

DRAFT Working Concepts
(not yet debated/approved by Campton Township)

NOTE: The offering of constructive suggestions to the ZBA related to the Maxxam petition does not alter the Township's position regarding this matter. For the record, the Township objects to the placement of a large, for-profit enterprise on the Glenwood site in the belief that emergency traffic generated by it would represent a danger to emergency responders, patients that would require those services, and the surrounding community. We also have concerns regarding potential negative impacts to the environment.

At minimum, we'd recommend the following be considered –

- According to the US Army Corps of Engineers, the Glenwood site includes areas considered to be of high habitat value, a wetland, and natural open waters. There's also a designated fen just to the north. Maps to support this can be found at <http://dewprojects.countyofkane.org/adid/index.htm>. Campton Hills is also dominated by shallow aquifers.

Hydrological and environmental studies should be conducted to assess the impact of any medications that would be released into the Glenwood septic system through patient urine and excrement. To support this, the USGS model developed in conjunction with Campton Township, may assist in determining any impacts to local watersheds.

A link to hydrological studies that demonstrate generalities of the USGS model, which was performed by CB&I (now Shaw Environmental) can be found at: <https://pubs.usgs.gov/sir/2006/5076/pdf/sir20065076.pdf>.

Other helpful studies include one conducted by Silent Spring in 2013 (<http://silentspring.org/sites/default/files/Contaminants%20of%20Emerging%20Concern%20and%20Septic%20Systems%202013%20Report.pdf>).

Another MA State study can be found at:
<http://www.masstc.org/wp-content/uploads/2013/08/TheFinalWhitePaper1.pdf>

In general, Kane County has collection programs specifically designed to keep medicines from our watershed. The impact of human excretion of these medicines into an area with shallow groundwater needs to be examined in depth.



- The petitioner should explain in greater detail how 8 dorms, originally designed for young children, can be sufficiently retrofitted to house 120 patients as a high-end treatment center without increasing the facility's footprint. As a general point of reference, the County should consider the original maximum occupancy of the site;
- The ZBA and representative County attorney should provide legal disposition as to how the County will reconcile compliance with Kane County's own zoning restrictions to not distribute (Schedule II) controlled substances in a F1 district, including those designated for Special Use. Whereas B and LI districts allow distribution of controlled substances, even these are limited at a maximum of 5-years. Whereas F-districts allow cultivation of a controlled substance, even these are specifically limited to 5-years (Article VIII, Section 8.1-2 Special Uses, ii).

Hospitals and pharmacies, which typically dispense these types of drugs, are specifically precluded from F1 Special Use, implying this activity should not be allowed. Whereas nursing and convalescent homes are contemplated under Special Use, these do not necessarily dispense controlled substances and it cannot be taken for granted that their inclusion under Special Use implies this function. We believe this issue should be resolved before any vote occurs and, certainly, even if allowed the act of dispensing these medications needs to be capped (per the existing ordinance) at no-more-than 5 years;

- Much has been made by both sides regarding the volume of emergency services required to support this facility. Each side believes the other to have included inapplicable sites which would indicate a need to have some arbiter that clarifies this issue so that a real traffic analysis can be conducted. We'd recommend any plan should include –
 - ✓ The Sherriff's office to work with cooperative inputs from the Village of Campton Hills Police and the Fox River Fire District so that it may compile and assess actual applicable data and define the real level of emergency responses that will be required.
 - ✓ This information should then be used to create an independent traffic study that includes this emergency response data.
 - ✓ If an action is required by the Village, Township, or County to alleviate any potential issues, this should undergo proper planning and a budget should be set forth that specifically addresses these needs so that it may be considered by the ZBA;

In the Matter of Maxxam Partners' Petition for Special Use within a F-1 District
Statement from Joe Miller, Campton Township Trustee
January 24, 2017

Since the onset of these meetings community concerns have been focused on two factors: safety and credibility. Neither of these items have been addressed to our satisfaction; to the contrary, given several months to address these concerns, the petitioner has instead chosen to simply reiterate previous statements already in the public record and offer a handful of medicine to the County. Whereas the former provides no new or relevant information for the ZBA to consider, the latter is immaterial to a zoning decision. Despite this, I shall focus on the key concerns related to this petition.

In regards to safety, data extrapolated from facilities with the highest accreditations in their field – accolades the petitioner does not yet have, has no experience in securing, and has not even promised to achieve – all demonstrate that multiple emergency responses would be required on a weekly basis (typically every day and sometimes 2 or more times per day). As I stated previously in my testimony, I personally researched facilities based on Maxxam's own alleged business model – private pay, offering detoxification services, no outpatient services offered, no methamphetamine patients treated, highest national certifications achieved, and greater-than-average distance from emergency responders and medical facilities. Facilities with dissimilar factors were excluded. The data extrapolated from these national facilities confirm our emergency response projections. We could have supplied even more data, though some of these were from small towns that had no formal process for certifying FOIAs and, thus, were excluded.

