

Want to Build a High Performance Root Vegetable Warehouse?



Think with Logix.



**LOGIX**<sup>®</sup>  
INSULATED CONCRETE FORMS

# The smartest growers own ware

## Logix High Performance Root Vegetable Warehouses

In today's world farming is ever-changing and growers operate in a truly challenging era of innovation.

That's why a Logix High Performance Root Vegetable Warehouse is the ideal storage solution for today and tomorrow. Logix warehouses deliver precision performance from Day 1 and they're designed to meet the evolving demands and challenges of the future.

Logix is used to build the full-height exterior and interior warehouse walls. No frost walls are required and the lower four to five feet of the exterior walls are usually backfilled. This eliminates a costly construction step and also helps to withstand the fluid pressure of the warehoused stock.

## Proven performance

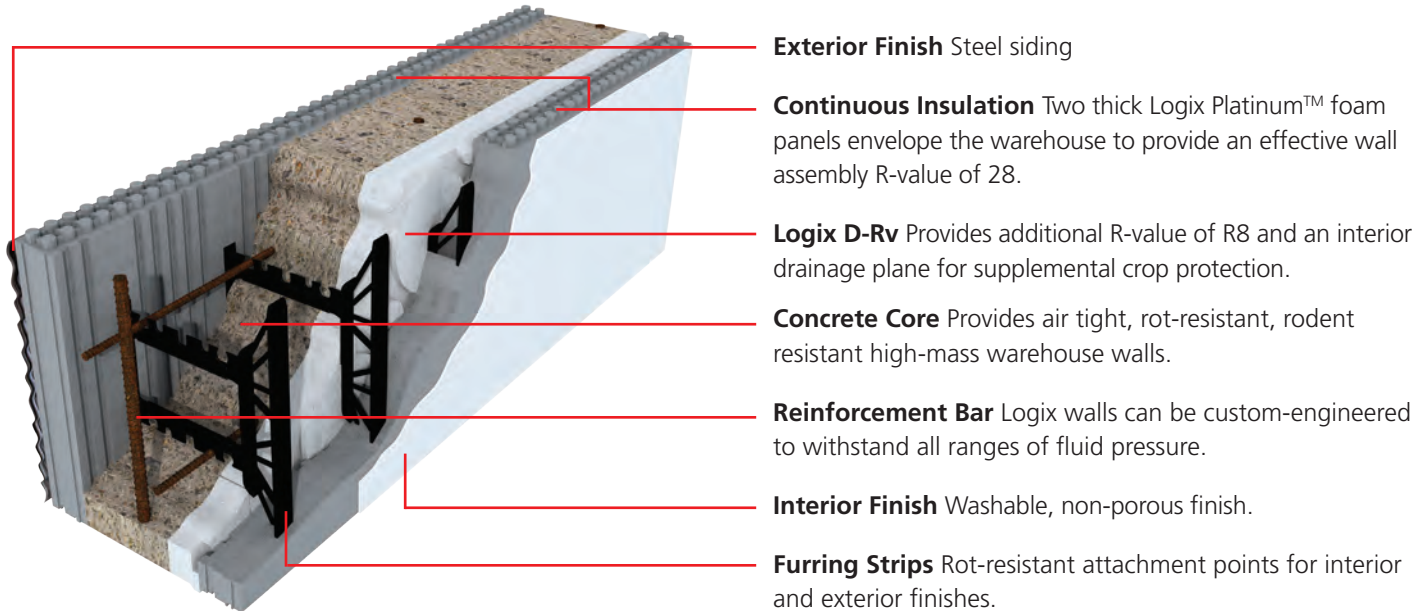
Over the last 15 years hundreds of ICF-built root vegetable warehouses have been constructed. Many growers are so impressed with the first building they are soon constructing another. It's a trend that began in the northeast and is quickly accelerating south and westward.



# houses built with Logix ICF's

Hollow foam blocks filled with concrete. That's the simplicity of North America's ultimate building system for high performance root vegetable warehouses. No other wall system combines climate control and durability like the ICF. **And no other ICF offers the product selection, expertise and support of Logix.**

## Typical Logix wall assembly for root vegetable warehousing.



## Customization Options. Choose Your Foam.

### Logix Pro

Logix Pro Forms are made with two thick panels of Type II EPS foam that do not off-gas and are treated with a fire-retardant.

