

**TOWN OF KENT**  
**Town Board Workshop/Meeting**  
**April 2, 2013/7:00 PM**

**Announcement – Community Service Recognition Night**

**Public Hearing – Amendment of Cell Tower Lease at Smokey Hollow Court**

**Workshop**

1. Petition for Change of Zoning
2. Recreation
  - a) OCFS Grant Resolution
  - b) Baseball Concession Stand
  - c) Seasonal Personnel
  - d) Start Smart Baseball Personnel
3. Public Sector HR Consultants Contract
4. Putnam County Real Property Contract
5. Release Erosion Control Bond – Mannion, 76 Smalleys Corner Rd, TM #21.5-1-18 \$3,125
6. Accept Erosion Control Bond – Chuang Yen Monastery, TM#19.-1-40.1 \$16,844 and Inspection Fee \$1,000
7. Kent Police Department
  - a) Purchase Laptop for Police Cars
  - b) Budget Transfer – Vehicle Repair
  - c) Amend Resolution Fence
  - d) Accept Resignation –Police Officer
  - e) Weapon Replacements
8. Independence Day Fireworks
9. Advertise - Lifeguard Positions
10. GASB Amend Resolution
11. Bid – Junk Cars
12. Lake Carmel Park District – Cowboy Sand

**Meeting**

13. Salute to the Flag
14. Roll call
15. Approval of Vouchers and Claims
16. Recreation
  - a) OCFS Grant Resolution
  - b) Baseball Concession Stand
  - c) Seasonal Personnel
17. Amend Resolution – Kent Police Department Fence
18. GASB – Amend Resolution
19. Bid – Junk Cars

**Public Hearing – Amendment of Cell Tower Lease at Smokey Hollow Court**

The Town Clerk read the notice of Public Hearing. Town Counsel Curtiss explained based on the meeting they had with NYC DEP, the applicant agreed to move the site from the existing site which was on an adjoining piece into basically the parking lot of the Highway Garage. The reason for that move was it takes it out of the wetland buffer and doesn't create anymore impervious surfaces there was an issue about gravel and impervious surface. It basically was requested by NYC DEP to conform to their regulations. Supervisor Doherty read the rules and procedures of a Public Hearing.

Robert Gaudioso of Snyder & Snyder on behalf of Homeland Towers stated they are requesting a lease amendment for the subsequent change of the new location of the facility to eliminate the need for a DEP variance. This was based on discussions with DEP and would greatly improve the project and also move the proposed facility area outside of the 100 foot wetland buffer. The proposed area outside of the wetland buffer minimizes the size of the lease area. Originally as approved the existing lease consisted of 5,625 square feet the new proposed lease area is about half, 2,836 square feet which is significantly smaller. With that lease they are eliminating a need for a SPEDES permit and DEP variance. This evening they are simply asking to resubmit the lease amendment.

Councilman Greene asked about the plans and the scale. Mr. Gaudioso and Councilman Greene reviewed the plans and measurements from the property line. There was a conversation regarding the scale of the old and the new proposed location. The shaded area being the asphalt and other being gravel. Councilman Greene had questions regarding the bay area, tractor trailers unloading and the relocation of the area in question to a burrow on the property.

Peter Bruen a resident of Smokey Hollow Court stated they were shocked to learn last month that Homeland Towers wants the location of the tower moved 95 feet north going from one bad location to another bad location. Last month prior to the meeting, he checked Homeland Towers' site plan and he found the stream that runs under the Highway Dept. not shown on the map it shows an ingress and egress of the stream and nothing in between. He has 10 questions he'd like answers to. (1) Why is the stream that directly feeds the reservoir hidden on the site plan? (2) Isn't it important to know where the stream is located before excavation start? (3) Why would a cell tower being placed on a flood zone? He's not sure if anybody is aware this new site has flooded 5 to 7 times in the past. It has flooded so badly the Highway Dept. paved it, got torn up and washed down to 301 and leaves trenches that are 3 to 4 feet deep that is where the tower should be he asked. (4) What is the dollar amount of Homeland Towers' liability insurance in case of structural failures, ice fall, and injury and/or kill someone? (5) Where else in the Town of Kent is a cell tower located so close to a road and so close to homes? (6) Where else in the Town of Kent is a cell tower located where school children must walk so close to one. (7) What about the safety of our Highway Department employees who must work almost directly under it especially in bad weather. (8) The reason Sedgewick Golf Club and Clearpool did not want a cell tower on their properties was due to their not wanting an electromagnetic radiation near them so why put a cell tower within 100 feet of at least 2 houses and within 500 feet of 5 other houses. (9) Why isn't any of our attorney's opposition communications posted on the Town's web site? (10) What about the vibrations caused by the heavy equipment used right on the same site including tractor trailer, loading and unloading material. He spoke to the Fire Commissioner Howard Carpenter with Kent Fire Dept. and was told there is no issue with the emergency radio communications along this side of 301 to Clearpool they utilize the repeater on Nimham Mt. He said we know who the Chief of Police reports to and questioned his statement. He said money should not be more important than people's health don't let politics dictate your decision. Vote with your conscience and ask yourselves would you want to live so close to a cell tower. Use common sense and vote no, by your oath you were elected and sworn to protect all rights of its citizens. He submitted pictures of the Fire Department's Cell Tower with health warnings posted and a statement to the Town Clerk to add to the records.

Mrs. Daniel Deerman the owner of 12 Smokey Hollow spoke and stated she sent an email a month ago and wanted to explain her situation. She and her husband, John a Sergeant with the Carmel Police Department bought the house in December of 2012; it was a terrible thing to find out a cell tower is being installed right across from their driveway two weeks before closing. She has a 2 and a 5 year old they are the youngest ones in the area. They are planning to stay for 20- 30 years it was their dream house this was supposed to be the best times in their life. They are worried about health effects. There is data supporting both ways, it is risky; the truth of the matter is no one really knows what the health side effects are. She doesn't want to find out the affects of it on her children 20 years from now. She is asking as a mother and a member of the community to take this in consideration along with the value of their homes. She works in the real estate industry and has sent an e-mail out to 100 realtors in the area and is receiving interesting responses, all in unison. She hoped the board is not considering the Lane

CC  
TB  
Homeland  
Gaudioso  
Wilson

My name is Peter Bruenn. We were quite shocked to learn last month that Homeland Towers now wants to move the site location of the tower 95 feet north, going from one bad location to another bad location. Last month, prior to the meeting, I checked out Homeland Tower's site map. I found it odd that the stream that runs under the highway dept. was not shown on the site map. It showed the ingress and egress but nothing in between. So I have 10 questions that need to be answered on April 16th:

- 1) Why is the stream that directly feeds the West Branch reservoir omitted from the new site map?
- 2) Isn't it very important to know where that stream is before excavating the site?
- 3) Why would a cell tower be placed in a flood zone? The new site is where at least 5 to 7 times in the past has flooded. It has flooded so badly that the highway dept. pavement is torn up and washed down to the pipe that runs under Rt. 301. It also left trenches that were up to 3 to 4 feet deep.
- 4) What is the dollar amount of Homeland Towers liability insurance in case of structural failure or if ice falls off and injures or kills someone?
- 5) Where else in the Town of Kent is a cell tower located so close to a road and so close to homes?
- 6) Where else in the Town of Kent is a cell tower located where school children must walk so close to one?
- 7) What about the safety of your own highway dept. employees who must work almost directly under it, especially in bad weather?
- 8) The reason the Sedgewood Golf Club and Clearpool did not want a cell tower on their property was due to their not wanting the electromagnetic radiation near them. So why put a cell tower within 100 feet of 2 houses and within 500 feet of 5 other houses?
- 9) Why isn't any of our attorney's opposition communications not included in the Town's website? That is not right!
- 10) What about the vibrations caused by the heavy equipment used right on the same site?

I spoke with Howard Carpenter, a Fire Commissioner with the Kent Volunteer Fire Dept. He told me that there is no issue with emergency radio communications along this side of Rt. 301 to Clearpool. They use the repeater on Ninham mountain. We all know who the Chief of Police reports to and consequently, we question his statement regarding communications with the Police cars.

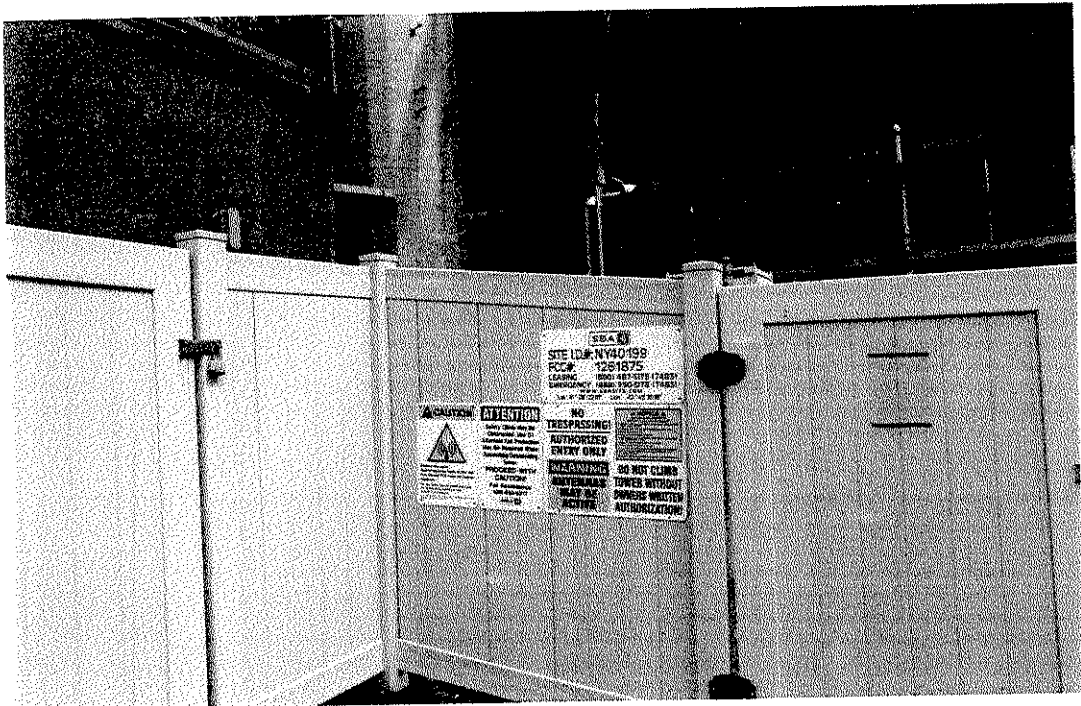
FYI, about 7 years ago, there was a stream bed that lead directly into a pond that then drained into the pipe that runs under Rt. 301. These past years has seen tremendous storms that have washed the highway dept. pavement, item 4, gravel and dirt directly into the reservoir stem every time! Now the pond is almost completely filled in as well as the stream bed that once existed. This stream runs 12 months per year.

It is apparent who really wants this tower here. Money should never, ever be more important than people's health and home values. If placed here, it will show that the Town Board really doesn't care about their residents. Don't let politics dictate your decision. Vote your conscience and ask yourselves would you want to live so close to a cell tower? Use your common sense and vote no and uphold the oath you all swore to when you were elected. You know the oath that says you will protect your residents. Think about it!

