Honolulu International Airport (HNL) Transit Rail Alignment Options Review

Federal Aviation Administration

Presented to: Federal Transit Administration, Region IX

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Honolulu International Airport - Google Earth Map (removed to reduce file size)

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City and County of Honolulu (CCH)
Proposed Rail Alignment at Honolulu International Airport

- CCH proposed Aolele Street rail alignment based on their review of costs as being least costly of 5 alignment options through HNL with two stations. One at HNL and one at Lagoon Drive.

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CCH Proposed Mitigation

- CCH proposes to shift Runway 4R/22L to the south 460' to get rail alignment out of the Runway Protection Zone (RPZ)
- Use declared distances to adjust Runway 22L RPZ away from the rail line
- Runway 22R RPZ to be reduced to aircraft approach category A/B (slower/smaller aircraft)
- Relocate visual and electronic navigational equipment
- CCH mitigation focused on RPZ mitigation

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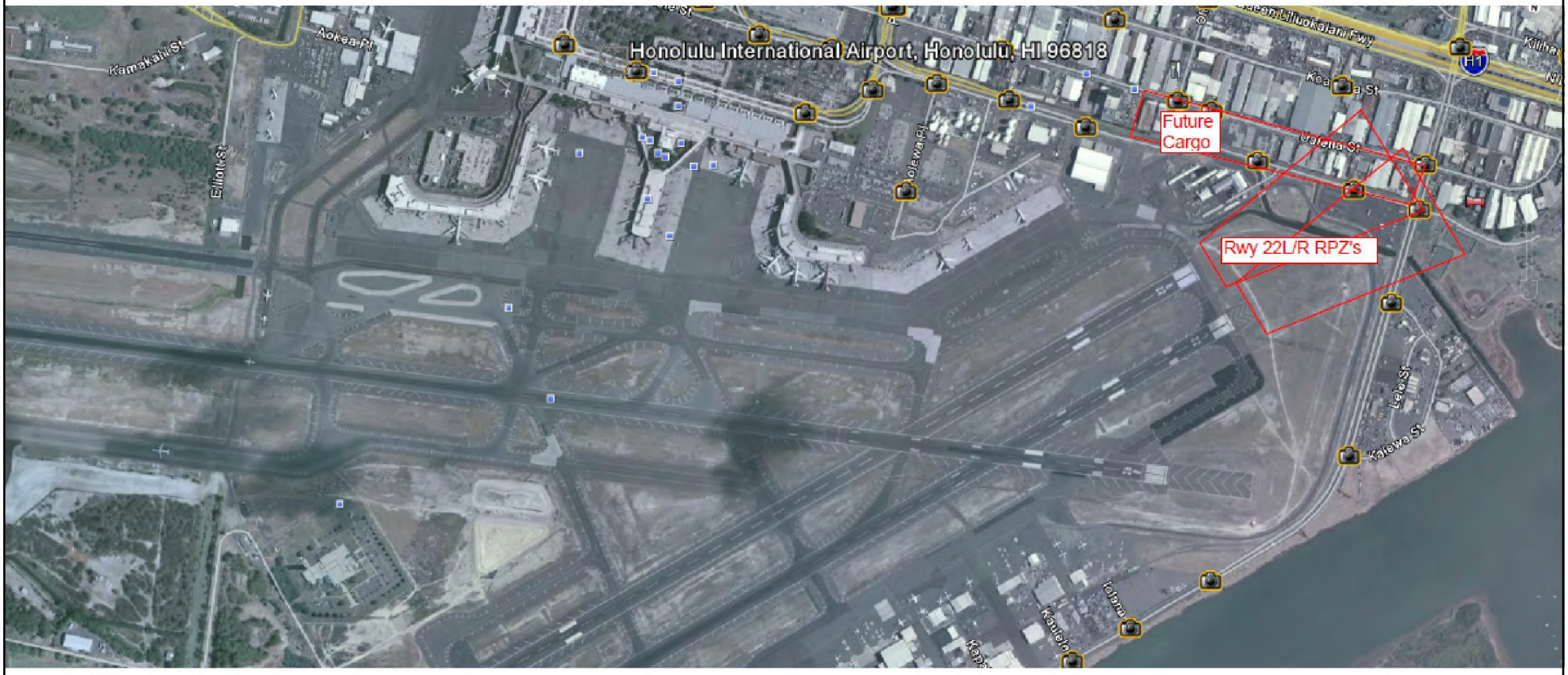
Runway Protection Zones for Runways 22L and 22R and Future Air Cargo Area



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Proposed Rail Transit Project by City and County of Honolulu (CCH) through Honolulu International Airport (HNL)

