



LOCAL BOARD MEETING

October 16, 2018

Executive Conference Room



Chief Executive Officer

UNM Gallup Local Advisory Board Meeting
Room GH1216 --- 705 Gurley Avenue
October 16, 2018 --- 1:00 PM
Gallup, NM 87301

Agenda

- I Call to Order, Confirmation of a Quorum, Adoption of the Agenda – Local Advisory Board Chair Ralph Richards
- II Vote to Approve of Minutes: August 28, 2018 Regular Meeting – Ralph Richards
 - a. Public Comment Related to Items on the Agenda (limit 3 min. per speaker)
All speakers must sign in with the Recording Secretary
 - b. Comments from Local Advisory Board Members
- III Vote to Sign Operating Agreement Between The Board of Regents of the University of New Mexico and The Local Board of the Gallup Campus of the University of New Mexico for July 1, 2018 thru June 30, 2022 – Ralph Richards
- IV CEO Report – James Malm
 - a. New Mexico Department of Higher Education 2018 Summer Hearing – Five Year Capital Project Funding Plan and 2016 Center for Career Technologies Education Programing Document Update
 - i. Lions Hall 1968 Deed and 2017 Renovation Denial
 - ii. Center for Career and Technology Innovation Programing Document Update
 - b. New Mexico Higher Education Department Research and Public Service Project (RPSP) 2018 SB 1 \$200,000 Work Force Development – Process Technology
 - c. UNM Gallup Campus Summary of Current and Plant Funds Report: 2019 Period 3
 - d. Unopposed Petition to Conduct the [2019 February] Local Option Branch Community College 2019 Elections with the 2019 [November] Regular Local Election – Filed by Senator Ivey-Soto in early October 2018 in consultation with the New Mexico Association of Community Colleges.
- V New Business
- VI Old Business
- VII Public Comments Not Related to Items on the Agenda (limit 3 min. per speaker)
All speakers must sign in with the Recording Secretary
- VIII Vote to Adjourn

Dates to Remember

November 13	UNMG Local Board Meeting in GH1216 at 1pm
November 22-23	Thanksgiving Break UNMG Closed
December 6	Holiday in New Mexico Gurley Hall Commons from 5:00 to 8:00 PM
December 15	Fall Commencement Miyamura High School at 10:00 AM
December 21-January 1	UNM & UNMG Winter Break UNMG Closed
January 8	UNMG Local Board Meeting in GH1216 at 1pm
January 20	Martin Luther King Day UNMG Closed
March 11-15	UNM & UNMG Spring Break for Faculty and Students
March 19	UNMG Local Board Meeting in GH1216 at 1pm
April 16	UNMG Local Board Meeting in GH1216 at 1pm
May 11 Tentative	Spring Commencement Angelo Di Paulo Public School Stadium at 11:00 AM
May 21	UNMG Local Board Meeting in GH1216 at 1pm
May 27	Memorial Day UNMG Closed
June 18	UNMG Local Board Meeting in GH1216 at 1pm

If you are an individual with a disability who is in need of a reader, amplifier, qualified language interpreter, or any other form of auxiliary aid or service to attend or participate in the meeting, please contact the Chief Executive Office (505-863-7501) as soon as possible. Public documents, including the agenda and minutes, can be provided in various accessible formats. Please contact the Chief Executive Office if a summary or other type of accessible format is needed. *Executive Session pursuant to NM Open Meeting Act; Acquisition or Disposal of Real Property, Section 10-15-1-H.(8), NMSA 1978.*



UNM GALLUP LOCAL BOARD MINUTES

Tuesday, August 28, 2018
Executive Conference Room 1216

1:00 PM
Gallup, NM 87301

UNM GALLUP LOCAL BOARD

Teri Garcia	P
Olin Kieyoomia.....	A
Gerald O'Hara.....	A
Ralph Richards	P
Priscilla Smith	P

UNM-GALLUP STAFF AND GUESTS:

James Malm, CEO	Rob Hunter, MCHS CEO
Dan Primozic, Dean of Instruction	Christy Butler, Executive Assistant
Irene Den Bleyker, Chair EHHS	
Mark Remillard, Chair Business & Applied Tech	

AGENDA ITEM I - Call to Order, Confirmation of Quorum, Adoption of Agenda

Chair, Ralph Richards called the August 28, 2018 regular meeting of the UNM-Gallup Local Board to order at 1:04 PM with roll call. A quorum was present.

Motion was made by Teri Garcia to approve the August 28, 2018 UNM Gallup Local Board Agenda as presented. Motion was seconded by Priscilla Smith and approved by unanimous roll call vote at 1:08 PM

AGENDA ITEM II – Approval of Minutes

Priscilla Smith made motion to approve the June 19, 2018 Board Regular meeting minutes as corrected in Agenda Item II 2. Priscilla Smith questioned what communication was sent to the Gallup-McKinley School District regarding the UNM Advisory Board's support for the Middle College. Chair Richards indicated that advice from UNM Legal was not to get involved. However, because of the fiscal responsibilities regarding the years of revenue received from Middle College, Smith reiterated the Board's right to know the status of the Middle College. Dr. Malm reported that Middle College has been offered a four-year lease signed by officials in Albuquerque, but that he had not received a return copy from MCHS. Dr. Hunter said he would send the executed copy. The Chair reminded that the executed copy could not have Dr. Hunter's signature on it until it was placed on the MCHS Board agenda and signed by the MCHS Governing Board President first. Teri Garcia seconded. Minutes were approved by unanimous roll call vote at 1:10 PM.

1. Public Comment Related to Items on the Agenda (limit 3 min)
None
2. Comment from Local Board Members
 - The Board congratulated MCHS for their A grade for PARCC scores and awarded by the PED. MCHS has the only A grade in the district and the Board is very proud of them.
 - Smith and Garcia expressed the opinion that UNMG should continue to support MCHS in the face of pending litigation from the GMCS District.

AGENDA ITEM III – Introductions

1. Daniel Primozic, Dean of Instruction
2. Mark Remillard, Chair Business & Applied Tech.
3. Cecilia Stafford, Zollinger Library Director & Faculty Assembly President
4. The Board gave Irene Den Bleyker and Lewis Gambill a big thank you and applause for giving their time and efforts as interim dean and chair. Their experience as interims makes UNMG a much stronger institution.

AGENDA ITEM IV – Chief Executive Officer's Report – James Malm

1. UNM Gallup Campus Summary of Current and Plant Funds Reports: 2018 Period 14 and 2019 Period 1—Dr. Malm gave the report and it stands as reported.
2. Reserve Categorization Department Executive Summary Report for Fiscal Year 2018 & 2019—Dr. Malm gave the report and it stands as reported.
3. UNM Foundation Endowment Activity Report Gallup Branch: For the twelve months ending June 30, 2018—Dr. Malm gave the report and it stands as reported.

4. NM Department of Finance & Administrative Approved FY20 Performance Measures under the Accountability in Government Act: UNM Gallup—Dr. Malm gave the report and explained the performance regulations information to the Board.

AGENDA ITEM V –

1. Vote on Open Meeting Resolution FY 2018-2019-- Motion was made by Teri Garcia to approve the Open Meetings Resolution, seconded by Priscilla Smith. Motion was approved by unanimous roll call vote at 2:16 PM.

AGENDA ITEM VI – Public Comments Not Related to Items on the Agenda (limit 3 min. per speaker)

Dr. Malm spoke on behalf of the Strategic Planning Committee. The Committee has been formed to refresh the Strategic Plan. John Zimmerman is the committee leader and would like to have some community and Board volunteers' involvement.

AGENDA ITEM VII – Adjourn

Priscilla Smith made motion to adjourn, seconded by Teri Garcia and passed by unanimous roll call vote at 2:20 PM.

Ralph Richards, Chair

Christy Butler, Executive Assistant
Board Recording Secretary

Priscilla Smith, Secretary

**OPERATING AGREEMENT
BETWEEN
THE BOARD OF REGENTS OF THE UNIVERSITY OF NEW MEXICO
AND
THE LOCAL BOARD OF THE GALLUP CAMPUS OF THE UNIVERSITY
OF NEW MEXICO**



New Mexico Department of Higher Education

Five Year Capital Project Funding Plan - Internal Update for Local Advisory Board and Capital Planning Leadership Team

INSTITUTION:		University of New Mexico Gallup Branch										DATE:		9/18/18 & 11/29/2018					
Institution acronym	FY20 Funding Priority #	Overall Funding Priority #	Project Title	Description	Year Project Funding will be requested	Month/Year Project to be started	Month/Year Project to be completed	Full Project	Phase	Cost of Project or Phase	GOB	STB	Other	Percent of GOB or STB	Percent of Other Funding Source	Description of Other Funding Source	New Construction	Renovation	Square Footage (GSF)
UNM-G	1	1	Campus & Facility Infrastructure and Engery Upgrades	Repair, upgrade and construct campus and facilities infrastructure, drainage and roadway system, exterior and interior lighting and safety upgrades	2018	Jul-19	Dec-21	X		\$ 1,300,000		X	X	75%	25%	Other	X	X	N/A
UNM-G		2	Center for Career Technologies Education	Career Technology Education	2019	Nov-20	Dec-22		X	\$ 6,000,000	X		X	75%	25%	Other	X		13,000
UNM-G		3	Demolish and remove Lions Hall	Abate, demolish and remove Lions Hall	2019	Nov-20	Dec-22	X		\$ 200,000		X	X	75%	25%	Other			5,781
UNM-G		4	Facility Repair and Renewal	Repair existing facilities and necessary upgrades to achieve peak energy efficiency and appropriate safe educational environments that building Renewal and Repair isn't enough to complete	2020		Dec-22	X		\$ 1,000,000		X	X	75%	25%	Other		X	N/A
UNM-G		5	Career Technologies Education Center Phase II	Planning, design, construct and equip a facility to house Career Technology Education programs. This building will have the flexibility to house a mechanical industrial technology program, technical allied health green technology programs, and other workforce training efforts	2021		Jul-25		X	\$ 2,000,000	X		X	75%	25%	Other	X		5,600
UNM-G		6	Facility Repair and Renewal	Repair existing facilities and necessary upgrades to achieve peak energy efficiency and appropriate safe educational environments that building Renewal and Repair isn't enough to complete	2022	Jul-23	Dec-25	X		\$ 750,000		X	X	75%	25%	Other		X	N/A

11250000

Infrastructure Capital Improvement Plan FY 2020-2024

ICIP Capital Project Description

Year/Rank: 2020-001

Priority: High

ID: 34409

Project Budget:

Estimated Costs Not Yet Funded

	Completed	Funded to date	2020	2021	2022	2023	2024	Total Project Cost
Water Rights	N/A	0	0	0	0	0	0	0
Easement & Rights of Way	N/A	0	0	0	0	0	0	0
Acquisition	N/A	0	0	0	0	0	0	0
Archaeological Studies	N/A	0	0	0	0	0	0	0
Environmental Studies	N/A	0	0	0	0	0	0	0
Planning	No	150,000	0	0	0	0	0	150,000
Design (Engr./Arch.)	No	175,000	125,000	0	0	0	0	300,000
Construction	No	0	420,000	320,000	0	0	0	740,000
Furnishing/Equipment	No	0	0	110,000	0	0	0	110,000
TOTAL		325,000	545,000	430,000	0	0	0	1,300,000
Amount Not Yet Funded		975,000						

PHASING BUDGET

Can this project be phased? No Phasing: Stand Alone: -1 Multi-Phased: 0

Phase: A project phase is a fundable, standalone, functional or operable stage during the development and/or life of a project.

Project phases: Unfunded amounts broken down by phase and category.

Phase:	Amount	Plan	Design	Construct	Furnish/Equip	Other (Wtr Rights, Easements, Acq)	# Mos to Complete
1	1,300,000	Yes	Yes	Yes	Yes	No	12
2	0	No	No	No	No	No	0
3	0	No	No	No	No	No	0
4	0	No	No	No	No	No	0
5	0	No	No	No	No	No	0
TOTAL	1,300,000						

Has your local government/agency budgeted for operating expenses for the project when it is completed? Yes

Explanation if not:

ANNUAL OPERATING BUDGET	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Annual Operating Expenses plus Debt Service	0	0	0	0	0	0
Annual Operating Revenues	0	0	0	0	0	0

Does the project lower out-year operating costs? No Explanation:

Infrastructure Capital Improvement Plan FY 2020-2024

ICIP Capital Project Description

Year/Rank: 2020-001

Priority: High

ID: 34409

Entities who will assume responsibility for this project:

Own:	Operate:	Fiscal Agent:	Own Land:	Own Asset:	Own Asset:
The University of New Mexico	UNM Gallup Branch	UNM Gallup Branch	The University of New Mexico	The University of New Mexico	UNM Gallup Branch

Lease/operating agreement in place?

Yes

Yes

Yes

Yes

Yes

More detailed information on project.

(a) How many years is the requested project expected to be in use before needing renovation/repair or replacement? 10-15 years

(b) Has the project had public input and buy-in? No

(c) Is the project necessary to address population growth, and if so will it provide services to that population or clientele? No

(d) Regionalism: Does the project benefit an entity other than itself? No

Explanation:

(e) Are there oversight mechanisms built in that would ensure timely construction and completion of the project on budget? Yes

Explanation: Institutional Support Services & Planning, Design & Construction (PDC) oversee & manage all capital projects at UNM. Nicole Dominguez, Financial Ofcr, PDC; Bruce Cherrin, Chief Procurement Ofcr.

(f) Other than the temporary construction jobs associated with the project, does the project maintain or advance the region's economy?

Explanation:

(g) Does the project benefit all citizens within a recognized region, district or political subdivision? No

Explanation:

(h) Does the project eliminate a risk or hazard to public health and/or safety that immediately endangers occupants of the premises such that corrective action is urgent and unavoidable? No

Explanation:

Infrastructure Capital Improvement Plan FY 2020-2024

ICIP Capital Project Description

Year/Rank: 2020-002

Priority: High

ID: 32164

Project Budget:

Estimated Costs Not Yet Funded

	Completed	Funded to date	2020	2021	2022	2023	2024	Total Project Cost
Water Rights	N/A	0	0	0	0	0	0	0
Easement & Rights of Way	N/A	0	0	0	0	0	0	0
Acquisition	N/A	0	0	0	0	0	0	0
Archaeological Studies	N/A	0	0	0	0	0	0	0
Environmental Studies	N/A	0	0	0	0	0	0	0
Planning	No	50,000	0	0	0	0	0	50,000
Design (Engr./Arch.)	No	450,000	50,000	0	0	0	0	500,000
Construction	No	0	600,000	450,000	0	0	0	1,050,000
Furnishing/Equipment	No	0	0	400,000	0	0	0	400,000
TOTAL		500,000	650,000	850,000	0	0	0	2,000,000
Amount Not Yet Funded		1,500,000						

PHASING BUDGET

Can this project be phased? Yes Phasing: Stand Alone: 0 Multi-Phased: -1

Phase: A project phase is a fundable, standalone, functional or operable stage during the development and/or life of a project.

Project phases: Unfunded amounts broken down by phase and category.

Phase:	Amount	Plan	Design	Construct	Furnish/Equip	Other (Wtr Rights, Easements, Acq)	# Mos to Complete
1	2,000,000	Yes	Yes	Yes	Yes	No	18
2	6,000,000	Yes	Yes	Yes	Yes	No	24
3	0	No	No	No	No	No	0
4	0	No	No	No	No	No	0
5	0	No	No	No	No	No	0
TOTAL	8,000,000						

Has your local government/agency budgeted for operating expenses for the project when it is completed? Yes

Explanation if not:

ANNUAL OPERATING BUDGET	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Annual Operating Expenses plus Debt Service	24,024	24,024	24,024	24,024	24,024	120,120
Annual Operating Revenues	0	0	0	0	0	0

Does the project lower out-year operating costs? No Explanation:

Infrastructure Capital Improvement Plan FY 2020-2024

ICIP Capital Project Description

Year/Rank: 2020-002

Priority: High

ID: 32164

Entities who will assume responsibility for this project:

Own:	Operate:	Fiscal Agent:	Own Land:	Own Asset:	Own Asset:
The University of New Mexico	UNM Gallup Branch	UNM Gallup Branch	The University of New Mexico	The University of New Mexico	UNM Gallup Branch

Lease/operating agreement in place?

Yes

Yes

Yes

Yes

Yes

More detailed information on project.

(a) How many years is the requested project expected to be in use before needing renovation/repair or replacement? 16 years or

(b) Has the project had public input and buy-in? No

(c) Is the project necessary to address population growth, and if so will it provide services to that population or clientele? No

(d) Regionalism: Does the project benefit an entity other than itself? No

Explanation:

(e) Are there oversight mechanisms built in that would ensure timely construction and completion of the project on budget? Yes

Explanation: Institutional Support Services & Planning, Design & Construction (PDC) oversee & manage all capital projects. Nicole Dominguez, Financial Officer, PDC; Bruce Cherrin, Chief Procurement Ofcr.

(f) Other than the temporary construction jobs associated with the project, does the project maintain or advance the region's economy? Yes

Explanation: The project will maintain and advance the region's economy by providing trained employees for the local economy.

(g) Does the project benefit all citizens within a recognized region, district or political subdivision? Yes

Explanation: The project will benefit the citizens in the region by increasing training opportunities.

(h) Does the project eliminate a risk or hazard to public health and/or safety that immediately endangers occupants of the premises such that corrective action is urgent and unavoidable? No

Explanation:

Infrastructure Capital Improvement Plan FY 2020-2024

ICIP Capital Project Description

Year/Rank: 2020-003

Priority: High

ID: 34415

Project Budget:

Estimated Costs Not Yet Funded

	Completed	Funded to date	2020	2021	2022	2023	2024	Total Project Cost
Water Rights	N/A	0	0	0	0	0	0	0
Easement & Rights of Way	N/A	0	0	0	0	0	0	0
Acquisition	N/A	0	0	0	0	0	0	0
Archaeological Studies	N/A	0	0	0	0	0	0	0
Environmental Studies	N/A	0	0	0	0	0	0	0
Planning	No	10,000	0	0	0	0	0	10,000
Design (Engr./Arch.)	No	10,000	0	0	0	0	0	10,000
Construction	No	30,000	150,000	0	0	0	0	180,000
Furnishing/Equipment	N/A	0	0	0	0	0	0	0
TOTAL		50,000	150,000	0	0	0	0	200,000
Amount Not Yet Funded			150,000					

PHASING BUDGET

Can this project be phased? No Phasing: Stand Alone: -1 Multi-Phased: 0

Phase: A project phase is a fundable, standalone, functional or operable stage during the development and/or life of a project.

Project phases: Unfunded amounts broken down by phase and category.

Phase:	Amount	Plan	Design	Construct	Furnish/Equip	Other (Wtr Rights, Easements, Acq)	# Mos to Complete
1	200,000	Yes	Yes	Yes	Yes	No	18
2	0	No	No	No	No	No	0
3	0	No	No	No	No	No	0
4	0	No	No	No	No	No	0
5	0	No	No	No	No	No	0
TOTAL	200,000						

Has your local government/agency budgeted for operating expenses for the project when it is completed? No

Explanation if not: This is to demolish the facility

ANNUAL OPERATING BUDGET	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Annual Operating Expenses plus Debt Service	0	0	0	0	0	0
Annual Operating Revenues	0	0	0	0	0	0

Does the project lower out-year operating costs? No Explanation:

WARRANTY DEED

THE GALLUP LION'S CLUB, INC., a non-profit corporation of the State of New Mexico, for consideration paid, grants to THE REGEN TSOF THE UNIVERSITY OF NEW MEXICO, a body corporate under the Laws of New Mexico, the following described real estate in McKinley County, New Mexico:

A parcel of land located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 27, Township 15 North, Range 18 West, N.M.P.M., more properly described as follows:

Beginning at the east one quarter corner of said Section 27;

Thence S 88° 38' W a distance of 513.3 feet to the northeast corner;

Thence continuing on S 88° 38' W a distance of 420 feet to the northwest corner;

Thence S 1° 54' E a distance of 630 feet to the southwest corner;

Thence N 88° 38' E a distance of 420 feet to the southeast corner;

Thence N 1° 54' W a distance of 630 feet to the point of beginning.

It is stipulated and agreed by the Grantee in accepting this Deed that the plaques in memory of Bert P. Cresto, Jr. and David A. Garcia presently located in the Lion's Club House shall be maintained by Grantee in their present location, provided, that should the Grantee remodel or renew the Lion's Club House or demolish and reconstruct a building or other improvement upon the area now occupied by the Lion's Club House or should such present location become otherwise inappropriate, then Grantee shall have the right to relocate said plaques to an appropriate place of memorial.

This conveyance is made subject to the expressed condition that the property herein described shall be used for university or college campus purposes. In the event of the abandonment of the use of this property for such campus purposes and such abandonment shall continue for six (6) months following written notice of such abandon-

LAW OFFICES
LEBECK, DEPAULI & RICH
408 SOUTH 2ND STREET
P.O. DRAWER 38
GALLUP, NEW MEXICO 87301

ment from the Grantor herein to the Grantee herein, then the Grantor may enter and terminate the estate herein conveyed and said title to said premises shall revert to the Grantor.

with warranty covenants.

WITNESS its hand and seal this 18th day of July, 1969.

GALLUP LION'S CLUB, INC.

BY: Bill G. Lewis
President

ATTEST:

Norman C. Van Riew
Secretary

OFFICE OF THE
COUNTY CLERK
AUG 0 1 25 PM '69
MCKINLEY COUNTY

STATE OF NEW MEXICO)
) ss.
County of McKinley)

On this 18th day of July, 1969, before me personally appeared Bill G. Lewis, to me personally known, who being by me duly sworn, did say that he is the President of THE GALLUP LION'S CLUB, INC., a non-profit corporation of the State of New Mexico and that said instrument was signed in behalf of said corporation, by authority of its Board of Directors, and said President acknowledged said instrument to be the free act and deed of said corporation and that said corporation has no corporate seal.

Lebeck & Lebeck
Notary Public



My Commission Expires:
11-22-70

STATE OF NEW MEXICO) # 120,510
COUNTY OF MCKINLEY) ss.
Filed for record in the Clerk's office
the 6th day of August
A. D. 1969 at 1:25 o'clock P.M.
and recorded in Book 18
of Woods on page 596-597
Fay Fadacevich
County Clerk
Lucile Ward, deputy

NEW MEXICO HIGHER EDUCATION DEPARTMENT



SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

Date: January 19, 2017
To: Dr. Barbara Damron, Secretary of Higher Education Department
From: Gerald Hoehne, Higher Education Department Capital Projects Director
Subject: Capital Projects Evaluation Committee Meeting Recommendation

The Capital Projects Evaluation Committee has reviewed the following project:

**University of New Mexico – Gallup Branch - \$1,200,000
Lions Hall Renovation**

This project has been reviewed for compliance with the State of New Mexico Energy Efficient Green Building Standards for state buildings. This Project is not part of the Institution’s five-year plan. The committee has reviewed the above project and does not recommend approval by the Secretary of the Higher Education Department.

Certification:

I have reviewed the above project that has been presented by the Capital Projects Evaluation Committee.

_____ Approved to proceed to New Mexico State Board of Finance on N/A
Initials

_____ Approved does not require New Mexico State Board of Finance review
Initials

Ad Denied (See Enclosed Document(s))
Initials

Signature 
Dr. Barbara Damron
Secretary of Higher Education

NEW MEXICO HIGHER EDUCATION DEPARTMENT



SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

Capital Projects Committee Meeting Minutes 01/11/2017

Committee Members Present:

Dr. Gerald Burke, Chair
Mr. Gerald Hoehne- HED
Dr. Harrison Rommel – HED
Ms. Erica Velarde – ENMRD
Ms. Debbie Romero – DFA

Chairman Burke opened the meeting by making note that the December meeting minutes were not included in the packet. He asked that the minutes be presented to the committee for review by NMHED staff at the next Capital Projects Committee Hearing. Mr. Hoehne noted the request.

Dr. Burke then notified those present that the next Capital Projects Hearing will not be until April 12, 2017 and that a notification had been sent to all institutions by NMHED. Dr. Rommel concurred that a notification had been sent. Dr. Burke also noted that this is Gerald's first official meeting and that he had worked in Capital Projects before as an auditor.

Chairman Burke then called up Chris Vallejos, Associate Vice President, and Institutional Support Services to present the projects for UNM.

Presentation of Projects:

1. University of New Mexico – Gallup Branch – Lion's Hall Renovation

Presenting for UNM-Gallup: Chris Vallejos, Associate Vice President, Institutional Support Services and Rick Goshorn, Financial Officer of Gallup Branch. Lisa Marbury is out today and David Harris is currently in New York selling bonds for the institution.

Mr. Vallejos introduced the project, noting the building is very old and what UNM wants to do is renovate the building for a total cost of \$1.2 million. The funding will come from the UNM Gallup Capital Reserve fund. A number of deficiencies will be addressed with this renovation such as correcting a roof that's deteriorating, shore up some foundation that is unstable, replacing HVAC, and interior remodeling to accommodate college high school. This remodel will house the charter school that is in coordination with the branch campus. Lots of deficiencies will be addressed with this renovation. Mr. Vallejos turned it over to Rick Goshorn to discuss the programmatic side and how it fits into the renovation.

Mr. Goshorn stated that this building was the original building donated to the campus in the mid 60's and part of the initial 90 acre donation that came to the campus. Many of the classes were held in this building. As this building has aged, ADA compliance has been an issue. As such the building has been vacant and empty for about three

years. UNM Gallup has been working with Middle College High School which operates on the campus grounds, high school students go through the high school curriculum as well as 60% who graduate with not only a diploma but also an associate's degree. The high school is gaining popularity, going from 30 to 60, and a promise of 100 to 200 down the line so it was felt that a centralized location would benefit the college. There is lots of community support and as a result some great fundraising capability with regards to using this building. The \$1.2 million is the anticipated project cost but they do not anticipate using the total amount because of the fundraising dollars that will be generated from the community support. This building represents the point of origin for the branch campus and they believe it would be a perfect spot for this group on campus.

Dr. Burke opened the floor for questions.

Debbie Romero asked what they mean by community support and why they feel they will not be spending the entire \$1.2 million.

Mr. Goshorn responded that the chairman of the local advisory board is very active in the local Lion's Club, and the club does rodeos and other fundraising around the community which has locked onto this building. There is a year-long color run and other opportunities planned. The Lion's Club is made up of most of the major business owners in the community so there seems to be a great deal of support to start working on this. Currently they have asked them to outfit the technologies and the interior of the building. The fundraising currently out in the community could go well beyond that request and the Lion's Club would like to be responsible for the majority of the renovation for this building. The fundraising committees are also looking into a pathway to education where they sell blocks with donors names to pave the path between Lion's Hall and Gurley.

Dr. Burke asked if there is any money currently in the bank.

Mr. Goshorn responded that there is no money in the bank. Right now there is fundraising going on for the hospital so they do not want to negatively impact that by having two fundraisers running at the same time.

Ms. Romero stated that they talked about the building being vacant and asked where the charter school is currently located.

Mr. Goshorn stated that they currently have two portable buildings in place next to their gymnasium and the University leases the land to them. Also several classrooms within the campus are being used. Because they are high school students they co-mingle with the college students.

Ms. Romero asked a question to NMHED staff on the position on high school and college readiness programs. She understands a lot of school districts are moving in this direction, and she understands the link, but she is unsure based on what she has heard Secretary Damron say, that this is not a 100% effective way to get students through college. Does NMHED support these college readiness programs and also, what benefit does the college get? All these renovations are being done for a charter school, what is the charter school bringing forward?

Dr. Rommel stated that there was a discussion with Dr. Dyre a couple of months ago and he asked Dr. Dyre to comment.

Dr. Dyre stated that what they get out of it is the students graduate at a very high rate, their tuition is paid for, helps fulfill performance measures for enrollment, and tuition support. What came up with Dr. Damron before was the question of whether these students needed remedial courses once they graduate. The answer is absolutely not. This program produces students who go onto colleges and programs throughout the country. It is a very strict and rigorous study, tutoring and mentoring program. Because of this, there is a very large interest in the community to get their children into the program because they know it works. Currently there is a waiting list of 70 students and

the community gets upset when their students don't get in. They have documentation to show they are successful students in STEM-H programs examples include engineers at Los Alamos.

Dr. Rommel stated that he did not want to speak on behalf of the Secretary in regards to college readiness programs but after the meeting with Dr. Dyre NMHED does not have any programmatic concerns.

Dr. Burke stated that the first one of these was done at New Mexico State and was a very successful program. He also mentioned that there is a difference between community college and early college high school and a charter school.

Ms. Romero asked if this was classified as an early college high school or a charter school because charter school has been mentioned several times during the presentation.

Mr. Vallejos stated that he misspoke when he called it a charter school. The discussion that was had with Secretary Damron and the staff of Gallup clarified that this was classified as an early college high school.

Mr. Goshorn stated that it's kind of a mix as it functions from the school districts perspective as a charter school under the control of the K-12 system but since it resides on our campus and receives its instruction from the college, it functions as an early college operation. It's a lottery system like most charter schools and falls under the performance requirements for dual enrollment in the HED funding formula.

Ms. Romero added that in reading the narrative and it says the school's enrollment is at 45% but I keep hearing 100% so you want to make sure the information is corrected.

Dr. Burke mentioned that under the rationale Lion's Hall is listed as the first building constructed on the UNM-Gallup campus and was wondering if that was right or was it built before Gallup became a campus?

Mr. Goshorn stated that it was built before the UNM-Gallup campus was established.

Dr. Burke said the information would need to be corrected. He went on to say that this building is a wreck and if he was in charge, he would tear it down and build a new building, naming it Lion's Hall. This would be cheaper than trying to fix this one. A new building would have a useful life of 50 years while the renovation of this building would only have a useful life of 25 years. He states that he supports the project but not the renovation of the existing building. Speaking personally, renovation of something that is more than 60% deficient does not make sense.

Mr. Vallejos confirmed that 60% is the target used in a cost benefit analysis of doing a demo vs a new build.

John Anthony with QA Engineering concurred that there are a number of things deficient with the building, there is a historical significance with the building as well as the condition of the building, and the other distribution of the building will be retained. Some cosmetic upgrades are also being done. Access and egress issues still remain even with a new building and there is no way to expand the building. The anticipated engineer's estimate is very conservative on the amount of structural repairs and actual repairs. There are a significant amount of energy upgrades built into this project. The actual repairs are approximately \$300,000 to \$400,000 to get the building up and running and the rest are energy upgrades. The energy upgrades would make it an attractive and energy efficient building for the school.

Dr. Burke stated that this project is \$240.00 per square foot. He then asked what the average construction cost was in Gallup for a new building.

Mr. Anthony stated that he concurs with the amount, however there are \$250,000 to \$300,000 just for repairs to make a ramp, and ADA, and an access road which would have to be incurred whether it's a new building or the existing building. Off the bat we are looking at about \$900,000 vs the \$1,200,000 and we also doing a number of cosmetic and energy upgrades that do not have to be done.

Dr. Burke stated in a new building it would all be included.

Mr. Anthony concurred and stated that the numbers were conservative. Over \$200k for site improvements, \$200k to \$250k for the actual repairs and structural remediation to the building, so we feel the actual upgrade is probably \$600,000 and another \$300,000 for energy upgrades. We would need to take out the \$200,000 to \$300,000 for the accessibility, putting in emergency vehicle access road and those costs are not part of the actual remodel.

Ms. Romero stated that this really causes a lot of concern. In her experience sitting on Public School Capital Outlay Council, very involved with GSD renovations with state facilities throughout the state, and at some point a determination is made that if a building has structural issues of 60% or more we don't throw state resources at it. This project is just a band aid that will allow usage for a little while but it's not a good use of state resources.

Dr. Burke mentioned that the funding is the institutions own reserve funds.

Ms. Romero explained that if the funds are from a state institution the funds are not a local resource, it is public money and we have a responsibility to protect public money. She also requested, and mentioned that she may make a motion for this, that the institution go back and do an assessment of what it would cost to renovate this building in the way structurally that is needed. In the report there are some structural items that have not been addressed. Also in the submittal there is information that says the renovation will allow for 86 students in the classroom and 16 in the computer lab. During the presentation you stated that there are 100 students currently enrolled and 70 students on the waiting list. What are you going to do to meet the future needs? She also recommend an assessment on what it would cost to build a new building to accommodate the 170 students.

Dr. Dyre asked to make four points based on Ms. Romero's comments. The students that are up there are entry level students mostly for testing, they could have 200-300 students and it would not affect the space. Point # 2 talking about public money, they are in the throes of a fundraiser that they feel will raise hundreds of thousands of dollars from the local community which is outside of the purview and does not fall under your definition of public money as it does not come through the tax base contribution.

Ms. Romero suggested that once they have that money they can come back.

Dr. Dyre stated that another issue lies in the fact that the support comes from the people who actually built the building and they want to see it renovated. There is a heritage value for this building in the community and that is the reason they want it done as well. Also there is a time issue involved because they don't know how long it will need to get that space available for improving and maintaining the Middle College High School going forward and it's growing a lot. The success rate is incredible with the 100% graduation factor. There is a time factor in trying to respond to the immediate needs and the community pressure to provide more space for students. They are trying to meet a couple of things that go beyond just the logistics and analysis, which has to do with heritage, immediate need, timing, and a historic fundraiser for this renovation. For example, the Lion's Club came forward and stated they would contribute resources, materials, money because they want it renovated. This is what the community is asking and as the leader of this institution, he is being the voice of the community and not just using a metric system to determine it should be torn down.

Ms. Romero moved that this request be denied and the institution come back with an assessment of the existing facility and also an assessment of what it would cost to build a new facility, including a structural analysis and an FCI.

Mr. Anthony stated that a structural analysis was done 2 years ago and again last year an analysis of the HVAC and lighting and structural foundation was done. All facilities were adequate with the exception of the structural foundation shoring up and these are included in the packet. The basic infrastructure remodel which included the structural repairs of \$200,000 to \$230,000 but the whole basic remediation including the mechanical upgrades including the doors and windows added up to be \$560,000 unloaded cost, loaded cost was \$760,000 at \$150.00 per square foot including site accessibility improvements to upgrade for ADA which would take \$120,000 out of the \$760,000 unloaded. So we would be at \$440,000 unloaded so the cost for just the basic repairs to the building, energy and utility upgrades to bring it up to code would be closer to \$120.00 per square foot. With respect to building a new building, increasing the capacity to what they would need, there is no space on the campus where this could be done. The current site does not allow for an increased footprint. A two story building could be an option but we would be looking at additional costs for elevators. Also donated lands does not seem like an option as well because land is not available. If it was, there would be an additional \$1 million to \$2 million for site improvements, utilities and grading.

Ms. Romero appreciates that some of the information is available but she feels very uncomfortable moving forward with this project as is. More information is needed.

Dr. Rommel seconded Ms. Romero's motion and also commented that he understands the emotional attachment the community has to the building. If you can build a building with Lion's Hall that preserves some of the architectural elements of the old building, reuse some of the old steel, that will last you 50 years for \$1,300,000 vs \$1,200,000 for a renovation, then the new building is what needs to be brought back to the Committee.

Mr. Goshorn clarified that they do have plenty of land at the campus that is not being utilized. Right now they are using 40% of the 97 acres owned by the campus.

Mr. Vallejos reiterated the main points made and stated he would take it back to senior leadership and bring back the information requested.

Dr. Burke mentioned that as an economist, if the community wants to support the project, there needs to be money in the bank.

Ms. Velarde commented that the biggest issues are the soil. So if they are looking at different areas or the same area, the soil is the reason for a lot of the foundation issues.

Dr. Burke asked if any objections to the motion.

Motion to deny project approved by Committee

2. University of New Mexico – Coronado Hall Renovation

Presenting for UNM-Gallup: Chris Vallejos, Associate Vice President, Institutional Support Services and Melanie Sparks, Executive Director institutional Support Services. Lisa Marbury is out today and David Harris is currently in New York selling bonds for the institution.

Mr. Vallejos presented the project as listed on the project submittal. Coronado Residence Hall renovations will include update of the resident rooms with new paint, updated ceiling treatment, replace fluorescent lighting with LED lighting, replace electrical receptacles with USB charging receptacles, new LVT flooring and replace in-room sinks with an updated modern integrated counter top and sink. Two of the communal bathrooms will be completely replaced with a set of individual upgraded lockable bathroom units that residents will share. Residence rates at UNM have not been increased in the last 5 years. Current cost per month of residents is \$500.

Dr. Burke asked if the existing bathrooms were like the old military type

Mr. Vallejos responded that they were.

Dr. Burke asked how the students were getting privacy now.

Ms. Sparks responded that they are separated by gender.

Mr. Vallejos stated that the new bathrooms will be a pod with key card access for privacy.

Dr. Burke asked if the dorms were about 50 years old.

Mr. Vallejos stated that yes they are.

Ms. Velarde stated that she would need to see a signed target finder and green screen review

Dr. Burke moved approval of the project with the following contingencies:

- Approval by Board of Regents
- Signed Target Finder approved by ENMRD
- Green Screen Review approved by ENMRD

Second by Mr. Hoehne

The Committee approved the project for submittal to State Board of Finance for their March 21, 2017 Meeting so long as contingencies are addressed.

3. San Juan College – STEM-H Renovation

Presenting for San Juan College: Edward M. DesPlas, VP for Administrative Services; Chris Harrelson, Senior Director for Physical Plant; Shelley Pickett, Director of Environmental Health, Safety and Risk Management; Brian Barnes, Architect from Dekker/Perich/Sabatini; and Dan Kemme, Architect for Dekker/Perich/Sabatini

Mr. DesPlas introduces the individuals from San Juan College and Dekker/Perich/Sabatini.

Mr. DesPlas presented the project as listed on the submittal. This project has been in the works since 2013 as an effort for more STEM-H projects added to the institutions 5 year plan. Part of this effort is to diversify and strengthen San Juan College's instructional offerings, which have been overly dependent on oil and gas. This project is a LEED silver project and they are seeking approval to move forward with Construction Manager at Risk contract.

Dr. Burke brought up two concerns that he has. One is the fact that the \$4,000,000 of 2014 GO Bond monies went this long without being questioned. He asked the NMHED staff be on top of these in the future. Secondly he asked that the institution look into renovating existing space instead of adding additional square footage.

Dr. Rommel explained that NMHED also was reluctant when this project was brought forward because of the increased footprint. Ultimately it was decided that the need for increased STEM-H, which is also a Governor's priority, and the institutions current square footage per FTE which is the least in the Independent Community College category in the state, supported the project.

Ms. Romero informed the institution that the next round of GOB appropriations must be spent or new funds may not be allocated. If this project appropriation was an STB it may have been swept.

Dr. Rommel requested that the institution submit a letter to Secretary Damron explaining why they needed to expand the square footage and the benefit this had to the STEM-H program.

Dr. Burke moved that the project be approved with the following contingency:

- Provide letter to Secretary Damron per Dr. Rommel's request

Second by Ms. Romero

The Committee approved the project so long as contingencies are addressed

4. New Mexico Institute of Mining and Technology – Data & Telecom Center

Presenting for NMIMT: Alex Garcia, Director of Capital Projects and Joe Franklin, Director of Information Technology

Mr. Garcia presented the project as listed on the submittal. The existing data center is housed in a 3000 square foot 1940's era converted fire station with a patchwork of mechanical systems that are very energy inefficient. The data center has outgrown its current floor space, support infrastructure and ability to further retrofit. The new data center would be a facility that centralizes the university's IT equipment and data servers with enhanced physical security and a highly regulated internal environment where everything from temperature to humidity would be controlled and monitored.

Dr. Rommel asked if the fire station was listed on the historical record and what would be done with the fire station if this project were approved.

Mr. Garcia stated that the fire station is not on the historical record and about 1500 square feet of the fire station, where offices are currently located could potentially be razed. The other 1500 square feet would have to stay in place because of the copper wiring for telephone connections that terminate in the building that gets distributed by fiber optic cables.