### Logix Platinum Series™

There's no ICF like Logix Platinum Series. Powered by millions of graphite heat reflectors, Logix's grey/silver-colored Platinum Series delivers an incredible R-Value of R-28. Logix Platinum Series is the world's only Green Guard certified ICF and delivers superior indoor air quality.

### Logix TX Series

Specially treated to protect against termites, even in area known to have very heavy termite concentrations. Available only in the USA (custom orders only).

## Choose Your Concrete Thickness

Concrete cores from 4" to 12" are available for maximum versatility and design flexibility. Even thicker cores are available with the Logix Xtender Clip.



# It pays to Think

The construction cost of a Logix High Performance Root Vegetable Warehouse will likely be a bit higher (approximately 10–15%)

## Less shrinkage and loss...and higher revenues

A Logix High Performance Root Vegetable Warehouse is far more airtight than a wood-frame structure and offers you more precise day-to-day control over the indoor warehouse atmosphere as you move from season to season. The result – less crop loss due to accidental deterioration.

Logix concrete walls also provide an impenetrable barrier to rodents and this again helps to reduce crop loss.

As crop shrinkage and losses get reduced, sales and revenues increase.

## For potato growers, more color control for your chip processor customers

Super-insulated high-mass Logix walls provide superior thermal performance and more consistent temperatures throughout the entire storage area. More consistent temperatures means a more consistent stock color – and, particularly in the chip market, this makes you a very reliable and valuable potato supplier to your processor customers.

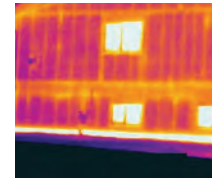
## Profit from refrigeration

The refrigerated storage market offers higher prices and attractive margins.

Whether you want refrigeration now or may want it down the road – in the words of one of our grower-customers, “A Logix High Performance Warehouse is a “no-brainer”.

We’ve been told time and time again by growers that our double insulated Logix walls are an ideal solution for refrigerated warehouses. The continuous insulation, air tightness and thermal mass of a Logix wall all combine to provide superior thermal performance and reduce the elevated risk of condensation and rot that is prevalent in a refrigerated warehouse.

Thermal image of a conventionally built building



Thermal image of a Logix XtraComfort building



Each and every year you will save substantially on the costs of refrigeration.



# with Logix.

than a regular wood-frame building. Your payback on this investment will be substantial, immediate and long-term.

## Lower repair expenses

When the challenge is to maintain a 95 – 97% interior humidity level in the cold winter months, a moisture and rot-resistant concrete structure will drive down your annual maintenance and repairs. You'll save a lot of time and money on repairs – year in and year out.

## Longer service life

A reinforced concrete structure will likely provide you with many additional years of service. How much would this be worth to you and your next generation of growers?

## And for your builder – an easier and safer build

Free-standing wood frame walls that are not yet laterally supported by trusses can give a construction crew pause — especially when they are 200 feet long, 20 feet high and in a windy field!

Logix walls, with their steel reinforced concrete core, are more secure and easier to work upon, especially at this stage of construction.



