





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Becoming a Rock Star

- Design & Installation for Boulders, Outcropping, and Wallstone
- By Paul Laiblin – Scott Byron & Co., Inc.

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

1





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Content

- Overview & Definitions
- Design & Construction Considerations
- Applications:
 - Boulders & Outcropping Walls
 - Steps
 - Wallstone/Cut Dry Wall



Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

2




Overview and Definitions

As we have seen in earlier presentations, we commonly use hardscape elements both functionally and visually as follows:

- To manage pedestrian and vehicular site circulation**
 - Walks, driveways and garden paths
 - Create linkage and transition between garden rooms
 - Create a "destination"
 - Create movement, rhythm and visual interest to support our planting design
- To create or define space**
 - Outdoor room or definition of function, such as a terrace, outdoor kitchen, kitchen garden, or work zone
 - Visually link outdoor and indoor space and extend the architecture of house into the landscape
 - Add verticality or a sense of dimension and enclosure and create informal seating using seat walls and steps
- To provide structure and visual interest**
 - The "bones" of our design
 - Provide contrast to or complement a planting design
 - Structure for winter interest
 - Reinforce thematic elements of design program—formal, informal, rustic, modern, etc.
- To manage site grade changes**
 - Steps/stairs
 - Create usable table land, manage soil erosion, add decorative boulders and artificially create grade change for visual interest or for berms
 - Related—manage site water through dry creeks, rain gardens, and swales

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

3




Overview and Definitions

Definitions: The terms boulders and outcroppings are frequently used interchangeably:

- Boulder:**
 - Rounded to angular rock
 - Range of types, sizes, and colors
 - Wisconsin Granite
 - Gun Metal Granite
- Outcropping:**
 - Flat, horizontal stone that is usually installed in layers
 - Range of types, sizes, and colors
 - Wisconsin limestone
 - New York Fieldstone
- Wall Stone / Cut Dry Wall:**
 - Cut dry wall: Flat, horizontal, and rectangular
 - "Field stone": Rounded to angular stone that can be "dry stacked" without mortar or mortared on a foundation to give appearance of a dry stacked wall.



Develop a familiarity with common materials for our area and with combinations of materials that work for you.

Have a basic overview of proper installation techniques—you do not have to become a master mason, but you should know if things are being installed correctly.

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

4

Design & Construction Considerations

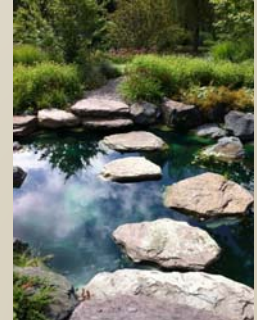
Linkage between functional/pragmatic and artistic—construction, grading and drainage, material selection and finish.

Sequencing—hardscape one of the first considerations in both design and construction.

Have a basic overview of proper installation techniques—you do not have to become a master mason, but you should know if things are being installed correctly.

In wall construction, as in all hardscape applications, design and functionality go together.

- What is my objective and what is the most appropriate material or combination of materials for the intended purpose?
- What color, finish, and installation technique works best for the application?
- What are budget considerations, and how can I fulfill my intent within those parameters?

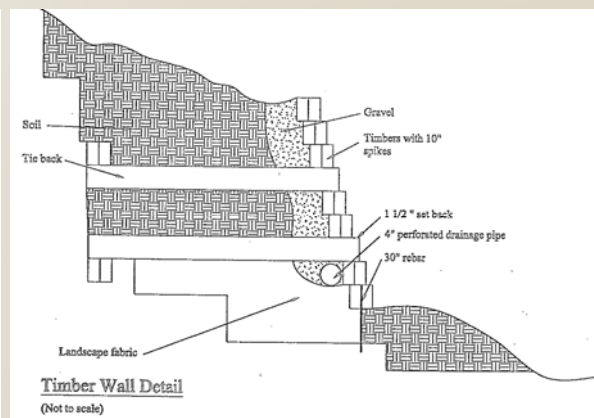
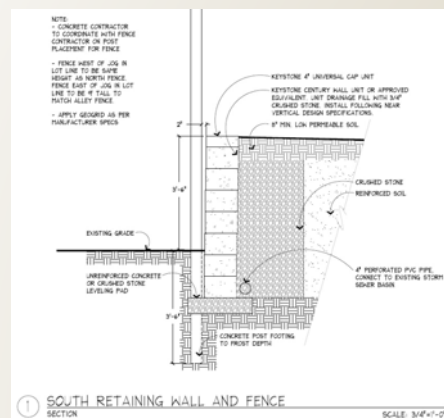


Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

5

Design & Construction Considerations

No matter the material, construction techniques are the same and follow similar principles to timber wall and CMU/landscape block construction.



Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

6

Design & Construction Considerations

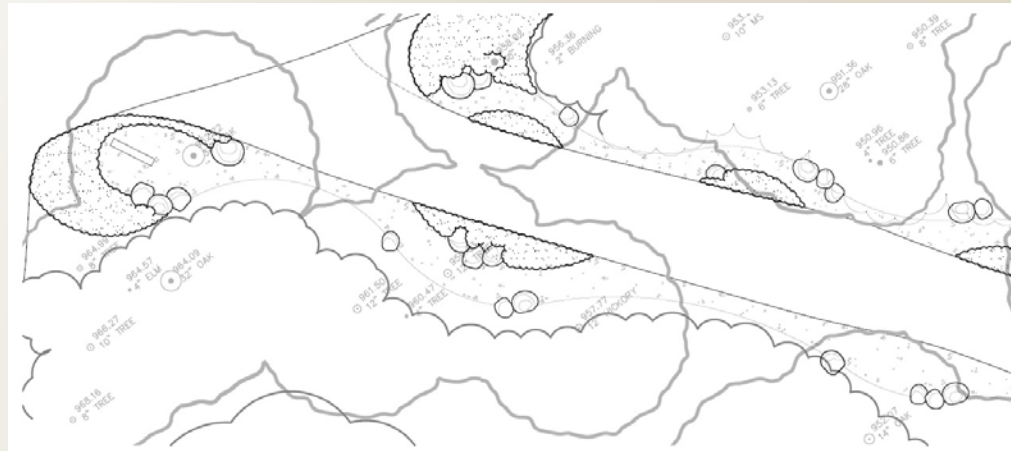
- Wall coursing should be a minimum of one course below finish grade on a 6"-12" compacted, granular base (i.e. CA-6 with fines).
 - Special conditions may call for several courses below grade.
 - Width of the trench for the first course should be about 2x the width of the wall material.
 - Establish finish grade then work backwards to determine trench depth and material quantity.
- A series of shorter walls or wall with corners/turns is better and stronger than a long, straight wall.
- A series of lower terraces may be better than one tall wall.
- Walls should have a batter of 1"-4" per vertical foot of wall.
- Walls should have some stones, as needed, turned perpendicular to the main face to provide more stability, similar to tie back or geogrid.
- Walls must account for settling, sliding, rotational forces, and water pressure.
 - Need to add weep holes, perforated pipe, or other method for drainage.
 - Backfill with gravel and geotextile fabric to prevent silting.
- Walls should have staggered joints, 2 over 1, 1 over 2.
- Consult with a civil or structural engineer or C.A. pattern for specialty situations.
- Review permit requirements and village codes prior to work commencing.

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

7

Design & Construction Considerations

- Boulder walls and outcroppings are usually shown as a loose graphic on landscape plans.



Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

8





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Design & Construction Considerations

- Strive for a "natural" non-contrived appearance. Mix sizes and shapes with this goal in mind.





Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

11





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Design & Construction Considerations

- Use installation techniques appropriate to the material being used:
 - Smaller material – ball cart, dolly, rollers
 - Larger material – skid steer with forks
- Track excavator with chains or slings, backhoe, or fork lift.
- Use Best Management Practices: SAFETY!!!
 - Tree and site protection
 - Plywood for protecting surfaces
 - Consider site access, staging, and material delivery
 - Sequencing
- Consider material selection to match or complement other hardscape elements, or architectural features of the house
 - Quantities: stone sold by the ton
 - L x H x D x 150 lbs. / 2000 = tonnage needed
 - By the piece, assume 165 lbs./cubic foot

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

12

Low Walls

4'-0" or lower, loose and more open appearance. Frequently with planting pockets

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

13

Low Walls

4'-0" or lower, loose and more open appearance. Frequently with planting pockets

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

14

Tall Walls

4'-0" or taller, more "stiff" and structured. May be one wall or a series of terraces. Soften with plantings.

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

15

Tall Walls

4'-0" or taller, more "stiff" and structured. May be one wall or a series of terraces. Soften with plantings.

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

16

Decorative Boulders/Outcropping

Use as "accents" to define a site element, such as address plaque or as scattered placement in plantings.

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

17

Decorative Boulders/Outcropping

Use as "accents" to define a site element, such as address plaque or as scattered placement in plantings.

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

18

Decorative Boulders/Outcropping

Use as "accents" to define a site element, such as address plaque or as scattered placement in plantings.

