

Foundations Failures & Successes

EDC 2019

DULUTH, MINNESOTA

In accordance with the Department of Labor and Industry's statute 326.0981, Subd. 11,

“This educational offering is recognized by the Minnesota Department of Labor and Industry as satisfying **1.5 hours** of credit toward **Building Officials and Residential Contractors code /1 hour energy** continuing education requirements.”

For additional continuing education approvals, please see your credit tracking card.

“Foundation”

Lowest load bearing part of a building

Base

Core

Starting point

Heart

Foundation – Basement.....

Strong

Dry – managed moisture

Healthy

Comfortable

Energy Efficient

Needed!

Basements

Extra living space

Storage for STUFF – down, up, down, up and on and on.....

Mechanicals

Appliances

Storm and personal safety

Foundations

Concrete block

Poured concrete

All Weather Wood

Panelized concrete

Shallow Frost Free Foundation

ICF – Insulated Concrete Forms



Location, Location, Location!



New home, many adjustments and more work

Remodel, more “Knowns”
AND “Unknowns”

Risk management –flood zones?



Moisture and Area Specific Issues

Backfill materials – Price?

Water table

Floods, Drought, Neighbors

Insulation methods many times do not truly consider moisture

Soils – Testing?









PLEASE HELP TO ME!



What Are Foundations Supposed To Do?

Hold up the house.

Hold down the house.

Provide space for living, storage, and safety.

Be dry, warm, healthy.....

Durable

Others.....



Considerations

11 courses – Really?

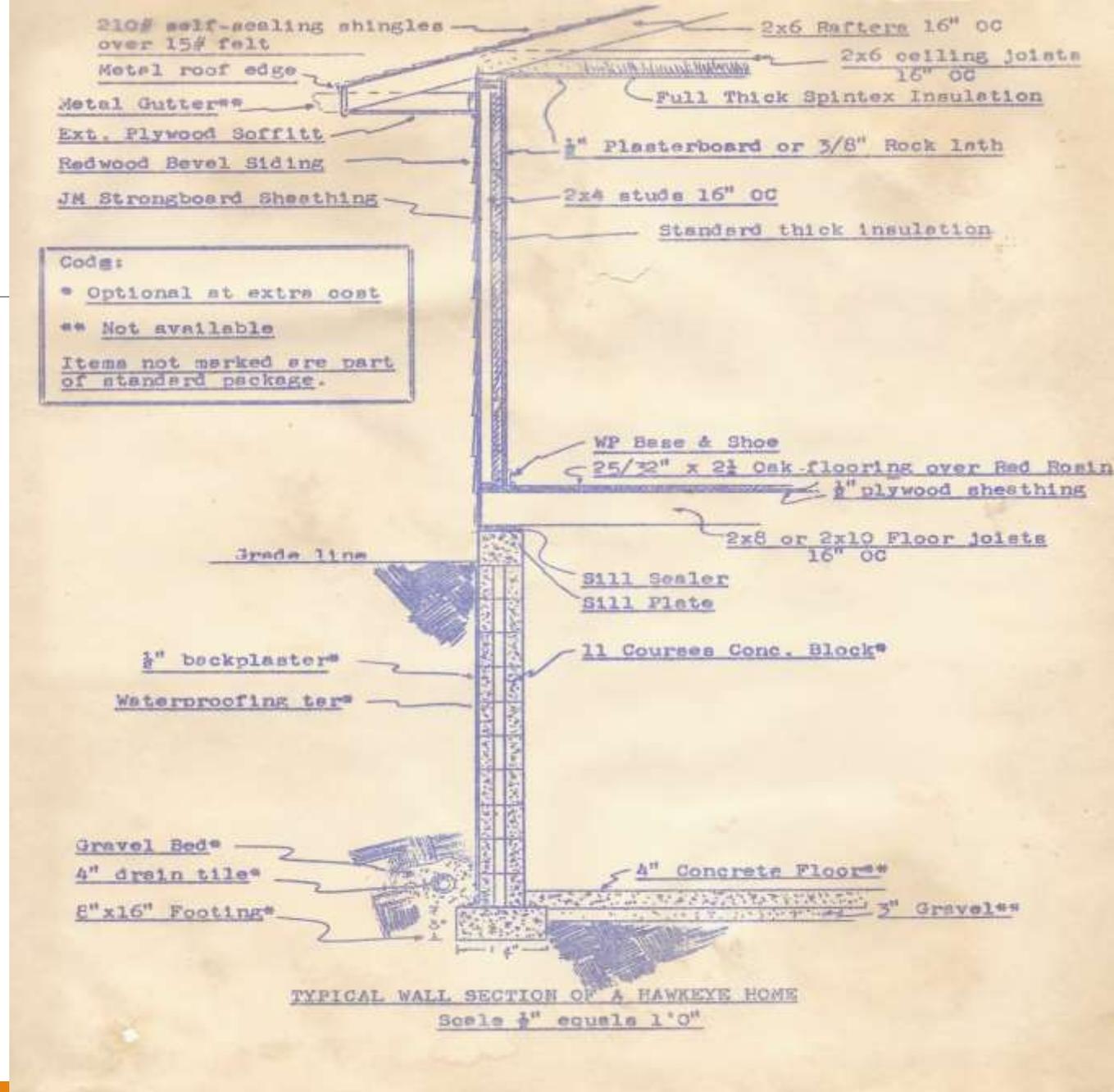
Sump pump....Energy Star?

