



DILLINGHAM AIRPORT MASTER PLAN UPDATE

PUBLIC MEETING #2: ALTERNATIVES & RECOMMENDATIONS



PROJECT CONTACTS



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<http://www.dot.state.ak.us/creg/dillingham/>



DILLINGHAM AIRPORT
MASTER PLAN UPDATE

AIRPORT MASTER PLAN OVERVIEW



- The Alaska Department of Transportation & Public Facilities is updating the Dillingham Airport Master Plan and the Dillingham Airport Layout Plan.
 - A Runway Safety Area Practicability Study was completed as part of the Airport Master Plan update.
- The updated Airport Master Plan and Airport Layout Plan will provide:
 - Plan for capital improvements, maintenance, and operations at Dillingham Airport (DLG) for 10-20 years.
 - Recommendations that allow DLG to continue to serve the City of Dillingham and surrounding communities into the future.



WORK COMPLETED SO FAR:

- Airport and Community Background
- Aviation Activity Forecast
- Conditions & Needs Assessment, Issues Identification
- Land Use & Economic Development Assessment
- Environmental Overview and Considerations
- Runway Safety Area Practicability Study
- Financial & Capital Improvement Plans
- Alternative Development and Analysis (DRAFT)
- Airport Layout Plan (DRAFT 50%)





ISSUES & NEEDS (FROM PUBLIC MEETING #1)

- Proximity to residential neighborhoods
- Proximity to Evergreen Cemetery
- Terminal infrastructure
 - Unreliable restroom facilities
 - No clean drinking water
 - Too small, carriers use separate buildings
 - Inadequate TSA facilities
- Airport maintenance equipment
- Not enough lease lots

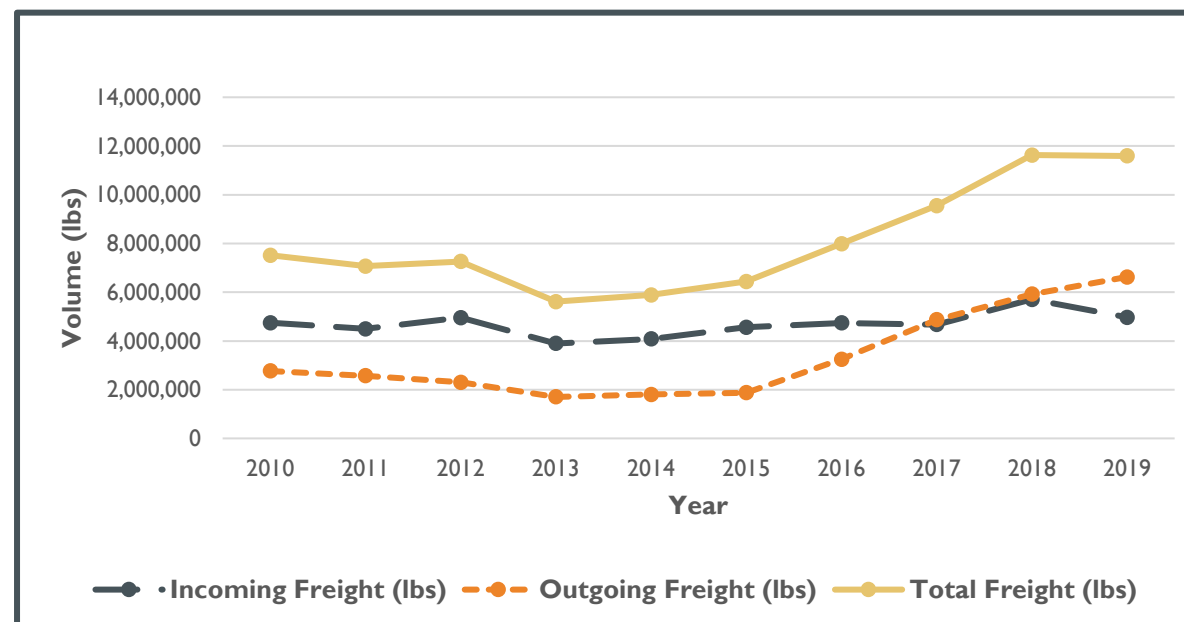




AVIATION ACTIVITY FORECAST HIGHLIGHTS

- Current critical aircraft: Boeing 737-700 (Airport Reference Code C-III)
- 2040 forecasted critical aircraft: Lockheed L-100 (Airport Reference Code C-IV)
 - Little population growth
 - Steady incoming freight
 - Long-term growth of fresh fish exports
- The Airport Reference Code affects federal design requirements

