

**Use of Rooms
as
Sewage Flow Estimator
instead of
Bedrooms**

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Why use rooms instead of bedrooms?

- Eliminates the need for many distinctions between bedrooms and non-bedroom rooms
- Definition may become simpler
- Provides for flexibility of use conversion (den to bedroom) without impacting estimated sewage flow

Rooms ↔ Bedrooms

- Census data:
The cumulative frequency of rooms and bedrooms of occupied housing units in Florida follows the following relationship:

$$\text{\#of rooms} = 1 + 1.8 * (\text{\#of bedrooms})$$

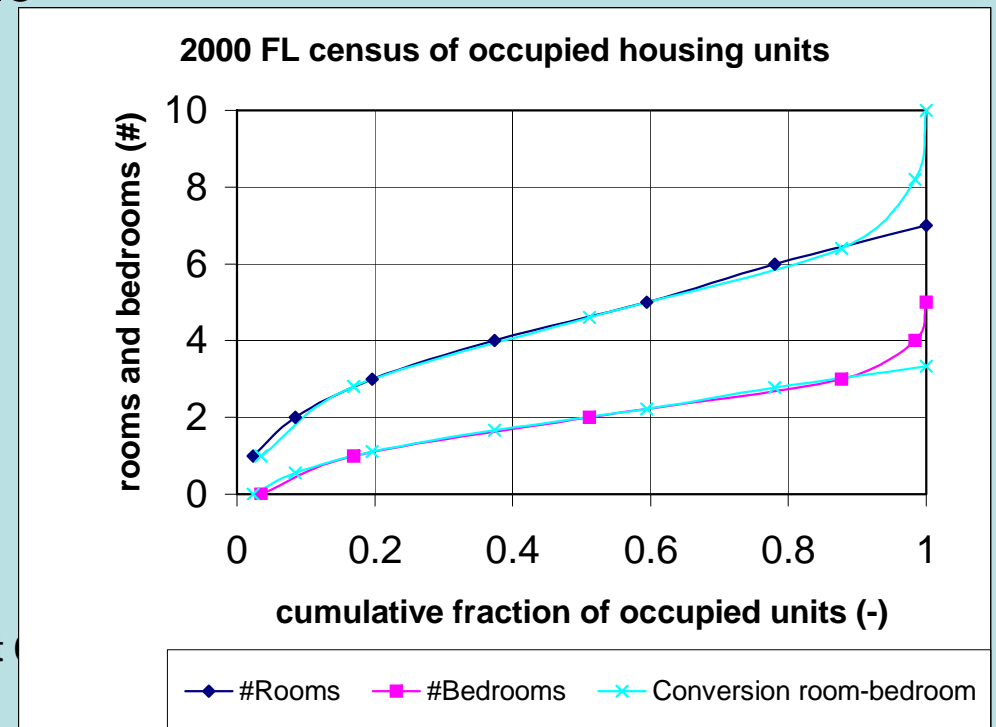
or

$$\text{\#of bedrooms} = (\text{\#of rooms} - 1) / 1.8$$

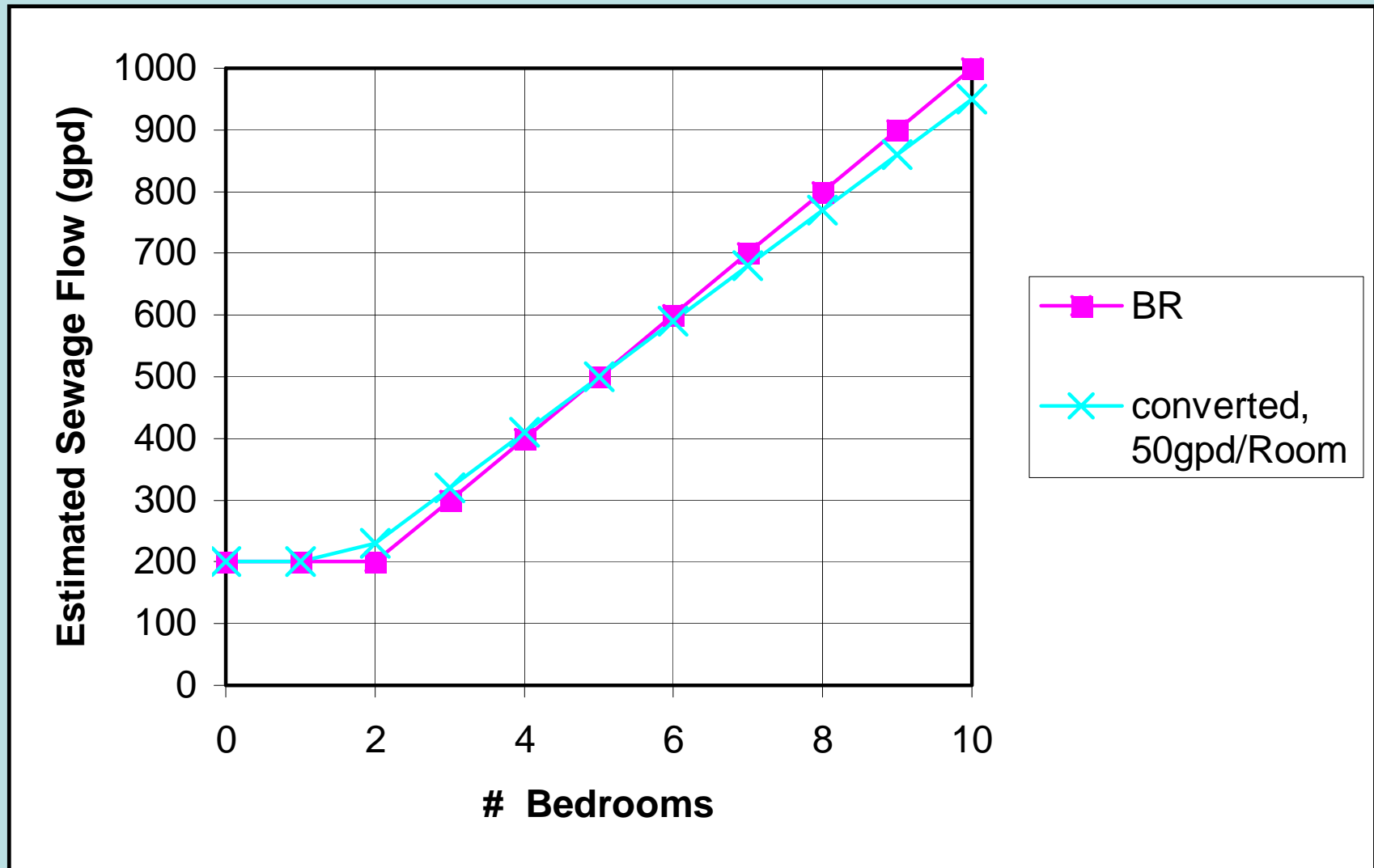
- Equivalent sizing is approximately 50 gpd/room (one occupant per room)

QT-H8

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Estimated Sewage Flow: 50 gpd/Room