Dr. Rommel asked what the rationale is for not razing the current structure and reconstructing the new building in its place. Also wouldn't you need to put in new fiber optic lines from the main campus to the new location behind the golf course?

Mr. Franklin stated that there already is fiber optic line that runs to that location. Currently there is vital computing equipment housed in various locations around the campus. The new data center would centralize all of this equipment in one location and the servers could be secured and cooled separately. The existing fire station has multiple roof heights and no specific security for servers. Currently local network providers such as Comcast have their equipment housed in the same areas as the institution servers. The net gain of putting up this building would be 2600 square feet with no demo. Doing the demo on a portion of the fire station would provide a net gain of 1700 square feet.

Dr. Burke stated that NMIMT historically has not done any demo of existing buildings at the campus.

Mr. Garcia stated that the institution is working on a new campus master plan which will have buildings which could potentially be ready for demo.

Dr. Burke asked for additional information on the current cost per square foot of \$867.31

Mr. Garcia stated that this was due to the type of structure being built

Dr. Burke moves approval of the project with the following contingency:

- Approval by Board of Regents of project with the caveat that NMIMT must demo 1500 square feet of existing space

Second by Dr. Rommel

The Committee approved the project for submittal to State Board of Finance for their March 21, 2017 Meeting so long as contingencies are addressed.

5. Northern New Mexico College – Infrastructure Improvements

Presenting for NNMC: Dr. Rick Bailey, NNMC President, Domingo Sanchez III, VP for Finance and Administration, and Lisa Martinez, Capital Projects Contract Support.

Dr. Bailey thanked the committee for having him at the meeting. He then introduced Mr. Sanchez.

Mr. Sanchez presented the project as listed on the submittal. The project will consist of renovation of Biology, Chemistry, and Environmental Labs as well as bathrooms in several buildings. The lab renovations are necessary because they are outdated. Upgrading will enhance instruction and student learning. In addition relocating the Environmental Lab from the Johnson Controls building to the Hi-Tech Building will improve accessibility to students. The renovation of the bathrooms throughout the campus is also necessary because the restroom structures are also outdated. It is difficult to maintain and keep clean causing sanitation concerns.

Mr. Hoehne stated that when the project was submitted to NMHED questions were brought up on how the project satisfied the requirement of the appropriation as it relates to critical health and safety infrastructure improvements. He asked that Mr. Sanchez explain this to the committee.

Mr. Sanchez stated that there was a hazardous spill in one of the labs which required them to call in experts to do the clean-up. The flooring and countertops are in such need of repair that the spill was difficult to complete the clean-up work. Installation of new flooring and countertops will provide safer and healthier teaching and learning environments for both the students and the instructors. As for the bathrooms, in the Administration building they are adjacent to the cafeteria and highly utilized by students and visitors. Currently they even have a bad smell and the institution spends a lot of time reacting to complaints about their condition. Replacing the old toilet and urinal handles with battery operated flush valves, replacing existing faucets with auto faucets, and replacing the old VCT tile with ceramic and waterproofing will assist with cleaning and provide for a more sanitary environment.

Dr. Rommel asked which room in the HiTech building was going to be renovated. He also stated that he thought the flooring in that space was concrete so the need to renovate.

Mr. Sanchez stated that the renovation would be in the Environmental Lab, Room 117. He then deferred to Ms. Martinez to provide more detail.

Ms. Martinez concurred that the existing floor is tile, which absorbs spills. They will be applying an epoxy floor coating which will provide a smooth and sealed finish making it easier to clean.

Ms. Romero commented that the project does in fact meet the requirements of the appropriation language for critical health and safety infrastructure improvements.

Dr. Burke moves that the project be approved with the following contingencies:

- Correct the dollar amount of the request. The project does not go to State Board of Finance

Second by Ms. Romero

The Committee approved the project so long as contingencies are addressed.

Chairman Burke motioned to adjourn the meeting at 10:53 a.m.

Second by Mr. Hoehne

Meeting adjourned

CCTEI

UNM-Gallup Center for Career Technology Education and Innovation Programming Document

09/23/16



Approval Authorization

CCTEI

The UNM-Gallup Center for Career Technology Education and Innovation Programming Document is submitted for your review and approval. Approval of this document constitutes direction for UNM PDC to proceed with the subsequent design effort.

Dr. Christopher Dyer
Signature

Date

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Acknowledgments

Programming Steering Committee

UNM Planning, Design & Construction

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Brian Scharmer, Project Manager

Ben Savoca, Planner

UNM-Gallup

Dr. Christopher Dyer, Chief Executive Officer

Christy Butler, Executive Assistant

Chris Chavez, Construction Technology

John T. Cresto, Community Member

Sonya Damon, EMS Director

Sabrina Ezzell, Nursing Program Director

Frank Loera, Division Chair

Ron Petranovich, Facilities Manager

Joe Sanchez, Welding Coordinator

SMPC Programming Team

Peggy Favour, IIDA, Principal in Charge/Programming, Principal

Tymn Waters, AIA, LEED AP, Project Manager, Sr. Associate

Erik Mease, RA, Project Architect/Programming, Associate

Glenn Fellows, AIA, Quality Control, Principal Emeritus

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Consultant Engineering Team

Mechanical Engineer

Pat Sedillo, PE, LEED AP, ArSed Engineering

Civil Engineer

Bruce Stidworthy, PE, Bohannon Huston, Inc

Jeff Mulberry, PE, Bohannon Huston, Inc.

Electrical Engineer

Bud Telck, PE, AC Engineering

Structural Engineer

Scott Heatly, PE, Heatly Engineering

Specialty Consultants

Cost Estimator

Jon Balis, PMP, Balis & Company

Executive Summary

Overview

The UNM-Gallup Center for Career Technology, Education and Innovation Programming Document's primary focus is to provide the necessary background and scope for the initiation of the design effort. SMPC Architects worked in collaboration with the University of New Mexico Planning, Design and Construction Department (UNM PDC) and the UNM-Gallup (UNM-G) Planning Committee and administration to develop this document.

The UNM-Gallup Center for Career and Technical Education and the Business and Applied Technology Division provide programs that are relevant to the community and that show steady growth in local student participation. To accommodate the increase in enrollment and growing interest in career technology programs, a new building that will house Construction Technology and Welding Technology is planned and will be named the Center for Career Technology, Education and Innovation (CCTEI).

The primary goal of the new CCTEI building is to provide flexible labs and teaching environments for high school students and UNM college students. The program is focused on providing AAS Degree and Certificate programs for local and regional job force specific programs.

The vision of the CCTEI building and for the design and construction process is to serve as a teaching tool. The Construction Technology and Welding curriculum will benefit if the building is a learning lab where structure and systems are exposed allowing students to study the applied construction techniques.

The EMS program is relatively new to the UNM-Gallup campus and will be expanding to include a Fire Science program in the next five years. The Planning team recommends a strategy to backfill the vacated spaces with EMS when the Construction Technology and Welding Technology programs are relocated to the new CCTEI building. The design and renovation to accommodate the EMS and Fire Science programs are not a part of the scope of the CCTEI project, however, preliminary programming for EMS and Fire Science has been included in the Appendix of this document for reference.

The planning team began meeting with UNM-G and UNM PDC in June of 2016 to fine tune project goals and align program needs with scope and budget constraints.

The following document includes the space summary program, site description, planning relationships, building system requirements, and a construction cost estimate based on programming.

Executive Summary

Project Delivery Method

The construction of the CCTEI building will be a design, bid, build process; separate request for proposals (RFP) will be issued for design services and for construction.

Budget and Scope

Scope

The CCTEI Building as specified by the New Mexico Higher Education Departments 2015 Capitol Project Outline will be designed and constructed in two phases:

- » Phase 1: 13,000 GSF
- » Phase 2: 4,000 GSF
- » Total Area: 17,000 GSF



"This building should be designed Like LEGOs"

- Dr. Christopher Dyer, Chief Executive Officer
UNM-Gallup Branch

Budget

Total Cost - Phase 1*	\$4,860,000
Total Cost –Phase 2*	\$1,500,000
Total Project Cost – All Phases*	\$6,360,000
Maximum Allowable Construction Cost (MACC)**:	\$0,000,000

*As outlined in the New Mexico Higher Education Departments 2015 Capitol Project Outline

**MACC includes NMGR & Contingencies and excludes Soft Costs including Specialty Equipment, FF&E, Fees, and Administrative Costs

Private and corporate donations and partnerships are being pursued for this project by UNM-Gallup CEO Dr. Christopher Dyer. The UNM-Gallup administration desires that the CCTEI building be designed for future expansion to accommodate these potential partnerships. These efforts by Dr. Dyer are documented in more detail in the Appendix.

Executive Summary

LEED Certification

The total GSF of Phase 1 and 2 of the CCTEI building is targeted to be 17,000 GSF mandating that new construction comply with the New Mexico Executive Order 2006-001 to be a LEED Silver certified building. It is also the desire of the UNM-G administration, faculty, and students that recognition of their commitment to a sustainable future on earth be acknowledged through this process. The UNM-Gallup Business and Applied Technology Division offers a Green Building Certificate Program that focuses on construction technology that develops and supports sustainable living philosophies. The team designing the new building will need to work with the current version of LEED to achieve minimum Silver LEED certification.

Applicable Codes and Standards (Current as of 9/2016)

- » International Building Code
- » 2009 International Energy Conservation Code
- » 2009 New Mexico Administrative Code
- » 2009 New Mexico Commercial Building Code
- » 2009 New Mexico Energy Conservation Code
- » 2009 New Mexico Plumbing Code
- » 2009 New Mexico Mechanical Code
- » 2014 New Mexico Electrical Code
- » 2012 New Mexico Electrical Safety Code
- » 2009 New Mexico Solar Energy Code
- » New Mexico State Elevator Code (current edition)
- » 2009 ICC ANSI A117.1
- » 2010 ADA Accessibility Guidelines
- » New Mexico Building Code Chapter 11

UNM Codes and Standards

- » UNM Learning Environments Design Guidelines (LEDG)
- » UNM Office Space Guidelines
- » UNM Architectural Design Guidelines and Building Efficiency Ratios
- » UNM-Gallup Facilities Master Plan 2016-2025
- » UNM Physical Plant Department Engineering & Energy Services Design Standards
- » UNM IT Design Guidelines & Specifications
- » UNM Safety & Risk Services Design Guidelines
- » New Mexico Executive Order 2006-001 - Energy Efficient Green Building Standards for State Buildings
- » New Mexico Executive Order 2007-053 – Increasing Energy Efficiency in State Government by 2015

CCTEI

UNM-Gallup Center for Career
Technology Education and Innovation
Programming Document

1

Functional Space Program

1. Functional Space Program

Programming for the CCTEI building involved UNM-G administrators, faculty, and students in charrette exercises, meetings, site visits, classroom observation and UNM-G Facilities Master Plan reviews. The planning team met with members of UNM PDC, the UNM-G administration and planning committee to give direction to the project. UNM-G Physical Plant Department (PPD) aided in the development of the understanding of the building systems, site utilities requirements and constraints. The planning team worked very closely with faculty and student representatives of the Construction Tech, Welding, and EMS programs to confirm the program and desired relationships of departments and program components.

The planning team listened to concerns and objectives of CCTEI constituents and synthesized the input into concepts and challenges to be solved by design. The following Existing Conditions Assessment, Needs Assessment, Space Descriptions and Space Program Matrix compile data that contribute to the overall Program statement.

Center for Career and Technical Education and the Business and Applied Technology Background

The UNM-Gallup Center for Career and Technical Education offers dual credit enrollment to the high school students in McKinley County. The Business and Applied Technology Division offer both degree and certificate programs to UNM college students. The program offerings listed on their website are as follows:

- » Automotive Technology
- » Collision Repair technology
- » Construction Technology
- » Cosmetology
- » Criminal Justice
- » Culinary Arts
- » Design & Digital Media
- » Early Childhood Multicultural Education
- » Fire Science Technology
- » Introduction to Health Careers
- » Multi-Vocational Service Occupations
- » Students Achieving New Directions
- » Welding Technology

The underlined programs listed above are the main candidates considered for the CCTEI building. The other programs listed above are located in various locations on the UNM-G campus. The criteria used to determine the best candidates for the new building consisted of the programs that would increase enrollment by increasing their area, that have similar shared space needs and that would benefit from consolidation. The Construction Tech and Welding Tech programs are the focus of the programming services for the CCTEI building.

The Planning team also performed programming services for the EMS and Fire Science programs and determined they were greater candidates for backfilling the existing building vacated by Construction Technology and Welding Technology. The programming services for EMS and Fire Science are located in the Appendix - Backfilling Opportunities.

1. Functional Space Program



Existing Conditions Assessment

The following is a list of issues concerning the existing facilities of the Construction Tech and Welding Tech Programs as observed by the Planning team.

Construction Tech:

- » Insufficient High Bay Clearances
- » Not Enough Outlets
- » Insufficient Access to Compressed Air
- » No Dedicated Classroom Space
- » Insufficient Office Space
- » No Access to Computers
- » Poor Lighting
- » No Access to Natural Light
- » Limited Lockers, too small
- » Insufficient Construction Yard
- » No Space for Students In between Classes
- » Limited Project Space and Storage

Welding:

- » Insufficient number of welding Bays
- » Insufficient Exhaust System
- » Poor Lighting
- » Maxed out Electrical load
- » No Space for Exterior Welding
- » Crowded and Inadequate Lockers Space
- » Insufficient Storage Space
- » Limited Access to Compress Air
- » No Submersion Sink
- » No Space for Specialty Equipment
- » High Number of Welding Tanks

1. Functional Space Program



Needs Assessment

The following is a list of suggested needs that should be incorporated into the CCTEI building as a response to the Existing Conditions Assessment, student input and Classroom observations by the Planning team.

Construction Tech:

- » Large Assembly Multi-Use Construction Lab
 - › 18' Clear
 - › Beam Crane
- » Dedicated Classrooms
- » Dedicated Computer Lab
 - › Plot Room
- » Fabrication Lab
 - › Laser Cutter, CNC Machine, Plasma Cutter.
- » Space for HVAC Tech Lab
- » Large Construction Yard
 - › Dedicated Covered Construction Space
 - › Sufficient Space for Materials Storage and Truck Access

Welding:

- » More Welding Bays
 - › 30 Interior Bays
 - › 20 Exterior Bays
- » Task lighting and Exhaust Hoods
- » Manifold Gas System - Fewer Bottles
- » Exterior Space for Welding
- » Ability to collaborate with Construction Tech
- » Better Classroom Space
- » Fabrication Lab
 - › Laser Cutter, CNC Machine, Plasma Cutter.
- » Access to Computer Lab
 - › OSHA
 - › Welding Cards Registration and Documentation

1. Functional Space Program



Collaboration/Social Spaces by SMPC Architects

Student Input

The following is a list of suggestions and desires that should be incorporated into the CCTEI building as a response to input from student representatives that met with the design team.

Social Spaces

- » More Outlets
- » Vending Machines
- » Access to Computers
- » Access to Parking

Construction Tech

- » More High Bay Space
- » Larger Lockers
- » Natural Light
- » Welding Space
- » Submersion Bath
- » More space for Special Equipment
- » Space to Clean Up Before Other Classes

1. Functional Space Program

Space Description Summaries

The following is a list of the unique spaces to CCTE building with brief descriptions of their functions. Room Data Sheets are available in the Appendix for spaces included in the Space Program Matrix. The Room Data Sheets include space description, finish materials, desired adjacencies, and special system requirements.

Assembly/ Multi-Use Lab

The Assembly / Multi-use Lab is a high bay space used for the assembly and construction of various building projects. Construction Tech will use this space to teach building techniques and construct housing modules as a part of the Navajo Nation Housing Project collaboration. The space should provide 18' tall clear space and a beam crane or bridge that can move projects from interior to exterior. The space should consist of durable materials, numerous outlets, access to compressed air, daylighting, Wi-Fi and high efficiency LED high bay lighting. The space will have numerous pieces of equipment that require dust collection.

Welding Lab

The Welding Lab is a high bay space used for the teaching of Welding Technology and the assembly of various fabrication projects. The space will be fitted out with thirty 6'x8' x 6' tall welding bays constructed of CMU. A manifold gas system will provide the necessary welding gasses to each bay and to some specialty equipment outside the bays. The space should have multiple access points to compressed air. A 3'x6' submersion sink will be provided for the cooling of welding projects. The space should consist of durable materials, numerous power outlets, access to compressed air, daylighting, Wi-Fi and high efficiency LED high bay lighting.

Finish Carpentry Lab

The Finish Carpentry Lab or Woodworking Lab is a high bay space used for the teaching of cabinetry and other wood working techniques. This space will be used for instructional use and for the fabrication of student and housing projects. The space should provide 18' tall clear space and have access to the exterior. The space should consist of durable materials, numerous outlets, access to compressed air, daylighting, Wi-Fi and high efficiency LED high bay lighting. The space will have numerous pieces of equipment that require dust collection. This space should have direct access with a large coiling door to the Assembly/Multi-Use Lab.

HVAC Lab

The HVAC Lab is a small storage room adjacent to the Assembly/Multi-use Lab with a minimum of one 6'-0" double door. This space will store HVAC Tech curriculum equipment that will be moved in and out of the Assembly/ Multi-Use Lab during class.

Multi-purpose Classroom/ Future Computer Lab

The Multi-purpose Classroom/Future Computer Lab is standard UNM Computer Lab. In phase 1 the computer lab will be used as a standard classroom until the addition of two standard Classrooms in phase 2. The Computer Lab will provide 30 workstations and will follow the UNM IT design standards. This space should be adjacent to the Computer Fabrication Lab.

1. Functional Space Program

Print/Plot Room

A Print/Plot Room should be incorporated adjacent to the Computer lab and may be used as a shared office in Phase 1 until the faculty offices are constructed in Phase 2. This room should be able to house at minimum two large format plotters and one free standing color printer. The print plot room should also incorporate flat file storage for large documents used by the Construction Document Reading class.

Computer Fabrication Lab

The Computer Fabrication Lab will house various CNC machines, including but not limited to a laser cutter, CNC milling machine, and plasma cutter. Each machine will have a dedicated computer work station associated with it. The computer workstation will need to be in electromagnetic shielded cases to protect the CPU's from the plasma cutter and other welding devices. This space should be adjacent to the computer lab and have access to the computer network.

Metallurgy Lab

The Metallurgy Lab is a dedicated space within the footprint of the Welding lab to house specialty equipment for the testing of welding projects.

Teaching Nook

The Teaching Nook is a dedicated space within the footprint of the Assembly/ Multi-Use Lab and Welding Lab. This is a small teaching space where instructors can briefly lecture or display information to their students. This space should have a LCD screen with sound and Wi-Fi access to allow an instructor to display various media from a tablet or laptop.

Classrooms (Lecture Rooms)

The Classrooms are standard lecture style classrooms and should follow the UNM LEDG design guidelines. The classrooms should at a minimum consist of Tier Two Technology as laid out by the UNM LEDG Technology Standards.

Finish Carpentry Wood Storage

The Finish Carpentry Wood Storage is a space adjacent or within the Finish Carpentry Lab for the purpose of storing fine and exotic wood lumber and sheet goods. This is conditioned space that should provide cantilevered storage racks that will support various sizes of lumber.

Tool Crib Storage

The Tool Crib Storage rooms will provide storage for various tools and equipment used for each program. Numerous outlets should be provided to support various charging stations for battery packs.

Collaboration/Agility Space

The Collaboration/Agility Space is a social space that promotes student interaction and provides areas for group and individual study. This space should provide a variety of seating options and numerous outlets for student to charge personal devices. This space is not an enclosed space but part of or open to the buildings circulation path. Vending machines and restrooms should be located near this area.

Student Lockers (HS and College)

Student Lockers are need for students to house all of their specialty tools and protective clothing overnight and book bags during class. These lockers should be sized at minimum 18"x18" (but ideally 24" x 24") double tier lockers with the welding student requiring slightly larger lockers. The lockers should be located adjacent to Changing rooms and showers.

Faculty and Staff Office and Adjunct Faculty Shared Office

The Faculty and Staff offices will follow the UNM Office Space Guidelines.

1. Functional Space Program

Exterior Construction Yard

A large exterior construction yard is needed for the various construction projects and teaching exercises, along with the storage of various materials and equipment. A portion of the exterior construction area should be covered to protect students and projects from the rain and sun. The following is a list of the components in the Exterior Construction Yard:

- » Construction Area (Partially Covered)
- » Rough Carpentry Wood Storage (Covered)
- » Welding Storage (Shed Storage - Unconditioned)
- » Stock Materials Storage (Shed Storage - Unconditioned)
- » Small equipment storage
- » Rammed earth machine
- » Cement Mixers
- » Band Saw lumber mill -20 foot
- » Tool Trailer -16 foot
- » Gas powered machines
- » Project Mock Up Space
- » Welding bays - 20
- » Manifold Gas Tank yard
- » Gas Bottle Storage
- » Bulk Material Storage Cribs

1. Functional Space Program

Space Program Matrix

The following is a compiled matrix that incorporates the Spaces described above with quantified net areas, compiled net areas and calculated total gross areas. This matrix outlines the scope of spaces and areas for the CCTEI building.

Construction Tech Program					
Department	Room Name	# of Spaces	Net Area SF	Compiled Net SF	Notes
Phase 1: 13,000 GSF					
Construction Tech	Assembly/ Multi use Lab	1	2,100	2,100	
	Welding Lab	1	3,600	3,600	30 Interior Bays- Connected to manifold gas system. Existing -18 bays @ 4779sf total. (Bay size approx. 6'x8'existing) (Requested :30 bays X 80sf/bay = 2,400sf x 1.50 =3,600sf + for additional work place)
	HVAC Lab	1	100	100	Storage closet off the Assembly/Multi Use Lab near Teaching Nook
	Multi-purpose Classroom/ Future Computer Lab	1	925	925	Sized for 30 Students
	Computer Fabrication Lab (CNC/Plasma)	1	800	800	
	Metallurgy Lab	1			NA Temporary - can be broken down.
	Teaching Nook	1	200		NA Inside of Assembly Multi Use Lab - Flat Panel and Stools
					7,525
Storage	Tool Crib Storage	2	200	400	
				400	
Support Spaces	Collaboration/Agility Space	1	300	300	
	Student Lockers (HS and College)	1	100	100	18"x18" Double Tier Lockers for 60 Students. Shared by CT and Welding. Can be open to the corridor. For students to store tools and Work clothes for the semester.
	Changing Room W/ Showers	2	100	200	Adjacent to Lockers.
Building Support Spaces	Men's Restroom	1	250		NA **Part of Building Gross Factor
	Women's Restroom	1	250		NA **Part of Building Gross Factor
	Universal Restroom	1	100		NA **Part of Building Gross Factor
	Mechanical				NA **Part of Building Gross Factor
	IT	3	120		NA **Part of Building Gross Factor
	Electrical	1			NA **Part of Building Gross Factor
	Custodial				NA **Part of Building Gross Factor
	Print/Plot Room	1	120	NA	Include in Computer Lab
				600	

1. Functional Space Program

Space Program Matrix

Construction Yard	Construction Area	1	400	400	Covered
	Rough Carpentry Wood Storage	1	500	500	Un conditioned Covered Storage (Shed)
	Welding Storage	1	500	500	Un conditioned Covered Storage (Shed)
	Stock Materials Storage	3	100	300	Wood, Plumbing, Metal - Covered W/ Cantilever Storage Racks
	Small equipment storage	1	100	100	
	Rammed earth machine	1	100	100	
	Cement Mixers	1	100	100	4 Cement Mixers
	Band Saw Lumber mill -20 foot	1	100	100	
	Tool Trailer -16 foot	1	100	100	
	Gas powered machines	1	100	100	Multiple machines of various sizes
	Project Mock Up Space	1	500	500	Small Construction will stay up for the life of the project
	Welding bays - 20	20	80	1,600	Connected to manifold gas system
	Manifold Gas Tank yard	1	2,000	2,000	80sf X 20 bays = 1600sf X1.25 =
	Gas Bottle Storage	1	80	80	
	Bulk Material Storage Cribs	3	80	240	for sand and gravel for concrete
				6,720	Not Included in Net SF

Total Net SF 9,281
Building Gross Factor 1.40 High bay Lab Efficiency
Total Gross SF 12,993

Phase 2: 4,000SF

	Classrooms (Lecture Rooms)	2	840	1,680	Paired to be one Classroom. Existing Welding - 660sf
	Finish Carpentry Lab	1	2,000	2,000	Existing 2886sf
				3,680	

Storage	Finish Carpentry Wood Storage	1	200	200	Part of the Finish Carpentry Lab
				200	

Faculty and Staff	Faculty and Staff Office	4	100	400	4 FTE
	Adjunct Faculty	1	256	256	4 Adjuncts @ 64sf
	Break Room /Kitchenette	1	100	100	

Total Net SF 4,636
Building Gross Factor 1.15
Total Gross SF 5,331

Future Needs

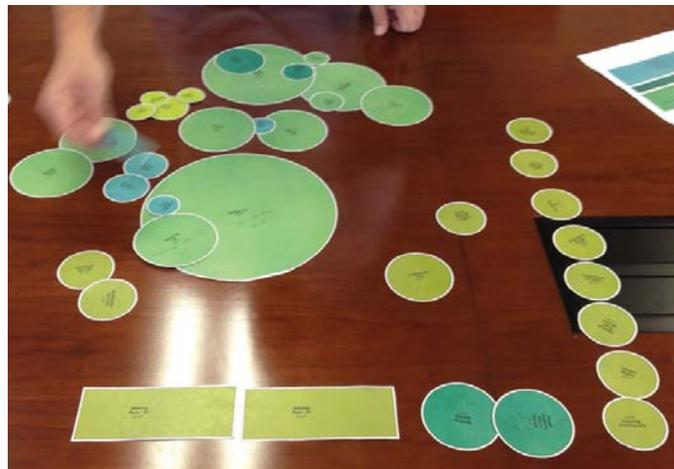
	Spray Booth	1	400	400	Based on Collision Repair Spray Booth 26' x13' plus additional space for circulation and mechanical.
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9/3/2016

1. Functional Space Program

Adjacency Diagrams

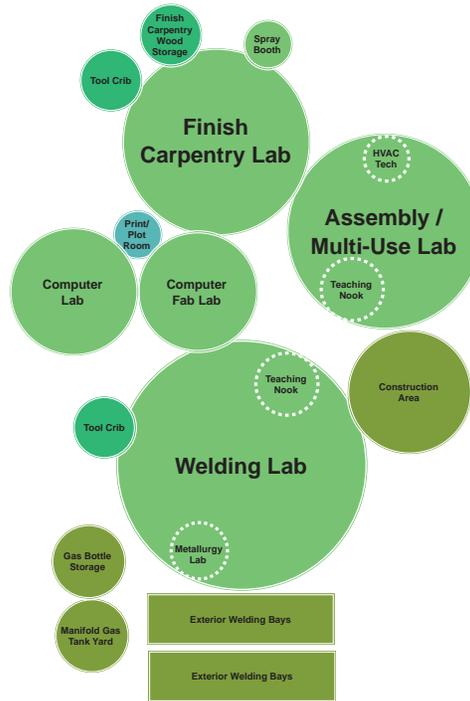
As a part of the planning process it is important to understand how functional spaces will be used in relation to each other. The Programming Team conducted a short charrette with representatives from the Construction Tech, Welding Tech and UNM PDC to determine optimum space adjacencies. The exercise consisted of using colored bubbles representing programmed spaces proportionally sized to their space requirements. Working together, the team developed the Desired Adjacencies diagrams.



1. Functional Space Program

Construction Technology and Welding Technology Desired Adjacencies.

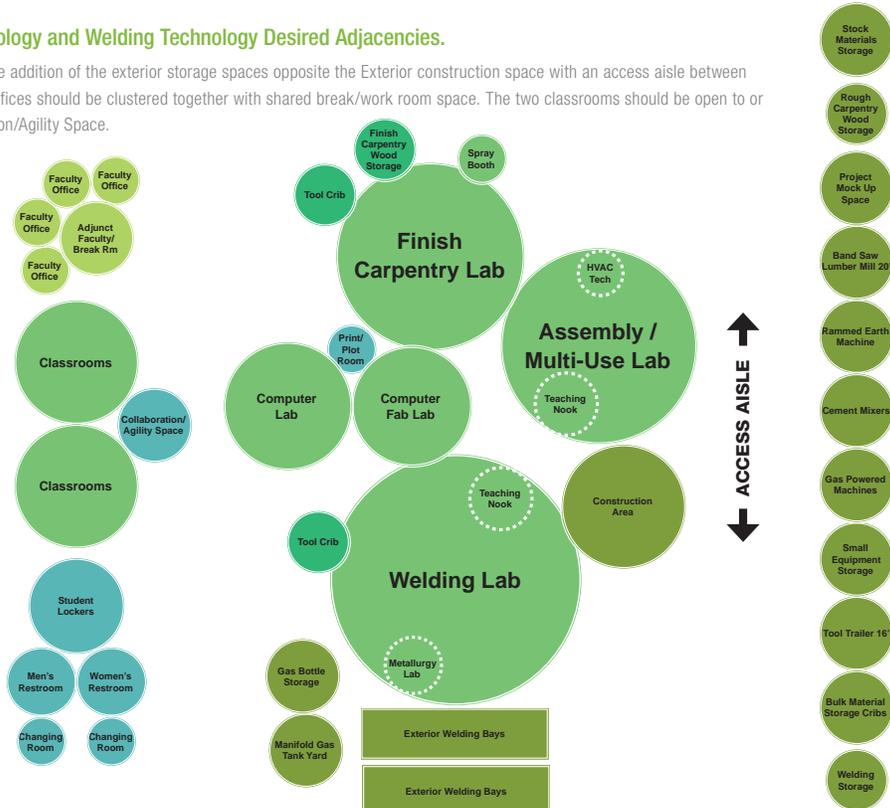
This first set of diagrams describes the desired adjacency of the main teaching labs. The Finish Carpentry lab and the Assembly/ Multi-Use Lab are immediately adjacent to each other with the Welding lab nearby and all spaces have direct access to the Exterior Construction Space. Located between the Construction Tech Labs and the Welding Labs are the Computer Lab and Computer Fabrication Lab, a shared resource.



1. Functional Space Program

Construction Technology and Welding Technology Desired Adjacencies.

In this diagram we see the addition of the exterior storage spaces opposite the Exterior construction space with an access aisle between them. Also, the Faculty offices should be clustered together with shared break/work room space. The two classrooms should be open to or be next to the Collaboration/Agility Space.



Site Description

2. Site Description

Context

The University of New Mexico Gallup campus is located on the south end of Gallup at the intersection of Boardman Ave and College Drive. The UNM-Gallup campus was founded in 1968 and is the largest of the UNM Branch campuses. The campus is located in the geographically distinct Colorado Desert Plateau. The existing buildings and circulation on campus work with the cherished unique topographical characteristics of the site.

The UNM-G campus serves approximately 5,000 students per year in credit courses and 2,560 students in non-credit courses. The Navajo Nation is a major source of student enrollment; approximately 80% of the student population are of Navajo descent.

UNM-Gallup Master Plan

A Facilities Master Plan has been developed by UNM-G and UNM PDC with Architectural Research Consultants, Incorporated. The design team will reference the Facilities Master Plan when developing subsequent phases of the CCTEI building.

Proposed Site Location

The proposed site location for the CCTEI building is located on the corner of Gurley Ave and Peggy Ann Drive, just west of the Physical Plant Department building and southwest of Zollinger Library. The site is very steep and is sloping from the west to the east. Development of the site should work with the topography of the landscape while still providing an accessible path from the main campus and to all parts of the new building. Future expansion should also be considered when developing the site.

Landscape

The Design team should consider the development of the site carefully. The site currently has a large number of trees on it. Great care should be taken to preserve as many of the existing trees and vegetation as possible when developing the site. Landscape and irrigation design should follow UNM standards and should use native and low water plants.



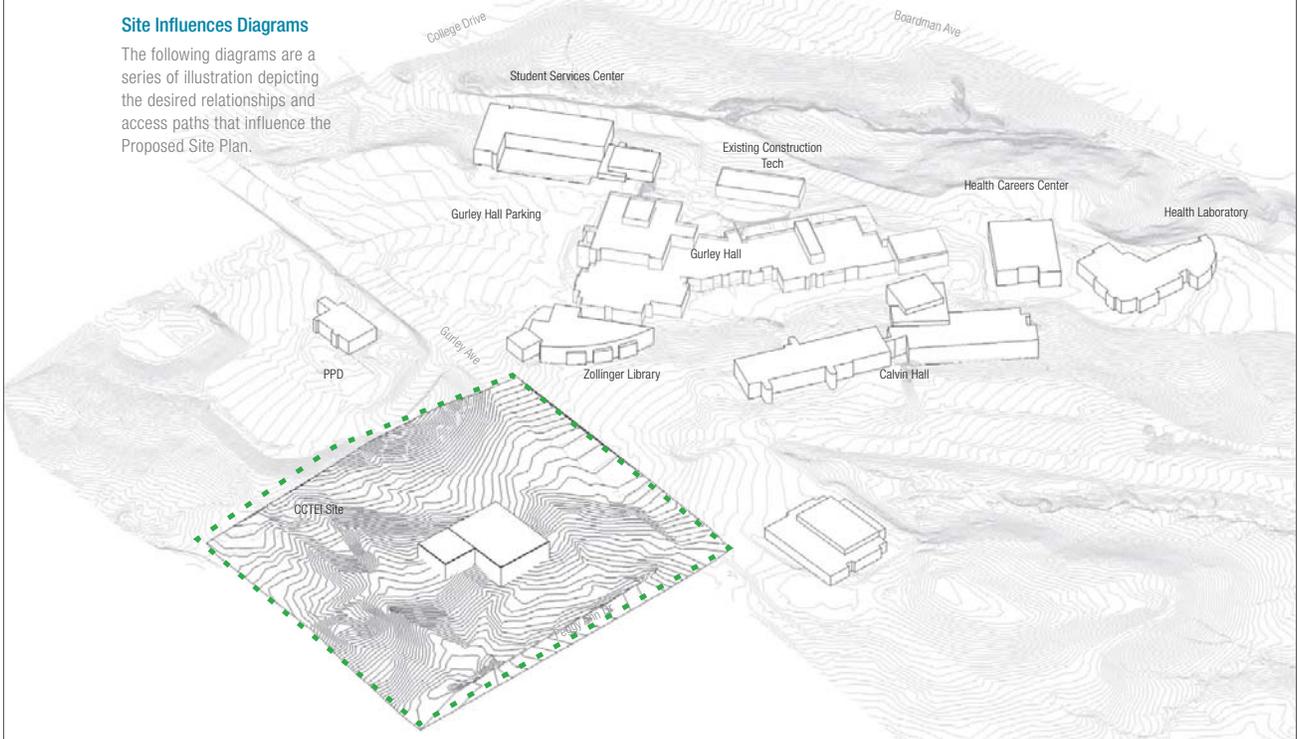
Site aerial from Google Earth

2. Site Description

Proposed Site Location

Site Influences Diagrams

The following diagrams are a series of illustration depicting the desired relationships and access paths that influence the Proposed Site Plan.