By Hand 4-2-2013









# An Analysis of Cell Tower Ice Falls

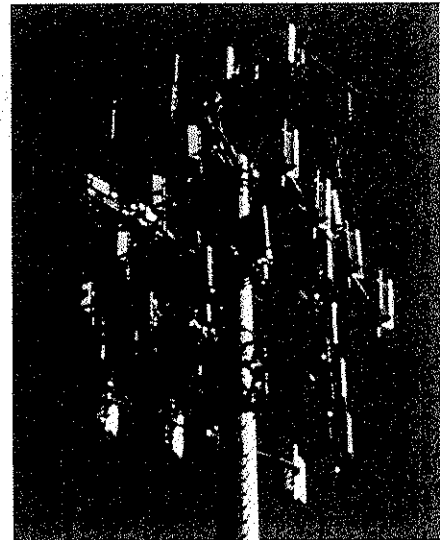
([www.symdesign.us/icefall](http://www.symdesign.us/icefall))

Dr. Dennis L. Rogers\*

CC  
7B  
Homeland  
Gund 1080  
Wilson

**Abstract:** The following is an estimate of the effects of ice falling from cell towers. The velocity of impact and distance of impact from the tower are calculated for the type of ice fragments expected due to freezing rain on the flat surfaces of the tower and antenna structures. These calculations are not intended to be comprehensive but do show the magnitude of effects to be expected.

**Introduction:** Freezing rain can cause ice to build up on the flat surfaces of the antenna elements arrayed around cell phone towers and also on the tower itself. The photo to the right shows such an antenna array. Since these surfaces are oriented vertically one would expect the ice to form primarily in almost flat sheets oriented vertically to the ground. The thickness of these sheets could be up to 6 cm thick due to freezing rain. In what follows I will consider the fate of such a sheet of ice that has detached from the cell tower surface. This could be due to heat from the antenna currents melting a thin layer next to the tower or antenna element. Indeed such ice falls have been observed.



Cell Phone Tower Antenna array in Kent NY.

**The Physics:** The sheet of ice will be subject to two forces: the downward force of gravity and the force exerted by wind resistance. The force of gravity is constant and equal to:

Eq 1.  $F_{grav} = Mg$

where  $g = 9.8 m/s^2$  is the acceleration of gravity, and  $M$  is the mass of the ice sheet in kg. In what follows I will assume the use of MKS units in the calculations.

The force due to wind resistance depends on the actual geometry of the piece of ice but is roughly proportional to the area exposed to the wind,  $A$ , the square of the velocity,  $v$ , at which it falls and the drag coefficient,  $C_d$ , which depends on the exact shape of the ice fragment. Using the EIA-222-C standard for calculating wind forces on antenna structures, the wind force can be written :

Eq. 2  $F_{wind} = F_0 A v^2 C_d$

where  $F_0 = 0.26 \frac{nt-s^2}{m^4}$

**No Wind:** The simplest case is where there is no wind blowing. The wind resistance is then only due to

By Hand 4-2-13

the velocity at which the object is falling. The downward acceleration,  $a$ , is then given by:

$$\text{Eq. 3} \quad a = \frac{dv}{dt} = \frac{F_{total}}{M} = \frac{-Mg + F_0 A v^2 C_d}{M} = -g + \frac{F_0 A v^2 C_d}{M}$$

For the thin sheets oriented vertically, the second term, the wind resistance force, will be negligible and the ice will fall primarily due to the force of gravity. The cases in which the ice sheet is not oriented vertically will not be considered. Assuming a tower height of 50 meters (about 150 ft) and only gravitational forces, the ice sheet would reach a velocity of 31 m/s or about 67 mph before hitting the ground. Assuming the flat surfaces of the antenna structures are 2 x 1 meters in size and that the ice is 6 cm thick this would result in a piece of ice weighing approximately 108 kg (237 lbs) striking into the ground with a speed of 67 miles per hour.

**With Wind:** With wind, of course, the ice can move in the direction of the wind before reaching the ground. A sheet of ice can experience considerable force from the wind, especially if the flat side of the sheet is perpendicular to the wind. In this case there is an equation of motion for both the vertical direction and the direction in which the wind is blowing. Vertically the equation is the same as in the no wind case:

$$\text{Eq 4.} \quad a_z = \frac{dv_z}{dt} = -g + \frac{F_0 A v_z^2 C_d}{M}$$

while in the direction of the wind:

$$\text{Eq 5.} \quad a_x = \frac{dv_x}{dt} = \frac{F_0 A (v_w - v_x)^2 C_d}{M} - \frac{F_0 A v_x^2 C_d}{M}$$

where now  $v_w$  is the velocity of the wind and  $v_x$  is the velocity of the ice in the direction of the wind. The first term is the force on the windward side of the sheet and the second term is the force on the opposite side of the sheet due to normal wind resistance. The amount the ice travels in the direction of the wind depends on the thickness of the sheet, with thinner sheets traveling further. These equations have been solved to determine the amount of travel in the direction of the wind that the ice sheet would travel before impacting the ground. Again assuming a sheet 2m x 1m, the figure below shows the distance from the tower the ice sheet would fall for three different thicknesses and weights:

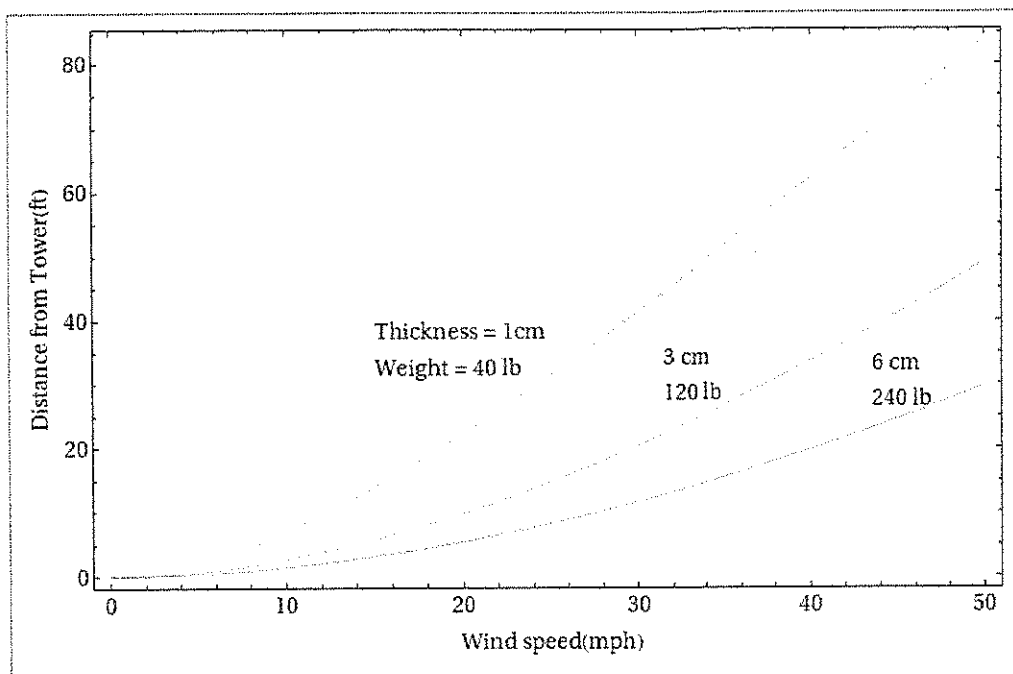


Figure 1. Distance of ice fall from tower vs wind-speed for three different thicknesses

As in the no wind case, the ice sheet would be traveling at approximately 67 mph on impact. Obviously, thinner sheets could travel further from the tower.

**Summary:** This analysis has shown that for one case, that of thin sheets of ice falling from the vertical part of the antenna structures, the ice fall can be a dangerous problem with the ice fragments weighing hundreds of pounds impacting the ground

at almost 70 mph. It also shows that wind conditions can cause these fragments to fall as much as 80 feet from a 150 foot tower with smaller, thinner sheets falling even further distances. Of course, as the photo to the right illustrates, in reality the



Cell Tower Ice build up

problem can be more complex with the ice fragments being composed of a combination of both snow and ice and the ice build up being more extensive than envisioned in this analysis with possibly more severe consequences. Therefore care must be taken in

positioning these towers to place them sufficiently distant from other structures and places where people may live and work.

\* Dr. Rogers received his Phd in theoretical solid stated physics from the University of California at Davis in 1977. Since then he has worked at IBM Research in Yorktown Heights NY for 27 until 2005. Since then he has formed the company Symbiotic Designs and is developing cell phone applications and energy saving devices.

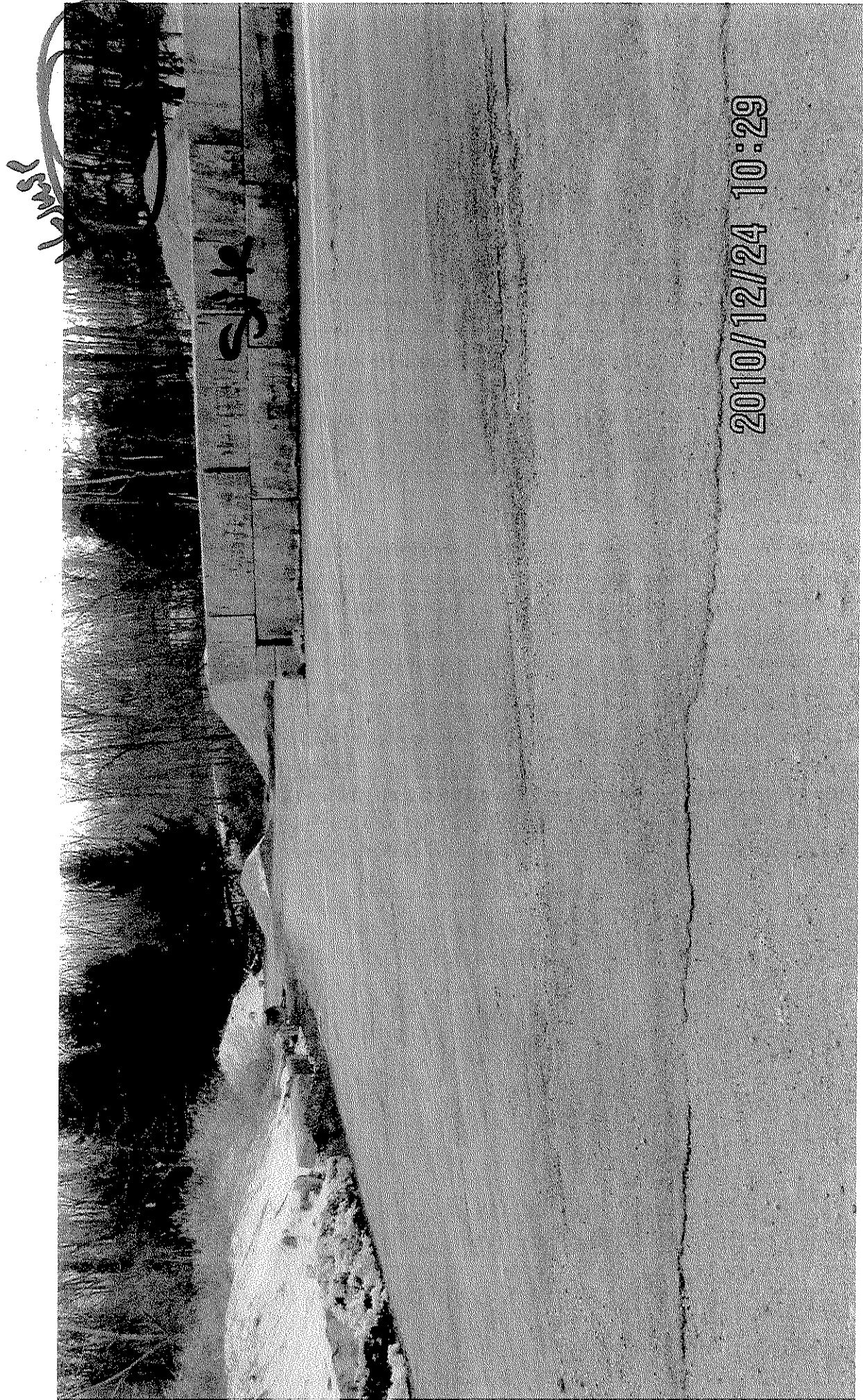
Tuesday, April 2, 2013  
To: Town of Kent  
From: Lynda Davidson

At the first town meeting on November 27, 2012 I brought to this board's attention my concerns with the flooding that occurs on Smokey Hollow Court and spoke about the times where the road and town garage lot completely lifted and torn apart after such flooding. At these times, the town garage had to put many big metal plates over the torn up road and parking lot in order to drive in and out until they were able to fix the affected areas. This leads to my doubts of the areas stability to build a structure and supporting buildings of this size. This new proposed site for the proposed cell tower is in direct position of this problem. You must give great thought to this when approving this new site location and consider the potential fall of this tower when this flooding occurs again and take the safety of the residents and town garage employees into consideration.

