LID Protest Hearing Presentation - February 4, 2020

OBJECTION TO PROPOSED FINAL ASSESSMENT, WATERFRONT LID NO. 6751

Robert S. Stevens
1950 Alaskan Way #326
Seattle, WA 98101-1077
Parcel ID: 9195871150

References:

Summary of Waterfront Seattle Project Final Special Benefit/Proportionate Assessment Study for Local Improvement District- prepared by ABS Valuation-2019

Gibbons & Riely Analysis- May 2, 2018

Cover page for Property Appraisal by Quinton Rushi Brown, Sweetgrass Appraisal Company

Official Property Value Notice- King County Assessor

My residence is in the Waterfront Landings condominium community; a 232 unit complex located on the Seattle waterfront across from Piers 62-63 and the Bell Harbor Marina. Since our condominium community includes not only our own separately owned units, but also property held in common amounting to over $100 million in value, the conditions that impact any part of our community property also impact my personal property.

I submit that this benefit study is defective and that the assessments based upon it are invalid for the following reasons:

Page 6 of Study Summary states: "A unique aspect of this special benefit study is that the analysis does not consider any view enhancement (or resultant market value increase) due to removal of the Alaskan Way Viaduct."

What the report also does not consider is the planned construction of the Pine Street connector between Alaskan Way and Elliot Way which will rise 18 feet and create a concrete wall that will completely obscure the views and restrict pedestrian and vehicle travel at the South end of our community. Access to our southern parking garage entrance and access from our parking garage to the street will become much less accessible and perhaps more hazardous to use. Garbage removal and emergency vehicles will experience greater difficulty in accessing the back of the property. Access and views for the entire southern third of our community will be permanently degraded. Yet the same valuation formulas for calculating benefit have been applied to the numerous units whose values will most certainly be permanently lowered as a result of this new road system. The study gives no consideration to the considerable negative impacts that this roadway will have to varying degrees on every unit in our community. Before our assessments are finalized, a separate study should be undertaken to properly evaluate and apply these impacts to our benefit valuations.

As a funding mechanism, LIDs are typically reserved for funding utilities and infrastructure projects where special benefits are easily calculated. Page 26 of the study defines a special benefit as "a specific, measureable increase in value of certain real property in excess of enhancement to the general area (and benefiting the public at large) due to a public improvement project." Washington Patten Instruction (WPI 150.07.0) states : "Special benefits are those that add value to the remaining property as distinguished from those arising incidentally and enjoyed by the public generally.

State law requires that a special benefit be defined separately from a general benefit. General benefits are inappropriate for inclusion in a local improvement district assessment . This study has failed to define and valuate "General Benefits" as separate from "Special Benefits" thus the assessments cannot be valid. Since the entire Waterfront Improvement Project is consistently referred to as a "regional park for all", it is highly likely that few if any of the improvements meet the criteria of "Special Benefit" as they apply to my property.

Proximity as a benefit-The study makes reference to the benefits incurred due to "proximity" to the improvements. As an apparent consequence, our property carries the highest estimated value increase (3%) of any residential property in the LID Area. My understanding of State Law is that "proximity" can only be considered as a benefit to "land" but can have no effect on "improvements". Since our complex occupies the maximum permissible build height and density, one would assume that we achieved "highest and best use" when the complex was built over 20 years ago.

Accuracy of Valuations- The study states on page 28: " Electronic data based on records of the King County Department of Assessments forms the basis of the final recommended assessment roll spreadsheets that are integral parts of this report."

At the risk of causing my own assessment to be increased, I offer the following proof of the study's lack of accuracy:

Official Property Value Notice, King County Assessor Dated 08/01/19	$1,088,000
Professional Appraisal by Quinton Rushi Brown Dated 09/30/19	$1,098,000
"After LID Improvements" valuation for my property contained in study:	$1,024,206

My Special Benefit is listed as a 3% appreciation in value or $29,831 yet falls over $50,000 short of the other two appraisals. The study's conclusion is clearly invalid.

I also find it very concerning that the valuations arrived at by the "mass appraisal technique" would produce such an apparently precise number as the one shown above. "Mass appraisal" may be an acceptable technique for planning of large projects but it has very personal and potentially damaging consequences when it is used to determine a property assessment of tens of thousands of dollars on a single property.

My suspicion is that whatever formula or algorithm was employed for this study simply strove to create the value spread necessary to achieve the desired amount of total assessment and was not sufficiently driven by real research or inspection. In summary, this study employed little physical inspection or rigor. The study's conclusions were reached using extremely abstract and theoretical assumptions and It does not belong as the basis for extracting $160 million in assessments from a minority of this city's residents.

How the project components impact my property: The study describes 6 different components that comprise the $346 million project. I will comment on each along with the additional impacts we are experiencing from the larger waterfront redevelopment.

1) **Promenade** – "a continuous public open space with amply green, landscaped spaces along the west side of the new Alaskan Way from S Washington to Pine Street"
   Impact: This is a city park and as such, all expense and benefit should be shared with the entire city.
2) **Overlook Walk-** "a pedestrian bridge and landscaped public space that connects the Pike Place Market with the Promenade"
   Impact: An attractive feature that also serves as the primary structure housing the Seattle Aquarium expansion. Were it not for the aquarium, it's design would be substantially less complex and considerably less expensive. In terms of market access to those of us no longer able to climb the steep stairs, it serves little value.
3) **Pioneer Square Improvements**- (Too far from our property to be relevant)
4) **Union Street Pedestrian Connection** – (Too far from our property to be relevant)
5) **Pike Pine Streetscape Improvements-** "A flexible space designed to accommodate diverse programming similar to Westlake Park, on the south side of Pine Street between Third and Fourth avenues".
   Impact: Given this neighborhood's historic reputation, unless the City commits significant resources to its policing and upkeep, it will only be another magnet for criminal activity. This component is of no benefit to my property. As a footnote, Westlake Park remains one of the least desirable park spaces in the downtown area.
6) **Pier 58** (Formerly Waterfront Park)- This is clearly a park space with benefit to the public in general and no direct benefit to my property.

Changes to the Seattle Waterfront not directly associated with the LID project but having considerable impact on my quality of life and property value:

1. **Pine Street Connector** – (already described above) reduces access and views.
2. **Abandonment of Pier 63-** Before its closure, central to my living room view and a feature that I enjoyed for many years for recreation was the Pier 62-63 complex. While Pier 62 is being rebuilt at considerable expense, it was announced that there are insufficient funds to complete Pier 63 so it will be closed. If not improved, Pier 63 becomes just an eyesore and an attractive nuisance for vagrants and unauthorized activity. Any thoughts of seeing major concerts return to this venue are out of the question. The "new" Pier 62 lacks the space and configuration to accommodate concerts. Without access for the large construction barge that is necessary to support a major project (blocked by Pier 62 on south and Bell Harbor entrance on north) it is doubtful that Pier 62 will ever be rebuilt. In the interim it could be used again for staging construction materials and then allowed to decay.
3. **Reduced Parking**- While the redevelopment is designed to attract visitors to the Seattle Waterfront, parking has been substantially reduced. That includes the removal of dedicated guest parking for our complex.

4. **Increased foot traffic**- Litter and vandalism to our flowers and shrubbery are already a problem. Increased foot traffic can only exacerbate this problem.

5. **Noise and air pollution**- At least until the Elliot Avenue street is completed, heavy traffic on Alaskan Way is a 20 hour a day problem. Speed limits are ignored and loud exhaust noise is a constant problem. During cruise ship season, the many large trucks servicing the ships docked at Pier 66 will pass directly under our living room window. As the number of cruise ships using our port increases, diesel smoke from both the ships and the trucks servicing them intensify.

The Waterfront Landings owners collectively are being asked to pay almost $2 million in assessments. Facts supporting the conclusions in this report are extremely speculative and vague. The City should not rely on what is clearly a very general and somewhat random method for determining a financial obligation of this magnitude.

I hereby request that the City of Seattle, prior to finalizing our assessment, embark on a more detailed and fair process of determining both the liabilities and benefits of the project as they affect our specific property.

LOCATED AT

1950 Alaskan Way
Seattle, WA 98101
Waterfront Landings Condominium Pct Und Int 0.78 2 Pkg Plat Block: Plat Lot:

FOR

Wells Fargo Mortgage
255 Second Avenue South
Minneapolis, MN 55479

OPINION OF VALUE

1,098,000

AS OF

09/30/2019

BY

Quinton Rushi Brown
Sweetgrass Appraisal Company
300 Lenora St, PMB 157
Seattle, WA 98121-2411
(206) 249-7123
quinton@sweetgrassappraisal.com
www.sweetgrassappraisal.com

SUBJECT INFORMATIO

County	King
State	WA
Zip Code	98101
Census Tract	0081.00
Map Reference	42644

PRICE & DATE

Contract Price	$
Date of Contract	

PARTIES

Borrower/Client	Robert S & Lynn R Stevens
Lender	Wells Fargo Mortgage

DESCRIPTION OF IMPROVEMENTS

Size (Square Feet)	1,512
Price per Square Foot	$
Location	N;Comm;
Age	22
Condition	C3
Total Rooms	6
Bedrooms	2
Baths	2.0