The petitioner has offered no new information to challenge our data. As example, they continue to rely heavily on an old memo from the Village of Campton Hills Police Department that was originally produced for another unrelated entity (Kiva). This letter has been shown on multiple occasions to have been constructed for an entirely different business model, one which was smaller and had no on-site detoxification. It should also be noted that its use was disavowed by the Campton Village Police Chief in a written statement to the previous ZBA. Despite this it continues to be referenced as the basis for their absurdly low emergency response projections. Even the Kane County Sherriff projects numerous calls will be required to support a Maxxam facility. Letters of support they have included in their petition, such as The Retreat in Wayzata MN, are similarly inapplicable to their business model and should be excluded.



The petitioner tries to dismiss/distract from these call volumes by claiming their security system will be state-of-the art. This response is irrelevant. Had they actually done their homework and investigated the matter they would have realized that the overwhelming majority of calls to facilities such as these would not be mitigated by a security fence in that they most-often involve issues inside the facility's perimeter, ones that cannot be prevented with light security on such a large footprint. Furthermore, the system being suggested has not been previously tested on this type of facility and its application here may not actually meet the needs of the site. In short, Maxxam is proposing a solution to a problem for which they and their security experts have neither experience nor understanding.

It is clear that the NET result of a Maxxam facility would be a significant increase in emergency response vehicles on small rural roads ever day, the impact of which has not been studied. It is common practice to respond to each and every call to these facilities with police, fire, and emergency medical technicians. These will travel abnormally long distances (compared to similar facilities) along narrow, winding, hilly roads with blind drives, no passing zones, and steep ditches on the sides that do not allow traffic to pull over and pass. They will need to navigate around children waiting for school busses, schools, cars from subdivisions, runners, groups of cyclists and cycling events, and even tractors. Accidents can be frequent in even the best of weather and without the added complexity of increased emergency traffic. Allowing this petition will endanger motorists, emergency responders, and even the patients that Maxxam claims to want to serve. Making these roads safe for such traffic will cost tens of millions of dollars and is well beyond any "reasonable accommodation" envisioned by the FHA.

It would be Pollyanish to believe that emergency services would not be impacted. The question of who ultimately pays for them is irrelevant when it dilutes the availability of these same services to residents. To state the obvious, we're a small semi-rural community with limited resources of these kinds. We simply cannot meet these needs and should not be expected to expand services just so a private, for-profit entity can operate a new and speculative commercial enterprise. It is not just a matter of adding equipment or people; on a purely financial basis alone, the total costs of doing so would far exceed their pay-per-use plan. Undoubtedly the balance of these costs would fall squarely and unfairly on taxpayers – underwriting Maxxam's business and profits at our expense. Again, this would be an unfair burden on the community and also beyond "reasonable accommodation".

No EPA studies have been conducted that address the release of Schedule II drugs (through urination and defecation) into a septic system and an area with shallow aquifers. Kane County has extensive programs to collect medications from the general population so as to prevent their release into the environment, yet no study has been done to ascertain the safety and efficacy of Glenwood's septic system on a surrounding area entirely dependent on well water and proximate to streams and other wetlands (some of which occur on the property itself). No monitoring program has been suggested or established to ensure the ongoing safety of these releases over time.

It should be obvious that these combined elements and the resulting noise from sirens will negatively impact property values, not because of any class of people, but because our area is unsuitable for a large business of this type. We do not have and cannot easily accommodate or remedy an infrastructure that will plainly be required to support Maxxam's proposed business. And, although the petitioner presented their own experts regarding property values, we showed these studies were cherry-picked and the statistics used were inherently flawed. Based on the negative impact to property values alone this should be rejected. Again, the loss in property value here is well beyond "reasonable accommodation".

This last point brings us to the topic of credibility. Mr. Marcos is a virtual ghost online; none of his claimed experience or contributions can be independently substantiated. And, whereas he alleges to have great skill in hiring and managing the best people, even this statement is suspect in that the people he hired were inadequate to the task. We need to recognize that this is not a proposal from the Mayo, Cleveland, or Betty Ford clinics. The petitioners are, by their own admission, out of state land developers, the standard model of which is to develop a property and move on; not to keep and operate it. Their claims otherwise challenge credulity. In fact, their very proposal to operate this facility violates a cardinal business rule: never invest in anything with which you have no experience. Stating that you'll hire "the right people" to manage a business is irrelevant if you don't understand enough about its demands to select or manage those people properly. Frankly put, they have no experience in this area. But this is a lucrative boon industry for which their mistakes will be a simple rounding error in their profit margin while we suffer through safety issues, diminished property values, and more taxes to support improved roads and emergency services that benefit them.

To support this view, the following examples are not aligned with 'hiring and managing the best':

- The real-estate studies provided compared, in one instance (MaRous), property values in Park Ridge IL against the impact of a non-comparable site. It, and the other study used high-density properties that are not similar to the ones surrounding the Glenwood School. One of the studies (Poletti) bordered on an industrial area with negative factors far greater than a rehabilitation center that skewed data. As example, does anyone believe a rehabilitation center will adversely impact property values when an oil refinery, a tire production center, and other industries are nearby?

