

## IT BUILDING PLANNING-STEERING COMMITTEE

Revised January 2012

### **MEMBERS**

1. William Goetz, chancellor, NDUS, Chair
2. Joshua Riedy, chief information officer, UND
3. Robert Kelley, president, UND
4. Steve Shirley, president, VCSU
5. Randall Thursby, chief information officer, NDUS
6. Alice Brekke, vice president for finance and operations, UND
7. Laura Glatt, vice chancellor for administrative affairs, NDUS
8. Duaine Espégard, vice president, SBHE
9. Marc Wallman, Interim Vice President for Information Technology, NDSU  
(replaced Bonnie Neas, effective January 2012)

### **RESPONSIBILITIES**

1. Determine in clear and concise terms the scope of committee's responsibilities.
2. Determine scope of project relative to resources.
3. Determination of construction oversight and decision-making process.
4. Determine process, if so determined, for broader input from perspective of the System.
5. Determine consideration and process should additional financial resources be made available, inclusive of fund reallocation.
6. Determination to be made for attaining needed expertise as project progresses.  
(architect etc.)
7. Establish internal-external communication process.
8. Establish necessary SBHE approvals and timelines.
9. Determine status of UND Federal Grant, as earlier proposed, as possibility.

## **University of North Dakota February 2012 (updated 2/27/12)**

SBHE authorization to proceed with construction of a Joint UND/NDUS IT office building and separate data center, at an estimated cost of \$15,500,000, to be funded from \$12.5 million in state appropriation and \$3.0 million from internal reallocation from efficiencies and one-time savings.

### **Project Description**

A project steering committee consisting of representatives from the SBHE, UND, NDSU, VCSU and NDUS recommends a two facility construction plan as follows:

- Construction of a new, approximately 40,000 square foot two-story office and support facility that provides work space, meeting rooms, training rooms, and other sundry spaces which facilitate the UND/NDUS IT mission. The office building will contain approximately 152 office/cubicles for the current 138 NDUS and UND staff, leaving minimal space for growth. Five NDUS and seven UND departments will be re-located from existing facilities including: Leonard Hall, 314 Cambridge, ND School for the Blind, Upson II, Robertson/Sayre Hall and Carnegie. The office building will be located north of the Hilton Garden Inn and west of Skalicky/IdaMae Rude/Ryan Hall.
- Renovation of an existing pre-cast concrete warehouse within the facility support complex on the UND campus which will accommodate 5,000 square feet of raised floor Tier III data center space and the approximately 5,000 square feet of required equipment/operation support space. The data center will be the primary site for delivery of core technology services within the NDUS. It will be designed as the primary backup site for institutional server activities of sufficient importance as to require offsite backup.

Based on the current "concept plan" stage of design development, the Data Center being renovated within warehouse space hosted at UND consists of a 5,000 sq ft raised floor data center machine room (3,000 sq ft operational day-one with the remaining 2,000 sq ft for expansion but the 2000 sq ft will have most of the mechanical and electrical work completed so that it can be operational quickly) along with an additional 5,000 sq ft of data center support area. This provides for a total of 10,000 sq ft. Some of the data center support area will be at the same height as the raised floor of the machine room whereas other support areas are anticipated to be at grade level. There will be some equipment located outside the building but within close proximity of the data center space as well.

In addition to the raised floor machine room space, other areas identified in the concept plan that would also be at the same height as the raised floor machine room includes; the network operating center (NOC), operations support area, prep/burn-in/staging area, main and intermediate distribution frame rooms, and the loading dock.

Other support areas that are anticipated to be at grade level include the electrical/mechanical/switchgear room, UPS A room, UPS B room, UPS battery room, and the chiller/pump room.

Located outside but near the data center area would be such things as the generators, cooling tower, and power transformer.

### Consistency with Campus Facility Master Plan and Budget

This project coincides with the goals of the UND Campus Facility Master Plan in its inclusion of this project within Section IV of the 2010 Master Plan.

### SBHE and/or Legislative History

This project was approved by the SBHE for inclusion within the Governors 2011/13 biennial budget in July, 2010.

The project was funded by the 2011 legislative assembly at \$12.5 million in general funds and \$8 million in federal funds. The anticipated grant from the National Institute of Standards and Technology for construction of a research facility to be built as part of, and in conjunction with the data center, did not materialize.

Additionally, Section 7 of HB1003 (2011) included the following related section of legislative intent: "The capital assets line item in subdivision 5 of section 1 of this Act includes the sum of \$20,500,000 for the North Dakota university system and university of North Dakota joint information technology building project. The state board of higher education may spend additional funds on the project of up to \$5,000,000 that are made available from the university of North Dakota, North Dakota state university, and North Dakota university system 2011-13 biennium information technology services funding resulting from one-time savings or efficiencies. The North Dakota university system shall provide a report to the budget section of the legislative management regarding any funds expended pursuant to this section.

### Estimated Total Purchased or Donated Costs: \$15,500,000

	Amount
<b>Planning, Permits and Insurance</b> (design costs associated with current project, OMB preplanning revolving funds, architect and engineer fees, permits, insurance)	\$1,436,000
<b>Land/Building Preparation and Purchase or Donated Costs</b> (land acquisition and site preparation/development)	\$0
<b>Demolition and Disposal</b>	\$150,000
<b>Construction</b> (foundation and building construction or renovation, including fixed equipment, landscape, infrastructure and utilities, mechanical and electrical, parking and driveways or roadways)	\$11,354,000
<b>Institutional work</b> (value of work completed by institutional trade staff)	\$160,000
<b>Contingency</b>	\$900,000
<b>Hazardous Material Abatement</b>	\$0

Other, including 3 <sup>rd</sup> party costs (please describe)	\$0
SUBTOTAL (if total exceeds \$250,000, requires SBHE approval)	\$
Furniture, Fixture and Equipment (FF&E)	\$1,500,000
TOTAL	\$

*No other work, other than that specified within this request, is required for the completion of the project nor is other work planned to supplement this project using funding or authority not included within this request.*

#### **Future Operating/Improvement Costs and Funding Sources**

Design efforts are underway for this project and will provide estimated utility costs and operating costs which are anticipated to be approximately \$4.00 per square foot per year or \$180,000. A more accurate estimate will be provided as design development proceeds.

