (Select one or more)	Responses
Sculpture.	37
Rotating/temporary.	36
Integrated (part of the streetscape).	44
Performance space.	26
I do not prefer any of these options.	3
Totals	**146**

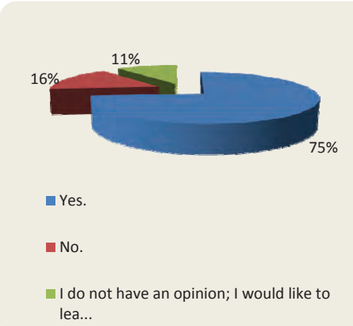
Answer Options	Response Count
Sculpture	37
Rotating/temporary	32
Integrated (part of the streetscape)	47
Performance space	30
I do not prefer any of these options	2
answered question	**70**
skipped question	**3**

DESIGNWORKSHOP

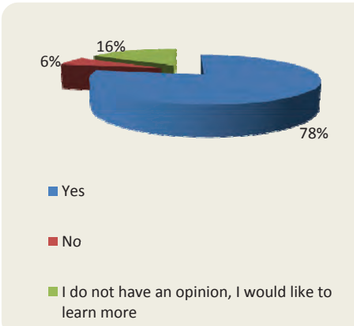
EAST-WEST GATEWAY Council of Governments

27. Would you be in favor of a 1% allocation of the budget for arts?

Keypad Polling



Online Polling



Would you be in favor of a 1% allocation of the budget for arts?	Responses
Yes.	75%
No.	16%
I do not have an opinion; I would like to learn more	11%
Totals	**100%**

Answer Options	Response Percent	Response Count
Yes	77.9%	53
No	5.9%	4
I do not have an opinion, I would like to learn more	16.2%	11
answered question		**68**
skipped question		**5**

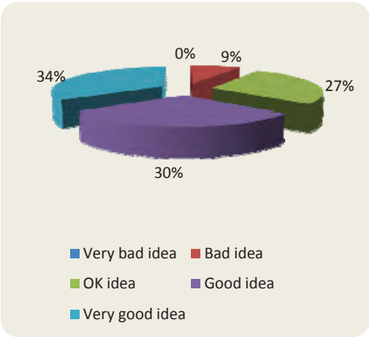
DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

28. The addition of a “kiosk;” like a newspaper/magazine stand or a flower stand, along South Grand would be… (Select one)

Keypad Polling

Online Polling



The addition of a “kiosk;” like a newspaper/magazine stand or a flower stand, along South Grand would be… (Select one)	Responses
Very bad idea.	5%
Bad idea.	12%
OK idea.	21%
Good idea.	38%
Great idea.	30%
Totals	**100%**

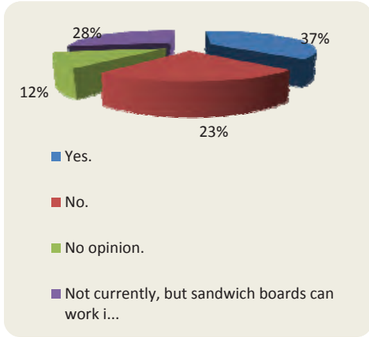
Answer Options	Response Percent	Response Count
Very bad idea	0.0%	0
Bad idea	8.6%	6
OK idea	27.1%	19
Good idea	30.0%	21
Very good idea	34.3%	24
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

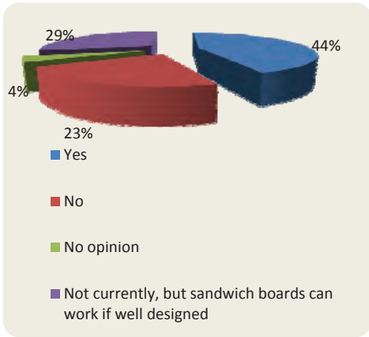
EAST-WEST GATEWAY Council of Governments

29. Is the use of “sandwich board” signs successful on the sidewalk? (Select one)

Keypad Polling



Online Polling



Is the use of “sandwich board” signs successful on the sidewalk? (Select one)	Responses
Yes.	37%
No.	23%
No opinion.	12%
Not currently, but sandwich boards can work if well designed	28%
Totals	**100%**

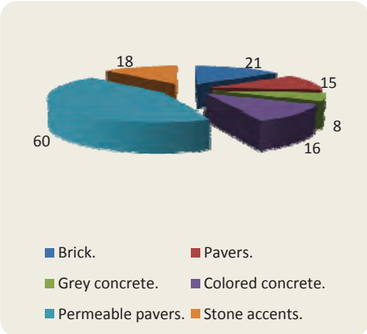
Answer Options	Response Percent	Response Count
Yes	44.3%	31
No	22.9%	16
No opinion	4.3%	3
Not currently, but sandwich boards can work if well designed	28.6%	20
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

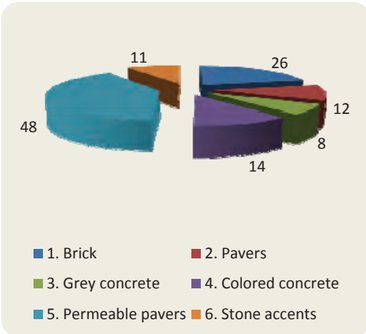
EAST-WEST GATEWAY Council of Governments

30. Select the style of paving you favor. (Select one or more)

Keypad Polling



Online Polling



Select the style of paving you favor. (Select one or more)	Responses
Brick.	21
Pavers.	15
Grey concrete.	8
Colored concrete.	16
Permeable pavers.	60
Stone accents.	18
Totals	**138**

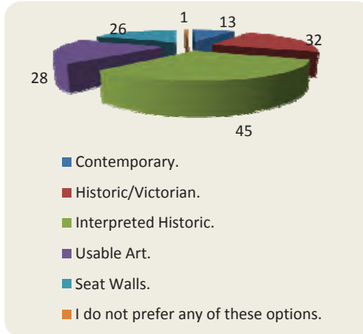
Answer Options	Response Count
Brick	26
Pavers	12
Grey concrete	8
Colored concrete	14
Permeable pavers	48
Stone accents	11
answered question	**70**
skipped question	**3**

DESIGNWORKSHOP

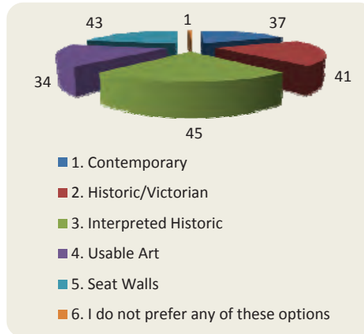
EAST-WEST GATEWAY Council of Governments

31. Select the style of bench you favor. (Select top 3)

Keypad Polling



Online Polling



Select the style of bench you favor. (Select top 3)	Responses
Contemporary.	13
Historic/Victorian.	32
Interpreted Historic.	45
Usable Art.	28
Seat Walls.	26
I do not prefer any of these options.	1
Totals	**145**

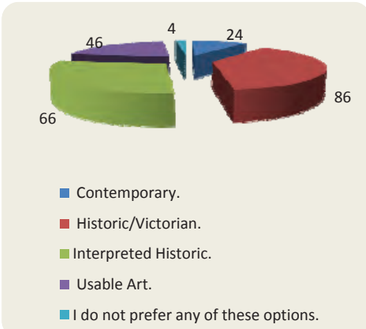
Answer Options	1st choice	2nd choice	3rd choice	Rating Avg.	Count
Contemporary	12	8	17	1.86	37
Historic/Victorian	24	7	10	2.34	41
Interpreted Historic	14	26	5	2.20	45
Usable Art	10	10	14	1.88	34
Seat Walls	9	16	18	1.79	43
I do not prefer any of these options	0	0	1	1.00	1
				answered question	**69**
				skipped question	**4**

DESIGNWORKSHOP

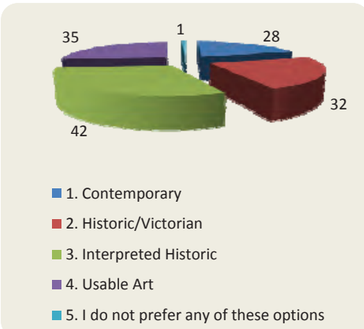
EAST-WEST GATEWAY Council of Governments

32. Select the style of bike rack you favor. (Select top 2)

Keypad Polling



Online Polling



Select the style of bike rack you favor. (Select top 2)	Responses
Contemporary.	24
Historic/Victorian.	86
Interpreted Historic.	66
Usable Art.	46
I do not prefer any of these options.	4
Totals	**142**

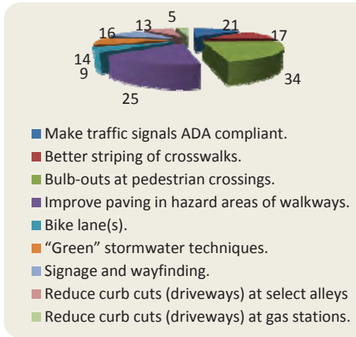
Answer Options	First choice	Second choice	Rating Average	Response Count
Contemporary	16	12	1.57	28
Historic/Victorian	18	14	1.56	32
Interpreted Historic	17	25	1.40	42
Usable Art	18	17	1.51	35
I do not prefer any of these options	1	0	2.00	1
			answered question	**70**
			skipped question	**3**

DESIGNWORKSHOP

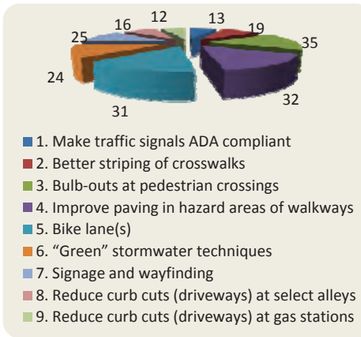
EAST-WEST GATEWAY Council of Governments

33. Where would you prioritize funding for street improvements on South Grand? (Rank your top 3 choices)

Keypad Polling



Online Polling



Where would you prioritize funding for street improvements on South Grand? (Rank your top 3 choices)	Responses
Make traffic signals ADA compliant.	21
Better striping of crosswalks.	17
Bulb-outs at pedestrian crossings.	34
Improve paving in hazard areas of walkways.	25
Bike lane(s).	9
"Green" stormwater techniques.	14
Signage and wayfinding.	16
Reduce curb cuts (driveways) at select alleys	13
Reduce curb cuts (driveways) at gas stations.	5
Totals	**155**

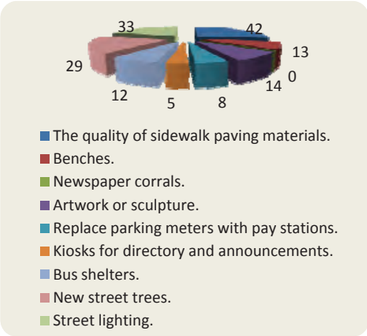
Answer Options	1st choice	2nd choice	3rd choice	Rating Avg	Count
Make traffic signals ADA compliant	5	4	4	2.08	13
Better striping of crosswalks	4	8	7	1.84	19
Bulb-outs at pedestrian crossings	15	13	7	2.23	35
Improve paving in hazard areas of walkways	16	8	8	2.25	32
Bike lane(s)	12	12	7	2.16	31
"Green" stormwater techniques	5	8	11	1.75	24
Signage and wayfinding	7	6	12	1.80	25
Reduce curb cuts (driveways) at select alleys	3	6	7	1.75	16
Reduce curb cuts (driveways) at gas stations	2	4	6	1.67	12
			answered question		**69**
			skipped question		**4**

DESIGNWORKSHOP

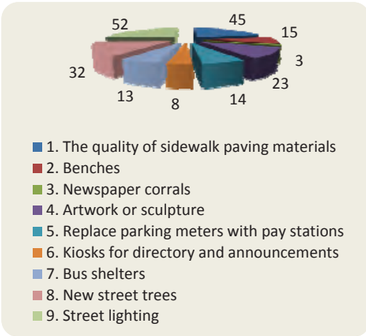
EAST-WEST GATEWAY Council of Governments

34. Where would you prioritize funding for furnishing improvements on South Grand? (Rank your top 3 choices)

Keypad Polling



Online Polling



32.) Where would you prioritize funding for furnishing improvements on South Grand? (Rank your top 3 choices)	Responses
The quality of sidewalk paving materials.	42
Benches.	13
Newspaper corrals.	0
Artwork or sculpture.	14
Replace parking meters with pay stations.	8
Kiosks for directory and announcements.	5
Bus shelters.	12
New street trees.	29
Street lighting.	33
Totals	**155**

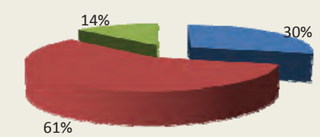
Answer Options	1st	2nd	3rd	Avg	Count
The quality of sidewalk paving materials	27	9	9	2.40	45
Benches	2	6	7	1.67	15
Newspaper corrals	0	1	2	1.33	3
Artwork or sculpture	10	6	7	2.13	23
Replace parking meters with pay stations	3	4	7	1.71	14
Kiosks for directory and announcements	2	4	2	2.00	8
Bus shelters	3	7	3	2.00	13
New street trees	5	17	10	1.84	32
Street lighting	17	14	21	1.92	52
				answered question	**69**
				skipped question	**4**

DESIGNWORKSHOP

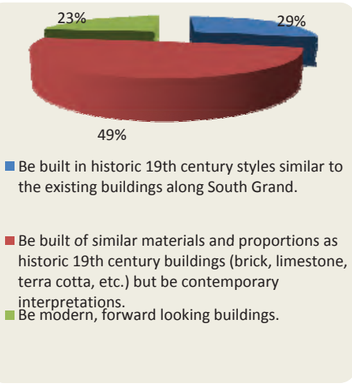
EAST-WEST GATEWAY Council of Governments

35. New buildings on South Grand should:

Keypad Polling



Online Polling



New buildings on South Grand should: (Select one)	Responses
Be built in historic 19th century styles similar to the existing buildings along South Grand.	30%
Be built of similar materials as historic 19th century buildings (brick, limestone, terra cotta, etc.) but be contemporary interpretations.	61%
Be modern, forward looking buildings.	14%
Totals	**100%**

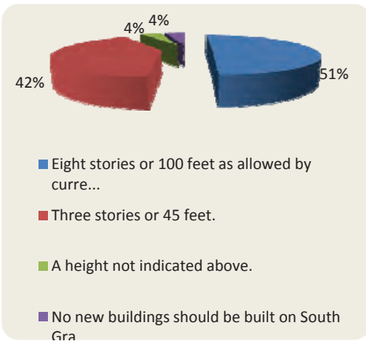
Answer Options	Response Percent	Response Count
Be built in historic 19th century styles similar to the existing buildings along South Grand.	28.6%	20
Be built of similar materials and proportions as historic 19th century buildings (brick, limestone, terra cotta, etc.) but be contemporary interpretations.	48.6%	34
Be modern, forward looking buildings.	22.9%	16
	answered question	**70**
	skipped question	**3**

DESIGNWORKSHOP

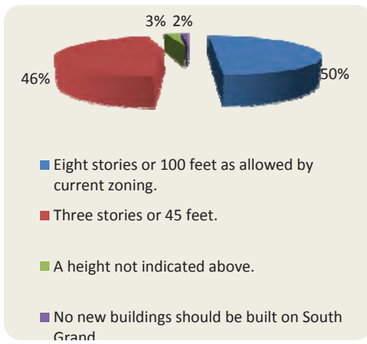
EAST-WEST GATEWAY Council of Governments

36. Building heights for new buildings on South Grand should be:

Keypad Polling



Online Polling



Building heights for new buildings on South Grand should be: (Select one)	Responses
Eight stories or 100 feet as allowed by current zoning.	51%
Three stories or 45 feet.	42%
A height not indicated above.	4%
No new buildings should be built on South Grand	4%
Totals	**100%**

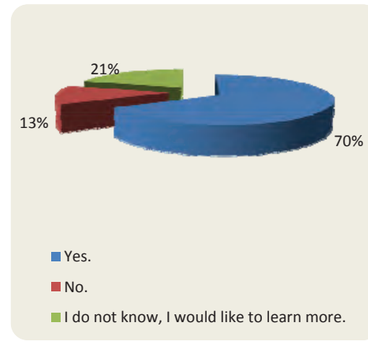
Answer Options	Response Percent	Response Count
Eight stories or 100 feet as allowed by current zoning.	50.0%	34
Three stories or 45 feet.	45.6%	31
A height not indicated above.	2.9%	2
No new buildings should be built on South Grand.	1.5%	1
answered question		**68**
skipped question		**5**

DESIGNWORKSHOP

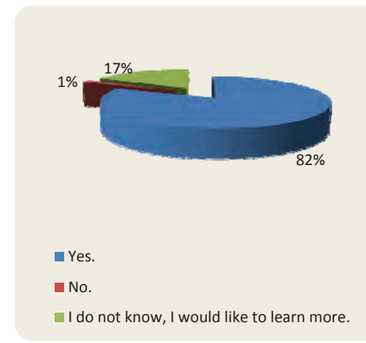
EAST-WEST GATEWAY Council of Governments

37. Setbacks should be required on South Grand and the side streets to ensure adequate sidewalk width and maintain the existing configuration of buildings:

Keypad Polling



Online Polling



Setbacks should be required on South Grand and the side streets to ensure adequate sidewalk width and maintain the existing configuration of buildings: (Choose one)	Responses
Yes.	70%
No.	13%
I do not know, I would like to learn more.	21%
Totals	**100%**

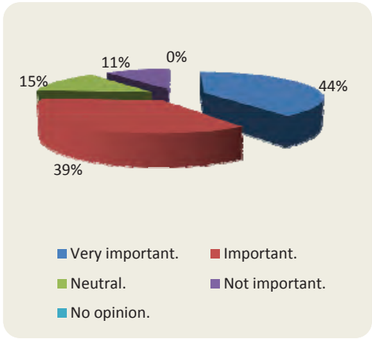
Answer Options	Response Percent	Response Count
Yes.	81.4%	57
No.	1.4%	1
I do not know, I would like to learn more.	17.1%	12
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

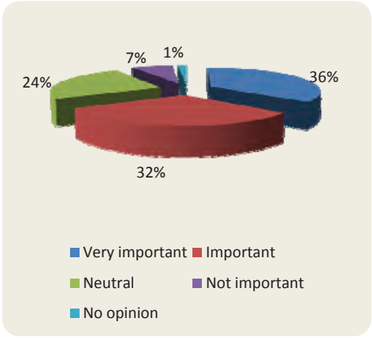
EAST-WEST GATEWAY Council of Governments

38.How important is it to you to go beyond the requirements of the Americans with Disability Act to accommodate the accessibility needs of these populations

Keypad Polling



Online Polling



(Choose one)	Responses
Very important.	44%
Important.	39%
Neutral.	15%
Not important.	11%
No opinion.	0%
Totals	**100%**

Answer Options	Response Percent	Response Count
Very important	35.7%	25
Important	31.4%	22
Neutral	24.3%	17
Not important	7.1%	5
No opinion	1.4%	1
answered question		**70**
skipped question		**3**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary of Direction

•The keypad polling and online polling representation from all neighborhoods.

•People want more shade on South Grand for their shopping and dining experience.

•People felt that the noise level on South Grand negatively impacts their shopping and dining experience.

•People felt safe when walking on South Grand.

•The majority prefer the name 'South Grand' for identity.

•The Three Lane Enhancement is the preferred option.

•As a way of defining the street identity most people prefer utilizing historic materials

•As a way of defining the neighborhoods, people preferred creating distinctive residential gateways and possibly providing "residential parking only" signage.

•Night sky preservation is important.

•One of the existing city lots should be utilized as a farmer's market to help energize the street.

•There should be a 1% allocation of the construction budget for arts and it should be an integrated part of the design.

•The addition of a "kiosk" or a flower stand, along South Grand would be a good idea.

•Permeable pavements are preferred.

•Historic/Victorian site furnishings are preferred.

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary of Direction *continued*

- The top three funding priorities are bulb-outs at pedestrian crossings, improving paving in hazard areas of walkways, and bike lanes.
- The top three furnishings improvements are the quality of the sidewalk paving materials, street lighting and street trees.
- New buildings on South Grand should be built of similar materials as historic 19th century buildings (brick, limestone, terra cotta, etc.) but be contemporary interpretations.
- Setbacks should be required on South Grand and the side streets to ensure adequate sidewalk width and maintain the existing configuration of buildings.
- It is important to go beyond the requirements of the Americans with Disability Act to accommodate the accessibility needs of the population.

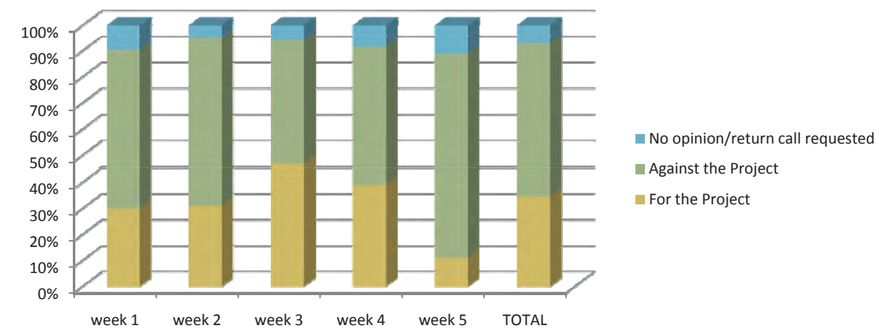
DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary Hotline Calls

Below are the results of the calls received to date for the Pilot Project which we implemented on September 9th, 2009 by the city for the Great Streets Initiative South Grand Project.

	Date of Calls	Total Calls	For the Project	Against the Project	No opinion/return call requested	% for the Project
week 1	9/9 - 9/13	103	31	62	10	33%
week 2	9/14 - 9/20	234	72	150	12	32%
week 3	9/21 - 9/27	*132*	*62*	*62*	*8*	50%
week 4	9/28 - 10/4	*95*	*37*	*50*	*8*	43%
week 5	10/5 - 10/12	*27*	*3*	*21*	*3*	13%
TOTAL	**TOTAL**	**591**	**205**	**345**	**41**	**37%**



Note: All callers requesting return phone calls have been contacted by either a member of the Public Involvement facilitation team or, if requiring more technical assistance, by a member of the design team.

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary of Hotline Calls

September 21-October 1

- 50% split of those for or against the project.
- Residents of the neighborhood were clearly more in support of the project than commuters.
- Commuters opposed to the project are concerned with traffic congestion and longer commuting times.
- Residents in favor of the project like the slower traffic, increased safety, traffic calming/decreased speeds, better pedestrian environment and decreased noise on the street.
- Others opposed to the project are mainly concerned with congestion, traffic being diverted to side streets, congestion due to buses and difficulty with parallel parking.

September 14-20

- Approximately 35% of callers were in favor of the project.
- Those opposed to the project were generally concerned with traffic congestion, availability of parking, slow moving traffic, congestion due to buses unable to pull over, gentrification, congestion due to parallel parking, emergency vehicles being impeded, increased danger of accidents, difficulty to turn onto side streets, difficulty to enter onto S. Grand from side streets, and difficulty for trucks to back out of closed alleys.
- Commuters opposed to the project felt that their commute takes longer, traffic is congested, it is difficult to get around parallel parkers and buses, and that S. Grand should remain a main arterial.
- Those in favor of the project felt that it would benefit businesses and residents, results in less accidents, traffic is slower and safer and more pedestrian and shopper friendly.
- Residents of the area were generally in favor of the project stating their support of slower traffic, increased safety for drivers and pedestrians and benefits to businesses.
- Those both opposed and in support of the project felt that traffic signals need to be better coordinated.

September 9-13

- Approximately 25% of callers were in favor of the project.
- Those opposed to the project were concerned with traffic congestion, bus stop congestion, difficulty to enter onto S. Grand from side streets, increased danger of accidents, and less patrons to the area.
- Residents of the neighborhood in support of the project generally liked the reduced traffic speeds/traffic calming, increased pedestrian and cyclist safety, decreased noise and benefits to businesses.
- Commuters opposed to the project generally felt the project lengthened their commute and caused increased traffic congestion.

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

A

APPENDIX

KEYPAD PAD AND ONLINE POLLING | OCTOBER 2009

Community Input

Polling for public opinion

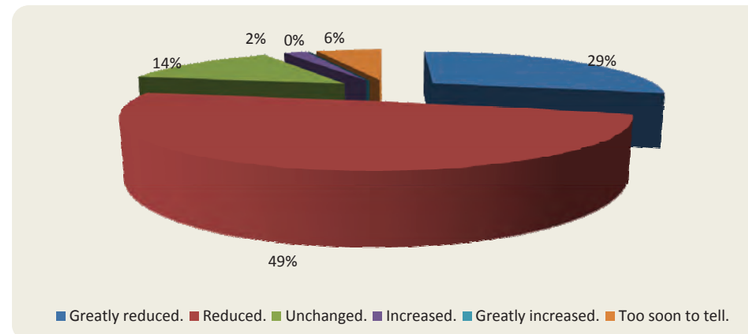
Note: Number of responses for the keypad polling also include 1 online response.

