SOUTH DAKOTA BOARD OF REGENTS

Budget and Finance

AGENDA ITEM: 6 – E
DATE: December 8-9, 2021

******************************************************************************

SUBJECT
SDSMT Mineral Industries Building Facility Design Plan (FDP)

CONTROLLING STATUTE, RULE, OR POLICY

SDCL 5-14-1 – Classification of Capital Improvements
SDCL 5-14-2 – Supervision by Bureau of Administration of Capital Improvement Projects
– Payment of Appropriated Funds
SDCL 5-14-3 – Preparation of Plans and Specifications for Capital Improvements – State
Building Committees – Approval by Board or Commission in Charge of
Institution
BOR Policy 6:4 – Capital Improvements
BOR Policy 6:6 – Maintenance and Repair

BACKGROUND / DISCUSSION
The South Dakota School of Mines & Technology (SDSMT) requests approval of the Facility Design Plan for the construction of a new Mineral Industries building. The Preliminary Facility Statement and Program Plan were approved at the June 2014 BOR meeting and March 2021 BOR meeting, respectively. The original request was to renovate the current facility. The cost to renovate the building was estimated at $28M and the cost to construct a new building was estimated at $34M. To better serve the disciplines for the next 60 years, the direction changed to a new building, with the current building being torn down.

IMPACT AND RECOMMENDATIONS
The new building will be 63,800 square feet. It will provide classroom space used by the entire university as well as laboratory and administrative space for the Departments of Geology and Geological Engineering, Mining Engineering and Management, and Materials and Metallurgical Engineering. The building also supplies space for multi-user research laboratories such as the Engineering and Mining Experiment Station (EMES). South Dakota Mines is one of only five universities in the nation that retains a core

(Drafted)

******************************************************************************

DRAFT MOTION 20211208_6-E:
I move to approve SDSMT’s Facility Design Plan for the Mineral Industries Building at a cost not to exceed $34,000,000 funded by a combination of General, Private, and University Funds.
expertise in all the areas that support the development of critical resources and minerals. The need for modernized space is even more pressing now that the Caterpillar MineStar Research Consortium has been announced, as this is the first step in creating a world class industries resource research center at the university. Additionally, the building will help increase the research enterprise and recruitment of talented students and faculty. The new building will support the mission of the university by providing efficient and modern facilities that meet the needs of the campus now and into the future.

**Construction Funding Sources:**
- $19,000,000 General Funds
- $12,000,000 Private Funds
- $3,000,000 University Funds

**Total: $34,000,000**

**Initial Cost Estimate:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost Estimate</td>
<td>$29,160,990</td>
</tr>
<tr>
<td>Commissioning</td>
<td>$99,010</td>
</tr>
<tr>
<td>OSE Fees</td>
<td>$120,000</td>
</tr>
<tr>
<td>Architect/Engineer Fees and Expenses</td>
<td>$2,220,000</td>
</tr>
<tr>
<td>Pre-Construction Fee</td>
<td>$70,000</td>
</tr>
<tr>
<td>Testing</td>
<td>$30,000</td>
</tr>
<tr>
<td>Construction Contingency (8%)</td>
<td>included</td>
</tr>
<tr>
<td>FF&amp;E (including IT/BIT)</td>
<td>$2,300,000</td>
</tr>
<tr>
<td>Bidding Contingency (10%)</td>
<td>included</td>
</tr>
</tbody>
</table>

**Total Estimated Project Costs**

$34,000,000

**ATTACHMENTS**

Attachment I – SDSMT Facility Design Plan, New Mineral Industries Building
Introduction:

The South Dakota School of Mines & Technology requests approval of the Facility Design Plan for the construction of a new Mineral Industries building. The Preliminary Facility Statement and Facility Program Plan were approved at the June 2014 BOR meeting and March 2021 BOR meeting, respectively. The original request was to renovate the current facility. The cost to renovate the building was estimated at $28M and the cost to construct a new building was estimated at $34M. To better serve the disciplines for the next 60-yrs, the direction changed to the new building with the current building being torn down.