#### **Source and Availability of Funds**

\$12.5 million state appropriation and \$3.0 million from efficiencies and one-time savings as outlined in the attached funding plan.

#### **Estimated Project Timeline and Completion Date**

Current estimated start of construction on office/support building: July 2012

Current estimated start of construction on data center space renovation: August 2012

Concurrent completion of both projects: July 2013

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### NDUS/UND IT Facility – Office Building/Data Center

<b>Office Building – Option 3</b>	\$9,133,128
<b>Data Center</b>	\$4,937,500
Tier 2 to Tier 3 (add on)	<u>\$1,356,250</u>
<i>Total</i>	<u>\$15,426,878</u>
 Legislative Appropriation	 <u>\$12,500,000</u>
<i>Difference</i>	<u>\$2,926,878</u>
 Section 7 – HB 1003 (2011 N.D. Laws, ch.3)	
Additional funds available through efficiencies and one-time funding	
UND, NDSU, NDUS \$5 M	<u>\$3,000,000</u>
	\$0

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#### Funding

- To assist with cash flow on construction costs, NDUS System Information Technology Services (SITS) will allocate \$3.0 million upfront toward construction of building. Funding for the building will be needed primarily during the latter half of FY2013.
- Funding will be provided from a combination of current operational balances, operational efficiencies and delayed equipment purchases.
- Ongoing efficiencies to pay for the full cost of the building can only be achieved through reduction of administrative overhead in the UND/NDSU service level agreements (SLAs) paid by SITS and the consolidated management of NDUS SITS funded IT operations including UND, NDSU and SITS, regardless of operation location and NDUS strategic operation planning to lower duplication of efforts system wide (Effective 7/1/12).
- The repayment of funding to the ConnectND operational accounts beginning in FY2014 is essential to maintain the solid operation of ConnectND, meet future obligations, and avoid ConnectND student fee increases.
- This plan does not require any direct cash contributions from either UND or NDSU.
- Both UND and NDSU will be impacted by the reduction/elimination of administrative overhead expenses in SLAs, shift of staffing paid through NDUS SITS funding noted above, and the elimination of duplicative efforts and consolidation of operations across UND, NDSU and SITS to the extent possible.

The source of the funds to meet the upfront requirements are estimated as follows:

	<u>FY2012</u>	<u>FY2013</u>	<u>Running Total</u>
Carryover funds FY2011	\$400,000		\$400,000
Delay of Operational Initiatives *	\$300,000		\$700,000
Operational Efficiencies		\$325,000	\$1,025,000
ConnectND Operational Accounts**		\$1,500,000	\$2,525,000
Delay Refresh of Computer Equipment		\$475,000	\$3,000,000

\*Projects to be delayed include: virtual applications, shared storage, and virtual desk top.

\*\*Payback to ConnectND operational accounts beginning in FY2014 of \$250,000 each year.

Efficiencies that contribute to annual amortization payments result from consolidation of information technology operational management and operations that support System IT applications and operations, the Enterprise (System) objectives such as common Learning Management System, lecture (content) capture, unified communication services, and other factors to be determined.

### Recommendations

Below are four key recommendations in order to implement and fund efficiency initiatives, improve student experience, and continue to provide the infrastructure necessary to maintain appropriate level of IT operations:

1. Establish an Information Technology Executive Oversight committee that consists of SBHE, Chancellor, Cabinet and NDUS CIO membership. It is recommended the committee meet twice each year regarding strategic initiatives and financial health of SITS.
2. The NDUS CIO is responsible for the efficient and effective planning and delivery of core technology services (see definition below) to the institutions.
3. The new data center will be the primary site for delivery of core technology services within the NDUS. It should be designated as the primary backup site for institutional server activities of sufficient importance as to require offsite backup.
4. To the extent possible, consolidate management and operational control of information technology services within NDUS. Information technology is now an essential component of delivering services to students, faculty, staff and citizens seeking access to information from the institution. Doing this effectively and efficiently requires a coordinated system-wide support plan to lower operating costs, improve service quality, reduce purchasing costs, and provide a superior customer