Lunch Session – PM Session:
119 Participants

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

1.) During the pilot test period I feel that automobile speeds were: (Select one)



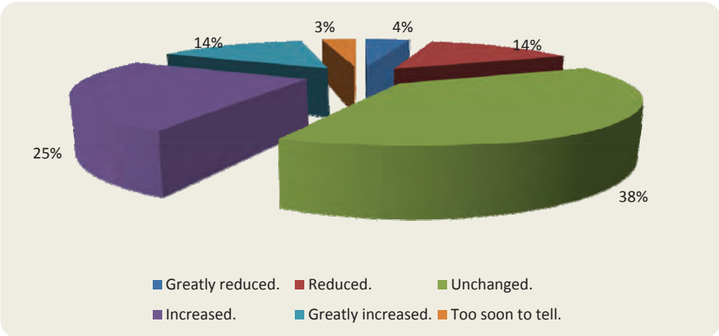
*Keypad Polling Plus One Online Polling Participant

	Responses	
Greatly reduced.	28	29%
Reduced.	49	49%
Unchanged.	14	14%
Increased.	2	2%
Greatly increased.	0	0%
Too soon to tell.	6	6%
Totals	**100**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

2.) During the pilot test period I feel that traffic congestion on South Grand was: (Select one)



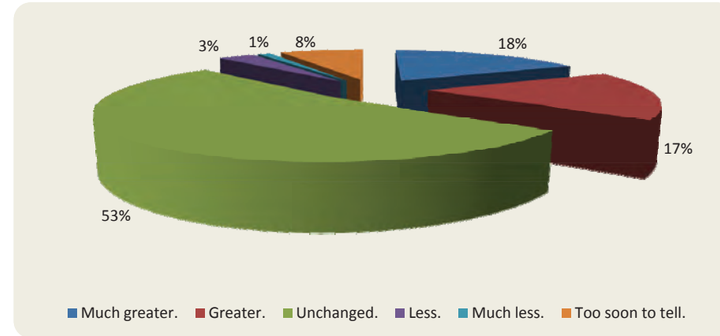
*Keypad Polling Plus One Online Polling Participant

	Responses	
Greatly reduced.	4	4%
Reduced.	13	14%
Unchanged.	35	38%
Increased.	23	25%
Greatly increased.	13	14%
Too soon to tell.	3	3%
Totals	**92**	**99%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

3.) During the pilot test period I feel that traffic on the secondary streets within your neighborhood were: (Select one)



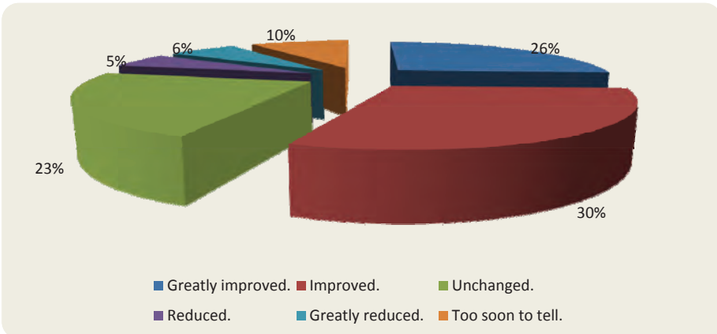
*Keypad Polling Plus One Online Polling Participant

	Responses	
Much greater.	16	18%
Greater.	15	17%
Unchanged.	48	53%
Less.	3	3%
Much less.	1	1%
Too soon to tell.	7	8%
Totals	**90**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

4.) During the pilot test period I feel that pedestrian safety was: (Select one)



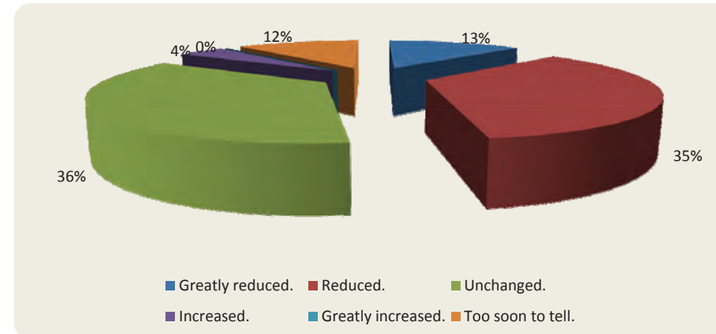
*Keypad Polling Plus One Online Polling Participant

	Responses	
Greatly improved.	24	26%
Improved.	29	30%
Unchanged.	21	23%
Reduced.	5	5%
Greatly reduced.	6	6%
Too soon to tell.	9	10%
Totals	**94**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

5.) During the pilot test period I feel that noise on South Grand was: (Select one)



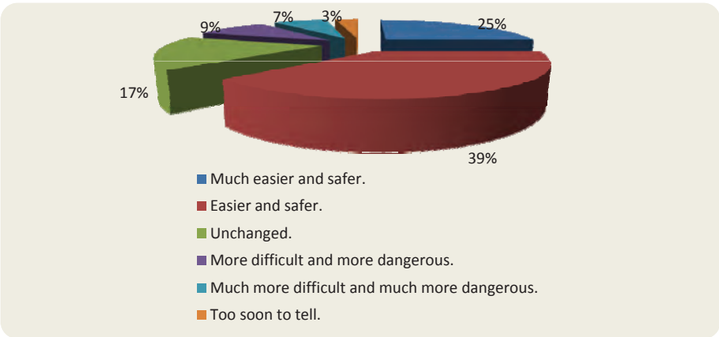
*Keypad Polling Plus One Online Polling Participant

	Responses	
Greatly reduced.	12	13%
Reduced.	33	35%
Unchanged.	33	36%
Increased.	4	4%
Greatly increased.	0	0%
Too soon to tell.	11	12%
Totals	**93**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

6.) During the pilot test period I feel that crossing South Grand by foot was: (Select one)



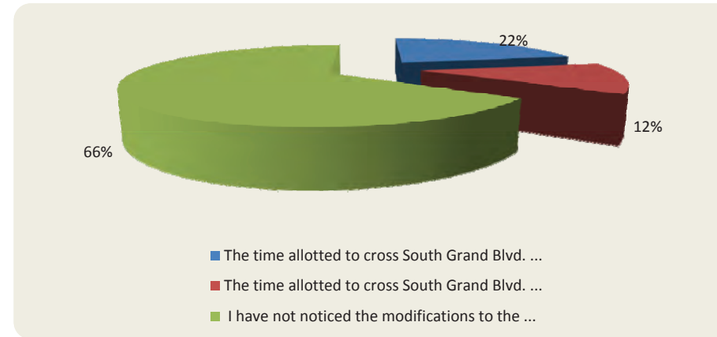
*Keypad Polling Plus One Online Polling Participant

	Responses	
Much easier and safer.	24	25%
Easier and safer.	38	39%
Unchanged.	16	17%
More difficult and more dangerous.	9	9%
Much more difficult and much more dangerous.	7	7%
Too soon to tell.	3	3%
Totals	**97**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

7.) Since the modification of the crosswalk signal timers I feel: (Select one)



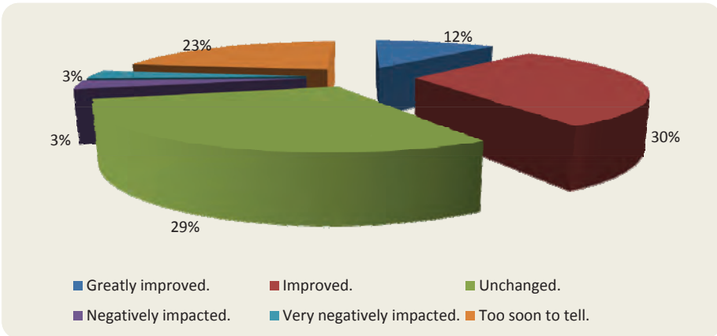
*Keypad Polling I

	Responses	
The time allotted to cross South Grand Blvd is sufficient.	21	22%
The time allotted to cross South Grand Blvd remains insufficient.	12	12%
I have not noticed the modifications to the crosswalk timers.	65	66%
Totals	**97**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

8.) During the pilot test period I feel that the dining and shopping experience on South Grand was: (Select one)



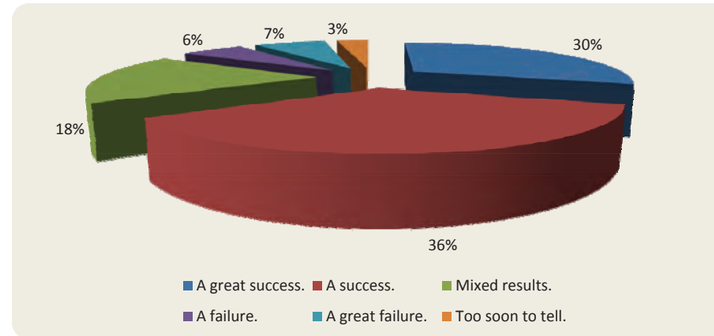
*Keypad Polling Plus One Online Polling Participant

	Responses	
Greatly improved.	11	12%
Improved.	29	30%
Unchanged.	27	29%
Negatively impacted.	3	3%
Very negatively impacted.	3	3%
Too soon to tell.	21	23%
Totals	**94**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

9.) How would you assess the pilot test of the three lane option? (Select one)



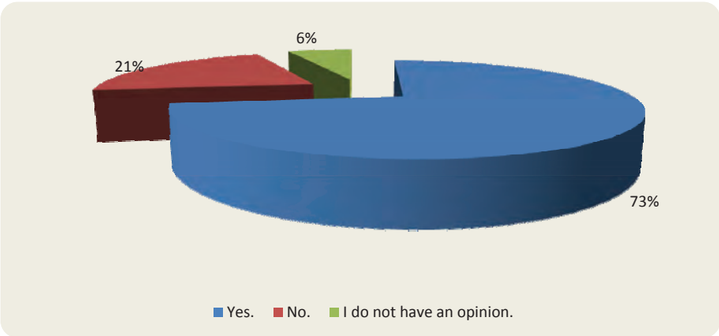
*Keypad Polling Plus One Online Polling Participant

	Responses	
A great success.	30	30%
A success.	37	36%
Mixed results.	18	18%
A failure.	6	6%
A great failure.	7	7%
Too soon to tell.	3	3%
Totals	**101**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

10.) Should the pilot test configuration on South Grand be continued until permanent construction next year? (Select one)



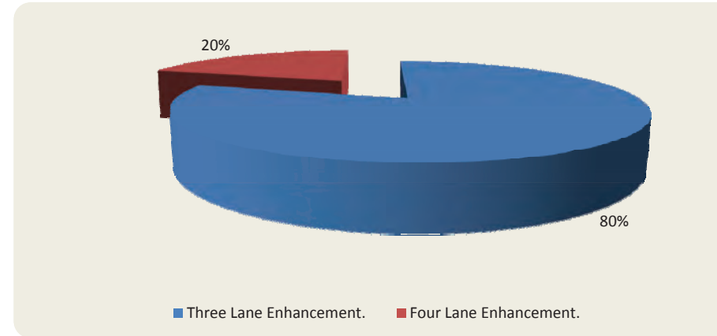
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	73	73%
No.	21	21%
I do not have an opinion.	6	6%
Totals	**100**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

11.) The plan for South Grand I prefer is: (Select one)



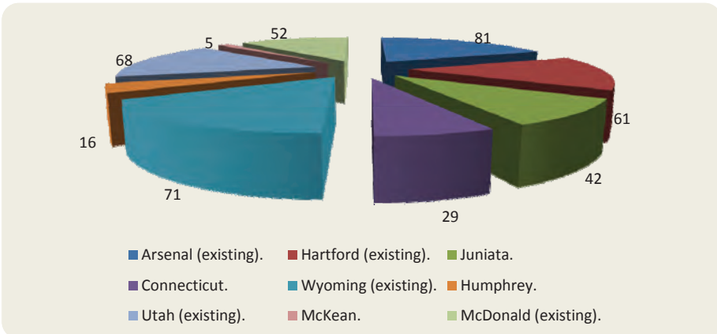
*Keypad Polling Plus One Online Polling Participant

	Responses	
Three Lane Enhancement.	76	80%
Four Lane Enhancement.	19	20%
Totals	**95**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

12.) I believe the following intersections with South Grand should have traffic signals… (Select all that apply)



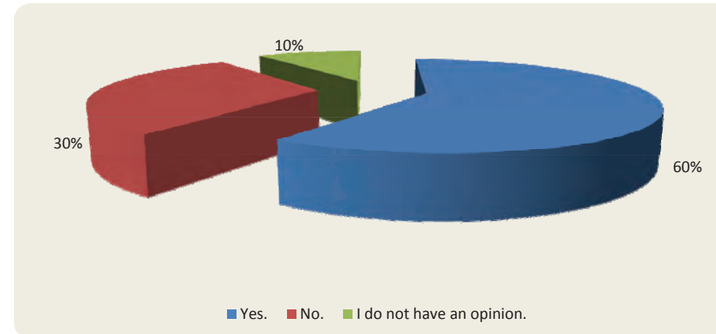
*Keypad Polling Plus One Online Polling Participant

	Responses
Arsenal (existing).	81
Hartford (existing).	61
Juniata.	42
Connecticut.	29
Wyoming (existing).	71
Humphrey.	16
Utah (existing).	68
McKean.	5
McDonald (existing).	52
Totals	**425**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

13.) In consideration of the master plan, should the three lane section of South Grand be extended all the way to Chippewa? (Select one)



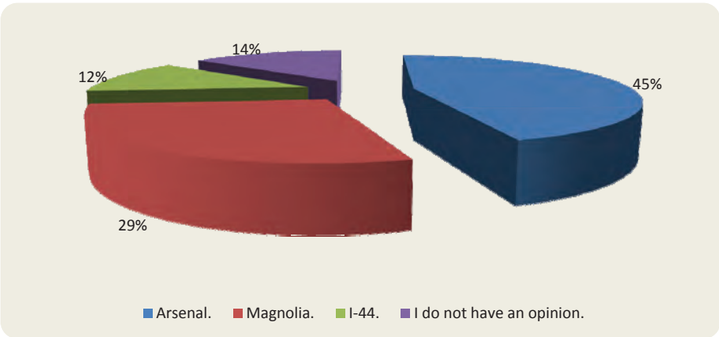
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	56	60%
No.	28	30%
I do not have an opinion.	9	10%
Totals	**93**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

14.) In consideration of the master plan, I feel that the three lane section of South Grand should transition to four lanes at: (Select one)



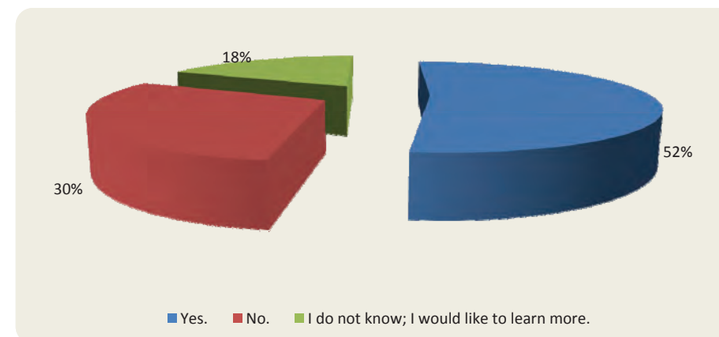
*Keypad Polling Plus One Online Polling Participant

	Responses	
Arsenal.	41	45%
Magnolia.	26	29%
I-44.	12	12%
I do not have an opinion.	13	14%
Totals	**92**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

15.) Although funding for such improvements will not be available in the foreseeable future, would you favor reinstalling a street car on South Grand?(Select one)



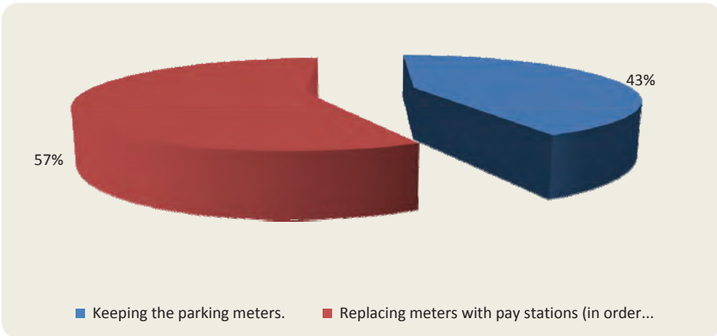
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	50	52%
No.	28	30%
I do not know; I would like to learn more.	17	18%
Totals	**95**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

16.) Parallel parking on South Grand should be paid by... (Select one)



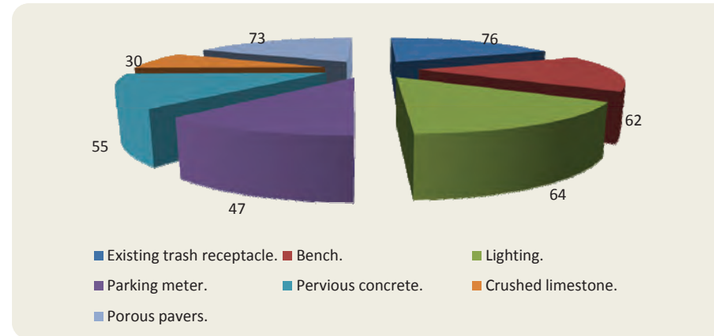
*Keypad Polling Plus One Online Polling Participant

	Responses	
Keeping the parking meters.	38	43%
Replacing meters with pay stations (in order to reduce sidewalk clutter).	52	57%
Totals	**90**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

17.) Select all of the designer's choices for site furnishings that you agree with: (Select all that apply)



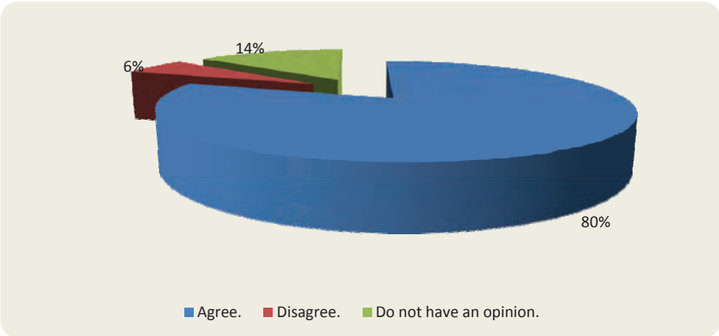
*Keypad Polling Plus One Online Polling Participant

	Responses
Existing trash receptacle.	76
Bench.	62
Lighting.	64
Parking meter.	47
Pervious concrete.	55
Crushed limestone.	30
Porous pavers.	73
Totals	**405**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

18.) How do you feel about the design of the proposed newspaper corrals? (Select one)



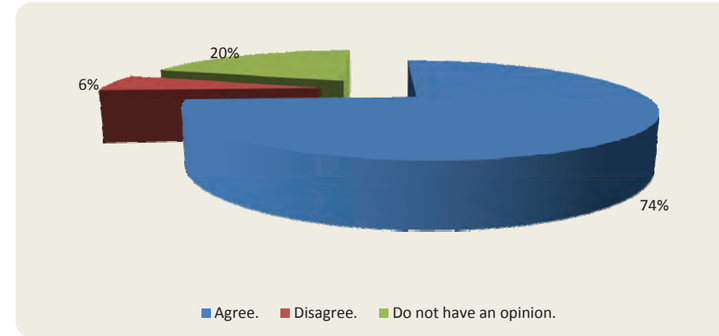
*Keypad Polling Plus One Online Polling Participant

	Responses	
Agree.	71	80%
Disagree.	5	6%
Do not have an opinion.	12	14%
Totals	**88**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

19.) How do you feel about the design of the proposed bike racks? (Select one)



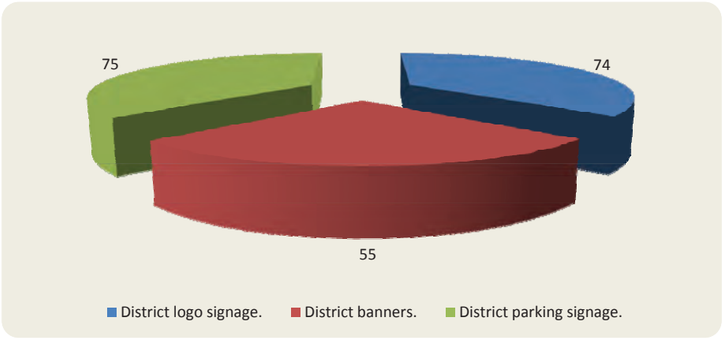
*Keypad Polling Plus One Online Polling Participant

	Responses	
Agree.	64	74%
Disagree.	5	6%
Do not have an opinion.	17	20%
Totals	**86**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

20.) Select all of the designer's choices signage that you agree with: (Select all that apply)



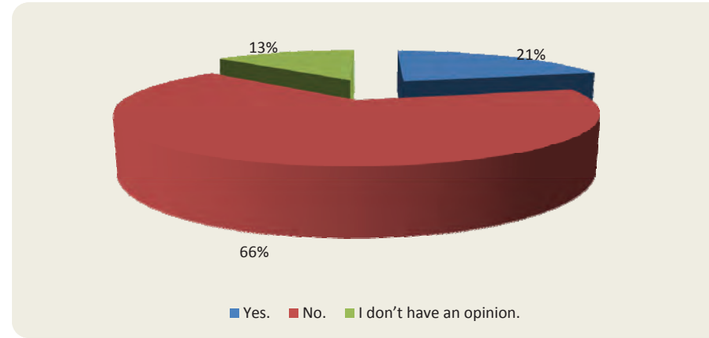
*Keypad Polling Plus One Online Polling Participant

	Responses
District logo signage.	74
District banners.	55
District parking signage.	75
Totals	**204**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

21.) Do you have concerns about the incorporation of audible intersection crossing aids for the visually impaired? (Select one)



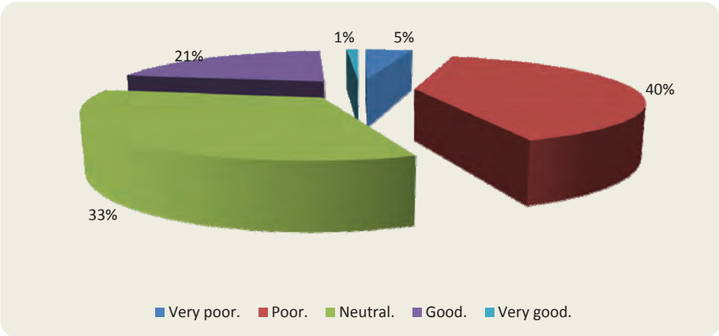
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	19	21%
No.	60	66%
I don't have an opinion.	12	13%
Totals	**91**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

22.) How would you rate the appearance of South Grand today? (Select one)



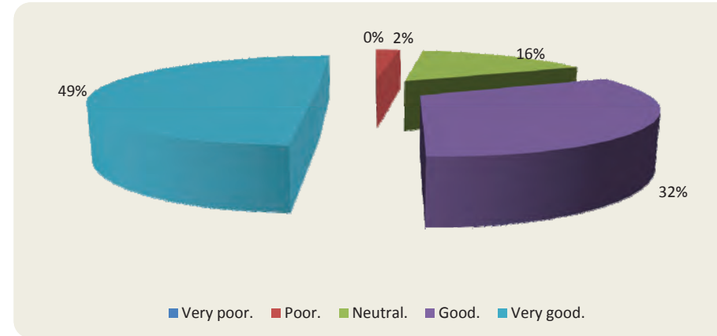
*Keypad Polling Plus One Online Polling Participant

	Responses	
Very poor.	4	4%
Poor.	36	40%
Neutral.	31	33%
Good.	19	21%
Very good.	1	1%
Totals	**91**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

23.) How do you rate the appearance of South Grand based on the proposed design? (Select one)



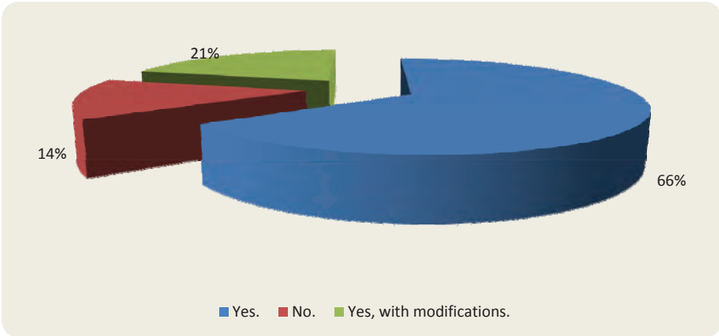
*Keypad Polling Plus One Online Polling Participant

	Responses	
Very poor.	0	0%
Poor.	2	2%
Neutral.	14	16%
Good.	28	32%
Very good.	44	49%
Totals	**88**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

24.) Are you in favor of proceeding with preparation of construction documents and construction of the three lane option as presented? (Select one)



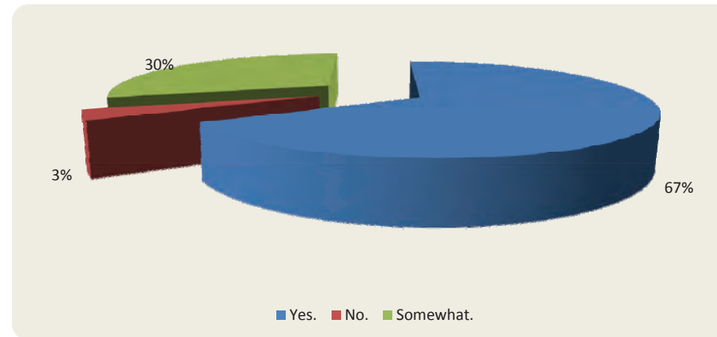
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	57	66%
No.	12	14%
Yes, with modifications.	19	21%
Totals	**88**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

25.) Do you feel the public meeting participants have had a chance to provide meaningful input to the process? (Select one)



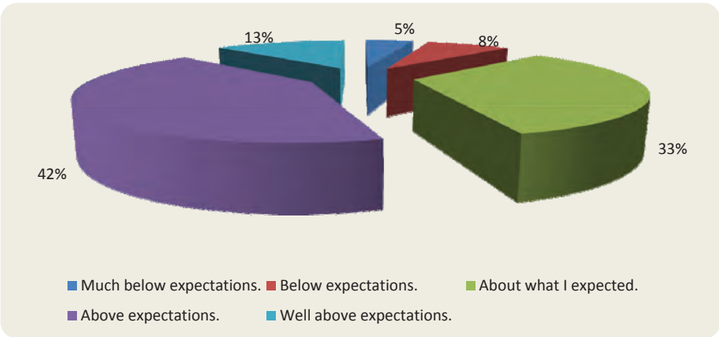
*Keypad Polling Plus One Online Polling Participant

	Responses	
Yes.	60	67%
No.	3	3%
Somewhat.	26	30%
Totals	**89**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

26.) Do you feel this planning process has met your expectations so far? (Select one)



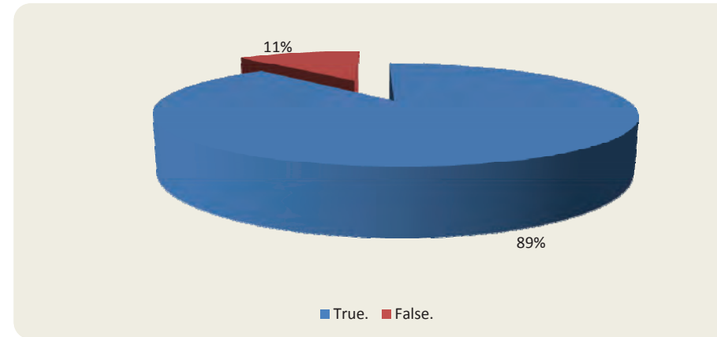
*Keypad Polling Plus One Online Polling Participant

	Responses	
Much below expectations.	4	5%
Below expectations.	7	8%
About what I expected.	28	33%
Above expectations.	37	42%
Well above expectations.	11	13%
Totals	**87**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

27.) So far the planning process has been "transparent". (Select one)



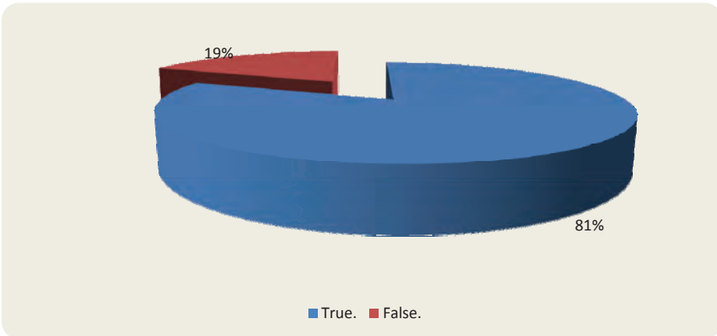
*Keypad Polling Plus One Online Polling Participant

