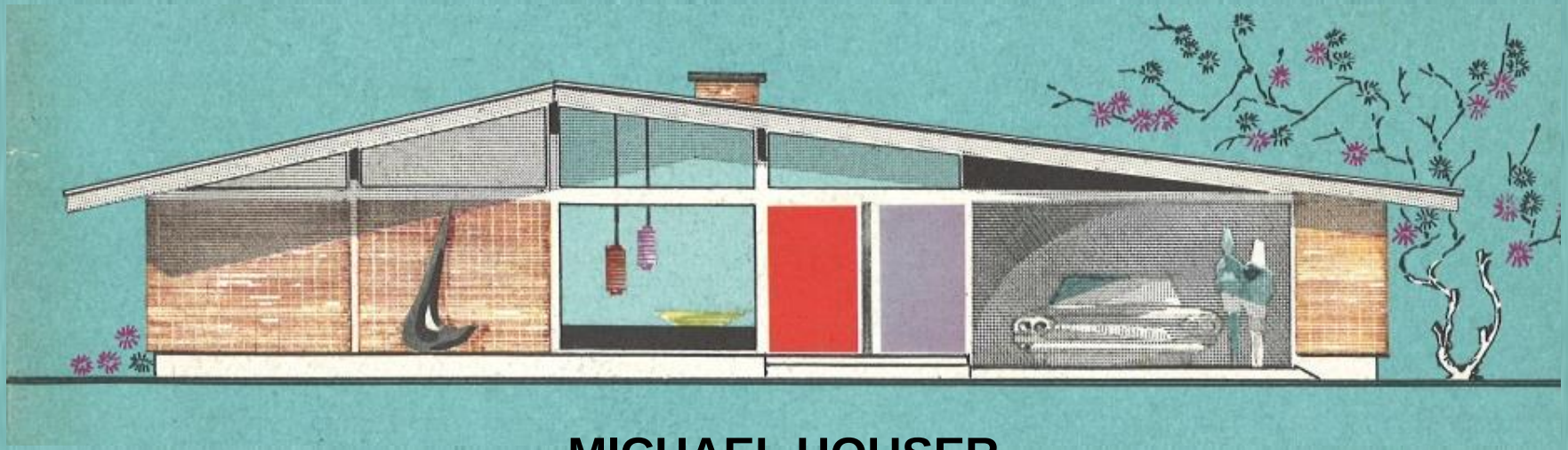
MID-CENTURY MODERN ARCHITECTURE

IN WASHINGTON STATE



MICHAEL HOUSER
State Architectural Historian
DAHP - Olympia, WA

June 2014

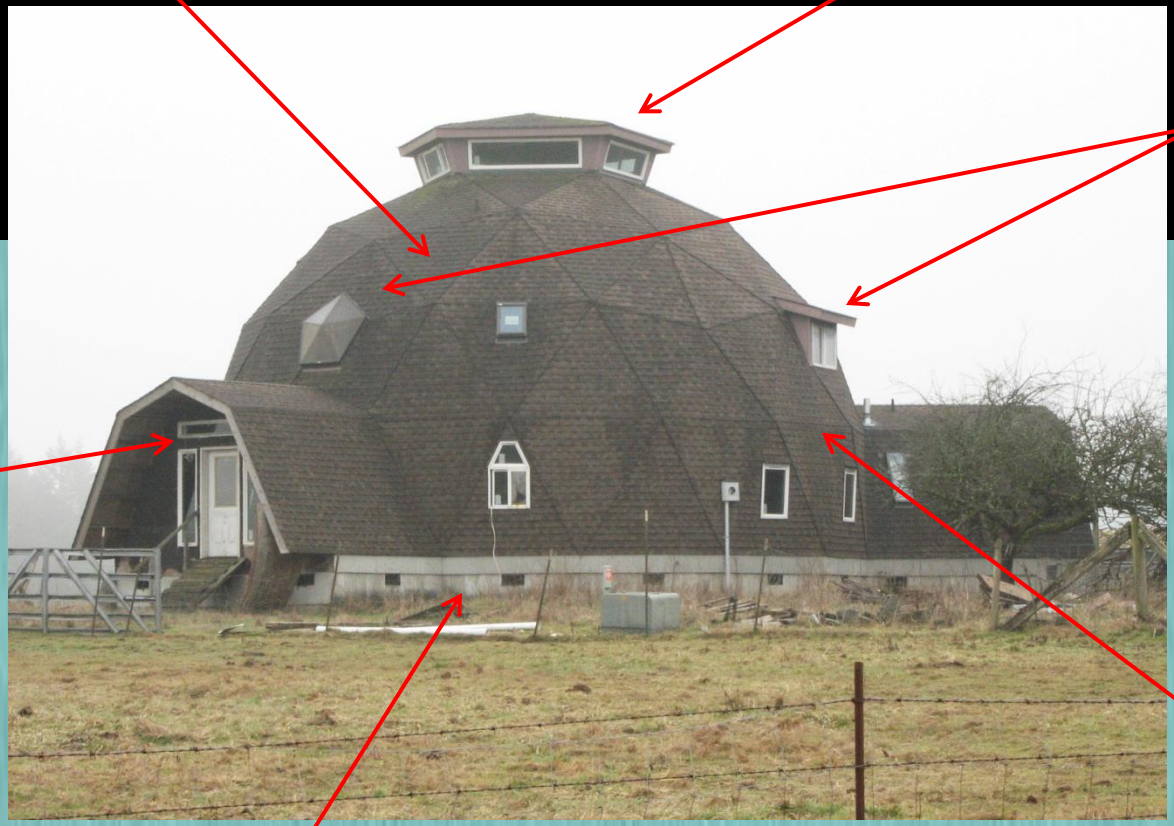
GEODESIC DOME

1960-Present

Space frame roof comprised of triangular-shaped panels

Copulas often found at peak of roof

Structure is composed of wood or metal frame



Skylights and dormer windows typical

Gambrel and flat roof wings often added as entry

Asphalt or cedar shingles, metal, plastic, and fiberglass cover plywood panels

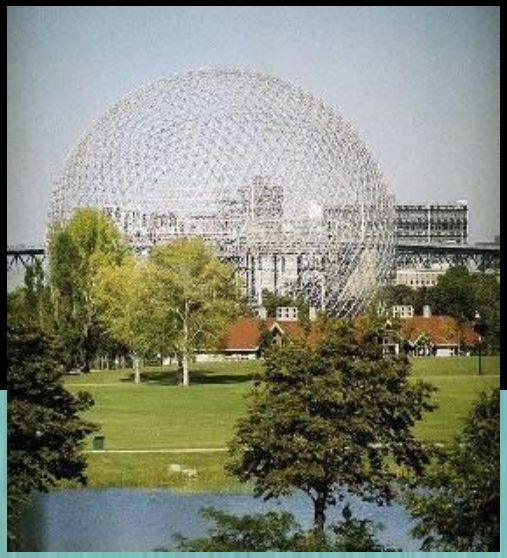
Sliding glass entry doors are common

Concrete Foundation

House Thurston County, c.1975

GEODESIC DOME

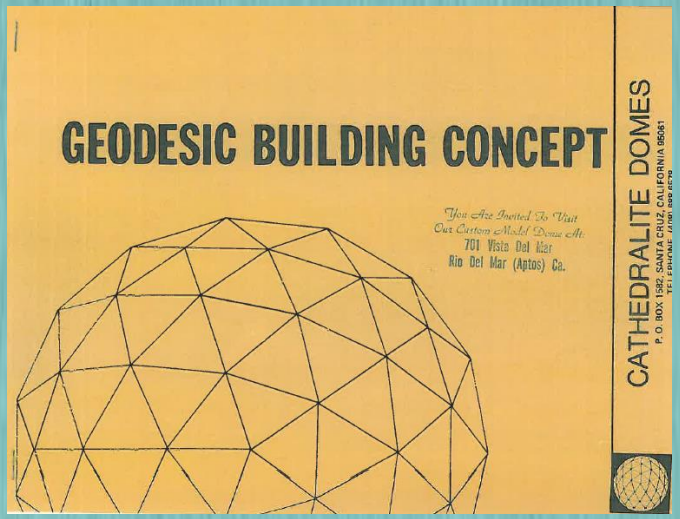
History



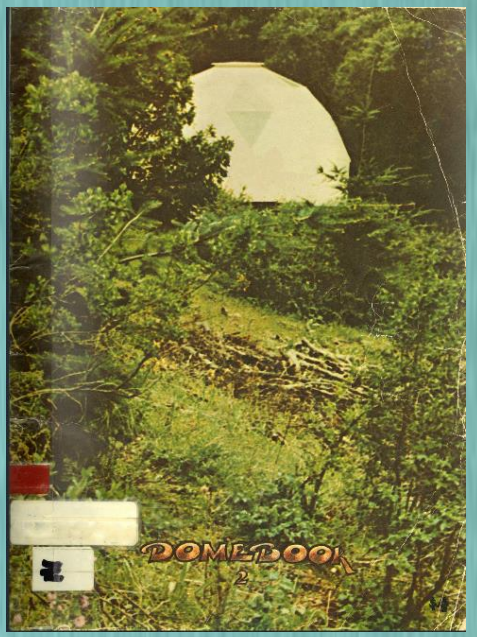
US Pavilion at Expo '67 Buckminster Fuller, Montreal, Canada, 1967

Epcot Center Buckminster Fuller, Orlando, Florida, 1967

Ford Rotunda Dome Buckminster Fuller, Detroit , Michigan, 1953



CatherDome Book 2, 1971



Dome Book 2, 1971

Buckminster Fuller to Speak At Environmental Conference

R. Buckminster Fuller, noted philosopher, engineer and inventor of the geodesic dome, will speak Saturday to conclude a three-day program on the environment at Inglemoor High School, 15400 Simonds Road N. E., Bothell.

Fuller, 74, whose unconventional ideas on the environment have won him fame, will speak on "Our Future Environment" at 7 p. m. Saturday. His speech will be open to the public.