APPRAISER

Appraiser	Quinton Rushi Brown
Effective Date of Appraisal	09/30/2019

VALUE

Opinion of Value	$ 1,098,000

KING COUNTY ASSESSOR
500 4TH AVE ROOM 740
SEATTLE, WA 98104-2384

OFFICIAL PROPERTY VALUE NOTICE

THIS IS NOT A TAX BILL

PRESORTED
FIRST CLASS MAIL
U. S. POSTAGE PAID
SEATTLE, WA
PERMIT NO. 213

ACCOUNT NUMBER: 919587-1150-08
LEVY CODE: 0011
EVN CODE: C121EC
PLAT NAME:
WATERFRONT LANDINGS

Disabled or age 61?
Property Tax relief may be available
Go To:
www.kingcounty.gov/assessor/seniors

2019 VALUE FOR TAXES DUE IN 2020

	APPRAISED VALUE		VALUE AFTER EXEMPTION
	OLD VALUE	NEW VALUE	
LAND:	305,200	305,200	305,200
BLDGS:	782,800	782,800	782,800
TOTAL:	1,088,000	1,088,000	1,088,000

MAIL DATE: 08/01/19

SEE BACK FOR APPEAL DEADLINE

MAILING ADDRESS:

STEVENS ROBERT S+LYNN R 819999
1950 ALASKAN WAY UNIT 326
SEATTLE WA 98101

CSF-IP1

RE•SOLVE

GIBBONS & RIELY, PLLC
Real Estate Appraisal, Counseling & Mediation
261 Madison Ave S, Suite 102
Bainbridge, WA 98110-2579

Anthony Gibbons, MAI, CRE
Direct Dial 206 909-1046
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May 2, 2018

John C. McCullough
Attorney at Law
McCullough Hill Leary, PS
701 Fifth Avenue, Suite 6600
Seattle, Washington 98104

Catherine Stanford
CA Stanford Public Affairs
Principal
1904 3rd Ave, Suite 828
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RE: **Waterfront Seattle LID Special Benefits Report – File Ref: 17-0291 – May 19, 2018**
Authored by Valbridge.

Dear Mr. McCullough and Ms. Stanford:

At your request, I have conducted this high-level review of the Valbridge mass appraisal study prepared for the purposes of documenting Special Benefit resulting from the city Waterfront Seattle project. The letter is intended as a consultation, and not as an appraisal review. At some point it may be appropriate to address individual valuations on a parcel by parcel basis, but that is not the concern of this letter. This consultation is largely conceptual in nature, and looks purely at the methodology employed and the general conclusions made in the presentation of the study. Please note, as a disclosure, I am part owner of a condominium located within the boundaries of the LID. I do not consider this to be a conflict in providing an objective review of the study methodology.

Valbridge Appraisal

Valbridge presents several conclusions, which briefly may be re-stated as:

1. LID Boundaries. Valbridge identifies a total of 6,130 properties with potential special benefits within an LID boundary that generally comprises the entire downtown area lying between Puget Sound, I-5, Denny Way, and S. Massachusetts Street.
2. Property Valuation. The value of property within this area is concluded to be approximately $48.8-billion.
3. Special Benefit Lift. The appraisal concludes with incremental increases in individual property values (which are presented numerically in the report) summarized as follows:

	Percentage of Property Value Increase	
Property Class	**High**	**Low**
Land value	<4.00%	<0.50%
Office/Retail	<3.50%	<0.50%
Hotel	<3.50%	<1.00%
Apartment/Subsidized housing	3.00%	0.00%
Residential condominium	3.00%	<0.50%
Waterfront	<4.00%	<0.50%
Special purpose	<0.50%	<0.50%

4. Special Benefit Amount v. Cost. The total of the individual assignments approximates a $415-million special benefit over these properties. This is compared and contrasted to the LID cost of $320-million. Legally the cost of the LID cannot exceed the benefit provided.
5. After Valuation. The incremental increases in value calculated are added to the Before value to create an After value, which in aggregate comes to $49.2-billion.

Conceptual and Methodological Issues

1. The basic construct of the LID and its application to Waterfront Seattle

LIDs are typically reserved for the funding of utility improvements and infrastructure within a specific neighborhood or market, and represent a means by which a group of property owners can receive and pay for improvements that might otherwise be avoided by a municipality; perhaps the project in question is/has been deemed too specific, or not a priority, to cover with general funding. The mechanism essentially allows property owners to pay for the LID with the obvious value lift associated with, say, the provision of sewer or a road. Under RCW 34.44.010, "*The cost and expense* [of improvements made through an LID] *shall be assessed upon all the property* [within the boundaries of the LID] *in accordance with the special benefits conferred thereon.*" (bracketed language added). The value lift associated with provision of the infrastructure (say water, power or sewer) is typically easily measured, and *special benefits*[1] are not hard to prove and calculate.

The current proposal, to fund a regional park through this mechanism, represents a special challenge for an appraiser, as the special benefit associated with an amenity such as a publicly-owned park is not obviously beneficial in the same fashion as a utility extension, representing more of an aesthetic, and widely dependent upon factors unrelated to the mere presence of the project (such as operations, public use, etc.). The project becomes even more challenging, when the park is to be located in a regional economic center, and funding requirements require benefit assessment across several downtown blocks that lie uphill from the amenity.

2. Special Benefit

Background

A successful LID is based on the correct identification of the *Special Benefit* created. The term Special Benefit is both a legal term and a term of art in the appraisal industry. The most succinct definition of Special Benefit is provided as a WPI instruction:

> "*Special benefits are those that add value to the remaining property as distinguished from those arising incidentally and enjoyed by the public generally.* WPI 150.07.01

The distinction between Special and General benefits is then a key consideration for an appraiser in the application of benefit deemed special. Eaton stresses the importance of the proper identification of special benefit, and the necessity for also identifying general benefit for the simple purposes of appropriate benefit allocation; if a project creates both special and general benefits, only the special increment that accrues to certain properties can be part of the assessment:

> *It should be noted that project enhancement...may be composed of general benefits, special benefits, or a combination of the two. Thus it may be necessary...to allocate the beneficial effects of project enhancement between special and general benefits and to consider only the special benefits in estimating the value of the property in the after situation."*
>
> Real Estate Valuation in Litigation, Page 326, by Jim Eaton MAI.

[1] See subsequent discussion on the definition of a special as opposed to general benefit.

The standard dictionary definition of special, an adjective, is *better, greater, or otherwise different from what is usual.* Synonyms include *exceptional, unusual, singular, uncommon, notable, noteworthy, remarkable, outstanding, unique, more.* In practical application though, the precise meaning of Special Benefit has been debated in the courts, particularly in eminent domain cases, with the same principles applying to LIDs. One of the clearest and oft-cited distinctions of special and general benefit is found in the following court decision:

> *"The most satisfactory distinction between general and special benefit is that general benefits are those which arise from the fulfillment of the public object..., and special benefits are those which arise from the peculiar relation of the land in question to the public improvement"*
> United States v. 2,477.79 Acres of Land, as quoted in Nicols

There are various common sense applications of special benefits. They cannot be "*remote, speculative or imaginary*" (WPI). In addition the appraiser should consider when the benefits will actually be received.

> *The fair market value of the remainder, as of the date of valuation, shall reflect the time when the damage or benefit caused by the proposed improvement or project will be actually realized.* Uniform Eminent Domain Code 1974, §1006, p.10.11. as quoted in Real Estate Valuation in Litigation by Jim Eaton, MAI

3. The Valbridge Study

The Valbridge study presented on behalf the city fails to meet key tests of credibility in the application of Special Benefit. At issue are the following general categories of analysis:

a. Special Benefit Definition and Distinction from General Benefits

The appraisal:

- Makes no attempt to assess General Benefit, and does not offset the apparent measure of special benefits with general benefits. The appraisal ignores the basic equation:
  - Total Benefit minus General Benefit = Special Benefit.

  If the evidence of benefit presented by the appraiser is to be believed, it is apparent that General Benefits have been included in the Special Benefit Study.

Beyond the lack of recognition of General Benefits, it is noted that the very nature of the public improvement – a regional park - and the wide LID boundaries described in the report, suggests that entire project could be described as offering almost entirely general benefit. Almost by definition, if $48.1B of real estate is impacted by the project, the benefits provided would seem very general and widespread in nature.

b. Method of Assessment

The method of assessment used – an application of a percentage to a concluded before value – does not represent a true measure of benefit. This is considered a short-cut, akin to a "strip-take" analysis, typically reserved for projects with minor damages - small easements or takes of strips of land. Its application to a special benefit study represents an improper method of analysis as the value lift should be calculated, not applied. The appraiser should evaluate the value of the properties without the project, and then with it, and measure the difference. Here the appraiser has not met the burden of proof of a value lift, as the latter is concluded and added, not measured as a difference.

c. Before & After Descriptions

There is very little clarity in the appraisal as to the precise difference between the Before and After. The appraisal acknowledges that the viaduct is down in the before, but it is not clear how the value lift associated

with the viaduct removal is built into the before value estimates. Further the level of improvement that would be undertaken by the city, but for the LID, is not described in detail. With no side-by-side comparison of images, it is not possible to know what was in the mind of the appraiser making an assessment for provision of an "extra" amenity. Since the entire analysis relates to an aesthetic difference, appropriate renderings of the aesthetic difference created would seem to be critical for proper analysis.

The issue also extends to cost. The LID is noted as a $320,000,000 project. Yet the increment associated with the LID cost verses the investment that would occur anyway is not presented. The impression – that $320,000,000 would be invested but for the LID – would appear to be an inaccurate presentation. It would appear that the appraiser incorrectly measures the benefits resulting from a $320,000,000 investment, as opposed to those accruing from a smaller investment, representing the LID extra.