	Responses	
True.	78	89%
False.	10	11%
Totals	**88**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

28.) So far the process has focused on the most important issues for South Grand. (Select one)



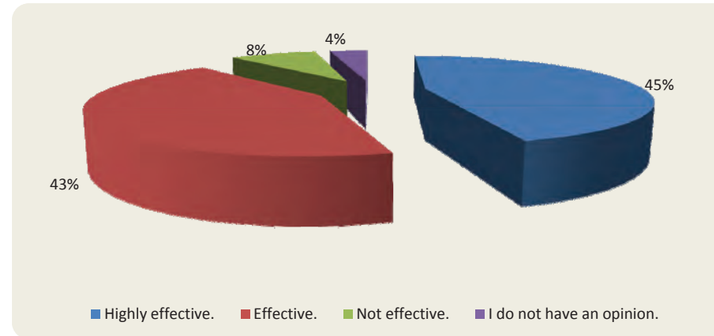
*Keypad Polling Plus One Online Polling Participant

	Responses	
True.	71	81%
False.	16	19%
Totals	**87**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

29.) As a way to gather input, I feel the key pad polling process is... (Select one)



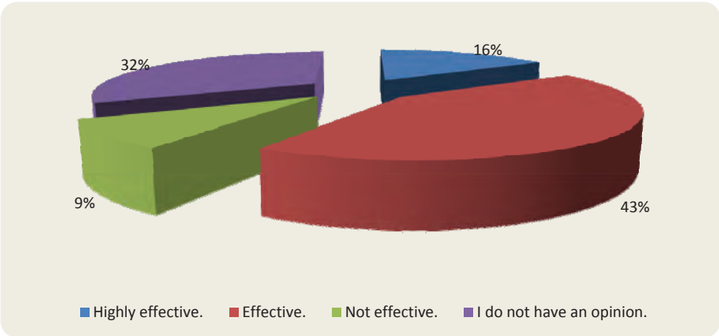
*Keypad Polling Plus One Online Polling Participant

	Responses	
Highly effective.	39	45%
Effective.	37	43%
Not effective.	7	8%
I do not have an opinion.	4	3%
Totals	**87**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

30.) As a way to gather input, I feel the on-line survey is …(Select one)



*Keypad Polling Plus One Online Polling Participant

	Responses	
Highly effective.	15	16%
Effective.	37	43%
Not effective.	8	9%
I do not have an opinion.	28	32%
Totals	**88**	**100%**

DESIGNWORKSHOP

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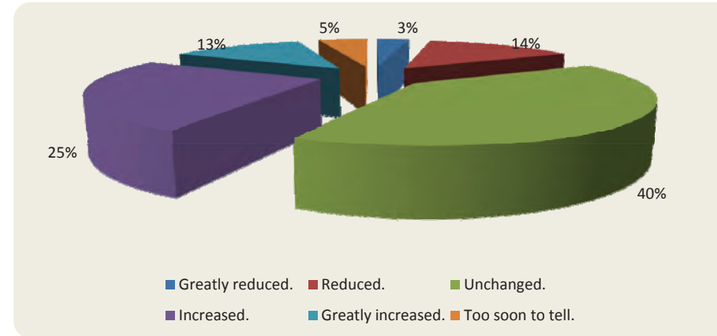
31.) During the pilot period I feel that the traffic congestion on South Grand was: (Select one)



*Keypad Polling F

	Responses	
Greatly reduced.	2	3%
Reduced.	9	14%
Unchanged.	25	40%
Increased.	16	25%
Greatly increased.	8	13%
Too soon to tell.	3	5%
Totals	**63**	**100%**

DESIGNWORKSHOP

EAST-WEST GATEWAY Council of Governments

Summary of Direction

•Speeds on South Grand have been reduced due to the pilot test period.
•Congestion on South Grand have been unchanged due to the pilot test period.
•Traffic on secondary streets in neighborhoods have not been due to the pilot test period.
•Pedestrian safety has been improved.
•Noise levels are unchanged.
•Crossing South Grand on foot has become easier and safer.
•The dining and shopping experience has been improved.
•The three lane pilot test has been a success.
•The pilot test should continue until construction next year.
•The three lane option is preferred.
•The three lane option should be extended to Chippewa.
•The lane transition back to four lane should happen at Arsenal.
•Reinstalling a streetcar one day would be desired.
•Parallel parking should be replaced meters with pay stations.
•The newly designed newspaper corrals and bike racks are desired.
•An audible intersection crossing aid would be a good idea.
•The appearance of South Grand based on the proposed design is good.
•They should proceed with preparation of construction documents and construction of the three lane option as presented.
•Public meeting participants have had a chance to provide meaningful input to the process.
•The planning process has exceeded expectations so far.
•So far the planning process has been “transparent”.
•So far the process has focused on the most important issues for South Grand.
•As a way to gather input, the key pad polling process has been highly effective.
•As a way to gather input, the on-line survey has been effective.

DESIGNWORKSHOP

EAST-WEST GATEWAY
Council of Governments

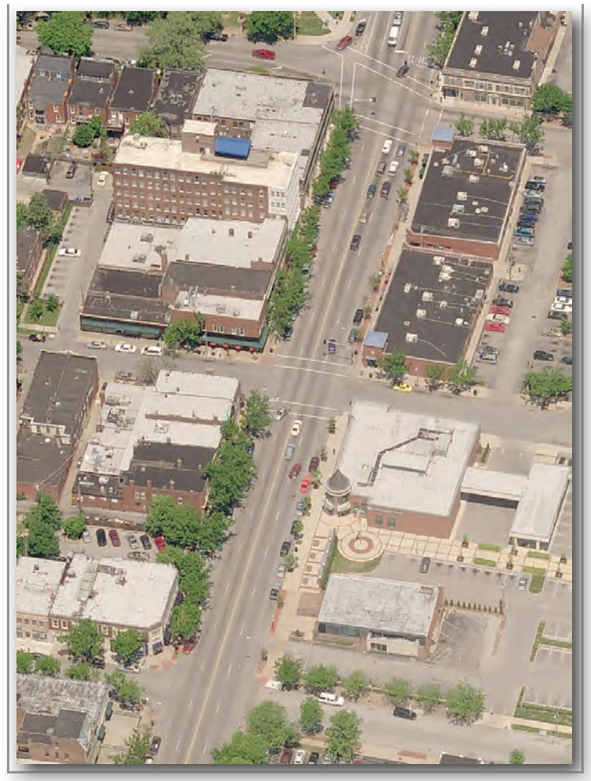
B

APPENDIX

TRAFFIC ANALYSIS REPORT

South Grand Boulevard Traffic Analysis

St. Louis, Missouri
August 26, 2009



Prepared By:
Chester "RIck" Chellman, P.E.

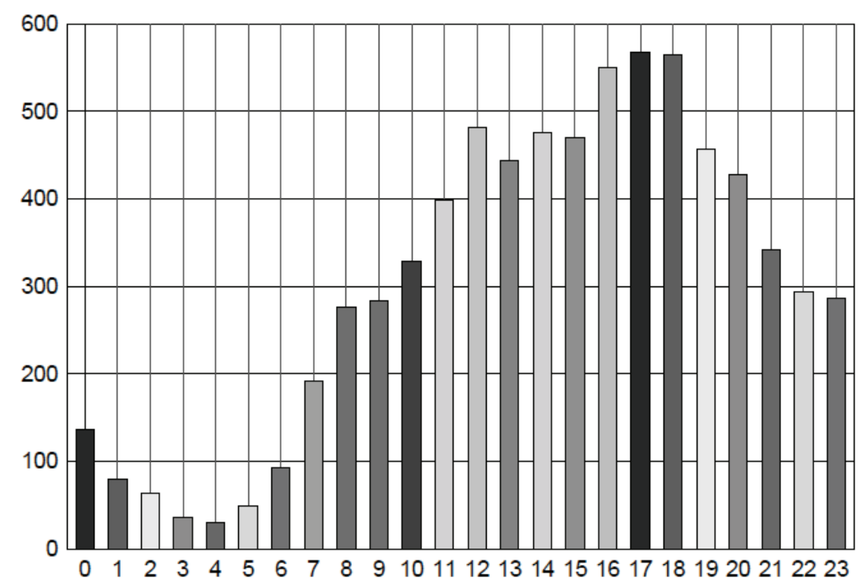
Evaluation of Grand Boulevard, St. Louis, Mo.

Introduction

Based on a charrette workshop held in St. Louis the week of August 10, and subsequent online polling for preferences, the desire to convert Grand Avenue from its current fairly high-speed four lane configuration into a slower three lane configuration is strong. Such a conversion is widely known as a "Road Diet".

Road Diets are usually successful where traffic volumes are below 20,000 vehicles per day and peak hourly approach volumes are below 1,000 vehicles. Initial traffic data collection showed a significant drop in volume south of Arsenal, from 28,643 to 19,209 vehicles/day.

However, additional data collection gathered during the charrette has since shown that either the data collectors malfunctioned (as some did on Gravois), or the traffic along Grand varies significantly from day to day. The later data showed a drop south of Arsenal to 25,408 and in the 22,000 range southerly for the balance of the study area (between Arsenal and Utah).



Traffic volumes exhibit peak flows in the AM, Midday and PM peak hours, as shown i the above from one of the Southbound lanes South of Arsenal (the horizontal axis shows 24-hour times, the vertical axis the numbers of vehicles per hour).

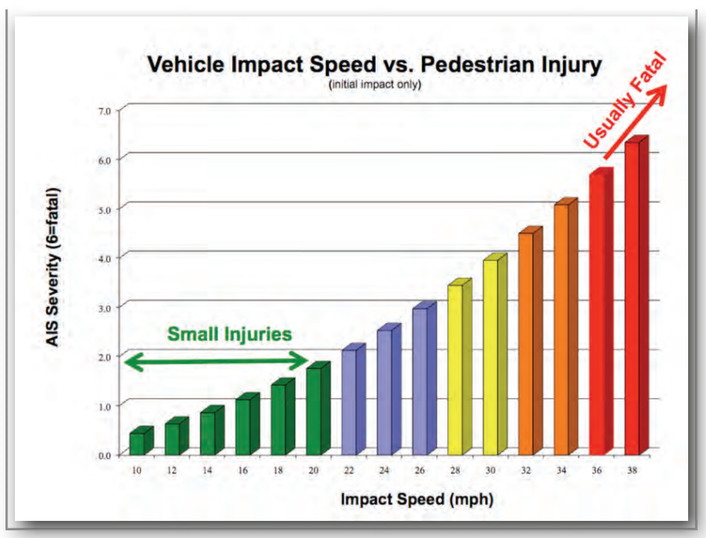
Left turns from even lane configurations are difficult with heavier traffic volumes, and a three lane cross section affords ample left turn storage opportunities. On South Grand presently, however, left turns are not allowed except for the southbound left at Arsenal.

Speed

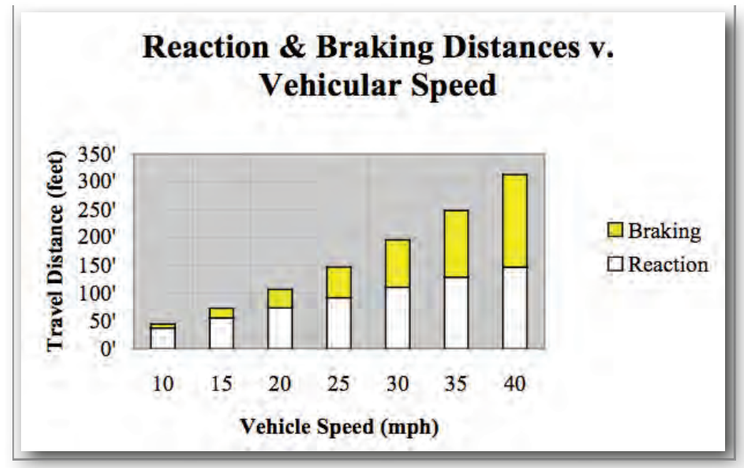
The area residents and business people have the perception that traffic flows much faster on Grand Avenue than the 25 mph speed limit would otherwise permit. The data collected by the traffic counters supports these perceptions.

The 85th percentile speeds (a value often used to create a speed limit as it means that 85% of the vehicles are traveling at or below that speed) are typically 35-40 mph, but as high as 46 mph in the left Southbound lane South of Magnolia. Average speeds range from 34 to 39 mph, and many examples of speeds over 50 mph.

Vehicle speed is a critical component of the overall safety of a street, because the kinetic energy associated with a vehicle increases exponentially with its speed. As may be seen below, the vehicles traveling along South Grand Avenue are at, and at times above, the speeds at which pedestrians are killed if an accident occurs.



Vehicle speed is also directly related to the distance required to stop a moving vehicle. A driver has to perceive the need to stop, to initiate the stop by applying the brakes, and then the vehicle must come to a stop due to the friction created by the braking maneuver itself. This equates to approximately three times more distance required to stop from 40 mph versus 20 mph.



Most pedestrians, of course, are unaware of these particulars regarding vehicle speeds, but since the sound associated with moving vehicles also increases exponentially with speed, pedestrians perceive the dangers, even if unaware of the particulars.

Existing Traffic Operations

There are currently traffic signals ("actuated and coordinated") on South Grand Avenue at Arsenal, Hartford, Wyoming, and Utah. The signal timing plans for these signals were received from Crawford, Bunte and Brammier on August 24.

Focussing on the PM peak hour, traffic volumes collected by Horner & Shifrin were added to the timing plan at Arsenal and the results evaluated.[1] This shows an existing PM overall "Level of Service" (LOS) of D, with the Eastbound left approach with an LOS of F and the Southbound left and both the Westbound left and through approaches at LOS E.

[1] The file was adjusted to include 5 buses per hour, 5 parking maneuvers per hour and the area type changed to CBD.

Level of service is a traffic term of art that relates to vehicle delay, and it is different for signalized and unsignalized intersections as described below, from the Highway Capacity Manual.

Intersection Level of Service Criteria		
LOS	Unsignalized Intersections	Signalized Intersections
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all,
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.
Reference: *Highway Capacity Manual 2000,* Transportation Research Board, 2000.		

Options

Additional analysis was completed to examine changes to the existing 4-lane cross section with adjusted signal timings to reduce travel speeds, as well as analysis of the possible 3-lane configuration. Side street volumes were estimated based on some manual counts and observations.

4-Lane ReTiming Option

This option examined changes in the signal timing plan to try to get vehicle speeds nearer the posted 25 mph limit, which is also a reasonable speed limit for a mixed-use urban street such as Grand.

This analysis was first done with Synchro software from the Trafficware corporation.[2] In Synchro, the link speeds are set, in this case at 25 mph and the results of that analysis are first in the Appendix. A small number of left turns were added on all approaches except Northbound at Arsenal.

As may be seen in the details, if the signal timings are reduced, levels of service may actually be improved; at Arsenal, for example, the overall LOS increases to C and no approach is at LOS F in this option.

However, to slow traffic, the signals were changed from their vehicle-efficient “actuated-coordinated” status to “pretimed”. The overall street throughput, established by the busier Arsenal intersection is 70 seconds. The other intersections, however, run individually more efficiently with shorter cycles, typically 50 seconds. By setting the signals in this manner, vehicles are more assured to need to stop along the corridor.

Simulation

To simulate traffic operations, software termed SimTraffic is used. This software takes the data from Synchro and then simulates driver behavior with an animation that may be run at real-time speed or faster or slower.

These simulations (the second set in the Appendix with “SimTraffic Report” in the lower right) show the potential to slow traffic by this method, as average Grand travel speeds in simulation reduce to 20 to 25 mph. It should be noted, however, that the software assume that drivers will try to stay within 15% of the speed limit (21 to 29 mph).

For sections such as the block from Arsenal to Hartford, or Wyoming to Utah, this is a reasonable option; for the unsignalized section from Hartford to Wyoming, it is less likely to be effective. In fact, driver frustration with reduced speeds associated with the signals would likely lead to speeding and possibly “slaloming” by drivers through the unsignalized portions. For these reasons, it is **not** recommended to implement the signal timing change unless additional signals are installed at all of the unsignalized intersections.

3-Lane Option

This option was analyzed in some detail, due to the public desire for it, and its potential to dramatically change the character of the street.

After considerable analysis, it was determined that the three lane cross section will perform acceptably. A key to making this option perform well is a change to the signal timing plans at Arsenal and Hartford, specifically changing the three left turn phases from protected only to protected and permitted.

[2] Specifically, Synchro 7, Build 773, Rev 8

With these changes, at Arsenal the overall LOS actually improves from its existing LOS of D to LOS C, with the Eastbound left approach at LOS E, the Westbound through at LOS F and Southbound left approach improving to a LOS A.

The short left turn phases added south of Arsenal are also protected and permitted in this option, and even the small volumes assumed (5 to 20) left-turning vehicles will experience little delay.

Together, the small interruptions in North-South throughput, combined with a reduction in capacity, act together to effectively reduce vehicle speeds.

Conclusion

Unless a full set of signals is installed, a revised timing plan is not advised as it may lead to aggressive driver behavior along the mostly unsignalized sections of South Grand Avenue.

Given the results of the analysis, South Grand Avenue is a relatively high volume street for a “road diet”, but it appears that a reduction to 3 lanes will function effectively and will reduce the speeds of the traffic, acknowledged to be problematic at present.

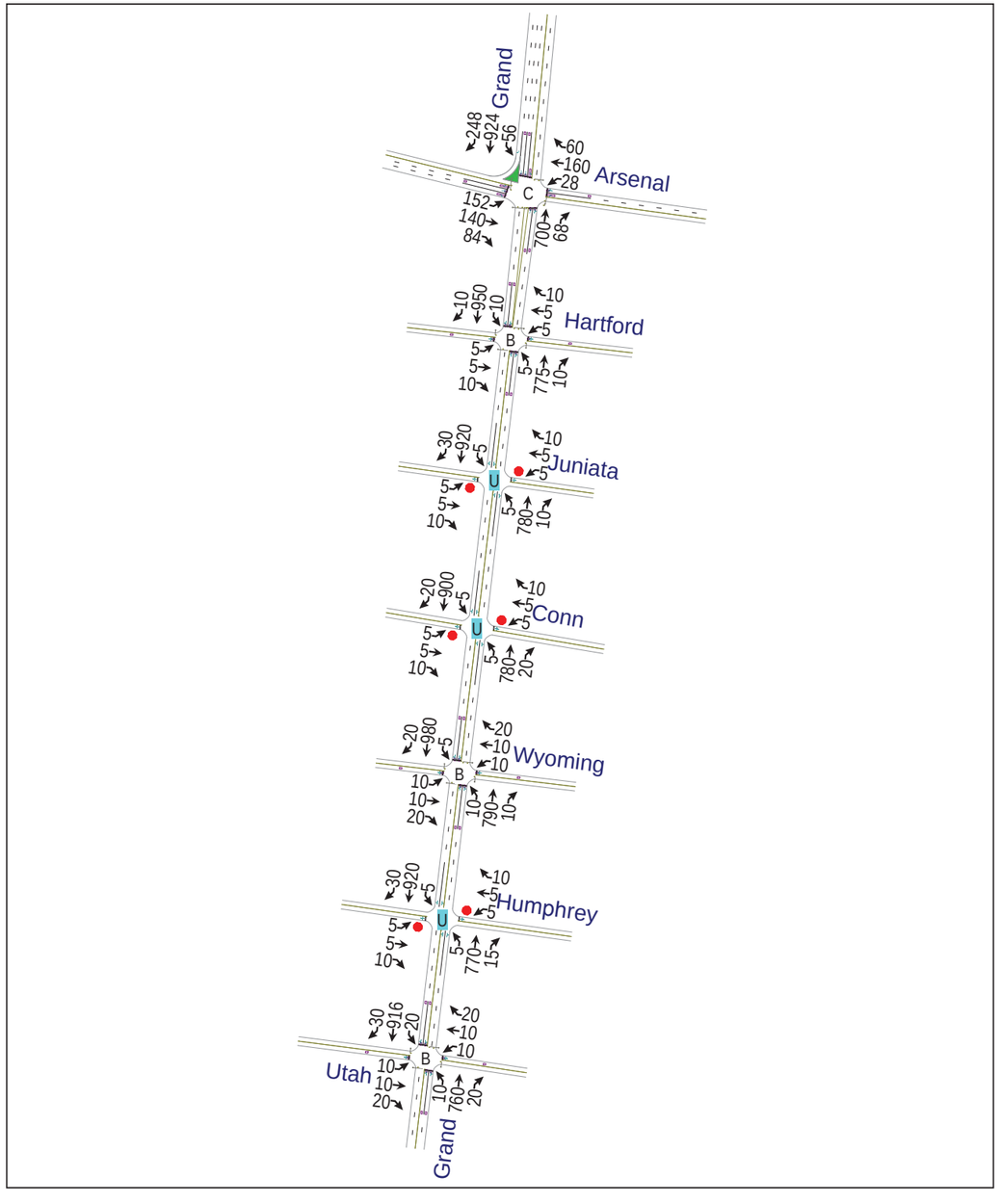
There will be a sorting out occurring just north of Arsenal, for southbound traffic where the lane reduction occurs, but that should work itself out with a “Do Not Block Intersection” sign and driver education, and there is plenty of queuing space at that location.

From a review of the literature, and the results of the analysis, it also appears that a change in South Grand Avenue to 3 lanes should not create a long-lasting shift in traffic to other routes.

If the decision is made to transform South Grand Avenue from 4 lanes to 3, it will be imperative that the public be closely informed and that real-time driver information signage be installed for the first few months to alert drivers to conditions ahead.

APPENDIX

Grand Avenue **4 Lanes PM Peak**



C. "Rick" Chellman

South Grand Avenue
3: Arsenal & Grand

ReTiming 4-Lane Option
8/25/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	140	84	28	160	60	0	700	68	56	924	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.99			0.99		0.99		0.94
Frt			0.850		0.959			0.987				0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1486	1565	1330	1486	1485	0	0	2703	0	1486	2754	1330
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1458	1565	1280	1455	1485	0	0	2703	0	1466	2754	1246
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91		25			16				270
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		331			403			332			401	
Travel Time (s)		9.0			11.0			9.1			10.9	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	165	152	91	30	174	65	0	761	74	61	1004	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	152	91	30	239	0	0	835	0	61	1004	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Turn Type	Prot		Perm	Prot						Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4									6
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0			20.0		8.0	20.0	20.0
Total Split (s)	13.0	23.0	23.0	10.0	20.0	0.0	0.0	29.0	0.0	8.0	37.0	37.0
Total Split (%)	18.6%	32.9%	32.9%	14.3%	28.6%	0.0%	0.0%	41.4%	0.0%	11.4%	52.9%	52.9%
Maximum Green (s)	9.0	19.0	19.0	6.0	16.0			25.0		4.0	33.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5			3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5			0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		Yes		
Walk Time (s)		5.0	5.0		5.0			5.0			5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	9.0	19.0	19.0	6.0	16.0			25.0		4.0	33.0	33.0
Actuated g/C Ratio	0.13	0.27	0.27	0.09	0.23			0.36		0.06	0.47	0.47
v/c Ratio	0.86	0.36	0.22	0.24	0.67			0.86		0.72	0.77	0.37

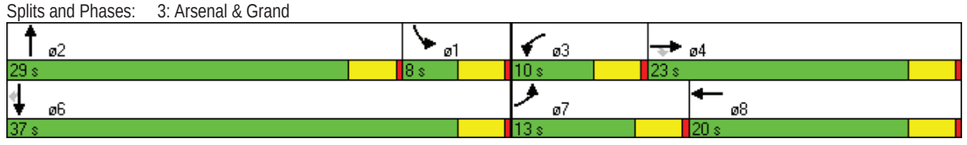
Chellman

Synchro 7 - Report
Page 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	71.2	23.5	6.6	34.8	32.6			31.2		78.1	20.5	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Total Delay	71.2	23.5	6.6	34.8	32.6			31.2		78.1	20.5	3.2
LOS	E	C	A	C	C			C		E	C	A
Approach Delay		39.0			32.8			31.2			19.6	
Approach LOS		D			C			C			B	

Intersection Summary	
Area Type: CBD	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 10 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Arsenal & Grand

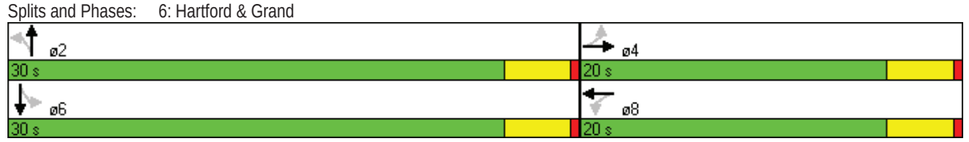


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	775	10	10	950	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.929			0.929			0.998			0.998	
Flt Protected		0.988			0.988						0.999	
Satd. Flow (prot)	0	1413	0	0	1413	0	0	2752	0	0	2750	0
Flt Permitted		0.965			0.965			0.950			0.946	
Satd. Flow (perm)	0	1374	0	0	1374	0	0	2614	0	0	2603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			11			4			3	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		234			275			318			332	
Travel Time (s)		6.4			7.5			8.7			9.1	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	842	11	11	1033	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	0	858	0	0	1055	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			26.0			26.0	
Actuated g/C Ratio		0.32			0.32			0.52			0.52	
v/c Ratio		0.05			0.05			0.63			0.78	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		9.1			9.1			11.1			15.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.1			9.1			11.1			15.1	
LOS		A			A			B			B	
Approach Delay		9.1			9.1			11.1			15.1	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	CBD
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Hartford & Grand



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	780	10	5	920	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.929			0.998			0.995	
Flt Protected		0.988			0.988							
Satd. Flow (prot)	0	1436	0	0	1436	0	0	2754	0	0	2745	0
Flt Permitted		0.988			0.988							
Satd. Flow (perm)	0	1436	0	0	1436	0	0	2754	0	0	2745	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		217			225			335			318	
Travel Time (s)		5.9			6.1			9.1			8.7	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	848	11	5	1000	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	0	864	0	0	1038	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	CBD
Control Type: Unsignalized	
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	780	20	5	900	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.929			0.996			0.997	
Flt Protected		0.988			0.988							
Satd. Flow (prot)	0	1436	0	0	1436	0	0	2748	0	0	2751	0
Flt Permitted		0.988			0.988							
Satd. Flow (perm)	0	1436	0	0	1436	0	0	2748	0	0	2751	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		207			289			328			335	
Travel Time (s)		5.6			7.9			8.9			9.1	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	848	22	5	978	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	0	875	0	0	1005	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