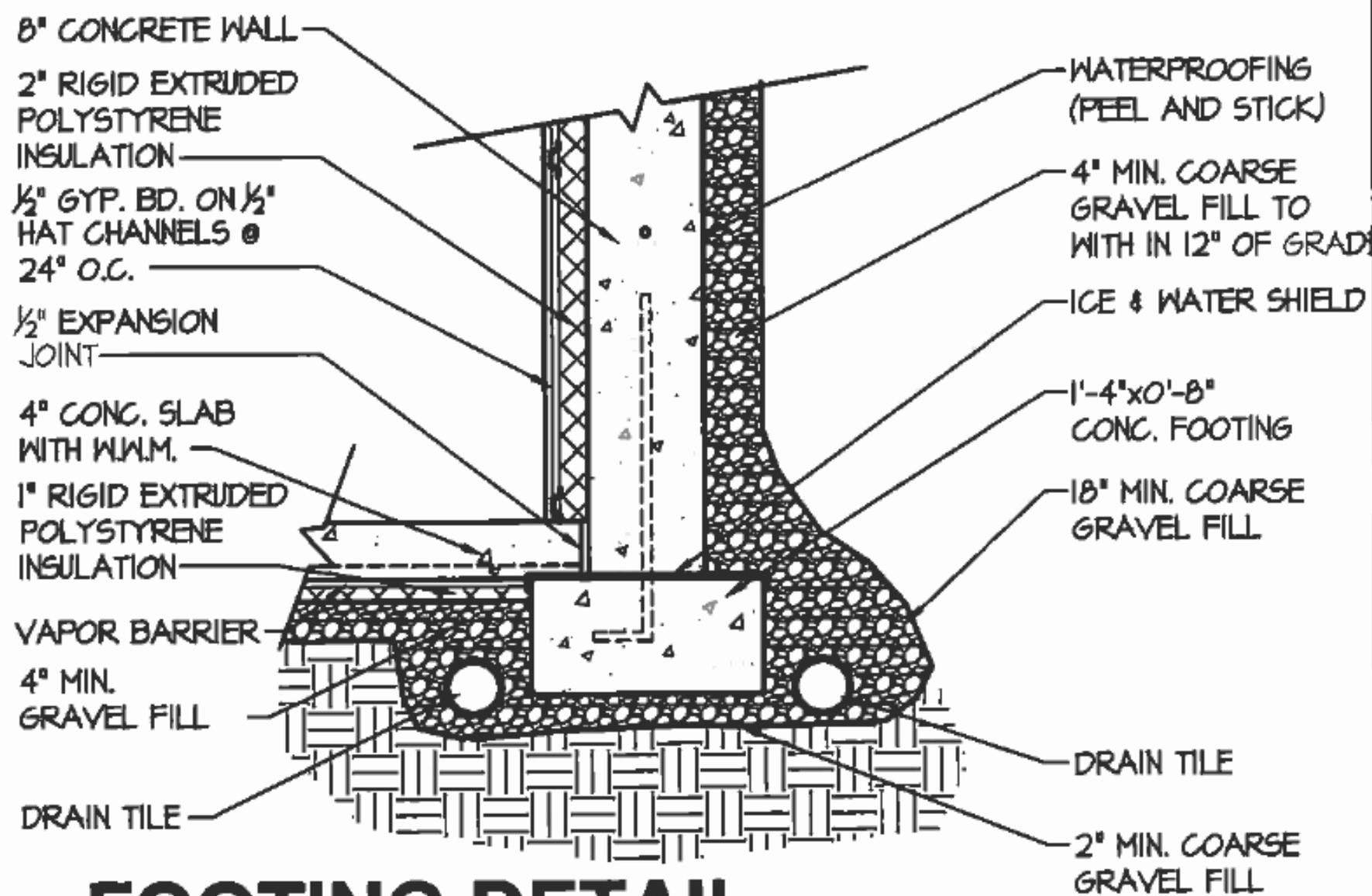
Grade & tile drainage

Radon mitigation system

Correct vapor and moisture control

Mold prevention strategies

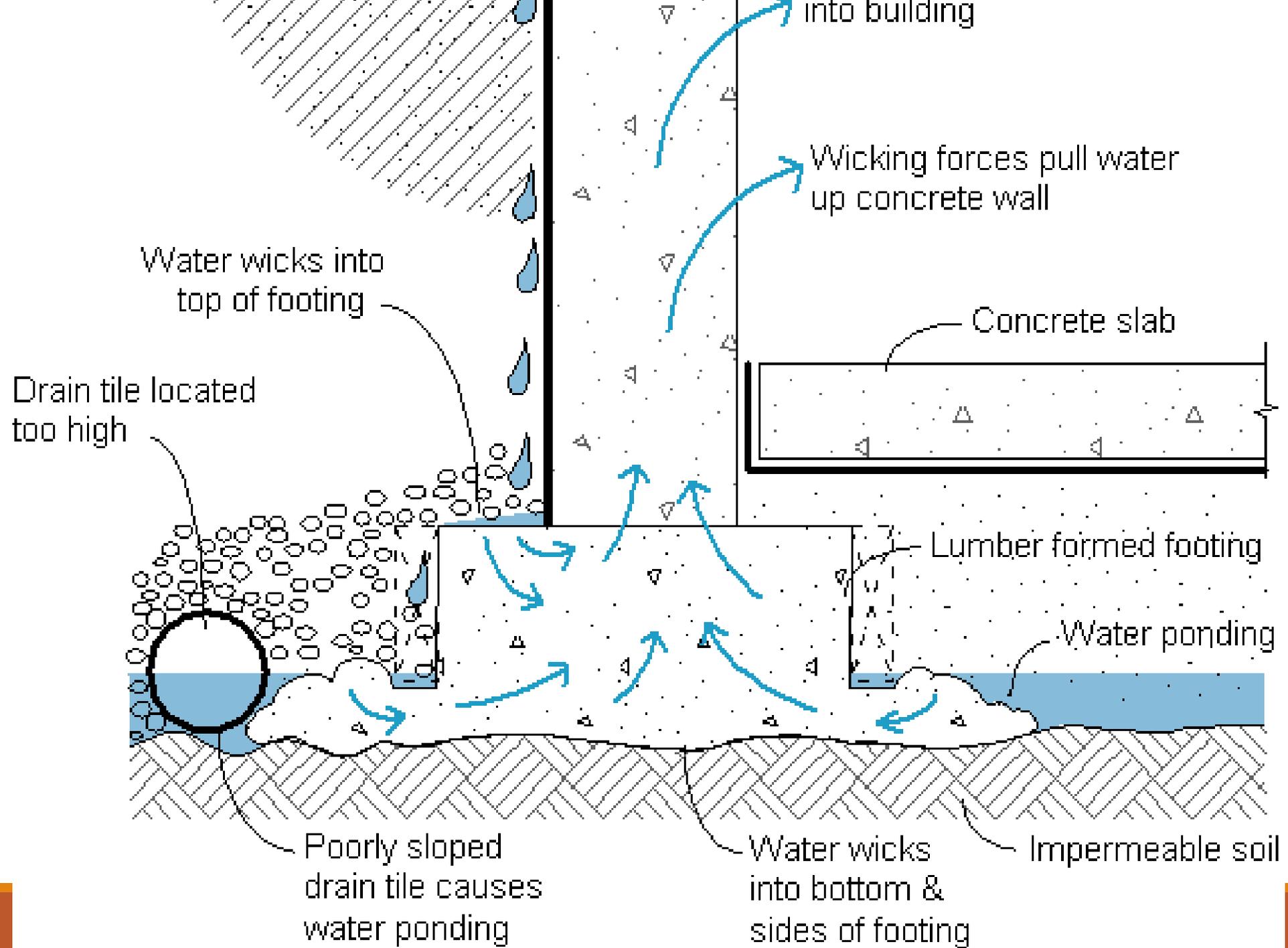




