RS&H 85 YEARS

Advanced Air Mobility

Infrastructure & Systems Design and Development

RS&H delivers full-service consulting services for Advanced Air Mobility (AAM), through planning, NEPA or Environmental documentation design, construction, and operations. Our experience supporting greenfield and existing airfield vertiport integrations includes airspace analysis and operational strategy, facility siting and design, energy systems deployment, and development of concepts of operation to integrate new entrant aircraft into existing air and ground operations. This experience enables clients to plan, build, certify, and operate AAM facilities with confidence as aviation regulatory frameworks, infrastructure, and next-generation energy systems continue to aggressively evolve.

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Rendering of a vertiport at Salt Lake City International Airport

Integrated Practice

› Architecture, engineering, environmental, planning, energy, and strategy under one roof – eliminating coordination gaps across the project lifecycle

Regulatory and Safety Expertise

› Deep experiential knowledge of FAA AAM policy, Human-in-the-Loop evaluation frameworks, and Part 139 certification processes as they apply to vertiport operations

› Intimate knowledge of Aviation Safety Management Systems (SMS), Safety Risk Management (SRM), and Operational Risk Management (ORM) applied to aviation and AAM operations

Scalable Delivery

› From single-site pilot programs to multi-node network buildouts, our experience and approach scales with each program's complexity and timeline

Energy Infrastructure

› Our experience sizing and deploying electrical infrastructure for AAM is assisting a nationwide network of fueling locations, and defining cost optimal installation requirements for supporting high ops-tempo facilities

Operator-Aligned

› We engage directly with AAM aircraft manufacturers, fleet operators, and airspace service providers to ensure infrastructure designs meet real operational requirements – not just code minimums

Let's Connect! AAM@rsandh.com



Max Kiesling
National Discipline Leader, Aviation Consulting

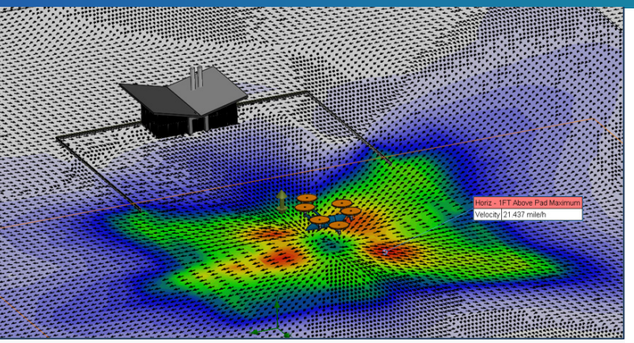


Broutin Sherrill
Client Solutions Leader



Torrie Meliska
Advanced Air Mobility Deputy Program Manager

Creating Tomorrow, Together



Downwash/outwash modeling of an eVTOL at a vertiport

FACILITY SITING AND DESIGN

RS&H provides full-lifecycle site services for vertiports and AAM ground infrastructure – from feasibility, site selection, and environmental planning through construction documents and operation. Our teams integrate FAA federal guidance, local zoning, airspace constraints, and aircraft manufacturer specifications into every phase from planning through construction.

- **Facility planning**
  Development plans that are scalable to support operational maturity and industry evolution
- **Land use, compatibility, and stakeholder coordination** Ensuring successful integration of AAM infrastructure within existing communities, regulatory frameworks, and operational environments.
- **Vertiport feasibility & site selection**
  Urban rooftop, ground-level, intermodal hub, and airport typologies
- **TLOF, FATO, & airside layout**
  Compliant with FAA AC/EB and ICAO vertiport design standards
- **Passenger terminal & infrastructure**
  Terminals, Support Facilities, Roadways, Parking Facilities, Utilities, wayfinding, Maintenance, Repair, and Operations (MRO) integration, and ground support
- **Downwash/outwash & noise modeling**
  Advanced modeling of airflow and acoustic impacts to inform safe operations, infrastructure design, and community compatibility.
- **Construction administration & commissioning support**