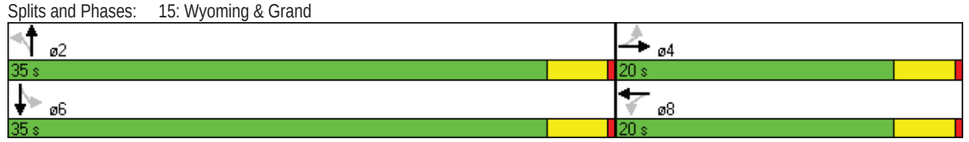
Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	10	10	20	10	790	10	5	980	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.932			0.932			0.998			0.997	
Flt Protected		0.988			0.988			0.999				
Satd. Flow (prot)	0	1418	0	0	1418	0	0	2749	0	0	2748	0
Flt Permitted		0.951			0.951			0.941			0.952	
Satd. Flow (perm)	0	1358	0	0	1358	0	0	2589	0	0	2616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			22			4			6	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		189			262			330			328	
Travel Time (s)		5.2			7.1			9.0			8.9	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	11	11	22	11	11	22	11	859	11	5	1065	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	44	0	0	881	0	0	1092	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	36.4%	36.4%	0.0%	36.4%	36.4%	0.0%	63.6%	63.6%	0.0%	63.6%	63.6%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			31.0			31.0	
Actuated g/C Ratio		0.29			0.29			0.56			0.56	
v/c Ratio		0.11			0.11			0.60			0.74	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		10.2			10.2			10.1			12.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.2			10.2			10.1			12.8	
LOS		B			B			B			B	
Approach Delay		10.2			10.2			10.1			12.8	
Approach LOS		B			B			B			B	

Intersection Summary	
Area Type:	CBD
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 54.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Wyoming & Grand



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	770	15	5	920	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.929			0.997			0.995	
Flt Protected		0.988			0.988							
Satd. Flow (prot)	0	1436	0	0	1436	0	0	2751	0	0	2745	0
Flt Permitted		0.988			0.988							
Satd. Flow (perm)	0	1436	0	0	1436	0	0	2751	0	0	2745	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		228			293			314			330	
Travel Time (s)		6.2			8.0			8.6			9.0	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	837	16	5	1000	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	0	858	0	0	1038	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	CBD
Control Type: Unsignalized	
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	10	10	20	10	760	20	20	916	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.932			0.932			0.996			0.995	
Flt Protected		0.988			0.988			0.999			0.999	
Satd. Flow (prot)	0	1419	0	0	1419	0	0	2742	0	0	2738	0
Flt Permitted		0.952			0.952			0.941			0.932	
Satd. Flow (perm)	0	1361	0	0	1361	0	0	2583	0	0	2554	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			22			8			10	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		289			229			205			314	
Travel Time (s)		7.9			6.2			5.6			8.6	
Confl. Peds. (#/hr)	20		20	20		20	20		20	20		20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	11	11	22	11	11	22	11	826	22	22	996	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	44	0	0	859	0	0	1051	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.37	1.25	1.25	1.37	1.25
Turning Speed (mph)	15		20	15		20	15		20	15		20
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			26.0			26.0	
Actuated g/C Ratio		0.32			0.32			0.52			0.52	
v/c Ratio		0.10			0.10			0.64			0.79	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		8.7			8.7			11.3			15.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.7			8.7			11.3			15.5	
LOS		A			A			B			B	
Approach Delay		8.7			8.7			11.3			15.5	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type: CBD	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: Utah & Grand

Summary of All Intervals

Start Time	6:57
End Time	7:10
Total Time (min)	13
Time Recorded (min)	10
# of Intervals	2
# of Recorded Intvls	1
Vehs Entered	536
Vehs Exited	537
Starting Vehs	69
Ending Vehs	68
Denied Entry Before	0
Denied Entry After	0
Travel Distance (mi)	168
Travel Time (hr)	12.6
Total Delay (hr)	5.6
Total Stops	838
Fuel Used (gal)	7.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Vehs Entered	536
Vehs Exited	537
Starting Vehs	69
Ending Vehs	68
Denied Entry Before	0
Denied Entry After	0
Travel Distance (mi)	168
Travel Time (hr)	12.6
Total Delay (hr)	5.6
Total Stops	838
Fuel Used (gal)	7.7

3: Arsenal & Grand Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.4	0.1	0.1	0.0	0.2	0.1	0.7	0.1	0.1	0.7	0.0	2.4
Delay / Veh (s)	47.8	32.7	9.2	19.5	38.3	31.9	19.0	18.2	39.2	15.7	1.5	19.3
Total Stops	31	14	14	2	21	12	78	8	9	96	3	288
Travel Dist (mi)	1.5	0.7	1.1	0.1	1.5	0.9	7.5	0.7	0.6	10.9	2.9	28.6
Travel Time (hr)	0.4	0.1	0.1	0.0	0.3	0.2	1.0	0.1	0.1	1.2	0.1	3.6
Avg Speed (mph)	3	5	11	8	5	6	8	8	5	9	22	8
Fuel Used (gal)	0.1	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.5	0.1	1.6
HC Emissions (g)	0	0	0	0	0	0	1	0	0	5	1	8
CO Emissions (g)	19	7	9	0	15	11	58	5	5	140	19	288
NOx Emissions (g)	2	1	1	0	2	1	8	1	0	17	2	34
Vehicles Entered	28	14	21	2	21	13	122	11	9	157	48	446
Vehicles Exited	26	11	20	2	24	14	126	11	7	162	48	451
Hourly Exit Rate	156	66	120	12	144	84	756	66	42	972	288	2706
Input Volume	152	140	84	28	160	60	722	68	56	924	248	2642
% of Volume	103	47	143	43	90	140	105	97	75	105	116	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Hartford & Grand Performance by movement

Movement	EBL	EBR	WBT	NBL	NBT	NBR	SBL	SBT	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.9
Delay / Veh (s)	0.9	3.7	30.5	16.2	9.9	7.1	3.8	11.2	10.6
Total Stops	0	1	1	1	65	2	1	93	164
Travel Dist (mi)	0.0	0.0	0.0	0.1	8.1	0.2	0.1	11.0	19.5
Travel Time (hr)	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.0	1.7
Avg Speed (mph)	17	13	4	8	12	13	16	11	11
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.5	0.9
HC Emissions (g)	0	0	0	0	1	0	0	4	5
CO Emissions (g)	0	0	0	0	39	2	0	118	160
NOx Emissions (g)	0	0	0	0	5	0	0	17	22
Vehicles Entered	1	1	1	1	135	4	1	183	327
Vehicles Exited	1	1	1	1	132	4	1	169	310
Hourly Exit Rate	6	6	6	6	792	24	6	1014	1860
Input Volume	5	10	5	5	780	10	10	1016	1871
% of Volume	120	60	120	120	102	240	60	100	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

9: Juniata & Grand Performance by movement

Movement	EBL	EBR	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Delay / Veh (s)	7.4	9.5	5.1	3.8	1.1	0.8	11.3	2.5	3.8	2.1
Total Stops	1	4	1	1	5	0	2	4	2	20
Travel Dist (mi)	0.0	0.1	0.0	0.0	8.7	0.1	0.1	8.8	0.5	18.5
Travel Time (hr)	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.9
Avg Speed (mph)	9	8	12	13	22	21	10	19	17	20
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.8
HC Emissions (g)	0	0	0	0	1	0	0	4	1	6
CO Emissions (g)	0	0	0	0	38	1	1	108	21	169
NOx Emissions (g)	0	0	0	0	5	0	0	17	3	25
Vehicles Entered	1	4	1	1	137	2	2	147	9	304
Vehicles Exited	1	4	1	1	138	2	2	147	9	305
Hourly Exit Rate	6	24	6	6	828	12	12	882	54	1830
Input Volume	5	10	5	10	780	10	5	930	30	1800
% of Volume	120	240	120	60	106	120	240	95	180	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

12: Conn & Grand Performance by movement

Movement	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2
Delay / Veh (s)	12.8	14.4	27.1	23.2	12.1	1.8	3.3	16.4	2.2	0.9	2.7
Total Stops	2	3	2	2	1	6	1	3	14	0	34
Travel Dist (mi)	0.1	0.1	0.1	0.1	0.1	8.4	0.3	0.2	8.9	0.2	18.4
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	1.0
Avg Speed (mph)	6	6	5	6	10	20	17	9	20	21	19
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.7
HC Emissions (g)	0	0	0	0	0	1	0	0	2	0	3
CO Emissions (g)	1	0	1	0	0	65	1	1	54	2	125
NOx Emissions (g)	0	0	0	0	0	9	0	0	8	0	17
Vehicles Entered	2	3	2	2	1	135	5	3	142	3	298
Vehicles Exited	2	3	2	2	1	139	4	3	143	3	302
Hourly Exit Rate	12	18	12	12	6	834	24	18	858	18	1812
Input Volume	5	10	5	10	5	795	20	5	910	20	1795
% of Volume	240	180	240	120	120	105	120	360	94	90	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

15: Wyoming & Grand Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.8
Delay / Veh (s)	9.0	2.3	4.8	17.2	25.2	4.2	8.2	1.5	10.2	9.1	20.1	8.8
Total Stops	1	1	1	2	2	2	60	0	1	72	2	144
Travel Dist (mi)	0.1	0.1	0.0	0.1	0.1	0.2	8.6	0.1	0.1	9.5	0.2	18.9
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.8	0.0	1.6
Avg Speed (mph)	7	16	10	6	5	15	13	21	8	12	9	12
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.8
HC Emissions (g)	0	0	0	0	0	0	1	0	0	2	0	3
CO Emissions (g)	0	1	0	1	0	0	38	1	1	74	1	118
NOx Emissions (g)	0	0	0	0	0	0	5	0	0	10	0	16
Vehicles Entered	2	3	1	2	2	4	141	2	1	156	4	318
Vehicles Exited	2	3	1	2	2	3	136	2	2	163	4	320
Hourly Exit Rate	12	18	6	12	12	18	816	12	12	978	24	1920
Input Volume	10	10	20	10	10	20	790	10	5	980	20	1895
% of Volume	120	180	30	120	120	90	103	120	240	100	120	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: Humphrey & Grand Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.3
Delay / Veh (s)	31.3	46.0	10.4	25.5	10.7	1.8	1.1	4.2	3.2	2.7	3.2
Total Stops	1	2	2	3	2	9	0	0	19	0	38
Travel Dist (mi)	0.0	0.1	0.1	0.1	0.1	8.1	0.1	0.1	9.7	0.2	18.6
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	1.0
Avg Speed (mph)	1	3	7	5	10	20	21	18	18	19	18
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.8
HC Emissions (g)	0	0	0	0	0	2	0	0	3	0	5
CO Emissions (g)	0	0	1	0	0	73	1	0	87	3	166
NOx Emissions (g)	0	0	0	0	0	10	0	0	13	0	23
Vehicles Entered	0	2	2	3	2	136	2	1	161	4	313
Vehicles Exited	1	2	2	3	2	136	2	1	161	4	314
Hourly Exit Rate	6	12	12	18	12	816	12	6	966	24	1884
Input Volume	5	5	10	5	10	770	15	5	975	30	1840
% of Volume	120	240	120	360	120	106	80	120	99	80	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

21: Utah & Grand Performance by movement

Movement	EBL	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.7
Delay / Veh (s)	6.1	7.9	1.1	14.0	1.1	13.4	7.3	3.1	14.9	8.7	5.9	8.0
Total Stops	2	1	0	3	0	2	69	2	3	64	3	149
Travel Dist (mi)	0.2	0.0	0.0	0.1	0.1	0.1	4.6	0.3	0.2	8.4	0.4	14.5
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.7	0.0	1.3
Avg Speed (mph)	12	11	15	7	19	6	10	13	9	12	15	11
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.7
HC Emissions (g)	0	0	0	0	0	0	1	0	0	2	0	3
CO Emissions (g)	1	0	1	1	0	0	36	4	1	65	2	112
NOx Emissions (g)	0	0	0	0	0	0	5	0	0	10	0	16
Vehicles Entered	4	1	1	4	2	3	135	8	4	144	6	312
Vehicles Exited	4	1	1	4	2	3	132	8	4	148	6	313
Hourly Exit Rate	24	6	6	24	12	18	792	48	24	888	36	1878
Input Volume	10	20	10	10	20	10	760	20	20	916	30	1836
% of Volume	240	30	60	240	60	180	104	240	120	97	120	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

Total Network Performance

Total Delay (hr)	5.6
Delay / Veh (s)	37.8
Total Stops	838
Travel Dist (mi)	168.3
Travel Time (hr)	12.6
Avg Speed (mph)	13
Fuel Used (gal)	7.7
HC Emissions (g)	47
CO Emissions (g)	1675
NOx Emissions (g)	213
Vehicles Entered	536
Vehicles Exited	537
Hourly Exit Rate	3222
Input Volume	16604
% of Volume	19
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Arsenal & Grand

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	TR	L	T	T	R
Maximum Queue (ft)	163	93	96	31	163	156	197	51	260	284	101
Average Queue (ft)	107	64	54	12	111	107	138	36	151	161	37
95th Queue (ft)	172	102	102	37	195	164	189	53	248	268	113
Link Distance (ft)	283	283	283	362	362	267	267	366	366	366	366
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 6: Hartford & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	31	25	159	161	239	248
Average Queue (ft)	6	5	105	98	156	170
95th Queue (ft)	26	21	174	173	233	239
Link Distance (ft)	198	238	265	265	267	267
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9: Juniata & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	31	31	30	53	99	53
Average Queue (ft)	18	12	12	11	33	11
95th Queue (ft)	42	37	36	46	103	45
Link Distance (ft)	180	189	280	280	265	265
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Conn & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	47	30	73	72	94	89
Average Queue (ft)	21	20	15	20	49	34
95th Queue (ft)	51	39	63	67	103	90
Link Distance (ft)	170	252	274	274	280	280
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 15: Wyoming & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	30	51	143	156	246	227
Average Queue (ft)	18	23	84	85	127	135
95th Queue (ft)	42	56	162	179	238	235
Link Distance (ft)	153	226	277	277	274	274
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: Humphrey & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	50	31	56	31	197	185
Average Queue (ft)	28	27	27	12	50	37
95th Queue (ft)	54	36	67	37	176	159
Link Distance (ft)	191	257	261	261	277	277
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

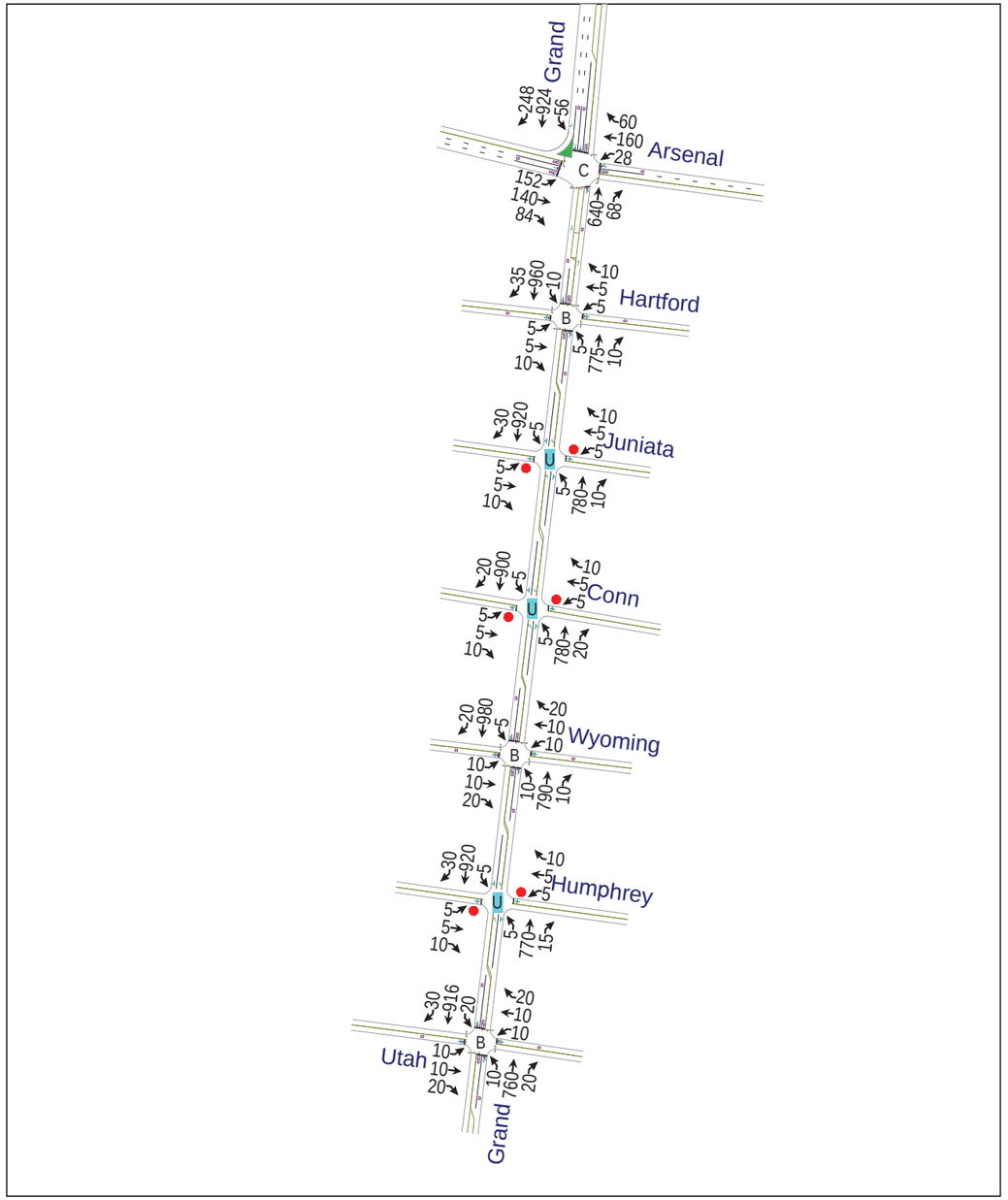
Intersection: 21: Utah & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	31	30	141	140	158	200
Average Queue (ft)	12	21	86	97	86	107
95th Queue (ft)	37	40	152	141	162	212
Link Distance (ft)	253	192	178	178	261	261
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 0

Grand Boulevard **3 Lanes PM Peak**



C. "Rick" Chellman

Grand as 3-Lanes So of Arsenal
3: Arsenal & Grand

Weekday PM Peak
8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	140	84	28	160	60	0	640	68	56	924	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	1		1	1		0	0		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor	0.96		0.89	0.92	0.97			0.99				0.89
Frt			0.850		0.959			0.987				0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	1676	1425	1593	1559	0	0	1398	0	1593	2950	1425
Flt Permitted	0.238			0.660						0.191		
Satd. Flow (perm)	385	1676	1266	1022	1559	0	0	1398	0	320	2950	1266
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91		13			8				270
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		331			403			171			734	
Travel Time (s)		9.0			11.0			4.7			20.0	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	165	152	91	30	174	65	0	696	74	61	1004	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	152	91	30	239	0	0	770	0	61	1004	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.39	1.14	1.14	1.26	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Number of Detectors	1	2	1	1	2			2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru			Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100			100		20	100	20
Trailing Detector (ft)	0	0	0	0	0			0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0			0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6			6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Signal Timings Changed
Chellman

Synchro 7 - Report
Page 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt		Perm	pm+pt						pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8						6		6
Detector Phase	7	4	4	3	8			2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0			4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0			20.0		8.0	20.0	20.0
Total Split (s)	13.0	29.0	29.0	8.0	24.0	0.0	0.0	75.0	0.0	8.0	83.0	83.0
Total Split (%)	10.8%	24.2%	24.2%	6.7%	20.0%	0.0%	0.0%	62.5%	0.0%	6.7%	69.2%	69.2%
Maximum Green (s)	9.0	25.0	25.0	4.0	20.0			71.0		4.0	79.0	79.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5			3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5			0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None			C-Max		None	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0			5.0			5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	32.3	27.5	27.5	23.3	19.3			73.3		79.7	79.7	79.7
Actuated g/C Ratio	0.27	0.23	0.23	0.19	0.16			0.61		0.66	0.66	0.66
v/c Ratio	0.85	0.40	0.25	0.14	0.91			0.90		0.24	0.51	0.29
Control Delay	73.2	43.8	9.8	34.2	84.0			30.3		9.5	11.5	1.7
Queue Delay	0.0	0.0	0.1	0.0	0.0			3.6		0.0	0.7	0.0
Total Delay	73.2	43.8	9.9	34.2	84.0			33.9		9.5	12.2	1.7
LOS	E	D	A	C	F			C		A	B	A
Approach Delay		48.1			78.4			33.9			10.0	
Approach LOS		D			E			C			A	

Intersection Summary	
Area Type: CBD	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8 (7%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Arsenal & Grand

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
6: Hartford & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	775	10	10	960	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.92			1.00			1.00	
Frt		0.929			0.929			0.998			0.995	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1449	0	0	1449	0	1593	1433	0	1593	1425	0
Flt Permitted		0.912			0.912		0.238			0.296		
Satd. Flow (perm)	0	1308	0	0	1308	0	399	1433	0	496	1425	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			11			1			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		234			275			318			161	
Travel Time (s)		6.4			7.5			8.7			4.4	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	842	11	11	1043	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	5	853	0	11	1081	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 4

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
6: Hartford & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	8.0	92.0	0.0	8.0	92.0	0.0
Total Split (%)	16.7%	16.7%	0.0%	16.7%	16.7%	0.0%	6.7%	76.7%	0.0%	6.7%	76.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		4.0	88.0		4.0	88.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		6.8			6.8		109.1	111.5		109.5	111.9	
Actuated g/C Ratio		0.06			0.06		0.91	0.93		0.91	0.93	
v/c Ratio		0.25			0.25		0.01	0.64		0.02	0.81	
Control Delay		41.5			41.5		2.4	3.6		0.6	18.8	
Queue Delay		0.0			0.0		0.0	0.6		0.0	0.0	
Total Delay		41.5			41.5		2.4	4.3		0.6	18.8	
LOS		D			D		A	A		A	B	
Approach Delay		41.5			41.5			4.3			18.6	
Approach LOS		D			D			A			B	

Intersection Summary	
Area Type: CBD	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 5

Splits and Phases: 6: Hartford & Grand

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	780	10	5	920	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.929			0.929			0.998			0.995	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1539	0	0	1539	0	1593	1435	0	1593	1430	0
Flt Permitted		0.988			0.988		0.950			0.950		
Satd. Flow (perm)	0	1539	0	0	1539	0	1593	1435	0	1593	1430	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		217			225			335			318	
Travel Time (s)		5.9			6.1			9.1			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	848	11	5	1000	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	5	859	0	5	1033	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	CBD
Control Type: Unsignalized	
Intersection Capacity Utilization 71.5%	ICU Level of Service C
Analysis Period (min) 15	

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
12: Conn & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	780	20	5	900	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.929			0.929			0.996			0.997	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1539	0	0	1539	0	1593	1432	0	1593	1433	0
Flt Permitted		0.988			0.988		0.950			0.950		
Satd. Flow (perm)	0	1539	0	0	1539	0	1593	1432	0	1593	1433	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		207			289			328			335	
Travel Time (s)		5.6			7.9			8.9			9.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	848	22	5	978	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	5	870	0	5	1000	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 8

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
15: Wyoming & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	10	10	20	10	790	10	5	980	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.92			1.00			1.00	
Frt		0.932			0.932			0.998			0.997	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1457	0	0	1457	0	1593	1433	0	1593	1430	0
Flt Permitted		0.934			0.934		0.206			0.292		
Satd. Flow (perm)	0	1349	0	0	1349	0	345	1433	0	490	1430	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			22			1			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		189			262			330			328	
Travel Time (s)		5.2			7.1			9.0			8.9	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	11	11	22	11	11	22	11	859	11	5	1065	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	44	0	11	870	0	5	1087	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	8.0	92.0	0.0	8.0	92.0	0.0
Total Split (%)	16.7%	16.7%	0.0%	16.7%	16.7%	0.0%	6.7%	76.7%	0.0%	6.7%	76.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		4.0	88.0		4.0	88.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.8			7.8		107.7	105.3		107.7	105.3	
Actuated g/C Ratio		0.06			0.06		0.90	0.88		0.90	0.88	
v/c Ratio		0.40			0.40		0.03	0.69		0.01	0.87	
Control Delay		42.5			42.5		1.0	4.5		1.4	13.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		42.5			42.5		1.0	4.6		1.4	13.4	
LOS		D			D		A	A		A	B	
Approach Delay		42.5			42.5			4.5			13.4	
Approach LOS		D			D			A			B	

Intersection Summary	
Area Type: CBD	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Wyoming & Grand

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
18: Humphrey & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	10	5	5	10	5	770	15	5	920	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.929			0.929			0.997			0.995	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1539	0	0	1539	0	1593	1433	0	1593	1430	0
Flt Permitted		0.988			0.988		0.950			0.950		
Satd. Flow (perm)	0	1539	0	0	1539	0	1593	1433	0	1593	1430	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		228			293			314			330	
Travel Time (s)		6.2			8.0			8.6			9.0	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	5	5	11	5	5	11	5	837	16	5	1000	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	21	0	5	853	0	5	1033	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.5%		ICU Level of Service C	
Analysis Period (min) 15			

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 12

Grand as 3-Lanes So of Arsenal — Weekday PM Peak
21: Utah & Grand — 8/26/2009

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	10	10	20	10	760	20	20	916	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.92			1.00			1.00	
Frt		0.932			0.932			0.996			0.995	
Flt Protected		0.988			0.988		0.950			0.950		
Satd. Flow (prot)	0	1457	0	0	1457	0	1593	1428	0	1593	1425	0
Flt Permitted		0.934			0.934		0.212			0.308		
Satd. Flow (perm)	0	1349	0	0	1349	0	355	1428	0	516	1425	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			22			3			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		289			229			205			314	
Travel Time (s)		7.9			6.2			5.6			8.6	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)								5			5	
Adj. Flow (vph)	11	11	22	11	11	22	11	826	22	22	996	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	44	0	11	848	0	22	1029	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.38	1.14	1.14	1.38	1.14
Turning Speed (mph)	15		20	15		20	15		20	15		20
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Signal Timings Changed — Synchro 7 - Report
Chellman — Page 13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	8.0	92.0	0.0	8.0	92.0	0.0
Total Split (%)	16.7%	16.7%	0.0%	16.7%	16.7%	0.0%	6.7%	76.7%	0.0%	6.7%	76.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		4.0	88.0		4.0	88.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.8			7.8		101.3	102.1		104.1	104.9	
Actuated g/C Ratio		0.06			0.06		0.84	0.85		0.87	0.87	
v/c Ratio		0.40			0.40		0.03	0.70		0.05	0.83	
Control Delay		42.5			42.5		3.0	9.4		1.9	7.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.5	
Total Delay		42.5			42.5		3.0	9.4		1.9	8.4	
LOS		D			D		A	A		A	A	
Approach Delay		42.5			42.5			9.3			8.2	
Approach LOS		D			D			A			A	