Sample sizes for both studies were small and statistical analyses used were incorrect. Whereas use as a rehabilitation center was claimed as the "highest and best possible use of the facility", this claim was not based on any data whatsoever and amounts to no more than a self-serving marketing statement. Certainly, the petitioner did not consult the surrounding community in what it considers "best use";

- No work was done to determine actual emergency response calls that would be required to serve a facility of this nature and no traffic studies were conducted considering this impact. Kenig, Lindgren, O'Hara, Aboona, Inc., (KLOA, the petitioner's expert) admitted under oath that emergency responses had not been considered and that the numbers proposed by the Sherriff would make their findings inapplicable;
- Mr. Elliott Messing was party to the application, then later withdrawn, possibly due to poor press regarding the facilities associated with him. Dr. Stephen Holtsford, M.D., admitted under oath that he has no experience in operating or managing a facility of this kind. Mr. Marco refused to provide anyone of any credible experience that could speak to relevant issues;
- They claim they will pursue top accreditations yet have no one experienced that can speak to these or ensure they will be pursued diligently;

- Maxxam has still not addressed how it plans to manage the issue of dispensing controlled substances on a property which zoning specifically prohibits dispensing them. Even other zones that allow an exception (B, LI) specifically limit this to 5 years. Do they only intend to be in business for 5 years?
- The security system being proposed has no record of being used in this application or for these types of facilities. Its use is wholly theoretical and, again, as the petitioner refuses to investigate the types of emergency responses that will be required, they continue to disadvantage themselves in proper planning for actual security needs;
- In regards to their concession #6, any Special Use privilege afforded their LLC can be bought, sold, become a subsidiary, or experience a change in partnership or investors. Within a private shell, the County would never know who was, is, or will-be benefitted by this business and you will never be able to prevent any of these transactions or to hold any individual accountable because they will be shielded by a corporate veil. Mr. Marco could even remain Managing Partner in name while substantive changes are made to the entirety of the investors and other members. This is yet another non-solution offered by the petitioner that does nothing to address the real issues that will face this community. Worse than meaning nothing, it pretends to provide assurances that simply aren't there;

Let me make this issue simple: for a moment let's consider we are discussing a gas station, a dentist's office, a hospital, or a grocery store. All these things are fine businesses which are needed by a community. However, just because something is needed does not mean it should be placed willy-nilly anywhere land is cheap and available. Nor should we then surrender our zoning laws just because an applicant is upset at being denied an ability to recklessly make money.

As for the future, the petitioner claims that the property is unwanted and will sit fallow for a long time. This couldn't be more false; although we were never allowed to question Glenwood School personnel on the record regarding this matter, I personally know of at least 4 entities that have tried in earnest to purchase the property. All were oddly rebuffed. Interest in this property has been strong, including from those better aligned with the original spirit of the zoning exception that allowed its development. Shoehorning a large, commercial business into this space is so far from that original intention as to be absurd.

In closing, I ask you to reject this petition – not from any malice or ill-informed NIMBY attitude, but for the purely logical reason that it represents an unfair burden on the community on multiple levels. It would compromise the safety of everyone (including patients), diminishes services, and would increase taxes while lowering property values. This will be solely due to the site being inapplicable for a large business such as the one proposed by Maxxam. The Fair Housing Act is not a blanket tool to allow a new, for-profit development of this type to force their business into any area of their choice. It allows for exceptions when a request is unreasonable and represents multiple predictable and calculable burdens on the surrounding community that outweigh the benefits. This petition easily meets the standard of “unreasonable”. Reject it because doing so is logical.



January 18, 2017

VIA ELECTRONIC MAIL
Mark D. VanKerkhoff, AIA, Director
Kane County Development & Community
Services Department
719 South Batavia Avenue
Geneva, IL 60134


RE: Maxxam Petition

Dear Mr. VanKerkhoff:

Per the Zoning Boards request attached is a list of conditions that the Village of Campton Hills would like to see included if the ZBA sees fit to recommend to approve the special use permit for Maxxam partners, LLC.

In no way should this be interpreted, that if these conditions are include, that the Village will drop its objections to the special use permit for the proposed Maxxam facility.

