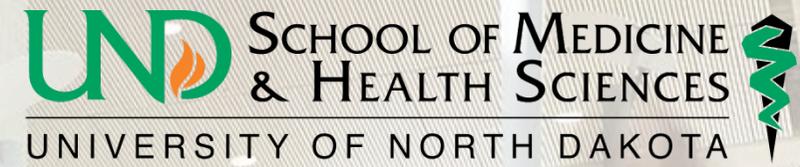


Higher Education Funding Committee

June 3, 2014

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES



Overview of Today's Presentation

- Review the status of the UND SMHS Advisory Council's Third Biennial Report
 - Update current status of *Healthcare Workforce Initiative*
 - Preview upcoming UND SMHS 2015-2017 budget request
- Provide an overview of the status of the new School of Medicine and Health Sciences building

UND SMHS Advisory Council Biennial Reports

- First Biennial Report – 2011
 - First comprehensive review of:
 - Healthcare workforce in North Dakota
 - Health status of North Dakotans
 - Health care delivery in North Dakota

UND SMHS Advisory Council Biennial Reports

- Findings of First Biennial Report – 2011
 - Need for more healthcare providers and better healthcare delivery systems due to:
 - Rural depopulation
 - Out-migration of the young
 - An increasingly elderly population
 - Low population density
 - Localized population growth

UND SMHS Advisory Council Biennial Reports

- Findings of First Biennial Report – 2011
 - Identified healthcare provider mal-distribution as a major issue for North Dakota
 - Emphasized that provider shortages extend beyond physicians to the entire healthcare delivery team

UND SMHS Advisory Council Biennial Reports

- Recommendations of First Biennial Report – 2011
 - First proposed components of what would become the *Healthcare Workforce Initiative*
 - Initial expansion of medical student (8), health sciences student (15), and residency (9) slots
 - Master of Public Health degree program (in conjunction with NDSU)

UND SMHS Advisory Council Biennial Reports

- Second Biennial Report – 2013
 - Updated First Biennial Report
 - Impact of oil boom in western part of the state
 - More robust analysis of non-physician healthcare workforce issues
 - Greatly expanded analysis of healthcare delivery quality and value indicators

UND SMHS Advisory Council Biennial Reports

- Recommendations of Second Biennial Report – 2013
 - Full implementation of the *Healthcare Workforce Initiative*
 - Reduce disease burden
 - M.P.H. program
 - Retain more graduates
 - Select more students from rural areas of North Dakota
 - *RuralMed* program

UND SMHS Advisory Council Biennial Reports

- Train more healthcare providers
 - Medical students (16 more/year)
 - Health sciences students (30 more/year)
 - Residents (17 more/year)
- Improve the healthcare delivery system
 - Train healthcare providers to deliver care in interdisciplinary teams
- Emphasized the need for additional facility space

UND SMHS Advisory Council Biennial Reports

- Third Biennial Report – 2015 (due fall 2014)
 - Will update Second Biennial Report
 - Provide current status of *HWI*
 - Update health status indicators for North Dakota, especially in the western part of the state
 - Focus on behavioral and mental health issues
 - Expand further the analysis of the non-physician provider workforce



HEALTHCARE WORKFORCE INITIATIVE UPDATE

Status of *Healthcare Workforce Initiative*

- Reduce disease burden
 - Master of Public Health degree programs (UND and NDSU) have graduated their first cohort of students
 - Further programming approaches under study to address mental and behavioral health issues in the state
- Retain more healthcare provider graduates for North Dakota
 - *RuralMed* program has 19 students enrolled
 - UND SMHS recognized as #1 in the nation for the percentage of its graduating class going into family medicine

Status of *Healthcare Workforce Initiative*

- Train more healthcare providers
 - Medical student class increased by 16/year
 - Health sciences students increased by 30/year
 - Resident slots increased by 17/year
 - Approved additional slots in rural family medicine, rural surgery, hospitalist
- Improve efficiency of delivery system
 - Training in inter-professional healthcare teams
 - Use of “learning communities” in new building



2015-2017 UND SMHS BUDGET PREVIEW

2015-2017 UND SMHS Budget Request Preview

- Important to emphasize that **no new funding** is being requested
- Only request is to continue implementation of *Healthcare Workforce Initiative* as discussed, reviewed, and approved two years ago

Health Care Workforce Initiative

For North Dakota's Future

Fact Sheet #1

The Issue

North Dakota is facing a major health care delivery challenge. There is a widening gap between the health care needs of North Dakotans and the workforce required to meet those needs.

