

city

Underground church energy efficient

By BECKY SWANSON

Battalion Reporter
Peace Lutheran Church is going underground, but the members are not hiding from anyone — they are only trying to escape the high energy bills that plague churches and other large buildings.

In fact, said Rev. Stan Sultemeir, pastor of the congregation that is building its new meeting-place largely underground, the church is in a "prime visible location" — at 1100 FM 2818, in the Southwood Valley.

The congregation, organized by Sultemeir in September 1977, has limited funds, so it must make the best use of its building area and utilities, Sultemeir said.

Rodney Hill, an associate professor of environmental design at Texas A&M University and architect of the building, said, "Nature is the best energy device."

The church's design utilizes several different natural devices that cut energy consumption, the most visible of which is covering three sides of the building with 11 feet of dirt.

The north and west sides of the building are covered with dirt to a height of about 11 feet, and the east side is partially covered.

All entrances to the building are on the south and east sides.

"At six to eight feet underground, you achieve the mean temperature," Hill said, which ranges from the lower to the mid-70s.

The church only has to deal with heating or cooling up or down from that range rather than competing with the outside air temperature.

Several natural devices were employed to maximize air circulation in the building, the first being the principle that warm air rises.

Above the northwest corner of the sanctuary, a glassed-in "wind scoop" is perched, which serves as a chimney to vent warm air when the windows are opened.

Hill said the breeze blowing across the wind scoop creates a suction which "sucks out all the heated air."

Air enters low on the south and east sides through screen doors and exits through the wind scoop and windows high on the north side of the building to cool the area of the church which doubles as a sanctuary and a recreational area.

The classroom, office and nursery areas are cooled by wind currents which enter through the south doors and exit through windows on the upper east wall.

Sultemeir pointed out all windows are high on the walls — most at ceiling level — which light the building during the day.

The trees and shrubs on the site were also considered when the building was planned, Hill said.

"Plants are evaporative coolers," he said. "We located the church so that all the wind has to come through all those trees on the site, and through all the underbrush before it goes through the church. That will help cool any air that is coming through."

"The city park and fire station is south of us, too, so we really don't have to worry about having big mas-

ses of asphalt that the wind will blow over and heat up."

Despite the unique design and construction of the church, Hill said it did not cost any more than a similar above-ground structure, because a "tilt-up" concrete construction was used in which the walls were poured

in sections, then raised and joined together.

The building cost about \$190,000, he said.

"Generally, they (underground buildings) would run a little bit more, but you would get all of that back in a few years just because of the

energy consumption," Hill said.

"One of the nice things about this is that, instead of using a lot of money for energy maintenance for the next years, they'll be able to put that into service rather than into utility companies."

Sultemeir said the church would not be completed when the contractors have finished their work. The patios, sidewalks, cabinets, flooring, and much of the sheetrocking and painting will have to be done by the members.

Hill and his wife Susan, who carved the A&M Centennial wood-carvings which hang in the Memorial Student Center, are carving the baptismal table, crucifix and candlesticks for the church.

"It's going to be fun because there will be some really unusual pieces of furniture," Hill said.

Other than the wood carvings and one stained-glass window, Sultemeir said the church would be a no frills church, and because of space and financial limitations, the sanctuary will double as a recreational area.

"It goes from a sanctuary — I would say within two minutes — to a recreational area," Sultemeir said. "Everything is portable."

The building is about 85 percent complete right now and they hope to be in by the end of January, Sultemeir said. "But we're going to have a Christmas eve service right here (in the sanctuary), even if it's like this."

"We've got that agreed with the contractor."

"We'll get a couple of bales of hay as an altar, and we'll ask people to bring candles and folding chairs. I think we'll probably have a pretty good crowd."




A stain in the glass

Cherie LeBlanc of College Station works on a stained glass window at Walton's stained glass studio. "Stained glass windows, lamps and tree ornaments make wonderful Christmas presents," LeBlanc said. "They're also fun and fairly easy to make."

Battalion photo by Rusty McDonald

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