



About Us

The Firm

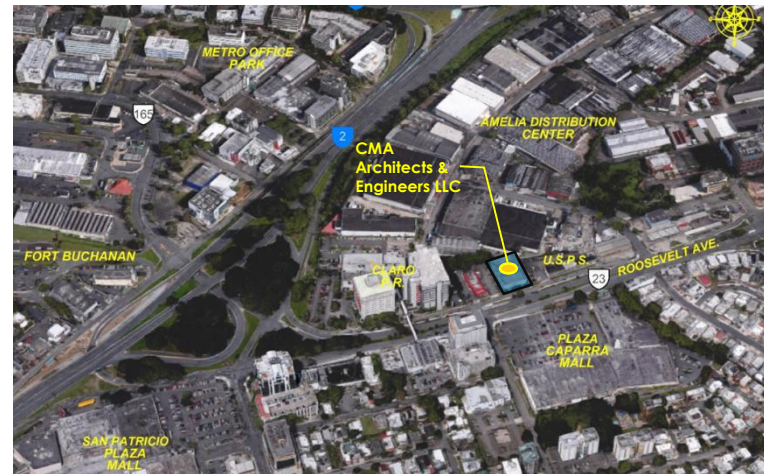
CMA Architects & Engineers LLC, founded in Puerto Rico in 1959, is a full service multi-disciplinary firm. Today, CMA continues to be one of the largest firms on the Island operating from its 30,000 sq.ft. office building in Guaynabo, Puerto Rico and growing into the US market with an office in Miami.

Experience

With **over 58 years** of continuous consulting practice in the fields of architecture and engineering, CMA offers comprehensive assistance from Planning and Design Development, Start-up, Field Observation and Construction Management. The firm is Minority Business Enterprise, and is proud member of the U.S. Green Building Council.

Staff

CMA staff encompasses **over 90 professionals** in the fields of architecture, planning, civil, transportation, water resources, environmental and electrical engineering, as well as cost estimate and construction management.



JORDI BOFILL, P.E.

Managing Partner
 Professional Societies: CIAPR, AAEE, AIDIS,
 ASCE, AWWA, WEF,
 Diplomate American Academy of Environmental
 Engineers,
 Past President, Puerto Rico Chapter of WPCF and AWWA.
 Past Member, WPCF Board of Control (1985-1988)

JOSE A. CARRO, P.E.

Partner
 Transportation Engineering
 Professional Societies: CIAPR, ASCE, ITE, T&DI, TRB, SAME,
 ACI, PCI
 Past President ASCE Puerto Rico Chapter

JORGE TIRADO, P.E.

Partner
 Civil Engineering
 Professional Societies: CIAPR, ASCE

ARIEL R. VERA BEVERAGGI, AIA, NCARB, CDT, LEED AP

Partner
 Architecture
 Professional Societies: AIA, CAAPPR, NCARB, CSI, USGBC

RICARDO A. HERRERA, P.E.

Partner
 Structural Engineering and CADD Services
 Professional Societies: CIAPR, ACI, ASCE

ALVIN M. RODRIGUEZ, P.E.

Partner
 Structural Engineering
 Professional Societies: CIAPR, ASCE, ACI,
 Earthquake Engineering Research Institute, Seismological
 Society Of America

GERALDO E. JUSINO-ARROYO, P.E., CDT, LEED AP

Partner
 Project & Construction Management
 Professional Societies: CIAPR, CSI, USGBC, ASTM, ACI,
 AWS, DHI, FBPE, ICRI, NRCA

SUZ ANN ARROYO, P.E., LEED AP, HFDP

Partner
 Mechanical Engineering
 Professional Societies: CIAPR, ASHRAE

LUIS MERLE, P.E.

Partner
 Mechanical Engineering
 Professional Societies: CIAPR, ASHRAE, ISPE, NFPA, ICC

ABRAHAM SANCHEZ, P.E.

Partner
 Electrical Engineering
 Professional Societies: CIAPR, IEEE, SIE

FRANCISCO VALENTÍN, P.E.

Partner
 Electrical Engineering
 Professional Societies: CIAPR

JOSE TORRES, P.E.

