

SPECIFIERS

BUILDING
OFFICIALS

DEVELOPERS

BUILDERS

BUILDING
OWNERS

"LEGALETT's Frost Protected Shallow Foundation (FPSF) eliminated any unknowns regarding the foundation design and offered many innovative engineering solutions for point loads and low soil bearing values which ultimately saved time and money on their project. I found the technical service and support good and would specify LEGALETT again on future projects." Jenina Hristova, Designer with Masters of Architecture, Design and Function.

"After having been involved with my first LEGALETT installation, it is clear to me that frost walls and crawl space foundations will be a thing of the past. The LEGALETT system provides a lower cost, more practical solution and it is just a matter of time before more Contractors and Designers recognize this." Gary Sharp is a professional Engineer and is a R2000 Co-ordinator for CHBA.

Rick Caldwell, Project Manager of a 28 home subdivision at Akwesasne, had this to say about LEGALETT. "We discovered too late that the soil at this site would only support 300 lbs/sq.ft. and had it not been for this type of engineering, these homes would not have been built. We had different workers on the site every day including students from the local trade school and it still worked out great. There was a short learning curve and the design was foolproof. Every one of our slabs came out perfect."

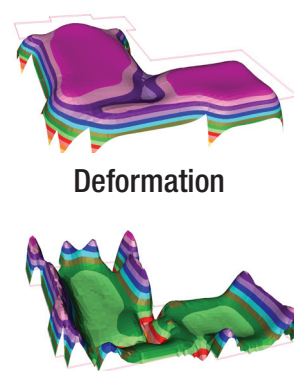
"Our 7 man crew can turn a 6-plex from breaking ground to handing the keys over to the new homeowner in 8-10 weeks," says Tom Kerr of Tom Kerr Heating and Air Conditioning "and since we get paid when they move in, time is everything."

We built our 6,400 sq.ft. church and community centre in 2002. The chapel walls are 28' high and the community room walls are 16' high. The rooms are always comfortable with nine heating zones used to effectively control the temperature in a wide variety of heat loadings, varying from practically no windows to walls made almost entirely of glazing.

The simplicity and cost savings of the LEGALETT foundation system provided a robust slab design eliminating the normally complicated foundation design of a multitude of interior and exterior strip footings and frost walls. LEGALETT's 8" slab throughout (without frost walls) easily supported the bearing walls and point loads in this structure. LEGALETT was even used for a small suspended slab over the basement entrance.

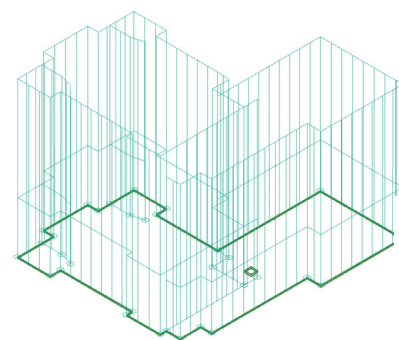
The floor heating system performed well over the past four years and in 2006 the quantity of gas used to heat this building was only \$1,600." Jan Wintjes

"We do this and much more for every project"

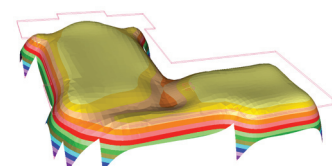


Deformation

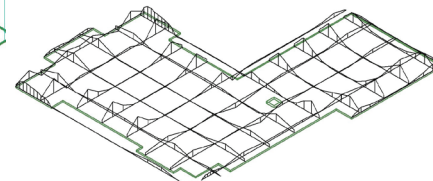
Moments



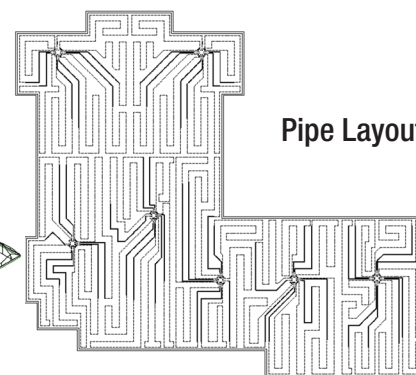
Line Loads



Soil Bearing Pressure



Wire Frame Moments



Pipe Layout

www.legalett.com
email: sales@legalett.ca
1-866-299-7567

LEGALETT®

Providing "Frost Protected Shallow Foundations" with "Warm Air Radiant Heating"



STEP UP!



