

## DESIGN CONSIDERATIONS:

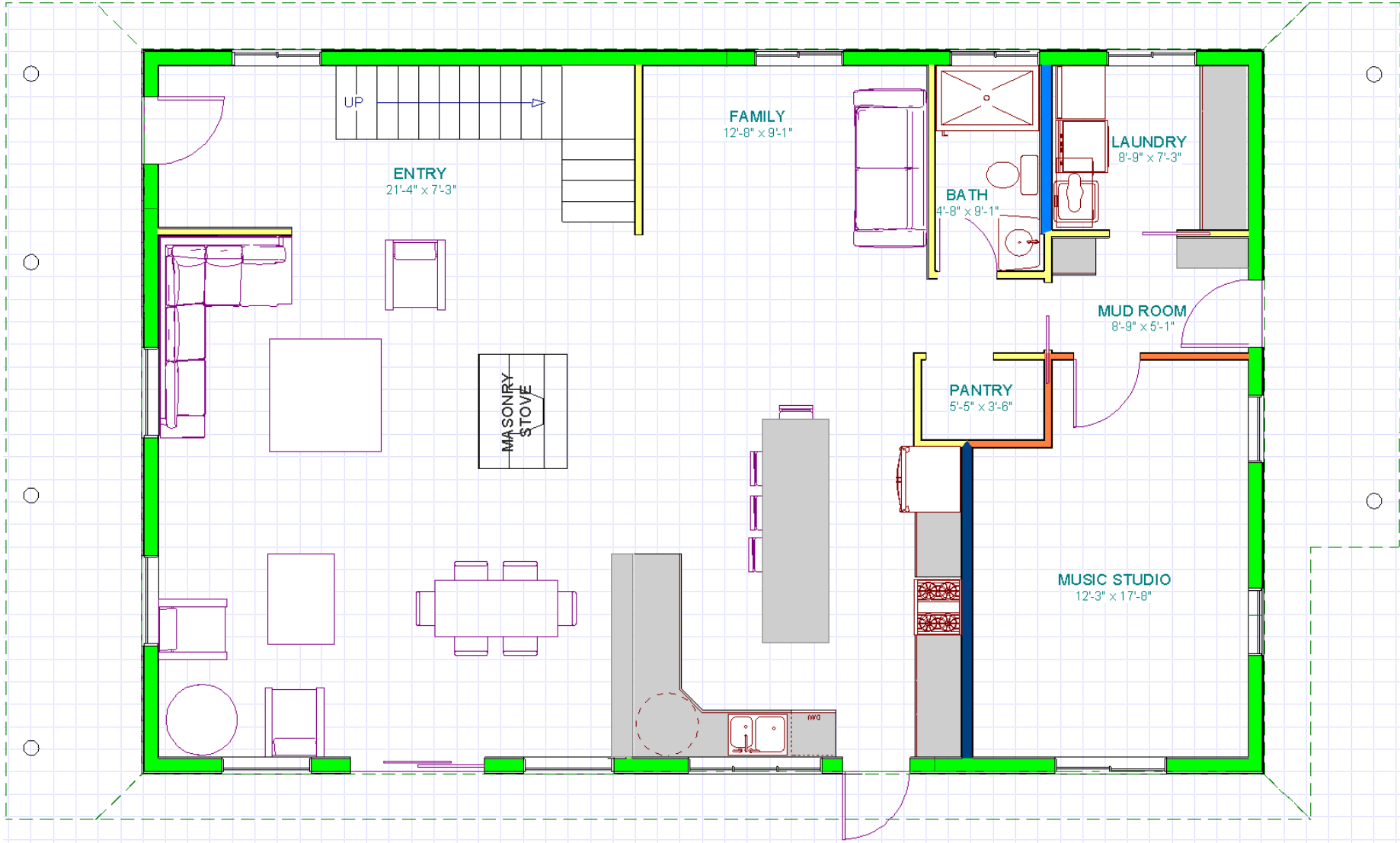
- 1) Bryan and Beth Cooperrider will eventually live in this home full time. The project will be accomplished in phases with the first phase being the main home. Eventually, a detached garage will be added on the north side of the home.
- 2) A music room on the first level will be well insulated on all walls and ceiling.
- 3) The stem walls of the home will be ICF and the exterior walls will be 2x8 frame with staggered 2x4 studs for thermal break and spray foam insulation. The roof insulation will be spray foam underneath the roof sheathing with a vapor barrier at least 2" from the undersurface of the sheathing.
- 4) The roof will be metal, with rain gutters installed and plumbed to a cistern so rainwater can be used for domestic use and irrigation. A gray water system will be plumbed to augment summer irrigation.
- 5) There will be windows on the south side of the home to provide ventilation, good daylighting and passive solar heating in the winter. An interior masonry stove in the living/dining room will store heat for the living areas at night.
- 6) Windows on the north, west and east sides of the building will provide daylighting, ventilation and views. Porches on the west and east sides of the home will minimize heat from the setting and rising sun.
- 7) The masonry wood stove in the family/dining room area coupled with the passive solar elements of the home will be used for space heating; electric baseboard heaters will be used for back-up heating.
- 8) A grid-interconnected solar PV system will provide most of the electricity for the home. The PV modules will be mounted on poles on the south side of the home and will be manually adjusted for seasonal sun angles.

