We have reviewed the document for the USU Eastern Blanding Campus Master Plan and confirm that it adequately represents our request for a planning document, fulfilling our mission goals for this project. The appropriate parties listed below have reviewed it for approval.

Guy Denton, Ph.D., Vice Chancellor, USU Eastern - Blanding

Date

Joe Peterson, Chancellor USU Eastern

Date

OTHERS??

Date
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Joe Peterson, USU Eastern Chancellor

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Justin Bergeman, USU Blanding Director PCTE
Kol Conway, USU Blanding Facilities
Michele Lyman, USU Blanding Health Sciences
Shane Brewer, USU Blanding Faculty
Virgil Caldwell, USU Blanding Director DL

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Don Mose III, USU Blanding, Supervisor - Distance Education, Monument Valley

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Terry Ekker, City Engineer

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Winston Hurst, Archaeologist

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Electrical
Neil Spencer, PE
Spectrum Engineers, Inc.
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1 Overview
Overview

USU Eastern Blanding Campus

The Utah State University Eastern campus in Blanding, Utah currently serves over 650 students. With 25 degree programs, the resources of USU and the regional demands for professional resources require a Campus Master Plan to direct current and future growth. Method Studio, Inc. was retained to work with the University to develop a fifty year Master Plan addressing the growing needs of this unique campus.

Having joined Utah State University in 2010, the College of Eastern Utah included both Blanding and Price campuses. Previously, the campus was a CEU facility, established in 1977 to serve the Four Corners region. The Master Plan will address the Blanding location only but within the greater context of USU Eastern and the Utah State University system.

The 83 acre site sits on the southwest edge of the city of Blanding, bounded on the west by the desert plateau and trails connecting students and the community through cedars, shaded washes, and sculptural, rocky outcroppings. The campus identity is both proudly Aggie and uniquely Four Corners. The landscape is an important part of local and tribal identities and maintaining that connection is important to both student and staff. While the expansion of campus facilities must have cutting-edge resources, the heart of the campus remains steeped in local culture and tied to the striking landscape.

The student body is more than 75% Native American, with students coming from Arizona, Colorado, New Mexico, and the southeastern portion of Utah. Seventy percent of the student body is female and with a new Technical College program expansion, the goal is to balance interests and offerings to increase male enrollment.

Attracting students from beyond the region is a key goal and will continue to aid in building community and educating the Native American population. Students - those nearby or afar - can enroll at the Blanding campus or one of their distance education locations in Montpelier, Monticello and Montezuma Creek. This provides them the opportunity to complete a certificate that gets them working quickly or pursue degree programs through the extensive USU resources that can be tapped into at any site. Educating the residents and encouraging them to remain in the community to serve in education, health services, and technical professions has been a key goal since the inception of the higher learning institution in Blanding.

At each phase, USU Eastern requires that the standard of excellence be maintained. With new housing projects and program expansion on the horizon, enrollment goals will surely be met and likely exceeded. This Master Plan addresses the current state of existing buildings, phasing for new buildings and facilities that extend to 50 years, while allowing for the accommodation of unforeseen growth and needs.
Planning Process

Methodology

Method Studio facilitated a series of workshops and additional online meetings with the Utah State University Steering Committee. Several meetings and workshops were held on campus, site visits to Monument Valley and Montezuma Creek were held, and interested parties and stakeholders from the San Juan area participated at an evening community meeting.

USU participants formed a steering committee composed of representatives from both the Logan and Blanding locations. Two student representatives and an archaeologist were also brought in to provide additional insight into campus issues and concerns. Workshops capitalized on the diverse talents and idea from all master planning team members. Activities included brainstorming phasing, short term and long term goals, funding, partnerships, and broader visioning activities. Campus issues priorities and goals were established through a variety of interactive, participatory techniques. These exercises allowed all participants in the process to openly share information, discuss differences, and come to a general consensus on the recommended master plan direction. In addition, the university provided Method an inventory of current buildings, utility plans, and a packet of data regarding the recorded archaeological sites on USU property. This information provided critical background information to the team.

Workshops took place over a three-month period. The first Workshop was held on April 12 and 13, 2016 at USU Eastern Blanding campus. The purpose of this two-day Workshop was to brainstorm issues and priorities, as well as establish goals. A number of key issues were defined and discussed at length. The second day focused on presenting the findings from the various focus group discussions and reviewing the common issues and priorities developed. Each participant was asked to share their vision for the future of the campus. The visions were collected and analyzed as part of the alternative development phase. During this Workshop, Method also met with Blanding City officials in a break out session to gain their insights regarding the future of campus development.

The Master Plan Steering Committee met again on June 28 and 29, 2016. The intent of the two-day session was to develop a preferred direction from the alternatives presented. The morning of the first day was spent touring the Distance Learning facilities in both Montezuma Creek and Monument Valley. In the afternoon, Method presented the Steering Committee with four distinct alternatives that were based on the key issues and priorities developed in the previous Workshop. The four options were then presented to the community in an evening meeting. At both, strengths and weaknesses were discussed and preferences were established to assist in developing an agreement on a single master planning direction.
After the second Workshop, several additional meetings took place including a presentation by GoTo meeting of a synthesis of the preferred option, a discussion with Facilities regarding a Central Plan, meeting with the Blanding city manager and engineer, and conference calls regarding Master Plan variations to accommodate the Trucking and Heavy Equipment program. The intent of these sessions was to refine and affirm the preferred direction established in the second Workshop. The third and final Workshop was held on September 28, 2016. Method Studio presented the recommended plan and design guidelines.

On Sept 29th, a team meeting was held in Blanding to present the draft recommended master plan and provide the campus staff members an opportunity to comment and provide input. In October of 2016, the final document was delivered.
Planning Process

Meetings & Workshops

ADDITIONAL WORKSHOP NOTES:
• Native American design considerations were discussed at length
• Currently programs offered are seen as a stepping stone to income; more culturally driven programs seem to be less successful as a result.
• This campus may become a laboratory destination for the larger USU campus scholars over time.
• Cultural cohesiveness on campus is important. “No Empires” is something that has kept the campus tight-knit. Students can sense the unity. The look has a quality as does the culture. Connections to surroundings are important as well.
• Families currently judge the programs based on the look of the campus.
• Bike and pedestrian friendly routes and amenities are important.
• Beautifully landscaped features with walking paths are a priority. The “preserve” area (at west) has begun this, but planning could continue.
• Community college feel must be maintained.
• Family feel also needs to be maintained.

WORKSHOP 2 COMMUNITY MEETING NOTES:
• Love #4, topologically sensitive really appeals as a resident
• Storage is needed in every building
• Extensive discussion over parking concerns
• Student: we want more running trails and connections to the outside
• Consider tying into/developing whole community/regional trail network
• County rep: “Better Cities” requires a community cultural center, work with the students for cultural presentations, like a business partnership similar to BYU Hawaii/Polynesian center
• City manager: One big parking lot is an eyesore and not a desired focal point; break them up
• Option #4 microwave tower placement is ideal next to back up power and data
• Option #4 microwave tower placement ruins the best view – there is 40 acres of adjacent BLM land that would provide a better location
• Building on rock west of 650 will be a major concern/cost

GOTO MEETING/PRESENTATION OF FINAL PLAN OPTIONS
• Blanding staff enthusiastically preferred the full pedestrian plaza feature
• Extensive discussion regarding the CDL/Trucking and HE course placement and requirements
• Health Sciences building location discussed
• CTE and Cultural Center are preferred at the south Gateway
• Include a Central Plant location; the plant may not ultimately be financially viable

CONFERENCE CALL RE: FINAL PLAN CDL/TRUCKING/HE LOCATION
• Heavy Equipment course needs to move from current location near residences/detention pond
• Include location of HE course on PH 1, but it will be moved off-site at PH 2
• The Trucking Course must remain on site and be buffered by buildings and green space
• CTE location preferred at the south Gateway location, Trucking course adjacent
• Health Sciences should be moved to north Gateway acting as anchor to the entry and gives more Trucking Course space at the CTE building to the south. They don’t need to be adjacent.
Planning Process

Option 1: Parallel/Linear/Continue As-Is
Planning Principles:
1. Extend new building in the pattern of existing buildings
2. Construct new buildings as needs arise
3. Incremental decisions
4. New building and parking constructed together
5. Concentrate development along 650 West
6. Incorporate an internal green corridor to connect north campus to south campus
7. Concentrate parking at the perimeter

Advantages:
• Expedient / quicker response
• Lower first cost
• Less red tape / fewer design guidelines
• Intuitive way finding for visitors
• Holds the street edge while preserving a green core

Disadvantages:
• May not address larger scale planning problems
• May not promote functional proximity
• Minimal response to topological changes across site
Planning Process

Option 2: Connection to the Cedars
Planning Principles:
1. Green space core for pedestrians
2. Construct new buildings as needs arise
3. Incremental decisions
4. Parking along perimeter, living/learning space at interior
5. Preserve and create green core of campus
6. Housing and classrooms to frame the green corridor

Advantages:
• Expedient / quicker response
• Convenient / less planning required
• Prioritizes greenspace for student use and culture
• Instinctive wayfinding for visitors
• Strong street presence and identity

Disadvantages:
• May not promote functional proximity
• Land use is prioritized for green corridor and may condense building footprints
• Culture of campus may be divided into “upper” and “lower” campus without significant visual and pedestrian connections
Planning Process

Option 3: Campus Districts
Planning Principles:
1. Strengthen existing zones
2. Realign districts where appropriate
3. Create new neighborhoods / clusters
4. Consider connections between nodes
5. Parking for each district
6. Build up the street identity along 650 W
7. Preserve the landscape at the center of campus
8. Develop identifiable cultural and green nodes

Advantages:
• Clarifies campus organization
• Reduces class issues with departments in nodes
• Clarifies rules for future building placement
• Less fragmented parking
• Stresses pedestrian connection within and between nodes

Disadvantages:
• Long implementation
• Removal / repurposing buildings and departments
• Housing spread out

Neutral:
• Requires greater density along vehicular corridors
• Multiple identities of campus nodes / district identities
Option 4: Topologically Responsive
Planning Principles:
1. Connecting upper and lower campus
2. Engage both sides of topological ridge
3. Concentrated parking at the center of campus
4. Options to connect: terracing or bridged
5. Strong identity
6. Ecological sensitivity
7. Housing adjacent to recreation
8. Classroom adjacent to greenspace

Advantages:
- Integrates the site into the identity of campus
- Improved vehicular access to all parts of site
- Creates an internal circulation loop, access & traffic calming
- Addresses class change timing issues so that departmental districts are utilized

Disadvantages:
- Connection of pedestrian access
- Culture of campus may be divided into “upper” and “lower” campus without significant visual and pedestrian connections

Neutral:
- Shatters status quo or as-is plan
- Changes to clustered parking
Planned Process

Archaeological Concerns

Recorded Archaeological Sites on
Utah State University - San Juan Campus
And Nations of Four Corners Properties
as of August, 2015

Base map: USGS Blanding, Utah
and Blanding South, Utah 7.5' quadrangles

former extent of Peterson-Palmer farmscape
Utah State University San Juan Campus
Nations of the Four Corners Cultural Center
recorded archaeological site
(all numbers have 42SA prefix, not shown;
ALL SITE BOUNDARIES ARE APPROXIMATE)
August 28, 2015

Dr. Guy Denton
Vice Chancellor
USU Eastern, Blanding
639 W 100 S
Blanding, UT 84511

subject: Archaeological sites condition assessment, southeast fields area.

Dear Dr. Denton:

Attached please find two short documents and a CD as promised in early August. I apologize for not getting these to you sooner, but crises trump urgencies which trump priorities, in the endless cycling of a life out of control. The attached materials include:

- FYI, a timeline summary listing of the archaeological projects that have been undertaken on what is now USUE-Blanding, with a map showing the locations of all the documented cultural sites;
- a copy of my brief report on the present condition of five archaeological sites that I documented between 1986 and 2006 in and near the open field property parcel in the southeastern part of the campus;
- (digital, on CD) copies of the various archaeological reports (excluding my original MA thesis, which I have not yet scanned to pdf) with copies of the full archaeological site forms, originals of which are on file at the Division of State History.
- (CD) shapefile of the archaeological sites that can be added as a layer to a GIS packaged of the campus, should you find that useful.

In compliance with my ethical and permit obligations as a state-permitted professional archaeologist, my condition assessment report and the associated site update forms will be filed with the Utah Division of State History so they can update their database of recorded archaeological sites.

I hope this material is useful. Please feel free to contact me at any time if you have questions, need clarification, or I can help provide additional materials.

Sincerely,

Winston Hurst

During the Kickoff/Workshop 1 meetings, archaeologist Winston Hurst was brought in to address Blanding’s unique historical considerations. The discussion included tribal concerns, state and federal law, recent history of local artifact collection, and the implication of archaeological findings during the building process.

