



MCCF Transportation Plan

April 2004

**Dan Wilhelm
First VP
Transportation Chair**



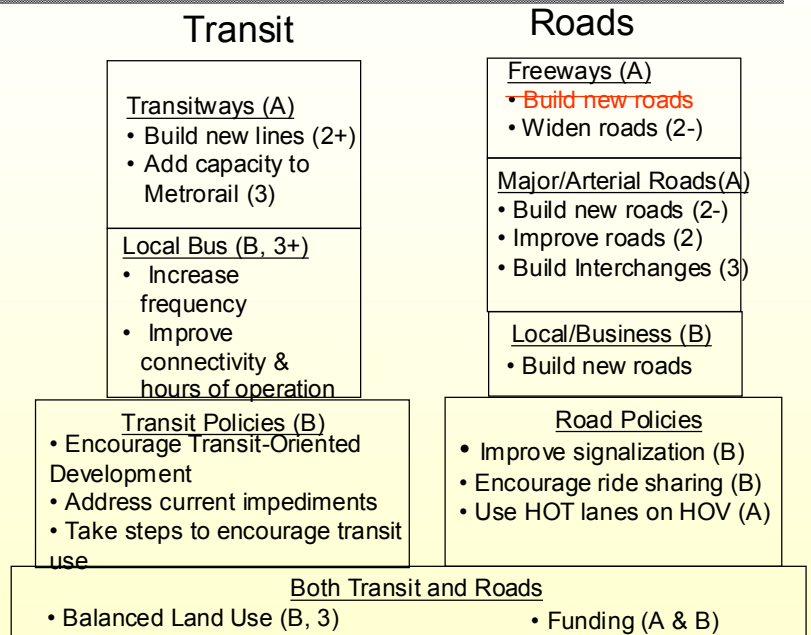
Problem and Approach Constraints

- **The Problems**
 - **Freeways and most major/arterial roads congested and getting worse.**
 - **Metrorail crowded in the downtown DC area**
 - **Bus service today not a viable option for many people**
- **The TPR Study concluded that we cannot build enough roads to address congestion in the long-term, even if funds were available**
- **Building significant numbers of new roads not realistic**
 - **County largely built-out and land not available**
 - **Impact on neighborhoods and quality of life creates strong opposition**
 - **Impact to the environment also creates strong opposition**
- **Funds are limited**



MCCF Approach

- Increase funding
- Make transit a viable travel choice
- Make road improvements to address current and near-term congestion problems to buy time
- Implement policies



~~MCCF opposes~~

MCCF Typical Priority

- 3 Strong support
- 2 Medium support
- 1 Build if funds available

Responsibility

- A. State
- B County

+ high within priority, - low in priority



Implementing Steps

- **Objective: Get projects and policies implemented**
- **Action required by County and often the State**
- **Projects need to be in the master plans**
 - Vast majority studied by TPR already included in master plans
 - TPR concluded a few should be deleted, which Planning Board and Council undertaking
 - TPR concluded a few others should be added, which Planning Board and Council undertaking
 - Policies, bus service, and at-grade intersection improvements not covered by master plans
- **County projects**
 - Need Executive and Council backing
 - Including them in Go Montgomery and Council Plan helpful
 - Projects need to be included in CIP
 - Most of bus improvements included in Operating Budget
- **State Projects**
 - Get Council and Executive to both agree on design and ask state to implement
 - Need SHA/MTA to support and include in their proposed budgets
 - Need Delegates and Governor's support



Project Support

- **Plans**
 - Go Montgomery: Target 2015 at \$9.5B (actually closer to \$11.3B)
 - Council: Target 2015 at \$6.9B
 - MCCF: No time frame (2025+) at \$7.8B
- **MCCF, Council and Executive agree on essentially all but a few major projects. Major projects where agreement doesn't exist:**
 - Bi-County Transitway (All support but differences on alignment)
 - Outer Purple (Exec for, Council & MCCF too expensive)
 - ICC (Exec & Council for, MCCF against)
 - Techway (Exec wants study, Council & MCCF against)
 - Beltway widening (east of I-270) (Exec for, Council & MCCF against under the assumption that it will require ROW)
 - Montrose Parkway (Exec and Council for, MCCF opposed)
- **Some projects MCCF supports not in Go Montgomery or Council plan**
 - Doesn't mean they do not support them
 - Means other projects should be accomplished first



