

2022 PROJECT PROPOSAL CHECKLIST
2023-25 Biennium Four-year Higher Education Scoring Process

INSTITUTION	CAMPUS LOCATION
365 - Washington State University	Pullman, WA
PROJECT TITLE	OFM/CBS Project #
Knott Dairy Center	40000333
PROJECT CATEGORY	FPMT UNIQUE FACILITY ID # (OR NA)
Infrastructure	A04823, A09815, A06517
PROPOSAL IS	
New or Updated Proposal (for scoring)	Resubmitted Proposal (retain prior score)
<input checked="" type="checkbox"/> New proposal <input type="checkbox"/> Resubmittal to be scored (more than 2 biennia old or significantly changed)	<input type="checkbox"/> Resubmittal from 2018 (2019-21 biennium) <input type="checkbox"/> Resubmittal from 2020 (2021-23 biennium)
CONTACT	PHONE NUMBER
Kate Kamerrer	509-335-9314

Proposal content

- Project Proposal Checklist: this form; one for each proposal
- Project Proposal Form: Specific to category/subcategory (10-page limit)
- Appendices: templates, forms, exhibits and supporting/supplemental documentation for scoring.

Institutional priority

- Institutional Priority Form. Sent separately (not in this packet).

Check the corresponding boxes below if the proposed project meets the minimum threshold or if the item listed is provided in the proposal submittal.

Minimum thresholds

- Project is not an exclusive enterprise function such as a bookstore, dormitory, or contract food service.
- Project meets LEED Silver Standard requirements.
- Institution has a greenhouse gas emissions reduction policy in place in accordance with RCW 70A.45.050 and vehicle emissions reduction policy in place per RCW 47.01.440 or RCW 43.160.020 as applicable.
- A complete predesign report was submitted to OFM by July 1, 2022 and approved.
- Growth proposals: Based on solid enrollment projections and is more cost-effectively providing enrollment access than alternatives such as university centers and distance learning.
- Renovation proposals: Project should cost between 60 – 80% of current replacement value and extend the useful life of the facility by at least 25 years.
- Acquisition proposals: Land acquisition is not related to a current facility funding request.
- Infrastructure proposals: Project is not a facility repair project.
- Stand-alone, infrastructure and acquisition proposals is a single project requesting funds for one biennium.

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Required appendices

- Project cost estimate: Excel C-100
- Degree Totals and Targets template to indicate the number of Bachelors, High Demand and Advanced degrees expected to be awarded in 2023. (Required for Overarching Criteria scoring criteria for Major Growth, Renovation, Replacement and Research proposals).
- Availability of Space/Campus Utilization template for the campus where the project is located. (Required for all categories/subcategories except Infrastructure and Acquisition proposals).
- Assignable Square Feet template to indicate program-related space allocation. (Required for Growth, Renovation and Replacement proposals, all categories/subcategories).

Optional appendices

Attach supplemental and supporting project documentation, *limit to materials directly related to and needed for the evaluation criteria*, such as:

- Degree and enrollment growth projections
- Selected excerpts from institutional plans
- Data on instructional and/or research space utilization
- Additional documentation for selected cost comparables (acquisition)
- Selected materials on facility conditions
- Selected materials on code compliance
- Tables supporting calculation of program space allocations, weighted average facility age, etc.
- Evidence of consistency of proposed research projects with state, regional, or local economic development plans
- Evidence of availability of non-state matching funds
- Selected documentation of prior facility failures, high-cost maintenance, and/or system unreliability for infrastructure projects
- Documentation of professional assessment of costs for land acquisition, land cleanup, and infrastructure projects
- Selected documentation of engineering studies, site survey and recommendations, or opinion letters for infrastructure and land cleanup projects
- Other: [Click or tap here to enter text.](#)

I certify that the above checked items indicate either that the proposed project meets the minimum thresholds, or the corresponding items have been included in this submittal.

Name: Kathleen Kamerrer Title: AVP, Capital Budget & Facilities
Business Administration

Signature: Kathleen Kamerrer Date: 8/10/22

INSTITUTION	CAMPUS
Washington State University	Pullman, WA
PROJECT TITLE	
Knott Dairy Infrastructure	

SUMMARY NARRATIVE

§ **Problem statement (short description of the project – the needs and the benefits)**

Washington State University requests \$10 million in the 2023-25 capital budget for a standalone infrastructure project at the Knott Dairy Center, located seven miles south of the Pullman campus. This request addresses the most crucial areas required for safety, continuity of operations and program growth.

The Knott Dairy Center is a critical resource utilized for teaching, research, and extension. It is also a key source for milk production for Cougar cheeses and ice cream that provides unique learning opportunities for WSU students and faculty, while showcasing the program to the public. However, the Knott Dairy Center does not meet modern standards to optimally reflect the excellence that WSU represents and expects.

Required infrastructure renewal at the Knott Dairy Center includes (in order of priority):

- Replacement of animal housing facilities that have failing structural components, risking the welfare of the animals along with the students and staff who care for them.
- Replacement of infrastructure components of the dairy, including electrical, telecommunications, water, sewer, and animal fencing to be able to support current and future dairy operations, provide redundancy, and allow for the use of modernized equipment.
- Improvement of low-stress animal handling and student/staff interaction points to ensure safety of individuals and best practices for animal movement.
- Replacement of structures that are now more than 60-years old to allow the program to increase the herd size to improve the economics of the facility and the student experience while fostering research activities to further the advancement of the dairy industry.

§ **History of the project or facility**

See **Figure 1** – antiquated milking parlor.

The dairy is challenged daily with limitations and interruptions due to aging water, sewer, and electrical infrastructure. There is a greater potential for bacterial contamination of milk, including coliforms. The structural integrity of existing facilities also poses serious risk to safety and operations. There is insufficient electrical capacity to provide for installation and use of modern analytical equipment in most areas. The existing power and water delivery systems also limit the dairy’s ability to improve the utilization of the surrounding pastures.



Figure 1 – milking parlor with 40-year-old equipment

The dairy industry in the state of Washington is continually seeking graduates from WSU who are trained in modern techniques, and meeting this need is key to WSU’s land-grant mission. The extent of deferred maintenance at the Knott Dairy Center adversely impacts the university’s ability to attract the finest undergraduate and graduate students, in that it limits effective hands-on education and experience in best care and production practices. The Knott Dairy Center’s lack of capital investment in modern technology and infrastructure imperils its mission to provide value to the students, staff, and dairy industry in the state of Washington.

§ University programs addressed or encompassed by the project

University programs encompassed by this project include Animal Sciences, Veterinary Medicine, Campus Veterinary office, Food Sciences, WSU Creamery, and the WSU Office of Research Assurances. Additionally, the Knott Dairy Center facilitates one of only four national dairy cooperatives for students, Cooperative University Dairy Students (CUDS), a program important to alumni and the dairy industry for providing hands-on, real-world training for future dairy managers.

Investment in the dairy will foster and enhance collaboration in agricultural sustainability initiatives including soil, water, crops, air quality, technology, and environmental management. Sustainability in these areas will require interdisciplinary efforts that include economic assessments, animal health, animal welfare, nutrition, and engineering. Capital investment will allow these existing programs access to facilities that are amenable to performing critical research.

GENERAL CATEGORY SCORING CRITERIA

1. Significant health, safety, and code issues

A. Identify whether the project is needed to bring the facility within current life safety (including seismic and ADA), energy, utilities, or transportation code requirements.

Yes, this project will address the non-compliant life safety and ADA issues at the facility. The Knott Dairy Center was originally constructed in 1959 for a herd size of 80 lactating head. Since then, the facility has been in continuous operation and has increased the lactating herd size to 180, a significant increase with little change to the original configuration or infrastructure components. With the increased herd size there is a need for greater interaction between humans and livestock within confined and antiquated spaces which creates unacceptable risks for injury where escapement is challenging. The

parlor requires exiting livestock to make an unnatural hard turn and share space with KDC/CUDS employees. With the need for twice daily milking of a much larger number of cattle, there is reduced time for animal movement and cleaning. The shortened time-frame for cleaning has led to an unacceptable increase in coliform counts in the milk which requires immediate mitigation.

Knott Dairy Center is regularly inspected by representatives from the state Department of Agriculture, WSU's Institutional Animal Care and Use Committee and Association for Assessment and Accreditation of Laboratory Animal Care, International.

During AAALAC reviews in 2018 and 2021 there were concerns over the condition of the dry cow barn, an essential component at the dairy that provides necessary shelter and protection for the dairy cattle when they are not lactating. Structural decline was noted at the supporting posts at the ground level, which adds to the difficulty in cleaning and re-bedding of the facility, contributing to the decay. Substandard infrastructure puts the facility at risk of a mandated closure. This project will address the structural issues and would allow for improved operations to minimize deterioration in the future.

B. Clearly identify the applicable standard or code and describe how the project will improve consistency with it. Provide selected supporting documentation in appendix and reference in the body of the proposal.

Life Safety Requirements

The Knott Dairy Center is classified as a **Group U Occupancy** under the International Building Code (IBC 2021) which encompasses livestock shelters or buildings, shade structures, milking barns, barns, and stables.

Improvements to the facility will include meeting all applicable codes and regulations such as the following:

- IBC C102.2 and C102.3 One-story and Two-story unlimited area. The area of a one-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet in width. In replacing existing structures, the correct placement shall meet this requirement or meet the size limitations.
- IBC C104.1 Exiting Facilities shall be provided in accordance with Chapters 10 and 11. Exceptions: 1) the maximum travel distance from any point in the building to an approved exit shall not exceed 300 feet. 2) One exit is required for each 15,000sf of area or fraction thereof. Exiting requirements will be improved with this project including the sections identified below.
- IBC Chapter 10 – Means of Egress. Section 1003.2 The means of egress shall have a ceiling height of not less than 7 feet 6 inches above the finished floor.
- IBC Chapter 10 – Means of Egress. Section 1003.3 Protruding Objects. Protruding objects on circulation paths shall comply with the requirements of 1003.3.1 through 1003.3.4
- IBC Chapter 16 – Structural Design. Section 1616.2.21 Structural Integrity of steel columns. There is evidence of structural deficiencies within several the barns that will need to be addressed with this project. See **Figure 2** - structural column corrosion.



Figure 2 – corroded steel column in Building 402A pens

- IBC Chapter 9 Fire Protection and Life Safety Systems – Section 903.2.11 states that in all occupancies other than Group U, an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Sections 903.2.11.1 through 903.2.11.6.
- Although not required, the dairy has experienced a recent situation where a service vehicle caught fire and the only means to extinguish it was with a fire extinguisher. Fire hydrants are needed to serve the area, which is our highest priority in addressing the water system requirements.
- NFPA 72, Sections 18.4.1 and 18.4.3 – Existing visual and audible fire alarm notifications that are found to be non-compliant will be addressed with this project.
- NFPA 72, Sections 17.5.3.1 and 17.5.3.2 – Existing “spot” fire alarm coverage will be upgraded to improve the “selective” coverage requirements of the current code.

Accessibility Requirements

IBC Chapter 11 Accessibility. Section 1103.2.4 Utility Buildings. Group U occupancies are not required to comply with this chapter other than the following: 1) in agricultural buildings, access required to paved work areas and areas open to the general public. 2) private garages or carports that contain required accessible parking.

Since this project entails a public face, accessibility requirements to allow for observation and activities for students, faculty, and the public will be included.

ADA 2010 Standards:

- Section 702 – Fire alarm systems will be upgraded to include appropriate ADA audible and visible alarms.
- Section 404 – Existing door size, clearance and hardware do not comply with ADA requirements. This project will correct any non-compliant doors and install appropriate ADA hardware.

2. Evidence of increased repairs and/or service interruption

Identify prior facility repairs, work order repair history or contractor repair callouts, increased utility and/or maintenance costs, and/or system unreliability. Provide selected supporting documentation in appendix, and reference them in the body of the proposal.

History of Repairs and Service Calls

WSU has more than five years’ worth of work requests and minor capital repairs for the Knott Dairy Center, see **Table 1**.

Over the past five years, WSU Facilities Services has received an average of nearly 85 reactive maintenance requests per year for Knott Dairy. The Maintenance Log Summary below shows the number of service calls addressed each year over the past five years (and the first half of 2022) and their associated cost (these do not include departmental repair expenditures that did not go through Facilities Services). See **Appendix B** for service requests.

Knott Dairy Maintenance Log Summary		
Year	Number of Calls	Cost
2017	61	\$175,907
2018	56	\$47,706
2019	127	\$103,041
2020	71	\$53,287
2021	111	\$140,000
2022 to date	107	\$66,774
Totals	533	\$586,715

Table 1

As a result of these emergent issues, WSU has invested over \$580,000 into recent repairs at the dairy primarily in infrastructure, plus an additional \$2,500,000 in minor capital repairs for a new water reservoir tank, water system improvements, minor electrical improvements, and concrete flatwork for animal safety. See **Appendix C** for minor capital repair logs.

Interruptions of Service

Interruptions of service happens on average two to three times a year and can take some time to respond to, being a remote site from central campus. When power outages occur, sometimes caused by wildlife or weather, the existing generator serves the milking parlor and residence above but not the rest of the facilities. The water holding tank can supply water via gravity for a maximum of three days, although the automatic waterers for cattle would not operate without power, nor does the electric fence for animal containment. Durations can last several hours and occasionally an entire day, threatening the care and well-being of the animals.

3. Impact on institutional operations without the infrastructure project

Describe how and the extent to which there would be an impact on existing operations and programs. Describe the potential impact on future, already funded or planned construction projects or program needs should this infrastructure project not occur.

The increasing deferred maintenance at the dairy has a serious impact to the operations of the Knott Dairy Center. Without this investment, the Knott Dairy Center is at risk of a mandated closure by the inspecting agencies. The impact will negatively affect the educational programs, industry research and the popular commodities produced by the creamery which promotes the program and the university's land-grant mission.

Failure of the structural integrity of our buildings poses clear risks to our WSU students, employees, and livestock. The use of the current facility places students and employees at risk of physical injury and the unexpected rise in bacterial contamination in milk poses an unacceptable health risk. Without improvements to the infrastructure at the dairy, the program would not be able to add modernized equipment to reflect the current industry standards. The electrical system is original and in need of replacement. The 12kv distribution is WSU owned and incurs regular reliability issues. **Photos below.**



Photos of Existing electrical service to Knott Dairy Center

4. Reasonable estimate

Provide as much detailed cost estimate information as possible, including documentation of professional assessment of costs (may contain opinions of external experts or experienced project management staff from the institution).

A detailed cost estimate for the Knott Dairy Center was developed by specialty professionals, Castellaw Kom Architects, Lewiston Idaho (**Appendix D**).

5. Engineering study

Identify whether there is a completed comprehensive engineering study, site survey and recommendations or opinion letter. Provide referenced supporting documentation in appendix.

A comprehensive engineering study was completed by Castellaw Kom Architects, the recommendations of this study have informed the basis of this request (**Appendix E**).

6. Support by planning

Describe the proposed project's relationship and relative importance to the institution's:

A. Campus/facilities master plan

B. Ongoing academic and/or research program need and strategic plan

A. It is necessary to address deferred maintenance issues at the dairy in 2023-25 to avoid catastrophic failures which could create significant risk to the execution of WSU's Facility Development Plan. WSU's capital plan reflects the university's continued commitment to reinvestment in existing facilities and infrastructure while also advancing programmatic priorities. It is focused on identifying and prioritizing capital projects that balance stewardship and renewal within a framework for responsible growth, as informed by WSU's Facility Development Plan (go.wsu.edu/WSUDevelopmentPlan2022).

Both the 10-year capital plan and the development plan recognize the urgent need to address a large and rapidly growing deferred maintenance backlog which has been identified as a significant risk to future operations at all the WSU campuses as they age.

B. The capital investment proposed here will allow Animal Sciences faculty to be competitive for external research funding and perform the essential applied research that the dairy industry, needs. This investment may also be used to leverage donor funding to further program growth and modernization.

Animal Sciences is a critical and high enrollment program within the College of Agricultural, Human and Natural Resource Sciences. It aligns with the university's land-grant mission and supports the dairy industry and economic growth. Animal Sciences aspires to be a leader in dairy production, livestock welfare and care, sustainability, and environmental stewardships. This will include development and use of livestock technology that reduces labor, improves animal care, and leads to advancement in reduction of greenhouse gases, water use, and nutrient use. Improved reproduction and milk production alongside decreased environmental impact and enhanced resource stewardship will be attainable through this investment. The facility investment will improve the safety of staff and students and ensure that there is increased capacity for safe interactions and observations of large livestock.

7. Resource efficiency and sustainability

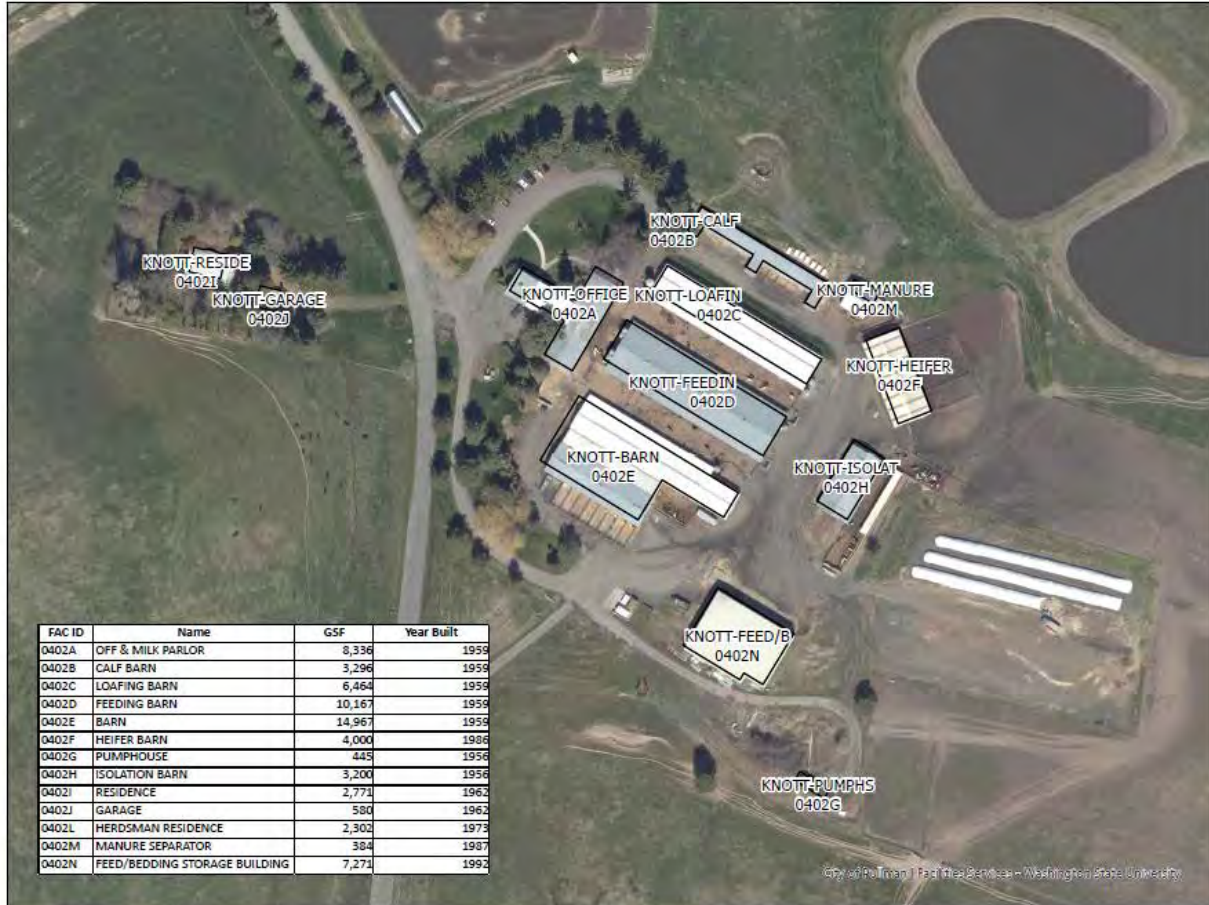
Document project benefits associated with low-impact stormwater management techniques, improvements in energy and resource conservation, and use of renewable energy sources.

Stormwater Management

This project will address the manure handling system reliability and capacity to support the dairy operations and to protect surface waters. Commercial dairies can have a serious impact on stormwater quality with the introduction of animal waste and how it is managed. The Knott Dairy Center has seen an increase in the herd size over the years and has made improvements to the waste handling systems. The dairy was issued a Concentrated Animal Feeding Operation Permit (CAFO) in the 2006-2008 period due to contaminated stormwater discharges to surface waters from manure and lagoon holding areas. After improved facilities were constructed and it was demonstrated that there were no longer any discharges to surface waters over several years of operations, WSU was able to terminate the CAFO permit. With the increase in herd size and limited resources it could once again result in contaminated surface waters resulting in fines and requirement to obtain the CAFO permit again.

Energy Conservation and Renewable Energy

Improvements to the electrical infrastructure will conserve electrical usage and reduce greenhouse gases. To expand services in the outlying pastures, solar powered and or wind powered waterers will be considered in lieu of running a new electrical service.



APPENDICES

- § Appendix A – C100
- § Appendix B – Service Requests
- § Appendix C – Minor Capital Repair Logs
- § Appendix D – Detailed Cost Estimate
- § Appendix E – Engineering Study

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2022

Agency	Washington State University
Project Name	Knott Dairy Infrastructure
OFM Project Number	400000343

Contact Information

Name	Louise Sweeney
Phone Number	509-335-4437
Email	lasweeney@wsu.edu

Statistics

Gross Square Feet	NA	MACC per Gross Square Foot	
Usable Square Feet	NA	Escalated MACC per Gross Square Foot	
Alt Gross Unit of Measure			
Space Efficiency		A/E Fee Class	C
Construction Type	Farm structures	A/E Fee Percentage	10.15%
Remodel	Yes	Projected Life of Asset (Years)	50

Additional Project Details

Procurement Approach	DBB	Art Requirement Applies	Yes
Inflation Rate	4.90%	Higher Ed Institution	Yes
Sales Tax Rate %	7.90%	Location Used for Tax Rate	3,812
Contingency Rate	10%		
Base Month (Estimate Date)	June-22	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule

Predesign Start		Predesign End	
Design Start	July-23	Design End	March-24
Construction Start	March-24	Construction End	March-25
Construction Duration	12 Months		

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Project Cost Estimate

Total Project	\$9,063,356	Total Project Escalated	\$10,000,432
		Rounded Escalated Total	\$10,000,000

Cost Estimate Summary

Acquisition

Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0
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Consultant Services			
Pre-design Services	\$0		
Design Phase Services	\$454,916		
Extra Services	\$261,500		
Other Services	\$204,382		
Design Services Contingency	\$92,080		
Consultant Services Subtotal	\$1,012,878	Consultant Services Subtotal Escalated	\$1,096,809

Construction			
Maximum Allowable Construction Cost (MACC)	\$5,905,043	Maximum Allowable Construction Cost (MACC) Escalated	\$6,530,054
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$590,504		\$657,645
Non-Taxable Items	\$0		\$0
Sales Tax	\$513,148	Sales Tax Escalated	\$567,828
Construction Subtotal	\$7,008,696	Construction Subtotal Escalated	\$7,755,527

Equipment			
Equipment	\$300,000		
Sales Tax	\$23,700		
Non-Taxable Items	\$0		
Equipment Subtotal	\$323,700	Equipment Subtotal Escalated	\$360,505

Artwork			
Artwork Subtotal	\$49,753	Artwork Subtotal Escalated	\$49,753

Agency Project Administration			
Agency Project Administration Subtotal	\$321,829		
DES Additional Services Subtotal	\$100,000		
Other Project Admin Costs	\$0		
Project Administration Subtotal	\$421,829	Project Administration Subtotal Escalated	\$469,792

Other Costs			
Other Costs Subtotal	\$246,500	Other Costs Subtotal Escalated	\$268,045

Project Cost Estimate			
Total Project	\$9,063,356	Total Project Escalated	\$10,000,432
		Rounded Escalated Total	\$10,000,000

Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request		
			2023-2025	2025-2027	Out Years
Acquisition					
Acquisition Subtotal	\$0				\$0
Consultant Services					
Consultant Services Subtotal	\$1,096,809		\$1,096,809		\$0
Construction					
Construction Subtotal	\$7,755,527		\$7,755,527		\$0
Equipment					
Equipment Subtotal	\$360,505		\$360,505		\$0
Artwork					
Artwork Subtotal	\$49,753		\$49,753		\$0
Agency Project Administration					
Project Administration Subtotal	\$469,792		\$469,792		\$0
Other Costs					
Other Costs Subtotal	\$268,045		\$268,045		\$0
Project Cost Estimate					
Total Project	\$10,000,432	\$0	\$10,000,431	\$0	\$1
	\$10,000,000	\$0	\$10,000,000	\$0	\$0
Percentage requested as a new appropriation			100%		

What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)
 \$10,000,000 requested for design and construction activities related to infrastructure improvements that are required for safety, continuity of operations, and program growth.
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What has been completed or is underway with a previous appropriation?
 N/A
 Insert Row Here

What is planned with a future appropriation?
 N/A
 Insert Row Here

Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
ACQUISITION TOTAL	\$0		NA	\$0	

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Cost Estimate Details

Consultant Services				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
1) Pre-Schematic Design Services				
Programming/Site Analysis				
Environmental Analysis				
Predesign Study				
Other				
Insert Row Here				
Sub TOTAL	\$0	1.0531	\$0	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	\$454,916			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	\$454,916	1.0701	\$486,806	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)	\$50,000			
Geotechnical Investigation	\$61,500			
Commissioning				
Site Survey	\$100,000			
Testing	\$50,000			
LEED Services				
Voice/Data Consultant				
Value Engineering				
Constructability Review				
Environmental Mitigation (EIS)				
Landscape Consultant				
Other				
Insert Row Here				
Sub TOTAL	\$261,500	1.0701	\$279,832	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	\$204,382			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
Sub TOTAL	\$204,382	1.1137	\$227,621	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	\$92,080			
Other				
Insert Row Here				
Sub TOTAL	\$92,080	1.1137	\$102,550	Escalated to Mid-Const.

