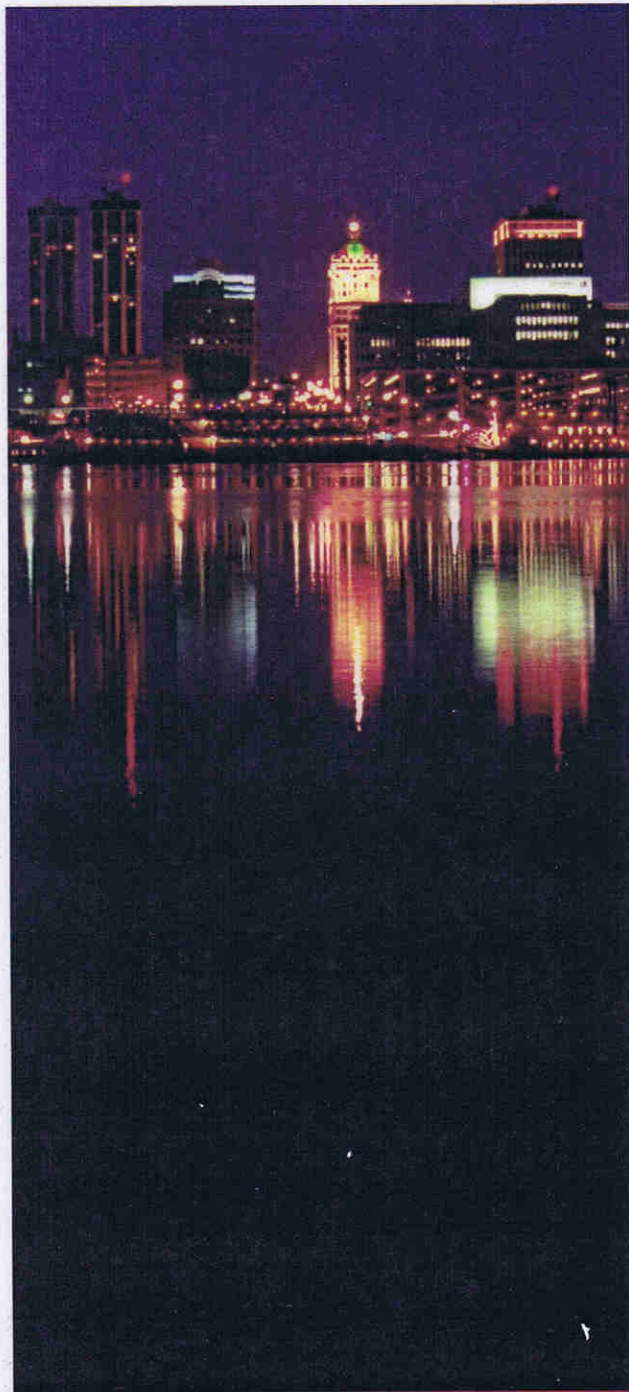


**APPENDIX D**  
**Alternatives Development**  
**and Screening**



TYPE	STRATEGY	DESCRIPTION	Effectiveness	Cost	Ability to Implement	EFFECT ON TRAFFIC	USE IN URBAN AREAS	Overall Rating-
1	Intersection & Roadway Widening	Widen turn lanes, or existing traffic lanes.	1	2	2	Improves safety and traffic movement	Use within Triplan model to test effectiveness on MIS.	1
1	New Freeway Lane Using Shoulders	Adding traffic lanes to a freeway within the existing right of way by using the median for constructing traffic lanes and shoulders.	1	2	2	Adds through traffic capacity reduces conflict with access/decel traffic.	I-74 is the primary candidate for this improvement and this improvement was included in the MIS model.	1
1	Turn Lane Installation	Adding left and/or right turn lanes.	1	1	2	Improves the level of service of intersections	Could improve efficiency and safety at some intersections. This is currently planned and designed as warrants merit.	2
1	One-way Streets	Locating and establishing parallel streets that could act as one way couples.	1	2	2	Increases capacity on existing parallel streets. May reduce access to property.	Limited utility on the east side of the river due to terrain and street patterns.	3
1	Land Use Restrictions	Restricting property access within a specific distance from busy intersection or down zoning land that would add additional turn movements to an intersection	1	2	1	Reduces conflicts between through traffic and traffic attempting to turn to access local land uses.	Current state statutes would need to be changed. This technique is not used by local governing agencies on the east side of the river.	3
1	Turning Movement Restrictions	Identifying a zone around key intersections to prohibit turns into private driveways.	1	2	2	Improves level of service at intersections for through traffic, reduces conflict with turning movements	Limited utility due to existing land use patterns and the cost of acquiring access and developing frontage roads to maintain access to existing property. This strategy would have effectiveness along a corridor that is forecast to develop in the future.	3