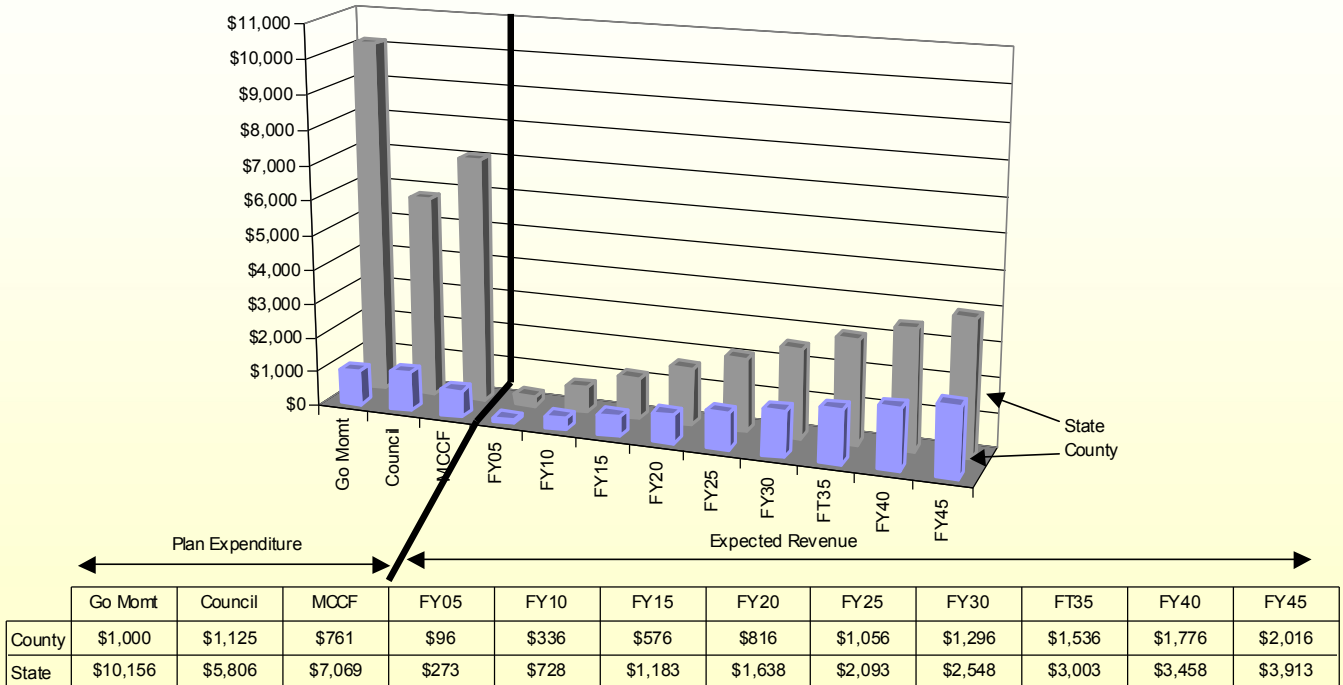
Plan Summary and Costs

	Go Montgomery (2015)	Council (2015)	MCCF (No period)
Land Use	Master Plan	Balanced	Balanced proposed
Local Bus	Yes	Yes	Yes
Transitways	GA, CCT, Outer/Inner Purple,	GA,CCT, Inner, WO Spur	GA, CCT, Inner w/conditions, WO Spur, Redline Extension
Interchanges	8	11 + study 5	27 of 27
Minor Road Projects	16 out of 42	16 out of 42	36 out of 42
Major Road Projects	7 out of 14	6 out of 14	9 out of 14
Interstate Projects	ICC, I-270, Beltway study Techway	ICC added, I-270, I495 west spur to VA	I-270
Signal improvements, maintenance, and other road based support items	Yes	Assumed elsewhere in budget	Assumed elsewhere in budget
Trails	Yes	Assumed elsewhere in budget	Assumed elsewhere in budget
Cost	\$11.3B	\$6.9B	\$7.8B

GA= Georgia Ave Busway, CCT= Corridor Cities Transit, WO= White Oak; CP=College Park



Plan Cost Compared to Expected Revenue



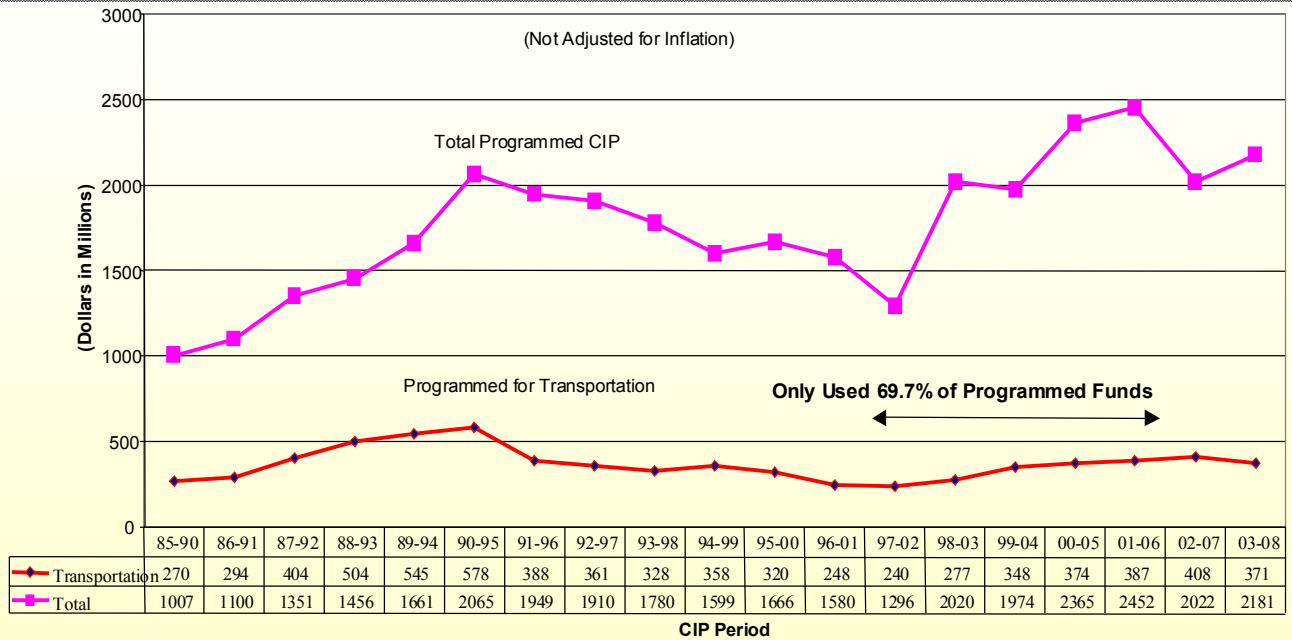
- **County Expected Revenue does not include recently enacted impact tax**
- **State shortfall substantial**

Revenue Projections come from June 22, 2002 memo from Art Holmes as Chairman of the Planning Board to Steve Silverman, Council President. DPWT and the Planning Department jointly developed the numbers. It was based upon average percentages of the County and State budgets between 1992 and 2002. The data shows amount that would be available for system expansion. It does not account for increases in maintenance costs.

