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## Metz Residence

The Metz's purchased a vacant lot in a built-up community where all the homes' orientation faced the street toward the east. The owner desired to blend with the surrounding context, however the primary elevation of the house fronting the street which was not conducive to solar design principles. Additionally, the existing homes had two-car garages facing the street, which detracted from the importance of the house entrance.

The approach that taken to address the solar needs and garage orientation was to evaluate the total site available to develop. All the residential lots were quite deep, but none of the adjacent buildings on the block were built to take advantage of these deep lots. The primary orientation of the lot was north-south, but the Metz Residence was built along an east-west orientation in order to maximize the southern exposure. In addition, placing the house toward the rear of the lot provided a park-like view to adjacent properties. The northern side of the house was landscaped by having the soil line elevated to insulate the basement area. The walls were built thicker with added insulation to assure an optimum solar benefit, negating the need for costly active solar requirements. Additionally, the garage entrance was turned 90 degrees to avoid detracting from the front entrance to the house, and in so doing, it provided privacy to the an adjacent side garden.

To achieve this design approach, it was necessary to provide two models. One model proposed a traditionally-designed house, so the main portion of the house faced the street. The second model showed the design concept that shifted the orientation of the house by 90 degrees and placed the house deep into the lot. The models allowed the client to make an informed decision to achieve the maximum solar benefits.

After one of the coldest winters on record, the owner indicated that the well-developed passive solar approach was very successful, as the heating bill for that month was only \$28. The owner also acknowledge how much they enjoy their house being so individualized from their neighbors. Bringing such happiness to clients is the primary aim of David Zeunert & Associates.



*Exterior from driveway*



*Exterior from rear yard*

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