Cattle Handling Facility Improvement Project

Group C

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24th March 2025

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Project Charter

Project Title: Cattle Handling Facility Improvement Project

Project Start Date: May 1, 2025 **Projected Finish Date**: July 2, 2025

Budget Information: Estimated Budget: $119,650

Project Manager: Andrea VanHorn; andrea.vanhorn@coyotes.usd.edu

Project Objectives:

1. *Enhance Efficiency:* Reduce time and labor in cattle handling with an optimized layout.
2. *Improve Safety:* Lower injury risks for handlers and cattle through safe design features.
3. *Ensure Compliance:* Meet industry standards for functionality and safety.
4. *Meet Deadlines and Budget*: Complete by July 2, 2025, without exceeding $119,650.
5. *Satisfy Stakeholders:* Fulfill the needs of the owner, team, and workers.
6. *Enable Scalability:* Allow future expansions without major redesign.

Success Criteria:

1. *Timely Completion:* The cattle handling facility is fully constructed and operational by July 2, 2025.
2. *Budget Adherence:* Total expenditure does not exceed the allocated $119,650.
3. *Efficiency Improvement*: The facility demonstrably reduces time and labor required for cattle handling operations.
4. *Safety Enhancement:* The design and construction result in a safer environment with fewer risks of injury to handlers and cattle.
5. *Standards Compliance:* The facility meets current industry standards and best practices for cattle handling.
6. *Stakeholder Approval:* The farm owner, project team, and workers express satisfaction with the facility's functionality and design.

Approach:

1. *Design and Planning:* The architect will develop detailed plans for the corral, chutes, and tub (May 1–6, 2025).
2. *Approval*: Securing approval of the design and plans from the project owner (May 1–6, 2025).
3. *Material Procurement:* Ordering and acquiring all necessary materials by the materials manager (May 6–9, 2025).
4. *Site Preparation:* Excavation and preparation of the construction site by Gillmore Construction (May 1–6, 2025).
5. *Construction*: Execution of construction tasks—including setting posts, welding, installing gates, placing chutes and tubs, and painting—by Davenport Construction (May 12–July 2, 2025).
6. *Quality Checks:* Conducting regular inspections throughout the project to ensure compliance with design and safety standards.

Roles and Responsibilities

Name and Signature	**Role**	**Contact Information**	**Signature**
VanHorn, Andrea	Project Manager	andrea.vanhorn@coyotes.usd.edu	

Rashed, Mohammed	Architect	mohammed.rashed@coyotes.usd.edu	
Balmaceda, Rodrigo	Foreman	rodrigo.balmaceda@coyotes.usd.edu	
Mutungi, Vincent	Farm Manager	vincent.mutungi@coyotes.usd.edu	
Davenport Construction	Construction Company	davenport@example.com	

Comments: (Handwritten or typed comments from above stakeholders, if applicable)

- Project Manager: Requests a contingency plan and mid-project review for better oversight.
- Architect: Suggests incorporating modern design standards and planning for scalability.
- Foreman: Advises securing contracts early and leveraging bulk purchases.
- Davenport Construction: Recommends a pre-construction soil test to mitigate risks.
- Davenport Construction: Proposes weather contingencies and a safety briefing.

Stakeholder Register

Prepared by: Rodrigo Balmaceda Date: 3/22/2025

Name	Position	Internal/ External	Project Role	Contact Information
VanHorn, Andrea	Project Manager	Internal	Planning and reviewing alternatives; scheduling	andrea.vanhorn@coyotes.usd.edu
Davenport Construction	Construction Company	External	Primary Contractor tasked with construction	davenport@example.com
Gilmore Construction	Sub-contractor	External	Excavation	gillmore@example.com
Corey & Andrea VanHorn	Owner-operators	Internal	Customer, define needs, provide feedback	andrea.vanhorn@coyotes.usd.edu
Rashed, Mohammed	Architect	External	Creating designs, scale plans	mohammed.rashed@coyotes.usd.edu
Mutungi, Vincent	Farm Manager	Internal	Reviewing safety and functionality of plan	vincent.mutungi@coyotes.usd.edu
Balmaceda, Rodrigo	Foreman	External	Secures contracts, purchasing material	rodrigo.balmaceda@coyotes.usd.edu

Scope Statement

Project Purpose and Justification:

The objective of this project is to design and construct a durable, functional, and efficient corral system for cattle at the designated farm location. The new corral system will enhance cattle handling efficiency, improve safety for workers and livestock, and ensure ease of operation for the farm's owner-operators. The project is essential for modernizing the facility to meet operational demands while maintaining sustainability and regulatory compliance.