The TPR projects were those used for round 3. The dollar amounts were constrained in order to set priorities. The Council figure includes the projects they approved in September 2002 and adds the ICC, which was added in December 2002, after the election. The Go Montgomery includes the Executive's new projects, but does not include rebuilding. The costs for the projects were taken from TPR except for the Go Montgomery Outer-Inner Purple Line. The \$5.3B cost was developed by SDOT based upon a request from Glenn Orlin. The letter was presented to the Council at the end of September 2002.



County Programmed Transportation CIP



- County needs to program more funds
 - Chart calculated before impact tax increase
- Executive needs to use programmed funds

Taken from Glen Orlin Memo to T&E Committee dated 2-26-02 dealing with FY03-08 CIP for transportation.



Capital Funding Situation for SDOT (Montgomery County needs partly included)

State Plan

FY 05-10

Total \$17.1B
 Unfunded \$10.5B (62% of total)
 \$7.1B road and transit less ICC
 (remaining airport & ports)
Expected: \$ 1.3B (fed & fees)*
 Needed \$ 9.2B
 Yearly \$ 1.5B

Without ICC (w/average fed payment)

Unfunded: \$7.5B (\$6B)
 Yearly: \$1.25B (\$1B)

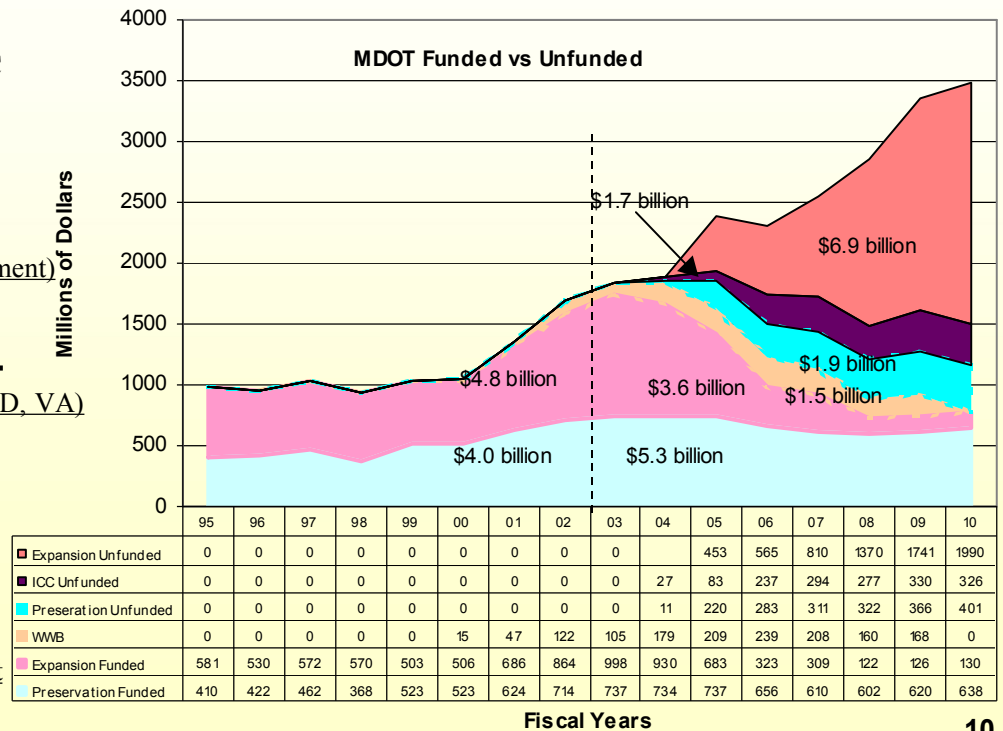
WMATA states its needs (DC, MD, VA)
 \$12.2B 2004-2010

Montgomery Yearly Need

Support 1% growth \$200M
 Support 1.5% growth \$300M
 Funds for backlog

MCCF supported for roads/transit
 \$560M /year increase

Chart from SDOT



* Does not include any federal funds for Transitways; lower federal funding than average (\$870M vs \$2.5B)



SDOT ICC Funding Proposal

- **SDOT Requested COG Transportation Planning Board (TPB) to approve the ICC for construction in the Constrained Long Range Program (CLRP)**
 - Construction complete by 2010
- **Funding - \$1.7B (from SDOT)**
 - \$50M Special request to Congress
 - \$100M State revenues from sale of assets and additional federal funds
 - \$450M MdTA Bonds (may add to GARVEE Bonds)
 - \$500M MdTA Bonds to be repaid from tolls (no final decision to impose tolls)
 - \$600M GARVEE Guaranteed Bonds. Use future federal transportation funds to repay bonds.
 - FY98-03 average federal payment was \$430M/yr
 - Expect it to increase - \$480M to \$530M/yr
 - \$60M per year principle/interest cost
- **Repayment of bonds from GARVEE and non-toll MdTA bonds**
 - \$106M per year or 22% of Federal payment
 - Federal payment covers entire state. If these payments come from Montgomery and to lesser extent PG allocation of federal funds, what will remain for other projects?