## Getaway Trail Passive Solar Home Conceptual Drawings

<b>1st Level:</b>	<b>1600 sqft</b>
<b>2nd Level:</b>	<b>1158 sqft</b>
=====	
<b>Total Conditioned:</b>	<b>2758 sqft</b>

<b>Sunspace</b>	<b>0 sqft</b>
<b>Porches</b>	<b>358 sqft</b>
<b>Garage &amp; Utility:</b>	<b>0 sqft</b>

**APPROX DESIGN TOTAL:  
3369 sqft**



Sheet Title:  
*1st Level Floor Plan*

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**C**

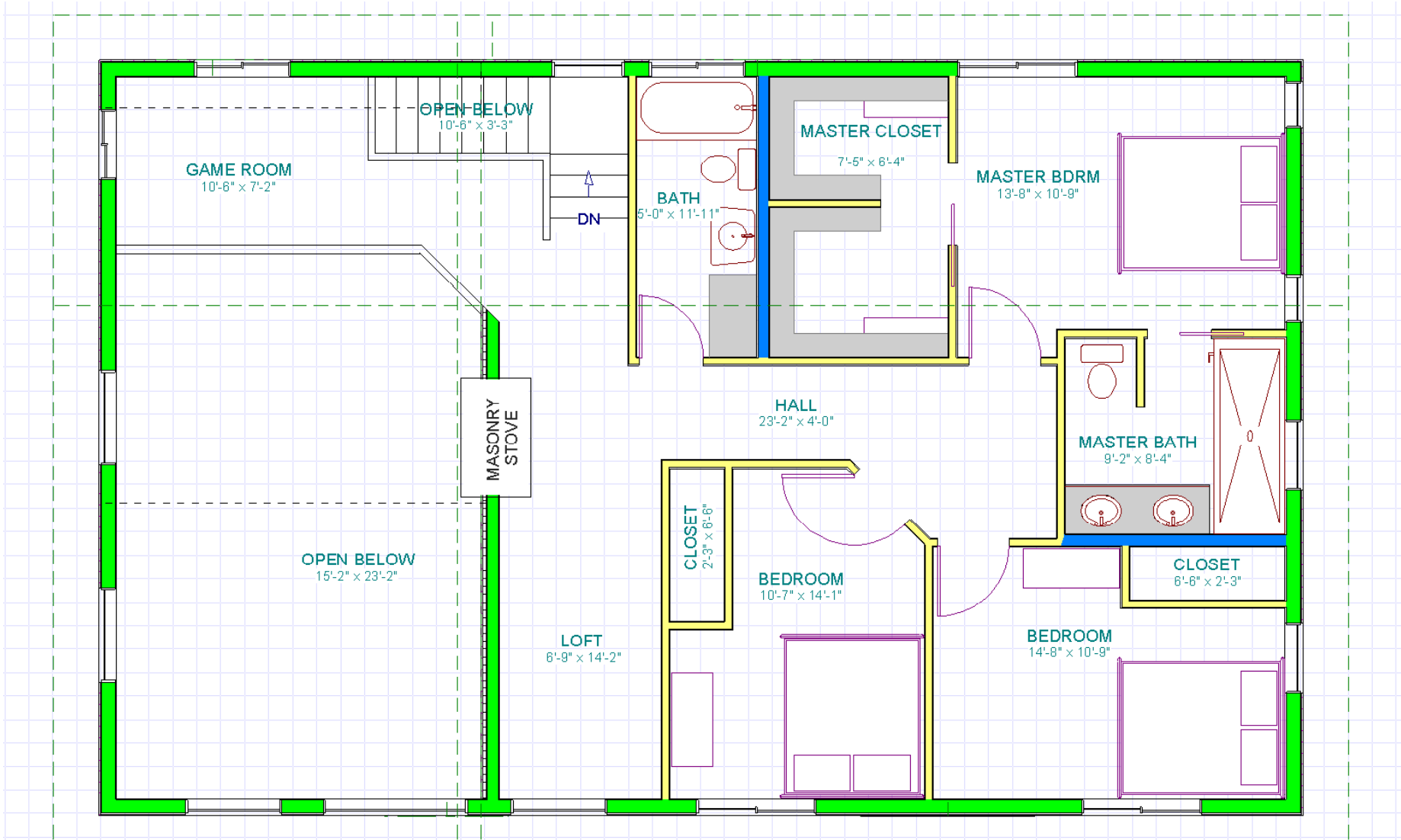


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**2**

Passive Solar, Forest Meadow Home  
 Flagstaff Client  
 South of Flagstaff, west of the County Fair Grounds