Cost comparison of proposed alignment options

	Aolele Street*	Ualena Street	Koapaka Street	Makai H-1	H-1 Median
CCH Consultant cost estimate	**$220 Million** (includes **$20 Million** for airport impact mitigation)	**$265 Million** due to urban construction setting	**$295 Million** due to urban construction setting	No estimate provided	No estimate provided
FAA/FTA cost estimate	**$302.4 to $328 Million** (includes **$102 - $128 Million** in Airport impacts & associated mitigation)	**$265.1 Million** for rail cost & property acquisition	**$295.6 Million** for rail cost & property acquisition	**$324 Million** for rail cost & property acquisition	**$500 Million** includes major fuel line relocation

CCH did not provide estimated cost of H-1 Makai or H-1 Median options.
*FAA prepared estimate for airport impacts. All other estimates in the lower row were prepared by FTA's contractor.

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Comparison of Airport Operational Impacts for Aolele Street option

	CCH/FTA November 2008 DEIS Impacts	CCH/FTA October 2009 Pre-Final EIS	FAA Airport Analysis for FTA Final EIS	What does this mean?
Impacts to Navaids	**None** Disclosed	CCH Proposes to **relocate** MALSR, PAPI, REIL's. **Did not include** relocation of Reef taxiway, HCF Power or HNL VORTAC	•CCH estimated **$800K.** •Relocation of full instrument lighting system will require the additional actions: ○HNL **VORTAC** relocation ○**Taxiway RA** (reef runway) relocation	•FAA Navaid estimate at **$11M.** •Relocate Reef Taxiway and VORTAC, & HCF Power duct bank estimate at **$87.1M.** •**Estimate Total $122M.** •Will require full **safety review** and could lead to additional costs.
Future Air Cargo at HNL	**None** Disclosed	**None** Disclosed	•Would **sever 28 acres** of airport land from future air cargo use planned since 1998. Economic impact to HDOT for lost future revenue. •HNL has a **major cargo operation** and currently ranks 15th in the USA and 48th in the world for Air Cargo tonnage.	•Loss of aircraft **access.** •Loss future lease **revenue**. •Loss of future air cargo capacity •**Estimate $6M/year lost opportunity cost.**
Runway Safety Area (RSA), Runway Protection Zone (RPZ)	**None** Disclosed	CCH used old RPZ size. Proposes **inappropriate use** of declared distances to correct for RPZ violation	•Rail violates RPZ for Runways 22L/R. RSA reduced for Runway 4R.	•Violates FAA Safety standards. RSA meets standards now, CCH misapplied Declared Distance procedures in an effort to mitigate RSA reduction.
Runway impacts at HNL	**None** Disclosed	**None** Disclosed	•**During construction (Temp):** all aircraft using Runway 4R shifted to Runway 8L. If navaid down graded, permanent shift of 7-17 night flights to Runway 8L.	•Runway **acceptance rate** cut in half during construction. Adds flight delays. •FAA **Safety Review** may require additional mitigation. •Significant increase in **noise** impacts west of HNL.