Traffic Signalization										
1	Local Intersection Signal Improvement	Signalize or adjust existing signal timing to maximize intersection capacity.	1	2	2	2	2	Varies dependent on analysis, signals could reduce conflict with turning vehicles and improve through traffic flow.	May help to improve "spot" congestion problems along existing arterial such as IL Route 8.	2
1	Arterial Signal System	Establish a coordinated signal system.	2	2	2	2	2	Maximizes through traffic operations along an arterial and improves level of service.	1	2
1	Area Signal System	Create a network of coordinated signal systems within an area.	0	0	0	0	0	Improves traffic operations within a large area.	1	2
1	Freeway Diversion and Advisory Signing	Create an arterial system that will divert traffic from the freeway system and establish an advisory signing system to notify the travelling public of alternate routes.	0	0	0	0	0	Improve level of service on the freeway system. May reduce level of service on existing arterial.	Only effective if arterial system has capacity. Due to the bridges being prime congestion points there is limited opportunity to accomplish this strategy in the study area.	3
1	Traffic Management Team	Combine department of transportation, public safety professionals and incident removal businesses into a team.	0	0	0	0	0		Potential development as population/employment reaches 400,000 within region.	2
1	Freeway Surveillance Control	Use loop detectors, video, or direct surveillance to monitor traffic conditions and report problems and congestion.	1	2	2	2	2	Improves incident detection and response. Can provide user information direction to help avoid delay	Future consideration as traffic within the central district increases.	2
1	Incident Detection	Similar to Freeway Surveillance Control strategy.	1	2	2	2	2		Future consideration as traffic within the central district increases.	2
1	Motorist Information System	Tie the surveillance and detection strategies into a communications network to inform motorists of roadway problems and alternative routes.	1	2	2	2	2		Future consideration as traffic within the central district increases.	2

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

3	Widen Sidewalks	Improve safety and capacity of sidewalks to promote pedestrian access between businesses and residential locations.	0	0	0	0	Encourages pedestrian traffic through safe efficient walkways.	Current east side land use pattern is not conducive to this strategy	3
3	Pedestrian Grade Separation	Remove the potential for conflict between motorized and non-motorized traffic.	0	0	0	0	Walkways over busy streets or freeways to connect residential areas and/or business activity centers.	This strategy would have limited use within the study area due to land use patterns.	3
3	Bikeways	Establish a network of bikeways that promotes access to important urban activity centers.	0	0	0	0	Promote bicycle use for access to work, school and other facilities.	Weather, land use patterns, population composition and auto preference make this strategy ineffective for removing large volumes of autos from the highways.	3
3	Bike Storage	Establish points along the system that would allow for secure and safe storage of bicycles.	0	0	0	0	Same as above.	Existing and planned bicycle system creates the potential for use as a commute alternative to some businesses in Peoria, East Peoria and Morton.	2
3	Pedestrian Control Barriers	Establish barriers where heavily traveled pedestrian walkways exist parallel to busy arterial.	0	0	0	0	Improves pedestrian safety at critical areas of the highway system.	Limited applicability within the study area.	3