Critical Aircraft
Most demanding aircraft type
with 500+ annual operations



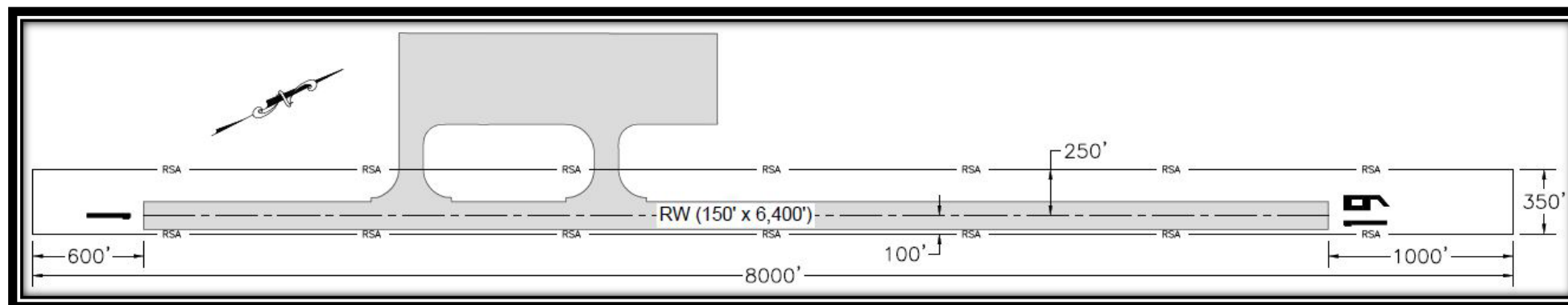


RUNWAY SAFETY AREA (RSA): REQUIREMENTS

Topic	FAA Requirement	Existing
RSA Length	1,000 ft. beyond runway ends	North RSA meets 1,000 ft. minimum South RSA is 600 ft. (400 ft. short)
RSA Width	500 ft. width centered on runway centerline	350 ft. width (150 ft. too narrow)
RW Length	6,000 ft. for DLG	6,400 ft.
RW Line of Sight	Mutual visibility 5' above any two points on RW	Violated by 7.2 ft.

Runway Safety Area

Surface surrounding the runway prepared to reduce risk of damage from an undershoot, overshoot, or runway excursion

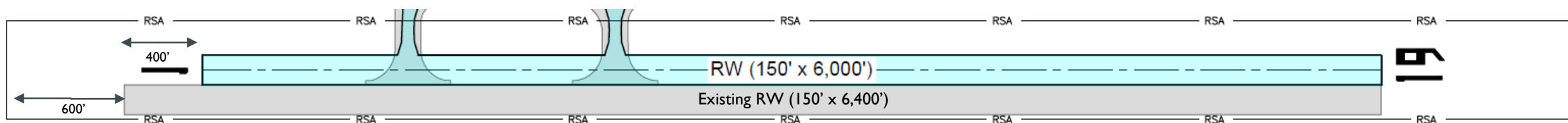




REQUIREMENTS: RUNWAY LENGTH

Why is the Runway Being Shortened?

- The existing runway length is 6,400 feet, which is longer than required for the critical aircraft.
- FAA will not pay for any runway maintenance beyond the length required for the critical aircraft as determined under Advisory Circular (AC) 150/5325-4B *Runway Length Requirements for Airport Design* and AC 150/5000-17 *Critical Aircraft and Regular Use Determination*.
- The F.A.R. runway takeoff length required by the critical aircraft grouping at DLG, achieving 500 cumulative annual operations is 6,000 feet.
- Shortening the runway 400 feet will provide the standard 1,000-foot south RSA length. A runway length reduction will increase the existing embankment length available for the runway safety area.



Aircraft	737-200	MD-82	737-400	737-700	DC-9-41 (30)	737-300
Annual Operations	15	199	88	264	78	175
Cumulative Operations	15	214	302	566	644	819
AAC-ADG	C-III	C-III	C-III	C-III	C-III	C-III
MTOW (lbs.)	115,500	149,500	150,000	154,500	114,000	139,500
Operational TOW (lbs.)	112,500	137,000	129,000	132,500	107,500	117,500
Takeoff Length Requirement (ft.)	9,000	6,400	6,200	6,000	6,000	5,700

From aircraft manufacturer planning manual F.A.R. charts adjusted for: airport elevation, temperature, aircraft characteristics, aircraft operational weights (payload/range), and runway gradient.