There is also no value discussion pertaining to timing; do assessments consider when the actual park will be complete, and therefore when the benefits, if present, will accrue? The interim condition and associated construction is likely to be disruptive: some properties will be "specially" as opposed to "generally" impacted by construction activity in terms of noise, dust, etc. Proximity, which is stressed as a special benefit, would represent a special negative as concerns related and proximate construction activity.

d. Assessments are not supported by empirical data

The evidence presented for special benefit is almost entirely anecdotal. The appraisal does not provide discrete and empirical before and after analyses of purportedly similar public projects across a wide-range of property takes. Anecdotal opinions of before and after, without apparent adjustment for general benefits, correction of blight issues and the passage of time, do not provide a convincing case for the assignment of a 0.5 to 4% value increase to a full spectrum of property types across a wide downtown area, many blocks away from the improvement.

Moreover, the level of assignment applied is largely immeasurable from an appraisal perspective. Application of a 0.5-4% value change on a general mass appraisal basis falls well below the standard of error already present in such an analysis – in effect the analysis reveals the benefit is immeasurable at this level. Even if individual "MAI appraisals" were completed on every individual property, it would be difficult if not impossible to measure the benefit of a park improvement a few blocks away to say, for instance, a downtown office tower. Take for example the 1201 Third Avenue office tower, valued at $716,942,500 - it would be hard to rationalize discrete adjustments of the magnitude presented here amid the myriad impacts on value such as market conditions, tenant sizes and rollovers, and different views and floor levels. The majority of the tower has no view of the park and no special access to it; a lease decision here would not logically include serious "special" consideration of a park three blocks away, and at a different elevation. Suggesting the property increased to $721,442,000 (a $4,500,000 or 0.6277% difference) on account of park proximity would seem to define a "*remote, speculative or imaginary*" adjustment.

e. Assessments include percentage assignments to improvement value

The assessments are based on a percentage assignment to total property value, in place in 2018. However, the project presented relates, purportedly, to a proximity benefit; this is a location factor, which is a land characteristic. Benefits from proximity do not accrue to improvement value, as the "bricks and mortar" are unchanged. This creates an inequity in the side-by-side comparison of improved and vacant land parcels, and one that is particular well illustrated in case of development properties that will imminently be developed. This methodological error is essentially a function of relying upon an across-the-board percentage adjustment, as compared to truly measuring before and after differences. Two examples are presented below:

Example 1: 1201 Third high-rise office v. 1206 Third across the street, high-rise under construction.

Property	Land Size	Building Size	Assessment	$/sf land	$/sf building
1201 Third	56,400sf	1,130,000sf	$4,500,000	$80/sf	$3.98/sf
1206 Third	43,680sf	720,000sf*	$1,023,000	$23/sf	$1.42/sf

* under construction; will be complete by 2023

1201 Third is located one block further from the park than 1206, and at a higher elevation. The higher assessment here is inequitable.

Example 2: Cyrene Apartments at Alaskan and University v. Woldson parking lot at 1100 Alaskan (with proposed development).

Property	Land Size	Units	Assessment	$/sf land	$/unit
50 University	17,333sf	169-units	$2,923,000	$169/sf	$17,296/unit
1100 Alaskan	35,233sf	256-units*	$1,233,000	$35/sf	$4,816/unit

* proposed; will probably be complete by 2023

Both properties have the same orientation to the park and lie at the same elevation. The higher assessment to the Cyrene Apartments at 50 University is thus inequitable.

Conclusion

In conclusion, the Special Benefits study presents several major issues. These include:

- The before condition is not adequately described; side-by-side illustrations of the before and after are not presented. This kind of descriptive detail would appear necessary for the purposes of evaluating an amenity or aesthetic difference to be specifically created through funding.
- Special benefits are merely assigned, not measured. The study does not provide a measurement of after value, with the project in place, that is independent of the before value, and takes into consideration delay until receipt.
- Purportedly measured benefits are not allocated into "general" and "special" benefits. Labelling all benefits as special does not appear credible for a regional park.
- Benefits associated with proximity should be evaluated in the form of a lift in land value. The methodology used (a broad percentage assessment applied to total property value) results in inequitable assignments between properties.

The more general issue is the difficulty of trying to forecast a benefit that is special to a park that has regional appeal. The more common application of an LID is for extension of infrastructure; and here special benefits can be practically and incrementally assessed to unserved property brought to a development condition through the provision of infrastructure. However, the application of the special benefit methodology to a downtown area for a park amenity, represents a challenging and potential impossible assignment, if it is to be free of speculation and imagination.

Respectfully submitted,

Anthony Gibbons, MAI, CRE

Ref: 181121-Waterfront LID

Gmail John Krah <john.krah@gmail.com>

Objection to Waterfront LID 6751 and Appeal of Assessment Amount on Tax Parcel 238200-2440

1 message

Alex Rito <ritoale@gmail.com> Mon, Feb 3, 2020 at 3:58 PM
To: LIDHearingExaminer@seattle.gov
Cc: Andrew.Lewis@seattle.gov, Kamilah.Brown@seattle.gov, Parker.Dawson@seattle.gov, Katherine.Sims@seattle.gov, Jacob.Thorpe@seattle.gov, Teresa.Mosqueda@seattle.gov, Lorena.Gonzalez@seattle.gov
Bcc: john.krah@gmail.com

Alexander Rito
1920 4th Avenue, Unit 2605
Seattle, WA 98101
ritoale@gmail.com

February 2, 2020

Office of the City Clerk
Seattle City Hall
600 4th Avenue, Floor 3
PO Box 94607
Seattle, WA 98124
LIDHearingExaminer@seattle.gov

Attention: LID Hearing Examiner

Objection to Waterfront LID 6751 and Appeal of Assessment Amount on Tax Parcel 238200-2440

I have been a resident of Seattle for 12 years. In May 2017, after nearly a decade of being a renter with careful budgeting and judicious saving, I was able to afford the down payment on a home in the downtown area and chose to purchase the property mentioned above (tax parcel 238200-2440).

I am a conscientious citizen. I support my neighborhood with charitable contributions, and I pay my fair share of property and sales taxes. However, I must strongly object to the waterfront LID (LID 6751) and appeal the final assessment amount levied against me and my property.

This LID is intended to support a public works project costing hundreds of millions of dollars, expected by the City Council to benefit not just Seattle city or King county, but all of Washington state, visitors from across the country, and even worldwide tourists.

However, instead of being fully funded with existing treasury or a tax that could equitably distribute the cost among all beneficiaries (including the most obvious--cruise ship passengers docking in Elliott Bay), the City Council has chosen to make a discriminated selection of business and property owners arbitrarily close the the proposed project and burden them with the expense. Those of us impacted by the LID assessment have been

given no opportunity to vote or approve this project. We have no say in how our money is being used. We have no control over much we're being billed. But if unpaid, the city threatens to take a lien on our property. This LID is tantamount to extortion. It is a flagrant abuse of power and egregiously unconstitutional.

Perhaps most shocking of all is that the City Council intends to use this same model for future projects if the current LID goes unchallenged. Residents of Queen Anne could be burdened with the cost of renovating the Key Arena grounds, and residents of Capitol Hill could be burdened with the cost of capping Interstate 5. This behavior cannot be allowed to pass, and I intend to fight it through all legal means.

Sincerely,

Alexander Rito

CC: Andrew.Lewis@seattle.gov
Kamilah.Brown@seattle.gov
Parker.Dawson@seattle.gov
Katherine.Sims@seattle.gov
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Teresa.Mosqueda@seattle.gov
Lorena.Gonzalez@seattle.gov

Attorney General Rob McKenna

COUNTIES—COUNTY COMMISSIONER—CONTRACT—LEGISLATIVE AUTHORITY —Power Of County Legislative Authority To Enter Into Contract That Binds The County Legislative Authority In The Future

A county legislative authority is generally prohibited from entering into contracts that bind the future legislative actions of the county. The application of this principle depends upon a distinction between actions that are legislative in nature and those that are merely administrative or proprietary.

May 15, 2012

The Honorable Steven J. Tucker
Spokane County Prosecuting
1115 W Broadway Avenue
Spokane, WA 99260-0270

Attorney Cite As:
AGO 2012 No. 4

Dear Prosecutor Tucker:

By letter previously acknowledged, you have requested an opinion from this office on the following questions, paraphrased for clarity:

1. Are there legal constraints on the power of a county legislative authority to circumscribe the legislative authority of future members of the body by entering into contractual commitments which would remain binding on the county for some period after the end of the terms of the current members of the body?

2. Would a series of agreements enclosed in your request, previously executed by the Spokane County board of commissioners, impermissibly bind future members of the board who might wish to change the policy choices represented by the agreements?

3. Could a county commissioner be held liable for tortious interference with a contract if the commissioner exercises his/her legislative functions in a manner inconsistent with contractual agreements previously entered by the board of commissioners?

BRIEF ANSWER

The case law establishes that boards of county commissioners may not take actions

that impair the core legislative powers of their successors in office. The law draws a distinction

[original page 2]

between "core legislative powers" of a legislative body, and those powers that are more properly described as "administrative" or "proprietary." Legislative bodies may not contractually bind their successors with regard to the former, although they may do so as to the latter. The case law, however, does not establish the precise limits of these constraints. We accordingly respond to your first question by examining the state of the law regarding these constraints.

We respectfully decline to answer your second question. The opinions process is designed to provide legal guidance with respect to issues of law, rather than to resolve disputes regarding specific factual circumstances. In this regard, unlike the judicial process, the opinions process is not suited to gathering and examining all of the facts that may be relevant to a particular situation. We answer your third question by providing guidance relating to the elements of tortious interference.