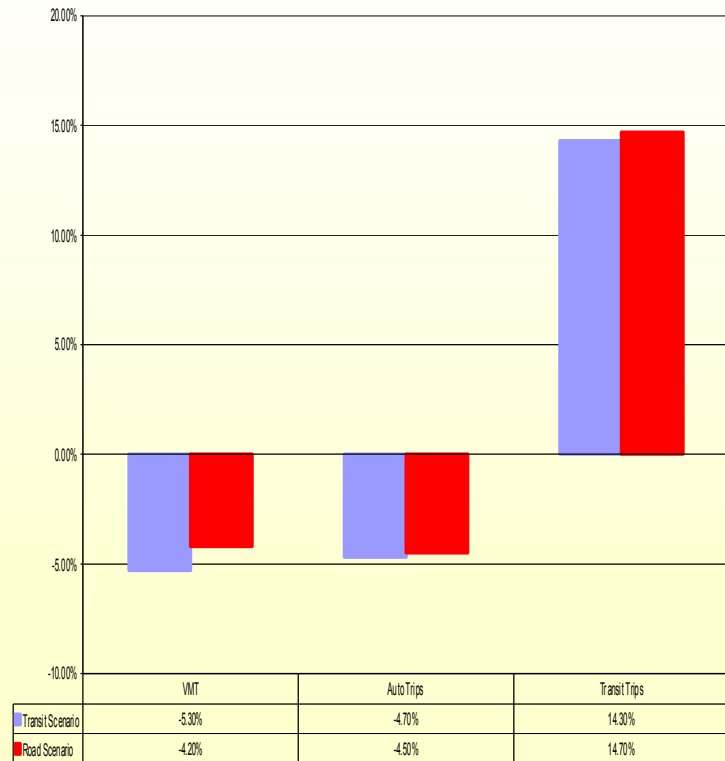
Specific Projects and Policies

In approximate order of MCCF priorities



Overall Policies Affects both Road and Transit

- **Balanced Land Use**
 - Improve jobs/housing mix within planning areas to allow people to live closer to work
 - For those traveling, uses non-peak road and transit direction capacity to exists to support demand
- Helps both road and transit





Local Bus

- **County/Wmata study identified many limitations with the current system**
- **Fix major limitations – implement grid system and add buses to**
 - Increase bus frequency (currently 15 to 30 minutes)
 - Increase areas served – business parks and residential areas
 - Increase hours of operation
- **Other improvements and policies**
 - More information and more understandable
 - Additional uses for smart cards (buses, parking lots)
 - More sidewalks
 - More comfortable and lower-floor buses
 - More shelters
 - Access to restrooms



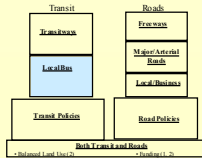
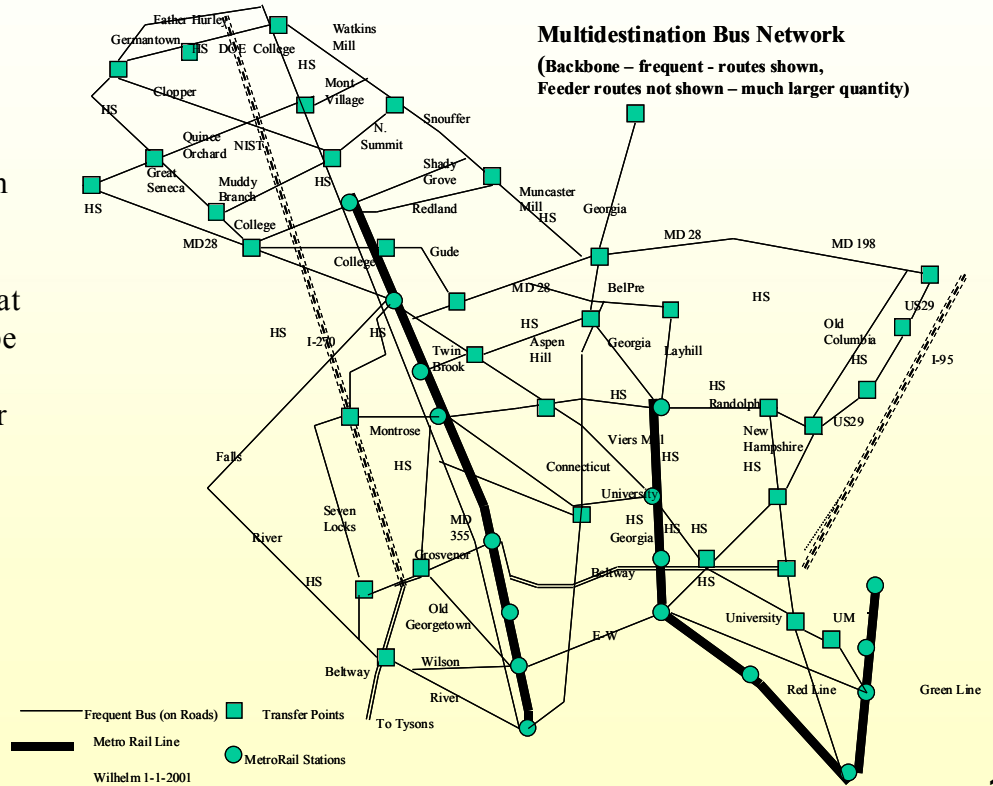


Notional Transit Grid System

Feeder-buses go into business and residential areas to pick-up passengers and take them to a transfer node

Transfer node is located at activity center. It could be a destination for local travel. It is also a transfer point between the backbone and feeder routes. County needs to identify and include in master plans.

Multidestination Bus Network
(Backbone – frequent - routes shown, Feeder routes not shown – much larger quantity)





Transit Policies

- **Transit-oriented development***
 - **Encourage development around transit stations and to a lesser extent around transfer nodes to allow people to walk to the station/node**
- **Implement charges for parking once bus system changed to encourage transit use**

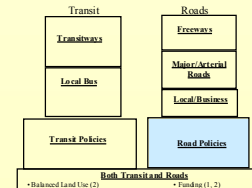
* MCCF Supports



Road Policies

- **Improve signal operation**
 - Time-of-day length to match volumes for non-peak periods - especially nights and weekends
 - Adjusting signal lengths can add 8% to 10% capacity to an intersection
 - Add sixth phase in ATMS to effectively add capacity to select intersections (allow sequencing of movements to better match volumes)
- **Increase people per vehicle to reduce number of vehicles on the road**
 - Encourage car-pooling/van-pooling
 - Add HOT to HOV lanes on I-270 and Beltway if widened