A significant amount of documentation was handed to the design team which included the map to the left, marking all documented archaeological sites on the USUE Blanding property. The most recent were unearthed with the construction for the baseball field and the current location of the Trucking Course. Additional documentation has been included in the Appendices. Refer to Archaeological Considerations of this document for recommendations.
Planning Process

Workshop Conclusions

- Options 1 – 4 were displayed and discussed
- Cultural Center location at the SW pavilion is ideal (pavilion would be removed)
- Cultural Center located next to amphitheater and existing cultural attractions is preferred
- Pro/Cons of each options were discussed
- Current CDL turning lot may not be ideal in the final master plan
- Current location and possible final locations discussed for CDL course
- Heavy Equipment course construction may have damaged the retention pond
- Dining services discussion included several options as well as phasing
- Student services could be moved toward the Housing
- Many options and growth must be addressed at every phase
- Cultural Center partnership with the City would work for all parties
- Cultural Center would be a draw to the south end of campus, direct route from main street
- City/USU partnership, funding discussion for both the Cultural Center and the Recreation Center
- Recreation pods are proposed instead of a Temporary Rec Center
- With full, on-campus rec center in Phase 2, smaller clusters should be considered: fitness room in housing, lounge in CTE, etc.
- Smaller vignettes could be proposed to the students; their raised funds could be implemented immediately (i.e. firepit and basketball courts proposed by Kol between housing and ballfield.)
- Option 4/Topological was preferred by the group
- Several points/strengths from other options are to be included in the final version
- Primary parking at the perimeter (buffered by vegetation) is preferred with smaller lots to provide disability, building maintenance, and some staff parking
- Ideal location for the Rec Center is next to housing
- Green core very desirable for interior of campus and connection to trails and outdoors
- Option 1: location of CTE not ideal, the group agrees SW corner placement preferred
- Health Sciences building located near the hospital or at north Gateway; hospital location determined not viable
- Funds from IHS through HNS may be available
- Include city map in final document
- Indicate larger connections in final document
- Note Edge of the Cedars museum in final document
- Add existing trails to maps
- Phasing was altered by the group
- Address dining in Phase 1
- Backing course is to be included in CTE planning, Ph1
- Start cultural expansion of outdoor trails in Ph1
- Ph2 Rec Center is to have dual purpose of Lg events, 1000+ seats
- Cultural Center/Hub with City is to be built in Ph2
- More pedestrian – based options, less vehicle dominant at the current heart of campus intersection
- Indicate Gateway concept at both north and south entries to campus
- Include plaza options for the final Master Plan
- Connect to existing trail system and green space
- Look at different parking strategies
- Present CDL course as is as well as other locations
• Place Central Plant in each variation
• Indicate a solar array location or strategy
• Propose Exercise Pods as an alternative to a Temporary Rec Center
• Assume that the full Recreation Center has event/convention capabilities
• Selected Option provides plaza pedestrian access through 200 West, with traffic calming and pedestrian preference through Campus Drive. The housing is clustered north and north east of the Rec Center. The CTE and Cultural Center buildings provide an anchor or gateway at the south. Trailhead pullouts along the Campus Drive, a lookout or tower at the plaza, and an event lawn at the Rec Center are preferred
• Green space core provides ecological and social connections
• Strong pedestrian/housing/rec core is preferred
• Campus identity needs to be strong along main drive; renaming the road is a possibility. Aggie Drive?
• Iconic CTE building anchors south Gateway
3 Findings
Findings: Campus Assets, Concerns & Goals

USUE Blanding Campus

BUILDING INDEX

- 455 gsf  252  Art Building
- 5,102 gsd  467  Administration Building
- 10,979 gsf  454  Blanding Arts & Events Center (BAEC)
- 4,471 gsf  460  Daycare & Education Building (EB)
- 31,745 gsf  459  Library and Health Sciences Building (HSL)
- 24,699 gsf  453  Lee Technology Building (BLT)
- 2,470 gsf  463  Maintenance/Purchasing
- 5,097 gsf  461  Quad Cafeteria & Bookstore
- 2,657 gsf  466  Native American Studies Building
- 4,946 gsf  464  Cedar Mesa Halls A
- 4,946 gsf  465  Cedar Mesa Halls B
- 16,084 gsf  468  Monument View Hall
- 1,798 gsf  468A  Pavilion

LEGEND
- Existing USUE Blanding Buildings
- Archeological Recorded Sites
- USUE Property Line
- Rock/Topo ridge

Site Conditions
Site Analysis

The USU Eastern Blanding campus has evolved with the changing needs of the community and funding opportunities much to the credit of an innovative and dedicated administration. The cluster of buildings at the intersection of 200 South and 700 West has provided a centralized core for students’ housing, food services, administrative needs, and instructional space. Parking is provided along the streets as well as in several parking lots which may not be fully utilized.

The Blanding Arts & Events Center is City owned and will soon be turned over to the university, continuing a partnership that has benefited both students and Blanding residents. There are several trails to the west and documented archaeological sites throughout the property. A retention pond to the east contains water throughout the year and is a stormwater collection point for much of the southwest quadrant of Blanding City.

The 85 acre campus is at the edge of the town with a dramatic landscape filled with cedars and rock outcroppings to the west. Much of the property has been undeveloped and will be limited in several areas both by access and surface rock conditions. The landscape is very much an asset, however, and is important to both staff and students.

Many students commute by private vehicle as no transit serves this area. Students on campus remain primarily pedestrian with only 1/3 of students who live on campus owning vehicles. The Master Plan addresses these populations by facilitating community traffic as well as necessary delivery and maintenance access points.

Current facilities also include rented areas for the Heavy Equipment and Trucking Center located at 1666 South Main, Blanding, Utah and the Professional Certified Technical Education Building located near the Blanding High School on 1+ acre. The three distance learning centers are located at Monticello, Montezuma Creek, and Monument Valley.
Findings: Campus Assets, Concerns & Goals

Site Views
view from interior of site toward south

view west of campus into the wash
Findings: Campus Assets, Concerns & Goals

City & Campus Data

POPULATION
The city of Blanding, Utah lies approximately 75 miles south of Moab in San Juan County. Currently, the population, including immediate surrounding communities, is about 4,600 residents. The number within city limits is 3,700 while the county population is closer to 15,000 residents. These numbers are difficult to accurately pinpoint, as 35-40% of residents are Native American and may choose to identify with a Native American Reservation rather than the city on censuses. Only 12% of the city population identified as Native American; city officials say that the number is actually closer to 40%. They are currently planning on 1.5% population growth per year as this has been the recent trend.

CITY GOVERNMENT & SERVICES
City government is made up of 5 council members and a Mayor. Government, tourism, education, and healthcare are the main industries in Blanding. Short term rentals have recently become a significant element of local tourism. Blanding Area Travel Council is the local tourism entity and does some marketing; most county funds go to Monument Valley advertising and current campaigns promote Blanding as the base camp for adventure in the southeastern region. Certainly, local attractions are highly accessible from this location: Bridges, Canyonlands, Bears Ears, Cedar Mason, & Dark Canyons. City officials would support the development of more hospitality programs at USUE Blanding campus as the current trend is 10% growth per year in local tourism-related industries.

In addition to hospitality-related programs, the city has specifically asked for police training as there is no education of the kind in the region. As with education and health care, it is difficult to bring in non-residents and have them settle long term in the area. Sending individuals out of the region for training has been largely ineffective and they have few other options.

Income gaps are spreading dramatically. While the median income is rising, it is largely due to a limited number of high paying jobs in healthcare. Most incomes are not increasing. There are more good jobs generally but the middle class is not growing. Uranium was a big industry in the 1950s and 60s, but is non-existent now. Ranchers in the area are mostly hobby-ranchers as cattle do not provide enough as a primary income.

UTILITIES
Access to electricity and gas come to campus from the city. The entire campus is below city sewer lines and
must be served by pumping stations. Currently there are three; the lift station at Grayson apartments (to south) has been determined by the city as sized to accommodate most of the planned campus phases, however it is encouraged to reassess pump capacities with the city regularly.

There is a well at the NE corner of 600 South. The city is willing to provide secondary water to campus for irrigation. This service is not available to residents at this time, but this option may reduce irrigation costs to the campus by 25% or more. No terms have been negotiated.

The retention pond on site is always full. Landscape design can count on it as a year-round feature or a year-round drainage concern. The city is dependent on this site/natural basin for the storm drainage for the west half of the city. City officials insist that it must be maintained on site and are very supportive of it becoming a landscape feature. Currently their pipes can handle at 10 year storm and have been overwhelmed in the last 2 years by storm events. The city does have a Stormwater Master Plan in place and that document is available through the city offices. Additional use of the on-site storm water as landscape features, vernal pools, or seasonal/overflow streams would be approved by the city as they are highly cooperative about all means of remediating the water on site. The pond was created by a resident and will need to be geoengineered before buildings and features are installed below or adjacent to it. The pond may have been damaged by recent earth moving and requires further assessment.

No utility easements have been formally designated on the university property. The city has not mapped utility maintenance access points on the campus; they have been previously “understood” by all parties, but not made legal. It is highly recommended that formal agreements be set into place for all future buildings and that the campus and city cooperatively identify utility access needs, creating a common reference if not a legal basis. Water, power, sewer, gas have no formally mapped easements on campus property. (Please refer to the Appendices for a Utility Map.)

ROAD DESIGN
Blanding road design guidelines include a 100 foot right of way for streets, often previously 60 foot. Most curb and gutter in surrounding residential areas will likely not increase in the foreseeable future.

The city is very willing to promote USUE Blanding signage, banners, etc. along Main Street or install banners on public streetlights along the routes to the campus. Officials were impressed with the depiction of intersection traffic calming on campus design options, our “heart of campus” plaza idea, and would be open to using similar interventions throughout Blanding based on the final campus’ traffic calming strategies. They acknowledge that wayfinding is lacking to the college, and in the city generally, and would welcome collaboration for design services for citywide signage.

There is no current or historical master plan for the city of Blanding and data available for resident numbers and growth only includes a 2014 census. Numbers cited herein have been gathered by Method Studio in interviews with city officials. They have confirmed that the utility plan included in the Appendices is the most accurate available. The city of Blanding has been found to be highly cooperative and willing to promote and collaborate with the campus as needs arise.
Findings: Campus Assets, Concerns & Goals

COLLEGES IN THE FOUR CORNERS
USUE Blanding has done well for a regional college largely in part because Native American students may cross state borders and not pay out-of-state tuition. Male population is growing here; female enrollment currently accounts for approximately 60%. Reservations’ females have been coming for health programs. The students are often deterred by distance when it comes to pursuing higher education and ability to interact with satellite locations has proven highly valuable in helping students enroll or complete their program.

Research numbers available on local colleges indicated that the Four Corners Native American population is not growing on campuses. Dine, Fort Louis, and San Juan colleges are currently competing for the same Native American enrollment demographics. It may be noted that many Native American parents prefer USUE Blanding for its reputation as a dry campus and higher graduation rates. Future enrollment growth may come from tapping into populations that campus outreach is not currently addressing. Additional outreach alone could increase the student population to 1,000 much sooner than anticipated. The Master Plan addresses faster than anticipated growth and presents options for expansion beyond the USU/Design Team’s collaborative projections.

Housing is a great concern for both the campus and the city. Housing Authority applications are an option only if students are on the waiting list and employed; this is not very feasible to full-time students. The campus has used local motels for residential students which certainly cannot be a long-term solution. Housing development and related support services is very necessary immediately and throughout every phase of campus growth. Single mothers or mothers with non-married partners have proven difficult to accommodate as current residential facilities accommodate single students only. Family housing is included in the Master Plan as a large percentage of students have children; currently students’ children often stay with family while the parent attends school.

Tribes currently served at the campus include Ute, Hopi, and Navajo. Navajo is approximately 80% of the current Native American population on campus. The tribes are unique with rich, independent traditions, art, and histories. Design references to indigenous cultures should be abstracted enough to be read as regional references common to all populations served on campus.
### HISTORICAL POPULATION FOR SAN JUAN COUNTY

<table>
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<tr>
<th>Census</th>
<th>Pop.</th>
<th>%±</th>
</tr>
</thead>
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<td>1880</td>
<td>204</td>
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<td>1890</td>
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<td>3.5%</td>
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<td>1940</td>
<td>4,712</td>
<td>34.8%</td>
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<tr>
<td>Est. 2014</td>
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U.S. Decennial Census[5]

### HISTORICAL POPULATION FOR BLANDING

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U.S. Decennial Census[6]
Findings: Campus Assets, Concerns & Goals

Distance Learning Sites

MONTEZUMA CREEK
- Introduced to the site by Vivian Todachinnie
- Staff wishlist would include a lab or collaboration with the local medical clinic for the USU health programs
- Campus may consider programs that would appeal to the immediate area: i.e. oil industry present
- “You serve by building the correct programs for the needs of the community.”
- Site currently serves approx. 70 students, conducting 100 classes, including Adult Ed
- The district owns the building
- Design and USU Team walked the facilities

MONUMENT VALLEY
- Introduction to the site by Don Mose III
- Staff wishlist: the ideal location would be next to the H.S. to really provide outreach to all populations of the reservation. Some students can’t make it to the current location. Also, the use as a former hospital may be a deterrent (Navajo taboo).
- 6 dedicated classrooms, computer lab, academic library, providing the only internet access in the area (bandwidth is critical antenna has been knocked out by rockfall before)
- The Goulding family own the site; the county commissioner has discussed a new location with Guy Denton
- Each distance site has at least one broadcast room from which to teach remotely
- The site serves 30-60 students during the year; cycles high in fall, lower in spring
- Design and USU Team walked the facilities

MONTICELLO
- leased space
CDL/Trucking/Heavy Equipment Programs

Part of the current campus is a parcel of approximately 1.5 acres, leased at the south of Blanding along the highway.

The Trucking Course has been developed on the primary campus with a Heavy Equipment site at the southeast near the stormwater pond. The University has also acquired a residence at the south edge of campus and will use that as administrative and classroom space for the Trucking and Heavy Equipment programs.

The programs have seen steady enrollment in the past several years. The Trucking program exceeds the basic CDL offerings by technical colleges in the state and serves a particular regional need.
Findings: Campus Assets, Concerns & Goals

Existing Buildings
The most immediate renovation needs would be the Cedar Mesa residential halls. As the oldest buildings on campus coupled with round-the-clock use, both Cedar Mesa wings require significant updating of all finishes and fixtures. Evaluation of mechanical systems should be assessed at the time of renovation and efficiency upgrades considered.

In addition, the Lee Technology Building (BLT) computer lab and portions of carpet in other areas of the BLT will require updating in the near future. Assessment of the extent of renovation should address adjacent areas and circulation as well as sections indicated. As these are present needs, throughout the phased build-out of campus, additional renovation needs should be evaluated on a regular basis.

The final build-out of the Master Plan shows the relocation of the Maintenance/Purchasing building. It is assumed that the current Daycare/Education facility and Maintenance/Purchasing buildings will be demolished.
Findings: Campus Assets, Concerns & Goals

Master Planning Goals

Master planning goals were derived from an evaluation of the key issues and priorities as determined during the initial workshops, accompanying interviews, and follow up meetings. They are described as follows:

INTEGRATIVE PLANNING
The development of a college campus represents the continued evolution of the education system established in Blanding to serve the community. The USUE Blanding recommended Master Plan must integrate previous and current planning efforts, as well as immediate construction and renovation needs. Additionally, the Master Plan is comprehensive in scope. Decisions and concepts about one planning element, thus, should be consistent with decisions concerning related elements.