In addition, this new site proposed – 100ft from the original proposed site - is now even more of a visual eyesore (if that was even possible) and positioned in the middle of an operational town garage parking lot and now even closer to our neighbor's homes. By Homeland Towers trying to avoid and skirt around issues with DEP they again have not considered the impact that this tower is going to have visually/physically or financially to the residents in this neighborhood or even consider the safety of the town highway garage employees.

I am submitting to you copies of pictures taken of the new proposed site. In these pictures, you can clearly see the many patch jobs the town garage must make to repair the road after a flooding. In addition, I have marked the site and clearly circled the closeness of the many homes around it. I find it disgraceful that a company such as Homeland Towers has such little integrity that it would jeopardize the health and well-being of 5 small children and their families merely to make a buck.





2010/12/24 10:29



Sik

12.12.2012 10-15





12-12-2012 10:15







515

12.12.2012 10:16



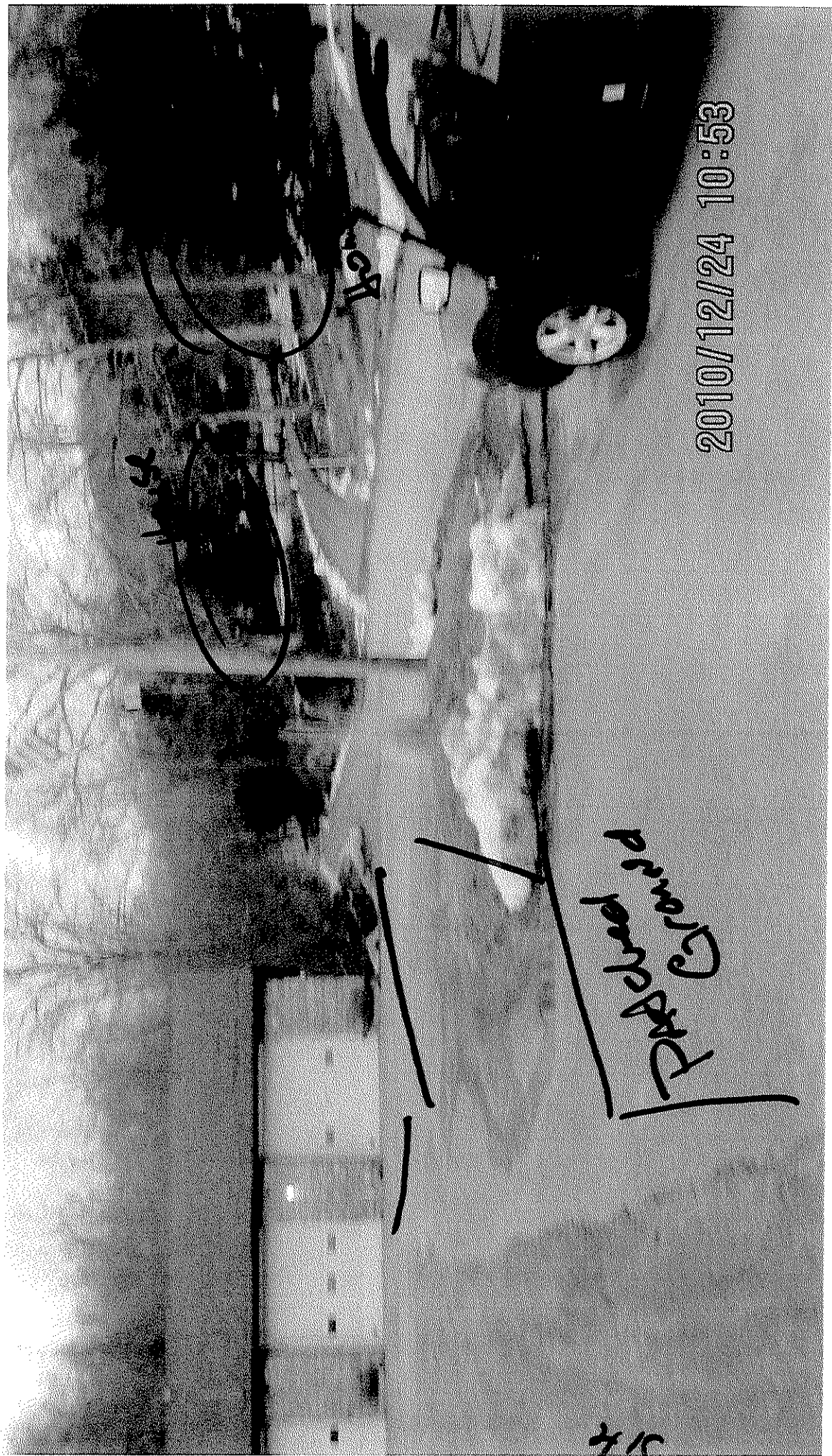


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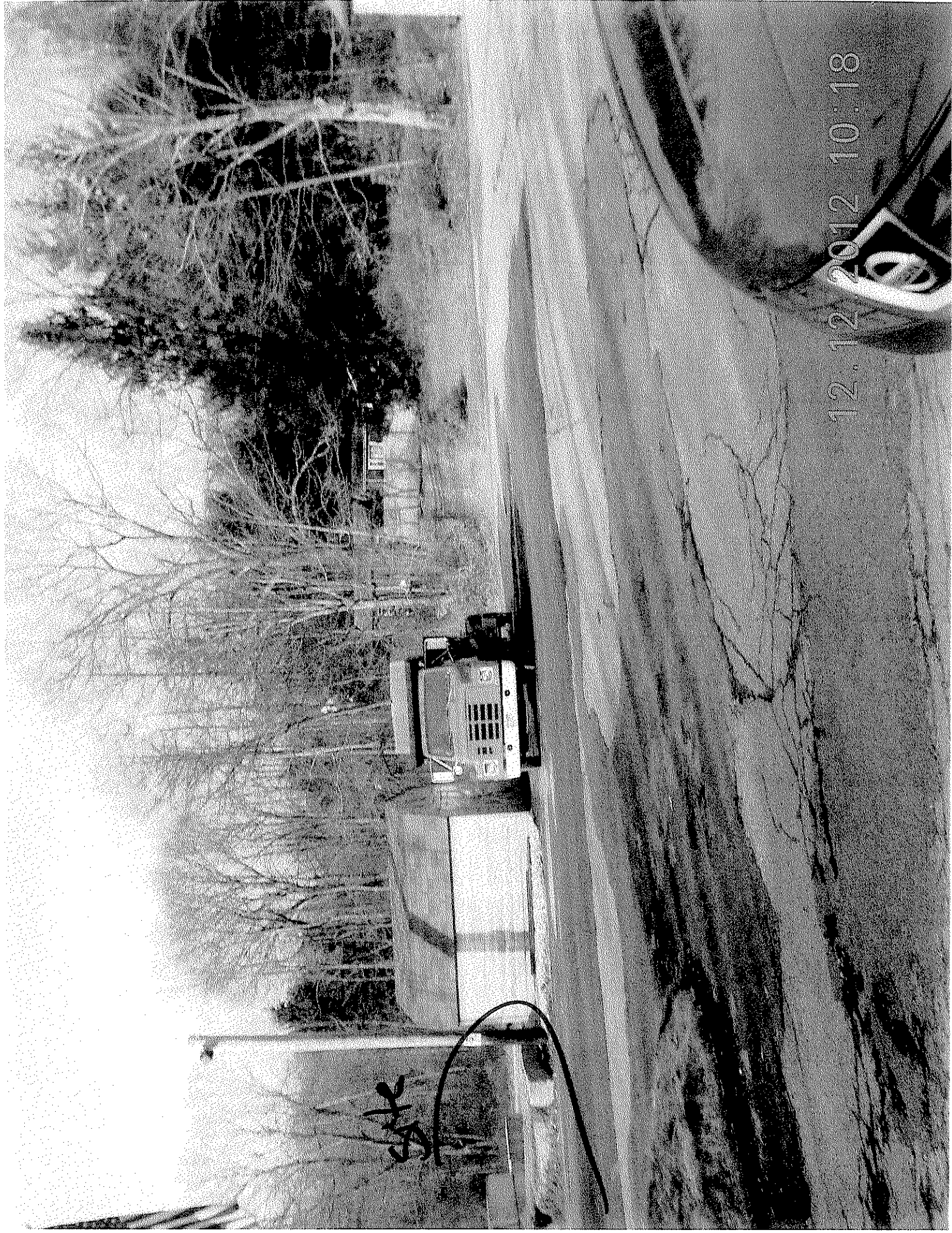
Patched  
Crown