* MCCF Has not discussed these





Grade-Separated Interchanges

- **Build 27 grade-separated interchanges [State \$1.5B, most priority 3]***
 - Primary congestion points addressed
 - Adds 150% to 250% in capacity and benefits both N-S and E-W travel
 - Top speed doesn't increase but eliminating much of stop time increases average speed
 - Retain traffic signals at arterial/residential streets to meter traffic to allow people to exit their houses/businesses
 - Series of interchanges more a benefit than isolated interchanges – create corridors
 - Randolph/Montrose
 - US29
 - MD 198-MD28
 - MD 355
- **Upgrade intersections improvement [State \$79M]**
 - Add turn, thru lanes

* MCCF Supports





Typical Grade-Separated Interchange Vision (MD 28 & Georgia)



MD28/MD97 Intersection Improvements Study

Alternative 4 - Urban Diamond Interchange (MD97 Depressed)

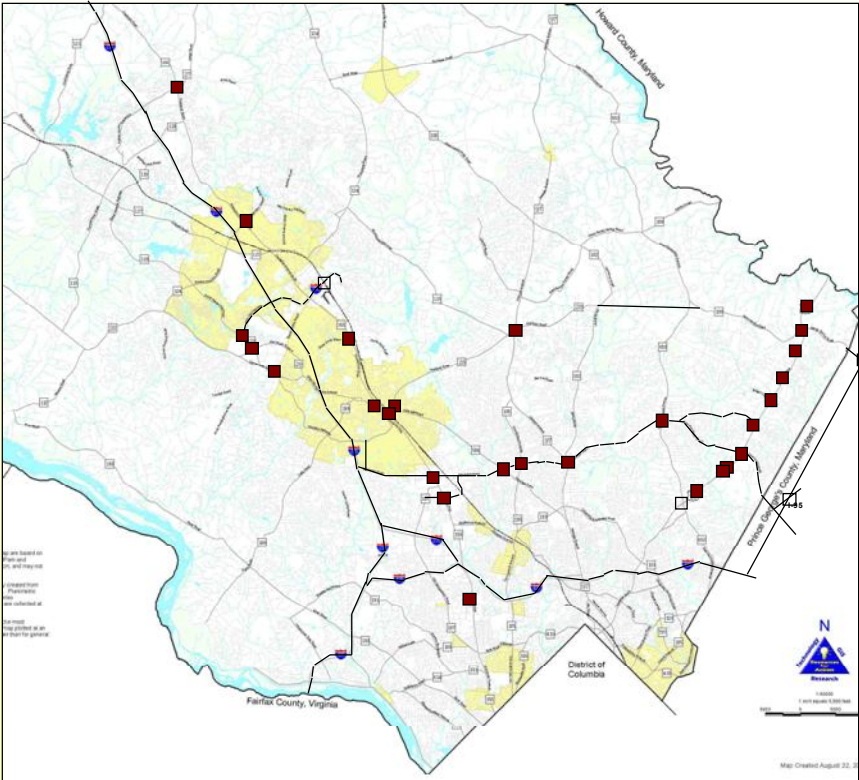


MD 28 and Georgia Ave Interchange Advisory Committee Recommendation





Build Grade-Separated Interchanges



- New Interchange
- Existing Interchange








Transitways

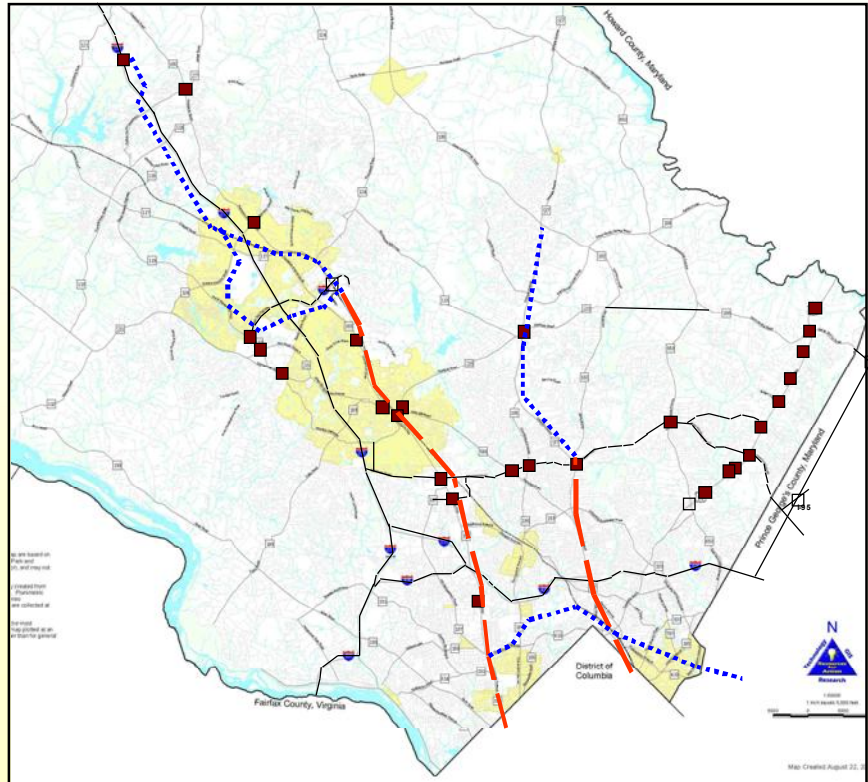
- **Metrorail**
 - Add cars and run all trains to end of lines [MD, VA, DC; \$12.2 B 2004 to 2010 , priority 3+]
 - Add station at Montgomery College [Metro, priority 3]
- **New systems (high speed, high capacity equivalent to freeways)**
 - Build Corridor Cities Transitway [State \$700M, priority 3]*
 - Build Bi-County Transitway (Inner Purple Line), *Bethesda to New Carrollton* [State, \$1.2B, priority 2 with conditions]*
 - Build Inner Purple Line spur *from Langley Park to White Oak* [State, \$198M, priority 2]*
 - Build Georgia Ave Busway *from Glenmont to Olney* [State, \$69M, Priority 3]*
 - Extend Red Line *from Shady Grove to Metropolitan Grove* [State, \$924M, priority 3-]*
 - Extend Purple line to Tysons Corner [State \$963M, priority 2-]
 - Build Outer Purple Line [State, \$5B, Priority 1]
- **Possible technologies for new system not specified by MCCF since should be part of study**
 - Heavy rail
 - Bus rapid transit
 - Light rail
 - Mono-beam