The Solution

North Dakota's Health Care Workforce Initiative (HWI) will provide the physicians and other health care professionals North Dakota needs for a healthy future. The plan addresses both shortages and maldistribution of health care workers. It fosters economic growth for our state.

What is driving the need?

Aging, population growth, and maldistribution of health care workers are our main challenges:

- The ranks of North Dakota's elderly are large and growing. As they increase, so does our need for health care services. The proportion of our population aged 85 and above is the second highest in the nation. Our senior population will grow rapidly as our baby boomers are reaching age 65.
- Spurred by energy development, the state's population, with attendant health care demand, is projected to grow by up to 20% in the coming years.
- Our rural areas are facing chronic shortages of health care workers that are expected to increase in the future.

How great is the need?

Current estimates indicate that if action is not taken, the aging of our population will create a shortage of between 260 and 360 physicians by 2025. If North Dakota's population grows as rapidly as some predict, the numbers needed could be substantially higher.

How does the HWI address needs?

The Workforce Initiative has three main components that work together:

- Expand medical and health sciences class sizes along with expansion of residency programs. (Medical school graduates complete from three to seven years of residency training after medical school.)
- Retain greater numbers of those we train.
- Reduce disease burden through continued geriatrics and public health training.

A proven strategy

"Growing our own" has proven to be a very effective approach to workforce development. It is key to meeting our future needs:

Percentage of ND primary care doctors who trained in-state*	55%
Percentage of ND doctors who graduated from UND, did some or all of their residency out-of-state, and returned to practice in ND	58%
Percentage of ND residency graduates who practice in ND or MN	60%
Percentage of UND/ND residency graduates who practice in ND	63%
Percentage of ND family medicine doctors who trained in-state	66%

* Graduated from UND and/or did residency in North Dakota

Plan implementation

Full implementation of the HWI, which began during the 2011-2013 biennium, will require four biennial cycles and additional facility space to complete. In addition to expansion of class sizes, the plan utilizes a number of strategies to maximize success, such as the following:

- Eighty percent of students accepted to medical school are North Dakota residents, weighted toward those from rural areas.
- Tuition forgiveness for those who commit to practice primary care in a rural community.
- Increased longitudinal experiences in rural communities.
- Increased geriatrics and public health focus.

Plan Review

The leaders of the School of Medicine and Health Sciences and the SMHS Advisory Council are recommending the full implementation of the HWI, and the State Board of Higher Education has endorsed the plan. The Legislative Interim Health Services Committee has recommended its full implementation, including the construction of a new medical school building (Option 3).

Deliverables

The most important deliverables are a supply and distribution of health care professionals that are adequate to serve the needs of North Dakotans.

The HWI will also have a direct positive impact on the economic environment of the state as a result of both increased employment and an estimated \$1 million annual economic impact from each additional physician employed.

It is further anticipated that for every \$1 appropriated by the Legislature, the School of Medicine and Health Sciences will generate another \$2 in grants, contracts, and service revenues. The total economic impact of the SMHS over the next three biennia should exceed \$400 million.

Impact on Enrollment*

	Additional per year	Length of program (years)	Total additional enrollment
Medical Students	16	4	64
Health Sciences Students	30	3	90
Residents	17	3	51
Total Additional Students/Residents			205

* Program fully implemented in the 2017-18 academic year.

Funding Requirements*

	2011-2013	2013-2015	2015-2017	2017-2019
Base Funding	\$45.90	\$47.70	\$57.09	\$68.18
Funding Increment	\$1.80	\$9.39	\$11.09	\$4.36
Cumul. Increment	\$1.80	\$11.19	\$22.28	\$26.64

* In millions

Building Construction Options

	Option One	Option Two	Option Three
Expansion of Class Size	✓	✓	✓
Program Consolidation		✓	✓
Value over Time			✓
Income Opportunity			✓

Incremental Cost of Building Options*

	Option Two	Option Three
Construction Cost	\$68.3	\$124.0
Income Opportunity	\$0	(\$36.9)
Net Cost	\$68.3	\$87.1
		Difference \$18.8

* In millions. 40-year horizon.