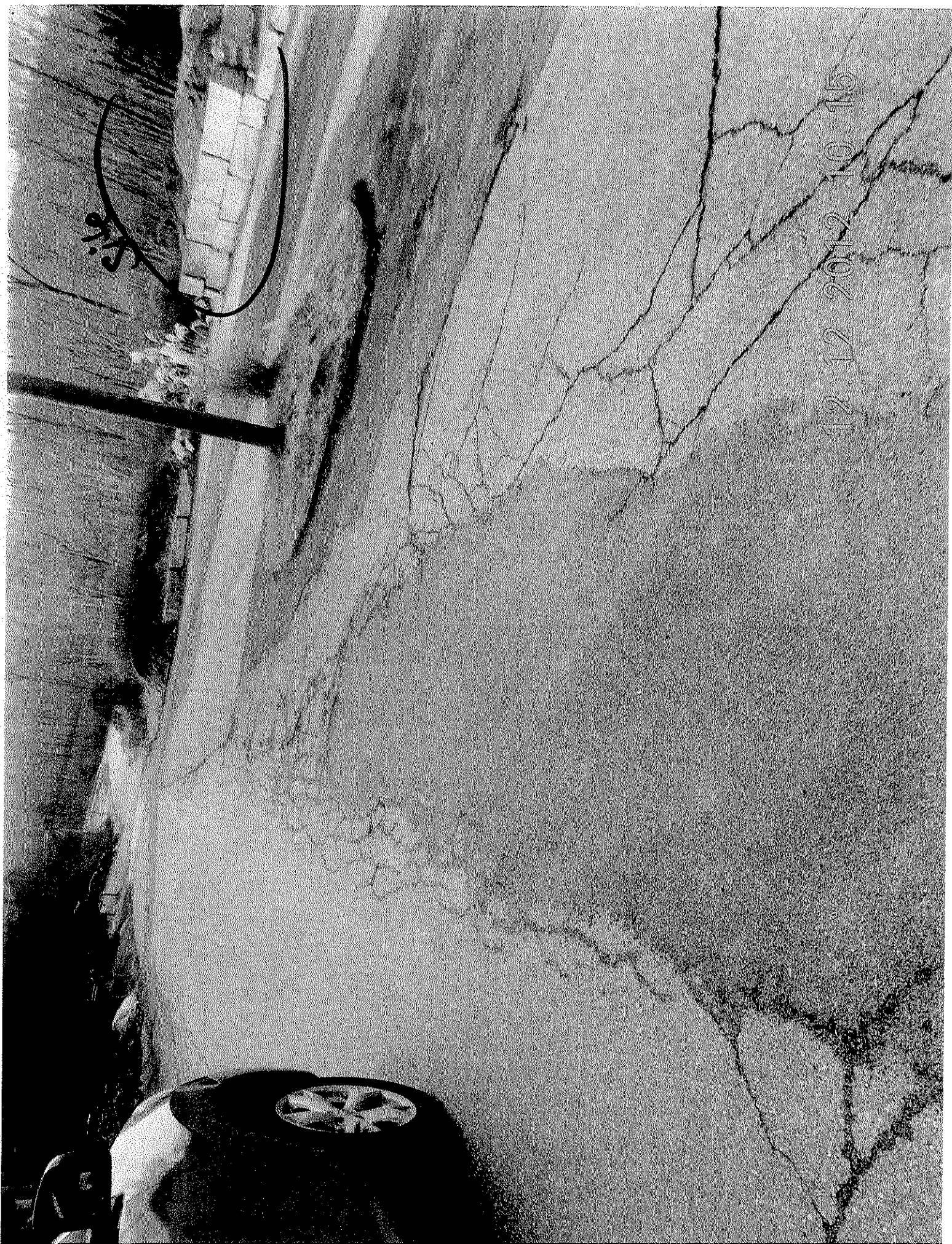


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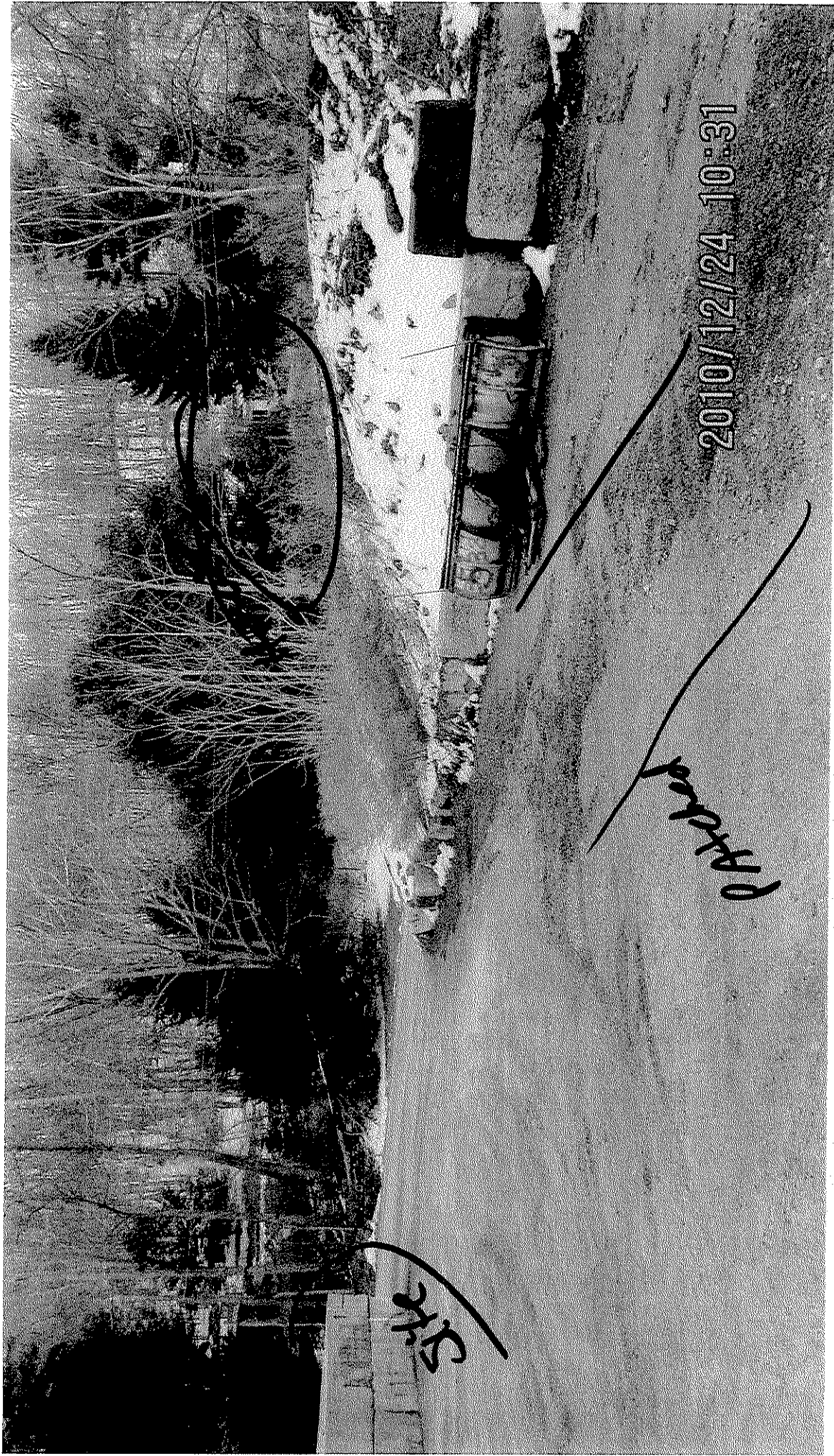




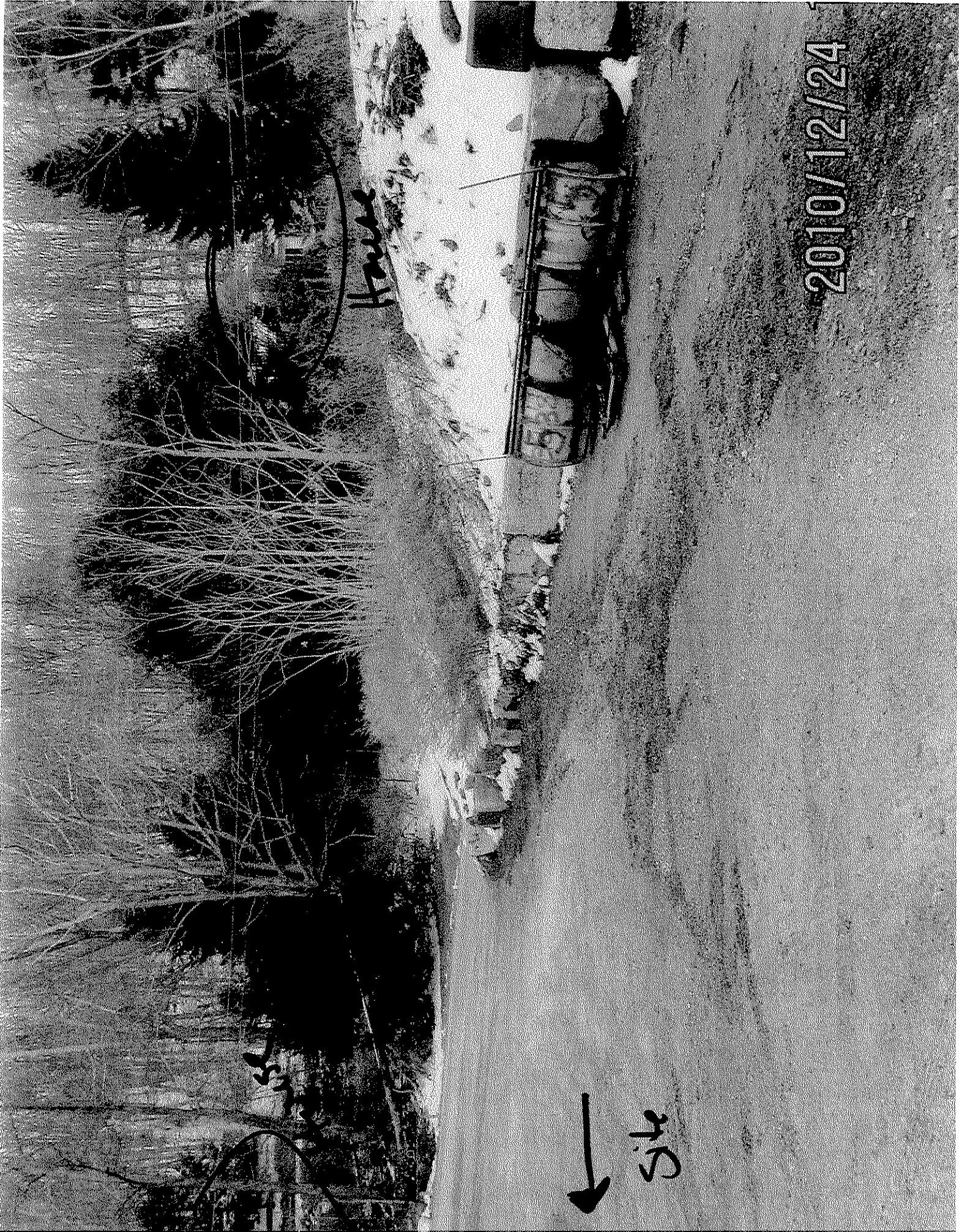


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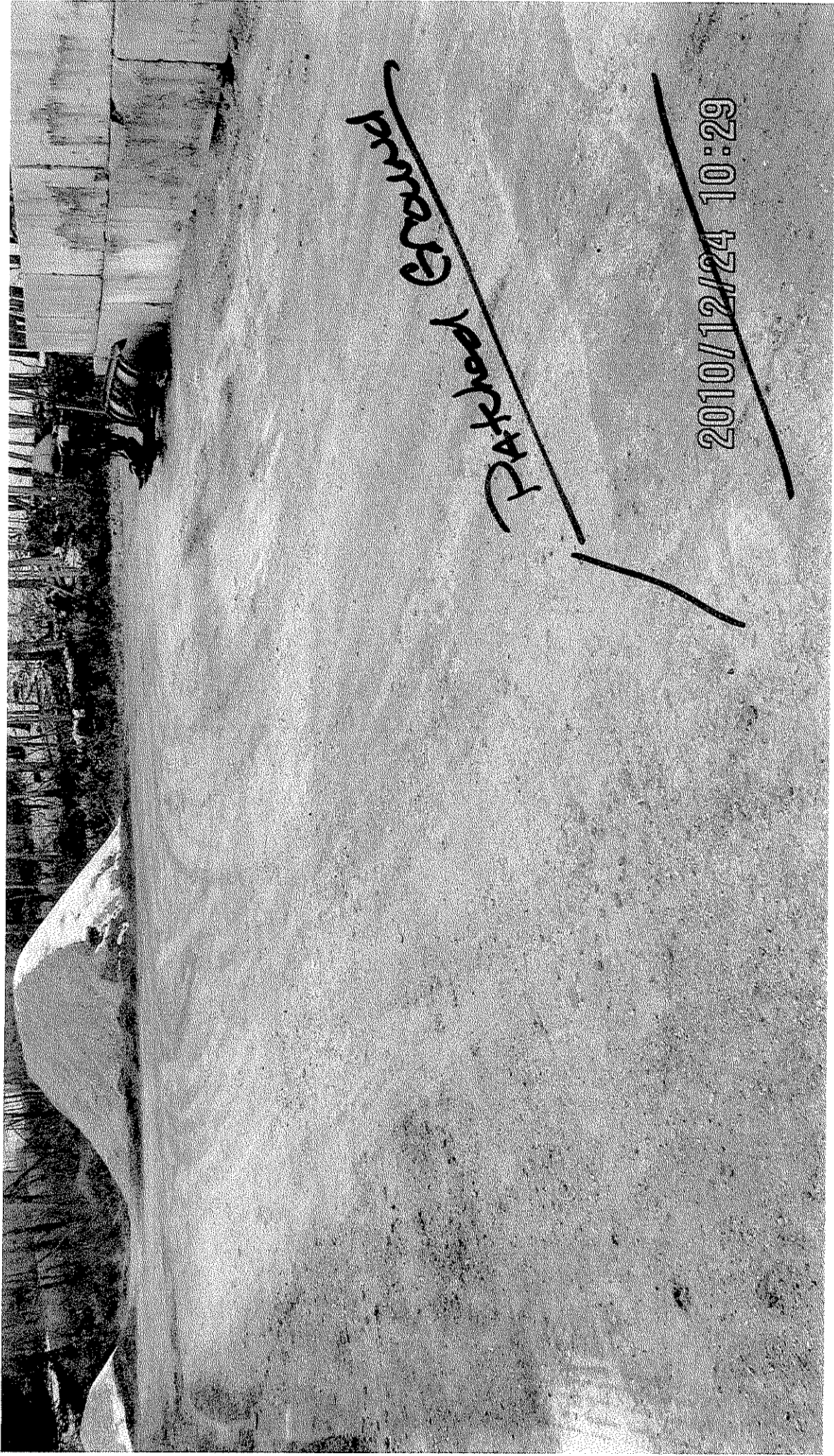