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FOOTING DETAIL

SCALE: 3/4" = 1'-0"

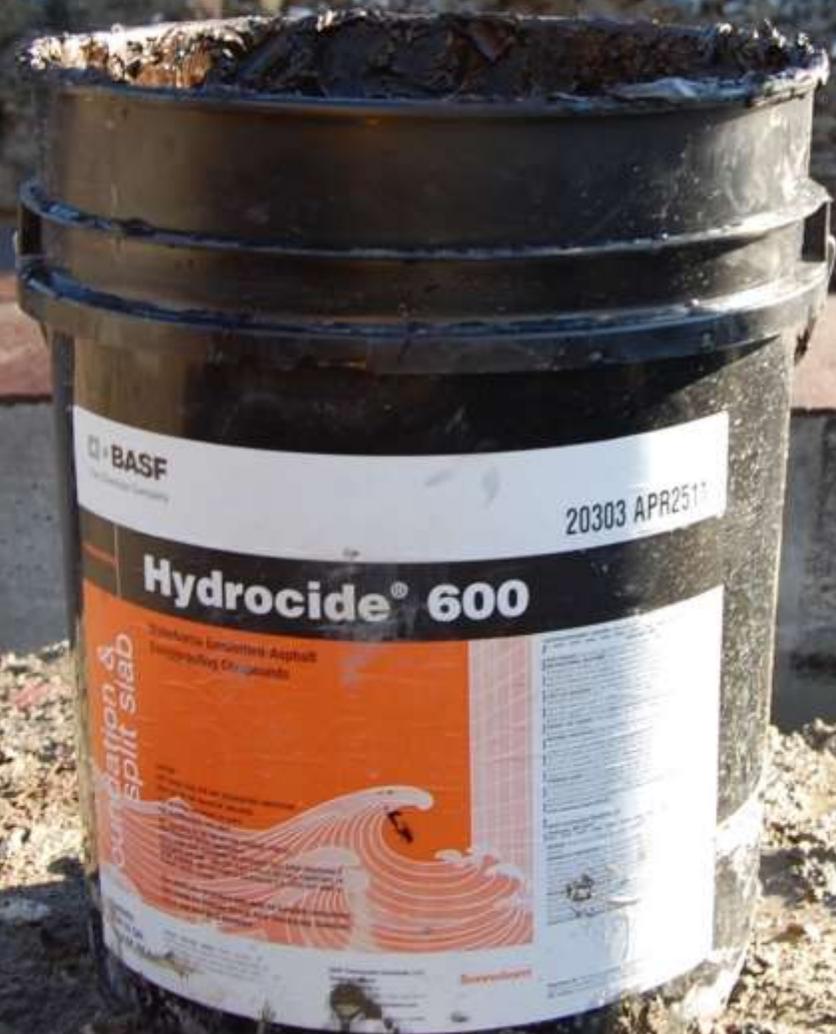












BASF

20303 APR2511

Hydrocide® 600

Sealant for Concrete Asphalt
Waterproofing Cracks

Application &
Installation



Technical specifications and safety information.





















