



CITIZENS ADVISORY COMMITTEE

September 24, 2014, 6:30 – 8:00 pm

McCloskey Room (#135)

*Suggested
Time:*

~6:30pm

- I. Call to Order and Introductions
- II. Approval of Minutes:
 - a. August 27, 2014
- III. Communications from the Chair and Vice-Chair
- IV. Reports from Officers and/or Committees
 - a. Project Updates
- V. Reports from MPO Staff
- VI. Old Business

~7:30pm

- VII. New Business
 - a. MTP Status Report
 - b. MPO 5 Year Spending Plan
- VIII. Communications from Committee Members (*non-agenda items*)
 - a. Topic suggestions for future agendas
- IX. Upcoming Meetings
 - a. Technical Advisory Committee –October 22 at 10:00 a.m. (McCloskey Room)
 - b. Citizens Advisory Committee –October 22 at 6:30 p.m. (McCloskey Room)
 - c. Policy Committee – October 10 at 1:30 p.m. (Council Chambers)

~8:00 pm

- X. Topic Suggestions Under Consideration for Future Discussion
Communication & Public Coordination Improvements, Bike/Pedestrian Set Aside Money

Adjournment

*(*Recommendations Requested / *Public comment prior to vote – limited to five minutes per speaker)*

Website of interest:

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Citizens Advisory Committee Meeting Minutes
August 27, 2014 McCloskey Conference Room 135, City Hall

Citizens Advisory Committee (CAC) Minutes are transcribed in a summarized outline manner. Audio recordings of the meeting are available in the Planning & Transportation Department for reference.

Attendance

Citizens Advisory Committee (Voting Members): John Kehrberg, Lynn Rogers, Ken Campanella, Paul Ash, Larry Jacobs, Elizabeth Cox-Ash, Sarah Ryterband, Sarah Clevenger, Laurel Cornell, Ted Miller, Mike Litwin, David Walter, Bill Milroy

Others in Attendance (including Non-Voting CAC Members): Anna Dragovich, James Culberson, Sandra Flum, Gary Vandegriff, Debra Ault, Jim Ude

I. Call to Order and Introductions (~6:30 PM)

II. Approval of Minutes

a. May 21, 2014 – Moved by Ms. Ryterband to approve the minutes, Mr. Ash seconded. The minutes were approved by voice vote.

Communications from the Chair and Vice Chair - Ms. Ryterband asked for a follow up from last months meeting regarding the bridge inspection TIP amendment. Ms. Dragovich explained that at the last meeting, some questions arose having to do with the funding associated with the TIP amendment. Specifically, the committee was curious to know if all of the funding was being spent within the BMCMPPO or if is for the entire State and where this amount of funding has come from. Ms. Dragovich further explained that the funding is for bridges statewide and so INDOT has been programming funding in all MPOs reflecting the amount being programmed statewide is \$250,000.

III. Reports from Officers and/or Committees

a. Project Updates – Ms. Flum introduced Gary Vandegriff, with the I-69 Development Partners. He will be managing operations and maintenance of Section 5 during and after construction. Ms. Flum explained that demolition of billboards, fences, houses, etc., has begun within the project right of way. She anticipates a public meeting to be held late September, early October. During the meeting, INDOT will present the sequence of construction as well as an aesthetics plan. INDOT is required to have an annual meeting to explain the construction what will happen each year. This year, construction will begin with That Rd. and Rockport Rd. A third lane will be going in along SR 37 between Fullerton Pike and SR 46. Ms. Flum explained that the project office will be moving to the old Sunrise Greeting building off of Vernal Pike. She mentioned that the bicycle and pedestrian facilities at the overpasses and interchanges are still on INDOT's list of commitments. Mr. Ash suggested that Ms. Flum coordinate with the Bloomington Bicycle and Pedestrian Safety Commission.

b. MTP Task Force – Ms. Dragovich gave an update on the travel demand model development. Mr. Miller asked if the new bus station was included in the model and if it would be possible to analyze the impacts an individual project will have on the over all system. Ms. Dragovich replied that she was not sure, but she would follow up at the next meeting.



IV. Reports from MPO Staff

a. Quarterly Tracking - Ms. Dragovich reported on the most recent quarterly project tracking meeting. She explained that projects in both their budgets and timeline seem to be moving along quite well.

V. Old Business – none

VI. New Business - none

VII. Communications from Committee Members

VIII. Upcoming Meetings

- a. Policy Committee – September 12, 2014 at 1:30 pm (Council Chambers)**
- b. Technical Advisory Committee – August 27, 2014 at 10:00 am (McCloskey)**
- c. Citizens Advisory Committee – August 27, 2014 at 6:30 pm (McCloskey)**

IX. Topic Suggestions under Consideration for Future Discussion -

Adjournment (~7:30 PM)

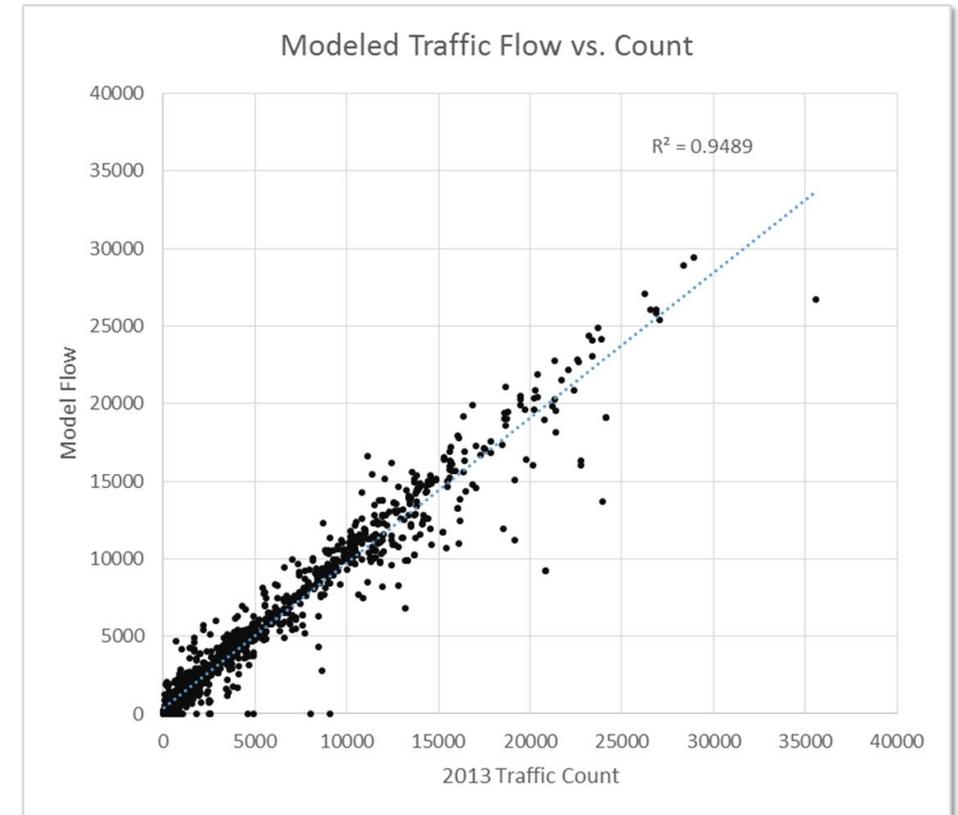
These minutes were _____ by the CAC at their regular meeting held on September 24, 2014 (___)

Validation Measures

Model Update

Validation Measure	Volume Group								Grand Total
	0-1K	1K-2K	2K-5K	5K-10K	10K-15K	15K-20K	20K-25K	25K-50K	
Number of Counts	466	155	261	199	175	53	29	8	1,346
Sum of AADT	193,763	221,433	878,493	1,482,507	2,119,613	900,640	637,432	226,520	6,660,401
Sum of Model Flow	274,187	284,805	944,441	1,514,153	2,092,784	860,036	571,727	215,470	6,757,602
Sum of FlowVMT	88,436	56,852	149,248	249,865	429,862	152,087	97,223	36,527	1,260,100
Sum of CountVMT	52,464	43,825	133,815	240,492	424,772	153,690	102,850	38,285	1,190,194
Average AADT	416	1,429	3,366	7,450	12,112	16,993	21,980	28,315	4,948
Average Truck Count	15	59	229	543	807	1,168	949	855	313
Loading Error	41.5%	28.6%	7.5%	2.1%	-1.3%	-4.5%	-10.3%	-4.9%	1.5%
VMT Error	-68.6%	-29.7%	-11.5%	-3.9%	-1.2%	1.0%	5.5%	4.6%	-5.9%
%RMSE	124.0%	60.1%	30.2%	18.4%	12.9%	14.2%	20.0%	11.5%	26.2%