CONSULTANT SERVICES TOTAL	\$1,012,878	\$1,096,809

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Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
1) Site Work				
G10 - Site Preparation	\$378,000			
G20 - Site Improvements	\$378,000			
G30 - Site Mechanical Utilities	\$504,000			
G40 - Site Electrical Utilities	\$504,000			
G60 - Other Site Construction				
Other				
Insert Row Here				
Sub TOTAL	\$1,764,000	1.0874	\$1,918,174	
2) Related Project Costs				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
Sub TOTAL	\$0	1.0874	\$0	
3) Facility Construction				
A10 - Foundations				
A20 - Basement Construction				
B10 - Superstructure	\$2,032,000			
B20 - Exterior Closure				
B30 - Roofing				
C10 - Interior Construction				
C20 - Stairs				
C30 - Interior Finishes				
D10 - Conveying				
D20 - Plumbing Systems				
D30 - HVAC Systems				
D40 - Fire Protection Systems				
D50 - Electrical Systems	\$500,000			
F10 - Special Construction	\$215,360			
F20 - Selective Demolition				
General Conditions	\$671,270			
Prevailing wage rates	\$319,652			
Mobiliz, taxes Insurance	\$402,761			
Sub TOTAL	\$4,141,043	1.1137	\$4,611,880	
4) Maximum Allowable Construction Cost				
MACC Sub TOTAL	\$5,905,043		\$6,530,054	
	NA		NA per GSF	

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7) Owner Construction Contingency

Allowance for Change Orders	\$590,504		
Other			
Insert Row Here			
Sub TOTAL	\$590,504	1.1137	\$657,645

8) Non-Taxable Items

Other			
Insert Row Here			
Sub TOTAL	\$0	1.1137	\$0

9) Sales Tax

Sub TOTAL	\$513,148		\$567,828
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CONSTRUCTION CONTRACTS TOTAL	\$7,008,696		\$7,755,527
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Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
1) Equipment					
E10 - Equipment	\$300,000				
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
Sub TOTAL	\$300,000		1.1137	\$334,110	
2) Non Taxable Items					
Other					
Insert Row Here					
Sub TOTAL	\$0		1.1137	\$0	
3) Sales Tax					
Sub TOTAL	\$23,700			\$26,395	
EQUIPMENT TOTAL					
EQUIPMENT TOTAL	\$323,700			\$360,505	

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Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
1) Artwork					
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$49,753				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	\$49,753		NA	\$49,753	

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Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
1) Agency Project Management					
Agency Project Management	\$321,829				
Additional Services	\$100,000				
Other					
Insert Row Here					
<i>Subtotal of Other</i>	<i>\$0</i>				
PROJECT MANAGEMENT TOTAL	\$421,829		1.1137	\$469,792	

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Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal	\$100,000				
Historic and Archeological Mitigation					
Facilities Services Support	\$146,500				
Insert Row Here					
OTHER COSTS TOTAL	\$246,500		1.0874	\$268,045	

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C-100(2022)
Additional Notes

Tab A. Acquisition

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Tab B. Consultant Services

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Tab C. Construction Contracts

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Tab D. Equipment

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Tab E. Artwork

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Tab F. Project Management

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Tab G. Other Costs

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Appendix B – Service Requests
 Knott Dairy Infrastructure

Work Order	Description	Date Created	Status	Type	Property	Actual Total
2022-029589	KNOTTS DAIRY FARM SYSTEM PERIPHERAL TROUBLE ALARM	7/11/21 2:55 AM	CLOSED	CORRECTIVE	0402G	\$144.50
2022-026631	KNOTT DAIRY FARM LEAKS GATED WATER VALVE IS SPITTING OUT HOT WATER. SAYS THEY HAVE THE WATER SHUT OFF BUT THEY NEED IT REPAIRED BY THIS AFTERNOON WHEN THEY FLUSH OUT THE MILK.	5/23/22 6:56 AM	OPEN	CORRECTIVE	0402G	\$0.00
2022-026618	WEB REQUEST: WATER AND SEWER PROBLEMS OUR FLUME PUMP FELL DOWN INTO THE CONCRETE TANK SO WE CAN'T USE IT. WE WOULD LIKE HEAVY EQUIPMENT TO COME OUT AND CLEAN OUT THE CONCRETE TANK WITH THE PUMP TRUCK SO WE CAN GET THE PUMP OUT. THIS IS A CRITICAL PIECE	5/22/22 8:44 AM	OPEN	CORRECTIVE	0402M	\$0.00
2022-026614	WEB REQUEST: PLUGGED FLOOR DRAIN WASHING MACHINE DRAIN HAS BEEN PLUGGED FOR OVER A MONTH, THE RESIDENT HAS BEEN DRAINING THE WASHING MACHINE, WITH A HOSE. A WORK ORDER WAS ALREADY TURNED IN FOR THIS BUT IT HAS NEVER BEEN RESOLVED.	5/21/22 7:26 AM	WORK COMPLETE	CORRECTIVE	0402L	\$0.00
2022-025854	WEB REQUEST: ELECTRICAL REPAIR THERE'S AN OUTLET THAT GOT RIPPED OFF THE SUPPORT BEAM BY THE COWS IN PEN 1, ABOUT THE MIDDLE OF THE PEN NEXT TO THEIR BEDS. SOME OF THE OUTLETS HAVE CAGES AROUND THEM SO THE COWS CAN'T CHEW ON THEM AND THAT WORKS OUT NIC	5/10/22 9:46 AM	OPEN	CORRECTIVE	0402D	\$0.00
2022-025853	WEB REQUEST: ELECTRICAL REPAIR THE SHUT OFF PANEL FOR THE ELECTRICITY AT THE ISO BARN IS HANGING BY 1 BOLT SO IT'S ABOUT TO FALL OFF. IT'S ON THE NORTH SIDE.	5/10/22 9:44 AM	OPEN	CORRECTIVE	0402H	\$0.00
2022-025775	WEB REQUEST: ROOFING REPAIRS THE DOWNSPOUT ON THE ISO BARN IS BROKEN AGAIN, THEY WERE OUT FIXING IT LAST WEEK BUT THE NEW PIECE FELL APART. THE COWS CAN'T REACH THIS SECTION AND WE HAVEN'T HIT IT WITH A LOADER SO IT WASN'T US.	5/9/22 8:36 AM	WORK COMPLETE	CORRECTIVE	0402H	\$371.16
2022-025765	WEB REQUEST: LIGHTING-INDOOR THERE'S 3 LIGHTS OUT INSIDE THE HIEFER BARN. A LIFT WILL BE NEEDED TO CHANGE THESE.	5/9/22 6:55 AM	OPEN	CORRECTIVE	0402F	\$1,325.46
2022-025763	WEB REQUEST: LIGHTING-INDOOR THERE'S 7 BULBS OUT INSIDE OF THE SCALE ROOM NEXT TO THE VET ROOM.	5/9/22 6:51 AM	OPEN	CORRECTIVE	0402E	\$106.29
2022-025352	WEB REQUEST: EQUIPMENT REPAIR THE LAST ROW OF FREE STALLS IN PEN 1 NEEDS THE RAILROAD TIES REPLACED AND THE STALLS STOOD BACK UP. THIS IS ROUTINE MAINTENANCE, WE JUST DON'T HAVE THE MANPOWER TO DO THIS WITH THE FARM SHOP BEING SHORT STAFFED. WE ALREADY	5/1/22 3:10 PM	OPEN	CORRECTIVE	0402D	\$0.00
2022-025351	WEB REQUEST: DOOR REPAIRS THE GATE TO THE FLUME IN PEN 1 NEEDS TO BE WELDED BACK ON TO THE POST.	5/1/22 3:09 PM	OPEN	CORRECTIVE	0402D	\$0.00
2022-025350	WEB REQUEST: LIGHTING-INDOOR THE SOUTH HALF OF THE LIGHTS IN THE CLOSE UP PEN AREN'T WORKING, THE LIGHT SWITCH MIGHT BE BROKEN. THIS POSES A POTENTIAL THREAT TO WORKERS, WE SOMETIMES DO VET PROCEDURES IN THAT ROOM AND PEOPLE ARE IN THERE CHECKING COWS	5/1/22 3:01 PM	WORK COMPLETE	CORRECTIVE	0402E	\$110.45
2022-024596	WEB REQUEST: ROOFING REPAIRS THE DOWNSPOUT ON THE BACK OF THE HEIFER BARN FELL APART THIS WINTER SO WATER JUST FALLS INTO THE BACK PATIO OF THE HEIFERS. THE HEIFERS CAN'T REACH IT AND WE DON'T DRIVE BACK THERE, IT FELL APART BY ITSELF.	4/27/22 11:32 AM	WORK COMPLETE	CORRECTIVE	0402F	\$958.53
2022-024593	WEB REQUEST: EQUIPMENT REPAIR SOME OF OUR HOSPITAL PENS ARE IN NEED OF REPAIR. AFTER 61 YEARS OF USE THEY ARE LOOSE AND THE COWS CAN SHAKE THEM FREELY AND WE ARE AFRAID SOME OF THEM ARE GOING TO BREAK. THIS MIGHT BE THE CARPENTRY SHOP, IT'S A LITTLE BI	4/27/22 11:15 AM	OPEN	CORRECTIVE	0402A	\$129.22
2022-024591	WEB REQUEST: DOOR REPAIRS THE DOOR GOING INTO THE VET ROOM FROM THE SCALE ROOM NEEDS ADJUSTING. SOMETIMES IT CLOSSES OTHER TIMES IT DOESN'T LATCH AND JUST OPENS BACK UP.	4/27/22 11:05 AM	OPEN	CORRECTIVE	0402E	\$67.10
2022-024587	WEB REQUEST: ROOFING REPAIRS THE BRAND NEW DOWNSPOUT IN THE ISO BARN FELL APART THE OTHER WEEK. THE COWS CAN'T REACH IT SO IT WAS PROBABLY A DEFECTIVE PART. ITS THE SPOUT THAT COMES FROM INSIDE THE PEN NEXT TO THE HOSE SPIGOT.	4/27/22 10:56 AM	WORK COMPLETE	CORRECTIVE	0402H	\$558.70
2022-024586	WEB REQUEST: DOOR REPAIRS THE SLIDING DOORS TO GO TO THE BOX STALLS FROM THE HOLDING PEN NEED NEW SHEET METAL COVERINGS. IACUC HAS WRITTEN US UP FOR IT, I'VE TRIED TO SCREW IT BACK INTO PLACE A COUPLE OF TIMES BUT IT KEEPS GETTING RIPPED UP AND IS A PO	4/27/22 10:53 AM	OPEN	CORRECTIVE	0402A	\$208.71
2022-024583	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN) THE DRAIN IN THE VET ROOM IS PLUGGED AGAIN. IT WOULD BE GOOD TO FLUSH THE PIPE OUT BECAUSE IT IS FULL OF MILK REPLACER (WE ARE WORKING ON RESOLVING THIS ISSUE SO IT DOESN'T HAPPEN IN THE FUTURE). WE JUST DON'T H	4/27/22 10:44 AM	OPEN	CORRECTIVE	0402E	\$2,126.21
2022-024581	WEB REQUEST: WINDOW REPAIRS THERE'S A BROKEN WINDOW NEXT TO THE FRONT DOOR OF THE FARM. IT'S PROBABLY THE ORIGINAL WINDOW SO I SUSPECT IT'S NOT TEMPERED. ITS THE VERY TOP PANE.	4/27/22 10:34 AM	WORK COMPLETE	CORRECTIVE	0402A	\$562.79
2022-024580	WEB REQUEST: WINDOW REPAIRS THERE'S 6 BROKEN WINDOWS IN THE NORTHERN WING OF BOX STALLS. OVER THE YEARS THEY HAVE JUST BEEN BOARDED UP INSTEAD OF BEING REPAIRED. THEY ARE ALSO SO OLD THAT THEY ARE STUCK IN PLACE SO WE CAN'T OPEN OR CLOSE THEM.	4/27/22 10:32 AM	OPEN	CORRECTIVE	0402A	\$32.31
2022-024579	WEB REQUEST: WINDOW REPAIRS THERE'S 5 BROKEN WINDOWS IN THE SOUTHERN WING OF BOX STALLS. OVER THE YEARS THEY HAVE JUST BEEN BOARDED UP INSTEAD OF REPAIRED. THE WINDOWS ARE ALSO SO OLD THAT THEY ARE HARD TO OPEN AND CLOSE SO THEY ARE STUCK IN PLACE.	4/27/22 10:31 AM	WORK COMPLETE	CORRECTIVE	0402A	\$325.72
2022-024445	WEB REQUEST: LIGHTING-INDOOR THERE'S 4 LIGHTS OUT IN THE VET ROOM.	4/25/22 2:30 PM	WORK COMPLETE	CORRECTIVE	0402E	\$857.23
2022-024439	WEB REQUEST: DOOR REPAIRS THERE'S 3 GATES IN THE HEIFER BARN THAT NEED TO BE WELDED BACK TO THEIR POSTS. THERE IS ALSO ONE GATE GOING OUT TO THE BACK PATIO OF PEN 3S THAT NEEDS TO BE REATTACHED TO THE WOODEN SUPPORT COLUMN.	4/25/22 2:10 PM	WORK COMPLETE	CORRECTIVE	0402F	\$129.22
2022-024438	WEB REQUEST: DOOR REPAIRS THE GATES GOING OUT TO THE BACK PATIO OF THE ISO BARN NEED TO BE WELDED BACK ONTO THEIR POSTS. THERE'S ALSO A GATE NEXT TO THE FEED BUNK THAT NEEDS TO BE WELDED BACK ONTO THE POST AS WELL.	4/25/22 2:09 PM	OPEN	CORRECTIVE	0402H	\$0.00
2022-024436	WEB REQUEST: DOOR REPAIRS THERE'S 2 GATES IN THE BULL BARN PENS THAT NEED TO BE WELDED BACK ONTO THE FRAMES, THEY'RE THE GATES THAT GO OUT TO THE PATIOS FOR THE HEIFERS.	4/25/22 2:08 PM	OPEN	CORRECTIVE	0402E	\$0.00
2022-024275	WEB REQUEST: DOOR REPAIRS WOMEN'S LOCKER RM DOOR IS NOT CLOSING ALL THE WAY RUBBING AT TOP OF FRAME.	4/21/22 3:31 PM	OPEN	CORRECTIVE	0402A	\$70.86
2022-024163	WEB REQUEST: WATER AND SEWER PROBLEMS THE DRAIN AT THE BACK ENTRANCE TO ROOM 5 HAS A BROKEN METAL GRATE. ENTRANCE IS USED TO GET COWS INTO THE PEN, SO THIS IS A RISK TO THE COWS' AND THE WORKERS' SAFETY. PLEASE CONTACT CELINA AT 520-450-0366 OR RICHARD	4/20/22 2:11 PM	OPEN	CORRECTIVE	0402E	\$212.58
2022-024006	WEB REQUEST: LIGHTING-INDOOR LIGHT OUT ON THE LANDING BETWEEN 1ST AND 2ND FLOOR'S.	4/18/22 2:52 PM	CLOSED	CORRECTIVE	0402A	\$70.86
2022-023902	WEB REQUEST: HEATING/COOLING CALIBRATE CHLORINE SENSORS SEND TO CONTROL SHOP	4/14/22 3:15 PM	OPEN	CORRECTIVE	402	\$639.84
2022-023863	WEB REQUEST: TREE AND SHRUB CARE PLEASE TRIM BACK TREE LIMBS FROM EDGE OF ROOF	4/14/22 8:47 AM	OPEN	CORRECTIVE	0402I	\$0.00
2022-023793	WEB REQUEST: TREE AND SHRUB CARE NEED TREES TRIMMED BACK FROM ROOF LINE ON MILKING PARLOR, HOUSE, AND GARAGE.	4/13/22 9:03 AM	OPEN	CORRECTIVE	402	\$0.00
2022-023527	WEB REQUEST: DOOR REPAIRS THE DOOR GOING OUTSIDE OF THE MILK TANK ROOM IS BENT SO IT DOESN'T TOUCH THE DOOR FRAME ON THE LOWER HALF. DURING THE WINTER IT MAKES IT SO THE HEATER IS ON IN THAT ROOM 100% OF THE TIME BECAUSE THERE'S AIR BLOWING IN	4/10/22 10:17 AM	OPEN	CORRECTIVE	0402A	\$0.00
2022-023018	WEB REQUEST: WATER AND SEWER PROBLEMS	3/31/22 12:42 PM	OPEN	CORRECTIVE	0402L	\$0.00
2022-022083	WEB REQUEST: LAWN CARE I AM REQUESTING TWO BROKEN BRANCHES OF A TREE TO BE REMOVED. THE WILLOW THREE OUTSIDE THE PARKING LOT HAVE TWO BROKEN BRANCHES THAT ARE GETTING HOLD BY OTHER BRANCHES. ONE IS BALANCING ON TOP OF ANOTHER BRANCH. THIS IS A RISK FOR	3/25/22 3:17 PM	OPEN	CORRECTIVE	402	\$0.00
2022-021887	WEB REQUEST: PROJECT MANAGEMENT NEW EXTERIOR KNOTT DAIRY CENTER SIGN, EXACT WORDING UNKNOWN, LARGE, VISIBLE, MATERIAL UNKNOWN. REPLACE EXISTING.	3/23/22 9:58 AM	ESTIMATING	ALTERATIONS	402	\$0.00
2022-021632	WEB REQUEST: HEATING/COOLING CHECK HTW HEATERS SEND TO CONTROL SHOP	3/18/22 1:31 PM	CLOSED	CORRECTIVE	0402A	\$141.72
2022-021575	WEB REQUEST: WATER AND SEWER PROBLEMS OUR COMMERCIAL HOT WATER TANKS ARE NOT PUTTING OUT THE HOT WATER WE NEED TO WASH OUR MILK LINE CORRECTLY. THE WATER IS ABOUT 30-40 DEGREES LESS THAN WHAT THEY ARE SET AT.	3/17/22 3:20 PM	CLOSED	CORRECTIVE	0402A	\$354.30
2022-021262	WEB REQUEST: DRINKING WATER FOUNTAIN THE WATER FOUNTAIN AT THE KNOTT DAIRY CENTER NEEDS THE FILTER CHANGED.	3/12/22 9:40 AM	CLOSED	CORRECTIVE	0402A	\$122.50
2022-021242	WEB REQUEST: LIGHTING-INDOOR PREVIOUS WORK REQUEST STATING HAD BEEN COMPLETE HAS NOT BEEN. 2022-020803. NOW THERE ARE 2 MORE LIGHTS OUT IN THE 0100 STAIR/CORRIDOR MAKING THINGS DARK. THANKS	3/11/22 12:31 PM	CLOSED	CORRECTIVE	0402A	\$33.55
2022-020803	WEB REQUEST: LIGHTING-INDOOR 2ND FLOOR LANDING SQUARE CEILING LIGHT IS OUT.	3/3/22 3:03 PM	CLOSED	CORRECTIVE	0402A	\$0.00
2022-020373	WEB REQUEST: WATER LEAKS/REPAIRS BROKEN WATER LINE TO EYE WASH. IT IS SHUT OFF.	2/25/22 9:22 AM	CLOSED	CORRECTIVE	0402G	\$556.56
2022-020329	WEB REQUEST: HEATING/COOLING WORK REQUEST FOR A PROPANE HEATER (ATN TIM)	2/24/22 12:32 PM	CLOSED	CORRECTIVE	0402G	\$460.59
2022-019457	KNOTT DAIRY CENTER FROST FREE VALVE WON'T SHUT OFF NORTH SIDE OF PEN 1 BY FIRST GRAIN BIN	2/22/22 11:07 AM	WORK COMPLETE	CORRECTIVE	402	\$139.14
2022-019307	DAIRY IS NEEDING A HEATER FOR THE COLD SNAP COMING UP	2/18/22 2:02 PM	CLOSED	CORRECTIVE	0402G	\$157.36
2022-018716	WEB REQUEST: COOLING/HEATING THE HEATER IN THE OFFICE WON'T TURN OFF.	2/9/22 1:25 PM	CLOSED	CORRECTIVE	0402A	\$633.98
2022-018547	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN) THE DRAIN IN THE VET ROOM IS PLUGGED. I TALKED TO LOGAN WHEN HE WAS OUT TODAY UNBLOCKING THE OTHER DRAINS AND HE SAID HE COULD GET TO IT TOMORROW.	2/7/22 1:51 PM	CLOSED	CORRECTIVE	0402E	\$268.40
2022-018490	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN) A COUPLE OF THE DRAINS IN THE NORTH SIDE OF BOX STALLS ARE PLUGGED AND HALF OF THE STALLS ARE FLOODED AND UNUSABLE. DAMON IS TOO BUSY TO COME AND UNPLUG THEM AND THE DAIRY IS SHORT STAFFED THIS WEEK SO WE WONT	2/6/22 8:35 AM	CLOSED	CORRECTIVE	0402A	\$134.20
2022-018489	KNOTTS DAIRY: BIG WATER LEAK NEED KEY FOR SHUT OFF VALVE.	2/6/22 8:19 AM	CLOSED	CORRECTIVE	402	\$128.00
2022-018002	WEB REQUEST: EQUIPMENT REPAIR ONE OF THE BIG HOT WATER TANKS AT THE KNOTT DAIRY CENTER NEEDS SERVICING, IT'S GIVING 2 ALARMS. T119: TIME TO CLEAN OUT CONDENSATE DRAIN TRAP AND T120: TIME TO REPLACE THE NEUTRALIZER. IT'S THE HOT WATER TANK ON THE FAR RI	1/29/22 10:57 AM	CLOSED	CORRECTIVE	0402A	\$201.30
2022-016688	WEB REQUEST: WATER AND SEWER PROBLEMS I AM REQUESTING THE PUMPER TRUCK TO UNPLUG THE DRAIN IN PEN 1	1/13/22 11:04 AM	CLOSED	CORRECTIVE	0402C	\$908.73