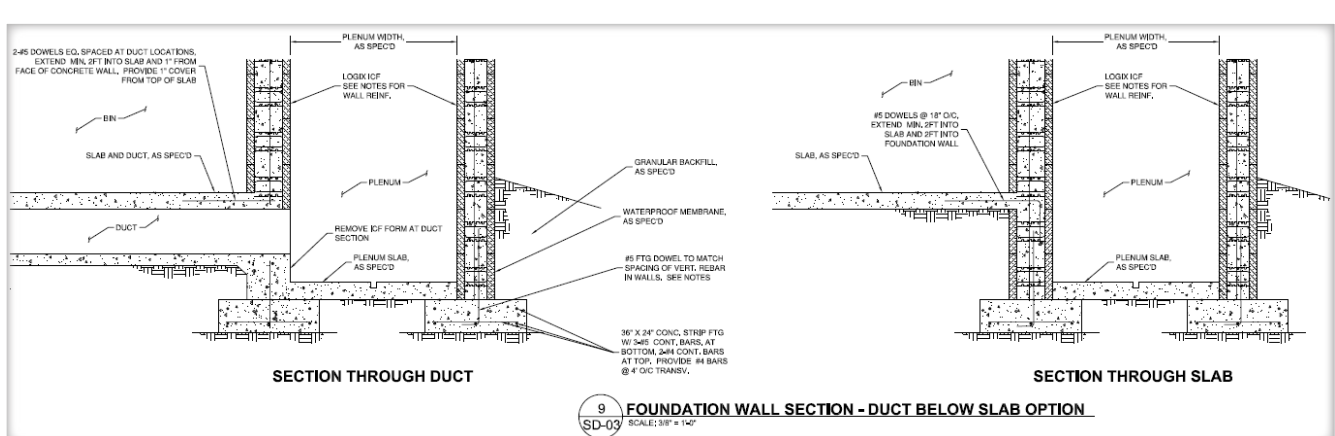
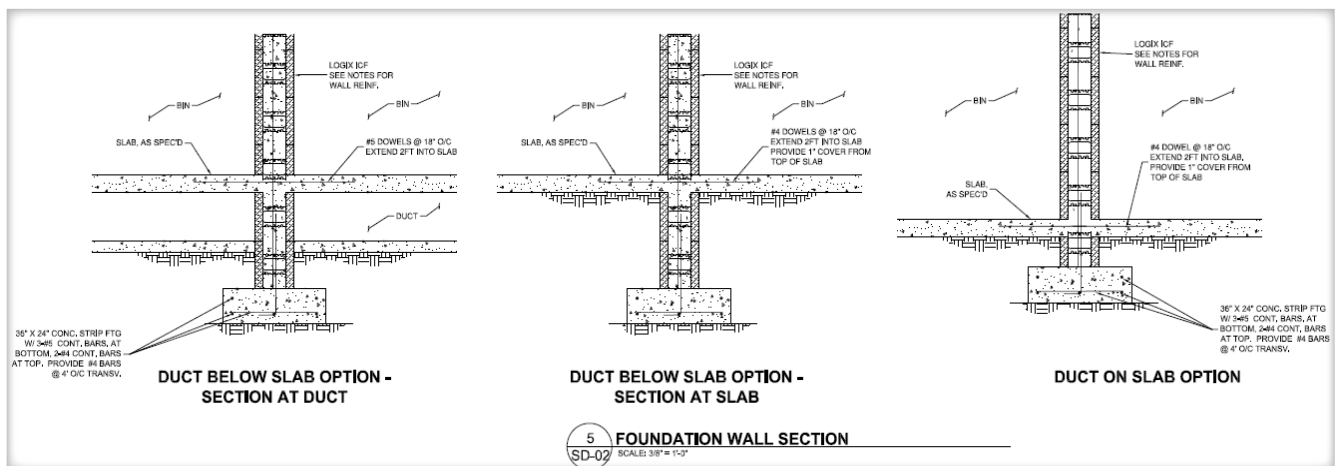
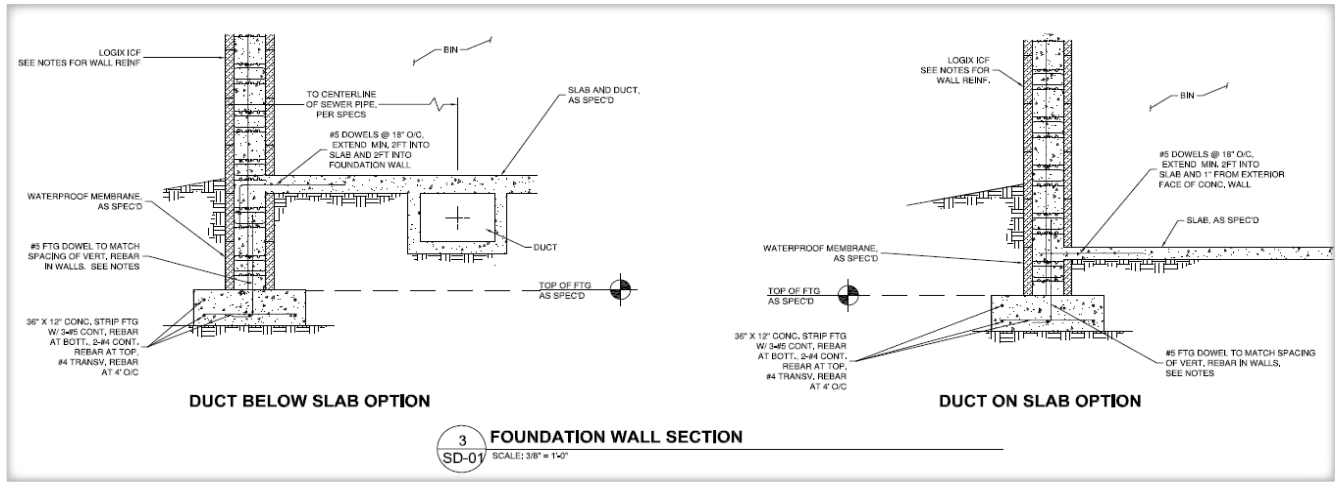
## A superior return on investment