Lief Van
1000-111-1111

















Foundations





OWENS CORNING
FOAMULAR 250

OWENS CORNING
FOAMULAR 250

R-10
2" Thickness
2" de espesor

OWENS CORNING
FOAMULAR 250

R-10
2" Thickness
2" de espesor

OWENS CORNING
FOAMULAR 250

OWENS CORNING
FOAMULAR 250





ASSURED THERMAL PERFORMANCE

R-19 6"

OWENS-CORNING
Fiberglas
Building
Insulation





R-5

1 inch Thickness
1 pulg. de espesor



FOAMULAR® 250

Energy-Saving, Moisture-Resistant XPS Insulation
Aislamiento XPS resistente a la humedad y aislador de energía de ahorro

R-5.0

1 inch Thickness
1 pulg. de espesor

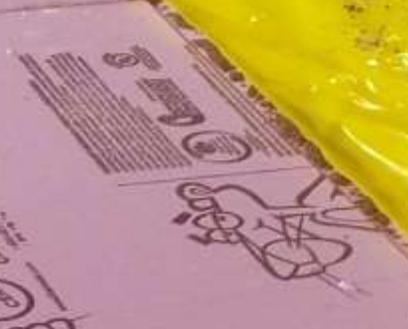
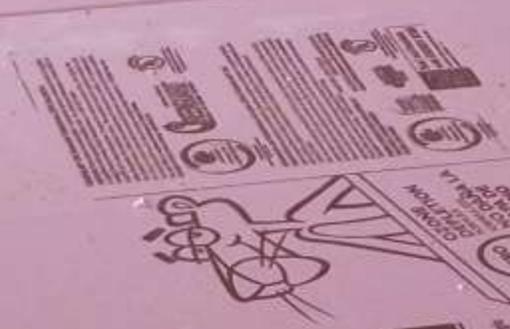
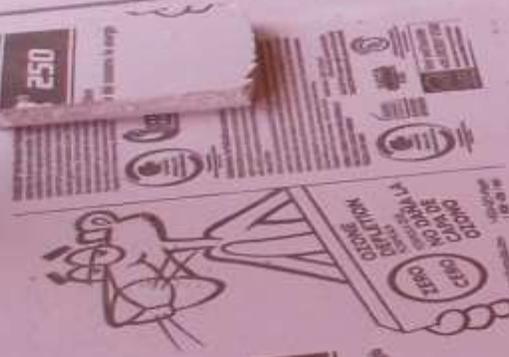
B120602C



FOAMULAR® 250

R-5
1 inch Thickness
1 pulg. de espesor

B120602C



R-5
1 inch Thickness
1 pulg. de espesor

OWENS CORNING
FOAMULAR® 250

R-5.0
1 inch Thickness
1 pulg. de espesor

B120602C



FOAMULAR® 250

R-5
1 inch Thickness
1 pulg. de espesor



FOAMULAR® 250

R-5
1 inch Thickness
1 pulg. de espesor

B120602C





3" X 11 Gauge
Adjustable Column
8'3"-8'7"

COMPLIES WITH ALL CURRENT
FHA/HUD SPECIFICATIONS
Reference ICC-ES Legacy Report 21-28

ALLOWABLE LOAD
13000#

Conforms to ASTM A-513
and all corrosion treatment specifications.
Column should be immobilized after final adjustment
using screw thread or encasement in concrete.