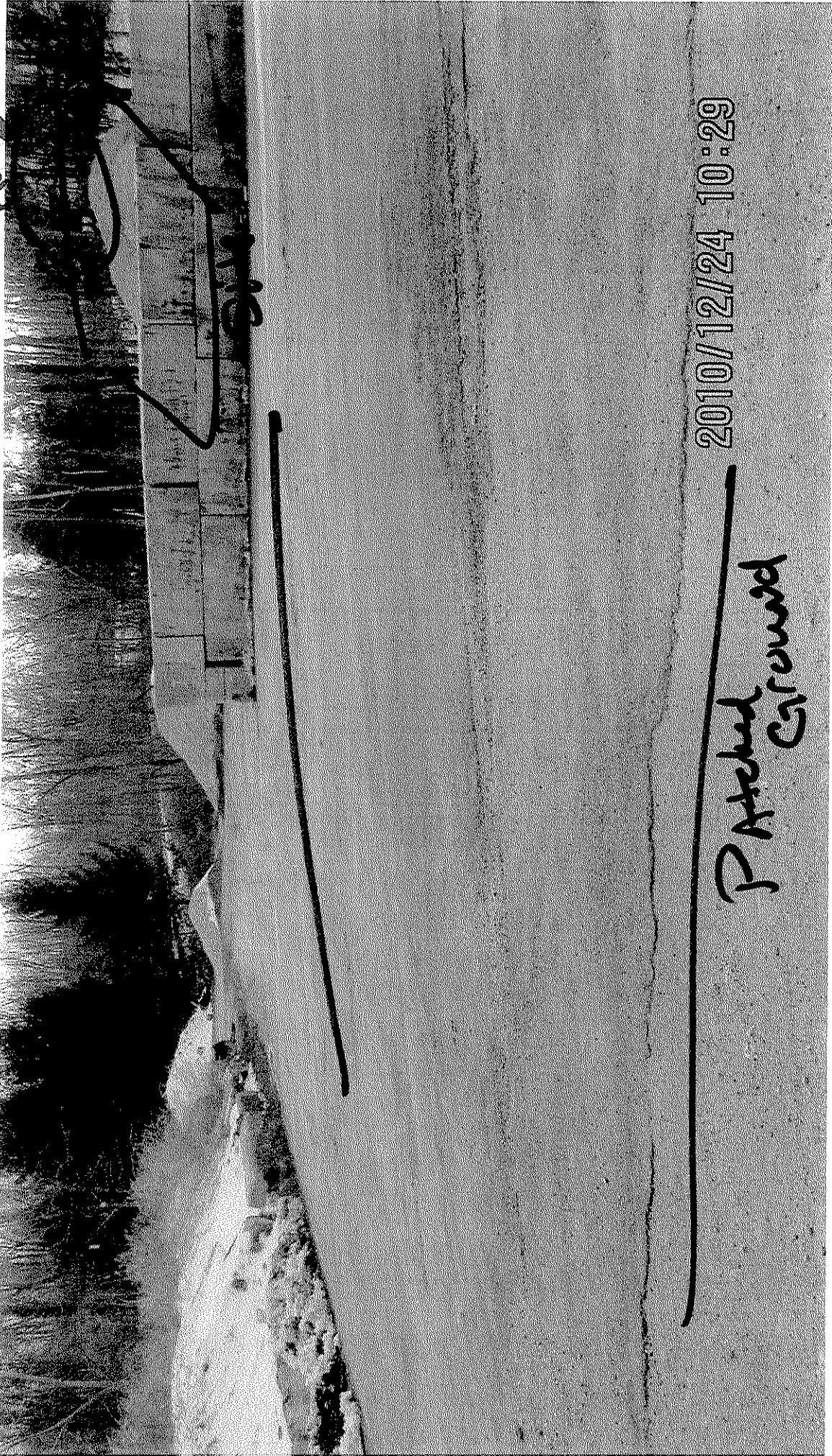


2010/12/24





5000



2010/12/24 10:29

Patched  
Ground

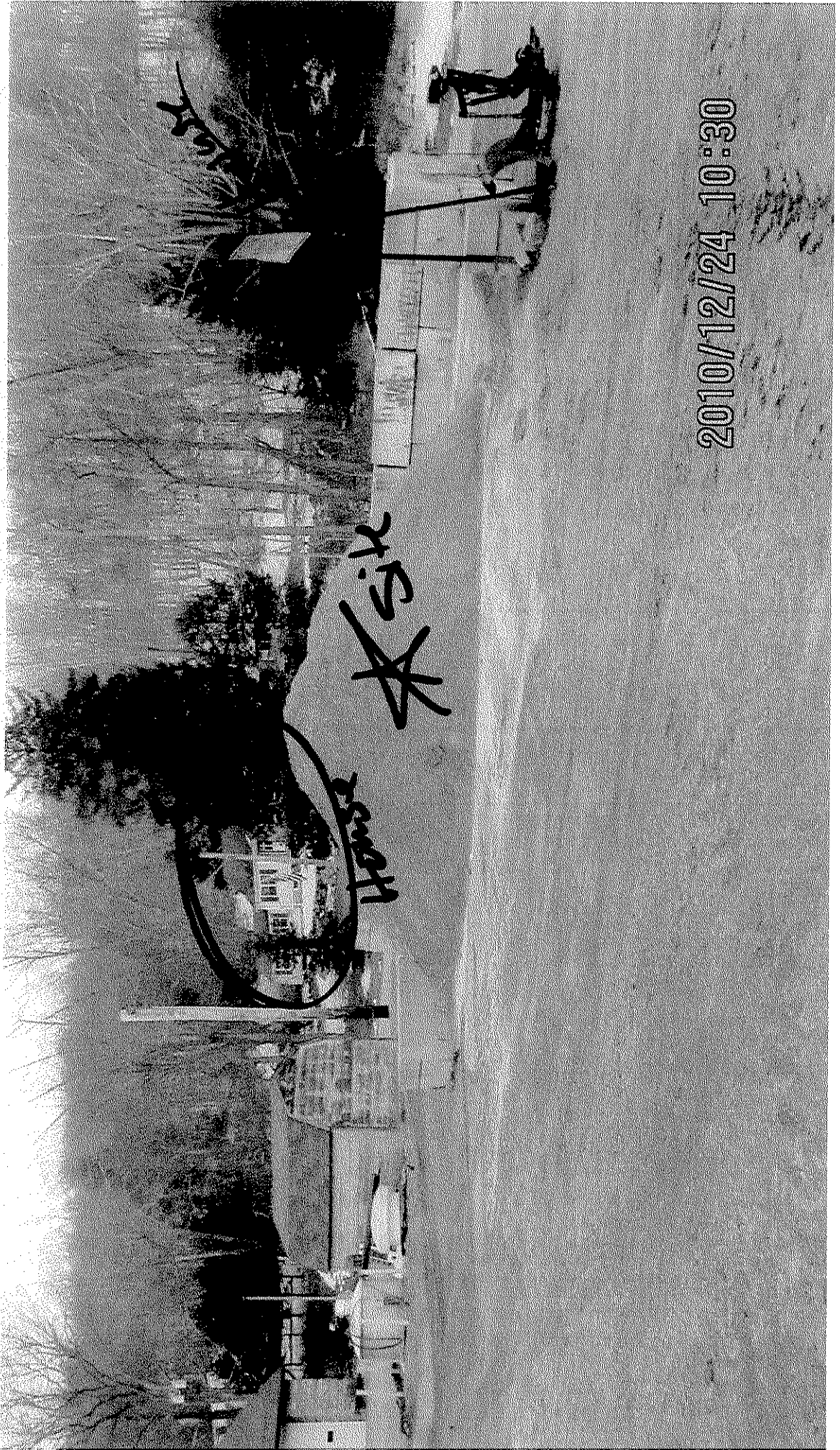




12-12-2012 10:17

House

Site



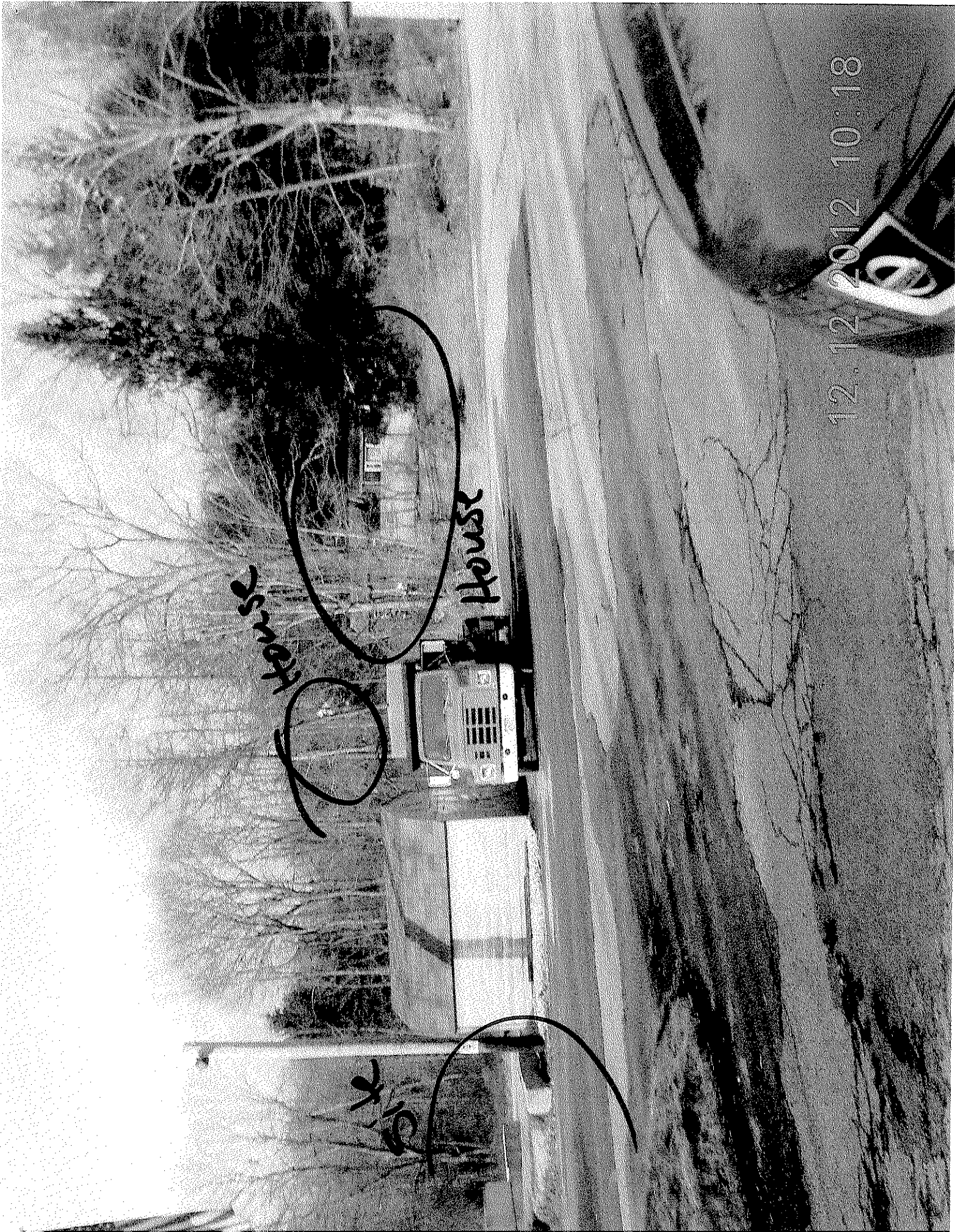
2010/12/24 10:30



Road Condition

12.12.2012 10:18









12.12.2012 10:15



April 2, 2013

cc  
+B  
Homeland  
Gaudioso  
Wilson

My name is Lisa Schuldt, I live at 22 Smokey Hollow Ct., directly across from the proposed site with my wife and two young children.

As I mentioned the last time that I spoke in one of these meetings I am a registered nurse with 17 years of experience and a national certification in oncology. During that meeting I spoke off the cuff about my concerns regarding the possible health implications for the residents of Smokey Hollow Ct. I shared anecdotal observations from my practice regarding potential carcinogenic exposure from seemingly benign sources specifically exposure to agent orange linkage leukemias and lymphomas and carpet factory exposures correlating with lung cancers. I had read the studies provided by Ms Doherty and expressed skepticism given the recent technological advances and the lack of adequate time to study exposure to cell towers and radio frequency electromagnetic fields. In fact cell phones have only been in existence since 1983, 26 years, and the use of said towers has increased exponentially. The Vietnam vets I treated in the early 2000's were exposed in potential carcinogens in the 1960's and 70's. The lung cancers I see in Danbury now were exposed during a similar time frame. I believe the jury is still out regarding the effects of radio frequency electro magnetic exposure.

Since the last time I spoke I have had time to do a little research of my own, partly in response to developments in my own health status. During the month of March I was diagnosed with a small, benign brain tumor called a meningioma. Ha, ha you might say you don't have the cell phone tower to blame for that one. This is true. However, it has raised even more concern for my and especially my children's health. I went to a reputable web site subscribed to by many physicians and found that the

By hand 42-13

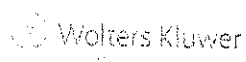
(World Health Organization)

“Who/International Agency for Research on Cancer recently classified radio frequency electromagnetic fields as possibly carcinogenic to humans.” (UpToDate article Risk Factors for Brain Tumors, page 4, copy provided) The other issue I find disconcerting is that my particular tumor has a genetic component. With cancer your likelihood to develop a malignancy increases dependent on the number risk factors you are exposed to. Some are not within our control, eg: our genes, environmental risks are often preventable. There is a reason that cell phone towers are not erected in residential areas. This is a risk that can easily be eliminated.

This is a very personal story that seemingly only effects my family at the moment. I feel slightly more secure in the fact that the four of us spend many outside of the home with work, school and activities. Some of my neighbors are not as lucky with infants and toddlers at home almost constantly. Think of the 24-hour exposure those vulnerable babies will experience.

You might say “sell your home if you’re so afraid.” It’s pretty obvious that the addition of this structure to our neighborhood will render our homes almost unmarketable. I ask you again to be aware of the safety of your residents and stop planning this tower. Thank you for your time and attention.

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**Disclosures**

All topics are updated as new evidence becomes available and our peer review process is complete.  
**Literature review current through:** Mar 2013. | **This topic last updated:** Jan 22, 2013.

**INTRODUCTION** — Primary brain tumors are a diverse group of neoplasms arising from different cells of the central nervous system (CNS). (See "Classification of gliomas", section on 'Histopathologic and molecular classification'.)

Although uncommon, there is evidence that the incidence of these tumors has been rising for as much as 50 years. Among the factors that have contributed to this phenomenon are the introduction of noninvasive diagnostic technology including computerized tomography (CT) in the 1970s and magnetic resonance imaging (MRI) in the 1980s, better health care access for the elderly population, and a 3.6-fold increase in the number of neurologists in the United States from 1970 to 1987 [1]. However, other sources contend that improved diagnostic capability cannot fully account for the magnitude of the observed increase in brain tumor incidence [2]. (See "Incidence of primary brain tumors".)

These data, in conjunction with evidence suggesting the increase may have been occurring for many decades, leave open the possibility that environmental exposures may account for the increasing incidence of brain tumors. A number of putative risk factors for brain tumors have been examined (table 1). A shortcoming in many reports is the tendency to group all brain tumors together; this approach may miss important exposures for specific histopathologic types of tumors [3].

General risk factors that have been associated with brain tumors are discussed here. The epidemiology of meningioma and its associated risk factors are discussed separately. (See "Meningioma: Epidemiology, risk factors, and pathology".)

**OCCUPATIONAL STUDIES** — A large number of studies have been conducted in cohorts of workers presumed to share common exposures. Standardized incidence or mortality ratios are compared to expected rates in the general population. However, these studies are prone to detection bias as working adults with health insurance may be more likely to seek medical attention and have diagnostic tests than the general population, leading to overestimates of ratios of incidence and mortality [3-5]. In general, the data are inconsistent and limited by small numbers of cases, imprecise methods of exposure assessment, and potential bias. Moderate risks cannot be excluded by these studies and well designed case-control studies would be necessary to properly address these issues.

**White collar professionals** — It has been suggested that workers in certain white collar professions, such as laboratory researchers and health professionals, have an increased incidence of brain tumors [6]. The possibility of detection bias was minimized in a study from Sweden, where health care is free and available to all citizens [7]. In this study, higher rates of brain tumors were reported among professionals with the use of the Cancer-Environment Registry, which linked cancer incidence for the years 1961 to

1979 with 1960 census information on occupation.

