

## Relocation of the VT Dairy

- Why?
  - Current facility was completed in 2005
  - A bit of history – Long convoluted political process
    - Vetoed by Governor Gilmore
    - Veto overridden by House and Senate. - John Miller and John Chichester
    - Nearly 5 years between initial approval and completion.
  - Convenience of location for teaching and research efforts.

## Why????

- Expansion of Research Park
  - 90 acres to research park several years ago.
  - \$75,000 to DASC to make facility changes and purchase equipment to move animals.
- New 460 Exit to Va. Tech Campus
- Expansion of airport

Proposed 460 exit and airport expansion.

Timeline

- US 460
- Research Park
- Airport

### The Challenges

- Planning began in late 2010 with master planning of relocation
- Impacts
  - All DASC facilities – Freestall, milking, feed, youngstock, Etgen Pavilion
  - DASC teaching and research
  - Ag. Tech Teaching
  - Vet School Teaching and Research

## Planning – 2010



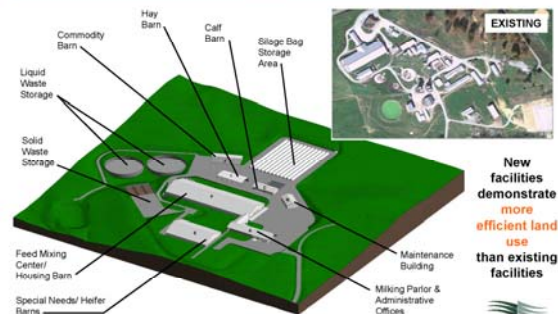
- CALS Administration
- Hugh Latimer – Campus planning
- DASC – Akers, James, Knowlton
- Architects
- Engineers – Agriculture and Civil
- Animal Science
- CSES

## Four components for replacement of function



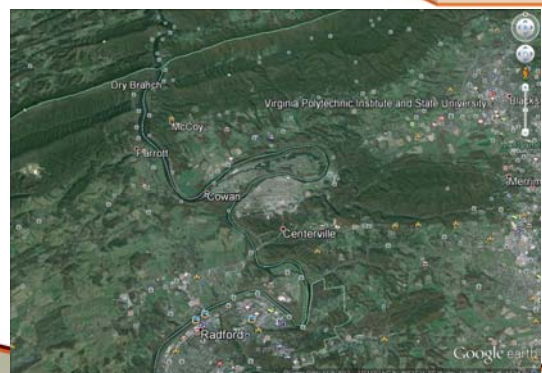
- Dairy center – Free stall barn, milking facility, feed storage, calf and heifer facility, manure storage, offices.
- Etgen Pavilion – Teaching
  - BETR – Bovine Extension Teaching and Research.
- Palpaton - Teaching
  - Applied Reproduction Facility
- Metabolism – Intensive research

### Kentland Farm: Primary Structures




KENTLAND PHASE I: DAIRY PROGRAM Virginia Tech Office of University Planning

## Where is Kentland?

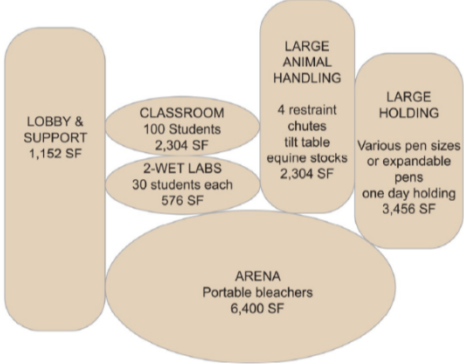


## Move to Kentland

- ~ 12 miles from campus - Used by Hort, CSES, Animal Science.....



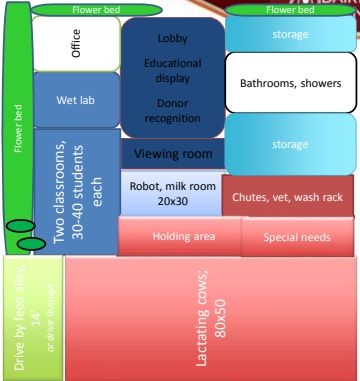
### Teaching Facilities – Bovine Extension Teaching and Research Building (BETR Building)



Room	Capacity / Description	Area (SF)
LOBBY & SUPPORT		1,152
CLASSROOM	100 Students	2,304
2-WET LABS	30 students each	576
LARGE ANIMAL HANDLING	4 restraint chutes, tilt table, equine stocks	2,304
LARGE HOLDING	Various pen sizes or expandable pens, one day holding	3,456
ARENA	Portable bleachers	6,400

### Layout

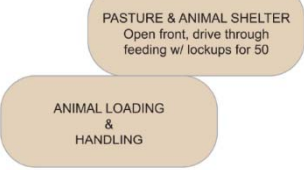
- Animal Handling
- Barn
- Robotic milker
- Classroom & lab
- Support space
- Public space
- Make it pretty



