INTRODUCTION

PURPOSE

The Design Team for this update to the Campus Master Plan was assembled by the campus leadership to analyze the existing 2011 Master Plan and provide an update to that document in order to inform major decisions on campus for the next decade. The ultimate direction of the previous Master Plan remains the guiding force for campus development, but the overall vision painted in that document was ultimately deemed too broad and ambitious to be considered actionable in the short-term. Our priority with this update to the Master Plan is to provide realistic, achievable, actionable goals for campus development over the next ten years while keeping the end goals of the original Master Plan in focus.

PROCESS

Through a process of Listen, Discover, Design, the design team sought first to understand the underlying potential behind this campus community, and then to provide an overall direction that will support the goals and initiatives meant to unleash that potential. We identified the most pressing needs by engaging eight campus groups representing all major aspects of the campus community in collaborative work sessions, and then worked closely with the steering committee to develop realistic and achievable plans for the near-term development of the campus and the connecting community.

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DESIGN TEAM

SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

The South Dakota School of Mines & Technology is committed to excellence in science and engineering academics and research, and to developing the next generation of leaders and problem-solvers. Located in Rapid City, in the beautiful Black Hills of South Dakota, SD Mines offers a rigorous academic experience, supported by small class sizes, committed faculty members, and many student development programs and organizations.

FMG ENGINEERING

FMG Engineering is a multi-discipline professional services firm located in Rapid City, SD with service lines of Civil and Geotechnical Engineering, Surveying, Construction Administration and Material Testing and Environmental Services. FMG's roots can literally be traced to the turn of the twentieth century when it began providing surveys for mining claims in the Black Hills of South Dakota. Through the years of ownership succession, it has evolved into a multi-discipline, full service engineering company offering professional services throughout the western United States and abroad. FMG's engineering staff includes eight SDSMT alumni.

TERRASITE

TerraSite Design is a cohesive partnering of a Landscape Architect and a Civil Engineer formed to solidify years of completing successful projects as a result of our experience and abilities. We are designers and scientists as well as engineers and architects; always striving to maximize performance. Our focus on sustainability epitomizes this performance goal through enhancing the human experience while remaining context sensitive to ecology and the urban environment. We currently employ 4 graduates of South Dakota School of Mines and Technology.

WEST PLAINS ENGINEERING

West Plains Engineering has been a leading mechanical, electrical, plumbing and power solution center in the Upper Midwest for more than 35 years. With more than 40 engineers on staff, our team of professionals has built a strong reputation for exceptional design, and perhaps more importantly, excellent client relations. Our Rapid City office has been a partner to the South Dakota School of Mines & Technology for more than three decades. Notably, 11 of our engineers are graduates of Mines, and we’re committed to helping it grow and support the next generation of professionals.

SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

CAMPUS MASTER PLAN

STRANG ARCHITECTS

Strang, Inc. is an award-winning Architectural / Engineering / Interior Design / Master Planning firm with an impressive list of clients from across the country. Our project types are diverse, including higher education, commercial, civic, science & technology, and the performing arts. A well-planned campus reflects a university’s culture, strategic goals, and core values. Our process produces straightforward, inclusive, practical, personal, responsible, and actionable master plans. By closely collaborating with our clients, Strang creates spaces that strike a balance with requirements for performance, image and budget.

CO-OP ARCHITECTURE

CO-OP Architecture is a full-service architectural firm with a staff of 142 people. We’ve designed schools, universities, churches, shops, downtowns, apartments, houses and hundreds of other projects, including numerous master plans. CO-OP Architecture is dedicated to beauty, economy, and craft. We work on large projects and small projects, and we are always looking for great clients and interesting challenges. We don’t worry about creating our own signature style, but rather each project is designed with context and function in mind. We want to utilize light effectively, apply thoughtful materials, and make inspiring spaces.
EXECUTIVE SUMMARY

CONTEXT MAP

VIEW FROM CLASSROOM BUILDING

VIEW FROM CAMPUS ENTRY

VIEW FROM QUAD - SOUTHEAST

CAMPUS STANDARDS
GUIDING PRINCIPLES

- World-class, innovative engineering and science university with a great reputation and connections around the world
- Small community of hard-working problem solvers with strong connections between students and faculty
- Provide top-notch research facilities that showcase the world-class work going on inside
- Strengthen ties to the community by encouraging growth to the northwest, towards Downtown Rapid City and the developing Innovation District east of Fifth Street
- Preserve the history and traditions of the campus while also clearly conveying the values and aesthetic of an innovative, future-focused technology school
- Focus academics within the existing campus core; build on and expand the synergies that are already established