The new building will be 63,800 sq ft. It will provide classroom space used by the entire university as well as laboratory and administrative space for the Departments of Geology and Geological Engineering, Mining Engineering and Management, and Materials and Metallurgical Engineering. The building also supplies space for multi-user research laboratories such as the Engineering and Mining Experiment Station (EMES). South Dakota Mines is one of only five universities in the nation that retain a core expertise in all the areas that support the development of critical resources and minerals. The need for modernized space is even more pressing now that the Caterpillar Minestar Research Consortium has been announced as this is the first step in creating a world class industries resource research center at the university. Additionally, the building will help increase the research enterprise and recruitment of talented students and faculty. The new building will support the mission of the university by providing efficient and modern facilities that meet the needs of the campus now and into the future.

a. Architectural, mechanical, and electrical schematic design:

Architectural:

The new Mineral Industries building will be 63,800 sq ft located between the O’Harra administrative building and the James E. Martin Paleontology Research Lab on the south side of campus. The building will consist of masonry, cast stone and aluminum curtain wall glazing systems supported by a structural steel column, beam and joist system. The roofing will be a combination of rubber membrane and metal roofing. The project will be striving to achieve LEED (Leadership in Energy and Environmental Design) Certified rating and therefore will be utilizing building materials that have low VOC (volatile organic compounds) materials and high performance mechanical and electrical systems.
In considering the design as a whole, the building is organized with three driving factors in mind: 1) efficient space utilization 2) efficient MEP distribution and 3) incorporation of highly collaborative areas. With those criteria in mind, each of the building floorplates are organized with a double loaded east-west corridor that connects each program area to the atrium as well as outdoor areas on the East and West. Office areas are located on the 2nd and 3rd floors. Teaching and research areas make up all three floors. Vibration sensitive and heavy floor loading requirement equipment are located on the first floor where isolated slab areas will be utilized to accomplish the needed vibration criteria. Reference Attachment A for building plans.

**Mechanical:**
The mechanical systems for this building will be connected to the campus chiller and steam/condensate loops. This will be a cost effect strategy for the new building. The mechanical systems will be designed to be efficient and meet LEED Certified rating requirements.

Other utilities to be noted include the extension of the domestic water from the south. The sanitary sewer will be connected near the building site with relocation of some existing sanitary sewer in the building footprint. Gas tie in will not be needed for the new building, but will be stubbed into the building if future connections are needed. The existing gas line under the building footprint will be relocated.

All mechanical equipment will be tied into the Universities building automation system for monitoring of equipment and addressing heating/cooling issues within the building remotely if needed.

A NFPA 13 compliant wet-pipe sprinkler system will provide full coverage for the building. Quick-response sprinklers will be used throughout the facility. Offices and classrooms will be classified as light hazard. Laboratories, storage rooms, custodial closets, and mechanical rooms will be classified as Ordinary Hazard, Group 1 or Group 2, depending on the specific requirements.

**Electrical:**
Primary electrical service to the facility will be a new pad mounted transformer located on the east side of the new building. The new transformer will be connected to an existing utility pad mounted switch. Service entrance cabling will be copper and will be routed outside the building from the service transformer to a single-ended, main service switchboard located in the main electrical room on the first floor. All necessary metering and switching requirements will be
provided as required. All site electrical equipment including the pad mounted transformer and stand by generator will be located away from main building entries. Lighting throughout the building will be LED (Light Emitting Diode) type fixtures and lighting levels will comply with applicable standards and energy code requirements. Lighting will be a combination of 2x2, 2x4, and Linear LED light fixtures. Lighting in offices, meeting rooms, labs, study rooms, and classrooms will be fully dimmable, and the building will have occupancy sensor controls to reduce energy consumption while providing flexibility to the occupants.

Voice and data systems will include jacks, cabling, conduit, racks, patch panels, testing, camera’s, TV’s, projectors, and card access.

