



Project Management,
Mechanical Engineering
and Construction Services

DMCSI
Dylan Mechanical Construction Services, Inc

Scope of Project Services During Design

- ▶ **Mechanical Design and Design Assist Services**
 - ▶ Add Value during the Design Process by Engineering and Constructability Reviews
 - ▶ Add Localization input to the design for local building practices and tropical engineering
 - ▶ Provide Permit Drawings as Designer of Record DOR
 - ▶ Assist with Inter-Disciplinary Coordination
 - ▶ Assist with Schedule and Budget Reviews
 - ▶ Assist with Defining and Documenting Project Program Requirements and OPRs (Owners Project Requirements) and BOD (Basis of Design)
 - ▶ Assist with Long Lead Equipment and Materials Procurement and Expediting
 - ▶ Technical Review and Response to Submittals and RFIs
 - ▶ Assist with Project Cost and Budget Planning
 - ▶ Assist with Project Coordination and Scheduling
 - ▶ Commissioning Agent Design Reviews. Assist with O&Ms and System Manuals for Operations. Develop Commissioning Contract Requirements.
 - ▶ Preventative Maintenance Planning
 - ▶ Assist with Plan Reviews to Resolve Design and Constructability Issues, Functionality, Controls and Operations, Energy Efficiency and Maintainability
 - ▶ Review Design for Energy Efficiency. Energy Auditing and Building Modeling

DMCSI SERVICES

Roles and Responsibilities Performed on Past Projects

- ▶ Project Management/Engineering
- ▶ Mechanical Design Engineering and Permit Drawings
- ▶ Construction Management
- ▶ Comprehensive Design Management
- ▶ Coordination over all disciplines and phases of design
- ▶ Commissioning Manager/Agent and Commissioning Services
- ▶ Design for Energy Efficiency. Energy Auditing and Building Modeling to minimize Energy Costs While Maximizing Comfort

Major Project Success:

Examples and the Elements Leading to the Successful Project

▶ Cavite, Philippines

- ▶ Project: 300,000 sq ft Manuf Bldg and 80,000 sq ft office bldg, with Central Plant Utilities, Campus Development, etc.
 - ▶ Leader for Cost Reduction Task Force: Met the objective of reducing the cost from \$145M to \$110M in 3 months with total of 3 engineers
 - ▶ HOW
 - Programming and defining **Owner's Project Requirements**
 - Value Engineering and Redesign of Civil, Arch, Mech and Elect Systems
 - Structural and Foundations were 90% Complete

Project: Manuf Facility

- ▶ Penang, Malaysia 150,000 Sq Ft Manu with Office Bldg, Central Plant, and Parking Structure
 - ▶ Project Manager Responsible for Delivering Project on Budget, on Schedule and Meeting Manuf and Sustaining Operational Requirements
 - ▶ \$45M Budget. Completed for \$35M
 - ▶ Elements that Added to Success:
 - Worked Closely with AE to Meet Schedule, Cost and Quality Goals
 - Competitive Procurement. Avoided Single and Sole Sourcing. Expediting and tracking materials and equipment.
 - In Team Quantity Surveyors to Estimate and Negotiate Change Orders
 - Teaming and Relationships with Key Contractors – Coordination and Sequencing
 - Currency Fluctuations

Project: Office Bldg and Data Center

- ▶ Chandler, AZ 320,000 sq ft 4 story office building with 11,000 sq ft Data Center to support \$700M Manuf Bldg Fab
 - ▶ 10 Month Schedule for Completion of Data Center. 12 Month Overall.
 - ▶ Project Manager Responsible for Delivering Project on Budget, on Schedule and Meeting Customer Operational Requirements
 - ▶ \$58M Budget and Completed for \$56M
 - ▶ Elements that Added to Success:
 - Competitive Procurement. Avoided Single and Sole Sourcing
 - Long Lead Equipment Expediting
 - Copied Steel and 80% of the Design from a Previous Structure
 - Micro Schedules and Micro Management of Schedule, Staffing Levels, and Coordination of Subs
 - Team Building, Safety Orientation, Communication at the Craft Level

Project Manager Central Utility Building and Waste Treatment System Upgrades Fab 32 Expansion Chandler AZ

- ▶ \$150M Portion of a \$900M Project
- ▶ Controlled Scope, Schedule and Budget
- ▶ Heavy Emphasis on Safety and No Impact to Production and ongoing Operations

Success Techniques

- ▶ Results Orientation
- ▶ Safety Values and Quality Production and Performance
- ▶ Value Engineering and Designing to Requirements
- ▶ Change Control and Budgeting
- ▶ Competitive Procurement, Expediting Long Lead and Short Lead Materials and Equipment, Avoiding Extra Procurement and Shipping Costs
- ▶ Coordination and Schedule Integration
- ▶ Document Control
- ▶ Visualizing the Project and the Schedule
- ▶ People and Relationships. Building and Being a Part of Successful Teams