



VENTURE

Engineering & Construction

*Statement of Qualifications
Commercial & Institutional*

STATEMENT OF QUALIFICATIONS

INTRODUCTION

Venture Engineering & Construction, Inc. (Venture) is a closely held, multi-disciplined engineering, design, and construction management company. Based in Pittsburgh and Las Vegas, Venture provides services to clients throughout North America and abroad ranging from front-end engineering to detailed design, project and construction management. Venture also offers custom process equipment design and fabrication.

Venture provides high-value consultancy, engineering, design, project management and construction management services to multiple industries including: commercial, institutional, chemical, energy, power, oil & gas, consumer goods, and general manufacturing markets.

Venture is not your traditional engineering company. We offer:

- Full suite of best-in-class software programs
 - ◇ ChemCAD for Process Modeling capabilities
 - ◇ Cesar II for thermal stress analysis
 - ◇ E-TAP for calculating power system loads
 - ◇ Deltek and MS Project for Project Management
 - ◇ Smart CAD systems such as the full 2016 AutoCAD Software Suite: Electrical, Civil 3D, Plant 3D, Smart P&ID and 3D AutoCAD Inventor

These programs enable Venture to expedite and collaborate on projects both locally, and worldwide.

- Multi-disciplinary team to handle all aspects of your project
 - ◇ Process / Chemical
 - ◇ Mechanical / Piping
 - ◇ Civil / Structural
 - ◇ Electrical
 - ◇ Automation
 - ◇ Instrumentation & Controls
 - ◇ Project Management
 - ◇ Construction Management

Our multi-disciplinary staff allows Venture to be a “one-stop-shop,” saving your organization time and money.

- Flexibility & Agility
 - ◇ We can respond quickly to your company’s needs
 - ◇ Knowledge of a large firm, with the commitment to superior customer service of a smaller firm
 - ◇ Ability to adapt to each project’s needs – we are not rigid with respect to project structuring, performance incentives, pricing, and collaborations



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SERVICES & CAPABILITIES

INSTITUTIONAL & COMMERCIAL

Specific to the Institutional & Commercial industries, Venture has worked on a variety of projects across the country. Some of our clients include: The University of Pittsburgh (Pitt), Community College of Allegheny College (CCAC), Grove City College, Pittsburgh Allegheny County Thermal (P.A.C.T.), PNC Park, Duquesne University, Medrad, City of Las Vegas, McCarran Airport, The Luxor Hotel & Casino, Caesar's Palace, Atrium Hotel & Suites, and more.

Venture's typical project focus in the commercial and institutional markets is aided by our extensive industrial engineering experience. We are proficient with LEED Design, HVAC systems design, District Energy Distribution, Steam systems, Mechanical-Electrical-Plumbing (M.E.P) Engineering, Piping System layout and design, Mechanical Equipment, Civil & Structural engineering/design, Pipe Stress Analysis, and much more.

Venture Engineering offers a wide array of engineering services for the commercial and institutional industry.

DESIGN AND CONSTRUCTION

- Detailed Design
- Cost Control
- Project Management
- Construction Management
- Installation Engineering (Full Service)
- Engineering Specifications/Standards
- Procurement/Expedition
- 2D & 3D Design Capabilities

SCOPE AND ESTIMATE SERVICES

- Front End Engineering
- Cost Estimation
- Process Evaluation/Technology Selection
- Equipment Selection, Design, and Procurement
- Pipe Stress Analysis

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SUMMARY OF PROJECTS

Carnegie Museums Structural Engineering

Venture Engineering & Construction was contracted to provide structural engineering services and design calculations for a storage room foundation. Carnegie Museums, located in Pittsburgh, Pennsylvania had a large storage room for artifacts and items that were not actively on-display. These items were typically rotated out by season or for specific promotions. Many of these items and artifacts were large, heavy, and very valuable. In turn, they were securely stored in a newly built, large storage room. Venture provided structural engineering calculations and the design for a foundation capable of supporting the storage in this room.

CCAC District Energy System

Venture Engineering & Construction was hired to demolish a chiller system that was no longer needed, and install a Heat Exchanger to connect to CCAC's district chilled water system. In addition, Venture was hired to install steam meters in mechanical rooms of several buildings around campus.

Horizon Properties Geotechnical Evaluation

Venture Engineering & Construction was hired by Horizon Properties to perform a detailed geotechnical evaluation at a potential property site in Harmarville, PA.

Atrium Hotel & Suites Hotel Renovations Project

Venture Engineering & Construction was contracted to provide construction design documents for competitive bidding for the renovations of the Atrium Suites Hotel located on Paradise Road in Las Vegas, Nevada. The project's intent was to upgrade the hotel to a 4 Star Rating. In doing so, the entire Heating, Ventilating, and Air Conditioning Systems were upgraded and the entire hotel was virtually gutted and rebuilt.



Luxor CatHouse Nightclub M.E.P. Project

Venture Engineering & Construction was contracted to provide a complete mechanical, electrical, and plumbing design for the Luxor Casino and Hotel casino level mezzanine CatHouse Nightclub. Inclusive to the new nightclub was a new kitchen design as a restaurant was part of the design requirements.