ACCOMMODATING GROWTH
The recommended Master Plan considers realistic projections for campus growth concerning the anticipated number of students, the amount of property needed, and the facilities required to accommodate those needs. The adjacent city and LDS parcels and other potential land acquisitions or swaps should be woven into planning strategies, as well as assessment of potential student outreach beyond current efforts.

CONCEPTUAL DIRECTION
The recommended Master Plan should give clear conceptual directions for where and how to develop. A Master Plan should present the university and its constituents with concepts for campus circulation and connections, the location of campus hubs, building location and massing, the creation of campus Gateways, and other relevant features.

SYSTEMS-ORIENTED
A university campus is composed of a series of overlapping systems. The USUE Blanding recommended Master Plan considers the influences of automobile, bicycle, and pedestrian movement systems, infrastructure systems, a green space network, and a wayfinding/signage system.

POLITICAL SENSITIVITY
The recommended Master Plan addresses the concerns of a number of significant constituencies. Interested parties include a variety of campus groups and organizations, the steering committee, distance sites, the broader regional and tribal communities, faculty, staff, and students. For many of the campus groups, the plan must recognize the ongoing dialogue that has taken place regarding campus planning and building issues, along with the perception of promises made.

FUNDING
Implementation of the recommended Master Plan will involve funding from public and/or private sources. Thus, the recommended Master Plan should be developed in a manner that is easily understood, both in content and graphic form, to assist in funding and in fund raising efforts.
“The only thing that can change their lives is education.”
- Guy Denton, USUE Blanding Vice Chancellor
Findings: Campus Assets, Concerns & Goals

Team Visioning for Campus in 50 Years

GENERAL REPUTATION
• Campus will be at 4000-5000 full-time students.
• Better Cities (Jeremy Redd) is a local program to bring major hotels and economic development to the area
• The campus will be the county's shining star
• Campus will look like and offer the large university draws
• We will be known for being the best destination for students on reservations
• Campus will be known as an economic driver for the region
• It will be the premier institution in Four Corners area
• We will emphasize financial readiness, serving native students, and the regional economy.

PROGRAMS
• We’ll offer quality programs but expand delivery options; all USU offerings are available, but not utilized now
• Prep students for higher education
• Currently programs offered are seen as a stepping stone to income, more culturally driven programs seem to be less successful as a result. May become a laboratory destination for the larger campus
• Scholarship growth over time.
• CTE programs are rigorous. Nursing would triple; trucking would be 1.5-2 times bigger in 50 years.
• USU will provide current asset inventory, so we can project and plan for future growth.
• We will be known for Native American Studies and Anthropology
• Training educators to go back to Native American communities
• We need to provide opportunities that don’t take from the Native American culture. They do not need to divorce themselves from their current life and understandings.
• Vision of core classes online with buildings for upper division classes only. Must be flexible with the times and technology in any scenario.

FACILITIES
• We’ll provide housing for 500
• Campus capacity will be at 2000
• Serving 3rd generation of students

CULTURAL
• Cultural cohesiveness on campus is important
• Continue opportunities for Native Americans
• Students are proud of being Aggies
• The look has a quality as does the culture
• Connections to surroundings are important

CAMPUS
• Inviting, represents the demographic we serve
• The design integrates cultural background
• Cohesive feel and look to campus
• Students’ sense of belonging
• Architecturally significant campus and building that reflects the surroundings
• Intimate, natural campus with reserved canyons, paths and native gardens
Feel of a self-contained community
Students will serve their communities or excel beyond San Juan County
Campus feels cohesive like Vancouver Washington State University
Campus is in an amazing setting and provides a rich cultural experience. Beautifully landscaped with bike and walking paths, pedestrian friendly routes, and site-specific amenities.
The preserve area (at west) has begun tying into regional trail but planning could promote this

RECREATION/ATHLETICS
- More club sports opportunities: students prefer basketball, sand volleyball, hiking, dance performance, even paintball.
- Any club or sport requires staff support and funds; Pow Wows may be a means of club fundraising

PARTNERSHIPS
- The greater community will thrive with university partnerships
- Child Care partnership will continue with DWS and Head Start
- Advisory Board associated with San Juan Foundation could be helpful
- School District
- Healthcare Interests
- Local Tourism Board
4 Master Plan
Recommended Master Plan

Master Plan

The recommended master plan direction for the Utah State University Eastern Blanding campus was formulated as a result of input from the steering committee, focus group participants, and general campus and public participants. It is not the result of selecting one of the proposed alternatives, but rather it represents a compilation of the best or most acceptable concepts from all alternatives. The recommended plan recognizes the importance of both the surrounding landscape and the rock outcroppings within the USU property boundaries. This plan will require promoting a strong Aggie identity along Campus Drive (700 West) and the Heart of Campus pedestrian plaza. The plan also suggests numerous enhancements to the entrance sequences onto the campus, movement around campus, gathering places or “hubs” on campus, and a proposed system for wayfinding. Finally, specific sites are suggested for development or redevelopment, and recommendations are made regarding potential uses for many of these sites.

The Main Campus houses academic and administrative functions, student residential life and dining facilities, and several recreation options. The university property is extensive but ideal building sites are limited. Steep ad stony slopes bound it to the west, neighborhoods to the north, east, and south. Expansion needs to be deliberate and thoughtful; building sites are limited within the campus and several are interdependent. Of paramount importance to the campus is the completion of the interior loop roadway and pedestrian plaza. Their development may involve some bureaucratic challenges due to the necessity of working with both the city of Blanding and neighboring property owners. Parking adequacy also presents a significant challenge and is planned for every phase. Although parking is currently adequate for the present campus, much of the available parking inventory is located where the pedestrian plaza is proposed. A redesign to angled street parking can happen immediately to improve safety and properly designate pedestrian crosswalks.

The preservation of natural spaces and the “oasis in a desert” character is considered important for the future of the campus. A pleasant pedestrian network is promoted, enhanced, and improved with consistent building signage and wayfinding systems. It is recommended that the existing administrative core continue as the center of academic life, adding to it a Housing/Recreation cluster and CTE/Cultural Center cluster. Additionally, the connections to the landscape and regional identity is highlighted wherever possible.

### EXISTING
- ART BUILDING
- BLANDING ARTS & EVENTS CENTER
- DAYCARE & EDUCATION BUILDING
- QUAD CAFETERIA & BOOKSTORE
- ART WORKSHOP
- CEDAR MESA HALLS A
- CEDAR MESA HALLS B
- NATIVE AMERICAN STUDIES BLDG
- ADMINISTRATION BUILDING
- MONUMENT VIEW HALL

### PHASE I
- 1A HEALTH SCIENCES
- 1B STUDENT SERVICES
- 1C MICROWAVE TOWER PLAZA
- 1D EXERCISE NODE 1
- 1E HOUSING/DINING
- 1F CENTRAL PLANT & YARD
- 1G STORAGE & YARD
- 1H TE BUILDING

### PHASE II
- 2A CLASSROOM BLDG
- 2B DAYCARE
- 2C HOUSING
- 2D MARRIED HOUSING
- 2E HOUSING/DINING
- 2F REC/EVENT CENTER
- 2G CULTURAL CENTER
- 2H RELOCATED MAINTENANCE

### PHASE III
- 3A CLASSROOM BLDG ADDITION

### FUTURE PHASE
- 3B POSSIBLE BLDG SITE
- 3C POSSIBLE BLDG SITE
Recommended Master Plan

Master Plan Planning Principles & Phasing

3 PLANS - SEPARATE PHASES
Key Master Plan Concepts:
1. Accommodate projected changes in enrollment
2. Preserve USU land grant legacy, while also continuing the College's historic emphasis on low-cost CTE and lower-division programming
3. Maintain a compact walk-able academic core
4. Strengthen & clarify USUE Blanding's image
5. Enhance compatibility with the community
6. Cultivate community vision and support
7. Maintain consistent spatial density
8. Efficient and safe pedestrian and vehicular travel
9. Sustainability and energy efficiency

Key Master Plan Strategies:
1. Compatibility with the community grid system, accommodating the pedestrian plaza by providing additional thu-ways.
2. Identify key hubs and gateways.
3. Maintain a network of interconnected open spaces from internal greenspace and stormwater retention pond to the external landscape beyond the campus core.
4. Buildings should be used to strengthen the street frontage and to frame open space features.
5. Parking should be adequate to support the space, but should not be a dominant feature. Surface lots should be located toward the back of buildings, where possible. The design should be softened by integrating landscaping and pedestrian walkways at the street side or adjacent a building.
6. Maintain a compact core and plan for infrastructure efficiency.
7. Pattern and density of new developments to be compatible with the scale and character of the surrounding community and region, and should support the campus image.
8. Sensitivity to surrounding zoning, including adjacent residential and open areas, and the city of Blanding future development plans. Connection with compatible adjacent development and buffering with incompatible development.
9. Incorporate principles of green building and sustainability for site, building, and utility design.
New Building Sites

NEW BUILDING SITES
Up to seventeen potential new building sites have been identified in this Master Plan. Most have no buildings on the site at this time, while the two would require the demolition of existing structures. The new building sites are listed below. The demolition of the current Daycare would happen upon completion of the new Daycare facility near the housing at the east. The Maintenance/Purchasing building would be relocated prior to Phase II Classroom Building beginning. The Classroom parcel may remain as a single building site or an addition may be added as Phase III. The next several years will see significant growth on campus, filling out the core of the property and clustering the development to best serve student and faculty while celebrating the regional landscape throughout. The Campus Loop road and spur connecting to 300 South need to be completed by Phase II for the Rec/Event Center; however it is recommended that it be completed to provide vehicular access around campus when the pedestrian Plaza is installed.

HEATH SCIENCES
A vacant site exists to the north of the Lee Technology Building. While a steep site, it completes the north Gateway entrance with the Student Services building. This is the only location where the Master Plan indicates a three story building. All others are assumed a single or two story.

STUDENT SERVICES
A vacant site exists north of the current Administration Building. Care is to be taken to preserve the mature trees when siting and constructing the building and parking lot. This site is located in a service area of the campus, building on existing service locations, and will provide parking for both the Student Services and Administration Building when the Plaza is installed.

HEART OF CAMPUS PLAZA
Coordinating with both the city and the neighboring LDS Institute, the street between the Library parking and the intersection with 700 West will be closed to through traffic. The smaller portion of 200 South on the east side of 700 West is closed to traffic as well. Hardscape is maintained for maintenance and delivery vehicles only in addition to ADA access for student pedestrian traffic. The Campus Loop road should be installed prior to or in tandem with the Plaza closing to vehicular traffic.

CLASSROOM BUILDINGS
The site along Aggie Drive (700 West) provides a great street frontage, allowing for parking for both the Classroom Building and the Arts & Event Center to be moved to the back. The Phase II building will sit at the current parking lot and Maintenance/Purchasing building location. Phase III is a wing that doubles the classroom capacity while utilizing Phase II elevators and mechanical. Subsequent analysis may determine that this wing will not be needed, or that a three story addition is required. The landscape drops to the south of this site, providing a beautiful panoramic view that will certainly be an asset to the buildings on this location.

SINGLE & MARRIED HOUSING
It is anticipated that a systematic program of housing will be built on campus to serve single students and families. An additional housing site to the south of Monument View Hall is the first to be built, allowing for the relocation of Dining Services to the new location. Additional sites have been selected at the east, adjacent to the city residential zones and the new Daycare. An additional site is identified at the east of the Rec/Event Center parking which may accommodate more housing. This may be unnecessary with the renovation of Cedar
Mesa Halls or it may be the desire of the administration to renovate the Quad and shift all housing from the administrative cor. This additional building site allows for flexibility when those decisions are made.

RECREATION/EVENT CENTER
The building site at the south of the greenspace buffer/rock outcropping utilizes the landscape for a gathering space or amphitheater. The Rec/Event Center is near the housing sites and the projected and existing sports fields. In addition, the site paths align with the trailhead at the Aggie Drive (700 West) and Campus Loop intersection which links to local and regional trails.

CENTRAL PLANT
The Central Plant and adjacent equipment yard is along the Campus Loop and is located centrally to most new building sites. This is the current location of the Trucking/CDL course and will make use of the prepared site and excavation. The Heavy Equipment course will be located approximately here until Phase II where it will be moved off-site.

CULTURAL CENTER
There is an existing converted pavilion on this site and access to the amphitheater. This site is highly visible and has abuts other points of cultural interest as well as anchoring the southern entrance Gateway. Depending upon the size of the final building, the pavilion may be demolished or converted back to an open-air space as part of the Cultural Center Complex.

COLLEGE OF TECHNICAL EDUCATION (CTE)
The CTE building site anchors the campus at the south Gateway. The site includes parking and a Trucking Course. The building will need to negotiate the grade from the street to the course, providing as level a Trucking Course as possible.

RELOCATED MAINTENANCE BUILDING
The site selected for the relocated Maintenance Building allows for easy deliveries and back of house operations to be clustered along the east of the Trucking course. The new building will be the first look at campus from the south and provide a street facade along 500 South.

STORAGE
This location provides a buffer between the trucking and existing residences. The Storage building is part of the back of house operations near the Maintenance/Purchasing building and Central Plant. The outdoor storage yard can be combined with the equipment yard of the Central Plant for secured outdoor storage.

ADDITIONAL BUILDING SITE OR EXERCISE POD LOCATION
There are two additional building sites identified for alternative locations of needed building or additional buildings as unexpected needs or program expansion occurs. The site northeast of the Central Plant could be additional Housing, Administration, or provide closer sports courts to the Housing located at the east entrance to campus. The site east of the Rec/Event Center parking would ideally serve either recreation or housing purposes.
Recommended Master Plan

City & Regional Connections

Blanding Main Street is shown in black from north to south. The USUE Blanding campus loop connects to Main Street at two locations, providing a greater transportation loop for both student access and deliveries. As the CTE Trucking program is sited at the south Gateway, truck traffic may be limited to 500 south only.

The City has been very cooperative and supportive of all campus development and identity. They are open to branding along this loop with banners on streetlights, etc. The Edge of the Cedars museum is indicated in red at the northwest and the popular tower is in red at the south. An extensive trail system runs along the west of the city and campus and is tied into by the Master Plan at several points.
Gateways to Campus

At the north and south of Campus Drive (700 West), two intersections are shown as Gateways to campus. At these points, not only is signage and USU branding present, but regional and tribal heritage can be promoted in geometric forms, plants, boulders and street sculpture. This can be a unique regional interpretation of Aggie pride.

