

# **Advanced Drafting: Major CAD Assignment**

Your architectural firm has been asked by Habitat for Humanity to submit a set of plans for a group of single family homes to be built in the area for local families in need. The criteria for the design are very strict. The following requirements **MUST** be adhered to in your design.

- 1) the lot size is 150ft(46m) X 220ft(68m)
- 2) must have 1 duplex and 5 detached homes
- 3) must have secure and safe play area for various aged children
- 4) adequate 'green' space for tree growth and yard areas
- 5) guest parking

In order to conserve funds these criteria will be followed for each home:

- 1) the 5 detached 1 storey homes will be identical in floor plan layout (colours and exterior finishings may vary)
- 2) the duplex (2 single homes attached together) will have a unique floor plan
- 3) maximum area per home is 1200 sq. ft (105 m<sup>3</sup>)
- 4) each home must have 3 bedrooms and at least 1 bath (4 piece) – plus kitchen and living space
- 5) uncovered parking for 2 vehicles per residence

The list of required drawings is as follows:

- 1) Lot plan – consisting of layers a) general building and road outline; b) landscaping
- 2) Floor plans – 1 for each single home and duplex
- 3) Elevations – 2 for each single and duplex (front and side)
- 4) Sectional – 1 from either type of building
- 5) An electrical layout layer for either building (use your text and CAD symbols for this floor plan layer)

## **Evaluation:**

Initial sketches	- clear pencil and paper sketches for ALL CAD Drawings showing general outlines and arrangements	15%
Lot plan	- functional and aesthetically pleasing - adequate yard and common space - follows criteria	10% building outline 5% landscape
Floor plans	- good use of space - storage considerations - rooms are sufficient size	15%duplex 10%single
Elevations	- functional and aesthetically pleasing - designed to have lasting appeal	20%(5% each)
Sectional	- use of techniques and materials to reduce initial costs and ongoing costs (heat) - conforms to building codes	15%
Electrical layer	- functional - conforms to building codes	10%