Appendix B – Service Requests

Knott Dairy Infrastructure

2022-016396	WEB REQUEST: LOCKS/KEY REPAIRS THE LOCK ON OUR GAS/DIESEL TANK PANEL IS GETTING WORN OUT AND HARD TO OPEN	1/10/22 9:35 AM	CLOSED	CORRECTIVE	402	\$101.85
2022-016395	WEB REQUEST: HEATING/COOLING THE HEATER IN THE CUDS OFFICE ISN'T WORKING	1/10/22 9:34 AM	CLOSED	CORRECTIVE	0402A	\$33.55
2022-016359	WEB REQUEST: WATER LEAKS/REPAIRS ONE OF THE FLEXIBLE WATER HOSES RUNNING TO THE RESIDENTIAL HOT WATER TANK IS LEAKING. IT'S THE LEFT HAND SIDE ONE.	1/8/22 10:00 AM	CLOSED	CORRECTIVE	0402A	\$67.10
2022-016089	WEB REQUEST: HEATING/COOLING I AM FILLING THIS WORK REQUEST FOR A HEATER THAT IS INSTALLED INSIDE THE DTX ROOM. IT QUIT WORKING A COUPLE OF WEEKS AGO. WE STARTED THERE A BARN HEATER FOR THE HOLIDAY PERIOD AND WE NEEDED TO SET UP A SECOND ONE DURING THE	1/4/22 12:11 PM	CLOSED	CORRECTIVE	0402M	\$1,078.35
2022-015885	KNOTTS DAIRY: PIPE BURST LOWER LEVEL MECH ROOM, POSSIBLE HOT WATER PIPE. WATER IS SPRAYING OUT.	1/1/22 11:01 AM	CLOSED	CORRECTIVE	0402G	\$454.90
2022-015878	KNOTT DAIRY: NEED PROPANE HEATER OR PROPANE FOR THE PARLOR AREA.	1/1/22 9:25 AM	CLOSED	CORRECTIVE	0402G	\$164.12
2022-015841	KNOTT DAIRY FIRE ALARM TROUBLE	12/30/21 12:46 PM	CLOSED	CORRECTIVE	402	\$145.92
2022-015636	WEB REQUEST: SINK REPAIR THE SINK IN OUR MILKROOM LEAKS FROM AROUND THE DRAIN, THE SEAL IS PROBABLY GOING BAD. IT'S THE SMALLER SINK ON THE RIGHT, NOT THE BIG ONE.	12/23/21 2:27 PM	CLOSED	CORRECTIVE	0402A	\$178.59
2022-013344	WEB REQUEST: WALL REPAIRS ONE OF THE SUPPORT BEAMS FOR THE ISO-BARN IS RUSTED OFF AT THE BOTTOM SO THE ROOF IS STARTING TO SAG. I DIDN'T KNOW HOW TO CLASSIFY THIS BUT IT'S DEFINITELY NOT A WALL REPAIR, IT'S STRUCTURAL.	12/4/21 1:32 PM	CLOSED	CORRECTIVE	0402H	\$2,028.12
2022-013258	WEB REQUEST: WATER AND SEWER PROBLEMS DAMON IS REQUESTING THE SERVICE OF THE PUMPER TRUCK TO CLEAN UP THE SEWER LINE AT THE PUMP HOUSE AT THE LAGOON. HE NEEDS TO PUMP WATER FROM THE LAGOON TO AN UPPER LAGOON. (SEE EXTRA DESCRIPTION)	12/2/21 3:39 PM	CLOSED	CORRECTIVE	402	\$0.00
2022-012921	PM CORRECTIVE ASSET 710967 REPAIR BACKFLOW KNOTT DAIRY 0402	11/30/21 2:26 PM	CLOSED	CORRECTIVE	402	\$139.14
2022-012799	WEB REQUEST: WATER AND SEWER PROBLEMS DAMON NEEDS HEAVY EQUIPMENT TO COME OUT WITH THE PUMP TRUCK TO CLEAN OUT A PIPE NEXT TO THE LAGOON.	11/29/21 8:08 AM	CLOSED	CORRECTIVE	402	\$685.11
2022-012751	WEB REQUEST: WATER LEAKS/REPAIRS THIS IS A REPORT FOR RAIN GUTTER REPAIR. WE HAVE THE RAIN GUTTER AT THE END OF PEN 5 BENT TO THE POINT THAT IT LEAKS INSTEAD OF RUNNING TO THE RUN OFF DISCHARGE. THE WATER FALLS IN THE PEN, AND IT WILL BE CREATING ICE F	11/24/21 10:24 AM	CLOSED	CORRECTIVE	0402E	\$2,007.84
2022-011926	KNOTT DAIRY TANK, PUMP ALARM	11/20/21 6:00 PM	CLOSED	CORRECTIVE	0402G	\$36.13
2022-011923	WEB REQUEST: PLUGGED DRAINS FLOOR DRAIN THERE'S WATER FLOWING INTO THE CATCH BASIN IN THE VET ROOM FASTER THAN WE CAN PUMP AND BUCKET IT OUT, SO WE NEED A BIGGER SUMP PUMP TO KEEP UP WITH THE WATER SO WE CAN TRY TO CLEAR THE DRAIN. OR THE DRAIN PIPE I	11/20/21 2:03 PM	CLOSED	CORRECTIVE	0402E	\$213.97
2022-011903	WEB REQUEST: DOOR REPAIRS THE DOOR IS MISALIGNED AND THE DOOR CLOSER SNAPPED FROM IT. NOW THE DOOR CLOSER IS ON THE WAY OF OPENING THE DOOR COMPLETELY, NOR CLOSES ALL THE WAY WITHOUT HAVING TO LIFT AND PULL VERY HARD. WE USES THAT DOOR MULTIPLE TIMES A	11/19/21 11:36 AM	CLOSED	CORRECTIVE	0402A	\$246.26
2022-011752	WEB REQUEST: ROOFING REPAIRS DRILL OUT POP RIVETS ON ONE SEAM, PREP SURFACE, APPLY CAULK AND LIFT SECTION INTO PLACE, POP RIVET, THEN STRIP JOINT IN WITH ETHERNOBOND AND TAPE. STRIP IN ALL SEAMS WITH ETHERNOBOND AND TAPE.	11/17/21 3:22 PM	CLOSED	CORRECTIVE	0402H	\$1,104.05
2022-011441	KNOTTS DAIRY [DISEGO ALARM] KNOTT DAIRY TANK PUMP ALARM TURNED ON.	11/12/21 9:57 PM	CLOSED	CORRECTIVE	0402G	\$72.26
2022-011231	WEB REQUEST: WATER AND SEWER PROBLEMS THE DRAIN IN PEN 5 IS CLOGGED, NEED TO HAVE THE PUMP TRUCK COME OUT AND JET THE LINE.	11/9/21 2:19 PM	CLOSED	CORRECTIVE	0402D	\$979.32
2022-011067	KNOTTS DAIRY - CCMS ALARM ON WELL PUMPS	11/5/21 8:29 PM	CLOSED	CORRECTIVE	0402G	\$144.50
2022-010537	WEB REQUEST: ROOFING REPAIRS SHEET METAL SHOP TO BUILD GUTTER DROP, ROOF SHOP TO DEMO DAMAGED DROP AND REPLACE WITH NEW.	10/29/21 9:57 AM	CLOSED	CORRECTIVE	0402E	\$699.14
2022-010389	WEB REQUEST: KNOTT DAIRY CNTR-RESIDENCE HEATING/COOLING NEED TO REPLACE OBSOLETE GAS FURNACE (LENNOX PULSE) WITH A CARRIER 80,000 BTU INPUT SEE DENNIS SEND THIS TO CONSTRUCTION IS WORKING AT THIS TIME CAPITAL PROJECT 1608-2022	10/28/21 5:29 AM	CLOSED	CORRECTIVE	0402I	\$8,033.12
2022-010242	WEB REQUEST: WALL REPAIRS THE SUPPORT COLUMNS IN THE HOSPITAL PEN ARE RUSTED AT THE BOTTOM. THEY NEED TO BE CUT OFF AND NEW SECTIONS WELDED BACK ON.	10/26/21 9:08 AM	ESTIMATING	CORRECTIVE	0402A	\$0.00
2022-010120	WEB REQUEST: WATER LEAKS/REPAIRS WE HAVE A VALVE BEHIND THE TANK ROOM THAT IS LEAKING. AS I UNDERSTAND WAS RECENTLY REPLACED. IT IS NOW LEAKING FROM A DIFFERENT PART UNDERNEATH THE VALVE IN THE MIDDLE.	10/25/21 8:23 AM	WORK COMPLETE	CORRECTIVE	0402A	\$262.99
2022-010119	WEB REQUEST: LIGHTING-INDOOR I AM NOT SURE IF THIS IS STILL CONSIDERED INDOOR LIGHTING. THERE ARE SEVERAL TUBE LAMPS WHERE ONLY ONE BAR IS WORKING. I COUNTED 5 LAMPS THAT NEED TUBES CHANGED AT THE HAY BARN	10/25/21 8:21 AM	CLOSED	CORRECTIVE	0402D	\$425.16
2022-010118	WEB REQUEST: HEATING/COOLING THE FURNACE AT THE RESIDENCE IS NOT WORKING. I CHECKED THE BREAKER AND CHANGED THE FILTER. YOU CAN CONTACT ME AT 520.450.0366 TO SCHEDULE A VISIT TO THE RESIDENCE	10/25/21 8:17 AM	CLOSED	CORRECTIVE	0402I	\$458.44
2022-010099	WEB REQUEST: WATER LEAKS/REPAIRS THE BRAND NEW BACKFLOW PREVENTER BEHIND THE MILK TANK IS LEAKING.	10/23/21 9:51 AM	CLOSED	CORRECTIVE	0402A	\$383.93
2022-009889	WEB REQUEST: ROOFING REPAIRS THE GUTTER OVER THE COMMODITY BARN IS CLOGGED AND WE DON'T HAVE A LADDER TALL ENOUGH TO GET UP AND UNCLOG IT. ALL THE WATER IS OVERFLOWING AND GETTING THE BEDDING WET.	10/22/21 2:08 PM	CLOSED	CORRECTIVE	0402N	\$484.58
2022-009888	WEB REQUEST: ROOFING REPAIRS THE ROOF OVER THE WEST ENTRANCE TO THE CALF BARN IS LEAKING.	10/22/21 2:05 PM	CLOSED	CORRECTIVE	0402B	\$484.58
2022-009481	WEB REQUEST: WATER AND SEWER PROBLEMS WE NEED THE CONCRETE TANK CLEANED OUT AT THE KNOTT DAIRY CENTER. THE VACUUM TRUCK FROM HEAVY EQUIPMENT HAS TO CLEAN OUT THE ROCK LIKE USUAL. THANK YOU.	10/20/21 8:49 AM	CLOSED	CORRECTIVE	0402M	\$1,624.75
2022-009336	KNOTTS DAIRY: ELECTRICAL ISSUES WITH WASHING MACHINERY.	10/17/21 7:13 AM	CLOSED	CORRECTIVE	0402A	\$144.50
2022-008640	WEB REQUEST: WATER AND SEWER PROBLEMS I AM REQUESTING THE PUMPER TRUCK TO UNPLUG THE FEED LINE TO THE MANURE SEPARATOR AT THE DAIRY. DAMON WILL CONTACT IAN TO TRY TO SET UP A DATE ASAP.	10/6/21 1:50 PM	CLOSED	CORRECTIVE	0402M	\$584.50
2022-008253	WEB REQUEST: WATER AND SEWER PROBLEMS TEST WATER AT DAIRY.	9/29/21 1:29 PM	CLOSED	CORRECTIVE	0402G	\$25.00
2022-007198	TULA YOUNG HASTINGS: ELECTRICAL REPAIR AND UPGRADES CAPITAL PROJECT 1608-2022	9/21/21 2:14 PM	SCHEDULED	ALTERATIONS	0402G	\$8,936.09
2022-007008	KNOTT DAIRY FIRE ALARM SOUNDING OFF; TELCO 1 FAULT	9/17/21 3:17 PM	CLOSED	CORRECTIVE	0402A	\$150.12
2022-006822	WEB REQUEST: WATER LEAKS/REPAIRS LEAK IN GROUND BEHIND DAIRY.	9/15/21 12:45 PM	CLOSED	CORRECTIVE	402	\$1,955.01
2022-006592	KNOTT DAIRY: ELECTRICIAN WASH SYSTEM FOR MILKING HAS ELECTRICAL ISSUE. GROUND FLOOR MILK ROOM. - URGENT- SOMEONE WILL BE ON SIGHT AS EARLY AS 6:30AM	9/11/21 3:18 PM	CLOSED	CORRECTIVE	0402A	\$566.66
2022-005779	WEB REQUEST: FLOORING - REPAIRS HAVE BEEN TOLD THAT ONE OF THE RUBBER SAFETY STRIPS ON THE STAIRWAY HAS BEEN TORN AND IS CREATING A SAFETY HAZARD. THANK YOU	8/27/21 2:59 PM	SCHEDULED	CORRECTIVE	0402A	\$70.86
2022-005612	CHECK POWER SOURCE AT KNOTT DAIRY FARMS	8/25/21 2:32 PM	WORK COMPLETE	CORRECTIVE	0402G	\$6,381.56
2022-005591	SUPERVISORY SIGNAL CSM REPORTED THAT THERE IS A ZONE PANEL IN SUPERVISORY SIGNAL, PLEASE CHECK.	8/25/21 12:00 PM	CLOSED	CORRECTIVE	0402G	\$75.06
2022-005290	KNOTT DAIRY FARM: TELCO 1 & 2 TROUBLE ALARMS	8/21/21 12:38 AM	CLOSED	CORRECTIVE	402	\$36.13
2022-004556	WEB REQUEST: WATER LEAKS/REPAIRS OUR SEPARATOR FEED LINE IS LEAKING SO OUR MANURE SEPARATOR IS SHUT OFF CURRENTLY. DALE AND HEAVY EQUIPMENT ALREADY LOOKED AT IT THIS IS JUST THE WORK REQUEST.	8/17/21 1:33 PM	CLOSED	CORRECTIVE	0402M	\$986.45
2022-004335	KNOTT TANK: CHECKED WATER TANK THAT WAS IN ALARM WHEN FOMS STARTED	8/12/21 8:13 PM	CLOSED	CORRECTIVE	0402G	\$144.50
2022-003785	WEB REQUEST: WATER LEAKS/REPAIRS CALIBRATE CHLORINE SENSORS SEND TO CONTROL SHOP	8/5/21 10:00 AM	CLOSED	CORRECTIVE	0402E	\$283.44
2022-003688	KNOTT DAIRY FARMS SYSTEM PERIPHERAL TROUBLE	8/4/21 6:25 AM	CANCELED	CORRECTIVE	402	\$0.00
2022-003331	FOS: KNOTT DAIRY: WATER DISTRIBUTION REPAIRS AT KNOTT DAIRY CAPITAL PROJECT 1161-2020	7/29/21 2:12 PM	CLOSED	ALTERATIONS	402	\$1,321.83
2022-003327	WEB REQUEST: WATER AND SEWER PROBLEMS PUMP SINGLE COMPARTMENT SEPTIC TANK	7/29/21 2:02 PM	CLOSED	CORRECTIVE	0402A	\$1,020.24
2022-003326	WEB REQUEST: WATER AND SEWER PROBLEMS PUMP HIGH SOLIDS SEPTIC TANK.	7/29/21 2:00 PM	CLOSED	CORRECTIVE	0402L	\$1,020.24
2022-002808	KNOTTS DAIRY FARM DRAIN OVERRUNNING, WORKERS CANNOT GET IT UNPLUGGED. REQUESTED MAINTAINED AND VAC-TRUCK	7/23/21 6:37 AM	CLOSED	CORRECTIVE	0402E	\$3,341.45
2022-002586	KNOTT DAIRY CENTER FIRE ALARM TROUBLE	7/21/21 8:39 AM	CLOSED	CORRECTIVE	402	\$17.72
2022-002508	KNOTT DAIRY CENTER WILLOW TREE SOME BRANCHES LOOK UNTRUSTWORTHY, PLEASE TRIM THEM SO THEY DON'T INJURE ANYONE	7/20/21 12:18 PM	CLOSED	CORRECTIVE	0402G	\$1,549.50
2022-001858	KNOTT DAIRY CENTER NO POWER TO MILK PUMP, PLEASE COME CHECK OUT AND REPAIR.	7/16/21 8:08 AM	CLOSED	CORRECTIVE	0402A	\$171.73
2022-001661	WEB REQUEST: WATER LEAKS/REPAIRS THE BRAND NEW BACK FLOW VALVE IN THE MILK TANK ROOM IS LEAKING WORSE THAN THE OLD ONE DID.	7/13/21 2:11 PM	CLOSED	CORRECTIVE	0402A	\$175.22
2022-001284	KNOTT DAIRY CENTER EXCAVATOR HIT AN ELECTRICAL LINE, NEED ELECTRICIANS TO COME OUT TO MAKE SURE THAT IT ISN'T A HOT LINE.	7/7/21 12:40 PM	CLOSED	CORRECTIVE	402	\$73.63
2022-001183	KNOTT DAIRY BEHIND DAIRY FEEDING BARN THERE IS A PIPE LEAKING, PLEASE COME REPAIR.	7/6/21 10:06 AM	CLOSED	CORRECTIVE	0402D	\$208.71
2022-001040	WEB REQUEST: WALL REPAIRS THE NEW DRAIN PIPE THEY INSTALLED FOR OUR WASH WATER WENT THROUGH A WALL DOWN IN THE MILK TANK ROOM. THE USDA INSPECTOR SAID THE HOLE IN THE WALL HAD TO BE PATCHED UP, NOT SURE IF THIS IS SOMETHING CARPENTRY IS COMING BACK FOR	7/1/21 1:42 PM	CANCELED	CORRECTIVE	0402A	\$0.00
2022-001038	WEB REQUEST: WINDOW REPAIRS THE SCREENS ON OUR WINDOWS IN THE MILK WASH ROOM NEED TO BE REPLACED, THE USDA INSPECTOR NOTED THIS.	7/1/21 1:23 PM	CLOSED	CORRECTIVE	0402A	\$360.62
2022-001015	KNOTT DAIRY CENTER POWER OUTAGE IN MOST ALL OF THESE BUILDINGS	7/1/21 9:56 AM	CLOSED	CORRECTIVE	402	\$1,097.31
2021-029467	WATER AND SEWER PROBLEMS I REQUESTING TO HAVE THE PUMPER TRUCK TO CLEAN THE SUMP PIT THAT IS BEHIND THE CALF BARN. THE WATER THAT IS GETTING PUMPED TO THE FLUME IS COMING WITH A LOT OF SAND AND GETS THE FLUME SYSTEM OBSTRUCTED.	6/29/21 1:12 PM	CLOSED	CORRECTIVE	0402B	\$3,148.06
2021-029350	WEB REQUEST: AIR FLOW ISSUES KNOTT DAIRY // THE FAN LOCATED ABOVE THE SINK IN THE MILK TANK ROOM IS NOT WORKING. PLEASE REPAIR ASAP.	6/28/21 12:04 PM	CLOSED	CORRECTIVE	0402A	\$378.55
2021-029315	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING PUMP DOWN CONCRETE TANK AT DAIRY MANURE SEPARATOR, AND FLUME LINE.	6/28/21 8:04 AM	CLOSED	CORRECTIVE	0402M	\$0.00
2021-029311	WEB REQUEST: KNOTT DAIRY CNTR - OFF & MILK PARLOR FLOORING - REPAIRS THE FLOOR IN OUR MILK ROOM IS GETTING WORN OUT WITH THE WASH WATER. I SENT RICH MILLER AN EMAIL ABOUT COMING TO LOOK AT IT. CAPITAL PROJECT 1524-2021 21-23 MCR BATCHED FLOOR REPAI	6/28/21 7:10 AM	SME REVIEW	CORRECTIVE	0402A	\$0.00
2021-027852	KNOTT DAIRY FARMS: SYSTEM PERIPHERAL ALARM	6/15/21 4:41 AM	CLOSED	CORRECTIVE	0402G	\$55.45
2021-027744	WEB REQUEST: DOOR REPAIRS PLEASE CHANGE DOOR TO M1000 OR Z2000 LOCK FOR CHLORINE ROOM, DAIRY WELL HOUSE #0402A	6/14/21 6:13 AM	CLOSED	CORRECTIVE	0402A	\$34.15
2021-027413	WEB REQUEST: ELECTRICAL REPAIR THE FAN IN THE MILK TANK ROOM IS STILL NOT WORKING, I THINK DAVE ORDERED THE MOTOR FOR IT A WHILE AGO BUT THAT'S THE LAST I HEARD ABOUT IT.	6/6/21 12:18 PM	CLOSED	CORRECTIVE	0402A	\$34.55

Appendix B – Service Requests
Knott Dairy Infrastructure

2021-027237	WEB REQUEST: WATER LEAKS/REPAIRS THERE IS WATER GETTING COLLECTED UNDERNEATH THE VINYL FLOOR UNDERNEATH MY DESK. IF YOU STEP ON THE SQUARES, THERE IS WATER COMING OUT. I AM NOT SURE IF IS RELATED TO THE WATER VALVE OUTSIDE. I NOTICED TODAY, BUT THE ISS	6/2/21 6:45 PM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-027153	KNOTT DAIRY: SYSTEM IN ALARM PLEASE CHECK.	6/2/21 7:55 AM	CLOSED	CORRECTIVE	0402G	\$145.37
2021-025130	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN THE DRAIN IN THE MILK TANK ROOM IS CLOGGED AGAIN. OUR WASH WATER (WHICH CURRENTLY OVERFLOWS INTO THAT ROOM) HAS MILK IN IT AND IT PROBABLY GOT CLOGGED WITH MILK SOLIDS. I CAN'T GET IT UNCLOGGED SO THERE'S A BUNC	5/6/21 11:48 AM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-024704	WEB REQUEST: BACKFLOW REPAIR REPLACE BACK FLOW	4/29/21 6:56 AM	CANCELED	CORRECTIVE	0402A	\$0.00
2021-024479	KNOTT DAIRY PUMPHOUSE: UPGRADE CONTROLS CAPITAL PROJECT 1527-2021	4/23/21 2:23 PM	CANCELED	ALTERATIONS	0402G	\$0.00
2021-024129	WEB REQUEST: LIGHTING-INDOOR NEED LED BULBS INSTALLED IN KNOTT DAIRY CENTER BARN. SEND TO JUSTIN	4/21/21 3:27 PM	CLOSED	CORRECTIVE	0402E	\$403.33
2021-023633	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN THERE'S A DRAIN IN THE BACK OF THE MILK TANK ROOM THAT DRAINS PRETTY SLOW. WE'RE GETTING WORK DONE IN THAT ROOM LATER THIS WEEK SO HOPING IF IT'S POSSIBLE TO GET THE DRAIN CLEANED OUT BEFORE WEDNESDAY. SHORT NOT	4/19/21 9:54 AM	CLOSED	CORRECTIVE	0402A	\$34.55
2021-023554	WEB REQUEST: LIGHTING-INDOOR CEILING LIGHT IS BLINKING ON AND OFF. THE REST OF THE LIGHTS ARE WORKING NORMAL.	4/16/21 10:30 AM	CLOSED	CORRECTIVE	0402A	\$389.20
2021-023239	WEB REQUEST: WATER LEAKS/REPAIRS THERE'S A LEAKING WATER VALVE IN THE MILK TANK ROOM DOWNSTAIRS IN THE BASEMENT, IT'S ROOM AT THE BACK OF THE TANK NOT THE ONE THAT LEADS OUTSIDE.	4/11/21 8:58 AM	CLOSED	CORRECTIVE	0402A	\$277.79
2021-023236	WEB REQUEST: WATER LEAKS/REPAIRS THE HOSE SPIGOT AT THE EAST END OF THE CALF BARN NEXT TO THE SEPARATOR ROOM IS LEAKING A STEADY STREAM. I TRIED TO FIX IT BUT IT WOULDN'T STOP.	4/10/21 1:54 PM	CLOSED	CORRECTIVE	0402B	\$70.52
2021-023235	WEB REQUEST: ROOFING REPAIRS THERE'S A LEAK IN THE ROOF OVER THE VET ROOM, NORTHWEST SIDE OF THE ROOM ABOVE THE CENTRIFUGE THAT'S ON THE COUNTER.	4/10/21 12:25 PM	CLOSED	CORRECTIVE	0402E	\$362.89
2021-023154	WEB REQUEST: HEATING/COOLING KNOTT DAIRY TANK 404K02B PMP ALM IS CURRENTLY ON. INVESTIGATE FOR CONTROL SHOP.	4/8/21 10:32 AM	CLOSED	CORRECTIVE	0402G	\$493.15
2021-022867	KNOTT DAIRY CNTR-PUMPHOUSE REPLACE CHLORINE DETECTORS AT KNOTT DAIRY SEND TO CONTROL SHOP CAPITAL PROJECT 1144-2020	4/2/21 12:35 PM	CLOSED	CORRECTIVE	0402G	\$3,195.14
2021-022844	KNOTT DAIRY CENTER FUEL TANKS NO POWER	4/2/21 8:29 AM	CLOSED	CORRECTIVE	0402J	\$73.39
2021-022733	WEB REQUEST: ROOFING REPAIRS THE ROOF ABOVE THE VET ROOM AND THE CLOSE UP PEN NEEDS TO BE RESURFACED OR REPLACED, I TALKED WITH RANDY ABOUT IT THIS MORNING AND HE LOOKED AT IT.	3/31/21 12:50 PM	CANCELED	CORRECTIVE	0402E	\$0.00
2021-022700	WEB REQUEST: KNOTT DAIRY CNTR - BARN ROOFING REPAIRS ESTIMATE REINFORCED COATING ON THE FLAT ROOF OF 402E. SEND TO ROOF SHOP CAPITAL PROJECT 1609-2022	3/31/21 8:50 AM	SCHEDULED	CORRECTIVE	0402E	\$1,277.55
2021-022570	WEB REQUEST: ROOFING REPAIRS THE CEILING IN THE CLOSE UP PEN IS LEAKING WATER SO THERE HOLE IN THE ROOFING SOMEWHERE, IT'S PRETTY BAD. IT'S ON THE SOUTH SIDE OF THE PEN CLOSE TO THE VET ROOM INSIDE THE COVERED AREA. YOU CAN SEE WHERE THE BOARDS ARE SWO	3/29/21 11:22 AM	CLOSED	CORRECTIVE	0402E	\$789.89
2021-022518	KNOTT DAIRY NO WATER PRESSURE	3/27/21 7:14 PM	CLOSED	CORRECTIVE	0402G	\$312.49
2021-022443	KNOTT'S DAIRY CHLORINE ALARM SOUNDING, FIRE DEPARTMENT RESPONDING, NEED ASSISTANCE FROM MAINTENANCE	3/25/21 5:35 PM	CLOSED	CORRECTIVE	0402G	\$253.28
2021-020805	WEB REQUEST: WATER AND SEWER PROBLEMS WE NEED THE FLUME LINE BETWEEN PEN 1 AND 5 REPLACED. WE'VE ALREADY MET WITH HEAVY EQUIPMENT, THE PLUMBERS AND THE CARPENTERS ABOUT THIS JUST NEED TO TURN IN A WORK REQUEST TO GET THE BALL ROLLING.	3/8/21 12:49 PM	CLOSED	CORRECTIVE	402	\$9,464.51
2021-020774	WEB REQUEST: DRINKING WATER FOUNTAIN THE FILTER IN THE DRINKING FOUNTAIN NEEDS TO BE CHANGED.	3/7/21 12:23 PM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-020730	WEB REQUEST: LIGHTING-INDOOR REPLACE T-8 BULBS WITH LED. SEND TO DAVE OLSON.	3/5/21 9:50 AM	CLOSED	CORRECTIVE	0402A	\$292.46
2021-020125	WEB REQUEST: WATER AND SEWER PROBLEMS I REQUESTING TO HAVE THE PUMPER TRUCK TO CLEAN THE SUMP PIT THAT IS BEHIND THE CALF BARN. THE WATER THAT IS GETTING PUMPED TO THE FLUME IS COMING WITH A LOT OF SAND AND GETS THE FLUME SYSTEM OBSTRUCTED.	2/24/21 12:36 PM	CLOSED	CORRECTIVE	0402B	\$1,233.08
2021-020124	WEB REQUEST: WATER AND SEWER PROBLEMS HIGH PRIORITY. COULD YOU PLEASE SEND THE PUMPER TRUCK TO CLEAN UP THE FLUME THAT BRING THE WATER TO THE PEN 5 BASIN, AND ALSO BETWEEN PEN 5 AND PEN 1. ONCE YOU ARE HERE WE MIGHT NEED TO CLEAN THE CLOSE UP DRAIN AND	2/24/21 12:33 PM	CANCELED	CORRECTIVE	0402D	\$0.00
2021-019908	WEB REQUEST: ROOFING REPAIRS FIX GUTTER DOWNSPOUT AND FABRICATE NEW GUTTER SLEEVE INSERT.	2/22/21 10:07 AM	CLOSED	CORRECTIVE	0402A	\$715.11
2021-019296	KNOTT'S DAIRY - TROUBLE ALARM STATES 'FIRE ALARM', ZONE 1 NO RESTORE	2/16/21 2:32 AM	CLOSED	CORRECTIVE	402	\$142.39
2021-019108	WEB REQUEST: UTILITY FAILURES (ELECTRICA REPAIR CHEMICAL FEED PUMP AT KNOTT'S DAIRY #0402	2/12/21 7:58 AM	CLOSED	CORRECTIVE	0402A	\$207.27
2021-018869	PLEASE CANCEL - I ALREADY TALKED TO JACKIE ABOUT THIS ONE BUT JUST WANTED TO FOLLOW UP WITH A WORK REQUEST. THE BRAND NEW DRAIN PIPE FOR THE SHOWER IN THE APARTMENT UPSTAIRS IS LEAKING. IT'S COMING OUT OF THE PEE TRAP IN THE CEIL	2/9/21 12:35 PM	CANCELED	CORRECTIVE	0402A	\$0.00
2021-018868	PLEASE CANCEL - KNOTT DAIRY CENTER RESIDENCE THE SHOWER THAT WAS JUST INSTALLED IS LEAKING, PLEASE COME REPAIR. WATER LEAKS/REPAIRS 2 WATER PIPES DOWNSTAIRS ARE LEAKING. I THINK THEY ARE THE 2 BRAND NEW LINES THAT WERE PUT IN FOR THE APARTMENT UPST	2/9/21 12:34 PM	CANCELED	CORRECTIVE	0402G	\$0.00
2021-018867	WEB REQUEST: WATER LEAKS/REPAIRS 2 WATER PIPES DOWNSTAIRS ARE LEAKING. I THINK THEY ARE THE 2 BRAND NEW LINES THAT WERE PUT IN FOR THE APARTMENT UPSTAIRS, THEY ARE RIGHT NEXT TO EACH OTHER. YOU CAN SEE THE WATER DRIPPING ON THE FLOOR.	2/9/21 12:33 PM	CANCELED	CORRECTIVE	0402A	\$0.00
2021-018806	WEB REQUEST: ELECTRICAL REPAIR THE FAN IN THE MILK TANK ROOM ISN'T WORKING. EITHER THE MOTOR IS GOING OUT OR THE FAN IS GUMMED UP WITH A BUNCH OF STUFF.	2/8/21 3:05 PM	CLOSED	CORRECTIVE	0402A	\$967.69
2021-018805	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN THE DRAIN IN THE MIDDLE OF THE CALF BARN IS CLOGGED. SOMEONE DROPPED A SCREW DRIVER DOWN IT A COUPLE MONTHS AGO AND IT WAS WORKING BUT NOT IT'S NOT. IT GOES STRAIGHT DOWN AT LEAST 4 FEET BECAUSE WE CAN'T REACH D	2/8/21 3:04 PM	CLOSED	CORRECTIVE	0402B	\$449.09
2021-018776	WEB REQUEST: HEATING/COOLING WE HAVE AN ETHYLENE GLYCOL LEAK IN OUR HOLDING PEN FLOOR HEATING SYSTEM. THE LEAK IS IN THE MECHANICAL ROOM DOWNSTAIRS RIGHT ABOVE ONE OF THE DRYERS. LOOKS LIKE THERE ARE 2 GASKETS THAT MIGHT BE GOING OUT, IT'S COMING FROM	2/8/21 9:31 AM	CLOSED	CORRECTIVE	0402A	\$363.71
2021-018570	WEB REQUEST: DOOR REPAIRS THE OUTSIDE DOOR TO THE MILK TANK ROOM WON'T CLOSE ALL THE WAY.	2/3/21 1:41 PM	CLOSED	CORRECTIVE	0402A	\$297.73
2021-018371	WEB REQUEST: EQUIPMENT REPAIR REPLACE HOT WATER CIRC PUMP. SEND TO DAVE OLSON	1/29/21 2:34 PM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-018255	WEB REQUEST: HEATING/COOLING COULD SOMEONE PLEASE CHECK WHY THERE IS NO HOT WATER AVAILABLE FOR THE SHOWER IN THE WOMEN'S BATHROOM					
2021-018255	THANK YOU	1/27/21 4:59 PM	CLOSED	CORRECTIVE	0402A	\$476.73
2021-018175	WEB REQUEST: FAUCET REPAIR COULD SOMEONE PLEASE CHECK THE WATER VALVES FOR THE EYE WASH STATION THERE IS NO WATER COMING AT ALL FROM THE VALVE. WE COULDN'T LOCATE A CLOSE VALVE SO, I WONDER IF IT HAS SOMETHING TO DO WITH THE WORK FOR THE SHOWER AT THE	1/26/21 1:41 PM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-017936	WEB REQUEST: COOLING/HEATING THE WATER HEATER AT THE HERDSMAN RESIDENCE KEEPS SHUTTING DOWN ABOUT THREE TIMES A WEEK. RECENTLY NEED TO REPLACE HOT WATER HEATER FULL OF CRUD	1/21/21 11:12 AM	CLOSED	CORRECTIVE	0402L	\$1,363.45
2021-015368	KNOTT'S DAIRY FARM: TROUBLE ALARM	1/16/21 2:53 AM	CLOSED	CORRECTIVE	402	\$182.83
2021-015210	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING POWER JET WASTE WATER FLUME AT KNOTT DAIRY CENTER (2165-0001)	1/13/21 11:07 AM	CLOSED	CORRECTIVE	0402M	\$151.58
2021-015184	KNOTT DAIRY CENTER ALL BUILDINGS THERE ARE A TOTAL OF 51 LIGHTS OUT THROUGHOUT ALL OF THESE BUILDINGS- 44INCANDESCENT AND 7 OF THE REGULAR TWISTY LIGHT BULBS. MAY NEED A LIFT TO REPLACE IN SOME AREAS	1/13/21 8:35 AM	CLOSED	CORRECTIVE	402	\$1,110.89
2021-014346	WEB REQUEST: HEATING/COOLING THE HEATER AT THE BEEF CENTER RESIDENCE WAS REPORTED AS NOT STAYING. SOME ONE CAME AND SERVICE IT BUT STILL DOES NOT STAY ON SO IT IS NECESSARY TO TURN IT ON BEFORE USING IT.					
2021-014346	THANK YOU					
2021-014346	CELINA	1/7/21 4:28 PM	CLOSED	CORRECTIVE	0402L	\$255.91
2021-014345	WEB REQUEST: ELECTRICAL REPAIR THE OUTLET FOR THE REFRIGERATOR AT THE MILK ROOM IS NOT WORKING. IT WAS RECENTLY CHANGED WITH A PREVIOUS WORK ORDER BUT STILL IT DOES NOT WORK. ALSO, THERE IS A SECOND OUTLET THAT IS NOT WORKING BEHIND THE WASHER IN THE S	1/7/21 4:25 PM	CLOSED	CORRECTIVE	0402A	\$772.06
2021-013377	WEB REQUEST: HEATING/COOLING CONTROL VALVE BROKEN ON APARTMENT HEATER	12/29/20 1:50 PM	CLOSED	CORRECTIVE	0402A	\$140.90
2021-012382	WEB REQUEST: SURPLUS DISPOSAL	12/23/20 8:59 AM	WIP	SPECIAL REQUEST	0402G	\$0.00
2021-012022	WEB REQUEST: ELECTRICAL REPAIR I AM REPORTING THAT THE OUTLET THAT WE USE FOR THE FRIDGE KEEPS TRIPPING. WE ARE USING AN EXTENSION CORD TO CONNECT TO A DIFFERENT OUTLET. THANK YOU	12/15/20 8:36 PM	CLOSED	CORRECTIVE	0402A	\$673.97
2021-011852	WEB REQUEST: HEATING/COOLING THIS REPORT IS FOR THE WATER HEATER AT THE HERDSMAN RESIDENCE. THE WATER HEATER KEEPS TURNING OFF EVERY COUPLE OF DAYS. IT TURNS BACK ON BUT, I WAS WONDERING IF A SENSOR IS BAD.					
2021-011852	THANK YOU	12/14/20 12:25 PM	CLOSED	CORRECTIVE	0402L	\$839.82
2021-011665	WEB REQUEST: EQUIPMENT REPAIR REPLACE BATTERY ON EMERGENCY GENERATOR FOR KNOTT DAIRY FARM. PM REFERENCE 2021-010782. SEND TO DAVE OLSON.	12/10/20 2:52 PM	CLOSED	CORRECTIVE	0402A	\$510.30
2021-011408	KNOTT DAIRY: PUMP HOUSE CONTROLS & WATER DISTRIBUTION REPAIRS CAPITAL PROJECT 1161-2020	12/4/20 9:37 AM	CANCELED	ALTERATIONS	402	\$0.00
2021-011217	WEB REQUEST: VENTILATION PLEASE PROVIDE AN ESTIMATE FOR CHLORINE ROOM HVAC INSTALLATION CAPITAL PROJECT 1167-2020	12/1/20 9:01 AM	CLOSED	CORRECTIVE	0402G	\$11,577.33
2021-011179	KNOTT DAIRY CENTER ALL BUILDINGS THERE ARE A TOTAL OF 51 LIGHTS OUT THROUGHOUT ALL OF THESE BUILDINGS- 44INCANDESCENT AND 7 OF THE REGULAR TWISTY LIGHT BULBS. MAY NEED A LIFT TO REPLACE IN SOME AREAS	11/30/20 1:32 PM	CLOSED	CORRECTIVE	402	\$205.53
2021-010933	DAIRY FARM - WATER HEATER ALARM. THIS IS THE WATER HEATER IN THE FIRST BUILDING TO THE LEFT UPON ARRIVAL, BASEMENT MECHANICAL ROOM. WATER HEATER #2.	11/22/20 9:40 AM	CLOSED	CORRECTIVE	0402I	\$460.96