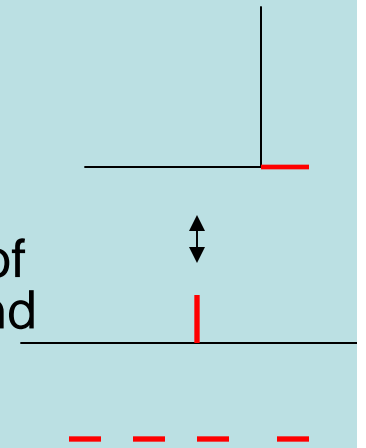
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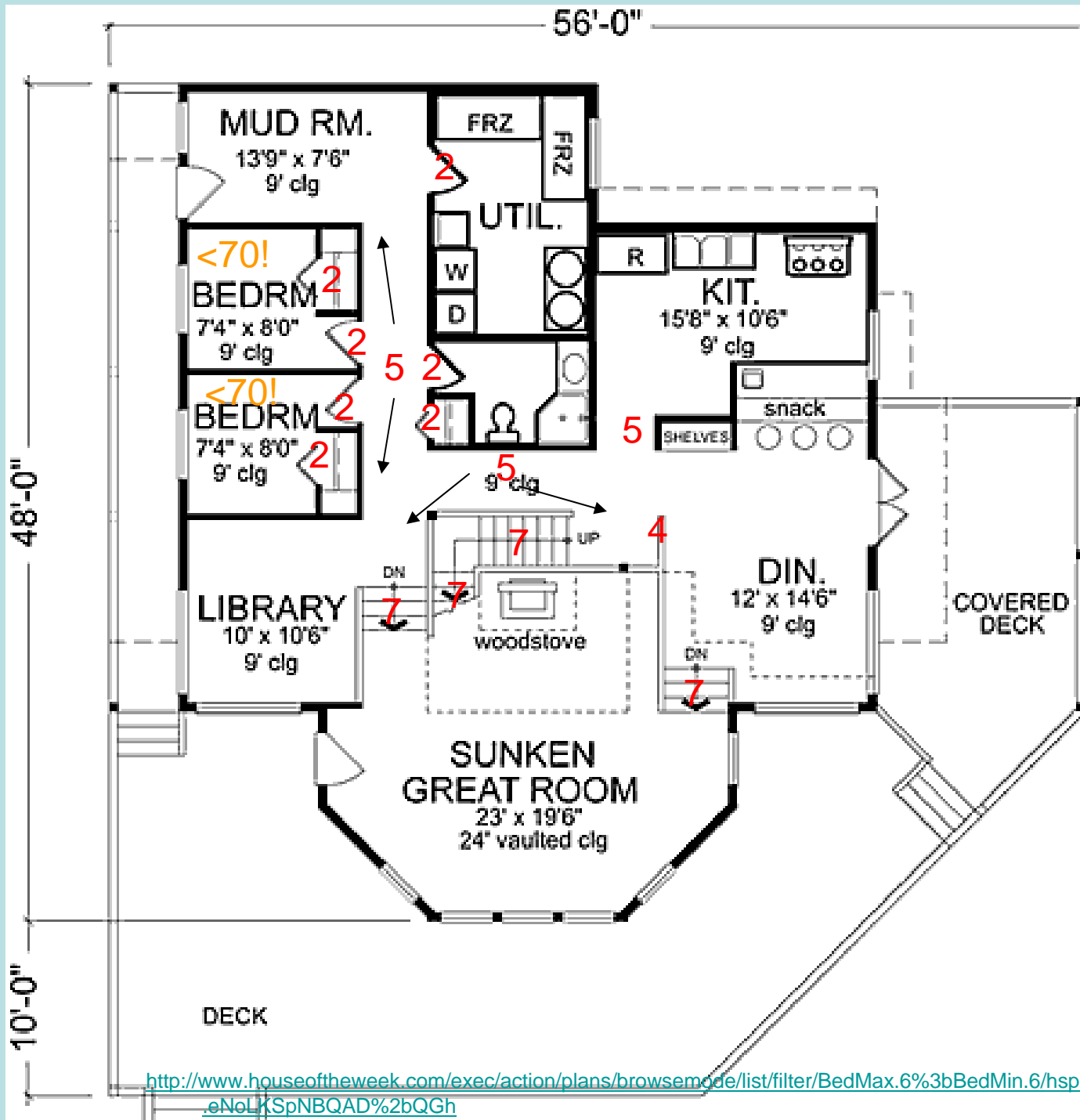
Tentative Definition of “Room” (handout)

- A room is a part of enclosed living space. Its floor area is determined by interior wall dimensions. In order to be considered for sewage flow determinations, a room shall have a minimum floor area of 70 square feet. A room is separated from other rooms by one or more of the following:
 1. a wall or a half wall (Half walls or bookcases count if built-in)
 2. a door
 3. two constrictions of at least 4” each on opposite sides of the room
 4. a constriction of at least 2 feet if extending from an angle formed by other walls and half walls of more than 180 degrees
 5. a constriction of at least 2 feet if extending from an angle of 180 degree or less formed by other walls and half walls and the distance to the next wall is 4 feet or less
 6. several constrictions of a cumulative length of at least 2 ft defining the side of a room
 7. a stairway (four steps minimum, area is proportioned between levels)

Tentative Definition of “Room”