ANALYSIS

1. Are there legal constraints on the power of a county legislative authority to circumscribe the legislative authority of future members of the body by entering into contractual commitments which would remain binding on the county for some period after the end of the terms of the current members of the body?

The Washington Supreme Court has long noted "the principle that one board of county commissioners cannot enter into contracts binding upon future boards of commissioners." *State ex rel. Schlarb v. Smith*, 19 Wn.2d 109, 112, 141 P.2d 651 (1943). Although the existence of such a limitation on contractually binding the decisions of future county legislative authorities is clear, we noted in an earlier opinion that the parameters of this limitation are not well defined. AGO 1974 No. 21, at 7. The statement is equally true 38 years later.

Applying the principle that contracts cannot bind future boards of commissioners is complicated, because county commissioners constitute the legislative body of the county, but also perform functions that are more properly described as executive or administrative. *See, e.g., Durocher v. King Cnty.*, 80 Wn.2d 139, 152, 492 P.2d 547 (1972) (distinguishing between the legislative and administrative functions of a county legislative authority). For example, the basic powers of a county legislative authority are listed in RCW 36.32.120, and that statute comprises both legislative acts (licensing, levying taxes, enacting police and sanitary regulations) and administrative functions (erecting and repairing county buildings, building and maintaining roads, managing county property).

The clearest principle we can discern from a study of the case law is that county commissioners may not bind the "core" legislative functions of future boards, but do have the authority to enter into contracts or make administrative arrangements that carry out the executive functions of the board, even though some of these arrangements will inevitably limit the freedom of future boards to make different administrative choices. The analytical difficulty is in identifying which county functions are "legislative" in nature.

[original page 3]

An authoritative treatise articulates this principle by explaining:

> Respecting the binding effect of contracts extending beyond the terms of officers acting for the municipality, there exists a clear distinction in the judicial decisions between governmental and business or proprietary powers. With respect to the former, their exercise is so limited that no action taken by the governmental body is binding upon its successors, whereas the latter is not subject to such limitation, and may be exercised in a way that will be binding upon the municipality after the board exercising the power shall have ceased to exist.

10A Eugene McQuillin, *The Law of Municipal Corporations* § 29.102 (3d ed. 2009).

Washington cases offer little guidance as to which contractual provisions might be regarded as legislative, and which therefore cannot bind future legislative bodies, and which are administrative or proprietary, and therefore are not so limited. This is because the resolution of specific cases often turns on specific statutory grants of authority, rather than on the application of the general principle that a contract may not bind the future exercise of legislative authority. For example, *Schlarb* concerned an agreement between King and Pierce counties to confine and improve the White River. *Schlarb*, 19 Wn.2d at 111. When King County declined to levy a tax pursuant to the agreement, Pierce County sued to compel action under the contract. King County argued that the contract was against public policy based upon "the principle that one board of county commissioners cannot enter into contracts binding upon future boards of commissioners." *Id.* at 112. The Washington Supreme Court held, however, that the general principle against binding future boards was overcome by a specific statute authorizing counties to contract with one another for the improvement, confinement, and protection of rivers and banks. *Id.* at 113. Although the court recited the rule regarding binding future boards of commissioners, the case was resolved based upon a statutory enactment and therefore provides no guidance regarding your question. *See also Richards v. Clark Cnty.*, 197 Wash. 249, 252-53, 84 P.2d 1009 (1938) (rejecting challenge to issuance of bonds to be repaid by future tax revenue on the basis that the legislature had statutorily authorized counties to commit future revenue to the purpose).

In two cases, our supreme court has entertained challenges to contracts based upon the argument that they were entered into by "lame duck" boards, improperly attempting to bind future commissioners to the arrangement. *Roehl v. Pub. Util. Dist. 1*, 43 Wn.2d 214, 233-34, 261 P.2d 92 (1953); *King Cnty. v. U.S. Merchants' & Shippers' Ins. Co.*, 150 Wash. 626, 274 P. 704 (1929). By concentrating on the "lame duck" issue, neither the *Roehl* nor the *King County* cases offer any significant analysis as to when a contract might impermissibly bind future boards, absent the circumstance of the commitments being made near the end of the current board's term of office. *Roehl*, 43 Wn.2d at 233-34; *King Cnty.*, 150 Wash. at 635; *but see Taylor v. Sch. Dist. 7 of Clallam Cnty.*, 16 Wash. 365, 366-67, 47 P. 758 (1897) (finding rule against contractually binding successors inapplicable because members of a school board served staggered terms, making it a continuous body).

[original page 4]

We have also looked to the case law of other states in our effort to define how far a board may go in constraining the policy choices of future boards. In *Kirby Lake Development, Ltd. v. Clear Lake City Water Authority*, 320 S.W.3d 829 (Tex. 2010), developers sued a water control and improvement district over possession of certain water and sewer facilities. One of several theories argued was that the defendant water authority had made contractual commitments which would bind future boards. The Texas Supreme Court rejected this argument as not supported by the facts, but did provide some quotes from earlier cases which shed some light on the principle under examination. The court

noted that certain government powers are conferred "for public purposes, and can neither be delegated nor bartered away." *Kirby Lake*, 320 S.W.2d at 843 (quoting *State ex rel. City of Jasper v. Gulf States Utils. Co.*, 144 Tex. 184, 194, 189 S.W.2d 693 (1945)). The court quoted an even earlier Texas case as follows:

> [Municipal] corporations may make authorized contracts, but they have no power, as a party, to make contracts or pass bylaws which shall cede away, control or embarrass their legislative or governmental powers, or which shall disable them from performing their public duties.

Kirby Lake, 320 S.W.2d at 843 (alteration in original) (quoting *Brenham v. Brenham Water Co.*, 67 Tex. 542, 554, 4 S.W. 143 (1887)).

These cases support the notion, implicit but not discussed in the Washington case law, that there is a "core" of public governmental power that cannot be bargained away or compromised by current officeholders to the detriment of their successors in office. *Kirby Lake*, 320 S.W.2d at 843; *see also Inverness Mobile Home Cmty., Ltd. v. Bedford Twp.*, 263 Mich. App. 241, 687 N.W.2d 869 (2004) (Michigan Court of Appeals held that a township could not enter into a consent judgment committing a future township board to amend the township's master plan to permit a manufactured housing development); *Cnty. Mobilehome Positive Action Comm., Inc. v. Cnty. of San Diego*, 62 Cal. App. 4th 727, 73 Cal. Rptr. 2d 409 (1998) (California Court of Appeal found that a county lacked authority to offer a lease committing future county boards not to enact rent control legislation for a period of 15 years).

Finally, we note *Plant Food Co. v. City of Charlotte*, 214 N.C. 518, 199 S.E. 712 (1938), in which the North Carolina Supreme Court found that a city had authority to enter into a ten-year contract to deliver city sewerage sludge to a company that had agreed to dispose of it, notwithstanding that such a commitment to a limited extent compromised the power of future city officers to dispose of sludge in a different manner. The *Plant Food Co.* decision distinguishes, again, between "governmental discretionary powers" which cannot be compromised or suspended (such as "the power to make ordinances and decide upon public questions of a purely governmental character") and the right of a municipality to make contracts in the course of administering its proprietary functions. *See* discussion *Plant Food Co.*, 199 S.E.

[original page 5]

at 713-14 [1]. The clear implication of the decision was that a contract to dispose of sludge was an administrative act, not a legislative one.

It therefore is reasonable to conclude that a distinction may be drawn between the "core legislative" powers of a legislative body and those powers which are more properly described as "administrative" or "proprietary." The hallmark of the first category is the authority of a legislative body to exercise continuing discretion in the setting of legal standards to govern behavior within the jurisdiction. If a contract impairs this "core" legislative discretion, eliminating or substantially reducing the discretion future bodies might exercise, the courts are likely to find that the contract has improperly impaired the legislative authority of future commissioners. By contrast, counties have, and greatly need, authority to enter into contracts and make administrative decisions concerning the management of public property and the day-to-day conduct of government business. A contract that facilitates public administration, and which places no significant constraint on future policy-making is likely to be upheld.

2. Would a series of agreements enclosed in your request, previously executed

by the Spokane County board of commissioners, impermissibly bind future members of the board who might wish to change the policy choices represented by the agreements?

Your second question asks us to apply the principle discussed above to specific agreements enclosed with your request. The opinions process is designed to provide legal guidance with respect to issues of law, but an answer to your second question would include an evaluation of factual circumstances in addition to the legal principles discussed in response to your first question. We do not know to what extent the parties have performed the obligations set forth in the agreements, whether there are any current disputes about performance, or whether other relevant facts or developments might affect the agreements and our legal analysis. For this reason, we respectfully decline to address your second question.

3. Could a county commissioner be held liable for tortious interference with a contract if the commissioner exercises his/her legislative functions in a manner inconsistent with contractual agreements previously entered by the board of commissioners?

Your final question asks about the possibility of liability for tortious interference with a contract. The elements of this tort are set forth in a recent case as follows:

> A defendant is liable for tortious interference with a contractual or business expectancy when (1) there exists a valid contractual relationship or business expectancy, (2) the defendant had knowledge of the same, (3) the defendant's intentional interference induced or caused a breach or termination of

[original page 6]

> the relationship or expectancy, (4) the defendant's interference was for an improper purpose or by improper means, and (5) the plaintiff suffered damage as a result.