Transit and Build Grade-Separated Interchanges

-  Red Line
-  Nearer Term Transitways
-  Significant Major/Arterial Road additions/widening
-  New Interchange
-  Existing Interchange





Build Major/Arterial Roads

- Few new roads planned since land is not available
- **Projects:**
 - **Eastern Connector (US29 to US1 on ICC ROW)[State \$116M, priority 2-]**
 - **Montrose Parkway (MCCF opposes but County decided to build) [County \$113M]**
 - **Midcounty Highway**
 - MD 124 to MD 27 (MCCF recommends study) [State \$207M]
 - MD 27 to Middlebrook [Included in above line]
 - Stringtown Rd to Md 355 [State \$14M, priority 2-]
 - **Western Connector**
 - Follow ICC ROW I-370 to MD 28 (Planning Board), [State \$98M]
 - Widen Muncaster Mill (MCCF) [State, \$77M]
 - **Brookeville Bypass [State, \$33M, priority 3]**
 - **Hyattstown Bypass [State, \$5M]**



Upgrade Major/Arterial Roads

- **Inside Beltway Region**
 - **Widen River Road*, *Beltway to DC* [State \$81M]**
- **Eastern Region**
 - **Widen MD28/MD198*, *US29 to Georgia* [State \$113M]**
 - **Widen Briggs Chaney*, & Greencastle*, *east of US29* [County \$35M]**
- **Georgia Ave Region**
 - **Widen Georgia*, *MD 28 to MD 108* [State \$59M]**
 - **Widen Layhill Rd, *Park Vista to Norwood** [State \$24M]**
 - **Widen Norwood/Dr Bird*, *MD 28 to MD 108* [State \$24M]**
 - **Widen MD 108*, *Laytonsville to Olney Mill Rd* [State \$55M]**
- **I-270 South Region (Rockville South)**
 - **Widen Gude Dr, *Key West to Shady Grove** [State, \$10M]**
 - **Widen River Rd, *Beltway to Falls Rd* [\$42M]**
 - **Widen Viers Mill*, *Randolph to Twinbrook* [State \$42M]**
 - **Widen Wootton Pkwy, [County]**

* All are MCCF priority 2

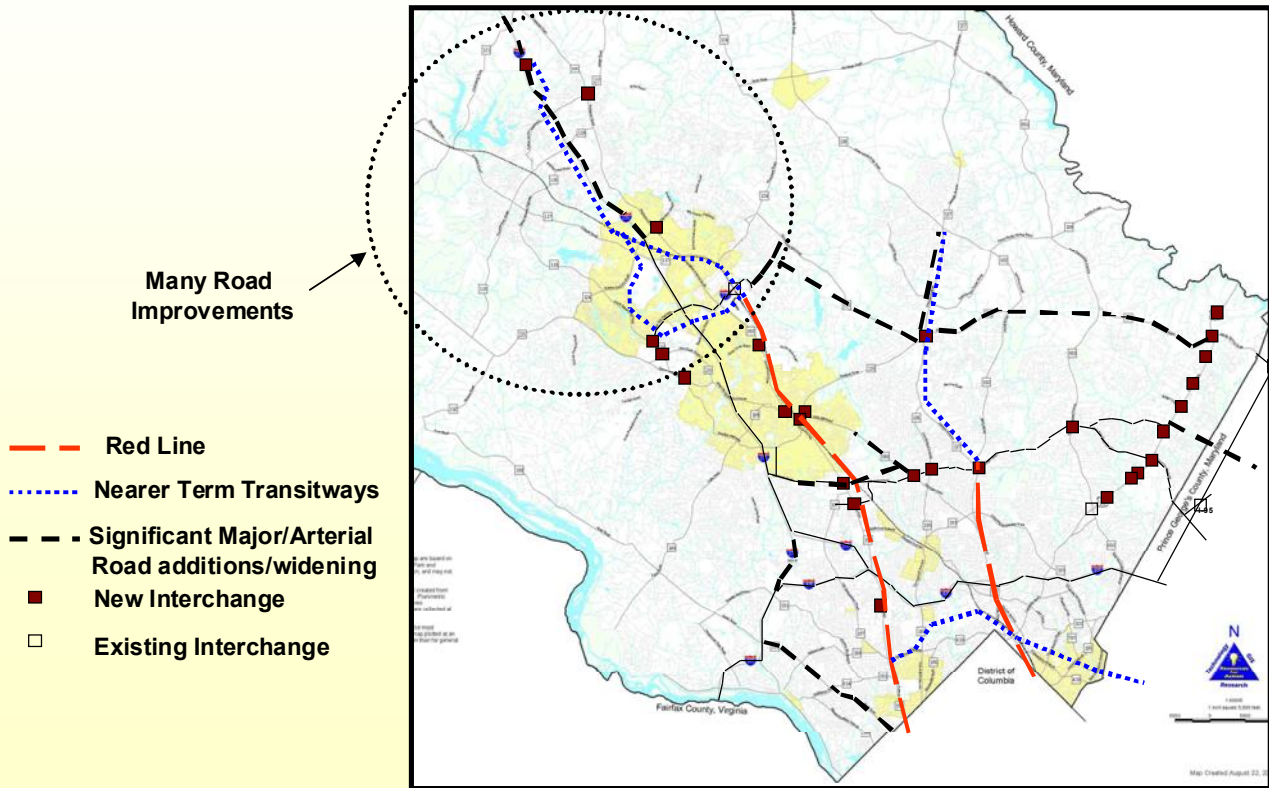


Upgrade Major/Arterial Roads (cont)