Fuller designed the dome housing the United States Pavilion that won acclaim at Expo '67 in Montreal. He has envisioned domed cities in the future, floating on water or in the air. The author of the prefabrication concept, he is a member of the faculty of Southern Illinois University.

The program will open at 7 p. m. Thursday with an introductory address by David Brower, former executive director of the Sierra Club.

R. BUCKMINSTER FULLER

Brock Evans, a lawyer who represents conservation groups, will speak on the "Environmental Crisis in the Pacific Northwest" at 8:15 p.m. His presentation will be followed by a film.

Friday's program will begin at 1 p. m. with a speech on "Environmental Concerns in King County" by County Executive John Spellman. A panel discussion on the "Crisis in the Cities" will begin at 2:15 p. m.

Prof. John Hessel will discuss "Population versus Ecology: Facts of Life in a Closed System" at 7 p. m. State Senator Joel Pritchard and County Councilman Edward Heavey will speak on "Effecting Legislative Action on Environmental Problems" at 8:15 p.m. A student film will follow.

Saturday's program will open at 1 p. m. with a presentation titled "Avoiding Terracide" by Dr. William Houff. A panel discussion on "Industry and Pollution Control" is scheduled at 1:30 p. m.

At 2:30 p. m., Dr. Arthur Kruckeberg will speak on "Do We Have the Right to Pollute?" A panel discussion, "Several Views on Pollution," will follow at 3. A debate on a dam proposed for the Middle Fork of the Snoqualmie River is scheduled for 4 p. m.

A display of 100 prints by Tim Times' Josef Seaylea also will be featured during the three days.

