US Coast Guard Initiatives & Practices

Presentation by:
AKS Architecture
Introduction

• Mark Adolphsen, Principal at AKS P.S., Inc. Architecture, Seattle
• Licensed Architect
• 39 years of continuous Architectural practice
• Focused on Federal Agency clients that include:
  • US Coast Guard, Navy, COE, NOAA, EPA, GSA, DHS, and USFS
• Passion for Facility Planning that leads to “Actionable Projects”
• Full Cycle of a facilities life – Maintenance, Planning, Design & Construction
• Delivery in Design/Bid/Build and Design/Build Structures
AKS Background

- Firm Founded by Ralph Anderson 1954
- Have served DOD/Federal Agencies for 27 years & forward
- Complete Life Cycle experience with USCG facilities
- Planning, Design, Construction, & Maintenance
- Delivery as Prime, Subconsultant, Design-Bid-Build, & Design-Build
- Have visited facilities throughout the USCG’s inventory
- Part of the Deepwater Facilities Impact team of 2002
Initiatives vs Actually Happening

- Safety first
- Energy conservation
- Sustainable facilities
- Lowered maintenance costs
- Flexibility of infrastructure
- Ability to adapt to change in Mission
- Improved support of AOR/Mission
- Preserve Historic site for the future
Initiatives vs Actually Happening

• Safety first
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Recent USCG Projects

USCG Base Kodiak History & Background
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Recent USCG Projects

Navy Air Station: 1939-1943
  • Supporting Aleutian Island Campaign
Turned over to USCG in 1972
Aircraft: HH-60 Jayhawk, HH-65 Dolphin, HC-130 Hercules
Surface: 378' WHEC, 282' WMEC, 225' WLB
AOR of 4,000,000 square miles
Largest Pacific Area USCG Base
265 Officers / 3,117 Enlisted
Small Arms Firing Range
Base Kodiak, AK

- Increased training demand following 911/DHS
- Existing 1940’s facility
- Closed in 2005 for safety reason
- Began training in portable trailer ranges
Challenges

• Training through-put demand of 8 lanes
• Need for Prep/Training spaces
• HQ adopted Air Force ETL-11-18 facility requirements
• Environmental issues/lead contamination
• Kodiak environment
• Maintenance funding limited to $900,000
Solution

- Master Plan for 8 lanes, Design for 4
- Reuse existing shelter and berm backstop
- Shoot “open air” with containment baffles
- Re-grade site for proper drainage and containment
- Plan for future addition of 4 lanes and roof
Keys to Success

- **USCG teamwork** with Range Master participation in planning and design

- **USCG movement towards new approaches** with reduced hazard ammunition, virtual training, etc.

- Modified Training Courses to match facility capability
UGH Housing
Base Kodiak, AK

- Need for 20 additional housing units to support the growing staff/Artic Operations
- 10 duplex buildings with associated site grading and improvements
- Design-Build RFP – November 2013, awarded to Perini Team April 2014
• Address environmental site contamination concerns
• LEED for Homes Certification
• Kodiak weather challenges/ageing of materials
• Limited construction window
• Worked closely with Alaska Department of Environmental Conservation (ADEC)
  • Site screening of excavated materials
  • Grading plan designed to minimize disruption
  • Building pad locations to minimize impact
• Fast Track Design – early foundation package
• Key LEED for Homes Features
  • Robust Exterior Insulation System
  • LED Lighting & Controls
  • Insulated Forms
  • Structural Floor Panels
Keys to Success

- On-site 15% Design Review Meeting
- Established USCG expectations for Building Standards
- Communication
- Fast Track Design Approvals
- Lessons Learned – Use of Kodiak Tested Materials
- Consolidation of multiple BOSS facilities into one central and efficient center
- Conservation of World War II era historic structures
- Adaptive reuse of Hangar structure to Maintenance Facility
• Updating & converting a historic 1940's hangar
• Identifying abandoned infrastructures
• Existing slab and bearing conditions
• Deteriorating historic structures
Solution

- Phased development & funding
- Renovation of Hangar 2, Building 20, into new BOSS Center
- Encapsulation of hazardous materials contained in exterior
- Improved building infrastructure
Keys to Success

- Project development from inception at PDS stage through complete design & construction
- 65% “in-field” design review
- Communication during Construction & found conditions
FOL New Hangar
Cold Bay, AK

• New MH60T Forward Operating Position Hangar

• RFP – Design-Build

Cold Bay
Challenges

- Remote Location
- Limited construction window & access to materials
- Sustainable infrastructure
- “Ultra” low maintenance
Solution

- Used the USGBC LEED system for tracking energy improvements
- Utilization of pre-engineered structure
- Everything by barge
- Used “lessons learned” from previous Cold Bay Hangar Renovation
Keys to Success

- 35% Customer Review Meeting
- Established USCG expectations
- Response to demanding weather conditions during construction
- Total Team work/involvement
Summary

• The Challenge
  • Aging infrastructure that is outpacing funding for repairs & improvements
  • Limited Funding
  • Expanding missions & AOR

• Keys to Moving Forward
  • Collaboration
  • Team Work
  • Inventiveness