- **I-270 North Region (Gaithersburg north) – all are MCCF priority 2**
 - Widen Clopper Rd, MD 121 to MDS 124, & Seneca Park to MD 118 [State \$145M]
 - Widen Clopper Rd, I-270 to Seneca Park*
 - Extend Father Hurley Blvd*, Wisteria to MD 118 [State, \$5M]
 - Goshen Rd, Gaithersburg to Warfield Rd [State \$18M]
 - Widen Great Seneca, Darnestown Rd to Middlebrook Rd* [\$18M]
 - Widen Longdraft, MD 124 to MD 117 [County \$20M]
 - Widen MD 118*, Clopper to Seneca Creek [State \$78M]
 - Widen MD 118*, Watkins Mill to I-270 [State \$6M]
 - Widen MD 121*, Stringtown to Newcut [State \$21M]
 - Widen MD 355*, Brink to Midcounty [State \$40M]
 - Widen Middlebrook*, MD 118 to MidCounty [County \$12M]
 - Widen Muddy Branch*, West Diamond to Darnestown [State, \$60M]
 - Widen/Extend Newcut Rd *, MD 121 to MD 27 [State, \$63M]
 - Widen Ridge Rd, MD 355 to Skylark [State\$33M]
 - Widen Ridge Rd*, MD 355 to MD 108 [State \$108M]
 - Widen Shady Grove*, Brairdale to I-370 [State, \$8M]
 - Widen Snouffer School, , Goshen to Mooney, MCCF recommends study [\$22M]
 - Widen Stringtown*, I-270 to MD 355 [\$20M]
 - Extend Watkins Mill, MD 355 to Clopper, MCCF recommends study [County \$34M]
 - Widen Woodfield Rd*, Midcounty to Warfield and extend to Ridge [State \$170M]



Build/Upgrade Major and Arterial Roads

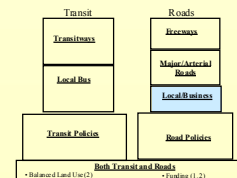




Build Local/Business Roads

- **Developer builds local residential streets under subdivision process**
 - Issue is not congestion but cut-thru traffic and speeding
 - Most cut-thru occurs because of congested major/arterial roads
- **County builds short business roads/segments to address local congestion**
 - Chapman Extended* [County \$63M]
 - Citadel extension* [County \$2M]
 - Nebel St* [County \$10M]
 - **Burtonsville Access Rd, [County]**
 - **Observation Dr, [County]**
 - **Rainbow Dr, extend to Thompson [County]**
 - **Others**

* MCCF has not discussed all of these but the ones we support are priority 2

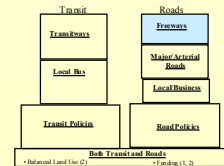




Freeways

- **Build new ones (MCCF opposes)**
 - ICC, *I-270 Gaithersburg to I-95 south of MD 198* [State \$1.7B+]
 - Techway or Techway Light, *another Potomac Crossing near MD 118 and widen other roads to support* [State \$408M]
- **Improve existing ones**
 - **Widen Beltway by adding one HOV lane in each direction** [State \$578M]
 - MCCF Executive Board supports from west spur to VA when VA builds HOV lanes
 - MCCF opposes east of I-270 based upon assumption that it would not fit in right-of-way (ROW) – State now claiming lanes can be added within ROW
 - **Widen I-270 by adding HOV from MD 124 to I-70*** [State \$1.2B]
 - **Widen I-270 spurs**
 - West side* [State \$68M]
 - East side [State \$68M]
 - Add 3 interchanges to I-270* [State \$50M]

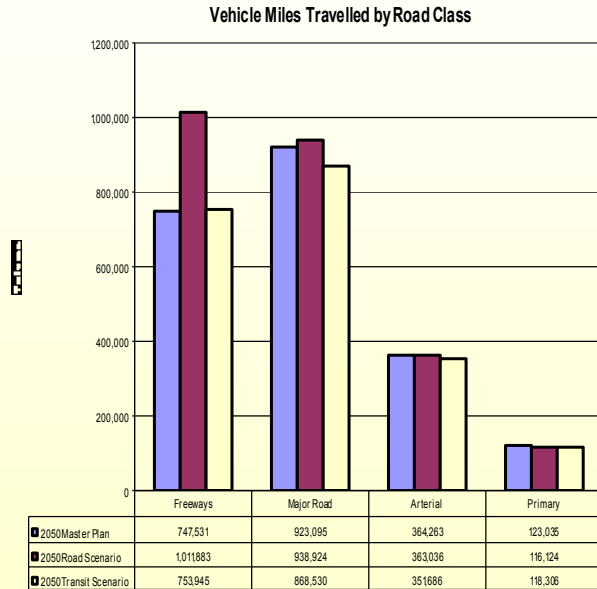
* MCCF Supports





Affect of improvements by Road Classification

- From TPR Study
 - Freeways expansion does not reduce travel on local roads. Still need other improvements
 - ICC reduces E-W congestion near road but increases N-S congestion
 - Transit reduces travel by roads, which means less congestion on local roads