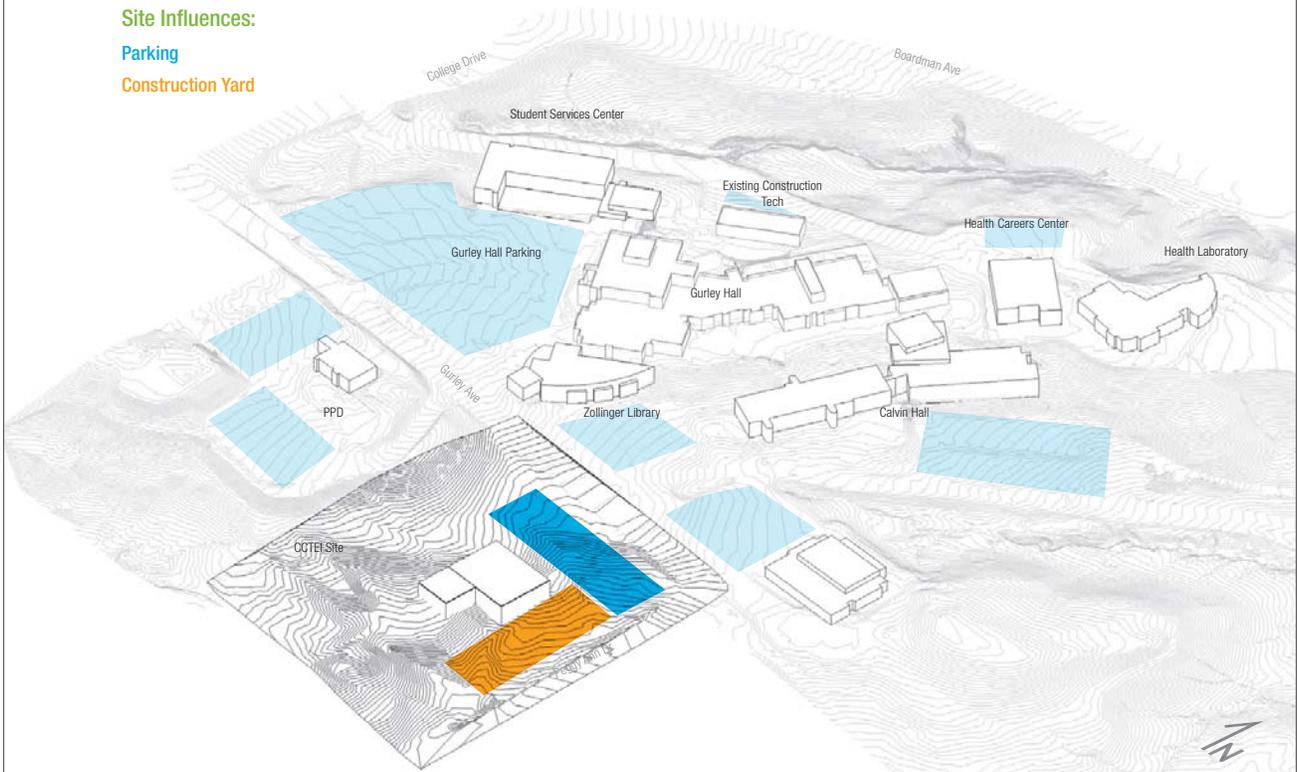


2. Site Description

Site Influences:

Parking

Construction Yard



2. Site Description

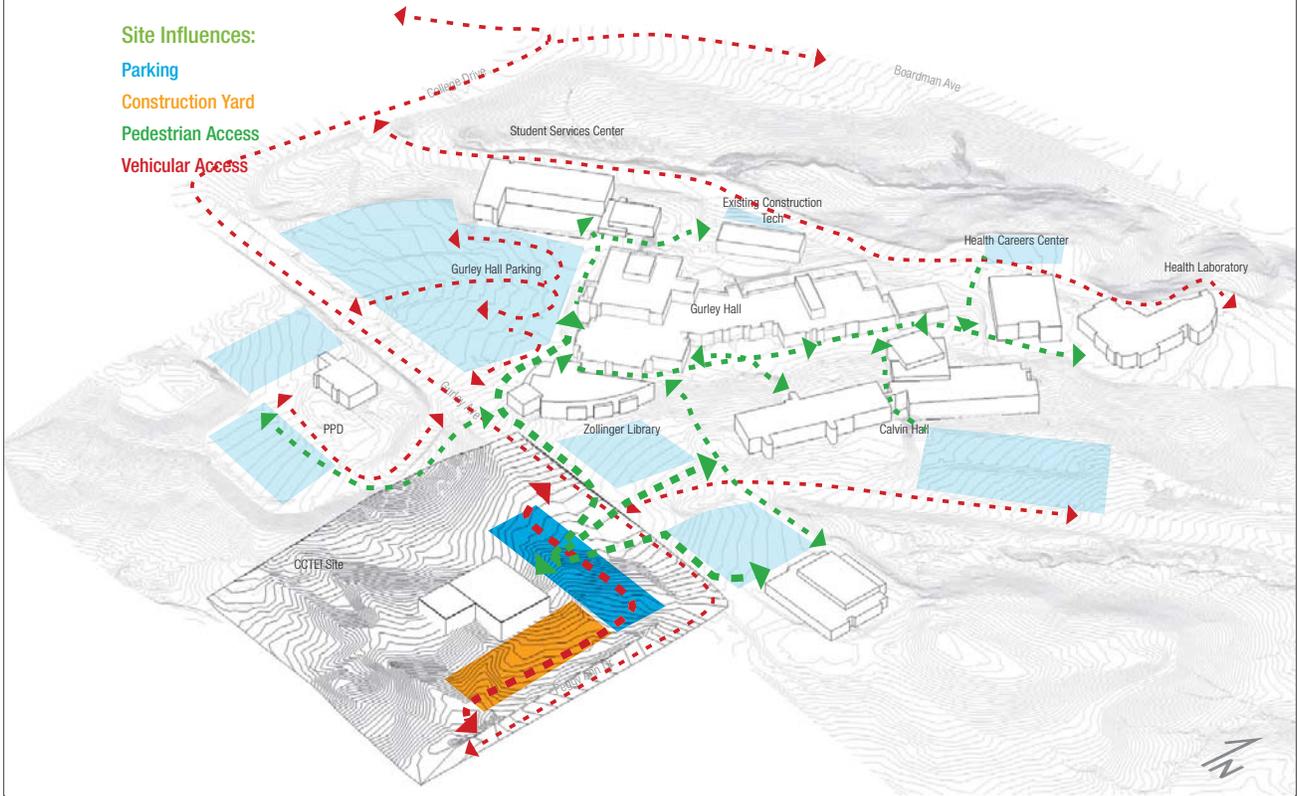
Site Influences:

Parking

Construction Yard

Pedestrian Access

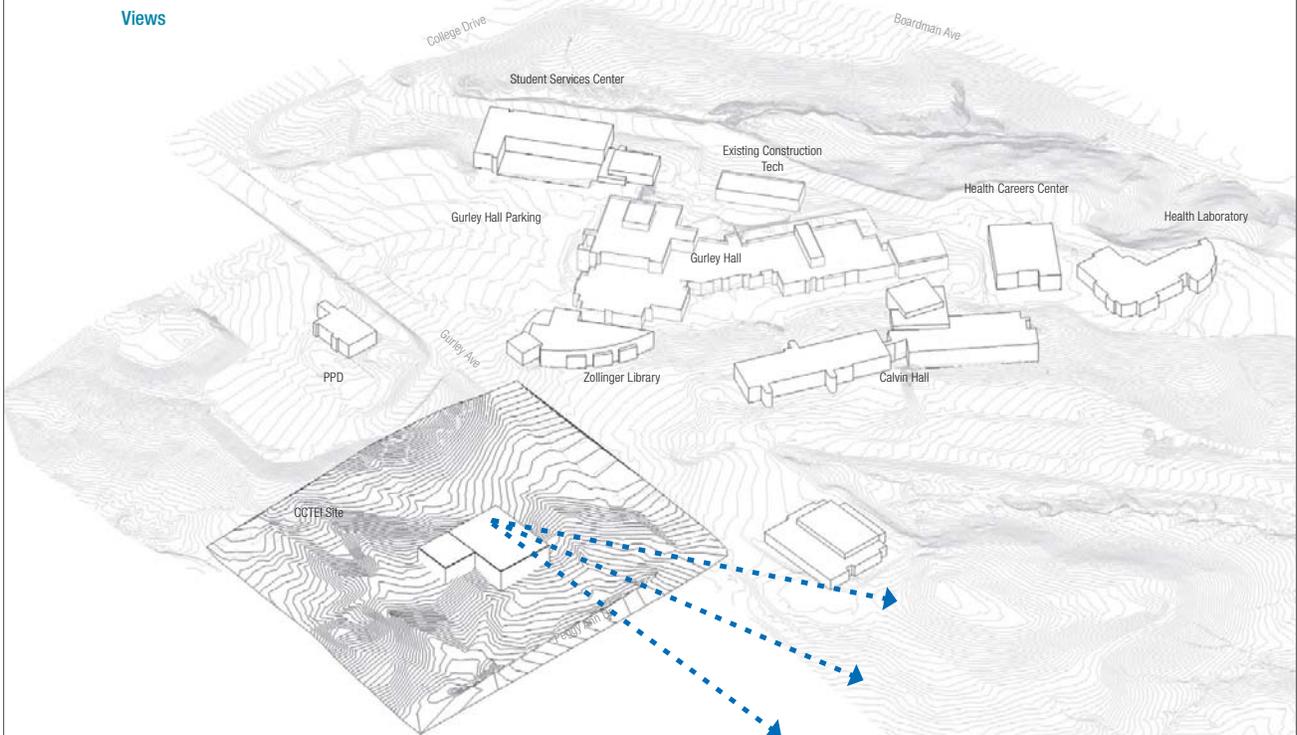
Vehicular Access



2. Site Description

Site Influences:

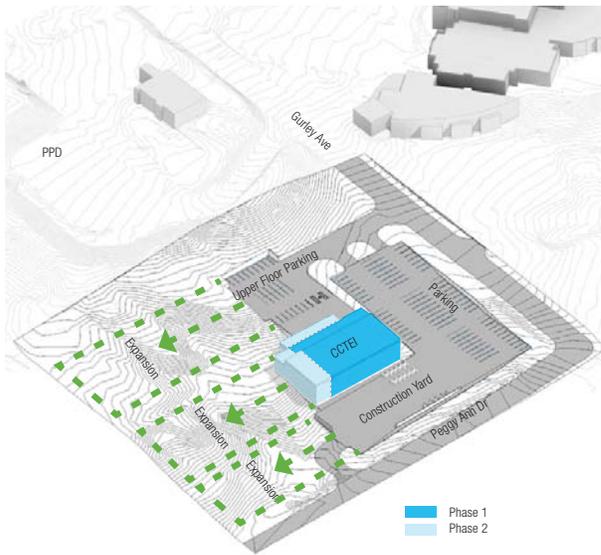
Views



2. Site Description

Proposed Site Plan Goals and Description

The Sketches below indicate a synthesis of the diagrams from above. Parking for the site should be tiered and follow the landscape as much as possible to help balance the cut and fill of the site. The Parking should be located to North to allow additional parking for the main campus, Zollinger Library and the Gym. The CCTEI building is be considered as a split level building to work with the site, this site plan illustrates entry points at both the West and East side of the building at two different levels. Parking should be provided both at the upper floor and the lower floor. The Construction Yard should be located at the flattest part of the site which is the east end of the site. The development of the parking, phase 1 and phase 2 should be concentrated to the North of the site to allow for future growth to the South. Again, as Dr. Dyer put it "this building needs to be designed like LEGOS," with future expansion in mind.



CCTEI

UNM-Gallup Center for Career
Technology Education and Innovation
Programming Document

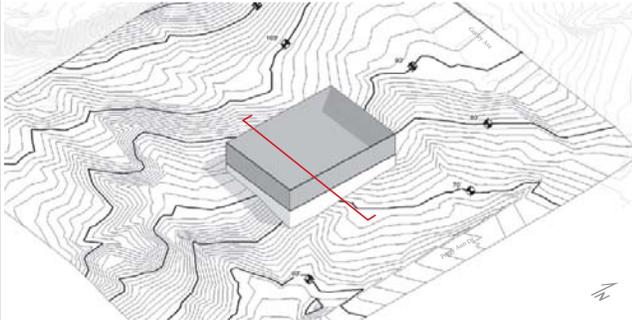
3

Departmental Relationship Planning

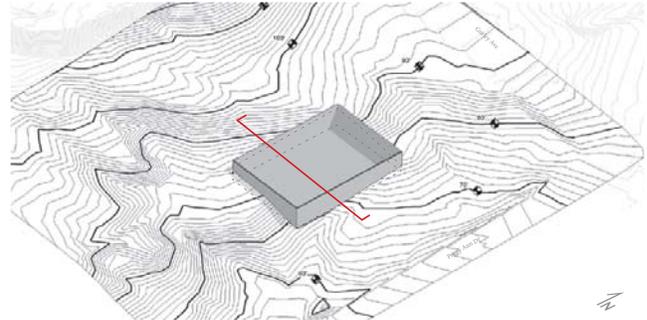
3. Departmental Relationship Planning

Sloped Site Constraints

The proposed site location for the CCTEI building has a significant grade change, sloping West to East with more than a 60 foot drop over the extent of the site. When considering the development of this site a single story building will have to either berm up on the site or bunker down into the hillside. Either one of these options would propose problems with entry to the building and with access to the construction yard. The diagram below describes these two scenarios. The illustrated box is a 30 foot tall building with the same building area as the proposed CCTEI building. The Programming Team believes that a single story design is not optimal for the development of the site.



Sloped Site Constraints
30' Tall building @ Elevation 6795'



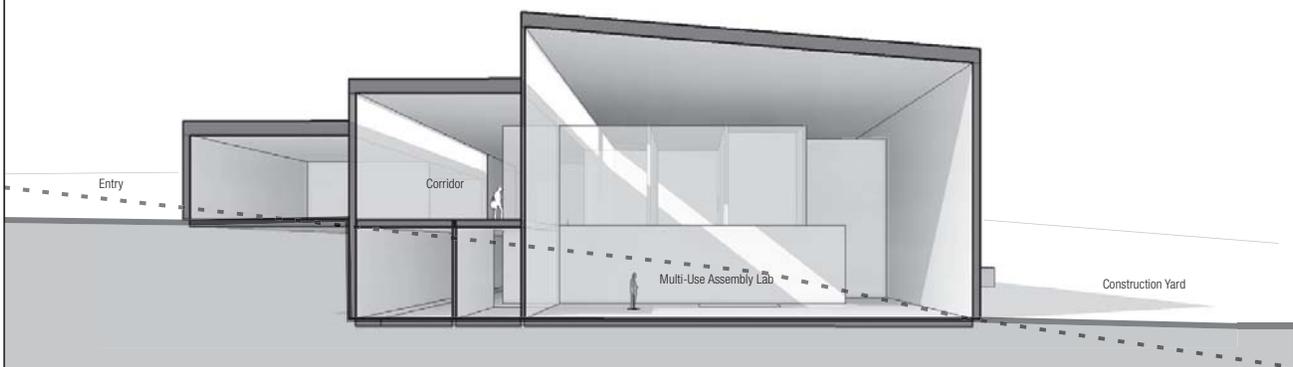
Sloped Site Constraints
30' Tall building @ Elevation 6768'

3. Departmental Relationship Planning

Desired Section of New Building

The Team developed a planning strategy for the building that incorporates a "Split Level" design that allows access to the West at an upper floor and access to the construction yard to the east on a lower floor. The illustration below is an imaginary cut section through the center of the building looking north, as illustrated by the red line on the diagrams above. The added benefits of this solution are allowing visual access from the upper corridor and Collaboration space into the Labs themselves*. This relationship is desirable to the faculty and staff because visiting groups and community members can see the Labs without having to shut down the lab for safety. The CCTEI building will also host community events and the visibility will help as a recruiting tool to the community. This solution will also aid in helping to balance the cut and fill of the site.

**The windows into the Welding Lab will need to be tinted or treated to protect viewer's eyes from the arc flash.*

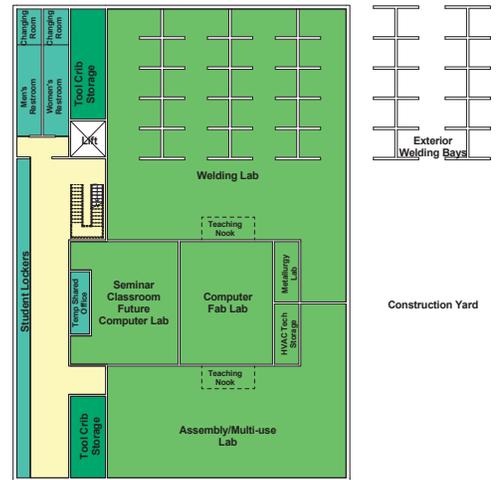
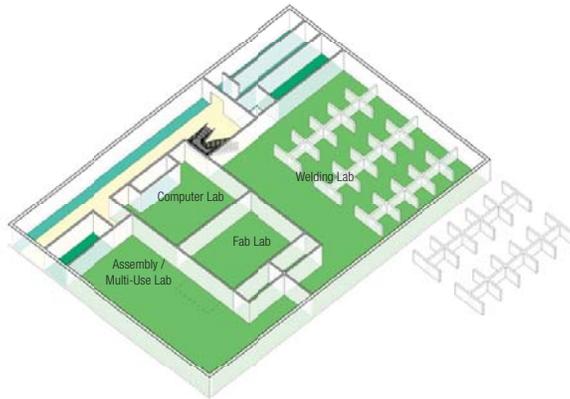


3. Departmental Relationship Planning

CCTEI Split Level Option Phase 1 Lower Level Plan

The diagrams below take the adjacency diagrams a step forward and illustrate departmental relationships while integrating circulation and building support spaces. These diagrams begin to inform the circulation flow and massing of the building.

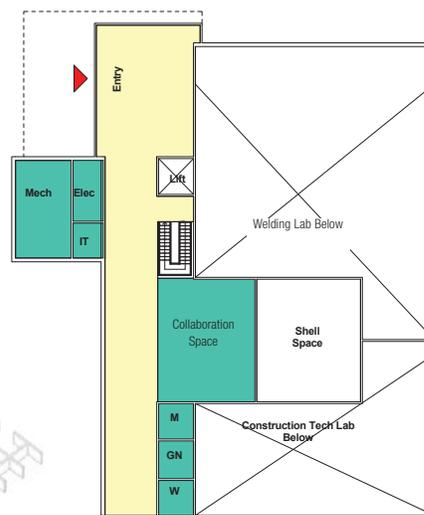
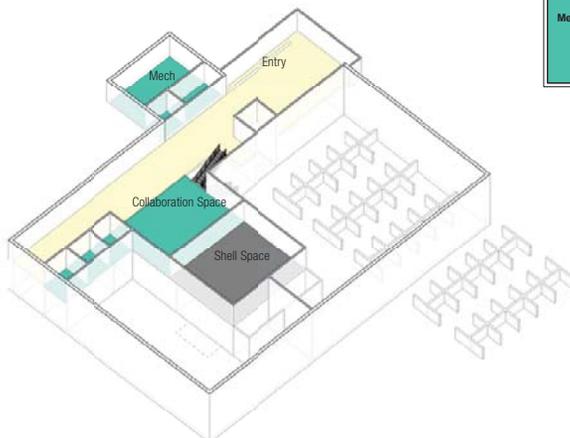
This block diagram of the lower level illustrates the relationships defined by the adjacency diagrams. The welding and assembly labs are split by the fabrication lab and the seminar classroom/future computer lab. Seminar classroom will occupy the computer lab until Phase 2 when the classrooms are added. The future plot room space can be used as a temporary shared office. Both high bay labs have access to the construction yard on the west. There are 30 interior welding bays and 20 exterior bays that are a continuation of the Interior bays. The student lockers are in a wide corridor to the west with changing rooms and rest rooms immediately adjacent. Each high bay lab has a teaching nook incorporated into its space. There is a connecting stair and lift to the upper level.



3. Departmental Relationship Planning

CCTEI Split Level Option Phase 1 Upper Level Plan

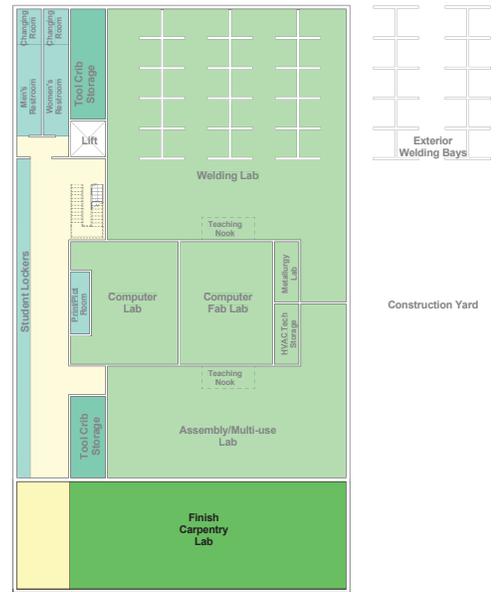
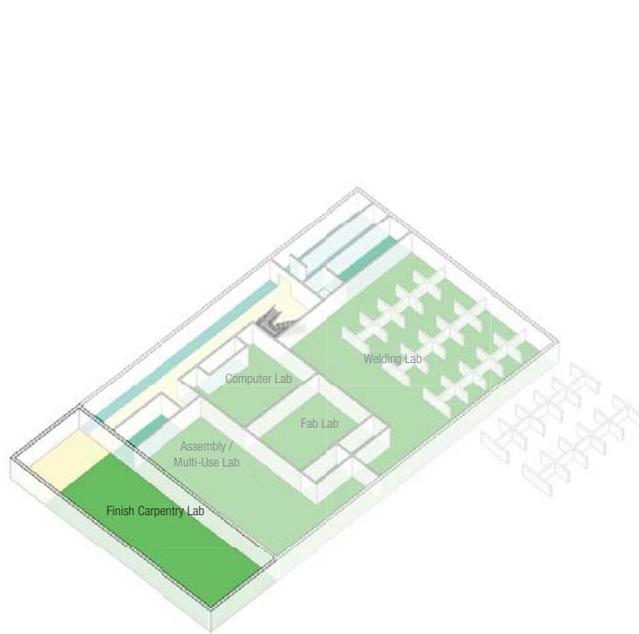
On the upper level there is a corridor running north south with opportunities for views into the Welding Lab and Construction Tech Labs below. The Collaboration Space also has potential views into the labs below. There is a shell space located over the Fabrication Lab which will be the location of the faculty offices in Phase 2. Building support spaces are also indicated.



3. Departmental Relationship Planning

CCTEI Split Level Option Phase 2 Lower Level Plan

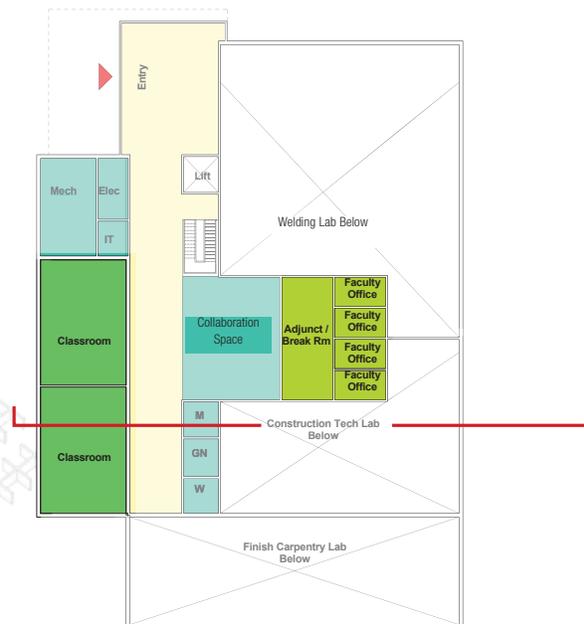
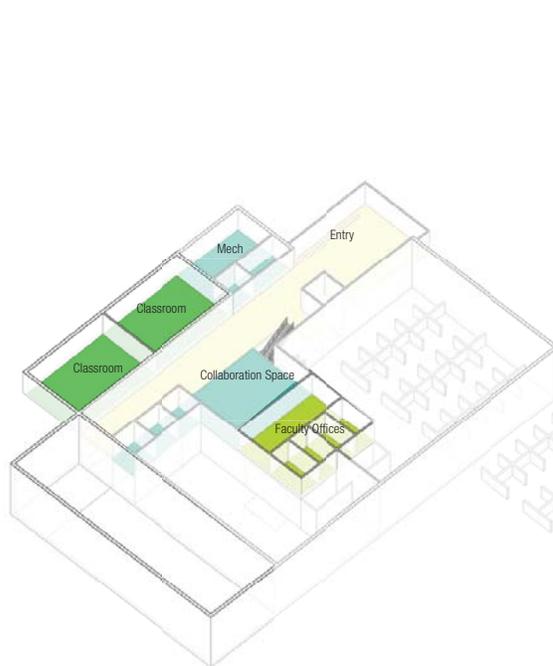
In Phase 2 the Finish Carpentry Lab is added to the south of the Assembly/ Multi-Use Lab and the computer lab is fitted out with 30 workstations.



3. Departmental Relationship Planning

CCTEI Split Level Option Phase 2 Upper Level Plan

In Phase 2 on the upper level two new Classrooms are added and the Faculty Offices are fitted out at this time.



Summary of Programming Phase Cost Estimate

4. Budget Cost Plan

Preliminary Programming Building Cost Estimate

The Programming Team has developed a preliminary cost estimate for the CCTEI building. This is a Program Phase cost estimate and includes Contractor markups and New Mexico gross receipts tax. The cost estimate is based on the programmed area, proposed site plan and the assumptions outlined in the building system requirements. These assumptions may change in subsequent design phases as the CCTEI building design is developed.



University of New Mexico - Gallup
Center for Career Technology Education and Innovation (CCTEI)
Summary of Program Phase Construction Costs
9/9/2016

Component	Direct Cost	Contractor Markups	NMGRT	Total	GSF	\$/GSF
Building Construction:			22.04%	8.3125%		
Phase 1	\$2,578,156	\$568,226	\$261,543	\$3,407,925	13,000	\$262.15
Phase 2	\$843,671	\$185,945	\$85,587	\$1,115,203	4,000	\$278.80
Sitework	\$856,034	\$188,670	\$86,841	\$1,131,545		
Subtotal	\$4,277,861	\$942,841	\$433,971	\$5,654,672	17,000	\$332.63
Equipment & Photovoltaics						
Photovoltaics	\$1,010,000	\$222,604	\$102,460	\$1,335,376		
Bridge Crane	\$110,000	\$24,244	\$11,159	\$145,403		
Subtotal				\$1,480,779		
Grand Total Estimated Project Cost				\$7,135,452	17,000	\$419.73

Building System Requirements

5. Building System Requirements

Architectural Narrative

Building Exterior

The CCTEI building exterior skin will be composite of a variety of modern exterior envelope systems that will meet and exceed the requirements as defined by the current International Environmental Energy Conservation Code (IEECC) and address LEED incentives. The primary task of the building exterior skin is to regulate the prevailing conditions with the exterior climate in order to ensure comfortable conditions in the interior enclosure. The façade and roof design must react to the climate condition and sun exposure in order to regulate how these conditions might affect the internal building climate.

The building structure identified for the CCTEI building is a steel post and beam structural design, described in detail in the structural narrative. This system was identified to allow for maximum flexibility of the exterior skin. Structural Insulated Panels (SIPS) or Structural Composite Integrated Insulated Panels (SCiIPS) are being considered for the exterior envelope of the CCTEI building. UNM-G CEO Dr. Dyer has been in discussion with a private homebuilding firm for opportunities to donate services and materials for the exterior skin. The UNM-G administration, faculty and staff desire for the CCTEI building to be a hallmark of innovative sustainable building design and construction.

The current assumptions for the percentages of building exterior envelope systems represented in the building cost estimate are:

- » 70% Exterior Cementitious wall system
- » 20% Composite Metal Panel wall system
- » 10% IGU Glazing – Vision and Spandrel

The high bay perimeter walls will consist of an exterior sheathing or stucco system over non-load bearing CMU walls that are non-combustible and highly durable in the construction and welding areas.

All other exterior walls will be veneer and insulation on a non-load bearing metal structural stud system.

5. Building System Requirements

Building Interior

The interior finishes of the CCTEI building will consist of contemporary durable materials that meet LEED guidelines and contribute to sustainability goals. All materials will comply with the UNM design guidelines. The faculty and staff of Construction Technology and Welding Technology see the new CCTEI building as a teaching tool for their curriculum. They desire that the building serve as a living lab where structural and building systems are exposed to allow students to study the construction techniques used in the CCTEI construction.

The high bay spaces and all other spaces that will be subject to construction environment abuse will have CMU partitions. These spaces will have exposed structure and building systems with power and data drops from the deck above to allow for maximum flexibility. These spaces will consist of polished, sealed, or coated concrete floors.

Classrooms, computer labs, corridors, collaboration spaces and faculty offices areas will consist of cold formed metal framing partitions with high impact surfaces 48" and below in high traffic areas. These spaces will have accessible ceilings with integrated lighting and mechanical systems, and polished concrete floor. Building support spaces will have durable, low maintenance finishes. These spaces will have accessible ceilings when appropriate or exposed structure. Floors will be polished, sealed, or coated concrete. Toilet rooms will have moisture-rated gyp board composite ceilings with porcelain tile on floors and walls.

The UNM-G campus and context, and building form and function need to be strongly considered while making the final selection of exterior and interior materials and finishes. The use of regional materials should be part of the discussion during design. The building materiality and systems need to represent the forward thinking of the UNM-G community and be exemplary of the sustainable construction principles that are being taught.

5. Building System Requirements

Civil Schematic Design Narrative

Drainage: The site is located on the southwest corner of Gurley Avenue and Peggy Ann Drive. The proposed Phase 1 building would be located to the east side of the site. The site is steep; generally sloping from west to east at approximately 16.4% with approximately 70 feet of fall.

Onsite ponding, storm drainage piping, and other drainage features will be required to mitigate flow such that the historic outfall flow volumes and locations are not exceeded. This pond is proposed to be located on the southeast side of the property.

The site does not lie within a flood zone according to the FEMA Firm Map #35031C1540E.

Domestic Water: Domestic water is currently being served from a 12" public waterline in Gurley Avenue. A new water meter will be installed on the north side of the property. A new backflow preventer (in a hotbox), and a new domestic line will be installed to feed the proposed building. It is assumed that domestic pressure and flow is not an issue, and this will be verified prior to design via a fire flow test.

Fire Protection: A private on-site fire protection main line will be constructed from the 12" waterline within Gurley Avenue. This line will run through a new backflow prevention device (in a hotbox), and then feed two new Fire Hydrants. Currently, there are 2 hydrants along Gurley Avenue and Peggy Ann Drive (across the street from the subject site). A fire flow test will be required to verify that the pressure is adequate.

Sanitary Sewer: The existing buildings currently north of Gurley Avenue are served by a lift station and 4" sanitary sewer force main. It is proposed that the new building will outfall to an onsite lift station, and then tie to the existing 4" force main via a new force main running across Gurley Avenue. The hydraulics of the existing force main and new lift station will need to be examined. There is also an option of a new master planned line to the east, that would eliminate the need for a lift station. This new gravity line could also eliminate the lift station at Calvin Hall and the Gymnasium. The ultimate outfall will likely need to be further coordinated. A life cycle cost analysis of the two options will need to be studied by the design team.

5. Building System Requirements

Structural Design Narrative

The CTCEI at the UNM-Gallup Campus is an approximate 13,000 SF building to be constructed during Phase I, with an additional 4,000 SF during Phase II. Our goal is to provide an efficient and cost effective structural system that addresses the use of the building and the challenging site issues.

Design Criteria: The project will be designed in accordance with the 2015 International Building Code (IBC 2015), other applicable design codes including ASCE 7-10, ACI 318-11 and any local codes. The building will be designed for all applicable dead loads, live loads, snow loads, and lateral loads including wind and seismic. The building is anticipated to be a single story building with a high bay. Significant changes in elevation across the site may warrant a split-level design and require some concrete retaining walls.

Roof Framing and Exterior Walls: The roof framing will consist of a steel roof deck that bears on steel joists. The steel joists will be supported by WF steel girders and steel columns. A steel wind girt will be used in the high bay at the exterior walls. The exterior walls will be framed using either SCiiPS (structural composite integrated insulated panel system) or light gage metal studs. Another option for the exterior walls is concrete tilt-up panels that serve as bearing walls.

Lateral System: The lateral system for the building will be concentric steel braced frames in both orthogonal directions. The building will most likely be classified as Risk Category II which, combined with soil site class and maximum predicted earthquake accelerations, will likely produce a Seismic Design Category B. Therefore, the braced frames can be designed as "special" or "ordinary", each having their own requirements, as well as positives and negatives, so we will look at each to make an informed decision.

Foundations: The foundation design will be contingent on the recommendations and requirements from a geotechnical soils report. Most likely, the foundation will be reinforced concrete footings, continuous and spot, that are located below frost depth. From past experience in the Gallup area, the site probably contains some collapsible and/or expansive soils which will likely require overexcavation of the native soils and replacement with compacted structural fill. The depth of overexcavation to be determined by a geotechnical engineer will be greater than typical projects in areas outside of Gallup and if it is too extensive, a deep foundation system may be a better option. The slab-on-grade will be a minimum of 5" thick concrete with conventional reinforcing in both directions.

Other Design Considerations: Some other design considerations that are unique to the use of the space include potentially increasing some roof member capacities in the high bay to support a bridge crane and/or a chain fall to allow movement of heavy objects fabricated by students in the labs. The equipment used in the labs may also require particular criteria of floor levelness/flatness as well as meeting some level of vibration criteria. Interior walls may need to be installed for sound mitigation and raised access flooring may be needed in particular areas. Solar panels may be installed on the roof structure. An exterior canopy may be required for an exterior student workspace. While all these design considerations can be met, they will add to the cost of the building.

5. Building System Requirements

Plumbing Systems Narrative

The building plumbing systems; building soil & waste-vent, roof drainage, and domestic hot & cold water shall be designed in accordance with applicable codes.

Plumbing Fixtures

- » Water conservation devices shall be utilized for all plumbing fixtures.
- » Water closet shall be wall mounted, ADA as applicable.
- » Urinals shall be shall mounted, ADA as applicable.
- » Lavatory shall be wall mounted, ADA as applicable.
- » Janitor Sink shall be floor mounted.
- » Electric water coolers shall be wall mounted dual height and bottle fill.
- » Showers shall be single handle type, ADA as applicable.

Waste-Vent System

Soil, waste, and vent piping below slab on grade shall be service weight cast iron bell and plain end or no-hub pipe, coated inside and outside, conforming to ASTM A-74 and 87 Standards

Soil, waste, and vent piping above grade shall be either service weight cast iron bell and plain end or no-hub pipe coated inside and outside, conforming to ASTM A-74 and 87 standards for bell and spigot, and CISPI Standard 301 for no-hub. Vent piping 2" and smaller above grade may be Schedule 40 galvanized steel.

Domestic Water System

Interior: Plumbing fixtures, drain locations and quantity shall be dictated by architectural plans. All plumbing groups and individual fixtures shall have isolation valves. Domestic hot water shall be provided utilizing a centrally located, natural gas fired water heater, storage tank and re-circulating pump.

Branch water lines shall be provided with isolation ball valves.

Domestic water piping above grade within the building 4 inches and smaller shall be Type L hard drawn copper, ASTM B 88.

Exterior: Service entrance piping shall be protected with reduced pressure back flow prevention devices. Exterior hose bibs shall be freeze proof design and vacuum breaker protected.

Natural Gas System

Natural gas piping will be extended from the existing site distribution system to one central gas meter. Gas main distribution piping shall be routed to devices at 7" w.c.

Roof Drainage System

Roof drainage system shall utilize cast iron piping. It shall be a double system separating main roof drainage from overflow roof drainage.

Fire Protection

Wet Pipe Sprinkler System: The building shall be provided with an automatic wet-pipe fire protection sprinkler system. The building shall be protected by applicable building codes as the design shall adhere to the requirements established by NFPA 13, Fire Sprinklers, Fire Extinguishers & Cabinets.

Fire/Smoke Separations: Any required fire separation walls shall be provided with fire sealing for pipe penetrations.

5. Building System Requirements

Special Systems Narrative

Welding

Welding system shall be provided with an acetylene single manifold system, consisting of a main gas delivery bank and a reserve bank, manually switched. System shall be designed with flashback arrestor.

Compressed Air

Labs shall be provided with a compressed air consisting of two rotary screw air compressor, two air dryers, distribution system, regulators and lab compressed air drops. Compressed air piping shall copper.

Building Heating/Cooling Systems Criteria:

The mechanical systems for the new facility shall be designed for LEED compliance, to use the most contemporary systems and equipment with built-in flexibility to maximize budgetary constraints, expedite the design and construction schedule and to incorporate input from all user groups. The following design parameters are utilized in developing the proposed systems for the facility.

Design Temperatures (2013 ASHRAE Fundamentals):

- › Outside: ASHRAE Design Criteria
- › Refrigeration Areas
- › Indoors: Summer: 75.0 ± 2.0 Fdb, $45\% \pm 5\%$ rh
- › Winter: $70^\circ \pm 2.0$ Fdb
- › Other Areas (Evaporative Cooled)
- › Indoors: Summer: 82.0 ± 2.0 Fdb,
- › Winter: $70^\circ \pm 2.0$ Fdb
- › Elevation: 6,467 ft. MSL

Lab Areas (Assembly/Multi Use Lab, Welding Lab, HVAC Lab, Metallurgy Lab, Finish Carpentry Lab)

Each lab shall be provided with a makeup air system utilizing a natural gas fired heat exchanger and an evaporative cooler. The makeup air unit shall be provided with both return air and outside air. Systems shall be zoned to reflect one unit per Lab area.

Air to air exchangers shall be provided for makeup exhaust systems for preheating and precooling of makeup outside air.

General Use Areas (Non Labs)

General use areas shall be provided with refrigerated air. Outside air for each option shall introduced to meet minimum code outside air requirements. System options to include but not limited to the following:

1. Package roof mounted HVAC units, DX cooling and natural gas heating. Package HVAC units will be provided with enthalpy economizer controls to utilize outside air for cooling, whenever the outside air temperature and humidity is in the correct range.
2. Variable Refrigerant Flow (VRF) heat recovery system.
3. Four pipe chilled water, heating hot water system with area fan coil units,

Outside air for options #1 and #2 shall be provided with Energy Recover Ventilators (ERV). ERV's shall be provided with discharge heater, with natural gas or electric.

Each option will require a detailed life cycle analysis.

5. Building System Requirements

Sound Levels– Mechanical Systems

Sound levels shall not exceed Levels list in ASHRAE Handbook Chapter 48, Table 1, Noise and Vibration Control.

Exhaust System

Exhaust Systems for Industrial areas shall meet ACGIH Industrial Ventilation Manual of Recommended Practice for Design, ASHRAE Standard 62.2 and the Uniform Mechanical Code ventilation requirements.

Roof mounted exhaust fans shall be provided for Toilets, Janitor Closets and Locker Room Areas.

Welded bottle storage area shall be provided with an exhaust system.

Ventilation

Minimum ventilation shall be ASHRAE Standard 62.2.

Special Systems

Electrical Rooms: Electrical rooms will be provided with a separate exhaust fan and a cooling only thermostat for rooms with 75 KVA transformers or less. Electrical rooms will be provided with a refrigeration split system with ground mounted remote air condensing unit for rooms with 76 KVA transformers or greater.

IT room shall be provided with a two cooling refrigeration split system with ground mounted remote air cooled condensing unit.

HVAC Instrumentation and Controls

The mechanical systems shall be controlled with a BACnet capable system that shall interface with the University of New Mexico's central control system.

HVAC Systems Testing, Adjusting, and Balancing

Testing, adjusting and balancing of the building air and water distribution systems shall be provided by NEBB certified TAB contractor.

5. Building System Requirements

Electrical Design Narrative

Interior Lighting System:

- A. Illuminance levels should be designed in accordance with Illuminating Engineering Society of North America (IESNA) standards. Maintained illuminance levels (FC) and visual comfort probability (VCP) levels should be designed for the following spaces:
- 1.) Classrooms - 50 FC
 - 2.) Offices - 50 FC
 - 3.) Labs and Hi-Bay spaces - 50 FC
 - 4.) Restrooms - 15 FC
 - 5.) Break Rooms - 40 FC
 - 6.) Lobby and Corridors - 15 FC
- B. Lighting should be designed with special emphasis on practicality, ease of maintenance, and suitability relative to function of the space to be illuminated.
- C. All fixtures should be LED type with drivers lumen output rated for the function of the space.
- D. Fixtures in classrooms and elsewhere in lay-in ceilings should be provided one per every 80 sq. Ft, or as required to meet illuminance levels stated above.
- E. Light fixtures in all offices and class rooms should consist of 2x4 indirect LED troffers.
- F. Light fixtures in the Hi-Bay Labs should consist of LED Hi-Bay pendant mount type fixtures.
- G. Light fixtures in the Toilets will consist of LED recessed down lights and wall mounted LED fixtures.

Exterior Lighting System:

- A. Exterior lighting should consist of LED luminaires. The parking lot luminaires and building mounted exterior lights will conform to the New Mexico Dark Skies Enforcement Act. Exterior fixtures cannot have any illumination from the luminaire above 26 degrees above horizontal.
- B. New exterior light fixtures should be installed on the building, adjacent to exterior doors.
- C. Lighting in the parking lot should consist of 20' poles with sharp cut-off luminaires in conformance with New Mexico Dark Skies Enforcement Act.
- D. Exterior lighting should be controlled by a photocell controlled contactor.

Emergency Lighting:

- A. Emergency and egress lighting should be provided with battery back-up provisions.
- B. All paths of egress should be illuminated to a minimum of 1 footcandle. Interior and windowless rooms should be provided with an emergency light fixture. All stairs should have an emergency light fixture installed at each landing.

5. Building System Requirements

Receptacles:

- A. Duplex receptacle outlets should be provided as follows:
- 1.) Hi-Bay Labs - minimum of 10'-0" O.C.
 - 2.) Classrooms - minimum of 8'-0" O.C.
 - 3.) Conference Rooms - minimum one (1) per wall or 8' O.C.
 - 3.) Restrooms - one adjacent to lavatory (GFI)
 - 4.) Offices - minimum one (1) per wall
 - 5.) Lobby and Corridors - minimum 16' O.C.
- B. Duplex receptacles installed adjacent to lavatories or sinks should be GFI type.
- C. A maximum of six (6) duplex receptacles should be connected to a circuit. Dedicated circuits should be provided as required. Isolated ground (IG) receptacles should be provided as specifically requested.
- D. All outlets should be provided with permanent labeling indicating branch circuit and panel connected to, and all device plates should be stainless steel.
- E. Construction Tech Labs, including Welding, Assembly, and Finish Carpentry should be provided with plug-in bus duct systems rated for the proposed demand load of equipment. The plug-in bus duct should be installed in continuous length of the room directly over load density of equipment.

Power Distribution:

1. Service entrance facilities should be coordinate with the 2016 UNM-Gallup Utilities Master Plan. There are two (2) options for providing power to the CCTEI building as identified in the 2016 UNM-Gallup Utilities Master Plan.
2. A new 15kV primary feeder should be extended from the existing campus primary distribution system to a new pad mount transformer located at the new CCTEI Building. The building secondary distribution system should be rated for 277/480 volt, three phase operation. Dry type transformers should be provided to step the secondary building distribution system voltage (480 volt) to 120/208 volt, three phase for receptacles and small mechanical loads.
3. The "Main Building" disconnect switches should be located on the exterior of the building or otherwise per NEC.
4. Main overcurrent protective device for panels installed on the secondary side of dry type transformers should be provided.
5. Secondary overcurrent protective devices should be provided within 25' of dry type transformers.
6. Minimum clearances should be provided in front panels, and double working clearance should be provided in front of switchboards over 1200 amperes, and over 6'-0" long.
7. Panels should be located in rooms solely dedicated to electrical equipment. All electrical gear should be provided to prevent space conflicts. All main distribution switchboards and panelboards should be provided in an interior room (Not located on the exterior of the building).
8. Conduit stubs should be provided for future building construction (from main distribution equipment or sub-panels). Pull strings should be provided in all empty conduits with a tracer, solid bare copper conductor.

