

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

A photograph of a multi-lane highway bridge at dusk. The bridge spans a body of water, and its lights are reflected in the calm surface. The sky is a deep blue, and the overall scene is serene.

SR 408 Eastern Extension PD&E Study



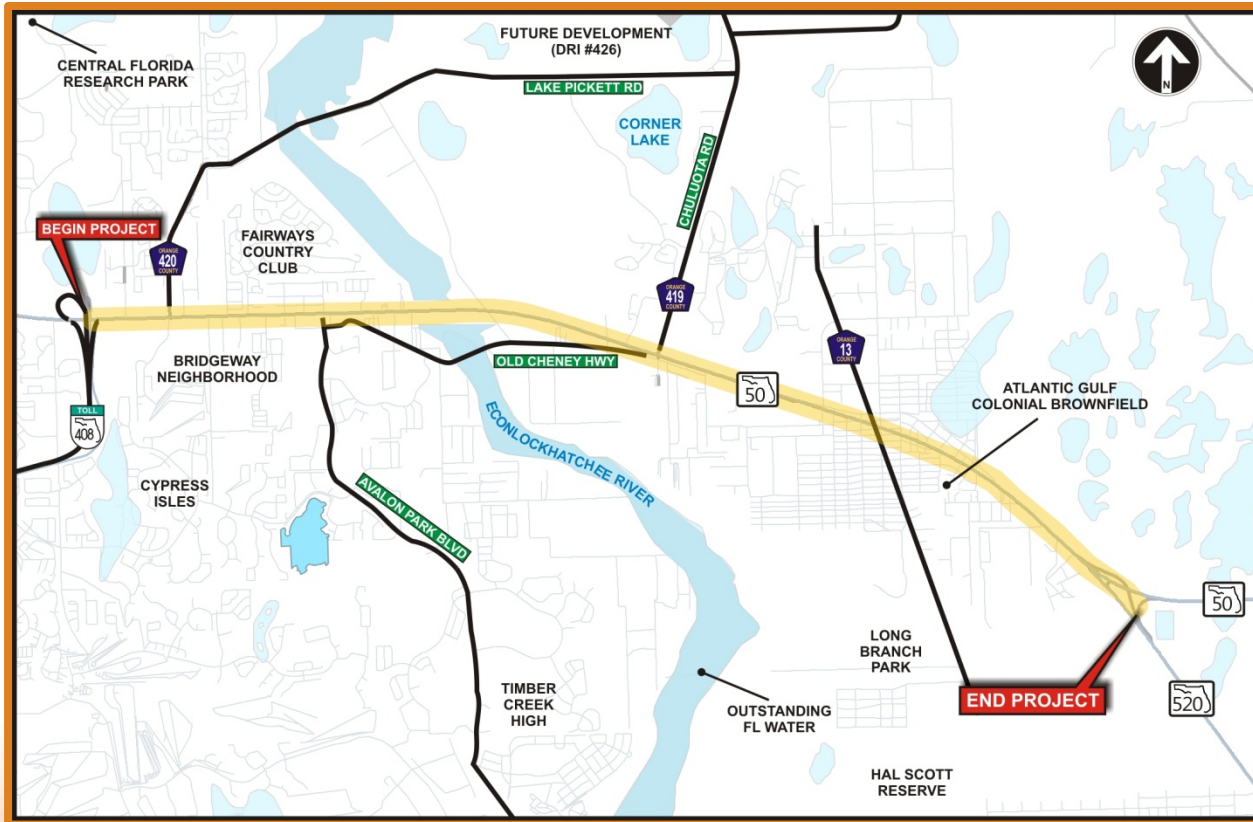
WHAT IS A PD&E?