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

19

Outcropping Steps

More natural, informal, outcropping selected for use as steps. Select for consistent riser heights, approximately 6"-7" height.

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

20





ILLINOIS LANDSCAPE
CONTRACTORS ASSOCIATION

Outcropping Steps

More natural, informal, outcropping selected for use as steps. Select for consistent riser heights, approximately 6"-7" height.



Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

21





ILLINOIS LANDSCAPE
CONTRACTORS ASSOCIATION

Outcropping Steps

More natural, informal, outcropping selected for use as steps. Select for consistent riser heights, approximately 6"-7" height.



Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

22





Slab Steps

Cut/dressed stone slabs, usually 6" riser height x 18"-24" x 3'/4'/5'. More structured, refined, and consistent.



Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

23





Slab Steps

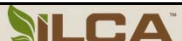
Cut/dressed stone slabs, usually 6" riser height x 18"-24" x 3'/4'/5'. More structured, refined, and consistent.



Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

24





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Slab Steps

Cut/dressed stone slabs, usually 6" riser height x 18"-24" x 3'/4'/5'. More structured, refined, and consistent.

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

25





 ILLINOIS LANDSCAPE
 CONTRACTORS ASSOCIATION

Wallstone / Cut Drywall / "Fieldstone"

Chicago area/Midwest:

- Usually constructed with cut drywall (no, not gypsum sheetrock)
- Wisconsin limestone in rectangular shapes
- Varying thickness (2"-3", 3"-4", 4"-5"), usually 8" wide x random lengths

Pennsylvania/East Coast:

- "Fieldstone"
- Random, angular quarried or harvested stone

"Dry Stacked":

- Installed without mortar on a compacted gravel base, similar to boulders and outcropping
- May "cheat" top stone with mortar or block adhesive
- Depends on the skill of the mason and proper construction to succeed:
 - Batter (2 over 1, 1 over 2)
 - Drainage
 - Tie backs
 - Vary stone heights for visual interest

"Dry Stacked" with Mortar:

- Similar stone wall units
- Mortar joints deeply raked or hidden to mimic appearance of dry stacked wall
- Set on gravel base, concrete grade beam with post hole foundation, or full concrete foundation

Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

26



Wallstone / Cut Drywall

Uses:

- Suitable for lower garden / retaining wall
- Boundary or enclosure
- More structured, solid, linear




Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

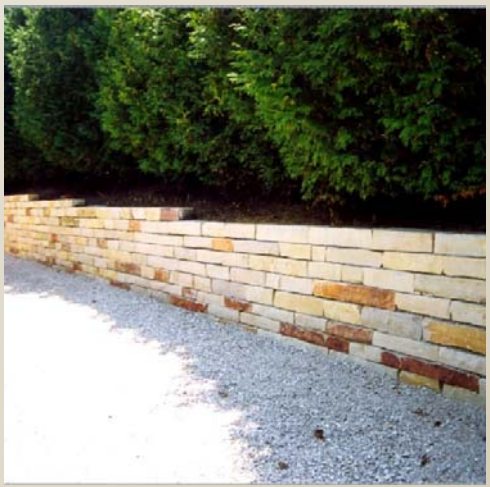
27



Wallstone / Cut Drywall

Uses:

- Suitable for lower garden / retaining wall
- Boundary or enclosure
- More structured, solid, linear

Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

28

Wallstone / Cut Drywall

Uses:

- Suitable for lower garden / retaining wall
- Boundary or enclosure
- More structured, solid, linear



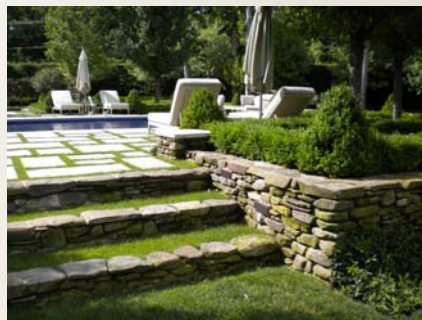
Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

29

"Fieldstone"

Uses:

- Suitable for lower garden / retaining wall
- Boundary or enclosure
- More rustic, angular, and informal



Hardscape Illinois
 February 23, 2017
 Illinois Landscape Contractors Association (ILCA)

30



“Fieldstone”

Uses:

- Suitable for lower garden / retaining wall
- Boundary or enclosure
- More rustic, angular, and informal




Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

31



Thank you and goodnight!

Remember, on your journey to becoming a rock star, never give up and never look back.



Hardscape Illinois
February 23, 2017
Illinois Landscape Contractors Association (ILCA)

32