**Electrical workers** — Possible exposures to electromagnetic fields (EMF) have led to occupational cohort studies of electrical workers. A number of studies have suggested that individuals in electrical occupations were at increased risk of brain tumors with relative risks ranging between 1.5 and 2.5 [8-14]. However, other studies have not confirmed these findings [2,15,16].

The data showing increased risk among electrical workers are usually interpreted as evidence for a role for EMF, and an apparent dose relationship was shown in a large cohort study with direct measurement of electromagnetic fields [14]. There are, however, several issues that complicate this interpretation. As an example, electrical workers are exposed to a number of potential carcinogens; thus, an increase in risk cannot be simply attributed to radiation exposure.

This possibility was illustrated in a death certificate-based, case-control study of brain tumors and occupational risk factors [9]. A relative risk (RR) of 1.6 for all brain tumors was found among men exposed to microwave and radiofrequency (MW/RF) radiation; the increase in risk was significant among men exposed for 20 or more years. All of the excess risk of brain tumors in MW/RF radiation-exposed subjects was derived from jobs that involved the design, manufacture, repair, or installation of electrical or electronic equipment (RR = 2.3). The risk of brain tumors among MW/RF radiation-exposed subjects who never worked in electrical or electronics jobs was not elevated (RR = 1.0). The risk was also increased for electronics workers who were considered to have no exposure to MW/RF radiation but may have been exposed to soldering fumes, solvents, and other chemicals.

A second problem is that failure to detect a significant association with the risk of brain tumors may be methodologic. In one review of 17 studies, for example, few were of sufficient size and design to completely ascertain EMF exposure [17].

**Oil refinery workers** — The questions of whether petrochemical, petroleum, and oil production industry workers are at increased risk of brain tumors is unresolved. At least 10 occupational cohort studies have reported an increased risk of brain tumors in workers in the oil refinery industry. However, a working group from the International Agency for Research on Cancer (IARC) concluded only one of these studies was without significant methodologic or statistical limitation [18]. This single study found an increased risk of brain tumors only among oil refinery workers who had been employed in the industry for a short duration of time, raising doubts about the validity of the results. Furthermore, at least two meta-analyses have found no significant overall increase in brain cancer mortality in petroleum workers [19,20].

No specific chemical exposure has been identified as a risk factor in these studies and the weight of the evidence to date does not establish employment in this industry as a risk for the development of brain tumors.

**Agriculture workers** — Agricultural workers are exposed to pesticides, herbicides, and fungicides, each of which may consist of many different combinations of chemicals. Similar to other occupational cohort studies, an important limitation of studies among these workers is the use of job classification as a proxy for nonspecific chemical exposures; in addition, biological markers of exposure are usually lacking.

Farming as an occupation and place of residence has been associated with a 1.3 to 3.6-fold increased risk of brain tumors [21-25]. This has been described among Italian farmers exposed to fungicides and copper sulfate [21], Swedish horticulturists [22], and Chinese farming women exposed to pesticides [23]. However, no consistent evidence exists to implicate any particular chemical exposure as a risk factor for brain tumor among agricultural workers.

**Others** — Increased risks have also been reported for workers in the vinyl chloride, petrochemical, and



**TOBACCO** — Although the presence of nitrosamines in tobacco smoke has stimulated interest in tobacco exposure as a potential risk factor for brain tumors, there is little evidence that either active or passive smoking are significant risk factor for brain tumors.

Although case control [2,50,82,83] and prospective cohort [84,85] studies have yielded some conflicting results, the majority of studies do not support an association between tobacco exposure and subsequent development of gliomas or meningiomas. A large, contemporary prospective study examining smoking history in detail, including dose, duration, and latency, found no association between smoking and risk of glioma.

Studies looking at the role of active smoking or passive smoking in mothers and the risk of childhood brain tumors have yielded conflicting results [2,73].

**ALCOHOL** — There has been speculation that consumption of alcoholic beverages may increase the risk of brain tumors since both beer and liquor contain nitrosamines. However, no consistent association between consumption of different types of alcoholic beverages and the risk of gliomas or meningiomas in childhood (maternal consumption) or adulthood has been demonstrated [82,86,87].

**INFECTION** — Most reported associations of infection with brain tumor have been inconsistent. As an example, prior infection with tuberculosis was suggested as a possible risk factor for glioma in one study [88] but not in another [89]. In one large study, subjects who reported a history of infectious diseases (eg, colds, flu), compared to those with none, had a 30 percent reduction in risk (RR = 0.72, 95% CI 0.61-0.85) [56]. Other proposed infectious risk factors have included the polyoma virus, simian virus 40 (SV40), neonatal viral infections, and infection with *Toxoplasma gondii*. At present, however, there is no compelling epidemiologic evidence establishing infectious agents as important factors in the etiology of brain tumors.