The streetscape along Campus Drive is very much about college life and identity and is the most formal portion of the Master Plan. Connecting walks, xeriscaping, trees, banners, facing buildings and adjacent plazas condense and beautifully articulate the campus experience in a mere block or two.
Recommended Master Plan

Exercise Pods & Trails

Blanding City Recreation Center has accommodated USUE Blanding students for the past several years and plans to add two additional courts to be designated as student use only. However, an on-campus Recreation Center is planned to be built in Phase II to better accommodate student needs and combine university functions with its placement on campus.

In the interim, the Design and USU Team determined that smaller interventions could facilitate on-campus fitness and outdoor recreation before the Rec/Event Center is built. The students have enthusiastically raised funds for a building, and while admirable, wouldn’t be applied to recreation for many years otherwise.

As a solution to both using available student-raised funds and providing additional services immediately, the concept of Exercise Pods has been introduced into the Master Plan. The Pods can be built as funds become available or in tandem with an adjacent building. The first Pod proposed is the Firepit, Basketball, and Volleyball Court sited between the existing Housing and the baseball field.

Additional Pods would include Trailhead development at the north Gateway of campus and at the intersection of Aggie Loop (700 West) and Campus Drive. Connecting to the extensive existing trails to the west of campus and to the larger regional trails should be a priority, marking distances and loops from the Rec/Event Center.

ADDITIONAL WORKSHOP NOTES

- Connect to Edge of the Cedars museum
- Design an overlook or garden as gateway to connecting trails
- City could connect the road (650) to the museum for better campus connection
- Exercise Pods along trails: outdoor fitness equipment. Clubs and the HS cross country team uses the trails to the west.
- Students desire, basketball, yoga, weights, sand volleyball; basketball is most popular
- Many kids go hiking—exterior recreation is in high demand. Navajo students do not go in portions of the canyon because it is their ruins and is considered taboo.
- An indoor pool for all seasons is on the student wishlist as most students don’t stay for summer.
- Accommodation for and organization of intramural teams is requested by students
- The current amphitheater was brought back by the students but it was not successful. Talent shows, freshmen orientation, etc. is great at this location. The natural setting was comforting to the students as an initial introduction to campus.
- Students go to the tower on the San Juan Foundation property. It is a popular place to hike.
- Students have raised $180k for the Rec/Event Center (fundraising continues) over 20 yrs
- Consider tying into/developing whole community trail network
Central Plaza: The Heart of Campus

With little to no hesitation, the USUE Blanding Administration selected a design which closed part of 200 South in order to provide a pedestrian campus plaza which connects several buildings at the east and links this Heart of Campus to an Overlook at the west. This is where the students will get their A, or Aggie sculpture. This is a place of shade and gathering, at both an intimate scale and in larger groups. Graduation procession could start here and end in the Recreation/Event Center where the students’ families await.

The loop indicated on the City & Regional Connections page shows how vehicular traffic currently flows to campus. The 200 West street is used minimally. Closing this to maintenance or delivery vehicles only will not disrupt current or future functions on campus. Coordination with the LDS church will be necessary to determine what parking accommodations they desire or if a land swap may be feasible with the Institute. The city would be amenable to turning over this portion of city street to the university for ownership of the portion of street on 700 West that the university currently owns. In addition, the city is highly cooperative regarding traffic calming techniques to be implemented along Campus Drive (700 West). This Heart of Campus plaza is a central connector, gather space, and key to promoting campus identity.

CAMPUS PRIMARY HUB
The Heart of Campus enhances the current location of the center of campus and celebrates the Aggie identity while facilitating greater connection and pedestrian preference. It is framed by the Library, Administration Building, and Quad. With the removal of the current parking and closing of sections of 200 South, the Plaza becomes a hub which will draw group activities, studying under trees, and eating lunch outdoors. As an oasis in the desert, a water feature would only enhance the draw and feel of the campus’ outdoor living room. The recommended Master Plan proposes enhancements to the hub environment in the form of improved paving, landscaping/shade trees, lighting, and street furniture. The closure of 200 South at the west of 700 West continues the pedestrian dominated design and terminates in a dramatic overlook toward Westwater Creek Wash and across the cedars. Highly key to the plaza on both sides of Aggie Drive (700 West), which would remain open to vehicles, is the recommendation to improve the pedestrian-preferred design at the intersection, a circular design deployed through the plaza. Relationships between the outdoor plaza and the interior spaces of adjacent buildings should be reexamined and redesigned as funds allow. It is anticipated that these improvements would take place during the normal course of building renovation.

A series of secondary hubs are also proposed. Like the primary hub, they are considered important gathering places at or near specialized activity centers. Secondary hub locations are: Firepit at the Exercise Node, Trailhead at the end of the Campus Loop street, and entrance Gateways at the north and south entries to campus.
Pedestrian Routes & Hubs

The student population is largely Native American and local students from Blanding. There are fewer students with cars here than at other campuses in Utah and biking has been limited in recent classes. This is very much a population of pedestrians. Students walk to the center of town or the city's Recreation Center two miles away in the course of an evening. In addition to providing basic connection and safety for pedestrian flows, the Master Plan indicates connections to adjacent trails, linking students to regional networks. At every phase, the connections are complete and complementary. Hubs along walkways become oases for sitting, with shade, plants, and social opportunities. Not only is this a parallel to tribal tradition but it is simply intelligent campus planning. With nodes or clusters for gathering, water is used judiciously and funds are spent where they can make the biggest impact visually and to the students' health.

CAMPUS DRIVE (700 WEST)
The campus street from the north Gateway to the south is the formal part of campus with USU Banners, street trees, xeriscapeing, and generous walks on either sides. Parking is parallel with bike lanes. A collegiate street-scape is the goal.

INTERNAL CONNECTING WALKS
Connecting walks navigate the change in elevation from the CTE to the Administration building, connecting Housing cluster to the Classroom Building or the Plaza to the baseball field. ADA slope and surface requirements must be met. In steeper areas, decomposed granite with a binder could be considered in addition to stairs on alternate routes.

PARKING
Even in large parking lots, measures should be taken that break down the apparent scale of the parking field, as well as assistance in wayfinding. Additionally, pedestrian routes from parking areas to the heart of the campus and campus pedestrian portals should be clearly noted by the use of painted striping or changes in paving materials.

PEDESTRIAN SIGNAGE
A pedestrian-oriented building signage system should be adopted that is consistent throughout campus and retrofitted on existing building as appropriate. Signage should be readily visible to pedestrians approaching building entrances. Gateway signage at the edges of the campus should contribute to a sense of entry. Typically these markers will be matching structures with appropriate signage. Parking portals serve as a “beacon,” or a transition point, between parking lots and the internal campus pedestrian spines. They should also be similarly constructed and incorporate pedestrian signage and lighting to aid in wayfinding at night. Directional kiosks should be located along primary pedestrian routes; always incorporate a campus wayfinding map.
Landscape Design & Wayfinding

One of the key assets of this location is the landscape. Not only do rock outcroppings occur throughout the site, but the cedars bring the region into campus with their sculptural trunks and desert green color. The stormwater collection pond is necessary to the city and becomes a landscape feature at the east of campus. From this anchor, the green space weaves across the site to connect to the vast open land at the west. Much of this remains USUE Blanding property but will be retained for outdoor recreation purposes. Buildings should tie into the core green space with exterior classrooms and gathering spaces where possible and make best use of views as this is important to all cultures represented on campus.

REGIONAL VEGETATION
Indigenous or regional landscape materials should be utilized whenever possible on campus. Their use will minimize the consumption of scarce water resources, be more easily maintained, grow in a heartier manner, and typically be less costly to install. In addition, local vegetation is meaningful to the Native American student population who have requested the inclusion of medicinal gardens with vegetable beds near student housing. Consider additional sumac or a sumac grove in landscape design as it is used for Native American wedding baskets and the one tree on campus is heavily harvested.

Seasonal color with greater maintenance or water needs should be in strategic, selected areas. In special locations, such as the central Plaza or entrance gateways, the use of plantings that provide seasonal color is encouraged. These plantings are more difficult to maintain, thus, their usage should be restricted to the most important or high profile campus locations. The idea of an oasis of color, scent, and shade may be served well by regionally appropriate plants and selective irrigation at pedestrian hubs, along the Aggie Drive (700 West), and at high-visibility points at building entries or signage. Turf is valued by this population and visiting family members and should be used judiciously in landscape design primarily for active student use and not for visual effect. The overall strategy for campus should be water-wise, broad implementation of xeriscape techniques, and celebrating regional vegetation.

XERISCAPE ALTERNATIVES
Xeriscape is a systematic concept for saving water in landscape areas. In xeriscape, native turf, indigenous vegetation, selective irrigation, and the use of natural soil amendments and mulches contribute to lower water consumption. Xeriscape is certainly appropriate for more natural, high desert environments on campus, but the concept may also be utilized more generally across campus and specifically in transitional areas which areas abut the cedars or native green space to remain.
Recommended Master Plan

WAYFINDING SYSTEM
The proposed campus wayfinding program consists of a hierarchical system of markers and signs. The intent of this system would be to help orient visitors as the campus grows while enhancing the visual image of USUE Blanding with a cohesive overall design. Campus gateways are significant structures, possibly constructed of masonry that provide a landmark at key automotive entrance points. Signage is typically university name identification, although in some instances, it may include features such as a message board. Parking portals should also be a structural element, possibly a smaller version of the gateway. Lighting should be incorporated into this structure, so that it can be easily seen at night. The signage message for a portal is also University name identification. Automobile directional signs should be scaled to be viewed by drivers traveling at the automobile speed limit. Lettering should be adequately sized and should have a significant contrast with the signage background. Pedestrian directional signs are relatively small, since they are viewed at close range and at slow speeds. They can be simple, such as a small pole mounted sign, or more elaborate, such as a small structure or artistic/sculptural element. Pedestrian kiosks are structural elements and should be located at key pedestrian entrance points or at major pedestrian crossroads. Kiosks should always contain a campus location map and directory, but may also include a message or display area as well. Building signs should be provided at two levels. The message should simply convey the name of the building.

ENTRANCE GATEWAYS
Entrance gateways are structures that welcome visitors at key entrance points into the campus. Two primary gateways are proposed in this master plan. The gateways serve as a primary entrance to campus from the north and south on Aggie Drive (700 W.). At both locations, traffic calming, branding and concentric circle landscape design provide USUE Blanding identity to the intersection, tying into smaller pedestrian hubs and the larger central Plaza. Smaller entrance signage is proposed at entrances from 200 South, 300 South, and at the property line on 500 South, approaching the larger Gateway at the CTE/Cultural Center corner.

PARKING PORTALS
Parking portals serve to orient the visitor, helping make the transition from the automobile parking lot to the internal campus pedestrian system. Portals are structures, located at the edge of parking area at the point of interface with the walkway system. Portals should be well lighted to facilitate wayfinding at night. Portal locations should also be sites for bicycle parking.

BICYCLE ACCESS AT PARKING GATEWAYS
The recommended Master Plan proposes a series of parking options at key pedestrian entrance points on campus. Each of the points should also accommodate bicycle access and parking. Because of topographical and sidewalk width constraints, it is not advisable to allow bicycles on all pedestrian paths on campus, but provide biking lanes along the roads as they do not have high volume traffic. Bicycle parking, either racks or lockers, should be provided at the Classroom Building, the central Plaza, and Housing at a minimum. Their design should complement the design standard for campus street furniture in both materials and color.

DIRECTIONAL KIOSKS
Directional kiosks may be structures or signage systems. Kiosks may serve as campus bulletin boards, but they must always contain directional maps for the campus.

BUILDING SIGNAGE
A consistent building signage system should be developed to assist with visitor orientation on campus. This system should be consistent in size, color, and graphic format. Signs should be located in close proximity to building entrances.

STREET FURNITURE
Consistent throughout campus street furniture generally refers to benches, trash receptacles, lighting fixtures,
information kiosks, outdoor vending facilities (such as newspaper vending devices), and other fixtures or furnishings that enhance the pedestrian environment. Adopted street furniture standards should be consistently applied throughout the campus. Consistency can be achieved by the use of furniture prototypes, consistent materials, a selected color palate, compatible scale, and common installation applications. Durable construction street furniture should be selected that is durable. Durability can be defined as utilizing materials that are less susceptible to damage due to harsh weather conditions or vandalism. Durable furniture can also be easily repaired when damaged. Color and material should be selected for extreme weather conditions.

STREET FURNITURE LOCATIONS
Street furniture should be appropriately located along pedestrian sidewalks and trails. Along internal campus sidewalks, gathering places (hubs) are appropriate locations for street furniture clusters. These clusters may contain several benches configured to facilitate small group interaction. Areas with shade trees are particularly appropriate locations for seating areas. Street furniture should not be located directly on pedestrian areas that must be cleared of snow or ice during winter months.

PEDESTRIAN LIGHTING
General campus sidewalk lighting should be consistent in design and scaled for pedestrians. Lighting standards (or poles) should be metal, and lighting sources should be energy efficient, utilizing a common bulb type. Re-lamping should be easily achieved, and luminaries should be resistant to vandalism. Lighting fixtures should not be located directly on pedestrian areas that must be cleared of snow or ice during winter months.

WASH BUILDING FACADES WITH LIGHT
Washing building facades with light can be an effective method for achieving ambient illumination, as well as identifying key pedestrian paths and buildings. If implemented throughout the campus, lighted facades can assist pedestrians with wayfinding and can enhance the campus image within the city of Blanding. Highlight building entrances with lighting for safety. Lighting at building entrances should be brighter than average ambient lighting intensity outdoors. Enhanced entrance lighting can occur at the exterior of the building entrance, project outward from the building's interior, or a combination of both.

AMBIENT PLAZA/HUB LIGHTING
Ambient lighting at major pedestrian plazas or hubs should be of greater intensity than general ambient lighting along pedestrian paths. Pedestrian scale lighting may be enhanced by the lighting of building facades and entrances, the lighting of trees, the lighting of sculpture, and/or by providing additional general illumination.