DESIGN STRATEGIES

- Design for the Tour
- Define the Gateway/Front Door
- Provide One-Stop Shops
- Put Science on Display
- Engage the City
- Reinforce the Values of the Campus Community

LANDSCAPE AND THE PUBLIC REALM

- Develop uniform landscape standards for the campus
  - Lighting
  - Signage
  - Site Furnishings
- Improve accessibility campus-wide
- Utilize environmental design standards shown to reduce crime and increase public safety
- Develop a vibrant streetscape
- Provide green infrastructure on campus that can be used as a living classroom of environmental design strategies
- Work with fairgrounds to encourage joint-use of facilities, athletic fields, and parking
- Strengthen connections to existing City bike/pedestrian paths

KEY PROJECTS

NEAR-TERM PROJECTS - NEXT 10 YEARS

- **Upgrade Campus Electrical Service**
  The electrical service for campus is at capacity and needs to be upgraded to facilitate any new buildings on campus.
- **Deveraux Library - Phase 1**
  Renovate library to improve access to student services, with an emphasis on academic services and flexible + varied study spaces.
- **Research Expansion - Phase 1**
  Relocate research laboratories on campus, potentially by acquiring the existing Ascent Innovation facility.
- **Mineral Industries (A, I, or K)**
  Relocate Mineral Industries program to a new building. Due to sensitive equipment, consideration should be made for vibration from nearby trains.
- **Surbeck Center Expansion (C)**
  Expand Surbeck Center to improve access to student services, with an emphasis on services that build community and enhance student life.
- **Future Research Expansion (L)**
  Expand research program work areas. Prioritize locations near existing Civil and Mechanical Engineering building to retain synergies with campus machine shop.
  - **King Center Parking Lot (P4)**
    Relocate existing parking to double parking at King Center.
  - **Surbeck Drop-Off (P2)**
    Rework parking lot and drive aisles to develop a safer and more functional drop-off for Surbeck Center. Relocate Grubby statue to McClaury Quad area.
  - **Surbeck Parking Lot (P1)**
    Rework parking lot to create a more appealing front-door for the campus. Relocate stalls to new Surbeck Center drop-off.

• **Research Expansion II - Phase 2**
  Expand research facilities by adding on to existing Ascent Innovation facility.
- **One-Stop Shop - O’Hara**
  Relocate Registrar, Financial Aid, and Cashier’s offices to one convenient location.
- **Grandstand Improvements/Expand Football Field**
  Upgrade existing grandstand and expand existing football field to accommodate soccer.
- **Gap Parking (P6)**
  Provide parking in the Gap, southeast of Campus. Plan for relocation of Baja track and Mining and Mudding field.

LONG-TERM PLAN - BEYOND 10 YEARS OR AS FUNDS BECOME AVAILABLE

- **Biomedical Engineering (E)**
  Plan for expansion to existing Chemical and Biological Engineering building due to addition of new Biomedical Engineering program.
- **Event Center/Field House (M)**
  Provide an indoor track to increase competitiveness and host collegiate and public events.
- **Music Building/Auditorium (J, D)**
  Provide space for student performances as well as guest speakers and campus/community events.
- **Loop Road Extension**
  Extend Loop Road on the east side of campus to St. Joseph Street via the uppermost ramp.
- **Traffic Improvements on St. Joseph Street**
  Work with City to provide safer pedestrian experience on St. Joseph Street.

PEDESTRIAN AND BICYCLE CIRCULATION

- Rework pedestrian routes to reinforce major axes through the campus
- Improve connections to City bike paths
- Provide contiguous interior/exterior transition spaces that cut through buildings along major public thoroughfares
- Create waypoints of visual interest that reinforce the aesthetic of a technology school
- Provide pedestrian-scale design elements that create a positive sense of campus community along St. Joseph Street

VEHICULAR CIRCULATION AND PARKING

- Reevaluate the role of the vehicle in campus life
- Prioritize strategies that reconfigure vehicular circulation around the perimeter of campus
- Redistribute parking to the perimeter of campus to reinforce pedestrian spaces
- Increase safety by creating clearly defined crosswalks and vehicular lanes
- Vacate Birch Street to improve access to campus via Kansas City Street
- Create gateways on St. Joseph Street to establish campus community
- Work with the City to create a safer and more pedestrian-friendly streetscape by increasing parking and calming traffic on St Joseph Street