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

Roadway Assignment										
3	Exclusive Bus Lane-Arterial	Dedication of a traffic lane for bus operations only	0	0	0	0	Promotes bus use as a more efficient choice over the single occupant automobile.	Lack of transit ridership and limited service areas make this strategy ineffective for improving level of service within the study area.	3	
3	Take-a-Lane	Remove an existing lane of traffic for bus service use only.	0	0	0	0	Reduces capacity for single occupancy vehicles (SOV).	Not Applicable	3	
3	Add-a-Lane	Add an additional lane with restriction of use to buses only.	0	0	0	0	Maintains existing SOV capacity and gives efficiency preference to bus traffic.	Not Applicable	3	
2	Bus-Only Street	Redesign a street for bus use only, no other vehicles would be allowed on the street as through traffic.	0	0	0	0	Reduces capacity of existing system for SOV. Gives preference to bus service over SOV.	Capacity reduction	2	
3	Contra-Flow Bus Lane	Establish one lane in the opposite direction for use by buses only. This maintains the capacity of the existing highway and takes advantage of excess capacity within the opposite traffic lanes.	0	0	0	0	Takes advantage of excess capacity in opposite flow travel lanes and gives preference to bus service.	May have utility as transit service expands to cover a regional service area.	2	
3	Reversible Lane Systems	Reverse the flow of one or more traffic lanes to add capacity during peak periods.	1	2	1	1	Takes advantage of excess capacity in opposite flow travel lanes.	Reviewed for Major Investment Study.	1	
2	Freeway HOV Bypass	Allow vehicles with more than two passengers to bypass congestion points such as toll booths.	0	0	0	0	Not Applicable	Not Applicable	3	
2	Exclusive HOV Lane Freeway	One or more freeway lanes dedicated to travel by vehicles with two or more persons traveling together.					Gives preference to high occupancy vehicles. May have a negative affect on the remaining SOV lanes.	Capacity forecasts don't merit this level of transportation change.	3	
3	Take-a-Lane	Remove an existing lane of traffic to promote higher vehicle occupancy.	1	1	0	0	Not Applicable	Not Applicable	3	
2	Add-a-Lane	Add a new lane of traffic dedicated to vehicles that carry two or more persons.	0	0	0	0	Not Applicable	Not Applicable	3	

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

Route Diversion										
3	Area Licensing	Charges motorists for the use of roads in selected districts, with the fee set higher for more congested districts.	0	0	0	0	0	0	Limited applicability within the Peoria Metro Area due to land use patterns and social and economic impacts.	3
3	Auto Restricted Zones	Similar to above	0	0	0	0	0	0	Applicable in densely developed areas such as central business districts. Limited effectiveness.	3
3	Pedestrian Malls	Removal of all traffic from the road and dedication of the road to pedestrians alone	0	0	0	0	0	0	Forces traffic to alternate routes and could reduce level of service.	3
3	Congestion Pricing	Placing tolls on key highway links during peak travel periods.	0	0	0	0	0	0	Attempts to discourage travel during peak congestion periods.	2
3	Congestion Reduction	Land use developments within the region would be required to plan and implement programs to reduce single occupancy vehicle use.	0	0	0	0	0	0	Reduces vehicle miles traveled and increased vehicle occupancy and transit use.	2
3	Multi-Use Developments	Development that includes a variety of uses in a high density setting that promotes alternative modes of transportation.	0	0	0	0	0	0	Reduce the need for multiple trips to shop, work and recreation. Effect on the highway network is reduction in vehicles miles traveled.	2
3	Growth Management	Public policy or ordinance based on planning, which would place control on future growth based on infrastructure availability.	0	0	0	0	0	0	Would require a high degree of planning and regulatory cooperation between local governing jurisdictions for implementation.	3