>500 cumulative operations achieved by C-III aircraft grouping

Table sorted in descending order by runway length required by each aircraft. The runway length was selected from the first column where 500 cumulative operations are achieved.

RUNWAY SAFETY AREA (RSA): CONSTRAINTS & CHALLENGES

Assessing Alternatives

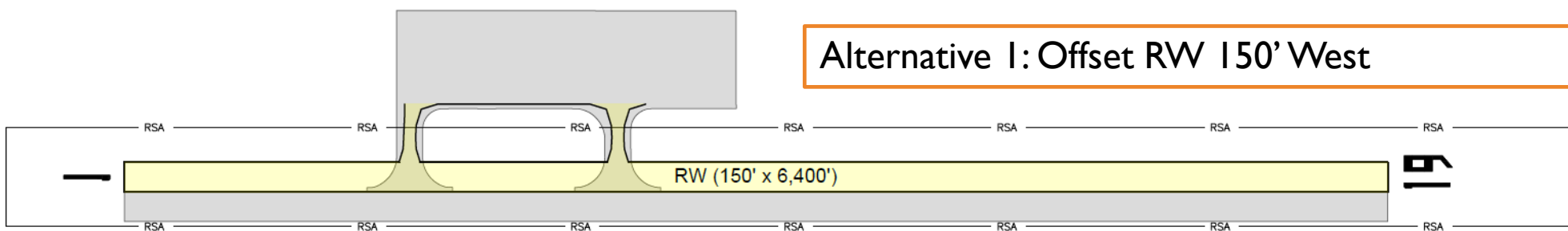
- Airport impacts
- Roadway & utility impacts
- Cemetery impacts
- Surrounding land ownership, obstructions, & LOS impacts
- Environmental impacts & geology
- Cost



