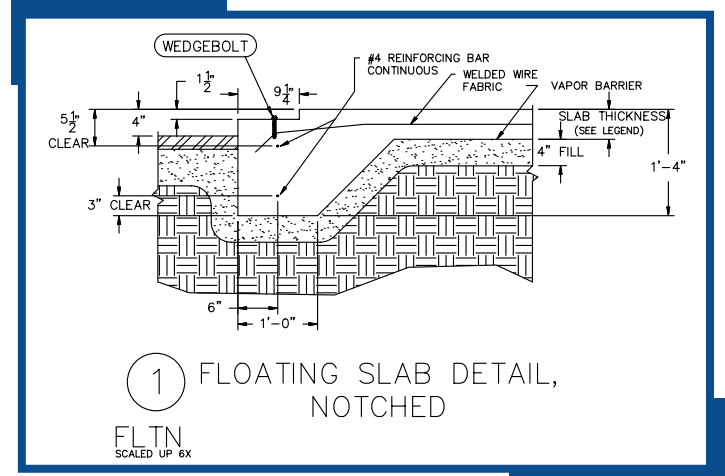




## Foundation Details

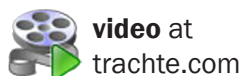
### Floating Slab Detail

This detail is used in all non-frost areas and may also be used in some frost areas (Call your local building dept. to see if they accept this design). There is no footing with the foundation. The concept is that the whole foundation moves up and down with the frost. The thickness of slab changes due to the snow and wind loads. Trachte can only assume a 1,500 lb soil bearing capacity. If you have a soil report that states a higher capacity, this will impact the thickness of the foundation.



Forms must be straight, level, and have adequate bracing. A 2" x 10" is used to form the required notch in the concrete. **Note:** Photos only suggest how to pour the floating slab foundation.

A 2" x 10" form is attached with screws so it can be dismantled during the finishing stage.



Look at our video *Concrete and Grading: The Foundation to a Great Project.*



# Foundation Details

The inside of the 2" x 10" form is staked to keep the form level during the pour. The stake is removed while the concrete is still workable. The required steel reinforcement bases are installed prior to the 2" x 10" form installation.



If the building requires interior column footings, locations are specified on the foundation plan. Mark the locations and shovel out to the depth denoted on the foundation plan.

A vapor barrier is placed under the concrete. 6" x 6" W1.4 x W1.4 welded wire fabric is specified on the plan. If you would prefer fiber mesh or rebar, Trachte will have to re-design the foundation because fiber mesh or rebar requires a thicker foundation.



A hand-held vibrator is used to work the concrete under the 2" x 10" form to help reduce the amount of air pockets.



The 2" x 10" form that shapes the notch must be removed while the concrete is still workable. If this is not done, there will be pock marks due to air pockets.

Curb edge the concrete to reduce chipping and hand trowel the notch to remove air pockets. Brush finishing the notch is also an option. Curb edge the concrete to reduce chipping and hand trowel the notch to remove air pockets. Brush finishing the notch is also an option.



# Foundation Details

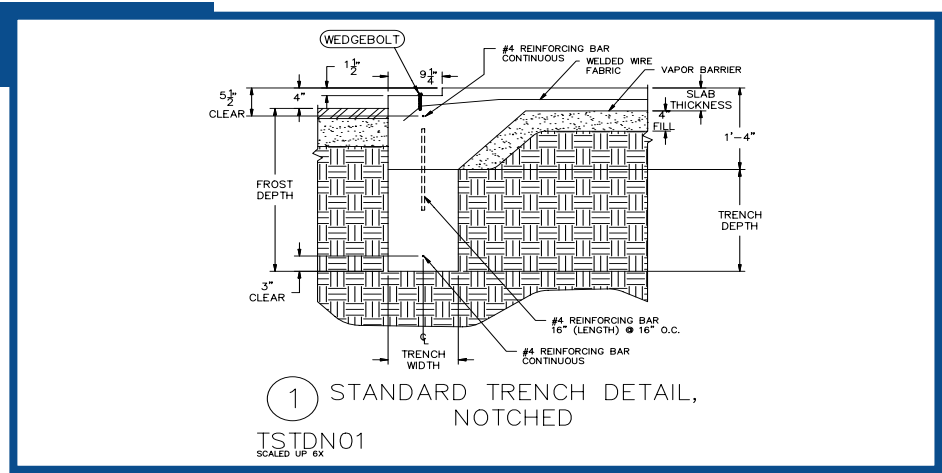
This is an alternative method to form your notch in the foundation. It will eliminate a lot of labor since you can trowel-finish your notch without removing any wood.