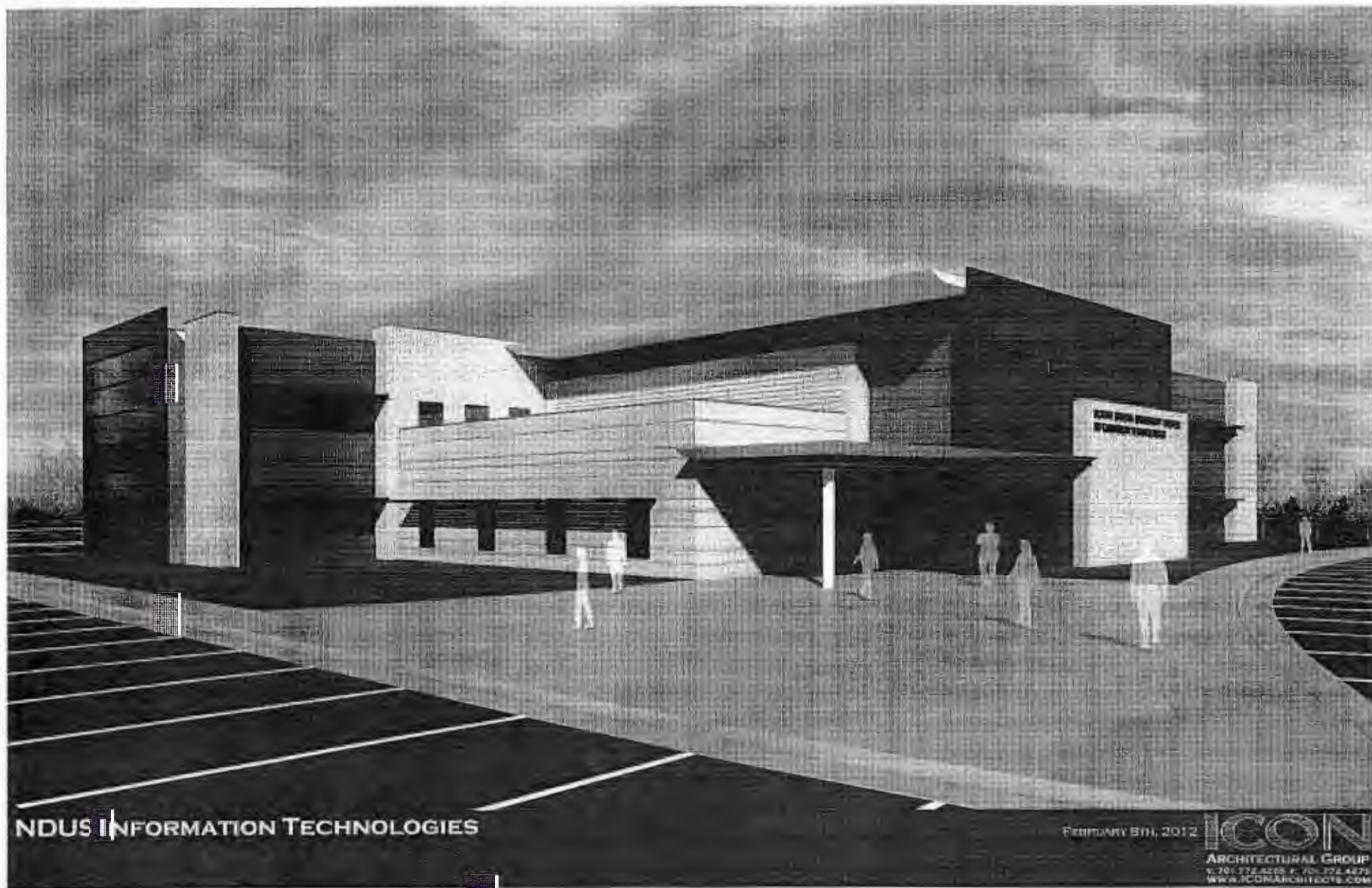
experience This is not intended to include the direct support of labs, desktops, faculty, staff, students, specialized research or other institutional specific activities. However, it does include core technology services (see below). It should be noted that only savings from the SITS budget related to these consolidations would be utilized to fund facility amortization costs; campus savings would not be used for this purpose.

### Assumptions

- NDUS CIO charged with managing the SITS budget in an efficient manner as possible while delivering services as effectively as possible. Steps should be taken to reduce administrative overhead and consolidate redundant services system-wide where practicable.
- The primary SITS budget will remain at NDSU while the SBHE studies the long-term plan for information technology services. In conjunction with the ongoing "Building a Cost-Effective IT System" process as outlined in the SBHE "Maximizing Results Through Efficiencies" document, a plan must be completed by June 30, 2012, with full implementation for the 13-15 biennium. This may have budget allocation implications for the 13-15 biennium, with these to be determined as part of the overall plan.

### Core Technology Services (Definition)

Administrative application services (recognizing there are exceptions), academic administrative systems such as library system (already mostly consolidated under a System operation), LMS, document imaging, lecture (content) capture, and other related system-wide activities like email, calendaring, unified communications, active directory, and identity management.