Validation Measure	Area Type					Grand Total
	Rural	Suburban	Urban	Commercial	CBD	
Number of Counts	222	133	714	217	60	1,346
Sum of AADT	461,860	563,980	3,503,133	1,673,264	458,164	6,660,401
Sum of Model Flow	533,286	608,184	3,445,493	1,697,904	472,737	6,757,602
Sum of FlowVMT	346,972	252,171	381,590	257,480	21,888	1,260,100
Sum of CountVMT	300,619	238,049	379,360	250,908	21,258	1,190,194
Average AADT	2,080	4,240	4,906	7,711	7,636	4,948
Average Truck Count	126	416	265	522	587	313
Loading Error	15.5%	7.8%	-1.6%	1.5%	3.2%	1.5%
VMT Error	-15.4%	-5.9%	-0.6%	-2.6%	-3.0%	-5.9%
%RMSE	28.5%	23.3%	30.1%	18.2%	14.0%	26.2%



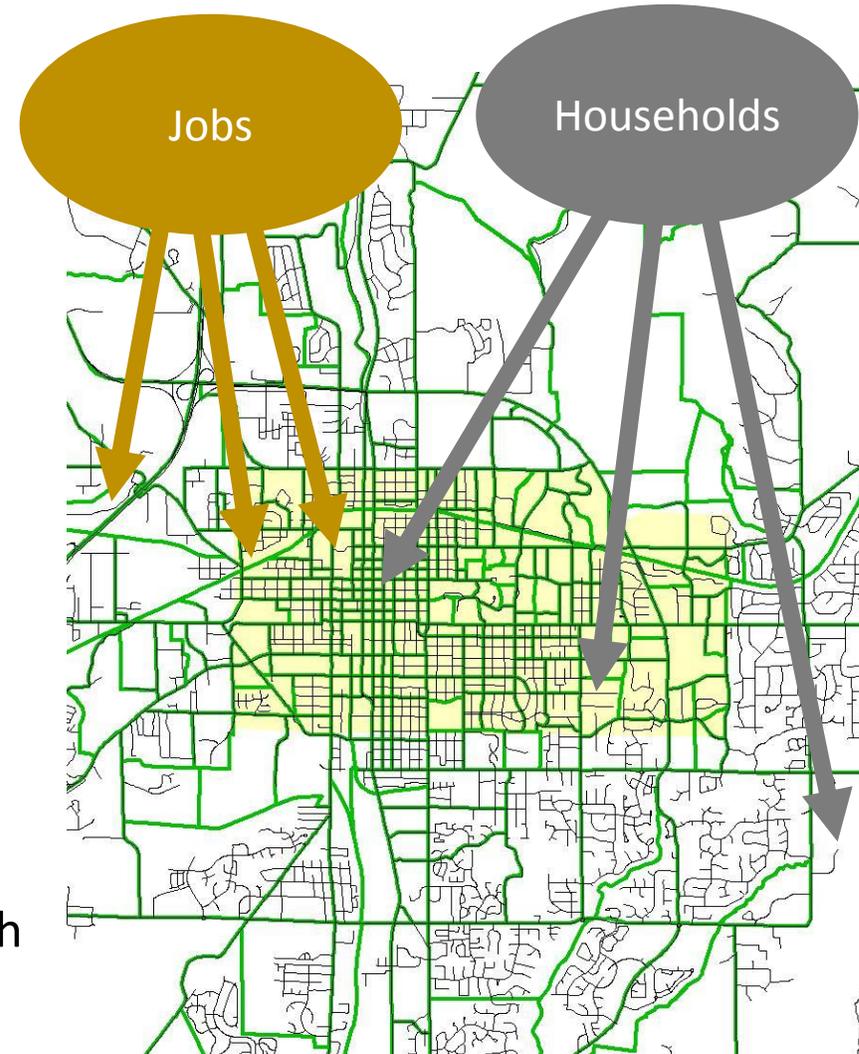
Scenario Development

Overall Growth Forecasting

- Historical growth trends
- Economic drivers
- County household and population forecast
- County employment forecast by sector
- Range of choices

Growth Allocation

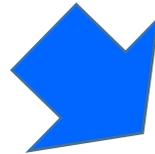
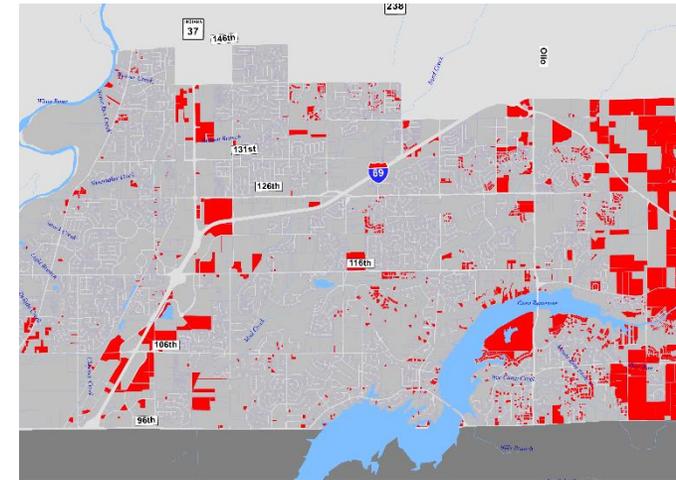
- Depends on land use policies
- Allocation process takes overall growth and applies policies



Scenario Development

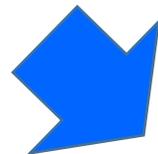
Growth Allocation Toolkit Inputs

- Input #1: Total Household, Population, and Employment forecast for metro area as control total
- Input #2: Parcel data with current land use and allowed land use policies. Info on redevelopment
- Input #3: Inputs on carrying capacity (max densities, max FAR, etc.)
- Input #4: Transportation network scenario



Growth Allocation Toolkit Outputs

- TAZ level allocation of households, household types, and employment by each sector



Model Outputs

- Changes in: Auto ownership, trip generation, destination choice, mode choice, traffic flow by mode, system performance