BAFFLED PARKING LOT LIGHT
It is appropriate to light large parking areas with taller fixtures, placed to provide general illumination. Parking lot fixtures should be located to minimize disruption during snow removal. Lighting sources in parking lots should be baffled to preclude visibility of the lighting source from adjacent residential neighborhoods and/or major arterial streets. All light sources should be highly efficient and LED as possible. As safety is the primary concern, student areas, pedestrian walks, and building entrances should be well lit. However, all campus lighting should be sensitive to light pollution issues as campus abuts natural space. Down-lighting, lowered brightness, and light shields should be considered for all light sources in tandem with safety concerns in order to minimize light pollution within campus and into surrounding areas.
Cultural Center & Partnerships

A significant campus opportunity is the Cultural Center planned at the south Gateway. Envisioned as a partnership with the city of Blanding, the Center is on university property but the building or complex would be funded jointly. Building on the existing cultural attractions at the intersection into the San Juan Foundation property, the Cultural Center would build on the regional heritage, allow showcase space for indigenous art, and provide rehearsal and performance space for the student cultural clubs. Drawing on the Blanding’s unique identity, the Cultural Center builds on the cultural pride of the region. The building would provide a performance, art, and convention venue (in tandem with the Rec/Event Building facilities), expanding the possibilities of what the campus can host. In the Community Meeting, a county representative referred to the Better Cities plan requiring a community cultural center; collaboration with students for cultural presentations is envisioned to operate like a business partnership similar to that of BYU Hawaii and the adjacent Polynesian Center.

There are virtual and literal links to the Edge of the Cedars museum to the north (see City Map, pg 52); the cultural tourism draw as well as the network of trails that run from the museum to the existing amphitheater at the Cultural Center site on campus.

Students have proposed to host a Pow Wow on campus. The Master Plan accommodates large events at the Recreation/Event Center, but with the Trucking course placed between that building and the Cultural Center, a large festival could be hosted with indoor and outdoor facilities. The existing pavilion could be removed or returned to an open-air facility and the Cultural Center complex would include the development of the immediate trail system. The building at the south Gateway presents an exciting design challenge to merge both campus identity and regional identity.

The Art & Events Center is city owned but university operated and maintained, changing hands in 2020 to full ownership by the university. The Cultural Center may be an opportunity to expand the partnerships between city and campus, extending portions of the programs housed in the Art & Events Center into the Cultural Center. Additional advisory or partnership opportunities for this building include the San Juan Foundation, school districts, and Local Tourism Board.
Archaeological Considerations

As soon as building sites and projects are identified, it is recommended that the archaeological assessment process moves forward, requesting evaluation and excavation as needed. Different portions of the campus have been explored for archaeological sites. Other areas have not been evaluated largely because they have not been regarded for building locations. Extraction/documentation could be requested for a building to be done 5 years in the future; once documented and excavated they building process may continue.

Documentation of location and artifacts are desired. There is very little “hands off” when it comes to finding archaeological sites while digging foundations or utility trenches. Archaeologists want the big picture of what these sites mean regionally. It simply must be documented prior to development.

There is an ongoing need to assimilate archaeological information into campus planning—what is known, unknown, and intra-agency coordination with the state. All building to be coordinated with the Deputy SHPO Antiquities Coordinator, State Historic Preservation Office. As of 2016, this is Chris Merritt.

CTE & Trucking/Heavy Equipment Program

The CTE building will be constructed in Phase I as soon as funds are available. Not only will it house programs that will support community growth but it will expand the campus population, targeting new and under-served demographics. Anchoring the south Gateway, the CTE building will frame the inner lot that serves the Trucking program, offering a more extensive program than simply CDL licensing. This is a key program for the university and one that was a priority to remain as part of the central campus.

Currently, the Trucking Course and the Heavy Equipment lot is placed to the north and west of residential areas. In the Master Plan, they are relocated to provide adjacency to the CTE building and allow for buffering zones between the residential areas and the lots. The Heavy Equipment program is shown on Phase I but it has been determined that it is best to have this program continue off-site for the long term.

The CTE building should be sited at 500 South to facilitate a pull-through garage for the Trucking program, accessed from both the street and the Trucking Course.

Housing & Food Service Strategy

The phasing of Food Services is very important at all Phases. Not only does the current dining call provide meals for most students on campus, it accommodates members of the community. Facilities to accommodate the rate of student body growth as well as provide diverse eating options are desired. As the next Housing building is installed, not only will this accommodate new facilities, but the adjacency to the Rec/Event Center allows for Food Service to be provided by the students for special events. Nodes for after-hour food services such as a coffee shop or breakfast cart may be considered in several buildings as needs arise in addition to the renovation of current facilities into culinary instruction or supplementary food service facilities. It is intended that the community would continue to patronize the new facilities. A loading dock and exterior patio for outdoor dining or events is included in the Phase I Housing for the food service in this building.

The new Daycare facility would have a full-service kitchen.
Recreation/Event Center

The on-campus Recreation Center to be built in Phase II has been envisioned as the social heart of campus. In addition to serving students in several capacities, it is the intention of USU administration that this building serve the larger community. This Rec/Events complex has been placed to serve the students and anchor the greenspace, connecting to existing and planned trails.

Adjacent to a rock outcropping to the north, the Rec/Event Center’s north walls would open up to a Gathering Lawn and event amphitheater built into the hill. In this way, our smaller campus can host large, community events such as Pow Wows while accommodating a full graduation assembly for their growing student body and family members. This building is adjacent to the CTE Trucking Course which may provide additional outdoor space and overflow parking when these larger festivals or events occur. Partnerships with the city and county for community and conference opportunities should be pursued.

ADDITIONAL WORKSHOP COMMENTS

- Rec/Event Center providing on campus event space should be promoted
- Campus Rec/Event Center auditorium would provide a different venue than the city rec center
- Maintenance costs discussed: student fees, donor for building and O&M
- Hosting a Pow Wow has large size, noise, timing, event space needs
- Interior Rec center sport courts could open to outside for events, graduation, sports tournaments
- Opportunistic thinking needed – partnerships with city and county
- Think of on campus Rec center as also a convention center
- Master planning document can define the need for an event/rec center w/o addressing the funding issues that will surround it
- There is no place for graduation and all family members attend. We cannot justify a space for 1000+ people if it is only used once a year.
- There is a need for a social space/student lounge which may be a reason for the students staying at the city rec center.
- Students liked the student center in Price—the centralized location and facility.
- Students use the student center as a lounge from 7pm-11pm and the Rec/Event Center should accommodate this
- Basketball is most popular with the students.
RELATIONSHIPS TO NATURAL + BUILT, INTERACTIVE ENVIRONMENTS.
Recommended Master Plan

Parking Design & Phased Growth

The phased design of campus has been applied to parking as it relates to the growing student body. The student populations to parking ratio 1/3 to 1/2 student population growth every decade. Parking ratio based on one stall off street parking per three students – the USU Logan ratio.

CURRENT PARKING
- 120 off-street parking stalls
- 192 street parking along USUE property lines (approximately)

PH1 (01-10 yrs)
- 216 off street stalls
- 650 - 850 students

PH2 (10-25)
- 255 - 300 off street stalls
- 850 – 1,000 students

PH3 (25 – 50)
- 333 – 365 off street stalls
- 1,000 – 2,000 students

PH4 (surprise growth)
- 1,200 – 1,500 off street stalls
- 4,000 – 5,000 students
- Build out of parking garage may be considered at an existing parking lot location

CAMPUS PARKING AND THE CITY OF BLANDING
The city does not own the road to the west of the Administration building. The city would be willing to partner in some off street parking if they could regain ownership of the street for maintenance and utility access. Angled or parallel parking will help this location some. 90 degree parking on 200 south is problematic. Angled or parallel parking will help here as well. The city would prefer no perpendicular parking at any phase; the Master Plan indicates angle or parallel parking only.

Current parking is primarily using using streets but this inhibits the city’s ability to clean streets and remove snow. Parking lots are available on campus, but not used to capacity. Parking lots that should not be used by housing are primarily used by housing residents. The Arts & Events Center parking lot has been overrun by housing parking but this is not actually a university building yet and the community requires more space in the adjacent lot.

MASTER PLAN CALCULATIONS
On-street parallel and angled parking provide an additional 250 - 300 parking spots, accommodating staff, service, and community use in addition to the above numbers based on student population growth.

PHASED GROWTH
With the phased growth and tandem parking plan, at each phase, additional parking is shifted into efficient lots adjacent to new buildings. This works with incremental funding and can also be adjusted by unforeseen needs or growth. Each phase accommodates a certain number of students, staff, and visitor/community use. One additional point to be made is that shade structures over parking lots may be considered for solar arrays rather than or in addition to the array location at the west of campus in the Master Plan.
CIRCULATION AND PARKING
Residential life is core to enrollment at USUE Blanding. However, this student body is less likely to own a car than at other Utah institutions. USUE Blanding should continue to develop and expand on a multi-modal transportation strategy -if cycling or city transportation become more viable options in the future. This strategy should employ automobile and parking access, biking, and pedestrian facilities. Add transit when it occurs.

ROADWAYS
The completion of a full interior loop road is considered a high priority. Its completion will allow for the installation of the pedestrian plaza without greater complicating vehicular access. The spur which connects 300 South will be necessary to the development of the housing cluster in that area. The preferred alignment is a connection to 500 West and allowing for a building site south of the rock outcropping for the Rec/Event Center. In order to accomplish this connection, a moderate topographical change must be negotiated. More detailed engineering studies will be required, and roadway slope variances may need to be sought. Traffic calming devices should be utilized whenever automobile and pedestrian conflicts exist. Clearly marked and signed pedestrian crosswalks represent a basic form of traffic calming. Using raised walks at central Plaza furthers the design while increasing pedestrian visibility. Whenever feasible, the curb line should be extended into the roadway parking lane at the crosswalk to decrease the conflict distance. Other traffic calming devices can be effective at the interface of the campus with its surrounding neighborhoods. Either extended curb lines or pavement changes at pedestrian crossings are effective. A specific request has been made for traffic calming treatment at the Plaza. The city of Blanding is very willing to collaborate on traffic calming strategies.

CAMPUS TRAFFIC
The campus is situated on the edge of a residential area. There is little through traffic beyond student and faculty access. With the closing of 200 South traffic in campus, new routes need to be provided for the neighborhood and maintenance/delivery needs.
Recommended Master Plan

Distance Learning Recommendations

The distance sites on Reservation land will likely remain rental property due to the complications of owning on tribal land. However, much can be improved to Montezuma Creek and Monument Valley. Owning is a viable option at Monticello and this possibility could be reassessed regularly as enrollment at this site increases over time.

Resource growth is imperative, as students at distance locations are dependent on the technology linking them to USU resources. Computers, relay towers, and utility maintenance will continue to be a primary demand. Facility maintenance at Montezuma Creek is important and assessments for expansion should be completed yearly.

At Monument Valley, it is recommended that facilities near or adjacent to the high school be acquired. The current location is a deterrent not only by location but in its previous use as a hospital which may be considered a taboo by the population on the Reservation. A location near the high school would facilitate amending graduation rates and greater serving the population at this site. The facilities at Monument Valley were not viable for the long-term, and relocation will be necessary.
Montezuma Creek

Monument Valley
Recommended Master Plan

Energy & Utilities

The Central Plant is positioned approximately where the current Trucking Course is located on campus. With the installation of the Campus Loop connecting 200 South to 700 West, utilities will be connected to the Plant along the streets. Not only does this connect to existing utilities, but it minimizes the amount of excavation needed. Minimal trenching is desirable due to rock at the surface throughout campus. No formal easements are on campus property, so close coordinate with the City of Blanding will be required. Legal easements are suggested for future development.

The microwave tower on the Master Plan has been located for maintenance and access. In addition, it is next to power and data near the BTL building. Possible partnerships and income is possible by leasing space to cell companies which may assist in maintenance costs.
The location for solar arrays on the Master Plan has been selected 1,) for SE to SW ideal exposure, 2.) due to rock outcroppings, no buildings should be placed in this location, and 3.) ease of access for maintenance from adjacent parking lot at Phases II - III.

For similar reasons, it may be desirable to place solar arrays at the parking lot of the Recreation Center on shade structures (as shown to the right.) Solar grants cover independent base structures (not on buildings) as well as the solar panels, so both parking shade structures and pedestrian walkways may be entirely funded by grants. Regardless of funding, the Rec/Event Center parking lot is a highly accommodating site for solar arrays independent of buildings.
Recommended Master Plan

USUE Blanding Identity

The connection to outdoors, exterior classroom opportunities, and well designed small-group and large-group spaces are to be driving forces in the plan. Deliberate connections speak to the unique regional identity of the Four Corners area: trails, views, native vegetation, material selections, judicious use of water. It is also desirable that this regional identity adopt the USU branding and make it unique to the campus. The students are proud of being Aggies. Providing beautiful spaces and a greater university identity implies the educational connections and opportunities given Blanding-based students to the larger Price and Logan campuses.

- Aggie identity, a campus A
- Unique overlook in lieu of a clocktower – clocks are not culturally significant here
- Heart of Campus Plaza for college identity as well as social gathering space
- Branding along Aggie Drive (700 West) with streetlights as well as shade trees
- Branding along connecting loop from Blanding City Main Street
- Renaming 700 West to Aggie Drive or something similar in collaboration with the city
5 Guidelines
Implementation & Funding

Funding for campus projects can come from a variety of sources, depending on the project. The Utah Legislature typically funds academic buildings. Currently, central plant buildings and classroom buildings are reasonable legislative priorities. Philanthropic donations and “business partnerships” can be used on a wide range of projects, including academic buildings, performing arts centers, student unions, business communications centers, and a variety other uses. Donors quite often target high profile, public uses for philanthropy. Bonds can be issued for a number of revenue generating uses, such as student unions or parking facilities. Student fees can also be assessed to retire bond indebtedness, but this might be discouraged given the economic background of the majority of the student body. Privatization has become an important approach for student housing on many college campuses. Basic sidewalk improvements and other basic capital improvements may be funded through state capital improvement or maintenance funds.

Projects in this category are typically small scale. The Utah State Legislature has a recent tradition of approving relatively larger funding requests, often in the $20 million price range. As such, USUE Blanding should pursue a well orchestrated strategy for achieving funding from a variety of sources, including a larger request from the state for an academic building, philanthropic sources for high profile projects or business partnerships, bonding and/or privatization for revenue generating projects, and improvement funds for smaller or maintenance oriented projects.
PHASING
Due to the immediate needs to expand and the greater vision of the campus’ ultimate size, a 50-year Phasing plan is provided.