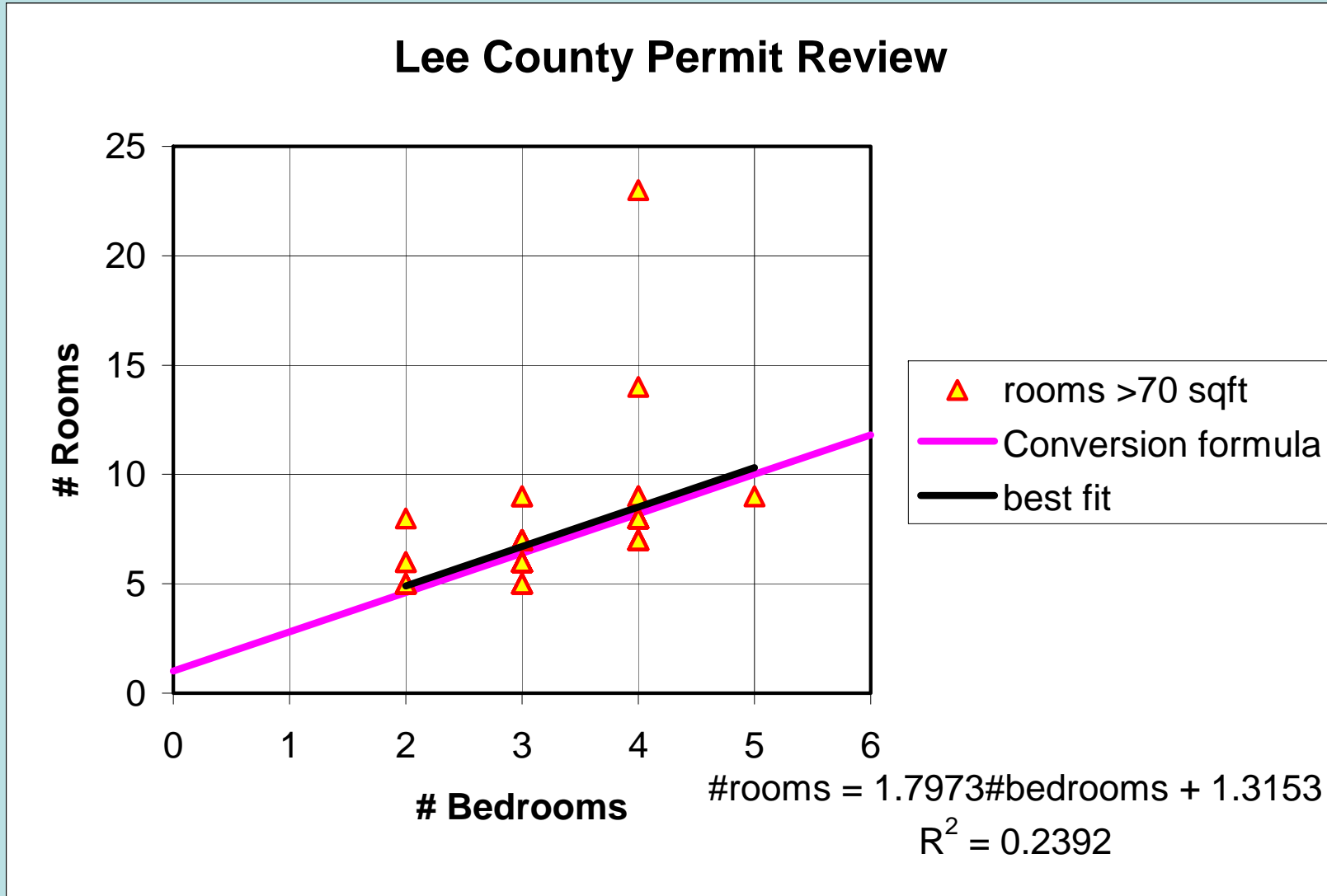
- A room is a part of the building area (=enclosed habitable area). Its floor area is determined by measurements of the interior wall dimensions. In order to be considered for sewage flow