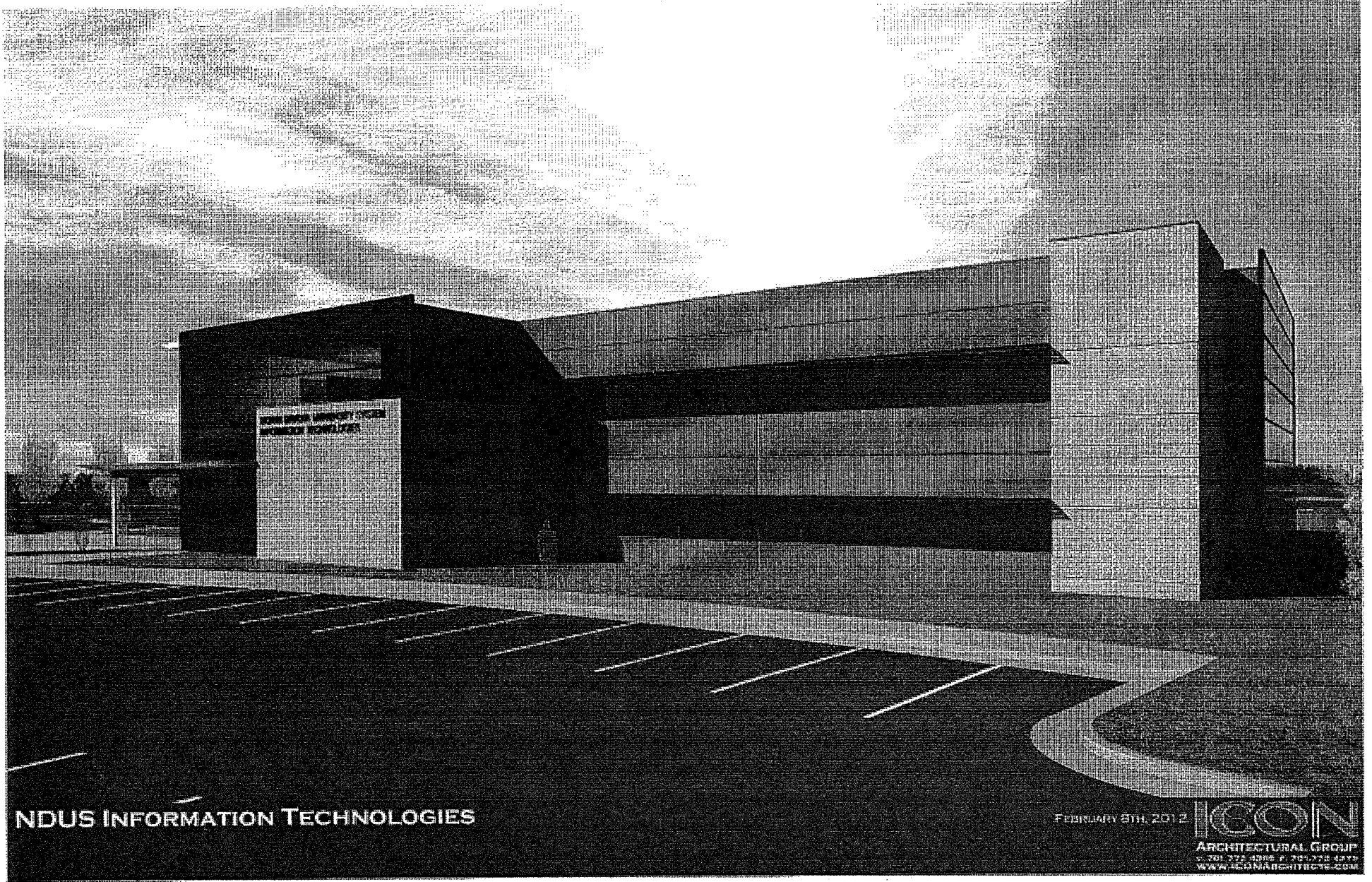


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FEBRUARY 8TH, 2012

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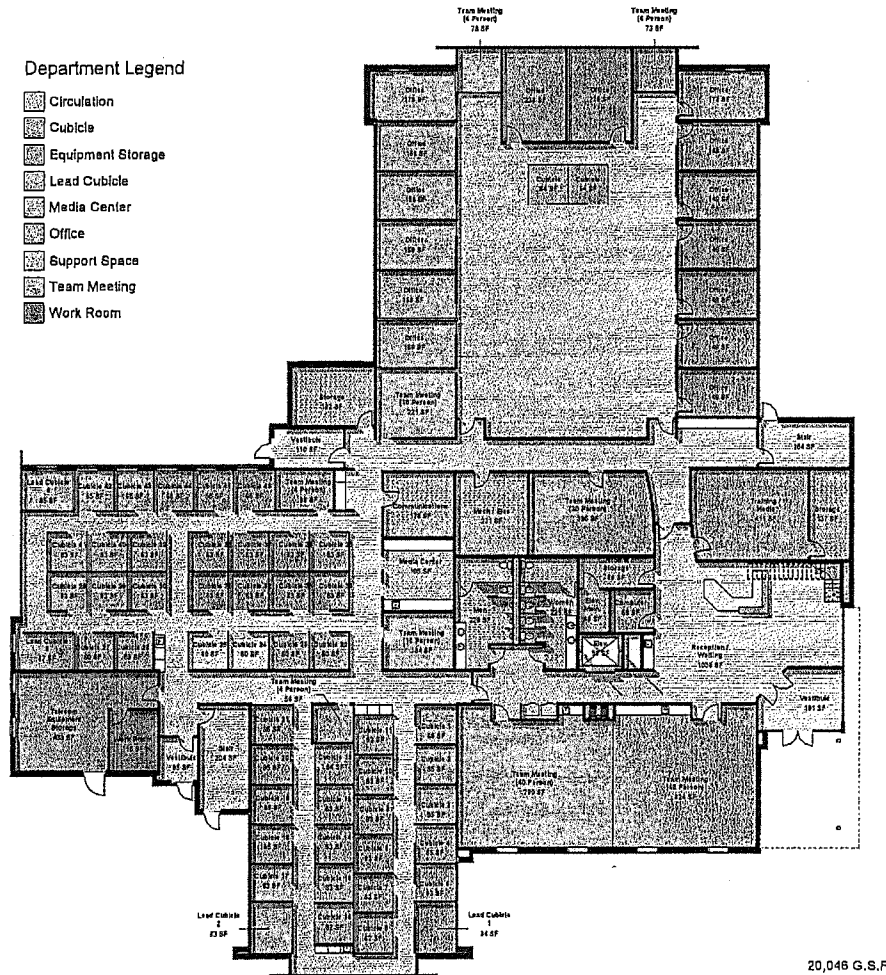
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# Department Legend

-  Circulation
-  Cubicle
-  Equipment Storage
-  Lead Cubicle
-  Media Center
-  Office
-  Support Space
-  Team Meeting
-  Work Room