Sincerely,


Harry Blecker
President
Village of Campton Hills

Village of Campton Hills ~ 40W270 LaFox Road, Suite B ~ Campton Hills, IL 60175
630-584-5700 ~ Fax: 630-584-5775 ~ www.villageofcamptonhills.org



Village of Campton Hills

Proposed Conditions on Maxxam Partners, LLC Application

The Village of Campton Hills respectfully requests that the Kane County Zoning Board of Appeals consider incorporating the following conditions in any and all approvals related to the special use permit request by Maxxam Partner's for the proposed alcohol and drug treatment center located at the former Glenwood School for Boys, 41W400 Silver Glen Road, Campton Township

1. The maximum number of patients at the Facility at any one time shall be limited to 96.
2. Prior to occupancy, a black metal fence with a minimum of 6' in height shall be installed on or near the boundary of the entire Property.
3. A state-of-the-art campus security system shall be installed, maintained, and monitored by personnel trained in security measures, and security personnel will be maintained on staff 24 hours per day when clients are present on the Property.
4. Exterior lighting fixtures upon replacement of existing fixtures or upon installation of new fixtures shall be full cut-off and have a color temperature of less than 3,000 Kelvin, provided that such fixtures do not compromise security as determined by the security system provider.
5. The Operator shall not accept state or federal funding for, or related to, the Property, which in any way inhibits the compliance with any special use conditions.
6. Wetlands on the Property shall be delineated and protected in perpetuity by conservation easements granted to Kane County and accepted by the Kane County Board.
7. The Operator shall develop a process of communication with the Campton Hills Police Department to ensure effective enforcement and intervention in the event of incidents occurring on the Property to which the Campton Hills Police Department responds.
8. The Operator agrees to maintain, at all times, the staffing levels required by the Illinois Department of Alcohol and Substance Abuse and all other applicable licensing authorities.
9. All signage related to the proposed use shall be restricted to the Property. Further, such signage or advertising shall not be placed on the water tower located on the Property.
10. The special use permit shall run for five years and shall require a public hearing for renewal for an additional five-year term.
11. The parties acknowledge that because of the proximity of the facility to the Village of Campton Hills, a number of the calls for police services will be responded to by the Village's police department. Because the Village of Campton Hills does not levy a property tax, it has limited resources available to fund necessary services for Village residents. In recognition of the facility's need for police services that will, in part, be provided by the Village's police department, Maxxam agrees to pay to the Village of Campton Hills an annual police impact fee in the amount of \$100,000 annual paid quarterly to the Village in \$25,000 increments.



Village of Campton Hills

Proposed Conditions on Maxxam Partners, LLC Application (cont)

12. The Operator agrees to put up a performance bond in the amount of \$100,000 and keep said bond in place while facility is in operation.
13. All patients shall pay the operator directly for their treatment. The operator's staff shall work with patients to provide a "courtesy bill" in order to assist patients in obtaining any allowable reimbursement from their insurance companies, but such reimbursements shall be payable to the patient and not the Operator.
14. Patients shall not be accepted directly from the Criminal Justice Systems.
15. Any patients found to have a primary addiction other than alcohol, or substance abuse shall be promptly referred to another facility for treatment.
16. Drug testing for both employees and patients will be performed by the Operator on a regular schedule.
17. The Operator shall seek Joint Commission accreditation. The Joint Commission is an independent, not-for-profit organization which accredits and certifies more than 19,000 health care organizations and programs in the United States.
18. Drug-sniffing dogs shall be used to check the facility on a random basis, no less frequently than monthly with reports filed semi-annually with the County.
19. Potential patients shall be screened, and patients who are registered sex offenders or who have been convicted of a felony involving violence (but excluding DUI or other substance abuse violation) shall not be accepted.
20. The Operator shall agree to engage in significant community activities, including educational activities related to, but not limited to, drug and alcohol abuse, such as school forum and teacher education seminars, in cooperation with local School District and annually report such activity to the County.
21. The construction of additional buildings and accessory structures shall require Operator to apply to amend its Special Use Permit with Kane County.
22. The Operator shall locate a public pedestrian and/or bike path easement on the Subject Property provided the easement is outside of any fence to be constructed on the Subject Property.
23. All clients must be medically stable, and no acute detox shall occur on the Subject Property. Any patient who needs to undergo acute detox shall be referred to a hospital or other appropriate facility for that purpose prior to admission.
24. The Subject Property shall be limited to a maximum wastewater capacity of 110 P.E. (population equivalent) as identified as the operational capacity of the property in the RHMG Engineers, Inc. Report dated October 10, 2012, entitled the "Glenwood School for Boys and Girls Water and Wastewater System Evaluation" until such time when the improvements identified in the report have been completed.

Commentary on the Methodological Validity of “Not in my backyard: The effects of substance abuse treatment centers on property values.” Laroche, Waller, & Wentland.

C. Cappell, Ph.D.
Version: Feb. 8, 2016

A Kane Co., IL, Zoning Board hearing (zoning petition #4364, Kane County Zoning Petitions) <http://www.countyofkane.org/FDER/Pages/development/buildingandzoning/PendingZoningPetitions.aspx> considered the appropriateness of locating a residential detoxification and substance abuse treatment center on a 120 acre site previously operated as a residential school. At one of the hearings, an opposing party introduced an article reporting property devaluation of properties proximate to Substance Abuse treatment Centers (SATC). This evidence contained in the research report is pivotal because one of the standards needed to be met to grant the special use requested to locate a SATC in district zoned as farming is:

“That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood;” (Kane County Ordinances, Zoning, Sect. 25-4-8-2(b).)