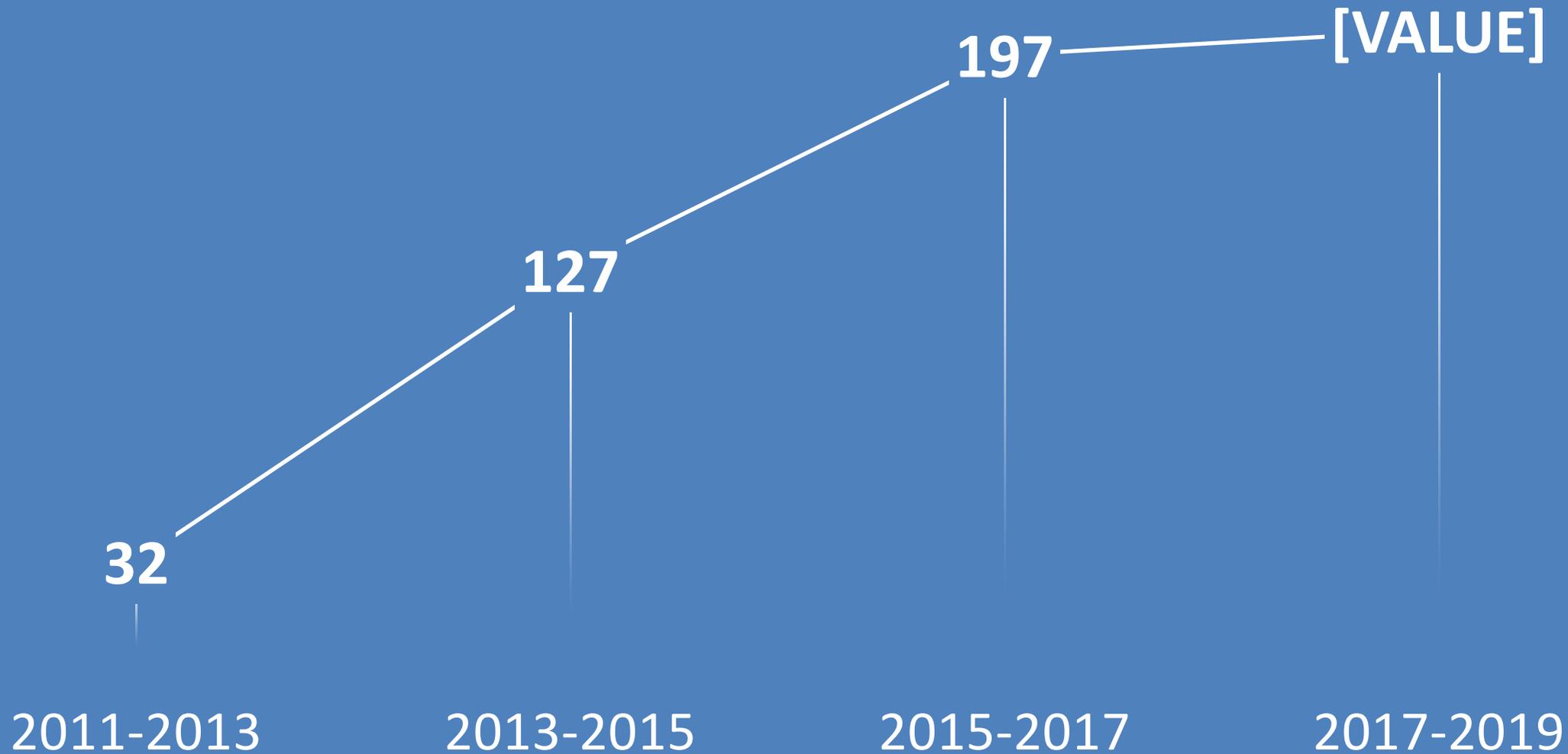
Funding Requirements*

	2011- 2013	2013- 2015	2015- 2017	2017- 2019
Base Funding	\$45.90	\$47.70	\$57.09	\$68.18
Funding Increment	\$1.80	\$9.39	\$11.09	\$4.36
Cumul. Increment	\$1.80	\$11.19	\$22.28	\$26.64

* In millions

HWI IMPLEMENTATION

TOTAL ADDITIONAL STUDENTS ENROLLED/YEAR (AT END OF EACH BIENNIUM)



Funding Requirements*

	2011- 2013	2013- 2015	2015- 2017	2017- 2019
Base Funding	\$45.90	\$47.70	\$57.09	\$68.18
Funding Increment	\$1.80	\$9.39	\$11.09	\$4.36
Cumul. Increment	\$1.80	\$11.19	\$22.28	\$26.64