- Process used to evaluate -
 - Engineering Alternatives
 - Environmental Impacts and Social, Cultural and Economic Impacts Associated with a Planned Transportation Project
 - Public Involvement
- The PD&E study entails the preparation of all preliminary engineering and environmental documentation
 - State Environmental Impact Report (SEIR)





PROJECT LOCATION



*Extension of the SR 408
from its current eastern
terminus to the SR
50/SR 520 Intersection
(Approximately 7 miles)*



PROJECT DESCRIPTION

– Purpose and Need

- Provide additional capacity in the east-west direction to mitigate or eliminate capacity deficiencies
- Provide additional emergency evacuation service to supplement the limited number of evacuation routes in this area of Central Florida
- Provide improved transportation connectivity/linkage induced by the continued population growth and land use development reflected in various local comprehensive plans
- Provide transit support



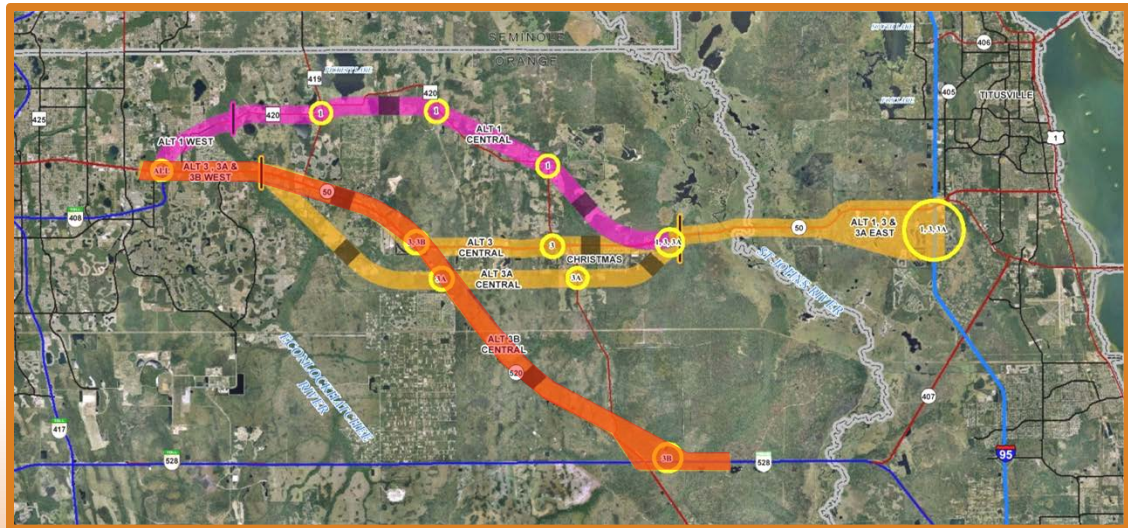
STUDY OBJECTIVES

- Update and validate 2008 Corridor Report results
- Determine design year (2045) traffic demand
- Develop feasible alternatives for a tolled, limited access facility along the existing SR 50 corridor
- Present project alternatives and obtain public consensus;
- Determine environmental and community impacts
- Prepare engineering and environmental documentation (SEIR and other supporting documents)



PROJECT HISTORY

- 2030 Orlando-Orange County Expressway Authority (OOCEA) Master Plan
- Concept Development and Evaluation Study Report completed in 2008
 - Evaluation of a new limited access facility between east Orange County and north Brevard County
 - Four (4) viable corridors were determined to meet the criteria and were further evaluated
- **Corridor 3B (along SR 50)** meets the transportation need west of SR 520, providing the greatest relief of the existing and projected future traffic congestion along SR 50