Intersection Summary	
Area Type: CBD	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: Utah & Grand

Summary of All Intervals

Start Time	4:57
End Time	5:10
Total Time (min)	13
Time Recorded (min)	10
# of Intervals	2
# of Recorded Intvls	1
Vehs Entered	505
Vehs Exited	502
Starting Vehs	75
Ending Vehs	78
Denied Entry Before	0
Denied Entry After	0
Travel Distance (mi)	181
Travel Time (hr)	14.5
Total Delay (hr)	7.0
Total Stops	575
Fuel Used (gal)	8.0

Interval #0 Information Seeding

Start Time	4:57
End Time	5:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	5:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Vehs Entered	505
Vehs Exited	502
Starting Vehs	75
Ending Vehs	78
Denied Entry Before	0
Denied Entry After	0
Travel Distance (mi)	181
Travel Time (hr)	14.5
Total Delay (hr)	7.0
Total Stops	575
Fuel Used (gal)	8.0

3: Arsenal & Grand Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.5	0.2	0.1	0.0	0.3	0.2	0.5	0.0	0.1	2.4	0.0	4.2
Delay / Veh (s)	71.4	37.5	38.1	36.6	55.3	49.5	12.6	3.2	63.2	53.3	0.9	34.5
Total Stops	28	18	9	2	17	12	35	0	5	171	1	298
Travel Dist (mi)	1.2	1.1	0.6	0.1	1.3	0.8	3.9	0.3	0.6	21.2	5.2	36.3
Travel Time (hr)	0.5	0.3	0.1	0.0	0.3	0.2	0.6	0.0	0.1	3.2	0.2	5.7
Avg Speed (mph)	2	4	4	5	4	4	6	14	6	7	24	6
Fuel Used (gal)	0.2	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	1.1	0.2	2.1
HC Emissions (g)	0	1	0	0	0	0	3	0	0	9	2	15
CO Emissions (g)	18	29	6	0	18	12	58	3	7	242	36	429
NOx Emissions (g)	2	4	1	0	2	1	8	0	1	25	5	48
Vehicles Entered	22	21	11	2	19	12	134	9	5	170	41	446
Vehicles Exited	26	20	11	2	19	12	133	10	4	149	43	429
Hourly Exit Rate	156	120	66	12	114	72	798	60	24	894	258	2574
Input Volume	152	140	84	28	160	60	722	68	56	924	248	2642
% of Volume	103	86	79	43	71	120	111	88	43	97	104	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Hartford & Grand Performance by movement

Movement	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.5
Delay / Veh (s)	83.4	56.6	23.6	39.9	7.8	1.1	22.3	1.7	0.6	5.4
Total Stops	1	1	2	1	35	0	2	8	0	50
Travel Dist (mi)	0.0	0.0	0.2	0.1	8.4	0.1	0.1	4.5	0.3	13.7
Travel Time (hr)	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.0	1.0
Avg Speed (mph)	2	2	5	4	13	22	4	18	21	13
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.5
HC Emissions (g)	0	0	0	0	2	0	0	2	0	5
CO Emissions (g)	0	1	1	0	51	0	0	49	7	110
NOx Emissions (g)	0	0	0	0	8	0	0	7	1	17
Vehicles Entered	1	1	4	1	141	2	2	149	11	312
Vehicles Exited	1	1	4	1	136	2	2	148	11	306
Hourly Exit Rate	6	6	24	6	816	12	12	888	66	1836
Input Volume	10	5	10	5	780	10	10	991	35	1871
% of Volume	60	120	240	120	105	120	120	90	189	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

9: Juniata & Grand Performance by movement

Movement	WBR	NBL	NBT	NBR	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1	0.0	0.2
Delay / Veh (s)	8.1	34.3	3.0	1.2	2.4	1.8	2.8
Total Stops	2	1	13	0	12	1	29
Travel Dist (mi)	0.1	0.1	9.0	0.1	8.2	0.4	17.9
Travel Time (hr)	0.0	0.0	0.5	0.0	0.4	0.0	1.0
Avg Speed (mph)	9	5	19	24	19	20	19
Fuel Used (gal)	0.0	0.0	0.3	0.0	0.3	0.0	0.6
HC Emissions (g)	0	0	2	0	3	0	5
CO Emissions (g)	0	0	60	1	61	2	124
NOx Emissions (g)	0	0	8	0	10	0	19
Vehicles Entered	2	1	142	2	139	7	293
Vehicles Exited	2	1	142	2	139	7	293
Hourly Exit Rate	12	6	852	12	834	42	1758
Input Volume	10	5	780	10	940	30	1810
% of Volume	120	120	109	120	89	140	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

12: Conn & Grand Performance by movement

Movement	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2
Delay / Veh (s)		50.6	2.8	8.7	2.2	3.0	18.1	2.1	1.6	2.8
Total Stops	1	1	1	1	5	0	1	9	0	19
Travel Dist (mi)	0.0	0.0	0.0	0.1	8.8	0.1	0.1	8.2	0.1	17.5
Travel Time (hr)	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.9
Avg Speed (mph)	1	3	13	12	20	18	8	20	22	19
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.6
HC Emissions (g)	0	0	0	0	2	0	0	2	0	4
CO Emissions (g)	0	0	0	0	65	0	0	51	1	117
NOx Emissions (g)	0	0	0	0	9	0	0	8	0	17
Vehicles Entered	1	1	1	1	143	2	1	131	2	283
Vehicles Exited	0	1	2	1	144	2	1	132	2	285
Hourly Exit Rate	0	6	12	6	864	12	6	792	12	1710
Input Volume	5	5	10	5	795	20	5	910	20	1795
% of Volume	0	120	120	120	109	60	120	87	60	95
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

15: Wyoming & Grand Performance by movement

Movement	EBL	EBT	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.7
Delay / Veh (s)	37.5	86.6	42.6	33.6	9.0	4.7	0.7	31.5	8.4	7.5	8.3
Total Stops	3	3	4	1	1	21	0	1	36	1	71
Travel Dist (mi)	0.1	0.1	0.1	0.0	0.1	8.4	0.2	0.1	8.1	0.2	17.4
Travel Time (hr)	0.0	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.7	0.0	1.4
Avg Speed (mph)	2	1	2	4	12	17	23	5	14	13	13
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.7
HC Emissions (g)	0	0	0	0	0	2	0	0	2	0	4
CO Emissions (g)	1	1	1	0	0	60	1	0	52	1	118
NOx Emissions (g)	0	0	0	0	0	9	0	0	7	0	16
Vehicles Entered	3	3	4	1	2	138	3	1	137	4	296
Vehicles Exited	3	3	4	1	2	142	3	1	139	4	302
Hourly Exit Rate	18	18	24	6	12	852	18	6	834	24	1812
Input Volume	10	10	20	20	10	790	10	5	980	20	1895
% of Volume	180	180	120	30	120	108	180	120	85	120	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

18: Humphrey & Grand Performance by movement

Movement	EBT	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.4
Delay / Veh (s)	89.7	3.8	34.4	19.7	4.5	4.0	9.1	3.2	1.8	4.5
Total Stops	1	1	2	1	26	0	3	13	0	47
Travel Dist (mi)	0.0	0.0	0.1	0.1	8.0	0.1	0.2	8.2	0.2	16.9
Travel Time (hr)	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	1.0
Avg Speed (mph)	1	13	4	7	16	15	12	18	21	16
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.7
HC Emissions (g)	0	0	0	0	2	0	0	3	0	6
CO Emissions (g)	0	0	0	0	59	1	1	79	1	141
NOx Emissions (g)	0	0	0	0	9	0	0	12	0	21
Vehicles Entered	1	1	2	1	134	2	3	137	3	284
Vehicles Exited	1	1	2	1	133	2	3	137	3	283
Hourly Exit Rate	6	6	12	6	798	12	18	822	18	1698
Input Volume	5	10	10	5	770	15	5	975	30	1840
% of Volume	120	60	120	120	104	80	360	84	60	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

21: Utah & Grand Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0
Delay / Veh (s)	45.2	94.8	3.5	10.1	76.7	8.3	7.1	5.0	3.4	27.3	2.7	1.6
Total Stops	1	1	1	3	2	3	1	15	1	3	8	0
Travel Dist (mi)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	4.4	0.2	0.2	7.3	0.2
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Avg Speed (mph)	3	2	14	8	2	9	15	14	15	6	19	19
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0
HC Emissions (g)	0	0	0	0	0	0	0	1	0	0	3	0
CO Emissions (g)	0	0	1	2	1	1	1	38	1	1	72	1
NOx Emissions (g)	0	0	0	0	0	0	0	5	0	0	12	0
Vehicles Entered	1	1	1	4	2	4	2	129	5	3	124	4
Vehicles Exited	1	1	1	4	2	4	2	132	5	3	128	5
Hourly Exit Rate	6	6	6	24	12	24	12	792	30	18	768	30
Input Volume	10	10	20	10	10	20	10	760	20	20	916	30
% of Volume	60	60	30	240	120	120	120	104	150	90	84	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

21: Utah & Grand Performance by movement

Movement	All
Total Delay (hr)	0.4
Delay / Veh (s)	5.2
Total Stops	39
Travel Dist (mi)	12.8
Travel Time (hr)	1.0
Avg Speed (mph)	14
Fuel Used (gal)	0.6
HC Emissions (g)	5
CO Emissions (g)	118
NOx Emissions (g)	18
Vehicles Entered	280
Vehicles Exited	288
Hourly Exit Rate	1728
Input Volume	1836
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

Total Network Performance

Total Delay (hr)	7.0
Delay / Veh (s)	50.1
Total Stops	575
Travel Dist (mi)	181.5
Travel Time (hr)	14.5
Avg Speed (mph)	13
Fuel Used (gal)	8.0
HC Emissions (g)	68
CO Emissions (g)	1893
NOx Emissions (g)	252
Vehicles Entered	505
Vehicles Exited	502
Hourly Exit Rate	3012
Input Volume	18405
% of Volume	16
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Arsenal & Grand

Movement	EB	EB	EB	WB	WB	NB	B2	SB	SB	SB
Directions Served	L	T	R	L	TR	TR	T	L	T	T
Maximum Queue (ft)	137	116	95	30	157	173	176	71	420	444
Average Queue (ft)	111	87	45	6	116	168	116	25	263	285
95th Queue (ft)	159	129	97	26	166	176	194	68	437	454
Link Distance (ft)	277	277	277	368	368	98	105		695	695
Upstream Blk Time (%)						31	11			
Queuing Penalty (veh)						244	84			
Storage Bay Dist (ft)								200		
Storage Blk Time (%)									41	
Queuing Penalty (veh)									23	

Intersection: 6: Hartford & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	30	53	31	272	31	118
Average Queue (ft)	6	16	6	152	12	61
95th Queue (ft)	26	51	26	286	37	131
Link Distance (ft)	200	240		260		105
Upstream Blk Time (%)				3		1
Queuing Penalty (veh)				21		13
Storage Bay Dist (ft)			120		100	
Storage Blk Time (%)				14		3
Queuing Penalty (veh)				1		0

Intersection: 9: Juniata & Grand

Movement	WB	NB	NB	SB
Directions Served	LTR	L	TR	TR
Maximum Queue (ft)	30	30	217	162
Average Queue (ft)	12	6	60	49
95th Queue (ft)	36	26	194	148
Link Distance (ft)	191		277	260
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)			2	2
Queuing Penalty (veh)			0	0

Intersection: 12: Conn & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	30	30	30	94	29	75
Average Queue (ft)	6	12	6	25	6	37
95th Queue (ft)	26	35	25	85	25	78
Link Distance (ft)	172	254		270		277
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120		120	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 15: Wyoming & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	72	31	31	285	29	270
Average Queue (ft)	47	6	6	146	9	197
95th Queue (ft)	73	26	27	313	28	313
Link Distance (ft)	155	228		273		270
Upstream Blk Time (%)				1		2
Queuing Penalty (veh)				8		18
Storage Bay Dist (ft)			120		120	
Storage Blk Time (%)				2		7
Queuing Penalty (veh)				0		0

Intersection: 18: Humphrey & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	30	31	31	250	30	89
Average Queue (ft)	6	12	6	76	18	56
95th Queue (ft)	26	36	26	225	42	96
Link Distance (ft)	193	259		257		273
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				2		
Storage Bay Dist (ft)			120		120	
Storage Blk Time (%)				4		
Queuing Penalty (veh)				0		

Intersection: 21: Utah & Grand

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	52	74	30	191	31	108
Average Queue (ft)	16	35	6	134	18	59
95th Queue (ft)	51	89	26	227	42	116
Link Distance (ft)	255	194		176		257
Upstream Blk Time (%)				1		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			120		120	
Storage Blk Time (%)				7		1
Queuing Penalty (veh)				1		0

Network Summary

Network wide Queuing Penalty: 417

Intersection: 3: Arsenal & Grand

Phase	1	2	3	4	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBTL	SBTL	EBL	WBTL
Maximum Green (s)	4.0	71.0	4.0	25.0	79.0	9.0	20.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	C-Max	None	None	C-Max	None	None
Avg. Green (s)	4.0	76.5	4.0	30.6	79.0	9.0	19.2
g/C Ratio	0.01	0.64	0.01	0.26	0.66	0.08	0.16
Cycles Skipped (%)	75	0	75	0	0	0	0
Cycles @ Minimum (%)	25	0	25	0	0	0	0
Cycles Maxed Out (%)	25	100	25	80	100	100	80
Cycles with Peds (%)	0	60	0	100	50	0	80

Controller Summary

Average Cycle Length (s): 120.0
Number of Complete Cycles : 4

Intersection: 6: Hartford & Grand

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	4.0	88.0	16.0	4.0	88.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	0.0	96.0	16.0	0.0	96.0	16.0
g/C Ratio	0.00	0.80	0.13	0.00	0.80	0.13
Cycles Skipped (%)	100	0	0	100	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	100	0	100	100
Cycles with Peds (%)	0	67	100	0	33	0

Controller Summary

Average Cycle Length (s): 120.0
Number of Complete Cycles : 4

Intersection: 15: Wyoming & Grand

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	4.0	88.0	16.0	4.0	88.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	0.0	96.6	13.9	4.0	96.6	13.9
g/C Ratio	0.00	0.80	0.12	0.01	0.80	0.12
Cycles Skipped (%)	100	0	0	80	0	0
Cycles @ Minimum (%)	0	0	0	20	0	0
Cycles Maxed Out (%)	0	100	20	20	100	20
Cycles with Peds (%)	0	75	60	0	50	40

Controller Summary

Average Cycle Length (s): 120.0

Number of Complete Cycles : 4

Intersection: 21: Utah & Grand

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	4.0	88.0	16.0	4.0	88.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	0.0	156.0	15.6	0.0	156.0	15.6
g/C Ratio	0.00	0.65	0.08	0.00	0.65	0.08
Cycles Skipped (%)	100	50	40	100	50	40
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	50	40	0	50	40
Cycles with Peds (%)	0	25	20	0	25	40

Controller Summary

Average Cycle Length (s): 120.0

Number of Complete Cycles : 4

C

APPENDIX

MARKET STUDY OVERVIEW

Power of Walkable Communities

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MAKING GREAT WALKABLE PLACES
SEVEN ELEMENTS FOR SUCCESS

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CATEGORIES OF WALKABLE PLACES

Traditional Downtown

- Boston
- Chattanooga
- Denver
- Midtown Manhattan
- San Diego
- Seattle
- Washington, D.C.

Downtown Adjacent

- Back Bay (Boston)
- Dupont Circle (DC)
- Georgetown (DC)
- Lincoln Park (Chicago)
- Mount Adams (Cincinnati)
- West Hollywood (LA)
- Virginia Highlands (Atlanta)

Suburban Town Center

- Birmingham (Detroit)
- Bethesda (DC)
- Bellevue (Seattle)
- Glendale (LA)
- Palo Alto (Bay Area)
- Shaker Heights (Cleveland)
- White Plains (NY)

Suburban Redevelopment

- Atlantic Station (Atlanta)
- Ballston (DC)
- Santana Row (San Jose)
- Victory Park (Dallas)

Suburban Greenfield

- Easton Town Center (Columbus)
- Reston Town Center (DC)
- San Tan Village (Phoenix)
- Valencia Town Center (LA)

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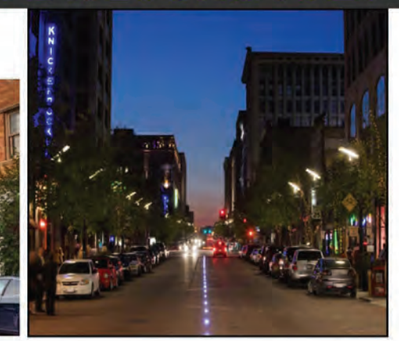
CATEGORIES OF WALKABLE PLACES
NUMEROUS "DOWNTOWN ADJACENT" PLACES IN MARKET

St. Louis Examples

- The Loop
- Washington Ave
- The Grove
- Cherokee Ave
- Central West End
- Soulard
- Lafayette Square



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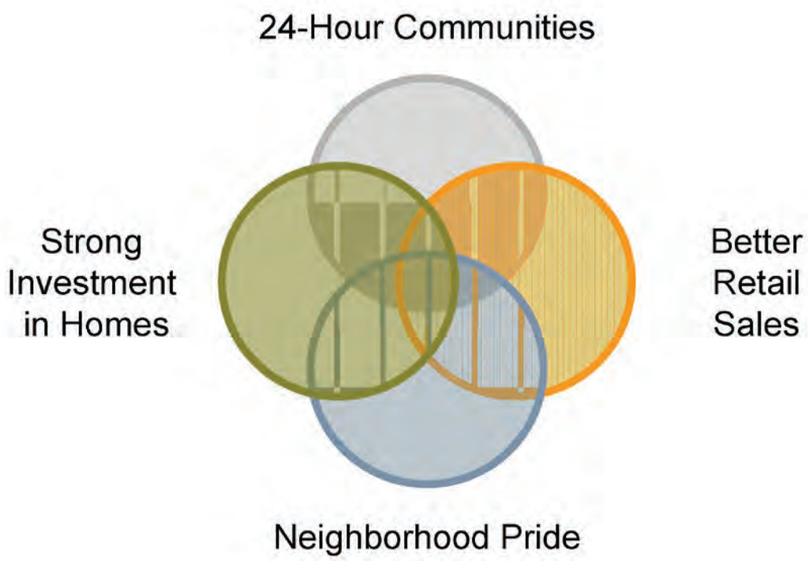
ADVANTAGES OF GREAT WALKABLE PLACES



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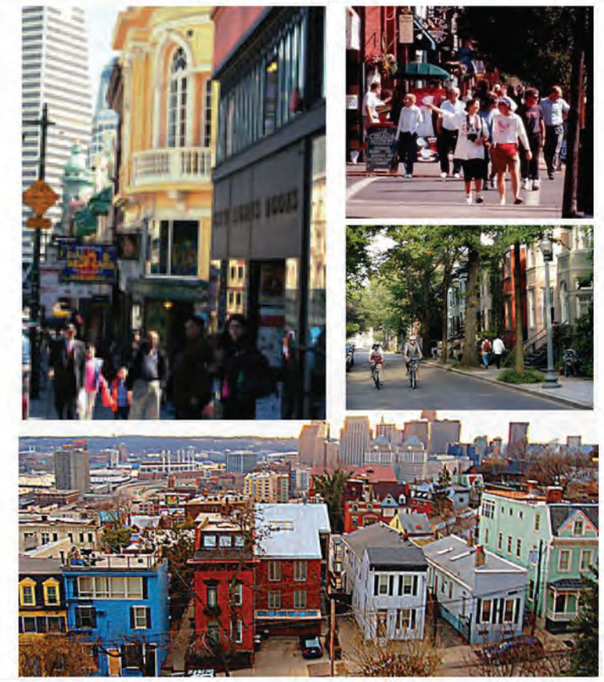
24-HOUR COMMUNITIES

ACTIVATE THE STREET WITH A VIBRANT MIX OF USES

- "Eyes on the street"
- Community gathering place
- Foster personal interaction



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STRONG INVESTMENT IN HOUSING
CREATES NEIGHBORHOOD STABILITY

- Increased sales volumes
- Stronger commercial and retail rents
- Stable residential rents
- Stronger sales prices & premiums (for-sale residential)
- Greater resiliency during downturns – properties retain value

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COMPETITIVE ADVANTAGE FOR RETAIL
UNIQUE SHOPPING AND DINING CREATES A DRAW

- Unique and authentic character
- Opportunities for outdoor dining
- Variety, diversity, & local flavor
- The experience economy
- Unique environs you can't get in a mall
- Areas that cultivate demand
- A very powerful "brand"

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NEIGHBORHOOD PRIDE

COMMUNITIES THAT ENDURE THE TEST OF TIME

- Community ownership – being part of something unique and special
- Neighborhood has staying power
- Strong community organizations and institutions create sense of place and ownership
- Public spaces and regular community events can foster this sense of place

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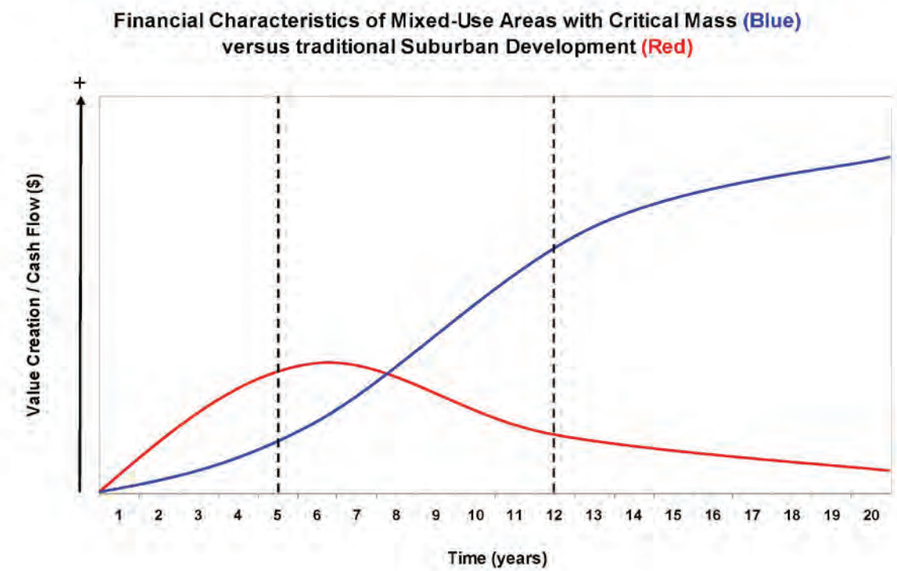
MIXED-USE NEIGHBORHOODS CREATE GREATER LONG-TERM VALUE THAN TRADITIONAL SUBURBS



SOURCE: RCLCO, The Brookings Institution

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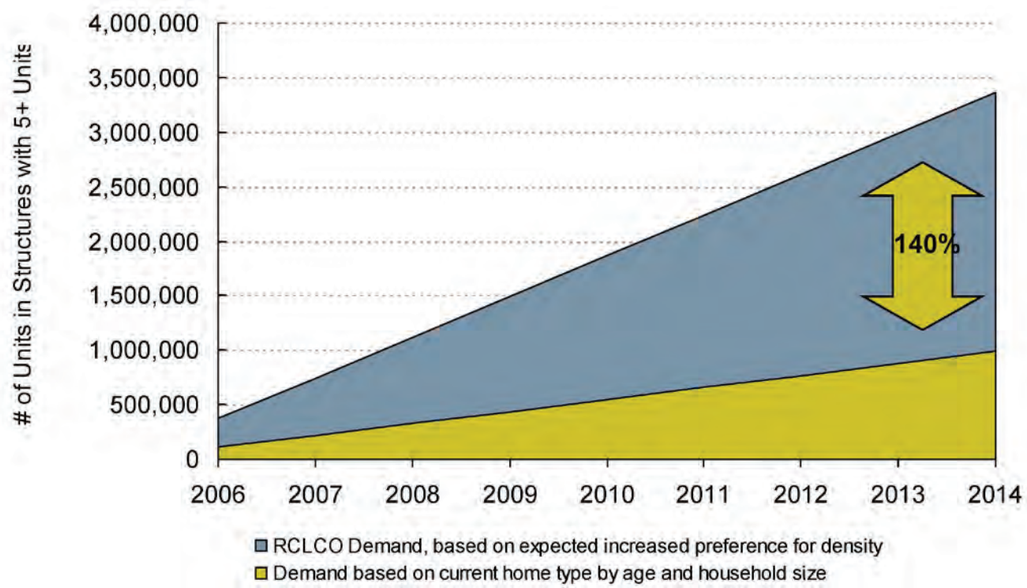
DEMOGRAPHIC SHIFT + PREFERENCE SHIFT =
POTENTIALLY MUCH HIGHER DEMAND FOR DENSITY



SOURCE: RCLCO Consumer Research

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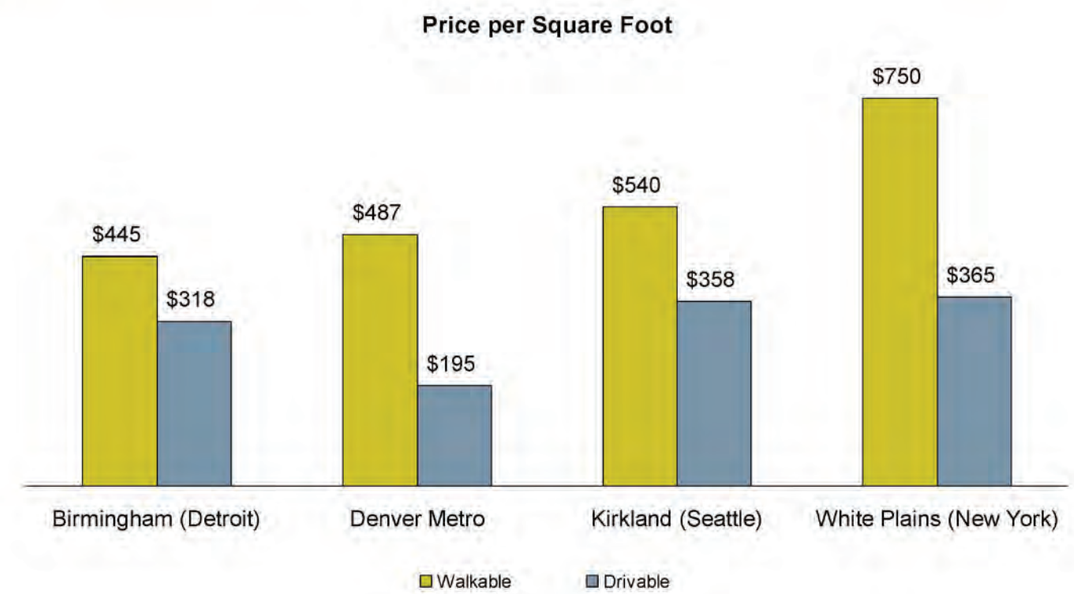
MIXED-USE, WALKABLE HOUSING MORE VALUABLE
EVEN IN SUBURBAN CONTEXTS, DEMAND FOR WALKABILITY



SOURCE: RCLCO, The Brookings Institution

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MIXED-USE, WALKABLE HOUSING MORE VALUABLE
PROXIMITY TO SOUTH GRAND ALREADY GENERATING VALUE

SOURCE: RCLCO, RealQuest

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SOUTH GRAND AT A CROSSROADS
INFLECTION POINT IN CONTINUUM OF COMMUNITY

Central West End

Built to the pedestrian … NOT the car!