* In millions

Important Factors in HWI Funding Model

- Relative Cost of trainees (costs rounded and approximate)

<u>Trainee</u>	<u>Cost</u>	<u>Relative Cost</u>
Resident	\$135K/year	10
Medical student	\$57K/year	4
Health Sciences student	\$14K/year	1

- Length of training

Resident	1 to 5 years
Medical student	4 years
Health Sciences student	3 years



NEW UND SMHS BUILDING UPDATE

UND SMHS Building Update

- Located at northeast corner of Bronson property
- Four floors (no basement and 5th mechanical floor)
- 325,446 sq. ft.
- 350 pilings are in place (depth up to 160 ft.)
- Formal groundbreaking June 12, 2014
- <http://www.med.und.edu/construction/index.cfm>
- **On budget and on time!**

UND SMHS Building Timetable

- Building structure – June 15, 2014 to April 2015
- Exterior shell – July 2014 to October 2015
- Interior Fit-ups – December 2014 to March 2016
- Landscaping – April 2016
- Punchlist completed – April 27, 2016
- Construction complete – June 1, 2016
- Move-in – June 15, 2016
- Classes begin – July 15, 2016

Campus Space Allocation

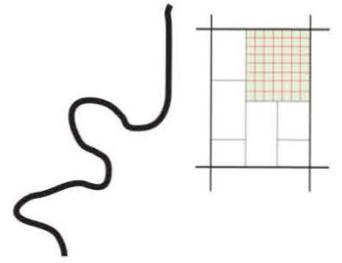
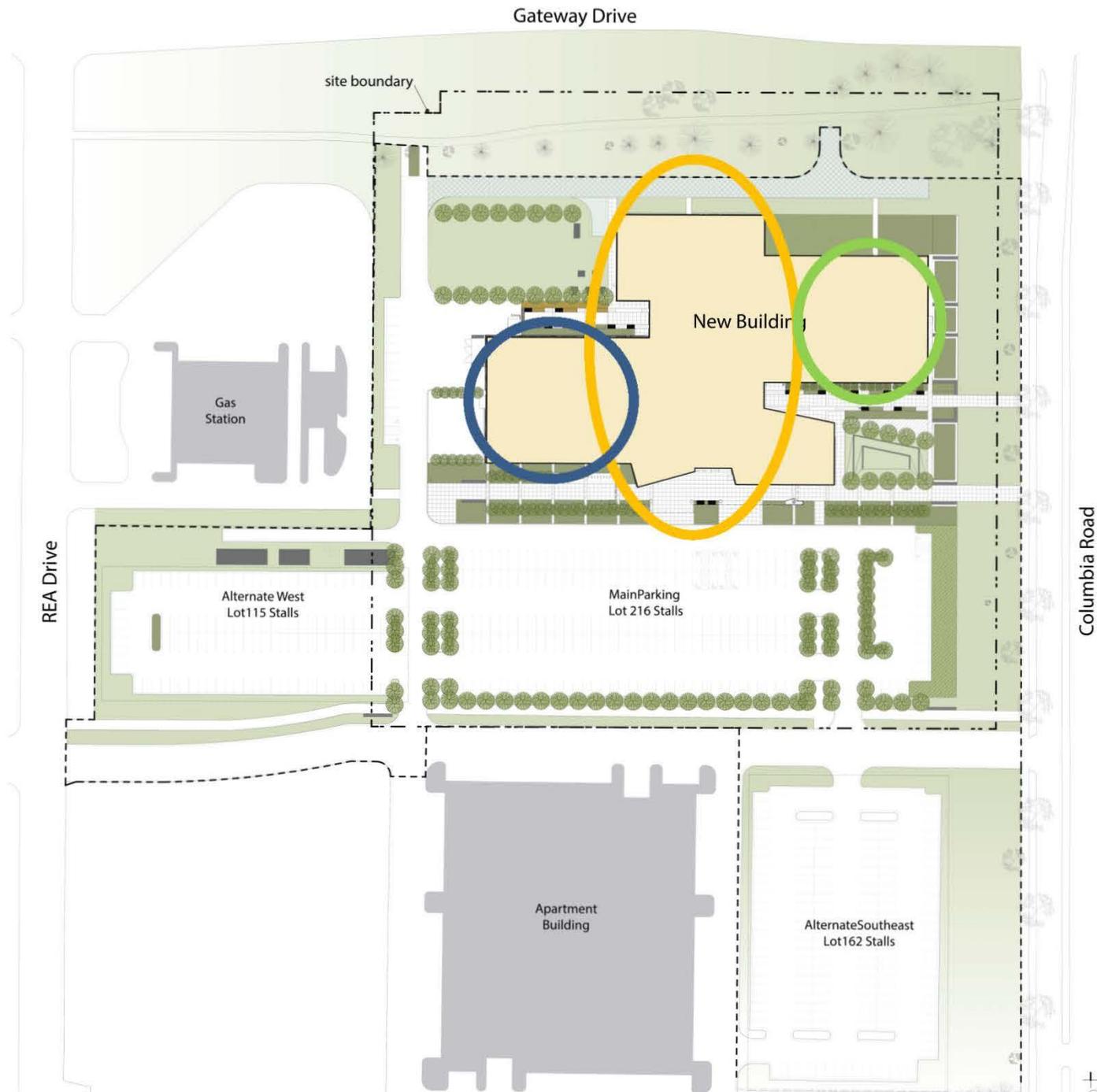