STRATEGY & MARKET ANALYSIS

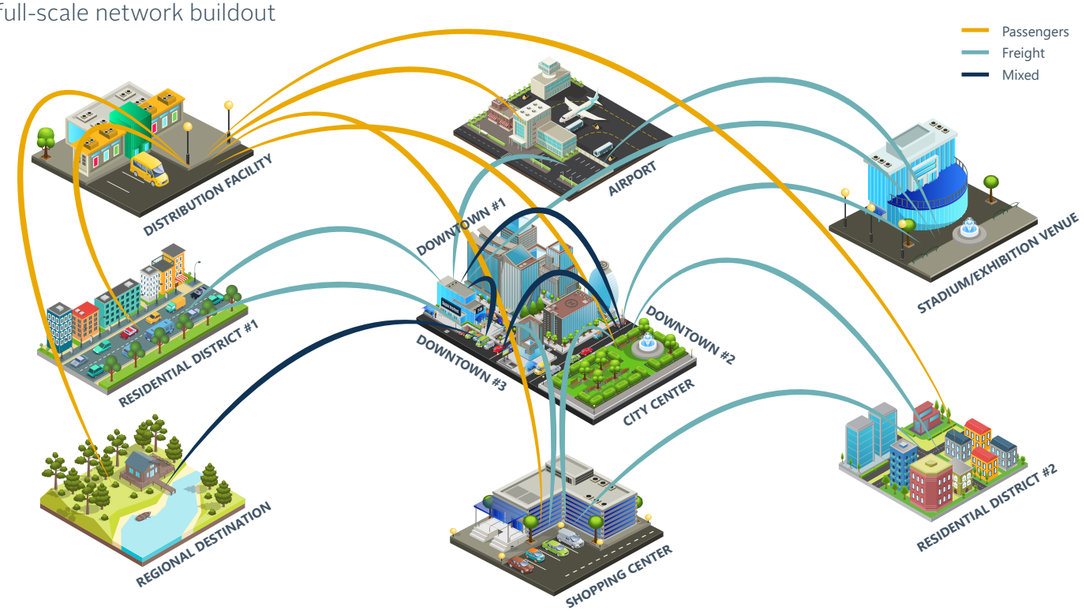
RS&H advises airports, municipalities, departments of transportation, and private operators on positioning within the rapidly evolving AAM landscape. We translate AAM use cases into actionable, implementable strategies that conform to emerging regulatory frameworks, market entrant timelines, and infrastructure investment cycles.

- **AAM Strategy development**
  Implementation road maps and action plans to guide ideas to operational reality
- **AAM market & demand analysis**
  Use case assessment, route modeling, activity forecasting, and operator landscape assessment
- **Capital program integration**
  AAM overlay planning within existing development programs
- **Regulatory roadmap development**
  FAA Part 139, ANCA, and emerging vertiport permitting/certification pathways
- **Funding structuring** – procurement strategy, RFP development, and operator engagement
- **Environmental Compliance and Permitting**
  Compliance with federal and state environmental regulations, permitting, and zoning code compliance
- **Phased implementation planning**
  Near-term pilot programs and adoption through full-scale network buildout

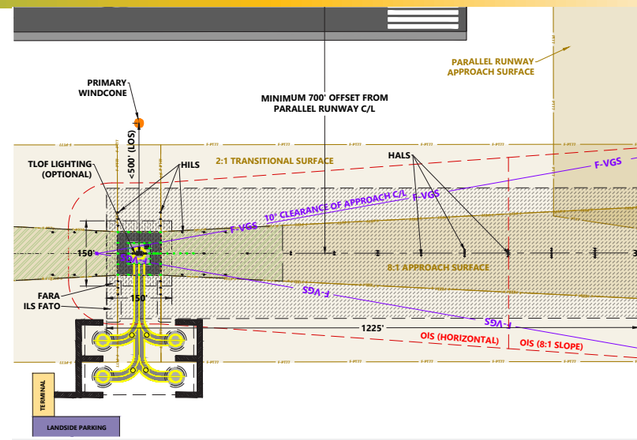
CONCEPTS OF OPERATIONS AND OPERATIONS FRAMEWORKS

RS&H develops rigorous AAM operations documentation and processes that define how AAM systems operate across all mission phases. Our Concept of Operations (ConOps) deliverables support FAA coordination, AAM systems architectures, unique operational requirements, use case definition, operator certification, and stakeholder alignment.

- **ConOps documentation**
  Aligned to evolving AAM standards and paradigms
- **Operations Manuals**
  PPR frameworks, standard operating procedures, safety management system development
- **Roles, responsibilities, & equipment**
  Ground crew, airfield management, fleet operators, ground support equipment
- **Vertiport operational flow modeling**
  Aircraft scheduling, pad utilization, and throughput analysis
- **Air Traffic coordination frameworks**
  Human-in-the-loop integration, flight strip management, airspace planning



Conceptual AAM network spanning urban and regional environments



Navigating compliance with emerging vertiport design criteria

ENERGY SYSTEMS DEPLOYMENT

Electric AAM operations can result in significant electrical loads. RS&H's energy practice sizes, designs, and integrates energy systems that deliver scalable, reliable, charging in an evolving energy environment. Solutions work to integrate with available infrastructure including interconnection requirements and energy resilience goals.

- **Infrastructure design**
  Solutions supporting long-term growth potential while minimizing financial risk and investment in early adoption stages
- **Load analysis & demand modeling**
  Right-sizing infrastructure to respond to dynamically changing loads and operations
- **Grid interconnection/utility coordination**
  Developing/negotiating realistic load requests, transformer sizing, and related energy support equipment. Goals involve optimizing capital and operating costs for predicted loads
- **Distributed Energy Resources**
  Sizing and integrating a range of energy generation and storage solutions to increase revenue, facility resilience, and grid stability
- **Charging infrastructure layout**
  Depot and operational charging, OEM coordination
- **Sustainability & resilience planning**
  LEED, net-zero pathways, backup power, and disaster response planning