Pleasant Areas to Linger

Gravois Ave.

Auto-Oriented Landscape

Suburban Retail Character

Long gaps and distances

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AUTHENTIC NEIGHBORHOODS CAN GROW WITHOUT LOSING DIVERSITY/UNIQUENESS

Baltimore, MD: "The Avenue"

Washington, D.C.: Adams Morgan

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AUTHENTIC NEIGHBORHOODS CAN GROW WITHOUT LOSING DIVERSITY/UNIQUENESS

Cleveland, OH: Ohio City

Pittsburgh, PA: Southside

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THE MARKET ALONE MAY NOT BE ENOUGH
NEEDS: DESIGN IMPROVEMENTS/STRATEGIC DIRECTION

Design Considerations

- Analog case studies within St. Louis and around the nation all have fewer than four lanes of traffic, and many have two.
- Vehicular traffic in analogs tends to move much slower – even though posted speed limits might be similar to South Grand
- Persistent concerns about parking may or may not be true, but, perception = reality
- Facades and streetwalls in analog case studies used to activate the street and create continuity, visual excitement, and clear sightlines
- Branding and theming of pedestrian experience via appropriately-designed pavers, landscaping, street treatments, signage, and building facades are important in analogs
- ***South Grand is evolving along the trajectory of several of these analogs – solving the design considerations will be key to continuing this evolution***

Strategic Direction

- South Grand CID has done the yeoman's work in bringing the area along thus far
- With the current energy and drive at the CID – and among its many stakeholders – it seems likely to maximize the future potential of this steward of South Grand
- Next steps may involve shifts in tactics employed and a refinement of goals and objectives for the CID
- Analog examples have often employed a private-sector property manager mentality in order to drive goals and objectives beneficial to the CID and the stakeholders involved
- ***South Grand CID has all of the pieces in place to maximize the return on the current public investment and accelerate the improvement of the investment climate along South Grand***

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South Grand in Context

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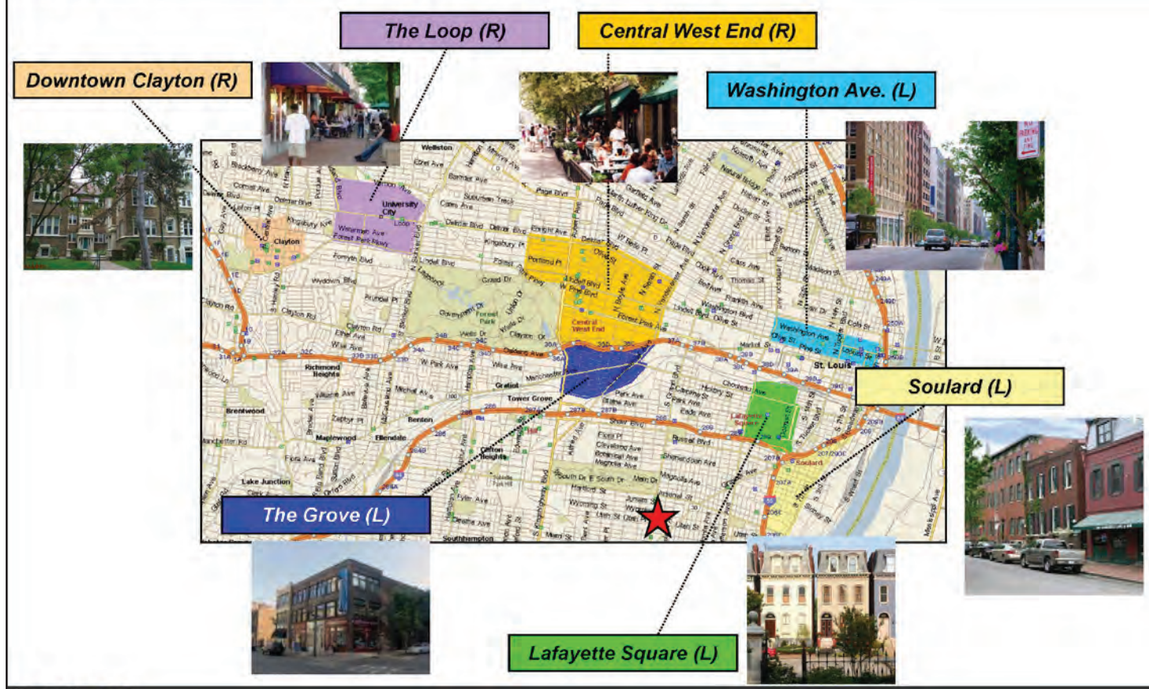
WALKABLE PLACES IN ST. LOUIS
(R)EGIONAL VS. (L)OCAL-SERVING



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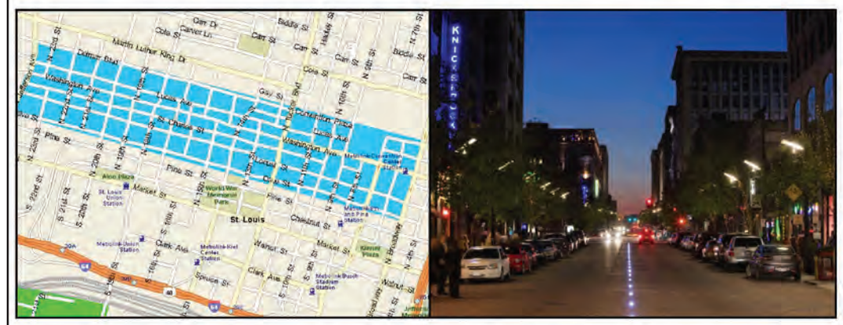
WASHINGTON AVENUE
HIGH-RISE URBAN CORRIDOR ADJACENT TO CBD



Residential Density	B
Daytime Employment	A
Variety of Local Retail	B
Access/ Infrastructure	A
Strong Urban Design	A
Symbiotic Anchor	A
Cohesive Brand	B

	Total	/Acre				Total	/Acre
Acres	196		Dominant Sector	Business Svcs.	Total Sales Volume	$153,940,000	$786,100
Households	892	4.6	Jobs/Household	15.9	Spending Power	$16,760,000	$85,600
Population	1,222	6.2	Vacancy	17.0%	Leakage	($137,180,000)	($700,500)
# Establishments	405	2.1	% Owners	~15.0%	Revitalizing high-rise residential core geared toward younger professionals, empty-nesters, and downtown workers. Likely future candidate for national branded retail tenants, but retail tenancy still incipient. Spillover from downtown props up sales volume.		
# MF Units	1,064	5.4	Avg. Yrs. of Residence (Owners)	N/A			
# SF Units	11	0.1	% of HH w/ $50K+ Income	6.1%			
Employment	14,164	72.3	Median Owner-Occ. Home Value	$51,187			

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THE LOOP
ENTERTAINMENT CENTER CLOSE TO WASH U.

Residential Density	A
Daytime Employment	C
Variety of Local Retail	B
Access/ Infrastructure	B
Strong Urban Design	B
Symbiotic Anchor	A
Cohesive Brand	A

	Total	/Acre				Total	/Acre
Acres	516		Dominant Sector	Eating/drinking est.	Total Sales Volume	$62,370,000	$120,900
Households	3,319	6.4	Jobs/Household	0.9	Spending Power	$122,060,000	$236,600
Population	6,908	13.4	Vacancy	7.8%	Leakage	$59,680,000	$115,700
# Establishments	202	0.4	% Owners	35.0%	Entertainment district surrounded by great neighborhoods of moderate density single-family homes and some higher-density housing. Retail benefits from proximity to Wash U – primarily entertainment and restaurants, some smaller specialty stores geared toward students.		
# MF Units	2,422	4.7	Avg. Yrs. of Residence (Owners)	9			
# SF Units	1,176	2.3	% of HH w/ $50K+ Income	33.5%			
Employment	3,098	6.0	Median Owner-Occ. Home Value	$352,000			

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THE GROVE
TRANSITIONING AREA WITH SMALL-SCALE RETAIL

Residential Density	C
Daytime Employment	C
Variety of Local Retail	C
Access/ Infrastructure	A
Strong Urban Design	C
Symbiotic Anchor	C
Cohesive Brand	C

	Total	/Acre				Total	/Acre
Acres	344		Dominant Sector	Manufacturing	Total Sales Volume	$39,620,000	$115,100
Households	1,255	3.6	Jobs/Household	1.5	Spending Power	$33,720,000	$97,900
Population	3,435	10.0	Vacancy	23.8%	Leakage	($5,900,000)	($17,100)
# Establishments	127	0.4	% Owners	33.9%	Historically a light industrial area with a quality housing stock of smaller single-family and some multifamily housing. Recent reinvestment in storefronts along Manchester Avenue has brought some vitality back to this area despite the highway dividing from the Central West End.		
# MF Units	1,067	3.1	Avg. Yrs. of Residence (Owners)	8			
# SF Units	581	1.7	% of HH w/ $50K+ Income	20.4%			
Employment	1,905	5.5	Median Owner-Occ. Home Value	$75,000			

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SOULARD
HISTORIC AND UNIQUE HOUSING STOCK

Residential Density	B
Daytime Employment	B
Variety of Local Retail	C
Access/ Infrastructure	A
Strong Urban Design	B
Symbiotic Anchor	B
Cohesive Brand	B

	Total	/Acre				Total	/Acre
Acres	337		Dominant Sector	Eating/drinking est.	Total Sales Volume	$104,620,000	$310,800
Households	1,885	5.6	Jobs/Household	1.8	Spending Power	$59,420,000	$176,500
Population	3,278	9.7	Vacancy	16.8%	Leakage	($45,200,000)	($134,300)
# Establishments	205	0.6	% Owners	29.2%	An historic area close to the Mississippi River and home to the Anheuser-Busch Brewery (symbiotic anchor). Maintains its fabled place in the regional mindset, and also now a trendy area for young professionals. Unique and historic housing stock and a good representation of unique and interesting bars and restaurants.		
# MF Units	1,727	5.1	Avg. Yrs. of Residence (Owners)	7			
# SF Units	538	1.6	% of HH w/ $50K+ Income	24.6%			
Employment	3,321	9.9	Median Owner-Occ. Home Value	$186,000			

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LAFAYETTE SQUARE
UPSCALE NEIGHBORHOOD WITH VARIETY OF RETAIL

Residential Density	C
Daytime Employment	C
Variety of Local Retail	B
Access/ Infrastructure	B
Strong Urban Design	A
Symbiotic Anchor	C
Cohesive Brand	B

	Total	/Acre				Total	/Acre
Acres	303		Dominant Sector	Business Svcs.	Total Sales Volume	**$58,190,000**	$191,800
Households	1,133	3.7	Jobs/Household	1.8	Spending Power	$45,720,000	$150,700
Population	2,259	7.4	Vacancy	16.9%	Leakage	($12,470,000)	($41,100)
# Establishments	116	0.4	% Owners	48.6%	Large historic single-family homes centered around Lafayette Park. Convenient location to downtown. Large amount of adaptive reuse and rehabilitation of individual homes. Some new infill construction – but in historic character. Strong local-serving retail presence including bars, restaurants, and a modicum of specialty retail.		
# MF Units	744	2.5	Avg. Yrs. of Residence (Owners)	6			
# SF Units	619	2.0	% of HH w/ $50K+ Income	32.3%			
Employment	2,070	6.8	Median Owner-Occ. Home Value	$145,000			

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DOWNTOWN CLAYTON
SUBURBAN EMPLOYMENT CENTER WITH HIGH INCOMES

Residential Density	C
Daytime Employment	A
Variety of Local Retail	A
Access/ Infrastructure	A
Strong Urban Design	B
Symbiotic Anchor	A
Cohesive Brand	A

	Total	/Acre				Total	/Acre
Acres	558		Dominant Sector	Legal Svcs.	Total Sales Volume	$77,380,000	$138,700
Households	2,015	3.6	Jobs/Household	13.4	Spending Power	$118,110,000	$211,600
Population	5,290	9.5	Vacancy	9.2%	Leakage	$40,730,000	$73,000
# Establishments	1,202	2.2	% Owners	71.7%			
# MF Units	921	1.7	Avg. Yrs. of Residence (Owners)	9			
# SF Units	1,298	2.3	% of HH w/ $50K+ Income	69.0%			
Employment	26,906	48.2	Median Owner-Occ. Home Value	$472,000			

Strong daytime employment center and with little residential density. Retail supported by from the large daytime employment population and adjacency to nearby high-income neighborhoods. Retail within downtown Clayton is primarily service and restaurant oriented.

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CENTRAL WEST END
HIGH DENSITY AREA WITH VARIETY OF VIBRANT RETAIL

Residential Density	A
Daytime Employment	A
Variety of Local Retail	A
Access/ Infrastructure	A
Strong Urban Design	A
Symbiotic Anchor	A
Cohesive Brand	A

	Total	/Acre				Total	/Acre
Acres	1,210		Dominant Sector	Health Svcs.	Total Sales Volume	$252,520,000	$208,800
Households	8,934	7.4	Jobs/Household	3.8	Spending Power	$267,040,000	$220,800
Population	14,987	12.4	Vacancy	12.4%	Leakage	$14,510,000	$12,000
# Establishments	1,442	1.2	% Owners	25.5%			
# MF Units	8,623	7.1	Avg. Yrs. of Residence (Owners)	6			
# SF Units	1,574	1.3	% of HH w/ $50K+ Income	26.1%			
Employment	33,742	27.9	Median Owner-Occ. Home Value	$247,000			

The Central West End is a vibrant area of shops and restaurants set amid historic single-family and significant concentrations of higher-density multifamily housing. The Wash U. Medical Center is a large presence in the area, and serves a role as a strong symbiotic anchor.

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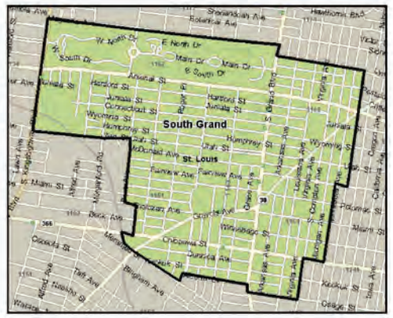
SOUTH GRAND
DENSE NEIGHBORHOOD ANCHORED BY RESTAURANTS



Residential Density	A
Daytime Employment	C
Variety of Local Retail	B
Access/ Infrastructure	B
Strong Urban Design	C
Symbiotic Anchor	C
Cohesive Brand	B

	Total	/Acre				Total	/Acre
Acres	1,558		Dominant Sector	Personal Svcs.	Total Sales Volume	$393,730,000	$252,800
Households	9,739	6.3	Jobs/Household	0.6	Spending Power	$306,200,000	$196,600
Population	24,842	15.9	Vacancy	17.4%	Leakage	($87,530,000)	($56,200)
# Establishments	510	0.3	% Owners	43.0%			
# MF Units	7,780	5.0	Avg. Yrs. of Residence (Owners)	8			
# SF Units	4,016	2.6	% of HH w/ $50K+ Income	16.8%			
Employment	6,252	4.0	Median Owner-Occ. Home Value	$101,000			

An area known for its strong international community which is expressed through a variety of unique eateries and full-service restaurants offering a variety of international cuisine. Quality housing stock, especially in areas west of South Grand and close to Tower Grove Park. Area suffers from a lack of connectivity along South Grand itself.

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ST. LOUIS - WALKABLE PLACES IN COMPARISON
WILL STRONG HH DENSITIES ALONE BE ENOUGH?

Area	Jobs/ HH	Jobs/ Acre	HHs/ Acre	Housing (% Vacant)	Housing (% Owner)	% HHs Earning > $50k/year	Sales Volume/ HH
Washington Avenue	15.9	72.3	4.6	17.0%	15.0%	6.1%	$172,578
The Loop	0.9	6.0	6.4	7.8%	35.0%	33.5%	$18,792
The Grove	1.5	5.5	3.6	23.8%	33.9%	20.4%	$31,570
Soulard	1.8	9.9	5.6	16.8%	29.2%	24.6%	$55,501
Lafayette Square	1.8	6.8	3.7	16.9%	48.6%	32.3%	$51,359
Downtown Clayton	13.4	48.2	3.6	9.2%	71.7%	69.0%	$38,401
Central West End	3.8	27.9	7.4	12.4%	25.5%	26.1%	$28,265
South Grand	**0.6**	**4.0**	**6.3**	**17.4%**	**43.0%**	**16.8%**	**$40,428**

Lowest concentration of daytime employment. No adjacent symbiotic anchor to drive daytime traffic to businesses/restaurants.

Strong household densities – a good starting point for neighborhood retail

High vacancy rate, esp. for-rent

Many owner-occupied households, but lower incomes than other areas such as Lafayette Square

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Issues & Opportunities

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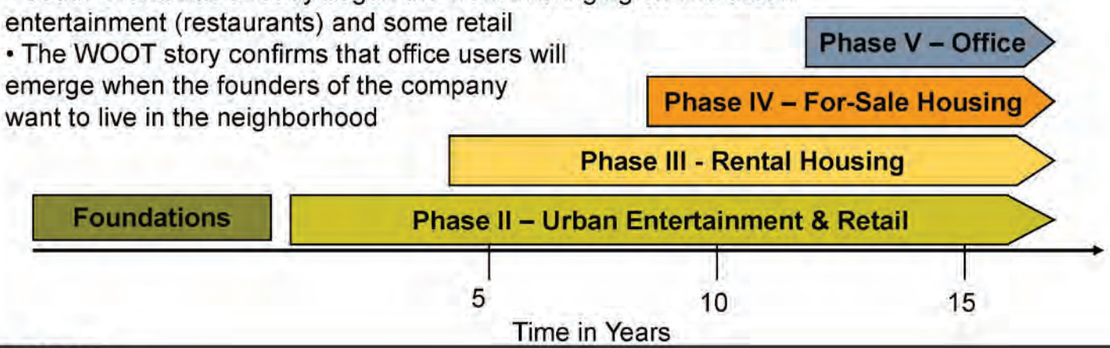
SOUTH GRAND – EVOLUTION AND TRAJECTORY
WELL-POSITIONED, AVOIDED OVER-REACHING IN BOOM YEARS

The diagram below depicts the most common – and most successful – trajectory of development of mixed-use districts that sustain the test of time.

Key elements to remember are:

- Foundation elements, such as catalytic uses and the creation of a BID/CID/Catalytic Development Entity, are critical
- Rental housing critical to making the retail thrive in the long-term
- The gestation period between foundations and long-term success may be twenty years or more (Blueberry Hill opened in 1972)
- South Grand has already begun the work in bringing on-line urban entertainment (restaurants) and some retail
- The WOOT story confirms that office users will emerge when the founders of the company want to live in the neighborhood



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SOUTH GRAND
ECONOMIC DEVELOPMENT STRENGTHS & CHALLENGES

Strengths (Attributes):

- Relatively high residential density
  - Quality housing stock
- Existing retail environment
  - Not starting from scratch
- Commercial strip has high degree of local and regional visibility

Challenges (Critical Issues):

- Relatively high proportion of vacant housing (42% of rental stock is vacant)
- Low daytime population (few employees within walking distance)
- Fewer renters than in many comparable vibrant mixed-use urban districts
- No symbiotic anchor (or at least, the potential symbiotic anchor is far away)
- Lacks the "connective tissue" characteristic of great walkable retail environs

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ECONOMIC DEVELOPMENT OPPORTUNITIES

Aspiration: South Grand aspires to be a unique walkable place with a vibrant commercial environment similar to the Central West End and The Loop. How can we get there from here?

Situation #1:	Great restaurant base but area remains a "point and shoot" environment rather than a place people want to linger and support other retail options. Loose brand exists but area lacks coherent vision among consumers.
Opportunity: #1:	Adding the right connective tissue (both through infrastructure enhancement and retail strategy) will help create a more coherent district that will be a destination. Loose brand exists now but needs to be refined.
Situation #2:	Quality residential stock exists but not all units being used to its utmost potential. Many vacant and some dilapidated housing units.
Opportunity #2:	Use policy levers and work with individual property owners and the local investment community to enhance and upgrade the existing housing stock.
Situation #3:	Strong culture of homeownership exists. Increasing the proportion of renter households will be an important element in driving demand for unique and vibrant local-serving retail options. Rental strategy = retail strategy.
Opportunity #3:	Encourage purchase of available stable and underutilized housing stock by investors. They can renovate these properties and eventually rent them. This can be a "win win" for the neighborhood.

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CATALYTIC USES HAVE CRITICAL ROLE
NON-QUANTIFIABLE DEMAND, FOUNDATION FOR GROWTH

- Catalytic uses can be "game changers"
- Demand unverifiable – Visionary Deals, defy underwriting
- Joe Edwards in The Loop:
  - A champion of entertainment-based uses
  - Helped define the district in the minds of consumers - which created a regional draw that improved the position of all retail, restaurant, and entertainment operators
  - Major changes like this typically do not occur organically – will take an individual's vision

Can South Grand recruit an entertainment champion?
- Person take the reigns and develop an entertainment based venue or bring in other catalytic uses

How can the CID assist?
- Work with property owners with vacant space to establish temporary art galleries, live music venues, etc.
- Leverage existing arts community in the neighborhood in a variety of ways to help brand the district
- Encourage live music and open mic events at existing restaurants, bars, and public spaces (CID funded?)
- Use capital expenditures funds to directly drive change

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Placemaking Economy Forecast & Opportunities

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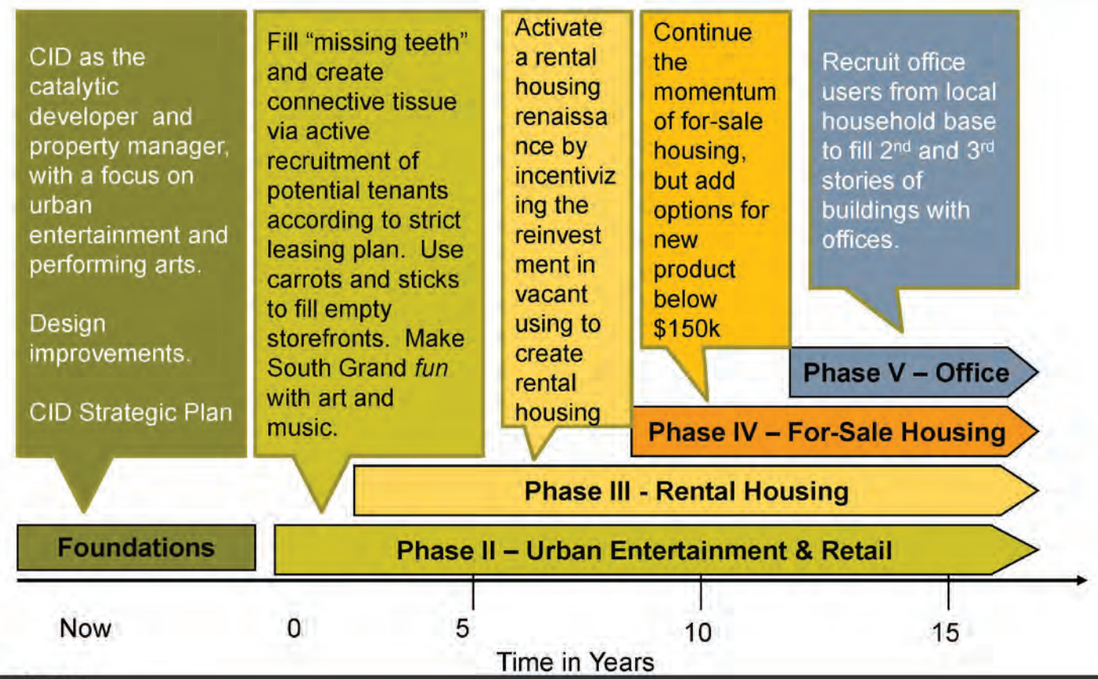
SOUTH GRAND ACTION AGENDA



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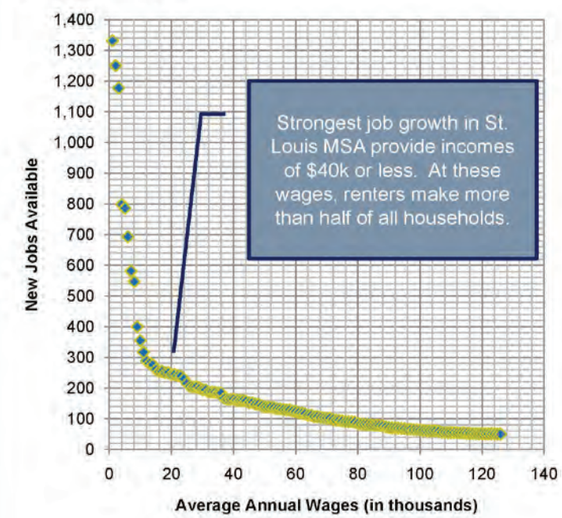
BULK OF JOB GROWTH = INCOMES < $40k
SUGGESTS DEEP DEMAND FOR RENTAL HOUSING

St. Louis Metro Area Occupational Projections 2006 to 2016



Tenure by Household Income – St. Louis City 2009

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GENERATION Y – MARKET OPPORTUNITY IN STL
CAPTURING THEM IN SO. GRAND IMPORTANT FOR RETAIL

Generation	Born	2008 Age	2008 % of Nation	US 2008 Pop.	2008 % of STL MSA
Eisenhowers	Before 1946	62+	17%	51M	16%
Baby Boomers	1946 – 1964	43 – 62	27%	78M	25%
Gen X	1965 – 1980	27 – 43	18%	52M	23%
Gen Y (Echo/Millenials)	1981 – 1999	8 – 27	27%	80M	25%
Gen Z	2000 and After	0 – 8	10%	30M	11%

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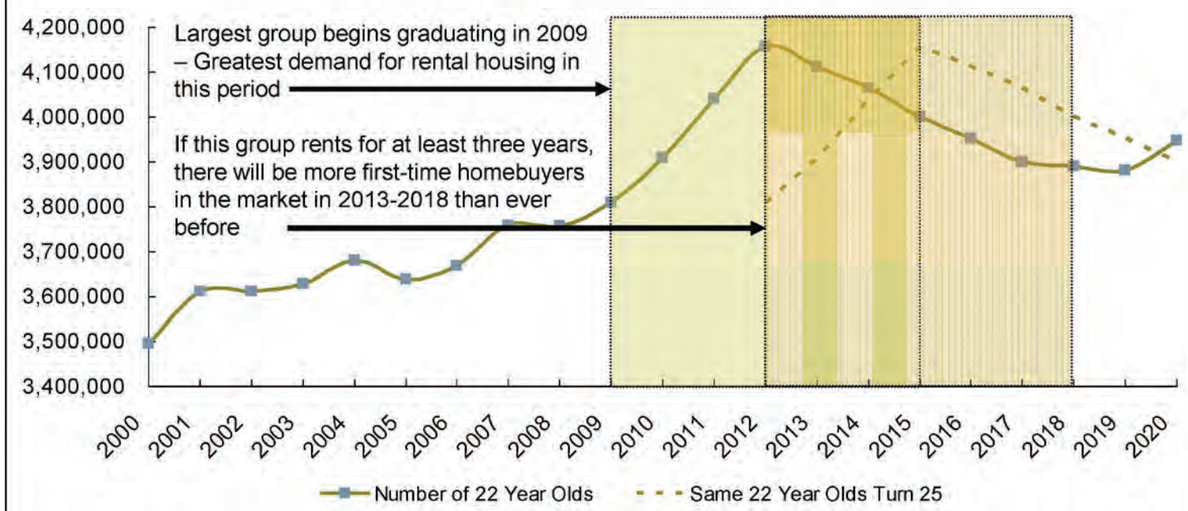
GENERATION Y WILL RENT FOR SEVERAL YEARS
SO. GRAND MUST HAVE PRODUCT TO ACCOMMODATE THEM

RCLCO Consumer Research shows:
- 41% of Generation Y plan to rent for at least three years
- 77% of Generation Y plan to live in an Urban Core



NOTE: Number of 22-year olds is based upon birth rate and does not factor in death rates and migration.
SOURCE: U.S. Centers for Disease Control and Prevention

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STRONG RENTAL MARKET GROWTH POTENTIAL
SOUTH GRAND HAS SHORTAGE OF ADEQUATE PRODUCT

Wave of Gen Y and late Gen X renters entering the St. Louis market through 2013

Only 12% of South Grand's housing stock positioned as rental – compared to renter propensity of 49% city-wide

Much of South Grand's rental stock is vacant or under-invested – opportunity to reposition these units to expand the capture of new renters

Can increase and enhance rental stock through public-private initiative to catalyze investment, especially east of Grand Avenue – with rental apartment buildings transacting at approximately $30k per door (finished), the economics for this are not unreasonable

Most new renter households demand housing between $400 and $600 per month (average)

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RESIDENTIAL MARKET FUNDAMENTALS
VACANT RENTAL STOCK = OPPORTUNITY

Current Conditions

South Grand only 12% Renters

St. Louis City 49% Renters

42% of South Grand rental stock is vacant

Critical Issues

Difficult to capture Gen Y w/o appropriate or enough rental stock

Vacant stock likely substandard

Opportunities

"Rental renaissance"

Rehab and conversion, especially east of Grand Ave

Capture 5% to 7% of market

Occupied housing is better for:

- Retailers
- Safety
- Public Perception
- Neighborhood Aesthetics
- Tax Base
- Neighborhood Stability

Appx 10,000 total housing units

Appx. 2,000 of these are for-rent

Almost 1,000 are vacant, and of these, only 200 are vacant but being marketed or waiting for an occupant.