determinations, a room shall have a minimum floor area of 70 square feet. A room is separated from other rooms by one or more of the following:
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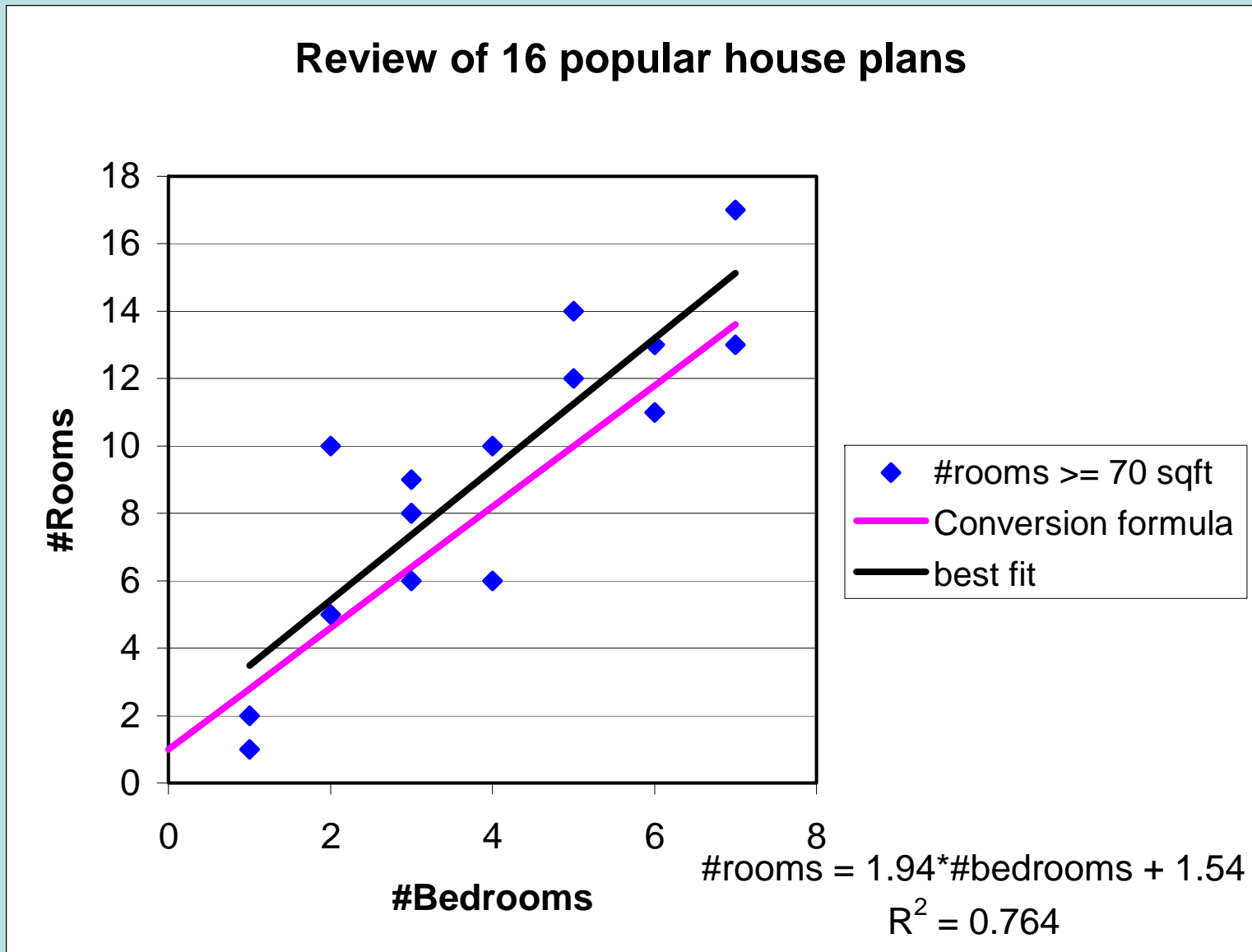