I offer the following review of this pivotal article based on my expertise as a statistically trained sociologist with 35 years of experience with the type of methods used in the LaRoche et al. research.

Comments on research design and sample

The research analyzed 194,983 real estate transactions from the MLS for an area in central Virginia around the Richmond metropolitan area. This analytical sample size was smaller than the original listings of 207,793 because some entries were deemed errors and extreme values were deleted (e.g. sale prices greater than \$1 million.) Best practices are met in documenting changes to the data, and importantly by a very large sample size which contributes to the power of the statistical conclusions, meaning that estimates are likely to have small sampling errors and hypothesis tests will be able to correctly reject hypotheses of no effects.

In footnote 3, the paper reports that a total of 309 housing sales did occur within at most a distance of .175 miles of a center: with 60 sales occurring with .125 miles, 96 sales at the greater distance of .15 miles, and 153 at the largest distance estimated at .175 miles. The number of sales analyzed is much greater than that usually considered in a ‘matched pair’ comparison.

The paper could be strengthened by examining the influence of each of the sales on the estimate of the effect of the treatment center proximity. Most of the tables report and the substantive conclusions focus on the estimates of the effects of being within the closest proximity. These effects are estimated based on the values of 60 sales within 1/8 of mile of a SATC. The authors comment without reporting details that the effects are not much different when estimated at the larger differences (see Exhibit 2, p.75). In general, one would have more confidence in the effects, being less sensitive to specific cases, if the estimates were based on sales within the largest distance, .175 and closer, with the largest number of cases, 309). If an original reviewer of this paper, I would have recommended more information on this point, perhaps in an expanded footnote. I also would have recommended that the analytical sample size used in each separate equation be included in the tables. This is necessary because of the changing specifications: including all real estate transactions outside the defined proximity as the reference category or limiting the reference category to those transactions not proximate to a SATC but within .6, 1.0, or 1.5 miles as in Exhibits 5 & 6.

The validity of the sample for reaching statistical inferences is very high, taking into consideration the deficiencies I noted above.



Comments on the specified models

The regression models estimated include a large set of hedonic indicators that affect property values, i.e. characteristics of the houses (14 in total) including number of bedrooms, square feet, acreage, etc. (See Exhibit 1, p. 71.) These variables will control for specific characteristics of the house independent of proximity to treatment center, an important set of controls. This is a statistically more powerful method of comparing prices than the 'matched pair' type of analysis.

The models' validity is enhanced by including additional control variables for the specific year of the sale and territorial-regional indicators, ranging from larger zip code location of the sale, to census tract, blockgroup, and blocks in different specifications. The inclusion of the location controls further adjusts for neighborhood and territorial characteristics. This specification isolates even further the unique effect of proximity to a SATC on sale price and time on market. This enhances the specification validity of the model.

The authors take into account that sales price and time on market are co-determined. They then specify simultaneous equations predicting both time and market and sales price using 2-stage and 3-stage least squares. The later procedure takes into account that the error terms from estimating sales price and time on market could be correlated. These estimating methods are well-established in the literature and appear to be executed correctly. Thus the estimation procedure has high validity.

In summary, the specification validity of the research is high. The only information that I noted as absent were comments on the relative influence of specific sales occurring within the proximity limits, since the number of sales occurring within the limits were relatively small. The analysis therefore, could be somewhat sensitive to a smaller subset of sales. But one must note, this is far more robust than matched pair analysis that are based on often no more than a dozen cases. Including the analytical sample size for each equation estimated is needed to meet best practices standards.

Comments on the Estimated Effect of Treatment Centers

The authors interpret the coefficient for the treatment effect (specified as a dummy variable (0,1) indicating proximity to a SATC) as a proportional change in the sales price due to a one unit change in the predicting variable. The estimated coefficient for the treatment variable is approximately -.08 in several specifications. The authors therefore interpret the effect of proximity to SATC to be an approximate 8% reduction in estimated sales price. This interpretation derives from estimating the elasticity of the beta using derivatives, appropriate when x is continuous. (Greene, p.214) However, indicator (or dummy) variable is not continuous, only taking on the values of 0 or 1.

However, a slightly different estimate of the impact can be derived from an explicit calculation of the expected proportionate decrease in sales price. I do so below.

From the three stage linear regression estimate of the semi-log equations for sales price and time on market, the partial beta giving the estimate of b for the impact of substance abuse treatment is -.077 (see Exhibit 4, p. 80).

As noted above, when x is continuous the beta coefficient can be interpreted as the proportion of change in the sales price for a one unit change in x. But x in this equation can only take on two values, 0, 1, indicating the proximity to a substance abuse treatment center (SATC).

