iHeart Media Radio Tower Relocation
Site Selection and Development Plan

Public Informational Meeting

Farrington High School Cafeteria

Thursday, January 19, 2017
Open House: 4:00 p.m. to 6:00 p.m.
Presentation: 6:00 p.m. to 8:00 p.m.
Open House: 8:00 p.m. to 9:00 p.m.

Presented For:
Department of Transportation
Harbors Division

Presented By:
R. M. Towill Corporation
AGENDA

1. Introductions
2. Existing Tower and Emergency Alert System
3. Relationship to Harbor and Airport Operations
4. Constraints
5. Candidate Sites
6. Site Selection Process
7. Alternatives Considered
8. Schedule
9. Questions and Answers
Site Selection and Development Plan for the iHeart Communication Tower Relocation

- Ford Fuchigami, Director
- Darrell Young, Deputy Director, Harbors Division
- Ross Higashi, Deputy Director, Airports Division
- Tim Sakahara, Public Information Officer
- Carter Luke, Harbors Engineering Program Manager
- Dean Watase, Harbors Project Manager
PROJECT TEAM

R. M. Towill Corporation
• David Tanoue, Vice President
• Laura Mau, Project Coordinator
• Michelle Wong, Planner

Centerline Solutions
• Matt Miura, Regional Director - Hawaii
• Aaron Toma, Project Manager
• Katie Southwick, Project Coordinator

Broadcast Resources Co.
• Ernie Nearman, Broadcast Engineer

SMS Consultants, LLC
• Faith Rex, President
• Kanaloa Schrader, Assistant Project Coordinator
OVERALL PROJECT PHASING

• Phase 1: Site Selection and Development Plan
• Phase 2: Environmental Compliance
• Phase 3: Design & Licensing
• Phase 4: Construction
Site Selection and Development Plan for the iHeart Communication Tower Relocation

LOCATION OF EXISTING TOWER
EXISTING TOWER VIEWS

View from Kohou St. Facing Mauka/Diamond Head

View from Dillingham Blvd. Facing Diamond Head
EXISTING TOWER VIEWS

View from Dillingham Blvd. Facing Makai
Tower Owner: iHeart Media
Land Owner: Kamehameha Schools
Construction Date: 1985
Existing Height: 450 ft. (440-ft. tower and 10-ft. base)
Antenna Features:
• AM Stations: KSSK 590 (Primary State EAS)
  KHVH 830
  KIKI 990
  KHRA 1460
• FM Station: The BEAT 93.9
AM Tower (i.e. 440’ high tower)

Controlled Area (No Public Access)

Buried Radials (Ground Wires)

On-site Backup Generator

Ground Wires Proportional to Tower Height

Ideal area approximately 10 to 18 acres for 440-ft. radials depending on site conditions

(Not to Scale)
WHY IS THIS PROJECT NEEDED?

• **Ensure Continued Public Safety**
  - Tower includes KSSK AM 590
  - Designated Primary Emergency Alert System (EAS) Station

• **Improve Maritime Operations**
  - Modernization of Honolulu Harbor
  - New, taller cranes needed to support larger Aloha Class Ships (Matson) and Kapalama Container Terminal (Pasha)

• **Support Aviation Operations**
  - Improve operational efficiencies
  - Tower relocation will provide wider departure path
HAWAII EMERGENCY MANAGEMENT AGENCY’S THREE-PRONGED SYSTEM:

• Live Audio Broadcast System (LABS)
• Live Video Broadcast System (LVBS)
• Siren Warning System
Site Selection and Development Plan for the iHeart Communication Tower Relocation
Site Selection and Development Plan for the iHeart Communication Tower Relocation
Photographs courtesy of Matson
CONSTRATINTS

Site Selection and Development Plan for the iHeart Communication Tower Relocation
Site Selection and Development Plan for the iHeart Communication Tower Relocation
All flight paths are conceptual and shown for illustrative purposes only.
CONSTRAINTS – FLIGHT PATHS (Kona Winds)

Site Selection and Development Plan for the iHeart Communication Tower Relocation
Site Selection and Development Plan for the iHeart Communication Tower Relocation

CONSTRAINTS – KALAELOA FLIGHT OVERLAYS

Existing FCC Monitoring Station

Existing iHeart Tower

Approach

Approx. 8.75 mi.