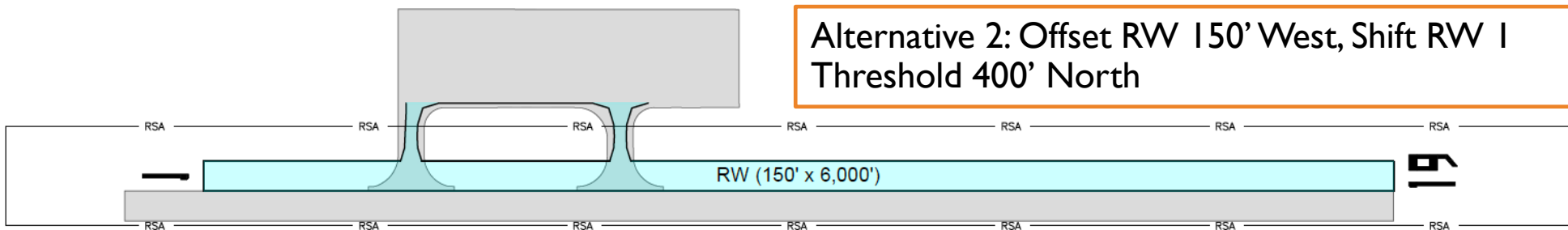


RUNWAY SAFETY AREA (RSA): ALTERNATIVES

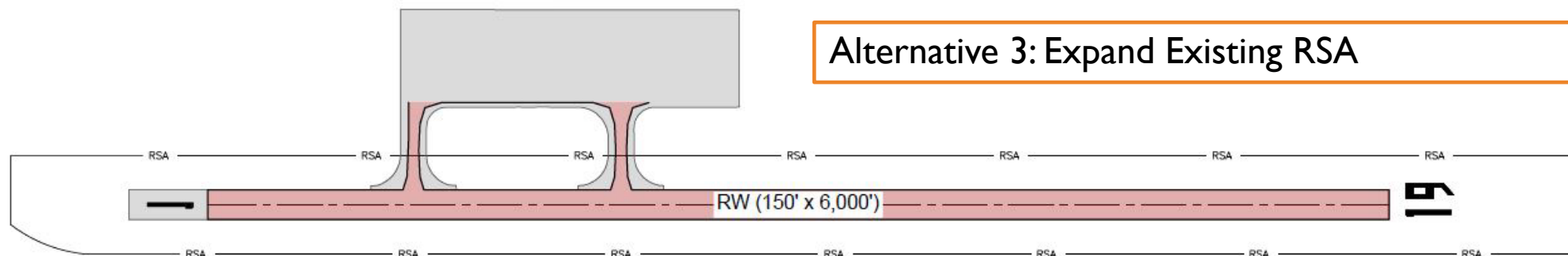
Alternative 1: Offset RW 150' West



Alternative 2: Offset RW 150' West, Shift RW I Threshold 400' North



Alternative 3: Expand Existing RSA



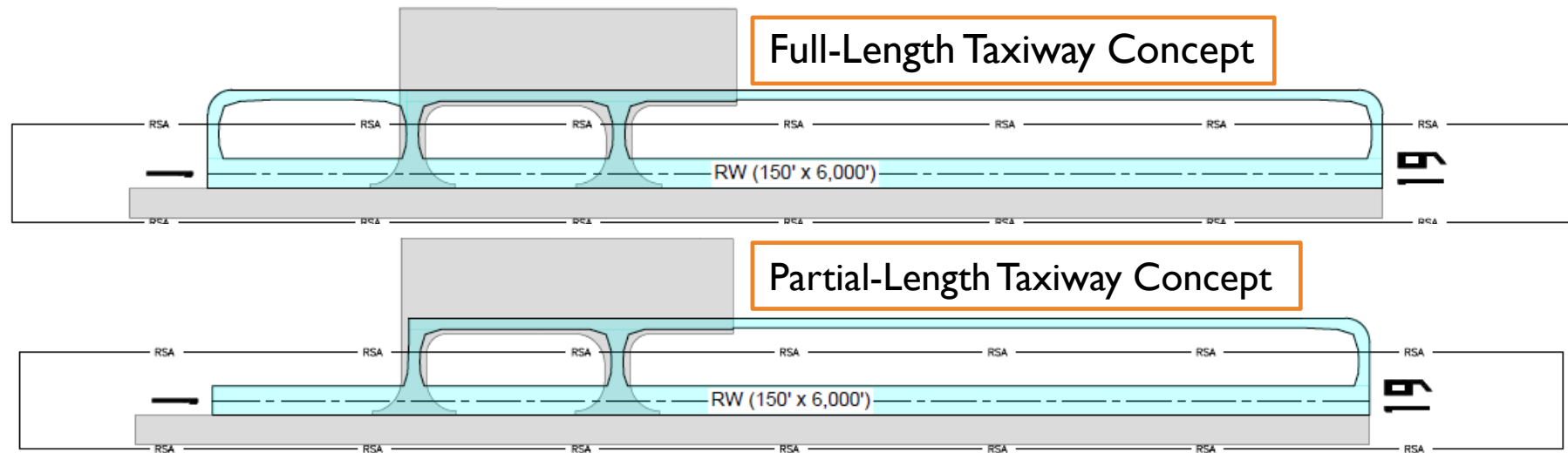
Alternative 4:

No Build,
Publish
Declared
Distances



RUNWAY SAFETY AREA (RSA): FULL & PARTIAL TAXIWAY

- Reduces embankment height to correct LOS deficiency
- Reduces aircraft turnarounds before takeoff (capacity improvement)