Tacoma Dome Tacoma, 1981-83

GEODESIC DOME

Residential Examples

House Port Townsend, c.1967

House Moses Lake, c.1982

House Clarkston, c.1970

House Lacey, c.1982

House Eatonville, c.1980

GEODESIC DOME

1st of its kind approved by King County Building Department

Steve & Janet Bondelid House

8656 ne 170th St, Bothell, 1974

A brown golf ball? A wooden egg?

Dome home rouses curiosity

By PAUL ANDREWS
Suburban Writer

BOTHELL — "It looks like a huge brown golf ball," said a duffer at the Wayne Golf Course here. "It looks like a big wooden egg," said a waitress at a Bothell short-order restaurant.

Few who see it can resist commenting on the geodesic dome being built by Steve and Janet Bondelid near the banks of the Sammamish River.

"We still get asked a lot, 'What's it gonna be, what's it gonna be?' " said Bondelid, who feels that by now it should be obvious that the structure will be the couple's new home.

AIDED BY relatives and friends, the Bondelids have been working on the dome since last April. They have managed to nearly complete the exterior despite frequent interruptions from curiosity-seekers and assorted dome freaks.

The Bondelids might have guessed that the dome would draw some notice when they discovered that it was the first of its type ever approved by the King County Building Department. The geodesic dome isn't the first to be built in the county, Mrs. Bondelid said, but it is the first with plans detailed and workable enough to be approved by the Building Department.

