

**APPENDIX C:
ALTERNATIVES SCREENING RESULTS TABLES**



Preliminary Screening						
	Preliminary Purpose and Need Criteria			Preliminary Engineering Criteria		
	Will the alternative result in a physical operational improvement in the east/west connectivity of SR-30 and US-89?	Will the alternative result in an increase in east/west vehicle capacity in the 200/400 North corridor?	Meets Purpose and Need?	Are there constructability issues that would make the alternative extraordinarily impactful to implement?	Would the alternative maintain adequate signal spacing to preserve the safety as well as functional and operational characteristics of 1000 West?	Progresses to next step?
Alternatives Considered						
No Build Alternative						
Transportation System Management	No. Does not change connectivity of SR-30 and US-89.	No. Reasonable, minor TSM enhancements to improve operations along SR-30, without expanding the number of travel lanes, were assumed in the 2030 no-build traffic analysis. Transit routes serving the 200/400 North study identified in the CMPO long-range transportation plan are also accounted for in the no-build conditions. Even with these improvements, additional capacity along SR-30 would be needed.	No	Purpose and Need Criteria Not Met--Engineering Criteria Not Considered		
Transportation Demand Management	No. Does not change connectivity of SR-30 and US-89.	No. The effectiveness and success of TDM programs is highly subjective and related to the effort made to implement and sustain them. Generally, vehicle traffic is reduced 1 to 6%. Assuming that the TDM Alternative would be effective and a 6% vehicle traffic reduction would be achieved, excessive demand would continue to overwhelm the capacity of SR-30.	No			
Land Use Pattern Changes	No. Does not change connectivity of SR-30 and US-89. Connectivity of SR-30 and US-89 would get worse as turning movement delays would increase at Main Street under Envision Cache "aggressive land use control" growth scenario.	No. Envision Cache "aggressive land use control" growth scenario would result in a 13% increase in SR-30 traffic demand, increasing the need for SR-30 improvements.	No			
3 Lanes on 400 North and 3 Lanes on 200 North (Bridge on 200 North)	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides additional capacity and connectivity on 400 North between 600 West and 1000 West. Allows both 400 North and 200 North to be utilized for east/west traffic.	Yes	No	Yes	Yes
Flexible Lanes	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	No. There is not a substantial peak hour directional flow in the study area. For flexible lanes to be effective there needs to be a 2:1 ratio directional flow in the peak hours.	No	Purpose and Need Criteria Not Met--Engineering Criteria Not Considered		
One-Way Couplets (with signals along 1000 West at 200 North and 400 North)	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 3 lanes of westbound capacity and 3 lanes of eastbound capacity.	Yes	No	No	No
One-Way Couplets (with structure at 1000 West)	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 3 lanes of westbound capacity and 3 lanes of eastbound capacity.	Yes	No	Yes	Yes
One-Way Couplets (diverging west of 600 West)	Yes. Provides connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 3 lanes of westbound capacity and 3 lanes of eastbound capacity.	Yes	No	Yes	Yes
Unbalanced Lanes	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 3 lanes of westbound capacity and 3 lanes of eastbound capacity.	Yes	No	Yes	Yes