Appendix B – Service Requests
Knott Dairy Infrastructure

2021-010932	WEB REQUEST: EQUIPMENT REPAIR THE BACKUP VACUUM PUMP AT THE KNOTT DAIRY CENTER IS MAKING AN ODD NOISE. JOE WHITNEY TOOK A LOOK AT OUR OTHER VACUUM PUMP AND WE GOT THAT ONE REPLACED BUT WE'D LIKE HIM TO CHECK OUT OUR BACK UP TOO.	11/22/20 7:45 AM	CLOSED	CORRECTIVE	0402A	\$36.70
2021-010348	WEB REQUEST: WATER AND SEWER PROBLEMS I AM REQUESTING THE CLEANING OF THE DRAINAGE FOR THE ISO BARN (DRY COWS). WE ALREADY DID AS MUCH AS WE COULD BUT IS PRETTY PLUGGED UP. THANK YOU	11/19/20 8:23 AM	CLOSED	CORRECTIVE	0402H	\$743.51
2021-010304	WEB REQUEST: WATER AND SEWER PROBLEMS I AM REQUESTING A FLUSH FOR THE FLUME BETWEEN PENS 5 AND 1 (PER DAMON RECOMMENDATION) SINCE WE CONTINUE TO HAVE OVERFLOW PROBLEMS WHEN IT IS IN USE. THANK YOU	11/18/20 12:33 PM	CLOSED	CORRECTIVE	0402C	\$678.89
2021-010191	WEB REQUEST: WATER AND SEWER PROBLEMS KNOTT DAIRY TANK ALARM SEND TO PLUMBING SHOP	11/17/20 6:57 AM	CLOSED	CORRECTIVE	402	\$0.00
2021-009888	WEB REQUEST: WATER AND SEWER PROBLEMS KNOTT DAIRY TANK PUMP IS IN ALARM. PLEASE INVESTIGATE. UTILITIES PLUMBERS	11/9/20 11:19 AM	CLOSED	CORRECTIVE	0402G	\$0.00
2021-009856	WEB REQUEST: PROJECT MANAGEMENT PLEASE ESTIMATE TO FABRICATE AND INSTALL A NEW METAL SIGN FOR THE SWING GATE THAT HAS BEEN ESTIMATED (WORK ORDER 2021-007594)	11/9/20 8:21 AM	CANCELED	ALTERATIONS	402	\$0.00
2021-009838	WEB REQUEST: COOLING/HEATING NOW THE HEATER AT THE STUDENT QUARTER IS LEAKING FROM THE BOTTOM. THE STUDENT TURNED THAT HEATER OFF. THANK YOU	11/8/20 3:21 PM	CLOSED	CORRECTIVE	0402A	\$731.01
2021-009837	WEB REQUEST: ELECTRICAL REPAIR COULD SOMEBODY CHECK THE TWO HEATERS AT THE CALF BARN I TRY PLUGGING THE EXTENSION CORD TODAY AND MADE A SHORT NOISE AND THEY DIDN'T WORK. THANK YOU	11/8/20 3:19 PM	CLOSED	CORRECTIVE	0402B	\$207.27
2021-009836	WEB REQUEST: ELECTRICAL REPAIR LAMP AT THE MILKING PARLOR IS FALLING OFF. IT IS UNSUPPORTED FROM ONE SIDE. THANK YOU	11/8/20 6:43 AM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-009832	WEB REQUEST: ELECTRICAL REPAIR THE FIRST LAMP AT THE CALF BARN GROUP PENS IS OUT. COULD SOMEONE COME AND CHECK IT OUT. IT MIGHT JUST BE THE BARS. THANK YOU.	11/7/20 2:30 PM	CLOSED	CORRECTIVE	0402B	\$69.09
2021-009597	WEB REQUEST: KNOTT DAIRY CNTR-OFF & MILK PARLOR WATER AND SEWER PROBLEMS BROKEN FLOOR DRAIN AT KNOTT DAIRY CAPITAL PROJECT 1167-2020	11/3/20 1:28 PM	CLOSED	CORRECTIVE	0402A	\$24,340.91
2021-009595	KNOTT DAIRY CENTER STUDENT RESIDENCE KITCHEN WATER LEAK, PLEASE INVESTIGATE AND REPAIR ASAP	11/3/20 12:57 PM	CLOSED	CORRECTIVE	0402I	\$138.18
2021-009593	WEB REQUEST: COOLING/HEATING THE THERMOSTAT FOR THE OFFICE RADIATOR ISN'T CONTROLLING STEAM TEMPERATURE. I TALKED TO THE TECH ABOUT IT.	11/3/20 12:52 PM	CLOSED	CORRECTIVE	0402A	\$209.99
2021-009532	WEB REQUEST: ELECTRICAL REPAIR OUR MAIN VACUUM PUMP IS NOT WORKING, IT'S RUN BY A ELECTRIC MOTOR AND THE MOTOR DOESN'T SEEM TO BE TURNING ON. THE MAIN VACUUM PUMP IS LOCATED DOWNSTAIRS NEXT TO THE CHEMICALS AND IT HAS A NEW BLUE PAINT JOB ON IT.	11/2/20 2:57 PM	CLOSED	CORRECTIVE	0402A	\$762.00
2021-009525	WEB REQUEST: LIGHTING-OUTDOOR THE STREET LIGHT ACROSS FROM THE KNOTT DAIRY CENTER IS BURNED OUT.	11/2/20 2:53 PM	CLOSED	CORRECTIVE	402	\$288.78
2021-009256	WEB REQUEST: WATER AND SEWER PROBLEMS THE PIPE RUNNING BETWEEN THE DTX SEPARATOR ROOM AND THE CONCRETE TANK IS CLOGGED SO WE NEED THE JET TRUCK TO COME CLEAN IT OUT.	10/28/20 11:19 AM	CLOSED	CORRECTIVE	0402M	\$1,018.26
2021-008509	KNOTT DAIRY RESIDENCE - HEATING/COOLING I AM REPORTING THAT THE FURNACE FOR THE RESIDENCE HAS NOT BEEN TURNED ON FOR THE RENTER.	10/22/20 3:20 PM	CANCELED	CORRECTIVE	0402I	\$0.00
2021-008489	WEB REQUEST: KNOTT DAIRY CNTR-ISOLATION BARN ROOFING REPAIRS THE GUTTERS ON THE ISOLATION BARN ARE LEAKING AT THE JOINTS AND HAVE MULTIPLE SAGS IN THEM. I SPOKE WITH RANDY OVER THE PHONE ABOUT THE ISSUE. BUILDING 402-H REHANG & SEAL PROJECT 1166-2020	10/22/20 1:25 PM	CLOSED	CORRECTIVE	0402H	\$9,921.91
2021-008293	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING SEWER JET FLUSH FLUME AT DAIRY	10/20/20 2:15 PM	CLOSED	CORRECTIVE	0402M	\$880.27
2021-008194	WEB REQUEST: HEATING/COOLING I AM REPORTING THAT THE FURNACE FOR THE RESIDENCE HAS NOT BEEN TURNED ON FOR THE RENTER. THERE ARE LOW TEMPERATURES COMING O	10/19/20 9:49 AM	WORK COMPLETE	CORRECTIVE	0402L	\$5,142.22
2021-007851	KNOTTS DAIRY CENTER REQUEST TO TURN FURNACE ON.	10/12/20 3:50 PM	CLOSED	CORRECTIVE	0402G	\$149.84
2021-007729	WEB REQUEST: LAWN CARE FOR SAFETY AND SECURITY REASONS, I AM REQUESTING LANDSCAPING/GROUNDS SERVICE FOR THE KNOTT DAIRY. THE SHRUB BELOW 402A OF THE KNOTT DAIRY ENTRANCE DRIVE HAS A SIGN THAT IS PARTIALLY OBTSCURED BY SHRUBBERY THAT NEEDS TO BE TRIMMED	10/9/20 3:02 PM	CLOSED	CORRECTIVE	402	\$436.59
2021-007670	WEB REQUEST: WATER AND SEWER PROBLEMS KNOTT DAIRY WELL INSPECTION OCTOBER	10/8/20 1:34 PM	CLOSED	CORRECTIVE	0402G	\$2,072.73
2021-007594	WEB REQUEST: PROJECT MANAGEMENT WILL YOU PLEASE PROVIDE AN ESTIMATE TO INSTALL A GATE WHERE COUNTRY CLUB ROAD TURNS INTO THE KNOTT DAIRY AND BEEF FACILITY DRIVEWAY. AN ESTIMATE FOR AN AUTOMATED GATE AND A MANUAL GATE BOTH IS WHAT I WOULD LIKE. ADDITIO	10/7/20 1:19 PM	CANCELED	ALTERATIONS	402	\$0.00
2021-007364	WEB REQUEST: WATER AND SEWER PROBLEMS THIS IS A REPORT FOR THE CONSTRUCTION CREW. WE HAVE VERY SLOW DRAIN IN THE MILK ROOM THAT WAS REPORTED BEFORE. AS I UNDERSTAND, THE LINE WAS PREVIOUSLY CHECKED WITH A CAMERA AND WAS DETECTED AS COLLAPSED. WE WASH T	10/2/20 1:25 PM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-007306	WEB REQUEST: PROJECT MANAGEMENT CAHNRS REQUESTS SECURITY CAMERAS AND OTHER ADDITIONAL BARRIERS TO PREVENT UNAUTHORIZED ACCESS TO THE KNOTT DAIRY AND BEEF CENTER. ONE SIGNIFICANT ISSUE IS EXTREMELY POOR INTERNET SERVICE. CAHNRS IT HAS BEEN WORKING WIT	10/1/20 2:05 PM	CANCELED	ALTERATIONS	0402A	\$0.00
2021-006558	WEB REQUEST: PROJECT MANAGEMENT RUN POWER FROM SOURCE INSIDE RM.101 (OFFICE) TO A 24X24 JBOX MOUNTED ON WALL JUST OUTSIDE OF OFFICE. RUN A 1 EMT BETWEEN THIS J-BOX AND ANOTHER 24X24 J-BOX MOUNTED OUTSIDE OF BARN ATTACHED TO MAIN BUILDING. PULL 120V POW	9/23/20 8:31 AM	CANCELED	ALTERATIONS	0402A	\$0.00
2021-006150	WEB REQUEST: ELECTRICAL REPAIR THE BATHROOM FAN AT THE STUDENT APARTMENT KEEPS MAKING NOISE WHEN IS IN USE. THERE IS NO OTHER VENTILATION AND IS PRETTY ANNOYING THE NOISE THAT IT DOES. THE PERSON THAT CAME AND CHECK ON THE SHOWER FLOOR NOTICED THAT AS	9/17/20 3:33 PM	CLOSED	CORRECTIVE	0402A	\$605.98
2021-006149	WEB REQUEST: ELECTRICAL REPAIR THERE ARE FOUR LAMPS THAT ARE NOT WORKING. I AM NOT SURE IF IS THE LAMPS ARE OUT OF THERE ANOTHER PROBLEM THANK YOU CELINA	9/17/20 3:31 PM	CLOSED	CORRECTIVE	0402D	\$265.82
2021-006023	WEB REQUEST: WATER AND SEWER PROBLEMS DISPOSE OF OLD DRAIN PIPE	9/16/20 10:05 AM	CLOSED	CORRECTIVE	402	\$414.55
2021-005728	WEB REQUEST: WATER AND SEWER PROBLEMS CAMERA SEWER AT DAIRY	9/10/20 9:20 AM	CLOSED	CORRECTIVE	402	\$138.18
2021-005707	404 POWER FAILURE CHECK UPS	9/9/20 6:45 PM	CLOSED	CORRECTIVE	0402G	\$0.00
2021-005660	WEB REQUEST: EQUIPMENT REPAIR REPLACE BOTH BATTERIES FOR THE EMERGENCY GENERATOR. SEND TO DAVE OLSON.	9/9/20 9:39 AM	CLOSED	CORRECTIVE	0402A	\$483.53
2021-005572	WEB REQUEST: WATER LEAKS/REPAIRS THERE IS A WATER LEAK DOWNSTAIRS NEXT TO THE WASHER/DRYER IN THE BASEMENT. IT APPEARS TO BE COMING FROM ONE OF THE PUMPS.	9/6/20 11:17 AM	CLOSED	CORRECTIVE	0402A	\$69.09
2021-005526	WEB REQUEST: WATER LEAKS/REPAIRS THERE IS ONE BLUE VALVE () CONNECTED TO A WATER LINE WITH A LEAK IN THE CORNER BETWEEN THE DRYER AND THE WASHERS AT THE BASEMENT. WE HAVE BEEN NOTICING WATER PUDDLES ON THE FLOOR AND CHECKIN ON THE WASHERS BUT WE FIGURE	9/4/20 7:45 AM	CLOSED	CORRECTIVE	0402A	\$148.87
2021-005355	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING PUMP OUT CONCRETE TANK AT THE DAIRY	9/1/20 9:04 AM	CLOSED	CORRECTIVE	0402M	\$1,055.43
2021-005173	WEB REQUEST: WINDOW REPAIRS THE RESIDENCE HAS SEVERAL PANES OF GLASS BROKEN IN DIFFERENT WINDOWS. ENTRANCE DOOR, ATTIC, ONE BEDROOM. COULD IT BE POSSIBLE THAT THE WINDOWS ARE INSPECTED IN GENERAL THERE IS GOING TO BE PEOPLE MOVING IN ON MONDAY AUGUST 3	8/27/20 1:08 PM	CLOSED	CORRECTIVE	0402L	\$2,311.90
2021-005169	WEB REQUEST: WATER AND SEWER PROBLEMS WE HAVE THE FLUME SYSTEM NEARLY PLUGGED. I SUBMIT A WORK REQUEST EARLIER THIS WEEK BUT DAHMOM WAS ABLE TO GET IT GOING. THIS MORNING THE FLUME WAS GETTING PLUGGED AGAIN. DAHMOM CHECKED ON IT TODAY AND HE SUGGESTED	8/27/20 12:57 PM	CLOSED	CORRECTIVE	0402C	\$832.57
2021-004268	KNOTT DAIRY CENTER SEWER DRAIN IS PLUGGED. PLEASE UNPLUG WITH THE BIG TRUCK	8/24/20 7:26 AM	CLOSED	CORRECTIVE	0402E	\$247.30
2021-004267	WEB REQUEST: WATER AND SEWER PROBLEMS UNPLUGGING THE FLUME AT KDC	8/24/20 7:23 AM	CANCELED	CORRECTIVE	0402C	\$0.00
2021-003518	WEB REQUEST: WATER AND SEWER PROBLEMS THE PIPES IN THE SOUTH END OF OUR HOSPITAL PEN ARE CLOGGED WITH STRAW, IF POSSIBLE WE'D LIKE THEM CLEANED OUT AND THE PIPES SCOPED TO SEE WHAT MATERIAL THE PIPES ARE MADE OF SO THAT WE CAN SEE IF IT'S POSSIBLE TO U	8/10/20 10:50 AM	CLOSED	CORRECTIVE	0402A	\$816.69
2021-003274	WEB REQUEST: WATER AND SEWER PROBLEMS THE EAST SIDE OF THE DRAINS FOR THE BOX STALL IS PLUGGED. I TRIED STICKING UP A HOSE IN THE DRAIN BUT THE WATER BACKS UP, IT HAS BEEN PLUGGED FOR 3 DAYS SO FAR AND THE STAGNANT WATER STENCH. THE WEST SIDE OF THE D	8/4/20 4:34 PM	CLOSED	CORRECTIVE	0402A	\$138.18
2021-003103	WEB REQUEST: KNOTT DAIRY CENTER-OFF & MILK PARLOR WATER LEAKS/REPAIRS I GOT A REPORT FROM THE STUDENT LIVING UPSTAIRS OF A SMALL CRACK ON THE SHOWER FLOOR. SEE EXTRA DESCRIPTION CAPITAL PROJECT 1393-2021	7/31/20 3:51 PM	CLOSED	CORRECTIVE	0402A	\$14,327.42
2021-003102	WEB REQUEST: ELECTRICAL REPAIR THE EXHAUST FAN IN THE NORTH SIDE OF BOX STALLS IS NOT WORKING AGAIN. I TRIED FLIPPING THE SWITCH SEVERAL TIMES BUT IT DOES NOT RUN. WAS REPORTED BEFORE, BUT IT RUN AFTER CHECKING THE SWITCH.	7/31/20 3:48 PM	CLOSED	CORRECTIVE	0402A	\$1,027.79
2021-002229	WEB REQUEST: WATER AND SEWER PROBLEMS REBUILD CL-17 AT BEEF CENTER	7/21/20 12:31 PM	CLOSED	CORRECTIVE	0402L	\$172.73
2021-002125	KNOTTS DAIRY- GO OUT AND START AND STOP PUMPS TO FILL TANK AS NEEDED	7/19/20 1:04 PM	CLOSED	CORRECTIVE	0402G	\$726.13
2021-001756	WEB REQUEST: WATER AND SEWER PROBLEMS WE HAVE THE BIG DRAIN AT THE VETROOM PLUGGED. IT FEELS LIKE THERE IS A LOT OF SAND IN THERE. THAT DRAIN CONNECTS TO OTHER TWO DRAINS THROUGH THE CLOSE UP PEN. WE HAVEN'T HAVE THE CHANCE TO WORK ON IT AND LOOKS MORE	7/15/20 10:53 AM	CLOSED	CORRECTIVE	0402E	\$207.27
2021-001547	WEB REQUEST: ELECTRICAL REPAIR IT SEEMS LIKE WE HAVE A FAULTY ELECTRICAL BREAKER FOR THE DRYER OUTLET AT THE BASEMENT. WE HAVE BEEN LOOSING THE HEAT FOR THE APARTMENT DRYER DOWNSTAIRS. WE TRIED THREE DIFFERENT DRYERS AND THEY WORK BUT THEY DON'T HEAT U	7/12/20 9:57 AM	CLOSED	CORRECTIVE	0402A	\$367.66
2021-001397	KNOTTS DAIRY - PUMP IS DOWN RUNNING IN HAND	7/8/20 4:44 PM	CLOSED	CORRECTIVE	0402G	\$1,249.88