5. Building System Requirements

9. A minimum of five (5) 3/4" C should be provided from panels (recessed flush in wall) and stubbed to above accessible ceiling areas.
10. Power Quality for Non-Linear Loads and Harmonics should be provided as follows:
 - A. 120/208 volt panels with 150% rated neutrals.
 - B. K-rated dry type transformers (K-rating as required by load).
 - C. 120V branch circuits with 200% rated neutral
 - D. Harmonic filters should be provided where applicable.
 - E. All electronic solid state ballasts should be provided with 10% or less THD
 - F. Surge Protective Devices (SPD) devices should be provided on panels (main and sub-panel protection).
 - G. SPD type receptacles should be provided for sensitive electronic equipment (telephone switch, MDF's, IDF's).
8. Branch circuit panels should be provided with door-in-door fronts and copper bus.
9. A spare fuse cabinet and spare fuses (one set for each size and type of fuse) should be provided.
10. Main distribution gear (switchboards and panelboards) should have circuit breaker type overcurrent protective devices (fuse and switch devices will not be allowed).
11. Branch circuit wiring should be color coded throughout the entire electrical distribution system as follows:
 - 120/208V Electrical Distribution: Phase A - Black, Phase B - red, Phase C - Blue, Neutral - White, Equipment Ground - Green
 - 277/480V Electrical Distribution: Phase A - Brown, Phase B - Orange, Phase C - Yellow, Neutral - Off/White, Equipment Ground - Stripped Green
12. Medium Voltage Distribution (over 600V):
 - A. Duct banks should be concrete encased and installed minimum 42" below grade.
 - B. All medium voltage cable and terminations should be "hi-pot" tested with documentation.
 - C. Vaults and pull boxes should be pre-cast concrete, minimum 8'x8'x8'.
 - D. The design of the medium voltage distribution should be coordinated with UNM Physical Plant Department and UNM Utilities Department.

5. Building System Requirements

Fire Alarm System:

- A. The proposed building will be provided with a new fire alarm system.
- B. Pull stations should be provided at all exits from the building. Pull stations should be double action with break glass fronts.
- C. Audible/visual strobes should be located at all exits, 50'-0" on centers in corridors, all classrooms, restrooms, conference rooms, Hi-Bay Labs, lobbies, and elsewhere as dictated by the function of the building. Strobes should be synchronized.
- D. Heat detectors should be provided in Janitor's Closet, Mechanical Equipment Rooms, and Break Rooms. Smoke detectors should be located in Electrical Equipment Rooms, Storage Rooms, and above the fire alarm control panel, and elsewhere as required by code.
- E. Flow switches and tamper switches should be provided on all fire sprinkler risers.
- F. Duct smoke detectors should be provided at all HVAC air handling units (other than evaporative coolers) for fan shut-down and fire alarm system connection to the building fire alarm panel.
- G. The Fire Alarm Annunciator Panel should be located at the fire fighters' entrance to the building.
- H. Duct smoke detectors should be located within 3' of fire/smoke dampers and provided with 120V interlock wiring.
- I. The elevator should be provided with "shunt trip" provisions (only if the shaft of the elevator is sprinkled). Heat detectors and smoke detectors should be provided in the shaft of the elevator within 3' of all fire sprinkler heads, in the elevator equipment room, and at the top of the shaft of the elevator. "Phase 1 and Phase 2" notes should be provided on the plans. A 1" phone conduit

connection should be provided from the elevator equipment room elevator controller to the telephone backboard.

- J. Smoke detectors should be provided at all elevator lobbies on all floors for elevator recall.
- K. A connections to the Post Indicator Valve (PIV) should be provided on the site.
- L. Smoke Doors, magnetic door hold open devices, panic hardware and doors requiring interlock wiring with the fire alarm system should be provided where required.
- M. A 120V, 20A branch circuit should be provided for the Fire Alarm Control Panel with a locking type circuit breaker with a painted red handle in the branch circuit panel.

Telecommunication System:

- A. New Telecommunication Fiber Optic Cable will have to be installed from Calvin Hall to an existing duct bank south of the building then to a new Main Distribution Frame Room located in the new CCTEI Building. Conduit will need to be routed to the Campus Main IT in the second floor of Calvin Hall. New Telecommunications Fiber Optic routing should be coordinated with UNM ITS Department and UNM-Gallup IT Department.
- B. Telecom outlets will be provided according to the function of the space.
- C. Wireless access ports should be provided in each Hi-Bay Lab, Classrooms, and elsewhere as required by the UNM ITS Department.
- D. A new background and sound system should be provided.
- E. The Design team will follow the UNM's IT Design Guidelines and Specifications located at <http://it.unm.edu/communications/design-guidelines/index.html>

5. Building System Requirements

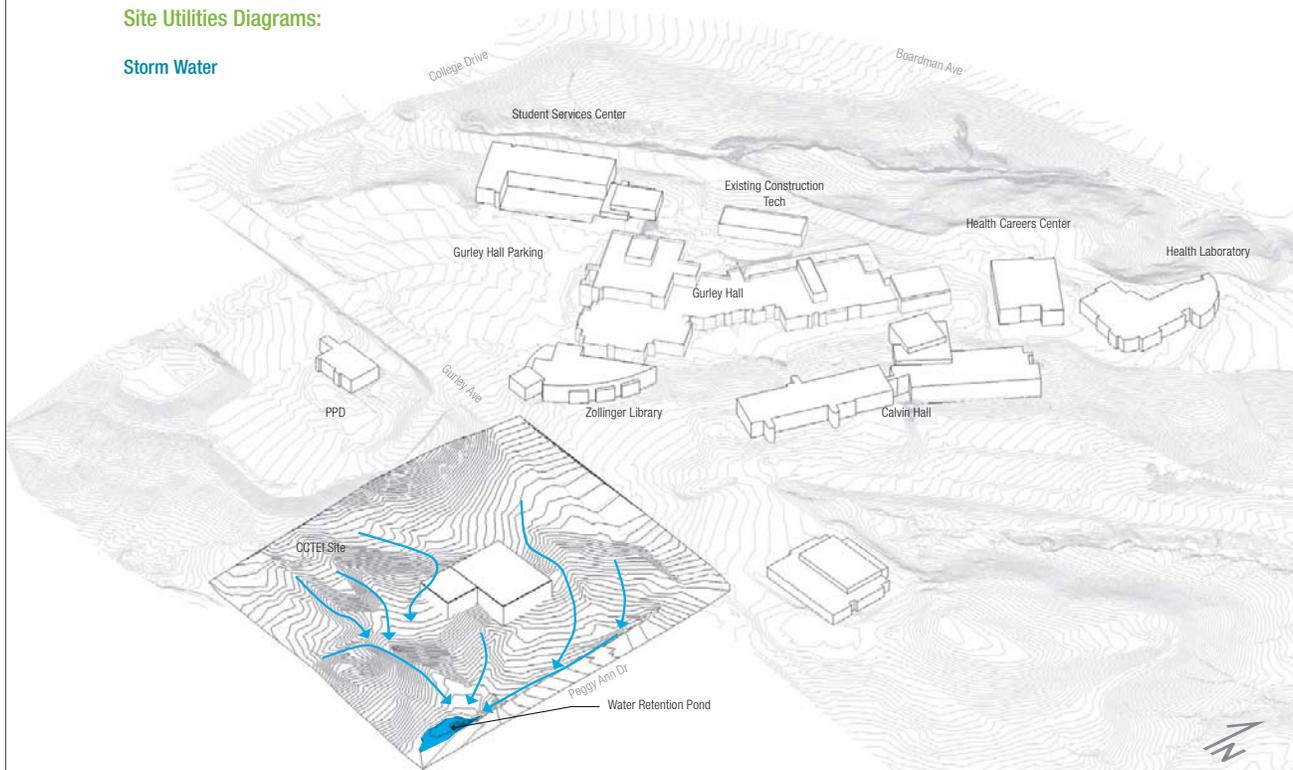
HVAC Power:

1. The mechanical HVAC system should be coordinated with the mechanical engineer for proper voltage, phase, minimum circuit amps, etc. for all HVAC equipment.
2. All HVAC equipment should be provided with fused protection (either at the branch circuit panel or from a fusible disconnect switch located at the unit). All thermal magnetic circuit breakers serving HVAC motor loads should be sized at 175% of unit MCA. Fuses should be sized as recommended by the HVAC unit manufacturer.
3. WP GFI duplex receptacles should be installed within 25' of each HVAC unit on the roof, or as dictated by NEC.
4. Permanent engraved mica labels should be provided on all starters and disconnect switches indicating panel fed from and circuit connected to.
5. Pilot light, thermal overload switches should be provided for control of all exhaust fans, unless otherwise controlled by time clock, twist timer, or from building automation system.
6. Location and wiring requirements of combination fire/smoke dampers should be coordinated with the mechanical engineer for. 120V control power, systems duct smoke detector (located in duct and within 3' of fire smoke damper), and fire alarm connections should be provided at all fire/smoke dampers.
7. The HVAC systems controls should be coordinated with the mechanical engineer.
8. Starters for pumps and fans should be provided and designed with proper NEMA Size, NEMA enclosure type, mounting, and control features. All motors 1HP and less should be designed for 120V. All motors larger than 1HP should be designed for three phase power.
9. A single light fixture and receptacle should be provided at mechanical equipment, where installed above ceilings.
10. Stranded conductors should be provided for all mechanical equipment, from the unit to the nearest termination point that is vibration free.
11. Duct smoke detectors should be provided for all air handling equipment (2000 CFM and greater return and/or supply air - verify with the mechanical engineer). The duct smoke detectors should be connected and powered from the building fire alarm system and should be furnished and connected by Division 16 and installed by Division 15.
12. A spare fuse cabinet should be provided for all HVAC equipment. The spare fuse cabinet should be located in the main Mechanical Room, and the cabinet labeled "SPARE FUSE CABINET". The spare fuse cabinet should be provided with shelves.

5. Building System Requirements

Site Utilities Diagrams:

Storm Water

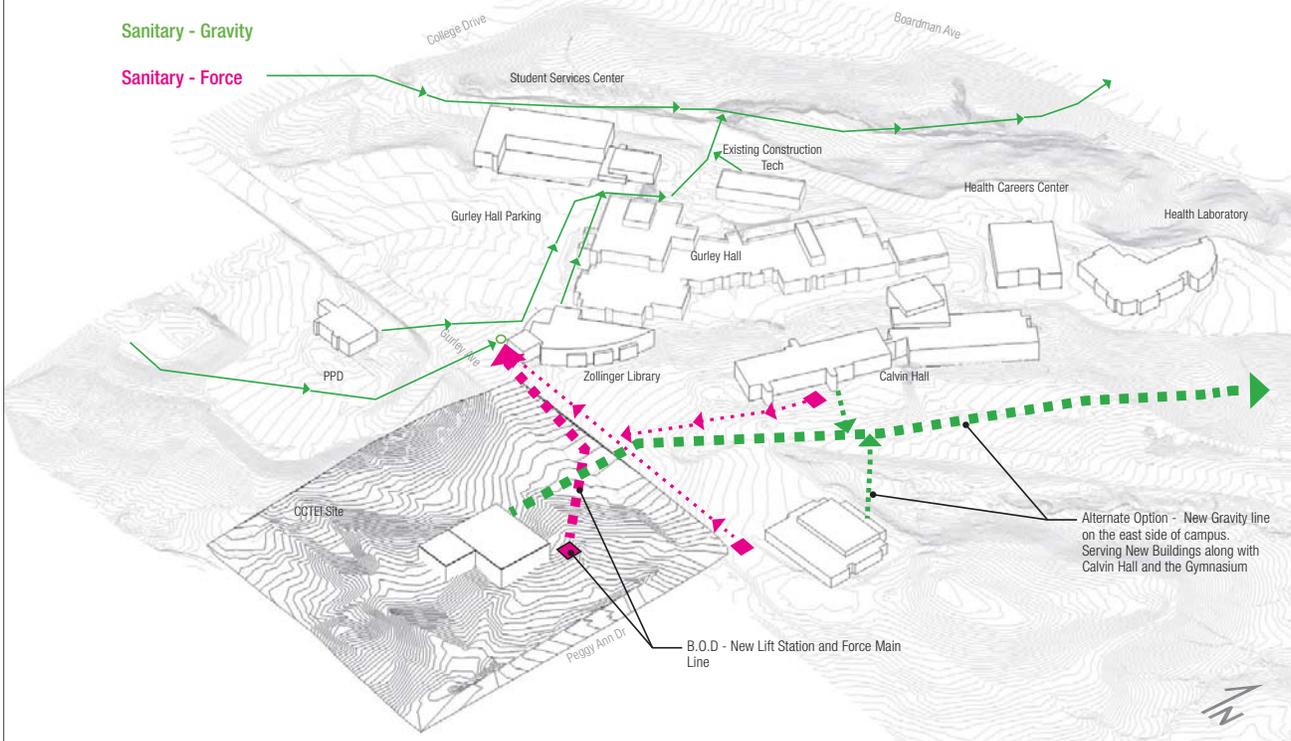


5. Building System Requirements

Site Utilities Diagrams:

Sanitary - Gravity

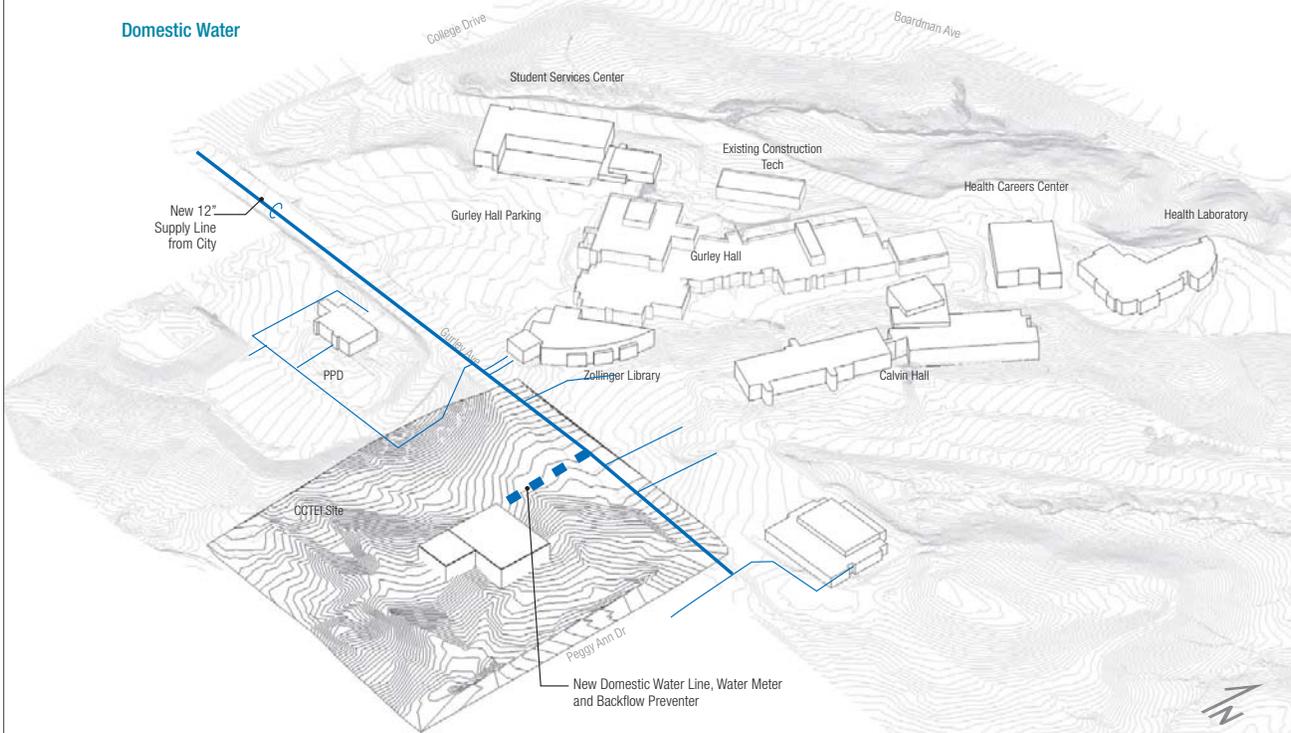
Sanitary - Force



5. Building System Requirements

Site Utilities Diagrams:

Domestic Water

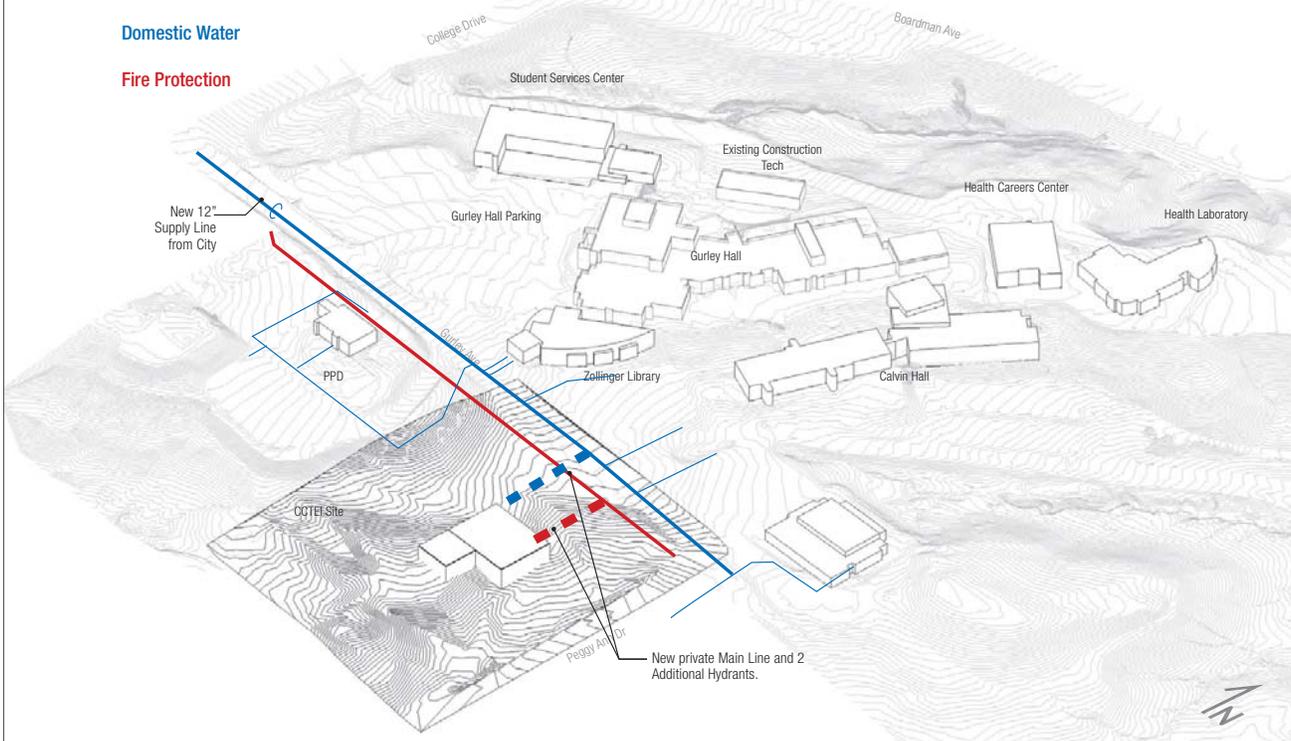


5. Building System Requirements

Site Utilities Diagrams:

Domestic Water

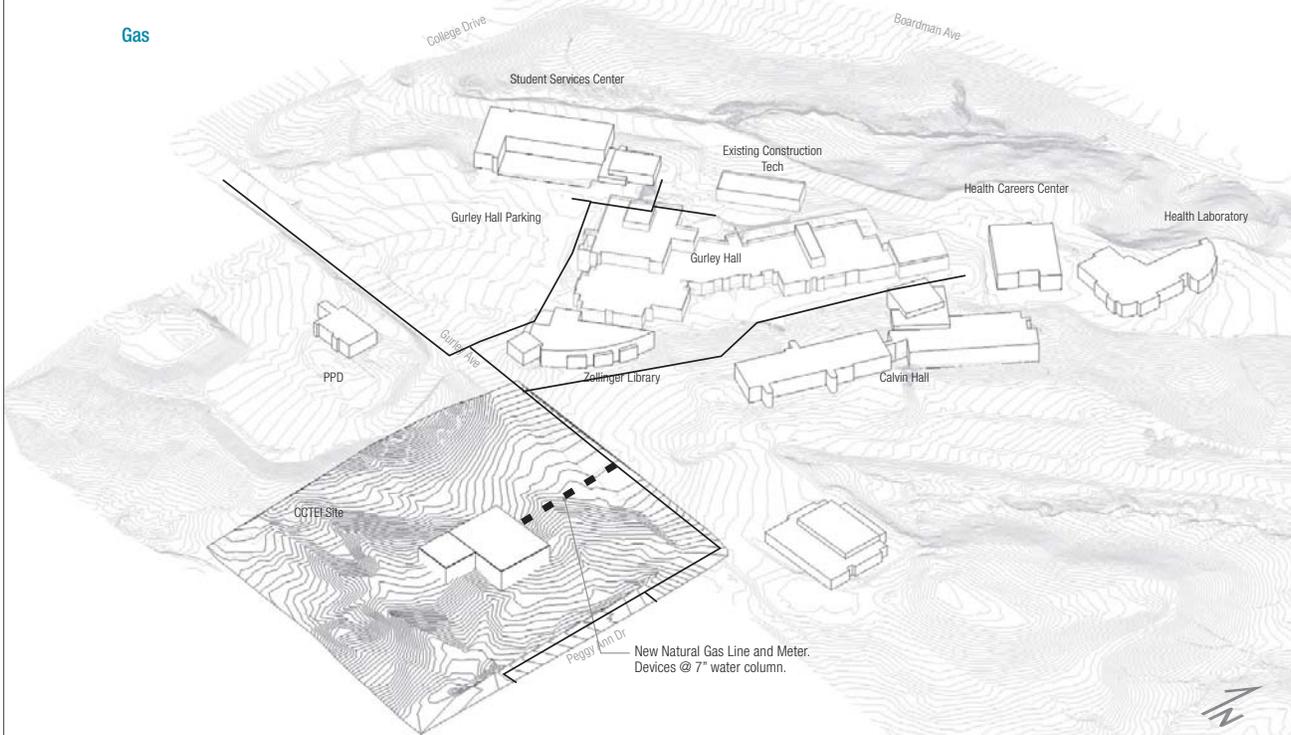
Fire Protection



5. Building System Requirements

Site Utilities Diagrams:

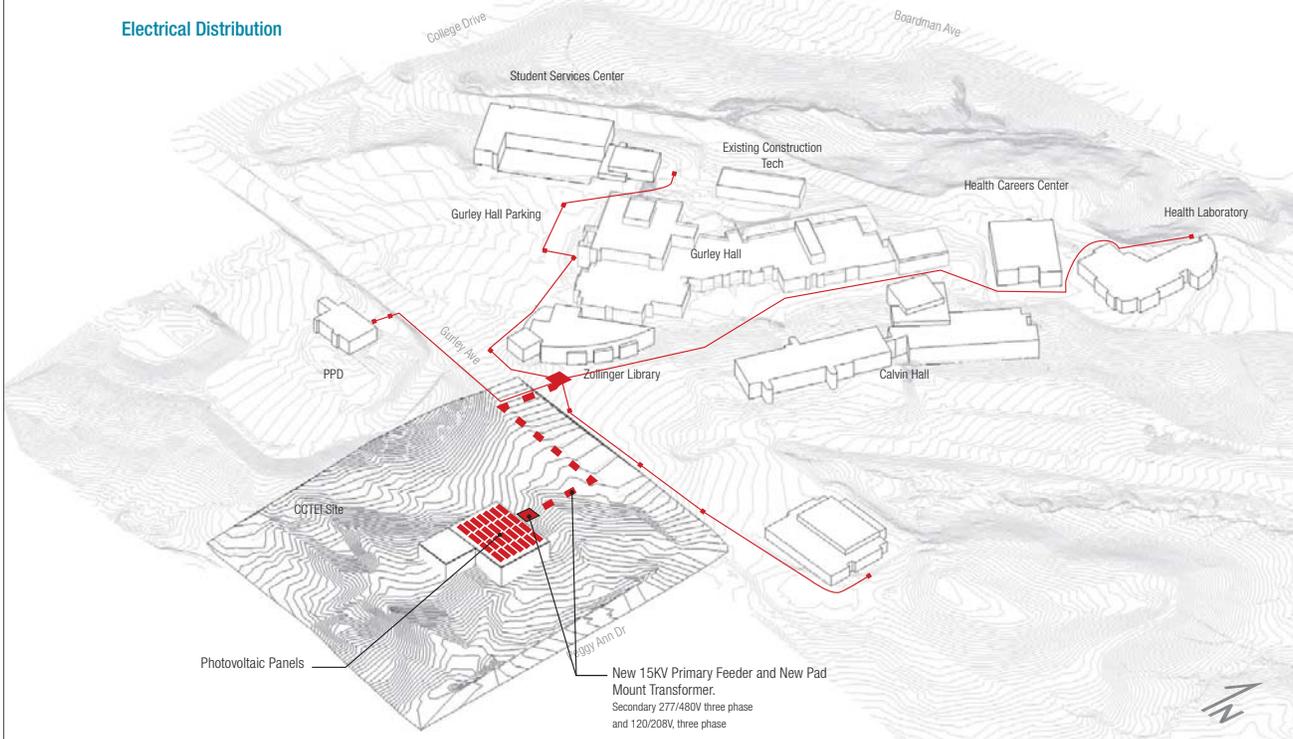
Gas



5. Building System Requirements

Site Utilities Diagrams:

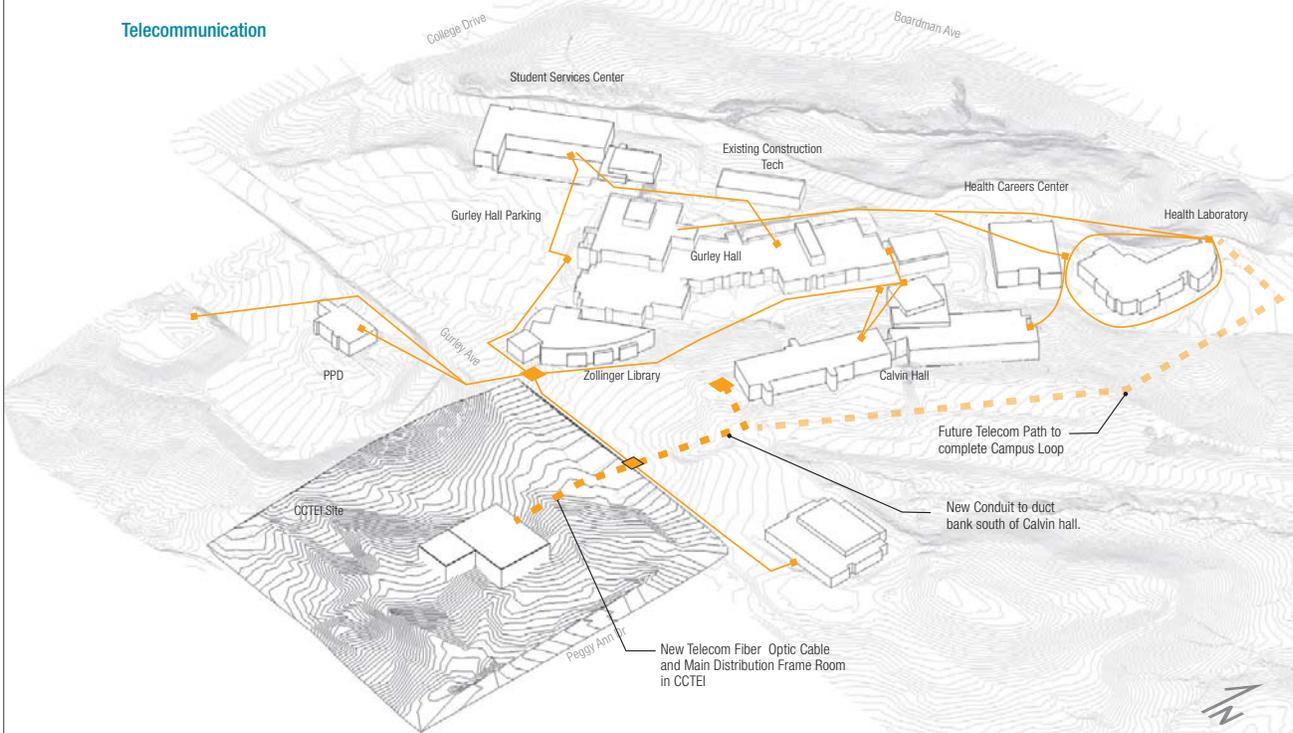
Electrical Distribution



5. Building System Requirements

Site Utilities Diagrams:

Telecommunication



Appendix Programming Phase Cost Estimate



University of New Mexico - Gallup
Center for Career Technology Education and Innovation (CCTEI)
Summary of Program Phase Construction Costs
9/9/2016

Component	Direct Cost	Contractor Markups	NMGRT	Total	GSF	\$/GSF
Building Construction:		22.04%	8.3125%			
Phase 1	\$2,578,156	\$568,226	\$261,543	\$3,407,925	13,000	\$262.15
Phase 2	\$843,671	\$185,945	\$85,587	\$1,115,203	4,000	\$278.80
Sitework	\$856,034	\$188,670	\$86,841	\$1,131,545		
Subtotal	\$4,277,861	\$942,841	\$433,971	\$5,654,672	17,000	\$332.63
Equipment & Photovoltaics						
Photovoltaics	\$1,010,000	\$222,604	\$102,460	\$1,335,376		
Bridge Crane	\$110,000	\$24,244	\$11,159	\$145,403		
Subtotal				\$1,480,779		
Grand Total Estimated Project Cost				\$7,135,452	17,000	\$419.73



University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTEI)
 Program Phase Cost Estimate
 Estimate Date: 9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
01 Phase 1				
A Element A - Substructure				
A10 Foundations				
A1010	Standard Foundations			
----	Foundations	13,000.00 sf	9.50 /sf	123,500
	A1010 Standard Foundations		9.50 /sf	123,500
	13,000.00 sf			
A1030	Slab-On-Grade			
----	Slab-on-grade, 5" w/#4's @ 12" o.c.ew	9,844.00 sf	8.50 /sf	83,674
	A1030 Slab-On-Grade		6.44 /sf	83,674
	13,000.00 sf			
	A10 Foundations		15.94 /sf	207,174
	13,000.00 sf			
A20 Basement Construction				
A2020	Basement Walls			
----	Below grade conc wall construction	1,100.00 sf	42.00 /sf	46,200
	Includes 8" thk cjp concrete wall construction with perimeter insulation & waterproof membrane		3.554/sf	46,200
	A2020 Basement Walls		3.554/sf	46,200
	13,000.00 sf			
	A20 Basement Construction		3.554/sf	46,200
	13,000.00 sf			



University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTEI)
 Program Phase Cost Estimate
 Estimate Date: 9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
A Element A - Substructure			19.49 /sf	253,374
	13,000.00 sf			
B Element B - Shell				
B10 Superstructure				
B1010	Floor Construction			
----	Floor construction	3,446.00 sf	28.00 /sf	96,488
	B1010 Floor Construction		7.422/sf	96,488
	13,000.00 sf			
B1020	Roof Construction			
----	Roof construction - flat	6,440.00 sf	26.50 /sf	170,660
----	Roof construction - sloped	3,155.00 sf	24.00 /sf	75,720
	B1020 Roof Construction		18.952/sf	246,380
	13,000.00 sf			
	B10 Superstructure		26.374/sf	342,868
	13,000.00 sf			
B20 Exterior Enclosures				
B2010	Exterior Walls			
----	Exterior wall construction	6,584.00 sf	28.58 /sf	188,171
	non-loadbearing masonry walls (ground level labs, etc) and second floor office/classroom areas can use metal stud with gyp. Stucco system on exterior.		14.48 /sf	188,171
	B2010 Exterior Walls		14.48 /sf	188,171
	13,000.00 sf			
B2020	Exterior Windows			
----	Exterior glazing @ 15% of exterior wall area	1,000.00 sf	55.00 /sf	55,000



University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTE)
 Program Phase Cost Estimate
 Estimate Date:9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
	B2020 Exterior Windows		4,231/sf	55,000
	13,000.00 sf			
B2030	Exterior Doors			
----	Exterior entry doors & vestibule	1.00 ea	15,000.00 /ea	15,000
----	Exterior man doors, single / double	6.00 ea	2,000.00 /ea	12,000
----	Exterior overhead doors, motor operated	5.00 ea	6,500.00 /ea	32,500
	B2030 Exterior Doors		4.58 /sf	59,500
	13,000.00 sf			
	B20 Exterior Enclosures		23,282/sf	302,671
	13,000.00 sf			
B30	Roofing			
B3010	Roof Covering			
----	Standing seam metal roofing on R-30 rigid insulation	6,440.00 sf	20.70 /sf	133,308
----	TPO membrane roofing on R-30 rigid insulation	3,114.00 sf	10.20 /sf	31,763
	B3010 Roof Covering			165,071
	B30 Roofing			165,071
	B Element B - Shell		62.36 /sf	810,610
	13,000.00 sf			
C	Element C - Interiors			
C10	Interior Construction			
C1010	Partitions			
----	Interior partitions	13,000.00 sf	12.00 /sf	156,000
		4		



University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTE)
 Program Phase Cost Estimate
 Estimate Date:9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
	C1010 Partitions		12.00 /sf	156,000
	13,000.00 sf			
C1020	Interior Doors			
----	Interior doors	13,000.00 sf	5.00 /sf	65,000
	C1020 Interior Doors		5.00 /sf	65,000
	13,000.00 sf			
C1030	Fittings & Specialties			
----	Casework, shelving, fittings & specialties	13,000.00 sf	7.00 /sf	91,000
----	24"x24" dbl tier lockers	60.00 ea	200.00 /ea	12,000
	C1030 Fittings & Specialties		7.923/sf	103,000
	13,000.00 sf			
	C10 Interior Construction		24.923/sf	324,000
	13,000.00 sf			
C20	Stairs			
C2010	Stair Construction			
----	Steel stairs/landings, cement filled pan, incl. handrail, complete	1.00 ft	25,000.00 /ft	25,000
	C2010 Stair Construction		1.923/sf	25,000
	13,000.00 sf			
	C20 Stairs		1.923/sf	25,000
	13,000.00 sf			
C30	Interior Finishes			
C3010	Wall Finishes			
----	Wall finishes	13,000.00 sf	3.00 /sf	39,000
		5		



University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTEI)
 Program Phase Cost Estimate
 Estimate Date: 9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
	C3010 Wall Finishes		3.00 /sf	39,000
	13,000.00 sf			
C3020	Floor finishes	13,000.00 sf	4.00 /sf	52,000
----	C3020 Floor finishes		4.00 /sf	52,000
	13,000.00 sf			
C3030	Ceiling finishes	13,000.00 sf	3.50 /sf	45,500
----	C3030 Ceiling finishes		3.50 /sf	45,500
	13,000.00 sf			
	C30 Interior Finishes		10.50 /sf	136,500
	13,000.00 sf			
	C Element C - Interiors		37.35 /sf	485,500
	13,000.00 sf			
D	Element D - Services			
D10	Conveying			
D1010	Elevators & Lifts	1.00 ea	68,000.00 /ea	68,000
----	Elevator, 2 stop, 3000 lb capacity		5.231/sf	68,000
	D1010 Elevators & Lifts			
	13,000.00 sf			
	D10 Conveying		5.231/sf	68,000
	13,000.00 sf			

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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
D20	Plumbing			
D2010	Plumbing	13,000.00 sf	8.50 /sf	110,500
----	Plumbing fixtures & equipment, DW & SAS distribution		8.50 /sf	110,500
	D2010 Plumbing			
	13,000.00 sf			
	D20 Plumbing		8.50 /sf	110,500
	13,000.00 sf			
D30	Heating, Ventilation & Air Conditioning (HVAC)			
D3010	HVAC	13,000.00 sf	29.69 /sf	385,970
----	HVAC & controls		29.69 /sf	385,970
	D3010 HVAC			
	13,000.00 sf			
	D30 Heating, Ventilation & Air Conditioning (HVAC)		29.69 /sf	385,970
	13,000.00 sf			
D40	Fire Protection			
D4010	Sprinklers	13,000.00 sf	3.50 /sf	45,500
----	Fire protection system		3.50 /sf	45,500
	D4010 Sprinklers			
	13,000.00 sf			
	D40 Fire Protection		3.50 /sf	45,500
	13,000.00 sf			

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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
<i>D50 Electrical</i>				
<i>D5010 Electrical</i>				
----	Electrical service, distribution, power & lighting	13,000.00 sf	24.862 /sf	323,209
	<i>D5010 Electrical</i>		24.862/sf	323,209
	13,000.00 sf			
<i>D5030 Communications & Security</i>				
----	Communications backbone & empty conduit (connn by owner)	13,000.00 sf	2.83 /sf	36,728
----	Fire alarm, access controls & intrusion detection & alarm	13,000.00 sf	4.52 /sf	58,765
	<i>D5030 Communications & Security</i>		7.35 /sf	95,493
	13,000.00 sf			
	<i>D50 Electrical</i>		32.21 /sf	418,702
	13,000.00 sf			
	D Element D - Services		79.13 /sf	1,028,672
	13,000.00 sf			
	01 Phase 1		198.32 /sf	2,578,156
	13,000.00 sf			



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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
02 Phase 2				
A Element A - Substructure				
<i>A10 Foundations</i>				
<i>A1010 Standard Foundations</i>				
----	Foundations	4,000.00 sf	9.50 /sf	38,000
	<i>A1010 Standard Foundations</i>		9.50 /sf	38,000
	4,000.00 sf			
<i>A1030 Slab-On-Grade</i>				
----	Slab-on-grade, 5" w/#4's @ 12" oocw	4,000.00 sf	8.50 /sf	34,000
	<i>A1030 Slab-On-Grade</i>		8.50 /sf	34,000
	4,000.00 sf			
	<i>A10 Foundations</i>		18.00 /sf	72,000
	4,000.00 sf			
<i>A20 Basement Construction</i>				
<i>A2020 Basement Walls</i>				
----	Below grade conc wall construction	250.00 sf	42.00 /sf	10,500
	<i>Includes 8" thick cjp concrete wall construction with perimeter insulation & waterproof membrane</i>			
	<i>A2020 Basement Walls</i>		2.63 /sf	10,500
	4,000.00 sf			
	<i>A20 Basement Construction</i>		2.63 /sf	10,500
	4,000.00 sf			



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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
A Element A - Substructure			20.63 /sf	82,500
	4,000.00 sf			
B Element B - Shell				
B10 Superstructure				
B1020 Roof Construction				
----	Roof construction - flat	2,220.00 sf	26.50 /sf	58,830
----	Roof construction - sloped	1,820.00 sf	24.00 /sf	43,680
	B1020 Roof Construction		25.63 /sf	102,510
	4,000.00 sf			
	B10 Superstructure		25.63 /sf	102,510
	4,000.00 sf			
B20 Exterior Enclosures				
B2010 Exterior Walls				
----	Exterior wall construction	2,100.00 sf	28.58 /sf	60,018
	<i>non-loadbearing masonry walls (ground level labs, etc) and second floor office/classroom areas can use metal stud with gyp. Stucco system on exterior.</i>			
	B2010 Exterior Walls		15.01 /sf	60,018
	4,000.00 sf			
B2020 Exterior Windows				
----	Exterior glazing @ 15% of exterior wall area	315.00 sf	55.00 /sf	17,325
	B2020 Exterior Windows		4.331/sf	17,325
	4,000.00 sf			
B2030 Exterior Doors				
----	Exterior entry doors & vestibule	0.00 ea		
----	Exterior man doors, single / double	2.00 ea	2,000.00 /ea	4,000
	10			