Manufactured by
GrowCo, Inc.
Mansfield, OH 44904 USA

Part # CT3837S

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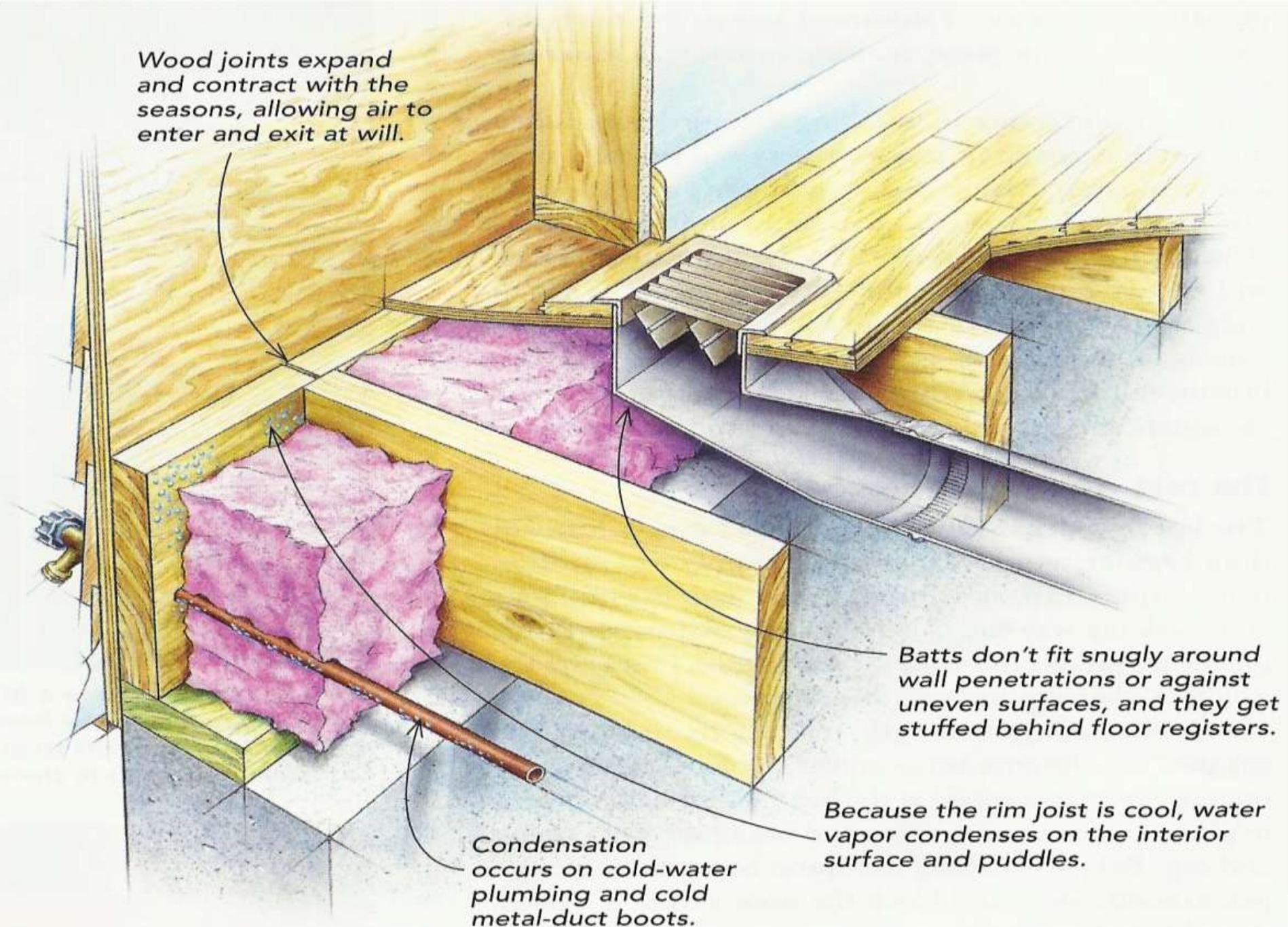








Wood joints expand and contract with the seasons, allowing air to enter and exit at will.



Batts don't fit snugly around wall penetrations or against uneven surfaces, and they get stuffed behind floor registers.

Because the rim joist is cool, water vapor condenses on the interior surface and puddles.

Condensation occurs on cold-water plumbing and cold metal-duct boots.