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Caesars Palace 29th Floor HVAC Renovations

Venture Engineering & Construction was contracted to provide construction documents and construction administration for the installation of new heating and cooling equipment for the Caesars Palace 29th Floor Palace Tower. As these suites on the 29th Floor were experiencing issues with the inability to provide cooling during the hotter summer months, Caesars Palace requested an analysis and a design to meet the site specific requirements to assure the suites could be cooled to temperatures much colder than the requirements of ASHRAE. New Variable Air Volume type systems were provided with low temperature supply air to increase the cooling capabilities without increasing noise criteria of the ducted supply air. Also the VAV system was designed with individual reheat coils to provide selective temperature control for each individual rooms of each suite. The air handling units were based on a fan wall design to allow for delivery through existing elevators, door openings, stairways, and the narrow passages to the roof penthouse areas of the building. New temperature control systems with Direct Digital Controls were designed to top off the high level of design parameters to provide maximum comfort levels.



The total magnitude of design and construction costs were in excess of \$1 million dollars. Design services included coordination with the Owner's selected architect for the design and the Owner's selected Contractor for the installation. Construction Administration and Document Control in MaxView format was provided for Close-Out of the project. All design and submission documents met the current IBC codes from the local jurisdiction.

Clark County Real Property Management Regional Justice Center

Venture Engineering & Construction's Las Vegas Office was contracted by Clark County to analyze and design the replacement of the Regional Justice Center Building underground energy distribution network including; chilled water, heating hot water, and tempering water piping with insulation jackets. The entire project was designed and installation closely monitored while the facility building remained occupied. The 750,000 square foot complex required that all work be performed in a design/build methodology working with the Owner's selected Mechanical Contractor to maintain all services. Project construction costs totaled well over \$6 million dollars.

The Design/Build Engineering Services included site investigation, analysis of the failed underground piping system components, temporary piping and valve isolation

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arrangements, complex scheduling, third party architectural, architectural landscaping, and inspection coordination, pipe stress and seismic analysis, piping head calculation increases due to new routing and configuration, coordination of hydro-excavations and associated backfilling, construction administration, and document control.

Quality Mechanical/McCarran International Airport T-3 Central Plant and Tunnel Project

Venture Engineering & Construction was contracted to provide mechanical systems pipe stress and seismic analysis using an approved software called Coade Caesar II for the distribution network of the new Terminal 3 Central Plant and Tunnel at the McCarran International Airport. The project was comprised of providing a complete construction package with deferred submittals to the local Clark County Building Department jurisdiction. The project was done in a design/build format working closely with the Mechanical Contractor. Deliverables included a complete 3D piping system design of the mechanical and plumbing piping distribution with all associated calculations identifying all forces and loads of the operating and seismic piping anchors and supports imposed onto the building structure, as these forces and loads were not indicated on the Owner's design documents. Complete spool drawings were included with the deliverables to allow for the contractor to pre-manufacture piping system components in a controlled shop environment to reduce costs. The Design Basis included: ASME B31.1 and ASME B31.9 for 150 PSIG operating system for mechanical piping system of sizes from 6 inch to 42 inch NPS black carbon steel for medium pressure natural gas, heating hot water, condenser water, and chilled water system distribution.

Pahor Mechanical/McCarran International Airport T-3 Site Civil Project

Venture Engineering & Construction was contracted to provide mechanical and plumbing systems pipe stress and seismic analysis using an approved software called Coade Caesar II for the tunnel and below grade distribution network of the new Terminal 3 Site at the McCarran International Airport. The project was comprised of providing a complete construction package with deferred submittals to the local Clark County Building Department jurisdiction. The project was done in a design/build format working closely with the Mechanical Contractor. Deliverables included a complete 3D piping system design of the mechanical and plumbing piping distribution with all associated calculations identifying all forces and loads of the operating and seismic piping anchors and supports imposed onto the building structure, as these forces and loads were not indicated on the Owner's design documents. Complete spool drawings were included with the deliverables to allow for the contractor to pre-manufacture piping system components in a controlled shop environment to reduce costs. The Design Basis consisted of: ASME B31.1 and ASME B31.9 for 150 PSIG operating system for mechanical piping system of sizes from 6 inch to 30 inch NPS black carbon steel for medium pressure natural gas, heating hot water and chilled water system distribution.

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McCarran International Airport Power Reliability Study

Venture Engineering & Construction was contracted by the Clark County Department of Aviation in Nevada to provide a Utility Power Reliability and Demand Conceptual Study for the McCarran International Airport complex. The purpose of the study was to address the major factors and present design concept alternatives to determine if independent generation would be a solution to the electric power needs. This study provided the airport with information to determine the most cost effective manner to construct an infrastructure that would be most beneficial to the future of the airport facility. It also provided the necessary information for the airport authority to define a clear objective and requirement from the power provider in southern Nevada for the new Terminal 3 Building.

Venture's study provided; description of the southern Nevada Power Systems, assessment of the airport power and electrical designs, evaluation of the present power reliability and capacity, improvement options to meet future airport needs, descriptions of Combined Heat and Power Generation systems, utilization of waste heat from CHP for chilled water and hot water generation, development and evaluation of various conceptual plant configurations with associated construction costs, and a list of recommended actions.



J.D. Edwards Corporate Headquarters Building Electrical Engineering & Design

Venture Engineering & Construction was contracted to provide electrical engineering and design services for the J.D. Edwards Corporate Headquarters building in Denver, Colorado. The J.D. Edwards Corporate Headquarters building is a 216,000 square foot, data office building, consisting of six floors, a full basement, a penthouse, and a two level parking garage with 179 parking spaces. The electrical design and construction consisted of two 3,000 amp services and distribution, outlets, devices, lighting, telephone/data cable tray system, fire alarm and detection systems. Standby power system consisted of a 100 kW emergency generator with automatic transfer switches, a UPS power system for the telephone/data systems, and specialty cold cathode and compact fluorescent lighting in the main entrance rotunda.

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