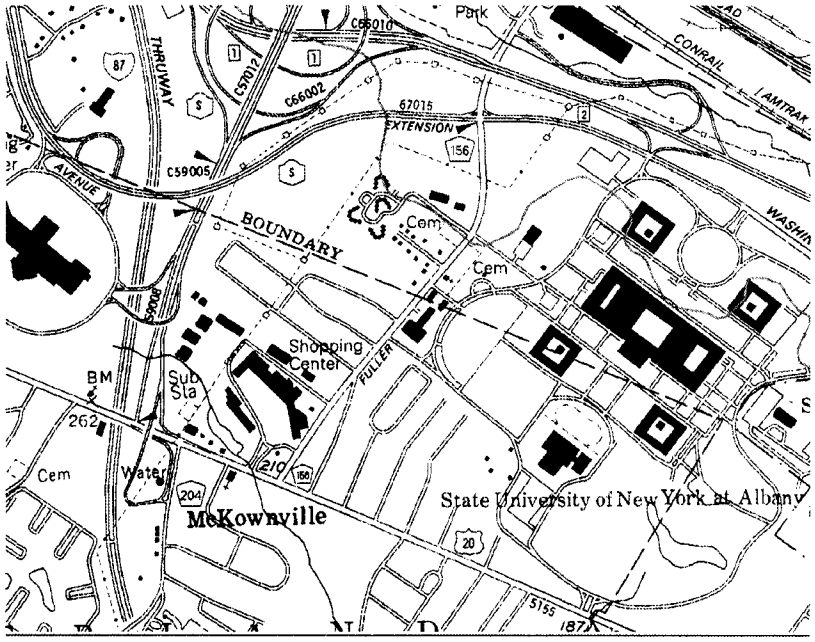
From: Don Reeb
Subject: NanoTech Storm Water Runoff
Date: March 19, 2009



1- Fuller Rd btw Wasshinton Ave and Rt 20 (CESTM in oval, watershed divider in tan)

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Walking the NanoTech site is most instructive. That the site, from Tricentennial Drive to Washington Avenue Extension and from Fuller Road to the Northway, is mostly paved may well be the first observation. All of this concrete, asphalt directs and guides the surface waters.

The first question is whether more of the surface water on the NanoTech plot is directed south than it was before the plot was covered with man-made materials—and the second is if more of it is being directed south, is it helping or harming the flooding of Western Avenue in McKownville.

The Washington Avenue Extension side of the NanoTech site shows a wide and deep culvert or swale running the length of the site, from Fuller Road north to the Northway. Similarly, there is a culvert on the Fuller Road side of the site from the Fuller Road Washington Avenue Extension intersection running south about half of the distance to Tricentennial Drive, the remaining half having a large hillock separating the parking lot of NanoTech from Fuller Road.

In all likelihood, the two culverts were created when this area was still a grassy field. It implies that the swales were useful to direct the surface water—again implying that the

surface water flowed away from the Tricentennial Drive towards the corner of Fuller and Washington Avenue Extension.

2- The CESTM area in 2001 (topo contours in black, watershed divider in tan)

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Near the Fuller Road and Washington Avenue Extension intersection there are two catch basins in Fuller Road adjoining the NanoTech plot, another in the grassy swale (this one is partially caved in with an orange cone covering a deep depression in the soil) and two more catch basins on the Washington Avenue Extension highway adjoining NanoTech. In addition, the Washington Avenue Extension side of the site, where the culvert nearly always contains standing water, there are several more catch basins. In addition, there are more than a couple of drainage type pipes extending from the NanoTech plot into the swale on the Washington Avenue Extension side. There can hardly be any other purpose for all of these than to direct the surface water towards Patroon Creek.

Before the State University was located on the Albany Country Club site there was no Washington Avenue Extension. After the Thruway was constructed in the 1950's and 60's there was a Thruway Exit 24 entrance type road beginning about where the intersection of Fuller Road and Washington Avenue Extension is located. This was, of course, before the Northway was built or I-90 was built. The culverts running towards Patroon Creek may have been installed prior to the construction of these large highways.

Not only is there the above evidence that the grassy fields that NanoTech presently occupies originally sloped towards the swales and the northeast corner of the plot, there were three large sand dunes running northwards from the Jewish cemetery to the Northway—they have been leveled .Tricentennial Drive—what had been Madison Avenue Extension— with its dunes along the southern or left hand side as you enter the

NanoTech site---was the boundary line between the southern slope and the northern slope of the 96 acre University owned plot, only a small portion of which is occupied by NanoTech. The southern edge of these dunes of course directed the surface water to the south.

3- The CESTM area in 2001 (topo contours in black, watershed divider in tan)

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Now walking around the land behind 303 and 275 Fuller Road, it becomes obvious there are about six or so naturally occurring shallow swales that carry storm runoff from behind Warren Street east to the catch basin located on Fuller Road. (Any effort to pipe the stream in this area must contend with where the water in these swales is going to go.) Since the construction of Freedom Quad and the construction of a "dry" holding basin from the runoff from Freedom Quad parking lots, a stream path has been created that runs from the "dry" holding basin to the Fuller Road catch basin. With the large addition of the surface runoff from the NanoTech parking lots emptying into the "dry" basin, the stream has become larger and flows more than full at times.

The water that enters the Fuller Road catch basin flows east under Fuller Road into a County maintained pipe which then flows southwards into the storm water pipes under Western Avenue. There is good reason to suppose that the flooding of Western Avenue is increased because of the under maintenance of the "dry" basin and the increased runoff entering the "dry" basin from the NanoTech parking lots. Whether this rerouting of surface waters is "negligible" in its impact on Western Avenue as claimed by the Hershberg memo depends so much on the redesign of the Stuyvesant flood area.

The "dry" catch basin should be returned to its original use—for Freedom Quad--and better maintained. The storm runoff from NanoTech might better be redirected north to Patroon Creek where the grassy fields originally directed the surface waters from that plot.

If this is too costly, then the University at Albany should accept the surface runoff as part of its storm water system and in which case the runoff would flow to the pond on the campus and enter the Krumkill generally behind Sutters and the Best Western motel.

There are three storm water catch basins on University property between Fuller Road and the University heating plant building and another four catch basins inside the perimeter fence/wall of the heating plant building nearest Fuller Road. All of these are probably connected to the University storm water system. The cost of using these to accept the surface runoff from Freedom Quad and NanoTech may not be horrendous since they are all quite close to 303 and 275 Fuller Road.

Western Avenue in McKownville is a mess of storm water problems. McKownville does not want the surface water runoff from Nanotech. It has far too many storm water runoff problems of its own to accept additional ones from anywhere.