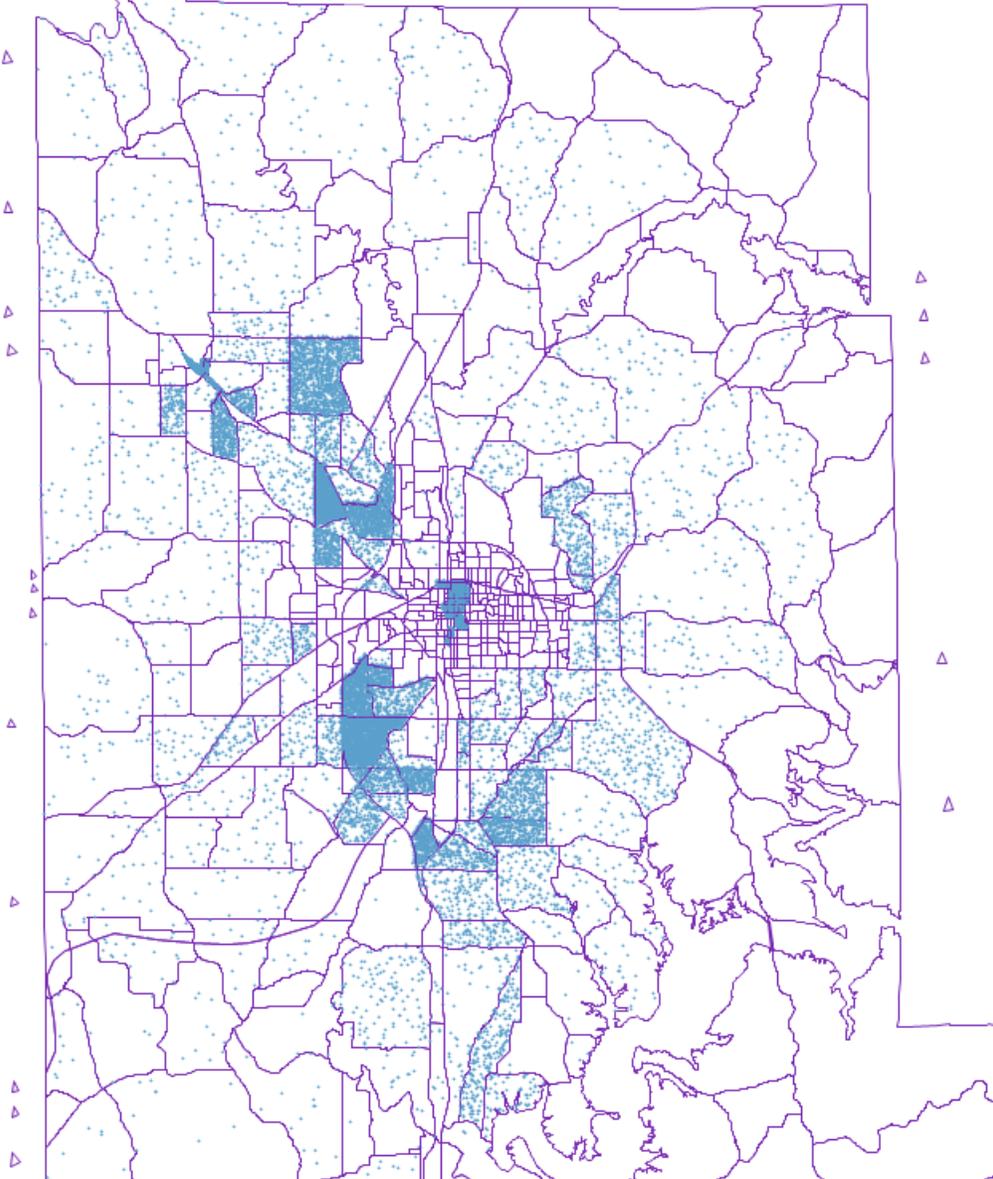
Land Use Scenario Development - Forecasts 2040		Overall Growth Scenario --->			Mid-Range Growth			High Growth			
		Development Style --->			Standard	Compact	Low Density	Standard	Compact	Low Density	Standard
Global Assumptions (apply to all TAZs)											
Control Totals											
Households	Number of households by scenario	64,431	64,431	64,431	72,952	72,952	72,952	82,552	82,552	82,552	
Population	Total population by scenario	153,209	153,209	153,209	173,784	173,784	173,784	185,234	185,234	185,234	
Employment	Total employment by scenario	94,240	94,240	94,240	107,135	107,135	107,135	118,443	118,443	118,443	
K-12 Enrollment	School enrollment	15,762	15,762	15,762	17,879	17,879	17,879	19,057	19,057	19,057	
University Enrollment	IU enrollment forecast	48,500	48,500	48,500	49,000	49,000	49,000	50,000	50,000	50,000	
Global Attributes											
Emp. Growth portion to existing establishments	Percentage	55.0%	50.0%	40.0%	55.0%	50.0%	40.0%	55.0%	50.0%	40.0%	
Emp. Growth portion to undeveloped sites	Percentage	25.0%	10.0%	50.0%	25.0%	10.0%	50.0%	25.0%	10.0%	50.0%	
Emp. Growth portion to re-development sites	Percentage	20.0%	40.0%	10.0%	20.0%	40.0%	10.0%	20.0%	40.0%	10.0%	
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Portion of New Housing as Low Density Residential	Percentage	50.0%	10.0%	80.0%	50.0%	10.0%	80.0%	50.0%	10.0%	80.0%	
Portion of New Housing as Medium Density Residential	Percentage	25.0%	50.0%	19.0%	25.0%	50.0%	19.0%	25.0%	50.0%	19.0%	
Portion of New Housing as High Density Residential	Percentage	25.0%	40.0%	1.0%	25.0%	40.0%	1.0%	25.0%	40.0%	1.0%	
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Portion of New Med. Density Housing on Existing Sites (Aux units, splitting, etc.)	Percentage	10.0%	50.0%	1.0%	10.0%	50.0%	1.0%	10.0%	50.0%	1.0%	
Portion of New High Density Housing on Re-Developed Sites	Percentage	70.0%	90.0%	30.0%	70.0%	90.0%	30.0%	70.0%	90.0%	30.0%	
Minimum Single Family Density - Rural	Units per acre	0.2	0.1	2	0.2	0.1	2	0.2	0.1	2	
Minimum Single Family Density - Urban	Units per acre	8	12	5	8	12	5	8	12	5	
Max Growth Rate for Rural	Percentage	0.5%	0.1%	1.0%	0.5%	0.1%	1.0%	0.5%	0.1%	1.0%	

Detailed Summary After Applying Assumptions:

		Overall Growth Scenario ---->			Mid-Range Growth			High Growth		
		Development Style ---->			Standard	Compact	Low Density	Standard	Compact	Low Density
Employment										
Total Employment 2040										
	RETAIL	7,945	7,945	7,945	9,032	9,032	9,032	9,986	9,986	9,986
	INDUST	9,853	9,853	9,853	11,201	11,201	11,201	12,383	12,383	12,383
	OFFICE	3,603	3,603	3,603	4,096	4,096	4,096	4,528	4,528	4,528
	SERVICE	72,839	72,839	72,839	82,805	82,805	82,805	91,545	91,545	91,545
	TOTAL_EMP	94,240	94,240	94,240	107,135	107,135	107,135	118,443	118,443	118,443
Net Employment Growth 2010-2040										
	RETAIL	(430)	(430)	(430)	657	657	657	1,611	1,611	1,611
	INDUST	(219)	(219)	(219)	1,129	1,129	1,129	2,311	2,311	2,311
	OFFICE	685	685	685	1,178	1,178	1,178	1,610	1,610	1,610
	SERVICE	14,595	14,595	14,595	24,561	24,561	24,561	33,301	33,301	33,301
	TOTAL_EMP	14,627	14,627	14,627	27,522	27,522	27,522	38,830	38,830	38,830
Employment Growth in Existing Establishments										
	RETAIL	(516)	(516)	(516)	362	329	263	886	805	644
	INDUST	(263)	(263)	(263)	621	564	452	1,271	1,156	924
	OFFICE	377	343	274	648	589	471	886	805	644
	SERVICE	8,027	7,297	5,838	13,509	12,281	9,824	18,316	16,651	13,321
	TOTAL_EMP	7,625	6,861	5,333	15,139	13,763	11,010	21,358	19,417	15,533
Employment Growth in Undeveloped Sites										
	RETAIL	48	17	72	164	66	329	403	161	805
	INDUST	24	9	37	282	113	564	578	231	1,156
	OFFICE	171	69	343	295	118	589	403	161	805
	SERVICE	3,649	1,459	7,297	6,140	2,456	12,281	8,325	3,330	16,651
	TOTAL_EMP	3,892	1,463	7,314	6,880	2,752	13,761	9,708	3,883	19,415
Employment Growth in Re-developed Sites										
	RETAIL	38	69	14	131	263	66	322	644	161
	INDUST	19	35	7	226	452	113	462	924	231
	OFFICE	137	274	69	236	471	118	322	644	161
	SERVICE	2,919	5,838	1,459	4,912	9,824	2,456	6,660	13,321	3,330
	TOTAL_EMP	3,114	5,851	1,463	5,504	11,009	2,752	7,766	15,532	3,883
Housing										
Rural Housing Units										
	Max allowed by growth rate	11,273	9,804	13,411	11,273	9,804	13,411	11,273	9,804	13,411
	Net HU growth in rural	1,806	337	3,944	1,806	337	3,944	1,806	337	3,944
	Rural acres needed	9,028	3,370	1,972	9,028	3,370	1,972	9,028	3,370	1,972
Urban Housing Units										
	Total urban HU in 2040	53,158	54,626	51,020	61,679	63,148	59,541	71,279	72,748	69,141
	Net growth in urban HU	8,141	9,609	6,003	16,662	18,131	14,524	26,262	27,731	24,124
	New low density HU	4,070	961	4,802	8,331	1,813	11,619	13,131	2,773	19,299
	New vacant site medium density HU	1,832	2,402	1,129	3,749	4,533	2,732	5,909	6,933	4,538
	New med. density HU by Infill	204	2,402	11	417	4,533	28	657	6,933	46
	New vacant site high density HU	611	384	42	1,250	725	102	1,970	1,109	169
	New re-developed site high density HU	1,425	3,459	18	2,916	6,527	44	4,596	9,983	72
	Urban acres needed for new single fam	509	80	960	1,041	151	2,324	1,641	231	3,860