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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
B2030 Exterior Doors				
----	Exterior overhead doors, motor operated	1.00 ea	6,500.00 /ea	6,500
	B2030 Exterior Doors		2.63 /sf	10,500
	4,000.00 sf			
	B20 Exterior Enclosures		21.961/sf	87,843
	4,000.00 sf			
B30 Roofing				
B3010 Roof Covering				
----	Standing seam metal roofing on R-30 rigid insulation	1,820.00 sf	20.70 /sf	37,674
----	TPO membrane roofing on R-30 rigid insulation	2,220.00 sf	10.20 /sf	22,644
	B3010 Roof Covering		15.08	60,318
	4,000.00			
	B30 Roofing		15.08	60,318
	4,000.00			
	B Element B - Shell		62.67 /sf	250,671
	4,000.00 sf			
C Element C - Interiors				
C10 Interior Construction				
C1010 Partitions				
----	Interior partitions	4,000.00 sf	12.00 /sf	48,000
	C1010 Partitions		12.00 /sf	48,000
	4,000.00 sf			



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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
C1020	Interior Doors			
----	Interior doors	4,000.00 sf	5.00 /sf	20,000
	C1020 Interior Doors		5.00 /sf	20,000
	4,000.00 sf			
C1030	Fittings & Specialties			
----	Casework, shelving, fittings & specialties	4,000.00 sf	7.00 /sf	28,000
	C1030 Fittings & Specialties		7.00 /sf	28,000
	4,000.00 sf			
	C10 Interior Construction		24.00 /sf	96,000
	4,000.00 sf			
C30	Interior Finishes			
C3010	Wall Finishes			
----	Wall finishes	4,000.00 sf	3.00 /sf	12,000
	C3010 Wall Finishes		3.00 /sf	12,000
	4,000.00 sf			
C3020	Floor finishes			
----	Floor finishes	4,000.00 sf	4.00 /sf	16,000
	C3020 Floor finishes		4.00 /sf	16,000
	4,000.00 sf			
C3030	Ceiling finishes			
----	Ceiling finishes	4,000.00 sf	3.50 /sf	14,000
	C3030 Ceiling finishes		3.50 /sf	14,000
	4,000.00 sf			
	C30 Interior Finishes		10.50 /sf	42,000
	4,000.00 sf			

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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
	C Element C - Interiors		34.50 /sf	138,000
	4,000.00 sf			
D	Element D - Services			
D20	Plumbing			
D2010	Plumbing			
----	Plumbing fixtures & equipment, DW & SAS distribution	4,000.00 sf	15.22 /sf	60,860
	D2010 Plumbing		15.22 /sf	60,860
	4,000.00 sf			
	D20 Plumbing		15.22 /sf	60,860
	4,000.00 sf			
D30	Heating, Ventilation & Air Conditioning (HVAC)			
D3010	HVAC			
----	HVAC & controls	4,000.00 sf	53.15 /sf	212,580
	D3010 HVAC		53.15 /sf	212,580
	4,000.00 sf			
	D30 Heating, Ventilation & Air Conditioning (HVAC)		53.15 /sf	212,580
	4,000.00 sf			
D40	Fire Protection			
D4010	Sprinklers			
----	Fire protection system	4,000.00 sf	6.27 /sf	25,060

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University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTE)

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Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
	D4010 Sprinklers		6.27 /sf	25,060
	4,000.00 sf			
	D40 Fire Protection		6.27 /sf	25,060
	4,000.00 sf			
D50	Electrical			
D5010	Electrical			
----	Electrical service, distribution, power & lighting	4,000.00 sf	14.00 /sf	56,000
	D5010 Electrical		14.00 /sf	56,000
	4,000.00 sf			
D5030	Communications & Security			
----	Communications backbone & empty conduit (comm by owner)	4,000.00 sf	1.50 /sf	6,000
----	Fire alarm, access controls & intrusion detection & alarm	4,000.00 sf	3.00 /sf	12,000
	D5030 Communications & Security		4.50 /sf	18,000
	4,000.00 sf			
	D50 Electrical		18.50 /sf	74,000
	4,000.00 sf			
	D Element D - Services		93.13 /sf	372,500
	4,000.00 sf			
	02 Phase 2		210.92 /sf	843,671
	4,000.00 sf			

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University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTE)

Program Phase Cost Estimate
Estimate Date: 9/9/2016



Item	Description	Takeoff Qty	Total	
			Unit Cost	Amount
03 Sitework				
G Building Sitework				
G10	Site Preparation			
G1030	Earthwork / Retaining Walls			
----	Earthwork / retaining walls (see separate estimate, includes civil soft costs of 10%)	1.00 ls	328,649.73 /ls	328,650
	G1030 Earthwork / Retaining Walls			328,650
	G10 Site Preparation			328,650
G20	Site Improvements			
G2020	Parking Lots			
----	Paving (see separate estimate)	6,888.00 sy	36.75 /sy	253,134
----	Stripping, parking lot graphics & signage	1.00 allo	2,800.00 /allo	2,800
	G2020 Parking Lots			255,934
G2030	Pedestrian Paving			
----	Entry plaza paving	2,500.00 sf	6.00 /sf	15,000
	G2030 Pedestrian Paving			15,000
G2050	Landscaping			
----	Landscaping & Irrigation	1.00 allo	50,000.00 /allo	50,000
	G2050 Landscaping			50,000
	G20 Site Improvements			320,934
G30	Civil / Mechanical Utilities			
G3010	Water Supply			

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University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTEI)

Program Phase Cost Estimate
Estimate Date: 9/9/2016



Item	Description	Takeoff Qty	Unit Cost	Total	
				Unit Cost	Amount
G3010	<i>Water Supply</i>				
----	Water (see separate estimate, includes civil soft costs of 10%) <i>Does not include new 12" supply line from city (public line)</i>	1.00 Is	92,987.29 /fs		92,987
	<i>G3010 Water Supply</i>				<u>92,987</u>
G3020	<i>Sanitary Sewer</i>				
----	Sanitary Sewer (see separate estimate, includes civil soft costs of 10%)	1.00 Is	68,811.600 /fs		68,812
	<i>G3020 Sanitary Sewer</i>				<u>68,812</u>
G3030	<i>Storm Sewer</i>				
----	Storm Drain (see separate estimate, includes civil soft costs of 10%)	1.00 Is	39,051.21 /fs		39,051
	<i>G3030 Storm Sewer</i>				<u>39,051</u>
G3060	<i>Fuel Distribution</i>				
----	Natural gas line & meter	140.00 If	25.00 /ft		3,500
	<i>G3060 Fuel Distribution</i>				<u>3,500</u>
	<i>G30 Civil / Mechanical Utilities</i>				<u>204,350</u>
G40	<i>Site Electrical Utilities</i>				
G4030	<i>Sote Communications & Security</i>				
----	New telecom FO cable from CCTEI to existing telecom MH at Zollinger Library <i>Assume direct bury of FO cable</i>	600.00 If	3.50 /ft		2,100
	<i>G4030 Sote Communications & Security</i>				<u>2,100</u>
	<i>G40 Site Electrical Utilities</i>				<u>2,100</u>
	G Building Sitework				856,034
	03 Sitework				856,034

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University of New Mexico, Gallup
Center for Career Technology Education and Innovation (CCTEI)

Program Phase Cost Estimate
Estimate Date: 9/9/2016



Estimate Totals

Description	Amount	Totals	Rate	Cost per Unit
Labor				
Material				
Subcontract	4,277,861			251.639 /sf
Equipment				
Other				
	<u>4,277,861</u>	4,277,861		<u>251.639 /sf</u>
General Requirements	342,229		8.000 %	20.131 /sf
General Contractor OH&P	231,004		5.000 %	13.588 /sf
Performance & Payment Bond	121,277		2.500 %	7.134 /sf
	<u>694,510</u>	4,972,371		<u>292.492 /sf</u>
Contingency	248,619		5.000 %	14.625 /sf
	<u>248,619</u>	5,220,990		<u>307.117 /sf</u>
Photovoltaic Panels (180 kW)	1,232,604			72.506 /sf
Bridge Crane, 25ton capacity	134,244			7.897 /sf
	<u>1,366,848</u>	6,587,838		<u>387.520 /sf</u>
NMGRT	547,614		8.313 %	32.213 /sf
	<u>547,614</u>	7,135,452		<u>419.732 /sf</u>
Total		7,135,452		419.732 /sf

Furniture, Fixtures & Equipment (FF&E) costs including Dust Collection equipment is excluded

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Appendix

Parallel Efforts - Dr. Dyer Public/Private Partnership Pursuits

6. Appendix

Activities Parallel to the Programming of CCTEI

Raw data taken from the meeting minutes concerning Dr. Dyer's vision, public private partnerships, SCIPS panels, private sector funding options, and other items running parallel to the UNM PDC programming.

Dr. Christopher Dyer CEO of UNM-Gallup is exploring several community partnerships to prepare an educated workforce to meet local labor needs. Dr. Dyer has been building relationships with the community through Community outreach, hosting community training and certification programs on campus. He is hoping to foster Economic development in the area through university lead initiatives.

One of these initiatives is a manufactured housing project intended to build 500-1,000 homes per year starting for the surrounding community. UNM-Gallup is partnering with Gallup Land Partnership is another initiative to create a high-tech business incubator, which would require technical education; they hope to work with the NM Aging & Long-Term Services Department for elder healthcare services.

For the manufactured housing program, UNM-Gallup Construction Tech would train cohorts of 4-5 people in each chapter house on the Navajo Nation to construct small homes for people in need.

Dr. Dyer also mentioned a partnership with Ed Munoz on a direct current converter for appliances to be used directly with solar panels. This partnership will be useful with the proposed housing project for the Navajo nation and the Construction Tech program.

Dr. Dyer has been seeking private partnerships to aid in the funding of this building.

Steve was contacted by our team gave a 10 minute overview of how the Structural Insulated Panel (SIP) product developed. Steve and Dr. Dyer have been attempting to form a public/private partnership.

- A. The SIP Panels were envisioned as a response to "stick" built wood construction and sustainability concerns.
- B. The SIP panels are still being researched and tested as a structure supported cladding system but the company hopes to have a tilt up style self-supported structural panel in the future.
- C. The SIP panels are being tested with a rating of 211 MPH wind resistance.
- D. More information and discussion on the assembly and panel sizes can be found on the [website](#).
- E. Dr. Dyer expressed that the CCTEI building will likely need more funding than the state can provide and will need to be a public/private venture.
- F. Dr. Dyer mentioned other partnership opportunities that may assist with aid or in-kind donations, i.e. Robert Roche and Adam Wilkey of Gallup Land Partners and BNSF railroad for freight transport of SIPS panels.
- G. Dr. Dyer expressed the desire to have Tynn (SMPC) and Steve accompany him September 11-12 at the Jobs Counsel meeting in Santa Fe to support opportunities for funding for UNM-G CCTEI.
- H. A private construction company may offer the building material to UNM-G at a discount which would allow UNM G to build for less or expand the building size. Dr. Dyer expressed a desire for CCTEI to be a showcase for the SIP panel construction material and innovative sustainable construction techniques.
- I. Dr. Dyer mentioned a portion of the CCTEI building could be a named in honor of large financial contributors. Ben Savoca asked that the UNM Naming Committee be consulted.
- J. UNM-G has looked to form partnerships so they are not solely relying on the HED for funding.

6. Appendix

Steve Markham and Dr. Dyer expressed the possibility of a manufacturing plant for SIP panels in Gallup employing 300-500 people as a possible goal; local job opportunities in manufacturing, sales and business. The local manufacturing of the products would have many benefits:

- A. Students at UNM-Gallup will use the panels to create modular housing as a part of the advance and Sustainable Construction Tech curriculum.
- B. Opportunity for modular housing program providing homes for the neighboring community. Other entities may be included in the modular home construction such as solar, PV and water heating.
- C. Dr. Dyer expressed that he has had conversation with the Governor's office and they are excited about the prospect of job creation this partnership might create.
- D. Steve believes that the SIPS panel project can have a global impact by creating new building systems that can help with the global housing crises. Dr. Dyer doesn't want to miss the opportunity and be "short circuited by shortsighted thinking."

The possibility of a manufacturing plant in Gallup employing 300-500 people is an end goal. The local manufacturing of the products is one piece of three, the second is the students at UNM-Gallup will use the panels to create modular housing. Other entities may be included in the modular home construction such as solar, PV and water heating.

Construction of the CCTEI facility may require a public-private partnership. Funding was removed from the State GO Bond list. At present, there is no funding for construction of the new CCTEI building. UNM-Gallup May look for grants, such as the EDA, the Power Grant from the Department of Commerce, or the USDA. and other potential private partners. They are developing a Potential SCIPS panels a manufacturing partnership may be established with the university.

PDC shared the 2015 State Legislative Capitol project evaluation for the CCTE/CCTEI building.

- A. This document has specific language that limits the project scope of the initial 13,000 GSF to be programs "focusing on construction technologies."
- B. The language for phase 2 does not specify that the additional 4,000 GSF be dedicated to construction technologies. SMPC will perform further investigation to understand if including the EMS program in phase 2 is feasible and a good fit.
- C. Brian will work with Dr. Dyer to explain the legislative language that limits program types for the phase 1 project of 13,000 GSF.

PDC explained that \$350,000 was allocated for planning and design of the building. Currently there is no funding in place for construction.

6. Appendix

The use of the SCIPS panels may reduce construction costs for the CCTEI building and be parlayed into a larger building. Dr. Dyer believes that the CCTEI building could be 25,000sf. Ben Savoca reiterated that the scope is currently set at phase 1- 13,000sf and Phase 2 – 4,000sf.

A private sector company may offer the building material to UNM-G at a discount which would allow UNM G to build for less or expand the building size. UNM-G has looked to form partnerships so they are not solely relying on the HED for funding. The jobs council may become involved. The governor's office likes the jobs prospect. The panels are being tested and a rating of 211 MPH wind resistance was mentioned. More information and discussion on the assembly and panel sizes will be forthcoming.

Dr. Dyer gave an updated of current projects on the UNM-G campus other than the CCTEI building.

- A. New 10" water line to the campus.
- B. New Physical Plant Department is on the next GO Bond proposal.

Dr. Dyer provided an update on his efforts towards capital support for the CCTEI building and the UNM-Gallup campus.

- A. Dr. Dyer acknowledged the restrictions but reiterated that the building must be thought of as "LEGO's" or continually expandable and flexible to meet the needs of Career Technology programs.
- B. Ben also reiterated that workforce funding is going to be looking at student per square foot numbers when determining appropriate funding.
- C. Dr. Dyer explained that he will be meeting with the UNM Provost to discuss "sovereignty" in regards to UNM-G and UNM Main Campus. Dyer wants UNM-G to always to respond to local needs of the community. Also, he would like to make UNM-G a place of greater opportunity.
- D. Dr. Dyer describe the need to increase the "Fascination Index," that is the ability to bring people back to campus.
- E. Brian reiterated that we are doing everything we can but that we have some restrictions.

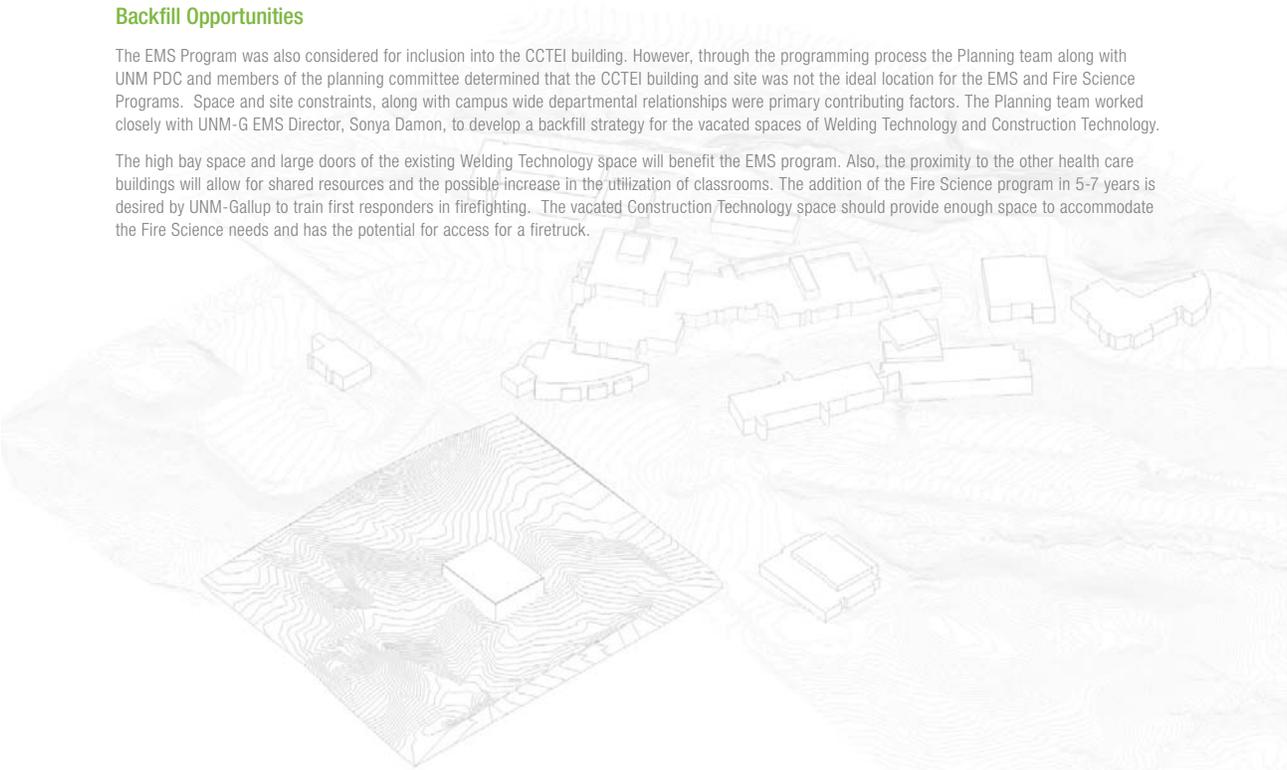
Appendix Backfill Opportunities

6. Appendix - Backfill Opportunities - EMS Programming

Backfill Opportunities

The EMS Program was also considered for inclusion into the CCTEI building. However, through the programming process the Planning team along with UNM PDC and members of the planning committee determined that the CCTEI building and site was not the ideal location for the EMS and Fire Science Programs. Space and site constraints, along with campus wide departmental relationships were primary contributing factors. The Planning team worked closely with UNM-G EMS Director, Sonya Damon, to develop a backfill strategy for the vacated spaces of Welding Technology and Construction Technology.

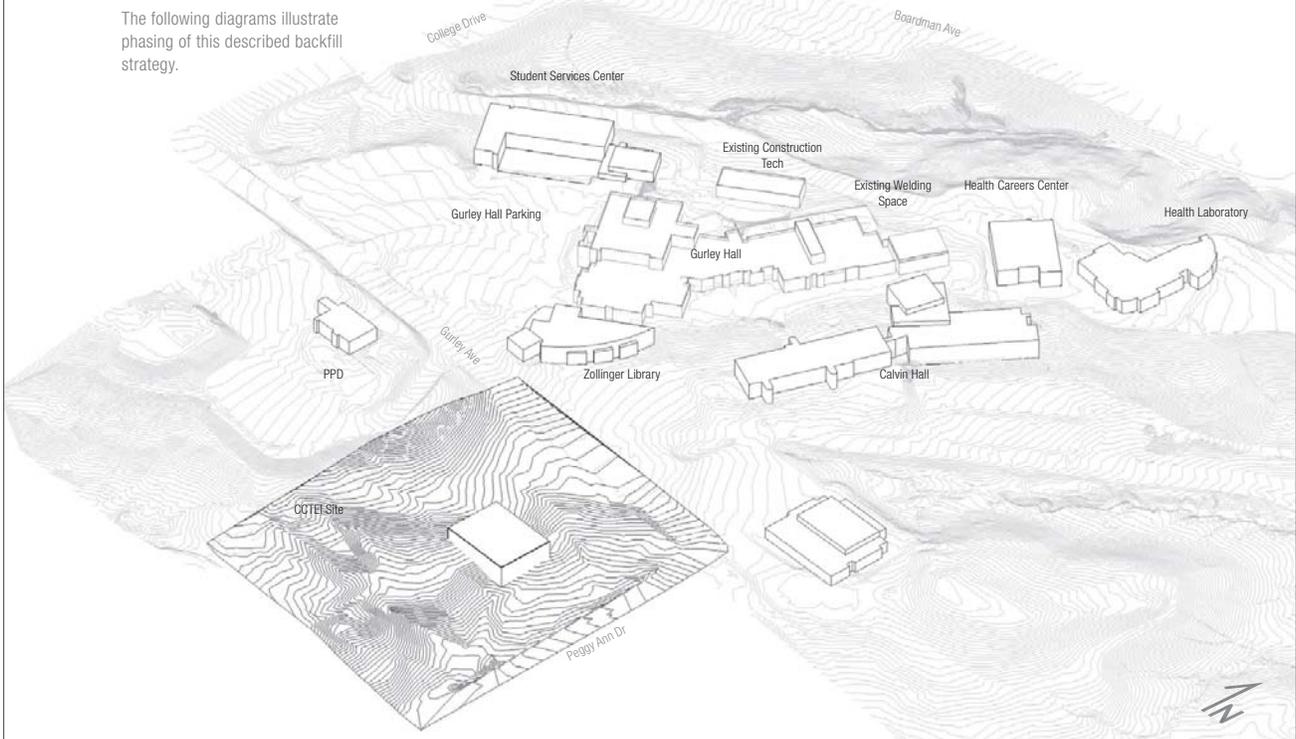
The high bay space and large doors of the existing Welding Technology space will benefit the EMS program. Also, the proximity to the other health care buildings will allow for shared resources and the possible increase in the utilization of classrooms. The addition of the Fire Science program in 5-7 years is desired by UNM-Gallup to train first responders in firefighting. The vacated Construction Technology space should provide enough space to accommodate the Fire Science needs and has the potential for access for a firetruck.



6. Appendix - Backfill Opportunities - EMS Programming

Backfill Opportunities

The following diagrams illustrate phasing of this described backfill strategy.

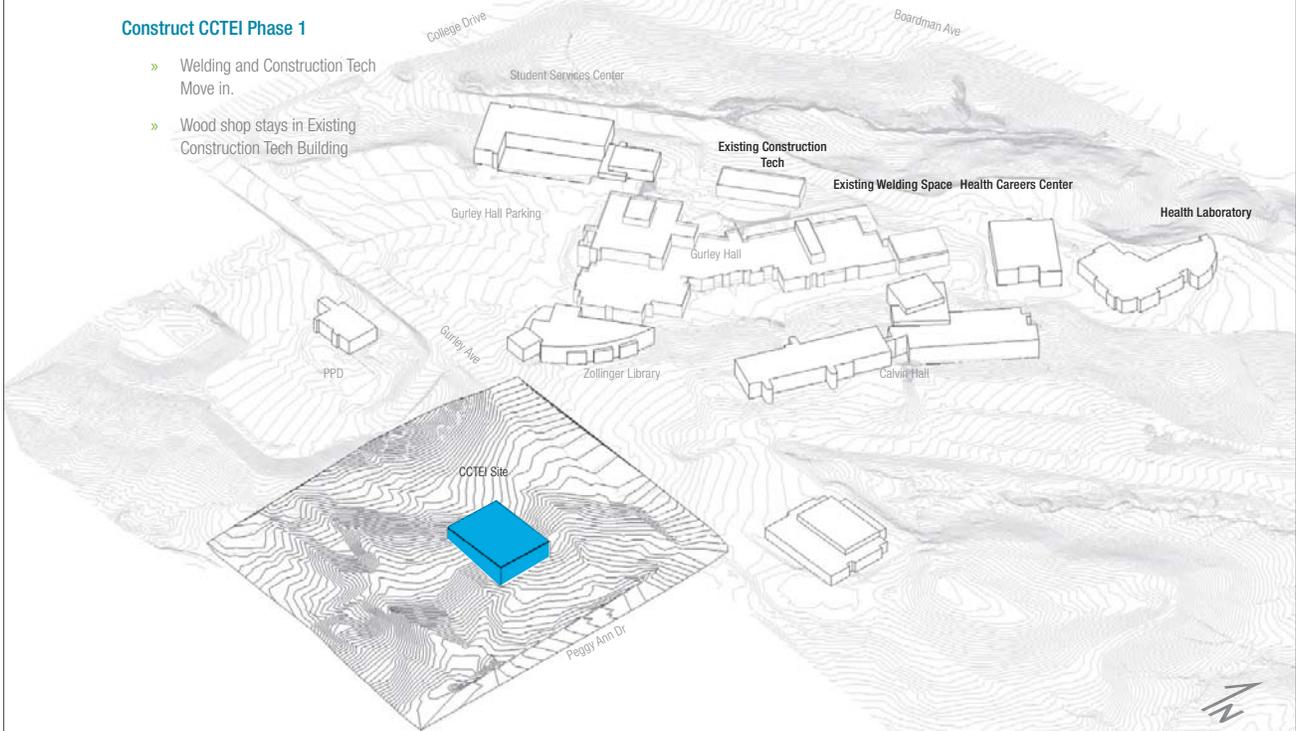


6. Appendix - Backfill Opportunities - EMS Programming

Campus Plan Phase 1:

Construct CCTEI Phase 1

- » Welding and Construction Tech Move in.
- » Wood shop stays in Existing Construction Tech Building



6. Appendix - Backfill Opportunities - EMS Programming

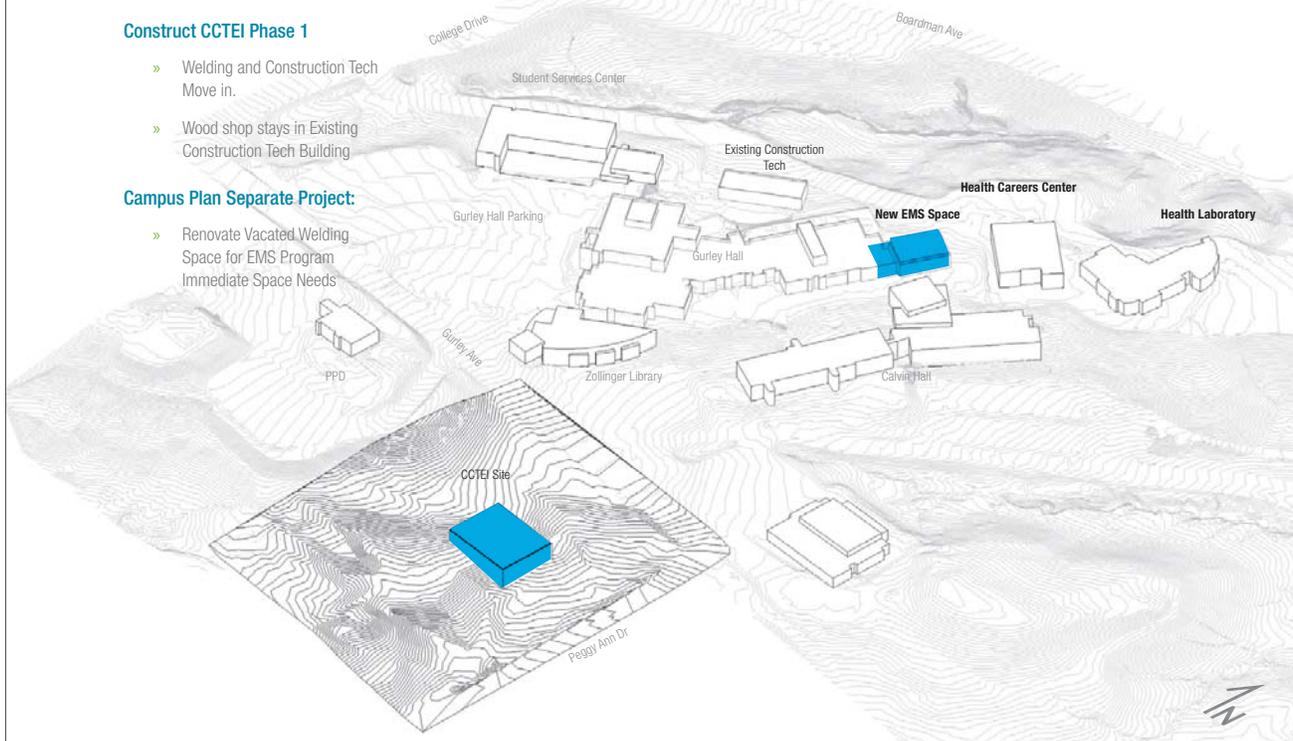
Campus Plan Phase 1:

Construct CCTEI Phase 1

- » Welding and Construction Tech Move in.
- » Wood shop stays in Existing Construction Tech Building

Campus Plan Separate Project:

- » Renovate Vacated Welding Space for EMS Program Immediate Space Needs

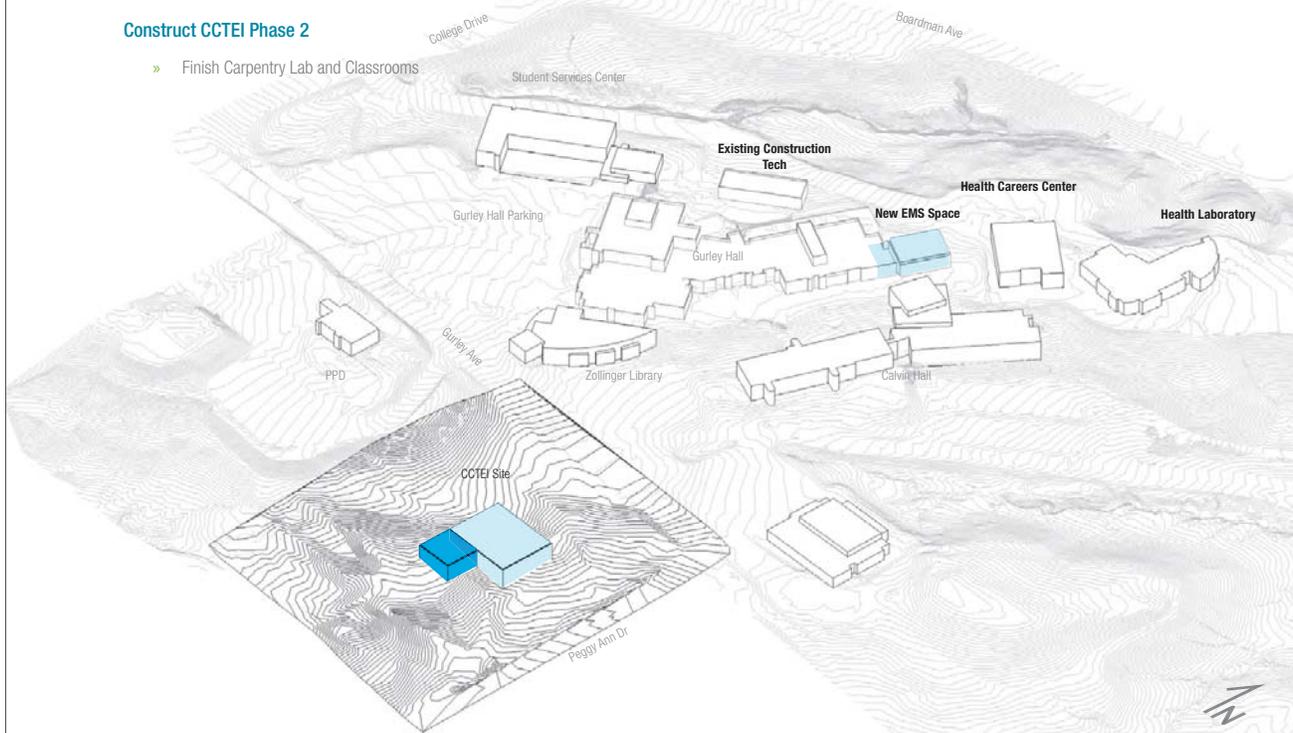


6. Appendix - Backfill Opportunities - EMS Programming

Campus Plan Phase 2:

Construct CCTEI Phase 2

- » Finish Carpentry Lab and Classrooms



6. Appendix - Backfill Opportunities - EMS Programming

Campus Plan Phase 2:

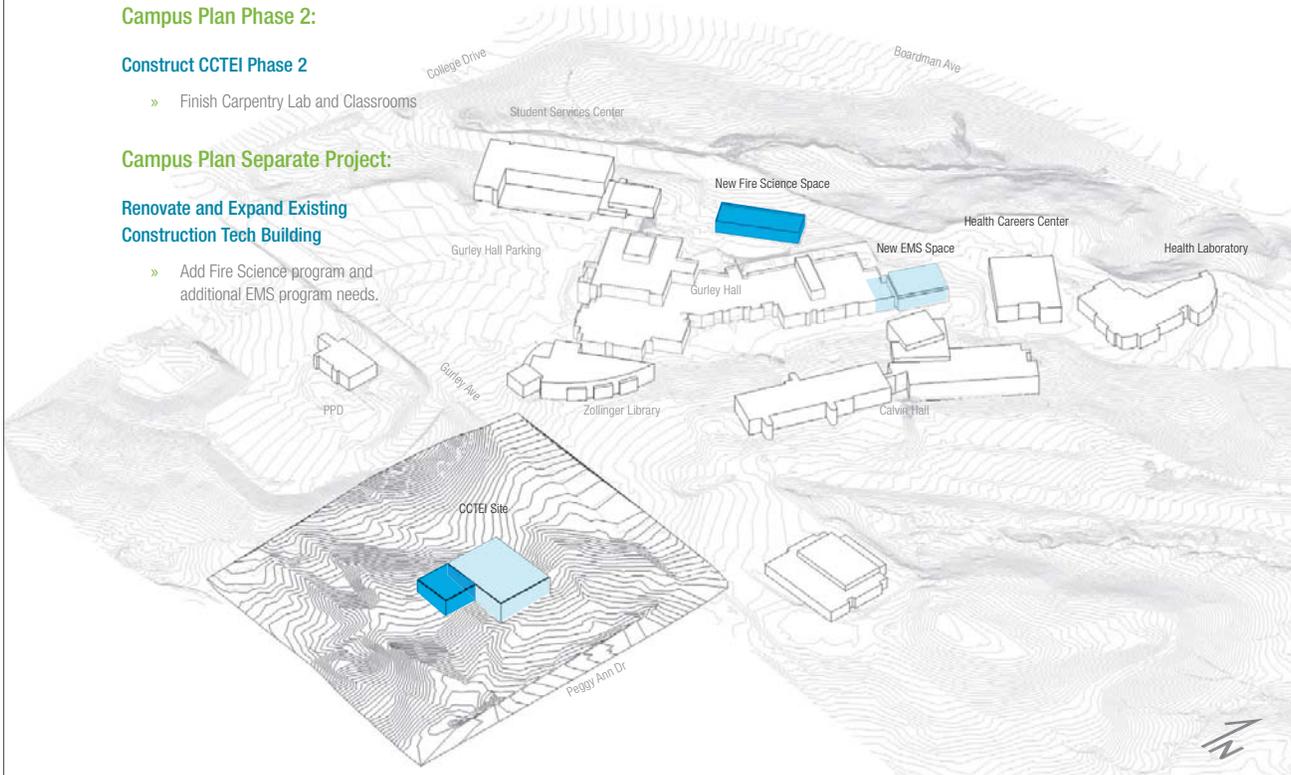
Construct CCTEI Phase 2

- » Finish Carpentry Lab and Classrooms

Campus Plan Separate Project:

Renovate and Expand Existing Construction Tech Building

- » Add Fire Science program and additional EMS program needs.



6. Appendix - Backfill Opportunities - EMS Programming

Health Programs

The planning team performed programming services for the EMS and Fire Science program to identify their current and future needs as it is a new and growing curriculum offered by UNM-Gallup. Information regarding backfill opportunities for the EMS Program was compiled through charrettes, meetings, site visits, classroom observation and UNM-G Facilities Master Plan reviews. The planning team worked very closely with faculty and student representatives of the EMS and Fire Science programs to develop the program scope and desired relationships of departments and program components.

The various concerns of all constituents involved were synthesized to develop a preliminary EMS and Fire Science Program. The following Existing Conditions Assessment, Needs Assessment, Space Descriptions and Space Program Matrix compile data from all these constituents.

Existing Conditions Assessment

The following is a list of issues concerning the existing facilities of the EMS Program as observed by the Planning team.

EMS Program:

- » No space to grow Program
- » Need Curriculum Specific Spaces
- » Storage is Not Sufficient
- » Space for Outside Teaching Exercises
- » Specific Space requirements for Accreditation
- » Interior Ambulance Bays Needed for Overnight Security
- » Interior Fire Truck Bay Needed for Fire Science Program
- » No Space for Students to Collaborate and Study on Campus.



6. Appendix - Backfill Opportunities - EMS Programming

Needs Assessment

The following is a list of suggested needs that should be incorporated into the renovated vacated spaces for the EMS Program as a response to the Existing Conditions Assessment, student input and classroom observations by the Planning team.

EMS Program:

- » Classroom Labs
 - › One room Optimal for Station Set up
 - › One room set up as a "Sitcom Set"
- » Simulation Lab and Observation Room
- » Large storage Room
 - › Adjacent to Classroom Labs and Simulation Lab
- » Faculty Offices for Growth
- » Interior and Exterior Ambulance Bays
- » Interior and Exterior Fire Truck Bay
 - › Exhaust Snorkel
 - › Lockers, Showers, Laundry



Sitcom Set - LinYanhua Design



Example of a Simulation Lab - Estrella Mountain Community College Learning Studio

6. Appendix - Backfill Opportunities - EMS Programming

Student Input:

The following is a list of suggestions and desires that should be incorporated into the renovated vacated spaces for the EMS Program as a response to input from student representatives that met with the design team.

EMS Program

- » Better Seamless Technology for the classroom
- » More Flexible Furniture - Fold-able, On Casters
- » The ability to create real life scenarios in classroom and Simulation Lab
- » Dimmable Lighting and blackout shades
- » Sound System
- » On Campus Study Space
- » Tabular List of Spaces
- » Incorporation of Vending Machines

Social Spaces

- » More Outlets
- » Vending Machines
- » Access to Computers
- » Access to Parking

Space Description Summaries

The following is a list of the unique spaces for EMS and Fire Science Programs with brief descriptions of their functions.

EMS Spaces:

Classroom Lab – Stations

The Classroom Lab Stations is a large flexible classroom with movable furniture on casters that allow the room to be set up in a number of different configurations. This room will predominately be set up with teaching stations for group work. This room should be located immediately adjacent to the Classroom Lab – Vignettes room with a shared foldable partition between the two rooms. This room should also be immediately adjacent to the Large Storage room. This room needs to be equipped with dimmable lighting, blackout shades and a sound system to simulate real world scenarios. This room should at minimum consist of Tier Two Technology as laid out by the UNM-LEDG Technology Standards.

Classroom Lab – Vignettes

The Classroom is a room with built in vignettes similar to that of a television Sitcom Set. The vignettes need to consist of various simulated real world environments for the training and education of first responder scenarios to students. The design team will work closely with the EMS program director to define the specific vignettes. At a minimum the space should include a domestic living environment, restroom, and stairs. This room should be located immediately adjacent to the Classroom Lab – Stations room with a shared foldable partition between the two rooms. This room should also be immediately adjacent to the Large Storage room. This room needs to be equipped with dimmable lighting, blackout shades and a sound system to simulate real world scenarios. This room should at minimum consist of Tier Two Technology as laid out by the UNM-LEDG Technology Standards.

6. Appendix - Backfill Opportunities - EMS Programming

Simulation Lab

The Simulation Lab is a space to test and observe students on various first responder scenarios. This room should be immediately adjacent to the Observation room with one-way glass from the observation room. This room should also be immediately adjacent to the Large Storage room. This room needs to be equipped with dimmable lighting, blackout shades and a sound system to simulate real world scenarios.

Observation Room

The observation room is a room immediately adjacent and with one-way glass into the Simulation lab. This room will be equipped with various monitors connected to cameras in various positions in the Simulation lab. All lighting and sound controls for the Simulation Lab will be housed in this room. This room should have dimmable lighting.

Classroom Lab and Simulation Lab Storage Room

The Classroom Lab and Simulation Lab Storage Room is a very large storage room immediately adjacent to the Classroom Labs and Simulation Room. This room houses all of the teaching and simulation equipment used for recreating first responder scenarios. This room will have perimeter shelving and lockable cabinetry along with freestanding shelving of various sizes and capacity.

