WHO
UCD’s Design Build Studio + FEED Denver

WHY
Repairing broken cycles = sustainability

WHAT
Learning Cube + Dairy House

HOW
Join the revolution

We are graduate architecture students, exploring real questions of designing and building, for a real client, FEED DENVER on their urban site inside the Stapleton redevelopment. Feed Denver’s mission is to build community-based urban greenhouse farms and markets to empower people to feed and sustain themselves and their communities. The site in Stapleton acts as a training center to model urban farming techniques.

FEED Denver and the Urban Farm believe, through hands-on agricultural and environmental education, they can improve the lives of children living in high-risk, urbanized neighborhoods by helping to create a sense of positive self-regard and self-reliance, a strong work ethic, and hope. Our goal is to generate public awareness about design and architecture by constructing unique and functional spaces.

The Learning Cube marks the entry to Feed Denver as an iconic open-air pavilion and market. Built with walls and ceiling of re-purposed wooden pallets, the Learning Cube serves as a sustainable, shaded, outdoor gathering space, market and classroom. The Dairy House is a hands-on outdoor classroom, designed as a model for future urban farming sites. In particular, Dairy House models the essentials of dairy goat farming by integrating the animal pen with functional storage, shelter, and classroom display. It features a gabion cage wall filled with demolished concrete “urbanite,” metal angle-iron, and a variety of reclaimed wood.

It happens with your help. Your monetary and material donations become a physical place and a permanent part of an insightful, forward thinking organization at FEED Denver and the Urban Farm. Based on studies of broken cycles in agriculture and material fabrication and construction, these outdoor classrooms are planned with sensibility and practicality. They are prototype examples of responsible material use, functionality, and beautiful places. You will be truly proud when you see your donation become a real, tangible place.
Dairy House Views

CUDENVER DESIGN_BUILD
FEED_DENVER
Material List

Gabion Cage Material Haves:

- Wire fencing – 12’ X 5’ pieces (on site), 12 pieces, 720ft² = 216 Lft. 2’x3’ boxed cages.
- Paper tube as Sonotube. 3’ - 6’ length, total of 8 pieces @ 8’ dia.. 28 Lft.

Roof & Wall Element Haves:

- Scrap lumber, 1” X 2” enough to cover 360ft²

Platform Haves:

- Scrap lumber, 2” X 4” boxed beams. Enough for 20’ X 3’ and 7’ X 1’. 67 ft²

Goat Head Holder Haves:

- Scrap lumber 2’ X 6”. (2) 2’ length pieces, (2) 25¼” length pieces. 98½ Lft.

Gabion Cage Material Needs:

- Tie Wire (bailing wire) – 1/16” dia. Galvanized steel. 1200 Lft
- Rebar 3/8”+ dia. 22 pieces @ 12’ Long. 360Lft.
- Steel Angle 16 pieces of 7’ length (structure through), 5 pieces of 20’ length (platform). 1½”X1½” or 2”X2” @ ¼” thickness. 221 Lft.
- Conduit every 15’. 9 pieces of 10’ length & 8 pieces of 15’ length. 3½” outer dia. 210 Lft. Or 90 Lft of 10’ pieces and 120 Lft of 15’ pieces.
- Concrete. Tubes at 3’-6” tall and 8” dia. 12 ft³ or 24 ft³ to be conservative.

Platform Needs:

- Hardware, Deck Bolts & Washers. 1¼” length #6 bolts, self sinking flathead Phillips, galvanized. 800-1000 screws/washers.
- Goat Head Holder Needs:

- Steel Channel, 2” X 1” X 3/16” 80” or 6.67 Lft
- Steel Angle (a), 2” X 2” X ½”, 8”
- Steel Angle (b) 3” X 3” X 3/8”, 4”
- Steel Angle (c) 1.5” X 1.5” X ¼”, 90” or 7.5 Lft.
- Steel Plate 13” X 6” X 1/8” (qty2) = (13” X 12” X 1/8” piece) 1.08 ft²
- Hinges (qty2) flushmount (spot weld) 2” X 1¼” (max dims)
- Other Hardware, bolts for pivots, pins for adjustable travel, slide lock at top.

Groundcover Needs:

- Base Gravel, 150ft²

Dairy House Materials

CUDENVER DESIGN_BUILD
FEED_DENVER
Learning Cube
Learning Cube
details

1x6 treated siding, same as deck
(12 ft lengths)

2x8 doubled up beam
(16 ft lengths, 47" o.c.)

post base brackets attached w/ j-bolt
attaches directly to center beam

1" dia. cardboard tubes filled with concrete
(12 ft lengths, 12 ft o.c.)

2x6 doubled up posts
(8' lengths)

2x6 joists attached by hangers
(24 ft lengths)

8 ft lengths 16" o.c.
single layer pallets
(attached between 2x6 posts flush or interior)

1x6 treated deckings

double layer pallets
(attached between 2x4 posts flush or interior)

doubled up 2x4 posts
(10' lengths)

2x8 wood beams nailed to posts
(24 ft lengths)

8'8" lengths
doubled up 2x6 posts

1x6 treated siding, same as deck
(12 ft lengths)
<table>
<thead>
<tr>
<th><strong>Wood</strong></th>
<th><strong>Masonry</strong></th>
<th><strong>Other</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tall Wall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Columns: 2&quot;x4&quot;x14' - 12 pieces (on site) (each column includes 2 - 2&quot;x4&quot;s sandwiched together)</td>
<td>Foundation</td>
<td>Fastening</td>
</tr>
<tr>
<td>Pallets: 15</td>
<td>50 cubic feet.</td>
<td>Nails</td>
</tr>
<tr>
<td>Fasteners: 2-1/2&quot; screws</td>
<td></td>
<td>Bolts</td>
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<tr>
<td><strong>Small Wall</strong></td>
<td></td>
<td>Washers</td>
</tr>
<tr>
<td>Columns: 2&quot;x8&quot;x10' - 22 pieces (each column includes 2 - 2&quot;x4&quot;s sandwiched together)</td>
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<td>...</td>
</tr>
<tr>
<td>Pallets: 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fasteners: 2-1/2&quot; screws</td>
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<td></td>
</tr>
<tr>
<td><strong>Floor</strong></td>
<td></td>
<td>Treating</td>
</tr>
<tr>
<td>Floor Joists: 2&quot;x8&quot;x8' - 36 pieces or 2&quot;x8&quot;x16' - 18 pieces</td>
<td></td>
<td>Wood Stain</td>
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<tr>
<td>Floor Beams: 2&quot;x10&quot;x12' - 6 pieces</td>
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<tr>
<td>Fascia Board: 1&quot;x10&quot;x16' - 1 piece</td>
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<td>...</td>
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<tr>
<td>Decking: 2&quot;x4&quot;x14' - 68 pieces (on site)</td>
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<tr>
<td><strong>Ribbon Wall/Shading</strong></td>
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<tr>
<td>Roof Joists: 2&quot;x8&quot;x16' - 8 pieces</td>
<td></td>
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<tr>
<td>Lattice: 1&quot;x6&quot;x6' - 104 pieces (70 on site) or 1&quot;x3&quot;x6' - 208 pieces (70 on site)</td>
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</tr>
<tr>
<td>Columns: 2&quot;x4&quot;x14' - 8 pieces (on site) (each column includes 2 - 2&quot;x4&quot;s sandwiched together)</td>
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</tbody>
</table>
STUDENTS

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