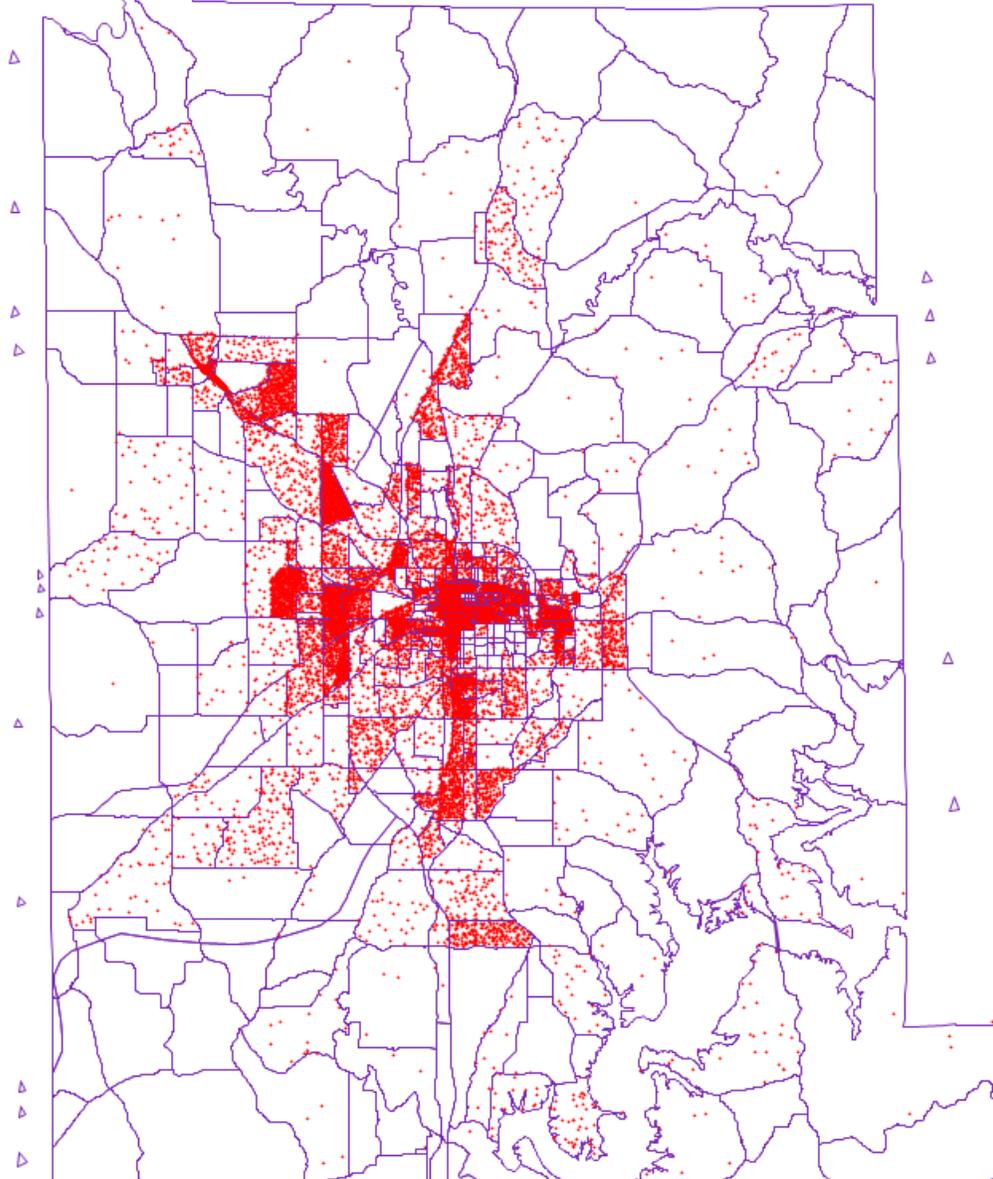
Forecast Allocation

Housing

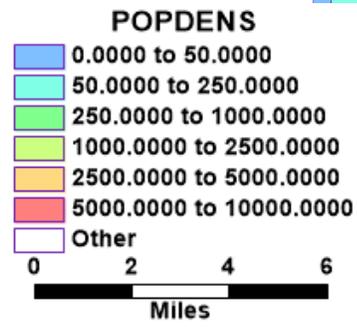
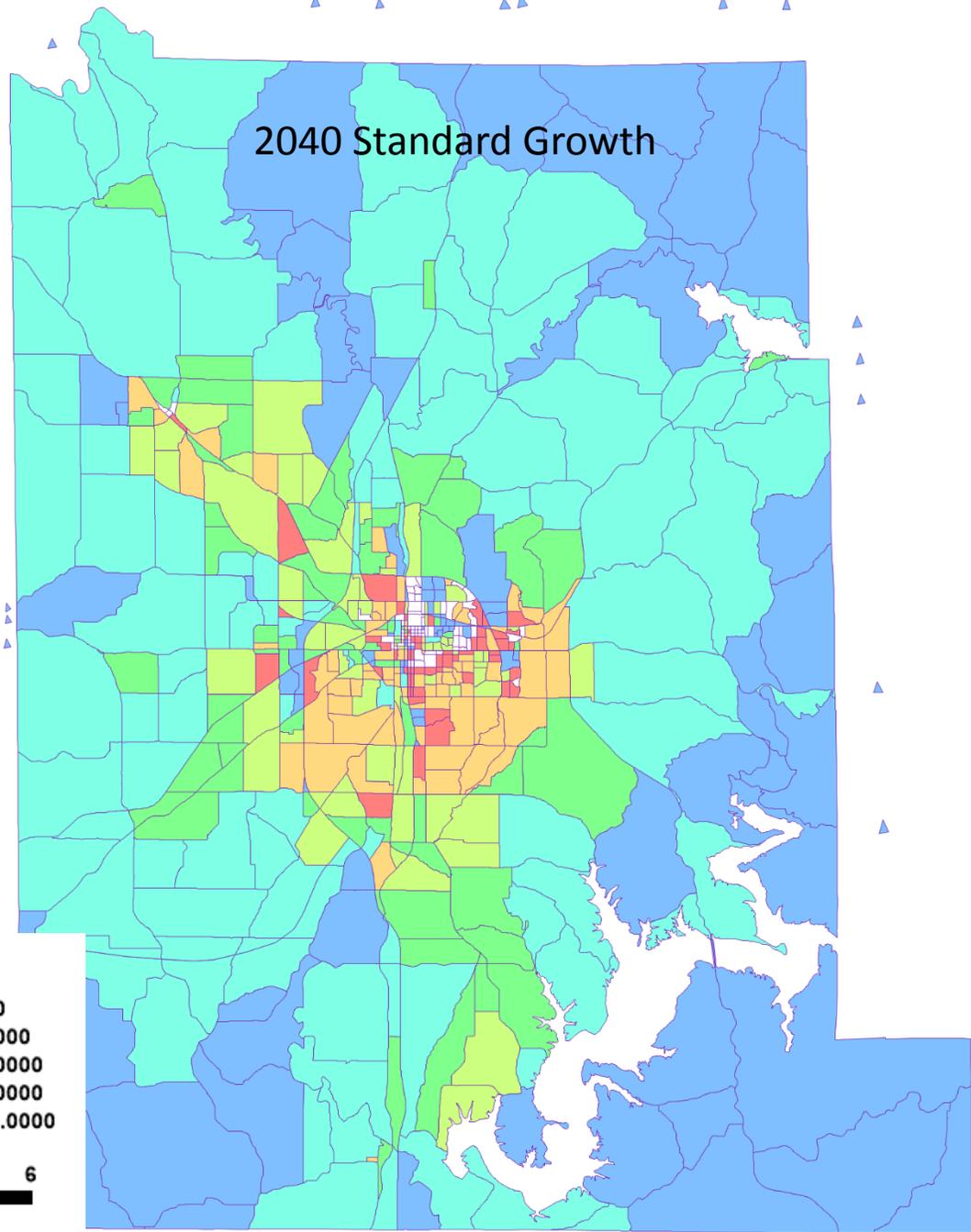
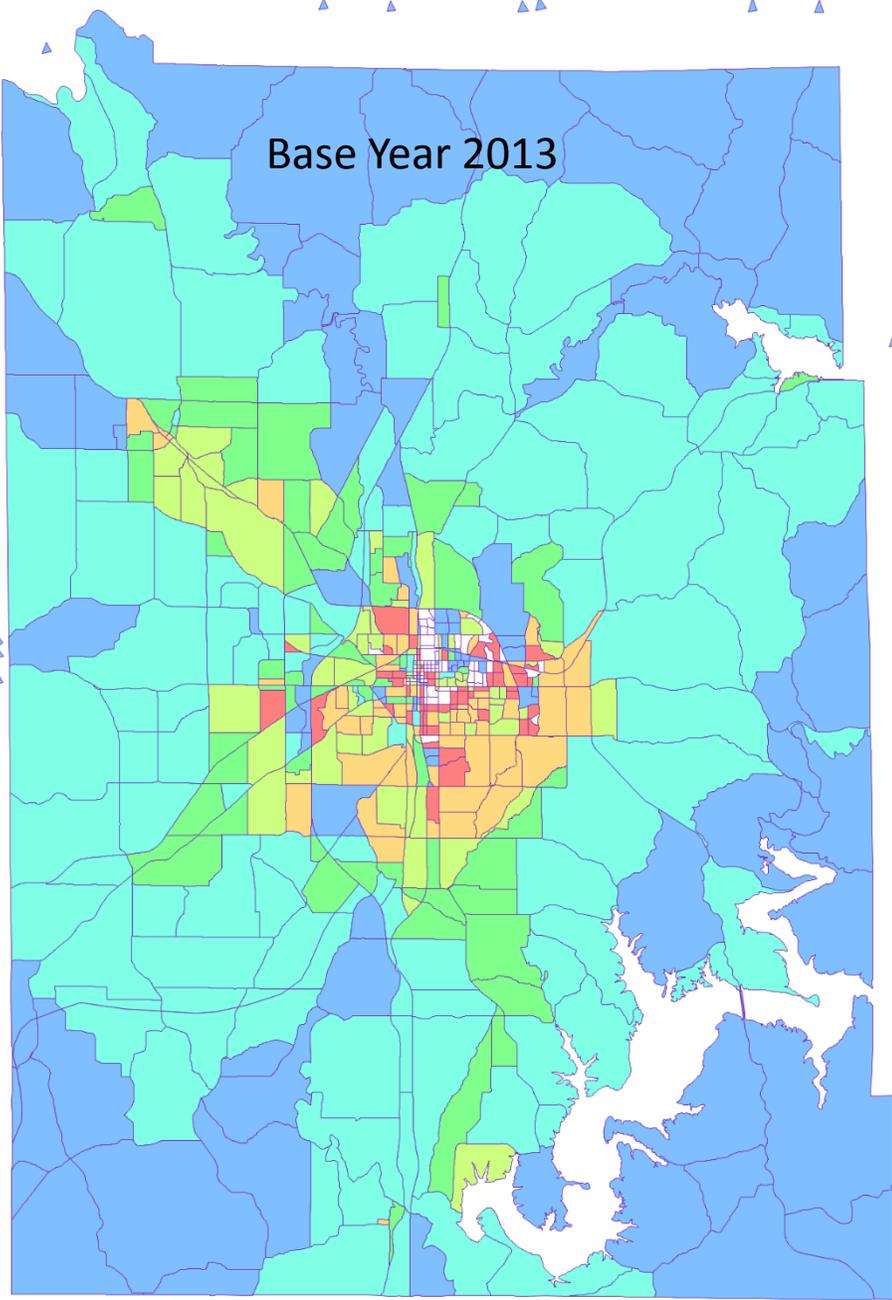


