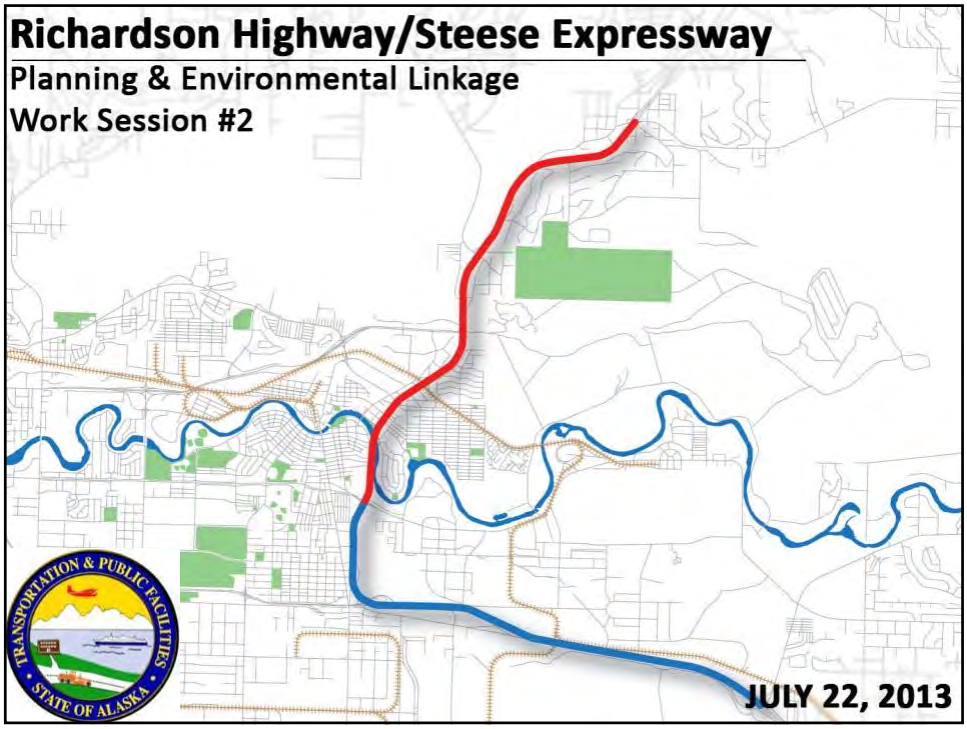

PEL WORK SESSION #2 AGENDA

- Safety minute
- Introductions
- PEL process review
- What we've heard so far
- Newly developed and refined concepts
- Discussion

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Chris Grgich, P.E., Traffic Engineer
- Zaid Hussein, P.E., Project Engineer
- Rachel Steer, Project Coordination

PEL PROCESS

We are here

- Identify transportation deficiencies;
- Develop project concepts that consider:

-Feasibility	-Land use
-Logical termini	-Freight movement
-Cost	-ROW impacts
-Air quality	-Environmental impacts
-Multi-modal traffic	-and more…

- Identify direct, indirect, and cumulative impacts for the preliminary class of action determination; and
- Use this information and analysis in future project development.

WHAT WE'VE HEARD SO FAR

General Themes:

- Various HSIP and multi-modal projects are in the planning or development process.
- Fort Wainwright and ARRC plans will impact future concept development.
- Preference for appropriate level of access built into road network (collector, arterial, expressway).
- Pedestrian and emergency service routes, air quality impacts, and freight traffic forecasts need to be considered.

MULTI-MODAL CONSIDERATIONS

- Richardson/Steese corridors are often barriers for cross movement.
- No new counts for pedestrian movements were conducted in this project.
- Desire for additional pedestrian access in the corridor.
- Concepts will require a future evaluation of multi-modal access and compatibility with the Fairbanks Non-Motorized Transportation Plan (NMTP).

Baseline Concept

- Update signal timing and phasing
  - Coordinates signals along corridors with master signals
  - Decreased delay throughout network
  - Minimal cost (assuming no hardware improvements needed)
  - No environmental impacts

CONCEPT 1 — Chena Hot Springs Road Interchange

- HSIP project in progress will replace existing stop controlled intersections with roundabouts.
- Safety improvement, not capacity improvement.
- Roundabouts projected to fail by 2030.
- Add two circulating lanes westbound and right turn slip lanes.

CONCEPT 1 — LOS & Delay

Concept 1	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Chena Hot Springs / NB Steese Expressway	E	47.8	A	6.7	A	7.9	A	4.5
Chena Hot Springs / SB Steese Expressway	F	55.1	C	15.6	C	15.8	B	10.5
Chena Hot Springs / Rainbow Drive	E	36.4	C	18.0	C	17.8	C	15.6
Chena Hot Springs / Whitney Drive	B	10.8	B	11.8	B	10.8	B	11.8
Chena Hot Springs / Old Steese Highway	C	21.6	C	15.0	C	21.6	C	15.0

CONCEPT 1 — Chena Hot Springs Road Interchange

Environmental Considerations

- Evaluate ROW acquisition and land use impacts
- 4(f) impacts unlikely
- Potential for wetland impacts is low