Collaboration/Agility Space

The Collaboration/Agility Space is a social space that promotes student interaction and provides areas for group and individual study. This space should provide a variety of seating options and numerous outlets for student to charge personal devices. This space is not an enclosed space but part of or open to the buildings circulation path. Vending Machines and restrooms should be located near this area.

Faculty and Staff Office and Adjunct Faculty Shared Office

The Faculty and Staff offices will follow the UNM Office Space Guidelines.

Interior Bays Ambulance

An Interior Bay for an Ambulance is required to securely store an Ambulance on campus overnight and when not in use. The space should provide enough room to allow for a small instructional space and the Ambulance.

Exterior Yard

An Exterior Yard is required for the instruction of numerous first responder techniques, ie "Jaws of Life", maneuvering of patient gurney. This space needs to provide access and ample space for the McKinley County Fire Department's equipment trailer and other equipment.

6. Appendix - Backfill Opportunities - EMS Programming

Fire Science Spaces:

Laundry space

The Laundry Space is needed for the Fire Science Program and the washing of equipment and firefighting apparel.

Student Lockers

Student lockers are need for student to store firefighting apparel and their normal clothing. The size of these lockers will have to be verified in the design process.

Interior Bay - Fire Truck

The Interior Bay - Fire Truck is a space that will house a fully operational fire truck. This space needs to include an exhaust and snorkel system to allow the fire truck to be running while in the interior. This space needs to provide room for the fire truck and instructional space adjacent to the firetruck. Ideally this space will have outside access both to the front and rear of the fire truck to allow it to drive completely through the building.

Classrooms (Lecture Rooms)*

The Classrooms are standard lecture style classrooms and should follow the UNM LEDG design guidelines. Ideally these classrooms would be grouped in pairs with a shared folding partition to allow the rooms to become one larger space. The classrooms should at a minimum consist of Tier Two Technology as laid out by the UNM-LEDG Technology Standards.

**These classrooms are not being considered as part of the space requirements because it is believed that there will be underutilized classrooms once Construction Tech, Welding Tech and EMS move to new spaces. Further utilization studies are needed to determine the need for additional classrooms.*

Computer Lab*

The future Computer Lab is a standard UNM Computer Lab. The Computer Lab will provide 30 workstations and will follow the UNM IT Design Standards. This space will also be used for testing and certification purposes.

* Scheduling a computer classroom is currently difficult for the EMS program. The planning team has suggested that UNM PDC evaluate the need for an additional Computer Lab on campus and explore the possibility of converting an existing under-utilized classroom into a new computer lab. For this reason the computer lab is not being considered as part of the space requirements.

6. Appendix - Backfill Opportunities - EMS Programming

Space Program Matrix

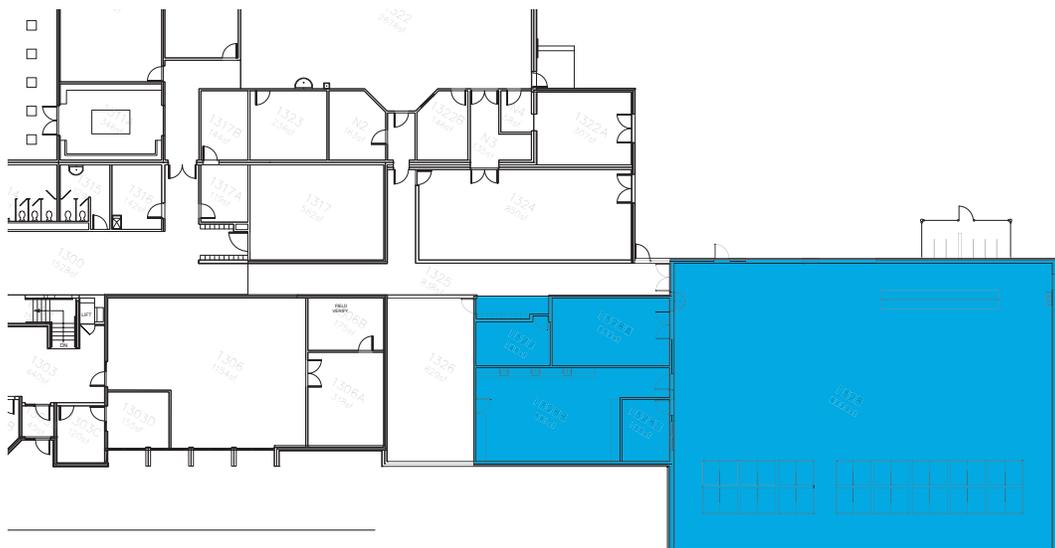
The following is a compiled matrix that incorporates the Spaces described above with quantified Net areas, compiled net areas and calculated total gross areas.

Health Program					
Department	Room Name	# of Spaces	Net Area SF	Compiled Net SF	Notes
Initial Needs:					
EMR, EMT Basic, EMT Intermediate, Paramedic	Classroom Lab - Stations/Vignettes	2	840	1,680	Paired w/ folding partition between rooms. One room to resemble real life vignette scenarios i.e. bedroom, kitchen, living room, bathroom. Second room to accommodate 4 stations @ 12'x12'. Large Storage room adjoin.
	Simulation Lab	1	600	600	Movable partitions for 2-3 separate areas. Next to Observation room
	Observation Room	1	150	150	One way glass into Simulation Lab
				2,430	
Storage	Classroom Lab and Simulation Lab Storage Room	1	1,200	1,200	Should be next to Classroom Lab. Based on Sonya's request
				1,200	
Support Spaces	Collaboration/Agility Space	1	200	200	
	Men's Restroom	1	250	NA	*Part of Building Gross Factor or Existing Building Infrastructure
	Women's Restroom	1	250	NA	*Part of Building Gross Factor or Existing Building Infrastructure
	Universal Restroom	1	100	NA	*Part of Building Gross Factor or Existing Building Infrastructure
	Mechanical			NA	*Part of Building Gross Factor or Existing Building Infrastructure
	IT	1	120	NA	*Part of Building Gross Factor or Existing Building Infrastructure
	Electrical	1	120	NA	*Part of Building Gross Factor or Existing Building Infrastructure
	Custodial	1	85	NA	*Part of Building Gross Factor or Existing Building Infrastructure
				200	
Administration	EMS Director office	1	200	200	
	Faculty and Staff Office	1	100	100	Clinical Coordinator office, Medical Director, Paramedic Program Coordinator, Intermediate/basic Program Coordinator, and Internship Coordinator
	Adjunct Faculty - Shared Office	1	320	320	5 Adjuncts @ 64sf
	Work/Print/Break Room	1	200	200	
				820	
Ambulance and Fire truck Bays	Interior Bays Ambulance	2	280	560	Fire Truck - 40' x 50' space for a 36' Truck.
	Exterior bays - Ambulances	2	280	NA	
	Exterior Yard	1	500	NA	Exterior yard will allow not only for access but instruction on how to operate the Jaws of Life. Needs to accommodate McKinley County Fire Departments trailer used for hauling equipment for instruction
				560	
				Total Net SF	5,210
				Building Gross Factor	1,20
				Total Gross SF	6,252
9/1/2016 Part of Renovated Existing Building					

6. Appendix - Backfill Opportunities - EMS Programming

Existing Welding Space

Space Available: 6,221 SF



6. Appendix - Backfill Opportunities - EMS Programming

Fire Science Needs:

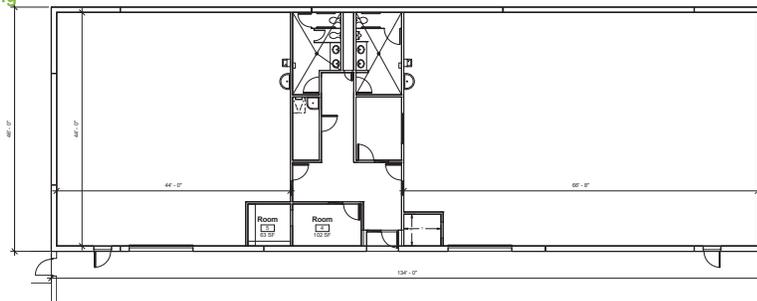
Fire Science and EMS Expansion	Laundry space	1	150	150	Front Loading - To accommodate Fire Fighting Gear.
	Student Lockers	1	200	200	Near Fire Truck - For Fire Safety Students only.
	Student Showers	2		2	
352					
Administration	Faculty and Staff Office	4	100	400	Clinical Coordinator office, Medical Director, Paramedic Program Coordinator, Intermediate/basic Program Coordinator, and Internship Coordinator
	Conference Room	1	240	240	
	Break Room/Kitchenette?	1	120	120	
760					
Ambulance and Fire truck Bays	Interior Bays	1	2,000	2,000	Fire Truck - 40' x 50' space for a 36' Truck.
	Exterior Bays - Fire Truck	1	1,000	NA	
2,000					
Total Net SF				3,112	
Building Gross Factor				1.60	Based on UNM LEDG - Mixed Use (Office + Classroom)
Total Gross SF				4,979	

Shared Space Needs:

Classrooms (Lecture Rooms)	3	840	2,520	Grouped in pairs w/ folding partition between to allow for two larger classrooms.]	
				Accommodate 30 students - UNM PDC evaluate need to convert an existing classroom to an additional 925 Computer Lab.	
Computer Lab	1	925			
3,445					
Storage	Classroom Storage	1	85	85	
85					

Existing Construction Tech Building

Space Available: 5,808 GSF



6. Appendix - Backfill Opportunities - EMS Programming

Adjacency Diagrams

As a part of the planning and programming process it is important to understand how functional spaces will be used in relation to each other for the building design. The Planning team conducted a brief charrette with the Director of the EMS program and UNM PDC to determine optimum space adjacencies. The exercise consisted of using colored circles, or 'bubbles', representing programmed spaces proportionally sized to their space requirements. Working together the team developed the following desired Adjacency Diagrams.

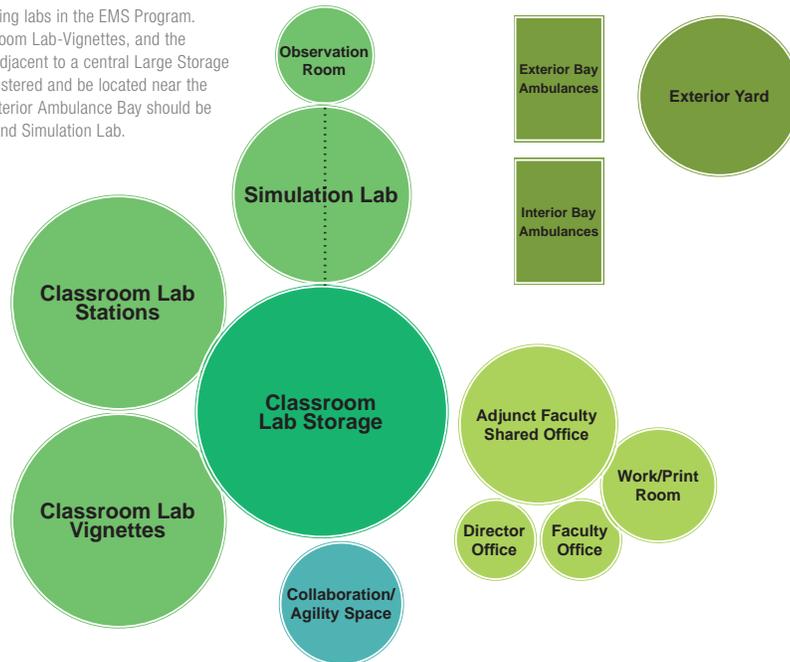


6. Appendix - Backfill Opportunities - EMS Programming

Adjacency Diagrams

EMS Program Immediate Needs and Desired Adjacencies.

This first set of diagrams describes the immediate needs and desired adjacency of the main teaching labs in the EMS Program. The Classroom Lab-Stations, Classroom Lab-Vignettes, and the Simulation Lab are all immediately adjacent to a central Large Storage Room. Faculty offices should be clustered and be located near the Collaboration/ Agility Space. The Interior Ambulance Bay should be located near the other Classrooms and Simulation Lab.

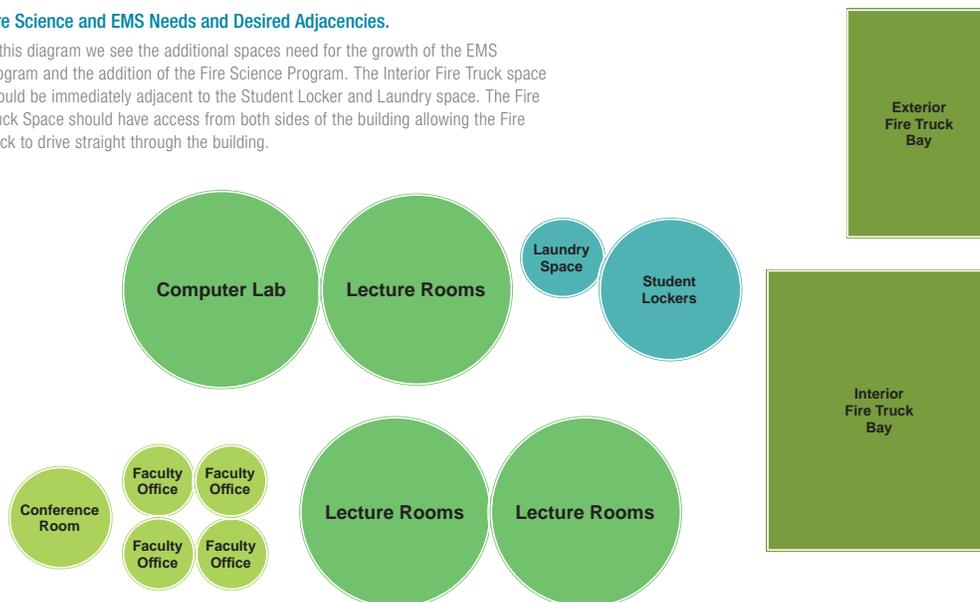


6. Appendix - Backfill Opportunities - EMS Programming

Adjacency Diagrams

Fire Science and EMS Needs and Desired Adjacencies.

In this diagram we see the additional spaces need for the growth of the EMS Program and the addition of the Fire Science Program. The Interior Fire Truck space should be immediately adjacent to the Student Locker and Laundry space. The Fire Truck Space should have access from both sides of the building allowing the Fire truck to drive straight through the building.



Appendix Room Data Sheets

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Classroom (Phase 2 Computer Lab)	925 NSF	
<p>NUMBER OF SPACES: 1 OCCUPANTS: 30 students, 1-2 teachers FREQUENCY: 5 days/week CLASSES: Construction Technology degree and certificate programs</p>		
<p>ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views VENTILATION: Standard FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, gypsum board on metal studs LAYOUT: Flexible classroom configuration with tables and chairs for 30 students. Anticipate as Computer Lab in Phase 2. Adjacent to Computer Fab Lab. Adjacent to Multi-Use Lab. Adjacent to Welding Lab. Access from Hall. Shared office space.</p>		
<p>EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, tables and seating for 30 students, flat file storage cabinets. Phase 1 faculty work room/area with desks, lockable storage, seating, to be future plotter & printer room/area for computer lab.</p>		
<p>PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard</p>	<p>ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable) POWER: multiple outlets at all walls, coordinate for future computer lab SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate for future computer lab</p>	
<p>REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for Classroom/Computer Lab, minimum Tier Two Technology.</p>	<p>PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)</p>	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Upper Level	Phase 1
Collaboration/Agility Space	300 NSF	
NUMBER OF SPACES: 1 OCCUPANTS: 15-20 students/teachers FREQUENCY: 5 days/week CLASSES: Construction Technology degree and certificate programs		
ENVIRONMENT – to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views, windows overlook into Welding and Multi-Use Labs VENTILATION: Standard FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, gypsum board on metal studs LAYOUT: Flexible space with individual and group furnishings for study and interaction. Access from Upper Level Hall.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, study tables and chairs, lounge tables and seating.		
PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 10'-0" height DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard REMARKS Agility space to be used for group or individual study, planned or impromptu meetings, potential place for book or media share.	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable) POWER: multiple outlets at all walls, coordinate with furnishings SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with furnishings PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS – zoned Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Computer Fabrication Lab	800 NSF	
NUMBER OF SPACES: 1 OCCUPANTS: 20 students, 1-2 teachers FREQUENCY: 3-5 days/week CLASSES: Construction Tech courses including framing, HVAC Tech, and assembly and construction of building projects		
ENVIRONMENT – to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views VENTILATION: Increased ventilation and exhaust FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, masonry wall LAYOUT: Configured to function with dedicated computer stations at each machine. Adjacent to Classroom/Computer Lab. Adjacent to Multi-Use Lab. Adjacent to Welding Lab.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, CNC machines, laser cutter, plasma cutter, electromagnetic shielded computer workstations.		
PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: exposed structure, minimum 10'-0" height clear DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed. DOOR HARDWARE: per UNM-G Standard REMARKS	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 4000K, surface mount, uniform, multi-level switching POWER: multiple outlets at all walls, coordinate locations with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with equipment PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS – zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Multi-Use Lab (Construction) Yard		2540 NSF
NUMBER OF SPACES: 1 OCCUPANTS: 30 students, 1-2 teachers FREQUENCY: 3-5 days/week CLASSES: Construction Tech courses including framing, HVAC Tech, and assembly and construction of building projects		
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: ~ VENTILATION: ~ FINISHES: ~ FLOOR/WALL: Concrete slab, masonry wall, fence LAYOUT: Partially covered, with area for construction and storage sheds and cribs for machines, equipment, tools. Adjacent to Multi-Use Lab. Adjacent to Welding Yard.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE rough lumber, stock materials, small equipment, rammed earth machine, cement mixers, band saw lumber mill, tools, gas-powered machines, bulk material		
PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: sound absorption panels on high bay walls above 10' WINDOWS: shading system, as required CEILING: ~ DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed, coiling door from Lab, truck access DOOR HARDWARE: per UNM-G Standard REMARKS	ELECTRICAL NEEDS EXTERIOR LIGHTING: LED POWER: outlets at all walls SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data/voice at teaching nook wall PLUMBING NEEDS FIRE SUPPRESSION SYSTEM Eye wash station HVAC NEEDS - zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Multi-Use Lab Tool Crib Storage		200 NSF
NUMBER OF SPACES: 1 OCCUPANTS: ~ FREQUENCY: 3-5 days/week CLASSES: Construction Tech courses including framing, HVAC Tech, and assembly and construction of building projects		
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: ~ VENTILATION: Exhaust and filtration (scrubber) equipment to remove impurities responsibly FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, masonry wall LAYOUT: Adjacent to Multi-Use Lab.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Personal protective equipment (PPE), construction tech equipment and tools, HVAC specialty equipment, compressed air.		
PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: ~ CEILING: exposed structure, minimum 9'-0" height clear DOOR/FRAME: metal DOOR OPENING(S): cage DOOR HARDWARE: per UNM-G Standard REMARKS	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, pendant, uniform, multi-level switching POWER: Numerous outlets required to support battery charging station SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data/voice at teaching nook wall PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS - zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.	

6. Appendix - Room Data Sheets

Multi-Use Lab		2100 NSF
NUMBER OF SPACES: 1		
<p>ENVIRONMENT - to meet minimum LEED Silver requirements</p> <p>DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views</p> <p>VENTILATION: Exhaust and dust collection equipment to remove impurities responsibly</p> <p>FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds</p> <p>FLOOR/WALL: Concrete slab, masonry wall</p> <p>LAYOUT: Large flexible space for multiple construction projects, space for beam crane to move assemblies from interior to exterior, HVAC Lab Storage with 6'-0" wide door opening, and teaching nook. Adjacent to Multi-Use Lab Tool Crib Storage. Adjacent to Construction Yard. Adjacent to Welding Lab.</p>		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE		
<p>PREFERRED ELEMENTS</p> <p>FLOOR: polished, sealed, or coated concrete</p> <p>WALL BASE: 4" height rubber wall base</p> <p>WALL: semi-gloss low or no VOC paint, light color</p> <p>WALL TREATMENT: sound absorption panels on high bay walls above 10'</p> <p>WINDOWS: shading system, as required</p> <p>CEILING: exposed structure, high bay 18 feet height clear</p> <p>DOOR/FRAME: metal</p> <p>DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed, coiling door to construction yard.</p> <p>DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS</p> <p>Consider relocating existing sawdust vacuum system</p>	<p>ELECTRICAL NEEDS</p> <p>INTERIOR LIGHTING: LED, 4000K, pendant, uniform, multi-level switching</p> <p>POWER: multiple outlets at all walls, coordinate locations with equipment</p> <p>SPECIAL SYSTEMS NEEDS</p> <p>CAMPUS CLOCK SYSTEM: per UNM-G Standard</p> <p>CENTRAL SOUND SYSTEM: per UNM-G Standard</p> <p>SECURITY SYSTEM: per UNM-G Standard</p> <p>DATA/VOICE/VIDEO: data/voice at teaching nook wall</p> <p>PLUMBING NEEDS</p> <p>FIRE SUPPRESSION SYSTEM</p> <p>Eye wash station</p> <p>HVAC NEEDS - zoned per lab</p> <p>Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.</p>	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Welding Lab Tool Crib Storage		200 NSF
<p>NUMBER OF SPACES: 1</p> <p>OCCUPANTS: ~</p> <p>FREQUENCY: 3-5 days/week</p> <p>CLASSES: Arc Welding, Advanced Arc Welding, OxyFuel Welding, Pipe Welding, Stick Welding, M.I.G (Gas Metal Arc) & T.I.G. (Gas Tungsten Arc) Welding</p>		
<p>ENVIRONMENT - to meet minimum LEED Silver requirements</p> <p>DAYLIGHTING & VIEWS: ~</p> <p>VENTILATION: Exhaust and filtration (scrubber) equipment to remove impurities responsibly</p> <p>FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds</p> <p>FLOOR/WALL: Concrete slab, masonry wall</p> <p>LAYOUT: Adjacent to Welding Lab.</p>		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Personal protective equipment (PPE), welding equipment-cutting torches, plasma cutting, pipe beveling, portable gas tanks, welding supplies, equipment, and tools.		
<p>PREFERRED ELEMENTS</p> <p>FLOOR: polished, sealed, or coated concrete</p> <p>WALL BASE: 4" height rubber wall base</p> <p>WALL: semi-gloss low or no VOC paint, light color</p> <p>WALL TREATMENT: ~</p> <p>WINDOWS: ~</p> <p>CEILING: exposed structure, minimum 9' height clear</p> <p>DOOR/FRAME: metal</p> <p>DOOR OPENING(S): cage</p> <p>DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS</p> <p>Reference Lincoln and Tulsa schools of welding</p>	<p>ELECTRICAL NEEDS</p> <p>INTERIOR LIGHTING: LED surface mount</p> <p>POWER: Numerous outlets required to support battery charging station</p> <p>SPECIAL SYSTEMS NEEDS</p> <p>CAMPUS CLOCK SYSTEM: ~</p> <p>CENTRAL SOUND SYSTEM: ~</p> <p>SECURITY SYSTEM: per UNM-G Standard</p> <p>DATA/VOICE/VIDEO: ~</p> <p>PLUMBING NEEDS</p> <p>FIRE SUPPRESSION SYSTEM</p> <p>HVAC NEEDS- zoned per lab</p> <p>Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.</p>	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Welding Lab Yard		4180 NSF
NUMBER OF SPACES: 1 area OCCUPANTS: 20 students, 1-2 teachers FREQUENCY: 3-5 days/week CLASSES: Arc Welding, Advanced Arc Welding, OxyFuel Welding, Pipe Welding, Stick Welding, M.I.G (Gas Metal Arc) & T.I.G. (Gas Tungsten Arc) Welding		
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: ~ VENTILATION: ~ FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, masonry wall, fence LAYOUT: Twenty 80 NSF exterior bays (1600 SF) consider connecting to manifold gas system. Enclosed storage area. Adjacent to Welding Lab.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Welding equipment-cutting torches, plasma cutting, pipe beveling, gas bottle storage (80 SF), compressed air equipment, manifold gas tank yard (2000 SF), unconditioned covered shed for welding equipment storage (500 SF)		
PREFERRED ELEMENTS FLOOR: sealed or coated concrete WALL BASE: ~ WALL: sealed or coated WALL TREATMENT: ~ WINDOWS: ~ CEILING: ~ DOOR/FRAME: ~ DOOR OPENING(S): ~ DOOR HARDWARE: ~ REMARKS Reference Lincoln and Tulsa schools of welding	ELECTRICAL NEEDS EXTERIOR LIGHTING: LED POWER: Exterior perimeter wall SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: ~ CENTRAL SOUND SYSTEM: ~ SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: ~ PLUMBING NEEDS HVAC NEEDS	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 1
Welding Lab		3600 NSF
NUMBER OF SPACES: 1 OCCUPANTS: 30 students, 1-2 teachers FREQUENCY: 3-5 days/week CLASSES: Arc Welding, Advanced Arc Welding, OxyFuel Welding, Pipe Welding, Stick Welding, M.I.G (Gas Metal Arc) & T.I.G. (Gas Tungsten Arc) Welding		
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views VENTILATION: Exhaust and filtration (scrubber) equipment to remove impurities/debris responsibly FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, masonry wall LAYOUT: Thirty 80 NSF interior bays, with 6' tall dividing walls, connected to manifold gas system with general workspace, Metallurgy Lab with 6'-0" wide door opening, and teaching nook. Adjacent to Welding Lab Tool Crib Storage. Adjacent to Welding Lab Yard. Adjacent to Multi-Use Lab.		
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, work tables, stools, personal protective equipment (PPE), welding equipment-cutting torches, compressed air, manifold gas system, metallurgy specialty equipment.		
PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: sound absorption panels on high bay walls above 10' WINDOWS: shading system, as required CEILING: exposed structure, high bay 18 feet height clear DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed, coiling door to welding lab yard. DOOR HARDWARE: per UNM-G Standard REMARKS Reference Lincoln and Tulsa schools of welding	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 4000 K, pendant, uniform, multi-level switching POWER: outlets at all bays, walls, coordinate locations with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data/voice at teaching nook wall PLUMBING NEEDS FIRE SUPPRESSION SYSTEM Manifold gas system, 3'x6' submersion sink HVAC NEEDS - zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.	

6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Upper Level	Phase 2		
Classroom		840 NSF		
<p>NUMBER OF SPACES: 2 OCCUPANTS: 30 students, 1-2 teachers FREQUENCY: 5 days/week CLASSES: Construction Technology degree and certificate programs</p>				
<p>ENVIRONMENT - to meet minimum LEED Silver requirements</p> <p>DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views</p> <p>VENTILATION: Standard</p> <p>FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds</p> <p>FLOOR/WALL: Concrete slab, gypsum board on metal studs</p> <p>LAYOUT: Classroom lecture configuration with tables and chairs for 30 students. Adjacent to Collaboration Space. Access from Upper Level Hall. Demising wall to be moveable wall to fold open to create one large 1680 NSF lecture room.</p>				
<p>EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, tables and seating for 30 students.</p>				
<table border="0"> <tr> <td style="vertical-align: top;"> <p>PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for Classroom, minimum Tier Two Technology.</p> </td> <td style="vertical-align: top;"> <p>ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable) POWER: multiple outlets at all walls, coordinate with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with equipment</p> <p>PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS - zoned Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)</p> </td> </tr> </table>			<p>PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for Classroom, minimum Tier Two Technology.</p>	<p>ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable) POWER: multiple outlets at all walls, coordinate with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with equipment</p> <p>PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS - zoned Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)</p>
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6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Upper Level	Phase 2		
Faculty Breakroom		100 NSF		
<p>NUMBER OF SPACES: 1 OCCUPANTS: teachers FREQUENCY: 5 days/week CLASSES: Construction Technology degree and certificate programs</p>				
<p>ENVIRONMENT - to meet minimum LEED Silver requirements</p> <p>DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views, windows look into Lab.</p> <p>VENTILATION: Standard with exhaust system</p> <p>FINISHES: Easily maintainable, durable, products with low or no volatile organic compounds</p> <p>FLOOR/WALL: Concrete slab, gypsum board on metal studs</p> <p>LAYOUT: Counter area and appliances to support quick nutrition</p>				
<p>EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Casework with counter and upper and lower cabinets with shelves and drawers, sink, microwave, coffeemaker, refrigerator, recycle bins, trash, bar-height counter with stools, marker and tack boards.</p>				
<table border="0"> <tr> <td style="vertical-align: top;"> <p>PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: Wood door with HMF DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for faculty office.</p> </td> <td style="vertical-align: top;"> <p>ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform POWER: outlets at all walls, counter-height GFI outlet near sink, MW ht SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops on two walls</p> <p>PLUMBING NEEDS FIRE SUPPRESSION SYSTEM, sink, and waterline to refrigerator & coffeemaker HVAC NEEDS Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)</p> </td> </tr> </table>			<p>PREFERRED ELEMENTS FLOOR: polished concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: Wood door with HMF DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard</p> <p>REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for faculty office.</p>	<p>ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform POWER: outlets at all walls, counter-height GFI outlet near sink, MW ht SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops on two walls</p> <p>PLUMBING NEEDS FIRE SUPPRESSION SYSTEM, sink, and waterline to refrigerator & coffeemaker HVAC NEEDS Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)</p>
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6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Upper Level	Phase 2		
Faculty Office		100 NSF		
NUMBER OF SPACES: 4 OCCUPANTS: 1 teacher FREQUENCY: 5 days/week CLASSES: Construction Technology degree and certificate programs				
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views, windows look into Lab VENTILATION: Standard FINISHES: Easily maintainable, durable, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, gypsum board on metal studs LAYOUT: Workstation and area for meeting. Access from Hall.				
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Desk, lockable storage, seating, and small meeting table.				
<table border="0"> <tr> <td style="vertical-align: top;"> PREFERRED ELEMENTS FLOOR: polished concrete or carpet tile WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: Wood door with HMF DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for faculty office. </td> <td style="vertical-align: top;"> ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable), task lighting POWER: multiple outlets at all walls SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops on two walls PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric) </td> </tr> </table>			PREFERRED ELEMENTS FLOOR: polished concrete or carpet tile WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: ~ WINDOWS: shading system, as required CEILING: acoustic lay-in ceiling tile, minimum 9'-0" height DOOR/FRAME: Wood door with HMF DOOR OPENING(S): 3'-0"x7'-0", typical DOOR HARDWARE: per UNM-G Standard REMARKS Comply with UNM LEDG Design Guidelines & UNM IT Standards for faculty office.	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 3500K, direct/indirect troffer, uniform, multi-level switching (dimnable), task lighting POWER: multiple outlets at all walls SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops on two walls PLUMBING NEEDS FIRE SUPPRESSION SYSTEM HVAC NEEDS Refrigerated air. Consider VRF heat recovery system or HVAC package units with ERV with discharge heater (natural gas or electric)
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6. Appendix - Room Data Sheets

UNM-GALLUP CCTEI	Lower Level	Phase 2		
Finish Carpentry Lab		2000 NSF		
NUMBER OF SPACES: 1 OCCUPANTS: 30 students, 1-2 teachers FREQUENCY: 3-5 days/week CLASSES: Cabinet building and finishing, Furniture construction and finishing				
ENVIRONMENT - to meet minimum LEED Silver requirements DAYLIGHTING & VIEWS: Direct and borrowed daylighting with interior/exterior views VENTILATION: Exhaust, filtration (scrubber), dust collection equipment to remove impurities responsibly FINISHES: Easily maintainable, durable, impact resistant, easily repaired/repainted, products with low or no volatile organic compounds FLOOR/WALL: Concrete slab, masonry wall LAYOUT: Configured for learning construction methods of cabinet making and finishing & furniture making using wood finishing equipment. Lockable storage room for tools and supplies. Adjacent to Multi-Use Lab. Adjacent to Construction Yard.				
EQUIPMENT & FURNISHINGS TO BE USED WITHIN SPACE Marker and tack boards, LCD screen, work tables, stools, personal protective equipment (PPE), woodshop equipment and tools, cabinet for flammables, spray booth, pneumatic tool air compressor				
<table border="0"> <tr> <td style="vertical-align: top;"> PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: sound absorption panels on high bay walls above 10' WINDOWS: shading system, as required CEILING: exposed structure, high bay 18 feet height clear DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed, coiling door to construction yard. DOOR HARDWARE: per UNM-G Standard REMARKS </td> <td style="vertical-align: top;"> ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 4000K, pendant, uniform, multi-level switching POWER: multiple outlets at all walls, coordinate locations with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with equipment PLUMBING NEEDS FIRE SUPPRESSION SYSTEM Eye wash station HVAC NEEDS - zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air. </td> </tr> </table>			PREFERRED ELEMENTS FLOOR: polished, sealed, or coated concrete WALL BASE: 4" height rubber wall base WALL: semi-gloss low or no VOC paint, light color WALL TREATMENT: sound absorption panels on high bay walls above 10' WINDOWS: shading system, as required CEILING: exposed structure, high bay 18 feet height clear DOOR/FRAME: metal DOOR OPENING(S): 3'-0"x7'-0", typical with double door clear opening, as needed, coiling door to construction yard. DOOR HARDWARE: per UNM-G Standard REMARKS	ELECTRICAL NEEDS INTERIOR LIGHTING: LED, 4000K, pendant, uniform, multi-level switching POWER: multiple outlets at all walls, coordinate locations with equipment SPECIAL SYSTEMS NEEDS CAMPUS CLOCK SYSTEM: per UNM-G Standard CENTRAL SOUND SYSTEM: per UNM-G Standard SECURITY SYSTEM: per UNM-G Standard DATA/VOICE/VIDEO: data drops to coordinate with equipment PLUMBING NEEDS FIRE SUPPRESSION SYSTEM Eye wash station HVAC NEEDS - zoned per lab Evaporative cooler and makeup air system w/natural gas fired heat exchanger, makeup air unit provided with both return and outside air.
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Appendix Meeting Notes



PROJECT NO. 16015

MEETING SUMMARY

PROJECT: UNM-Gallup Construction Tech Career Center (CTCC) *or* Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming kick-off and facility tour

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: June 22, 2016, 10:00 – 12:30 pm

ATTENDEES:	Chris Dyer	CEO	UNM-G
	Ron Petranovich	Facilities Manager	UNM-G-PPD
	John T. Cresto	Community member	Gallup
	Sabrina Ezzell	Nursing Program Director	UNM-G
	Sonya Damon	EMS Director	UNM-G
	Christy Butler	Executive Assistant	UNM-G
	Frank Loera	Division Chair	UNM-G
	Chris Chavez	Construction Technology	UNM-G
	Joe Sanchez	Welding Coordinator	UNM-G
	Ben Savoca	Planner	UNM PDC
	Brian Scharmer	Project Manager	UNM PDC
	Peggy Favour	Principal	SMPC Architects
	Tymn Waters	Project Manager	SMPC Architects
	Jason Holubiak	Document Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

1. Dr. Dyer gave an overview of the UNM-Gallup (UNM-G) campus Vision and Community relationship.
 - a. Campus Background - Originally established in the 1940s.
 - b. Currently UNM-G has 350,000 SF of facilities.

- c. Career Tech is over capacity and outdated.
 - d. Dr. Dyer expressed great passion for the community and UNM's role in the community. UNM-G is mending the rift that had occurred between the campus and the community. Dr. Dyer is exploring several community partnerships to prepare an educated workforce to meet local labor needs. One of these initiatives is a manufactured housing project intended to build 500-1,000 homes per year starting on the Navajo Nation. Gallup Land Partnership is another initiative to create a high-tech business incubator, which would require technical education. Hope to work with the NM Aging & Long-Term Services Department for elder healthcare services.
 - e. A major goal is flexibility – must accommodate rapid change as programs and technologies change. A large high bay space is desired for projects and may be leased by partnering private entities for demonstration purposes.
 - f. The Navajo Nation is a major source of enrollment, 80% of the student population is Navajo.
 - g. EMS (established August 2015) has started some new programs and demand/enrollment has been high, not just for people training to enter the profession but for continuing education.
 - h. Potential future healthcare programs: Laboratory medical technology programs, phlebotomy certificate, medical equipment technology programs.
 - i. Manufactured housing program – Construction tech would train cohorts of 4-5 in each chapter house on the Navajo Nation to construct small homes for people in need.
 - j. Construction of the CCTC/CCTEI facility will require a public-private partnership; it was removed from the State GO Bond list. There is at present no funding for construction. May look for grants, such as the EDA, the Power Grant from the Department of Commerce, or the USDA.
 - i. A National Construction company was mentioned as a potential private partner.
 - ii. Potential SIPs panels manufacturing partnership.
 - iii. Brian Scharmer will investigate the parameters for approval of a facility that is privately funded.
 - k. Higher education enrollment trends are turning towards programs with specific, applied skills. CCTC/CCTEI will focus on accommodating programs that generate enrollment within the university, and generating employment within the community.
2. Dr. Dyer proposes a new name: Center for Career Technology, Education, and Innovation (CCTEI)
 3. Chris Chavez is the head of the construction technology program.
 - a. Chris Chavez recommends leaving the woodworking program in the existing career tech building.
 - b. Chris has hosted Green Gallup seminars to teach community members about green technologies and to assist them in incorporating those technologies into their homes and lives (e.g. Solar panels and batteries in off-the-grid homes on the Navajo Nation).
 - c. Welding shop has maxed out existing electrical capacity. Almost all machines are 208, or three phase 480.
 - d. Construction Tech and Welding programs work closely with high schools for dual credit courses.

- e. Welding program is turning students away – have only 20 spots and receive about 35 applicants.
 - f. Welding program may not be in compliance with EPA in ventilating away its toxic, carcinogenic fumes. Air Quality may be an issue.
4. Ben Savoca will establish checklist for academic program approval. He will need academic plan from each program that will occupy the building. He will work with SMPC to determine a means of prioritizing programs for inclusion in the project.
 - a. Need to determine which programs require ground floor access and vehicular access.
 5. SMPC presented their 12 week guide to achieving the required information to complete the programing process. The proposed next face to face meeting will be July 13 at UNM-G.
 6. SMPC walked through some of the goals that have been identified for in the recently complete Campus Master Plan. SMPC asked the Planning Committee to state their goals for the CCTC /CCTEI building:
 - a. Sustainability / LEED – 15,000sf is the UNM project size threshold for a LEED Silver requirement. The CCTC/CCTEI project is 13,000 GSF and would be excluded from that requirement, but all efforts to achieve the green building will be documented.
 - b. Community outreach.
 - c. Economic development.
 - d. Adaptive Flexibility ability for spaces to be easily adaptable by multiple departments.
 - e. Open structure as “truth windows” to use the building structure and design as a teaching element.
 - f. Access to Technology, seamless and variable instruction methods. Incorporate distance learning (Zoom).
 - g. Make classrooms as multipurpose and flexible as possible.
 - h. Incorporate SIP technology.
 - i. Identify and mitigate incompatible uses/adjacencies (for example, concentrated oxygen for healthcare next to welding's live flames).
 - j. Meet all health and life safety code requirements.
 7. The location of the CCTC/CCTEI building was discussed; it will be near the current child care building.
 - a. There is insufficient electrical service so a new 480 3 phase transformer is needed, and accompanying switch gear. A new fiber loop on campus may be tapped into for the data. Gas and water will need to be checked for size and capacity; water for domestic and fire protection. Storm drainage appears to be surface drained over the hilly site.
 8. SMPC listed the programs to be considered for the CCTC/CCTEI building per the Planning Committee:
 - a. Incorporate Allied Health – specifically Medical Equipment Technology (would use general classrooms; hands-on training would occur in hospital environment), Emergency Medical Services, EMS;
 - b. Junior Public Safety program – criminal justice / police academy;
 - c. Hazmat training – would require ambulance bays or at least simulated bays;
 - d. 3D modeling/drafting/BIM training (really like the Aviation Training Center at CNM);

- e. HVAC / mechanical technology;
 - f. Sustainability Design;
 - g. Construction Technology;
 - h. Welding.
9. The CCTC/CCTEI project is funded to be programmed for 13,000 GSF in phase 1 with a 4,000sf addition in phase 2.
- a. SMPC will work with PDC, UNM-G Planning Committee and Administration to establish what programs will go into the building.
 - b. SMPC requested each department develop a narrative with a space requirements summary for the team to review. Programming exercises will discuss the adjacency needs of the programs and determine a hierarchy of spaces based upon that assessment.
10. The CCTC/CCTEI building characteristics and needs:
- a. The building needs to be a single story structure with high bay spaces.
 - b. A yard is needed suggested as 3 times the size of the existing yard, so classes may be held outdoors simulating real life experiences.
 - c. Material storage and equipment will also be needed in the yard. An inventory of material and equipment is required to determine the right size.
11. UNM Standards - PDC will supply SMPC with the following standards:
- a. Technology standards (SMPC will investigate UNM online documents);
 - b. Space allocations standards (SMPC will investigate UNM online documents);
 - i. The statement was made that sharing spaces, multi-use rooms and less department ownership is a current guideline. This is similar to other higher education institutions SMPC has programmed recently.
12. At the end of the meeting the group toured a few of the programs to be included in the CCTC/CCTEI building. Faculty and staff emphasized existing challenges to the current programs.
- a. Construction Tech, Woodworking
 - i. Supply yard is too small to store materials and use as a building space.
 - ii. Electrical load problems.
 - iii. Ceilings are too low for construction projects, need minimum 20' clear height.
 - iv. Not enough room for various projects.
 - v. No dedicated classroom space.
 - vi. Control of acoustics (equipment noise), adequate ventilation, and air temperature is inadequate.
 - vii. Adjacency and scheduling all lead to challenges for the existing programs.
 - b. Welding
 - i. Insufficient classroom space.