Preliminary Screening						
Alternatives Considered	Preliminary Purpose and Need Criteria			Preliminary Engineering Criteria		
	Will the alternative result in a physical operational improvement in the east/west connectivity of SR-30 and US-89?	Will the alternative result in an increase in east/west vehicle capacity in the 200/400 North corridor?	Meets Purpose and Need?	Are there constructability issues that would make the alternative extraordinarily impactful to implement?	Would the alternative maintain adequate signal spacing to preserve the safety as well as functional and operational characteristics of 1000 West?	Progresses to next step?
5 Lanes on 200 North to 200 East	Yes. Reduces intersection turning movement delays at Main Street and reduces conflicting turning movements.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	No	Yes. Would preclude future signal at 200 South.	Yes
5 Lanes on 200 North connecting to 400 North East of the Temple	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	Yes, the 11.2% grade of 200 North between 200 East and 300 East exceeds the 6% standard for State Highways. Correcting this condition would require 14 foot cuts and 14 foot fills that would require major retaining walls and would affect adjacent properties along approximately 2160 linear feet of roadway (1460 feet along 200 North, 400 feet along 200 East, and 300 feet along 300 East). Access to many of the properties could not be maintained—requiring as many as 20 - 30 relocations. The main entrance to the LDS temple could not be maintained. Many of the impacted structures are in the historic time period and are likely significant cultural resources. Major utility relocations would be required on 200 North, 200 East and 300 East. These changes would substantially affect community character and aesthetics.	Yes. Would preclude future signal at 200 South.	No
5 Lanes on 400 North	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	No	Yes	Yes
5 Lanes on 400 North with westward extension	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	No	Yes	Yes
5 Lanes on 400 North connecting to SR-30 behind the jail	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	No	Yes	Yes
3 Routes (200 North, 400 North, and 1000 North)	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	No. The new alignment from 2600 West to 1000 West serves as a bypass to 1000 West. It relieves north/south traffic on 1000 West, but does not reduce traffic in the SR-30 corridor. Demand on SR-30 exceeds capacity resulting in LOS F conditions.	No	Purpose and Need Criteria Not Met--Engineering Criteria Not Considered		
3 Routes (200 North, 400 North, and 1400 North)	Yes. Provides more direct connection with less intersection turning movement delays at Main Street and fewer conflicting turning movements.	No. The new alignment from 2600 West to 1000 West serves as a bypass to 1000 West. It relieves traffic north/south on 1000 West, but does not reduce traffic in the SR-30 corridor. Demand on SR-30 exceeds capacity resulting in LOS F conditions.	No			

Preliminary Screening						
	Preliminary Purpose and Need Criteria			Preliminary Engineering Criteria		
	Will the alternative result in a physical operational improvement in the east/west connectivity of SR-30 and US-89?	Will the alternative result in an increase in east/west vehicle capacity in the 200/400 North corridor?	Meets Purpose and Need?	Are there constructability issues that would make the alternative extraordinarily impactful to implement?	Would the alternative maintain adequate signal spacing to preserve the safety as well as functional and operational characteristics of 1000 West?	Progresses to next step?
Alternatives Considered						
5 Lanes on 600 North	No. Would not provide improved connectivity between SR-30 and US-89 and would result in double north-south jog, increasing out of direction travel.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	No			
Improve North/South Capacity to Reduce East/West Demand	No. Does not change connectivity of SR-30 and US-89.	No. By providing improved north/south capacity, the intersections along SR-30 would operate more efficiently. Sensitivity analysis completed for the traffic study indicates that improving north/south routes may result in a small reduction in east/west trips on SR-30. However, improvements in north/south routes would not draw enough traffic off SR-30 to reduce the need for an additional lane of capacity.	No	Purpose and Need Criteria Not Met--Engineering Criteria Not Considered		
Tunnel/Bridge/Viaduct	Yes. Provides an uninterrupted connection between SR-30 and US-89.	Yes. Provides 2 lanes of westbound capacity and 2 lanes of eastbound capacity.	Yes	Yes, a tunnel requires portals and ventilation shafts that would impact surface land uses; limits access to surrounding land uses at the entrance/exit; has substantial water and power requirements to sustain air, lighting, fire suppression, and communication systems; and operationally there are emergency response risks. Additionally, there are low water table issues on the west side of the study area. A viaduct would require a lengthy elevated bridge. Existing developed land uses could not continue to operate under a viaduct and the relocations required for the facility would be greater than for any other alternative considered. A viaduct would also have winter maintenance issues and emergency response issues.	Yes	No