A digital, addressable type, fire alarm control system with voice evacuation capabilities will be provided to satisfy all Life Safety and Code requirements. The system will be designed in accordance with all current codes and standards and will also satisfy all current accessibility guidelines. In addition, all necessary connections will be made for 24-hour fire alarm system monitoring.

b. Changes from Facility Program Plan:

The square footage has changed from 90,000 sq ft to 63,800 sq ft to keep the project in budget. The offices have moved to the 2nd and 3rd floors and some atrium space has been used to house graduate student space. One flexible lab space and one classroom were removed from the plan. There will no longer be a large penthouse. There may be a screen wall, but it will depend on costs.

c. Impact to existing building or campus-wide heating/cooling/electrical systems:

The building will be connected to the existing campus chiller, steam/condensate, and electrical loops providing the most cost-effective operating methods for this building. Studies have been completed to ensure capacity within each loop.
### d. Total project estimates:

**Funding Sources** –
- $19M General Funds
- $12M Private Funds
- $3M University Funds

The funding available is $34M. The following is the breakdown of the project estimate:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost Estimate</td>
<td>$29,160,990</td>
</tr>
<tr>
<td>Commissioning</td>
<td>$99,010</td>
</tr>
<tr>
<td>OSE Fees</td>
<td>$120,000</td>
</tr>
<tr>
<td>Architect/Engineer Fees and Expenses</td>
<td>$2,220,000</td>
</tr>
<tr>
<td>Pre-Construction Fee</td>
<td>$70,000</td>
</tr>
<tr>
<td>Testing</td>
<td>$30,000</td>
</tr>
<tr>
<td>Construction Contingency (8%)</td>
<td>included</td>
</tr>
<tr>
<td>FF&amp;E/Moving (including IT/ BIT)</td>
<td>$2,300,000</td>
</tr>
<tr>
<td>Bidding Contingency (10%)</td>
<td>included</td>
</tr>
<tr>
<td><strong>TOTAL ESTIMATED PROJECT COSTS</strong></td>
<td><strong>$34,000,000</strong></td>
</tr>
</tbody>
</table>

### e. Changes from cost estimate for operation or M&R expenses:

No changes from the Program Plan.
P TRACK AT TOP OF ALL INTERIOR WALLS / STUDS EXTENDING TO STRUCTURE TO ALLOW FOR DEFLECTION OF DOUBLE 8" FINISHES ARE TO BE INSTALLED.

16' - 8 1/2"

INSTALLING AND PENETRATIONS WITH A CONTINUOUS BEAD OF ACOUSTICAL JOINT SEALANT. INSTALL ACOUSTICAL JOINT SEALANTS AT BOTH FACES OF PARTITIONS, AT PERIMETERS, AND THROUGH FIRE RATED ASSEMBLIES.

REFERENCE CODE

39' - 4"

FIRE RESISTANT GYPSUM BOARD AS SPECIFIED.

21' - 0"

21' - 0"

MBLIES. REFERENCE WALL TYPE SCHEDULE FOR SOUND ATTENUATION INSULATION REQUIRED WITHIN STUD AREA B AREA C.
**GENERAL PLAN NOTES**

1. All IRONWORK, COLUMNS, TIMBER, DECKING and TO FACE OF CONCRETE, AND TO FACE OF CONCRETE, WHERE EXPOSED.
2. PROVIDE BULLNOSE UNITS @ ALL DOOR AND WINDOW OPENINGS, END WALLS, AND OUTSIDE CORNERS IN CMU WALLS.
3. REFER TO STRUCTURAL DRAWINGS FOR GROUTING AND REINFORCEMENT OF CMU WALLS.
4. PROVIDE UNIFILM @ ALL OPENINGS IN RATED ASSEMBLIES.
5. REFER TO CODE COMPLIANCE PLANS FOR LOCATION OF FIRE RATED WALLS AND SMOKE SEPARATION WALL LOCATIONS AND REQUIREMENTS.
6. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
7. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
8.唯一 walls are to be used at walls and to face of concrete, and to face of concrete, where exposed, or as specified.
9. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
10. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
11. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
12. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
13. REFER TO FRAME DRAWINGS FOR FLOOR, ROOF AND WALL FRAMING AS INDICATED.
REFLECTED CLG LEGEND

GPDW - GYPSUM DRY WALL
ACOUSTICAL PANEL CEILING SYSTEM
SUSPENDED GPDW CEILING SYSTEM
RETURN AIR / EXHAUST AIR GRILLE
MECHANICAL
SUPPLY AIR DIFFUSER
ELECTRICAL
RECESSED & PENDANT MOUNTED LIGHT FIXTURES
EXIT SIGNAGE