Conceptual Cost Estimates

Lane widening	$2 million
Intersection widening	$5 million

CONCEPT 2 — Old Steese to Old Farmers Loop Extension

- Extend Old Steese Highway north to connect to Old Farmers Loop right-of-way.
- Serves travel demand between Johansen Expressway and Farmers Loop Road.
- Includes:
  - Realignment of Old Steese Highway north of Farmers Loop Road
  - Additional westbound lane on Johansen Expressway
  - Various intersection upgrades

CONCEPT 2 — LOS & Delay: AM Peak Hour

Concept 2 (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Farmers Loop Road/Old Farmers Loop Road	B	13.0	B	14.0	A	9.1	C	16.5
Farmers Loop Road/Old Steese Highway	F	3146.1	F	7213.2	C	15.5	C	19.3
Farmers Loop Road/Steese Expressway	F	302.9	F	400.7	C	23.9	D	39.2
Johansen Expressway/Steese Expressway	E	78.2	F	137.2	E	69.3	F	128.1
Johansen Expressway/ Northside Boulevard-Old Steese Highway	B	19.5	D	39.4	D	46.4	D	50.8
Johansen Expressway/Hunter Street	D	36.4	E	77.0	C	26.3	C	32.3

CONCEPT 2 — LOS & Delay: PM Peak Hour

Concept 2 (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Farmers Loop Road/Old Farmers Loop Road	B	10.5	B	10.9	B	10.7	C	15.6
Farmers Loop Road/Old Steese Highway	F	887.4	F	1688.0	B	13.7	C	15.8
Farmers Loop Road/Steese Expressway	E	65.2	F	85.3	C	21.6	C	24.5
Johansen Expressway/Steese Expressway	D	36.2	D	49.4	C	24.7	C	31.5
Johansen Expressway/ Northside Boulevard-Old Steese Highway	C	26.0	B	16.5	C	31.8	C	33.2
Johansen Expressway/Hunter Street	B	16.8	B	19.4	C	22.3	C	28.6

CONCEPT 2 — Old Steese to Old Farmers Loop Extension

Environmental Considerations

- Analyses likely needed
  - Noise
  - Socioeconomic impacts
  - Section 106
  - 4(f)
  - Phase 1 ESA (contaminated sites in area)
  - Wildlife
  - Hydrology
- Potential wetland impacts

Conceptual Cost Estimates

Old Steese Highway extension	$18 million
Johansen lane widening	$2 million
Intersection upgrades and widening	$17 million

CONCEPT 3 — Richardson/Steese Corridor: Farmers Loop to Airport Way

Includes several individual projects:

- Baseline: Steese Expressway widening (included in all concepts)
  - 3rd Southbound through lane from Farmers Loop Road to Mitchell Expressway
- Concept 3A: Farmers Loop Road/Steese Expressway
  - Intersection improvements vs. interchange
- Concept 3B: Johansen Expressway/Steese Expressway interchange
- Concept 3C: Airport Way/Steese Expressway
  - Intersection improvements vs. interchange
- Concept 3D: Steese Expressway: Trainor Gate to 10th Ave. intersection improvements

CONCEPT 3 — Intersection Improvements: LOS & Delay: AM Peak Hour

Concept 3 Intersections	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road	F	302.9	F	400.7	C	27.0	E	77.0
Steese Expressway/Johansen Expressway	E	78.2	F	137.2	D	39.0	E	79.9
Steese Expressway/Trainor Gate Road	F	105.7	F	154.0	D	38.4	E	65.5
Steese Expressway/College Road	E	59.6	F	103.3	C	27.6	D	51.8
Steese Expressway/3rd Street	F	89.7	F	121.0	D	43.4	E	69.8
Steese Expressway/10th Avenue	A	4.2	A	2.5	A	4.3	A	2.3
Steese Expressway-Richardson Highway/Airport Way-Gaffney	F	144.0	F	188.8	D	42.3	D	49.8

CONCEPT 3 — Intersection Improvements: LOS & Delay: PM Peak Hour

Concept 3 Intersections	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road	E	65.2	F	85.3	C	22.5	C	24.6
Steese Expressway/Johansen Expressway	D	36.2	D	49.4	C	34.6	D	48.4
Steese Expressway/Trainor Gate Road	C	32.3	D	45.4	B	18.1	C	20.3
Steese Expressway/College Road	C	21.4	C	24.9	D	41.8	D	43.9
Steese Expressway/3rd Street	C	31.3	C	34.7	C	22.7	C	29.3
Steese Expressway/10th Avenue	A	10.0	B	12.7	A	7.1	B	13.7
Steese Expressway-Richardson Highway/Airport Way-Gaffney	F	118.4	F	149.8	D	47.4	E	58.5

CONCEPT 3 — Interchange Improvements: LOS &Delay

Concept 3 Interchange	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road (northbound ramps)	F	400.7	F	85.3	B	12.6	B	17.1
Steese Expressway/Farmers Loop Road (southbound ramps)					A	3.4	A	0.7
Steese Expressway/Johansen Expressway	F	137.2	D	49.4	C	21.2	B	12.9
Steese Expressway/Airport Way (northbound ramps)	F	188.8	F	149.8	C	25.8	B	18.0
Steese Expressway/Airport Way (southbound ramps)					C	32.7	C	23.1