Partner
 Sciences and Environmental Engineering
 Professional Societies: CIAPR, AIDIS

PEDRO JANER, P.E., REM, LEED-GA

Partner
 Sciences & Environmental Engineering
 Professional Societies: CIAPR, AIDIS, INCE, IECA, SWANA,
 NREP, USGBC, WEF

RAFAEL E. BULERIN-ROSARIO, P.E., MEM, CDT, PMP

Associate
 Project & Construction Management
 Professional Societies: CIAPR, PMI, ASTM, ASCE, ACI

CARLOS A. MEDINA ALAMEDA, P.E.

Associate
 Civil Engineering
 Professional Societies: CIAPR

Leadership

JUAN BOLIVAR FUENTES, PH.D., P.E.

Associate
 Structural Engineering
 Professional Societies: CIAPR

JOSE O. COLON VELEZ, P.E.

Associate
 Transportation Engineering
 Professional Societies: CIAPR, ASCE

Administration

JORGE W. TROCHE, MBA, PHR

Administration & Human Resources Director
 Certified Professional in Human Resources
 SHRM - National & PR Chapter

JOSECIR CABALLERO

Accounting Director

JUAN L. CABRERA

IT Director

Why CMA?

Advantages

- Full service A/E firm
- 58 year proven track record
- Local expertise in similar projects
- Office in close proximity to project site
- Knowledge of existing site conditions
- Understanding of Owner's expectations
- Expeditious implementation of Owner's decision
- Full Expertise in Managing Construction Projects *(from Bid to Construction to Occupancy)*



...In-house capabilities that translate into cost effective solutions!

We Can Manage

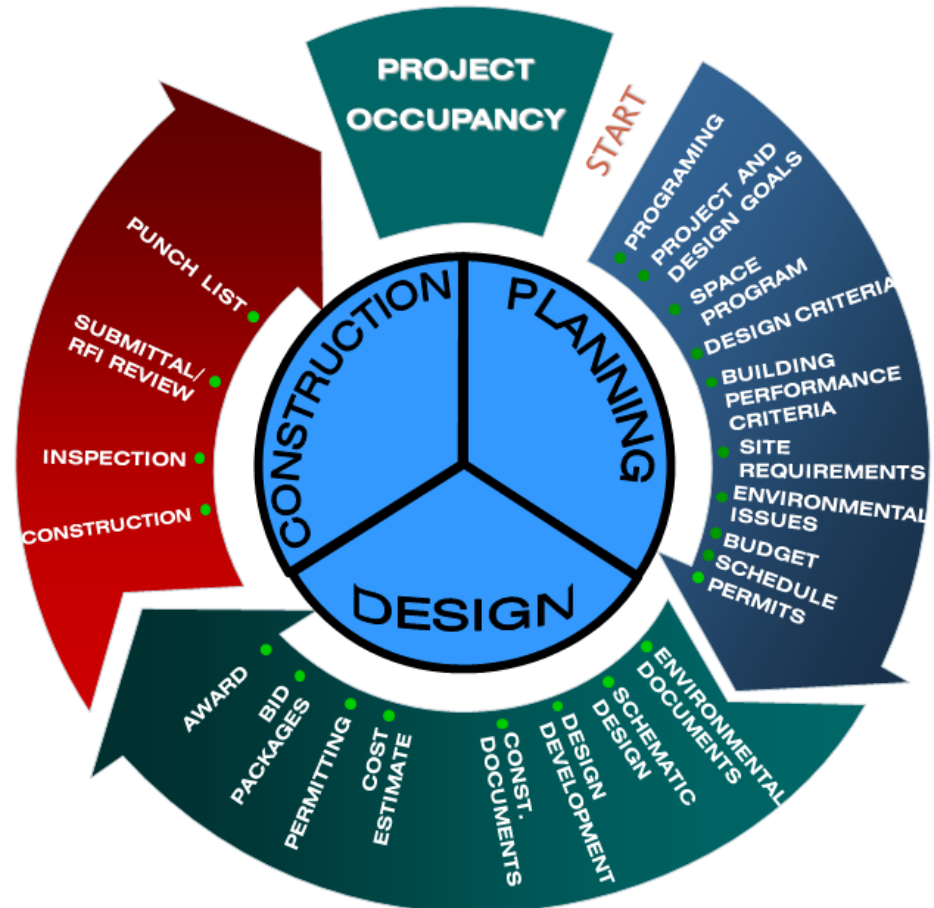
ALL SERVICES

All Services under One-Roof

CMA Architects and Engineers LLC can provide services for the complete project cycle

- ❖ Planning
- ❖ Design
- ❖ Construction

Start to Finish, CMA can assist you in all project related tasks to ensure the final product is what you envision.