Appendix B – Service Requests
Knott Dairy Infrastructure

2021-001348	WEB REQUEST: COOLING/HEATING KNOTT DAIRY TANK LEVEL SENSORS ARE SHOWING FAILED. PLEASE INVESTIGATE AND REPAIR. FOR CONTROL SHOP CAPITAL PROJECT 1144-2020	7/8/20 11:43 AM	CLOSED	CORRECTIVE	402	\$933.94
2021-001165	WEB REQUEST: ELECTRICAL REPAIR WE HAVE SEVERAL LAMPS OUT IN PEN 1. IT MIGHT BE TIME TO GO OVER THE LAMPS THROUGH THE FACILITY AND REPLACE THE LAMPS OR THE BALLASTS AS NEEDED. THANK YOU CELINA	7/3/20 6:52 AM	CLOSED	CORRECTIVE	0402C	\$420.28
2021-001135	KNOTT DAIRY PUMP HOUSE - DOOR RENEWAL AND SIDING CAPITAL PROJECT 1418-2021	7/2/20 11:17 AM	SCHEDULED	ALTERATIONS	0402G	\$20,132.55
2021-001032	TROUBLE ALARM GOING OFF	7/1/20 10:13 AM	CLOSED	CORRECTIVE	402	\$104.32
2020-027550	WEB REQUEST: FLOORING - REPAIRS WE NEED FLOOR REPAIRS AT KDC. SOME 16 DIFFERENT PIECES OF VINYL TILE WILL NEED A REPLACEMENT. WE HAVE FOUR PATCHES TO BE REPAIRED AT THE CUDS OFFICE AND IN THE MIDDLE OF DOWNSTAIRS.	6/28/20 10:05 AM	CLOSED	CORRECTIVE	0402A	\$2,486.19
2020-027353	WEB REQUEST: ELECTRICAL REPAIR WE HAVE AN EXHAUST FAN NOT WORKING IN THE NORTH BOX STALLS. IT WAS WORKING ABOUT A WEEK AGO BUT NOW IT DOES NOT RUN ANYMORE. COULD YOU PLEASE CHECK WHAT THE PROBLEM IS THANK YOU CELINA	6/26/20 1:04 PM	CLOSED	CORRECTIVE	0402A	\$184.28
2020-027352	WEB REQUEST: ELECTRICAL REPAIR THE TWO 36 IN FANS THAT ARE IN THE CUDS PEN ARE NOT WORKING. COULD YOU PLEASE DOUBLE CHECK THE REASON AND IF THEY ARE NOT GOOD ANYMORE WE ARE PLANNING TO REPLACE THEM WITH TWO NEW FANS THAT CAN BE PLUG WITH AN EXTENSION C	6/26/20 1:02 PM	CLOSED	CORRECTIVE	0402C	\$66.44
2020-027351	WEB REQUEST: ELECTRICAL REPAIR THE OUTLET FOR THE WASHER IS NOT WORKING. WE DON'T KNOW WHERE THE BREAKER IS. COULD SOMEBODY COME AND RE-ESTABLISH THE POWER TO IT AND SHOW US WHERE CAN WE CORRECT THE PROBLEM IF IT HAPPENS AGAIN THIS IS THE SECOND TIME H	6/26/20 12:59 PM	CLOSED	CORRECTIVE	0402A	\$201.97
2020-026597	WEB REQUEST: WATER LEAKS/REPAIRS FIX WATER LEAK OUTSIDE	6/24/20 8:06 AM	CLOSED	CORRECTIVE	402	\$2,169.23
2020-026160	WEB REQUEST: BROKEN/CUT GLASS FIX BROKEN WINDOW IN IN 402I RESIDENCE APARTMENT. SEND TO MA-CARPENTRY	6/15/20 1:51 PM	CLOSED	CORRECTIVE	0402I	\$276.89
2020-025758	WEB REQUEST: WINDOW REPAIRS THE STUDENT APARTMENT UPSTAIRS DOESN'T HAVE ANY SCREENS ON ANY OF THE WINDOWS. IT LOOKS LIKE THERE WERE SCREENS AT ONE TIME BECAUSE THERE ARE SCREEN CLIPS. ONE OF OUR STUDENT RESIDENTS IS ALLERGIC TO WASPS AND THEY HAVE BEEN	6/6/20 2:02 PM	CLOSED	CORRECTIVE	0402I	\$990.31
2020-025473	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN IN THE MILK ROOM NEXT TO THE OFFICE, THE DRAIN IN THE CORNER OF THE ROOM UNDER THE SINK IS GETTING REALLY SLOW. IT'S BEEN GETTING WORSE OVER TIME. NOT FULLY CLOGGED BUT WILL BECOME AN ISSUE IN THE NEAR FUTURE.	6/2/20 8:48 AM	CLOSED	CORRECTIVE	0402A	\$265.76
2020-025369	WEB REQUEST: ELECTRICAL REPAIR THERE ARE EXPOSED ELECTRICAL WIRES AT THE END OF OUR HAY BARN. IT IS RIGHT BELOW THE OUTLET IN THE WEST CORNER OF PEN 1, JUST OUTSIDE THE PEN. IF YOU FIND ME WHEN YOU GET HERE I CAN SHOW YOU EXACTLY WHERE THEY ARE.	5/30/20 2:37 PM	CLOSED	CORRECTIVE	0402D	\$387.46
2020-025364	WEB REQUEST: WINDOW REPAIRS BOTH WINDOWS IN BEDROOM NEXT TO THE KITCHEN AT THE STUDENT QUARTERS NEED REPAIR. I HAVE A REPORT THAT BOTH PANELS IN THE WINDOWS MOVE IN THAT ROOM. WHEN THE LATCH IS UNATTACHED IN BOTH OF THE WINDOWS THE TOP PART FALLS DOWN	5/29/20 6:25 PM	CLOSED	CORRECTIVE	0402A	\$153.83
2020-024422	FIX SEAMS ON GUTTER	5/13/20 12:56 PM	CLOSED	CORRECTIVE	0402N	\$3,249.50
2020-024400	UNCOVER WATER VALVES AT KNOTT DAIRY	5/13/20 6:01 AM	CLOSED	CORRECTIVE	402	\$132.88
2020-024379	WEB REQUEST: ELECTRICAL REPAIR WE HAVE THE OUTLET WHERE WE HOOK UP THE WASHER UPSTAIRS TRIPPING. I WENT TO LOOK IN TO THE ELECTRICAL PANELS DOWNSTAIRS AND I COULDN'T FIGURE WHAT IS THE BREAKER FOR THAT OUTLET. COULD SOMEONE CAN COME IN RESOLVE THE ISSU	5/12/20 2:25 PM	CLOSED	CORRECTIVE	0402A	\$69.08
2020-024348	WEB REQUEST: WINDOW REPAIRS WE HAVE A BROKEN GLASS PANEL FOR A WINDOW AT THE MILK ROOM NEXT TO THE OFFICE. HARD BLOWING WIND CLOSED THE WINDOW AND THE BOTTOM GLASS SHATTER. THANK YOU	5/12/20 7:24 AM	CLOSED	CORRECTIVE	0402A	\$463.93
2020-024272	WEB REQUEST: WATER LEAKS/REPAIRS CALIBRATE CHLORINE SENSORS AT KNOTT DAIRY SEND TO CONTROL SHOP	5/8/20 4:07 AM	CLOSED	CORRECTIVE	402	\$4,139.45
2020-023722	WEB REQUEST: UTILITY FAILURES (ELECTRICA TEST WATER SOFTENER AT KNOTT DAIRY	4/28/20 3:09 PM	CLOSED	CORRECTIVE	0402G	\$465.08
2020-023301	BOILER - #15 RELIEF VALVE NEEDS TO BE REPLACED.	4/20/20 1:44 PM	CLOSED	CORRECTIVE	0402A	\$265.76
2020-023137	WEB REQUEST: ELECTRICAL WORK WE PREVIOUSLY REQUESTED AN INSTALLATION OF AN ELECTRICAL OUTLET BY THE GRAIN BIN. WE WILL MOVE FORWARD BUT WE WANT TO INCLUDE THE PREPARATION TO RUN A MOTOR FOR A SECOND GRAIN BIN THAT WE ARE PLANNING TO ADD TO THAT SITE.	4/13/20 7:10 AM	CANCELED	ALTERATIONS	0402C	\$0.00
2020-023118	FOMS RESPOND TO PUT THE PUMPS IN AUTO FOR THE WATER TANK.	4/10/20 4:45 PM	CLOSED	CORRECTIVE	402	\$69.08
2020-022907	KNOTTS DAIRY- CHECK TANK AND START AND STOP PUMPS AS NEEDED	4/4/20 9:10 PM	CLOSED	CORRECTIVE	0402G	\$449.02
2020-022770	CHECK DAIRY TANK LEVEL, SENSOR IS NOT ACCURATE.	3/30/20 4:40 PM	CLOSED	CORRECTIVE	402	\$69.08
2020-022731	WEB REQUEST: UTILITY FAILURES (ELECTRICA KNOTTS DAIRY- CHECK TANK LEVELS, START AND STOP PUMPS AS NEEDED	3/27/20 10:37 PM	CLOSED	CORRECTIVE	0402G	\$345.40
2020-022728	WEB REQUEST: PROJECT MANAGEMENT REPLACE OR REALIGN WATER SAMPLE TAPS SO THAT THE SPIGOT POINTS DOWN, AND REPLACE THE TAP HANDLES IF NEEDED. IN ADDITION LABEL THE SAMPLE TAP WHETHER IT CHLORINATED WATER OR UN-CHLORINATED WATER.	3/27/20 3:50 PM	CANCELED	ALTERATIONS	0402G	\$0.00
2020-022678	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING NEED CONCRETE TANK AT THE DAIRY PUMPERD.	3/26/20 2:56 PM	CLOSED	CORRECTIVE	0402M	\$1,301.49
2020-022335	WEB REQUEST: WATER AND SEWER PROBLEMS BROKEN DRAIN LINE AT KNOTT DAIRY	3/26/20 11:39 AM	CLOSED	CORRECTIVE	0402E	\$2,522.73
2020-022282	WEB REQUEST: WATER AND SEWER PROBLEMS WE NEED THE FLUME CLEANED OUT AGAIN USING THE PUMP TRUCK, WHICH IS ACCESSED IN FRONT OF THE HEIFER BARN AND NEXT TO THE DTX ROOM. IT'S FULL OF ROCK.	3/25/20 11:28 AM	CLOSED	CORRECTIVE	402	\$760.17
2020-021884	WEB REQUEST: HEATING/COOLING CHECK ROUTINE BOLIER CHECKS SEND TO CONTROL SHOP	3/19/20 5:55 AM	CLOSED	CORRECTIVE	0402A	\$267.04
2020-021846	ANNUAL FIRE ALARM TESTING	3/18/20 12:58 PM	CLOSED	CORRECTIVE	0402G	\$282.14
2020-021506	WEB REQUEST:PM CORRECTIVE ROOFING REPAIRS ASSET I.D.# 700650 B3011:ROOFS/KNOTT DAIRY CENTER BARN/ MAIN ROOF . TWO 10 FOOT SECTIONS OF GUTTER NEED REPLACED.	3/11/20 12:02 PM	CLOSED	CORRECTIVE	0402E	\$2,127.12
2020-021472	WEB REQUEST: PM CORRECTIVE ASSET # 700648 B3011 ROOFS KNOTT DAIRY CNTR-LOAFING BARN MAIN ROOF	3/11/20 6:41 AM	CLOSED	CORRECTIVE	0402C	\$523.01
2020-021435	TEST 9 BACKFLOWS AT KNOTT DAIRY	3/10/20 12:00 PM	CLOSED	CORRECTIVE	402	\$685.61
2020-021057	WEB REQUEST: DRINKING WATER FOUNTAIN THE FILTER IN THE DRINKING FOUNTAIN NEXT TO THE OFFICE NEEDS TO BE REPLACED.	3/4/20 12:16 PM	CLOSED	CORRECTIVE	0402A	\$66.44
2020-020125	WEB REQUEST: WATER AND SEWER PROBLEMS WE ARE GETTING LOW WATER FLOW FOR THE FLUME. THERE IS ALSO VISIBLE GRAVEL IN IT. COULD YOU PLEASE SEND THE VACUUM TRUCK TO DO A CLEAN UP OF THE FLUME SYSTEM. IT RUNS FROM THE WASTE PIT PUMP TO THE FRONT OF THE HEIF	2/26/20 10:22 AM	CLOSED	CORRECTIVE	0402D	\$1,531.55
2020-019463	WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN KNOTT DAIRY RESIDENCE IN THE COLD ROOM OFF OF THE LAUNDRY ROOM, IF YOU RUN WATER IN THE SINK, WATER COMES UP IN THE FLOOR DRAIN. SIGNE STOLZ REPORTED IT, SO SHE WILL BE THE CONTACT PERSON.	2/18/20 8:22 AM	CLOSED	CORRECTIVE	0402I	\$132.88
2020-019434	WEB REQUEST: WATER LEAKS/REPAIRS WE HAVE BEEN NOTICING STEAM COMING FROM A HOT WATER PIPE LATELY AND WE JUST FND WATER LEAKING IN THE BASEMENT AREA. WE ARE THINKING THAT THE HOT WATER PIPE COMING FROM THE WATER HEATER HAS RUST TO THE POINT THAT IT HAS	2/17/20 12:46 PM	CLOSED	CORRECTIVE	0402A	\$2,214.87
2020-019267	WEB REQUEST: ELECTRICAL REPAIR WE ARE REQUESTING A NEW OUTLET OR TO RELOCATE THE EXISTING ONE TO AN OUTSIDE WALL. WE HAVE RESEARCH EQUIPMENT THAT REQUIRES TO BE CONNECTED TO AN ELECTRICAL OUTLET AND THE EXISTING OUTLET IS THE THE COW'S SIDE. THE COWS K	2/13/20 3:27 PM	CLOSED	CORRECTIVE	0402C	\$964.43
2020-018719	BEE CENTER/KNOTT DAIRY FARM HAS NO POWER. INLAND POWER OUTAGE PER RYAN GEHRING. KEEP BACKUP GENERATORS RUNNING.	2/5/20 12:12 PM	CLOSED	CORRECTIVE	402	\$238.54
2020-017547	WEB REQUEST: WATER AND SEWER PROBLEMS PLEASE SEND THE TRUCK TO SOAK UP THE WATER AND UNPLUG THE SEWER NEXT TO THE CLOSE UP PEN (PEN 7). WE TRIED LIFTING THE LID AND STIRRING UP THE WATER BUT SEEMS LIKE IT HAS A HEAVIER PLUG (MAYBE GRAVEL) IN IT. THANK	1/24/20 9:56 AM	CLOSED	CORRECTIVE	0402E	\$4,431.32
2020-014566	WEB REQUEST: LIGHTING-INDOOR LIGHT OUT IN MAIN ENTRY STARTING TO GET DARK.	12/23/19 3:36 PM	CLOSED	CORRECTIVE	0402A	\$132.88
2020-013222	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING PUMP MANURE LINE FROM CONCRETE TANK TO MANURE SEPARATOR	12/21/19 7:22 AM	CANCELED	CORRECTIVE	0402M	\$0.00
2020-013213	WEB REQUEST: WATER AND SEWER PROBLEMS PLEASE SEND THE PUMPER TRUCK TO UNPLUG THE CONCRETE TANK PIPE THAT GOES TO THE SEPARATOR ASAP. PLEASE CONTACT DAHMON BURKE ABOUT IT. THANK YOU!	12/11/19 4:42 PM	CLOSED	CORRECTIVE	0402M	\$553.86
2020-012119	WEB REQUEST: ELECTRICAL REPAIR WE NEED THE LIGHTS FIXED IN THREE BUILDINGS. IT IS EITHER THE LAMPS OR THE FIXTURES. PLEASE CHECK THE BULL BARN, CALF BARN (FIRST LIGHT IS OUT) AND THE SOUTH BOX STALLS. THANK YOU CELINA	11/13/19 3:52 PM	CLOSED	CORRECTIVE	0402E	\$1,023.78
2020-010694	KNOTT DAIRY RES : WEB REQUEST: WATER LEAKS/REPAIRS THERE IS A PIPE LEAKING INTO THE BASEMENT UNDERNEATH THE KITCHEN	10/28/19 11:11 AM	CLOSED	CORRECTIVE	0402I	\$2,497.78
2020-010692	WEB REQUEST: WATER AND SEWER PROBLEMS PLEASE SEND THE PUMPER TRUCK TO UNPLUG THE CONCRETE TANK PIPE THAT GOES TO THE SEPARATOR ASAP THANK YOU	10/28/19 11:09 AM	CLOSED	CORRECTIVE	0402M	\$545.64
2020-010174	WEB REQUEST: WATER LEAKS/REPAIRS THE RAIN GUTTER IN THE EAST SIDE OF THE ISO BARN IS SAGGY IN THE MIDDLE. THE WATER DOESN'T RUN TO THE END WERE THE WATER DISCHARGE IS SO IT LEAKS/OVERFLOWS IN THE MIDDLE DUE TO THE WATER WEIGHT.	10/22/19 1:22 PM	CLOSED	CORRECTIVE	0402H	\$3,200.41
2020-010172	WEB REQUEST: FLOORING - REPAIRS WE HAVE ABOUT EIGHT BROKEN VINYL TILE SQUARES BROKEN AT THE CUDS OFFICE. THANK YOU	10/22/19 1:16 PM	CLOSED	CORRECTIVE	0402A	\$61.53
2020-010168	WEB REQUEST: UTILITY FAILURES (ELECTRICA REPLACE METER AT DAIRY WELL 1	10/22/19 12:16 PM	CLOSED	CORRECTIVE	0402G	\$35.22
2020-009871	WEB REQUEST: DOOR REPAIRS DOOR IS SAGGING. WILL NOT CLOSE ALL THE WAY IN WOMEN'S RESTROOM.	10/17/19 9:40 AM	CLOSED	CORRECTIVE	0402A	\$61.53
2020-009870	WEB REQUEST: LIGHTING-INDOOR LIGHT IS OUT IN STAIRWAY.	10/17/19 9:38 AM	CLOSED	CORRECTIVE	0402A	\$66.44
2020-009249	WEB REQUEST: ELECTRICAL REPAIR TWO LINES OF LAMPS IN BOTH SIDES OF BOX STALLS ARE NOT WORKING. WE HAVE ONE LINE OF LAMPS WORKING BUT THE BOX STALLS AREA IS VERY DARK. ALSO, IN THE SOUTH SIDE THE SWITCH IS TO SOFT; IT DOES NOT STAY IN THE ON POSITION SO	10/9/19 10:54 AM	CLOSED	CORRECTIVE	0402A	\$66.44

Appendix B – Service Requests Knott Dairy Infrastructure

2020-009239	WEB REQUEST: WATER LEAKS/REPAIRS WE HAVE ONE MIRAFOUNT WATER TROUGH BROKEN IN PEN 1. THIS ONE THAT WAS PREVIOUSLY FIXED BUT WE CLOSE THE VALVE BECAUSE THE PIPE IN BETWEEN THE VALVE AND THE MIRAFOUNT GOT LOOSE. THE OPENING TO REACH AND ATTACH THE PIPE I	10/9/19 10:43 AM	CLOSED	CORRECTIVE	0402C	\$1,128.18
2020-008667	KNOTTS DAIRY: FIRE TROUBLE ALARM	10/5/19 3:54 AM	CLOSED	CORRECTIVE	402	\$141.91
2020-008487	KNOTS DAIRY - ZONE S1 ACCOUNT 1168 - TROUBLE	10/3/19 3:10 AM	CLOSED	CORRECTIVE	0402G	\$35.73
2020-007859	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING PUMP GRAVEL OUT OF CONCRETE TANK AT KNOTT DAIRY CENTER	9/25/19 2:18 PM	CLOSED	CORRECTIVE	402	\$1,649.34
2020-007827	WEB REQUEST: WATER AND SEWER PROBLEMS REQUESTING THE SEWER JET TRUCK TO CLEAN THE LINE FOR THE FLUME SINCE IS GETTING SLOW AND OVERFLOWS	9/25/19 9:02 AM	CLOSED	CORRECTIVE	0402M	\$161.46
2020-007255	WEB REQUEST: WATER LEAKS/REPAIRS REPLACE FAILED METER AT DAIRY WELL #1	9/17/19 10:34 AM	CLOSED	CORRECTIVE	0402G	\$1,723.72
2020-007067	WEB REQUEST: WATER AND SEWER PROBLEMS THERE IS NO WATER SERVICE AT THE RESIDENCE. I NOTICED IT YESTERDAY AT 7 PM. THERE IS SOME MARKINGS ON THE GROUND ON COUNTRY CLUB RD IN FRONT OF THE RED HOUSE WHERE THERE IS WATER RUNNING ON THE SIDE OF THE ROAD. I	9/13/19 6:58 AM	CLOSED	CORRECTIVE	0402I	\$0.00
2020-006964	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING REMOVE SOLIDS FROM PUMP PIT AT LOWER LAGOON	9/12/19 7:21 AM	CLOSED	CORRECTIVE	402	\$774.76
2020-006651	WEB REQUEST: ELECTRICAL REPAIR THE UID COVER OF THE NEW OUTLET FOR THE DRYER IS ON THE WAY FOR THE PLUGGING CABLE TO BE CONNECTED. THE WAY THAT THE OUTLET WAS SET UP REQUIRES THE CABLE TO BE CONNECTED WITH THE CABLE COMING FROM THE TOP OF THE PLUGGIN HE	9/7/19 10:29 AM	CLOSED	CORRECTIVE	0402A	\$199.35
2020-006086	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING ATTENTION: STEVE HULBROCK THE YARD IN FRONT OF THE COMMODITY BARN AND THE ROAD NEXT TO THE BULL AND THE CALF BARNs AT KNOTT DAIRY CENTER NEED TO BE RE-LEVELED AND ADDED NEW GRAVEL. AN ESTIMATE IS REQUESTED A	9/3/19 2:38 PM	CANCELED	CORRECTIVE	402	\$0.00
2020-005922	WEB REQUEST: WATER AND SEWER PROBLEMS WATER RUNNING ACROSS THE ROAD	9/3/19 9:09 AM	CLOSED	CORRECTIVE	402	\$431.86
2020-005680	WEB REQUEST: ROOFING REPAIRS REPLACE FIBERGLASS PANEL THAT IS BROKEN.	8/28/19 4:06 PM	CLOSED	CORRECTIVE	0402H	\$1,326.51
2020-005419	KNOTS DAIRY - WATER PROBLEM	8/26/19 6:16 AM	CLOSED	CORRECTIVE	0402G	\$928.72
2020-005304	WEB REQUEST: DI WATER REPAIRS THIS IS A REPORT FOR A SECOND WATER LEAK IN PEN 1. WASN'T LEAKING MUCH BY THE TIME THAT THE PREVIOUS LEAK WAS WAS FIXED BUT NOW WE HAVE BEEN NOTICING WATER STANDING BEHIND THE BACK WALL OF THE PEN AND WE BELIEVE IS COMING	8/22/19 10:28 AM	CLOSED	CORRECTIVE	0402C	\$99.66
2020-004827	KNOTT DAIRY LOST POWER	8/15/19 3:11 PM	CLOSED	CORRECTIVE	402	\$238.56
2020-004771	WEB REQUEST: ELECTRICAL REPAIR RELOCATION AND RE-CONNECTION OF FANS IN THE CUDS SECTION. THE BIG FANS DON'T MOVE THE AIR IN THE FIRST SECTION OF FREE STALLS NEXT TO THE WEST WALL OF THE BARN. THE COWS AVOID USING THE FREE STALLS IN THAT SECTION, THEY P	8/15/19 9:58 AM	CANCELED	CORRECTIVE	0402C	\$0.00
2020-004701	WEB REQUEST: WATER AND SEWER PROBLEMS WATERING STATION HAS NO WATER	8/14/19 12:06 PM	CLOSED	CORRECTIVE	0402E	\$398.64
2020-004448	WEB REQUEST: NEW KEYS MADE I'M REQUESTING A NEW KEY BEING MADE FOR THE STUDENT APARTMENT SINCE WE HAVE A SECOND RENTER AT THE APARTMENT IN A SEPARATE LEASE.					
2020-004448	THANK YOU	8/12/19 8:48 AM	CLOSED	ALTERATIONS	0402A	\$4.50
2020-004103	WEB REQUEST: UTILITY FAILURES (ELECTRICA WE HAVE ONE OUTLET AT THE MILK ROOM THAT NEEDS TO BE MOVED 1 FT UP. IS AN EXTERIOR INSTALLATION SO IT JUST MATTER OF SHORTENING THE CONDUIT TO IT. WE HAVE A REFRIGERATOR CONNECTED TO IT AND THE OUTLET TRIPS OVER	8/6/19 4:09 PM	CLOSED	CORRECTIVE	0402A	\$132.90
2020-003526	WEB REQUEST: FLOORING - REPAIRS 4 MORE TILES HAVE BROKEN AND BECOME LOOSE CAUSING A SLIPPING HAZARD. THANK YOU	8/1/19 7:16 AM	CLOSED	CORRECTIVE	0402A	\$215.36
2020-003213	WEB REQUEST: PROJECT MANAGEMENT WE ARE REQUESTING AN OUTLET FOR A DRYER IN THE CLEANING ROOM NEXT TO THE PARLOR. THANK YOU.	7/29/19 9:58 AM	CANCELED	ALTERATIONS	0402A	\$0.00
2020-003212	WEB REQUEST: WATER AND SEWER PROBLEMS WE HAVE A 6 IN PIPE PERFORATED WITH AN AUGER WHILE DRILLING FOR A FENCE POST. THAT LINE TAKES MANURE WATER FROM THE PIT TO THE MANURE SEPARATOR. WE TURNED THOSE PUMPS OFF SINCE WE WILL NOT BE ABLE TO USE BUT WE CAN	7/29/19 9:54 AM	CLOSED	CORRECTIVE	0402M	\$499.93
2019-028874	WEB REQUEST: PROJECT MANAGEMENT I'M REQUESTING A 80 FT LONG RAIN GUTTER IN THE BACK OF THE ISO BARN ROOF	6/25/19 10:29 AM	CANCELED	ALTERATIONS	0402H	\$0.00
2019-027748	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING INSTALL 100 FEET OF 6 TO 8 INCH UNDERGROUND SEWER LINE AT THE DAIRY LAGOON SYSTEM. NEED TO COORDINATE WITH FARM SERVICES. PROJECT CAN BE DONE IN SEPTEMBER WHEN LAGOONS ARE PUMPED DOWN.	6/11/19 7:27 AM	CANCELED	CORRECTIVE	0402M	\$0.00
2019-026614	KNOTT DAIRY FARM PHONE TROUBLE ALARM	5/29/19 8:24 AM	CLOSED	CORRECTIVE	402	\$68.04
2019-026490	KNOTS DAIRY - COMMUNICATION ALARM	5/27/19 6:12 AM	CLOSED	CORRECTIVE	0402G	\$0.00
2019-026426	KNOTT DAIRY .PLUGGED DRAIN IN MILK ROOM PLEASE FIX.	5/24/19 8:12 AM	CLOSED	CORRECTIVE	0402G	\$672.96
2019-026224	WEB REQUEST: ELECTRICAL REPAIR ELIMINATE 2 MOTOR WHIPS/ TOM WILSON/ CO ELEC	5/22/19 6:51 AM	CLOSED	CORRECTIVE	0402D	\$67.52
2019-025872	WEB REQUEST: PROJECT MANAGEMENT ADDITION OF ELECTRICAL OUTLETS	5/16/19 2:23 PM	CANCELED	ALTERATIONS	0402D	\$0.00
2019-025710	WEB REQUEST: WATER LEAKS/REPAIRS REPLACE CHLORINE PUMPS AT KNOTT DAIRY	5/15/19 11:59 AM	CLOSED	CORRECTIVE	0402G	\$926.96
2019-025451	WEB REQUEST: PROJECT MANAGEMENT WE ARE MISSING HALF OF A PLASTIC SHEET THAT COVERS THE ROOF IN THE ISO BARN THANK YOU CELINA	5/11/19 3:39 PM	CANCELED	ALTERATIONS	0402H	\$0.00
2019-025011	WEB REQUEST: WATER LEAKS/REPAIRS WE HAVE A CONTINUOUS WATER LEAK COMING FROM 2 WATER TROUGHS IN PEN 1. ONE OF THEM IS ALARMING SINCE IS A BIG CONTINUOUS WATER FLOW THAT RUNS 24 HOURS A DAY. THAT IS CONTINUOUSLY WASHING AWAY SOIL UNDER THE CONCRETE THAT	5/6/19 10:35 AM	CLOSED	CORRECTIVE	402	\$873.85
2019-024414	WEB REQUEST: WATER AND SEWER PROBLEMS PUMP OUT SEWER TANK AT KNOTT DAIRY WEB REQUEST: PROJECT MANAGEMENT NEED A SIGN MADE FOR MANURE PIT. SIGN SHOULD SAY "DANGER - DO NOT ENTER" SIGN NEEDS TO BE AROUND 2FT X 2FT	4/30/19 1:18 PM	CLOSED	CORRECTIVE	0402L	\$498.72
2019-024300	SIGN SHOULD SAY "DANGER - DO NOT ENTER" SIGN NEEDS TO BE AROUND 2FT X 2FT	4/29/19 9:26 AM	CLOSED	ALTERATIONS	0402M	\$118.48
2019-023731	CLEAN CONCRETE TANK AT KNOTT DAIRY CENTER	4/22/19 8:43 AM	CLOSED	CORRECTIVE	0402M	\$820.86
2019-023661	WEB REQUEST: WATER AND SEWER PROBLEMS SEWER LINE BACKING UP ON THE FLOOR OF THE PANTRY AT THE BASEMENT. THE PANTRY IS LOCATED NEXT TO THE LAUNDRY ROOM. THERE IS VISIBLE WATER OVER THE DRAIN AND THE WALL NEXT TO IT IS GETTING SOAK.	4/19/19 11:52 AM	CLOSED	CORRECTIVE	0402I	\$1,043.21
2019-023658	WEB REQUEST: DI WATER REPAIRS WE HAVE A WATER LEAK NEXT TO THE COMMODITY BARN. THE WATER IS STARTING TO RUN TOWARDS THE ROAD FROM UNDERNEATH A DIRT STACK THE CREATING MUD IN FRONT OF THE COMMODITY BARN. IT ALSO SEEMS THAT SOME OF THAT WATER IS COMING	4/19/19 11:49 AM	CANCELED	CORRECTIVE	0402N	\$181.86
2019-022510	WEB REQUEST: ELECTRICAL REPAIR PLEASE HAVE THE CONTROL SHOP CHECK THE PUMP ALTERNATOR AT KNOTT DAIRY THANK YOU	4/3/19 11:59 AM	CLOSED	CORRECTIVE	0402G	\$35.93
2019-022309	WEB REQUEST: ELECTRICAL REPAIR LIGHT SWITCH IN 2ND FLOOR APARTMENT R/H BEDROOM NOT WORKING - HAVE CHECKED BULB AND THAT IS NOT ISSUE. RESIDENCE HAS NOT BEEN INHABITED UNTIL AFTER REMODEL ON 1ST FLOOR - WONDERING IF THIS COULD HAVE CAUSED ISSUE. APART	4/1/19 3:57 PM	CLOSED	CORRECTIVE	0402A	\$249.32
2019-021566	WEB REQUEST: WATER AND SEWER PROBLEMS SEWER BACKING UP IN PUMP HOUSE	3/27/19 9:17 AM	CLOSED	CORRECTIVE	402	\$478.58
2019-021528	WEB REQUEST: ELECTRICAL REPAIR WE NEED TO AN ELECTRIC OUTLET FOR A DRYER (240 V) TO DRY THE TOWELS THAT WE USE TO WIPE THE COWS UDDERS. WE WANT TO HAVE THE DRYER NEXT TO THE WASHER THAT WE ALSO USE TO WASH THE TOWELS	3/26/19 5:47 PM	CLOSED	CORRECTIVE	0402A	\$944.16
2019-021527	WEB REQUEST: TREE AND SHRUB CARE WE HAVE 2 BRANCHES THAT FELT TO THE GROUND DURING WINTER THAT NEED TO BE CUT WITH A CHAIN SAW AND REMOVED. WE ALSO HAVE A PINE SHRUB THAT NEEDS TO GET TRIM BECAUSE IS TAKING SPACE FROM THE PARKING LOT. THANK YOU!	3/26/19 5:22 PM	CLOSED	CORRECTIVE	402	\$1,616.05
2019-021526	WEB REQUEST: COOLING/HEATING WE HAVE ISSUES WITH THE RADIATOR FOR THE HEAT WEB REQUEST: PLUGGED DRAINS (FLOOR DRAIN THE DRAIN FOR THE LAUNDRY SINK AT THE RESIDENCE IS PLUGGED. IT IS AN ISSUE BECAUSE IT CONNECTS WITH THE KITCHEN SINK SO, WHEN IS USED IT OVERFLOWS THE LAUNDRY SINK AT THE BASEMENT.	3/26/19 5:16 PM	CLOSED	CORRECTIVE	0402A	\$919.43
2019-021195	WEB REQUEST: ELECTRICAL REPAIR 1) THE LIGHT FIXTURE AT THE CENTER OF THE BARN GOT THE COVER MELTED DURING THE FIRE AND ALSO IS NOT WORKING. 2) WE WOULD LIKE THE CONDUIT THAT SUPPLY THE ELECTRICITY CHECKED AS WELL BECAUSE OF HEAT OF THE FIRE MIGHT HAVE	3/21/19 2:11 PM	CLOSED	CORRECTIVE	0402I	\$473.92
2019-021194	2) WE WOULD LIKE THE CONDUIT THAT SUPPLY THE ELECTRICITY CHECKED AS WELL BECAUSE OF HEAT OF THE FIRE MIGHT HAVE	3/21/19 2:07 PM	CLOSED	CORRECTIVE	0402D	\$969.70
2019-021193	WEB REQUEST: LIGHTING-OUTDOOR WE HAVE 2 FLUORESCENT LIGHTS OUT ON THE EAST SIDE OF THE	3/21/19 1:58 PM	CLOSED	CORRECTIVE	0402C	\$638.16
2019-021062	WEB REQUEST: WATER LEAKS/REPAIRS RE PIPE CHLORINE PUMP NUMBER 1 AT KNOTT DAIRY	3/20/19 8:54 AM	CLOSED	CORRECTIVE	0402G	\$605.56
2019-020507	WEB REQUEST: FLOORING - REPAIRS MANY FLOOR TILES LOOSE OR BROKEN IN ROOM 102 HAS 8 TILES, ROOM 100 HAS 6 TILES. THANK YOU	3/12/19 7:30 AM	CLOSED	CORRECTIVE	0402A	\$562.78
2019-020432	WEB REQUEST: UTILITY FAILURES (ELECTRICA FAILED TANK CONTROLS AT KNOTT DAIRY	3/11/19 8:39 AM	CLOSED	CORRECTIVE	0402G	\$71.24
2019-020398	WEB REQUEST: WATER AND SEWER PROBLEMS KNOTTS DAIRY - CHECK WATER TANK LEVELS	3/10/19 9:56 AM	CLOSED	CORRECTIVE	402	\$80.44
2019-020383	KNOTT DAIRY-LARGE VEHICLE FIRE IN BARN	3/9/19 7:55 AM	CLOSED	CORRECTIVE	402	\$643.51
2019-020005	WEB REQUEST: ELECTRICAL REPAIR REPAIR OUTLET	3/5/19 3:43 PM	CLOSED	CORRECTIVE	0402A	\$618.34
2019-019689	TANK FAILED.	2/28/19 7:05 PM	CLOSED	CORRECTIVE	402	\$80.44
2019-019240	WEB REQUEST: ELECTRICAL REPAIR THE OUTLET FOR OUR WASHER QUIT WORKING THIS MORNING. IT IS ON THE WEST WALL OF ROOM 105.	2/26/19 10:03 AM	CLOSED	CORRECTIVE	0402A	\$118.48
2019-018716	ANNUAL FIRE ALARM TESTING AT KNOTT DAIRY CENTER	2/18/19 1:56 PM	CLOSED	CORRECTIVE	0402A	\$788.61
2019-018012	WEB REQUEST: FURNITURE AND EQUIPMENT MOVING REMOVE MUD AND GRAVEL	2/12/19 3:49 PM	CLOSED	CORRECTIVE	402	\$545.50
2019-017624	MONITOR WATER LEVEL.	2/7/19 10:38 PM	CLOSED	CORRECTIVE	0402G	\$541.46
2019-017507	KNOTTS DAIRY TANK LEVEL IN ALARM	2/7/19 6:38 AM	CLOSED	CORRECTIVE	0402G	\$95.72
2019-017458	TAKE DOWN AND REINSTALL SMOKE DETECTORS WEB REQUEST: ELECTRICAL REPAIR THE OUTLET IN BLDG #402A KDC MILING PARLOR, ROOM 105, IS CURRENTLY LOCATED NEAR THE FLOOR IN THIS ROOM WHICH IS THE MILK EQUIPMENT CLEANING ROOM. THIS ROOM IS GENERALLY HOSED OUT AND THE OUTLET IS SUBJECT TO WATER SPARY	2/6/19 3:08 PM	CLOSED	CORRECTIVE	0402A	\$133.04
2019-017216	WEB REQUEST: WATER LEAKS/REPAIRS REPAIR WALLS IN PUMP HOUSE THIS FOR THE CARPENTER SHOP THANK YOU	2/4/19 11:50 AM	CLOSED	CORRECTIVE	0402A	\$148.10
2019-017208	WEB REQUEST: WATER LEAKS/REPAIRS REPAIR WALLS IN PUMP HOUSE THIS FOR THE CARPENTER SHOP THANK YOU	2/4/19 10:47 AM	CLOSED	CORRECTIVE	0402G	\$2,869.28