All flight paths are conceptual and shown for illustrative purposes only
Site Selection and Development Plan for the iHeart Communication Tower Relocation

All flight paths are conceptual and shown for illustrative purposes only.
CONSTRAINTS – FLIGHT OVERLAYS (Trade Winds)

All flight paths are conceptual and shown for illustrative purposes only.
CONSTRANTS – FLIGHT OVERLAYS (Kona Winds)

All flight paths are conceptual and shown for illustrative purposes only.
SITE SELECTION PROCESS

1. Site Screening and Evaluation
2. Outreach Program
3. Research, System Requirements and Testing
4. Regulatory and Environmental Determination
5. Site Licensing
6. Development Plan
1. Site Screening and Evaluation

- Prepare Selection Criteria Matrix
- Conduct Candidate Search
- Prepare Candidate Summary
- Identify Candidate Short-List (up to 3 sites)
PREFERRED SITE CHARACTERISTICS

- Adequate Land Area – Min. 10 to 18 Acres (contingent on signal strength)
- Sea Level Proximity
- Flat Topography
- No Nearby Tall Structures (1 kilometer clear distance)
- No Avigational Interference
- Ready Access
- Publicly-Owned Property
- Maintains Existing Signal Coverage
- Power Source Availability
## PRELIMINARY SITE SELECTION MATRIX