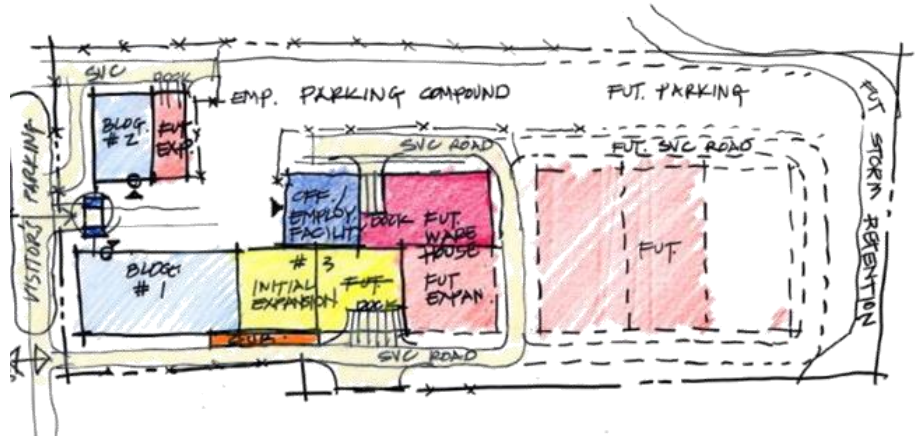
In-House Services

- Land Use Planning
- Environmental Assessments
- Feasibility and Site Selection Studies
- Permitting at Commonwealth & Federal Agencies
- Government Liaison
- Traffic Studies
- Water Resources Planning
- Hydraulic & Hydraulic Studies
- Noise Studies
- Automation and Controls
- Seismic Evaluations & Rehabilitations
- People and Material Flow Analysis
- Space Planning
- Code Compliance & Life Safety Assessments



In-House Services

- Concept Design
- 3D Modeling & Presentations
- Schematic Design
- Design Development
- Construction Documents
- Opinion of Probable Cost
- Bid Process
- Equipment Procurement
- Construction Administration & Management
- Commissioning
- Project Occupancy Permits





In-House Services

- Architecture and Interior Design
- Master Planning, Site Planning and Design
- Electrical, Mechanical, Structural, Civil, Water Resources, Instrumentation and Process Engineering
- Project and Construction Management
- Inspection and other Field Services during Construction
- Cost Estimates and Value Engineering
- Contract Documents and Specifications
- Owner's Representative Roles
- Green Building Design and Certification Assistance



Other Specialized Services

- River/Stream Corridor Improvements
- Flood Control Structures
- Storm Water management
- Erosion & Sedimentation Control
- Scour Analysis
- Existing Infrastructure Analysis
- Port Master Plan and Design
- Pumping Stations
- Soil Rehabilitation
- Soil Remediation Studies



Other Specialized Services

- Piping & Process Piping
- Fire Protection
- Controlled Environments
- Potent Compound Environments
- Pumping Stations
- Fuel Oil System
- Energy Conservation
- Renewable Energy
- Wastewater Collection & Treatment Design
- Wetlands Delineation
- Tree Inventory & Reforestation Plans



Other Specialized Services

- High/Low Voltage transmission and Distribution
- Substation and Switchyards
- Distributed Power Generation
- Fault Analysis, Arc Flash Studies
- Grounding & Lightning protection
- Industrial Control & Instrumentation
- Communications and Data Infrastructure
- Security Systems
- Fire Alarm Systems
- Building Management Systems
- Cogeneration Plants





Sustainability

With 8 **LEED Certified Professionals** on our staff, and CMA's membership in the U.S. Green Building Council, we are able to provide our Clients with the alternatives that best suit the LEED Certification level pursued.