REFLECTED CLG GENERAL NOTES:
1. GPDW BULKHEADS SHALL BE FRAMED WITH 25 GAUGE 3 5/8" STEEL STUDS @ 16" O.C. AND 5/8" TYPE 'X' GPDW TO 6" ABOVE FINISH CEILING. BRACE AS REQUIRED.
2. LIGHTING FIXTURES AND MECHANICAL DIFFUSERS / GRILLES ARE SHOWN FOR REFERENCE ONLY, SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR EXACT LOCATIONS
3. ELEVATION TAGS ARE IN REFERENCE TO ARCHITECTURAL ELEVATIONS
4. WHERE CEILINGS ARE EXPOSED TO STRUCTURE ABOVE, PAINT ALL UNFINISHED MATERIALS OVERHEAD INCLUDING, BUT NOT LIMITED TO ROOF DECKING, DUCTS, PIPES, CONDUITS & JUNCTION BOXES; SEE FINISH SHEETS FOR PAINT.
5. PROVIDE ACCESS PANELS AS REQUIRED IN HARD LID CEILINGS. COORDINATE WITH MECHANICAL AND ELECTRICAL ACCESS REQUIREMENTS.
REFLECTED CLG GENERAL NOTES:
1. All dimensions shown in feet and inches.
2. Ceiling heights shall be as indicated on floor plans.
3. All wall finishes and materials shall be as shown.
4. All electrical and mechanical fixtures shall be as shown.
5. All doors and windows shall be as shown.

REFLECTED CLG LEGEND

- Ceiling System
- Door
- Window
- Electrical Fixture
- Mechanical Fixture
- Lighting Fixture
- Access Panel

RCP ABBREVIATIONS

- Structural Steel
- Plumbing
- Electrical
- Mechanical
- Finish Schedule

SECOND FLOOR REFLECTED CEILING PLAN
REFLECTED CLG GENERAL NOTES:

REQUIREMENTS...
COORDINATE WITH MECHANICAL AND ELECTRICAL ACCESS
PROVIDE ACCESS PANELS AS REQUIRED IN HARD LID CEILINGS.
SEE FINISH SHEETS FOR PAINT.
TO ROOF DECKING, DUCTS, PIPES, CONDUITS & JUNCTION BOXES;
WHERE CEILINGS ARE EXPOSED TO STRUCTURE ABOVE, PAINT ALL
ELEVATIONS
ELEVATION TAGS ARE IN REFERENCE TO ARCHITECTURAL
DRAWINGS FOR EXACT LOCATIONS
SHOWN FOR REFERENCE ONLY, SEE ELECTRICAL AND MECHANICAL
LIGHTING FIXTURES AND MECHANICAL DIFFUSERS / GRILLES ARE
CEILING. BRACE AS REQUIRED.
STUDS @ 16" O.C. AND 5/8" TYPE 'X' GPDW TO 6" ABOVE FINISH
GPDW BULKHEADS SHALL BE FRAMED WITH 25 GAUGE 3 5/8" STEEL

CLARK-ENERSEN
Architecture     Engineering     Interior Design
Daybreak Design, Architecture     Planning
October 22, 2021

616.474.8237
2020 Baltimore Ave., Suite 300
Kansas City, Missouri 64108-1914

South Dakota Mines - Mineral Industries
Center of Excellence
Technology CT
Rapid City, SD
CE No.: 888-003-21
OSE No.: B0721-08X
October 22, 2021

DRAFT

REFLECTED CLG LEGEND

RCP ABBREVIATIONS

Third Floor Reflected Ceiling Plan

A1.23
ROOF PLAN GENERAL NOTES:

1. All roofing shall be installed in accordance with the NRCA Roofing Manual: Membrane Roof Systems 2007.
2. Roofing system shall be a 60mil full fastened TPO roofing system over polyisocyanurate roof insulation. System should qualify for a minimum 20 year warranty.
3. Roof insulation thickness shall be provided as noted on roof plan.
4. The roof slope shall be 1/4" per foot unless indicated otherwise or as required for crickets and saddles. Slope direction is down as indicated, slope is noted in distance per foot.
5. Typical notation: (+4 1/2") indicates the height or thickness of materials above the roof deck including tapered polyisocyanurate insulation, and/or typ. base polyisocyanurate insulation thickness. Slope requirements dictate thickness; verify thickness indications.
6. Provide chamfers, crickets and saddles as required @ insulation height transitions & obstructions to drainage.
7. Verify all mechanical penetrations with mechanical and food service drawings and mechanical contractor.
8. Provide roof walkway pads min 30" wide in walk-way areas to and around mechanical equipment, & @ top & bottom of ladder locations, & downsput locations as per the roofing manufacturer's roofing warranty requirements.
9. Install roof drains in accordance with NRCA roofing manual. Install new accessories as required per original manufacturer.
10. Install through wall scuppers, conductor heads and downsputs in accordance with Sheet Metal and Air Conditioning Contractors National Association (SMACNA) and National Roofing Contractors Association (NRCA) roofing manual.
11. Install mechanical equipment with 12" minimum to top of curb from adjacent new roof membrane & provide 2-piece flashing. Adjust curbs as necessary to maintain minimum flashing requirements.

Roof Drain Area Calculations:

<table>
<thead>
<tr>
<th>DRAIN 1</th>
<th>DRAIN 2</th>
<th>DRAIN 3</th>
<th>DRAIN 4</th>
<th>DRAIN 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,913 SF</td>
<td>3,900 SF</td>
<td>4,590 SF</td>
<td>4,628 SF</td>
<td>4,393 SF</td>
</tr>
<tr>
<td>185 SF</td>
<td>102 SF</td>
<td>420 SF</td>
<td>458 SF</td>
<td>191 SF</td>
</tr>
</tbody>
</table>

Total Square Footage:

<table>
<thead>
<tr>
<th>DRAIN 1</th>
<th>DRAIN 2</th>
<th>DRAIN 3</th>
<th>DRAIN 4</th>
<th>DRAIN 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,098 SF</td>
<td>4,002 SF</td>
<td>5,010 SF</td>
<td>5,086 SF</td>
<td>4,584 SF</td>
</tr>
</tbody>
</table>
Third Floor HVAC Plan - Area C

DRAFT

PREPARED FOR PRELIMINARY SUBMISSION AND REVIEW ONLY -- NOT FOR CONSTRUCTION.

October 22, 2021

SCALE: 1/4" = 1'-0"

THIRD FLOOR HVAC PLAN - AREA C

ATTACHMENT I
Third Floor HVAC Piping Plan - Area B

THIRD FLOOR HVAC PIPING PLAN - AREA B
SECOND FLOOR PLUMBING PLAN - AREA C

SCALE: 1/4" = 1'-0"

SECOND FLOOR PLUMBING PLAN - AREA C

DRAFT
PREPARED FOR PRELIMINARY SUBMISSION AND REVIEW ONLY -- NOT FOR CONSTRUCTION.

CLARK ENERSEN
Architecture     Engineering     Interior Design
Land
scape Architecture     Planning

CE No.: 888-003-21
OSE No.: R0721-06X
October 22, 2021

Design Development
South Dakota Mines - Mineral Industries Center of Excellence Technology CT South Dakota Mines Rapid City, SD
CE No: 888-003-21
OSE No: R0721-06X
October 22, 2021

Second Floor Plumbing
Plan - Area C

P2.23
SECOND FLOOR LIGHTING PLAN

SECOND FLOOR LIGHTING PLAN NOTES

KEY

NOTE DESCRIPTION

1 OVERHEAD LIGHTING IN OPEN STAIR ARE SHOWN ON THE THIRD FLOOR LIGHTING PLAN.

SCALE: 1/8" = 1'-0"
1 LOCATE HEAT DETECTOR WITHIN 2'-0" OF EACH SPRINKLER HEAD FOR CODE REQUIRED ELEVATOR RECALL.

2 LOCATE SMOKE DETECTOR IN THIS AREA. PROVIDE ALL NECESSARY RELAYS AND CONNECTIONS TO ELEVATOR CONTROLLER FOR CODE REQUIRED ELEVATOR RECALL. COORDINATE CONNECTION WITH THE ELEVATOR SUPPLIER/INSTALLER.

