

Aerospace/ Defense

Services

- Facility Design Support
- Facility Upgrades and Modification
- Facility Support
- Fuel Storage/Terminals
- Water Supply and Distribution
- Grading and Drainage/Flood Control
- Wastewater Collection Systems
- Industrial Structures
- Site Stabilization Structures
- Structural Retrofit and Rehabilitation
- Site Lighting
- Launch Site Design and Rehabilitation
- Process Piping
- Building Renovation
- Civil, Structural, Mechanical, and Electrical Engineering
- Automation and Controls
- Surveying and Mapping
- Arc Flash Studies
- Construction Management
- Geographic Information Systems

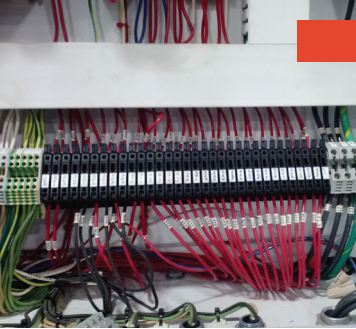
Projects



Launch Site Construction Drawings

Cape Canaveral, Florida

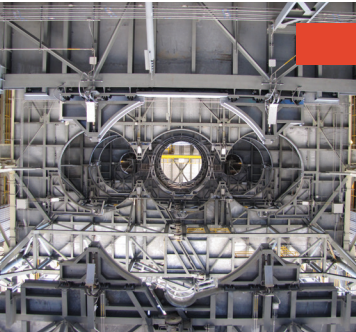
A private commercial space company designs, manufactures, and launches advanced rockets and spacecraft. Cannon has worked with this company to provide ongoing civil and structural consulting services at their Vandenberg and Cape Canaveral launch site facilities. Recently, Cannon was retained by the company to develop construction drawings for a flame deflector, crown, hydraulic foundation, and flame cover at their Cape Canaveral launch site.



PLC/HMI Programming

Santa Maria, California

Zodiac Aerospace requested Cannon's services to provide PLC and HMI software programming and commissioning for a new thermal press. The added thermal press allowed Zodiac to significantly increase production of aircraft seat shells using a variety of molds. This press required a major modification to convert from steam-heating to electric-heating, which required Cannon to upgrade the older PLC and HMI components in the existing panel. Cannon supported the hydraulic, mechanical, and electrical and automation aspects of the press commissioning, performed O&M training, and developed follow-up "recipes" for the SCADA software application.



3D Laser Scanning for United Launch Alliance

Vandenberg, California

ULA needed a highly accurate as-built model of a Mobile Service Tower (MST) structure to create a 3D model of the existing rocket launch pad and service platforms. The model would be used to confirm sufficient clearance ("rattle space") between the Delta IV booster rocket tanks (configured for heavy payload) and the newly constructed multiple service platforms, and to confirm that no prelaunch obstructions existed. Cannon provided 3D scanning and modeling services to the ULA Team which were instrumental in providing pre-launch safety certifications for the MST Tower. These technologies also provided significant cost and time savings over conventional approaches to retrofitting the MST service platforms.



ULA SLC-6 MST Stairs

Lompoc, California

The stair towers in the movable tower at SLC-6 were constructed with rigid spray-on insulation. Due to vibrations from multiple launches, a large percentage of the insulation lost adhesion with the metal siding around the stair tower. During one particular launch, approximately one third of the insulation fell from the stair tower to the ground, while another third came loose. Cannon was retained to evaluate the condition of the remaining insulation and to develop concepts for how to proceed. Options explored included new insulation at the areas where the insulation had fallen away, which would be securely attached to the tower walls; securing existing insulation that had not yet come loose from the tower with mechanical anchors, which would prevent the insulation from coming loose in the future; and whether the loose insulation should or should not be removed or secured.