Steel angles are another alternative method for forming the notch.

## Trench Wall Foundations

This is a detail of Trachte's trenchwall foundation. The trench is poured to the depth of the frost line and the trench thickness can be either 8", 10", or 12" wide. The thickness of the slab changes due to the snow and wind loads. Trachte can only assume a 1,500 lb soil bearing capacity. If you have a soil report that states a higher capacity, it can impact the thickness of the foundation.



Dig a 12" wide trench in preparation for a 12" wide trench wall foundation.



The 12" wide trench is poured with #4 steel reinforcement bars protruding upward to anchor floor slabs. These bars are capped for safety.

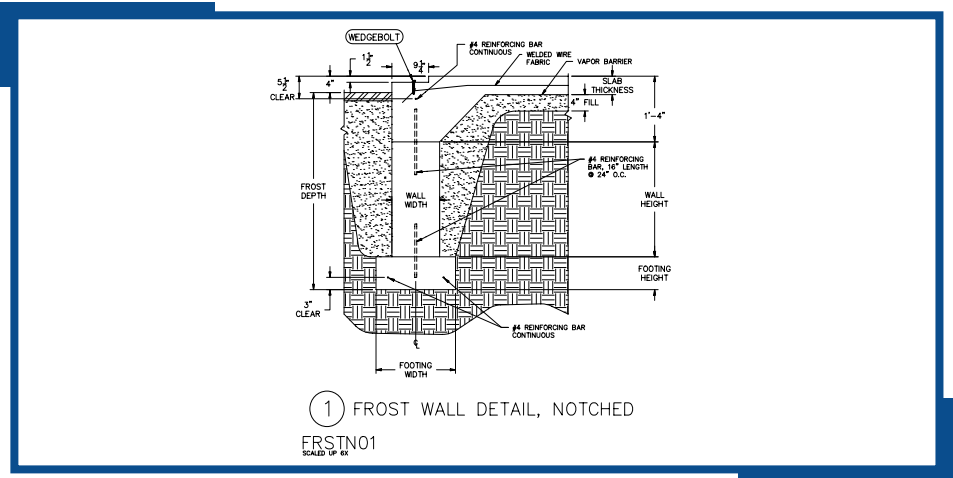
Alternative to the two step trench wall: surround the 12" wide trench wall foundation with forms and pour all concrete at once. The wood form stops the pour at the 12" step down.



# Foundation Details

## Frost Wall Foundations

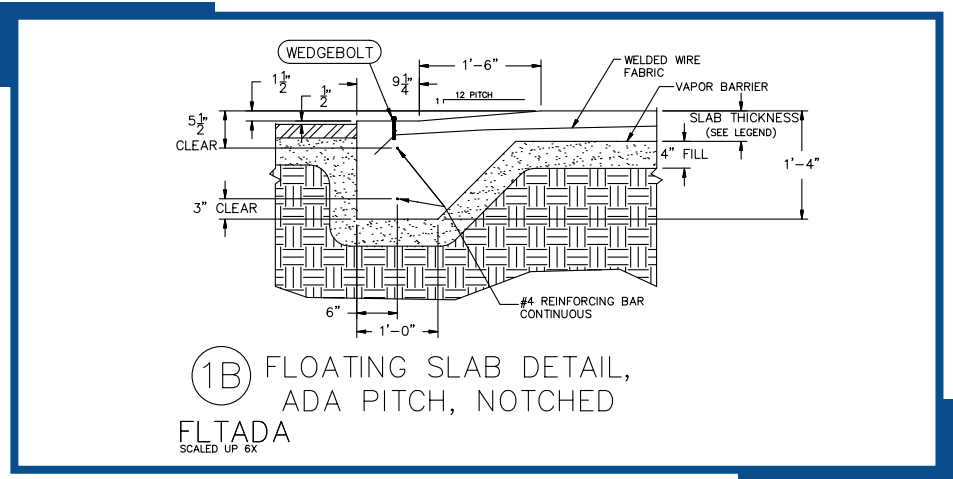
The frost wall footing may be used in lieu of a trench wall footing. The footing is poured first, then forms are used for the walls. This system typically is more expensive than a trench wall foundation. This foundation is easiest to insulate.