1 FIRST FLOOR PLAN  
3/32" = 1'-0"



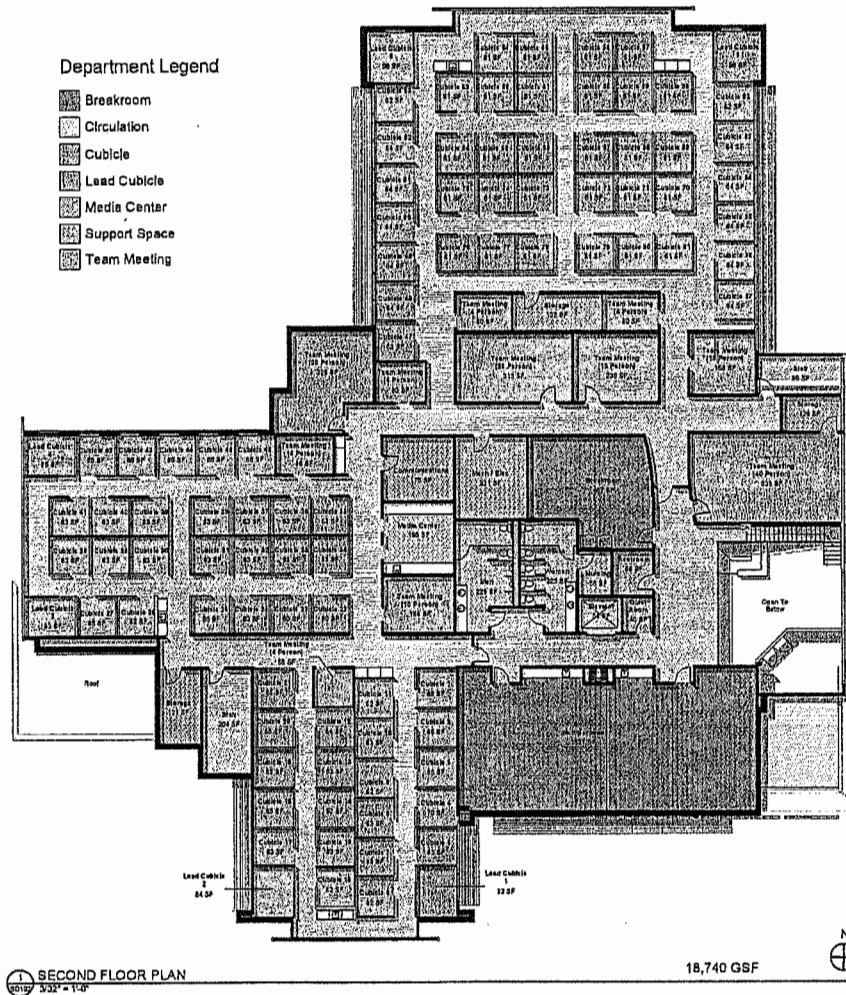
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FIRST FLOOR PLAN

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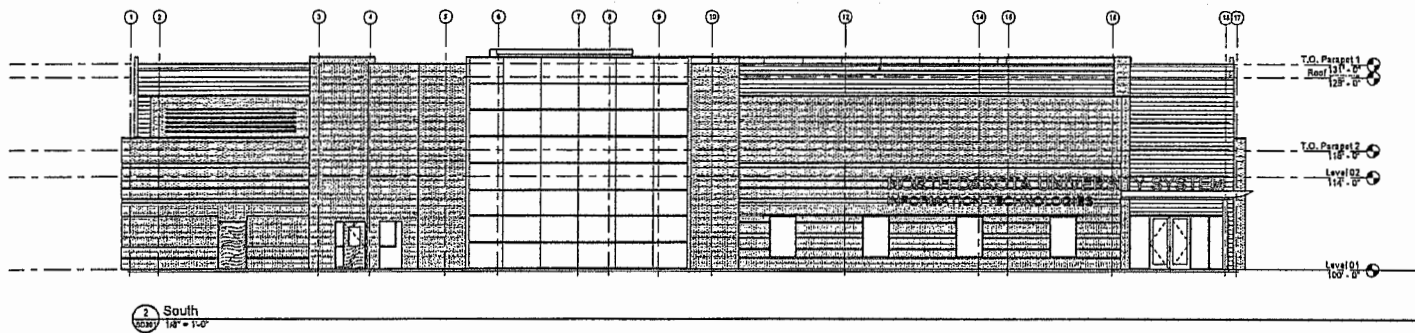
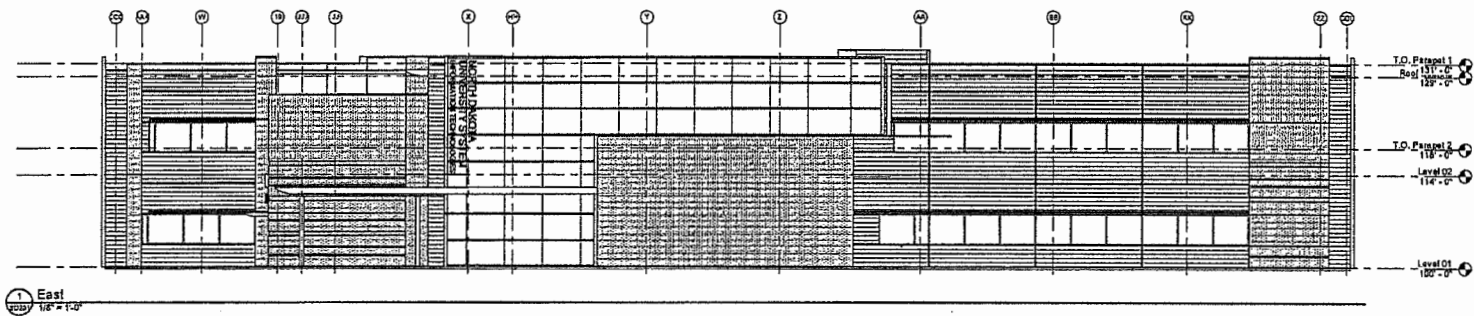
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SECOND FLOOR PLAN