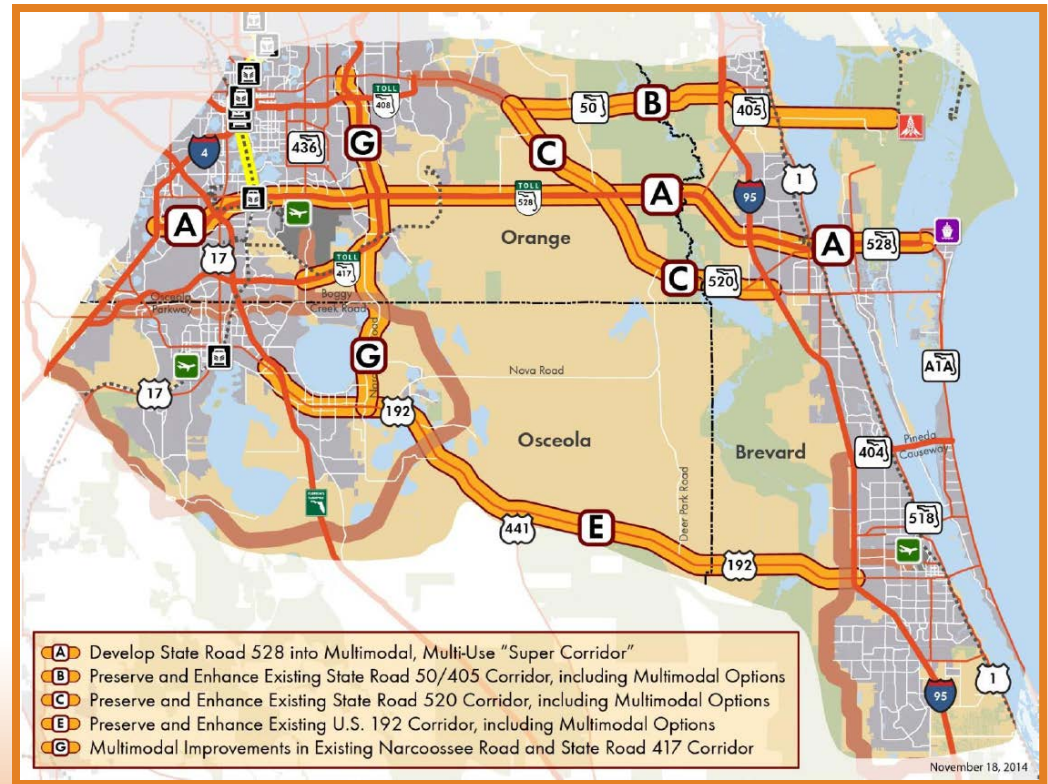




PROJECT HISTORY

- East Central Florida Corridor Task Force

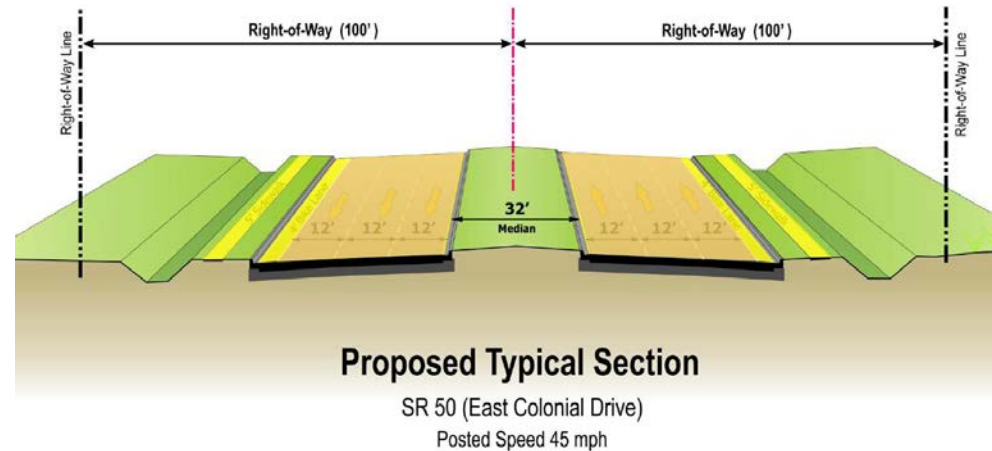
- Executive Order 13-319
- Evaluate and recommend future transportation corridors
- Final Report completed in December 2014
 - B – Preserve and Enhance existing SR 50/405 Corridor
 - C – Preserve and enhance existing SR 520 corridor