Evergreen Moneysource Mortg. Co. v. Shannon, 274 P.3d 375, 383 (Wash. Ct. App. 2012) (citing *Pleas v. City of Seattle*, 112 Wn.2d 794, 800-05, 774 P.2d 1158 (1989)). Your third question arises from a concern that a county officer might wish to take some future action which could be construed as inconsistent with the commitments the county made in the agreements attached to your request, leading to a concern that such action might result in liability on the part of the officer.

The answer to your question would depend on the facts as they might actually play out, as well as on an evaluation of the meaning and enforceability of the various agreements and an analysis of the background law. To lead to liability, an officer would have to act with knowledge of a valid contractual relationship, must intentionally induce a breach or termination of that relationship, must act for an improper purpose or by improper means, and must cause damages to the person or persons claiming tortious interference. We cannot determine what kind of fact pattern would meet all of those requirements, nor can we completely discount the possibility that under some set of circumstances, the conditions for liability might be met. Under these conditions, it would not be appropriate to attempt an opinion on the matter, and we leave it to county officers and their legal counsel to chart a course of conduct with awareness of the various legal issues presented, including the question of tortious interference.

We trust that the foregoing will be useful to you.

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[1] The court also noted that "[t]he line between powers classified as governmental and those classified as proprietary is none too sharply drawn, and is subject to a change of front as society advances and conceptions of the functions of government are modified under its insistent demands." *Plant Food Co.*, 199 S.E. at 714.

The Impact of Parks on Property Values: A Review of the Empirical Evidence

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Articles

The Impact of Parks on Property Values: A Review of the Empirical Evidence

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The real estate market consistently demonstrates that many people are willing to pay a larger amount for a property located close to a park than for a house that does not offer this amenity. The higher value of these residences means that their owners pay higher property taxes. In many instances, if the incremental amount of taxes paid by each property which is attributable to the presence of a nearby park is aggregated, it is sufficient to pay the annual debt charges required to retire the bonds used to acquire and develop the park. This process of capitalization of park land into the value of nearby properties is termed the "proximate principle."

Results of approximately 30 studies which have empirically investigated the extent and legitimacy of the proximate principle are reported, starting with Frederick Law Olmsted's study of the impact of New York's Central Park. Only five studies were not supportive of the proximate principle and analysis of them suggested these atypical results may be attributable to methodological deficiencies.

As a point of departure, the studies' results suggest that a positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point. If it is a heavily used park catering to large numbers of active recreation users, then the proximate value increment may be minimal on abutting properties, but may reach 10% on properties two or three blocks away.

KEYWORDS: *Parks, open space, property values*

Introduction

The difficult fiscal environment that prevails in many cities, and the escalation of urban land values, have made the economic justification of park land and open space increasingly necessary in order to rebut the persuasive rhetoric of those who say: "I am in favor of parks and open space but we cannot afford the capital costs of acquisition and development because of more pressing priorities, or the loss of operational revenue that will accrue if the land is removed from the tax rolls." Government officials often seek to enhance the tax bases of their communities by encouraging development. There is a widespread belief that this strategy raises additional revenues from property taxes, which then can be used to improve community services without increasing the taxes of existing residents. The notion that development brings prosperity is deeply embedded in the American psyche. In contrast

to the enhanced tax revenues accruing from development, contemporary conventional wisdom among many elected officials and decision makers is that open space and park land is a costly investment from which a community receives no economic return. The social merit of such investment is widely accepted, but social merit amenities frequently are regarded as being of secondary importance when budget priorities are established.

Advocates of park and open space provision view this economic conceptualization of parks as flawed. They exhort the adage that much of the value of properties on the tax roll is acquired from amenities that are off the tax roll, and that the contributions of these amenities to the tax base are likely to be at least as substantial as those forthcoming from residential real estate developments. This paper reviews empirical evidence in the literature relating to three key questions: (1) Do parks and open spaces contribute to increasing property values (the proximate principle)? (2) What is the magnitude of this effect? and (3) How does distance effect the proximate principle?

The Basic Principle

The premise that parks and open space have a positive impact on property values derives from the observation that people frequently are willing to pay a larger amount of money for a home located close to these types of areas, than they are for a comparable home further away. If this observation is empirically verified, then owners of the enhanced property are likely to pay higher property taxes to governments because of the increase in the property's appraised value. In effect, this represents a "capitalization" of park land into increased property values for proximate land owners. Conceptually, it is argued that the competitive market will bid up the value of property just equal to the capitalized value of the benefits that property owners perceive they receive from the presence of the park or open space. Economists refer to this approach as "hedonic pricing." It is a means of inferring the value of a non-market resource (a park) from the prices of goods actually traded in the market place (surrounding residential properties).

In some instances if the incremental amount of taxes paid by each property that is attributable to the presence of the park or open space is aggregated, it will be sufficient to pay the annual debt charges required to retire the bonds used to acquire and develop the park. In these circumstances, the park is obtained at no long-term cost to the jurisdiction.

This principle is illustrated by the hypothetical 50 acre park shown in Figure 1. It is a natural, resource oriented park with some appealing topography and vegetation. The cost of acquiring and developing it (fencing, trails, supplementary planting, some landscaping) is $20,000 an acre, so the total capital cost is $1 million. The annual debt charges for a 20 year general obligation bond on $1 million at 5% are approximately $90,000.

A projected annual income stream to service the bond debt was calculated using the following assumptions:

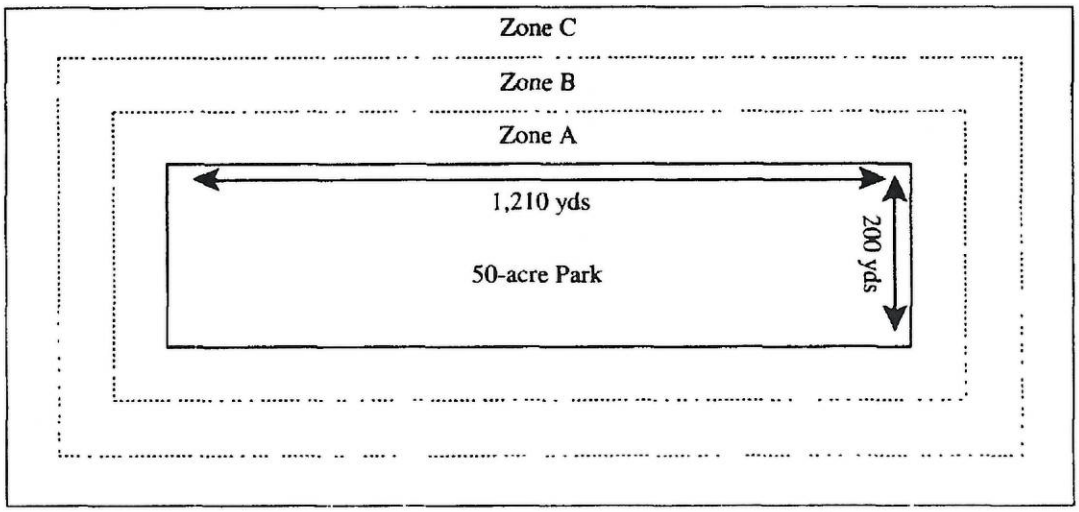

Figure 1. Layout of a 50 acre Natural Park and the Proximate Neighborhood Area

- If properties around the park are 2,000 sq ft homes on half-acre lots (40 yd × 60 yd) with 40 yd frontages on the park, then there would be 70 lots in Zone A (30 lots along each of the 1,210 yd perimeters and 5 lots along each of the 200 yd perimeters).
- Assume total property taxes payable to city, county, and school district are 2% of the market value of the property.
- Assume the market value of similar properties elsewhere in the jurisdiction beyond the immediate influence of this park is $200,000.
- Assume the desire to live close to a large natural park creates a willingness to pay a premium of 20% for properties in Zone A; 10% in Zone B; and 5%, in Zone C, and that there are also 70 lots in Zones B and C.

Table 1 shows that, given the above assumptions, the annual incremental property tax payments in the three zones from the premiums attributable to the presence of the park amount to $98,000. This is sufficient to pay the $90,000 annual bond debt charges.

The flows of this investment cycle are shown in Figure 2: (i) the council invests $90,000 a year for 20 years (annual debt charges on a $1 million bond) to construct or renovate a park; (ii) which causes the values of properties proximate to the park to increase; (iii) leading to higher taxes paid by the proximate property owners to the council; (iv) that are sufficient to fully reimburse the $90,000 annual financial investment made by the council.