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>Criteria #</th>
<th>Decision Criteria</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Maintain Existing Statewide Coverage</td>
<td>Ability to maintain existing coverage with statewide coverage.</td>
</tr>
<tr>
<td></td>
<td>1a</td>
<td>Statewide RF Coverage</td>
<td>Flat terrain &amp; proximity to ocean.</td>
</tr>
<tr>
<td></td>
<td>1b</td>
<td>Geographic Conditions</td>
<td>Flat terrain &amp; proximity to ocean.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Land Area</td>
<td>Approximate area is 10-12 acres, based on existing conditions.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>FCC Clearance</td>
<td>Meets standard interference criteria.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Airspace Encroachment</td>
<td>Located outside of flight path.</td>
</tr>
<tr>
<td></td>
<td>4a</td>
<td>FAA Clearance</td>
<td>Located outside of flight path.</td>
</tr>
<tr>
<td></td>
<td>4b</td>
<td>ACH CEI</td>
<td>Located outside of flight path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Conditions</td>
<td>FESA, Army Corp. of Engineers, State and City and County land designations that impact the construction cost and sociability. Includes the impact to Shoreline Management, Preservation Land, Wetlands, Flood Zones.</td>
</tr>
<tr>
<td></td>
<td>5a</td>
<td>Environmental Permits, i.e. 464/461, SBB, CDBUA</td>
<td>Presence of previously identified sites.</td>
</tr>
<tr>
<td></td>
<td>5b</td>
<td>Archeological/Cultural Resources (Sec. 106)</td>
<td>Presence of previously identified sites.</td>
</tr>
<tr>
<td></td>
<td>5c</td>
<td>Endangered Species/Habitats (Sec. 7)</td>
<td>Presence of SE species and/or critical habitats.</td>
</tr>
<tr>
<td></td>
<td>5d</td>
<td>Public Recreation Resources (Sec. 8)</td>
<td>Presence of LUPDF and other recreational resources.</td>
</tr>
<tr>
<td></td>
<td>5e</td>
<td>Hazardous Materials *</td>
<td>Presence of contaminants. * Phase 1 testing for up to 3 sites.</td>
</tr>
<tr>
<td></td>
<td>5f</td>
<td>Soil Conditions *</td>
<td>Soil testing for up to 3 sites.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Operational Costs</td>
<td>Monthly rent and maintenance costs.</td>
</tr>
<tr>
<td></td>
<td>6b</td>
<td>Land Ownership</td>
<td>Property is readily available.</td>
</tr>
<tr>
<td></td>
<td>6c</td>
<td>State Ownership</td>
<td>Property is readily available.</td>
</tr>
<tr>
<td></td>
<td>6d</td>
<td>Property Availability</td>
<td>Property is readily available.</td>
</tr>
<tr>
<td></td>
<td>7a</td>
<td>Licensing Requirements</td>
<td>Adequate time to use a property that is clear of encumbrances at an acceptable rental rate that is acceptable to the lessee (iHeart).</td>
</tr>
<tr>
<td></td>
<td>7b</td>
<td>Zoning Requirements</td>
<td>Adequate land use permits from the jurisdictional body responsible for the property.</td>
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<tr>
<td></td>
<td></td>
<td>Constructability</td>
<td>Capital cost to build the project as funded by the DOT.</td>
</tr>
<tr>
<td></td>
<td>8a</td>
<td>Construction Cost</td>
<td>Capital cost to build the project as funded by the DOT.</td>
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<tr>
<td></td>
<td>8b</td>
<td>Foundation *</td>
<td>Foundation of structural foundation for 440-tall self-support tower. * Site 1 testing for up to 3 sites.</td>
</tr>
<tr>
<td></td>
<td>8c</td>
<td>Resilience</td>
<td>Additional costs required for construction to address flood zone and natural disasters.</td>
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<tr>
<td></td>
<td></td>
<td>Utility Availability</td>
<td>Contingent on HECO. Feasible access to commercial power utilities for 100/40 single phase electrical service. Key requirements are easement and proximity to utility access point, which could be underground or aerial. Service request to be submitted for final candidate site.</td>
</tr>
<tr>
<td></td>
<td>9a</td>
<td>Power **</td>
<td>Contingent on HECO. Feasible access to commercial power utilities for 100/40 single phase electrical service. Key requirements are easement and proximity to utility access point, which could be underground or aerial. Service request to be submitted for final candidate site.</td>
</tr>
<tr>
<td></td>
<td>9b</td>
<td>Telecom **</td>
<td>Contingent on telecom provider. Feasible access to telecom (fiber/wire/cable) utilities for signal, data, communication connectivity. Key requirements are easement and proximity to utility access point, which could be underground or aerial. ** Service request to be submitted for final candidate site.</td>
</tr>
<tr>
<td></td>
<td>9c</td>
<td>Water **</td>
<td>Contingent on WRP. Feasible access to water utilities for irrigation of the landscaping. Key requirements are easement and proximity to utility access point. ** Service request to be submitted for final candidate site.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preliminary Candidate Sites</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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## PRELIMINARY SITE SELECTION MATRIX

<table>
<thead>
<tr>
<th>A</th>
<th>Maintain Existing Statewide Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1a. Statewide RF Coverage</td>
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<tr>
<td></td>
<td>1b. Geographic Conditions</td>
</tr>
<tr>
<td>2</td>
<td>Land Area</td>
</tr>
<tr>
<td>3</td>
<td>FCC Clearance</td>
</tr>
<tr>
<td>4</td>
<td>Airspace Encroachments</td>
</tr>
<tr>
<td></td>
<td>FAA Clearance</td>
</tr>
<tr>
<td></td>
<td>One Engine Inoperative (OEI) Overlay</td>
</tr>
<tr>
<td>5</td>
<td>Environmental Conditions</td>
</tr>
<tr>
<td></td>
<td>5a. Permits and Approvals</td>
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<tr>
<td></td>
<td>5b. Archaeological/Cultural Resources (Sec. 106)</td>
</tr>
<tr>
<td></td>
<td>5c. Endangered Species/Habitats (Sec. 7)</td>
</tr>
<tr>
<td></td>
<td>5d. Hazardous Materials</td>
</tr>
<tr>
<td></td>
<td>5e. Soils Conditions</td>
</tr>
<tr>
<td>B</td>
<td>6</td>
</tr>
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</tr>
<tr>
<td>6A. Operational Costs</td>
<td></td>
</tr>
<tr>
<td>6b. Land Ownership</td>
<td></td>
</tr>
<tr>
<td>6bi. State Ownership</td>
<td></td>
</tr>
<tr>
<td>6bii. Property Availability</td>
<td></td>
</tr>
</tbody>
</table>
## PRELIMINARY SITE SELECTION MATRIX

| C | 7 | 7a. Licensing Requirements  
7b. Zoning Requirements |
| 8 | Constructability  
8a. Construction Cost  
8b. Foundation  
8c. Resiliency |
| 9 | Utility Availability  
9a. Power  
9b. Telecom  
9c. Water |
Site Selection and Development Plan for the iHeart Communication Tower Relocation