Parking Management										
3	Curb Parking Restrictions		1	2	2			Increase capacity by removing a lane dedicated for parking and allowing traffic access.	Most arterials in the study area do not allow curb parking.	3
3	Off-Street Parking Restrictions	Restrict the development of off-street parking facilities to promote high occupancy vehicle use.	0	2	2			Increase capacity by removing a lane dedicated for parking and allowing traffic access.	Parking does not affect capacity in the study area.	3
3	HOV Preferential Parking	Promote high occupancy vehicle use by giving preferential parking to these vehicles. Works best in conjunction with the above strategy.	1	2	2			No direct impact on capacity.	Coupled with a regional program this is a good incentive to promote high occupancy vehicle use.	2
3	Parking Rate Changes	Increase parking rates.	0	0	0			No direct impact on capacity	Limited effectiveness.	3

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

Transit Operations									
2	Bus Route & Schedule Modifications	Change bus routes and schedules to match the travel demands of potential users.	0	1	2	Increase transit ridership will reduce vehicle miles traveled.	Will be considered in MIS	1	
2	Express Bus Service	Provides point to point non-stop service between a park-n-ride facility and a place of business.	0	1	2	Increase transit ridership will reduce vehicle miles traveled.	Will be considered in MIS	1	
2	Bus Terminals	Provide one or more locations for transferring between bus routes and express bus service.	0	0	0	No direct impact on capacity.	Helps promote transit use.	2	
2	Simplified Fare Collection	Create an electronic fare card or similar system that can be activated at convenient locations throughout the region.	0	0	0	No direct capacity affect.	Helps promote transit use.	2	



Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

	Transit Management		0	0	0	0	No direct capacity effect.	Helps promote transit use.	3
1	Marketing Program	Promote transit use over SOV use as a consumer cost savings, efficient, effective and environmentally sound manner of travel.	0	0	0	0			
1	Maintenance Improvements		0	0	0	0	Reduces environmental impacts (air emissions), minimal highway capacity improvement.	Current fleet is well maintained and includes ethanol coaches.	3
1	Vehicle Fleet Improvement	Make coaches modern and comfortable. Add user amenities that attract business clientele.	0	0	0	0	Reduces environmental impacts (air emissions) minimal highway capacity improvement.	Current fleet is modern.	3
1	Operations Monitoring Program	Interactive systems of detectors and communications to determine where buses are, if they are on schedule, and when they will arrive. Make this information available to the persons waiting for the bus.	0	0	0	0	No direct capacity affect.	TCRPC is sponsoring a computerized dispatch system for all transit providers.	2

Intermodal Coordination								
2	Park-n-Ride Facilities	Strategic locations to take advantage of suburban locations and establish transfer points from auto to fixed route or express bus service.	1	2	2	No direct capacity affect.	Considered as a component of the planning process for this MIS.	2
1	Transfer Improvements	Create a bus system that simplifies route selection and transfer options via color coding, information kiosks, etc.				No direct capacity affect improves convenience of transit use.	Mass Transit District has jurisdiction over fare collections.	2

Commercial Vehicles										
3	On-Street Loading Zones	Prohibit on-street loading or restrict the time to off-peak hours.						Improves capacity in problem areas.	Not considered an issue in the Peoria Metro Area (east portion).	3
3	Off-Street Loading Areas	Promote use of off-street loading facilities in new developments or remodel/rehabilitation of existing developments.						Improves capacity in problem areas.	Land use development regulations typically require these facilities.	3
1	Truck Route System	Restrict or prohibit truck use of certain portions of the network to reduce conflict between trucks and automobile traffic.	0	2	1			Reduces conflict between local automobile traffic and commercial delivery and transport vehicles.	System is already in place in Peoria Metro Area.	3

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

Work Schedule										
1	Staggered Work Hours & Flex Time	Stagger work shifts, i.e., 7 a.m. to 4 p.m., 8 a.m. to 5 p.m., and 9 a.m. to 6 p.m. This will redistribute peak hour traffic loading.	1	2	2			Some reduction in travel during peak periods.	Will be considered in MIS alternatives analysis	1
1	Four-Day Week	Work four, 10-hour days with one day off.	0	2	2			Some reduction in travel during peak periods.	Will be considered in MIS alternatives analysis	2