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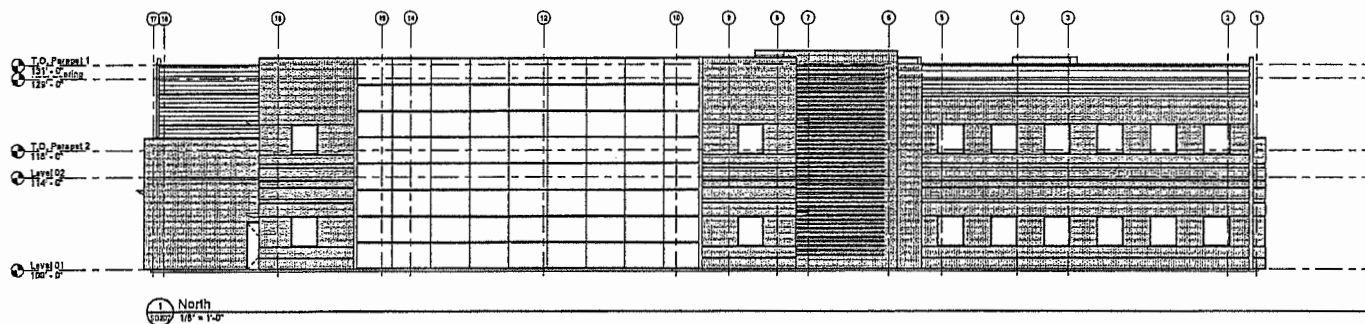
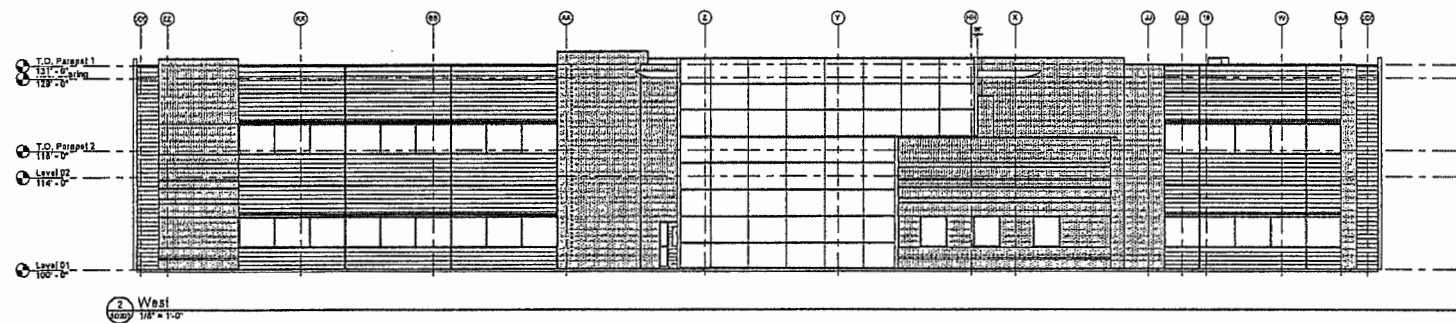
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EXTERIOR ELEVATIONS

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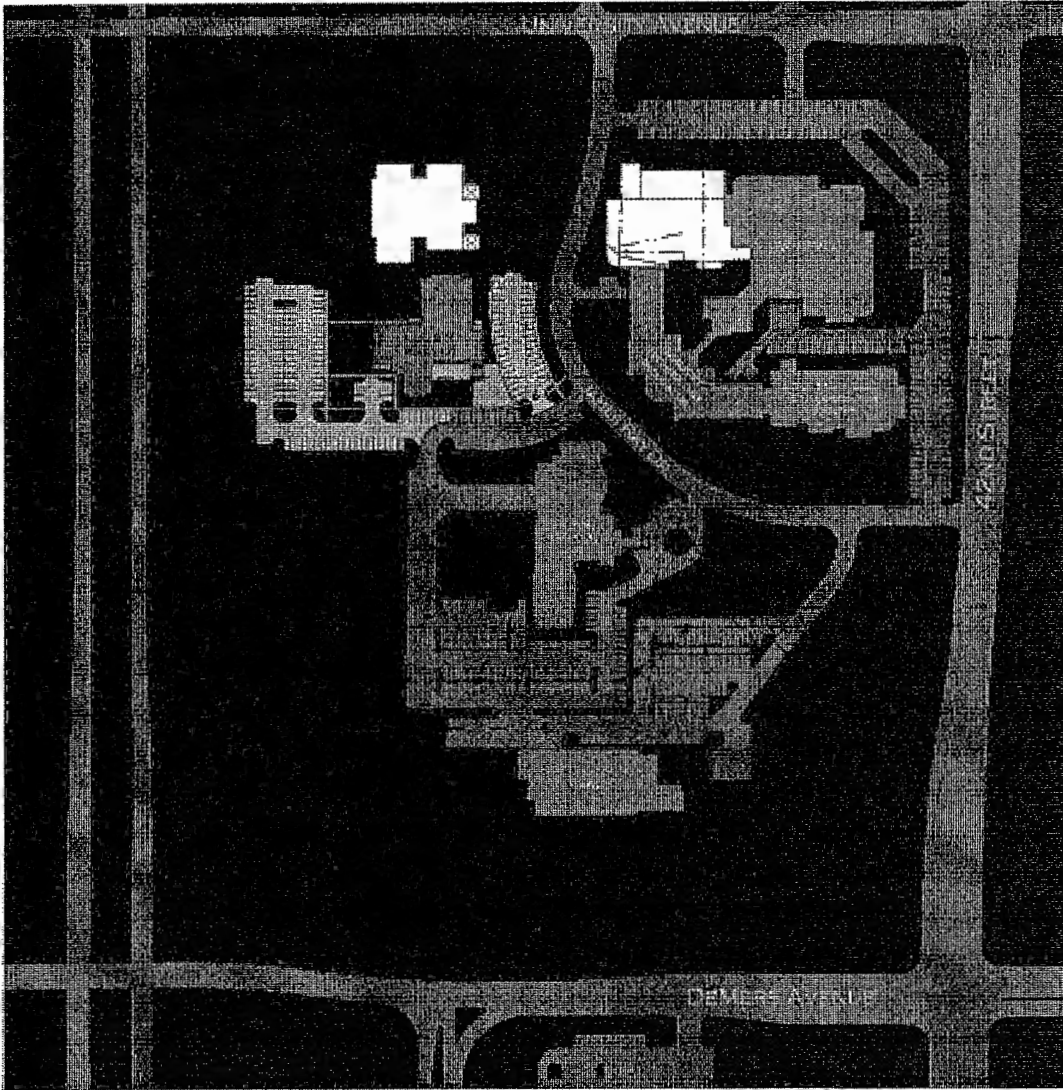
EXTERIOR ELEVATIONS