DISADVANTAGES OF WOOD FRAME WAREHOUSES	DISADVANTAGES OF QUONSET HUT WAREHOUSES
X Requires additional insulation layers	X Additional spray foam insulation required
X Additional air and vapor barriers required	X Susceptible to heat gains
X Less air tight	X Less air tight
X Less thermal mass	X Less thermal mass
X Can promote mold growth	X Less storage volume per square foot of footprint
X Susceptible to rot	X Must be weatherproofed and sealed



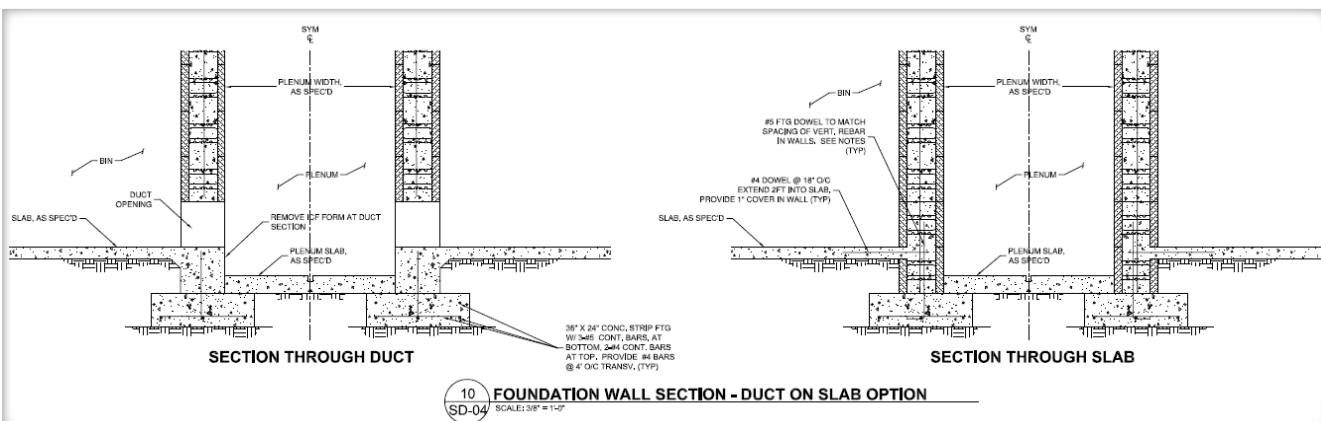
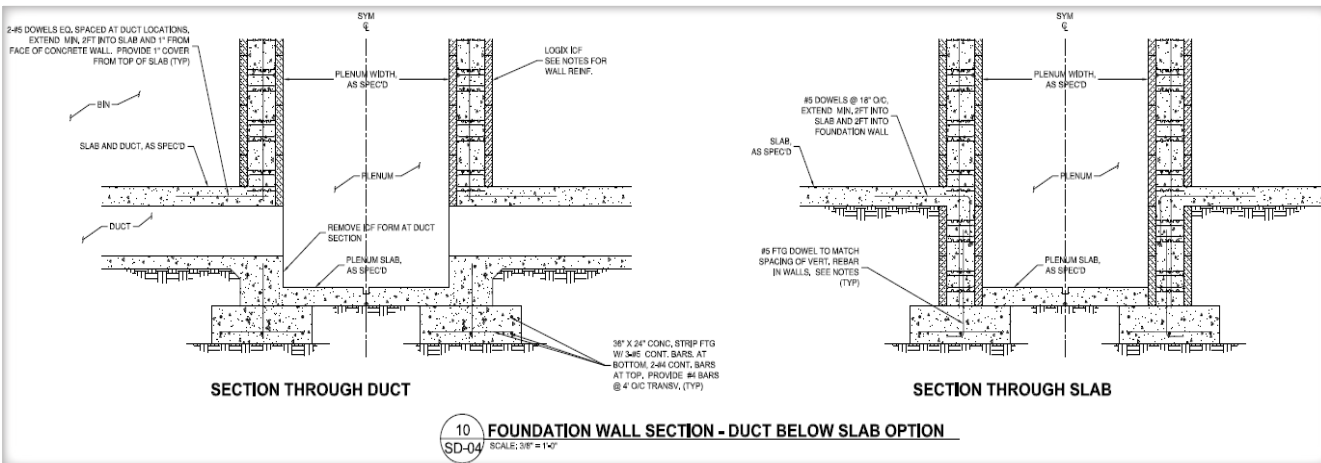
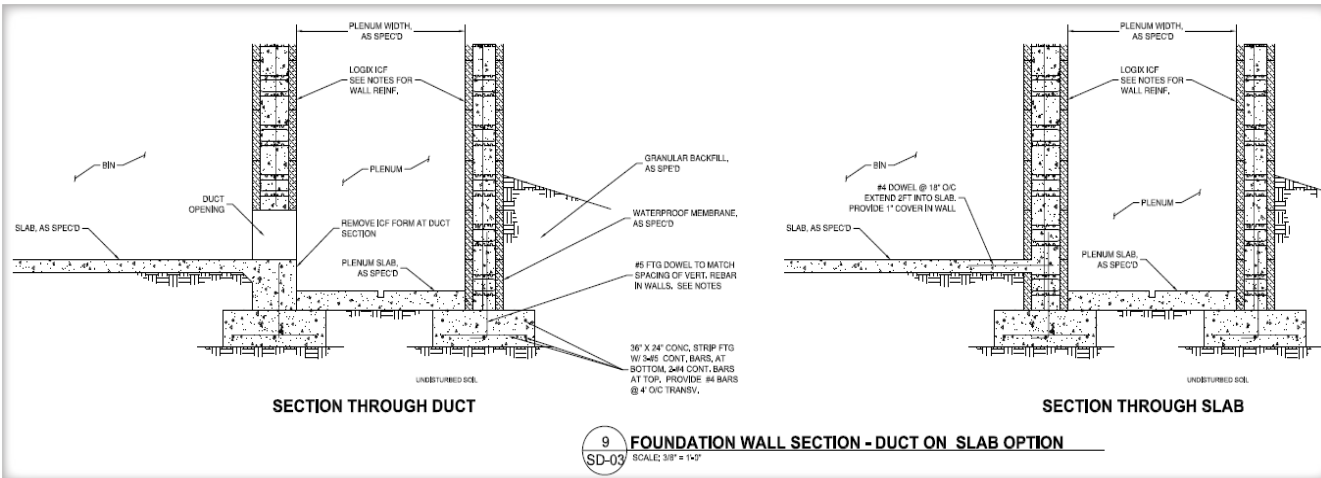