The couple decided to build the structure after seeing photographs of geodesic domes in a magazine last year. "We'd looked at a lot of floor plans, but nothing struck us as very interesting until we saw these domes," Mrs. Bondelid said.

FROM THERE, they purchased a copy of "Dome Book 2," a paperback compilation of various dome designs edited by Lloyd Kahn, and developed plans for their home based on the "shake dome" on page 53.

"It's a good structure to build, because it's very strong, and you get a lot of cubic space for the size of the enclosure," Mrs. Bondelid said. To test just how strong the dome was, the couple soldered together a 14-gauge copper-wire model of the structure, a foot in diameter.

"Steve found he could sit on it," Mrs. Bondelid said.

The geodesic dome, developed by Buckminster Fuller, consists of a series of triangles and sub-triangles, usually in the overall form of an icosahedron. It derives its great strength from distributing weight on any part of its surface throughout the surface structure.

The Bondelid dome — a hemisphere with a 30-degree truss — is 40 feet in diameter, with a floor area of 1,250 feet. It has two basic levels — a garage and basement below and kitchen, bathroom, bedrooms and sunken living room above.

A LOT OF window space is provided for, including a pentagonal skylight at the top of the dome and a picture window overlooking the river. There also will be star-shaped skylights sloping down from the top of the dome.

When it is finished, the dome also will have a loft, a sun deck, a hanging fireplace and a circular stairway leading up from the lower-level entrance. The dome will be insulated with polyurethane foam, which the couple plans to paint for the interior.

About 7,300 cedar shakes are being used to cover the exterior. The round basement windows actually are old picture-tube covers which Bondelid, a television repairman, saved. "He thought maybe they would come in handy some day," Mrs. Bondelid said.

Neither she nor her husband had done much construction work before building the dome. Their combined background included building a horse stall and putting together a dog house.

"My dad and family have sort of always done things by ourselves, so I wasn't really afraid to tackle something like this," Mrs. Bondelid said. Their construction techniques so far have included quite a bit of improvisation — "your imagination is taxed heavily building a dome," Bondelid said.

ALL TOLD, the Bondelids figure they will have spent about $12,000 on the dome by the time they are fully moved in next spring. They also are doing their own plumbing and as much of their own wiring as the county code permits.

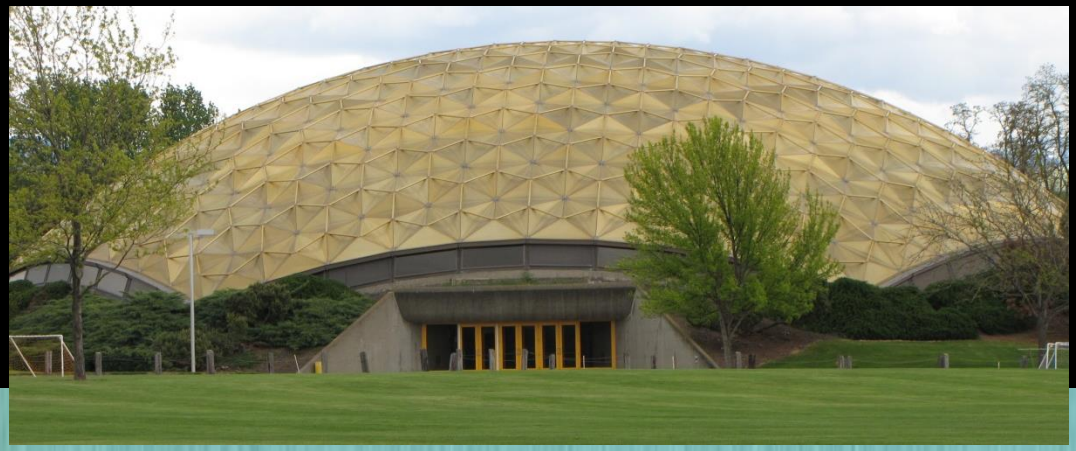
The Bondelids, who live in a rented home across the river from the dome, hope the curiosity-seekers will taper off as the structure nears completion. "We're going to put together a scrapbook on the building, and then if people really want to see it, we'll just hand them the book," Mrs. Bondelid said.

For now, they explain the structure to passers-by with a sign posted near the garage entrance. "Be It Ever So Hexagonal, There's No Place Like Dome."