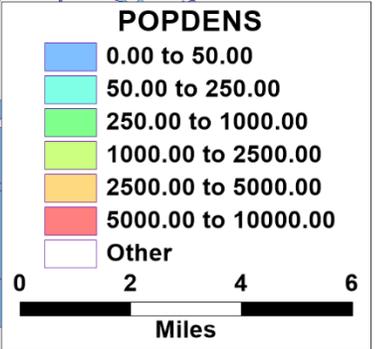
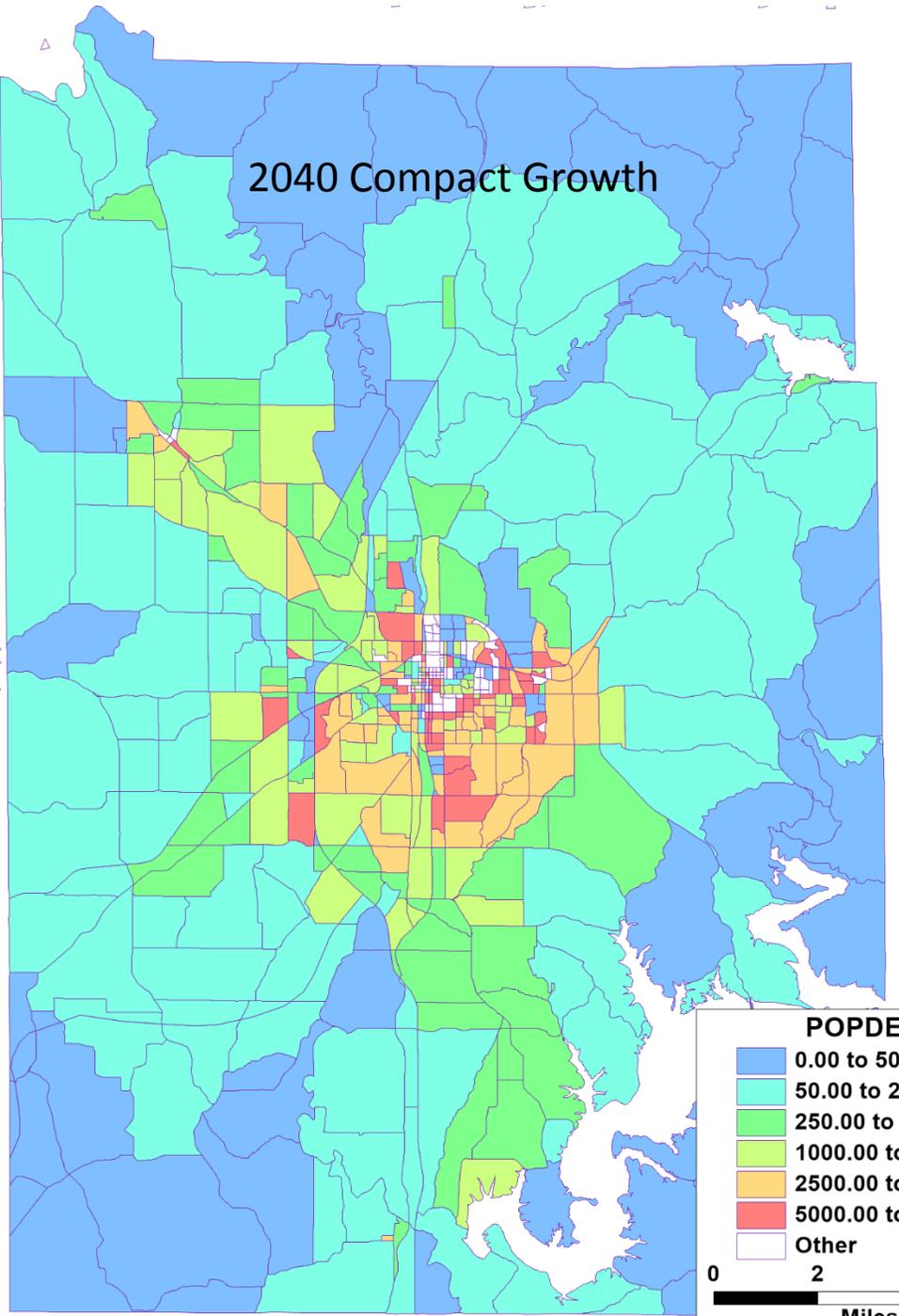
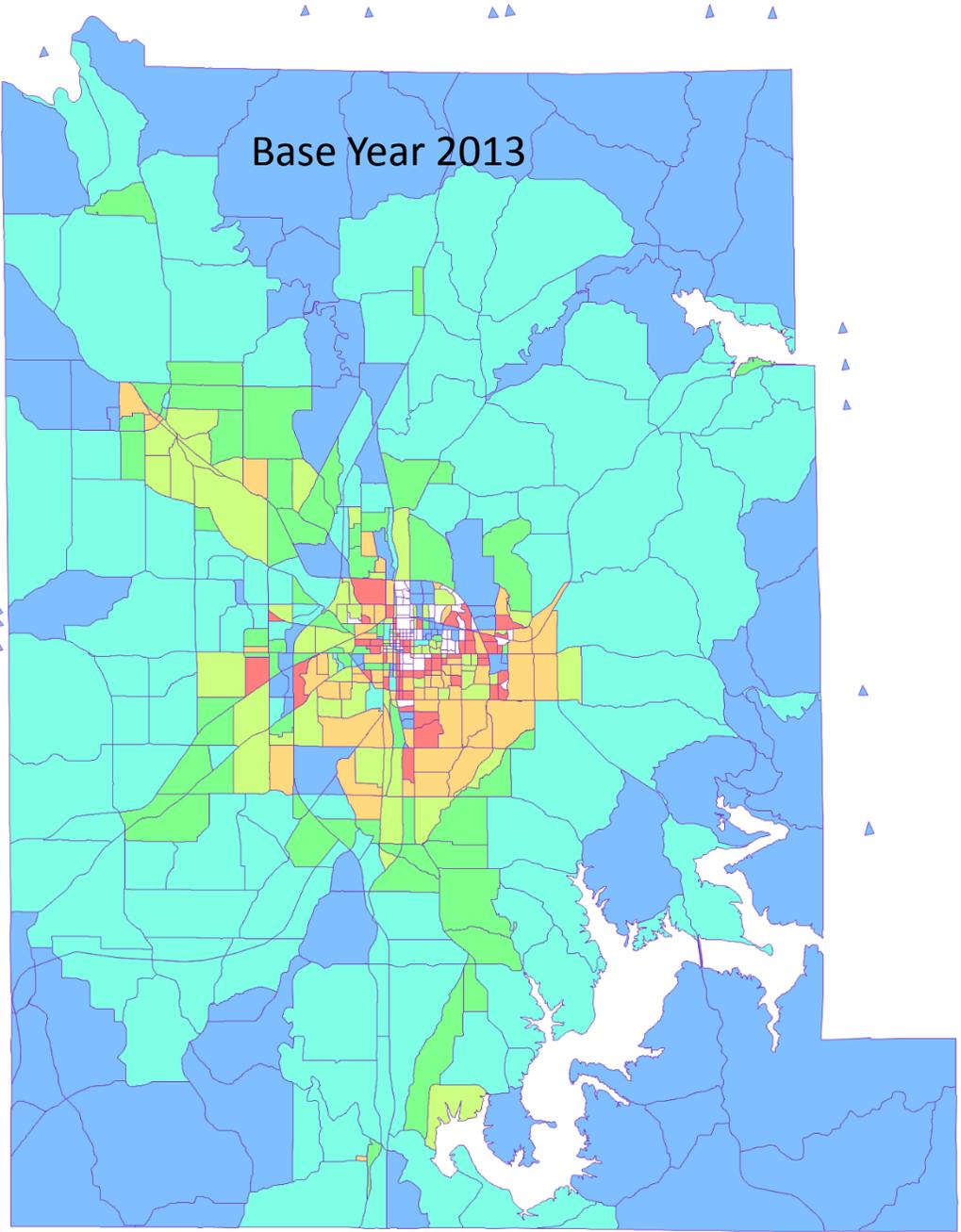
2013-2040 New Housing Units
= 1 HH Growth