PROJECT HISTORY

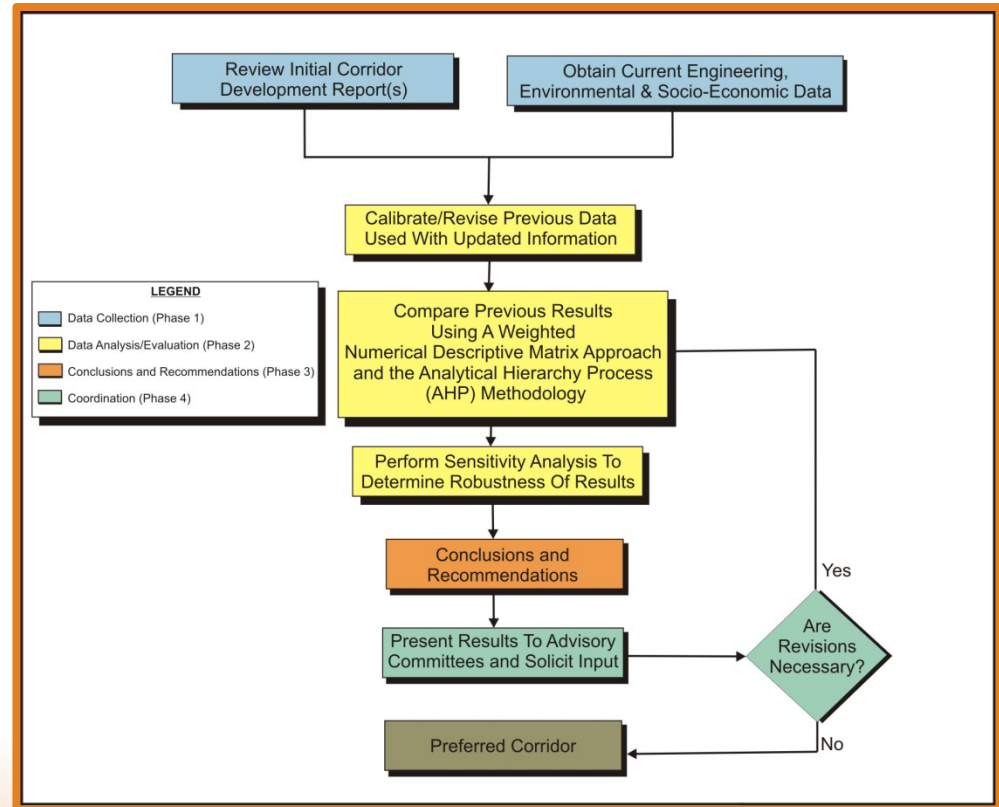
- On-Going FDOT Projects to widen SR 50 from 4 to 6 lanes from SR 436 to SR 520
 1. FM #: 239203-4-52-01 – From Dean Road to Old Cheney Highway
 2. FM #: 433607-1-52-01 – Replacement of bridges over Econlockhatchee River
 3. FM #: 239203-7-52-01 Old Cheney Highway to Chuluota Road
 4. FM#: 239203-8-52-01 Chuluota Road to SR 520
- CFX team will coordinate with FDOT design teams throughout the PD&E Study





CORRIDOR REEVALUATION ANALYSIS

- Analysis completed to determine the preferred corridor.
- Methodological Approach
 - Phase 1 – Data Collection
 - Phase 2 – Data Analysis/Evaluation
 - Phase 3 – Conclusions and Recommendations
 - Phase 4 - Coordination