In the derivation below, I leave out all of the other control variables in the equation and isolate the effect of SATC. Just like the intercept, these values cancel out when deriving the proportional change in sales price due to proximity to SATC so they can be ignored for calculation purposes.

$$\ln(\widehat{SP}) = a + b(Treat)$$

This semi-log form (only the sales price variable is logged, not any of the predictor variables on the right-side of the equation) is the form of the equation that is estimated.

Analysis of Poletti Data and Evaluation of Report Conclusions

C. Cappell, Ph.D.

Last updated Mar. 11, 2016

The Poletti report on the devaluation of housing values due to proximity to a substance abuse treatment center (SATC) concludes that no such devaluation is observed when analyzing three years of sales in the Timberline Knolls Substance Abuse Treatment Center (SATC) in Lemont, IL.

My reanalysis of Poletti's data invalidates Poletti's conclusion of no devaluation of housing prices due to the proximity of the SATC.

First, observe that the methodology used is regression analysis, a methodology preferred to an analysis that only compares a few cases. The Poletti report also included the data analyzed in appendices that permitted reanalysis and replication, following a best practice. One's first impressions are that the appropriate method of analysis was chosen and the author included the actual data for validation.

After a reanalysis of the data contained in Poletti's Appendices, I conclude that the Poletti analysis violates several of the best practices required by regression analysis:

1. Miscoding of at least 6 addresses as in the Target area (proximate to the SATC) that were outside that area. Calls into question the integrity of the sales data.
2. Unwarranted trimming of cases from the final analysis indicating potential 'data cooking'.
3. Misspecification of the regression equation that overlooks the interaction of age of the property and proximity to the SATC.
4. Failure to check assumptions of the regression technique that requires analysis of the distribution of the residuals.

These four fatal flaws lead me to conclude that the Poletti report conclusion that there is no devaluation of property sale values due to proximity to the Timberline Knolls SATC is invalid.

Detailed Results

I discovered in the course of the reanalysis that 6 sale addresses were coded as being proximate to the SATC (in Target area) that in fact were outside the target area (67,70, 72, 74, 77, 78) (see Poletti, p.14 for outline of Target area). I did not systematically review all of the addresses and coding into the Control or Target area, so there may be other errors, reducing confidence in the integrity of the data and coding used in the Poletti analysis.

Table 1: Questionable Assignment of Addresses to Target Area in Poletti Report

Sale #	Address	Error
67	16701 Wilshire	West of RT 355
70	12448 Province	West of RT 355
72	12448 Province	West of RT 355
74	12437 Province	West of RT 355
77	12635 Thornberry	West of RT 355
78	12345 Thornberry	West of RT 355

In my own analysis, I revised the dummy variable indicator, `prox_revised`, to represent an indicator variable regarding whether the sale took place in Poletti's target area or the control area that corrected these 6 misclassifications.

Best practices in regression analysis dictate that cases be dropped from the analytical data file only for strong theoretical or empirical reasons, such a sample point that is clearly from a different population, or a clear data



entry error for a case. Yet Poletti presents 3 datasets with successive trimming of cases in the appendix to the report. The final analytical sample (n=179) used in his regression analysis reduces the original sample size (n=340) by nearly half (47.4%). This extent of trimming sends up red flags.

Furthermore, when examining the observed sale price comparisons between the Target and Control areas, one notices that as the sample is trimmed, a dramatic shift occurs. In the original and Arms Length Sales, the average sale price is higher in the Control area than in the Target area; but in the final regression sample, the direction changes and the Target area now, in this trimmed sample, has a higher average sale price. This extensive trimming raises suspicions about strategies that violate data analysis best practices designed to avoid cooking the data (selecting cases leading to the researcher's preferred results).

Table 2: Analysis of Sale Price Data Contained in Appendices from Poletti.

	Appendix 2a Full Sample		Appendix 2b Arm's Length		Appendix 2c Regression (Post 1970)	
	Target	Control	Target	Control	Target	Control
Sample size	90	250	73	188	43	136
Mean	309,394	316,874	329,540	349,095	423,164	399,169
Median	280,500	328,500	305,500	355,000	420,000	395,000
Std. Dev.	145,260	143,283	147,278	129,429	109,012	108,231
Skewness	.41	.07	.22	.16	.06	.15
Kurtosis	2.10	2.63	1.96	2.69	1.65	3.72

The following table describes the sale price, age, and size of the sale by proximity to the SATC using the corrected Target/Control address designations.

Table 3: Distribution of Sale Price, Age (Year Built) and Size by Corrected Proximity

prox_revised	Sale Price(sprice)	Year Built(age)	size
control 0	322425.5	1983.691	2320.67
target 1	291940.3	1970.917	2143.44
Total	314893.8	1980.535	2276.627

STATA code: `. tabstat sprice age size , stats(mean) by(prox_revised)`

These results show that there is confounding between the area of the sale (control, target) and the size and age of the sold dwelling. Poletti notes the covariation between proximity and age, but then in some subsequent analysis focuses only on newer properties, unnecessarily trimming the data by deleting older homes. Unjustified and unwarranted trimming of cases from regression analysis violates best practices.