Jobs

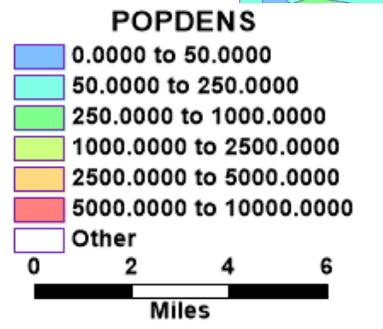
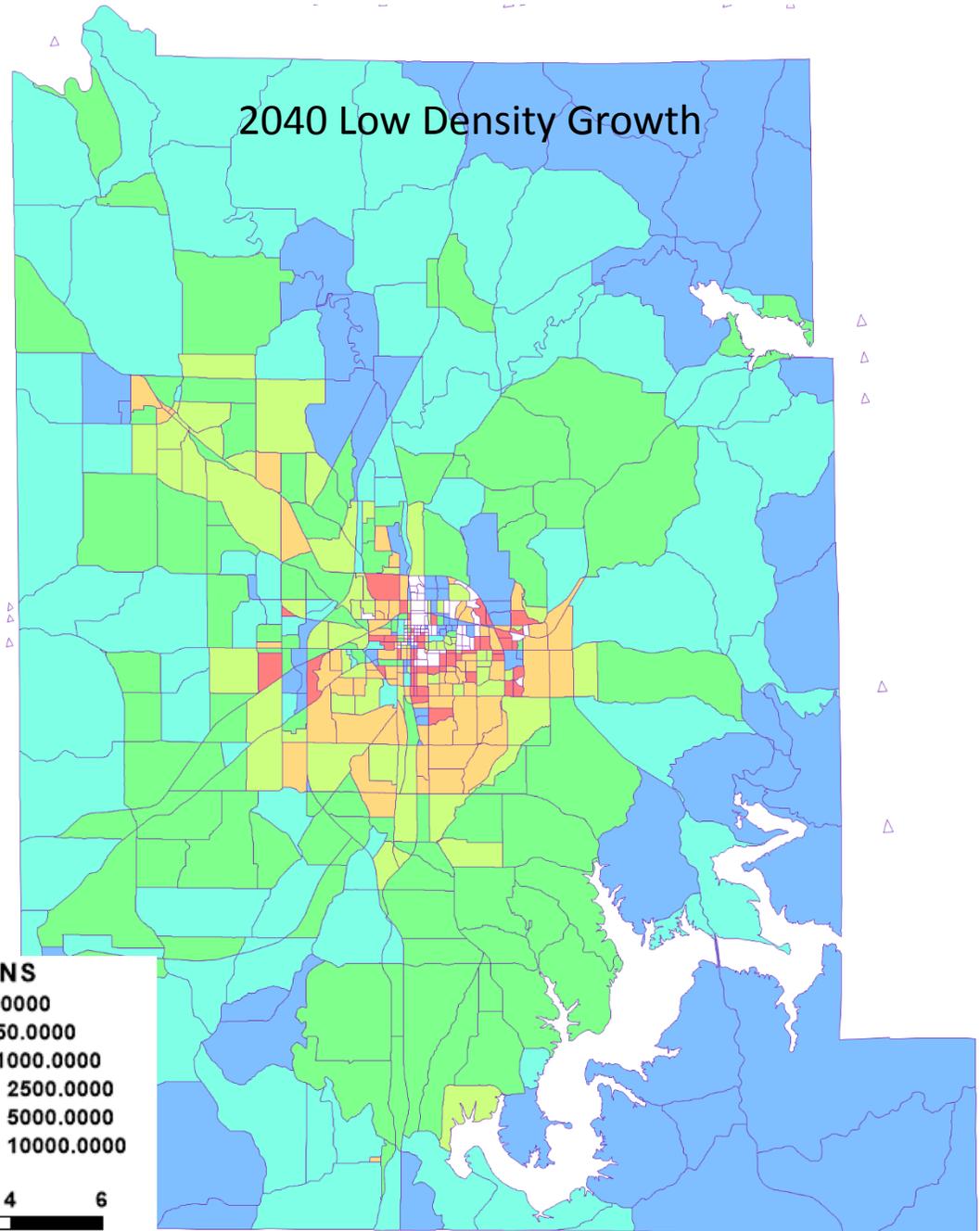
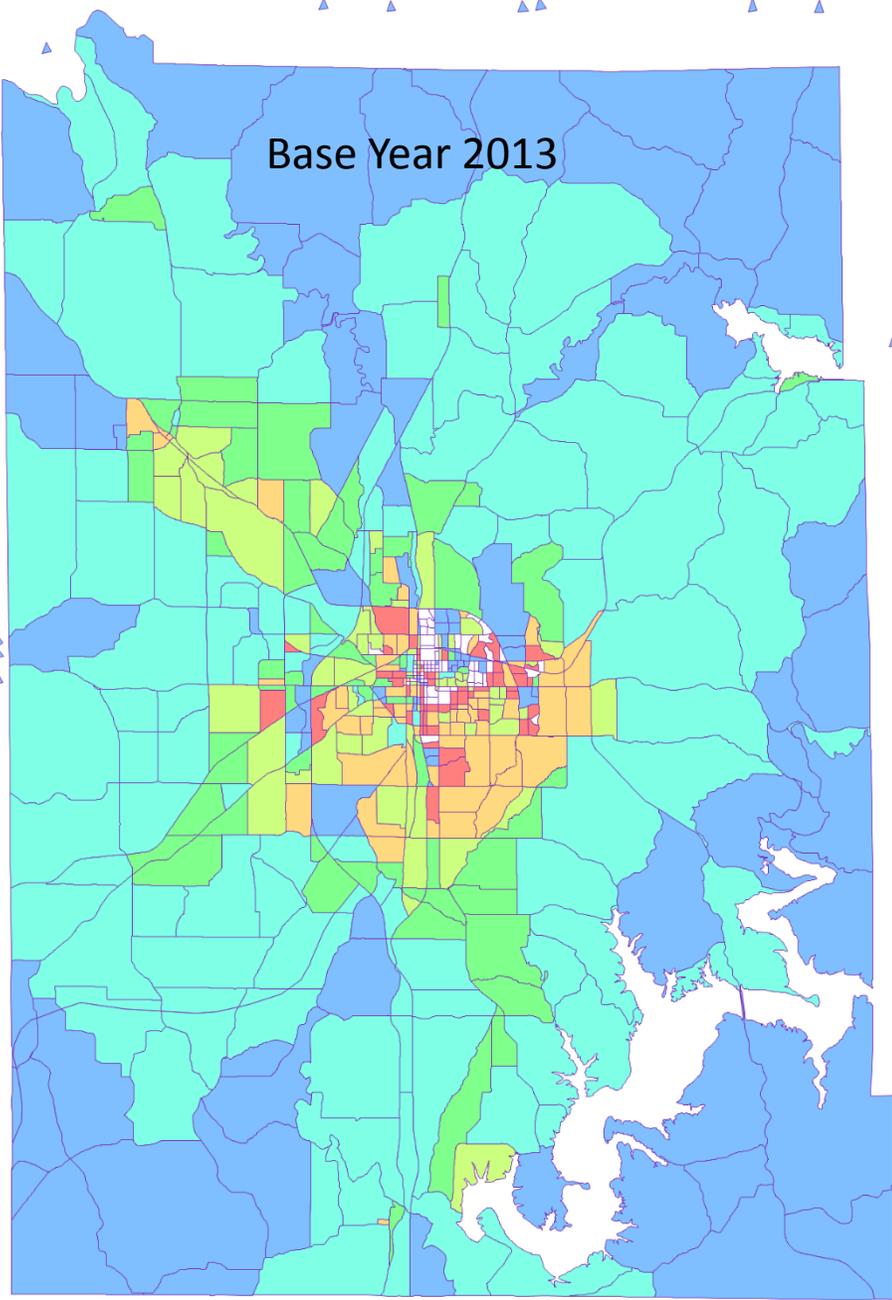