Designed For Comfort, Engineered For Simplicity

Nine Easy Steps



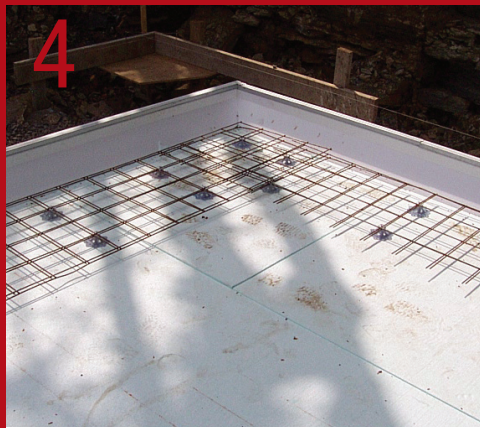
Remove Organics



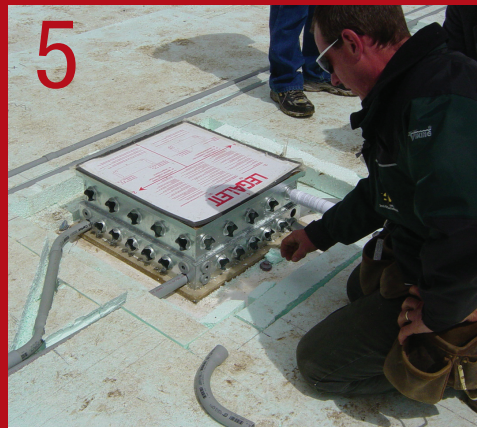
Place and Level Stone



Install EPS Form Work



Install Perimeter Reinforcement



Position Heater Box



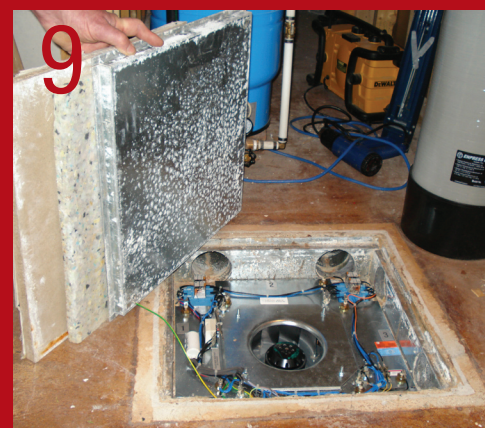
Install Heating System



Install Final Reinforcement



Place and Finish Concrete



Install Permanent Heater

Trained Installers perform pre-pour inspections to ensure that the installation conforms with the engineered design and a post start-up inspection is done to confirm that controls are installed correctly and the heating system is operational.

Designed For Comfort, Engineered For Simplicity



Floor Coverings

Any type of floor covering can be used with Legalett

Unlike hydronic systems that can “shock” the slab with high temperature water causing wood floors to warp or crack, the Legalett system gently maintains a consistent slab temperature of 23 to 24°C (75 - 78°F), so even 1/2” engineered hardwood flooring can be used without issue.



“Worry Free” Controls

One thermostat per 400 sq.ft. or less

Our system comes with programmable thermostats to store off-peak energy in the slab for areas that offer tiered energy rates.

Specifications

Precision cut TYPE 2 EPS meets ASTM C578-06 and CAN/ULC-S701-05. This makes for a fast installation with less than 1% waste, (all recyclable) making Legalett a “LEED” compatible construction alternative. 6” of EPS over 4”- 6” of 3/4” clear stone provides a moisture break from ground water and 5” - 8” of concrete provides a seal against radon.

Engineered Solutions for:

- Point loads of up to 100,000 lbs within the thickness of the slab (eliminating the additional excavation, formwork and concrete normally required) (LEED)
- Low bearing capacity soils or landfill
- Expansive soils (using our below grade water shield design)
- Permafrost
- Seismic control
- Vibration or sound control foundation requirements (often required when building near railway lines)

Design Advantages

- Legalett’s low/no maintenance heating system will provide years of comfortable radiant heat and is designed to work with “Off Peak” energy billing
- No intrusion into high water tables or undermining the roots of mature trees (LEED)
- Prevention of Radon Gas and moisture migration into the building through the foundation (LEED)
- Cisterns for rain water or fresh water can be placed below the Frost Protected Shallow Foundations (FPSF) (LEED)

Legalett achieves all this by designing a Frost Protected Shallow Foundation (FPSF) that behaves structurally as a two-way raft foundation resting on soil that is modeled as an infinite set of springs. The slab provides the foundation structure for the building at a much reduced soil bearing pressure compared to conventional footings, allowing opportunities for building on low-lying areas and poor quality soils.