# Sample Foudation

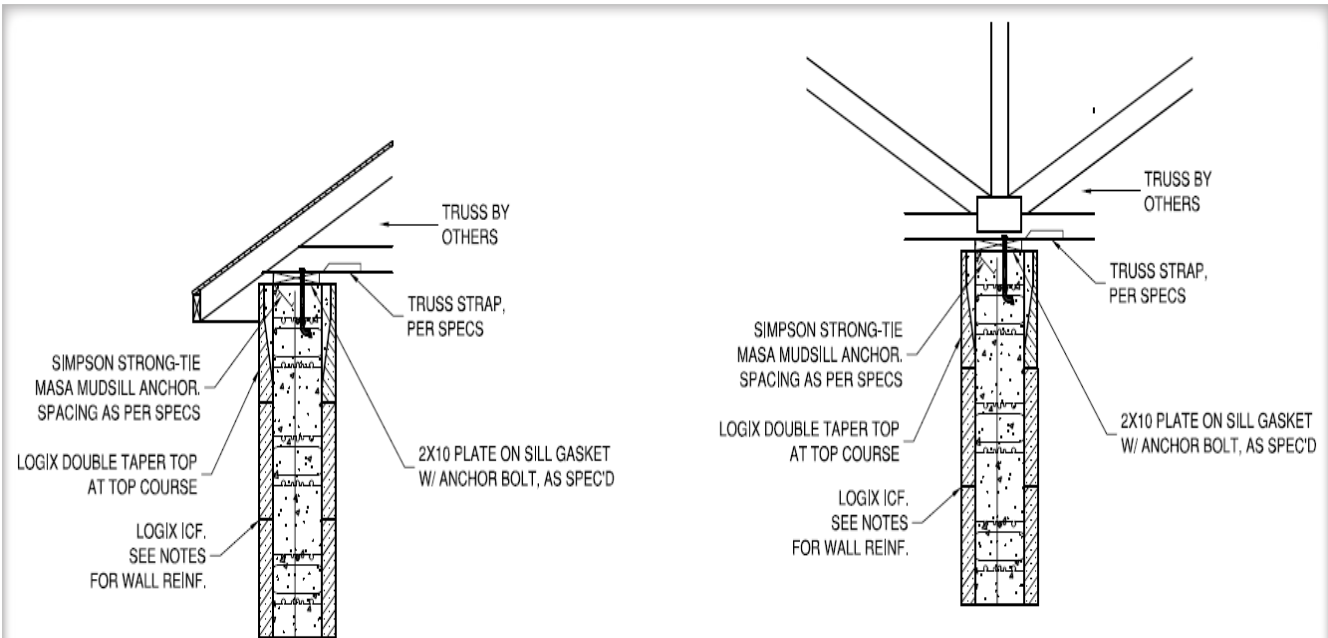




# Details

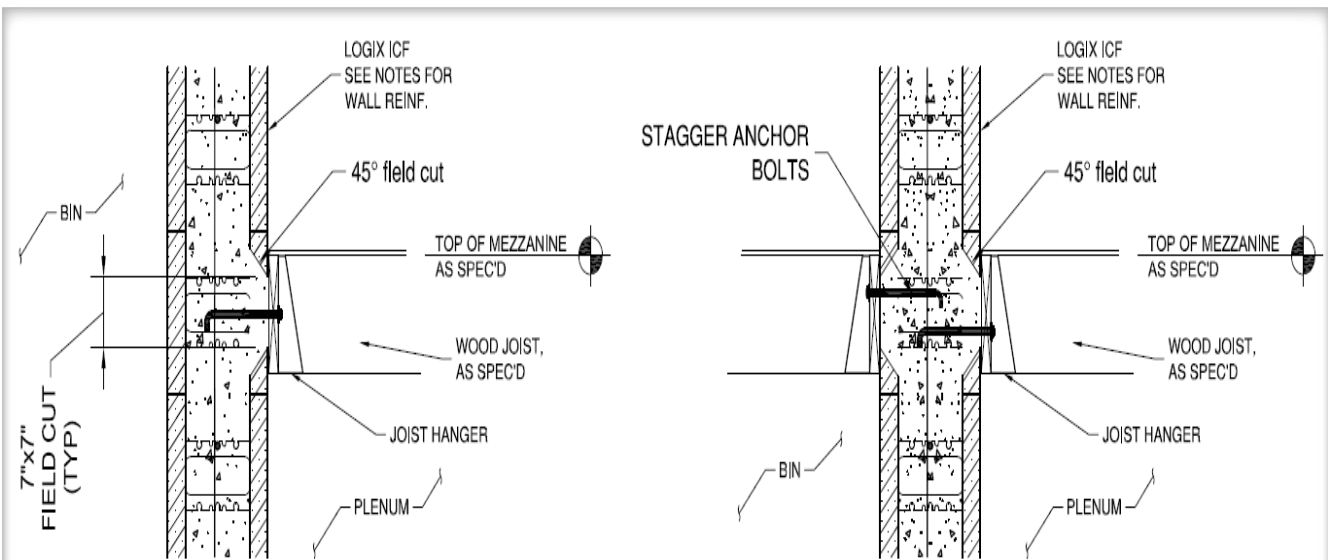