Some projects that have achieved LEED Certification are:



LEED Gold. Environmental Protection Agency Region 2
City View Plaza, Guaynabo PR



LEED Silver. Internal Revenue Services
City View Plaza, Guaynabo PR



LEED Certified. Department of Veteran Affairs
El Nuevo Día Annex Building,
Guaynabo PR



LEED Silver. US Customs and Border Protection
City View Plaza, Guaynabo PR

EXPERIENCE IN THE
INDUSTRY

Cemento Argos (formerly Essroc San Juan)

San Juan, PR

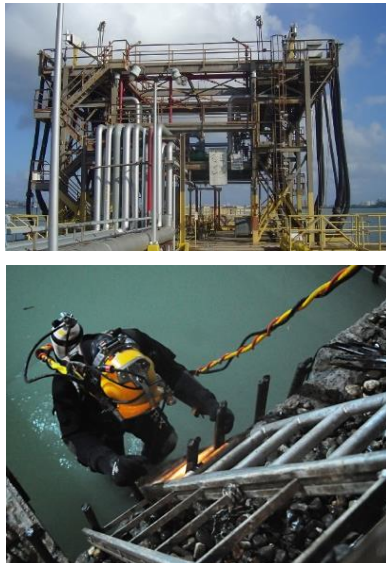
- 150mt Silo Foundation and Powder Activated Injection System
- Plant Dry Conversion & Dust Transport System
- Clinker Handling System
- Inverted Cone Cement Storage Silo Design (IBAU Equipment System)
- New 24,000 tons Raw Material Storage Dome, BMH Stacker Implementation, Reclaimer Foundation & Hopper Modifications
- Roller Crusher Building Platform & Modifications
- Building Structural Assessment and Inspections
- K-12 Foundation Assessment & Rehabilitation
- 115kV High Voltage Line Relocation
- SNCR Pulmonary Quotes – Electrical Work
- Environmental & Permitting Compliance Consultants



CEMEX Puerto Rico (formerly PR Cement Co).

Ponce, PR

- Structural Modifications at Limestone Raw Material Access Tunnel for New Chain Conveyor
- New Coal Dust Feed System – PFISTER Platform
- 38kV High Voltage Line Relocation
- Two New BMH Rotary Packer Feed System and Packaging Lines
- Environmental & Permitting Compliance Consultants



Relevant Experience

Various Locations, PR

- Port Facility Structural Inspection, Assessment & Rehabilitation
- Building and Platform Structural Assessment and Safety Audit
- 42, 000 tons Concrete Silo Storage Facility with Interstitial Spaces & Truck Access Below

WE PROVIDE

ADDED VALUE



CMA FIVE

ADDED VALUE



**BEST
PRACTICES**



**IN-HOUSE
SERVICES**



**CONSTRUCTION
COLLABORATION**



**COST
SAVINGS**



**OPTIMAL
CUSTOM DESIGN**

CMA FIVE: BEST PRACTICES



- **Proven processes** for effective planning and programming.
- **Local** permitting expertise.
- **Worldwide** applicable experience.
- **Success** on similar size urban setting projects.
- **Award-winning** collaboration.
- **Effective** project and schedule.



CMA FIVE: IN-HOUSE SERVICES



- **Enhanced coordination** of all disciplines.
- **Clear communication** path from decision-making team to design-delivery team.
- **Unified approach** to design and construction.
- **Expeditious implementation** of Owners decisions.
- **Quality and consistent** deliverables.



CMA FIVE: CONSTRUCTION COLLABORATION



- **Effective approach** to design and construction.
- **Optimized schedule** completion through early coordination to determine best and alternate approaches.
- **Creative approach** for this multi-track project that will result in overall value in construction coordination effort.



CMA FIVE COST SAVINGS



- **Judicious material selection** for increased life cycle.
- **Efficient** mechanical and electrical facility utilities.
- **Expeditious** response time from the Principal-in-Charge.
- **Owner-Designer-Integration** **Strategy** reduces time to completion.
- **BIM technology** to anticipate functionality visualizations and construction coordination opportunities early.
- **LEED Certified** buildings minimize natural resource waste.



CMA FIVE OPTIMAL CUSTOM DESIGN



- **Expert** planning and programming team that collects quality information that will be applied to achieve an effective design.
- **Functional design** and efficient space distribution that leads to long term productivity.



Partial Client List





Full Architectural-Engineering Services under one roof...