Second Screening- Purpose and Need

Screening Criteria	Improve the east/west traffic flow conditions and level of service on SR-30 for the design year 2035	Improve E/W regional Connectivity of SR 30 and US 89		Alternative Meets Purpose and Need?
		Reduce use of N/S road capacity to serve E/W traffic demand	Reduce delays on SR-30 associated with Main Street turning movements at the 200 North and 400 North intersections.	
Measure of Effectiveness	Travel time from 1400 West to Main Street? (LOS E or better meets P&N)	Does the alt use existing or planned N/S road capacity? (no meets P&N)	Intersection LOS at 200 North and Main Street and 400 North and Main Street (LOS E or better meets P&N)	Y= progresses to alternatives comparison N= does not progress
Alternatives Considered				
No Build Alternative				
3-Lanes on 400 North and 3-Lanes on 200 North (Bridge on 200 North)	LOS F	No	LOS F	No
One-Way Couplets (with structure at 1000 West)	LOS D	No, requires widening of 200 East	LOS D	Yes
One-Way Couplets (diverging west of 600 West)	LOS D	No, requires widening of 200 East	LOS D	Yes
Unbalanced Lanes	LOS E	No, requires widening of 200 East	LOS F	No
5-Lanes on 200 North to 200 East	LOS F	No, requires widening of 200 East	LOS E	No
5-Lanes on 400 North	LOS E	No	LOS E	Yes
5-Lanes on 400 North with westward extension	LOS E	No	LOS E	Yes
5-Lanes on 400 North connecting to SR 30 behind the jail	LOS E	No	LOS E	Yes

Alternatives Comparison- Operational Considerations

	Driver expectancy	Safety	Center-lane Miles	Ranking of Alternatives
Operational Considerations	Would this violate drivers expectations for how the roadway should operate?	Is there sufficient distance between intersections to safely and efficiently accommodate traffic?	How many center-lane miles would be constructed or reconstructed?	
Alternatives Considered				
One-Way Couplets (with structure at 1000 West)	One-way couplets do not allow two-way movements (which are generally expected in Logan City), this would necessitate out of direction travel and signage to make be effective. Additionally there would be restricted turning movements and out of direction travel associated with the bridge at 200 North and 1000 West. In general there are large blocks west of 600 East that would result in substantial out of direction travel.	The location of the sheriff's driveway on a high speed road between two curves may pose a safety concern. There is limited distance between the sheriff's office driveway and the left-lane turn around for vehicles trying to travel east. Separating the State Routes that co-exist on Main Street would reduce conflict points for weaving movements and provide a safety benefit.	4.55 (vs. 2.31 of existing SR-30)	5
One-Way Couplets (diverging west of 600 West)	One-way couplets do not allow two-way movements (which are generally expected in Logan City), this would necessitate out of direction travel and signage to make be effective. Additionally there would be circulation and accessibility issues between 600 West and 1000 West on 200 North. In general there are large blocks west of 600 East that would result in substantial out of direction travel.	The location of the sheriff's driveway on a high speed road between two curves may pose a safety concern. There is limited distance between the sheriff's office driveway and the left-lane turn around for vehicles trying to travel east. Separating the State Routes that co-exist on Main Street would reduce conflict points for weaving movements and provide a safety benefit.	3.6 (vs. 2.31)	4
5-Lanes on 400 North	None Identified	The location of the sheriff's driveway on a high speed road between two curves may pose a safety concern. Providing a free-flow route through Logan (no turning movements) would reduce conflict points and provide a safety benefit.	1.93 (vs. 2.12 of existing SR-30)	3
5-Lanes on 400 North with westward extension	None Identified	Providing a free-flow route through Logan (no turning movements) would reduce conflict points and provide a safety benefit.	3.39 (vs. 3.66 of existing SR-30)	1
5-Lanes on 400 North connecting to SR 30 behind the jail	There would be an extended dead end on the existing SR-30 between the new SR-30 tie in and 1000 West that would result in out of direction travel.	Providing a free-flow route through Logan (no turning movements) would reduce conflict points and provide a safety benefit.	2.41 (vs. 2.61 of existing SR-30)	2