CORRIDOR REEVALUATION ANALYSIS

- Corridor Alternatives Reevaluated, potential impacts updated

PREVIOUS LEVEL 2 CORRIDOR ALTERNATIVES EVALUATION*							UPDATED INFORMATION					
Corridor							Corridor					
Evaluation Type	Criteria	Quantitative Measure	1	3	3A	3B	Comments	1	3	3A	3B	Comments
Community	Residential Units	Acres of units by density H	20 to 24	13 to 16	18 to 22	14 to 17	> 5 DU/acre per 2004 land use data	20 to 24	13 to 16	18 to 22	14 to 17	> 5 DU/acre per 2004 land use data
		Acres of units by density M	20 to 24	32 to 38	15 to 18	26 to 31	2 to 5 DU/acre per 2004 land use data	20 to 24	32 to 38	15 to 18	26 to 31	2 to 5 DU/acre per 2004 land use data
		Acres of units by density L	90 to 110	47 to 56	44 to 53	19 to 23	< 2 DU/acre per 2004 land use data	90 to 110	47 to 56	44 to 53	19 to 23	< 2 DU/acre per 2004 land use data
	Commercial Units	Acres of units	8 to 10	88 to 106	41 to 49	74 to 89	Derived from 2004 land use data	8 to 10	88 to 106	41 to 49	74 to 89	Derived from 2004 land use data
	Community Facilities (Hospitals, schools, libraries, etc.)	No. of units	0	4 to 5	3 to 4	4 to 5	Few facilities encountered, mostly in the western segments	1	5	2	4	Generally similar ranking results
	Community Services (Fire/police, post office, government, etc.)	No. of units	0	1 to 2	0	0	Few encountered; mostly along SR 50	1	2	0	0	Generally similar ranking results
	Parks / Recreational Facilities	Acres	1 to 2	4 to 5	3 to 4	3 to 4	Parks defined by a general recreational coverage and includes playgrounds, golf courses, RV parks, etc.	2	3	1	2	Generally similar ranking results
	Historic / Archaeological	Number of sites	1 to 2	4 to 5	7 to 8	3 to 4	Includes potential historical structures	6	4	5	3	Rank reversal for Corridor 1
	Community Cohesion	Number of communities split	5 to 6	18 to 22	7 to 8	13 to 16	Largest potential impact is along the SR 50 corridor	4	9	6	13	Generally similar ranking results
	Future Land Use Plan Compatibility	High / Medium / Low	Medium	High	High	Medium	Supports the projected FLU population increases	Medium	High	High	Medium	No change
Environmental	Wetlands	Acres	480 to 570	430 to 510	400 to 480	160 to 192	Occur throughout the project area	210	180	250	130	Generally similar ranking results
	Wildlife and Habitat	Average wildlife index ranking	4.8 to 5.2	5.0 to 5.4	5.2 to 5.6	5.0 to 5.4	Based on Average IWHRS Value within a corridor segment	3.1	3.4	5.1	4.6	Generally similar ranking results
	Floodplain Encroachment	Acres	540 to 640	470 to 560	510 to 610	104 to 124	Occurs throughout the project area and include major systems such as the St. Johns and Econlockhatchee Rivers.	240	240	310	180	Generally similar ranking results
	Water Body	No. of crossings	5 to 6	2 to 3	2 to 3	1 to 2	Does not include retention and stormwater ponds or borrow pits.	7	3	1	7	Corridor 3A has the least potential impacts
	Outstanding Florida Waterway	No. of crossings	1	1	1	1	Crossing of the Econlockhatchee River by all four corridors is at existing locations.	1	1	1	1	No change
