Process and Schedule
Efficient Decision-making with Continuous Communication.

**Discovery**
- January: Project Kick-off
- February: Campus Kick-off

**Analysis**
- March: Analysis + Early Ideas
- April: Analysis & Alternatives

**Scenarios**
- May: Preliminary Master Plan
- June: Draft Final MP Review

**Recommendations**
- July: Draft Final Master Plan
- August: Final Document Delivery

**Refinement**
- September: Phasing & Implementation

**Implementation Strategy**
- October: Final Document Delivery
- November: Final Document Delivery
- December: Final Document Delivery

**Discovery & Analysis**
- Idea Generation
- Documentation

Legend:
- Blue: Campus Visit
- Yellow: Videoconference
- Red: Project Completion
Mission
We, the Colorado School of Mines community, are united by our commitment to our timeless mission of educating and inspiring students from all backgrounds and advancing knowledge and innovations, with the aspiration that our graduates, ideas, actions, and innovations will have a transformative impact on individuals and society, leading to shared prosperity and sustainable use of the Earth’s resources.

MINES Pillars
• Focused public mission
• Elite institution (but not elitist)
• Challenging practical education and professional preparation
• Collaborative pursuits of use-inspired innovation and discovery
• Connections and partnerships, particularly with industry and mission-oriented agencies
• Honest broker of information
• Great people (students, faculty, staff, alumni)
• Immense pride
Master Planning Principles

Guiding Principles

- **Maintain Framework** – Create and preserve a campus urban design framework for the physical development.

- **Interconnected Learning Community** – Create a physical environment that is conducive to supporting a learning community without boundaries.

- **Natural Environment** – Be a good steward to the earth. Be sensitive to, and work with, the regional context of the natural environment.

- **Efficient Resources** – Use all physical resources, in and out of buildings, amongst the site and the infrastructure, in an efficient manner.

- **Students** – The campus should be safe, secure, student friendly, and conducive to higher learning.
Master Planning Principles
Goals and Objectives

- Improve **inter-relationships** between campus land use zones. Establish **mixed-use vehicular and pedestrian strategies** without urban sprawl.
- Provide **appropriate technology** for teaching, learning, and communication.
- Create spaces (indoor & outdoor) that foster interaction among students, faculty, staff, and community.

- Relate to the historic context of the campus and the community. **Honor and preserve** historic buildings and campus spaces.
- Maintain and operate the existing physical plant.
- Relate to the **regional context** of the environment.
- Establish a strong sense of **physical identity**.

- Establish a plan to develop and maintain a strong **human scale** within the physical environment.
- Improve all campus circulation.
- Improve pedestrian orientation.
Plan for the Entire Campus
Inclusive + Transparent Conversation
Campus. Community. Partners.
Cognitive Mapping

**Preserve:** Areas of Campus that Must be Preserved

**Enhance:** Areas of Campus that with a little help could become great

**Transform:** Areas of Campus where we should start over
Alternative Development Concepts

A

B

C
Reactions to Alternative Development Concepts
Open Houses

- Students
- Faculty/Staff
- City of Golden and Residents
Foundational Analyses
Foundation: Enrollment Projections
On-Campus Student Enrollment Projections, 2017-2027

- Faculty
  - Full-Time: +20%
  - Part-Time: +20%
- Staff
  - Full-Time: +12%
  - Part-Time: +15%
Foundation: Space Needs Analysis
ASF to Serve 6,900 Students, research growth

- Classrooms: more space for Active Learning
- Instructional Labs: need 30,000 ASF (Chemistry, Geology, Engineering)
- Research Labs: double space to double research over 15 years
- Office: quantity is sufficient, quality needs improvement
- Study Spaces: need 10,000 ASF
Space Needs: Classrooms
Educational Adequacy

Environmental Quality

- Daylight
- Views to Outdoors
- Interior Visibility
- Lighting Control
- Thermal Control
- Acoustic Quality
- Environmental and Cultural Inclusiveness
- Accessibility and Universal Design

Layout and Furnishings

- Proximities within Space
- Movement through Space
- Seating Density
- Furniture Configuration Flexibility
- Work Surfaces
- Seating Comfort
- Moveable Partitions
- Transparency
- Access to Adjacent Informal Learning Areas
- Writable Surfaces
- Physical Storage
- Future Proof

Technology and Tools

- Electrical Power
- Network Connectivity
- Visual Displays
- Sound Amplification
- Audio/Visual Interface and Control
- Distributed Interactivity
- Session Capture and Access
Space Needs: Classrooms

Goals

- Colorado School of Mines is a **premier** engineering institution.
- Every classroom at MINES should:
  - provide a consistent infrastructure of **technology**,  
  - the ability to conduct a variety of teaching pedagogies via **Active Learning Environments** (ALE) and,  
  - to the degree possible, provide healthy and **stimulating environments**
- **Smaller classroom sizes** that complement competitive student/ faculty ratios.
- **Renovate existing** and **incorporate additional** into new research buildings.
Space Needs: Funded Research