Alternatives Comparison- Environmental Considerations

Environmental Considerations	Aesthetics	Historic Resources	Community Cohesion	Wetlands	Right-of-way		Would the alternative affect school accessibility?	Ranking of Alternatives
	Would the alternative remove mature trees? (number/ % removed)	How many historic properties would be affected? (property acquired)	Would the alternative divide an established community?	Would the alternative affect potential wetlands? (acres)	Number of acquisitions	Total Acres of Acquisition		
Alternatives Considered					Full	Partial		
One-Way Couplets (with structure at 1000 West)	Yes (110/ 30% removed)	10	Compared to a single 5-lane cross section, one-way couplets would disperse the east/west traffic to two routes instead of one, resulting in fewer direct impacts for residents along 200 North and 400 North, including less traffic, less noise, larger setbacks from the road, and preservation of more trees. However, these facilities would affect a larger portion of the neighborhood and may create an isolated area between 200 North and 400 North that is bound by major transportation facilities. Additionally, out of direction travel necessitated by one-way couplets would increase traffic on neighborhood streets adjacent to both 200 North and 400 North. Studies indicate that speeds on one-way couplets tend to be higher due to less congestion and fewer conflicting turning movements.	Yes (<1 acre)	1	40	20	Most of students in the Ellis catchment area would have to cross either 200 North or 400 North to get to school.
One-Way Couplets (diverging west of 600 West)	Yes (120/ 32% removed)	10	Compared to a single 5-lane cross section, one-way couplets would disperse the east/west traffic to two routes instead of one, resulting in fewer direct impacts for residents along 200 North and 400 North, including less traffic, less noise, larger setbacks from the road, and preservation of more trees. However, these facilities would affect a larger portion of the neighborhood and may create an isolated area between 200 North and 400 North that is bound by major transportation facilities. Additionally, out of direction travel necessitated by one-way couplets would increase traffic on neighborhood streets adjacent to both 200 North and 400 North. Studies indicate that speeds on one-way couplets tend to be higher due to less congestion and fewer conflicting turning movements.	Yes (<1 acre)	0	40	9	Most of students in the Ellis catchment area would have to cross either 200 North or 400 North to get to school.
5-Lanes on 400 North	Yes (140/ 98% removed)	75 (w/1 full acq.)	Realignment of SR-30 and the accompanying increase in traffic volumes on 400 North would directly affect the residents on 400 North (increased noise, traffic, removal of trees, reduced setback from the road). The implementation of a 5-lane facility with higher traffic volumes would not be consistent with the character of other 3-lane primarily local streets within the neighborhood. Additionally, traffic speeds may be higher than currently occur along SR-30 due to the wider facility and lack of congestion. While traffic would increase on 400 North it would decrease on 200 North. These changes may affect pedestrian movements and reduce the accessibility of businesses and services along 200 North to patrons outside of the neighborhood. While these changes would be substantial for residents along 400 North and businesses along 200 North, overall travel patterns, service accessibility, access to schools, and the ability of people to communicate and interact with each other in ways that lead to a sense of community for the entirety of the Ellis neighborhood would not substantially change.	Yes (<1 acre)	1	120	8	In general less of the neighborhood would have to cross SR-30 to get to school since all but 2 blocks of the Ellis catchment area is south of 400 North.
5-Lanes on 400 North with westward extension	Yes (130/ 95% removed)	75 (w/1 full acq.)	Realignment of SR-30 and the accompanying increase in traffic volumes on 400 North would directly affect the residents on 400 North (increased noise, traffic, removal of trees, reduced setback from the road). The implementation of a 5-lane facility with higher traffic volumes would not be consistent with the character of other 3-lane primarily local streets within the neighborhood. Additionally, traffic speeds may be higher than currently occur along SR-30 due to the wider facility and lack of congestion. While traffic would increase on 400 North it would decrease on 200 North. These changes may affect pedestrian movements and reduce the accessibility of businesses and services along 200 North to patrons outside of the neighborhood. While these changes would be substantial for residents along 400 North and businesses along 200 North, overall travel patterns, service accessibility, access to schools, and the ability of people to communicate and interact with each other in ways that lead to a sense of community for the entirety of the Ellis neighborhood would not substantially change.	Yes (6 acres, could indirectly affect additional wetlands, would require a culvert to cross Swift Slough a potential water of the US, may affect springs under the jurisdiction of the USACE). Likely to encounter shallow groundwater (less than 10 feet to groundwater)	1	110	35	In general less of the neighborhood would have to cross SR-30 to get to school since all but 2 blocks of the Ellis catchment area is south of 400 North.
5-Lanes on 400 North connecting to SR 30 behind the jail	Yes (130/ 95% removed)	75 (w/1 full acq.)	Realignment of SR-30 and the accompanying increase in traffic volumes on 400 North would directly affect the residents on 400 North (increased noise, traffic, removal of trees, reduced setback from the road). The implementation of a 5-lane facility with higher traffic volumes would not be consistent with the character of other 3-lane primarily local streets within the neighborhood. Additionally, traffic speeds may be higher than currently occur along SR-30 due to the wider facility and lack of congestion. While traffic would increase on 400 North it would decrease on 200 North. These changes may affect pedestrian movements and reduce the accessibility of businesses and services along 200 North to patrons outside of the neighborhood. While these changes would be substantial for residents along 400 North and businesses along 200 North, overall travel patterns, service accessibility, access to schools, and the ability of people to communicate and interact with each other in ways that lead to a sense of community for the entirety of the Ellis neighborhood would not substantially change.	Yes (2 acres, could indirectly affect additional wetlands, would require a culvert and bridge to cross Swift Slough a potential water of the US, may affect springs under the jurisdiction of the USACE). Likely to encounter shallow groundwater (less than 10 feet to groundwater).	1	100	20	In general less of the neighborhood would have to cross SR-30 to get to school since all but 2 blocks of the Ellis catchment area is south of 400 North.