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RESIDENTIAL MARKET FUNDAMENTALS
VACANT RENTAL STOCK = OPPORTUNITY

Current Conditions

49% of City HHs are renters

Only 12% of So Grand stock is for-rent

42% of South Grand rental stock is vacant

Critical Issues

Difficult to capture Gen Y w/o appropriate or enough rental stock

Vacant stock likely substandard

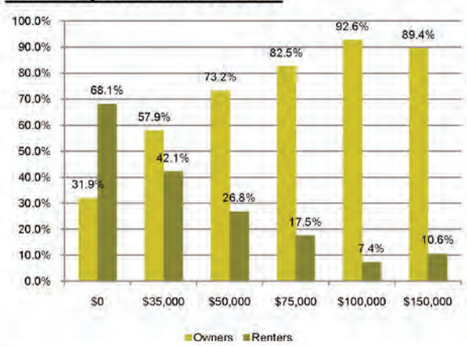
Opportunities

"Rental renaissance"

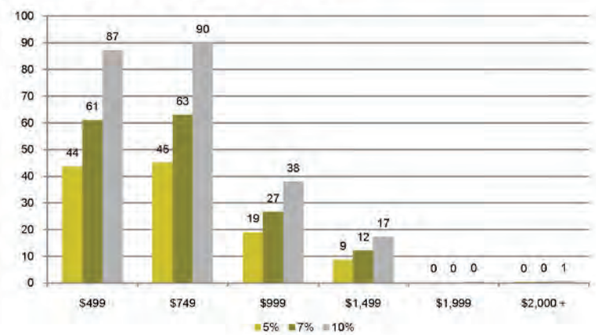
Rehab and conversion, especially east of Grand Ave

Capture 5% to 7% of market

Tenure by Household Income



Demand Capture by Monthly Rent



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STRONG RETAIL UPSIDE POTENTIAL
EXISTING BUSINESSES WILL BENEFIT AND NEW ONES WILL OPEN

- Opportunity for existing retail and restaurants to capture more of area expenditures
- Also an opportunity for new stores/restaurants to enter the marketplace – will not cannibalize existing businesses
- South Grand will remain a largely local-serving retail destination – this will not be a natural location for national tenants to locate (and significant space inventory on Wash Ave. will be first choice for most national retailers looking for new St. Louis location)

Store Category	South Grand Retail Sales	Additional Potential Sales	Upside Absorbed By...
Furniture & Home Furnishings	$810,000	$960,000	Existing and New Stores
Household Appliances	$0	$760,000	New Store
Specialty Food Stores	$450,000	$340,000	Existing Stores
Beer, Wine, & Liquor Stores	$1,500,000	$1,100,000	Existing and New Stores
Drug Stores	$7,650,000	$7,290,000	Existing and New Stores
Optical Goods	$0	$430,000	New Store
Sporting Goods	$120,000	$1,240,000	Existing and New Stores
Book Stores	$0	$1,050,000	New Stores
Office Supplies, Stationery, Gifts	$450,000	$1,380,000	Existing and New Stores
Full-Service Restaurants	$2,360,000	$8,960,000	Existing and New Stores
Drinking Places (Clubs & Bars)	$140,000	$1,020,000	Existing and New Stores

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GENERATION Y KEY TO URBAN RETAIL ACTIVATION
DRIVE RESTAURANT AND ENTERTAINMENT REVENUES

- Gen X
  - Annual buying power - $125 B
  - Clicks *and then* bricks
  - Home goods
  - Gourmet groceries
  - Upscale food-at-home
- Gen Y
  - Spending $172 B per year and growing
  - Urban sensibilities
  - Clicks *instead of* bricks
  - ***Restaurants*** – eating out 24 times per month
  - "Indie" chains
  - Shopping is entertainment

	Under 25	25-45	45-65	45-54	55-64	65+
Average Annual Expenditures	$24k	$42k	$50k	$52k	$47k	$31k

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RETAIL MARKET POTENTIAL

South Grand restaurants and retail would benefit from an expanded capture of younger demand segment

They dine out 28 times per month on average and spend a higher proportion of their disposable income on urban retail than family households

"Missing teeth" on South Grand are a barrier to success

Lack of urgency to fill empty storefronts certainly not helping the cause

Chain grocer not adequately serving the neighborhood – in need of repositioning or upgrading

Strong opportunity to use existing footprints to make South Grand a great location for restaurant/food retailers that also want to wholesale their specialty foods (and in fact, this is already happening)

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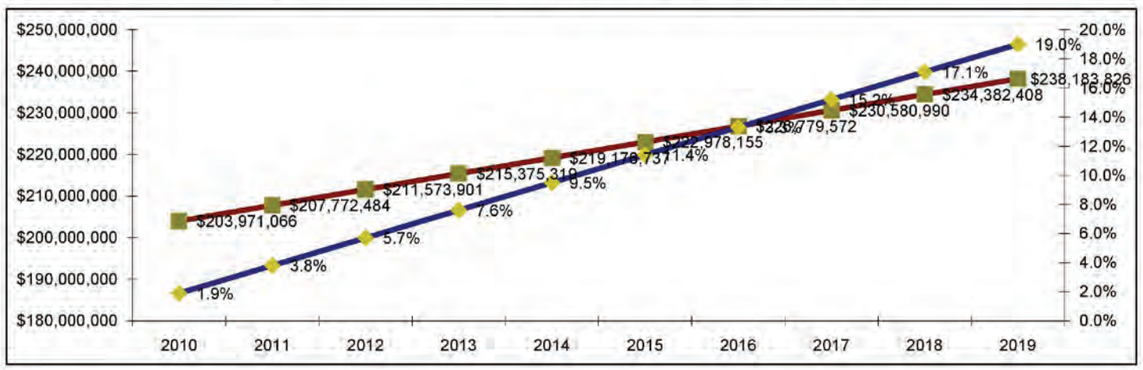
RETAIL MARKET FUNDAMENTALS
DISTRICT SALES POTENTIAL UPSIDE > $30M (15%)

Current Conditions
- $200M Annual Revenues
- $100M Taxable
- Too *much* retail in Market Area
- South Grand net $ ***importer***

Outlook
- Recapture $30 M in revenues
- Increase revenues 28.5% over 10-year period (to $238M)
- Diversify retail base *somewhat*

Opportunities
- Culinary cluster
- Kitchen appliances
- Home and garden
- Specialty & Convenience

Potential Retail Expansion Opportunities on South Grand – 2009-2019



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FOR-SALE RESIDENTIAL OPPORTUNITY
LONG-TERM PROPOSITION, BUT REQUIRES FORESIGHT

- Today's for-sale opportunity confined to the following areas:
  - Rehabbed single-family or plex beginning in the $150k to $200k range east of Grand, and starting in the $220k range closer to Grand itself.
  - "Fixer-upper" opportunity in the sub $150k (and often sub$100k) range, with rehab costs of $50k and up plus time/sweat equity
  - Limited opportunities for turnkey purchase/live below $150k – *but that's where the majority of the demand is*
- Unclear whether for-sale economics for deepest part of demand work – but they could certainly work for re-positioning as rental
- Solutions include:
  - New construction (such as Compton Gate), but community has expressed sour opinions on new construction in South Grand
  - Multifamily conversions
- Benefits of a Balanced For-Sale Solution include:
  - Locations for the next entrepreneur to live/invest in the neighborhood
  - Continued trajectory towards stability, especially east of Grand
  - Ownership already strong in South Grand

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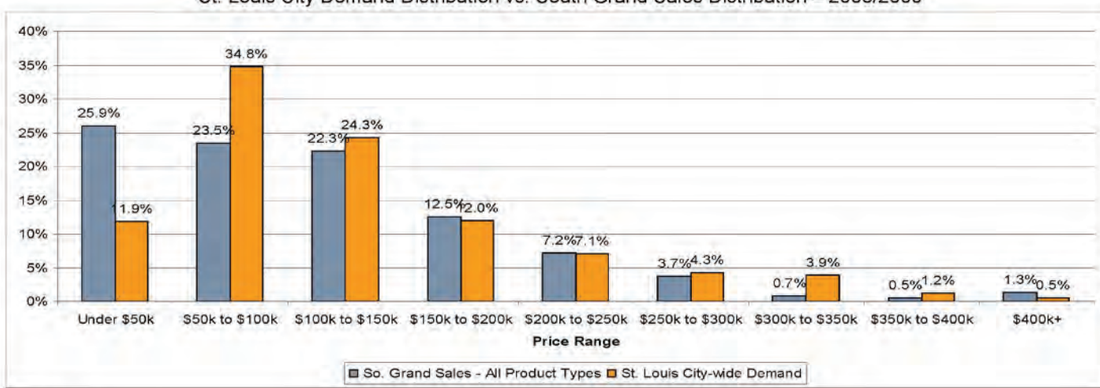
RESIDENTIAL MARKET FUNDAMENTALS
CONTINUE MOMENTUM TO RECLAIM AND REPOSITION

Current Conditions
- Sales at every price point
- Entry-level pricing available
- Opportunities for upgrading
- ~400 sales/year = 6% of City

Critical Issues
- New development difficult
- Upgrades not for everyone
- East-west divide

Opportunities
- Continue momentum
- Product $150k near So. Grand
- Incentivize re-positioning of vacant stock east of Grand

St. Louis City Demand Distribution vs. South Grand Sales Distribution – 2008/2009



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OFFICE OPPORTUNITY
LOCAL-SERVING AND LIGHTNING STRIKE TENANTS

- New office demand will come primarily from smaller tenants representing a variety of local-serving uses
  - Tenancy will be made up of office users that are not seeking high profile locations but rather storefront or second-level (above retail) spaces that are easily accessible and highly visible to neighborhood residents
  - Affordability will be a key location determinant for these tenants
  - Examples of tenants include: medical office (doctors, dentists, optometrists, etc.), small law offices, accountants, financial advisors, etc.
- Typical footprint will be between 2,000 and 4,000 square feet
  - However, many will be below 2,000 square feet
  - Few tenants will have substantial expansion needs
- Rents will range from $10 to $12 full-service gross
  - Not high enough to support new construction
- "Woot 2.0"?
  - Potentially in a later phase when surrounding area has further evolved (more retail and residential will be necessary and more young residents will need to be attracted)

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OFFICE MARKET FUNDAMENTALS

STRUCTURAL DEMAND FOR 14k to 37k ON S. GRAND

Regional Snapshot

43M SF, 17% Vacancy

40k new jobs through 2019

Higher occupancies closer-in

Market demand for 4M SF

St. Louis City

2M SF beyond Downtown

4.7% of All Occupied Space

Renovations and Rehabs

Market ***capture*** for 131k-206k

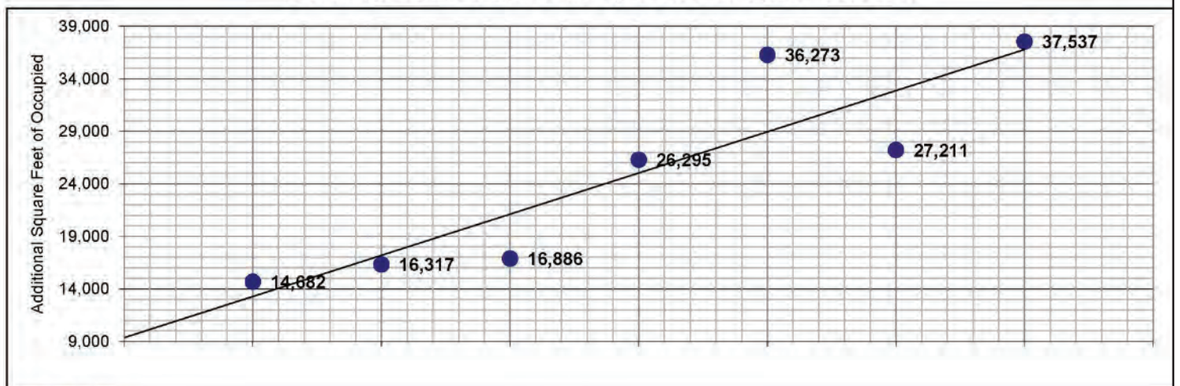
South Grand

Niche market with great appeal

Creative firms that want walkability and unique space

Market ***capture*** of 14k to 37k

Potential Additional Occupied Office Space on South Grand – 2009-2019



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SOUTH GRAND OPPORTUNITIES BY PRODUCT TYPE

Product Type	Current Situation	Challenges	Opportunity/Strategy	Near-Term Market Opp (X to XXX)	Mid-Term Market Opp (X to XXX)
For-Rent Residential	Only 12% of area households are renters and many rental units are sub-standard housing.	Large proportion of rental housing stock is vacant and/or underutilized and dilapidated.	Attracting more young renters will strengthen area retail. Can encourage purchase of underutilized housing and incentivize buyers to reinvest and offer as rental housing.	XXX	XXX
For-Sale Residential	Strongest demand exists for housing priced below $150,000. Currently, many units at these price points are dilapidated and have not been recently updated.	Not financially feasible to deliver new product at these price points.	Encourage entrepreneurial investment community to purchase and reposition vacant and most dilapidated housing and resell at affordable prices.	XX	XXX
Retail	Great restaurant base exists but area remains a "point and shoot" environment. People are not lingering and shopping at multiple stores.	South Grand has many "missing teeth" and its existing infrastructure is not conducive to a strong retail district.	Bolster existing retail while appealing to new operators. Provide "connective tissue" to create a more coherent district and strengthen brand.	XX	XXX
Office	Few office users on/around South Grand. Those that do exist are local-serving and found in smaller storefronts or on upper levels above retail.	Lack of quality space with modern amenities, limited visibility for office users.	South Grand can be a niche market with great appeal. Pent up demand for additional local-serving uses. Upside from creative class tenants attracted to area's brand and quality of life.	X	XX

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SOUTH GRAND OPPORTUNITIES BY PRODUCT TYPE

Product Type	Typical Unit Size	Optimal Pricing	Candidate Tenant(s)
For-Rent Residential	650 SF (1BR/1Ba) 950 – 1,150 SF (2BR/2Ba) Under 1,400 SF (3BR/2Ba)	$1.00/SF	Young professionals and students, roommates
For-Sale Residential (Condos)	750 – 800 SF (1BR/1Ba) 1,100 – 1,300 SF (2BR/2Ba) < 1,900 SF (3BR/2Ba)	$190 - $215/SF	Young professional singles and couples and empty-nesters (secondary audience)
For-Sale Residential (Existing SF/Plex)	Varies, but homes typically in the 2,000 to 2,500 range	$100/SF for a nicely-rehabbed unit	Mature families and empty nesters Some younger families/couples that do not mind the pain and suffering of living through a renovation
Retail	1,500 to 3,000 SF	$12 - $16/SF (NNN)	Furniture/Home Furnishings, Drug Store, Optical Goods, Sporting Goods, Book Store, Office Supplies/Stationery/Gifts, Full-service Restaurants, Drinking Places (Bars & Clubs)
Office	2,000 to 4,000 SF	$10 - $12/SF (full-service gross)	Local-serving office users/retail hybrid (including medical professional offices)

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HIGH IMPACT & LOW COST ALTERNATIVES ARE EASY VICTORIES FOR THE CID

Factors	Qualitative Assessment						
	South Grand	Central West End	The Loop	Weight	Transfomative Impact	Cost	Focus
Sidewalk Width	2	2	3	4	Moderate	High	X
Sidewalk Condition	1	5	4	7	High	Low	XXXX
Perceived Safety	2	4	3	10	HIgh	Moderate	XX
Wayfinding	2	4	4	3	Low	Moderate	X
Lighting	2	4	4	6	Moderate	Moderate	XX
Street Trees	3	4	2	8	Moderate	High	XX
Percieved Parking Convenience	1	3	4	13	High	Low	XXXX
Noise (db)	1	5	4	10	High	Moderate	XXX
Street Furniture	1	3	3	2	Low	High	X
Façade Treatments	3	4	2	10	High	Moderate	XXX
Crosswalk Effectiveness	1	5	3	5	Moderate	Low	XX
Vehicular Speeds	1	5	3	12	High	Low	XXXX
Bicycle-Friendly	1	2	4	5	Low	Low	X
Street Width	2	5	3	5	Moderate	High	X
Weighted Average/Total	1.64	4.06	3.26	100			

* Weight reflects importance of factor in positively-influencing economic development. Values total to 100.

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IMPLICATIONS FOR STRATEGY

- **What do these key trends/issues mean for the CID's strategy?**
  - St. Louis gaining households – and the city is back in business
  - Retail strategy implies a *residential strategy*
  - Capturing Gen Y (renters for now) critical for retail today and office tomorrow
  - South Grand will have to compete against other emerging areas
  - Must fill missing teeth with retail connective tissue
  - Clearly define the South Grand "brand"
  - Maintain international flavor and "edginess"
  - The CID must be the software that runs the hardware

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Agenda – Day 1

Wednesday September 9

- **8:00 AM – 9:00 AM – Economic Overview**
- **9:00 AM – 10:00 AM – South Grand CID-Findings and Conclusions**
  - **Situation Analysis – SWOT**
    - **Key Strategy Issues**
    - **Examples from Other CIDs**
- **10:00 AM – 12:00 PM – Preliminary Strategy Planning**
  - **Strategy Goals and Objectives – What Does "Success" Look Like?**
  - **Mission, Vision ,and Core Values**
  - **Core Competency Strategy**
  - **Customer Strategy & Brand**
  - **Organization Strategy**
  - **Profitability/Capital**
  - **CID Tactics**
  - **Strategy Hypothesis**
- **12:00 PM – Working Lunch (Optional)**
- **1:00 PM – RCLCO Work Sessions**

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STRENGTHS

People and Talent

- Tremendously motivated and capable board
- Energetic and capable staff
- Community members and business owners recognize this as a key asset – a competitive advantage for South Grand CID vis-à-vis other places

Shared Vision

- Business owners, property owners, and community residents largely share vision of a more pedestrian-friendly environment with a first-rate urban retail/restaurant experience
- Consensus around this vision has been demonstrated privately and publicly

Community Integration

- Two-way-street – CID active in community and community can interface with CID
- Sets the table for constructive dialogue at the community level and at City Hall
- Community shares broad goals of CID

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STRENGTHS

Current Planning Effort

- Tremendous opportunity to fix the "hardware" of South Grand and put in place momentum for the next level of growth
- Opportunity to go to market anew with a refined brand statement or a new brand proposition

Foundations Already In-Place

- Formation of a CID and the cultivation of restaurant experience usually the biggest hurdle to cross
- With this infrastructure in place, the strategy involves fine-tuning and goal-setting more than ground-up capacity building

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WEAKNESSES

Mission, Vision, and Core Values?

- Not stated explicitly, and lack of clarity implicitly?
- How will the CID measure success?
- Affects spending and activity priorities (how do we know what we want to do and whether it helps achieve our goals?)

Management Confusion

- Hospitality Coordinator reports to Executive Director, but is reviewed by Downtown Partnership
- No job descriptions – difficult to measure success
- Overlapping or confusing lines of responsibility

Missing Teeth

- There should be no excuses for empty storefronts north of Utah
- Not all share the motivation for investment and reinvestment - are the benefits the same for all?

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WEAKNESSES

Funding and Activity Priorities

- Not aligned to mission, vision, or goals, so…
- Difficult to measure, manage, and prioritize
- CID as catalytic developer? Urban entertainment champion?

Business Owners and CID Board Not on Same Page

- *Very* different perspectives on quality of South Grand
- *Very* different perspectives on roles/responsibilities of CID
- Frustration on behalf of both parties, but critical to close this loop

Governance

- Current Board not representative of all stakeholders
- Need a culture of bottom-line orientation

Planning "bogeymen"

- Parking is a scapegoat for other issues
- Traffic speeds a real concern, but great places can live or die without beautiful trees and benches

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OPPORTUNITIES

Cadre of Property Owners

- Opportunity to leverage this talent and resources to do a limited number of very targeted deals
- Speak the language of development

Market Forces

- The economic opportunity is there already
- St. Louis not a boom/bust environment, but will enjoy national upswing nonetheless

Residential Vacancies East of Grand

- Bringing these back on-line for Gen Y renters will further animate the streetscape, fill in the neighborhood, and drive retail sales volumes

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THREATS

Participation at All Levels

- Mixed record on communicating benefits of CID involvement to business owners
- Must demonstrate positive impact of work to business owners in order to cultivate interest – not easy to do!

Market Size and Competitive Advantage

- Other areas up-and-coming – there is only so much regional demand
- South Grand is only cool, unique, edgy, and different for so long

Hostility to New Construction

- Need to expand opportunities for multifamily development
- Need to rebalance jobs-housing ratio

Development Sites

- This is a repositioning exercise more than anything else
- Without carrots, sticks, and all players on the same team, difficult to get to the goal of a better South Grand

Politics and the East/West Divide

- Aldermanic district division down Grand dilutes capacity of public stewards to treat the area as a cohesive entity

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KEY STRATEGY ISSUES

Goals and Objectives

- Outline a clear, consensus vision for the CID
- Define clear and measurable goals and objectives for a five-year horizon

Mission and Vision

- Lack of mission and vision statements
- Need to define how the mission statements reflect what the company actually does on a day-to-day basis in each of it chosen areas of activity

CID Roles – Driven by Mission and Vision

- What is the CID going to do, and what it is not going to do, and by what tactics?

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KEY STRATEGY ISSUES

Governance and Inclusivity

- If you want business owners to participate, they have to be at the table and have full voting privileges
  - Can the legislation be amended to create exclusive categories of participation (i.e. business owners who are not property owners, community members who are none of the above, etc.)
  - Make participation in CID activities the most important thing in the world for business owners (hint: you have to show them the money, or at least the promise of the money)
  - Is South Grand a victim of its own success? It might get less Aldermanic attention and City support because it has its own financial base
  - CID staff should report to the CID – not to the partnership

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KEY STRATEGY ISSUES

Market-Responsive Strategy

- How can South Grand CID catalyze a rental renaissance in the area?
- Are there ways that the CID could implement a leasing strategy – much like a mall developer would deploy a tenanting strategy?
- Can there be carrots and sticks built into the CID that keep everyone on the same page – and support members who need it?

Optimal Use of Talent

- Serving both property owners and business owners
- Keeping the Executive Director involved in Executive-level tasks
- Effectively deploying CID staff
- Clear job responsibilities, tied to CID Mission and Vision, and core competencies

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KEY STRATEGY ISSUES

Core Competencies

- Perception of excellence in clean and safe not shared by the business community. And perception = reality.
- What if the core competencies necessary to achieve the mission of the CID are different than "clean" and "safe"?
- Marketing, business promotion, and branding are key focus areas – how much time/budget is spent there? Is it effective?
- Elephant in the Room
  - South Grand needs an urban entertainment entrepreneur who is also a property owner. Any takers? What about the CID itself?

Branding and Marketing

- Clearly very important – is the current plan working?
- Brand by accident only works for so long…

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CENTRAL ATLANTA PROGRESS; ATLANTA, GA
IVAN ALLEN JR. BLVD. STREETSCAPE AND REALIGNMENT

Organization: Central Atlanta Progress/ADID
Location: Downtown Atlanta, GA
Project Type: Infrastructure & Streetscape Improvement

Central Atlanta Progress
Atlanta Downtown Improvement District

Background/Goals
Ivan Allen was urban corridor with no urbanity. Project's goal was to link entertainment, hotel, and office districts in northern section of Downtown Atlanta. Area was previously difficult to navigate (particularly for pedestrians). Realignment and streetscape improvements would improve connectivity and spur private sector development.