SITE

EXISTING SITE

REAC-1

community connection



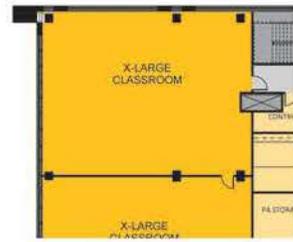
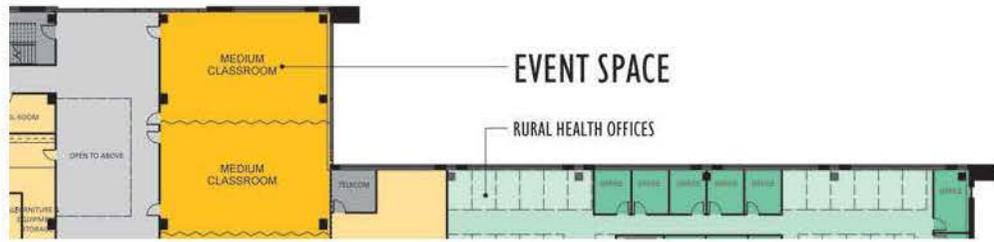
site plan



First Floor



First Floor – Learning Hall

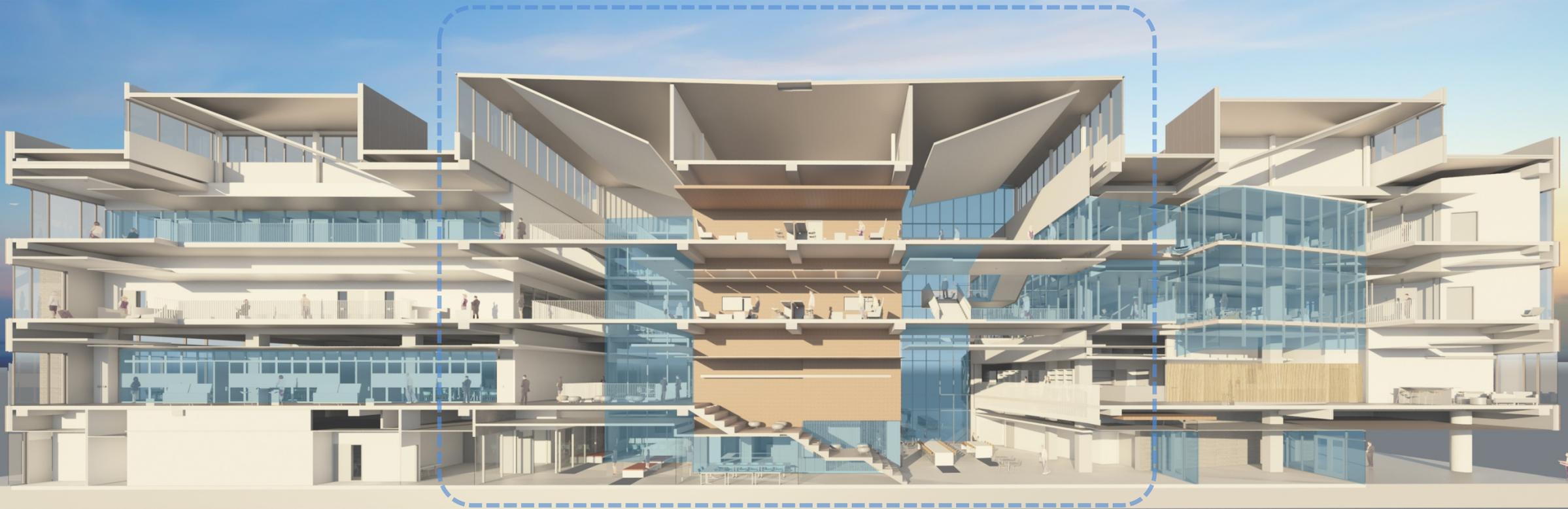


- Building Resources
- Education Spaces
- Research
- Offices

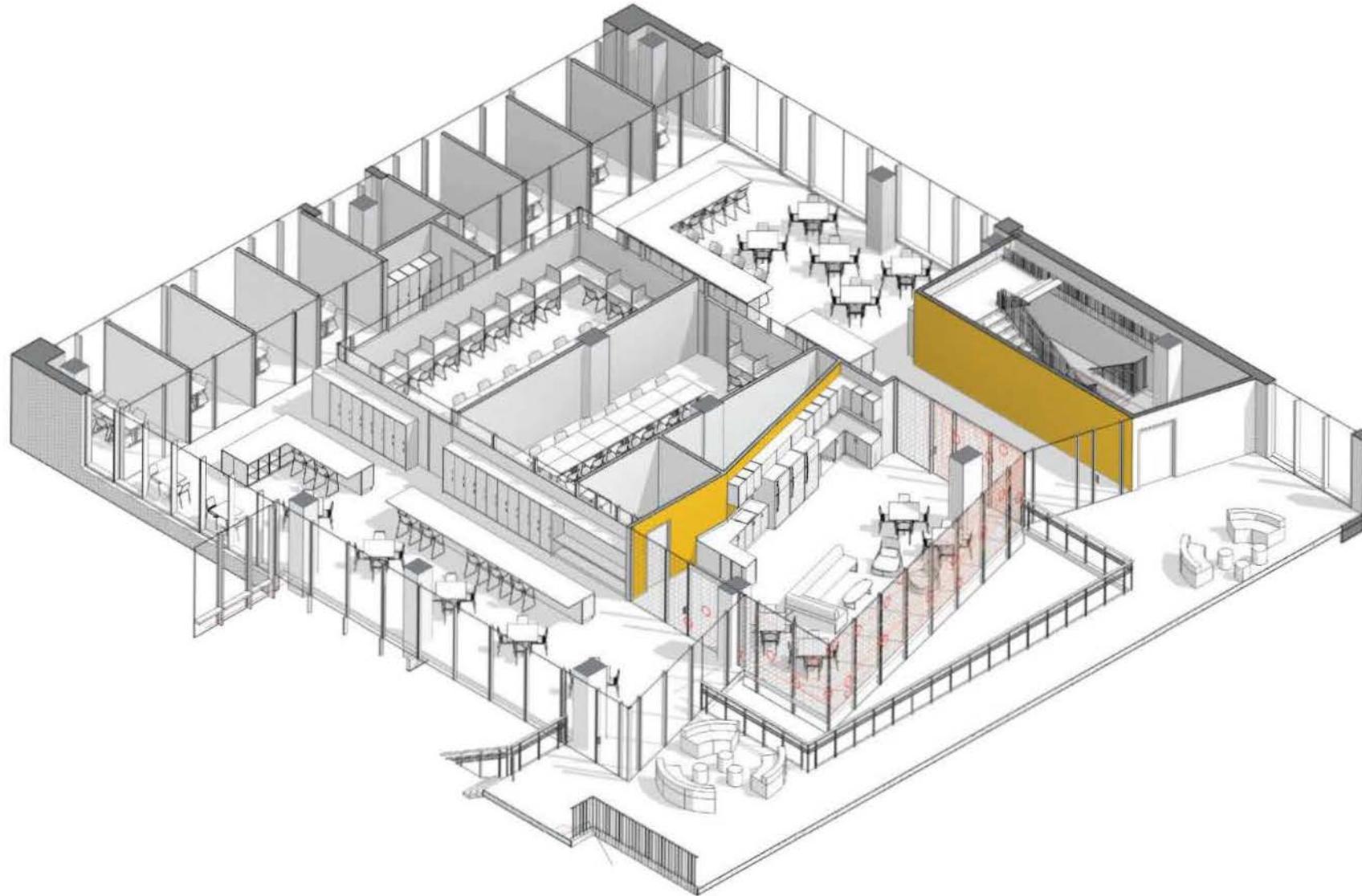


Second Floor

Interactive “heart of the building” north & south daylight atriums



main street mixer
view looking east – building section



Learning Community



Third Floor – View looking North



Small Classroom

Education Lab

Large Classroom

Public stair and dining at
center of building

dining interior

dining / courtyard



View from Southeast corner



Please see handouts

- HWI Update
- UND SMHS Building Update
- Sustainability

<http://www.med.und.edu/construction/index.cfm>

View from Southeast corner

Status Report

Healthcare Workforce Initiative

June 2014

In conjunction with its Advisory Council, the UND SMHS is implementing a Healthcare Workforce Initiative across North Dakota to help meet the state's healthcare delivery needs now and in the future. To meet the burgeoning demand for healthcare, driven by the aging as well as the growth of the state's population, a four-pronged approach is being unveiled. The foundational elements of the approach, and a brief summary of progress to date, are outlined below.

Reduce Disease Burden

- A Master in Public Health degree program has been developed by UND in partnership with NDSU. Each program had five graduates of their respective program receive their M.P.H. degrees at commencement in May 2014.
- Further programming approaches to address mental and behavioral health challenges are being studied. Of particular interest is the development of a telehealth training program in mental and behavioral health.

Retain More Health Provider Graduates for Service in North Dakota