Steve Bondelid checked for loose shingles

GEODESIC DOME

Commercial Examples



Deitrich Activity Center Walla Walla, 1977

Building Milton, c.1975

Cathedralite Office Tacoma, 1978

Tacoma Dome
Tacoma, 1981-83

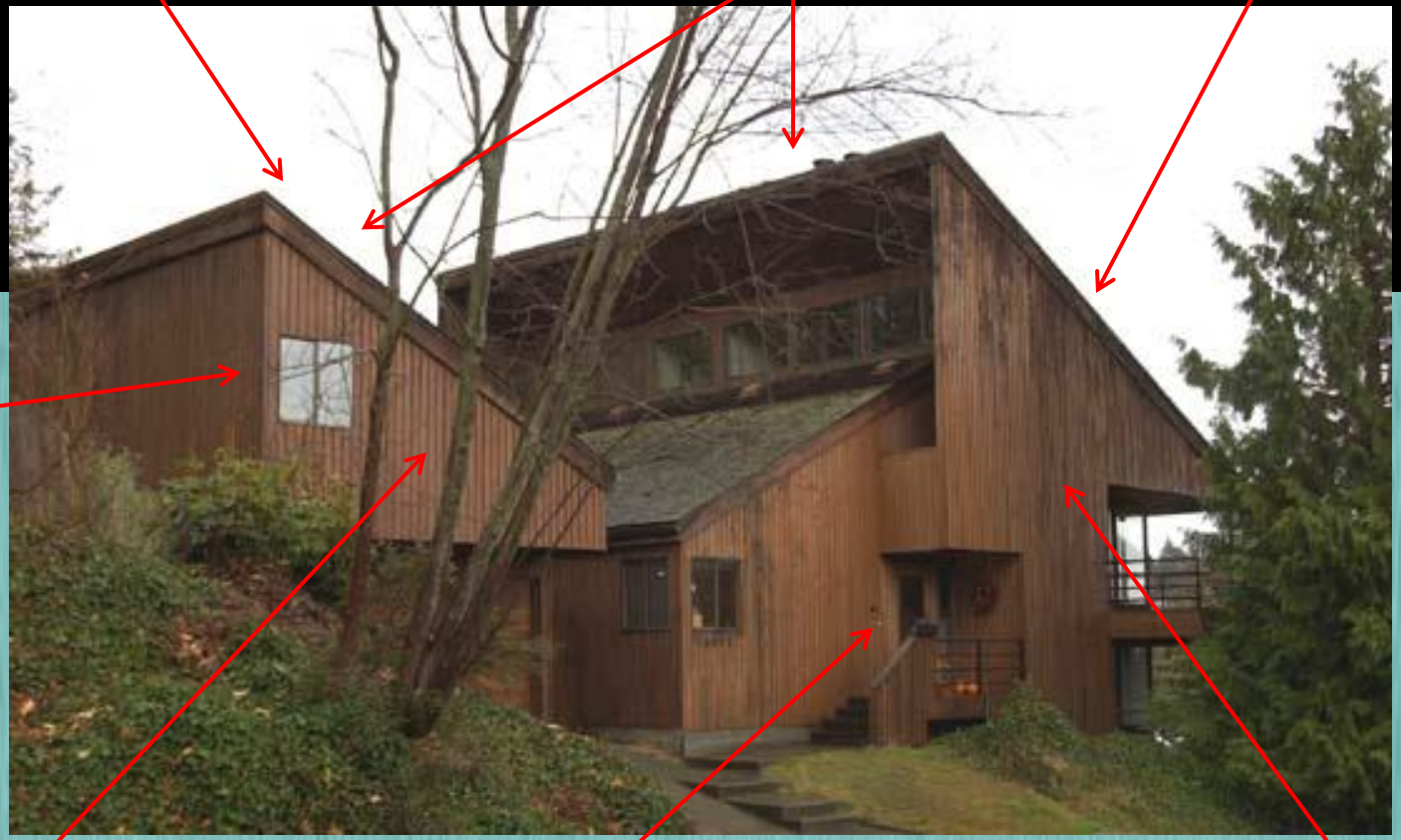
SHED

1960-1985

Box-Like Asymmetrical Form

Multiple Single-Slope Roofs in different and same directions

Simple, no-overhang eave and rake trim



Varied window sizes and shapes

Vertical, diagonal, shingle and T-1-11 Siding

Recessed or downplayed entry

Typically 1 to 1 ½ stories tall