# Sample Roof, Mezzanine



**12** **ROOF DETAIL AT EXERIOR WALLS**  
SD-06 SCALE: 3/8" = 1'-0"

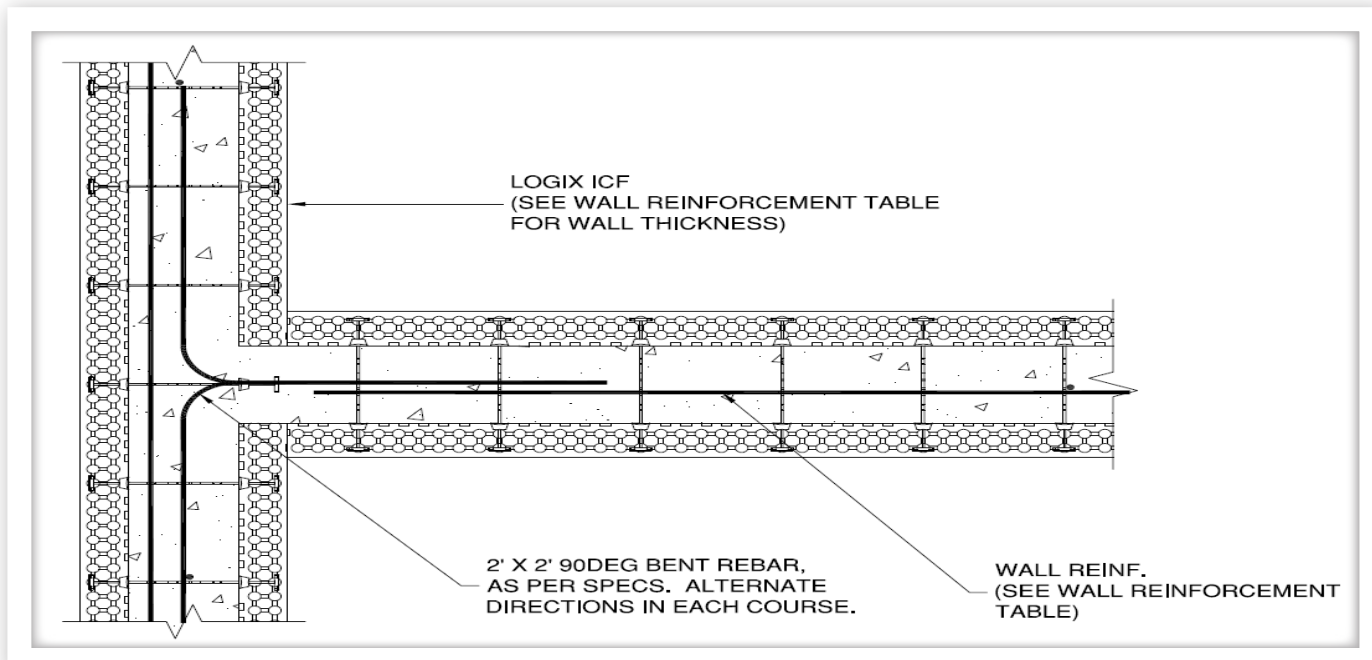