- The RuralMed program currently has 19 medical students enrolled. These students are committed to practice family medicine in a rural area of North Dakota; in exchange, they have all four years of medical student tuition expenses absolved.
- The UND SMHS has again been recognized as one of the Top Ten medical schools for the highest percentage of the class going into family medicine.

Train More Healthcare Providers for Service in North Dakota

- The medical school class size will increase by 8 students each year for two years. In August 2014, the incoming Class of 2018 will have 78 students (up from 62), including seven students in the Indians into Medicine (INMED) Program.
- The health sciences class sizes will increase by 15 students each year for two years; an additional 30 students will begin their studies in August 2014.
- Rural residency training slots in general surgery and family medicine have been implemented. There are rural training slots through Altru Hospital, and UND's Centers for Family Medicine in Bismarck (partnering with Hettinger) and Minot (partnering with Williston). There is also a hospitalist training program in Bismarck.

Improve the Efficiency of Our Healthcare Delivery System

- We are strong proponents of interprofessional healthcare teams and believe that implementation of such teams will lead to improved health outcomes at reduced cost. While we have already implemented training in such teams, having multiple programs colocated in the new building will facilitate training. Indeed, the building is being designed to emphasize this approach to education and care, and will incorporate four "learning communities" that will bring the various health professions students together into a cohesive learning environment.



New Building