	Conservation lands / mitigation banks	Acres	230 to 280	190 to 230	340 to 410	33 to 40	All mitigation banks have been avoided	60	30	310	50	Generally similar ranking results
	Wildlife Refuges / Wildlife Management Areas	Acres	34 to 40	34 to 40	75 to 90	0 to 20	Tosehatchee WMA impacts associated with Corridors 1, 3, and 3A East and 3A & 3B Central	0	0	80	0	Generally similar ranking results
	Water/Wastewater/Solid Waste Facilities	No. of facilities	0	2 to 3	0	2 to 3	3 A & 3B Central (the 2 solid waste facilities are salvage yards)	0	3	0	3	Generally no change
	Utilities and Railroads	No. of facilities	3 to 4	3 to 4	3 to 4	3 to 4	All of the listed utilities are transmission power lines. No railroads in any Level 2 Corridor	4	4	4	5	Generally no change
Purpose & Need	Reduction in Traffic Congestion/Improved safety	Volume reduction on SR 50 (Thousand Daily Vehicles)	W = 10 to 22 E = 13 to 15	W = 43 to 51 E = 0 to 12	W = 14 to 51 E = 0	W = 33 to 53 E = 0	Volume difference between the 2035 Baseline forecasts and the Level 2 forecasts. W = West of SR 520 and E = East of SR 520	W = 12 E = 0	W = 20 E = 0	W = 18 E = 0	W = 20 E = 0	Maximum volume difference between the 2045 Baseline forecasts and the Level 2 forecasts. W = West of SR 520 and E = East of SR 520
	Traffic Volume Accommodated	2015 AADT (Thousand Daily Vehicles)	W = 19 to 33 E = 21 to 24	W = 46 to 47 E = 3 to 14	W = 25 to 44 E = 4 to 7	W = 44 to 48 E = N/A	Tolled Traffic Volumes. W = West of SR 520 and E = East of SR 520	W = 14 E = 1	W = 22 E = 0	W = 21 E = 0	W = 23 E = N/A	Maximum Tolled Traffic Volumes. W = West of SR 520 and E = East of SR 520
	Network / Systems Connectivity Improvement	Systems Interchanges	Medium	High	High	High	Supports connections to the local and regional roadway network	Medium	High	High	High	Supports connections to the local and regional roadway network
	Enhanced Multi-modal Potential	LYNN/SCAT linkage	Medium	High	High	Medium	Transit linkage potential to support projected future population	Medium	High	High	Medium	Transit linkage potential to support projected future population
Costs	Construction Cost	In 2007 \$	\$680M to \$820M	\$610M to \$730M	\$640M to \$770M	\$370M to \$450M	Corridor 3B includes only two segments.	\$680M to \$820M	\$610M to \$730M	\$640M to \$770M	\$370M to \$450M	Corridor 3B includes only two segments.
	Engineering, Admin & Legal	In 2007 \$	\$180M to \$220M	\$160M to \$200M	\$170M to \$210M	\$100M to \$120M	Corridor 3B includes only two segments.	\$180M to \$220M	\$160M to \$200M	\$170M to \$210M	\$100M to \$120M	Corridor 3B includes only two segments.
	Wetland Mitigation Costs	In 2007 \$	\$48M to \$57M	\$43M to \$51M	\$40M to \$48M	\$16M to \$19M	Based on \$100k per acre of impact.	\$48M to \$57M	\$43M to \$51M	\$40M to \$48M	\$16M to \$19M	Based on \$100k per acre of impact.
	Right-of-Way Requirements	In Acres	1080 to 1300	850 to 1000	1050 to 1250	700 to 840		1080 to 1300	850 to 1000	1050 to 1250	700 to 840	