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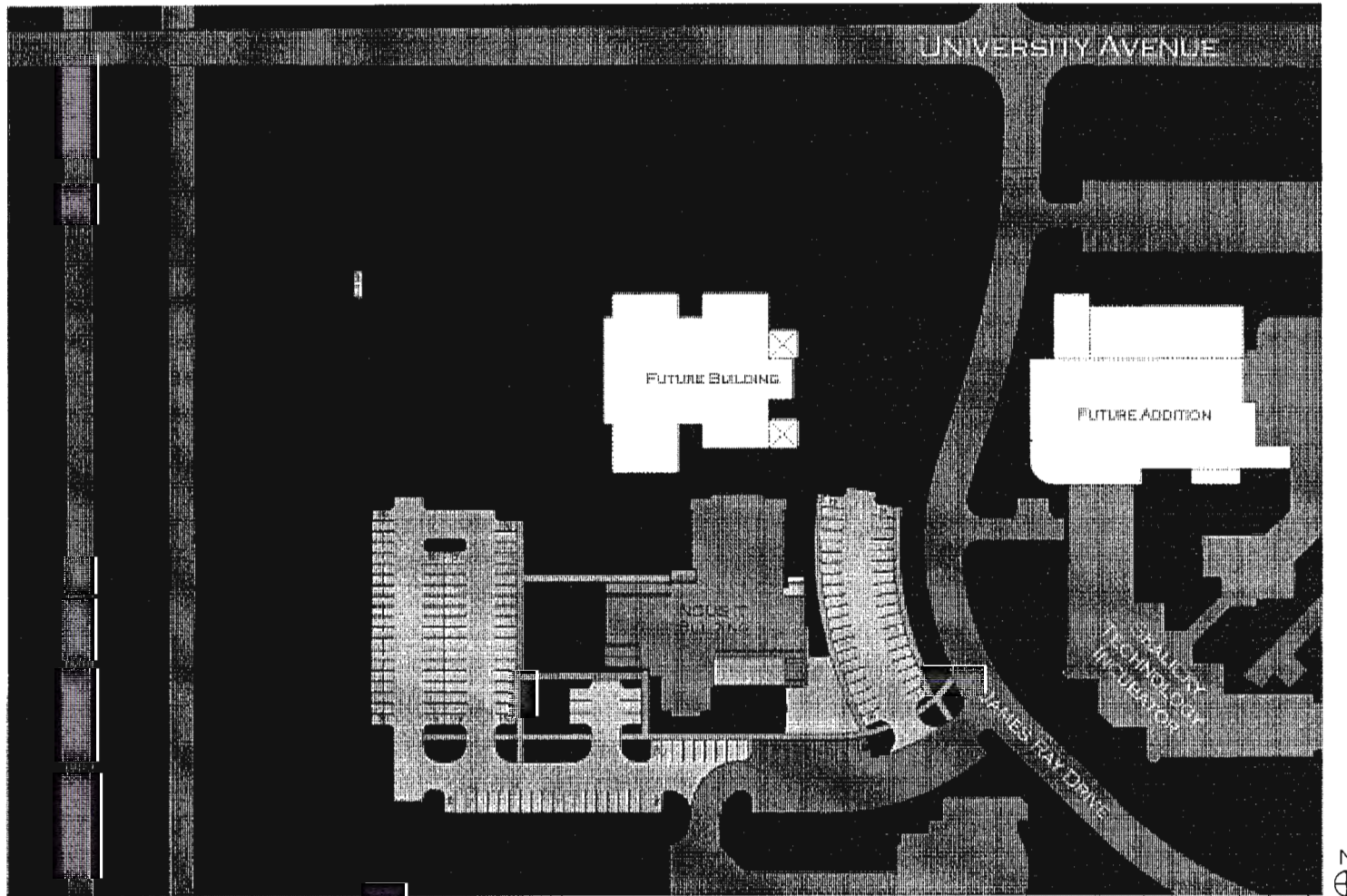
SITE PLAN

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**NDUS INFORMATION TECHNOLOGIES**

ENLARGED SITE PLAN

FEBRUARY 8th 2012

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### 5.13 Option Three Program

The final option also lists the same rooms as the previous two options. The staff cubicle sizes are kept at 8'-0"x 8'-0". Future cubicle spaces are included in this option.