The new School of Medicine and Health Sciences facility is beginning to take shape. It is located at the corner of North Columbia Road and Gateway Drive. Support pilings have been hammered into the ground to support the new building, and groundbreaking will take place on June 12, 2014, with an expected completion date of two years hence. The building will be a four-story 325,000-sq.-ft. facility with a north-south oriented "Main Street" around which will be clustered various educational classrooms, small-group rooms, lecture halls, simulation and gross anatomy labs, and other associated pedagogical support space. To the east will be a wing for faculty and administrative offices, and the west wing will house much of our research enterprise. Our architectural consultants from JLG Architects currently are preparing construction blueprints that will be used to solicit bids for the construction phase of the project.

One can feel the excitement build as everyone realizes that what once was a dream is fast becoming a reality! One of the features of the layout are the two offices that will be by the front door of the building to service the School's two most important constituencies—students and the people of North Dakota who are footing the bill for the new facility. The Office of Student Affairs and Admissions will be front and center to welcome prospective and to assist current students. The Office of Alumni and Community Relations will similarly welcome and assist the public and alumni visiting the building. The School very much hopes that the community will utilize their building, and to facilitate this, a capacious learning hall (auditorium) has been designed to be right by the front entrance and adjacent to the two office suites. It is, after all, the people's building!

You can see renderings and floor plans of the building at this link:

<http://www.med.und.edu/construction/renderings.cfm>.

You can also view time-lapse video of the construction at this link <http://oxblue.com/open/pcl/UNDSMHS>.



