Golden Neighborhood Meeting

March 15, 2016
6pm – 7:30pm
Agenda

- Welcome
- Construction Activity
- Agreement with the City of Golden
- Lights at Clear Creek Athletic Center
- Parking
- Upcoming Events
- Communication
Construction Activity

CoorsTek Center – 16th and Illinois

Schedule

- Demolish Meyer Hall – 90% complete
- Excavation start – March 2016
- Construction complete – November 2017

Near Term Activity

- Demolition/excavation/underground utilities-foundations/steel structure
  - 16th Street – Generally remains open for the duration of the project with periodic temporary closures and narrowing for underground utilities and safety.
  - Illinois Street – Truck traffic between 16th Street and 19th Street. Sub-contractors have been advised to use 19th Street and Illinois as the primary route to and from the site.
  - Duration March – November, 2016
CoorsTek Center Construction Site Plan

CSM CoorsTek Site Plan

Traffic Pattern

Proposed concrete washout area

Dumps 30 yd

- 6 x 6

- Qty and location to change as needed

Toilet

- Quantity and location to change as needed

Dumps 30 yd

- 6 x 6

- Qty and location to change as needed

Tree to be removed

Locate concrete washout area closer to exit

16th St.

Illinois St.

Trailers

Parking for Owners Meetings

Office Management Stand Down area

Toilets

Colorado School of Mines

Earth • Energy • Environment
Construction Activity

△ Mines Heating Plant – 13th and Cheyenne

△ The Mines Heating Plant Renovation is a replacement of the entire steam system within the building. Most work takes place inside the structure. Exterior work includes underground utilities and a new generator.

△ Transitions the heating plant to Mines primary steam source.

△ Plant History


△ In 1982 Coors Line became operational (steam purchase agreement).

△ Coors Line has reached the end of its usable life.

△ 1982 – Present; the Mines Plant operates in a backup capacity mode and houses Welding, Machine Shop, Controls, Mechanical and Plumbing.

△ Typical annual run time is 2-3 weeks per year, to accommodate preventative maintenance of the Coors Line and/or maintenance work within the Coors Plant.
Construction Activity

Mines Heating Plant – 13th and Cheyenne

Schedule

- Construction start – March 2016
- Construction complete – June 2017

Near Term Activity

- Near term interior demolition/underground utilities
  - Truck Traffic is anticipated for the demolition of the steam system. Once demolition is complete, truck traffic will diminish for the remainder of the project.
  - Subcontractors will be instructed to access the site from 19th Street.
  - Duration March – August, 2016
  - 13th Street & Cheyenne Street – Generally remain open for the duration of the project with periodic temporary closures and narrowing for underground utilities and safety.

Noise Mitigation

- An acoustic engineer is engaged to study the best ways to mitigate sound that will come from running the plant operations.
Mines Heating Plant Elevations
Mines Heating Plant Site Plan

13th St.

Generator

Screen

Cheyenne St.
Construction Activity

Mines Heating Plant – 13th and Cheyenne

Plant Operations – Summer 2017

- Plant will become Mines primary steam source and as such will provide distributed steam for campus operations 24/7.
- Heating, Cooling, Hot water
- Plant Building will house Operations staff & Plumbing staff.
- 24/7 plant operations with five full-time operators.
- Monday – Friday, 7:00am – 4:00pm; Plumbing Shop with seven full-time employees.
General Research Laboratory Annex - GRLA

Construction Process

The GRLA was designed in three phases. The design methodology was *atypical* of Mines’ standard process. The approach was used to accommodate the construction of the CoorsTek Center by providing space for the displaced Physics Department from Meyer Hall.

- **Phase I** – Procurement of the pre-manufactured metal building.
- **Phase II** – Foundations and site utilities. Mines reviews building with City Staff - February 2015.
- **Phase III** – Interior lab design, mechanical & electrical system – final mechanical design completed. Mechanical deck designed, June 2015. City staff and neighbors should have been advised at this time. An internal communication breakdown did not reveal the extent of the exhaust system to management until October 2015.
Construction Activity

- **GRLA Mechanical Deck Screening**

- **Fence Screening**
  - In conjunction with acoustic recommendations, Mines is considering erecting a screen if it will mitigate sound and/or will adequately screen the system.

- **Painting**
  - As an alternative to screening, Mines may paint the mechanical equipment to blend with the background colors.

- **Landscaping**
  - Mines is considering planting dense conifer trees (pine or spruce) on the perimeter of the site.
**Construction Activity**

**GRLA Noise Mitigation**

- An acoustic engineer is engaged to study the source noise coming from the mechanical deck and provide recommendations for sound mitigation.

- Early data shows the source of sound that may be the most bothersome comes from a high frequency sound emitted from an air control device and not from the exhaust fans.

- The acoustic engineer will provide sound level readings around the neighborhood and compare them to levels with the mechanical equipment off.

- Early testing by CPC suggests the levels with the mechanical equipment running are ~50 dB along Maple Street and 12th Street compared to readings taken at 3:00 a.m. which were ~47 dB.