**Viral infection** — The relationship between antecedent viral infections and subsequent development of brain tumors appears to be complex. Evidence for possible interactions comes from the identification of viruses and virus-like particles in brain tumor specimens, as well as from epidemiologic studies.

- **SV40** — Interest in SV40 was stimulated by animal studies documenting brain tumor development after intracerebral inoculation with SV40 and by human studies which isolated SV40 from brain tumor tissue [90]. It was unclear, however, if SV40 contributed significantly to malignant transformation or whether certain tumors provided a microenvironment that favored replication in patients with latent SV40 infection.

Poliomyelitis vaccine administered between 1955 and 1962 was contaminated with SV40, and vaccination cohorts have been the subject of study over subsequent decades [91-93]. However, elevated brain tumor rates have not been observed in these cohorts. In a nested case-control study, no significant association was reported between antibodies to SV40 (or two other polyomaviruses, JC virus and BK virus) as measured in prediagnostic serum and incident primary malignant brain tumors [94].

- **CMV** — Data concerning a possible etiologic role for cytomegalovirus (CMV) is conflicting. At least two studies reported a high percentage of gliomas were infected with CMV [95,96], although other reports have not confirmed an association [97,98].
- **In utero viral exposure** — Whether exposure to maternal viral infection while in utero is a risk factor for brain tumors is unclear. A large case-control study found an increased risk (RR = 2.4) for all

types of brain tumors after different maternal and perinatal infections [99]. In addition, an association between influenza infection in pregnant women and childhood brain tumors (OR = 3.15) was suggested in a study in which mothers of 94 children with brain tumors or neuroblastomas and 210 controls were interviewed [100]. However, others have failed to confirm an increased risk of brain tumors in the offspring of mothers infected with varicella, rubella, or mumps during pregnancy [101].

- **Varicella zoster** — In contrast, a protective role for antecedent infection with varicella zoster was suggested by an analysis of 229 adults with glioma and 289 controls from the San Francisco Bay Area Adult Glioma Study [102]. Individuals with gliomas were significantly less likely than controls to have a self-reported history of chickenpox (odds ratio [OR] 0.59) and they also had lower levels of immunoglobulins directed against varicella-zoster.

A similar inverse association was observed for self-report of history of chickenpox in a case-control study of 325 adult glioma and 600 controls (OR = 0.52) [103]. Statistically significant inverse associations also were observed for reported infections with other herpesviruses (Epstein-Barr virus, CMV, and herpes simplex virus) in that study [103], but no association had been found for those three herpesviruses in the first study [100]. Based upon these observations and those for allergies, immune modulation has been postulated to have a role brain tumorigenesis. (See 'Allergies' above.)

**Toxoplasma infection** — Infection with *Toxoplasma gondii* has been associated with an increased risk of astrocytoma and meningioma in two case-control studies [104,105]. In one, a significantly increased risk of meningioma (OR = 2.1), but not glioma, was associated with the presence of IgG antibodies to *T. gondii* as measured by ELISA [105]. Although this parasite has a propensity to infect the nervous system, it has not been established as a major risk factor for brain tumors.

**GENETIC FACTORS** — Approximately 1 to 5 percent of brain tumors are due to genetic syndromes that confer an increased risk of developing tumors of the nervous system [2,106]. Some of these tumors are associated with neurofibromatosis and several other inherited syndromes (table 2).

**Neurofibromatosis type 1** — Neurofibromatosis type I (NF1) occurs in 1 of 3000 persons and is linked to a gene on chromosome 17. The NF1 gene encodes a protein called neurofibromin that restricts cell proliferation by activating GTP hydrolysis on ras proteins. (See "Neurofibromatosis type 1 (von Recklinghausen's disease)".)

Multiple neurofibromas are seen and some undergo malignant change to neurofibrosarcoma. (See "Pathogenetic factors in soft tissue and bone sarcomas".)

Other malignancies that develop in up to 5 to 10 percent of patients with NF1 include other malignant nerve sheath tumors such as malignant schwannomas and astrocytomas. The astrocytomas are usually low grade and frequently have a pilocytic histology. These lesions have a predilection for the optic pathways, hypothalamus, and cerebellum.

It has been proposed that malignant degeneration in NF1 reflects the two-hit hypothesis in which one allele is constitutionally inactivated in the germline while the other allele undergoes somatic inactivation (the second hit) [107]. Animal models are consistent with this hypothesis but suggest that the second hit can be a mutation in the p53 gene [108,109].

**Neurofibromatosis type 2** — Neurofibromatosis type 2 (NF2) is an autosomal dominant disorder predisposing to multiple neoplastic lesions. This disorder is due to a mutation in the NF2 gene, a tumor suppressor gene on chromosome 22 that encodes a membrane cytoskeletal protein called merlin or

schwannomin [110] that appears to be involved in actin-cytoskeleton organization [111]. Other modifier genes may also be involved [112]. (See "Neurofibromatosis type 2", section on 'Molecular pathogenesis'.)

The pathognomonic findings are bilateral vestibular schwannomas (acoustic neuromas). Vestibular schwannomas are seen in 90 to 95 percent of patients with NF2 and generally develop by 30 years of age. (See "Vestibular schwannoma (acoustic neuroma)" and "Neurofibromatosis type 2", section on 'Vestibular schwannomas'.)

Other types of brain tumors are also seen, the most frequent of which are meningiomas. Approximately one-half of individuals with NF2 have meningiomas, and multiple meningiomas are often present [113]. The incidence of meningioma increases with age, and the lifetime risk may be as high as 75 percent [114]. Patients with NF2 tend to develop meningiomas at an earlier age than those with sporadic meningiomas. The meningiomas seen in patients with NF2 are more frequently atypical or anaplastic compared with sporadic tumors [115,116]. (See "Neurofibromatosis type 2", section on 'Vestibular schwannomas'.)

**von Hippel-Lindau syndrome** — The von Hippel-Lindau syndrome is an autosomal dominant disorder associated with hemangioblastomas, pancreatic cysts and neuroendocrine tumors, renal tumors, and pheochromocytomas. The gene on chromosome 3p25 normally functions as a tumor suppressor gene. (See "Clinical features, diagnosis, and management of von Hippel-Lindau disease" and "Molecular biology and pathogenesis of von Hippel-Lindau disease".)

**Li-Fraumeni syndrome** — The Li-Fraumeni syndrome is inherited as an autosomal dominant trait and is usually associated with a germline mutation in the TP53 gene. (See "Li-Fraumeni syndrome".)

Li-Fraumeni syndrome is primarily characterized by sarcomas, breast cancer, leukemia, and adrenocortical cancer occurring before the age of 45. Other tumors are also seen in the Li-Fraumeni syndrome, including brain tumors. Of particular note, a high percentage of choroid plexus carcinomas are associated with germline mutations in TP53 even in the absence of another cancer or a positive family history.

**Turcot's syndrome** — Turcot's syndrome refers to an association between brain tumors (primarily medulloblastomas and gliomas) and two forms of colonic polyposis [117]. (See "Clinical manifestations and diagnosis of familial adenomatous polyposis".)

- Familial adenomatous polyposis (FAP) is an autosomal dominant condition caused by a mutation to the adenomatous polyposis coli gene on chromosome 5. The majority of FAP-associated brain tumors are medulloblastomas, but gliomas have also been described. (See "Clinical manifestations and diagnosis of familial adenomatous polyposis".)
- Hereditary nonpolyposis colorectal cancer (HNPCC) is characterized by germline mutations in one of several enzymes involved in DNA nucleotide mismatch repair. These patients are prone to high-grade gliomas [117]. (See "Clinical features and diagnosis of Lynch syndrome (hereditary nonpolyposis colorectal cancer)".)

**Basal cell nevus syndrome** — Persons with the basal cell nevus syndrome (Gorlin syndrome, nevoid basal cell cancer syndrome), have an increased risk of medulloblastoma. The syndrome is caused by germline mutations of the patched (PTCH) gene, a tumor suppressor gene. (See "Nevoid basal cell carcinoma syndrome".)

**Familial glioma** — Several case reports, case-control, and cohort series document the aggregation of

gliomas (astrocytomas) in families [118-120]. Although some families have inherited syndromes that explain these disease clusters (see above), many do not.

In one population based study that included 2141 first degree relatives of 297 individuals with astrocytoma diagnosed over an eight year period in Sweden, 5 percent had a familial aggregation of glioma [121]. Segregation analysis of 14 families with at least two affected first degree relatives suggested an autosomal recessive pattern of inheritance in 65 percent (9 families), while an autosomal dominant inheritance pattern was suspected in only 21 percent (3 families).

These familial aggregations may reflect common environmental exposures among family members rather than a genetic predisposition. However, this theory was not supported by a second population-based study from these same investigators that demonstrated an increase in the risk of brain tumors among first-degree relatives but not spouses of probands with primary brain tumors [122].

**SUMMARY** — Brain tumors are an uncommon but especially lethal form of cancer, and the incidence may be increasing. The only firmly established environmental risk factor, ionizing radiation, and genetic predisposition in identified syndromes account for only a fraction of incident cases. Possible causative factors which require further investigation include allergies, non-ionizing radiation, physical and acoustic trauma, and certain infections.

The study of brain tumors has been complicated by a number of factors. Brain tumors are an uncommon form of cancer, making centralized reporting and multi-institutional collaboration essential for effective observational study. Such reporting and collaboration are recent developments and promise improved study design and execution in the future.

Since brain tumors are a heterogeneous group of tumors arising from different cell types, perhaps by different molecular mechanisms, future studies of brain tumors should focus on individual tumor types such as astrocytoma and meningioma. Molecular classification of these tumors may allow even greater refinement of tumor classification. The World Health Organization (WHO) classification system is now the most widely accepted histopathologic classification system with high inter-rater reliability (94 percent) and serves as the basis of reporting to the Central Brain Tumor Registry of the United States (CBTRUS). (See "Classification of gliomas", section on 'Histopathologic and molecular classification'.)

Future epidemiologic studies of brain tumors should explore more fully the role of allergies, physical trauma, and viral infection. Collaboration and centralized reporting should improve these studies. Understanding the molecular pathology of gliomas may allow correlation of candidate exposures with specific molecular subtypes of tumors possibly shedding light on the molecular mechanisms of disease causation and progression.

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Topic 5214 Version 15.0

## GRAPHICS

### Factors studied in relationship to risk of primary brain tumors of neuroepithelial tissue or meninges

Hereditary syndromes\*: tuberous sclerosis, neurofibromatosis types 1 and 2, nevoid basal cell carcinoma syndrome, and adenomatous polyposis syndromes, Li-Fraumeni cancer family syndrome (inherited p53 mutations).

Family history of brain tumors

Constitutive polymorphisms in glutathione transferases, cytochrome p450 2D6 and 1A1, N-acetyltransferase, ERCC1 and ERCC2, other carcinogen metabolizing, DNA repair, and immune function genes.