Project Scope Description:

This project includes the planning, design, procurement, and construction of a fully operational corral system. The scope encompasses site preparation, material acquisition, fabrication, and installation of structural components required for the corral system.

Key Components of the Corral System:

- Materials: Metal rods, poles, pipes (various sizes), rocks, hydraulic system, paint, concrete
- Construction Elements: Holding pens, sorting pens, loading chute, squeeze chute area, and alleyways
- Equipment & Machinery: Dozer for excavation, welding tools for assembly
- Labor Requirements: Welders, dozer operators, general labor
- Stakeholder Engagement: Regular reviews and feedback from farm owner-operators and the farm manager
- Safety Considerations: Implementation of industry-standard safety measures to mitigate workplace injuries and hazards

Deliverables:

1. Completed Corral System: A fully constructed and functional cattle handling facility
2. Site Preparation Report: Documentation of excavation and foundation work
3. Material Procurement Report: Detailed inventory of purchased and used materials
4. Safety Compliance Checklist: Verification that all safety measures were adhered to
5. Final Inspection & Approval: Signed off by project stakeholders confirming project completion

Exclusions:

- No additional land acquisition outside the predefined project area
- No modifications to existing farm structures not part of the corral system
- No automation or electronic cattle management systems
- Landscaping or aesthetic enhancements beyond the functional scope

Project Constraints:

- Timeframe: The project must be completed within 2 months
- Budget: Must adhere to the allocated budget for materials and labor and remain under $119,650
- Resource Availability: Availability of construction materials and labor in the remote location

Assumptions:

- Weather conditions will remain manageable for construction
- All required permits and regulatory approvals will be secured before construction
- Materials will be available for procurement without significant delays
- Stakeholders will provide timely feedback and approvals to avoid delays

Risks and Mitigation Strategies:

1. Weather Delays: Rain may delay excavation and foundation work → Implement contingency scheduling and use temporary protective coverings
2. Supply Chain Issues: Remote location may cause material delivery delays → Secure multiple suppliers and pre-order critical materials
3. Workplace Safety Hazards: Welding and heavy machinery usage pose risks → Enforce strict safety protocols and provide proper PPE
4. Stakeholder Delays: Late approvals could impact the schedule → Set up scheduled reviews and approval checkpoints

Approval Requirements:

The project will be considered complete upon final approval from the farm owner-operators and farm manager. A walkthrough and functionality assessment will be conducted to verify the quality and usability of the corral system before sign-off.

Project Success Criteria:

- The corral system is constructed within the 2-month timeline
- The system meets the functional needs of the farm as per the owner-operators' specifications
- Safety and regulatory standards are met
- The project remains within the designated budget
- No major workplace injuries or construction-related accidents occur

Prepared by: Mohammed Rashed
Approved by: Project Stakeholders

Team Contract

Purpose

This team contract outlines the expectations, responsibilities, and commitments of all team members involved in the Corral System Project. It ensures accountability, effective collaboration, and adherence to the project's goals, scope, and timeline.

Team Members and Roles

1. Andrea VanHorn (Project Manager) – Planning, scheduling, and reviewing alternatives.
2. Davenport Construction (Primary Contractor) – Construction execution.
3. Gillmore Construction (Subcontractor) – Excavation work.
4. Corey & Andrea VanHorn (Owner-Operators) – Defining needs, providing feedback.
5. Mohammed Rashed (Architect) – Creating designs, scale plans.
6. Vincent Mutungi (Farm Manager) – Reviewing safety and functionality.
7. Rodrigo Balmaceda (Foreman) – Securing contracts, purchasing materials.