Phasing was developed by the Design/USU Team based on the staging of needs, funds, and steps for growth that facilitate future steps. Funds for buildings in Phase I are currently being raised with the CTE building as a first goal.

**BUILDING** | **SQ. FT.** | **COST**
--- | --- | ---
**PHASE 1 (0-10 YRS):**
CTE Bldg. | 55K | $7m - $9m
Student Housing (w/Dining) | 17K | $2.8m - $3.1m
Storage Facility/Yard | 10K | $120k - $150k
Health Science | 40K | $11m
Student Service | 10K | $1.7m
Central plant | 6K | cost not yet determined
Microwave tower | 250 SF Base | $150k
Exercise Pod 1, firepit, trails | 20K | $100k - $120k
Plaza, Traffic Calming, Tower | n/a | cost not yet determined

**PHASE 2 (10-25 YRS):**
Daycare | 10K | $2.4m
Classroom Bldg | 40-50 K | $7.6m - $9.5m
Student Housing | 17K | $2.8m
Married Housing | 17K | $3.1m
Recreation & Event Center | 30K | $7.2m
Cultural Center (partner w/City) | 20K | $7.2m
Exercise Pod 1-3 (exterior) | 200 SF each | $30-40k each

**PHASE 3 (25-50 YRS):**
Classroom Bldg | 40-50K | $7.6m - $9.5m

*Location factor has only been applied to Housing in these preliminary numbers.
Phasing & Design Guidelines

Architectural Narrative/Vision

BUILDING DESIGN
Throughout the duration of the programming effort, the architectural vision of the project has been discussed at length. Several major drivers have come to the forefront. USUE Blanding has a significant desire to serve community in a significant way. The direction was given to provide a Master Plan for campus with longevity and flexibility in mind, while promoting the USU identity uniquely translated for the region, promoting a coherent design to new and existing buildings, and connecting to the landscape and region as much as possible. The campus is located on a beautiful and varied site with opportunities to translate these concerns into design that serves the community, staff and student body.

BRANDING & IDENTITY
The Blanding campus has grown from a beautiful and unique area of southeastern Utah but both staff and student body are proudly Aggie. Combining the Utah State University branding, signage, and other iconic emblems with the regional traditions and landscape provide unique design opportunities. With this in mind, considerations must be made on how to achieve and create identity while maintaining a cohesive language with the architectural and interior design of the building.

USER GROUP INTERACTION
With any campus or cross-disciplinary building, there are varying user groups that utilize and interact with buildings and features. The campus user groups made up of students, faculty, and the public. The steering committee has expressed the desire to find opportunities within the campus where user groups can interact. This can happen in the public hubs, trails, building services, and food service spaces.

Hub spaces should be celebrated and serve as the bridge between user groups and different activity types. This can only serve to enrich and enhance the learning environment and quality of spaces across the campus. It must be done however without compromising the function of each of the buildings and maintaining appropriate security and privacy where required.

BUILDING MASSING AND FORM
There is a strong desire that massing across campus be appropriate to the site, city, and existing buildings.
As considerations for massing and the design and form of building are studied, it is strongly encouraged that the design of individual projects take advantage of opportunities to integrate with the views and landscape while promoting a collegiate feel at the street level. Consideration must also be given to breaking up the massing of larger buildings to maintain a pedestrian scale at every location. The planned height on all buildings (with the exception of the Health Sciences building due to site) is two stories.

Building articulation can be done both horizontally and vertically with the massing or within the fenestration or architectural detail of the elevations. Attention should also be given to stepping the building and breaking down the massing to address scale, in particular to respond to the scale of the street and grade changes from one location to the next. Design sensitivity should be given to the campus Master Plan for all future buildings.
BUILDING ORIENTATION
Buildings should be oriented to not only meet the goals of function and street presence but should also take advantage of sustainable practices in response to solar orientation, wind, and taking full advantage of views and natural day lighting. Strong considerations must also be given to existing buildings within and without campus. Existing utility infrastructure, pedestrian, and vehicular circulation, grading, and parking should also be carefully studied and thoroughly contemplated as design of the each phase moves forward. In addition, relationships and adjacency to outdoor amenities is an important element to the student experience on campus and must be considered in the development of each building location and orientation. It must be noted again that Native American cultures prefer main entrances on the east and should be considered if feasible on future projects.

NATURAL LIGHT AND VIEWS
Every opportunity to utilize natural light to maintain and enhance view corridors should be thoroughly evaluated in the design of the each phase of campus. In particular all public spaces, offices, and classrooms must maintain access to natural light and views. This is a critical element that impacts both the comfort and well-being of the occupants as well as individual building energy efficiency.

In an effort to achieve this goal, all buildings could consider the use of large windows, clerestory windows, skylights, and other potential transparent or translucent materials. Window openings should be oriented to take advantage of northern sky or controlled southern exposure. Windows on the west and east sides of the building should also be controlled or minimized.

Additionally, attention to the type of glass will be important to controlling and minimizing the amount of heat gain and harmful UV exposure. Balancing the type of glass with the size and orientation will be critical to meet the minimum quantities prescribed by code and to achieve the goal of LEED or Utah State mandated high performance standards.

EXTERIOR MATERIALS
The architectural response should consider the context of Blanding, San County, and the surrounding areas. Existing buildings utilize materials such as brick, stone, precast concrete elements, integral colored honed or split-faced CMU, metal panel, and glass elements. It is the desire of the university to explore a palette of materials that respects the regional context and creates a rich and welcoming expression in the architecture.

Generally, selected materials should be easily maintained and durable. Buildings should be designed to be warm and inviting to students, faculty, the local community and all that interact with the University. Consideration may also be given to selecting materials that respond to creating a cohesive look across campus.

INTERIOR MATERIALS
The design of the interior spaces should create a welcoming learning environment that is warm, bright, inviting, and promotes good health. Selection of interior finishes and materials should be responsive to the use of each of the spaces. Consideration must also be given to texture, color, acoustics, sustainability, and light reflectance and how they affect each space.
Selection of materials should be carefully considered in an effort to create an appropriate response to the function of each space while maintaining a cohesive language throughout each building. In regard to durability and maintenance, generally the selection of materials within reason should consider a 50-year building standard and should correspond to the amount of traffic and anticipated use of each building.

SUSTAINABLE DESIGN
The State of Utah has adopted the policy that all future State owned buildings are required to be designed to a minimum of LEED® Silver Certification. With this in mind, the design of the facility must incorporate sustainable practices while balancing budget parameters.

LANDSCAPE
The landscape plan will be one of sustainability and durability. The plant materials should be primarily native to the Blanding and surrounding area, and once established will require low amounts of water to maintain. The vegetation that lines the streetscape will consist of larger, regionally appropriate trees that will break up the building facades and allow for shaded walking along the street. All building main entrances will have an identifying landscape that will help to create a warm welcome environment to the students, faculty, and visitors. These plant materials should also be below maintenance and small enough not to provide a security risk. All the vegetation will be positioned in a way to allow various views around the buildings and plazas to help maintain the overall security of the campus. The irrigation systems will be high efficiency and adhere to USU standards. Planter beds and islands will utilize a drip system and the turf areas will use a combination of larger rotors and small pop-up spray heads. All new building site will use low trajectory nozzles in the sprinkler heads to help combat wind and provide the most efficient use of water. This use of drip and low trajectory nozzles will also assist in keeping the building from being sprayed and developing water stains.

OVERVIEW
For the USUE Blanding campus, the materials, design and construction will conform to the standards established by the Utah State Division of Facilities Construction and Management (DFCM). Furthermore, all projects will conform to all building, accessibility codes and requirements and the energy codes adopted by the State of Utah at the time of design and construction, whether or not they are specifically referenced in this document.

It is the Design Team and the Architect of record’s responsibility to verify and use all the latest revisions, editions and adopted version code documents. If there are conflicting standards, code provisions and/or regulations, the most stringent will govern unless such requirements are waived in writing by the Utah State Division of Facilities Construction and Management.

DESIGN STANDARDS
Applicable codes must be the latest year; a partial list of applicable codes and standards:
National Electric Code (NEC) w/ Utah Amendments
Life Safety Code NFPA 101 w/ Utah Amendments
International Building Code (IBC) w/ Utah Amendments
International Fire Code (IFC)
International Mechanical Code (IMC)
International Plumbing Code (IPC)
Planning & Design Criteria to Prevent Architectural Barriers for Aged & Physically Handicapped (4th Revision, w/ lever hardware amendment)
International Energy Conservation Code
International Fuel Gas Code (IFGC)
EIA/TIA, Electronics Industries Association / Telecommunications Industry Association

IEEE 1100-1999, Recommended Practice for Power & Grounding Electronic Equipment

IESNA, Illuminating Engineering Society of NorthAmerica
NFPA, National Fire Protection Association (applicable sections including but not limited to): NFPA 70, National Electrical Code & NFPA 72, National Fire Alarm Code

ASHRAE Indoor Air Quality 62-2001 & Addendum 62
Utah Code for Energy Conservation in New Building
Construction (ASHRAE Standard 90.1-1989)

American Society of Heating, Refrigeration & Air Conditioning (ASHRAE)

Occupational Safety & Health Administration (OSHA)
Sheet Metal & Air Conditioning Contractor National Association (SMACNA)

Underwriters Laboratory (UL)
Underwriters Laboratory (UL)
American Society of Testing Materials (ASTM)
American Standards Association (ASA)
DFCM Design Criteria for Architects & Engineers
DFCM Indoor Air Quality Criteria

OCCUPANCY CLASSIFICATION
The occupancy determinations of all projects must be confirmed by the Architect of Record with the State Building Official and the State Fire Marshall at the time of design.

ADA ACCESSIBILITY
The new USU Eastern Central Instruction Building is required to be in compliance with the American with Disabilities Act, Title III, 1991/1998 (ADA). The Utah State Building Board has adopted the following additonal requirements:
All public entries to the building will be ADA compliant with automatic door operators including required vestibule doors.

One set of accessible Rest room doors shall be equipped with automatic door operators including vestibule doors if applicable.
ADA compliant parking shall be provided.
Electrical Technical Narrative

CODES, STANDARDS AND REFERENCE MATERIALS

Codes and Standards which are directly applicable to design of the electrical systems are listed below:
ADA, Americans with Disabilities Act
ASHRAE 90.1 Energy Code
IECC, International Energy Conservation Code
DFCM, Division of Facilities Construction and Management, Design Requirements
DFCM, State Buildings Energy Standard
USU, Utah State University, Design Standards
EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
IBC, International Building Code
NFPA, National Fire Protection Association (applicable sections including but not limited to):
NFPA 70, National Electrical Code
    NFPA 72, National Fire Alarm Code
UL, Underwriter’s Laboratories
Utah State Fire Marshal Laws, Rules and Regulations

Campus Site Utilities

Power
The existing campus is serviced from Blanding City Electric. The City serves and meters each building separately with secondary delivery. Most of the distribution on campus is underground. As new buildings are added, coordination with Blanding City to service and meter each building shall be continued. The size of the existing campus, plus potential additional building area does not justify the campus owning its own medium-voltage distribution. However, as each new building is added to the campus, the project electrical engineer shall consider the possibility of a campus-owned system and review costs and benefits with campus facilities engineers.

Should a central plant be considered for the production and distribution of heating and cooling, the plant could also be an opportunity to centrally locate a medium-voltage metering and distribution point, or a place where a central backup generator could be placed to distribute emergency/standby power to the campus, thus eliminating multiple generators with all of the associated noise and exhaust at each building. A central plant could also provide an opportunity to explore a cogeneration plant for the simultaneous production of heating and power using natural gas engines. The full study and feasibility of these options is beyond the scope of this report and would have to be studied as part of a separate project.

The campus would like to consider on-site solar photovoltaic (PV) power. The exact location is yet to be determined, but coordination for this PV power production facility shall begin with the first new building added to the campus. Coordination with Blanding City Electrical will be required for utility-interactive connections and net metering regulations and requirements. All power that is generated and distributed back into the City electrical system should be credited to the Campus to offset campus electrical costs. In addition to a large
ground-mounted PV system, each new building should be considered for a roof-mounted PV system that is grid-connected to that building’s electrical system.

Telecommunications
Campus telecommunications service enters the Technology Building data center, and from there copper and fiber is distributed through campus via underground conduits. A redundant fiber loop should be developed as the campus grows, with the fiber loop made to go in and out of each new building using physically redundant paths to the extent possible. A loop of (2) 4” CND with inner ducts should developed to carry telecommunications and other low-voltage systems connections throughout campus.
For building voice/data cabling distribution, follow the most current USU IT standards and guidelines as they are sure to evolve and change over the years.

Campus Site Lighting
The campus is located in a rural, dark-sky zone. Outdoor light fixture selection shall provide safe levels of lighting according to IES standards, while being sensitive to maintaining dark-sky views and minimizing unnecessary light pollution. For walkways, use only LED fixtures with full cutoff distribution on 12’ maximum height poles. Parking and roadways may use up to 18’ height poles. Any up-lighting or building façade lighting should be avoided. Work closely with architects and campus facilities personnel in the selection of the outdoor lighting fixture styles, which should be consistent throughout campus, without having to lock into one manufacturer.

Campus Fire Alarm
All buildings on campus report to a central fire alarm annunciator. As new buildings are added, continue to report fire alarm signals to the central location. At some point, a campus-wide fire alarm upgrade will be required at which time the distribution network can be changed to fiber optic transmission.

Maintenance Considerations
Since this a remote campus, careful consideration should be given to the selection of systems and equipment that are straight-forward in their operation and can be locally purchased and maintained. While this cannot be entirely accommodated, a specific review of each system or component should be done prior to final selection so that these concerns can be addressed.
Civil Technical Narrative

Below is a brief summary of the soil and archaeological conditions along with the existing utility conditions.

Soil Conditions
Soil conditions are predominately hard rock with varying depths of soil near the surface. The hard rock areas are subsurface outcrops that exist throughout campus. The soil material above the rock is approximately 1’ to 8’ deep. Through the course of many projects, it has been determined that the rock depth can vary greatly within a relatively small area. It is important to investigate subsurface conditions for each specific project. For future projects, it is anticipated that rock will need to be removed for building foundations and utility trenching. For example, on the Residence Hall project, there was 450 cubic yards of rock removed for a sewer main that was 950 linear feet with depths varying from 2’ to 8’ feet deep.