There are five additional points worth noting which may further strengthen the economic case. First, this illustration assumes no state or federal grants are available to aid in the park's acquisition and development. If they were available to reduce the community's capital outlay, then the incremental property tax income stream would greatly exceed that required to

Table 1
Property Taxes Pay the Annual Debt for Acquisitions and the Development of the Park

Zone	Market Value of Each Home	Incremental Value Attributed to the Park	Total Property Taxes at 2%	Incremental Property Taxes Attributed to the Park	Aggregate Amount of Property Tax Increments Given 70 Home Sites
Outside the park's influence	$200,000	$0	$4,000	$0	$0
A (20% premium)	$240,000	$40,000	$4,800	$800	$56,000
B (10% premium)	$220,000	$20,000	$4,400	$400	$28,000
C (5% premium)	$210,000	$10,000	$4,200	$200	$14,000
					$98,000

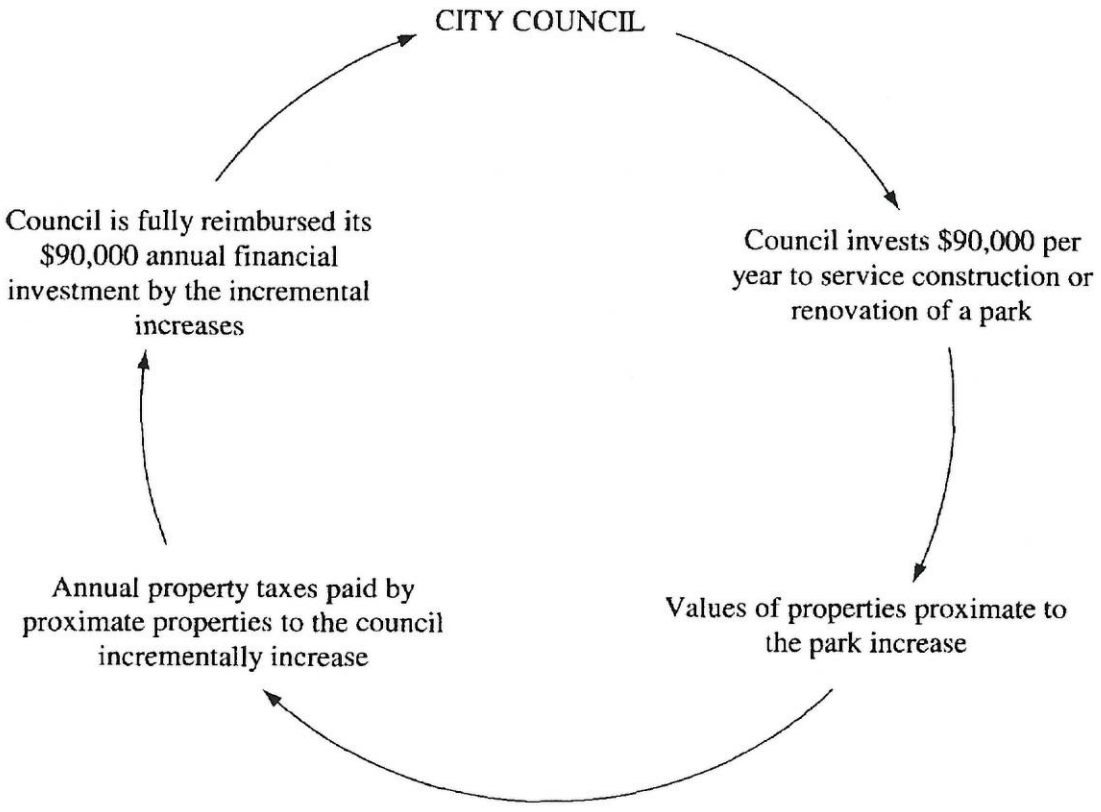

Figure 2. The Investment Cycle Associated with a Local Government's Investment in a Park

service the debt payments. Second, the incremental property tax income will continue to accrue to the community after the 20-year period during which the debt charges will be repaid, at which time the net return to the community will be substantially enhanced.

Third, there is evidence to suggest that investment in parks affects the comparative advantage of a community in attracting future businesses and desirable residential relocators such as retirees (Crompton et al, 1997). However, the proximate capitalization approach does not capture the secondary economic benefits attributable to park provision that accrue from such sources.

Fourth, a park of the size shown in Figure 1 is likely to improve the quality of life and, thus, have some economic value to urban residents living beyond Zone C. In all the studies reviewed in this paper, the capitalization of benefits ceased at a selected distance, usually somewhere between 500 feet and 3000 feet away from the park perimeter in urban contexts. However, it is unlikely that park users and beneficiaries will be restricted only to those individuals located within such a narrowly defined service area (Lynn, 1972).

Finally, there is convincing evidence that the public costs associated with residential development exceed the public revenues that accrue from it by, on average, approximately 15% (Crompton, in press). Thus, if the annual tax yield to a community was $1 million from a residential development, the median cost of servicing it is likely to be $1.15 million. In this case, if the operation and maintenance costs associated with using the land as a park or open space were less than $150,000, then it would be a more cost effective use of the land for the community than residential development.

A determining factor of the magnitude of a park's impact on the property tax base is the extent of the park's circumference or edge (Little, 1990). If a 100 acre park is circular in shape, then it has a relatively small circumference. If the 100 acres is distributed more linearly, then the amount of edge increases substantially. The principle is illustrated by the calculations in Figure 3. The increased amount of edge means that more property can be sited adjacent to the park and the aggregate enhancement value of the property tax base is likely to be larger. This edge principle has been widely

A circular park that is 100 acres in area will have a radius of 1,177.8 feet. Given that the circumference of a circle is two times pi, times the radius ($2\pi r$), the amount of edge will be 7,396.7 feet.

Assume this park is unpeeled into a long strip of green which is one square acre wide (209 feet)—in effect, laying one acre next to another in a line. To find the length of the edge of 100 acres in this configuration 209 feet is multiplied by 100 times two, since there are two sides to this strip. The result is 41,800 linear feet, 5.65 times as much edge compared with a circular park of the same number of acres. That is the edge effect.

Source: Little, C. E. (1990).

Figure 3 Illustrating the Edge Effect

embraced in the design of golf courses which are incorporated into residential real estate developments.

It is important to recognize that some types of parks are more desirable than others as places to live nearby. For example, there is convincing evidence that large flat open spaces which are used primarily for athletic activities and large social gatherings, are much less preferred than natural areas containing woods, hills, ponds or marsh (Kaplan & Kaplan, 1990). Further, it must be recognized that there are contexts in which parks exert a negative image on property values. A useful analogy is with a well-groomed front lawn which is likely to increase the value of a home, but if it is overgrown with weeds then the property value is likely to be diminished (Fox, 1990).

This point was made by the deputy director of the Parks Council, a nonprofit advocacy organization in New York City when she observed: "We have many poor neighborhoods in the South Bronx near parks. But the parks are not helping them. If you put money into a park, chances are that you will improve one portion of the neighborhood. But if the park does not have proper security and maintenance, it becomes a liability for nearby homes" (Tibbets, 1998, p. 9). Adverse impacts may result from nuisances such as: congestion, street parking, litter and vandalism which may accompany an influx of people coming into a neighborhood to use a park; noise and ballfield lights intruding into adjacent residences; poorly maintained, or blighted derelict facilities; or undesirable groups congregating in a park engaging in morally offensive activities.

In rural contexts, the proximate presence of undeveloped public park or open space is likely to be regarded by many landowners as an asset. However, in some contexts it may be viewed negatively because of trespass concerns. Hence, many proximate landowners in rural areas post and fence their land against trespassing (Gartner, Chappelle & Giraud, 1996).

A final negative impact is that appreciation of property values results in higher property taxes. Residents who have lived in a location for a long time and have no interest in selling their property, may see no personal benefits accruing to them from development or major renovation of a nearby park. Nevertheless, they are required to pay higher taxes because the appraised value of their property has increased.

The conceptual outcomes discussed in the previous paragraphs are summarized in Figure 4 which recognizes that both positive and negative impacts on property values are possible. The top half of Figure 4 suggests that property value benefit increments associated with proximity and accessibility will decay as distance from the park increases. The lower half of Figure 4 suggests that any negative values are likely to be limited to properties in close proximity to the park and these will decay more rapidly than positive impacts as distance from the park increases—that is, the positive curve is likely to be flatter than the negative curve (Li & Brown, 1980). Thus, in the negative scenario property in the park's service area but beyond (say) 500 feet is still likely to experience an increase in value, since some benefits of access to the

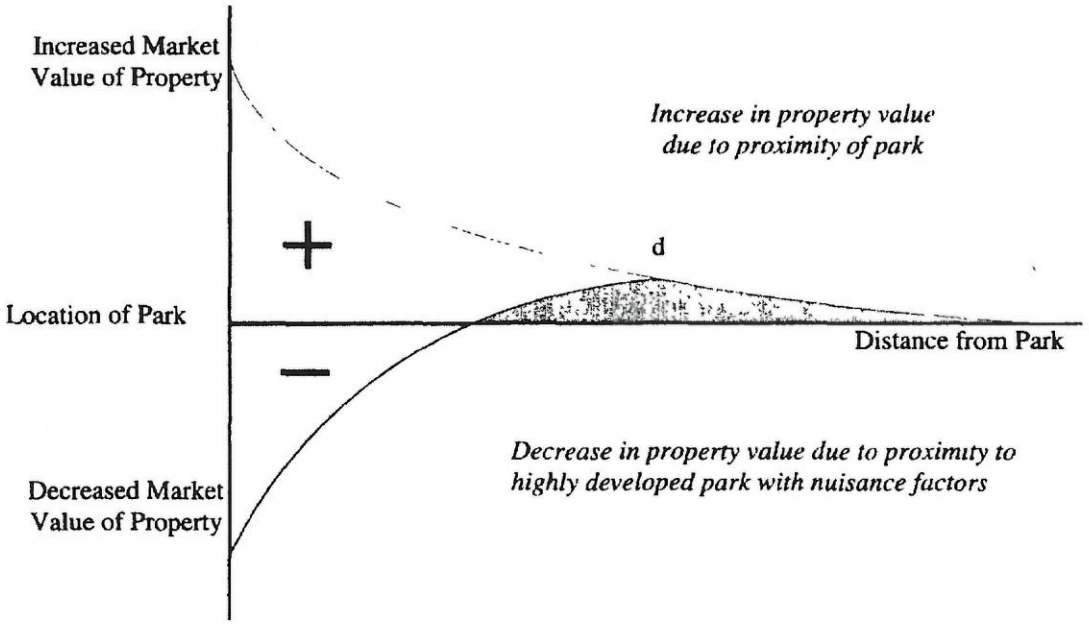

Figure 4. The Positive and Negative Impacts of Parks on Residential Property Values. Source: Li, N. M. and Brown, H. J. (1980).

park's amenities accrue to these homeowners but they avoid the nuisance costs inflicted on those who live close to it.