Another issue raised by Poletti concerned short sales and sales involving banks. Poletti's solution was again to drop cases from the analysis. A better strategy is to code those bank involved sales with an indicator variable and include all cases, as I did in my analysis.

Given the association between the age of the house (indicated by year-built mean adjusted) and proximity to the SATC, best practices for regression analysis calls for inspection of interaction effects to examine the proper specification. The results presented in Table 4 test whether age and proximity interact and have an influence on sale price (sprice) and show that we cannot estimate an independent effect of proximity, it will vary according to the age of the dwelling.

Table 4: Test for Interaction between Revised Proximity Indicator and Age(Year Built-Mean Adjusted)

Source	SS	df	MS	Number of obs	=	340
Model	3.9928e+12	3	1.3309e+12	F(3, 336)	=	149.03
Residual	3.0008e+12	336	8.9308e+09	Prob > F	=	0.0000
				R-squared	=	0.5709
				Adj R-squared	=	0.5671
Total	6.9936e+12	339	2.0630e+10	Root MSE	=	94503

	sprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	age_ma	3821.921	202.2933	18.89	0.000	3424 4219.842
	1.prox_revised	7915.051	12243.95	0.65	0.518	-16169.4 31999.51
	prox_revised#c.age_ma					
	1	-1083.713	361.4582	-3.00	0.003	-1794.719 -372.7072
	_cons	310363.1	5940.842	52.24	0.000	298677.1 322049

STATA code; reg sprice c.age_ma##i.prox_revised

The results in Table 4 indicate that a regression model that does not include the interaction between proximity and age will be misspecified, and consequently, the interpretation and conclusions about the effect of proximity will be invalid. The following results include the interaction specification involving Proximity to the SATC and Year-built_mean adjusted (age). The model results presented in Table 5 also specify effects for Bank involvement in the sale (bank), size (size_ma), and sale date (date2_ma). The other predictors (style, fireplaces, basement status, garage) included in Poletti's final model were not available for the full set of cases included. When the additional variables are included, the interaction effect remains statistically significant at the .10 level, and the 95% confidence interval for the interaction effect ranges from -852.603 to 26.96885; while this range includes zero, indicating no effect, the range is clearly more in the negative range, barely crossing into the positive range. Recall, that the model without the additional controls also showed a strong interaction effect.

The model presented in Table 5 is superior to the model presented in Poletti, Table 2. My model uses 338 cases so there is no invalid trimming of the data set analyzed. It adjusts for age of the structure and whether a bank was involved in the sale. Poletti's adjusted R², an indicator of how much variation in the sale price is explained by the model, is .741, the model I estimated in Table 5 has an adjusted R² of .84.

The effects of house characteristics on sale price estimated by the model conform with common sense expectations. Each additional square footage of a house increases the expected sale price by \$98, controlling for all other effects. Involvement of a bank decreases the expected sale price by \$52,196.71, controlling for all other effects. And each added month of recency from the earliest sale date increases the expected sale price by \$1,376.70, controlling for the other effects, indicating a positive time effect as the sale date is removed from the housing recession.

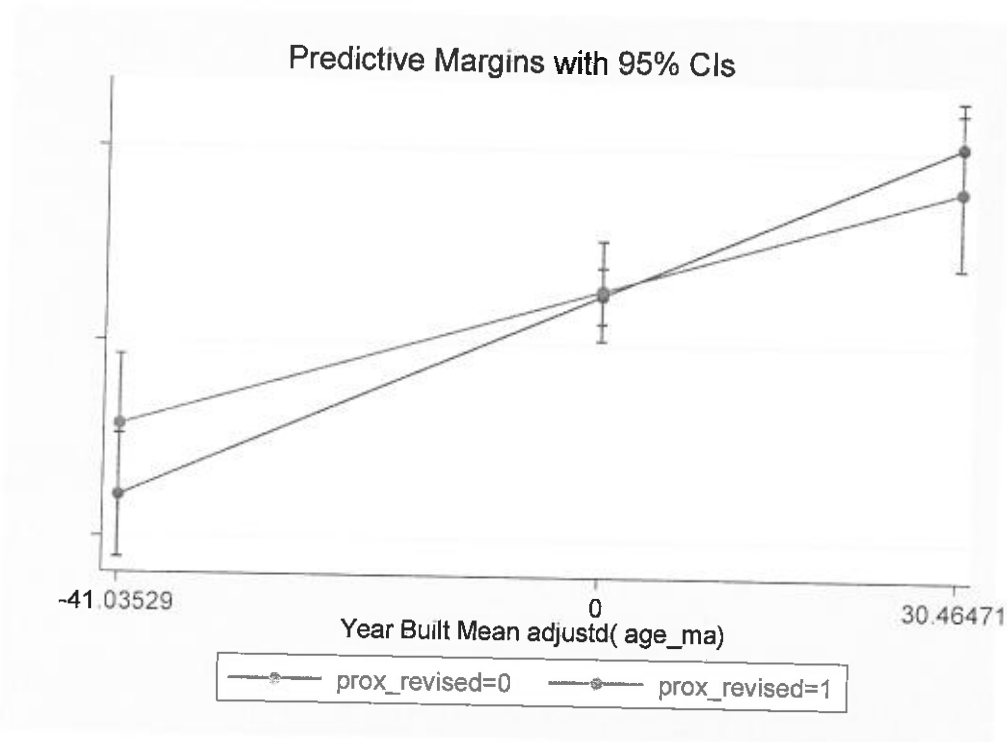
Table 5: Predicting Sale Price as Function of Age, Proximity, their Interaction, Bank, Size, & Sale Date