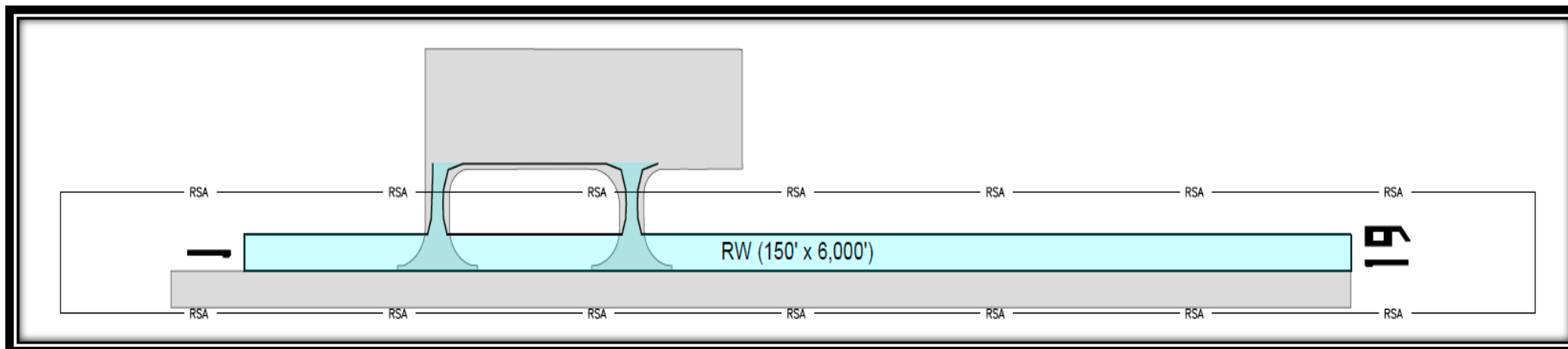
Component	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Basic Description	Offset RW 150' West	Offset RW 150' West, Shift RW 1 Threshold 400' North	Expand Existing RSA	No Build
RW Length	6,400'	6,000'	6,000'	6,400'
RW & RSA Construction	RW offset 150' west, RSA widened westward to meet 500' standard width. TW A & B shortened to 400'. Declared distances shorten LDA and ASDA to 6,000'	RW offset 150' west, RSA widened westward to meet 500' standard width. TW A & B shortened to 400'. RW 1 threshold shifted 400' north to create 1,000' RSA length to the south	Build RSA around existing RW; RW 1 threshold shifted 400' north to create 1,000' RSA length to the south; Extend RSA east to meet 500' standard width	None. Declared distances shorten LDA and ASDA to 6,000'
RSA Meets Standards?	Yes	Yes	RSA chamfered to avoid impacts to Kananak Rd	No
Re-Align Wood River Road	Yes, due to minor OFA penetration after RW offset	Yes, due to minor OFA penetration after RW offset	Yes, relocated. Greater OFA penetration without RW offset	No, remains OFA penetration
Re-Align Kananak Road	No	No	RSA chamfered to avoid impacts	No
Utility Impacts	Relocate telecom & FO lines along Wood River Rd. Relocate electrical vault and SS manholes for lines crossing under the RW.	Relocate telecom & FO lines along Wood River Rd. Relocate electrical vault and SS manholes for lines crossing under the RW.	Relocate telecom & FO lines along Wood River Rd. No impacts to utilities crossing under the RW midpoint.	None
Airport Lighting	Runway edge, threshold, and connecting TW lighting replaced	Runway edge, threshold, and connecting TW lighting replaced	Existing lighting system replaced in kind due to failure, age	Lighting system should be replaced under separate project
Nav aids	ODALs, PAPI/VASI, localizer, and wind cone & segmented circle replaced	ODALs, PAPI/VASI, localizer, and wind cone & segmented circle replaced	Wind cone and segmented circle relocated outside RW OFA (existing deficiency).	No impacts
Evergreen Cemetery Disposition	Remains an OFA penetration; close to new burials, clear trees	Remains an OFA penetration; close to new burials, clear trees	Within the expanded RSA, relocate	No change, remains OFA penetration
Obstruction Clearing	Part 77 and Departure Surface tree obstructions to the north. OFA terrain leveling.	Part 77 and Departure Surface tree obstructions to the north. OFA terrain leveling.	Part 77 and Departure Surface tree obstructions to the north. OFA terrain leveling (existing deficiencies).	Existing obstructions remain
Property Acquisition	For OFA to the southwest; north RPZ	For OFA to the southwest; north RPZ	For OFA to the east; north RPZ	None



RUNWAY SAFETY AREA (RSA): RECOMMENDED ALTERNATIVE

- Shift RW 400 ft. north, 150 ft. west.
- Shift RW I threshold 400ft. North to bring new RW to 6,000 ft.

Element	Estimate
Alternative 2 (Preferred Alternative):	\$52,181,944
Full Parallel TW:	\$9,178,290
LOS Correction:	\$2,168,210
Total Estimate:	\$63,528,444










FENCE & SERVICE ROAD IMPROVEMENTS

PROJECT NOTES:

