

## Material Distance



## Fire Rating



Magnet Sensor


Structural Insulated Panels
Typ fire rating. $1 / 2$ hour to hour ratings
Exterior materials
wood, plastic, metal, cement-board siding, masonry stone brick and or veneer.

## Rescheck Results

Energy Code: 2009 IECC
Location: Minot, North Dakota
Construction Type: Multi-family
Project Type: New Construction Conditioned Floor Area: 13,640 ft2
Glazing Area 8\%
Climate Zone: 7 (9193 HDD)
Compliance: Passes using UA trade-off 18.7\% Better Than Code

Maximum UA: 1335 Your UA: 1085


| Site | Area SF | Cost |
| :--- | :--- | :--- |
| 1 | 101671 | $\$ 915,039.00$ |
| 2 | 52420 | $\$ 471,780.00$ |
| 3 | 56830 | $\$ 511,470.00$ |
| 4 | 130169 | $\$ 1,171,521.00$ |
| Total | $\$ 3,069,810.00$ |  |
|  |  |  |
| Area Costs | Costs Per Square foot |  |


| Units | $\#$ | Area per unit | Total Unit Area | Cost |
| :--- | :--- | :--- | :--- | :--- |
| 4 | 168 | 1276 | 214368 | $\$ 47,160,960.00$ |
| 3 | 52 | 1116 | 58032 | $\$ 12,767,040.00$ |
| 2 | 87 | 841 | 73167 | $\$ 16,096,740.00$ |
| 1 | 63 | 667 | 42021 | $\$ 9,244,620.00$ |
| Total Cost |  |  |  | $\$ 85,269,360.00$ |

## Land Cost Estimate

Land Acquisition - \$3,069,810.00
Project Cost Per Square Foot - $\$ 9$
Premium for Parking Site
Construction Contingency Fee 5\% - \$4,263,468.00
Design Fee 10\% - \$8,953,282
Cost Fee - 101,555,920
Financing Bank 6\% - \$6,093,335

## Recycled Materials

1. Fiber Cement Siding
2. Wood from barns and rapid renewable source From the source below I counted approximately 150 cities then counted the first 10 towns. Those towns had 13 deserted house or barns. I then calculated approximately 200 usable bars or deserted homes only in ND. SD,MN,MT,WY and Canada would still fall within the 300 limit.
3. Carpets from post consumer Shaw
4. Blacks farm wood- Flooring


## Building Cost

Type 3 - \$220.00 Per Square Foot
The exterior of a building constructed of SIPs can be finished like any wood-frame building: combustible (wood or plastic) or noncombustible (metal or cement-board) siding, masonry (stone or brick) veneer, or other materials.



Units Avallable

n additon to the conformity of the unit no overall shape of the buildings will be the same. Materials will vary creating a uniquie neighborhood down town Minot.

Site 1-2 Units \# People | 4 | 102 | 408 |
| :--- | :--- | :--- |
| 3 | 33 | 99 |

| 3 |
| ---: |
| 23 |
| $2 \quad 24$ |


|  | 24 | 48 |
| :--- | :--- | :--- |
| 1 | 21 | 21 |
| Total | 180 | 576 |


Pand


Basement - Parking

$|$|  |  | IIIII |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |  |  |  |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |

4th Floor



5th Floor


2nd Floor
An

3rd Floor


Roof Top Garden


## Variety of <br> Design Forms



## The Aftermath

Reducing Urban Sprawl
Concentrate area affecting less land Adding greens space to the environment Preserve the landscape / Farms Less risk of empty house


The Swap

Empty units convert to Commercial, Retail or Restaurant spaces. They may also be bought for more space from neighboring units


## Elevations

West
East


North


South


Natural


## Systems



Structure


HVAC


Lighting


Horizontal Section


## Systems



Structure


Longitudinal Section



M

Rhino/
Grasshopper