- ii. Lack of technology in the classroom.
 - iii. Insufficient shop space. Currently have 18 bays, limiting the number of students who can enroll and work in the space.
 - iv. No dedicated outdoor space to be able to work in "real world" situations.
 - v. Currently maxed out on the electrical load for the building.
- c. EMS
- i. Needs dedicated space, currently sharing space with dental in the old nursing building.
 - ii. EMS representatives had a wish list of spaces from the director:
 - A 12 person conference room;
 - 5 classrooms (30-32 students in each);
 - 6 offices;
 - Large storage area;
 - Simulation Lab with 4 rooms around an observation room;
 - 1 computer lab that can be used for testing;
 - Laundry space.
 - iii. 4 ambulance bays.
 - iv. Space in classrooms for an ambulance.
 - v. No Biohazard but a sharps container is needed.
13. SMPC asked all faculty and staff representing different programs to be thinking about programs and classes that could stay where they are currently operating and prioritize what would need to go into the CCTC/CCTEI building.
14. SMPC discuss previous relevant experience with similar building types including the CNM ATC building and CNM Rio Rancho nursing skill lab. SMPC would be willing to arrange tours of the facilities to show the team examples of similar programs. The need and value for tours can be discussed at future meetings.

Note: This document is considered to be an accurate summary of the designated meeting unless written notice to the contrary is received within seven (7) days after receipt.

Attachments: Agenda and Sign-In

MEETING SUMMARY

PROJECT: UNM-Gallup Construction Tech Career Center (CTCC) or Center for Career Technology Education & Innovation (CCTEI)

MEETING: Project scope clarification and protocols

LOCATION: UNM PDC Upper Level Conference Room

DATE: June 28, 2016 10:00 – 11:00 pm

ATTENDEES:	Ben Savoca	Planner	UNM PDC
	Brian Scharmer	Project Manager	UNM PDC
	Peggy Favour	Principal	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

SMPC and PDC met to discuss the scope of the CTCC/CCTEI project and discuss steps moving forward:

- SMPC clarified the 12 week work plan proposed by SMPC inadvertently skips a week (8/8-8/12). SMPC anticipates that the project will be completed during the week of 9/5-9/9, unless circumstances arise beyond what is doable.
- SMPC will communicate directly with Ben Savoca and copy Brian Scharmer on all correspondence.
- PDC shared the 2015 State Legislative Capitol project evaluation for the CCTE/CCTEI building.
 - This document has specific language that limits the project scope of the initial 13,000 GSF to be programs "focusing on construction technologies."
 - The language for phase 2 does not specify that the additional 4,000 GSF be dedicated to construction technologies. SMPC will perform further investigation to understand if including the EMS program in phase 2 is feasible and a good fit.
 - Brian will work with Dr. Dyer to explain the legislative language that limits program types for the phase 1 project of 13,000 GSF.
- SMPC will explore how the construction tech and EMS program would be able to work together or be adjacent. Sabrina and Sonia would be the healthcare POCs. Some concerns are:
 - Occupancies and required separation

- b. Hazardous fumes
- c. Site coordination with access for ambulance bays and construction yard.
- 5. PDC explained that \$350,000 was allocated for planning and design of the building. Currently there is no funding in place for construction.
- 6. PDC stated all final decisions will come from Dr. Dyer (leading the Planning Committee) and approved by UNM PDC.
- 7. Ben Savoca will contact Rich Goshorn, Director of UNM-G Business Operations, to discuss the potential key members outside of the Planning Committee that SMPC should engage as part of the programming process. PDC will work with Dr. Dyer, Richard Goshorn, and Frank Loera, UNM-G chairperson of Business and Applied Technology, to verify the Planning Committee membership.
- 8. Ben Savoca will provide enrollment data for UNM-G campus enrollment, CCTE program enrollment and dual credit enrollment.
- 9. PDC will provide a final site plan that is being developed by Bohannon Huston in a couple of weeks.

Reported by: Erik Mease & Peggy Favour, 07.01.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC

Note: This document is considered to be an accurate summary of the designated meeting unless written notice to the contrary is received within seven (7) days after receipt.

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Groups Interviews – Construction Technology

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: July 22, 2016 11:00 – 12:30 pm

ATTENDEES:	Chris Chavez	Construction Technology	UNM-G
	Joe Sanchez	Welding Coordinator	UNM-G
	Ben Savoca	Planner	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

Ben Savoca and SMPC met with Christopher Chavez, Construction Technology Program Coordinator and Joe Sanchez, Welding Coordinator to discuss their program needs for the CCTEI building.

As the legislative bonds were passed to provide a building focusing on the Construction Technology programs, Construction Tech and Welding are planned to relocate to the new building in Phase One. There was initial desire to maintain space in their old buildings. However, equipment redundancies like dust removal, tools, shared faculty and other shared resources of the dual credit programs make a case for all programs to relocate to the new CCTEI building. The following is a summary of the items discussed:

1. Woodshop (Chris Chavez):
 - a. Woodshop is “bread and butter.” Night class (cabinet making) is very popular, as is the furniture making class on Saturdays. Started in 1985 and has been canceled only three times in its existence.
 - b. Requires considerable storage for wood and tools (more storage than needed for construction materials).
 - c. Woodshop requires air filtration and dust collection, pneumatic tool air compressor, secure tools storage and electrical needs.
 - d. Chris Chavez would prefer that the wood shop have two separated areas: one for cutting of material; and the other for assembling.

- e. Finishing space / spray booth for painting and staining
 - i. It was noted that there is a spray booth in collision repair curriculum that may be shared or become available.
 - f. Woodshop location: in the earlier meetings it was discussed that leaving the woodshop where it is would save space in the new CCTEI building. However, a few disadvantages were discussed:
 - i. Redundancies in equipment, dust collection, pneumatic tool infrastructure and tools and supplies.
 - ii. Chris Chavez preferred that all the programs be situated together. SMPC and UNM-PDC expressed a desire not to have the faculty spread out across campus. If the same tools are required for dual credit courses and college courses, ideally there should be one lab facility for both course levels and not separate labs.
 - iii. Large spaces should accommodate different layouts and setup.
 - iv. The abandoned existing wood shop would open opportunities for other programs to relocate into that building. The EMS program would benefit from moving to the wood working or welding space since they have yards and high bay space. This was part of the afternoon discussion with EMS.
 - g. Need to include eyewash and shower stations.
 - h. Need flammables cabinets.
2. Construction Technology (Chris Chavez):
- a. Lab for Construction curriculum, an associate's degree is offered by UNM-G.
 - b. Lab for stick framing, alternative materials (SIPS).
 - c. A teaching space in the Labs is needed with large flat screen controlled by instructor's tablet and stools for students.
 - d. Would require secure tool storage for hand tools, pneumatic tools, power tools, etc.
 - e. High school classes come in the morning and the afternoon. Introduces scheduling challenges for the college level classes.
 - f. Project storage – students are building cabinets and furniture over the course of a semester. Need separate areas for both High school and College level projects to stay out during the life of the project.
 - g. Work bays and equipment should be visible from corridors, not only to showcase the work but also to prevent visitors from stumbling into dangerous areas.
 - h. Shared computer design spaces. The CNC cutters and plasma cutters may have software in a shared tech design space
 - i. Need to include eyewash and shower stations.
 - j. Need flammables cabinets.
3. Construction Tech & Woodworking Yard:
- a. The yard may be shared. It needs covered storage for pipes, steel, and wood.
 - b. Material storage needs: sand/gravel mixes for concrete, studs need covered storage.

- c. Currently have four cement mixers, portable sawmill, rammed-earth machine. Ideally covered – lean-to or shed.
 - d. These spaces need to have truck access and should be worked into the site plan so semi-trucks can drive to and through the yard and back out to the street.
 - e. Some wood working occurs outdoors for building mock ups, mainly because there's not enough space or ceiling clearance indoors. If UNM-G ends up building housing for the Navajo Nation (four at a time), that would require a lot of trucks, exterior work on a pad, etc. Ideally would have a bay module with overhead doors at opposite walls to allow for full pull-through.
4. Classroom:
- a. 25-30 students
 - b. Should be close to Lab space and wood shop.
 - c. Classrooms should have large flat screens for teaching and follow the UNM-PDC guidelines for classroom technology.
 - d. The classrooms can be shared by other programs.
 - e. Classroom will be utilized for Construction Documents/Blueprint reading course and will need tables that can be arranged to accommodate large documents.
 - i. Needed by all trades programs
 - ii. Large flat file storage for Drawing Documents.
5. Computer Lab:
- a. 25-30 students
 - b. 3D modeling classes will be offered in the future for BIM and Sketchup
 - c. Need individual computers and large flat screen for instructor and should follow UNM-PDC Technology standards for computer classrooms.
 - d. Teach OSHA 10 and other generic material for core curriculum classes and would overlap all trades.
 - e. Need a plotter in a work/copy room.
6. Welding (Joe Sanchez):
- a. If welding maintains existing space, wants oxy-fuel and stick welding there.
 - b. Joe liked the idea of all trades located in one building because they teach collaboratively.
 - c. Exhaust, ventilation, and filtration are especially important in welding and metallurgy. Some systems filter air and then pump it back into space (or at least through a heat exchanger) to save heating and cooling costs. Should have a variable volume/capacity so that it only draws as much air as the number of people working. Automatically driven by Arc strike – no chance of someone forgetting to turn on the fan. Reference the Lincoln and Tulsa schools of Welding.
 - d. Ventilation may need a scrubber to collect impurities prior to exhausting the air.

- e. Welding wants to move from gas bottles to a manifold gas delivery system. Creating a manifold gas delivery system allows for safe gas storage in a central yard, fewer bottles in the welding lab and the ability to do all the welding in 40 work stations. This is a more economic approach in the long run. Welding will still utilize some portable tanks for portable/outdoor work and for safety and other demonstrations. Manifold also allows for increased efficiency as students can do all assignments in their booth; don't need to move around or worry about availability. All equipment is multi-task – can do many types of welding with a single machine.
 - f. Testing machines are used less frequently.
 - g. Welding accepts 20 students. Currently have only 18 booths. Ideally would like two sections of 20 students each (40 students total). May end up hiring an adjunct staff member.
 - h. Welding Yard:
 - i. Exterior storage for metal can just be a lean-to.
 - ii. Need some exterior welding stations
 - iii. Gas bottles (currently 38 bottles, growing to ~70 – dependent on gas manifold system),
 - iv. Portable welders on trailers.
7. HVAC Tech:
- a. HVAC lab is currently in a block storage room just a couple hundred square feet with an overhead door.
 - b. SMPC needs a follow up discussion with the instructor to further understand the needs of this department.
8. Secure Tool Storage:
- a. Separate storage for Welding, Plumbing, Carpentry and Woodworking. Carpentry and woodworking require tool cribs/cages. Dual credit students are issued tools and gloves. college students have their own. Lockers are required for college students to keep tools on campus and safely stored - see needs for Lockers (# 9).
 - b. Welding wants to separate high school tools from college (provide additional equipment and accessories for high school students).
 - c. Chris and Joe to inventory equipment and provide sizes of each shed.
 - d. Want to find a way to increase security for tools
9. Lockers:
- a. Want tall lockers (5'x16") with bench for students. The lockers are for personal items but also for student tools (so they're not hauling them back and forth to campus). Those lockers are assigned on a semester basis.
 - b. Need to provide an area for welding students to change.
 - c. Construction lockers can be out in the hallways.
 - d. Showers or changing rooms was desired

- 10. SMPC requested an inventory from Joe and Chris of their equipment with the clearances required. This will help determine the required area of the Labs.
- 11. Potentially shared spaces: work/copy room, computer lab, 3D printing, classroom, student congregation areas.
- 12. Existing Hand Drafting Lab is in Calvin Hall but the program may be phased out in the next year.
- 13. SMPC requested an inventory from Joe and Chris of their equipment with the clearances required. This will help determine the required area of the Labs.
- 14. UNM-G Construction Tech slogan: "Imagine. Design. Build."
- 15. Envision construction Tech as being a training facility for community needs in addition to workforce needs. Occasionally hold public workshops – how to build/install home solar, for instance. Also use for workforce training / continuing education (e.g. OSHA).
- 16. Tests are a variety of written, oral, demonstration, and physical tests (hammer test for metallurgy)
- 17. Should accommodate a lift for cleaning, changing lights, maintenance, etc.
- 18. Offering lots of different classes: plumbing, electrical, sustainability and energy auditing, green building, alternative construction (timber framing, Adobe construction, earth ships), concrete
- 19. Woodworking schedule:
 - a. Tuesday, Wednesday, Thursday, Saturday.
 - b. High school: Monday-Friday, two hours a day
 - c. Some classes run until 10:30pm
- 20. Chris listed the programs that are currently being taught by Construction Tech:
 - a. HVAC
 - b. Construction Safety
 - c. Interior Framing
 - d. Exterior Framing
 - e. Plumbing
 - f. Sustainable Design
 - g. Green Building
- 21. SMPC expressed a desire to create bubble diagrams and space adjacency plans as the next step of the programming phase. We will use the spaces and areas listed in the questionnaire and the equipment layouts and lists coming from these programs

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Attachments: Questionnaires .

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Groups Interviews - EMS Program

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: July 22, 2016 11:00 – 12:30 pm

ATTENDEES: Sonya Damon	EMS Director	UNM-G
Ken Langley	Police Officer	UNM Campus Police
Ken Hoffman	EMS Coordinator	McKinley Fire Department
Ben Savoca	Planner	UNM PDC
Tymn Waters	Project Manager	SMPC Architects
Erik Mease	Project Architect	SMPC Architects

SUMMARY:

Ben Savoca and SMPC met with Allied Health – Sonya Damon (EMS) Ken Hoffman (Advanced EMS, McKinley County FD), Ken Langley (Public Safety) to discuss their program needs for the EMS program.

It was explained that the new building would be a Construction Technology facility. Ken Langley suggested that EMS could move to occupy the current welding or woodworking space once the CCTEI building is completed. The design team had been considering this and there is interest to repurposing these facilities. The following is a summary of the items discussed:

1. EMS would require minimum six classrooms:
 - a. Three (or four, with Fire Sciences) lecture style classrooms (24 students).
 - b. Two classroom labs.
 - c. One simulation room.

2. EMS would like to incorporate a Fire Science program in the future. There would be some opportunities for space sharing and integration, including sharing an ambulance bay with EMS.
3. Simulation Lab:
 - a. The simulation lab would have live patients as well as mannequins (currently have one permanent mannequin, one traveling mannequin, one OB mannequin, one baby mannequin, and one ALS mannequin).
 - b. Lab could be one large room with partitions to separate into two or three smaller rooms for flexibility.
 - c. Hospital patient room and "real life" scenarios are needed. "Real life" scenarios should incorporate a back of an ambulance, domestic living room, bedroom and/or kitchens space with an adjacent large room for observation and teaching instruction. This set up should resemble a sitcom television studio. These real life scenes should be partitioned off so the adjoining space can be utilized as classroom space for other programs.
 - d. Ideally would want a preceptor type observation window into the simulation lab. Observation room needs to have significant IT integration to monitor what's going on with the mannequins.
 - e. Ideally no windows.
 - f. Observation also requires dimmable lighting.
4. Classrooms:
 - a. Three to four classrooms needed and sized for 24 students.
 - b. Could be two double-sized classrooms with removable partitions for four typical sized classrooms. This would allow the flexibility for classroom space to be opened up for larger events.
 - c. Should be set up with Zoom technology for distance learning (Both for transmitting and receiving – have students in Zuni, and would be watching lectures from the Fire Academy).
 - d. Should be compliant with UNM-PDC standards for technology in classrooms.
5. Need a space that simulates the back of an ambulance. This may be in the simulation lab but the location is not yet specified by the EMS administration.
6. Fire Truck and Ambulance Bays:
 - a. McKinley County Fire Department will be donating an ambulance and possibly a fire truck for the branch's use. Would prefer to be housed indoors.
 - b. Ambulance 20' truck
 - c. Firetruck 36'-40' for both, would require a 40'x50' space. Plan to teach some minor maintenance and upkeep of the vehicles.
 - d. Exhaust removal system - exhaust snorkel, doesn't need to be an automated system.
 - e. Compressor for firetruck and ambulance maintenance.

- f. Need bollards outside the garage door.
 - g. Fire Science Yard:
 - i. Exterior yard will allow not only for access but instruction on how to operate the Jaws of Life.
 - ii. Needs to accommodate McKinley County Fire Departments trailer used for hauling equipment for instruction.
 - iii. Any firefighting would be done off campus.
7. Lockers and Showers:
 - a. Fire Science students will need lockers near fire truck bays.
 - b. Need showers For Fire Science (Could use shower rooms in other campus locations?)
8. EMS Students will be required to wear scrubs and carry a stethoscope and shears. No lockers required.
9. Classroom Labs: 2 Labs
 - a. Lab room has multiple stations – air weight, medication administration, etc. Stations are torn down and stored as needed.
 - i. Sonya Damon will provide approximate clearance and number of stations needed.
 - b. Adjacent storage needs to be secure.
 - c. No live oxygen or other gases needed. Do want compressed air, remote 20 gallon.
 - d. Need dimmable lighting and blackout blinds (or no windows) – need to be able to simulate darkness and low light conditions.
10. Storage:
 - a. Storage needs to be much larger than the EMS current storage space.
 - b. Sonya Damon will provide approximate size of anticipated storage needs.
11. Computer Lab:
 - a. Sized for 30 stations and instructor.
 - b. Computer lab is for testing and for teaching documentation. Also used for registration.
 - c. Cannot be shared.
 - d. Do not necessarily need privacy fins.
12. Laundry Room:
 - a. A laundry room will be needed for the fire science program.
 - b. Front-loading machines are better for fire department equipment.
 - c. No need for a simulated medication room.
13. Offices:
 - a. 4-6 Administrative offices will be required once the program meets accreditation.
 - b. Shared office "hotel space" for five adjunct faculty.

14. Conference Room:
 - a. Can use classrooms for most conferences, barring scheduling conflicts.
 - b. Most meetings require 6-12 people (perhaps include a smaller conference space or a multi-use study area)
15. Accrediting body: CAAHEP (Commission on Accreditation of Allied Health Education Program) and the state. Working with other programs – bring instructors on site to teach in exchange for letting those groups use their space.
 - a. Accreditation does not specify adjunct faculty, but does specify the other full-time staff. Adjuncts are used primarily for teaching in the labs. Future discussion will be required for how to accommodate adjuncts.

Reported by: Tymn Waters, Ben Savoca & Erik Mease, 08.01.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: Questionnaires

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Group Interviews – Construction Technology

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: August 12, 2016 11:45 – 1:00 pm

ATTENDEES:	Chris Chavez	Construction Technology	UNM-G
	Joe Sanchez	Welding Coordinator	UNM-G
	Brian Scharmer	Project Manager	UNM PDC
	Ben Savoca	Planner	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

Brian Scharmer, Ben Savoca and SMPC met with Christopher Chavez, Construction Technology Program Coordinator and Joe Sanchez, Welding Coordinator to review their program needs discussed in their previous meetings. The team also discussed the relationship and special arrangements of those program needs. The following is a summary of the items discussed:

1. SMPC presented a space summary report that was a compilation of the spaces described in previous meetings.
 - a. SMPC presented that the current program was currently over the 18,000gsf threshold for phase 1 and phase 2.
 - b. SMPC, PDC and UNM-G worked together to clarify the square footage needs for each component of the building.
 - i. HVAC Technology Lab – this space does not require a separate lab, instead it can have a designated storage room near the Multi-use lab to utilize the Multi-use lab. It can share the teaching nook. The teaching nook is an area within the lab that students may gather in front of the flat panel display for instruction, rather than go to a separate classroom.
 - ii. Offices – Currently there are two full time employees (2 FTE) for Welding and two full time employees (2 FTE) for Construction Tech.
 - SMPC will use 100sf per office.

- iii. Welding Lab – Lab needs 30 indoor bays instead of 40. Joe Sanchez stated he would rather teach two sections of fifteen students than sections of twenty students. Currently he teaches one section of twenty students.
 - Need lockable storage racks for equipment and tools.
 - iv. Exterior welding bays – twenty total. Next to building, arranged to be a continuation of the interior welding bays.
 - Ground the welding bays in the rebar.
 - v. Welding bays – The current welding bay of 8' x 6' is an appropriate size for the new building.
 - vi. Rough Carpentry storage - can be outside in unconditioned space but covered and lockable
 - vii. Finish Carpentry storage should be interior conditioned space and lockable.
 - viii. Student lockers - need lockers for 60 students. Double tier 18" x 18" lockers should be sufficient.
 - ix. Welding Storage – could be outside in unconditioned space.
 - x. Metallurgy Lab – can share space with the Welding Lab, currently these are temporary setups that are taken down when not being used.
 - xi. If these can remain in place that is favored, they provide interest to those visiting the program.
- c. Welding Lab and Construction Tech lab should be separated for safety.
 - i. Joe and Chris recommended an outdoor construction area separating the two.
 - d. Labs should be constructed of non-combustible materials.
2. Transparency – Joe and Chris like the idea of transparency into the CT Lab and the Computer Fabrication Lab from the corridors.
 - a. This would help highlight and advertise the programs.
 - b. Chris would like windows and doesn't want a repeat building like the one he is currently in.
 - c. Ben and Tymn mentioned the concern for security and "active shooter" scenarios.
 - i. Ben will contact Kevin McCabe to address the potential security concerns.
3. SMPC presented a 3D digital model of the site and some site massing explorations.
 - a. The site has extreme topography changes that consist of a 70' elevation change from east to west. Because of this elevation change SMPC presented a split level concept for the building. Consisting of the short spaces like classrooms and offices on the high side and the high bay spaces on the low end. Chris and Joe liked the split level option.
 - b. Ben and Brian explained that they have been doing a number of studies with Bohannon Huston on the proposed site. SMPC will work with UNM PDC and BHI to explore and help resolve the site massing options.
 4. Chris stated that he would like this building to be a LEED Certified Building and wants the plaque to be located in the lobby of the building.
 - a. The Construction Tech curriculum is being renamed as the Green Building.

Reported by: Tymn Waters, & Erik Mease, 08.17.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: Meeting Presentation w/ draft space summary report, Photos from the Adjacency Exercise and Photos of the Proposed CCTEI Site.

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Group Interviews - EMS Program

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: August 12, 2016 1:00 – 2:00 pm

ATTENDEES:	Sonya Damon	EMS Director	UNM-G
	Brian Scharmer	Project Manager	UNM PDC
	Ben Savoca	Planner	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

Brian Scharmer, Ben Savoca and SMPC met with Sonya Damon (EMS Director) of Allied Health to review the program needs for the EMS program discussed in previous meetings.

The following is a summary of the items discussed:

1. SMPC stated that as previously discussed new CCTEI building needs to be specifically programmed for Construction Technology curriculum for Phase 1.
 - a. Previously the design team was considering the EMS program could be incorporated into the 4,000gsf Phase 2. However, the design team does not feel that is appropriate, considering the space requirements for the EMS program exceeds 21,200gsf, and other potential site congestion hazards in terms of fire trucks, ambulances, parking and construction equipment.
 - b. SMPC showed that the current Welding Lab would provide about 6,000sf and the Construction tech building would provide 8,000sf when vacated.
2. SMPC presented a space summary report that was a compilation of the spaces described in previous meetings.

- a. SMPC showed how the space requirements previously discussed totaled 21,200gsf.
- b. SMPC, UNM PDC and Sonya Damon worked together to identify program needs that are necessary now for the EMS program to operate and identify future needs for the program.
 - i. Current needs include the Classroom Lab stations/Vignettes, Simulation Lab w/observation room, Classroom Lab Storage, Interior Ambulance Bays, two (2) FTE offices and a shared office for five (5) adjuncts.
 - ii. Ben Savoca and Sonya Damon agreed that the EMS program could continue to utilize the classrooms and computer labs they are currently using. Sonya believed that it would not be a problem until the program grows in 5-7 years to include Fire Science.
 1. Sonya stated that scheduling the computer lab is often difficult.
 2. The team stated that an underutilized classroom could be converted into a computer lab if the campus utilization required it.
 3. Ben Savoca will evaluate the computer classrooms utilization for the campus to determine if another is needed on campus.
 4. Some space in the Health Information Technology (HIT) program may become available in the future.
 - iii. The EMS programs top priority is the Classroom Labs for Stations/Vignettes, Simulation Room with attached observation room, large storage space and office space.
- c. One scenario presented by SMPC was that the EMS immediate needs be constructed in renovated space in the vacated Welding lab, w/ proximity to the current Healthcare buildings. The rest of the program needs including the fire science program could be constructed in a renovated existing Construction Tech building.
 - i. Sonya agreed that this idea could work and that they would be adding the Fire Science program in 5-7 years.
 - ii. The current welding lab will need a Cell Phone Relay to help with cell service in the building.
- d. SMPC, UNM PDC and Sonya discussed some of the details of the program summary.
 - i. Simulation Lab – needs to be the size of the existing simulation lab in the nursing program 600sf (originally programmed as 1200sf).
 - ii. Simulation Lab Storage – redundant space already accounted for in the Classroom Lab storage.
 - iii. Classroom Lab is adequately programmed.
 - iv. Lecture Rooms – The EMS program can use the current classroom space throughout the campus and only needs three in the future as opposed to four.
 - v. Ambulance Bays – require two interior ambulance bays. The ambulance bays need to be interior to provide adequate security for the ambulance trucks at night. Ventilation will be required to handle emissions from the vehicles.

- vi. Offices – Currently need two (2) FTE offices and shared office space for five (5) adjuncts. SMPC will use 100sf per faculty and 64sf per adjunct when programming space allocation.
- vii. Future needs – Interior Fire Truck Bay, Student Lockers, four faculty offices, Laundry space and Conference rooms, Lecture rooms. These program spaces will be needed in 5-7 years for accreditation of the EMS Program and the addition of a Fire Science Program.
 - 1. One potential space is the existing Construction Tech building. That building has high bays space, exterior yard and access and interior space for a firetruck.
- e. SMPC will email Sonya Room Data sheets to fill out and complete.
- f. Ben Savoca will provide SMPC CAD floor plans of the existing Nursing Building to size existing storage needs.

Reported by: Tymn Waters & Erik Mease, 08.17.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: Meeting Presentation w/ draft space summary report and Photos from the Adjacency Exercise

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Group Interviews – IT and Utilities

LOCATION: UNM-Gallup Gurley Hall Administrative Conference Room

DATE: August 12, 2016 10:00 – 10:45 pm

ATTENDEES:	Jim Blackshear	IT Manager	UNM-G
	John T. Cresto	Community member	Gallup
	Brian Scharmer	Project Manager	UNM PDC
	Ben Savoca	Planner	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

Brian Scharmer, Ben Savoca and SMPC met with Jim Blackshear, Information Technology Manager UNM-G, and John T. Cresto, a retired member of the community with experience in facility management with the local school system to discuss the infrastructure and Utilities for the UNM-G Campus and the proposed site of the new CCTEI building. Ron Petranovich, the facilities manager for UNM-G was also invited but was unable to make it. The SMPC team will set up a conference call with him, UNM PDC and SMPC in the near future.

The proposed site of the CCTEI building is located on the Southwest corner of Gurley Avenue and Peggy Ann Drive. This site is a rugged steep landscape and previously undeveloped. New utilities will have to be brought to the site, the extents of which were discussed in this meeting. The following is a summary of the items discussed:

1. The City of Gallup and UNM-G are currently working on a project that is bringing a new ten inch water line to the campus under Gurley Avenue.
 - a. The CCTEI building will tap into this new main line.
 - b. No separate meter for Fire and Domestic water.
 - c. State Fire said they needed more water there is a pump house next to the Physical Plant

2. There is an existing sanitary sewer lift station located at the corner of Gurley Avenue and Peggy Ann on the site of the Gymnasium. This is a four inch line lifting sanitary sewage to a gravity line near Zollinger Library running north.
 - a. The current gravity flow of the campus is maxed out. The CCTEI building will require coordination with the city for a capacity study.
 - b. Sanitary lines for CCTEI building will have to tie into the lift station near the Gymnasium, or a new station will be required. Coordination of the proposed new sanitary lines and this site will require further discussion.
3. The goal for the campus is to have loop systems set up for all utilities as outlined in the master plan.
 - a. Part of the IT loop has been completed. All other loops are planned for the future.
 - b. The CCTEI Utilities should plan to utilize the utility loops in future even if the loops are not in place at the completion of construction of the CCTEI building.
 - i. A "Gray water" Loop is not currently planned for UNM-G.
 - c. Electrical infrastructure is maxed out at by SMPC; Construction Tech, Welding, High bay spaces, Computer Lab, Classrooms and Computer Fabrication Lab.
 - d. Brian Scharmer clarified the program of the building for both Phase 1 and 2 is specifically defined by the language of the capital outlay document approved by the New Mexico Legislation. The language reads as follows:
 - i. "Phase I (13,000 GSF) project for the building will provide two Class/Labs for training in Construction Technologies and Sustainable Construction Systems design and fabrication with additional classrooms and faculty offices." "...Phase II (4,000 GSF) addition to support drafting and Pre-engineering fabrication and HVAC/Mechanical Instrumentation Technologies and other Career Technology programs yet to be determined."
4. John T. Cresto stated that things need to stay flexible to allow for learning environments to adapt to changing needs. Also, Welding and Construction tech in one location will allow for trades to learn how to work together and to work together safely.
5. Jim Blackshear described some of the Information Technology concerns/issues related to the CCTEI building.
 - a. Fiber optic cable will come directly into the building, and then switch to copper (cat-5 cat 6) cable.
 - b. Need to isolate things as much as possible
 - i. IT rooms need to be located as far as possible away from the Welding and Plasma cutter to avoid Electromagnetic Interference (EMI). IT room ideally would be close to the center of the building. No more than 300M cable travel distance.
 - ii. Computer station at the Plasma Cutter will need will need and EMI shield container.
 - iii. Data and power need to be isolated from each other. **IT rooms will need to have additional filtration to protect the equipment from fine dust and metal particles.**
 - c. Data Drops at all machines.
 - i. All data drops will be overhead in conduit to allow the most flexibility.
 - ii. Need multiple pull boxes to allow for flexibility.

- d. Classrooms and Computer Classrooms will have standard data packages.
 - e. Public infrastructure in collaboration areas and Wi-Fi throughout the building including high bay spaces.
 - f. Central plot/print room is needed.
 - g. Welding debris significantly cuts down the life of computer equipment.
 - i. SMPC will include language for exhaust and air scrubber options for the building to reduce debris. SMPC will be budget conscious when including these options.
 - h. UNM Main Campus IT will need to be consulted during the CCTEI IT design process.
 6. Jim Blackshear suggested the SMPC team contact Ron Petronavich to discuss his preferences for the building's mechanical system.
 - a. SMPC describe the current Mechanical design assumption for the CCTEI building.
 - i. A dual system of evaporated cooling for the high bay spaces and refrigerated air for the classrooms, offices and remainder of the building.
 7. In a future meeting SMPC will discuss solid waste and recycling collection, on this site and campus wide.
 - a. These construction tech programs create a waste stream different from typical aluminum, plastic and paper. Wood, various metals and other materials need to be handled properly.

Reported by: Tynn Waters & Erik Mease, 08.17.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

Note: This document is considered to be an accurate summary of the designated meeting unless written notice to the contrary is received within seven (7) days after receipt.

Attachments: none

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)
MEETING: Programming User Groups Interviews – Construction Technology Students
LOCATION: UNM-Gallup
DATE: August 26, 2016

ATTENDEES:	Chris Chavez	Construction Technology	UNM-G
	Brian Scharmer	Project Manager	UNM PDC
	Byron Gutierrez	CT Student	UNM-G
	Byron McCray	CT Student	UNM-G
	Gary Lee	CT Student	UNM-G
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

SMPC met with past and present students of the courses being programmed and looked with renewed eyes at the apparatus and storage and layout needs as it pertains to the associated lab.

Construction Tech

Chris Chavez showed us models of the concepts for the modular housing in his office, in the yard were actual build projects conveying the lessons of the program. Classes were going on in both shops area classrooms, so we met with 3 students Byron, Byron, and Gary in Chris's office before touring the yard.

The students request more storage; more outlets, more compressed air and associated tools; places to hang out and eat; places to do distance learning classes offered at other campuses; a higher bay; better sound mitigation, daylighting and better room lighting; and an associate's degree.

Storage for tools and tool belts 24 x 24 x 24 inches, may be perforated metal and secured with locks the student brings. A tool crib will be used for storage and controlled issue of tools for use by students in the shop. There was a request for more outlets for hand tools and chargers, and more compressed air outlets and pneumatic tools. A screw type compressor and dryer should be installed in the new building.

A place or places to get away and check you messages, eat or study where food is allowed and available through vending, food trucks or brown bag.

Some students in Construction tech take distance learning courses offered at the main campus, they want a place to go and do this work nearby their core courses in Construction tech.

The existing high bay is not high enough to erect scaffolding and build tall projects like walls and stairs. The new building should accommodate this part of the curriculum. A shop is a noisy place; selection of materials for the shop that mitigate the noise will be welcome, especially if there is a teaching nook located in the same space. There is also a desire to have quiet classrooms and labs adjacent to the labs that have sound attenuation.

The shop should have daylighting and views to outside. The general lighting should simulate daylighting (4000 K) and finally the students understand they can earn more with an associate's degree so they would like to see them offered at UNM Gallup in this field (again).

The yard has open storage for raw materials for making concrete and covered storage for wood. The required walls supporting and separating the raw materials can be used as site retaining walls. There is also a need for covered outside work space.

And trucks need to access the yard for material delivery and pick up. The yard shall be a surface level enough for students to operate fork lifts and other construction vehicles. The yard will also be a place for storage of equipment and provide outside areas in which to work as construction takes place year round. Some outside work areas will have a canopy overhead.

Both rough and finish carpentry are offered. We will define rough as the framing and stair building component of construction and finished as the mill work trim and casework. They require different storage and processes but share common tools.

Some students leave projects on site between semesters. They take up room in the shop. If wood shops require more room for long term storage, it has not been sized yet.

A desire for a paint booth like the one in the automotive shop was expressed. It would mitigate the fumes associated with finishing casework and other items produced in the wood shops. It may be shared with other departments. Access from the exterior is preferred so vehicles can be driven into the raised booth.

The current Construction tech building has a sawdust vacuum system. This may be disassembled and relocated to the new building. Coordinate port locations with tools.

Having offices nearby is preferred as the instructors spend long hours in this shop and do not travel around the campus a lot. They benefit from being in close proximity to other CCTEI instructors to coordinate and collaborate. These offices should be tied to the network and have all the software available. They will need secure drives for restricted information. A local printer is needed to serve the instructors office for privacy. Plots may be sent to the plotter room.

It was noted that participation in the shop leave one coated in grime, so a shower and locker room should be in the building to allow for cleaning up and changing. Restrooms should have amenities that allow people with coveralls, gloves and tools. Wider stall, cubbies and shelves should be available to set things upon and provide space to maneuver.

Reported by: Tymn Waters & Erik Mease, 08.30.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: photos

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming User Groups Interviews – EMS Program Students

LOCATION: UNM-Gallup

DATE: August 26, 2016

ATTENDEES:	Sonya Damon	EMS Director	UNM-G
	Arlita Pablo	EMS Student	UNM-G
	Paul L Lopez	EMS Student	UNM-G
	Christian Sarracino	EMS Student	UNM-G
	Brian Scharmer	Project Manager	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

SMPC met with past and present students of the courses being programmed and looked with renewed eyes at the apparatus and storage and layout needs as it pertains to the associated lab.

Meeting with the EMS team

This meeting began in the conference room at Gurley Hall and finished at the teaching spaces the EMS programs now occupy. An animated group in an exciting profession shared stories of ride-along and real life drama. They want a learning environment to simulate the varied work areas they face in the real world. Sonja Damon, EMS Director and Arlita Pablo, Paul Lopez and Christian Sarracino provided input.

The students explained that access to parking and safety is an issue on campus. The current classrooms being used by the EMS program have a number of deficiencies. Student complained that furniture was hard to move and took up ample space. Lab exercises were often hectic and cramped. The existing classrooms have issues with technology.

The current technology often is broken or missing from the room. Some instructors bring in their own projectors and sound equipment. The students requested that the new building have a more seamless interface for technology and have the capability of showing a variety of media including videos with sound. The sound system is important as instructors use it to teach students how to listen to a person's breathing to perform a diagnosis.

The current classrooms have a number of Computer workstations in them. These computers are not needed in the classroom and would be better suited in a separate computer lab. The EMS Program has difficulty scheduling classes and access for students with the current computer labs available on campus.

Special learning environments for the EMS program include the Ambulance bays, ambulance simulators, rescue lab which has a sit-com stage or vignettes of rooms, stairs, corridors and other places that will help students simulate rescue. The students liked the idea of a Lab Vignette space set up like a television "sit com" set. Like a nursing simulation lab they requested lighting controls that can simulate different times of day. Apparatus, such as toys on the steps and noise are welcome as they are present in the real world. This lab would be specially built for the EMS program. They also will benefit from simulated ambulances to get used to working in confined spaces if hydraulics can be added to simulate travel it would be a better experience. They also request a simulation room similar to that in the nursing simulation area for a permanent install of their mannequins. Ambulance bays will require vehicle exhaust remediation.

Generic Classrooms available to any course or program are preferred by UNM for optimum utilization. The EMS team accepts this and requests a storage room be provided between two classrooms for their program specific apparatus. This will keep the untrained hands from experimenting with the equipment. Located between classrooms would allow them to use 1 or the other or both classrooms. If sized as a classroom, the storage room could be converted if the program relocates.

Locating the EMS program close to the nursing program will allow greater opportunities for shared resources. Our discussions have this program back filling a space vacated by a program moving to the new CCTEI Building. The current welding area is a leading candidate

The students were a very involved group that relayed stories that helped us recognize important items to add to the programming of EMS. Like other healthcare programs these student travel in packs, they study and take breaks together. So agility and study spaces, break areas and the like

need to accommodate groups. They need areas to decompress from a stressful and high paced active profession. Capturing vistas between classes and allowing for congregating outside of learning spaces are desired in this program.