2013-2040 Job Growth
= 1.0000 Emp Growth





I-Mon



Vision and Performance Measures

Performance Measure Categories	MTP Vision				
	<i>Mobility and Accessibility</i>	<i>Transit</i>	<i>Community</i>	<i>Safety</i>	<i>Rebuild and Renew</i>
<i>Travel Demand</i>	●	●			
<i>System Efficiency</i>	●	●	●		
<i>System Condition</i>					●
<i>Safety</i>				●	
<i>Environmental Concerns</i>			●		
<i>System Investment & Economics</i>		●	●		

Vision and Performance Measures

Travel Demand

- Person trips per day
- Daily vehicle trips
- Daily vehicle miles
- Daily vehicle hours
- Daily transit boarding's
- Mode shares

Safety

- Predicted number of accidents
 - Fatal, Injury, Property Damage

Travel Efficiency

- Vehicle hours of delay
- Accessibility by mode
 - Number of jobs within X minutes
 - Shopping within X minutes
- Transit person hours
- Weighted average transit walk distance
- Weighted average transit headway
- 5D Variables

Economic

- Infrastructure costs
- Monetized System User benefits (time, cost, etc.)
- Potential jobs impacts
- Prosperity index

Environmental

- Greenhouse gas emission tonnage
- GHG per trip
- GHG per capita

Aggregate Statistics

Urban Design Variables					
Elements	Variables		Data Source		Units
Density					
DENS1	Households Densiity		No. Households from TAZ data	TAZ land area in sq.mi	households per sq. mi.
DENS2	Employment Density		No. of Jobs from TAZ data	TAZ land area in sq.mi	jobs per sq.mi.
Diversity					
DIVERS	Jobs/Housing Ratio		No. of Jobs within 1 mile radius	No. Households within 1 mile radius	Jobs per household ratio
Design					
DESGN1	Walkability		Pct. Of TAZ streets that are walkable		miles walkable per total centerline miles
DESGN2	Average Blockface (miles)		Centerline miles of road (non-freeway)	Number of links (non-freeway)	Miles per link
DESGN3	Street Density		Centerline miles of road (non-freeway)	Land area of TAZ	road miles/square mile
Destinations					
DEST1	Commercial establishments within 10 min walk		Selection set of commercial parcels	Count parcels within 0.1667 mi	Number of establishments
DEST2	Retail jobs within 10 min walk		No. of Retail jobs from TAZ data	Count jobs within 0.1677 mi	Number of retail jobs
Distance to Transit					
DTT1	Street Coverage within 10min. Walk to Transit Stop		Street miles within a 10 min walk of transit stops		Pct. Of Centerline Miles
DTT2	Access to destinations via transit		Number of stops within 5 miles via transit		Number of stops

Aggregate Statistics

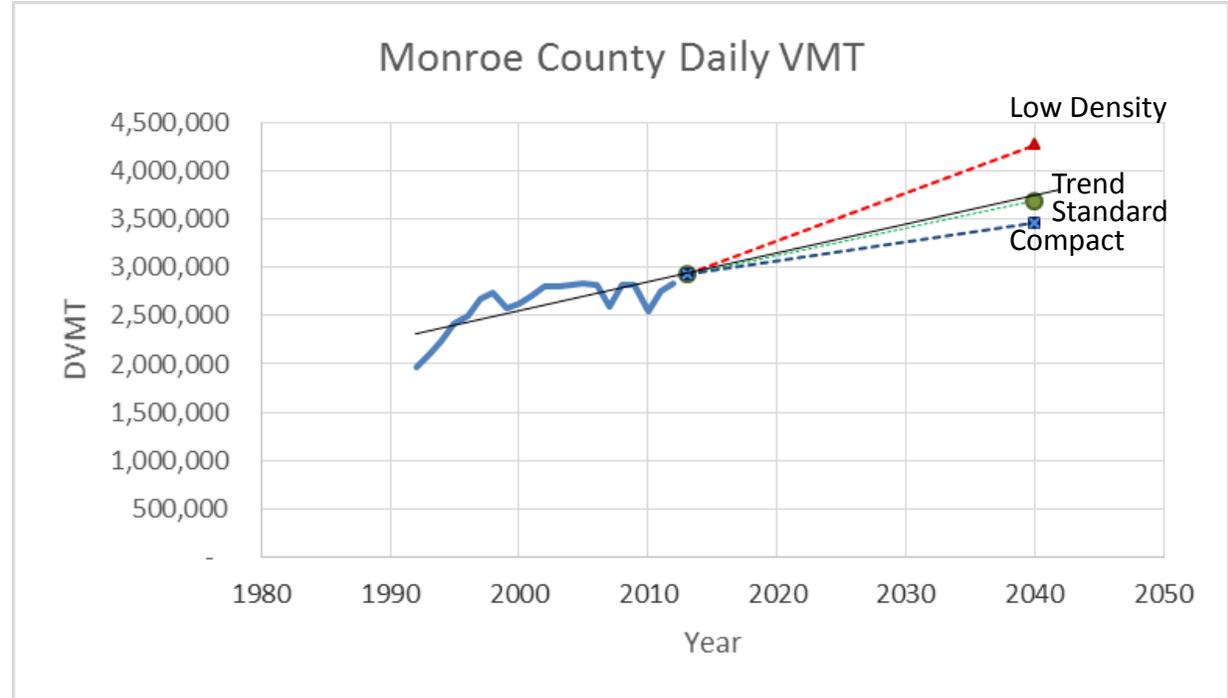
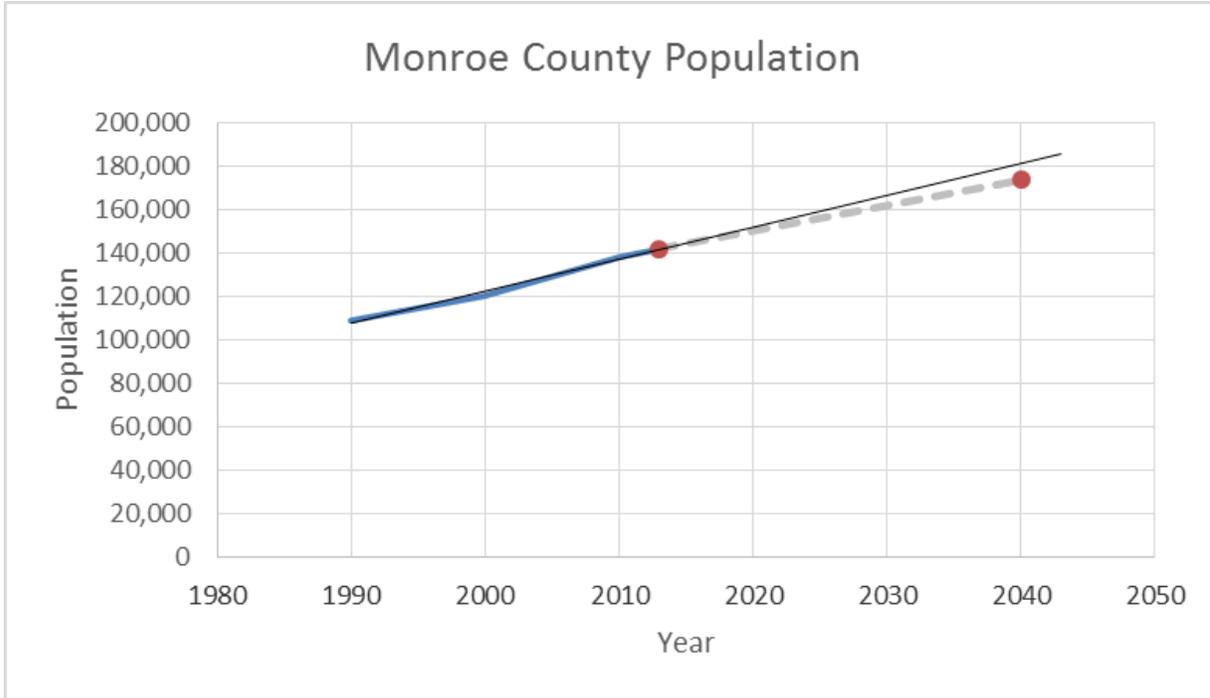
Vehicle Trip Elasticity by 5D Variable		
5D Variable	Cervero and Ewing	EPA Doc
Density1	-0.011	
Density2	-0.005	-0.040
Diversity	-0.026	-0.060
Design1	-0.054	
Design2	-0.054	
Design3	-0.054	-0.020
Destinations1	-0.022	
Destinations2	-0.034	-0.030
DistancetoTransit1	-0.027	
DistancetoTransit2	0.000	N/A