Lymphocyte mutagen sensitivity to gamma radiation

Prior cancers

Infectious agents or immunologic response: viruses (common colds, influenza, varicellazoster virus, BK virus, JC virus, others), Toxoplasma gondii

Allergies

Head trauma

Epilepsy, seizures, or convulsions

Drugs and medications

Diet and vitamins: nitrosamine/nitrosamide/nitrate/nitrite consumption, cured foods, calcium, food frequency

Tobacco smoke exposures

Alcohol

Hair dyes and hairsprays

Traffic-related air pollution

Occupations and industries: synthetic rubber manufacturing, vinyl chloride, petroleum refining/production work, licensed pesticide applicators, agricultural work, others (see text), parental workplace exposures

Ionizing radiation: therapeutic\*; diagnostic and other sources

Cellular telephones

Other radiofrequency exposures

Lower frequency electromagnetic field

ERCC2: Excision repair cross complementation group 2 gene, complementation group 2 (xeroderma pigmentosum D).

\* These are the only factors that have been proven to cause primary brain tumors of neuroepithelial tissue or meninges. Evidence for or against associations of other factors is presented in the text.

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Genetic syndromes associated with nervous system tumors

Syndrome	Chromosome	Inheritance	CNS tumors
NF I	17q1	AD	Glioma, meningiomas
NF II	22q	AD	Acoustic neuroma, optic glioma, meningioma, ependymoma
Tuberous sclerosis	9q32-34	AD	Ependymoma, astrocytoma, ganglioneuroma
Von Hippel-Lindau	3p25-26 3p13, 14	AD	Hemangioblastoma
Sturge-Weber disease		AD	Chorid plexus papilloma

NF: neurofibromatosis; AD: autosomal dominant.







Appraisal Report, they are cities and locations in Rockland County they are poles the size of flag poles, lower than 150', located in woods, mountains, in hills not in their front yard. It is not fair to compare the studies. The Town of Patterson is the closest comparable that was on the market for 608 days and dropped \$143,000 from their asking price and included five additional lots, which could be the reason why it was priced more per square foot. She is gathering more opinions and will have more to say at the next meeting.

Dr. Dennis Rogers a resident of Smokey Hollow Court talked about his calculations last month since then he has printed it out for the board. (attached). He revised them somewhat and looked at sheets of ice formed on antenna elements and looked at the thickness of 1, 2 up to 6 cm which is large. The results of the calculations were the ice fragments would fall at approximately 67 miles per hour. He looked at how far it would fall from the tower. The bottom line is it could fall 80' from the tower. He thinks that is particularly important because this will be at the roads department where employees will be working during storms and urged them to consider the safety of the employees. These ice falls are a real thing on February 2, 2011 the George Washington Bridge was closed due to ice falls.

Lynda Davidson of Smokey Hollow Court said she brought to the board's attention in November of 2012 her concerns about flooding. She said the lot completely lifted after the flooding, big metal plates were installed in order to drive in. The new proposed site is in this location, and urged the Board to give great thought for the potential fall of the tower. The new site a 100' from the original proposed is more of a visual eye soar and even closer to some of their neighbor's homes. Homeland Towers has not considered the impact this tower will have visually, physically and financially to the residents or the safety of the highway employees. She submitted copies of pictures of the Highway Garage parking lot and the homes around it. (attached)

Lisa Schultz a resident of Smokey Hollow mentioned at the last meeting she is a nurse with 17 years experience in oncology. Please see her statement attached.

Councilman Tartaro stated by moving the tower he is assuming it is closer to the resident's home. He asked on the 16<sup>th</sup> when you answer the questions are you going to quantify how far the homes are. Mr. Gaudioso stated there were inaccuracies, the closest home is 200' away, and there were also inaccuracies on the statements about the ice fall.

#### **Resolution #158 - Close Public Hearing**

On a motion by Supervisor Doherty

Seconded by Councilwoman Osborn

Resolved: The Public Hearing on the Amended Cell Tower Lease at Smokey Hollow Court was closed at 7:30 p.m.

Motion carried unanimously

Workshop Agenda – The board discussed all the items on the Workshop Agenda

**Salute to the Flag** – At 8:15 p.m. Supervisor Doherty led the Salute to the Flag

#### **Roll Call**

Supervisor Katherine Doherty – present      Councilwoman Penny Osborn – present

Councilman Lou Tartaro – present      Councilman Mike Tierney – present

Councilman John Greene – present

Also Present: Town Counsel Curtiss, Police Chief DiVernieri and Recreation Director Fernandez.

#### **Resolution #159 - Approval of Vouchers and Claims**

On motion by Supervisor Doherty

Seconded by Councilman Tierney

Resolved: Voucher #200123506 - #200123815 and claims submitted by

1. ACM Playgrounds, Inc.	\$69,990.00	Ryan's Park Playground
2. Broadview Networks	\$3,628.21	Telephone Bill
3. Cargill, Inc.	\$10,194.82	Salt
	\$7,462.91	
4. Carmel Central School District	\$5,588.00	Gym Use
	\$5,836.00	
5. Global Montello Group Corp.	\$6,665.19	Diesel
6. Jim Williams Welding	\$3,885.00	Welding: Highway Trucks



7. John's Truck Parts of NY, Inc.	\$2,000.00	Municipal Repairs
8. Richard Harris	\$3,465.00	IT Service
9. Robison Oil	\$6,730.12	Heating Oil
10. Somers Sanitation	\$4,137.72	Lake Carmel Garbage
	\$4,025.82	
11. Sprague Operating Resources LLC	\$6,502.65	Gasoline
12. Thalle Industries, Inc.	\$4,468.68	Sand
13. Town of Kent Municipal Repairs	\$12,185.53	Chargebacks: Highway

In the amount of \$196,432.30 may be paid.

The board took a poll vote as follows:

Councilman Greene – aye Councilwoman Osborn – aye

Councilman Tartaro – aye Councilman Tierney – aye

Supervisor Doherty – aye

Motion carried unanimously

**Resolution #160 - NYS Office of Children & Family Services Grant**

On a motion by Supervisor Doherty

Seconded by Councilman Tierney

Whereas, the New York State Office of Children and Family Services has made funds available for recreational programs,

Whereas as the Town Board of the Town of Kent wishes to apply for these funds,

Now therefore the Town Board of the Town of Kent hereby authorizes the Recreation Director to apply for these funds and,

Further authorizes the Supervisor to sign any and all documents to effectuate the grant.

Motion carried unanimously

**Resolution #161 - Recreation - Ryan Park Concession Stand**

On a motion by Supervisor Doherty

Seconded by Councilman Greene

Resolved: Ken Stengel, Owner of Carmel Bagel Deli...licious is authorized to operate the concession stand at Edward Ryan Memorial Park during the 2013 Recreation baseball/softball season. They will provide insurance and worker's compensation and 10% of the net profit at the end of the season.

Motion carried unanimously

**Resolution #162 - Recreation 2013 Seasonal Personnel**

On a motion by Supervisor Doherty

Seconded by Councilman Tierney

Resolved: On the recommendation of Director Fernandez, the 2013 Seasonal Park Maintenance Workers were accepted as submitted. (Attached)

Motion carried unanimously

**Resolution #163 - Amend Resolution # 113 Kent Police Fence**

On a motion by Supervisor Doherty

Seconded by Councilwoman Osborn

Resolved: Resolution #113 Kent Police Fence is amended to reflect an additional \$500.00 for a heavier gauge fence.

Motion carried unanimously

**Resolution #164 - Add Kent Police Accept Resignation to the Agenda**

On a motion by Supervisor Doherty

Seconded by Councilman Greene

Resolved: Accept Kent Police resignation was added to the Agenda.

Motion carried unanimously

**Resolution # 165 - Kent Police Accept Resignation**

On a motion by Supervisor Doherty

Seconded by Councilman Greene

Resolved: The resignation of Police Officer Christopher Tompkins as of April 1<sup>st</sup>, 2013 was accepted with regrets.

Motion carried unanimously

Louis M. Fernandez  
Director of Recreation and Parks



Town of Kent Recreation and Parks Department  
770 Route 52 Kent Lakes, NY 10512

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Webpage: [www.townofkentny.gov](http://www.townofkentny.gov)

April 1, 2013

Kent Town Board  
25 Sybil's Crossing  
Kent Lakes, NY 10512

Subject: Seasonal Park Maintenance Workers

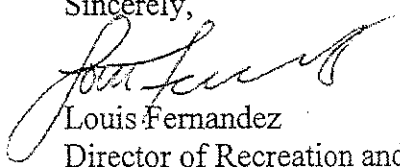
Dear Town Board Members,

The Recreation and Parks Department heavily relies on seasonal personnel to accomplish its many and ongoing parks projects and upkeep. I am asking that the following personnel be re hired for the 2013 year. I have firm commitments from these young men but as almost all of them are in college their availability may change due to internships, schedule changes or better opportunities. Some of these re hires will have a limited work schedule so as we get closer to the summer I do plan on bringing in two additional seasonal staff of high school age to augment the crew. If for some reason some of the returning staff do not end up returning I will have to bring in additional new staff.

Below I have listed the personnel I wish to bring back, their 2012 hourly pay rate and the 2013 pay rate I would like them approved at. In most cases I am asking for a 25 cent hourly increase in pay with the exception of Rob Webb. He has been working for us for nearly 10 years and is an exceptionally valuable, reliable and accountable employee. In my opinion a 75 cent per hour increase for Rob Webb is appropriate. As in keeping with past practice I will make sure that our total yearly expense will be kept within the yearly budget and no seasonal employee work more that 16 – 40 hour work weeks. Thank you for your consideration in this matter.

	<u>2012 Pay Rate</u>	<u>2013 Pay Rate</u>
Rob Webb	\$11.25 per hour	\$12.00 per hour
Nick DeNapoli	\$8.75 per hour	\$9.00 per hour
Ryan Anderes	\$8.25 per hour	\$8.50 per hour
Estlin Link	\$8.25 per hour	\$8.50 per hour
Troy Torres	\$8.25 per hour	\$8.50 per hour
Michael DeNapoli	\$7.50 per hour	\$7.75 per hour

Sincerely,

  
Louis Fernandez  
Director of Recreation and Parks





**Resolution #166 - GASB – Rescind Resolution**

On a motion by Supervisor Doherty

Seconded by Councilman Tartaro

Resolved: Resolution #154 adopted on March 19, 2013 was rescinded.

Motion carried unanimously

**Resolution #167 - Actuarial Consultant GASB**

On a motion by Supervisor Doherty

Seconded by Councilman Tartaro

WHEREAS, the Government Accounting Standards Board (GASB) has required in GASB-45 that governments annually calculate their Other Post Employment Benefits for reporting purposes, and

WHEREAS, the Town Board of the Town of Kent wishes to appointment Aquarius Capital in regards to the GASB-45 calculation and preparation of reports,

BE IT RESOLVED, that the Town Board of the Town of Kent agrees to appointment Aquarius Capital as the consultant in regards to the GASB-45 calculation and preparation of reports,

BE IT RESOLVED, that the Town Board of the Town of Kent hereby authorizes and directs the Supervisor to execute any and all documents and take any actions necessary to give effect to this resolution.

BE IT FURTHER RESOLVED, payment in the amount of One Thousand, Five Hundred Dollars will be made to Aquarius Capital in accord with the Town procurement policy.  
Motion carried unanimously

**Resolved #168 - Advertise for RFP for Junk Cars**

On a motion by Supervisor Doherty

Seconded by Councilman Tierney

Resolved: The Town Clerk is authorized to advertise for RFP for the Scrap of Junk Cars.

Motion carried unanimously

**Resolution #169 - Adjournment**

On a motion by Supervisor Doherty

Seconded by Councilman Tierney

Resolved: The Town Board meeting of April 2, 2013 adjourned at 8:26 p.m.

Motion carried unanimously

Respectfully submitted:



Yolanda D. Cappelli  
Town Clerk