Source	SS	df	MS			
Model	5.7849e+12	6	9.6415e+11	Number of obs	=	338
Residual	1.1003e+12	331	3.3241e+09	F(6, 331)	=	290.05
				Prob > F	=	0.0000
				R-squared	=	0.8402
				Adj R-squared	=	0.8373
Total	6.8852e+12	337	2.0431e+10	Root MSE	=	57655

sprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
age_ma	1274.797	163.6465	7.79	0.000	952.8783	1596.715
1.prox_revised	1178.488	7484.545	0.16	0.875	-13544.79	15901.76
prox_revised#c.age_ma						
1	-412.8171	223.5642	-1.85	0.066	-852.603	26.96885
size_ma	98.47224	4.382945	22.47	0.000	89.8503	107.0942
bank	-52196.71	8528.575	-6.12	0.000	-68973.75	-35419.66
date2_ma	1376.703	326.845	4.21	0.000	733.7477	2019.659
_cons	322094.7	3966.214	81.21	0.000	314292.5	329896.9

STATA code: `. reg sprice c.age_ma##i.prox_revised size_ma bank date2_ma`

The crucial information for assessing whether proximity to the SATC has an effect on sale price is complicated by the interaction effect of proximity with age. To view the nature of the interaction effect, one plots the expected value at different levels of the year-built variable, here plotted with values at the 10th percentile, the mean, and the 90th percentile of year built.



STATA code: `marginsplot, x(age_ma)`

Figure 1: Marginal Prediction of Sale Price as Function of Interaction between Proximity and Age

Figure 1 shows that there is not a consistent effect of proximity on sale price. The effect of being proximate to the SATC varies according to the age of the house. For some unknown reason, older houses in the proximate area have higher predicted sale prices than the comparable older house in the non-proximate (Control) area. However, as the houses become newer, houses in the control area have higher expected sale values than those proximate to the SATC.

Perhaps the clearest interpretation of the above interaction effect showing the negative effect of proximity to a SATC is to focus on the slopes of the two lines. The slope of the line showing the expected increase in sale price due to newness of the house for houses proximate to the SATC (the red line in Figure 1) is smaller than the slope of the line for the control area (the blue line in Figure 1). This shows that there is a negative effect on the expected value increase for newness of the home if the home is proximate to the SATC rather than further away. The above model invalidates Poletti's conclusion regarding the effect of proximity to the Timberline Knolls SATC.

Poletti's analysis further fails to meet regression best practices by failing to examine important assumptions of regression analysis, the distribution of the residuals of the model. My analysis shows (Table 6) that the normality assumptions of the residuals is not met, invalidating any use of inferential statistics in these results. The residuals are skewed in the positive direction (skewness= .34) and a far more concentrated around the mean of zero (kurtosis=5.99) than would a normal distribution (skewness=0 and kurtosis= 3).

These results dictate that one can't use the models specified by Poletti or myself to extrapolate to a broader population of housing sales. A different type of regression analysis is required (ordinal decile regression) to meet the assumptions required for generalization.

Table 6: Skewness/Kurtosis tests for Normality

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Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
ressprice	338	0.0098	0.0000	28.56	0.0000

STATA code: sktest resprice

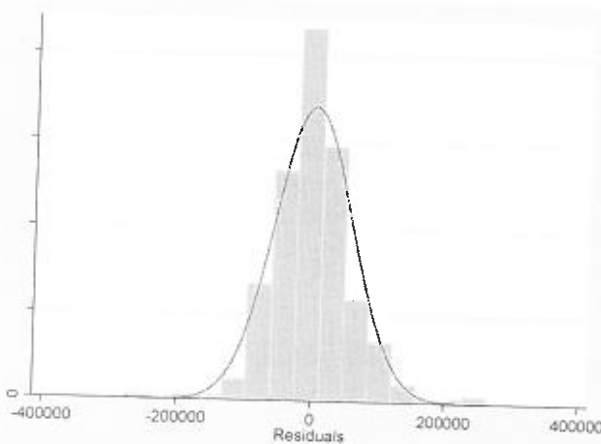


Figure 2: Plot of Residuals of the Regression Model Described in Table 5 with a Normal Graph Overlaid.