CONCEPT 3 — Richardson/Steese Corridor: Farmers Loop to Airport Way

Environmental Considerations

- Analyses possibly needed
  - Noise
  - Land use
  - Phase 1 ESA (contaminated sites in area)
- Potential wetland impacts
- ROW impacts likely
- Historic sites related to military infrastructure to east

Conceptual Cost Estimates

Intersection Improvements	$32 million
Interchange Improvements	$170 million

CONCEPT 4 — College Road Corridor

- Johansen Expressway/College Road interchange improvements.
- College Road/Bentley Trust Road improvements.

CONCEPT 4 — LOS & Delay: AM Peak Hour

Concept 4 Intersections (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
College Road/ Johansen Expressway	C	25.3	C	30.0	C	21.6	C	25.5
College Road/Illinois Street-Bentley Trust Road	B	19.5	C	20.6	--	--	C	21.3
College Road/ Crossover Way	A	7.8	A	8.7	--	--	--	--

CONCEPT 4 — LOS & Delay: PM Peak Hour

Concept 4 Intersections (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
College Road/ Johansen Expressway	C	22.7	C	21.6	C	20.7	C	20.1
College Road/Illinois Street-Bentley Trust Road	C	22.2	C	23.6	--	--	C	23.2
College Road/ Crossover Way	B	14.7	B	10.2	--	--	--	--

CONCEPT 4 — College Road Corridor

Environmental Considerations

- **Analyses possibly needed**
  - Noise
  - Section 106
  - 4(f) historic building and district in area
- **Potential wetland impacts**

Conceptual Cost Estimates

Johansen/College Road Interchange	$12 million
College Road/Illinois Intersection	$3 million

CONCEPT 5 — Old Steese Corridor

- **Close Trainor Gate between Old Steese Highway and Steese Expressway**
  - Will require improvements at:
    - Trainor Gate/Old Steese Highway
    - Trainor Gate/Steese Expressway
- **Intersection upgrades**
  - College Road/Old Steese Highway
  - 3rd Street/Old Steese Highway

CONCEPT 5 — LOS & Delay: AM Peak Hour

Concept 5 Intersections (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/ Trainor Gate Road	F	105.7	F	154.0	B	13.4	B	13.7
Old Steese Highway/ Bentley Trust Road	A	5.8	A	6.8	A	7.1	A	8.5
Old Steese Highway/ College Road	C	30.2	C	32.0	C	32.5	C	33.6
Old Steese Highway/ 3rd Street-Minnie Street	C	25.3	C	31.9	C	24.9	C	28.8

CONCEPT 5 — LOS & Delay: PM Peak Hour

Concept 5 Intersections (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/ Trainor Gate Road	C	32.3	D	45.4	A	5.5	A	5.2
Old Steese Highway/ Bentley Trust Road	A	6.0	A	7.0	A	6.2	A	6.9
Old Steese Highway/ College Road	C	28.2	C	31.7	C	25.8	C	29.1
Old Steese Highway/ 3rd Street-Minnie Street	B	19.1	C	21.0	C	20.2	C	22.0

CONCEPT 5 — Old Steese Corridor

Environmental Considerations

- **Analyses that may be needed**
  - Land use changes and access to private property (related to Trainor Gate closure)
  - Phase 1 ESA may be needed for acquisition of parcel south of right turn lane (contaminated sites in area)

Conceptual Cost Estimates

Trainor Gate Closure	$5 million
College Road/Old Steese Highway Intersection Improvements	$2 million
3rd Street/Old Steese Highway Intersection Improvements	$2 million

CONCEPT 6 — Johansen Expressway Corridor

- Old Steese Highway-Northside Drive/Johansen Expressway intersection improvements
- Hunter Street/Johansen Expressway intersection improvements

CONCEPT 6 — LOS & Delay

Concept 6	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Johansen Expressway/ Old Steese Highway-Northside Boulevard	D	39.4	B	16.5	C	21.0	C	23.3
Johansen Expressway/Hunter Street	E	77.0	B	19.4	C	23.0	C	21.6

CONCEPT 6 — Johansen Expressway Corridor

Environmental Considerations

- Potential wetland impacts
- Evaluate ROW acquisition and land use impacts

Conceptual Cost Estimates

Old Steese Highway/Johansen Expressway	$2 million
Hunter Street/Johansen Expressway	$2 million

CONCEPT 7 — Richardson Highway Off Ramp

- Construct a grade separated off-ramp
- Level of Service & Delay
  - Not able to be evaluated
- Environmental Considerations
  - Potential wetland impacts
- Conceptual Cost Estimate

Richardson Highway off ramp overpass	$12 million

NEXT STEPS

<u>Fall 2013</u>

- Presentation to FHWA
- Public open house #2
- PEL work session #3
- Final concepts included in MTP update

QUESTIONS/COMMENTS

- Submit comments by Friday, August 2
- Send comments to:

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