3 COORDINATE LOCATION OF RECEPTACLE WITH THE MECHANICAL CONTRACTOR FOR CONNECTION TO ELEVATOR PIT SUMP PUMP.

4 ALL DEVICES IN THE ELEVATOR SHAFT SHALL BE NEMA 4 RATED AND ALL CONDUIT SHALL BE GALVANIZED RIGID STEEL.

5 2 GANG BOX WITH SINGLE GANG EXTENSION RING AND BLANK COVER FOR FUTURE USE. FLUSH MOUNT IN WALL AT +18" AFF UNLESS OTHERWISE INDICATED. ROUTE (1)-1" CONDUIT FROM BOX, CONCEALED UP WALL AND STUB ABOVE ACCESSIBLE CEILING IN CORRIDOR. BUSH CONDUIT ENDS.

6 CONNECTION AND CONTROLLER FOR THE OVERHEAD DOOR. COORDINATE CONNECTION WITH THE OVERHEAD DOOR SUPPLIER/INSTALLER.
1. 2 gang box with single gang extension ring and blank cover for future use. Flush mount in wall at +18" AFF unless otherwise indicated. Route (1)-1" conduit from box, concealed up wall and stub above accessible ceiling in corridor. Bush conduit ends.

2. Surface mounted raceway. See the surface mounted raceway detail for additional information. Raceway to be mounted at height indicated on plans.
1. Two gang box with single gang extension ring and blank cover for future use. Flush mount in wall at +18" above floor unless otherwise indicated. Route (1)-1" conduit from box, concealed up wall and stub above accessible ceiling in corridor. Bush conduit ends.

2. Surface mounted raceway. See the surface mounted raceway detail for additional information. Raceway to be mounted at height indicated on plans.

3. Provide 120V electrical connection to electric water cooler. Coordinate connection requirements with electric water cooler supplier/installer.
Scale: 1/4" = 1'-0"

Third Floor Power & Auxiliary Systems Plan - Area B

Key

1. 2 Gang Box with Single Gang Extension Ring and Blank Cover for Future Use. Flush Mount in Wall at +18" AFF unless otherwise indicated. Route (1)-1" Conduit from Box, Concealed Up Wall and Stub Above Accessible Ceiling in Corridor. Bush Conduit Ends.

2. Surface Mounted Raceway. See the Surface Mounted Raceway Detail for Additional Information. Raceway to be Mounted at Height Indicated on Plans.


Design Development
South Dakota Mines - Mineral Industries Center of Excellence

CE No.: 888-003-021
OSE No.: R0721-06X
October 22, 2021

DRAFT
PREPARED FOR PRELIMINARY SUBMISSION AND REVIEW ONLY -- NOT FOR CONSTRUCTION.

Third Floor Power & Auxiliary Systems Plan - Area B

E2.03b
1. LOCATE HEAT DETECTOR WITHIN 2'-0" OF EACH SPRINKLER HEAD FOR CODE REQUIRED ELEVATOR RECALL.

2. LOCATE SMOKE DETECTOR IN THIS AREA. PROVIDE ALL NECESSARY RELAYS AND CONNECTIONS TO ELEVATOR CONTROLLER FOR CODE REQUIRED ELEVATOR RECALL. COORDINATE CONNECTION WITH THE ELEVATOR SUPPLIER/INSTALLER.

3. PROVIDE 30A NON-FUSED DISCONNECT LOCATED IN ELEVATOR HOISTWAY FOR ELEVATOR CAB LIGHTING. DISCONNECT SHALL BE LOCABLE IN THE CLOSED POSITION WITH A LOCKING MECHANISM THAT CANNOT BE REMOVED. DISCONNECT TO BE PROVIDED WITH A POSITIVELY DRIVEN AUXILIARY CONTACT. CONTACT SHALL OPEN WHEN DISCONNECT IS OPENED.

4. ELECTRICAL CONNECTION TO ELEVATOR CONTROLLER. COORDINATE EXACT CONNECTION LOCATION WITH THE ELEVATOR SUPPLIER/INSTALLER. SEE THE ONE-LINE DIAGRAMS FOR FEEDER SIZING.