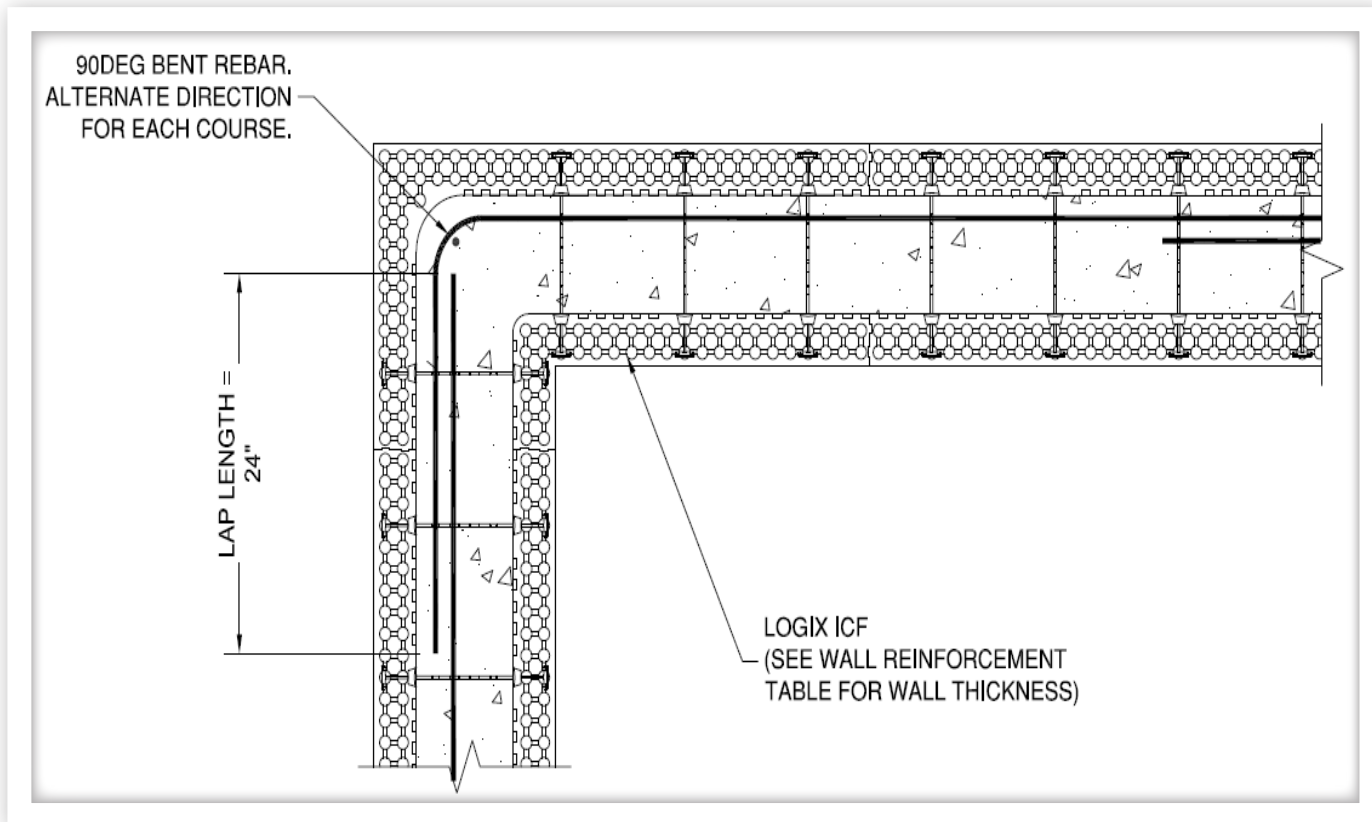
**13** **ROOF DETAIL AT INTERIOR WALLS**  
SD-06 SCALE: 3/8" = 1'-0"