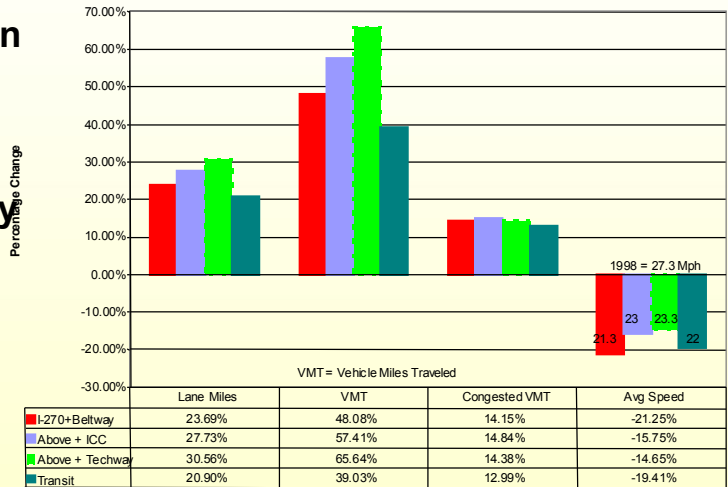
Road Scenario includes ICC, Techway, Beltway widening, and I-270 widening
 Major roads are often 6 lane roads (not freeway)
 Arterial roads are most 2-4 lane roads excluding primary and subdivision streets
 Primary roads include Notley, Cannon, Lockley, Old Columbia



Benefit of ICC and Other Interstate Roads

- From TPR Study
 - Congestion in future worse than today
 - Adding lane miles results in more driving
 - ICC reduces congestion slightly for short period but not in long term

Comparison of the future (2050) with Today (1998)



Based upon TRP data, round five runs for roads compared to 4 base.



Environmental Impact Comparison

	2050 MP	2050 Road Scenario	% Change w/ 2050MP	ICC Part	% of MP Value	2050Transit Scenario	% Change w/ 2050MP
Wetlands (acres)	15.77	75.23	377%	32.5	206%	13.04	-17%
Floodplain (acres)	143.68	286.82	100%	53.01	37%	123.85	-14%
Stream/Lake (acres)	394.29	745.59	89%	121.67	31%	353.65	-10%
Wet/Flood/Stream Total	443.95	873.29	97%	146.7	33%	398.41	-10%
Parkland (acres)	110.95	331.47	199%	73	66%	75.57	-32%
Bioacres (acres)	25.6	146.27	471%	115.61	451%	17.93	-30%
Topten (acres)	15.02	103.98	592%	75.58	503%	6.66	-56%
Park/Bioacres/Topten	115.6	423.87	267%	152.29	132%	75.95	-34%
Interior (acres)	5.23	55.69	965%			3.22	-38%
Significant (acres)	74.28	206.77	178%	139.7	188%	51.08	-31%
Direct Forest (acres)	79.51	262.46	230%			54.3	-32%
Interior Forest (acres)	17.33	118.12	582%	98.84	571%	11.69	-33%
# of play. fields	15	29	93%	1	7%	12	-20%
Well Service area (acres)	402.05	384.99	-4%	32.86	8%	217.43	-46%
# of buildings	161	304	89%	21	13%	179	11%

MP = Master Plan

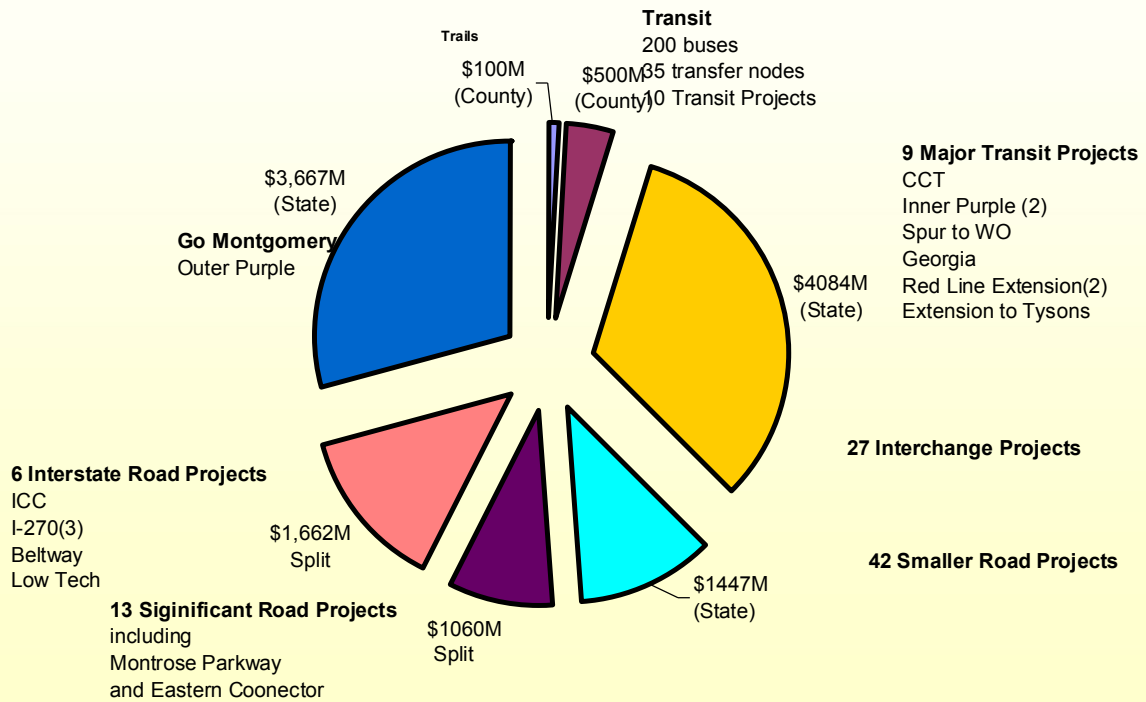


Backup



Costs for all Projects Considered

Total \$17.9B





Capacity

- Capacity drops as speed drops
- Capacity drops with the length of the signal cycle and number of controlled left turns