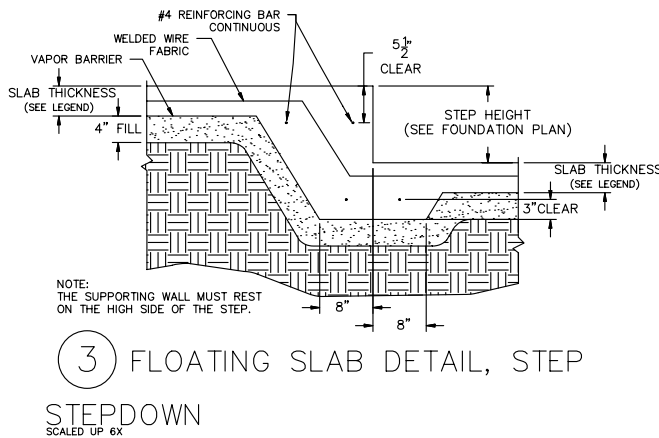
The frost walls are poured, then the forms are taken off. Additional forms must be added to form the top portion of the slab and notch.

## ADA Compliance

Units that are required to comply with the ADA (American Disability Act) must have the notch sloped at 1" and pitched to the finished floor height. Talk to your regional manager for details specific to your building code.



An ADA unit once poured.



### Steps

If your building requires steps in the foundation, this detail illustrates how it is constructed.

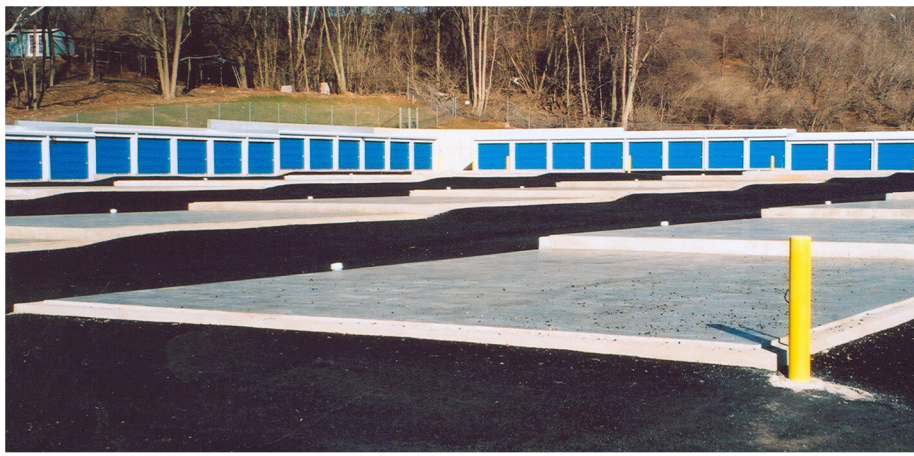
Each section of foundation is poured to the next step.





## Foundation Details

This photo depicts a finished building step. Stone or driveway base should be placed around the slab prior to arrival of building.



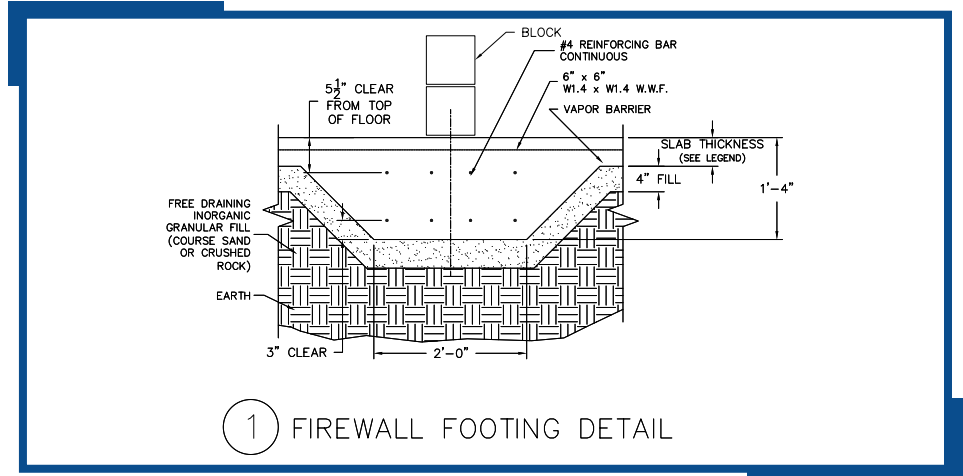
The finished stepped foundation.

