

FAA Academy

Academy Training Systems

Presented to: 11th Annual Verification and Validation Summit

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**Federal Aviation
Administration**

Mission

The National Airspace Systems (NAS) Technical Services Division provides technical support and maintenance services for the Federal Aviation Administration Academy's Technical Operations and Air Traffic training environments.

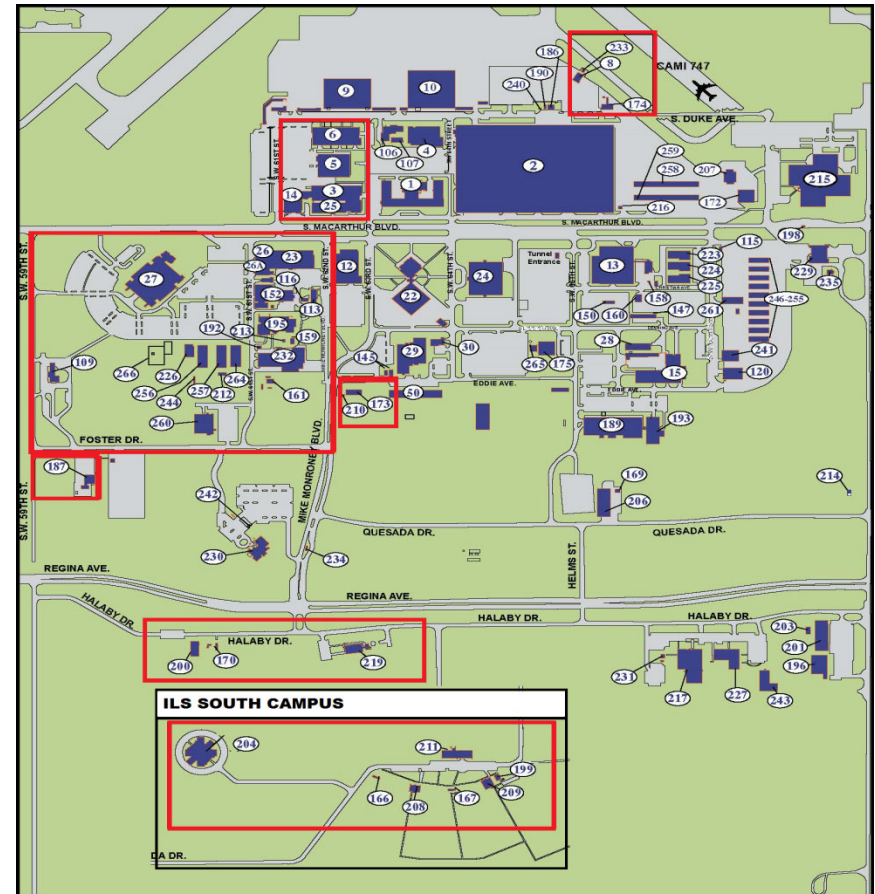


Facility Capabilities

- Area of Support on MMAC
 - 445,398 Square Feet of Academy Space
 - 49 Buildings
 - 265 Classrooms

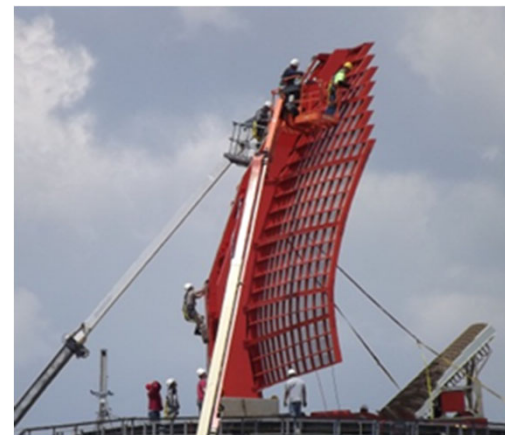
- Air Traffic Simulators/Classrooms
 - 30 EnRoute Sectors
 - 24 Terminal Sectors
 - 15 TSS LABS

- Tech Ops NAS Systems (NextGen and Legacy)
 - 150 Systems
 - 470 Equipment Profiles



Part Verification, Validation and Training

Example: Restoration of Eagle Peak ARSR-4



Partnered Organizations

- Academy
- Logistics Center
- Second-Level Engineering

Academy Evaluation System (AES)

Can identify:

- **Challenges with system documentation**
- **Procedural deficiencies**
- **Safety concerns**
- **Perception of new systems**



Validation and Verification of Training Effectiveness

National Airspace System Technical Evaluation Program (NASTEP)

| Primary Category | Num of Issues | Num of Param |
|---|---------------|--------------|
| 1a. Certification Parameters Out of Tolerance | 4 | 7 |
| 1b. Key Parameters Out of Tolerance | 16 | 28 |
| 1c. Other Parameters Out of Tolerance | 5 | |
| 1e. Other Parameters Checked - Deterioration/Trends | 2 | |
| 3a. References / Commissioning Data (Unique) | 10 | |
| 3b. TPR or Flt Insp - Out of Tolerance Cond / Incorrect Tolerance | 12 | |
| 3c. TPR General Completion Errors | 17 | |
| 4a. Certifications Missed or Invalid | 2 | |
| 4b. Certification Improper Statements / Process | 2 | |
| 4c. Outage Reporting Accuracy and Coordination | 2 | |
| 4e. Accuracy / Validity of Maintenance Logging | 5 | |
| 4f. Scheduling / Completing Periodic Maintenance | 16 | |
| 4g. General Logging Errors / Administrative | 1 | |
| 5a. Facility Directives / Changes / Notices | 2 | |
| 5b. Accuracy / Validity of Maintenance Procedures | 2 | |
| 5d. FRD Documentation Availability and Organization | 1 | |
| 5e. Handbook Suggestions - Tolerances / Procedures | 1 | |
| 6a. Modification Completion/ Documentation | 14 | |
| 7a. Supervisory Review - Logs TPRs FRD etc. | 2 | |
| 7d. FSEP (Facility Service Equipment Profile) | 12 | |
| 8d. Equipment Condition (physical) | 20 | |
| 8e. Installation / Design Deficiencies / Energy Conservation | 2 | |
| 8f. Primary and Standby Power Quality / Adequacy / Cabling | 2 | |
| 8j. Housekeeping / Labeling / Organization etc. | 5 | |
| 9e. Fuel Leaks and Monitors / Hazardous Fumes / Ventilation | 1 | |
| 11b. Refresher Training / Seminars / NAS Knowledge | 4 | |
| 11c. Test Equipment Calibration and Adequacy | 2 | |

NAS Change Proposal (NCP)



Workload

- Equipment Installation, Relocation, and Decommissioning

| | |
|----------------|------------|
| CARSR | NADIN |
| SIGNAL ERAM | DSR |
| ESS Renovation | ARTS/STARS |
| ACEPS Type II | ERAM |
| SWS | HOST |
| MEARTS | WAAS |



- Support to Second level Engineering and Logistics Center

- Lab Instruction Support and Video Lab Procedures for Training

- Power Module Replacement Instruction Video
- Lab Instruction

- Academy Safety Program

- Academy Environmental Program

- Classroom Audio Visual Support



On the Horizon



- **Terminal Automation Modernization and Replacement (TAMR)**
 - ARTS IIE and IIIE transitioning to STARS
- **Airport Surface Surveillance Capability (ASSC) - September 2016**
 - Replace/Supplement ASDE-3
- **NAS Voice Switch (NVS) – 2019-2020**
 - To replace VSCS
- **Data Communications (Data Comm)**
- **System Wide Information Management (SWIM)**

Questions