Description
Converted one way streets to a continuous two-way corridor. Corridor upgrades included intersection redesign for pedestrian crossing and signal efficiency, medians where appropriate, pedestrian and street lighting, utility relocation, sidewalks, bike lanes, and enhanced transit stops and linkages (rail and bus).

The Results
- Phase II (final phase) completed in 2009 – planning began in 1999
- $468m in new private investment along corridor – including new construction and reinvestment in some existing properties, anchored by Allen Plaza mixed-use development (picture at top left)

Takeaways for South Grand CID
- Demonstrates catalytic potential of infrastructure investment
- You're already doing this and are on the right track!

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CITY OF CAMBRIDGE, MA COMMUNITY DEV.
BEST RETAIL PRACTICES

Organization: City of Cambridge Dept. of Community Development
Location: Cambridge, MA
Project Type: Business Assistance

Background/Goals
Reaches out to local retailers and restaurant owners seeking to improve their establishments' interior appearance, marketing, operations, and advertising. Goal of assisting businesses owners with technical and financial assistance to built a stronger customer base and boost sales.

Description
City hires expert retail consultants to share best practices with the participants. Program includes free workshops covering such topics as interior design, marketing and management, individual in-store consultations, and grant assistance.

The workshop is offered free of charge to all Cambridge retailers and restaurant owners. A smaller number of eligible businesses will receive visits from the consultants and get customized advice for improving store design, marketing, and operations. Matching grants are available to the retailers and restaurant owners who participate in the one-to-one in-store consultations and wish to make recommended improvements.

Takeaways for South Grand CID
- Provides relatively inexpensive and easy assistance to independent business owners that can produce real results
- Can strengthen relationship between CID and business owners

Before

After

The Department of CAMBRIDGE COMMUNITY DEVELOPMENT cambridgema.gov

Before

After

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CITY OF AUSTIN, TEXAS
DOWNTOWN ARTS DEVELOPMENT STUDY

Organization: City of Austin, TX
Location: Downtown Austin, TX
Project Type: Public Space Improvements & Business Dev.

Background/Goals
The Downtown Arts Development Study was a collaboration between Civic Arts and Art in Public Places programs. The Study competed was in 2007 with the aim to provide a framework, guidelines, and an action plan for cultural vitality and pubic art that will contribute to creating a culturally dynamic downtown. In doing so, civic arts and public art will enhance and enrich Austin's downtown public spaces and attract residents, businesses, and visitors to the area.

Recommendations/Implementation
The downtown arts development study provided many recommendations that have since been implemented (or are in the process of being implemented) in Downtown Austin. These include: the integration of public art and architecture, master planning of public art installations, temporary public art installations, and an arts and community development program (local artist working in their community to create public art and create/maintain temporary installations).

Takeaways for South Grand CID
- Can tap into local artist community to showcase their work and the presence of this community in the neighborhood
- Temporary public art installments in/around underutilized spaces and buildings that currently are "missing teeth"

AUSTIN
ART IN
PUBLIC
PLACES

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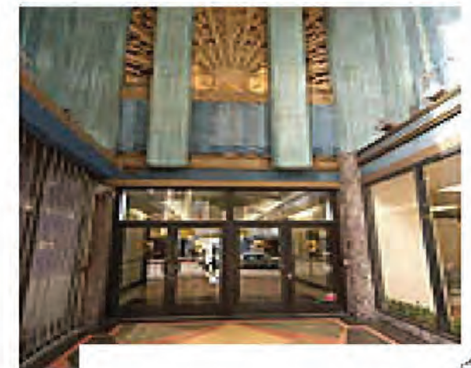
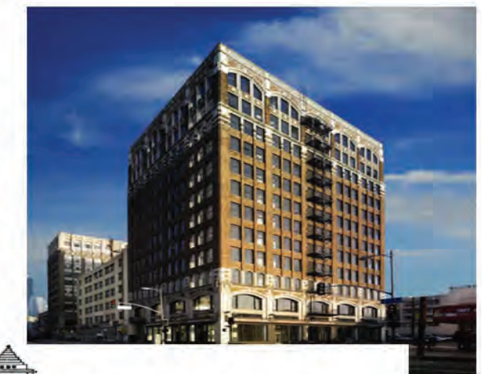
CITY OF LOS ANGELES, CA
ADAPTIVE RESUSE ORDINANCE

Organization: City of Los Angeles, CA
Location: Greater Downtown Los Angeles Area
Project Type: Development Incentives





Background/Goals
Revitalize the greater Downtown LA area with the specific objectives of:
- Creating new housing opportunities
- Revitalizing neighborhoods
- Preserving historic architecture
- Stimulating economic investment
- Facilitating mixed-use growth models

Description
Ordinance facilitates the conversion of older, economically distressed, or historically significant buildings to apartments, live/work units or visitor-serving facilities through the use of development incentives. Buildings constructed in accordance with building and zoning codes before 1974 are eligible. Incentives available to eligible buildings are: increased density, reduced requirements for off-street parking, exemption from commercial corner development regulations, exemption from requirements for site plan reviews, exemption from loading space requirement.

The Results
- Program has been largely successful, streamlines permitting/approval period and reduces costs associated with reuse projects
- Catalyzed downtown residential and retail development

Takeaways for South Grand CID
- Saw older underused buildings as an opportunity and used policy levers to incentivize development ("green taping")
- Made it easy to the do the right thing

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DOWNTOWN DENVER PARTNERSHIP
RETAIL RESEARCH DATABASE & OUTREACH

Organization: Downtown Denver Partnership
Location: Downtown Denver, CO
Project Type: Business Attraction & Retention

Background/Goals
Goal is to sell the Downtown Denver area as a viable location for new retail investment through data dissemination and broker/developer outreach. The goal of this ongoing effort is to collect detailed information on the retailing environment and make it widely available to the local development, business, and brokerage community in an easy to use and interactive format. This combined with one-on-one consultation has proven effective.

Description
The Partnership gathers a large amount of data and makes it available through an online interface. Additionally, individuals at the partnership are available to meet with business owners and those in the real estate community to discuss opportunities downtown.

The Partnership maintains an online interface geared toward developers, brokers, and retailers. It offers information on available retail space, new developments, and pedestrian and vehicle counts. The partnership maintains and regularly updates a "retail market snapshot" with top-level information on the health of the retail market downtown (occupancy, rents, total SF, etc.). This has proved helpful when trying to sell the district to developers, brokers, and business owners.

DOWNTOWN DENVER PARTNERSHIP, INC.

Takeaways for South Grand CID
- Maintain and regularly update commercial market stats (keep "finger on the pulse")
- Foster close ties with commercial brokerage community so CID becomes "go to" resource and salesperson for entire district – monthly "broker breakfast"?

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DOWNTOWN DC BID & DENVER PARTNERSHIP
WAYFINDING SIGNAGE PROGRAM

Organization: Downtown DC BID & Downtown Denver Partnership
Location: Downtown Washington, D.C. & Denver, CO
Project Type: Public Space Improvements

Background/Goals
DC's citywide wayfinding program consists of pedestrian- and vehicle-related signs geared to the needs of Washington DC's 22 million annual tourists. Provides readable signs showing the right level of detail. Signs point to destinations within an area that is within a reasonable walking distance (one half to one mile radius). Denver's program does direct people to significant buildings but also acts as a business directory.

Description
Since its implementation, DC's signs have met much success in navigating tourists through the city's often complex street grid. The signage guides people to important buildings, streets, parks, and transit facilities throughout Downtown DC. Denver places larger signposts in heavily trafficked pedestrian areas. These have maps orient users to the district while also providing free advertisement for local retailers and restaurants.

Takeaways for South Grand CID
- Denver's signs essentially help the district function as a professionally managed shopping center. Signage is similar to "mall directories." Consumers are familiar with this and it helps alleviate "point and shoot" shopping mentality.
- DC's signage program is notable for the quality and visual coherence of the signs themselves. They are easily readable and recognizable to passers-by.

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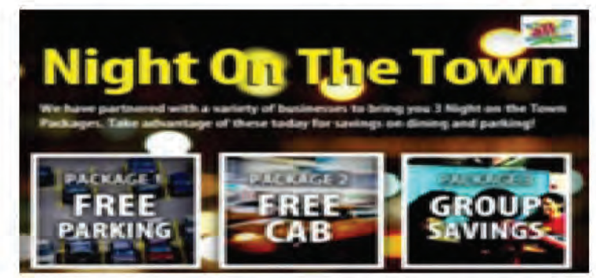
SPRINGFIELD, MO
STRONG & INNOVATIVE WEB MARKETING

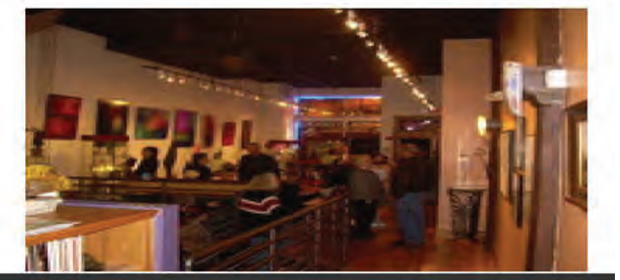
Organization: Downtown Springfield CID, et. al
Location: Downtown Springfield, MO
Project Type: Marketing

Background/Goals
Downtown Springfield saw an opportunity to showcase all its activities and promote its businesses through a strong and innovative web marketing approach.

Description
Web portal is fully integrated with downtown events, business specials, coordinated marketing. Joint effort between Downtown CID, Urban Districts Alliance, Downtown Springfield Association, and Historic Walnut Street Association. Website includes:
- "Night on the Town packages" offering free parking, free cab ride, or a group savings package at local restaurants with purchase of $50 in "Downtown Dining Dollars."
- Regularly updated calendar of public events including events/specials at local retailers and restaurants (free advertising for local businesses)
- Discount coupons listed online for local businesses
- Parking map online showcases number of spaces, their location, and price. Prominently shows advertises that there are "over 6,000 parking spaces within walking distance."



Takeaways for South Grand CID
- All events promoted online (even those not sponsored directly by CID)
- Resource for business owners and online gateway to South Grand
- "Go to" source for planning a trip to Downtown Springfield
- Innovative events programming including: First Friday Art Walk, Friday Night Farmers market…this area "owns" Friday night in Springfield
- Parking tool takes some guesswork out of parking and lets people plan ahead



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WHAT IS STRATEGIC PLANNING AND WHY IS IT IMPORTANT?

- ***What*, and to some extent *where***
  - *How critical, but tactical*
  - *Important to distinguish between long-range strategy and annual business plan*
  - *Strategy 3 to 5 year view*
  - *Business plan 6 to 12 month implementation of strategy*
- ***Explicit* – born out of consensus**
  - *vs. – implicit – unconscious decision*
- ***Road map***
  - *Where an organization is going and how it plans to get there*
- ***Advantage***
  - *Clarity of common direction*

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WHAT ARE THE GOALS OF THIS SESSION
WHAT DOES THE TEAM WANT OUT OF THIS PROCESS?

Ideas for an Organization in Transition
- Transition CID's organizing core from start-up mode to mature and branded mode – without losing energy or vitality

Conscious Consensus
- Develop shared strategy to ensure alignment

Brand Strategies
- Define the brand that will be the hallmark of South Grand going forward

Core Competencies, Roles and Responsibilities
- Determine what the CID does – key product and customer segments

Human Capital
- Have the right people doing the right things at the right times

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SUCCESSFUL STRATEGY PLANNING

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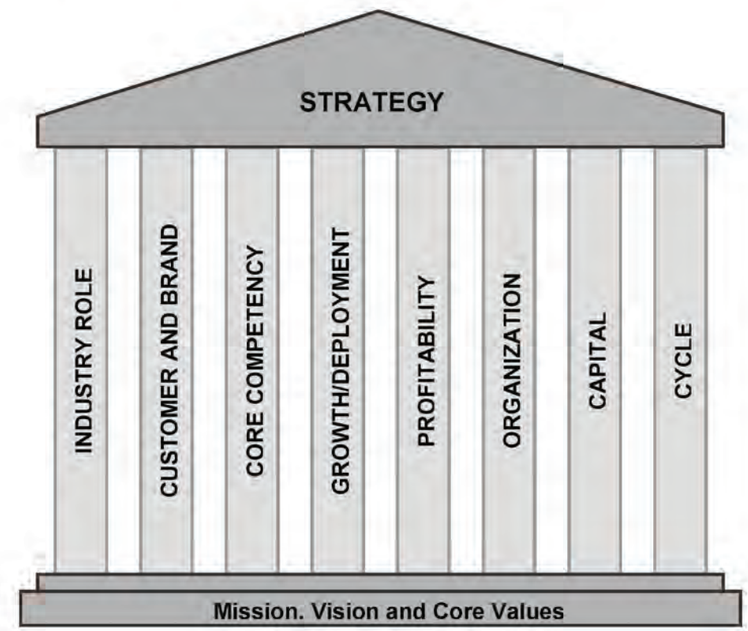
STRATEGY PILLARS



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GOALS & OBJECTIVES
WHAT METRICS SHOULD DEFINE "SUCCESS"?

Financial	40% increase in CID revenues by 2020
Non-Financial	Perception of area, as measured in consumer intercept surveys
Placemaking	Increased pedestrian counts at all hours, especially daytime
	No empty storefronts north of Utah
Organizational	Capacity to support three additional FTEs by 2013
Activities	Two major development projects complete by 2012

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MISSION, VISION, AND CORE VALUES

- **Mission Statements**
  - Ideal future - inspirational, and aspirational
  - Unite an organization in a common, coherent strategic direction
  - Convey a larger sense of organizational purpose
  - Answers the question, what impact do we want to have on society?
- **Vision Statements**
  - Supports the mission
  - Overall purpose - what we do, for whom, and how and why
  - Set the boundaries of the organization's current activities
  - Are the starting point in developing a strategic direction
- **Core Values Statements**
  - Core ideology of an organization, the deeply held beliefs
  - Answer the question, how do we carry out our mission?
  - Culture of the organization, not values you *think* it should have

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MISSION STATEMENTS EXPLORED

Google	*"To organize the world's information and make it universally accessible and useful."*
3M	*"To solve unsolved problems innovatively"*
Mary Kay Cosmetics	*"To give unlimited opportunity to women."*
Merck	*"To preserve and improve human life."*
St. Louis University	*"The pursuit of truth for the greater glory of God and for the service of humanity.*
Wal-Mart	*"To help people save money so they can live better."*
Walt Disney	*"To make people happy."*
Microsoft	*"To help people and businesses throughout the world realize their full potential."*

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SOUTH GRAND CID
CURRENT VISION/MISSION

"To provide enhanced public safety, maintenance, building improvements and economic development beyond those services already supplied by the city."

RCLCO's Take: This is a "how", not a "what"

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CENTRAL ATLANTA PROGRESS/ADID
ATLANTA, GA

Central Atlanta Progress
Atlanta Downtown Improvement District

Central Atlanta Progress's Mission Statement:

"CAP is a private association representing the interests of businesses and Downtown organizations that share a common vision of central Atlanta that is thriving, secure and vibrant. CAP and its affiliate organizations have been a driving force in shaping Downtown development and public policy through innovative programs and public-private partnerships since 1941."

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LOWER EAST SIDE BUSINESS DISTRICT
NEW YORK, NY

Lower East Side BID's Mission Statement:

LES
Lower East Side

"The Lower East Side Business Improvement District was established in 1992 as a nonprofit economic development organization dedicated to revitalizing the Orchard Street Shopping District while preserving its unique and diverse character."

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DOWNTOWN SAN RAFAEL BID
SAN RAFAEL, CA

Downtown San Rafael BID's Mission Statement:

"The Downtown San Rafael Business Improvement District is a group of merchants and professional people working together to revitalize and promote the Downtown Business area through increased public facilities improvements, stimulation of new capital investment and blending of public and private economic development strategies. It is our continued mission to increase business for all merchants in the Downtown area and to make the Downtown a fun, safe and friendly place in which to eat, shop and live."

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TROY DOWNTOWN COLLABORATIVE
TROY, NY

Troy Downtown Collaborative Mission Statement:

"To cultivate the economic growth and development of the downtown Troy community by creating an increasingly inviting, dynamic and sustainable environment that celebrates the city's history while building towards its future."

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ROSSLYN BID
ARLINGTON, VA

ROSSLYN
Discover a new horizon

Rosslyn BID's Mission Statement:

"To provide supplemental services in support of successful revitalization of Rosslyn and its economic development."

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DOWNTOWN BOZEMAN BID
BOZEMAN, MT

Downtown Bozeman BID's Mission Statement:

"The BID is an organization of downtown property owners who through thoughtful, pro-active collaboration and partnership with local government, business owners, residents and citizens strive to create a shared vision and voice for the community of downtown Bozeman. The BID will commit resources, identify, plan and act on short-term and long-term initiatives otherwise unavailable to individual owners. The BID has a goal of ensuring the long-term preservation and vitality of the city's underlying economic, cultural, social and environmental assets and the BID will work together to keep our downtown a safe, beautiful and vibrant place."

DOWNTOWN
BOZEMAN

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YONKERS DOWNTOWN/WATERFRONT BID
YONKERS, NY

Yonkers Downtown/Waterfront BID's Mission Statement:

"The Yonkers Downtown/Waterfront Business Improvement District (Yonkers D/W BID) shall serve the special improvement district identified within its geographically specified bounds, the Yonkers business community and the City of Yonkers to formulate, promote and implement the economic revitalization and general welfare of the District and the City, promote and preserve the cultural, historic, tourist and civic interests of the District and the City; mobilize available public and private resources for these purposes; provide a mechanism by which service firms, retail establishments, property owners, employers, citizens, and others can cooperate to promote business opportunities, employment, consumer choices, shoppers' facilities, and the general civic interests; and aid, work with, and participate in the activities of other organizations, individuals and public and private entities within and outside the City engaged in similar activities."

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OSHKOSH DOWNTOWN
OSHKOSH, WI

Downtown Oshkosh's Mission Statement:

"Our primary mission is to proactively position and promote the positive attributes of Downtown Oshkosh as well as to encourage recruitment and retention of diverse businesses that will foster continued economic growth in our downtown commercial districts."

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CID MISSION AND VISION
PROPOSED MISSON/VISION AT AUGUST 11 MEETING

"To create the best place to live, work, shop, and play"

"To provide a clean and safe district"

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CID MISSION AND VISION
POTENTIAL VISION STATEMENTS

"To drive the continual improvement of the South Grand neighborhood by supporting the growth of its unique retail, restaurant, and commercial enterprises."

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CID MISSION AND VISION
POTENTIAL VISION STATEMENTS

"To sustain and grow the climate for business activity on South Grand and make it the most appealing urban neighborhood in St. Louis."

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CORE COMPETENCIES

- **What differentiates an organization from its competition?**
  - Better, faster, and/or cheaper than others, and
  - Competitive advantage in the marketplace
- **Without some clearly definable core competencies**
  - Marginal role and
  - Mediocre results

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CORE COMPETENCIES
HOW ARE WE MEASURING SUCCESS?

CID Board States Core Competencies as…	*Questions that Surface*
•Security	Do the beneficiaries of these activities agree?
•Cooperation with Police Department	How are we measuring excellence?
•Marketing Function	Do these competencies line up with the proposed/accepted Mission/Vision of South Grand CID?
•Cultivation of Consensus	
•Cleanliness	Are there core competencies that are lacking that the CID needs in order to execute its Mission?
•Stable, Strong, Effective Organization	
•Land Acquisition	Are there "excess competencies" that are nice, but not necessary?

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PROPOSED CORE COMPETENCIES
LINKED TO MISSION/VISION

What does the CID *need* to do well in order to execute its Mission?

1. Marketing and Promotion
2. Internal communication
3. Create and sustain a Brand
4. Tenant/business recruitment and retention

And… **The CID needs to measure these competencies so it can manage them**

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CID ROLES - CURRENT

Public Safety
Supplement Police
CID Guide

Capital Programs
Creation of Acquisition Funding

Cleanliness
Additional Cleaning
Anti-graffiti (CID Guide)

Property Acquisition/Development
Parking solution

Marketing
Events
Collateral Material

Economic Development
Coordination of business owners

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CID ROLES – POTENTIAL FUTURE

Property Manager	•"Clean and Safe" •Appearance/Aesthetics •Tenant Relations
Leasing Coordinator	•Tenant Recruitment •Tenant Relations •Liaison between Property Owner and Tenant
Marketing and Promotion	•Event Planning •Advertising •Media Relations •Brand Management
Business Support	•Façade Improvements •Business Consulting •Government Relations •Corral Public Resources
Catalytic Developer	•Acquisition/Development •Residential and Urban Entertainment •Gatekeeper for retailers ("The Bad Cop")

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CUSTOMER STRATEGY AND BRAND

- **Identifying who are the company's customers and/or clients**
  - External
  - Internal
  - How they differentiate the company from its competition
- **To brand or not to brand, that is the question?**
- **Two Brand Camps**
  - Efficiency
  - Pricing Power

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CUSTOMER STRATEGY AND BRAND

- **Identifying who are the company's customers and/or clients**
  - External - Consumers
  - Internal – Business Owners

  Do we treat the internal customers as clients?
- **To brand or not to brand, that is the question?**
- **Two Brand Camps**
  - Efficiency
  - Pricing Power

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ORGANIZATION

- **How to best organize the business to:**
  - Achieve the company's strategic objectives,
  - Pursue its industry roles and geographic deployment strategies
  - Optimize organizational effectiveness.
- **Two Dimensions:**
  - Project vs. Process Orientation
  - Centralized vs. Decentralized
- **Typical Elements:**
  - Success Planning
  - Compensation
  - Growth and Organizational Expansion

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ORGANIZATION ISSUES

- **Staff**
  - Confusing roles – not clearly defined
  - CID Hospitality Coordinator does not really report to the Executive Director
  - No job descriptions for staff
  - External perception of Hospitality Coordinator varies from person to person
  - No annual goals/performance metrics (or they are not formalized)
  - "Hospitality Coordinator" – not needed, and he does other things better
- **Board**
  - No representation by proprietors who are not property owners
  - No citizen representation
  - Biases the viewpoint of the Board

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ORGANIZATION OPPORTUNITIES

- Executive Director position in other CIDS/BIDs is strategic in nature
  - Sets strategy, goals, drafts business plan, budget
  - External liaison to Mayor's office, other CIDs, development community
  - Decision-maker about resource expenditures
  - Responsible to the Board to achieve the goals and targets
  - Public face of the CID
- Staff are the execution capacity of CIDs. Roles could include:
  - Program Manager
  - Business Coordinator
  - Marketing Coordinator
  - Community Outreach
- Business owners expressed an interest in joining the Board – if it was meaningful and involved some voting power

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CAPITAL

- **Access to and deployment of capital**
- **Purposefully formulated near end of process**
  - First determine opportunities then figure out how to fund
  - Acceptable to modify appetite/ambition given capital availability and risk
  - Mistake to begin planning with assumption limited capital available
- **Typical Elements:**
  - Access to capital
  - Cost of capital
  - Project vs. entity level financing?
  - Diversity of sources?
  - Public vs. private?

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PROFITABILITY

- **Improving efficiency and increasing the bottom-line**
  - Which components of the CID revenue structure make the most contribution to profitability?
- **Typically oriented around ways to:**
  - Reduce the cost of doing business
  - Increase the speed of delivery
  - Improve customer satisfaction
- **Types of Profitability Strategies:**
  - Growing the Top Line
  - Technology/Systems
  - Outsourcing
  - Standardizing procedures/practices
  - Customer Satisfaction
  - Market Position

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POTENTIAL CID TACTICS
CORE COMPETENCIES AND ROLES

1. CID as Catalytic Developer - Uses Funds for Acquiring Parcels, Problem Properties, Etc.
2. CID as Entertainment Entrepreneur - Bringing Catalytic Uses (Urban Entertainment) to South Grand
3. Pursue a Residential Development Strategy
4. Create Event Marketing Specialist
5. Create Business Liaison Specialist
6. Purchase Underutilized Residential Units and Accelerate Rehabbing via Sale or Development
7. Create Acquisition/Development Fund w/ Pension-grade Rates of Return
8. CID as JV Partner with Reluctant Property Owners

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POTENTIAL CID TACTICS
PROFITABILITY AND EFFICIENCY

1. Provide Shuttlebus from SLU and Downtown (the South Grand Shuttle)
2. Create a "meal plan" option between SLU and restaurants]
3. South Grand Gift Cards
4. Free Cab Rides to/from Downtown/SLU/Theaters
5. Agree to and enforce a retail tenanting strategy
6. Create Incentives and Penalties for Prolonged Retail Vacancies
7. Lien and Green for Problem Properties
8. Agree to and enforce an office user recruitment strategy
9. Office Tenanting Strategy Tax Abatements for 2nd/3rd Floor Users (Residential or Office)

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POTENTIAL CID TACTICS
ORGANIZATION

1. Redesign Hospitality Coordinator to Marketing Coordinator
2. Change Board Composition to Require non-Property Owners and Citizens on Board
3. Circulate CID Budgets, Spending Goals, Actuals (website?)
4. Create Goals and Performance Metrics that Align with Annual Business Plan/Mission
5. Create measurable metrics for all Marketing/Promotional Activity,
6. Commit to Measuring/Sharing Results
7. Move "Hospitality Coordinator" from Downtown Partnership to CID
8. Draft Agendas for Business Meetings and Circulate Prior to Meeting
9. Allow Business Owners to Set Agenda Items

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POTENTIAL CID TACTICS
CUSTOMER AND BRAND

1. Contract with a company such as Hi-Tec Security to provide vehicular-based patrol officers
2. Staff the parking lot behind Commerce Bank on evenings and weekends
3. Refinish the surface lot
4. CID Parking Sticker
5. One-stop marketing for all CID events on Website
6. Provide Valet Parking
7. Fill empty storefronts with art displays
8. CID-Based Business Strategy Program
9. Pursue a Niche Market (Bicyclists, Dog Lovers, etc.)
10. Aggressive multi-lingual outreach effort
11. Web 2.0 Marketing (del.ici.ous, Twitter, digg, Facebook, mySpace)
12. Unabated Fun & Games

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POTENTIAL CID TACTICS
CAPITAL

1. Achieve annual cash flows of $250k
2. Establish standing fund of $1M for property acquisition/development
3. Establish JV partnership fund of $500k with pension-grade rates of return
4. Endow particular programs/activities
5. Establish endowed matching funds for business improvements, façade improvements, tenant improvements

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STRATEGY PLANNING SESSION

South Grand Community Improvement District
September 9-10, 2009

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