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

Pricing										
1	Peak Hour Tolls	Establish tolls for the peak hour.	0	0	0	0	0	0	May have socio economic impacts on the urban area.	3
1	Low-Occupancy Vehicle Tolls	Establish a toll for use of SOV.	0	0	0	0	0	0	Reduced social and economic impacts; may be considered.	2
3	Gasoline Tax	Increase the cost of fuel to reduce reflect the real costs of SOV transportation alternatives.	0	0	0	0	0	0	Has potential for social, economic and political impacts. Typical tax approvals are tied to system improvements rather than penalties.	3
2	Telecommuting	Use telecommunications technology to allow employees to work at home during portions of the day or specific days of the week. Use teleconferencing to promote contact with outside offices without travel.	0	2	2	2	2	2	No data available for modeling, the estimated affect would be similar to a four-day work week.	2
1	Peak-Off-Peak Transit Fares	Reduce transit fares during peak hours							Limited affect on MIS study area.	3
1	Reduce Transit Fares	General Reduction							Only effective if a regional system is in operation. Otherwise this may provide minor reductions within the Peoria area only.	3

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

	Paratransit								
1	Carpool Matching Programs	Program related to transportation management at the employment location to coordinate car pool use.					Some reduction of vehicle miles traveled during peak periods.	Will be considered in model development for MIS.	2
1	Transportation Management Association	develop an association and a transportation coordinator to promote high occupancy vehicle					Reduces vehicle miles travel during peak periods and promotes mass transit use.	Has potential for promotion as the development of suburban business centers continues to	2
1	Van Pool Programs	Employer-owned or subsidized vans for employee commute, usually tied to a TMA and guaranteed ride home.					Some reduction in VMT during peak periods.	Will be considered in model for MIS.	2
1	Taxi-Group Riding Programs	Increase the passenger use of taxi-cabs.					Limited reduction of vehicle miles travel.	Limited or no impact on the study area due to land use patterns and limited cab service.	3
1	Dial-a-Ride	Mass transit service tied to point to point or door to door service. Sometimes tied to a fixed route system with point deviation.					Increases convenience of mass transit service and the opportunity to reduce VMT.	Will be considered in model for MIS.	2
1	Elderly and Handicapped Service							Already in use throughout the region.	na

Peoria Pekin Urbanized Area Major Investment Study Alternatives Analysis

Strategies

1	Develop new highways	Increase the number of kilometers of general purpose roads through new construction.						Increase capacity to accommodate growth in vehicle miles traveled.	Will be considered in model for MIS.	1
1	Reconstruct existing highways	Improve design						Improves capacity on existing highways.	Already considered under "existing committed" network for the MIS.	1
1	Widen existing highways	Addition of general purpose travel lanes.						Improves or expands capacity on existing highways.	Already considered under "existing committed" network for the MIS.	1
1	Provide Highway Grade Separations	Construct bridges and ramp facilities to separate turning traffic from through traffic.	2	0	0	0	0	Improve spot congestion locations and safety.	Limited affect on regional network	3
1	Provide Rail Road Grade Separations	Construct rail road or roadway bridges that separate rail crossing points from highway traffic.	2	0	0	0	1	Improve safety and spot congestion locations.	Limited affect on regional network.	3

	<b>Notes:</b>																		
		Ability to implement data was not developed (in the article by Arnold)																	
		M/TDM approaches listed for this Major Investment Study.																	
		<b>TYPE =</b>																	
		Transportation System Management (TSM) = 1																	
		Combination TSM/TDM Strategies = 2																	
		Transportation Demand Management (TDM) = 3																	
		<b>Overall Rating =</b>																	
		Good potential for improving capacity = 1																	
		Average potential for improving capacity = 2																	
		Poor potential for improving capacity = 3																	
		<b>Sources:</b>																	
		Sources of Effectiveness for TSM Strategies; Charles M. Abrams																	
		Congestion-Reducing Measures Used in Virginia; E. D. Arnold Jr.																	
		Transportation Engineers Compendium of Technical Papers, 1991																	