UND SMHS Building Update: June 3, 2014

Site Location:

- Northeast corner of the Bronson Property, at corner of Gateway Drive and North Columbia Road in Grand Forks

Building basics:

- JLG Architects, in partnership with national firms Perkins & Will and Steinberg Architects
- 5 floors (no basement), Total of 325,446 sq. ft.
- Floors 1 through 4 are organized in the following manner: North-South Main Street with educational resources; east wing for administration and faculty offices; west wing for research
- The 5th floor (30% the size the other floors) is dedicated for the mechanical suite

Occupants:

- Students (estimate of 800+): Medical, Physical Therapy, Occupational Therapy, Physician Assistant, Athletic Training, Public Health, Medical Lab Science and Basic Sciences Graduate Program
- Faculty and Staff: estimate of 350+

Planning Process:

- Now about one year since the project started
- Floor plans for the entire building have been completed
- Construction documents are in progress

Budget:

- \$122,450,000. In addition, UND will be requesting an additional \$1.55 million of NDUS Contingency Pool funds. The project is currently on target for budget

Current Site Development:

- Site Preparation (completed)
- Foundation pilings completed (350 piles @ 160 ft.)
- Work to begin on site excavation, site utilities and foundation grading and elevation
- Formal groundbreaking will be June 12, 2014
- Construction: 2 years. Facility will be ready to teach students by July 15, 2016

Project currently is On-Time and On-Budget!

Sustainability

The new School of Medicine and Health Sciences building has incorporated a number of methods, processes and materials following the outline required for LEED Certification. The Design Team along with the engineers and consultants have designed the building to utilize and incorporate sustainable design aspects to maximize the efficiency and building use. The LEED Certification Checklist outlines six categories for certification: 1) Sustainable Sites; 2) Water Efficiency; 3) Energy & Atmosphere; 4) Materials & Resources; 5) Indoor Environmental Quality; and 6) Innovation & Design Process. The design and functionality of the new School of Medicine and Health Sciences building incorporates sustainable solutions in all six of the LEED Certification Checklist items. Incorporating sustainable design transforms the way buildings and communities are designed, constructed, maintained and operated. The Design Team believes that if UND decided to proceed with LEED certification, the School of Medicine and Health Sciences building would meet the criteria to be LEED certified. Below is a list of sustainable methods and materials that have been incorporated into the School of Medicine and Health Science project:

Sustainable Sites

- Construction Activity Pollution Prevention
- Site Selection
- Development Density & Community Connectivity
- Alternative Transportation, Bicycle Storage & Changing Rooms
- Site Development, Maximize Open Space
- Stormwater Design, Quality Control – The stormwater system will limit distribution and pollution to the English Coulee by managing the stormwater runoff. The pond will capture and treat the stormwater runoff from 90% of the average annual rainfalls using a wet detention pond and a bio-filtration basin (raingarden). The pond and raingarden are capable of removing 80% of the average annual total suspended solids from the site stormwater runoff.

Water Efficiency

- Water Use Reduction
- Water Efficient Landscaping
- Water Use Reduction
- Increase Water Efficiency

Energy & Atmosphere

- Fundamental Commissioning of the Building Energy Systems - Increase levels of energy performance beyond the industry standard minimum requirements
- Minimum Energy Performance
- Fundamental Refrigerant Management
- Optimize Energy Performance

- Enhanced Refrigerant Management - Utilize refrigerants that will minimize ozone depletion
- Measurement & Verification - Provide measurement and verification processes for building energy consumption.

Materials & Resources

- Storage & Collection of Recyclables
- Construction Waste Management; Divert 50% from Disposal
- Recycled Content
- Regional Materials, Extracted, Processed & Manufactured Regionally
- Certified Wood

Indoor Environment Quality

- Minimum IAQ Performance - Monitor the amount of outside air delivery to the building.
- Environmental Tobacco Smoke (ETS) Control - Provide increased ventilation above industry standard minimum.
- Increased Ventilation
- Construction IAQ Management Plan, During Construction - Reduce indoor air quality problems resulting from construction.
- Low-Emitting Materials, Adhesives & Sealants
- Low-Emitting Materials, Paints & Coatings
- Low-Emitting Materials, Carpet Systems - All of the interior carpeting contains at least 40% recycled content.
- Low-Emitting Materials, Composite Wood & Agrifiber Products
- Indoor Chemical & Pollutant Source Control
- Controllability of Systems, Lighting
- Controllability of Systems, Thermal Comfort
- Thermal Comfort, Design - Provide a comfortable thermal environment that promotes occupant productivity and well-being.
- Thermal Comfort, Verification - Provide a thermal comfort assessment of building occupants and make necessary changes to promote occupant comfort.

Innovation & Design Process

- Innovation in Design