Capital Project	Description	Type	Status	Reference Number	Total Allotment	Expensed
1017-2019	KNOTT DAIRY CNTR-OFF & MILK PARLOR: REMOVE INSULATION FROM BARN CEILING	CONSVS RENOVATION	CLOSED	MCR AAALAC/DEPT	6,631.45	5,112.90
1161-2020	KNOTT DAIRY: WATER DISTRIBUTION REPAIRS AT KNOTT DAIRY	DEMOLITION<1M	FINAL COMPLETION	MCR 19-21 IF / 21-23	450,461.00	367,373.76
1418-2021	KNOTT DAIRY PUMPHOUSE: REPLACE DOORS & SIDING	CONSVS RENOVATION	CONSTRUCTION	MCR 19-21 /21-23 ES	50,841.23	22,364.55
1498-2021	KNOTT DAIRY & ENSMINGER BEEF CENTER: ADD WIRELESS ACCESS POINTS	INFRASTRUCTURE<1M	PROJECT CLOSEOUT	DEPT / 19-21 MCR	62,000.00	49,461.42
1550-2021	KNOTT DAIRY HAY STORAGE: REPLACE DAMAGED POSTS AND INSTALL BRACINGS	CONSVS RENOVATION	CONSTRUCTION	MCR 21-23 / DEPT	29,238.00	18,903.54
7796-2014	KNOTT DAIRY: NEW MANURE HANDLING EQUIPMENT	RENOVATION<1M	CLOSED	MCR 13-15/15-17	256,727.63	256,727.63
8274-2015	POTABLE WATER DISTRIBUTION & STORAGE SYSTEM: REPLACE EXISTING WATER STORAGE TANK AT KNOTT DAIRY	INFRASTRUCTURE<1M	CLOSED	MCR 17-19 IF	659,778.59	659,778.59
8814-2016	KNOTT DAIRY: REPAIR WELL ONE AT TULA HASTINGS FARM	RENOVATION<1M	CLOSED	MCR 15-17	16,347.81	16,347.81
8990-2016	KNOTT DAIRY FEEDING BARN: REPAIR CONCRETE CATCH BASINS & SECTIONS OF CURB	CONSVS RENOVATION	CLOSED	DEPT/AAALAC MCR	8,835.95	8,155.91
8995-2016	KNOTT DAIRY COMPLEX: RENEW/RENOVATE BUILDINGS AND SYSTEMS	RENOVATION<1M	CLOSED	MCR 15-17/17-19 ES	983,678.10	973,815.08
9169-2017	KNOTT DAIRY: LOAFING BARN ROOF & GUTTER REPLACEMENT	CONSVS RENOVATION	CLOSED	MCR 15-17	85,035.61	85,035.61
9170-2017	KNOTT DAIRY: BARN ROOF REPLACEMENT	CONSVS RENOVATION	CLOSED	MCR 15-17	95,510.58	95,510.58
9174-2017	KNOTT DAIRY: RE-GRADE AREA AT DAIRY BARN	CONSVS RENOVATION	CLOSED	MCR 15-17	25,009.38	25,009.38

\$2,730,095.33 \$2,583,596.76

	A	B	C	D	E	F	G	H	I	J	K	L
1	OPINION OF PROBABLE CONSTRUCTION COSTS											
2	KNOTT DAIRY Facility Study											
3	COUNTRY CLUB ROAD SITE											© copyright CKA 2022
4	CAHNRS-Washington State University				Identified Initial Priorities:				Architect Team:			
5	Pulman, WA				Priority 1-	Dry Cow Barn			CKA Castellaw Kom Architects			
6					Priority 2-	Animal Handling / Improve Safety			850 Main Street			
7					Priority 3-	Parlor Expansion			Lewiston, ID			
8					Priority 4-	Data Connectivity (Internet)						
9												
10	8/5/2022	Facility Study- Concept Design										
11												
12	Item	Description			Units	Quantity	Unit Cost	Phase 1	Phase 2	Phase 3	Phase 4	Site Circulation
13								+New Heifer Barn	+Demo Feed Barn	+Remodel 402E	+Expand New	+Site Vehicle
14								+Relocate Dry Cows	+New Lactating	for Close Up,	Lactating Barn	Circulation
15								+Improve Data	Cow Barn	Vet Med &	+Expand New	Improvements
16								Connectivity	+New Feed Barn	Handling	Heifer Barn	(roads / parking)
17								+Corrals		+Remodel 402C	+New Milk Stor	
18								(Eliminate Hot Wire)		for Calves &	+Remodel Parlor/	
19								+Expand Parlor		Sick Cows	Admin Bldg	
20								Holding Pens				
21												
22												
23												
24	PROBABLE CONSTRUCTION COSTS											
25	General Conditions											
26	Div. 1	Mobilization			Lump Sum	Project	0.80%	\$51,144	\$0	\$32,784	\$121,426	\$30,486
27		Insurance/Fees/Bonds			Lump Sum	Project	3.00%	\$191,791		\$122,941	\$455,349	\$114,322
28		Building Permit Allowance (DBS)			Allowance	Project	2.50%	\$159,826	\$229,924	\$102,451	\$379,458	\$95,269
29		R-O-W Permits/Meters/Taps/Buy-in Allowance (TBD)			Allowance	Project	0.00%	\$0	\$0	\$0	\$0	\$0
30		Prevailing Wage Adder-State of WA			Allowance	Project	5.00%	\$319,652	\$459,847	\$204,902	\$758,916	\$190,537
31		Soils Testing & Report-By Owner			Allowance	Project	0	\$0	\$0	\$0	\$0	\$0
32		Special Inspections, Quality Control-By Owner			Allowance	Project	0	\$0	\$0	\$0	\$0	\$0
33		Hazardous Waste Testing & Report-By Owner			Allowance	Project	0	\$0	\$0	\$0	\$0	\$0
34		Survey/Topography- By Owner			Allowance	Project	0	\$0	\$0	\$0	\$0	\$0
35		WA Sales/Use Tax (7.5%-Materials Only)-Project Cost			Lump Sum	Project	0.00%	\$0	\$0	\$0	\$0	\$0
36		General Conditions			Lump Sum	Project	10.50%	\$671,270	\$965,679	\$430,295	\$1,593,723	\$400,128
37		General Conditions Subtotal						\$1,393,683	\$1,655,449	\$893,374	\$3,308,872	\$830,742
38		Percentage of Construction Cost						21.80%	18.00%	21.80%	21.80%	21.80%
39												

	A	B	C	D	E	F	G	H	I	J	K	L
40	Improvements by Structure											
41												
42	Calf Barn / Sick Pens											
43		Demolition Work-Site-Earthwork			SF	10500	2.5			\$26,250		
44		Demolition Work-Building(s)-Interior			SF	6288	3.5			\$22,008		
45		Site Improvements			SF	10500	5			\$52,500		
46		Infrastructure: Structural Modifications			SF	6288	40			\$251,520		
47		Infrastructure: New Structure			SF	0	0			\$0		
48		Infrastructure: Utility Improvements (MPE)			SF	6288	25			\$157,200		
49		Infrastructure: Animal Circulation (Panels / Alley Ways)			SF	6288	10			\$62,880		
50		Equipment-Project Provided			SF	6288	0			\$0		
51		Equipment-Owner Provided			SF	6288	0			\$0		
52												
53	Heifer / Dry Cow Barn											
54		Demolition Work-Site-Earthwork			SF	31500	12	\$378,000				
55		Demolition Work-Site-Earthwork			SF	41100	12				\$493,200	
56		Demolition Work-Site-Earthwork			SF		12				\$0	
57		Demolition Work-Building(s)			SF	4000	11.25				\$45,000	
58		Site Improvements			SF	31500	12	\$378,000				
59		Site Improvements			SF	41100	12				\$493,200	
60		Site Improvements			SF	0	12				\$0	
61		Infrastructure: Structural Modifications			SF	0	0					
62		Infrastructure: New Structure			SF	16800	150	\$2,520,000				
63		Infrastructure: New Structure			SF	20600	150				\$3,090,000	
64		Infrastructure: New Structure			SF	0	150				\$0	
65		Infrastructure: Utility Improvements (MPE)			SF	16800	60	\$1,008,000				
66		Infrastructure: Utility Improvements (MPE)			SF	20600	60				\$1,236,000	
67		Infrastructure: Utility Improvements (MPE)			SF	0	60				\$0	
68		Infrastructure: Animal Circulation (Panels / Alley Ways)			SF	16800	10	\$168,000				
69		Infrastructure: Animal Circulation (Panels / Alley Ways)			SF	20600	10				\$206,000	
70		Infrastructure: Animal Circulation (Panels / Alley Ways)			SF	0	10				\$0	
71		Equipment-Project Provided			SF	16800	0	\$0				
72		Equipment-Project Provided			SF	20600	0				\$0	
73		Equipment-Owner Provided			SF	16800	0	\$0				
74		Equipment-Owner Provided			SF	20600	0				\$0	
75		Robotic Feeders (TBD)			SF	16800	0	\$0				
76		Robotic Feeders (TBD)			SF	20600	0				\$0	
77												
78	Vet Med / Close Up / Handling Barn											

Appendix D – Detailed Cost Estimate
Knott Dairy Infrastructure

	A	B	C	D	E	F	G	H	I	J	K	L
79		Demolition Work-Site			SF	0	0			\$0		
80		Demolition Work-Building(s)-Interior			SF	13362	7			\$93,534		
81		Site Improvements			SF	0	0			\$0		
82		Infrastructure: Structural Modifications			SF	13362	120			\$1,603,440		
83		Infrastructure: New Structure			SF	0	0					
84		Infrastructure: Utility Improvements (MPE)			SF	13362	60			\$801,720		
85		Panels / Stalls / Alley Ways			SF	13362	10			\$133,620		
86		Equipment-Project Provided			SF	13362	0			\$0		
87		Equipment-Owner Provided			SF	13362	0			\$0		
88												
89	Lactating Cow Barn											
90		Demolition Work-Site-Earthwork			SF	19200	8.5		\$163,200			
91		Demolition Work-Site-Earthwork			SF	21600	12		\$259,200			
92		Demolition Work-Site-Earthwork			SF	14000	12				\$168,000	
93		Demolition Work-Building(s)			SF	10657	11.25		\$119,891			
94		Demolition Work-Building(s)			SF	3200	11.25				\$36,000	
95		Site Improvements			SF	21600	7.5		\$162,000			
96		Site Improvements			SF	14000	7.5				\$105,000	
97		Infrastructure: Structural Modifications			SF	4800	7.5				\$36,000	
98		Infrastructure: New Structure			SF	24000	150		\$3,600,000			
99		Infrastructure: New Structure			SF	15400	150				\$2,310,000	
100		Infrastructure: New Structure (Viewing Platform + Stair-New			SF	1200	120		\$144,000			
101		Infrastructure: New Structure (Viewing Platform + Stair-New			SF	650	120				\$78,000	
102		Infrastructure: Utility Improvements (MPE)			SF	24000	60		\$1,440,000			
103		Infrastructure: Utility Improvements (MPE)			SF	15400	60				\$924,000	
104		Panels / Stalls / Alley Ways			SF	6200	10		\$62,000			
105		Panels / Stalls / Alley Ways			SF	24000	10		\$240,000			
106		Panels / Stalls / Alley Ways			SF	15400	10				\$154,000	
107		Equipment-Project Provided			SF	24000	0		\$0			
108		Equipment-Project Provided			SF	15400	0				\$0	
109		Equipment-Owner Provided			SF	24000	0		\$0			
110		Equipment-Owner Provided			SF	15400	0				\$0	
111		Robotic Milkers (TBD - Estimated @ \$300K Each w/ Install)			SF	24000	0		\$0			
112		Robotic Milkers (TBD - Estimated @ \$300K Each w/ Install)			SF	15400	0				\$0	
113		Robotic Feeders (TBD)			SF	24000	0		\$0			
114		Robotic Feeders (TBD)			SF	15400	0				\$0	
115												
116	Feed Barn											
117		Demolition Work-Site-Earthwork			SF	16800	12		\$201,600			

Appendix D – Detailed Cost Estimate
Knott Dairy Infrastructure

	A	B	C	D	E	F	G	H	I	J	K	L
118		Demolition Work-Building(s)-Interior			SF	3200	5					
119		Demolition Work-Building(s)			SF	3200	11.25		\$36,000			
120		Site Improvements			SF	9600	7.5					
121		Site Improvements			SF	16800	12		\$201,600			
122		Infrastructure: Structural Modifications			SF	3200	40					
123		Infrastructure: New Structure			SF	4800	150		\$720,000			
124		Infrastructure: Utility Improvements (MPE)			SF	4800	30		\$144,000			
125		Panels / Stalls / Alley Ways			SF	3200	10					
126		Panels / Stalls / Alley Ways			SF	4800	10		\$48,000			
127		Equipment-Project Provided			SF	3200	0					
128		Equipment-Project Provided			SF	4800	0				\$0	
129		Equipment-Owner Provided			SF	3200	0					
130		Equipment-Owner Provided			SF	4800	0				\$0	
131												
132	Milking Parlor											
133		Demolition Work-Site			SF	4000	8.5				\$34,000	
134		Demolition Work-Building(s)-Interior			SF	4736	10				\$47,360	
135		Site Improvements			SF	4000	7.5				\$30,000	
136		Infrastructure: Structural Modifications			SF	4736	40				\$189,440	
137		Infrastructure: Utility Improvements (MPE)			SF	4736	30				\$142,080	
138		Infrastructure: Animal Circulation (Panels / Alley Ways)			SF	4736	10	\$47,360				
139		Equipment-Project Provided			SF	4736	0		\$0			
140		Equipment-Owner Provided			SF	4735	0		\$0			
141												
142	Admin / Classroom / Residence Building											
143		Demolition Work-Site			SF	4000	10				\$40,000	
144		Demolition Work-Building(s)			SF	3600	15				\$54,000	
145		Site Improvements			SF	4000	12				\$48,000	
146		Infrastructure: Structural Modifications			SF	3600	200				\$720,000	
147		Vertical Circulation-Elev-3 Stops			EA	1	550000				\$550,000	
148		Infrastructure: Utility Improvements (MPE)			SF	3600	50				\$180,000	
149		Equipment-Project Provided			SF	3600	0				\$0	
150		Equipment-Owner Provided			SF	3600	0				\$0	
151												
152	Milk Storage Facility											
153		Demolition Work-Site-Earthwork			SF	12000	12				\$144,000	
154		Demolition Work-Building(s)			SF	3328	7.5				\$24,960	
155		Site Improvements			SF	5100	12				\$61,200	
156		Tanks(s)- Relocated			EA	0	0				\$0	

Appendix D – Detailed Cost Estimate
Knott Dairy Infrastructure

	A	B	C	D	E	F	G	H	I	J	K	L
157		Infrastructure: New Structure / Tanks			EA	2	85000				\$170,000	
158		Infrastructure: Utility Improvements (MPE)			EA	2	30000				\$60,000	
159		Equipment-Project Provided			SF	800	0				\$0	
160		Equipment-Owner Provided			SF	800	0				\$0	
161												
162	Other Site Utility Infrastructure Improvements											
163		Pasture-Cow Water System			Allowance	1	0					\$0
164		Waste Flume-Modifications			Allowance	1	0					\$0
165		Settlement Ponds-Improvements			Allowance	3	0					\$0
166		Composting-Self Managed-Site Located + Access Road			Allowance	1	0					\$0
167		Composting-Digester System-Site Located			Allowance	1	0					\$0
168		Data Connectivity Upgrade (Initial Startup Allowance)			Allowance	500000	1	\$500,000				
169		Electrical Service Upgrade			Allowance	1	0		\$0			
170												
171	Site Circulation Improvements				SF	168000	12					\$2,016,000
172		Parking Lot Improvements-Existing-Improve			SF	5600	25					\$140,000
173		Parking Lot Improvements-Expansion			SF	5600	40					\$224,000
174		Roads-Circulation-Existing-Improve			SF	15000	20					\$300,000
175		Roads-Circulation-Improvements			SF	10000	30					\$300,000
176												
177												
178												
179												
180												
181												
182												
183												
184		Building Construction Subtotal						\$4,999,360	\$7,541,491	\$3,204,672	\$11,869,440	\$2,980,000
185		<i>Percentage of Construction Cost</i>						<i>78.20%</i>	<i>82.00%</i>	<i>78.20%</i>	<i>78.20%</i>	<i>78.20%</i>
186												
187								Phase 1	Phase 2	Phase 3	Phase 4	Site Circulation
188								+New Heifer Barn	+New Lactating	+Demo Heifer Barn	+Remodel 402C	+Site Vehicle
189								+Locate Dry Cows	Cow Barn	+Remodel 402E	for Calves &	Circulation
190								in New Heifer Barn	+ Upgrade elec	for Far Out,	Sick Cows	Improvements
191								Temporarily	Service	Vet Med &	+Expand New	(roads / parking)
192								+Improve Data		Handling	Locating Barn	
193								Connectivity		+Expand New	+Expand New	
194										Heifer Barn &	Heifer Barn	
195										Close Up	Again	

Appendix D – Detailed Cost Estimate
Knott Dairy Infrastructure

	A	B	C	D	E	F	G	H	I	J	K	L	
196												+New Feed Barn	
197												+New Milk Stor	
198												+Remodel Parlor/ Admin Bldg	
199												PROBABLE CONSTRUCTION COSTS	
200	Subtotal- Site + Building Development							\$6,393,043	\$9,196,941	\$4,098,046	\$15,178,312	\$3,810,742	
201	Design Contingency (unitemized work)					15.00%	=	\$958,957	\$1,379,541	\$614,707	\$2,276,747	\$571,611	
202	PROBABLE CONSTRUCTION COSTS: Site + Building Development by Phase							\$7,352,000	\$10,576,482	\$4,712,753	\$17,455,059	\$4,382,353	
203	Cumulative Costs								\$17,928,482	\$22,641,235	\$40,096,293	\$44,478,646	
204	<i>*Note: Above itemized costs do NOT include construction contingency, haz-mat/env costs, furnishings, misc. equipment, A/E fees or other project costs.</i>												
205	<i>**Note: Cost model developed for Spring 2023 cost expectations and does NOT include addtl inflation/cost escalation. Current market conditions remain extremely unstable creating need for various assumptions to be made.</i>												
206													
207	PROJECT BUDGET ASSUMPTIONS							Budget Factor					
208	Project Cost-Assumed by Phase					Const Cost	x	1.330	\$9,778,160	\$14,066,721	\$6,267,961	\$23,215,228	\$5,828,529
209									\$23,844,881	\$30,112,842	\$53,328,070	\$59,156,600	
210													



Facilities Master Planning - Knott Dairy Center

FEASIBILITY STUDY



WASHINGTON STATE UNIVERSITY
College of Agricultural, Human,
and Natural Resource Sciences



Pullman, WA
July 2022

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EXECUTIVE SUMMARY

INTRODUCTION

The WSU Animal Sciences Department (AS) has an obligation to train the next generation of livestock producers and industry leaders and conduct research that is relevant to the sustainability and growth of the livestock industry in Washington State, the Pacific Northwest, and the greater US. This study is the culmination of collaborative efforts between stakeholders, faculty, staff, and students to begin the fulfillment of that obligation. Through the process of this study, a strategic investment has been identified, that once executed, will offer better and more relevant hands-on learning opportunities for students and perform essential research for the livestock industry to address efficiency, sustainability and profitability moving forward.

SCOPE OF STUDY

The premise of this study was to identify a project scope and probable cost for development of the existing Knott Dairy Center (KDC) for the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS) on the Washington State University campus in Pullman, WA. Per the Animal Sciences Department (AS), the KDC is in need of repair and modernization to allow training of conventional and robotic dairy techniques, increase production capacity, improve facilities for the shelter and care of their livestock, and improve utilities including electrical, data, water, and manure handling. There is a strong desire to make the KDC better reflect the professional image of excellence that AS wishes to portray.

This document has been developed by the study team to be used to guide the planning of the proposed master plan for the dairy center. It is expected to be a living document that will evolve over time. Included is scope of work (program and conceptual design), potential cost, and rough schedule expectations.

PROGRAMMED SPACES

The Knott Dairy Center promotes three levels of academia which include teaching, research and a student ran club. The current facilities lack the technology needed to support the modern day research needed and prepare students for what they will encounter in the industry. The Cooperative University Dairy Students (CUDS) is a student led program with academic credits that requires independent control from the rest of the KDC herd to be successful.

In order to meet the current and future academic needs of the dairy, the numerous facilities that make up the KDC are in need of an extensive upgrade and modernization. The following is a summary of facilities / spaces expected to be included in the master plan:

- Calving Barn
- Heifer Barn
- Dry Cow Barn
- Lactating Cow Barn
- Close Up Barn / Pens
- Vet Med Space (main and satellite labs)
- Milking Parlor / new robotic milkers.
- Milk storage (redundant safety system).
- Classroom, Offices, and Residence



EXISTING KDC - LACTATING COW BARN FEED ALLEY

CONCEPTUAL DESIGN

The conceptual design of this study has identified several phases to best implement the needed improvements. A future master plan was developed and then overlaid with top priority items to determine the best order for phasing the work. Each phase builds on work from previous phases required to keep the dairy fully operational during construction.

POSSIBLE COSTS/BUDGET

Possible construction and project costs have been developed for the conceptual design. The project is expected to be administered by WSU Facility Services following established state and institutional requirements. The following is a summary of identified cost allowances for this project:

	<u>PHASE I</u>	<u>PHASE II</u>	<u>PHASE III</u>	<u>PHASE IV</u>
Programmed Construction Costs (construction costs 75% of project costs)	\$7,352,000	\$10,576,482	\$4,712,753	\$17,455,059
Anticipated Project Costs	\$2,426,160	\$3,490,239	\$1,555,208	\$1,446,176
Total Project Budget Range <i>(range for conceptual design unknowns / 3-5 years inflation)</i>	\$9.7M - \$12.2M	\$14M-\$17.6M	\$6.3M-\$7.8M	\$23M-\$29M

POSSIBLE SCHEDULE

A possible project schedule by phase was reviewed as part of this analysis. It is anticipated that Phase 1 and Phase 2 would occur within 5 years of this study with Phase 3 & Phase 4 to follow consecutively afterwards as funding becomes available:

- Phase I: 2023-2025
- Phase II: 2025-2027
- Phase III: TBD
- Phase IV: TBD



EXISTING SITE ANALYSIS

EXISTING SITE OVERVIEW

This site analysis portion of the study conducted an in-depth review of the existing site layout and overall proximity of existing structures to one another. A review of the current flow of animals was analyzed to identify areas of concern that need addressed. The team also met with WSU Facilities to review know utilities in the area and potential improvements that need to be considered.

EXISTING FACILITIES

The KDC consists of 13 separate structures spread across the site, with 7 of the structures specifically used for housing of animals. Currently the herd size exceeds the originally designed capacity for the dairy which has resulted in mixed use between several structures and poor flow of animals across the site. Herding and containment of animals utilizes hot-wire electric fence, posing safety concerns for the staff and students working at the center.

EXISTING UTILITIES

The following existing utilities have been reviewed with WSU Facilities.

Domestic Water

- Majority of water piping has been upgraded in the last few years with new HDPE water lines (4" & 2").
- Capacity has been up-sized for additional load including providing water to pasture troughs.
- Holding tank was upgraded from 40 Gallons to 150 gallons in last few years.

