

## 410 First Site Redevelopment in the Flood Fringe

- The redevelopment of this site will remove two houses from the flood fringe. The first floor elevations of these houses are 785 and 787. Their primary use is office, and an asphalt parking area for 20 cars covers much of the balance of the site. There is currently no storm detention, and as such all water sheet flows off site directly into the city storm system.
- This site falls within jurisdiction of the MDEQ, and as such all construction will need to follow the applicable FEMA bulletins on development in a flood hazard area. In addition to the necessity of building the first floor at least one foot above the base flood elevation (100 year flood event), and flood proofing or installing all mechanical equipment above this elevation, the project as designed has 11.4 times the amount of required opening area below the base flood elevation to allow water to flow during a flood event.
- The 100 year flood elevation level at this site is 789. The 500 year flood elevation level is 790. The first floor of the residential units in the 410 First Street redevelopment project is 793, or 3' above the 500 year flood elevation level.
- As part of the project, there will be a net cut of 1100 cubic yards of material, the equivalent of 222,000 gallons of water. This is not part of the new storm detention system.
- This is not a small project requiring only storage of first flush events. In addition to storing 120% of a 100 year rain event in the new storm system on site, the project lies within the floodplain of Allen Creek, and as such was reviewed by the Washtenaw County Water Resources Commissioner's office. As part of the approval, the County acknowledged that Allen Creek may be at full capacity during even minor rain events, and thus required this project to assume a "no outlet" condition during rain events. The new on site storm detention system is oversized so that while the Allen Creek is at full capacity, the onsite detention system will have the capacity to store water until the water can be released into the City system.
- In coordination with city staff, this project has been designed to pick up off site drainage that currently sheet flows across the site and directly into the city storm system during rain events. This off site flow will be directed to the new city rain garden for infiltration. Attached is a drawing of the entire surface area of rain water that will be directed into the on site detention system and city rain garden, rain water that currently flows directly into the city storm system, a total land area of 0.44 acres