BE CAREFUL TO FLOW THE HIGHER



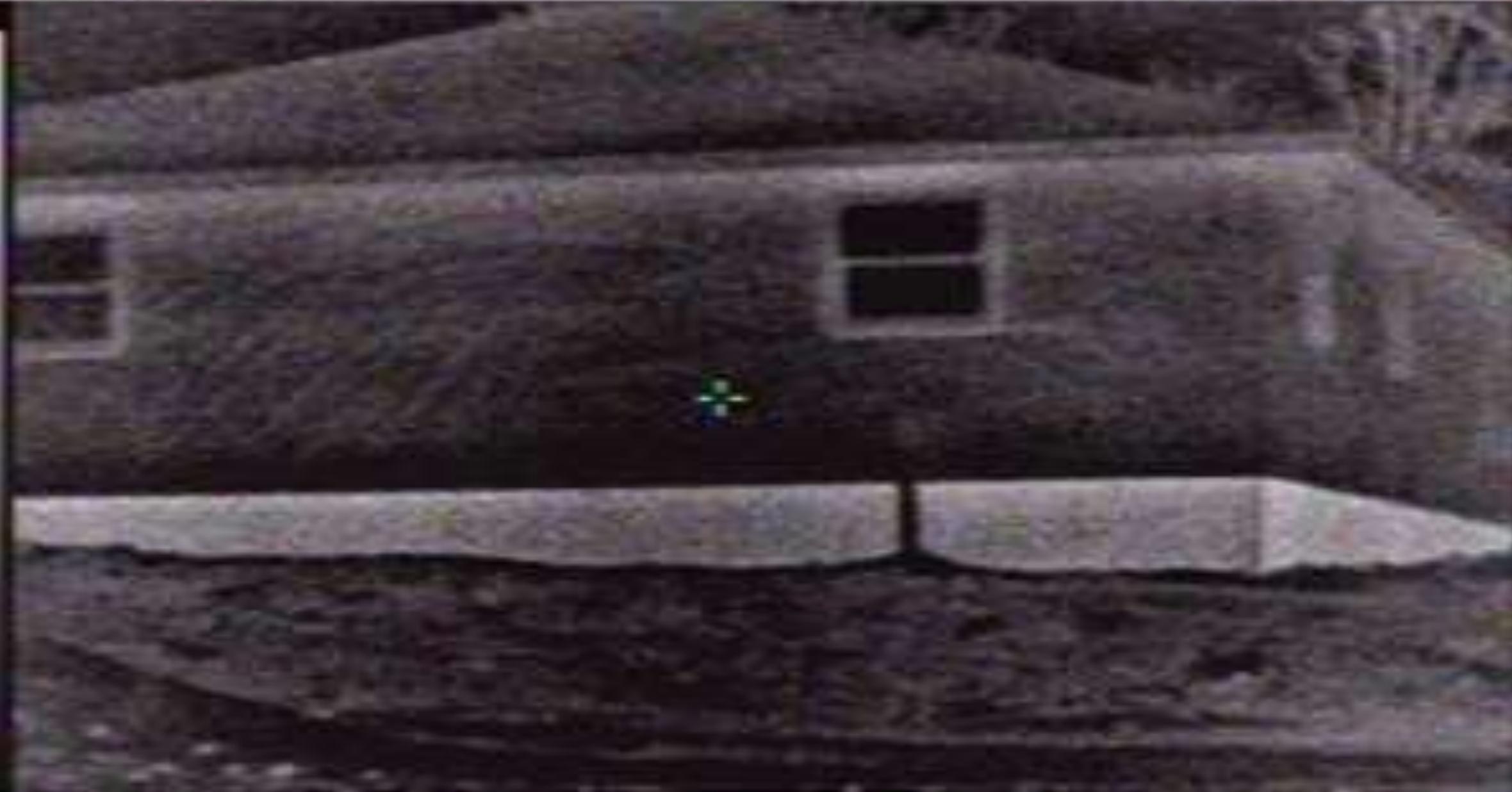
A construction site showing a concrete slab on a wooden formwork, with a blue drainage channel in the foreground and OSB walls in the background. The concrete slab is a uniform grey color and is supported by a wooden frame. The walls are made of oriented strand board (OSB) panels. In the foreground, there is a blue drainage channel with a black cap. The floor is covered with gravel and dirt. The text "What's The Problem?" is overlaid on the image.

What's The Problem?