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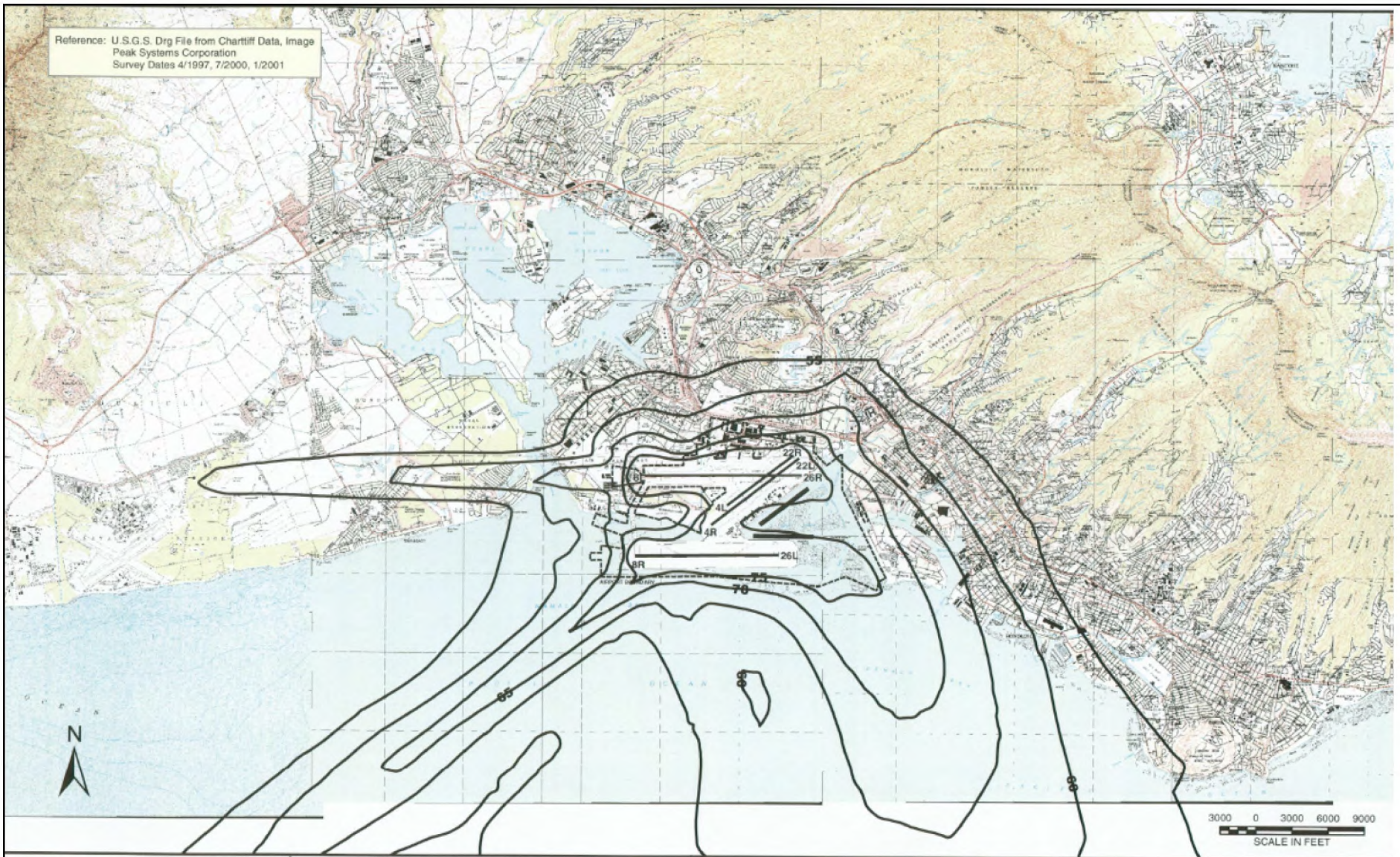

AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

HONOLULU INTERNATIONAL AIRPORT
MASTER PLAN UPDATE AND
NOISE COMPATIBILITY PROGRAM

Edward K. Noda
and Associates,Inc

2008 (FORECAST) FIVE YEAR
NOISE EXPOSURE MAP
NO MITIGATION SCENARIO

FIGURE
5 –1

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Additional Environmental Analysis Needed for Aolele Street Option

	CCH/FTA November 2008 DEIS Impacts	CCH/FTA Pre-Final October 2009 EIS Impacts	FAA Airport Analysis for Final EIS	What does this mean?
Runway Impacts at HNL including Navigational aids.	**None** disclosed.	**None** disclosed.	• **Additional NEPA** analysis needed for MALSR relocation into Lagoon and relocation of VORTAC and Taxiway RA (for Reef Runway) •Coastal Zone Management (CZM) issues. •Federally listed threatened or endangered species in Mamala Bay (for MALSR stations) •Noise impacts for Runway 8L	•**FAA estimates 18-24 months** to evaluate environmental impacts.
Ke'ehi Lagoon Park	None disclosed. After DEIS, City Council Action, moved alignment away from Salt Lake to Ke'ehi Lagoon Park	Possible DOT Section 4(f) use of part of the park. FTA must make 4(f) Determination	•FTA DOT Section 4(f) determination required by CCH to be included in the FTA EIS.	•FTA will have to make a **Section 4(f) determination** if Ke'ehi Lagoon Park land used. •FAA does not make Section 4(f) determination for this project.

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Summary of Aolele Street Alignment Impacts

- Aolele Street alignment results in significant additional airport costs and impacts, while other four alignments do not.
- Proposed runway shift contrary to FAA use of declared distances.
- Permanently restricts aeronautical use of 28 acres of airport land planned since 1998.
- Airport construction of 8 months and up to 18 months for flight procedures.
- Airport noise impacts to residential communities due to runway closure and shift in operations.
- Significant adverse effects on airport operations, aircraft delays and safety concerns during construction of Runway 4R/22L.
- Permanent noise impacts due to partial shift of operations if full Runway 4R Instrument Landing System capability not maintained.
- Requires new approach light stations in environmentally sensitive lagoon area.
- Airport environmental impacts not previously disclosed in EIS.

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