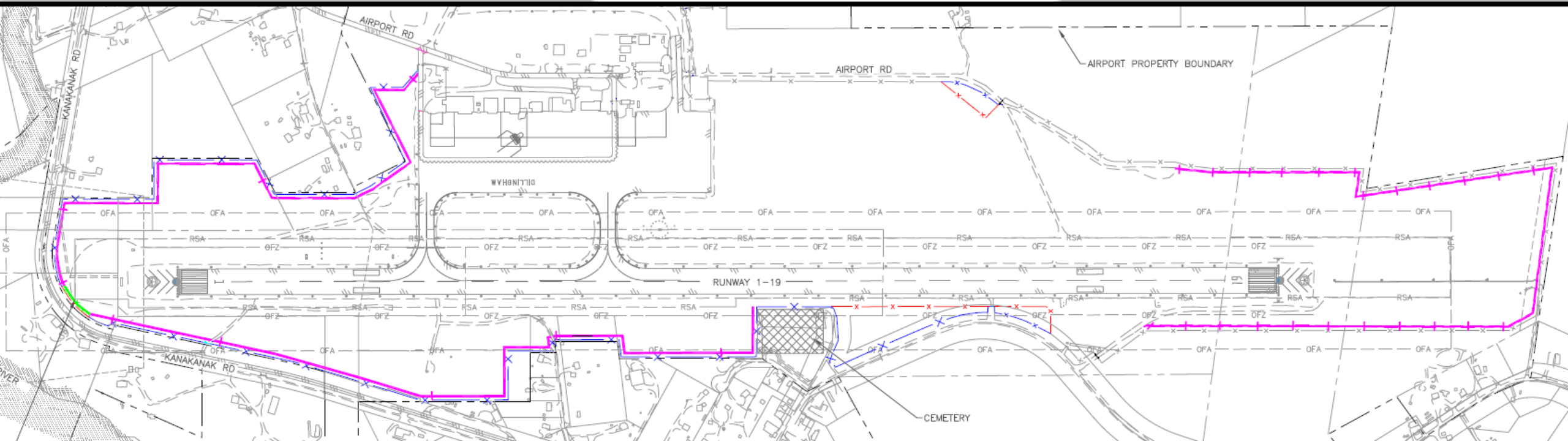
1. FENCE GATES TO REMAIN UNLESS SPECIFIED OTHERWISE.
2. SECTIONS OF FENCE INSTALL INCLUDE EXISTING FENCE REMOVAL.
3. CULVERT SPACING ASSUMED TO BE EVERY 200' ALONG NEW ROAD. CULVERT LENGTH ASSUMED TO BE 16'. ACTUAL CULVERT LOCATIONS AND LENGTH TO BE DETERMINED IN DESIGN.

LEGEND:

-  ACCESS ROAD
-  INSTALL FENCE
-  DEMOLISH FENCE
-  MSE WALL
-  CULVERT

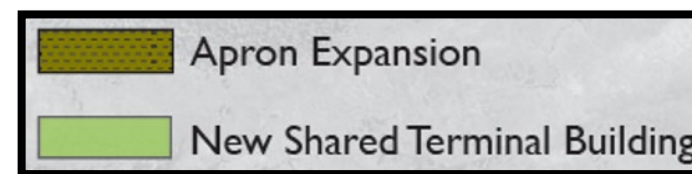
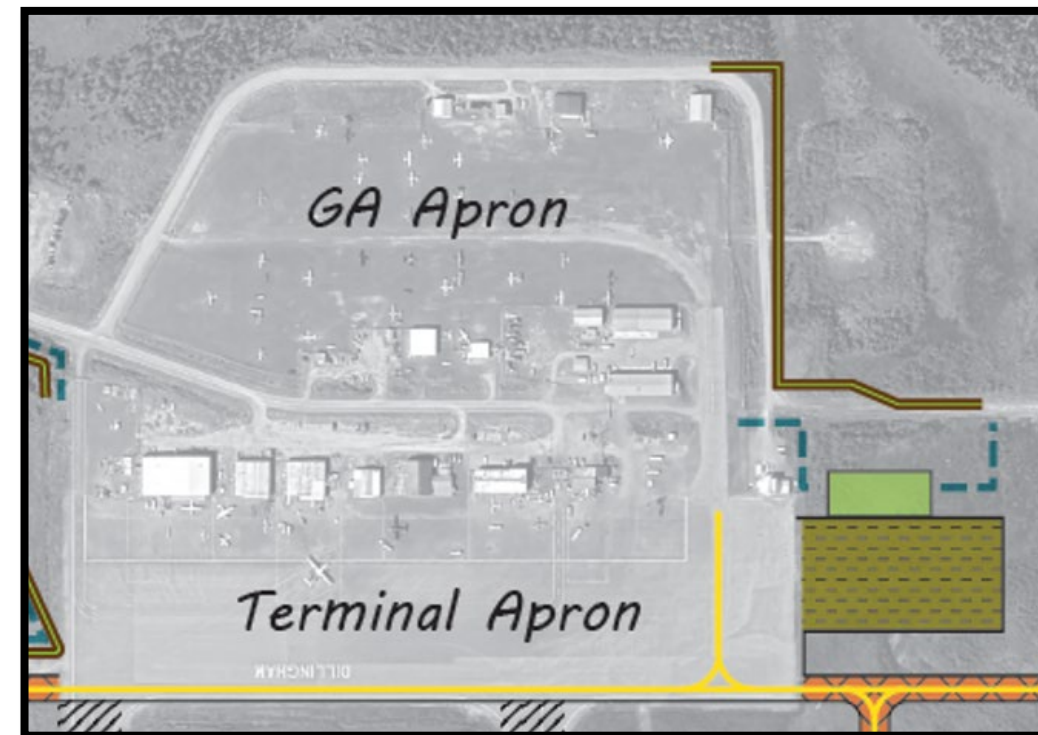
APPROXIMATE QUANTITIES:

ACCESS ROAD:	14,500	LF
REPLACEMENT FENCE:	8,900	LF
PERMANENTLY REMOVE FENCE:	2,400	LF
NEW FENCE:	300	LF
MSE RETAINING WALL:	230	LF
CULVERT:	1,100	LF





SHARED TERMINAL FACILITY & APRON EXPANSION

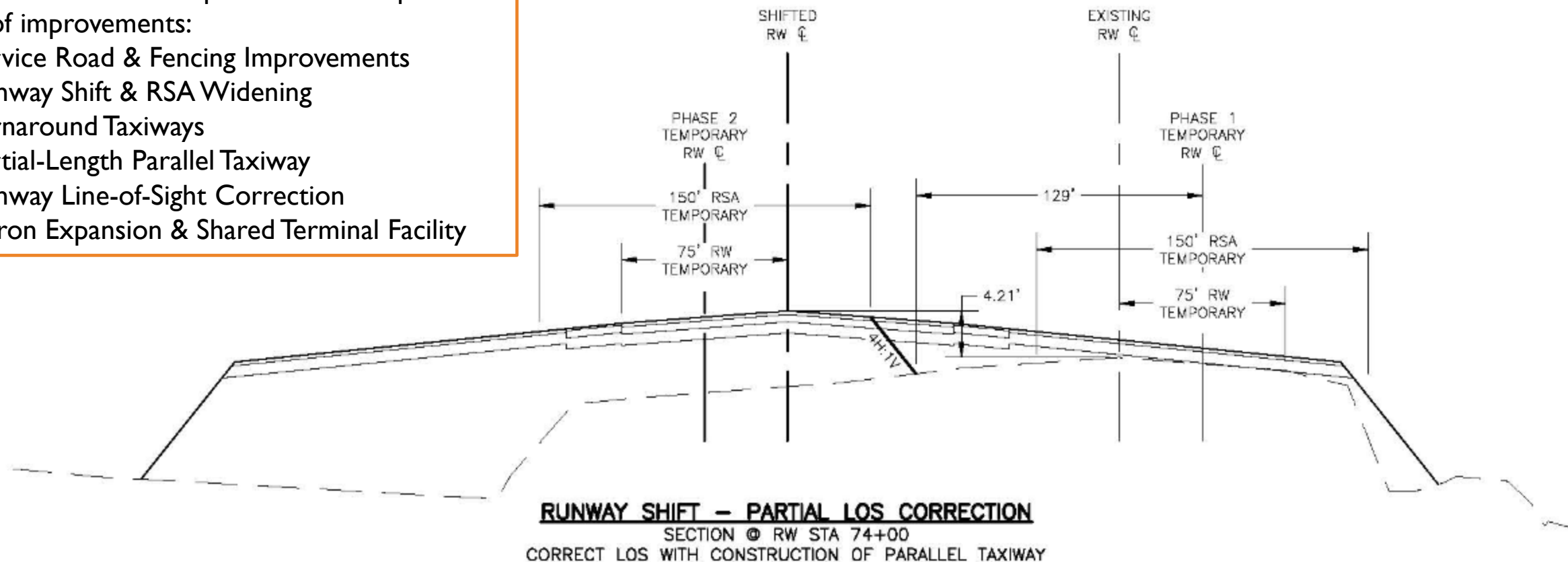




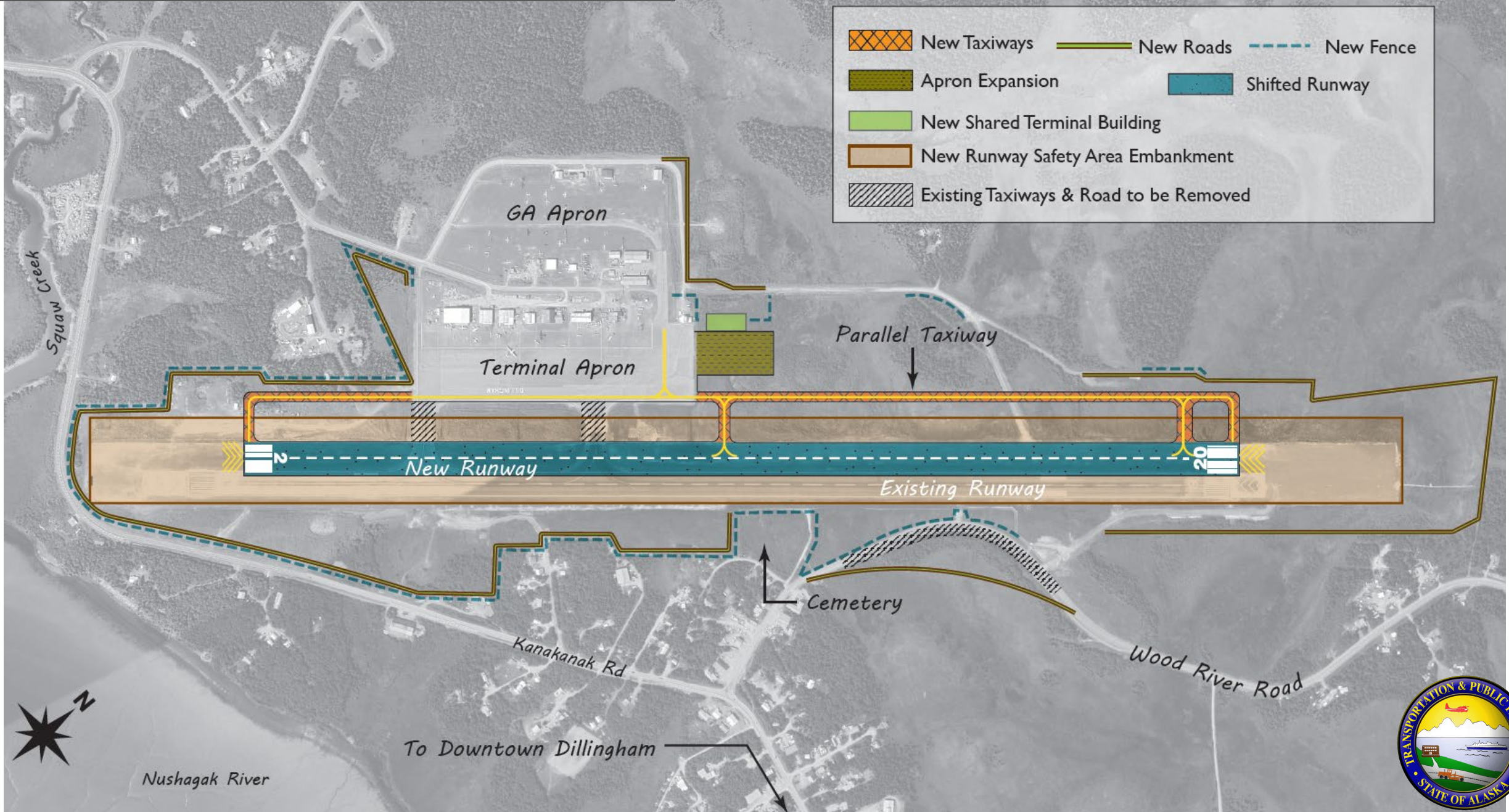
CONSTRUCTION PHASING

Incremental project improvements to keep airport open and maintain safe operations. Anticipated order of improvements:

- 1) Service Road & Fencing Improvements
- 2) Runway Shift & RSA Widening
- 3) Turnaround Taxiways
- 4) Partial-Length Parallel Taxiway
- 5) Runway Line-of-Sight Correction
- 6) Apron Expansion & Shared Terminal Facility



ULTIMATE AIRPORT LAYOUT PLAN



QUESTIONS?



Please introduce yourself!

1. Name
2. Organization (if applicable)
3. How you use the airport



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