#### North Dakota University System

January 11, 2012

#### Informational Technologies

Option 3 - 8'x8' cubicles

#### 50% SD Budget Summary

35,600SF

<b>A Construction Cost</b>		<b>Cost</b>	<b>Total</b>
A1	Construction Estimate	\$160.50 /SF	\$5,713,959
A2	Site work		Included in A1
A3	Parking		Included in A1
A4	Building Demolition		N/A
A5	Construction Allowances		\$0
A6	Design Contingency	10.00% of A1	\$571,396
A7	Construction Cost		\$6,285,355
A8	Construction contingency	10.00% of A7	\$628,535
A9	Total Construction Cost		\$6,913,890
<b>B Construction Related Cost</b>			
B1	Hazardous materials abatement	Allowance	N/A
B2	Temporary Facilities	Allowance	\$0
B3	Moving expenses	Allowance	\$15,000
B4	Total Construction Related Cost		\$15,000
<b>C Fixtures, Furnishings &amp; Equipment (FF&amp;E)</b>			
C1	Site Fixtures	Allowance	\$5,000
C2	Furniture	Allowance	\$1,200,000
C3	A/V Equipment	Allowance	\$15,000
C4	Building maintenance equipment	Allowance	\$5,000
C5	White Noise/Masking	Allowance	\$35,600
C6	Networking/Phones	Allowance	\$90,000
C7	Total FF&E		\$1,350,600
<b>D Professional Fees &amp; Expenses</b>			
D1	A/E Fee - Basic services	8.00% of A9	\$553,111
D2	A/E Fee - Furniture Design	6.50% of C2	\$78,000
D3	University Project Management Fe	2.00% A9	\$138,278
D4	Commissioning		\$40,000
D5	Reimbursable expenses	8.00% of D1	\$44,249
D6	Total Professional Fees & Expenses		\$853,638
<b>E Sub-Totals</b>			
E1	Sub-Total Project Cost		\$2,219,238
F1	TOTAL PROJECT COST		\$9,133,128



Data Center  
 Concept Estimate  
 Reliable Resources, Inc.  
 revised January 9, 2012

PROJECT FAC RECV DATA CENTER  
 Grand Forks, North Dakota

Note: 3000 sf raised floor, Tier 2, 50 w/sf upgradeable to Tier  
 3, 100 w/sf  
 2000 sf raised floor w/o power or cooling added  
 Total raised floor = 5000 sf

DESCRIPTION	QUANTITY
PROJECT DURATION (MOS)	8.00
ENG/ARCH SERVICES	\$430,000.00
TELECOMMUNICATIONS	\$70,000.00
CONSTRUCTION ALLOWANCE	\$4,350,500.00
UND Facilities Management 2%	\$87,000.00
<b>TOTAL</b>	<b>\$4,937,500.00</b>
SITE (ACRES)	not applicable
TOTAL BUILDING (SF)	13,000

DESCRIPTION	TOTALS (estimated)
CONSTRUCTION MANAGER FEE	\$ 160,000
GENERAL CONDITIONS	\$ 293,030
SITE WORK	\$ 85,380
BUILDING SHELL - DATA CENTER	\$ 693,000
DEMOLITION AND RELOCATION	\$ 30,000
MECHANICAL	\$ 876,300
ELECTRICAL	\$ 1,817,300
CONTINGENCY	\$ 395,500

Data Center  
Additions to meet Tier 3  
revised January 9, 2012

DESCRIPTION	QUANTITY	UNIT	MAT'L COST	TOTALS (buyout)
B Side Critical UPS Input Switchboard	1	ea	\$85,000	\$85,000
B Side Mechanical Switchboard	2	ea	\$80,000	\$160,000
B Side UPS	1	ea	\$115,000	\$115,000
B Side Critical UPS Output Distribution Switchboard	1	ea	\$25,000	\$25,000
B Side MCC	2	ea	\$20,000	\$40,000
Second 800 KW Genset	1	ea	\$160,000	\$160,000
Additional Daytank (or Belly Tank)	1	ea	\$15,000	\$15,000
Paralleling Switchgear	1	ea	\$115,000	\$115,000
2 Additional PDUs	2	ea	\$30,000	\$60,000
Additional Pipe and Wire to Install Above	1	Lump Sum	\$581,250	\$581,250
Total to move Data Center from Tier 2 to Tier 3 (in today's dollars)				<b>\$1,356,250</b>
<b>Other items discussed but not req'd for Tier 3</b>				
Addition of Absorption chiller w/ cooling tower	1	ea	\$200,000	\$200,000
Heat pump for recapture of heat	1	ea	\$150,000	\$150,000
			<b>Total</b>	<b>\$350,000</b>
<b>Additional items of elect and cooling for remaining 2000 sf at 50 w/sf</b>				
4 CRACS	4	ea	\$22,000	\$88,000
2 PDUs	2	ea	\$30,000	\$60,000
1 Air Cooled Chiller	1	ea	\$60,000	\$60,000
Installation Costs	1	Lump Sum	\$90,000	\$90,000
			<b>Total</b>	<b>\$298,000</b>

Note: contingency required for above values.