

DESIGN CASE STUDY:

Making a Modern New England Traditional



In 1986, this custom-designed 2,600-square-foot home cost \$60 per square foot to build. (1988 costs are about \$75 per square foot.) Although it is easy to spend more than that, it is very difficult to spend less. The owners of this custom-designed home wanted a "country-farmhouse" look, with lots of traditional New England features. In response to this, architect Jay Ance! detailed clapboard siding, overhanging eaves, wide corner boards, and wide-trimmed windows.

Taking a custom home from the client's notions to a finished design

by John Wagner

"Designing a house for a client is really very exciting," claims Jay Ance! of Montpelier, Vermont's Black River Design. "Most of us must adapt to the space we live and work in. But when you can turn that around and have the space respond to the client's needs, it's a rare opportunity." What follows is a case study of that process, focusing on the practical steps along the way from clients' wishes to working drawings. The process is illustrated on the following pages.

The Questionnaire

The clients, a young couple, and the architect met a couple of times to make sure they wanted to work together. At the first meeting, Ance! and his assistant David Lahar showed them slides of some previous work and explained how the house design process worked. After the initial meeting, the clients filled out the company's residential questionnaire, which asked them to list what they wanted in the house (see "Residential Questionnaire," next page).

The questionnaire identified the clients' basic needs. The family and two kids—one an infant—and wanted a

wide open arrangement on the first floor. Upstairs, they wanted a master bedroom with a full bath, and two bedrooms with a shared full bath. The couple entertained a lot, so they wanted a formal dining room. In addition, they wanted a living room that could double as a guest room (so they needed a full bath on the first floor, too).

Many other issues emerged as well. The clients wanted to add a garage and breezeway at a later date, so the entry to the house would have to accommodate this wish. Yes, they required a mud room (you need one in northern New England), and at least one porch. They also wanted views of a pond they were going to create on the property.

On the exterior, they asked for a traditional "country farmhouse" look with clapboard siding. Inside, though, they sought a contemporary look with an open room-to-room arrangement. And they wanted to bring in the whole deal between \$135,000 and \$155,000 (excluding land and landscaping costs).

Finally, the clients wanted to feature the view. The 10-acre lot overlooked two spectacular mountain ranges, and the clients wanted full views of both.

Design Response to Needs

"Since the clients made such a strong point about the view," Ance! explains, "I didn't design the foundation at the southwest corner as a standard 90 degree angle, but as a faceted edge instead. The view was panoramic, and I didn't want to have a 90-degree corner at that part of the house. I wanted the view from inside to be continuous, not chopped up into a south wall and a west wall."

The foundation also extends out at the northwest corner to allow for the large living room/guest room. These angled walls added cost, the designer admits, not only because of foundation work, but because the framing and interior work takes on non-standard dimensions. But the designer felt the expense was justified.

Also at the southeast corner of the house, is the main entryway, a rather unusual placement. Here, too, the foundation doesn't simply meet at 90 degrees; it turns out to form the mud-room walls.

"On the entryway," Ance! explains, "we didn't have much choice, for location or design. The clients wanted an

Residential Questionnaire

*A questionnaire like this helped the owners
outline their specific requirements.*

OWNERS AND FAMILY: *A COUPLE WITH TWO SMALL CHILDREN*
Site:

Location: *NORTHERN VERMONT*

Area description: *10.1 ACRES, SLOPING, 1/2 WOODED, 1/2 OPEN*

View or other important site characteristics: *MT. MANSFIELD,
WORCESTER RANGE, VIEWS OF POND DESIRED, EXPOSURE TO SUN*

Road access: *PRIVATE ROAD, UNPAVED*

Sewer: *MOUND SEPTIC SYSTEM*

PROGRAM REQUIREMENTS:

Give approximate square footage, dimension, and area.

Mudroom/Entry:

Entries: *TOTAL OF 3 ENTRIES TO THE HOUSE*

Use and size: *KEEP COLD AIR FROM BLASTING INTO THE HOUSE*

Heated or non-heated: *NON-HEATED*

Living room:

Uses: *VISITING, ENTERTAINING, LIBRARY*

Preferred location: *OFF OF DINING ROOM*

Size: *15 x 20'*

Existing furniture: *TABLE, CHAIR, STEREO SPEAKERS*

Anticipated furniture: *ONE COUCH, CHAIR, TABLE, STEREO SPEAKERS*

Wood stove or fireplace: *FIREPLACE*

Do you prefer a feeling of openness? *YES!*

Floor materials: *WOOD FLOORS* **Wall finishes:** *SHEETROCK*

Family Room or Den:

Use: *TV ROOM, KIDS PLAYROOM, 4-6 PEOPLE*

Relation to other rooms: *CONNECTED TO KITCHEN*

Eating:

Separated dining room?: *YES* **Use:** *3-4 TIMES/WEEK*

Open to kitchen or separate: *SEPARATE*

Other furniture: *CORNER HUTCH, SERVING TABLE*

Eating area in kitchen? *YES*

Access to deck, porch or terrace: *YES*

Other remarks: *WE WOULD LIKE A WOODSTOVE IN THE FAMILY
ROOM AND/OR THE KITCHEN AREA*

Cooking:

Separate kitchen: *OPEN TO FAMILY ROOM*

Approximate size: *15 X 20*

Ovens: *ONE UNDERCOUNTER* **Fuel:** *GAS*

Exhaust fan: *YES* **Hood:** *YES*

Length of counter: *8 FEET*

Remarks: *FLOOR? WOOD, TILE, LINOLEUM? WE LIKE AN OPEN
LARGE KITCHEN WITH PLENTY OF ROOM FOR A TABLE*

Bathrooms:

No. 1 location: *MASTER BEDROOM TOILET, LAUNDRY, TUB, SHOWER*

Remarks: *FOR OUR USE*

No. 2 location: *UPSTAIRS HALL TOILET, LAVATORY, TUB, SHOWER*

Remarks: *WILL BE MOSTLY FOR CHILDREN'S USE*

No. 3 location: *DOWNSTAIRS TOILET, SHOWER*

Sleeping:

Master Bedroom: *YES*

Number and type of beds: *ONE KING-SIZE BED*

Other furniture: *TWO DRESSERS, 2 NIGHT STANDS, ROCKING
CHAIR, PLANTS*

Location: *UPSTAIRS*

Type of closet: *STANDARD. IF ENOUGH ROOM, TWO CLOSETS*

Remarks: *WOOD FLOORS*

Bedroom 2: *CHILD'S ROOM*

Number and type of beds: *ONE OR TWO TWIN BEDS*

Other furniture: *DRESSER, TOY CHEST, NIGHT STAND, DESK*

Location: *UPSTAIRS*

Approximate size: *10 X 12 (AT LEAST)*

Bedroom 3: *BABY'S ROOM*

Number and type of beds: *ONE TWIN BED, OR BUNK BEDS*

Location: *UPSTAIRS*

Approximate size: *10 X 12 (AT LEAST)*

Other sleeping areas for guests: *YES*

Convertible sofas: *IN LIVING ROOM? OR BEDROOM DOWNSTAIRS*

Laundry: *WASHER, DRYER, IRONING BOARD, NO SINK*

Preferred location: *NOT SURE? UPSTAIRS OR IN BASEMENT*

Other requirements: *ROOM FOR A DRYING RACK OR CLOTHESLINE*

Remarks: *WOULD PROBABLY LIKE TO HAVE IT UPSTAIRS NEAR A
WINDOW. ALL DEPENDS ON SPACE AVAILABLE*

Garage/shed: *YES, BUT NOT RIGHT AWAY*

Remarks: *FUTURE CONNECTION TO FRONT DOOR*

Decks, porches, and terraces:

Location and size: *WOULD LIKE A PORCH OFF DINING ROOM OR
KITCHEN, FAMILY ROOM NOT SURE ABOUT LOSS OF LIGHT IN
THOSE ROOMS*

Adjacent to which interior spaces?

Landscape and Site Work:

Number of cars to be parked: *2-3*

Pond, location, size: *DOWN FROM HOUSE AT NORTHERN PROP-
ERTY LINE, 200 X 100 FEET*

General:

**Would you characterize your tastes as leaning toward tradi-
tional or contemporary?** *TRADITIONAL WITH SOME
CONTEMPORARY FEATURES*

Explain feelings you have toward exterior or interior styles:

WE LIKE A COUNTRY FARMHOUSE LOOK, CLAPBOARD SIDING

Anticipated design and construction schedule: *BEGIN BUILDING
BY JULY?*

Preferred telephone locations: *KITCHEN, MASTER BEDROOM*

Do you have any particular expansion plans:

BREEZEWAY/GARAGE

**What are your feelings in regard to a single-level house as
compared with a multi-level or multi-story house?** *WE ONLY
WANT A MULTI-STORY HOUSE*

