



CONSTRUCTION MANAGER/ GENERAL CONTRACTOR Pueblo of Acoma



20th Annual National Tribal Transportation Conference • September 26, 2017 • Tucson, Arizona





- MANDARAS





1st Lt. Governor Raymond J. Concho, Jr.



Governor Kurt Riley



Tribal Secretary Marcus Leno









Tribal Interpreter Elliot Sanchez, Jr.

2nd Lt. Governor Christopher J. Garcia







Planning & Engineering Department

David Deutsawe, Acting Director

- CMCG Project Lead Represents the Owner In Project & Cost Meetings & Mini GMP Development
- Co-Author of Project Amendments & Agreements
- Issues Notice to Proceed
- Approves Pay Applications
- Reports to Funding Agencies: Federal Highway Administration, New Mexico Department of Transportation, Federal Emergency Management Agency, Bureau of Indian Affairs and Army Corps of Engineers
- Reports to Stakeholders: Tribal Leadership, Traditional Leadership and Community Members

Monica Felipe, Project Coordinator

- Co-Author of Project Amendments & Agreements
- Participant in Project & Cost Meetings and Mini GMP Development
- Develops Bid-Item Tracking Method
- Reviews and Recommends Pay Application Approval
- Requests for Payment
- Monitors Budgets for Mini GMPs
- Reports to Funding Agencies: New Mexico Department of Transportation, New Mexico Indian Affairs Department, New Mexico Department of Finance & Administration
- Reports to Stakeholders: Tribal Leadership, Traditional Leadership and Community Members





Planning & Engineering Department

Curtis Paytiamo, Project Inspector

- Monitors Project Progress (Diary & Photos)
- Composes Inspection Reports
- Conducts Verification of Material

Monica Garcia, Administrative Assistant

- Courier of documents for approval and payment
- Steward of project documents









FNF Construction Infrastructure Engineers Manhattan Construction Advanced System Design New Mexico Department of Transportation NM Department of Homeland Security and Emergency Management **NM Department of Indian Affairs** NM Department of Finance and Administration **Bureau of Indian Affairs**

What is

Construction Manager /General Contractor (CM/GC) delivery?





Integrated Approach

Owner, Designer & CM work collaboratively develop the project scope, optimize the design, improve quality, and manage costs to deliver projects early and under budget.



Why are Owners Choosing CM/GC?

Myth: Low Bid Method is Cheaper





What types of Projects?

What did we ask the team to do?



- Complete construction of all projects by June 2017
- Second to a budget of \$6.9 M
- Hire locally from Cibola County
- Innovate to meet these goals
- S Work as a team to deliver

Deliver a 7-10 year program in 18 months



Dueblo of Acoma HAAKU





CM/GC Project Locations

Pinsbaari Drive – Phase A

2-Lane Roadway Reconstruction

- Reconstruct as much of 2-lane roadway as possible with budget
- Use cost savings from other projects



Pinsbaari Drive – Phase A

Scheduled Completion

- Contract: March 2017
- Kick-Off Meeting: June 2017
- Actual: November 2016

- Contract: \$ 2,200,000
- Target: \$1,540,000
- Actual: \$1,890,800 (14% under budget)

Pinsbaari Drive – Phase A

Innovation

- Design exception for side slopes to balance project
- 3-lane design eliminated
- Geogrid in lieu of additional ABC
- Reuse of millings for parking lots
- Construct concurrently with parking lots

Hire Local

• Employed 10 local workers

Rinconado Bridge

Replace 3-Cell Box Culvert

- Provide clear span (no walls or piers)
- Provide 8' minimum vertical clearance for maintenance
- Maintain existing roadway profile
- Minimize potential for overtopping



Rinconado Bridge

Scheduled Completion

- Contract: June 2016
- Kick-Off Meeting: October 2016
- Actual: September 2016

- Contract: \$ 900,000
- Target: \$639,000
- Actual: \$636,400
 (30% under budget)

Rinconado Bridge

Innovation

- "Super Box" design
- No deep foundation needed
- Contingency plan for flooding
- Reuse of existing guardrail
- Relocation of intersecting dirt road

- Construction problems resolved quickly by team:
 - Staking problem
 - Reinforcing steel layout

Hire Local

• Employed 5 local workers

Parking Lot

Reconstruct and Expand Parking Lot from Post Office to Food Distribution

- Construct as many stalls as possible within budget
- Provide minimum stall size of 9-ft x 18-ft





Parking Lot Scheduled Completion

- Contract: June 2016
- Kick-Off Meeting: June 2016
- Actual: October 2016 (decision made to sacrifice schedule for cost-savings)

- Contract: \$450,000
- Target: \$315,000
- Actual : \$333,300 under budget)





Parking Lot

Innovation

- Eliminated concrete curbs and added rubber curb stops as needed
- Combined construction activities with Pinsbaari Dr., reducing mobilization costs
- Value engineered layout for elimination of "dead" pavement space
- Used millings from Pinsbaari Dr.

Hire Local

• Employed 10 local workers

Veteran's Parking Lot

Pave Existing Gravel Parking Lot

- Construct as many stalls as possible within budget
- Provide minimum stall size of 9-ft x 18-ft
- Provide landscaping if budget allows



Veteran's Parking Lot

Scheduled Completion

- Contract: March 2016
- Kick-off Meeting: August 2016
- Actual: October 2016 (decision made to sacrifice schedule for cost-savings)

Budget

- Contract: \$ 90,000
- Target: \$81,000
- Actual: \$ 90,000 (on budget)

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Veteran's Parking Lot

Innovation

- Eliminated concrete curbs and added rubber curb stops as needed
- Combined construction activities with Pinsbaari Dr., reducing mobilization costs
- Value engineered layout for elimination of "dead" pavement space
- Used millings from Pinsbaari Dr.