Archaeological Conditions
There are six recorded archaeological sites that exist on campus. The findings consist of sparse artifacts, masonry structures, field home remnants, ceramic shreds, and mounds of rubble. At this time, any significant findings have been removed from these sites. There are no known significant findings located on campus.

Sewer System
The 8” sewer line in 200 south flows to the east to the city’s system. The 8” sewer line that serves the northwest area of campus flows to the north to a lift station. After the lift station, the sewer flows to the east along 100 south. There is an 8” sewer line that was installed in 2014 with the Monument View Residence Hall project. This line begins at the east side of the new residence hall and continues south through the open area as it parallels 700 west. It then turns west at 90 degrees near the proposed Campus Loop street before it enters 700 west. At this point it continues south in 700 west to 500 south to a lift station. After the lift station, the sewer continues east along 500 south. All of the sewer lines are sized for future growth, although additional lines will be required to account for future phasing. It is required that each of these future main lines be at least 8” diameter lines.

Storm Drain System
The storm drain system is mostly surface flow for a majority of campus. There are a series of inlets along the west side of campus (west of 700 west) that drain into the ravine to the west. 700 west drains to the southwest corner of campus into this same ravine near the cultural center. There is an existing retention pond located at the southeast corner of campus that acts as a basin for the city. It is estimated that approximately a third of the city’s storm water discharges into this pond. This basin must be maintained and possibly enlarged to handle the city’s current flows and the future development of campus. It is anticipated that future development will require the installation of storm drain that will discharge into this retention pond or into the ravine to the west of 700 west.

Culinary Water System
Overall, the culinary water system is adequately sized for future development on campus. There is an 8” water line that runs in 700 west from 100 south to 500 south. The line running east to west along 100 south is an 8” line. There is a water line that runs in 100 south as well, but the size is unknown. It is anticipated that a new water line will be required to run from 200 south along the future Campus Loop road to 700 west.
Gas System
The gas mains are 2” and run throughout campus. They do not extend south of the Maintenance and Purchasing Building along 700 west. Additional main lines will be required for future phasing.

Power System
The campus has a series of underground and overhead powerlines. The powerlines also do not extend south of the Maintenance and Purchasing Building along 700 west. Additional power lines will be required for future phasing.
Phasing & Design Guidelines

Structural Technical Narrative

The structural design for this project should provide a building which will integrate with the program requirements for space layout, architectural and service needs, while meeting current code standards for vertical and horizontal load carrying capacity. User needs in terms of current flexibility of the spaces and future adaptability of use should be considered. The level of user comfort as determined by the acoustic and vibration sensitivity of the structure shall also be addressed.

The campus has a wide variety of program spaces that must be accommodated including classrooms, office spaces, health sciences, CTE, recreation/events center, daycare, housing, and building support spaces. Many of these spaces have unique demands for loading and durability that must be addressed in the final design.

Structural / Service Coordination

Layout of the structural grid will need to respect various building functions. During the design phase, a completely integrated approach to building systems is recommended. Distribution of HVAC, plumbing and electrical services must be carefully coordinated with the structural elements, particularly at framing intersections and major crossover points. This close coordination must be achieved in order to avoid conflicts and limit penetrations of major structural members.

Codes and Standards

Codes and standards that apply to the design of this building are:

- 2015 International Building Code
- DFCM Design Criteria for Architects and Engineers, March 21, 2015
- American Institute of Steel Construction (AISC) with Commentary
- ACI 318 Building Code Requirements for Reinforced Concrete
- ACI 530 Building Code Requirements for Masonry Structures
- American Iron and Steel Institute (AISI) Specifications for the design of Cold-Formed Steel Structural Members
- American Welding Society (ANSI/AWS) D1.1 Structural Welding Code
- Steel Joist Institute (SJI) for open web Joists and Girders
- Steel Deck Institute (SDI) for Metal floor and roof Decks

Geotechnical Criteria

A site specific geotechnical investigation dated June 25, 2012 was been completed by GROUND Engineering Consultants Inc. for the recent student housing building. This investigation indicates that the site consists of silts and clays over weathered claystone. The claystone bedrock layers were encountered at depths ranging from 1 to 9 feet below surface grade. The report also indicates that the surface soils have a minor collapse potential. Excavation of the bedrock will be very difficult and has required blasting to remove it on previous projects. The report indicates that the anticipated structure may be supported on conventional reinforced concrete footings. Footings supported on undisturbed natural bedrock would have an anticipated allowable bearing pressure on the order of 3000 psf. Footings supported on structural fills would have an anticipated allowable bearing pressure on the order of 2000 psf. A geotechnical report should be prepared for each individual building site to verify the actual conditions.
Design Criteria

The structural systems in the facility shall be designed to meet the requirements of the 2015 International Building Code (IBC) and the Design Criteria Manual adopted by the Utah State Building Board. The following minimum requirements should be anticipated:

- **Risk Category**  
  Category II or III (Depending on Occupancy)

- **Wind Loads**
  - Wind Velocity: 115 mph, (3 second Gust)
  - Exposure Type: “C”, for the building structure, or as appropriate to the site.
  - Wind Importance Factor, \( I_w \): 1.00

- **Seismic Loads**
  - Short Period Spectral Response Acceleration: \( SD_s = 0.194 \) g (Values from 2012 Housing Project)
  - Long Period Spectral Response Acceleration: \( SD_1 = 0.530 \) g
  - Site Class: D
  - Seismic Design Category: A
  - Seismic Importance Factor, \( I_e \): 1.00-1.25 (Depending on Occupancy)

- **Roof Loads**
  - Ground snow, \( p_g \): 43 psf
  - Snow Importance Factor, \( I_s \): 1.00 – 1.10 (Depending on Occupancy)

- **Overhead Crane Loads**
  - Overhead cranes may be required in the CTE building.
  - Coordination of the anticipated vertical and lateral loads associated with this equipment shall be provided as part of the design of associated roof structure.

- **Floor Live Loads**
  - Floor design live loads shall be in accordance with the latest edition of the DFCM Design Criteria Manual and the 2015 International Building Code and as follows:
    1. Provide minimum uniform floor live loads based on the designated usage in accordance with ASCE 7-10 Table 4-1
    2. 15 psf movable partition load
    3. Areas of concentrated standard file storage - 125 psf
    4. Floor areas supporting high density rolling files – 225 psf, or actual load
    5. Paper storage areas – 250 to 350 psf as appropriate
    6. UPS Battery Storage areas – 250 to 450 psf as appropriate
    7. Mechanical Equipment Rooms – 125 psf minimum or as required by actual equipment
Areas where heavy load concentrations exceed the normal loading requirements shall be designed for the specific load case.

Note: The more stringent requirement between the 2015 IBC, the DFCM Design Criteria Manual, and the loads given above shall govern.

Floor Vibration Criteria
Control of suspended floor and roof structure vibrations due to human and mechanically induced excitation forces shall be considered in the selection of the building structural floor and roof framing systems.

It is not generally anticipated that any activities or equipment that are sensitive to floor vibrations will be located within this facility. The potential exception to this may occur in the Health Science Building where it is anticipated that there will be lab spaces that will require the use of microscopes. This should be verified as part of the final design. Should vibration sensitive activities or equipment become necessary within the facility then structural system compatibility should be carefully evaluated.

Future Building Expansion
The A/E designers of the building shall consider potential future horizontal and/or vertical expansions as identified by the program for each individual building.

Testing and Inspections
The Architect/Engineer, and the selected testing lab, shall perform periodic construction observations, testing, and special inspections, as outlined in the DFCM Design Criteria for Architects and Engineers. The design engineer shall list all required special inspections on the contract drawings, and perform periodic construction observations as required by the A/E agreement. Costs for special inspections and testing services will be paid for directly by the owner.

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Mechanical Technical Narrative

A comparative analysis of a central plant verses point of use building mechanical systems is given below.

ASSUMPTIONS
A breakdown of future estimated load is attached. Mechanical schedules are also included. Heating & cooling load assumptions are as follows:

- Total Building Area: 335,000 S.F.
- Cooling Load: 1,310 Tons
- Heating Load: 17,950,000 Btu/hr

CENTRAL PLANT OVERVIEW
Central Utility Plant (CUP) systems are best suited for applications where the campus has a high density of buildings and where the buildings have high heating and air conditioning loads are high.

Load Density: A high load density is required to cover the capital investment required for the utility generation and distribution system, which constitutes most of the capital cost for the overall system (ASHRAE suggests the distribution system typically comprise 50 – 75% of the total costs associated with district heating and cooling.) A central plant system that utilizes multiple utilities such as electrical generation & distribution, phone, IT, domestic water, district steam & chilled water will maximize its ROI.

Load Factor (avg. power divided by peak power): It is important that the annual load factor be high because the total system is capital intensive. These factors make district heating and cooling systems most attractive in serving (1) Industrial complexes, (2) densely populated urban areas, and (3) high-density building clusters with high thermal loads. Low density and residential areas have not usually been attractive markets for district heating. District cooling applies in most areas that have appreciable concentrations of cooling loads, usually associated with taller buildings.

The above factors make district heating and cooling systems most attractive in serving high-density building clusters with high thermal loads. In other words, district heating is best suited to campuses with high building and population density in relatively cold climates. District cooling applies in most areas that have appreciable concentrations of cooling loads such as universities with laboratories, rec-centers, and data centers.

CENTRAL PLANT COMPONENTS:
The central plant consists of three primary components: The central plant, the distribution network, and the consumer systems.

- Central Source or Production Plant may be any type of boiler, a geothermal source, solar energy, or thermal energy developed as a by-product of electrical generation. The last approach, commonly referred to a Co-Gen or Combined Heat & Power (CHP) has high energy utilization efficiency.
- Chilled water can be produced by refrigeration chillers, gas/steam turbine or engine driven compression equipment or a combination.
- Conveying systems consist of the distribution & piping network that conveys energy. The piping is often the most expensive portion of a district heating or cooling system. The piping consists of a combination of pre-insulated and field insulated pipe in both concrete tunnel and direct burial applications. These networks require substantial permitting and coordination with non-users of the system for right-of-way if not on the
owners property. Because the initial cost of distribution systems is high, it is important to optimize it’s use.

- The consumer system consists of the building energy consuming equipment such as air-handlers, heat exchangers, water heaters, etc.

CENTRAL PLANT NARRATIVE
The central plant heating & cooling generation systems should be designed with N+1 redundancy to prevent any loss in capacity during routine maintenance or equipment failure.

- Heating: The central plant requires 17.95-million Btu/hr heating. The CUP will be equipped with qty(4) Bryan RV-800’s providing 19.2-million Btu/hr with N+1 redundancy. The plant will also be equipped with associated chemical feed, deaerator, condensate recovery. See schedule sheet for a complete list of equipment. The steam distribution piping will be sized to convey 20,000 lbs/hr and piping will consist of 8”-dia steam line, and 4” dia. Condensate return.
- District Cooling: The central plant requires 1,310 tons of cooling. The CUP will be equipped with qty-3 York Model YKGEXP9-ERG 700-ton Centrifugal chillers, qty-3 crossflow cooling towers, cooling tower sump and filtration package. See schedules for a complete list of equipment. The chilled water distribution system will be sized to convey 2,600 GPM and the chilled water supply and return mains will be sized at 12”-dia.

COST ESTIMATE
A detailed cost estimate is attached. The central plant will require approximately 10,000 S.F. of building area necessary to accommodate the associated equipment. The plant must be separated into a 7,300 S.F. heating generating equipment (Boiler) room, and a 2,700 S.F. refrigerant machinery room (Chiller). The below costs reflect mechanical costs only. Additional electrical, architectural, civil, and structural costs apply.

Building Size:
- Boiler: 7,300 S.F.
- Chiller: 2,700 S.F.
- Cooling Tower Yard: 2,700 S.F. (yard is just an enclosed area for the towers)

Central Plant Mechanical Costs:
- HVAC: $2,090,000
- Plumbing: $103,000
- Fire Sprinkling: $35,000
- Unfoseen: $222,800 (unforeseen costs based on 10% of the above total)
  TOTAL: $2,450,000 (245 S.F.)

Utility Distribution(*)
- Enclosed Tunnel: $5,000 per lineal foot
- Direct Buried: $500 per lineal foot

(*) Enclosed tunnel costs are based on USU’s standard utility tunnel with chilled water, steam and electrical distribution. Direct buried costs include trenching & backfill of 12” chilled water distribution lines and 8” steam & 4” condensate, but does not include electrical.

POINT OF USE BUILDING HVAC/PLUMBING SYSTEMS
The campus is already equipped with numerous buildings with independent packaged systems that do not lend themselves well to central plant conversion.
Utilizing point of use mechanical systems at each building allows for a greater range of systems. Various commercial-grade HVAC systems commonly used on campuses are as follows:

1. **Central Air Handler with VAV Re-heat: $35/sq.ft.**
   A boiler and chiller would supply heating and cooling needs to various variable air-volume air-handling units. These systems are highly malleable and may be converted to district heating more easily than the other systems mentioned below.

2. **Packaged Rooftop Units: $25/sq.ft.**
   Packaged gas fired, DX-cooling units placed on the roof. This system requires very little mechanical room space, however it does not lend itself well to district heating and cooling.

3. **VRF: $25/sq.ft.**
   Variable Refrigerant Flow systems utilize in room cassettes connected to refrigerant piping. The VRF system provided both heating & cooling. High density thermostatic control with low ceiling space is achieved. This type system does not lend itself well to large outside airflows. Laboratories, and auditoriums are not easily served by this system.

4. **Ground Source Heat Pump: $35/sq.ft.**
   A heat pump is placed in a furnace closet or ceiling space. The heat pumps are approximately the same size as a furnace. A ground loop heat exchanger is utilized as a heat sink. Typically 1 sq.ft. of ground loop is required per 1 sq.ft. of building space.

5. **Fan Coil Units: $20/sq.ft.**
   Fan coils (approximately the same size as a furnace) are utilized for heating & cooling purposes. This type system lends itself well in residential halls, and small office buildings.