Approximate cost range: *155,000-155,000 (INCLUDES
EVERYTHING EXCEPT LAND, POND, AND CLEARING)*

Other remarks or special requirements: *LOTS OF WINDOWS
PREFERRED, GOOD VENTILATION, OPEN FEELING THROUGHOUT
THE HOUSE. WANT A WARM, FRIENDLY FEELING, NOT STUFFY OR
FORMAL*

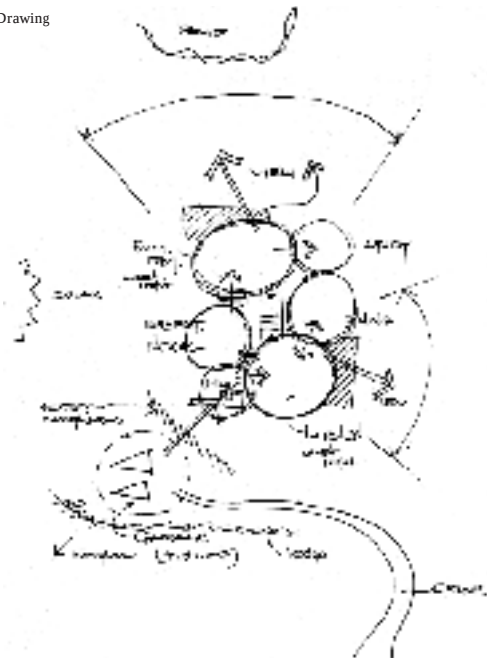
Heating:

Do you have any preference for (or aversion to) any fuel type:

*NO ELECTRIC OR OIL; PREFER A WOOD/COAL OR WOOD/GAS
FURNACE*

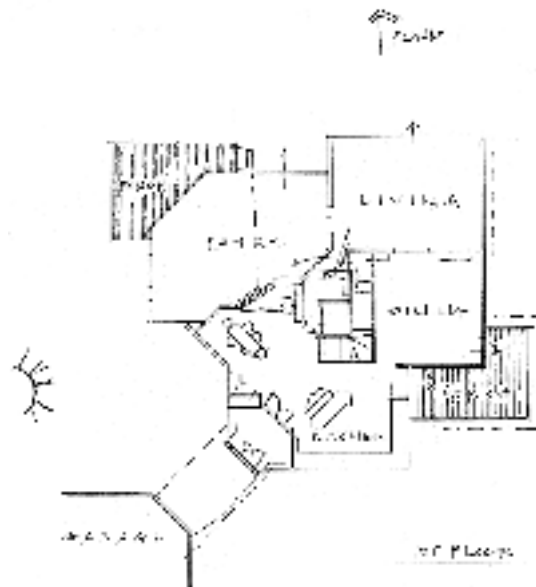
Wood Stove: *YES, AS A BACK-UP OR ELSE INSTEAD OF FURNACE*

1) Bubble Drawing



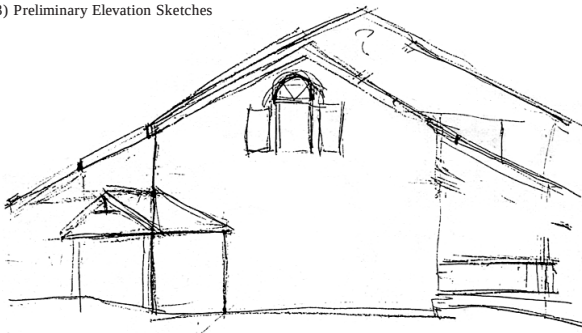
These "bubble drawings" are the first round of design sketches. The clients wanted the kitchen and mudroom to be attached and to serve as the main entryway. The family room needed to face the southwest for the view and sun, yet it needed to be separate from the formal dining room. Since the dining room would be used frequently, it had to be near or attached to the kitchen. The form of the house started to take shape before pencil was set to paper.

2) Floor Plan, 1/8" Scale



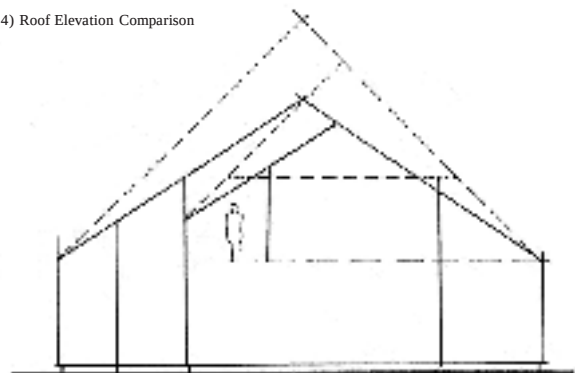
The first round of floor plans quickly followed the bubble diagrams. The 1/8-inch scale drawings make graphic the room-to-room layout but ignore interior details like cabinet or closet placements. Putting a family-room porch to the southwest made it necessary to cut a corner off the foundation. Though this added cost for the owners and complications for the builder, the faceted corner allows window placements that give a panoramic view.