Project: AD10-07  
 Designer: Thed Johnson  
 Date: 5/22/10

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 7709 West Painted Rock Trail, Williams, AZ 86046



Sheet Title: *2nd Level Floor Plan*  
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NORTH



Sheet Title:  
*South Elevation*

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Sheet Title:  
*North Elevation*

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Project: AD10-07  
Designer: Thed Johnson  
Date: 5/22/10

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Sheet Title:  
*West Elevation*

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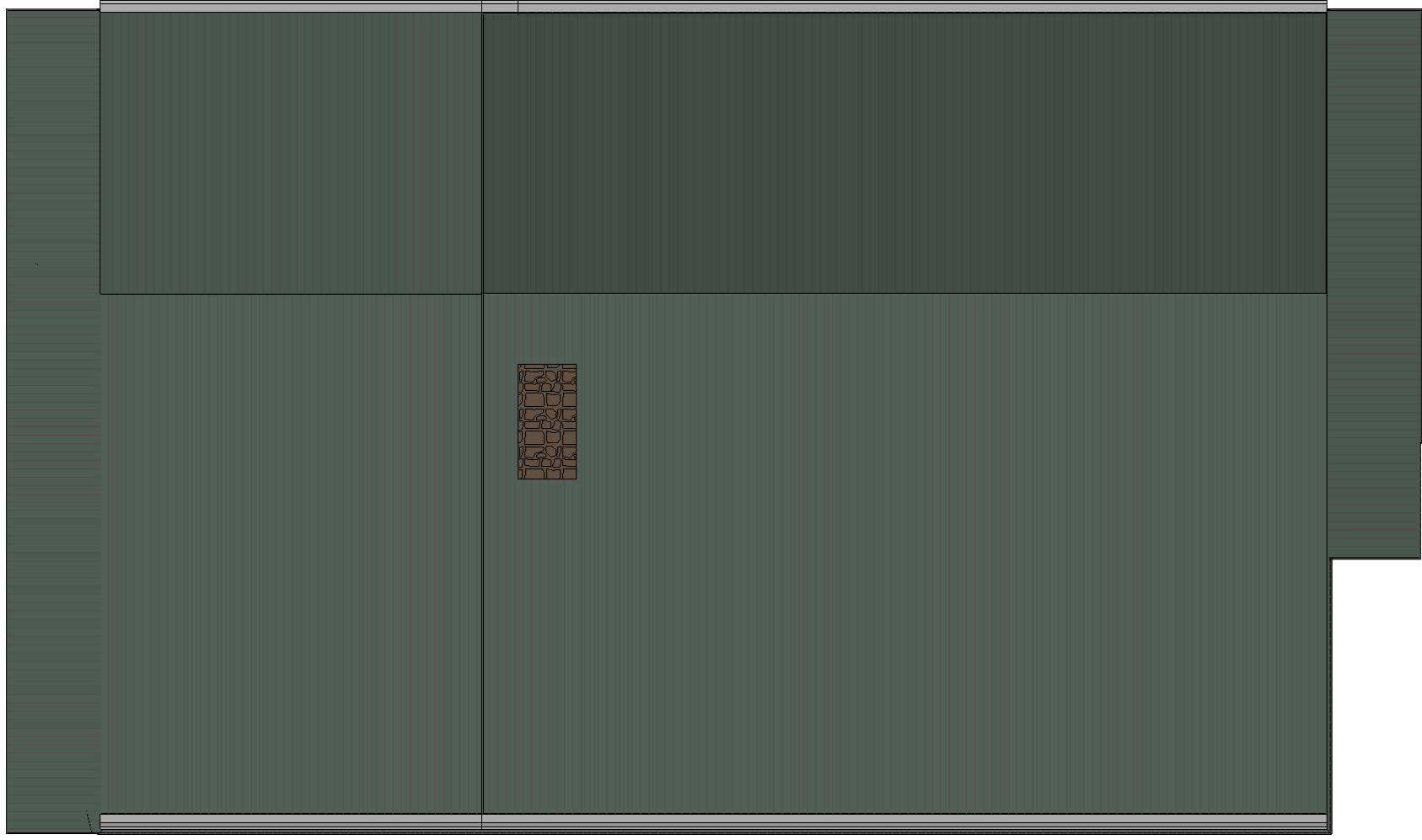
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Flagstaff Client

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Sheet Title:  
*Overhead View*

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**Project: AD10-07**  
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