Research Expenditure Growth

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<th>Projected</th>
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2016: $55M (216 PI’s, 150k SF)
2024: $85M (6% growth)
2026: $105M (2% growth)
2028: $115M (3% growth)
2030: $125M (3% growth)
2032: $130M (3% growth)
Space Needs: Funded Research

115,000 ASF Additional Lab ONLY Space in addition to CoorsTek
175,000 ASF Additional Lab/Office Space COMBINED in addition to CoorsTek
300,000 Gross Square Feet Additional (60% Efficient) in addition to CoorsTek
3 Additional Buildings @ 100,000 GSF Each
Foundation: Space Needs Analysis
ASF to Serve 6,900 Students

- Service
  - Tech Services, Central Storage, Central Service: need 30,000 ASF
  - Shop: need 25,000 ASF
  - Bookstore/Retail: expand

- Residential: Expand to meet Mines’ 2-year live-on requirement goal; provide graduated housing – different social atmospheres
  - First/Second Years (traditional, social, engaged)
  - Upper Level (transition)
  - Grad/Family (independent)
Foundation: Space Needs Analysis
ASF to Serve 6,900 Students

• Special Use
  — Recreation: need 12,000 ASF recreation (fitness, on-campus residential growth)
  — Day Care: need 10,000 ASF

• General Use
  — Meeting Space: expand, Conference Center?
  — Merchandise: 4,500 ASF
  — Dining: 12,000 ASF
  — Student Life Programs: expand
Draft Final Master Plan
Built on the Existing Master Plan

- Prepared in October 2010
- Solid foundation for recent construction
Bedrock Assumptions

National best practices

- Our urban context and our urban grid are valuable.
- The remaining available on-campus sites should be optimized.
- Open spaces are key to campus identity and community building.
- Important edges and gateways should be created or reinforced.
- We should strategically invest in our facilities, and disinvest in those that can no longer serve the university long-term.
Near-Term Change

Near-Term Projects

- Parking Garage I & Classroom Building (Maple and West Campus)
- Residence Hall VI (between Weaver and Starzer)
- Jackson Residence Hall (at 1750 Jackson)
- Mines Innovation Hub (behind General Research Lab)

Building Demolitions

- Those slated for removal due to Parking Garage I and Classroom Building

Building Renovations

- Green Center
- Arthur Lakes Library
Neighborhoods
Draft Final Master Plan: Neighborhoods

- Mines Park
- South Campus
- West Campus
- Central Campus
- Research
- Innovation Hub
- Athletics
Interdisciplinary academic and research collaboration is a foundation of innovation, and our campus should encourage it.
State of the Art Instructional Labs. Functional, efficient, flexible, adaptable, expandable, sustainable. An outreach opportunity.
Draft Final Master Plan: West Campus

A vibrant student life is key to retention and graduation. Our facilities must create and strengthen community.
Draft Final Master Plan: West Campus
Draft Final Master Plan: Housing

First/Second Years (traditional, social, engaged)
Upper Level (transition)
Grad/Family (independent)
Draft Final Master Plan: Central Campus
Draft Final Master Plan: Innovation Hub
Draft Final Master Plan: Innovation Hub
Draft Final Master Plan: Athletics

Baseball/Softball Concessions

Future

Oredigger Park

Parking

Offices

Arena
Draft Final Master Plan: Mines Park
Draft Final Master Plan: Mines Park
The most successful university conferencing developments serve much more than just the university.
Draft Final Master Plan: South Campus
Flexibility for Potential Partnerships

Approach A: Mines Neighborhood
- Sophomore Housing Village
- Dining
- Recreation

Approach B: Golden Destination
- 19th Street Community Gateway
- Conference and Arts Center, with Hotel
- Mixed Use with Street-Level Retail
- 19th Street is Community Gateway with mix of uses
- All first and second year housing located north of 19th Street
- Fewer 19th Street ped crossings
Draft Final Master Plan: Edgar Experimental Mine

Upper Site

9th Ave

Lower Site
Draft Final Master Plan: Edgar Experimental Mine

Lower Site: Classroom, Lab, Event Space
Draft Final Master Plan: Edgar Experimental Mine

Upper Site: Offices, Locker Rooms
Next Steps
Next Steps

- September 4-5: Final Master Plan - On-Campus Presentations

- Project phasing, design guidelines, implementation, documentation

- Board of Trustees adoption

**Tuesday**
- **1:00 - 2:00pm**
  - Faculty/Staff/Students, Student Center – Ballroom C
  - Research/Deans/Faculty Leadership/Foundation

- **2:30 - 3:30pm**
  - Student Life, Public Safety, Student Government

- **3:30 - 4:30pm**
  - City/Neighborhood/Students, Student Center – Ballroom C

- **5:30 - 7:00pm**
  - Operations/CCIT

**Wednesday**
- **8:00 - 8:45am**
  - Operations/CCIT

www.mines.edu/masterplan/