JRS-2682
Main floor

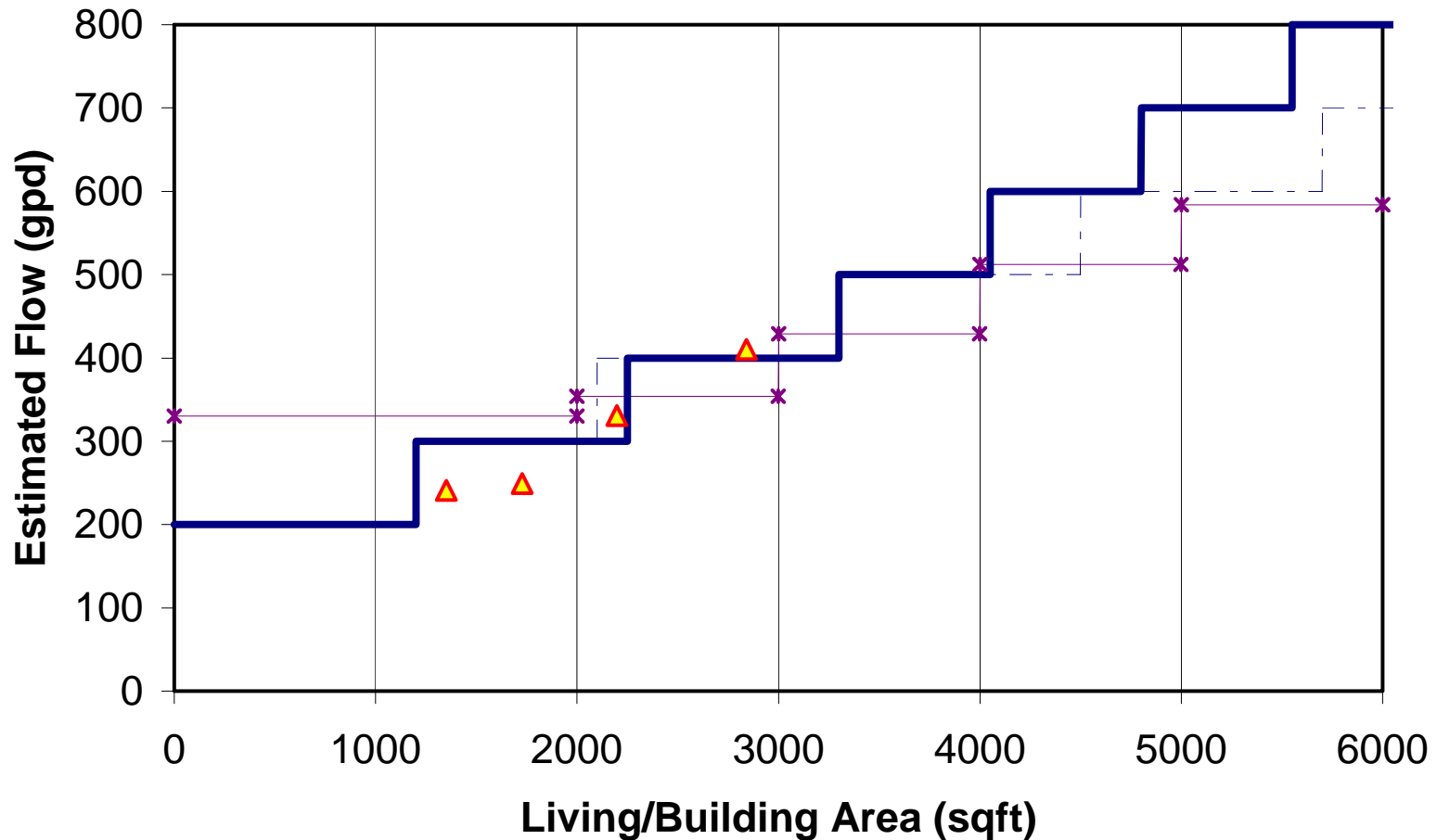
Lee County 60 permits



16 House Plans (house of the week)



Area Sizing Options from Water Use Studies



- ▲ FL 4-person household estimate (25th,50th,75th,90th%tile)
- * Christensen's 84th percentile
- FAC current
- - - alternative: 100 gpd/ 1200 sqft >2100

Remaining Issues

- How can we refine the definition, so that its results will be unambiguous and reproducible?
- How will this affect very large houses? (-> variances)
- How can this approach supplement or replace one based on building area?
- Others?