- Preliminary observations suggest that a reduction of the high frequency noise may mitigate the problem.
## Examples of Sound Levels

<table>
<thead>
<tr>
<th>Sound sources (noise) Examples with distance</th>
<th>Sound pressure Level $L_p$ dB SPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet aircraft, 50 m away</td>
<td>140</td>
</tr>
<tr>
<td>Threshold of pain</td>
<td>130</td>
</tr>
<tr>
<td>Threshold of discomfort</td>
<td>120</td>
</tr>
<tr>
<td>Chainsaw, 1 m distance</td>
<td>110</td>
</tr>
<tr>
<td>Disco, 1 m from speaker</td>
<td>100</td>
</tr>
<tr>
<td>Diesel truck, 10 m away</td>
<td>90</td>
</tr>
<tr>
<td>Kerbside of busy road, 5 m</td>
<td>80</td>
</tr>
<tr>
<td>Vacuum cleaner, distance 1 m</td>
<td>70</td>
</tr>
<tr>
<td>Conversational speech, 1 m</td>
<td>60</td>
</tr>
<tr>
<td>Average home</td>
<td>50</td>
</tr>
<tr>
<td>Quiet library</td>
<td>40</td>
</tr>
<tr>
<td>Quiet bedroom at night</td>
<td>30</td>
</tr>
<tr>
<td>Background in TV studio</td>
<td>20</td>
</tr>
<tr>
<td>Rustling leaves in the distance</td>
<td>10</td>
</tr>
<tr>
<td>Hearing threshold</td>
<td>0</td>
</tr>
</tbody>
</table>
Large machine shop

Thin film deposition

Laboratory Hoods

Microscopes

Benchtop equipment for analysis
Agreement with the City of Golden
Clear Creek Athletic Complex

Football Field Lights

- Field light “cut-off” is not what was represented to us by the lighting manufacturer.
- The lighting manufacturer has been directed to evaluate a realignment of the field lights to provide more “cut-off” and reduce spillage at the perimeter of the field. If adequate field lighting can be achieved, the lights will be re-aligned.
- In the interim, 8 field lights have been turned off to reduce the light levels that previously illuminated the alley between 11th and 12th Streets. These 8 lights have remained off and the alley no longer is illuminated.

Parking Lot and Street Lighting

- Shrouds are being installed on all LED parking and street lights. ~65% of the shrouds have been installed and the remaining shrouds will be installed over the next three months.
Parking

Mines Initiated a Joint Parking Study with the City of Golden (January 2016)

- Walker Parking Consultants hired
  - Needs analysis (Campus and Downtown)
  - Evaluation of parking technology, rates, and policy analysis (Mines & City)
    - How to be more effective, efficient and customer focused

Stadium Parking

- New pedestrian path from upper lot – lot full each football game
- New stadium lot (north side of stadium) – lot full each football game
  - Open daily for staff & student parking
  - Open for all athletic events ($10 charge for football)
  - Shuttle services on game days serving 2200 parking spaces on campus
    - Evaluating the opening season for changes to shuttle services
Upcoming Events

Oredigger Classic Cycling Race

- Saturday March 19th – Sunday March 20th
- Street closures:
  - 3/19 - 7am – 3:00pm. Lookout Mountain Road from Pillars to Buffalo Bills Museum
  - 3/19 - 3pm – 6:30pm. Illinois from 13th to 16th Street
  - 3/30 - 6am – 5:30pm. Elm Street from 18th Street to W Campus Rd and W Campus Road west of Elm Street to Elm and 18th Streets (fraternity row)

E-Days

- Wednesday, March 30th – Sunday, April 3rd

Major Events Open to the Public:

Friday, 4/1

- 11:00am – 1:30pm, ROTC landing and viewing of four Army helicopters
- 2:30-5:30pm, Field Day, IM Fields
- 2:30-4:00pm, Trebuchet Contest, Q Lot
- 7:00-10:00pm, Into the Streets Concert, IM Fields – DJ Interactive Concert
  - Tickets - $20 cash at the door
  - Doors open at 6pm

Saturday, 4/2

- 10:30am-3:00pm, Car Show, Ford Lot
- 10:00am-12:00pm, Cardboard Boat Race, Clear Creek
- 12:00-3:00pm, Carnival, IM Fields - Wrist band $5 for food/$5 for beer (optional)
- 7:00-10:00pm, Concert, IM Fields – Band - American Authors
  - Tickets - $25 cash at the door
  - Doors open at 6pm
- 9:30pm, Fireworks from North IM Field

May CSM Graduations at Clear Creek Athletic Center

- Graduate Commencement
  - Thursday, May 12th, 5:00pm
  - Marv Kay Football Stadium

- Undergraduate Commencement
  - Friday, May 13th, 9:30am
  - Marv Kay Football Stadium
If you would like to be added to the email mailing list for updates of these scheduled events, please send a request with your email address to cpc@mines.edu.