The Early Empirical Studies

The legitimacy of the proximate principle was conventional wisdom that prevailed among park professionals, landscape architects and urban planners in the early years of the twentieth century. Given his legendary, inspirational role in the architecture, design and popularization of parks in the United States, it should come as no surprise that this conventional wisdom emerged from the work of Frederick Law Olmsted.

Before funding for Central Park was committed, Olmsted explained how the proximate principle would result in the park being self-financing and his argument convinced key decision-makers. Thus, the New York City Comptroller, writing in 1856 shortly after the city acquired title to the land for Central Park, said, "the increase in taxes by reason of the enhancement of values attributable to the park would afford more than sufficient means for the interest incurred for its purchase and improvement without any increase in the general rate of taxation" (Metropolitan Conference of City and State Park Authorities, 1926, p. 12).

Olmsted consolidated the initial conceptual acceptance of the proximate principle for Central Park by subsequently providing empirical verification of it. He was responsible for the earliest documentation of the rela-

tionship between public parks and real estate values (Fox, 1990). His data are summarized in Table 2. This documentation was widely disseminated and was a powerful weapon in the armory of early public and open space advocates seeking to persuade communities to commit new investments into these amenities.

Soon after Central Park was completed, the New York Parks Commission was able to assert that before the park was developed, the three wards adjacent to the park paid one dollar in every thirteen the city received in taxes; but after its development they paid one-third of the entire expenses of the city, even though acquiring the land for Central Park removed 10,000 lots from the city's tax roll (Metropolitan Conference of City and State Park Authorities, 1926).

Attributing all the high increase in the property values in these three wards to the park, as Olmsted and the New York Parks Commission claimed, was probably inappropriate and an exaggeration of the park's influence. It is likely that natural growth in the city's population which caused a northerly movement of people would have created increased property values in these wards without the park. Indeed, the average values in other parts of the city increased approximately 100% during this time period. However, if this average rate of increase had been applied to the three wards contiguous to Central Park then their property value would have been about $53 million;

Table 2
Frederick Law Olmsted's Documentation of the Impact of Central Park on the Property Tax Base of the Three Proximate Wards

Assessed value in 1873		$236,081,515.00
Assessed value in 1856		26,429,565.00
Showing an increased valuation of		$209,651,950.00
The total expenditure for construction, from May 1st, 1857 to January 1st, 1874, is		$8,873,671.50
The cost of land of the Park to the city is		5,028,844.10
The cost of the Park to the city is		$13,902,515.06
The rate of tax for the year 1873 is 2 50, yielding on the increase of valuation as above stated, increase of tax amounting to $5,241,298.75.		
Total increase of tax in three wards		$5,241,298.75
The annual interest on the cost of land and improvement of the Park, up to this time, at six percent	$834,150.94	
Deduct one percent, on $399,300 of stock, issued at five percent	3,933.00	
		830,157.94
Excess of increase of tax, in three wards, over interest on cost of land and improvements		$4,411,140.81

Source: Fox, T. (1990)

whereas it was actually $236 million. Thus, even when this is considered, the park's influence remained considerable.

The highly publicized financial success of Central Park generated calls for the scenario to be replicated elsewhere in the New York City area. For example, in a letter to the New York Times in 1882 a correspondent noted that Central Park "has not only paid, but it has been a most profitable investment, and regarded in the light of a real estate transaction alone, it has been a great success" (New York Times, 1882, Jan. 9, p. 3). He went on to observe that "those who want a reduction in the tax rate and those who favor the movement for its effect on real estate" were now "certain" to support development of future parks. As a result of the Central Park success, the letter writer advocated a proposal to acquire and develop two new 2,000 acre parks on the periphery of the city before its expanding population reached those areas. He argued:

> Four or five millions of dollars at the utmost will be sufficient and, as experience has proved, the City will not only be reimbursed for the outlay, but will receive in the increased tax income collected on the enhanced value of land contiguous to the proposed parks much more than will be required for maintenance and other accounts, leaving, as in the case of Central Park, a handsome profit on the investment (p. 3).

Similar arguments were used in many other locales, as local governments realized that large public parks encouraged new residential development on the periphery of a city which they believed expanded and strengthened the tax base (Fox, 1990). The documented evidence from Central Park established the proximity principle as conventional wisdom among planners and park advocates, and resulted in it being used to justify major park investments in many other communities, most notably in nearby Brooklyn, in Boston and in Kansas City. In Brooklyn, for example, it was a prime factor in stimulating development of the 526 acre Prospect Park, which Olmsted and his partner Calvert Vaux also designed and built, since one of the main purposes of that park was to stimulate new real estate development (Fox, 1990).

The first county park system in the U.S. was the Essex County Park Commission in New Jersey which was established in 1895. Much of its early justification for park investment was based on the proximate property principle. In 1915, the Commission engaged a consultant to assess the impact on land values of four Newark parks—Eastside, Westside, Weequahic, and Branch Brook (Weir, 1928). The results are summarized in Table 3. They showed that over a 12 year period, the increased taxes paid to the county by adjacent property owners, which were attributable to the four parks, were sufficient to pay all debt charges and almost all of the maintenance costs.

Similar results were reported in a study undertaken by a firm of accountants for the neighboring Union County Park System in New Jersey in 1928 (The Playground, 1928). The study focused on property adjacent to Warinanco Park in both the City of Elizabeth and the Borough of Roselle,

Table 3
The Impact of Four Newark Parks on Adjacent Property Values

	Rate of Increase in Property Values		
Park	Property Adjacent to Parks	Rest of Same Taxing District	Adjacent Taxing Districts
Eastside	9 times	2¼ times	2½ times
Westside	15 times	3 times	3 times
Weequahic	14 times	7 times	3 times
Branch Brook	5 times	2½ times	3⅔ times (part adjoins park)

Source: Weir, L. H. (1928).

for the years 1922 and 1927. For comparative purposes, the study reported assessed values of the City of Elizabeth; the Tenth Ward of that city in which the park was located; and of the balance of the taxing district of Roselle, for the same years. Results of the study are summarized in Table 4.

The consultants reported that the increase in assessed values in the Elizabeth Tenth Ward outside the area adjoining the park in this period was 64.1%. If the area adjoining the park had increased in value at that rate since 1922, then its assessed value would have increased by only $450,000, giving a total for 1927 of $1.15 million instead of the $3.77 million shown in Table 4. The difference of $2.62 million they believed was attributable directly to the influence of the park.

A similar situation was evident on the Roselle side of the park where the rate of increase for the Borough property beyond the park area was

Table 4
The Influence of Warinanco Park on Adjacent Land Values in the City of Elizabeth and the Borough of Roselle 1922-1927

	City of Elizabeth	Tenth Ward in Elizabeth	Adjacent to Park on Elizabeth Side	Borough of Roselle	Adjacent to Park in Roselle
1922 Assessed Value*	83.90	16.10	0.703	7.10	1.07
1927 Assessed Value*	125.13	29.05	3.770	11.57	2.65
% Increase	49.1%	80.4%	436.1%	62.8%	147.0%

*Values are in $ millions.
Source: County parks increase property values. *The Playground*, March 1928: 633-634

34.5%. If this rate were applied to the park area property, then the increase in assessment values from 1922 to 1927 would have been $370,000 giving a total of only $1.44 million instead of the actual total of $2.65 million shown in Table 4. Again, the difference of $1.21 million was attributed by the consultants to the influence of the park.

A subsequent update of this study reviewed the 17 year period from 1922 to 1939 (Herrick, 1939). It reported that there was a 632% increase in assessed valuations on properties adjacent to Warinanco Park during this period. This was nearly 14 times the average increase of 46% for the entire city during the same period of years. The property in Elizabeth adjacent to the park which was assessed at $703,000 in 1922, rose to $5.1 million in 1939. A similar, though less spectacular, increase was shown on lands adjacent to the park in Roselle where valuations on land adjacent to the park increased by 257%.

In the first third of the twentieth century, developments of parkways and playgrounds were considered to be as central economic, social, and political issues, as the development of parks. Development and maintenance of parkways was a major responsibility of some urban park departments, and their positive impact on proximate land values was a primary justification for their development. The prevailing mind-set was that parkways were analogous to linear parks and, thus, a similar premium attributable to their aesthetic appeal would be present. Empirical studies appeared to confirm this premium (Nolen & Hubbard, 1937). However, it was not possible to untangle the myriad of influences accounting for the increases, and historical perspective suggests that much of the value increase was attributable to more effective and efficient access for traffic and transit, rather than to the parkways' aesthetics.

In most communities today, the distinction between parks and playgrounds has disappeared. Typically, playground equipment is one of multiple features incorporated into the design of parks. Playgrounds as independent entities are confined primarily to inner city neighborhoods where they are vestiges of a previous planning era. However, in the first third of the twentieth century, independent playgrounds were a common feature in the urban landscape. These entities were defined as, "spaces wholly designed for play, and having little or no park-like qualities" (Stoney, 1927, p. 324).