3) Preliminary Elevation Sketches



Once a floor plan is approved, fat-pencil sketches of the elevations begin. The clients wanted traditional details. The 12/9 roof pitch is typical of New England. So, too, are the arched windows and eaves. Notice that the entryway is oddly positioned on the corner of the house. The clients wanted the entry of the house to be through a mudroom into the kitchen on the southeast side. Also, the entryway would serve the planned-for breezeway to the garage.

4) Roof Elevation Comparison



When sketching the elevations, the designer compared different roof pitches to see how they affected the standing room of the three bedrooms on the second floor. With the roof pitch at 12/9, he found it was necessary to put a dormer in the master bedroom to add light and headroom. Of the two children's rooms, one was in the center of the second floor with no natural light available from the east or west. So, a second dormer was put there as well. Large arched windows were put in the second child's bedroom, on the west side, and in the master bedroom's east side as well.

entryway structure that would allow for future expansion into a breezeway and garage. They knew they wanted the entryway to serve the garage and come into a mud room off the kitchen. That was a given. They also wanted the porches on the southwest and northeast corners. We couldn't put the garage on the northwest side, because it would block the view and ruin the look of the guest room. The southwest and northeast corners were definitely out because the garage would block the view and sunlight. The access road came in on the southeast side of the site. So, in a way, we were forced to put that entryway there as a tradeoff to other requirements."

Outdoor living was important. The clients wanted to be able to come out through the dining area to sit on the porch or eat outside. The porches make this outside-to-inside transition. "We

added a porch on the northeast side," Ancel explains. "People often don't like direct sunlight in the summer, and the northeast light is very pleasant. But the southwest porch offers that direct light option as well, and that is the porch with the outstanding view."

The Exterior

This house, if you'll excuse the jargon, is a "contemporary traditional." This is in direct response to the clients' desires. Inside the first floor is a "contemporary home," with a large kitchen, a circular room-to-room arrangement, and a full bath. But the exterior of the house has many traditional forms and details. The roof pitch is 12/9, which is traditional in New England. Porches typically have a lower pitch, and that is followed through here as well with a 12/15 pitch. Clapboards (typical for this region) are used here as a siding

material, with wide corner boards. Notice, too, the traditional overhanging eaves. The windows are heavily trimmed out, whereas most modern windows have minimal exterior trim. Arched windows, as seen on the west and east sides of the house, are historically common in area house designs. Finally, the porch posts are traditionally detailed with capitals and plinth blocks.

Interior Considerations

Ancel chose extra-high windows to satisfy the clients' view requirements, but also to meet the clients' desire for passive solar gain (this is also why the house has a circular design). To get the most out of these windows, Ancel detailed a step-down from the eating area to the family room, and from the dining room to the living room. Because of these step-downs, the living

room picked up enough vertical distance so that the ceiling didn't have to be raised for the extra-large windows (the family room has a vaulted ceiling).

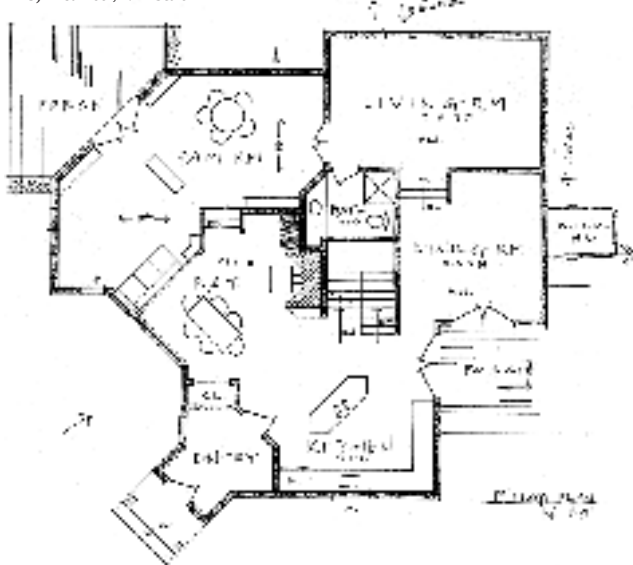
There are other advantages to the step-down floor levels. If the ceiling in the living room had to be raised, the bedroom elevation would have been higher, and this would have thrown off the eaves line.