VMT Elasticity by 5D Variable		
5D Variable	Cervero and Ewing	EPA Doc
Density1	-0.040	
Density2	0.000	-0.050
Diversity	-0.020	-0.050
Design1	-0.120	
Design2	-0.120	
Design3	-0.120	-0.040
Destinations1	-0.200	
Destinations2	-0.200	-0.200
DistancetoTransit1	-0.050	
DistancetoTransit2	-0.050	N/A

Current Scenarios Being Evaluated

- Standard Forecast - 2040 growth allocation (mid-range growth, standard policies), No new projects
- Standard Forecast, but delete I-69 to illustrate impact
- Standard Forecast, but allow auto operating costs to increase faster than inflation
- Standard Forecast, but add E-W BRT

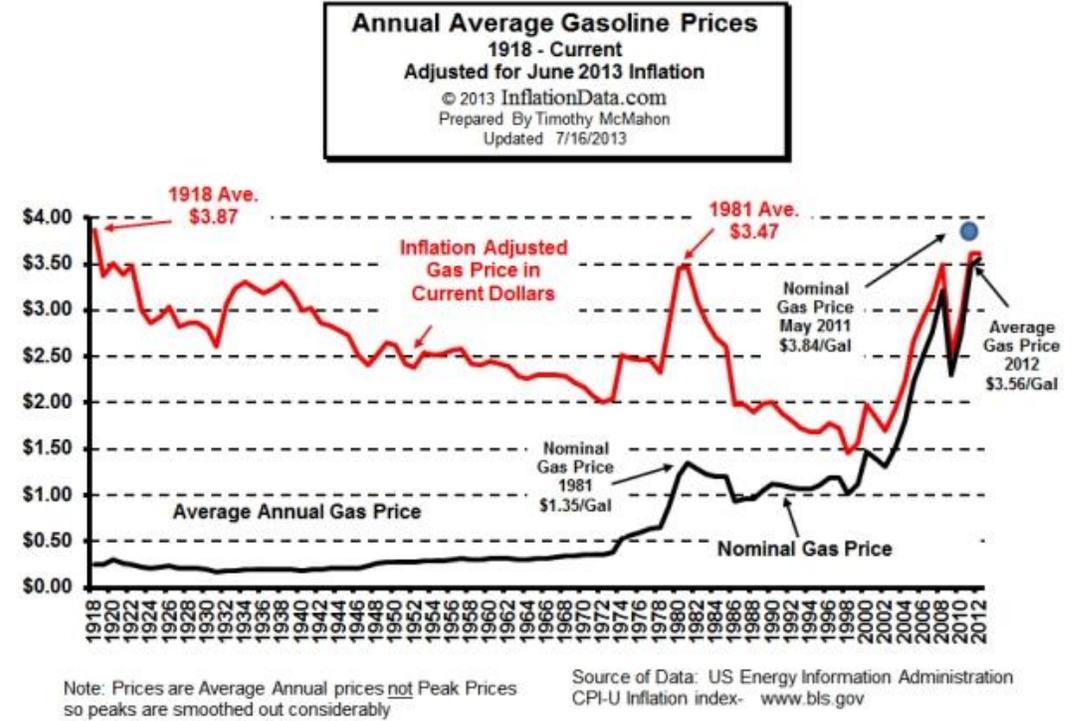
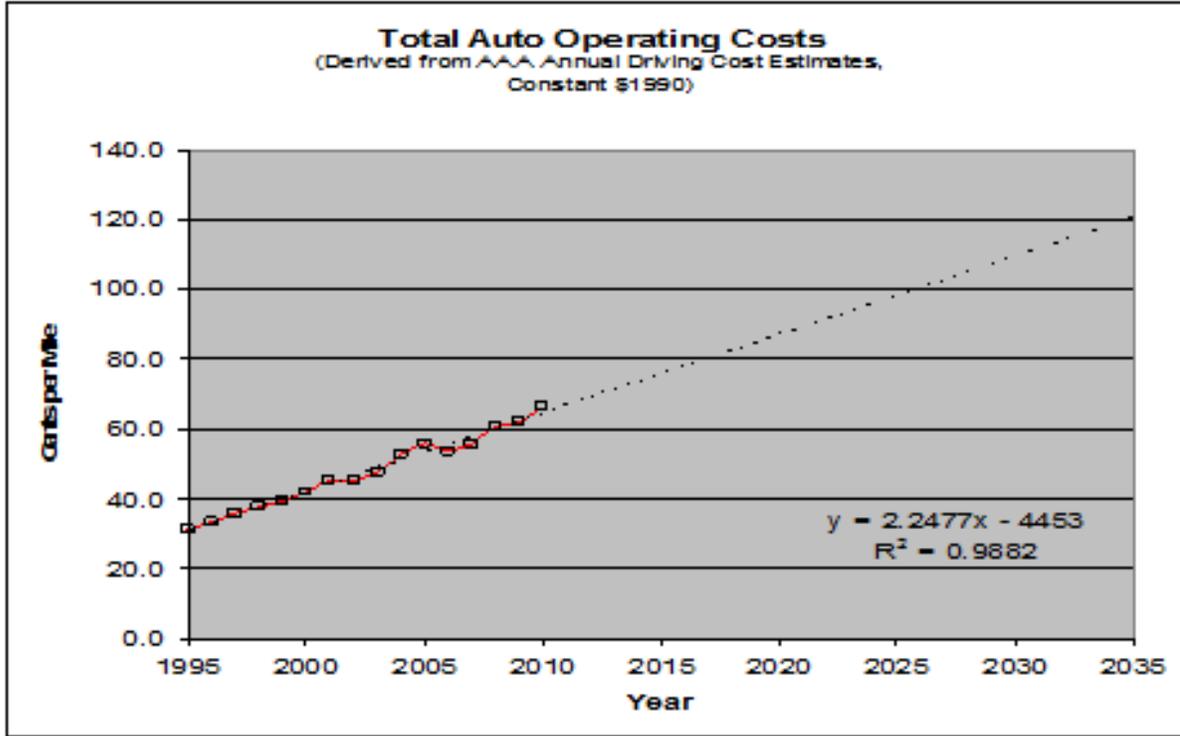
Development Style Impact on VMT



I-69 Impact on Travel Demand

- Contributes 300,000 vehicle miles per day in 2040
- I-69 VMT makes up 8% of vehicle travel
- Positive impact on safety
- Improves auto travel times
- No impact on mode share
- Positive impact on GHG

Increasing Driving Cost's Impact on Travel Demand



Increasing Driving Cost's Impact on Travel Demand

Auto Cost Per Mile of Travel

	2014		2040	
Operating Cost	\$	0.59	\$	1.32
Time Cost	\$	0.55	\$	0.55
Total Cost	\$	1.14	\$	1.87

Estimated Mode Share						
2040	Auto - Driver	Auto - Passenger	Rode a bike	Transit, drove to bus	Transit, walked to bus	Walked
Standard	52.6%	4.3%	17.0%	0.2%	5.2%	20.7%
Higher Auto Costs	42.1%	5.3%	20.7%	0.3%	6.4%	25.2%

E-W BRT Impact on Travel Demand

- Too early to say
- We now know that it can't replace BT Route 3

Initial Summary

Scenario	HH	Person Trips	VMT	Auto Trip Length
Base	54,038	432,304	2,929,216	6.776
Standard	72,507	580,056	3,690,813	6.363
Low Density	72,507	580,056	4,270,797	7.363
Compact	72,507	580,056	3,453,546	5.954
Higher Gas	72,507	580,056	3,304,385	5.697
No I-69	72,507	580,056	3,390,763	5.846