Hire Local

• Employed 10 local workers

T-Intersection

E. Pueblo Rd. & Dichuuna Rd.

- Correct deficient sight distance
- Install new signage and striping as appropriate





T-Intersection

Scheduled Completion

- Contract: June 2016
- Kick-off Meeting: June 2016
- Actual: NA

- Contract: \$286,000
- Target: \$ 200,200
- Actual: \$26,000 (project discontinued)



T-Intersection Innovation

- Rock excavation verses roadway realignment
- Gabion retaining walls with reuse of stones from demolished buildings
- Excavated rock to be used as riprap for bridge projects

Hire Local

• NA – Project did not go to construction

Project Challenge That Could Not be Overcome

• Agreement could not be reached with land assignee; project was discontinued.

Rock Retaining Wall Replacement

Roadway Maintenance Project

- Replace failing stacked rock retaining wall
- New wall should satisfy engineering requirements and homeowner aesthetic concerns





Rock Retaining Wall Replacement

Scheduled Completion

- Contract: April 2016
- Kick-off Meeting: April 2016
- Actual: June 2016

- Contract: \$470,000
- Target: \$329,000
- Actual: \$249,000 (47% under budget)

Rock Retaining Wall Replacement

- Final field review by team resulted in large reduction in wall area
- Handrail length reduced as a result of final field review
- Eliminated need for temporary utility poles
- Low cost masonry wall system allowed use of local labor

Hire Local

• Employed 6 local workers

Asset Maintenance Planning & Training

Roadway Maintenance Project

Objectives

- Prepare GIS asset inventory
- Provide maintenance and equipment training

Scheduled Completion

- Contract: June 2017
- Kick-off Meeting: June 2017
- Actual: December 2016

- Contract: \$80,000
- Target: \$56,000
- Actual: \$40,100
 (50% below budget)

Stockyard Bridge

FEMA Project – Replacement of Failed Culvert

- Replace corrugated metal pipe culvert washed out by flooding
- Install a more robust structure that can resist overtopping and washout





Stockyard Bridge

Scheduled Completion

- Contract: December 2016
- Kick-off Meeting: December 2016
- Actual: November 2017 (Projected, FEMA approval delays)

- Contract: \$108,500 (original); \$213,000 (with HMP funds)
- Target: \$130,200
- Actual: \$213,000 (GMP)

Stockyard Bridge Innovation

- Submitted and received approval from FEMA on Hazard Mitigation Plan
 - Additional funds to improve hydraulic and maintenance performance
 - Bridge size (NBIS qualifying) box culvert
 - Vertical clearance of 8-ft for maintenance
- Improved safety features
- Partnered with ACOE on Hydrologic/Hydraulic study at no cost to the project

Hire Local

• Employing 6 local workers

Roadway Stabilization

Stabilization and Dust Control for Dirt Roads

- Provide best means of roadway stabilization with available budget for 3 to 5 existing dirt roads
- Provide best means of dust control with available budget for 3 to 5 existing dirt roads



Roadway Stabilization

Scheduled Completion

- Contract: June 2016
- Target: June 2016
- Actual: August 2016

- Contract: \$450,000
- Target: \$315,000
- Actual: \$512,900 (14% over budget)



Roadway Stabilization

- Consultation with FHWA's leading expert
- Extensive research on chemical applications
- Used recycled asphalt pavement (RAP) millings from local supplier
 - Recommended by FHWA
 - Yielded 5 miles of stabilized roadway
 - Best overall "bank for the buck"

Hire Local

• Employing 6 local workers

FEMA Projects

FEMA Funded Maintenance Projects

Objectives

- Bundling under CM/GC
- Rapid delivery
- Site recovery minimized by use of same contractor
- Regular communication with
 FEMA streamlined approvals

Hire Local

Employed 6 local workers







Pinsbaari Drive – Phase B

2-Lane Roadway Reconstruction

- Reconstruct remaining 3.3 miles of Pinsbaari Drive
- Use cost savings from other CM/GC projects and other available funds



Pinsbaari Drive – Phase B

Scheduled Completion

- Contract: October 2017
- Target: October 2017
- Actual: October 2017 (projected)

- Contract: \$2,800,000
- Target: \$ 2,800,000
- Actual: \$2,800,000 (GMP)



Pinsbaari Drive – Phase B

Innovation

- Design exception for side slopes to balance project
- Geogrid in lieu of additional ABC
- Employ lessons learned from Phase A
- Use of UAV (Drone) imagery to supplement survey data

Hire Local

• Employing 6 local workers



What can we improve? Lessons Learned

- Make sure you have a Project Leader on day one of the project
- Clearly outline the minimum needs in the Request for Proposal
- Cost modeling needs to be discussed at pre-bid and kick-off meeting
- Keep your stakeholders informed as team makes changes

What can we celebrate? Success Stories

- All projects, with exception of FEMA work and T-Intersection, completed in 10 months, including permitting and design
- Cumulative \$ 1.15 million in cost savings used to fund large portion of Pinsbaari Dr. Phase B
- Team overcame significant challenges by always working together on the solution verses pointing fingers
- First programmatic use of CM/GC on tribal lands
- CM/GC delivers big results when properly implemented!

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