Team Expectations and Responsibilities

- Communication: Team members will maintain open and timely communication via email and scheduled meetings.
- Accountability: Each member is responsible for fulfilling their assigned duties and notifying the team of any issues or delays.
- Decision-Making: Major decisions will be made collaboratively with input from all key stakeholders.
- Conflict Resolution: Disputes will be resolved professionally through discussion and, if necessary, mediated by the Project Manager.
- Deadlines: All members agree to adhere to the project timeline and promptly report potential delays.
- Quality Standards: All work must meet agreed-upon standards to ensure the safety, durability, and functionality of the corral system.
- Safety Compliance: All members will adhere to safety regulations and industry best practices.

Meeting Schedule and Reporting

- Weekly Progress Meetings: Held every Friday at 10 AM to review status, address challenges, and align on next steps.
- Reporting Structure: Updates will be shared through email summaries, with major milestones requiring formal reporting.

Risk Management and Contingency Planning

- Weather Delays: Adjust scheduling as needed and implement protective measures.
- Material Shortages: Identify alternative suppliers and plan for early procurement.
- Workplace Safety: Conduct safety briefings and enforce protective measures.

Contract Agreement

By signing this contract, all team members acknowledge their roles, responsibilities, and commitment to the successful completion of the Corral System Project.

Name	Role	Signature	Date
Andrea VanHorn	Project Manager	_____	_____
Davenport Construction	Primary Contractor	_____	_____
Gillmore Construction	Subcontractor	_____	_____
Corey VanHorn	Owner-Operator	_____	_____
Andrea VanHorn	Owner-Operator	_____	_____
Mohammed Rashed	Architect	_____	_____
Vincent Mutungi	Farm Manager	_____	_____
Rodrigo Balmaceda	Foreman	_____	_____

Approval and Acceptance This contract is considered effective upon signing by all parties. Amendments may be made with mutual agreement and documented updates.

Initial Schedule/ WBS

To access the project schedule please click on the following link

Tasks	Assigned To	% Allocation	Start Date	End Date	Health	Status	Notes
Corral							
Corral Measurements and Plan	Architect	50%	05/01/25	05/06/25		In Progress	Must be approved by VanHorn Farms Manager before project starts.
Approval from Owner	Project Mananger		05/01/25	05/06/25		Not Started	Once approval is received, construction can begin.
Order Materials	Materials Manager		05/06/25	05/09/25		Complete	Materials take 2-3 days to deliver.
Excavation	Gillmore Construction		05/01/25	05/06/25			Excavation of the barn takes 2 days. Extra included for weather. Ground will be flat and square before construction begins.
Haul in Rock	Rock Quarry		05/06/25	05/08/25			Rock will be hauled in and smoothed out before posts can be set.
Measure out corral boundaries	Davenport Contruction		05/09/25	05/09/25			
Set Posts	Davenport Construction		05/12/25	05/16/25			Set all posts once boundaries have been defined.
Saddle High Pressure Ares	Davenport Construction		05/19/25	05/30/25			Measure, cut, torch, and fit pipe in high-pressure areas. Three additional days added for slack or weather.
Weld Runner Pipe, Hang Gates	Davenport Construction		06/02/25	06/13/25			Use spacers to weld remaining pipe. Two additional days of slack added.
Position, Weld uprights.	Davenport Construction		06/16/25	06/18/25			Measure and weld overheads to strengthen stability of corral.
Place Tub, Long Chute, Pour Concrete for Chute	Davenport Construction		06/18/25	06/20/25			Haul in, assemble, attach and level the working tub, and long alley. Should only take one day. Added day for weather.
Place Long Chute	Davenport Construction		06/23/25	06/24/25			Put the chute in place, attach it to the alley, and connect hydraulics.
Finish Welding with Caps, Latches, Chains	Davenport Construction		06/25/25	06/27/25			Cap off all posts. Attach latches to each gate as well as additional chain.
Paint	Davenport Construction		06/30/25	07/02/25			
Andrea VanHorn							