Storm / Sanitary Sewer

- Cattle waste management consists of a flume system to separate waste and collect solids to transport to WSU's compost facility on the Pullman campus. Liquids are diverted to settling ponds.
- Human waste (Milking Parlor & Residence) is on septic system.
- Little is know about both systems and may require work.

Electrical

- Infrastructure upgrades currently being processed by WSU facilities for future project.

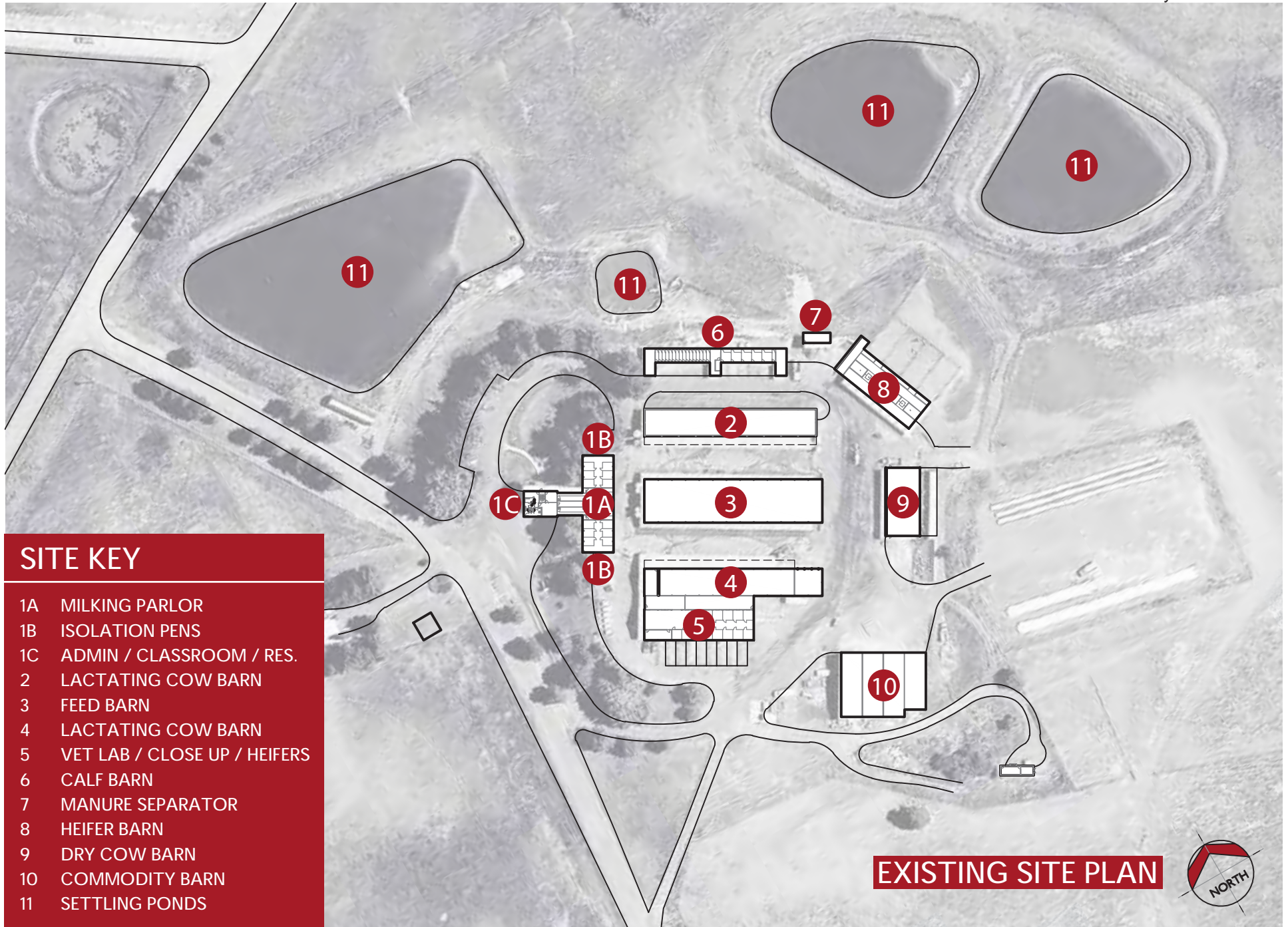
Data

- Upgraded data infrastructure is top priority for KDC.
- Current system is all wireless and not reliable.
- Running fiber optic to site or mix of hardwire and wireless system is needed in order to achieve desired modernization of dairy.

Gas Service

- No gas service available for this area.





PROGRAM REQUIREMENTS

HERD DISTRIBUTION

The following herd size distribution has been closely coordinated with WSU Animal Sciences Department administration and staff to identify facility needs based on the desired herd size of the Knott Dairy Center. As basis-of-design, the faculty shared distribution numbers for a 1000 cow dairy that was then converted to meet the current and projected herd sizes. Currently, the KDC herd is approximately 425 head with 180 lactating cows. It is desired to reach a herd size of 220 lactating cows which meets the milk demand of the WSU creamery. Although it may be impractical for the KDC, the industry design standard advises facilities be designed to 140% of the desired herd size to account for variations in the calving rate of the herd. This has been taken into account for the long term master by providing ample space on site for future growth with initial phases aimed at providing closer to the actual desired herd size.

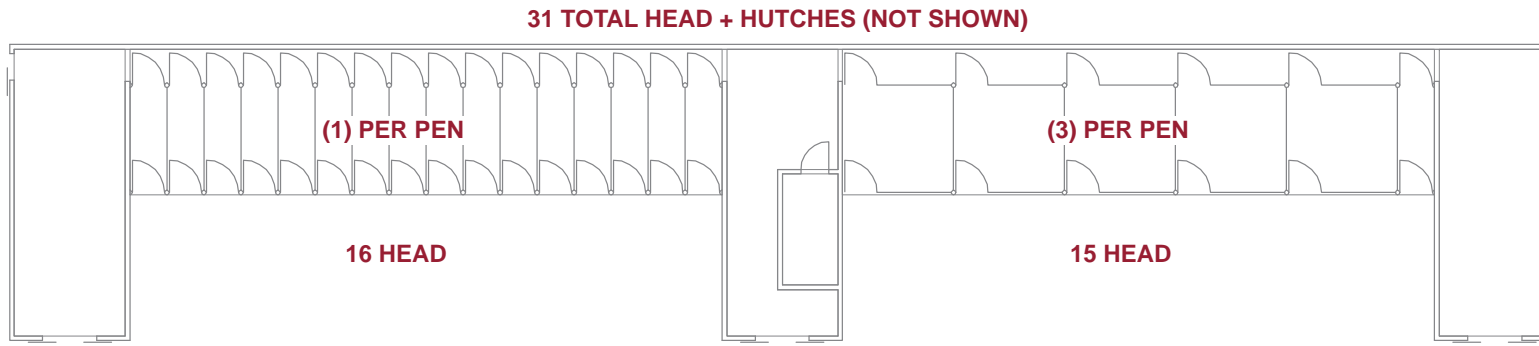
Item	Current Herd Size	Desired Herd Size	140% of Desired Size
Female Calves			
Birth to 2 mo	17	21	30
3-5 mo	26	32	45
Total Calves	43	53	74
Heifers			
6-8 mo	26	32	45
9-12 mo	35	42	59
13-15 mo	26	32	45
16-22 mo	61	74	104
60 -22 d before calving	11	13	19
close-up heifers (21 d before calving)	7	8	11
Total Heifers	165	201	282
Cows			
Dry cows (60-22 d before calving)	23	28	39
Close-up cows (21 d before calving)	14	17	24
Total Dry cows	37	45	63
First-lactation cows	61	74	104
Lactating cows (\geq second lactation)	119	146	204
Total Lactating cows	180	220	308
Total Cows	217	265	371
Total Head	425	520	727

CALF BARN

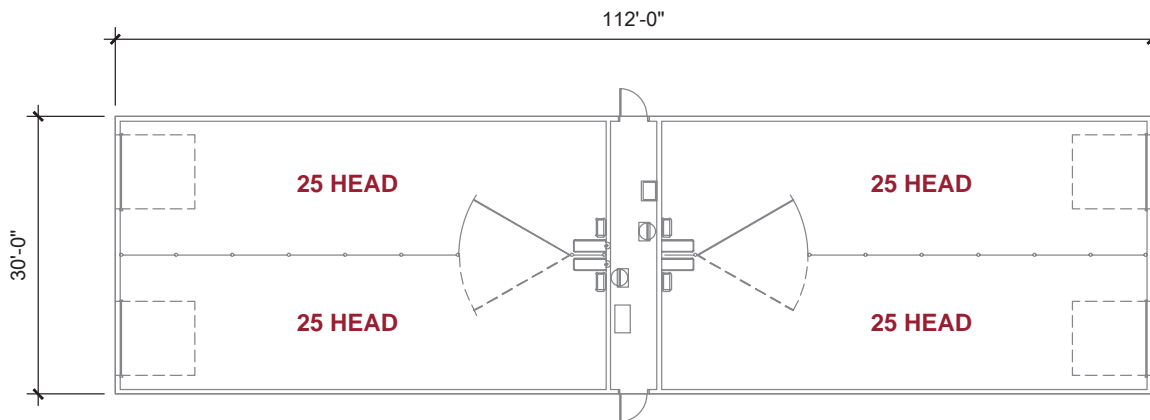
Programmed SF: 3,360 SF
Existing Space SF: 3,328 SF

Notes

- Current arrangement houses 1-3 calves per pen with individual manual feeding.
- Anticipated design to implement automatic group feeding with 25 head per pen.
- Projected design size to be 30 heifer calves.
- Additional space accounted for separate CUDS pens, potential research trials, and possible bull calves program.



EXISTING CALF BARN PLAN
NOT TO SCALE



PROPOSED CALF BARN PLAN
NOT TO SCALE

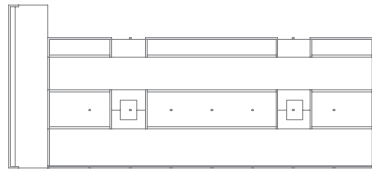


HEIFER / DRY COW BARN

Programmed SF: 38,750 SF
Existing Space SF: 7,200 SF

Notes

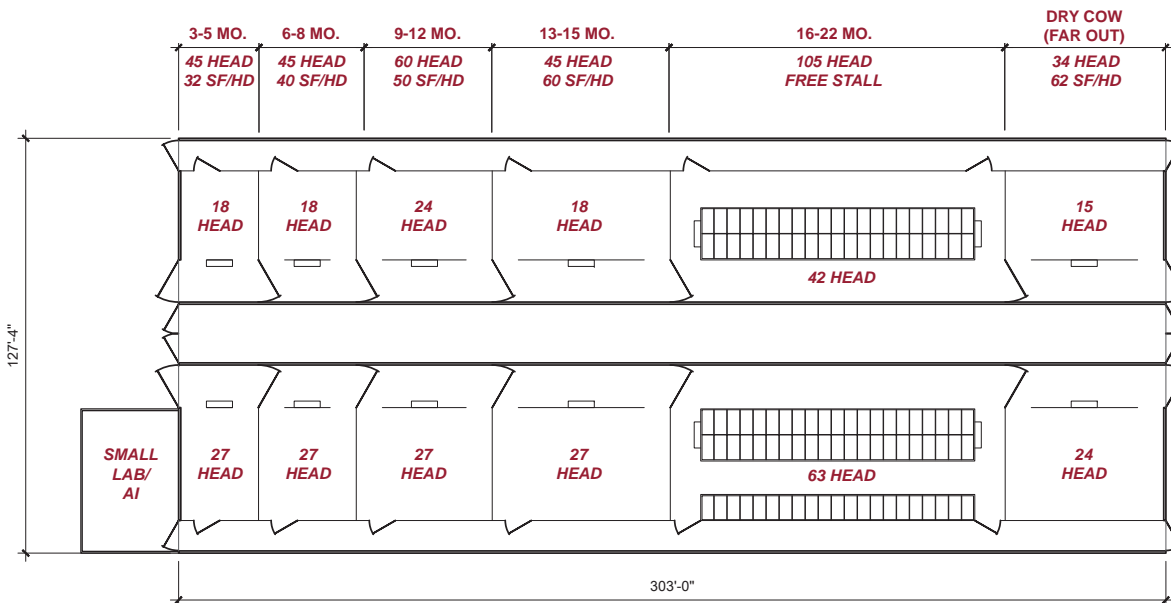
- Heifer barn is undersized for current herd resulting in heifers being housed in other barns across the site.
- Current dry cow barn failed the most recent AALAC inspection and requires repairs to regain compliance.



EXISTING HEIFER BARN
NOT TO SCALE



EXISTING DRY COW BARN
NOT TO SCALE



PROPOSED HEIFER / DRY COW BARN
NOT TO SCALE

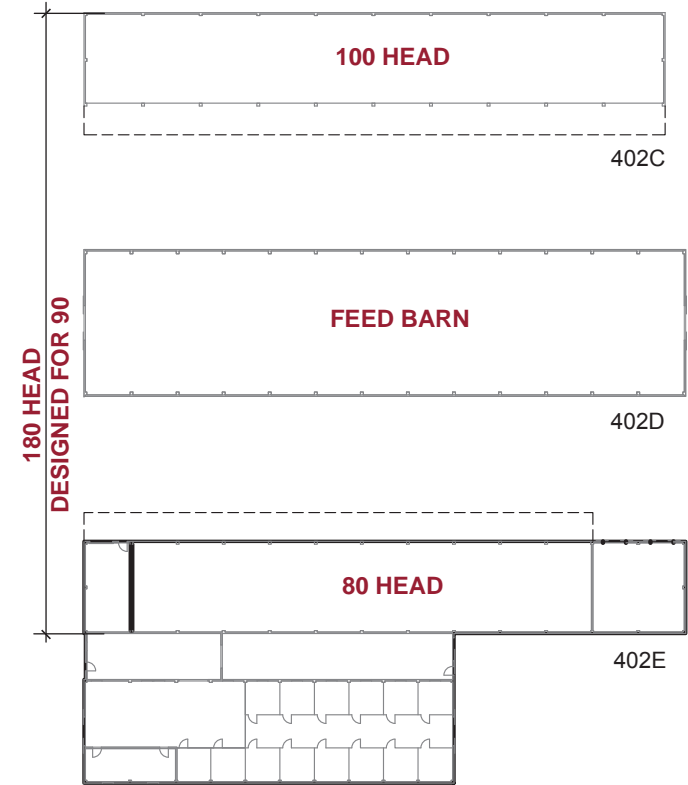
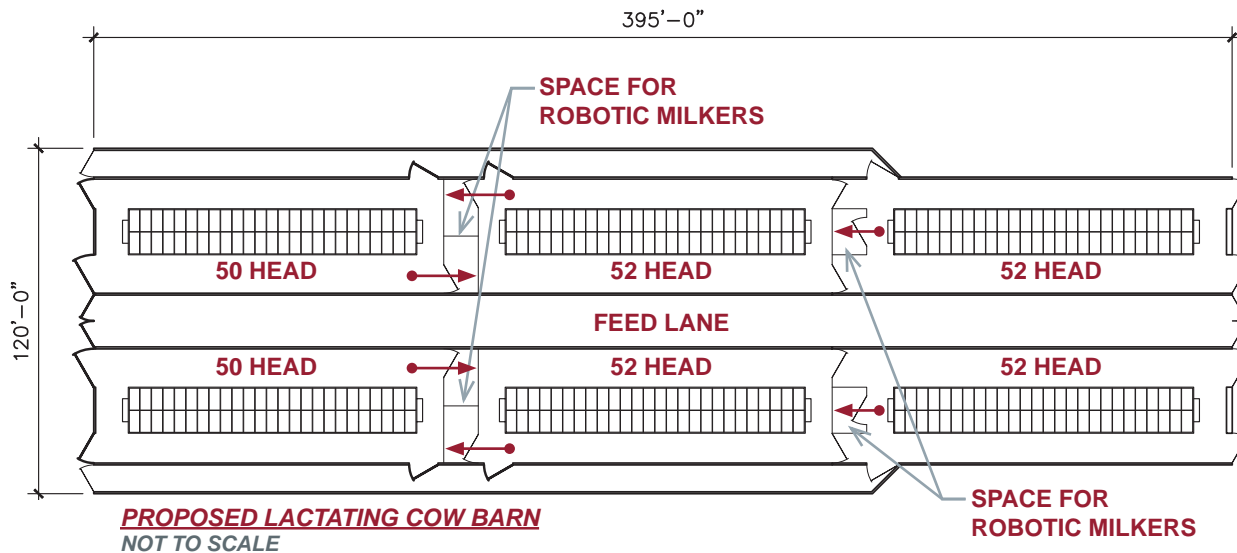


LACTATING COW BARN

Programmed SF: 44,000 SF
Existing Space SF: 46,200 SF (including exterior open space)

Notes

- Current complex of barns were designed for 90 lactating cows but currently hold 180 head.
- Existing covered area is undersized and not properly ventilated.
- Current configuration uses hot-wire for containment of animals which poses a safety concern.
- A teaching space is needed with room for students to gather and view operation.
- Desire to provide robotic milkers in the future does not work with current layout.



EXISTING LACTATING COW BARN
NOT TO SCALE

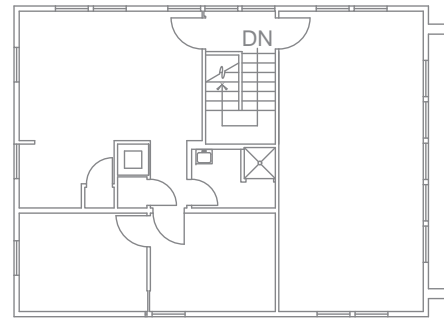


OFFICE AND MILK PARLOR

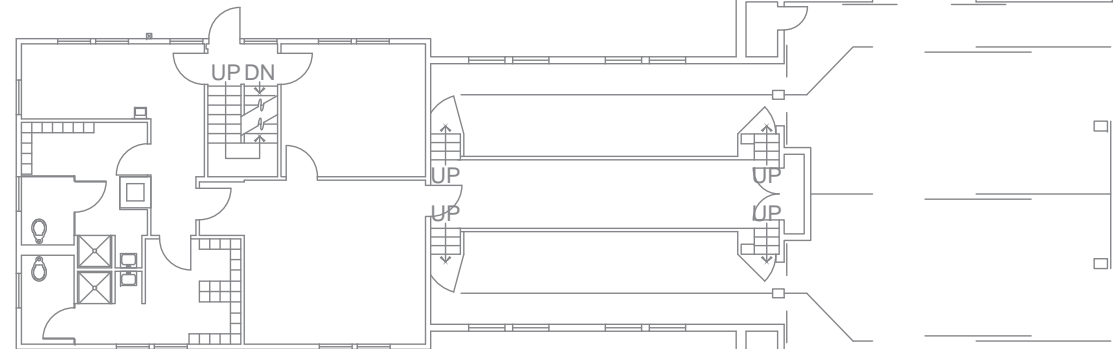
Existing Space SF: 8,500 SF

Notes

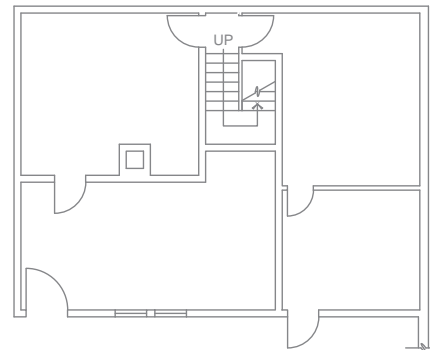
- Existing building consists of milking parlor, milk storage, office / admin space, locker rooms, classroom and residence.
- Parlor only allows for twice a day milking (most dairies are 3x) due to limitations in both space and equipment.
- Parlor access for both people and animals is a concern. Hot wire electric fence is used to guide cows into parlor with no separate space for entering and existing. Staff entrance passes through pens which poses a danger and should be independent.
- Sick pens located adjacent to milking parlor show potential structural issues and programatically should not be located in this close proximity of healthy animals.
- Milk storage is down to a single tank with no redundancy



BASEMENT



FIRST FLOOR



SECOND FLOOR

EXISTING OFFICE AND MILK PARLOR
NOT TO SCALE

CODE CONSIDERATIONS

An initial code analysis of the 2018 International Building Code (IBC) has identified a number of code considerations that should be further examined during project development. Building codes that have been adopted by the State of Washington at the time of building permit review will need to be the basis of project design. Type of construction, allowable building area, adjacent structures separation, fire sprinklers, fire flow, and exiting all appear to be issues that will require close examination as the project design is further developed. Building code requirements for construction change over time. This document provides for master planning considerations making it will be important to provide an updated code analysis prior to each phase of work. The following is a summary of code limitations identified at this time for future consideration:

AUTHORITY HAVING JURISDICTION (AHJ)

Early coordination with the Authority having Jurisdiction should occur during the design process to fully identify building classifications and code requirements that will be required on the project (each phase & final completion).



OCCUPANCY CLASSIFICATION

The obvious classification of the buildings at the WSU Knott Dairy would be a U Occupancy (barns, livestock shelters, stables). Often an AHJ will classify university ag research buildings as a B Occupancy due to the higher education activities provided by the facility. Additionally, the International Building Code includes 'Appendix C, Group U Agriculture Buildings'. Use of an appendix to the IBC is not mandatory unless specifically adopted by the AHJ. It appears that Washington State has currently not adopted Appendix C. Some AHJ officials will still consult an appendix to the code that has not been adopted to provide direction.

TYPE OF CONSTRUCTION

It appears that a number of Types of Construction could be used for the facility depending on the AHJ occupancy classification and use of Appendix C. Type VB (combustible construction) might be considered if Appendix C is used for direction due to the possibility of 'unlimited building area'. Other construction types to consider per the IBC are Type IB and IIB (non-combustible construction).

BUILDING SEPARATION

Building placement on site is required to follow the code minimum distance between buildings based on occupancy and construction classification. The required building separation also could vary considerably depending on AHJ determinations. This could vary between no required separation to 30 or 60 feet of separation being required. It appears that there are a number of code gymnastics that can be considered by the designer to meet building code limitations.

AUTOMATIC FIRE SPRINKLERS

The use of an automatic fire sprinkler system (AFSS) has the advantage of allowing the basic allowable area per floor to be increased significantly over 300% in a single-story building.

Large area non-fire sprinklered building(s) appear to be allowed by the IBC depending on roof height selected, building classification, type of construction, fire protection and whether or not Appendix C is used for code determination direction.

If automatic fire sprinklers are to be considered as a part of the project design, well pressures and water storage options will need to be considered as an effective system is designed.

NFPA CONSIDERATIONS

In addition to the International Code Council family of building codes, National Fire Protection Association (NFPA) requirements will need to be considered. Based on the contents of the buildings the NFPA should classify these buildings as a moderate hazard. Additionally, the NFPA does not have a corresponding classification to the IBC U Occupancy which indicates close coordination with the fire marshal will be critical to project success.

ALLOWABLE BUILDING AREA

Based on building classification, type of construction, roof height, fire protection and whether Appendix C is used, the allowable area will be identified. There appear to be a number of alternative code paths for the designer to pursue.

EGRESS

Due to the low egress occupant load of agricultural buildings (300 sf per occupant), it appears that only 2 exits would be required from any building. The conceptual design has taken this into account and has also provided for the required remoteness of exits.

ACCESSIBILITY

IBC Chapter 11 and the Americans with Disabilities Accessible Guidelines (ADA-AG) require that the facility includes accessible features. It should be noted that U Occupancies require accessibility as follows: 1) In ag buildings, access is required to paved work areas and areas open to the public, and 2) areas that contain required accessible parking. The conceptual design included in the study has taken into account specific accessible requirements.

FUTURE ADDITION(S)

Master planning, phasing and future improvements anticipated should be considered when initial improvements are made so that future needs can be easily met. This approach would provide the college with future growth opportunities with little redesign of improvements previously completed.



EXISTING KDC - VIEW OF MILKING PARLOR FROM CLASSROOM

CONCEPTUAL DESIGN

PHASING INFORMATION

PHASE 1

- Construct a new heifer and dry cow barn at the northeast side of the site. Barn is to be positioned in a manner that allows for the construction of future addition(s) under later phases. New barn to house overflow of heifers located elsewhere on site (not in current heifer barn) and relocation of dry cows from current barn. The existing dry cow barn is to be abandoned due to non-compliance with current AALAC regulations. Barn design to follow a freestall and compost bedded pack housing module.
- Construct system of corral fencing at current lactating cow barn to replace hot-wire used for herding animals to milking parlor.
- Expand parlor by constructing corrals outside of building to increase holding pen size and provide safer human access.
- Upgrade data infrastructure to provide more reliable internet on site. Upgrades may include installing fiber optic to site or a mix of improved exterior wireless access points and hardline cabling from tower to site.

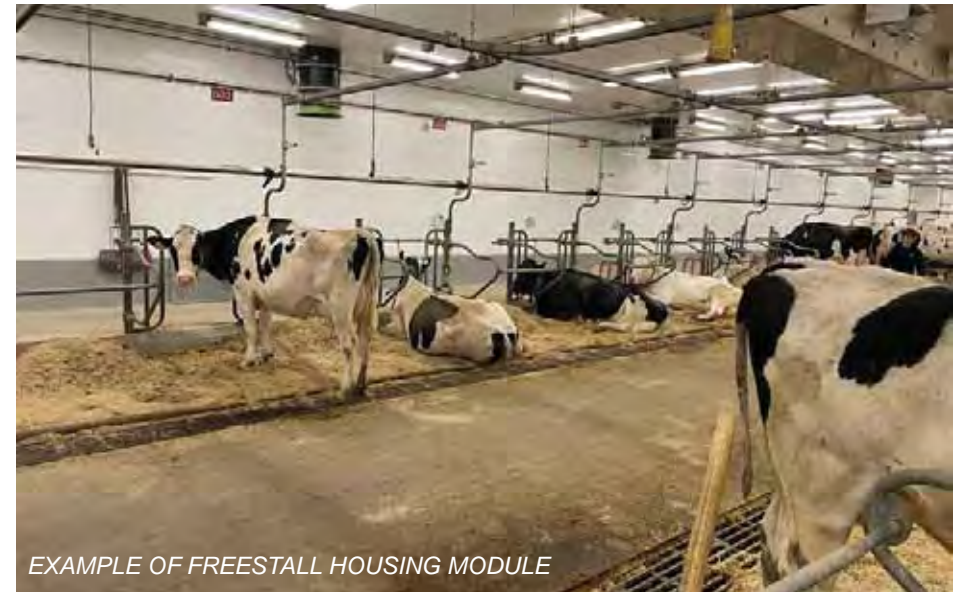


EXISTING KDC - CALF BARN AND
LACTATING COW BARN MODULE

CONCEPT DEVELOPMENT

The conceptual design has been developed to be responsive to the Washington State livestock agricultural community. The Animal Sciences Department (AS) is committed to building their reputation for excellence by modernizing the Knott Dairy Center to meet the research and educational needs of the industry. It is desired to reconfigure the current layout to create a more efficient flow of animals and provide a safer environment for the staff, researchers, and students running the center.

The future vision of the KDC includes modernized barns with robotic feeders and milkers that will provide the precision required for collecting research data. In order to accomplish the much needed improvements, a long term master plan has been established with a phased approach guided by the priorities identified during this study. The enclosed concept includes a mixture of new and remodeled buildings that will be sequenced in a manner that allows the KDC to remain operational during the construction phases.