*Source: Concept Development & Report, SR 408 East Extension, Orlando-Orange County Expressway Authority, July 28, 2008

LEGEND
Previously recommended alternative
Updated Information

*See Table in Handout



CORRIDOR REEVALUATION ANALYSIS

- Generation of a weighting scheme for each of the evaluation parameters
- Involved a combination of both qualitative and quantitative values resulting in an overall score
- **Corridor 3B** clearly remains the superior alternative

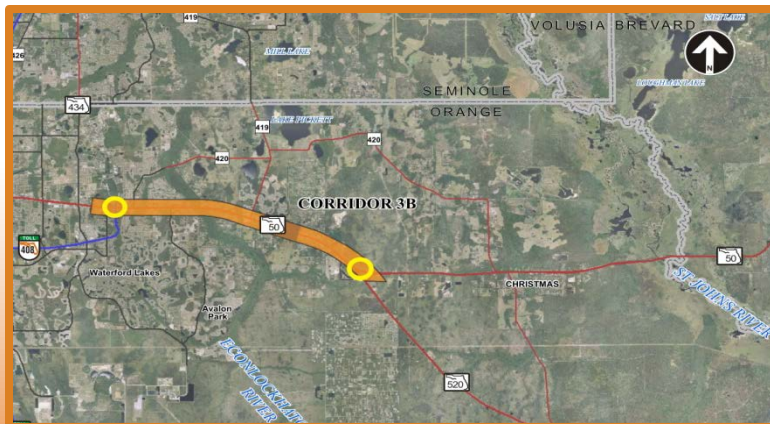
ALTERNATIVES	PURPOSE & NEED COMPLIANCE				ENVIRONMENTAL IMPACTS								COMMUNITY IMPACTS								COST			RANK (TOTAL SCORE)
	TRAFFIC / SAFETY		CONNECTIVITY	MULTIMODAL	WETLANDS	FLOODPLAIN ENCROACHMENT	CONSERVATION LANDS	WILDLIFE / HABITAT	NUMBER OF WATER CROSSINGS	R/W REQUIREMENTS	COMMUNITY COHESION	FUTURE LAND USE COMPATIBILITY	HISTORIC / ARCHAEOLOGY	PARKS / RECREATIONAL FACILITIES	COMMUNITY SERVICES & FACILITIES	CONST / ENG / ADM	WETLAND MIT.							
	14	12	7	6	8	6	6	4	6	6	6	6	6	6	6	5	5							
1	Least effective of all corridors in terms of reducing congestion along SR 50 and diminishing congestion safety concerns	--	Not as effective in terms of network and systems connectivity as the other three corridors	0	Medium transit linkage potential to support projected future population	0	High wetland impacts of all corridors	High potential floodplain encroachment within this corridor	Medium impacts to conservation lands	0	Lowest Integrated Wildlife Habitat Ranking System (IWHRS) Assessment	Requires the highest number of water crossings of all corridor options	High potential right-of-way requirements	Generally low potential community cohesion impacts	Medium future land use compatibility	High potential impacts to Historic / Archaeological sites	Slightest less number of parks / recreational facilities potentially impacted	No potential negative impacts within this corridor	High potential cost of all corridor options	High potential cost of all corridor options	4 48.8			
	Generally effective corridor in terms of reducing congestion and diminishing safety concerns along SR 50	2.8	Supports connections to the local and regional roadway network	7.2	High transit linkage potential to support projected future population	4.2	Medium wetland impact	Generally similar to corridor 1	Lowest impacts to conservation lands	3.6	Low Integrated Wildlife Habitat Ranking System (IWHRS) Assessment	Requires less number of water crossings than corridor 1 but more than corridor 3A	Less potential right-of-way requirements than corridors 1 and 3A but more than corridor 3B	Slightly more potential community cohesion impacts than corridor 3A but less than corridor 3B	High future land use compatibility	Lower potential impacts to Historic / Archaeological sites than corridor 3A but higher than 3B	High potential number of parks / recreational facilities potentially impacted	High potential negative impacts compared to other alternative corridors	High potential cost	Medium potential cost when compared to all corridor options	2 69.4			
3A	Not as effective as corridors 3 and 3B but significantly more than corridor 1	11.2	Generally similar to corridors 3 and 3B	12.0	Generally similar to corridor 3	7.0	Highest wetland impacts of all corridors	Highest potential floodplain encroachment of all corridors	Very high impacts to conservation lands	4.8	Very High Integrated Wildlife Habitat Ranking System (IWHRS) Assessment	Requires the least number of water crossings of all corridor options	High potential right-of-way requirements	Slightly more potential community cohesion impacts than corridor 1	Generally similar to corridor 3	Higher potential impacts to Historic / Archaeological sites than corridor 1	Least number of parks / recreational facilities potentially impacted	No potential negative impacts within this corridor	High potential cost	Generally similar to alternative 3	3 61.0			
3B	Generally similar to corridor 3	8.4	Generally similar to corridors 3 and 3A	12.0	Generally similar to corridor 1	7.0	Least wetland impacts of all corridors	Least potential floodplain encroachment of all corridors	Slightly lower impacts to corridor 1 but still rather high	1.2	Medium Integrated Wildlife Habitat Ranking System (IWHRS) Assessment	Generally similar to corridor 1	Least potential amount of right-of-way requirements	Largest potential community cohesion impacts	Generally similar to corridor 1	Least potential impacts to Historic / Archaeological sites	Generally similar to alternative 3A	Less potential of negative impacts than corridor 3 but higher than corridors 1 and 3A	Lowest potential cost of all corridor options	Lowest potential cost of all corridor options	1 78.0			
LEGEND																								
++ SUBSTANTIALLY POSITIVE EFFECT OR BEST CORRIDOR																								
+ GENERALLY POSITIVE EFFECT OR GOOD CORRIDOR																								
0 GENERALLY NO EFFECT OR MODERATE CORRIDOR																								
- GENERALLY NEGATIVE EFFECT OR INFERIOR CORRIDOR																								
-- SUBSTANTIALLY NEGATIVE EFFECT OR WORST CORRIDOR																								