All sites are preliminary and subject to evaluation. Additional sites may be identified as project progresses.
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Site Selection and Development Plan for the iHeart Communication Tower Relocation

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Site Selection and Development Plan for the iHeart Communication Tower Relocation
2. Outreach Program

• Federal
  – Federal Communications Commission
  – Federal Aviation Administration
  – U. S. Fish and Wildlife Service

• State
  – Hawaii Emergency Management Agency
  – Dept. of Land and Natural Resources
  – Key Senators and Representatives
  – University of Hawaii
  – Office of Planning

• City and County of Honolulu
  – Honolulu Authority for Rapid Transportation
  – Dept. of Planning and Permitting
  – Dept. of Parks and Recreation
  – Key Councilmembers
  – Key Neighborhood Boards
2. Outreach Program (continued)

- iHeart Media
- Honolulu Harbor Users Group
- Airlines Committee of Hawaii
- Landowners
- Public Informational Meetings
3. Research, System Requirements and Testing
(Up to 3 Sites)

- Topographic Survey Map
- FAA / FCC 1A Certification Forms
- Electro Magnetic Emission Survey
- Phase 1 Hazardous Materials Survey
- Geotechnical Survey
- Ground Meggar Readings
- Electro Magnetic Interference Study
- Broadcast Equipment Requirements
- Combiner Filter Analysis
- Preliminary Site, Tower and Foundation Plans
- Utilities System Plans (Electrical, Telecom, and Water)
SITE SELECTION PROCESS

4. Regulatory and Environmental Determinations (Up to 3 Sites)
   • Prepare Frequency Clearance Assessment
   • Prepare Aeronautical Clearance Assessment
   • Determine Environmental Documentation

5. Site Licensing (Up to 3 Sites)
   • Prepare Audit Review and Assessment
   • Coordinate Title Report, Access Easement, and License Option Agreement

6. Development Plan
   • Summarize Site Selection Process
   • Identify Next Steps
## ESTIMATED SCHEDULE – PHASE 1

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<td>Q2 Q3</td>
<td>Q4 Q1</td>
<td>Q2 Q3</td>
</tr>
<tr>
<td>1</td>
<td>iHeart Media Tower Site Selection &amp; Development Plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Project Coordination</td>
<td></td>
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<tr>
<td>3</td>
<td>Site Screening and Evaluation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Agency and Stakeholder Outreach</td>
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</tr>
<tr>
<td>5</td>
<td>Research, System Requirements and Testing</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Regulatory and Environmental Determination</td>
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<tr>
<td>7</td>
<td>Site Licensing</td>
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<tr>
<td>8</td>
<td>Development Plan</td>
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</tbody>
</table>
OVERALL PROJECT – PRELIMINARY SCHEDULE

• Phase 1: Feasibility and Site Selection
  Scheduled Completion: Spring 2018

• Phase 2: Environmental Compliance
  Anticipated Completion: 2019 - 2020

• Phase 3: Design & Licensing
  Anticipated Completion: 2020 - 2021

• Phase 4: Construction
  Anticipated Completion: 2021 - 2022
Please submit Input Sheets tonight or Via mail or email by Thurs., Feb. 2, 2017 to:

R. M. Towill Corporation
2024 North King St., Suite 200
Honolulu, HI  96819
Attention:  Laura Mau, Project Manager
Email:  iHeartTowerSiteSelection@rmtowill.com

This presentation is available at DOT’s website:
http://hidot.hawaii.gov/presentations/
MAHALO!
QUESTIONS & ANSWERS