Note: All values are approximate, based on preliminary design, and are subject to change.

Alternatives Comparison- Feasibility of Implementation

Feasibility Considerations	Local Planning	Political Support	Cost (Order of Magnitude)	
	Would the alternative be consistent with adopted land use and transportation plans?	Is there support by the community for the alternative?	Construction	Maintenance
Alternatives Considered				
One-Way Couplets (with structure at 1000 West)	Yes. The Logan City Transportation Plan recommends consideration of "an East-West couplet involving 200 South and 400 South" as an alternate to the realignment of SR-30 on 400 North. Land uses along 200 North and 400 North are generally residential with commercial and industrial uses at the east and west ends of the study area. East of 600 West the study area is primarily built out. West of 600 West commercial and industrial development is still occurring. Existing land uses would support one-way couplets. One-way couplets impose access limitations that could limit future development opportunities west of 600 West.	High level of support- Logan residents have traditionally expressed support for a one way system and reduced impacts would be popular with residents along 200 and 400 North.	70 million	\$ 70,000
One-Way Couplets (diverging west of 600 West)	Yes. The Logan City Transportation Plan recommends consideration of "an East-West couplet involving 200 South and 400 South" as an alternate to the realignment of SR-30 on 400 North. Land uses along 200 North and 400 North are generally residential with commercial and industrial uses at the east and west ends of the study area. East of 600 West the study area is primarily built out. West of 600 West commercial and industrial development is still occurring. Existing land uses would support one-way couplets. One-way couplets impose access limitations that could limit future development opportunities west of 600 West.	High level of support- Logan residents have traditionally expressed support for a one way system and reduced impacts would be popular with residents along 200 and 400 North.	30 million	\$ 50,000
5-Lanes on 400 North	Yes. The Logan City Transportation Plan proposes re-routing SR-30 to 400 North to create a new primary arterial along 400 North.	Medium level of support- This alternative has not been supported by residents along the alignment, but general population seems to recognize this as a reasonable alternative.	25 million	\$ 30,000
5-Lanes on 400 North with westward extension	Yes. The Logan City Transportation Plan proposes re-routing SR-30 to 400 North to create a new primary arterial along 400 North. The general plan identifies a number of sensitive lands that would be affected by this alternative.	Medium level of support- This alternative has not been supported by residents along the alignment, but general population seems to recognize this as a reasonable alternative. The Sherriff would support an alternative that did not interfere with the entrance to the jail.	40 million	\$ 20,000
5-Lanes on 400 North connecting to SR 30 behind the jail	Yes. The Logan City Transportation Plan proposes re-routing SR-30 to 400 North to create a new primary arterial along 400 North. The general plan identifies a number of sensitive lands that would be affected by this alternative.	Medium level of support- This alternative has not been supported by residents along the alignment, but general population seems to recognize this as a reasonable alternative. The Sherriff would support an alternative that did not interfere with the entrance to the jail.	35 million	\$ 20,000
Note: All values are approximate, based on preliminary design, and are subject to change.				