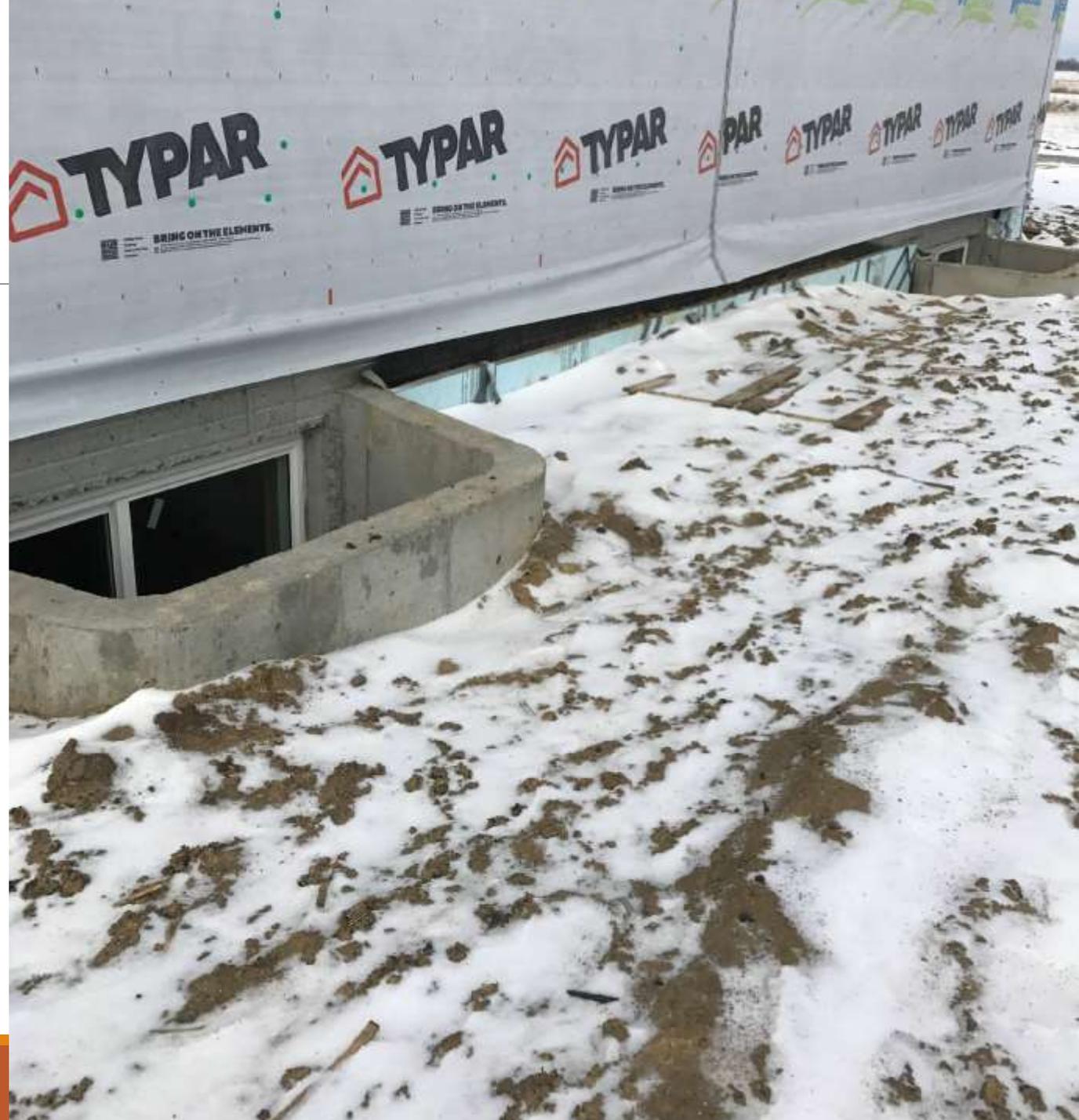
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RNG:01 MAP:64 02/04/03 18:24







What's The Problem?







Lessons Learned

Soil and load issues

Water and moisture management

Affordable

Healthy

Safe

QUESTIONS?