Room / Feature	Dimensions / Capacity
Drive by feed alley	14' or drive through
Two classrooms	30-40 students each
Wet lab	
Office	
Lobby	Educational display
Viewing room	
Robot, milk room	20x30
Holding area	
Lactating cows	80x50
Bathrooms, showers	
Chutes, vet, wash rack	
Special needs	
Storage	

### Applied Reproduction Facility

- Location? Vet School, Animal and Dairy and Ag. Tech



Room / Feature	Description
PASTURE & ANIMAL SHELTER	Open front, drive through feeding w/ lockups for 50
ANIMAL LOADING & HANDLING	

## Initial Funding Estimates



- Dairy center for all dairy animals – Va. Tech Foundation - ~\$16 million
- Applied reproduction - \$381,000
- BETR building - \$4,255,000
- Metabolism Lab - \$3,134,00

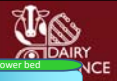
## Funding



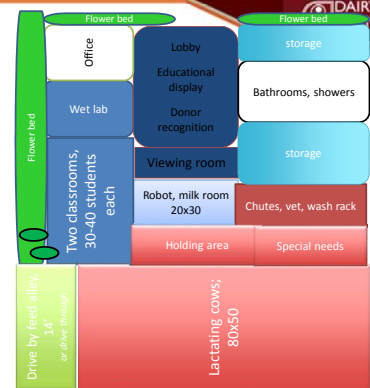
- Dairy Facility - ~ \$14,000,000 – Va. Tech Foundation
- ARF, BETR, Metabolism - \$500,000 in planning money from legislature.
  - Remodel old facility at Kentland for ARF
  - Remainder ????
- Robotic – student run dairy.



## Legacy Dairy



1. Animal Handling
2. Barn
3. Robotic milker
4. Classroom & lab
5. Support space
6. Public space
7. Make it pretty





## Community Agriculture Center

Proposed Legacy Dairy/Legacy Farm/Community Agriculture Centre at Virginia Tech will be host to several student-run businesses including, but not limited to, a robotic dairy and value-added agritourism enterprises. The student-run business(es) will be a new venture for the college. A key goal is to operate multiple food and farm businesses to be sustainable *economically, socially, and environmentally.*

## What's happening at Kentland?



- English Construction
  - Saudi Arabia – 5400 cows
  - Estonia – 1600 cows
  - Finland
  - China
  - US dairies
- Thompson – Litton – Architects

## Kentland



- Construction started summer/ late fall
- Initial move date was February 15
- Anticipated move date.

## View towards the northwest



ENGLISH

VT Dairy Relocation

10-24-14



### Free stall barn

Drivers alleys both sides of barn  
Research pens on one side.  
Double sloped to middle

Feed mixing and storage  
Sand bedded free stalls.

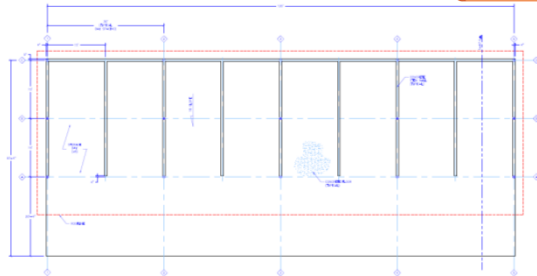
### Special needs barn - weaned calves, breeding age heifers, close up dry cows

Working area for animal handling and veterinary work.

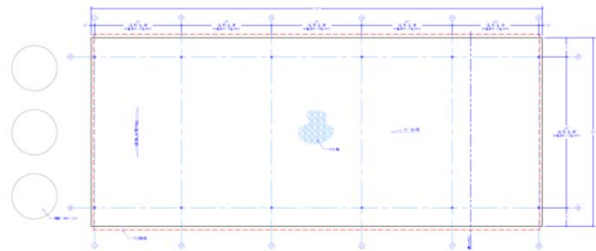
### Calf barn with automatic feeders and weaned calf pens

We will move our autofeeders to Kentland, curtain side walls

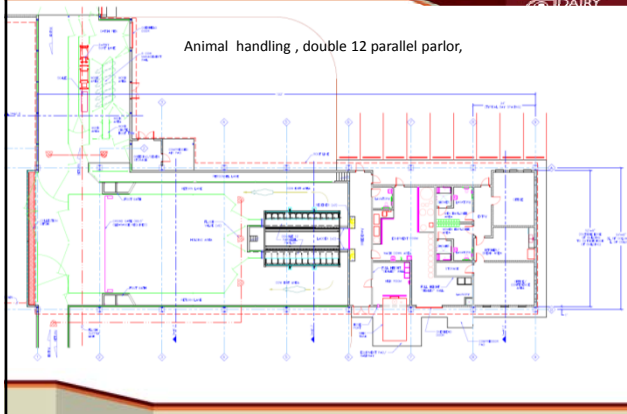
## Commodity shed



## Hay storage



## Milking facility



## Phase two



- \$500,000 appropriated from General assembly for planning.
- Critical needs
  - Metabolism facility – Intensive feeding and research
  - Hands on teaching facility - Student run robotic dairy, Other animal enterprises
  - Applied reproduction facility.



Thanks for your support