Alternatives Comparison-Summary

	Operational Considerations Summary	Environmental Considerations Summary	Implementation Feasibility Summary
Alternatives Considered			
One-Way Couplets (with structure at 1000 West)	This alternative would result in driver expectancy issues resulting from limitations on two-way movements and from limitations on turning movements at 1000 West and 200 North. There is a potential for safety concerns at the Sherriff's driveway access, and there would be a substantial increase in center-lane miles that UDOT would be responsible for. From an operational standpoint this alternative performed the worst.	Both the one-way couplet alternatives had similar environmental impacts; however, this alternative required more acquisition acreage, affected slightly more wetlands, and affected one more historic resource. All alternatives experienced impact tradeoffs for community cohesion and school accessibility and those categories were not used to distinguish between alternatives.	All of the alternatives would be consistent with adopted land use and transportation plans, and that category was not used to distinguish between alternatives. This was the only alternative that would result in a high level of community support. However, this alternative would result in disproportionately high construction and maintenance costs.
One-Way Couplets (diverging west of 600 West)	This alternative performed similar to the one-way couplets (with structure at 1000 West) alternative but would result in better circulation in the vicinity of 1000 West and 200 North. There would be additional circulation issues on 200 North between 1000 West and 600 West associated with this alternative.	Compared to the 5-Lane Alternatives this alternative had relatively minor impacts on aesthetics, historic resources, wetlands, and acquisitions and was determined to have the fewest environmental impacts of all alternatives.	From an implementation feasibility standpoint, this alternative and the 5-lanes on 400 North alternative would be the most acceptable. The adjacent property owners on 400 North have expressed support for this alternative and the cost is reasonably comparable to the least expensive alternative.
5-Lanes on 400 North	This alternative did not result in driver expectancy issues, but there was a safety concern associated with the driveway to the Sherriff's office that would be located on a curve. Overall center-lane miles would decrease over the existing conditions.	This alternative removed more trees than either of the one-way couplet alternatives (both in total number of trees and in the percentage of total trees), it would affect substantially more historic resources (although impacts would primarily be from partial acquisitions, and may not result in an adverse affect). This alternative would require the smallest acquisition area, but would affect substantially more properties. Wetland impacts would be comparable to the one-way couplet alternatives.	From an implementation feasibility standpoint, this alternative and One-way couplets (diverging west of 600 West) alternative would be the most acceptable. The alternative would not be popular with adjacent property owners on 400 North, but likely would not be opposed by the community at large. The cost for this alternative would be lower than any other alternative.
5-Lanes on 400 North with westward extension	This alternative performed the best of the alternatives for operational considerations. No driver expectancy issues or safety issues were identified. Center-lane miles would be similar to the existing conditions.	This alternative would result in the greatest environmental impacts due to disproportionate wetland impacts and acquisition acreage. Permitting of this alternative through the Army Corps of engineers could be an issue.	This alternative would be similar to the other 5-lanes on 400 North alternatives, but would be the most costly and would result in the most miles of new alignment.
5-Lanes on 400 North connecting to SR 30 behind the jail	This alternative performed similar to the other 5-lane on 400 North alternatives, but would result in an extended dead end on 200 North, that would result in out of direction travel.	Environmental impacts of this alternative would be more than the 5-Lanes on 400 North alternative and less than the 5-lanes on 400 North with the westward extension alternative. Wetland impact and acquisition acreage would be substantially more than either of the one-way couplet alternatives or the 5-Lanes on 400 North alternative. Permitting of this alternative through the Army Corps of engineers could be an issue.	This alternative would be similar to the 5-lanes on 400 North alternative, but would be more costly.

This page intentionally left blank.