The porch also had an effect on the interior. Porches make interiors darker, so Ancel had to get light back inside the house. The skylight added on the west elevation just above the porch accomplishes this.

Room-to-Room Arrangement

In the questionnaire, the clients had assigned each room with a purpose and a desired square footage. They wanted the living room to be 15x20 feet, and to have enough room for bookshelf-lined

5) First Floor, 1/4" Scale



After the elevations were approved, the designer moved to 1/4-inch-scale floor plans. Here, interior details were determined. A first-floor full bath opens onto the living room, which will serve occasionally as a guest room. It can be closed off from the family room by French doors, and from the dining room by a pocket door. There is a step-down from the dining area to the living room, and from the eating area to the family room. This change in elevation allows for extra large windows looking out to westerly views without having to raise the ceilings. Notice, too, a porch off the kitchen and dining room areas provides an outdoor eating area.

6) Second Floor, 1/4" Scale (Preliminary)



One porch was added on the southwest side for an outdoor dining and living area, but this blocked out some natural light. Some skylights were added to bring daylight back in. Notice the extra-large windows that were put in for the views and to add passive solar heat to the house.

7) West Elevation



This early 1/4-inch scale drawing shows a third bedroom that was eventually eliminated to allow for the family room's vaulted ceiling. Instead, the living room on the first floor was designed to be closed off for a guest room. A second bath was also added on the second floor. In the final drawings, one full bath serves the master bedroom, and one full bath serves the two children's rooms.

8) North Elevation



The clients wanted a second porch on the northeast corner of the house for the view and to have a place for outdoor summer dining, out of direct sunlight. Both the kitchen and dining area open onto this porch. The entryway was placed on the southeast corner of the house, where the clients plan a breezeway to a garage.

walls, off limits to the dogs and kids. The family room needed to accommodate six people, be connected to the kitchen, and contain two couches and a large hutch. The dining room needed to be separate (they planned to use it three to four times a week). It had to contain a large table, a corner hutch, and serving table. They wanted the kitchen to be 15x20 feet, with a large commercial range with a hood. They wanted 8 feet of counter space, and a chopping counter. For the mud room they wanted 5 feet of hanger space, a couple of shelves, and a bench.

These requirements needed to be melded with the clients' desire that the house lend itself to family interaction and that it make use of passive solar heat from the large windows.

Given that the views were to the southwest and northeast, and the entry on the southeast, three rooms were

already positioned: the mud room, the kitchen, and the family room. The southwest side, with its porch and view, would best serve the multi-use family room.

The house began to take shape. The dining room would have to be attached to the kitchen, yet these rooms had to open on to a porch for outdoor eating. These decisions formed the northeast corner's floor plan. The living room, (doubling as a guest room) was positioned in the northwest corner of the house, for sunlight, views, and privacy.

The clients' desire that the house be "well-ventilated, with a warm, friendly feeling, not stuffy or formal" was partly addressed by the family room's vaulted ceilings and by the many windows. The circular arrangement of the floor plan itself also added to this feeling of openness.

By the time the first-floor layout had

taken shape in the bubble diagrams, the second floor was also coming into focus. When sketching the elevations, Ancel compared different roof pitches to see how they affected the standing room of the three bedrooms on the second floor. With the roof pitch at 12/9, he found it was necessary to put a dormer in the master bedroom to add light and room. Of the two children's rooms, one was in the center of the second floor with no natural light available from the east or west. So, a second dormer was put there as well. The dormers' form has a traditional look, with a 12/11 pitch. Also, large arched windows were put in the bedrooms on the east and west sides of the house.

Once the first few rounds of drawings were completed, Ancel's job was really one of detail—figuring out the mechanicals, electrical layout, and structural issues.

Opportunities or Constraints?

The house went in at budget for about \$60 a square foot (total construction costs were \$158,000), but certain trade-offs were made. "We try to design everything a client wants into the house, rather than planning for later additions. If, however, we have to put some parts of the program on hold, then we can incorporate in the design some things to make the expansion easier, like putting in the services ahead of time, or leaving room for an extra bath. With this project, though, we were able to get much of what was desired into the original house design." ■

John D. Wagner is features editor of The Journal of Light Construction.