**14** **MEZZANINE LEVEL AT ICF (see Notes)**  
SD-06 SCALE: 1/2" = 1'-0"

**15** **MEZZANINE LEVEL AT ICF (see Notes)**  
SD-06 SCALE: 1/2" = 1'-0"

# & Junction Details



## LOGIX Engineering

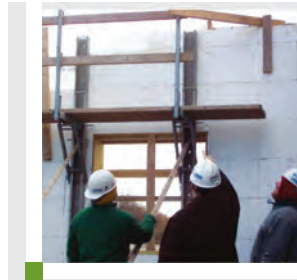
Engineering is available for the LOGIX wall reinforcement with varying wall heights and loading conditions. For more information please contact your local LOGIX representative, or email [info@logixicf.com](mailto:info@logixicf.com)

# Industry-leading products. Industry-leading support.

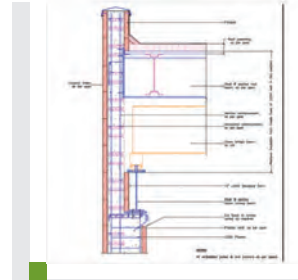
Logix's unique product offering goes beyond unsurpassed performance. We also offer a level of ICF service and support unmatched in North America. We are with you, your builder and your designer every step of the way, providing timely expertise and solutions. Our talented nation-wide technical support team features a line-up of jobsite-seasoned technical representatives, a LEED AP and a CDT certified professional engineer.



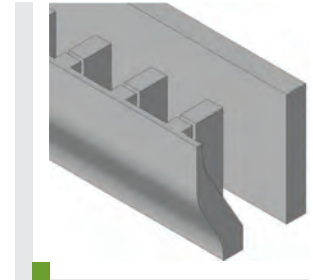
Locally deployed technical support staff



Installer training courses



Details and design guidelines



BIM 3D Object Library



Estimating and costing software



Manuals, DVD's and research whitepapers



Over 400 local stocking distributors and multiple manufacturing facilities across North America



Regular & highwall bracing solutions

## Upgrade to a Logix High Performance Warehouse

### Still in the thinking & planning stage?

For more information, please visit our Pro Site, [www.logixicf.com](http://www.logixicf.com).

Please contact your local Logix distributor or Territory Manager to discuss any questions you may have, they can also put you in touch with designers and builders that are experienced with Logix

All Logix distributors and Territory Managers are listed in the Find A Distributor section of [logixicf.com](http://logixicf.com).

### Already have a designer?

Logix offers full support to architects and engineers when they first work with us.

### Already have a builder?

Assistance and support is offered to all builders when they first work with Logix.

If your builder is experienced with another ICF, then working with Logix should be a natural transition. Building with Logix is similar to other ICF systems, especially as Logix is compatible with the bracing and fastening used with other ICF's.