A step may be added along the length of the building. The longitudinal step should be done in 6" increments. Trachte will design the building so that there is no step in the roof.



## Firewalls

If your building requires a block firewall, the foundation must be installed underneath the block.



The block firewall rests directly on the slab.

The finished foundation with a corner bollard (6" minimum) and finished pavement. It is recommended to have 1" - 3" from the bottom of the notch to the pavement. The ADA units must have pavement to within 1/2" of the bottom of the notch.



# Foundation Details

## Concrete Finishing

Once the concrete has set, mark and chalk line the foundation every 10' down the length of the building. The first line should be located 11' off the end wall so all the cuts are off the structural line. Note: Try to minimize the saw cut inside the interior hallways.



Saw cut the slab once along the width of the building and then every 10'-15' along the length. The center saw cut should not be placed on a structural line, or in the hallway if possible.

Saw cut should be located 12" off the structure line.



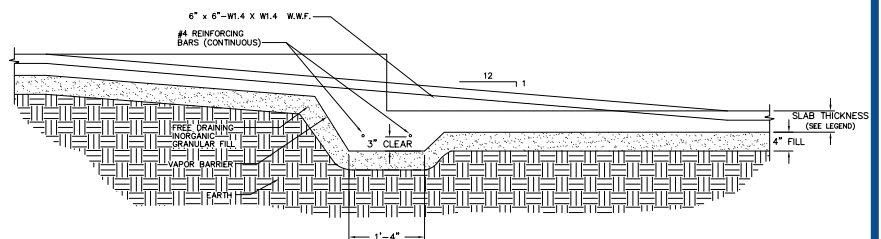
A concrete sealer is applied to create a smooth, finished surface that is easier to clean and prevents spilled liquids from being absorbed.



The foundation is designed 2" wider than the building width. The added width allows for variations in the concrete. The foundation should be set out past the building by 1" as shown.

### Ramps for Corridors

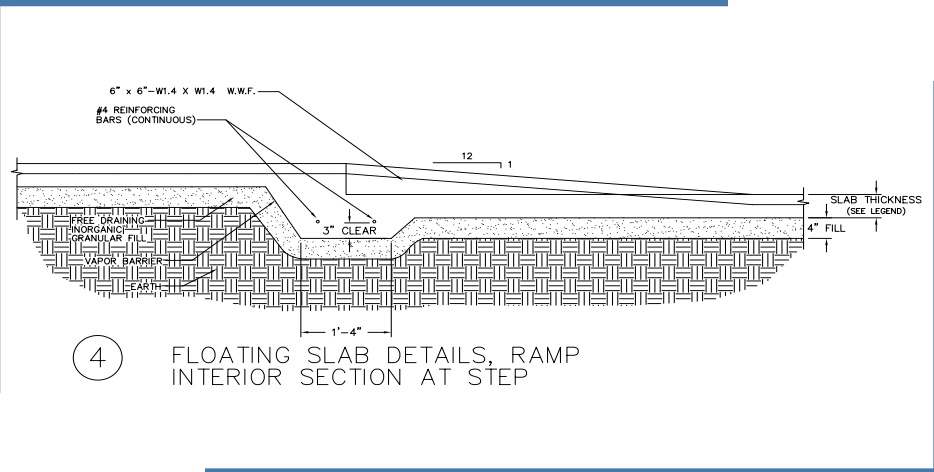
If you have a corridor in your building with a step in it, you must slope the corridor at a 1% grade. The typical detail is to center the ramp in the step.



④ FLOATING SLAB DETAILS, RAMP INTERIOR SECTION THRU STEP

# Foundation Details

This ramp is centered in the step.