EXAMPLE OF FREESTALL HOUSING MODULE

PHASE 2

- Demo existing feed barn and dry cow barn.
- Construct new lactating cow barn after demolition of buildings indicated above. Barn to be designed following the freestall housing module. Included shall be space for robotic milking stations (for future install or during this phase pending available funding sources). New underground stainless steel piping show be installed running towards milk storage tanks in existing parlor and also plumbed to the north for future relocation of tanks. An elevated observation walkway is desired above the pens to allow for a safe teaching environment.
- Construct new feed storage on east side of site. Location of new feed storage should be positioned to allow for future growth of the lactating cow barn.
- Temporary feed aisle for existing lactating cow barns to be constructed for use during Phase 2 construction.

PHASE 3

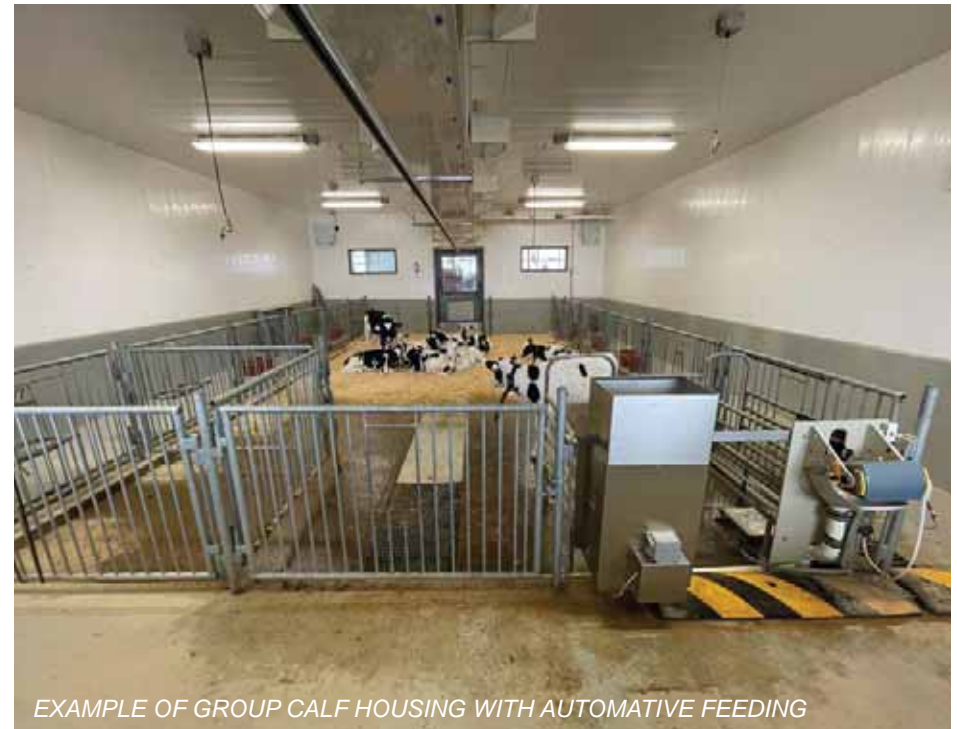
- Remodel / reconstruct existing lactating cow barns.
- South barn location to become new updated veterinary medical lab, pens for up close heifers and cows, storage, and teaching classroom lab.
- North barn location to become new ambulatory care (relocated from milking parlor building) and new calf barn. A small lab is to be constructed as separation between the two functions. Calf barn to provide group feeding with automative feeding.

PHASE 4

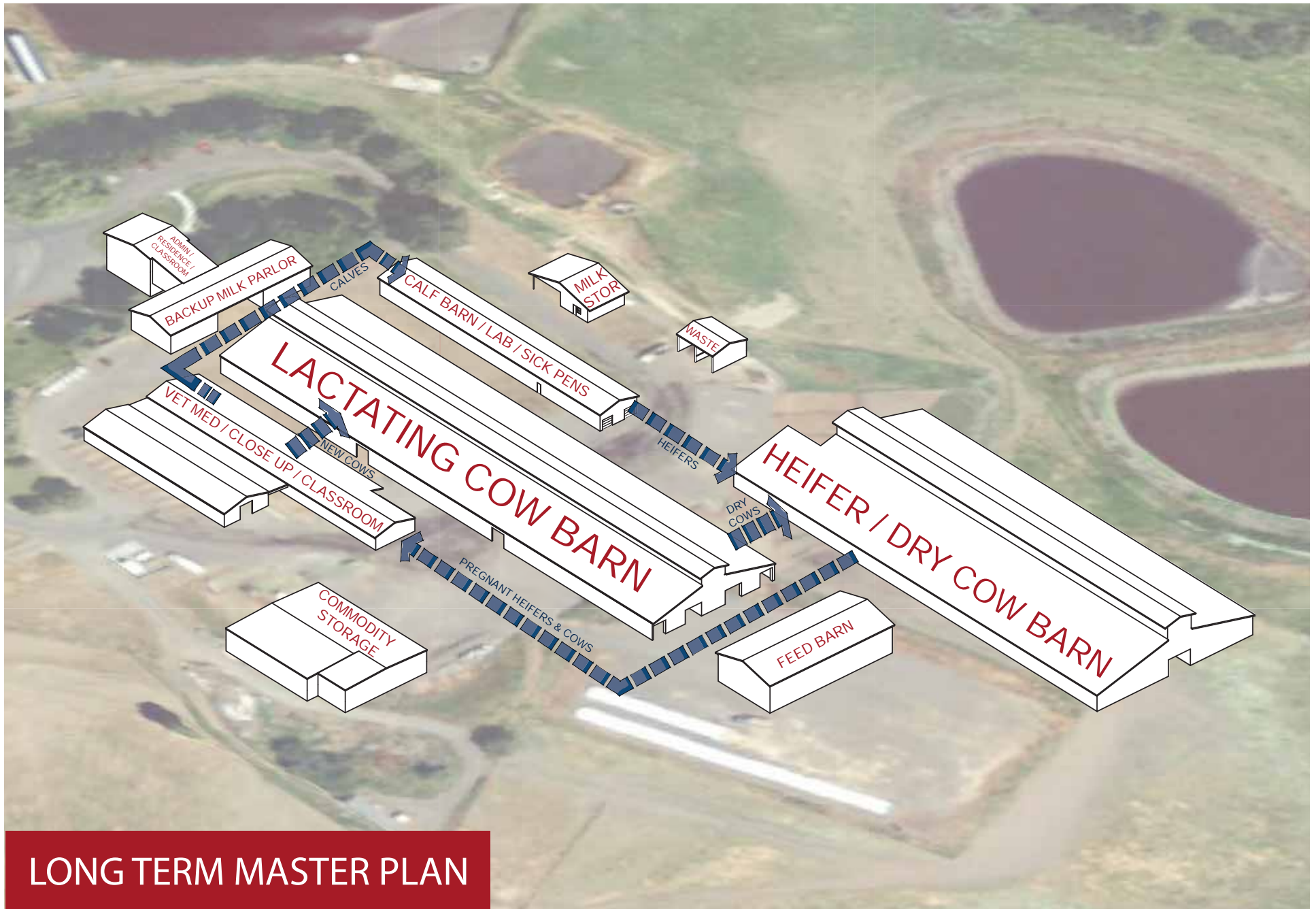
- Demo existing heifer barn and expand new heifer / dry cow barn. Expansion to follow a freestall and compost bedded pack housing module. A small lab shall be constructed including set up to conduct artificial insemination (AI).
- Expand lactating cow barn to the east following the same freestyle housing module.
- Remodel existing parlor, residence, and administrative building. Milking parlor to remain as teaching tool and emergency milking with anticipation that majority of milking to take place by new robotic milkers located in lactating cow barn.
- Demo existing calf barn for new milk storage building.

ADDITIONAL SITE DEVELOPMENT CONSIDERATIONS

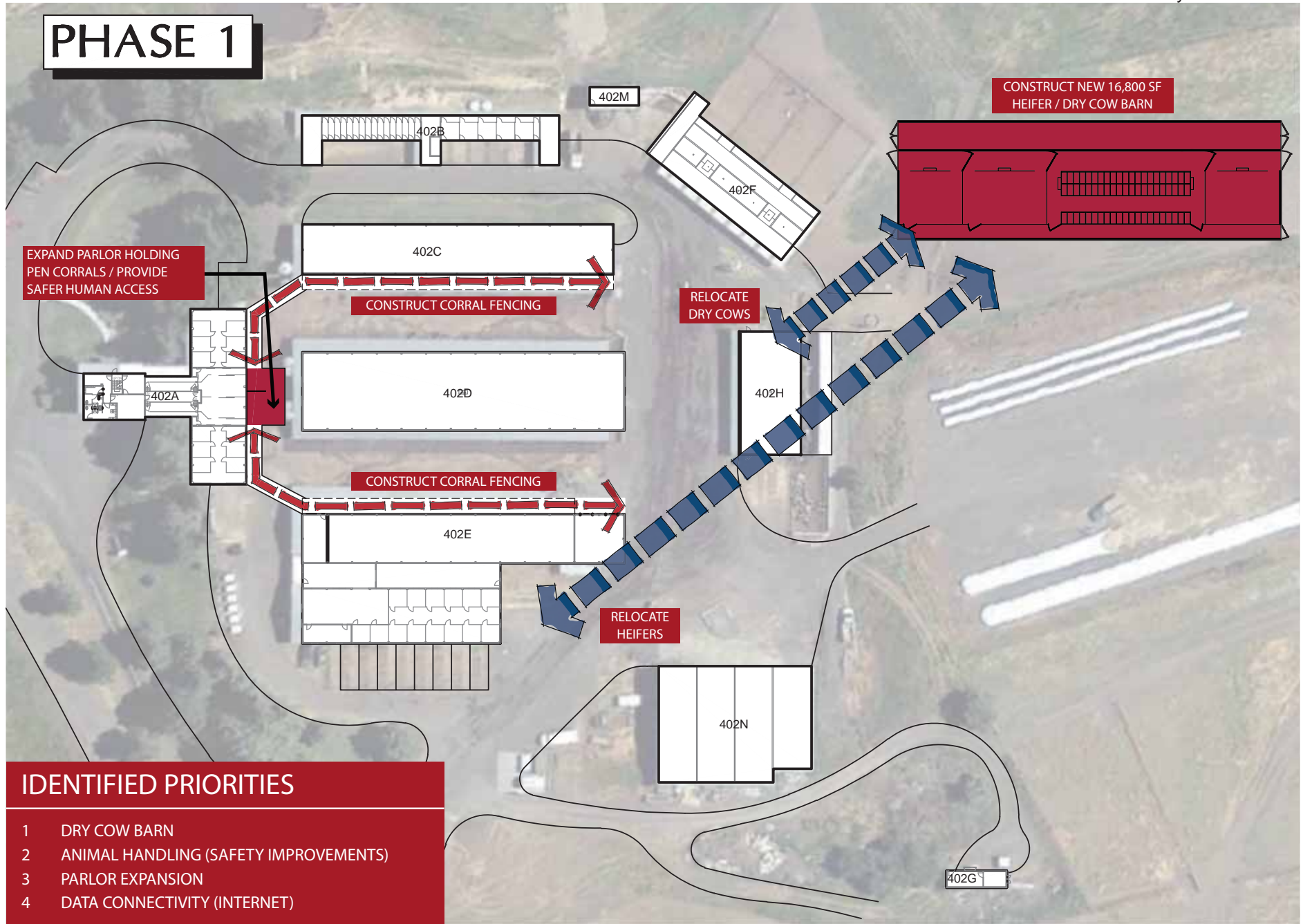
It is expected that the existing site directly related to each phase will be developed for the needs under that phase. In addition, other site improvements which may be independent of the above listed phases include road and parking lot improvements, pasture watering system, and improvements / modifications to the current waste management system. There are many decisions left to be made regarding the direction of the waste management system which may include improvements to waste flume and settlement ponds, addition of on-site composting, or implementation of a dairy digester system.



EXAMPLE OF GROUP CALF HOUSING WITH AUTOMATIVE FEEDING



LONG TERM MASTER PLAN



PHASE 1

CONSTRUCT NEW 16,800 SF
HEIFER / DRY COW BARN

EXPAND PARLOR HOLDING
PEN CORRALS / PROVIDE
SAFER HUMAN ACCESS

CONSTRUCT CORRAL FENCING

RELOCATE
DRY COWS

CONSTRUCT CORRAL FENCING

RELOCATE
HEIFERS

IDENTIFIED PRIORITIES

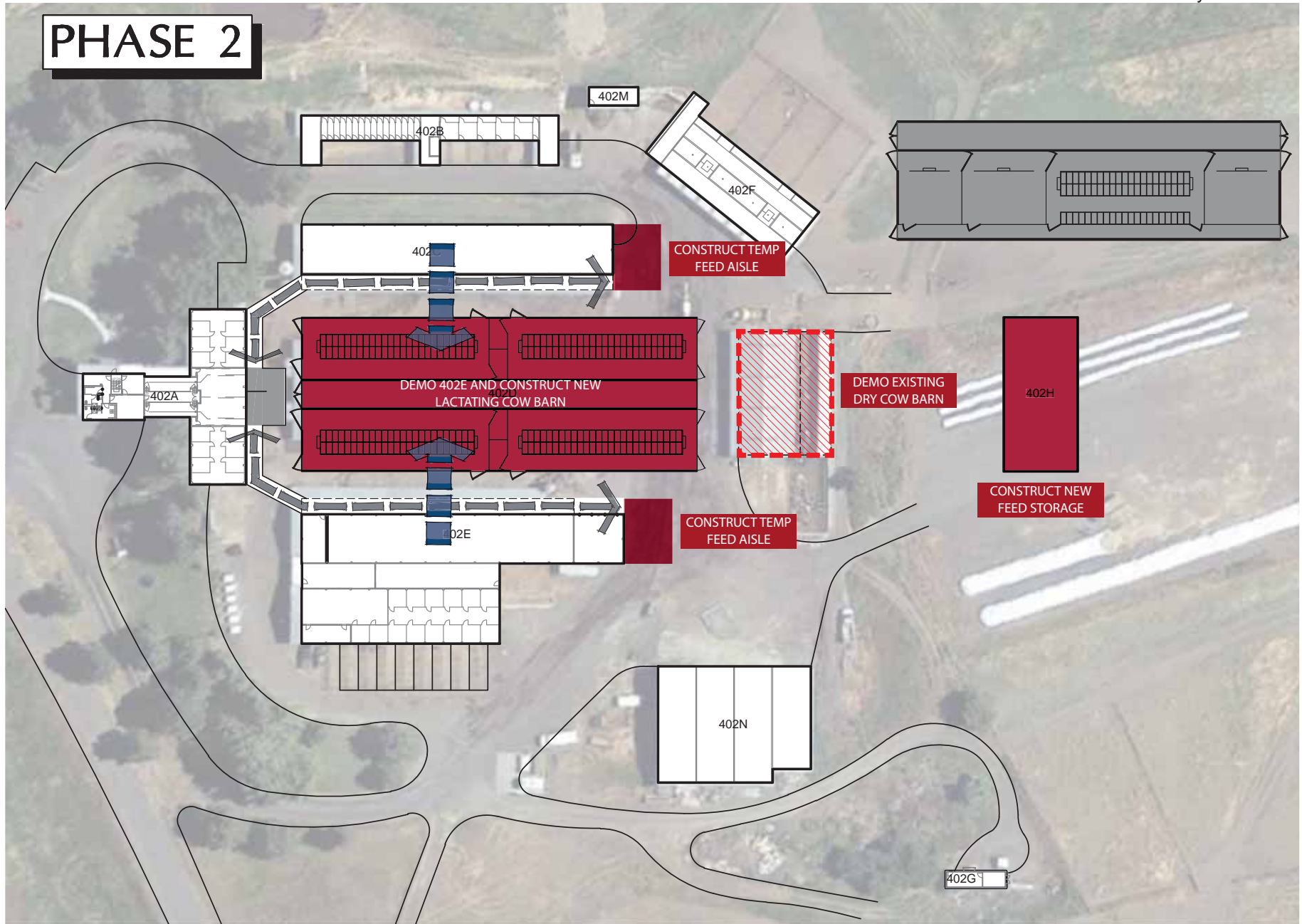
- 1 DRY COW BARN
- 2 ANIMAL HANDLING (SAFETY IMPROVEMENTS)
- 3 PARLOR EXPANSION
- 4 DATA CONNECTIVITY (INTERNET)

PHASE 1

SCALE: 1" = 80'-0"

NORTH

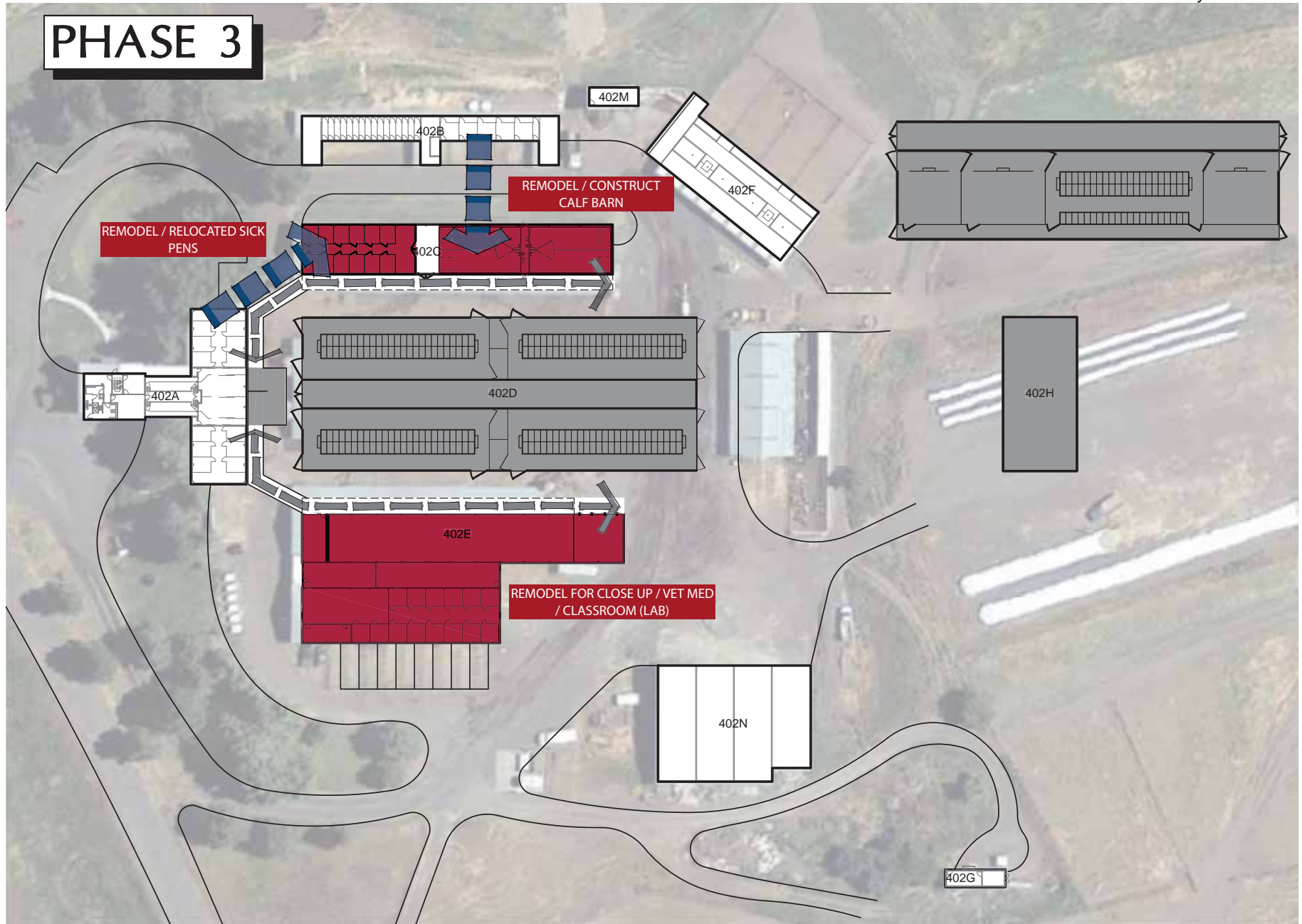




PHASE 2

SCALE: 1" = 80'-0"



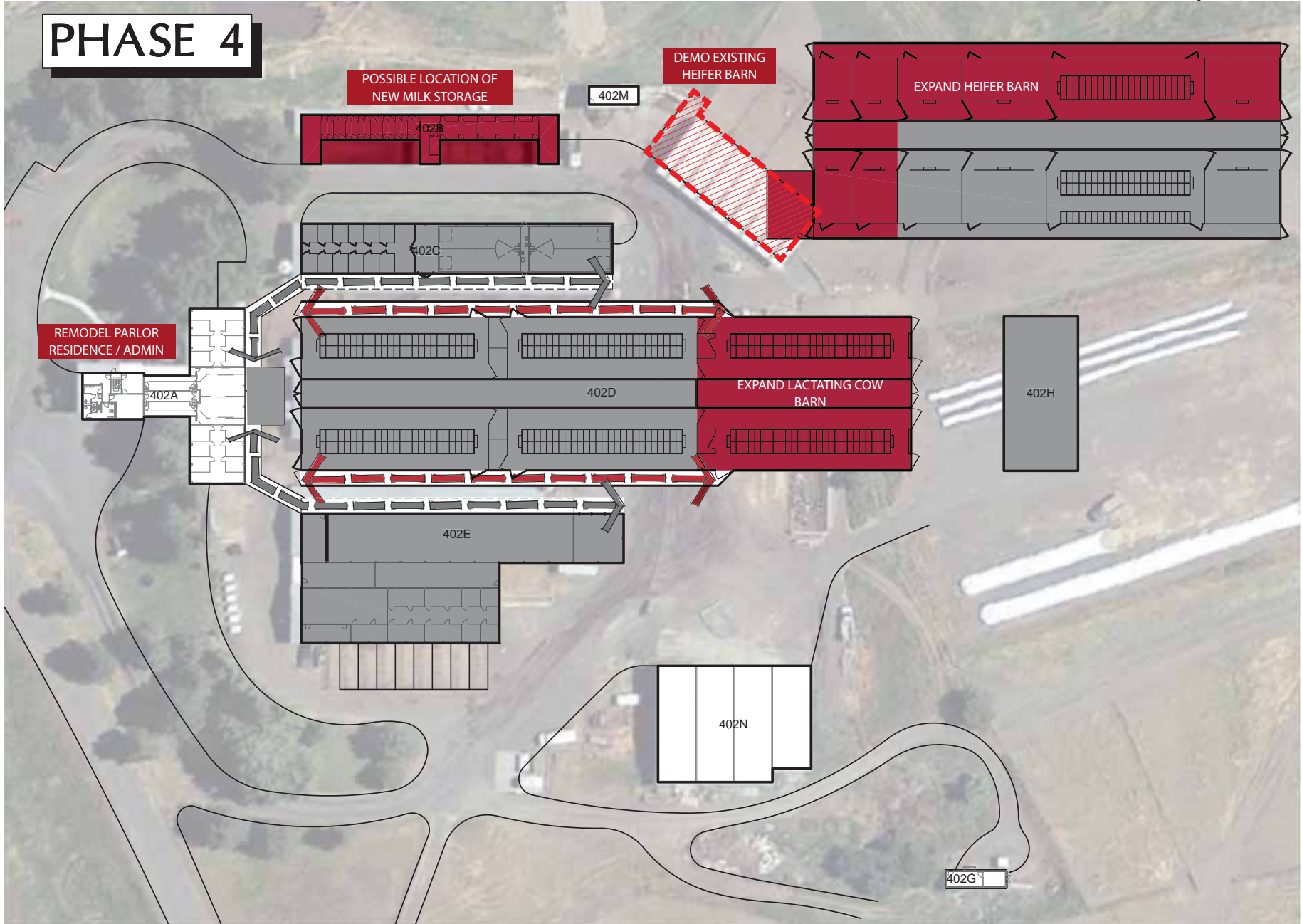


PHASE 3

PHASE 3

SCALE: 1" = 80'-0"





PHASE 4

SCALE: 1" = 80'-0"



POSSIBLE COSTS / BUDGET

The success of any project is founded on quality research and investigation to fully understand applicable issues. This facility study and conceptual design is a step forward in identifying these issues. It is fully expected that adjustments in cost assumptions will need to be coordinated and refined as the design is further developed and actual financing is finalized. The project will be administered by WSU Facility Services and state requirements will need to be followed. Costs will need to be continually updated as more information is obtained, scope is refined, and the design is adjusted.

CONSTRUCTION COSTS ANTICIPATED

The construction costs included for this facility study are a summary of an itemized cost model that was developed for the conceptual design. Anticipated construction costs have been identified per each phase outlined in this document. Included are building construction costs as well as site improvement costs directly related to the development of that structure. Separate from the identified phased work may be additional site improvement costs for road and parking lot improvements, a pasture watering system, and improvements / modifications to the current waste management system. As mentioned previously, the construction cost model will need to be updated at each design phase to monitor whether assumptions made are still valid with changing market conditions.

TOTAL PROJECT COSTS ANTICIPATED

Total project costs include allowances for costs that will be required for the entire project in addition to the assumed construction costs. Included are additional expenditures beyond construction costs such as allowances for administrative, support, FFE (fixtures, furnishings, & equipment), moving, A/E fees, inflation, testing & commissioning, abatement, change orders, and project contingencies. These project costs should be closely examined, identified, amended, and budgeted as required. WSU Facility Services will provide project cost budgeting and administration.

OPINION OF PROBABLE COSTS

	PHASE I	PHASE II	PHASE III	PHASE IV
General Conditions	\$1,393,683	\$1,655,449	\$893,374	\$3,308,872
Calf Barn / Sick Pens			\$572,358	
Heifer Barn / Dry Cows	\$4,452,000			\$5,563,400
Close Up / Vet Med			\$2,632,314	
Lactating Barn		\$6,190,291		\$3,811,000
Feed Barn		\$1,351,200		
Milking Parlor	\$47,360			\$442,880
Admin / Classroom / Residence				\$1,592,000
Milk Storage Facility				\$460,160
Other Infrastructure	(Data) \$500,000			(Other) TBD
Design Contingency (15%)	\$958,957	\$1,379,541	\$614,707	\$2,276,747
Probable Construction Costs	\$7,352,000	\$10,576,482	\$4,712,753	\$17,455,059
Anticipated Project Costs (33% of construction costs)	\$2,426,160	\$3,490,239	\$1,555,208	\$5,760,169
Probable Total Budget Cost (range for conceptual design unknowns / 3-5 years inflation)	\$9,778,160	\$14,066,721	\$6,267,961	\$23,215,228
	\$9.7M - \$12.2M	\$14M-\$17.6M	\$6.3M-\$7.8M	\$23M-\$29M

SCHEDULE EXPECTATIONS

The following anticipated project schedule expectations have been processed with the WSU College of Agricultural, Human, and Natural Resource Sciences administration identifying possible milestone expectations for funding of the individual phases. It is anticipated that Phase 1 and Phase 2 will occur within 5 years of this study with Phase 3 & Phase 4 following consecutively afterwards as funding becomes available.

- Phase I: 2023-2025
- Phase II: 2025-2027
- Phase III: TBD
- Phase IV: TBD

PROJECT SCHEDULE MILESTONES ANTICIPATED

A possible project schedule per phase has been approximated below based on a 24 month schedule for design, approval, and construction. Applicable milestones should also include funding finalization, Washington State University Board of Regents approval (planning & design) and WSU Facility Services assignment and set up. A possible schedule of milestones may look like the following:

Finalized Project Design	4 months
Construction Documents	5 months
Plan Review	1 month
Bidding and Contracts	2 months
<u>Construction</u>	<u>12 months</u>
Total Design/Construction	24 months



ACKNOWLEDGMENTS

The following individuals have provided active participation, input, or feedback as a part of this facility study. With much gratitude their efforts have provided for the development of this comprehensive study for the proposed WSU Knott Dairy Center Master Planning.

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