### CENTRAL PLANT VS. POINT OF USE SYSTEM PROS & CONS

**Central Plant Pros:**
- **Environmental Benefits:** Emissions from central plants are easier to control than those from individual plants and, in aggregate, are lower because of higher quality equipment, seasonal efficiencies and level of maintenance, diversity of loads, and lower system heat loss.
- **Operating Personnel:** One primary advantage to a building owner is that operating personnel for the building HVAC system may be reduced or eliminated. Engineers will be required in the central plant for proper operation & optimization.
- **Liability:** The elimination of a boiler in each building reduces the risk of fire and accidents are reduced.
- **Equipment Maintenance:** With less mechanical equipment, there is proportionately less equipment maintenance, resulting in less expense and reduced maintenance staff.
- **Higher Thermal Efficiency:** A larger central plant can achieve higher thermal and emission efficiencies than the sum of several smaller plants. Part load performance is also improved.
- **Higher Reliability:** The district energy systems are typically highly reliable and rarely have outages.
- **High Level of Control & Monitoring:** Typically the level and quality of control and monitoring systems in district energy systems are superior to commercial-grade HVAC systems.

**Building HVAC System Pros:**
- Initial capital investment is lower because the distribution system commonly associated with district energy plants is not required.
- Versatile HVAC system. As mentioned above, each the variety of HVAC systems is greatly increased.
- The expertise of HVAC maintenance personnel is not as high as those required in a district energy system.

### OVERALL CONCLUSION

While District Energy has considerable benefits over conventional building HVAC systems, the campus does not have a high building density, or a large energy load density. Due to the long distribution tunnels/piping that would be required to connect each building, the District Energy System is cost prohibitive and will most likely never pay for the initial capital investment.
Landscape Technical Narrative

The Utah State University Eastern (USUE) Campus sits in a beautiful natural setting at the western edge of Blanding City, Utah. The low hills that surround the city provide pleasant views from campus. Trails coming right into campus are inviting to hikers and others and invite them to experience the great trails that are developing in and around the city. Rock outcroppings and rock that is quite near the surface at several locations in and around campus are to be highlighted and used as a unique landscape feature.

Connection to Heritage

The landscape for the USUE Blanding campus will tie to the cultural and natural roots of the area through the use of sculptures, paving patterns, landscape features and plants that may reflect regional artwork, craft, and mythology.

Using local stone that is also used in nearby Native American structures and reflecting similar construction methods as accent walls and other landscape elements will help tie the campus to its surroundings and to the history and culture in the area.

Using specimen cedars as sculpture throughout campus as it develops will provide beautiful and connected softness to the campus landscape. Using regional drought tolerant plants and introducing demonstration gardens that showcase plants significant to tribal culture will enrich the campus culture and feel.

Some ideas of plants to plant and examples of their cultural significance in Navajo tradition:

Alder: was used for dyes for wool, leather, and basketry. Red, tan and brown dyes are made from alder bark. The red, all vegetable wool dye is made from juniper, mountain mahogany, alter, and an unidentified moss. Alder was also used to make spears.
- Brown Eyed Susan: used for heartburn, indigestion, relief from colds, and chest congestion.
- Evening Primrose: The whole plant is used as a poultice on spider bites, and the ground plant is used as a dusting powder on sores. It’s made into a lotion for boils, mixed with flax and nodding eriogonum to treat kidney disease.
- Four O’clock: Used for easing rheumatism and swellings, easing sores in the mouth including canker sores, swollen gums, or decayed teeth. It is also used to treat broken bones in humans and animals.
- Sagebrush: a life medicine, this plant mixed with another type of sagebrush is said to cure headaches by odor alone. Boiled, the plant is said to be good for childbirth, indigestion, and constipation; a tea of the stems and leaves is said to cure colds and fevers. A tea drunk before long hikes or athletic events is said to purify the body. A poultice from pounded leaves is said to be good for colds, swellings, tuberculosis or as a liniment for corns. This medicine can also be used on animals.
- Yarrow: a primary “medicine twig,” or Navajo life medicine. The yarrow does not need to be fresh to be effective. Therefore, it can be stored and carried for emergencies. Yarrow is used alone for fever and headaches. Smoke from yarrow stalks added to a fire is used to relieve a headache caused by sore eyes. Yarrow can also heal sores on people and animals, especially saddle sores on horses.
- Yucca: its fibers can be used to make rope, shoes, and ceremonial items. It makes good shampoo, and it has edible fruit and flowers.


These plants’ traditional uses could be narrated or depicted on informational plaques. Campus cultural events
could highlight the significance and teach the use of these as well as other plants in Navajo culture and in people's everyday lives. Introduction of demonstration gardens showcasing plants with water needs even less than those native to the region could be of value as water preservation becomes of increasing concern. Plants such as cacti and various succulents can thrive with no supplemental irrigation after establishment.

Adapted drought tolerant plants should be used judiciously as needed to accentuate landscape elements, provide shade, and highlight native and culturally significant plantings.

Connection to the Future
The classrooms, infrastructure and buildings on campus connect students out to the world and the future, and the landscape will also reflect this through the sensitive use of materials that are more modern that will blend well with the surrounding landscape.

Materials such as cor-ten steel or board-form concrete planter boxes and retaining walls, saw-cut score joints in colored concrete paving will lend a modern and restful contrast to the wilder, more native elements of the landscape that make a direct connection to the site.

Building design that incorporates modern materials -especially glass- can provide a modern, progressive feel while providing sweeping uninterrupted views out to the landscape design that highlights and celebrates the landscape typical of the region in and around Blanding. This can create a meaningful symbolic connection between the heritage of the people in the community and their desire to contribute and be involved in the future of the community and world.

Views out to the native landscape should be highlighted wherever possible as well. Providing areas that allow for a large sweeping view of the surrounding native landscape is appropriate, and should be designed into the campus master plan. However, framing views to the native landscape by careful placement of campus buildings, trees and sculptures, etc. from specific gathering or pedestrian corridor areas is a critical element to providing successful views of the native landscape.

Connection to People
There is a strong pedestrian culture at USUE. The campus master plan design will highlight the trails and connections that are actively being introduced and provide places for gathering informally and formally for cultural and everyday events. When considering the design of the spaces and elements in
Phasing & Design Guidelines

the campus landscape, a primary focus on creating positive interactions with other people should be the focus.

The primary flow of campus circulation is an internal loop that moves around a natural rock outcrop. This central object around which the campus circulates can hold many deep symbolisms for people of different cultures.

By providing tasteful and appropriate signage with meaningful names to significant trailheads, planning campus circulation (both vehicular and pedestrian) to provide convenient access to trails, and providing appropriate parking for cyclists, pedestrians, and those who will park their car, then access the trails we can strengthen this pedestrian culture. Other site amenities such as benches, drinking fountains, and personal storage locations will make trailheads user-friendly. Shade trees and turf (lawn) in these areas will be designed to make these areas places where people can meet and spend time. These areas could be considered like oases, and have a theme of being refreshing and social places to congregate.

Part of this master plan that is focused on strengthening this pedestrian culture is to close off 200 South to make a central pedestrian plaza that will provide places for large group gatherings as needed as well as intimate spaces for typical days. Trees and seating will be needed in these areas to make them comfortable and effective. Seating should be designed to encourage passersby and those sitting to interact or to choose to sit privately in a comfortable, beautiful space.

Tasteful frequency and placement of water features is important to highlight its critical life-giving role in the area. Water features may incorporate meaningful symbolism that tie to our human culture and to the specific historical cultures of this area. Water features should be natural or more modern, or a blend of both, tying to the connection between heritage and future-ward progress represented by this campus. Some water features should be interactive in a limited way and should be near gathering and walking areas. Limited use of safe fire features or lighted features that imply fire may be appropriate.

Lighting can be used to great effect in the campus landscape to accentuate landscape elements and for general campus illumination. Lighting system should be designed to allow facility managers to dim and adjust light color easily and should provide for flexibility. Sustainable maintenance of lighting system by use of LED fixtures is recommended. Lighting should be designed to avoid areas of deep contrast where areas of deep shadows are not directly adjacent to areas with very bright lighting to provide for the nighttime safety of pedestrians.

Dedicated sport fields and informal lawn areas will provide sporting opportunities near the recreation center and parking. Pathways through campus will be designed to make access to these sports fields intuitive and convenient. Preserving an east to west green space at the center of campus will provide one place for impromptu informal sports games and relaxation or social gathering. A lawn amphitheater will be built near the recreation center to provide another venue for gathering and socializing. The rec center will double as an event space with rolling doors that open to the amphitheater/event lawn to the north for events such as graduation or regional pow-wows.

Connections of a more technical nature
Irrigation design for plantings on campus should incorporate point-source drip irrigation in all planter beds, and water conserving rotary nozzles or rotor heads in lawn areas. Water conserving irrigation components such as
localized weather based controllers should also be used.

The existing pond on site needs to be retro-engineered. It was built by a rancher years ago, likely damaged in recent trucking course work, and the city is depending on it to be maintained as it is a storm water collection point for about a third of the city. It is to be re-designed as a landscape amenity, linking to the recreation center and trails. Designing a dry creek landscape below it could provide a seasonal overflow for the pond.

All irrigation and water management systems are to be coordinated through USU Logan’s Facilities and maintain university standards while integrating with existing systems and city water.
Phasing & Design Guidelines

Many Tribes: Culture & Landscape

This is an area, a region that is served nearly regardless of state boundaries. The campus is rare because it is so small and yet it is considered a destination campus for the demographics served. From the Gallup area to Moab, Navajo, Ute, Hopi, locals of European and Latin descent, Utah State University Eastern Blanding campus serves a population unlike other Utah campuses.

The region must provide for and strengthen itself; local residents improve the area through local programs and education. Residents are improving education, healthcare, hospitality, and a wide variety of technical professions. High turn-over rates for professions served by non-residents has only resulted in instability, happily combated by the rich educational offerings through USU resources.

USUE Blanding is a nurturing campus to the Native American population. It is close enough to Reservations that students remain active in family life and responsibilities. If it is necessary to go home for a semester or two, distance sites allow students to continue their studies. Staff and faculty are supportive and accommodating to the students’ obligations to family. Non-native students comprise approximately 30% of the student body and integrate well, most having been raised in the region with demographics similar to campus.

“State boundaries don’t exist here; we serve a region.”
-Guy Denton
General Design Guidelines

While the Architectural Narrative addressed buildings and additional features, Campus Design addresses the feel of the campus beyond individual projects.

NATIVE AMERICAN ART AND REFERENCES
It is necessary that while Native American references may be incorporated into campus design, they should be a modern interpretation of indigenous symbols or traditions that do no transgress tribal taboos, being abstract enough to become universal design. Preferring one tribe is not acceptable nor is cultural appropriation. Partnerships with local artists, especially Native American artists, who interpret regional representations in individual ways is encouraged.

URBAN DESIGN & INTEGRATION OF LANDSCAPE
To promote a “complete at every phase” approach, decisions regarding signage, material guidelines, landscape strategies, and curb/gutter connections need to be made before Phase I buildings are begun. Connections such as sidewalks, delivery routes, pedestrian trails, and vehicular circulation need to be maintained and developed and reviewed with every project initiated.

Particular attention should be paid to the integration of existing buildings, their renovations, signage upgrades, and entry retrofits (such as the Quad at the new Plaza), that a cohesive design strategy ties these existing structures to the new buildings on campus. As new projects are programmed and built, analyzing a building’s individual design through the lens of the current campus and Master Plan is necessary so a recognizable campus order and design is promoted. Upgrades and additions to existing buildings should be analyzed with the same rigor to ensure that all decisions look to the overall campus design.

ADDITIONAL DESIGN NOTES
- Hogan structure/typology, circle shapes
- No buildings to imitate ruins (taboo)
- The population appreciates the landscape/lawn; consider oasis-type designs rather than lawn-dominant landscapes. Place sod in areas with which students interact and actively use.
- Keep main entrances to the east if possible
- Subtle references to the four cardinal directions and the elements (represented by 4 colors) also considered
- Aggie + tribal symbolism would be unique to this campus
- Fire-pit and outdoor courts could be installed very soon—use a social circle design for the fire-pit
- Need more sumac on campus or a grove – used for wedding baskets
- Consider a medicinal garden and garden plots for the students near housing
- The look has a quality as does the culture—a visual cohesive design mirrors the social structure of campus. Unity.
- Connections to surroundings are important at all buildings
- Bike and pedestrian friendly routes and amenities are a top priority
Appendices
Appendices

Aerial Image
Inspiration Images

All images selected from Google images.
Geotechnical Reports

housing
library

INCLUDE ACTUAL DOCUMENTS?
Appendices

References

Blanding, the University of Utah Eastern Blanding Campus, & Regional Information Sources

Better Cities: County Economic Plan.


CEU San Juan Facilities Master Plan, MHTN Architects Inc. Utah State DFCM; March 2005.


San Juan County Master Plan. San Juan County. March 2008
Archaeological Site Records

Recorded Archaeological Sites
USUE Blanding and San Juan Foundation - Nations of Four Corners property
Master Plan Alternatives

MASTER PLAN CONCEPTS & CONCERNS

Concerns arose around the current Trucking Course location and the Heavy Equipment course at the southeast of campus which have recently been installed. As the internal Campus Loop road was deemed necessary, options were explored to determine how to accommodate both internal circulation and the larger course required by the Trucking program.

Discussions with administration in Blanding, Price, and Logan determined that the Trucking Course needs to remain on campus, adjacent to the CTE building, while the Heavy Equipment course can be moved off site at a later phase.
This plan relocates the CDL course adjacent to the CTE at the south Gateway. The Recreation and internal greenspace becomes a connecting core at the center of campus. The CDL course is buffered by buildings and green space; connecting roads at the north and south would accommodate large trucks and a future drive-thru shop. The Heavy Equipment course would be relocated off-site at Phase II or III. This will be shown in our phasing, but is not indicated on this plan.
Master Plan Alternative 2

This plan keeps the CDL course approximately the same, moving the CTE into campus. The Rec center would anchor the South Gateway. The interior connecting road moves closer to the rock outcrop/slope in the center of campus. Additional roads at the north and south of the CDL course would accommodate large trucks and a future drive-thru shop. The Heavy Equipment course would be relocated off-site at Phase 2 or 3. This will be shown in our phasing, but is not indicated on this plan.