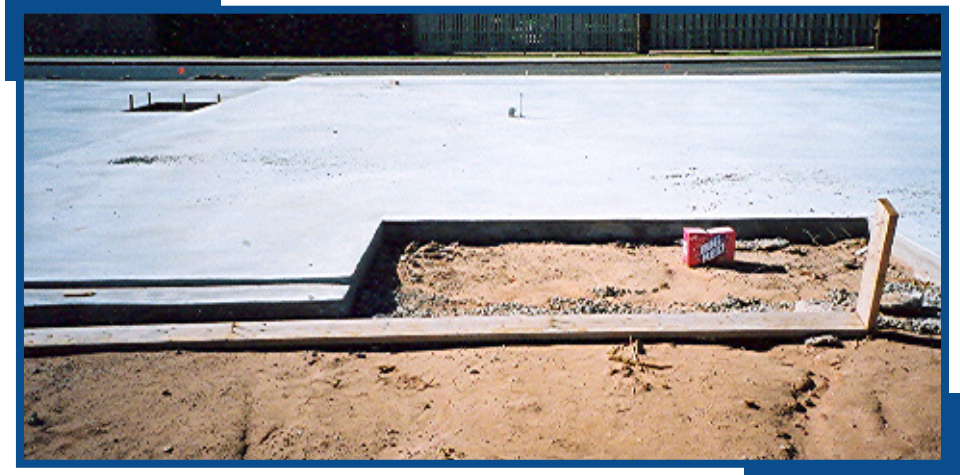
Details of an alternative ramp, which starts from the top of the step and slopes to the lower finished floor.

This ramp started at the top of the step and slopes at a 1":12" slope to the lower finished floor.



### Recessed Corridors

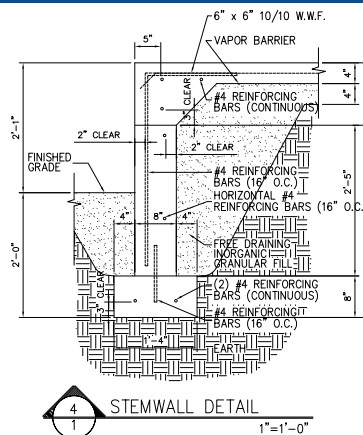
If the building has a recessed corridor, the foundation must be poured at a slope. Typically, the sloped area is poured after the slab is completed.



This photo shows a ramp in the foundation that is sloped back 5' for a recessed entryway. It will have an exterior swing door to access the interior corridor.

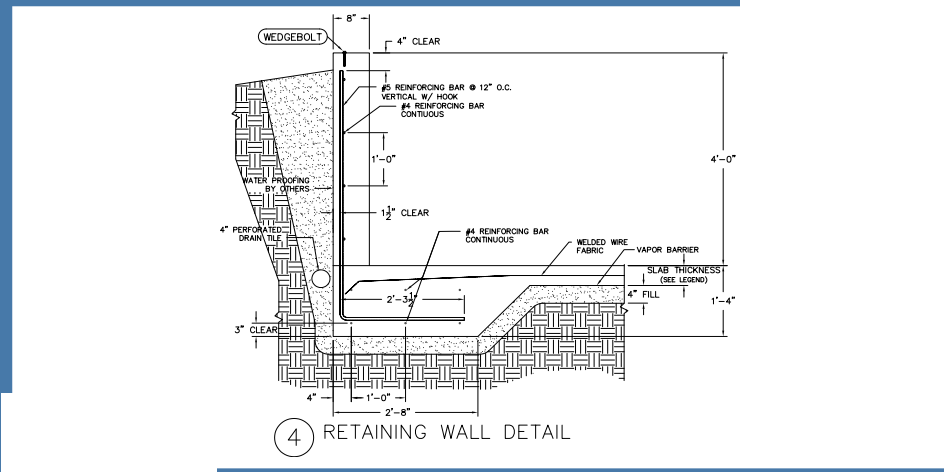
### Stemwall Details

If the land elevation is lower than the foundation elevation, the building may require a stemwall to hold up the foundation. The height of the stemwall will be the difference between the land grade and foundation grade plus the frost depth.



# Foundation Details

A finished stemwall.



## Retaining Wall Details

If building into a hill, a retaining wall is needed to hold back the earth. It is highly recommended to have a soil report to minimize the retaining wall specifications.

A photo of a building built into a hill with a retaining wall.



The retaining wall can also step with the foundation to conform to the slope of the land.



An inside view of the retaining wall.