*See Table in Handout



CORRIDOR REEVALUATION ANALYSIS

- Conclusions and Recommendations
 - Comparison of Concept Development and Evaluation Study Report completed in 2008 and the reevaluation
 - Proposed improvements along the existing SR 50 Corridor
 - Using majority of the existing SR 50 facility's Right of way
 - Corridor 3B is indeed the superior option



CORRIDOR OPTIONS	CRITERIA	ORIGINAL	UPDATED
1	Traffic Service	Relieves SR 50 and SR 419 Traffic Congestion	Least effective option in terms of SR 50 traffic congestion relief and trip attraction to proposed SR 408 extension
	Community Impacts	Significant potential impacts to residential areas	Generally similar results
	Environment Impacts	Significant potential impacts to environmentally sensitive lands	Generally similar results
	Controversy Potential	Community members and representatives are strongly opposed to this corridor	Community members and representatives are strongly opposed to this corridor
3	Traffic Service	Relieves SR 50 traffic congestion, especially in the segment from the current SR 408 terminus to SR 520	Provides significant congestion relief to SR 50 and affords transit linkage potential to support projected future population
	Community Impacts	Potential for relatively high community impact but it could be minimized depending on the eventual alignment chosen	Potential for relatively high community impact with highest potential of negative impacts to community services and facilities
	Environment Impacts	Potential for relatively high environmental impacts but they could be minimized based on the eventual alignment chosen	Generally similar results
	Controversy Potential	No significant controversy potential expected	No significant controversy potential expected
3A	Traffic Service	Relieves SR 50 traffic congestion, especially in the segment from the current SR 408 terminus to SR 520	Generally not as effective as alternatives 3 and 3B in terms of SR 50 traffic congestion relief
	Community Impacts	Significant potential impacts to Historical/Archaeological sites and high potential right-of-way requirements	Generally similar results
	Environment Impacts	Major environmental impacts	Major environmental impacts with high impacts to conservation lands, floodplain encroachment, and wetland impacts
	Controversy Potential	EAG members wanted this alternative removed as a viable option due to its very high environmental impacts	EAG members wanted this alternative removed as a viable option due to its very high environmental impacts
3B	Traffic Service	Attracted the greatest amount of traffic thus providing significant congestion relief to SR 50	Generally similar to corridor 3 but provides the greatest trip attraction to proposed SR 408 extension
	Community Impacts	Fewest negative community impacts of all viable corridors	Fewest negative community impacts with the least potential amount of right-of-way requirements
	Environment Impacts	Fewest negative environmental impacts of all viable corridors	Fewest negative environmental impacts of all viable corridors
	Controversy Potential	No significant controversy potential expected	No significant controversy potential expected

*See Table in Handout



NEXT STEPS

- Next Project Advisory Group/ Environmental Advisory Group Meeting: January 2016
- Public Kick-off Meeting: October 22, 2015
- CFX Corridor Re-Evaluation Approval
- Alternatives Development



FOR MORE INFORMATION

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QUESTIONS?