Fire Sciences are a near future desire as a program offering at UNM Gallup. It will involve first responders in addition to the EMS personal, fire fighters, and other rescue personnel. A yard is required to use the Jaws of Life and other techniques to free victims from vehicles; similar to EMS the more realistic the simulation the more accurate the learning. They would like a firetruck to be able to pull into the building for instructional purposes. This will require vehicle exhaust remediation.

Washers and dryer are requested to clean clothes after returning from a call. Break areas and agility spaces with wifi, outlets to charge phones, tablets and laptops; and food will be needed for time between calls and classes. There will be no fires to fight on campus; they will be at the fire training facility off campus.

This program is 5-7 years out. It is another candidate for back filling a building vacated by a program moving to the new CCTEI building. in this case the Construction tech building may be modified to accept the fire truck and improvements to host the Fire Sciences curriculum.

QA more direct connection between EMS and fire sciences should be installed a stair from the lower yard to the upper yard should be built. The campus terrain will not allow a ramp in this area another accessible route will need to be studied and initiated.

Reported by: Tynn Waters & Erik Mease, 08.30.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: photos

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)
MEETING: Programming User Groups Interviews – Welding Technology Students
LOCATION: UNM-Gallup
DATE: August 26, 2016

ATTENDEES: Joe Sanchez	Welding Coordinator	UNM-G
Montelban R. Terijer	WT Student	UNM-G
Byron McCray	CT Student	UNM-G
Brian Scharmer	Project Manager	UNM PDC
Tymn Waters	Project Manager	SMPC Architects
Erik Mease	Project Architect	SMPC Architects

SUMMARY:

SMPC met with past and present students of the courses being programmed and looked with renewed eyes at the apparatus and storage and layout needs as it pertains to the associated lab.

Welding Lab

The space was cool as no one was working. It really heats up with all the welding booths operating. A high school class was arriving. We spoke with 2 students, Byron, Montelban and the director. The existing storage area (approximately 200 SF) is not adequate, some tools are not easy to access and some go in and out all the time. The tool crib idea is favored by Joe Chavez, director of welding, who went so far as to describe a vending machine check out type of tool crib. Like construction tech, the college students would benefit from lockers to safely stow their gear. High school students are issued gear that needs to remain on site so secured yet, easy access is required. Some metallurgy equipment does not have the floor space currently and needs to be stored. They desire it be on the floor to be available to test samples without setting up each time.

Welding rods need to be stored in a specialty oven to keep moisture from getting in to the rods. Stick welding tiG welding and arc welding should be available at each welding station. Currently the majority of the welding stations have yellow and blue curtains containing the flame and light from the work inside. Building the walls dividing the booths with a solid fire rated material would eliminate the yellow curtains. The blue curtains close off the space and would need to remain unless the booth was redesigned.

Snorkel ventilation is present and needs to be placed near the welding site. This is harder to do while wearing the gloves and helmet. An overhead ventilation system may be a better option. We have discussed tying the ventilation into a medium scrubber to remove impurities before exhausting outside. General lighting producing adequate foot candles above the booths are required the fixtures situated as to not produce shadows. Additional task lighting may be added. General high bay LED lighting is a good start. Where ducts and apparatus inhibit the light, fixture locations may be adjusted. A 4000 K color saturation is a good starting point.

Welding interferes with data. It also sends particles of steel into the air. The ventilation should assist with the particulate matter; conduit separating data and electrical will be required. Many outlets for hand tools are desired as is the compressed air. Welding can share a compressor and dryer with the other shops

The welding shop needs to be separated from the wood working shop to eliminate the sawdust combustion. The heat and noise of the shop should be separated from adjacent rooms. A teaching nook should be located to protect the AV equipment from the lab environment and have acoustics befitting a conversation.

We have discussed a tank farm to minimize the number of bottles in the welding shop, the transferring of bottles and allowing for longer operation without changing bottles. Large tanks of gases may be placed in a properly designed shelter and serviced by large trucks. Also outside, they desire 10 work stations. The new helmets are affected by sunlight so experience welding in daylight outside is necessary.

The plasma cutter was being set up and is to become part of the curriculum. The PC that programs the machine needs to be protected from the heat and other factors. There is a desire to also have an associate degree in welding as it was noted to add \$10 per hour to the welders pay.

Having offices nearby is preferred as the instructors spend long hours in this shop and do not travel around the campus a lot. They benefit from being in close proximity to other CCTEI instructors to coordinate and collaborate. These offices should be tied to the network and have all the software available. They will need secure drives for restricted information. A local printer is needed to serve the instructors office for privacy. Plots may be sent to the plotter room.

It was noted that participation in the shop leave one coated in grime, so a shower and locker room should be in the building to allow for cleaning up and changing. Restrooms should have amenities that allow people with coveralls, gloves and tools. Wider stall, cubbies and shelves should be available to set things upon and provide space to maneuver.

Dr. Dyer lead partnerships

Our report will also discuss the parallel track that Dr Dyer is heading up; this involves developing public private partnerships. There are meetings slated 12-13 September at the New Mexico Jobs Council, to discuss the potential for a potential private partner building a manufacturing plant in Gallup McKinley. They would produce the SCIPS Structural Composite Integrated Insulated Panel System.
<http://www.buildingsolutions.com/#hcs-building-panels/f56du>

UNM – Gallup endeavors to build modular homes using the panels for the Navajo reservation. They would include solar PV and hot water and be modular so they can be driven to the site and set upon site built structure. This way the students gain hands-on training on the varied construction and construction technology professions.

Local venture capitalists and property owners are assisting Dr. Dyers efforts to establish a public private partnership, UNM Gallup is seeking other means of funding growth and establishing programs of study that are important to Gallup-McKinley other than relying solely on HED – Higher Education Department funding.

Reported by: Tymn Waters & Erik Mease, 08.30.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

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Attachments: **photos**

MEETING SUMMARY

PROJECT: UNM-Gallup Center for Career Technology Education & Innovation (CCTEI)

MEETING: Programming Findings Presentation

LOCATION: UNM-Gallup

DATE: August 26, 2016

ATTENDEES:	Ron Petranovich	Facilities Manager	UNM-G-PPD
	Sonya Damon	EMS Director	UNM-G
	Christy Butler	Executive Assistant	UNM-G
	Frank Loera	Division Chair	UNM-G
	Chris Chavez	Construction Technology	UNM-G
	Brian Scharmer	Project Manager	UNM PDC
	Tymn Waters	Project Manager	SMPC Architects
	Erik Mease	Project Architect	SMPC Architects

SUMMARY:

SMPC presented their findings for the programming of the new Center for Career Technology Education & Innovation (CCTEI) building. The presentation presented a number of aspects pertaining to the planning process of the CCTEI and presented a campus plan for backfilling the vacated spaces on campus. A few comments were made pertaining to the information presented; the following is a list and responses to those statements.

1. Sanitary -Ron Petranovich voiced concern about the sanitary strategy.
 - a. The part of the campus gravity and forced systems are at capacity and the proposed new lift station for the CCTEI building may overload lift stations down the chain.

- b. A new gravity system running on the west end of the campus would alleviate this issue and could incorporate Calvin Hall and the Gymnasium buildings. This would eliminate two lift stations on campus.
- c. SMPC and BHI will include an option in the Programming Services Document to include the option of running a new gravity sanitary line on the west side of the campus. A feasibility study is needed to validate this option.
- 2. Electrical – Brian Scharmer asked if the Electrical utilities load would be designed in the initial phase to handle Phase 1 and Phase2.
 - a. SMPC indicated that the system would be designed to handle both phases and that the phase 2 load was small enough that it should not have an impact on the initial cost of the system.
- 3. Telecom – Ron Petronavich wants the campus to install a loop on the west side of Calvin Hall.
 - a. When the CCTEI building telecom is installed the line should run first direct north under Gurley avenue and then over to the main box near Zollinger Library. A “man hole” should be installed where the telecom line turns at Gurley Ave to allow for the future West loop to tie into this line.
- 4. Frank Loera Mentioned that one additional Faculty office may be needed in the CCTEI building for an Administrator.
 - a. SMPC will work to incorporate this office into the program
- 5. Peggy Anne Drive –Brian Scharmer voiced concerns on a few Items pertaining to Peggy Anne road
 - a. Does Peggy Anne Dr. have the bearing capacity for heavy trucks delivering material?
 - i. SMPC has had discussions with BHI regarding this issue. BHI believes that road would be able to accommodate the load because there is a warehouse down the road and presumably large vehicles are currently using Peggy Anne to access it. However, BHI would need to look at as built drawings of Peggy Anne to evaluate the bearing capacity.
 - b. Would truck traffic be allowed on Peggy Anne because of the residential houses on Peggy Anne?
 - i. SMPC has contacted the city in regard to this issue and will continue to track the issue.
 - c. Is the purposed truck access to the site off of Peggy Anne Drive have sufficient room to accommodate a tractor trailer turning radius.

- i. SMPC is investigating the turning radius required for this intersection. The proposed site plan will need to be tested in the subsequent design phases.
- 6. Overall the programing presentation was well received by the members of the CCTEI Planning Committee that were present for the meeting.

Reported by: Tymn Waters & Erik Mease, 09.10.16

Distributed to: Ben Savoca and Brian Scharmer, UNM PDC and Dr. Dyer, UNM-G

Note: This document is considered to be an accurate summary of the designated meeting unless written notice to the contrary is received within seven (7) days after receipt.

Attachments: Presentation PDF: 2016-09-06_UNMG_CCTEI_Final.pdf and sign in sheet

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Research & Public Service Project (RPSP) and other Funding Requests

FY 2020

Print, sign, and submit packet to NMHED per instructions by 9/14/18

#NAME?	University of New Mexico-Gallup		
Primary Contact	Name and Title: Dr. Daniel T. Primozic, Dean of Instruction		
	Phone: 505-863-7591		
	Email: dprimozic@unm.edu		
Governing Board Signature:			Date:

Institutional Rank (priority)	Program/Project Title	Process and Mechanical Technology	Request in FY 20	New Program (X)
--------------------------------------	------------------------------	--	-------------------------	------------------------

1				
2				
3				
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7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total Funding Request			\$ 200,000.00	0

Please insert additional rows as necessary.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Research & Public Service Project (RPSP)

FY 2020

Fill and submit packet to NMHED per instructions by 9/14/18

Institution: UNM-Gallup

Name/Title of Project: Process and Mechanical Technology

Indicate type New

FY20 Funding

If Previously Funded, Amount that was awarded in FY19 \$ -

Type of Project (X for type) Research ___ Public Service ___ Academic ___ Athletics ___ Clinical ___ Economic Development ___ Other ___ (Please explain in the space below)
Academic

1 Number of years the project has received General Fund support: (Disregard if new program) 0

2 Project Description/Executive Summary:

The University of New Mexico-Gallup has entered into a partnership with local refining industry to promote workforce development training for the Gallup community. First this partnership will provide Basic Operator Training for workers in the partner industry. Then it will provide the opportunity for a Certificate in Process Technology attainable within two years which can later progress to an Associate of Applied Science degree. The \$200,000 allotment for workforce development is seed money to cover the startup costs of this new partnership program. This program could generate between 30-40 new jobs annually as well as have the possibility of professional education for workers in the partner industry. The seed money will be used in the following manner:

1. A visiting professor will be hired to develop and coordinate the new program at a salary of \$70,000 with 35% for fringe benefits. This coordinator will:

- a) conduct needs assessments,
- b) write curriculum as needed for additional courses not being currently offered by the University of New Mexico Gallup,
- c) oversee the purchase of equipment needed for the program,
- d) schedule classes,
- e) create and monitor the budget for the new program,
- f) perform assessment of the program, and
- g) revise the program to reflect innovations in the field during this initial phase of the program.

2. This will be a two-year visiting position wherein the coordinator will also do some of the instruction for the program in conjunction with the existing industrial partner's training staff and supplemental professors from UNM Gallup. This position may be extended into a tenure track position if the program proves successful and mutually advantageous to both the university and the professor.

3. After several consultations and site visits with the industrial partner's on-site trainer, we have already determined that the university will have to supplement additional professors for specific modules of the program.

4. Initial purchases of instructional materials and supplies will be taken from the remainder of the \$200,000 allotment after the deduction of faculty salary and benefits. All equipment for the program will be housed at the industrial partner's work site where it is anticipated that all instruction will take place.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Research & Public Service Project (RPSP)

FY 2020

Fill and submit packet to NMHED per instructions by 9/14/18

3 **Budget Narrative (Overview only - Budget Detail follows on next Worksheet).**

Visiting Professor of Process and Mechanical Technology salary of 70,000.00 over 2 years @ 70,000.00 per year. Supplies and materials @ 11,000.00 over 2 years.

4 **Program Mission (include population served, other demographic info):**

To serve the Gallup community and the region by creating a workforce development program that may provide up to 30-40 new jobs per year and enhance the economic development for the people of our area.

5 **Key Project Objectives (Overview only - details and measures on following worksheet):**

Create instruction for partner in Basic Operator Instruction; Hire Visiting Professor to create and coordinate program; Visiting Professor Completes the creation of the Certificate in Process and Mechanical Technology; Visiting Professor finalizes program for Summer Semester, 2019 launch; Visiting Professor/ UNM Gallup faculty instruct program; Students complete Certificate Program.

6 **For Existing Projects, Describe Major Accomplishments and/or Obstacles Encountered the Previous Fiscal Year. For New Projects Identify the Top Objectives and Challenges for the Current FY:**

7 **Describe the Project Impact (Statewide Impact, Does it address the Governor's initiatives, and/or what are the Student Outcomes):**

This program can produce 30-40 new jobs in the Process and Mechanical Technology field per year for the people of our local and regional economy and provide our students with a certificate in Process and Mechanical Technology that can eventually lead to an AAS in that expanding field.

8 **Does the project receive Awards, private donations or Federal grants? Have you sought out funding from other sources?**

Not yet.

9 **Accomplishments / Highlights:**

Medical Projects

1 How many graduates stay in Practice in New Mexico:

0

NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Project (RPSP)
Project Budget Sheet

Institution:

RPSP Project: Total:

Budget versus Actual	Budget	Change	Request	
Revenue and Transfers	FY19		FY20	Comments
Beginning Fund Balance	\$ 200,000.00	\$ (200,000.00)		
Appropriations				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ -		
Local		\$ -		
Total Appropriations	\$ -	\$ -	\$ -	
Grants and Contracts				
Federal		\$ -		
State		\$ -		
Local		\$ -		
Total Grants and Contracts	\$ -	\$ -	\$ -	
Private Gifts, Grants and Contracts		\$ -		
Land & Permanent Fund or Local Property Taxes		\$ -		
Tuition and Fees		\$ -		
Endowment		\$ -		
Sales and Services		\$ -		
Other Sources - Detail in Comments		\$ -		
Total Revenues	\$ -	\$ -	\$ -	
Transfers (to) from				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
Total Transfers	\$ -	\$ -	\$ -	
Expenses				
Faculty Salaries	FTE \$ 140,000.00	FTE \$ (140,000.00)		
Professional Salaries		\$ -		
Other Staff Salaries		\$ -		
Student Salaries (GA/TA)		\$ -		
Other Salaries		\$ -		
Total All Salaries	0 \$ 140,000.00	0 \$ (140,000.00)	0 \$ -	
Fringe Benefits	\$ 49,000.00	\$ (49,000.00)		
Travel		\$ -		
Utilities		\$ -		
Institutional Support Charges		\$ -		
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 11,000.00	\$ (11,000.00)		
Equipment		\$ -		
Other Expenditures		\$ -		
Total Expenditures	0 \$ 200,000.00	0 \$ (200,000.00)	0 \$ -	
Ending Funding Balance	\$ -	\$ -	\$ -	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Project (RPSP)
Project Objectives Sheet**

Institution:

University of New Mexico-Gallup

RPSP Project:

Process and Mechanical Technology

Total

\$ 200,000.00

Goal based on benefit to students (especially at-risk), generation of degrees (especially STEM-H) and the people of New Mexico

Comments - Demonstrate consistent improvement as a result of the awarded RPSPs, trends, etc.

	Target for FY 18	Actuals for FY 18	Targets for FY 19	Targets for FY 20	
1		2019			
2	November, 2018				
3			August, 2019		
4			March, 2019		
5			May, 2019		
6			Summer, Fall Semesters	Spring, Summer Semesters	
7					
8					
9					
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20					

Add Additional lines as needed

**Exhibit 1 - UNM GALLUP Campus
Summary of Current and Plant Funds**

		Original		Revised		Actuals 2019	
		Budget 2019		Budget 2019		PERIOD 03	
		PERIOD 03		PERIOD 03		PERIOD 03	
		Unrestricted	Restricted	Unrestricted	Restricted	Unrestricted	Restricted
Revenues	Instruction and General	14,772,351	742,610	14,807,811	0	3,967,178.70	.00
	Student Social and Cultural Ex 15	79,120	0	79,120	0	37,728.87	.00
	Research Ex 16	0	0	0	0	.00	.00
	Public Service Ex 17	12,773	1,008,620	17,773	0	9,750.00	.00
	Student Aid Ex 19	0	0	0	0	4,880.68	.00
	Auxiliaries Ex 20	1,224,626	0	1,224,626	0	370,290.71	.00
Subtotal Current Funds		16,088,870	1,751,230	16,129,330	0	4,389,828.96	.00
TOTAL Revenues		16,088,870	1,751,230	16,129,330	0	4,389,828.96	.00
Beginning Balance	Instruction and General	4,344,561	0	0	0	6,197,830.94	.00
	Student Social and Cultural Ex 15	38,142	0	0	0	64,423.95	.00
	Public Service Ex 17	306,979	0	0	0	318,444.51	.00
	Internal Services Ex 18	11,630	0	0	0	3,640.21	.00
	Student Aid Ex 19	185,543	0	0	0	276,587.23	.00
	Auxiliaries Ex 20	201,945	0	0	0	169,928.90	.00
Subtotal Current Funds		5,088,800	0	0	0	7,030,855.74	.00
TOTAL Beginning Balance		5,088,800	0	0	0	7,030,855.74	.00
Total Available	Instruction and General	19,116,912	742,610	14,807,811	0	10,165,009.64	.00
	Student Social and Cultural Ex 15	117,262	0	79,120	0	102,152.82	.00
	Research Ex 16	0	0	0	0	.00	.00
	Public Service Ex 17	319,752	1,008,620	17,773	0	328,194.51	.00
	Internal Services Ex 18	11,630	0	0	0	3,640.21	.00
	Student Aid Ex 19	185,543	0	0	0	281,467.91	.00
	Auxiliaries Ex 20	1,426,571	0	1,224,626	0	540,219.61	.00
Subtotal Current Funds		21,177,670	1,751,230	16,129,330	0	11,420,684.70	.00
TOTAL Total Available		21,177,670	1,751,230	16,129,330	0	11,420,684.70	.00

**Exhibit 1 - UNM GALLUP Campus
Summary of Current and Plant Funds**

		Original		Revised		Actuals 2019	
		Budget 2019		Budget 2019		PERIOD 03	
		PERIOD 03		PERIOD 03		PERIOD 03	
		Unrestricted	Restricted	Unrestricted	Restricted	Unrestricted	Restricted
Expenditures	Instruction and General	14,149,016	742,610	14,184,476	0	2,866,100.35	.00
	Student Social and Cultural Ex 15	79,120	0	79,120	0	525.39	.00
	Research Ex 16	0	0	0	0	.00	.00
	Public Service Ex 17	12,773	1,008,620	17,773	0	4,932.43	.00
	Internal Services Ex 18	0	0	0	0	719.87	.00
	Student Aid Ex 19	100,000	0	100,000	0	56,526.00	.00
	Auxiliaries Ex 20	1,184,626	0	1,184,626	0	418,838.41	.00
Subtotal Current Funds		15,525,535	1,751,230	15,565,995	0	3,347,642.45	.00
TOTAL Expenditures		15,525,535	1,751,230	15,565,995	0	3,347,642.45	.00
Transfers	Instruction and General	(623,335)	0	(623,335)	0	(563,335.00)	.00
	Student Aid Ex 19	100,000	0	100,000	0	641.53	.00
	Auxiliaries Ex 20	(40,000)	0	(40,000)	0	.00	.00
Subtotal Current Funds		(563,335)	0	(563,335)	0	(562,693.47)	.00
TOTAL Transfers		(563,335)	0	(563,335)	0	(562,693.47)	.00
Ending Balance	Instruction and General	4,344,561	0	0	0	6,735,574.29	.00
	Student Social and Cultural Ex 15	38,142	0	0	0	101,627.43	.00
	Research Ex 16	0	0	0	0	.00	.00
	Public Service Ex 17	306,979	0	0	0	323,262.08	.00
	Internal Services Ex 18	11,630	0	0	0	2,920.34	.00
	Student Aid Ex 19	185,543	0	0	0	225,583.44	.00
	Auxiliaries Ex 20	201,945	0	0	0	121,381.20	.00
Subtotal Current Funds		5,088,800	0	0	0	7,510,348.78	.00
TOTAL Ending Balance		5,088,800	0	0	0	7,510,348.78	.00
Total Expenditures, Transfers and Balances		21,177,670	1,751,230	16,129,330	0	11,420,684.70	.00

STATE OF NEW MEXICO
COUNTY OF SANTA FE
FIRST JUDICIAL DISTRICT COURT

Case Number: _____
Assigned Judge:

In The Matter Of:

**THE LOCAL OPTION
BRANCH COMMUNITY COLLEGE
2019 ELECTIONS.**

**UNOPPOSED PETITION TO CONDUCT THE
LOCAL OPTION BRANCH COMMUNITY COLLEGE 2019 ELECTIONS
WITH THE 2019 REGULAR LOCAL ELECTION**

COME NOW, the New Mexico Community College Association on behalf of the five affected Branch Community Colleges (listed below), with the support of the New Mexico Counties Clerks Affiliate on behalf of its respective County Clerks, and with the non-opposition of the Secretary of State, to Petition this Honorable Court to fashion an equitable remedy to ensure that the 2019 elections for Local Option Branch Community Colleges be held as provided in the Election Code for the regular Local Election, instead of on the date provided under NMSA 1978, Chapter 21, Article 14, titled Branch Community Colleges, thus resolving conflicts in law regarding Branch Community College Elections, and who in support hereby **STATE:**

A. BRIEF STATEMENT OF EQUITABLE RELIEF SOUGHT

- 1) The Parties petition this Honorable Court to enter an Order directing that the 2019 elections for Branch Community Colleges be held on November 5, 2019 – the date provided in the Election Code for the regular Local Election, instead of the date specified in Chapter 21, Article 14, titled Branch Community Colleges, which is February 5, 2019.
- 2) The boundaries of Branch Community College Districts are coterminous with School Districts, whose Boards serve as the Board for their Branch Community Colleges unless a Local Option is selected, in which case a separate Board is elected. Local Option elections have always been elected on the same ballot as the school districts in which they operate and those elections should continue to be aligned.
- 3) The Legislature in 2018 repealed and replaced all of the procedures and timelines for the election of School Boards, previously also held in February of odd-numbered years. Accordingly, the affected Branch Community Colleges are lacking timelines and procedures with which to conduct their elections should the relief requested in this Petition not be granted.

B. JURISDICTION OVER THE PARTIES AND VENUE IN THIS COURT

- 4) This Court has jurisdiction over the subject matter herein, *viz* resolving a statutory conflict with orphan provisions that cannot be executed pursuant to the current chaptered laws and fashioning an equitable remedy in response.
- 5) New Mexico Association of Community Colleges (the Association) is based in the City and County of Santa Fe. The Association is the organizational representative of the ten Branch Community Colleges in New Mexico organized pursuant to Chapter 21, Article 14, NMSA 1978, including the five affected Branch Community Colleges, each of which have

exercised the local option provision for a separate Branch Community College Board as provided for in NMSA 1978, Section 21-14-2.1(A) (1985), and who through their organizational representative come before this Court seeking an equitable remedy to a statutory conundrum. Those five affected Branch Community Colleges are:

- a) Eastern New Mexico University – Roswell, located in Chaves County,
 - b) Eastern New Mexico University – Ruidoso, located in Lincoln County,
 - c) University of New Mexico – Gallup, located in McKinley County,
 - d) University of New Mexico – Los Alamos, located in Los Alamos County, and
 - e) University of New Mexico – Valencia, located in Valencia County.
- 6) New Mexico Counties Clerks Affiliate (the Affiliate) is a part of the organizational structure of New Mexico Counties (NMC), based in the City and County of Santa Fe. The Affiliate, though the NMC, is the organizational representative of the thirty-three County Clerks in New Mexico, including the five impacted County Clerks who are responsible for administering the elections in the Counties where the Local Option Branch Community College Boards listed above are elected. Those five impacted County Clerks are:
- a) The Honorable Dave Kunko, Chaves County Clerk,
 - b) The Honorable Rhonda Burrows, Lincoln County Clerk, along with her Chief Deputy, Whitney Whittaker, who is the unopposed person to be elected Lincoln County Clerk in November 2018 and who will take office and be the elected official in Lincoln County administering elections in 2019,
 - c) The Honorable Harriett K. Becenti, McKinley County Clerk,
 - d) The Honorable Naomi D. Maestas, Los Alamos County Clerk, and
 - e) The Honorable Peggy Carabajal, Valencia County Clerk.

- 7) The Honorable Maggie Toulouse Oliver is the elected Secretary of State for the state of New Mexico, whose principle office is located in Santa Fe County. The Secretary of State is the Chief Elections Officer whose duties are to “obtain and maintain uniformity in the application, operation and interpretation of the Election Code”, NMSA 1978, Section 1-2-1(B)(1) (2017), and to “generally supervise all elections by administering the Election Code in its statewide application”, NMSA 1978, Section 1-2-2(A) (2011).
- 8) The Association and the Affiliate have standing in this matter, where New Mexico Courts “have allowed organizations to sue if their individual members would have standing in their own right.” *ACLU of New Mexico v. City of Albuquerque*, 2008-NMSC-045, ¶ 12, 144 N.M. 471.
- 9) Please note that although this matter is styled as an unopposed, non-confrontational petition, the protagonists are the affected Branch Community Colleges appearing through the Association (traditionally labeled Petitioner), the impacted parties are the County Clerks who administer local elections appearing through the Affiliate (traditionally labeled Real Parties in Interest), and the Secretary of State is the Chief Elections Officer whose relevant duties are outlined above (traditionally labeled Respondent).

C. RELEVANT FACTS AND HISTORY REGARDING BRANCH COMMUNITY COLLEGES AND THE LOCAL OPTION FOR A SEPARATELY ELECTED BRANCH COMMUNITY COLLEGE BOARD

- 10) Branch Community Colleges were first conceived in 1957. Their organizational structure and duties are currently codified in Chapter 21, Article 14. NMSA 1978, Sections 21-1-14 to -16 (1957, as amended through 2009).

- 11) Branch Community Colleges were legislatively created to enable the state's "six universities established by the constitution of New Mexico. . . to create branches of their institutions in conjunction with local school districts." NMSA 1978, Section 21-1-39 (1998).
- 12) The purpose of the Branch Community Colleges is to provide "either the first two years of college education or organized vocational and technical curricula of not more than two years' duration designed to fit individuals for employment in recognized occupations, or both." Section 21-14-1(A) (2007). This is similar to the purpose of Community Colleges and the purpose of Technical and Vocational Institutes. *Compare* NMSA 1978, Section 21-13-2(A) (1998), definition of "community college" *and* NMSA 1978, 21-16-2(A) (1999), definition of "technical and vocational institute".
- 13) There are currently ten Branch Community Colleges in the state.
- 14) Between 1957 and 1985, the Governing Board of a Branch Community College was composed exclusively of the local Board of Education (commonly known today as a School Board) of the Municipal School District in which the Branch Community College District resided, or by the combined local Boards of Education acting as a single board when a Branch Community College District comprised more than one Municipal School District. NMSA 1978, Section 21-14-2 (1957, as reenacted and amended through 1985), *see also* N.M. Att'y Gen. Op. 75-50.
- 15) In 1985, the Legislature authorized a Local Option, permitting the local Boards of Education to "cease to operate as the branch community college board and provide for an elected branch community college board" to be elected at the "regular branch community college election, to be held on the first Tuesday of February of each odd-numbered year"

NMSA 1978, Section 21-14-2.1 (1985). From 1985 through 2018, the first Tuesday of February of each odd-numbered year was the same day as the regular election day for local Boards of Education. *See* NMSA 1978, Section 1-22-3(B) (1985, as amended through 2015).

16) Of the ten Branch Community College Districts, five have continued to be operated by a Governing Board comprised of the local Board of Education, and five have chosen the Local Option of a separately-elected Branch Community College Board.

17) Chapter 21, Article 14 provides that:

H. All elections held pursuant to the branch community college laws shall be as follows:

(1) the board calling the election shall give notice of the election in a newspaper of general circulation in the branch community college district at least once a week for three consecutive weeks, the last insertion to be not less than thirty days prior to the proposed election;

(2) the election shall be conducted and canvassed in the same manner as municipal school district elections *unless otherwise provided in the branch community college laws;*

NMSA 1978, Section 21-14-2(H) (2005) (emphasis added).

18) The final clause quoted above appears to be an apparent but unstated oblique reference to Subsection F of the same section that taxes are to be levied for the Branch Community College District pursuant to the College District Tax Act, NMSA 1978, Sections 21-2A-1 to -10 (1995, as amended through 2013).

D. ARGUMENT: IN THE LOCAL ELECTION ACT, THE LEGISLATURE MOVED SCHOOL BOARD ELECTIONS TO NOVEMBER, LEAVING BRANCH COMMUNITY COLLEGES WITH NO ELECTION PROCESS OF THEIR OWN. THIS COURT SHOULD ORDER THE 2019 ELECTIONS FOR BRANCH COMMUNITY COLLEGES TO BE CONDUCTED AS PART OF THE REGULAR LOCAL ELECTION

- 19) In 2018, the Legislature passed the House Bill 98, the Local Election Act (LEA), now Chapter 79 of New Mexico Laws of 2018, *available at* <http://www.sos.state.nm.us/uploads/files/CH79-HB98-2018.pdf>.
- 20) The LEA, at 267 pages, is a comprehensive rewrite of the laws addressing local elections. In it, the entire School Election Law, previously found at Chapter 1, Article 22, was repealed and in its place the Local Election Act was enacted. *Compare* School Election Law, NMSA 1978, 1-22-1 to -19 (1985, as amended through 2015; repealed 2018) *with* Local Election Act, NMSA 1978, 1-22-1 to -20 (2018).
- 21) The LEA creates a consolidated ballot for local, non-partisan public bodies with ad valorem taxation authority. These various local, non-partisan public bodies are detailed in NMSA 1978, Section 1-22-2(C) (2018):
 - a) school district,
 - b) special hospital district,
 - c) community college district,
 - d) technical and vocational institute district,
 - e) learning center district,
 - f) arroyo flood control district,
 - g) special zoning district,
 - h) soil and water conservation district,

- i) water and sanitation district,
 - j) municipality, including a home rule municipality governed pursuant to Article 10, Section 6 of the constitution of New Mexico, a municipality operating pursuant to a territorial charter or special charter, and,
 - k) beginning July 1, 2022, a conservancy district governed pursuant to Chapter 73, Article 14 or 18 NMSA 1978 and a watershed district governed pursuant to the Watershed District Act.
- 22) Although Community College Districts are listed above, along with Technical and Vocational Institute Districts, there is no specific reference to *Branch* Community College Districts, even though the three different types of bodies serve equivalent functions in their respective communities, *supra*. This omission appears to have been caused by an egregious oversight by the normally diligent Legislative Sponsors of House Bill 98.
- 23) For the five affected Local Option Branch Community College Districts, this creates an unworkable statutory conundrum, described as follows:
- a) NMSA 1978, Section 21-14-2.1 (1985) sets the regular elections for Local Option Branch Community College Districts to be held on February 1 of each odd-numbered year.
 - b) NMSA 1978, Section 21-14-2(H)(2) (2005) provides that Branch Community College District elections shall be conducted and canvassed in the same manner as municipal school district elections unless otherwise provided in the branch community college laws.
- 24) However, under the LEA, municipal school district elections and all procedures associated with them have been moved from February to November of each odd-numbered year as

part of a consolidated ballot, making any reference to a February date an orphan election with no parent body to guide it or to provide structure.

- 25) Accordingly, there is no longer any provision specific to Municipal School District elections that establishes the date a proclamation must be passed by the local Board of Education (pursuant to the LEA, at NMSA 1978, Section 1-22-4 (2018), the Secretary of State now issues the proclamation for the consolidated election).
- 26) Under the LEA there is no longer a filing date for School Board Candidates that makes sense for an orphan election to be held in February. Indeed, under the LEA, the County Clerk is the Proper Filing Officer for the consolidated elections, but since there is no longer a School Election Law, there is no Proper Filing Officer for February Branch Community College Elections.
- 27) Under the LEA, there are no absentee provisions or early voting hours specific to any Municipal School District, as their elections are now consolidated with other local public bodies.
- 28) Under the LEA, the Board of County Commissioners consolidates precincts and sets the polling places for the consolidated election in November. Under the previous School Election Law, the local Board of Education consolidated precincts and set the polling places for the February election. No provision exists any more to authorize setting of polling places or consolidation of precincts for a February election.
- 29) Under the LEA, the County Clerk appoints the Precinct Board members for the consolidated election in November and provides for their compensation. There is no statutory authority for the County Clerk to appoint a Precinct Board for the Branch

Community College election, and there is no authorization to compensate such Precinct Board members for their service.

- 30) Under the previous School Election Law, the Canvassing Board was comprised of the County Clerk, the School Superintendent, and a Magistrate Judge. Under the LEA, the County Canvassing Board is comprised of the Board of County Commissioners who act with regard to the consolidated ballot and the State Canvassing Board as defined in the state constitution performs its duties for any multi-county districts. These bodies are not authorized to act with regard to a separate Branch Community College District should they conduct their elections apart from the LEA and the Branch Community College laws do not identify a canvassing board.
- 31) If it were not for Section 21-14-2(H)(2), stating now paradoxically that Branch Community College District Elections “shall be conducted and canvassed in the same manner as municipal school district elections unless otherwise provided in the branch community college laws”, it would be easy for the colleges and election administrators to determine that elections for Branch Community Colleges are to be moved to November through the reference to Municipal School District Elections.
- 32) Indeed, Section 174 of House Bill 98 is a Temporary Provision which is intended to cover exactly the type of legislative conundrum faced by the affected Branch Community Colleges:

SECTION 174. TEMPORARY PROVISION.--References in law to the Municipal Election Code and to the School Election Law shall be deemed to be references to the Local Election Act.

- 33) However, in the case of the Branch Community College laws, there are two phrases that create the unworkable conundrum that has brought the parties before this Court:
- a) the clause in Section 21-14-2(H)(2), “unless otherwise provided in the branch community college laws”, and
 - b) the statement in Section 21-14-2.1 states that officer elections for Local Option Branch Community College Districts are “to be held on the first Tuesday of February of each odd-numbered year”.
- 34) For the five Local Option Branch Community College Districts, the combination of these two phrases creates a Gordian Knot: the Legislature clearly intended to capture any stray sections of law through the Temporary Provision in Section 174, yet the combination of the above two phrases appears to thwart that legislative intent. How, then, to hold an election without procedures, without rules, and in the same manner as another public body – Municipal School Board – that no longer conducts its own elections. Alternatively, how, then, to conduct its election on the consolidated ballot, where Municipal School Elections now reside.
- 35) To further tighten the yoke lashed by the Gordian Knot, the impacted Local Option Branch Community Colleges considered having a special election in 2019, however, under the provisions of Laws 2018, Chapter 79, as of July 1, 2018, all special elections related to local governments are mailed ballot elections and are exclusively for elections on a ballot questions. Specifically:
- A. The county clerk shall conduct by mailed ballot any special election called by the state or a local government except for a special election for the office of United States representative.

C. Mailed ballot elections shall be used exclusively for voting in special elections on a ballot question, including a recall election.

NMSA 1978, 1-24-3(A)&(C) (2018).

- 36) Previous to House Bill 98, mailed ballot elections were also exclusively for ballot questions. However, House Bill 98 combined Articles 23 and 24 of the Election Code removing the option of conducting a local government special election in any manner other than by mailed ballot.
- 37) As such, Laws 2018, Chapter 79 removed all the election procedures for an in-person election in February, while also depriving Local Option Branch community Colleges from conducting an in-person special election, necessary for the election of Board Members.
- 38) The Parties are in agreement that ultimately this matter should be resolved through a legislative fix. However, absent a Special or Extraordinary Session in the final months of 2018, any legislative fix will come too late for the February 2019 elections, which are mandated to be held, even though the parent has moved and there is no direction given to the orphan as to the timing of the proclamation, the identity of the proper filing officer, the rules for voting, or the method for canvassing. In short, the five orphaned Branch Community College Districts come before this Court seeking a home.
- 39) That home is to reunite in 2019 the Branch Community Colleges with the local School Boards with which they have been associated since their inception. Indeed, the five Branch Community Colleges who have not selected the Local Option will be electing their Board Members – comprised of the local Boards of Education – in the regular Local Election in November 2019. Reunification of all ten Branch Community Colleges and the local Boards of Education is the solution that cuts the Gordian Knot presented herein.

E. EQUITABLE RELIEF IS APPROPRIATE IN THIS MATTER, ESPECIALLY SINCE THE PARTIES HAVE AGREED TO A SOLUTION SHOULD SUCH FIND FAVOR WITH THIS HONORABLE COURT

- 40) At the very inception of New Mexico's territorial jurisprudence, there was a recognition that situations arise in which the law is incomplete and inadequate. In such circumstances,

Equity obtains jurisdiction where the remedy at law is not plain, adequate, and complete. It is not enough to exclude its jurisdiction that there is a remedy at law. The remedy should be equal to give complete redress. If it falls in some essential quality, the equity may be invoked.

Romero v. Munos, 1859-NMSC-008, ¶ 2, 1 N.M. 314.

- 41) Slightly more than a century after the above concept was first articulated, our Supreme Court continued along that same line, indicating the Court's perception

that a court of equity has power to meet the problem presented, and to fashion a proper remedy to accomplish a just and proper result, and that the trial court in doing so in the instant case did not err.

Hilburn v. Brodhead, 1968-NMSC-142, ¶ 11, 79 N.M. 460.

- 42) And in *Navajo Academy, Inc. v. Navajo United Methodist Mission School, Inc.*, the New Mexico Supreme Court further explained that:

Equitable remedies . . . are distinguished by their flexibility, their unlimited variety, their adaptability to circumstances, and the natural rules which govern their use. There is in fact no limit to their variety and application; the court of equity has the power of devising its remedy and shaping it so as to fit the changing circumstances of every case and the complex relations of all the parties.

1990-NMSC-005, ¶17, 109 N.M. 324 (*quoting* 1 John Norton Pomeroy, *A Treatise on Equity Jurisprudence* § 109, at 141 (Symons ed., 5th ed. 1941)) (omission in original).

- 43) The Parties in this matter – the Association on behalf of its affected member Branch Community Colleges, the Affiliate on behalf of its impacted County Clerks, and the Secretary of State as the Chief Election Officer for the State of New Mexico – agree that notwithstanding the two phrases cited above causing the conundrum and despite the legislative faux pas which was inevitable in legislation as complex and comprehensive as Laws 2018, Chapter 79, the legislative intent is made clear through Section 174 of House Bill 98 that even if there be stray provisions that were not properly amended, the officers of a non-partisan, local public body with ad valorem taxation authority should be elected at the regular Local Election in November of each odd-numbered year.
- 44) As to the future, the Parties in this matter have committed themselves to seeking a legislative solution to clarify this matter in the statutes.
- 45) Insofar as the present is concerned, the five Local Option Branch Community Colleges are concerned, however, the Parties come before this Honorable Court in harmony seeking an Order from this Court to give effect to the dictate in NMSA 1978, Section 21-1402(H)(2) of the Branch Community College laws that their elections “shall be conducted and canvassed in the same manner as municipal school district elections” – pursuant to the catchall language in Section 174 of the LEA, those elections should be held as part of the regular Local Election.

F. CONCLUSION

- 46) Now therefore...