### Foundations Poured on a 1% Grade

Foundations may also be poured on a slope of up to 1%. This building is 150' long and the right side is 1'6" higher than the left. This option can eliminate steps, but you must hire a very competent concrete contractor to ensure success of the project.



video at [trachte.com](http://trachte.com)

Look at our video *Erecting Your Building On A 1 Percent Slope.*

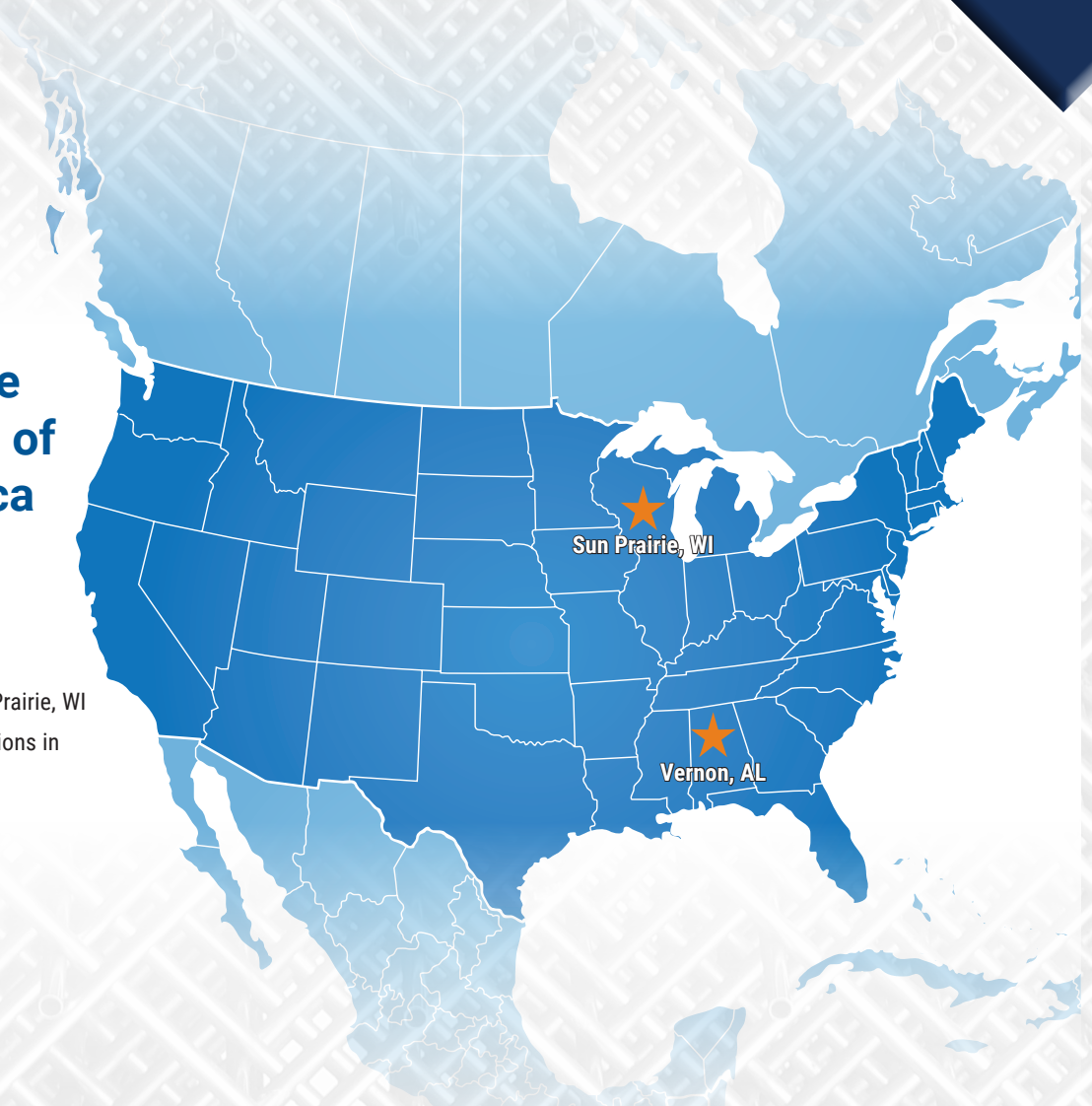




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