It had been claimed that playgrounds were likely to depreciate land values in their vicinity, but the empirical evidence suggested this concern was generally unfounded, especially in proximate rather than abutting properties (Stoney, 1927; Feldman, 1929). The cases investigated indicated that, for the most part, playgrounds did not retard the natural rise of land values. In residential neighborhoods, playgrounds tended to increase the value of proximate property at a greater rate than in neighborhoods where business and industry were present. These conclusions were based on the results from only two studies. However, both studies were carefully executed and were comprehensive involving 22 different sites in three different communities, and

they reached similar conclusions. These characteristics suggested that a reasonable level of confidence could be placed in the generalizability of their findings.

The relatively small number of early studies relating to the impact of parks on property values was supplemented by many subsequent studies in later years. These reflected the continued central role of urban parks in communities throughout the century. In contrast, the role of parkways and stand-alone playgrounds diminished considerably in later years, which explains the subsequent absence of studies measuring their impact.

Throughout the time period of the studies reviewed here—from the earliest days of urban park development in the 1850s, through the 1930s—there was an insistent, almost inviolate conviction among park and open space advocates of the legitimacy of the proximate principle. It was conventional wisdom among them and was also espoused by elected officials. However, in many ways, these early studies creating this conventional wisdom were naïve, reflecting the underdeveloped nature of the statistical tools and research designs in the early years of the field. They were limited to simple calculations of increased tax receipts accruing from properties in proximity to parks, parkways and playgrounds (Fox, 1990). This approach ignored the necessity of unraveling the complicated plexus of factors that may influence property values in addition to parks. It was noted that these "are not merely additive, but react on each other and may react in opposite directions in different cases" (Nolen & Hubbard, 1937, p. 124).

In subsequent eras, substantial improvements were made in methods used for quantifying the impact of parks and open space on real estate values. Statistical techniques, such as regression analysis, made it possible to identify the relative influence on property values of factors other than parks. The emergence of these analytical tools defined the end of the era of "early" empirical studies rather than any specific date, but this tended to occur in the 1930s.

The Later Empirical Studies

The review of later empirical studies is divided into three main sections. The first section chronologically reviews studies reporting results in urban areas. With the exception of a pioneering, pathfinding study completed in the late 1930s (Herrick, 1939), these studies were all undertaken after 1960. The growth in their number after this time was coincident with the increasing capability of computing. Almost all of the later studies used least squares regression analysis as their primary statistical tool. Typically, property prices or assessed valuations were regressed against a measure of distance and a set of control variables which measured the contributions of other potential influences on property value as well as parks and open space. The increased sophistication of computing made feasible more complex analyses containing a greater number of control variables. The key questions these analyses addressed were:

(i) Did parks and open space contribute to increasing property values when other potential influences on those values were also taken into account?
(ii) How large was the proximate effect?
(iii) Over what distance does the effect extend?

A sub-section reviews studies that did not treat parks and open spaces as being homogeneous, but which recognized there are qualitative differences among them that are likely to result in different impacts on proximate property values.

Findings emerging from studies of parks and open spaces in urban areas may not be generalizable to non-urban or to large state and national level parks because of differences in context, scale or mission. For this reason, results from studies undertaken in those contexts also are reviewed in separate sub-sections. Results from water based parks are not reviewed here because they add a level of complexity to the discussion that was deemed to be outside the scope of this paper. In the final section, studies are reviewed whose findings did not endorse the proximate principle.

Results from the Urban Studies

The shift from the rudimentary early empirical studies to stronger methodological approaches was initiated by Herrick (1939). His primary purpose was "to show the possibilities of a simple method of analysis applied to available data" (Herrick, 1940, p. 96). It was 25 years before others emulated his approach which highlighted the pioneering nature of the study. Pioneers of new methods by definition expose themselves to criticism. Colleagues identified what they believed to be significant weaknesses in the mathematical models he developed, but at the same time they acknowledged. "Mr. Herrick's paper is an interesting first approach" (Ackerman & Goodrich, 1940, p. 56).

He was the first to use statistical techniques to try and isolate the unique contribution of parks to property value increases vis-à-vis other factors. It was an attempt to rectify the fundamental weakness inherent in the early studies of ascribing all increases to the existence of a park and disregarding the array of other factors that may have contributed to the increases, such as differences in the size, age and quality of residences erected on lots; lot size; proximity to a Central Business District, schools, or shopping centers; and access to other facilities and amenities which generate real estate value. Herrick (1939) used regression analysis to identify the impact of park acreage and population density on real estate value in Washington, DC for the 1911-1937 period.

Herrick concluded that his analyses suggested: "Most cities could afford to have twenty to thirty percent of their areas in parks. The ten percent rule, which has been suggested, is much too low" (p. 92). However, the dramatic findings and conclusions of this study have to be tempered by the reservations expressed by critics about the application of the regression analysis

(Ackerman & Goodrich, 1940). In the long term, the study's main contribution was its pioneering illustration of the role of statistical tools in investigating this issue.

Although no additional work evaluating the proximate principle was reported after Herrick's study for 25 years, the principle retained its status as the prevailing conventional wisdom through the 1940s and 50s. For example, in their *Home Builders' Manual for Land Development,* the National Association of Home Builders noted: "In the vicinity of park and recreation areas, enhanced values of building sites up to 15% to 20%, with a high level of sustained value over the years, are not uncommon experiences" (Little, 1960, p. 85). However, in 1961 the lack of convincing scientific evidence to support such anecdotal and experiential conclusions caused William Penn Mott Jr., who at that time was Superintendent of Parks for the city of Oakland, to write a letter to the Caro Foundation in San Francisco stating the "need for concrete evidence to indicate that parks are good business and that the purchase of park lands for future use is good business for a city" (Wonder, 1965, p. 3).

As a result of that letter, the Caro Foundation sponsored a study focused on two parks in Oakland (Wonder, 1965). The samples were relatively small, but they confirmed the positive impact of parks on the assessed values of proximate properties. The results are summarized in Table 5.

Clinton Park was in a relatively affluent area, while the San Antonio Park neighborhood property values were substantially lower. In both locations, the mean assessed values (which were supplied by the Tax Collector's Office) of properties fronting the park were dramatically higher than those of properties located one or two blocks away from the parks. A third neighborhood relatively close to the San Antonio Park was used as a control area. It mirrored the San Antonio neighborhood in size, type of dwelling units, ethnic composition, median family income, and education level, but was not subject to the influence of a park. Thus, its first zone fronted on to other

Table 5
The Impact of Two Parks in Oakland on the Assessed Values of Properties in the Surrounding Neighborhoods

Name of Park	Properties Fronting the Park	Properties One Block from the Park	Properties Two Blocks from the Park
Clinton Park	$3,416	$2,300	$2,355
San Antonio Park	$1,489	$940	$932
Control Area*	$876	$932	$1,195

*In the control area, the first zone fronted on to other houses rather than a park, so these values were not subject to the influence of a park.
Source: Wonder, R. L. (1965)

houses rather than a park. Its aggregate assessed values were substantially lower than those of the San Antonio neighborhood, but all the difference was attributed to properties on the block that immediately fronted the San Antonio Park.

The wider availability and greater capacity of computing in the 1970s and 1980s stimulated an increase in the number of empirical studies investigating the issue. A Philadelphia study focused on seven sites, at three parks, three schools, and one school-park combination (Lyon, 1972). During the sample years of the study, 1,725 property sales were recorded in the neighborhoods around the sites. As a percentage of total housing units in each area, the sample size ranged from 12% to 25.5%. In all seven neighborhoods regression analyses indicated that distance from the site had an impact on property values, enabling the author to conclude, "there appear to be locational advantages to school and park facilities, and these advantages have been capitalized in the sale price of nearby property" (p. 126).

Another Philadelphia study in 1974 analyzed the impact on sales price of 336 properties in the vicinity of Pennypack Park (Hammer, Coughlin & Horn, 1974). This 1,294 acre stream-valley park is in north-east Philadelphia and was surrounded by residential areas developed at a density of approximately ten dwelling units per acre. The area around the park was comprised of "unimaginative housing, heavy in scale with natural landscaping losing out to concrete and stone" (p. 275). Based on their subjective evaluation of the area, the researchers hypothesized that "the residents do not consider natural amenity to be very important" so "public open space would be expected to have a relatively low effect on land values compared to other neighborhoods" (p. 275).

Despite the authors' pessimistic prognosis, regression analysis indicated that the park accounted for 33% of land value at 40 feet. This dropped to 9% at 1,000 feet and 4.2% at 2,500 feet which was the peripheral limit set for the study. From these data, the authors concluded that a net increase in real estate value of $3.3 million was directly attributable to the park.

The most frequently cited study in this literature examined the effect of greenbelts on property values in three different areas of Boulder, Colorado (Correll, Lillydahl & Singell, 1978). A total of 1,382 acres of greenbelt had been purchased adjacent to residential developments in the 10 years prior to the 1978 study. The sample consisted of properties from each area that sold in a selected calendar year which were located within 3,200 feet of the greenbelt ($n = 82$).

Variables in the regression model that were believed likely to influence the sales price of these single family homes were: (i) walking distance in feet to the greenbelt; (ii) age of each house; (iii) number of rooms in each house; (iv) square footage of each house; (v) lot size; (vi) distance to the city center; and (vii) distance to the nearest major shopping center. The regression results showed that, other things being equal, there was a $4.20 decrease in the price of residential property for every foot one moved away from the

greenbelt. This suggested that if other variables were held constant, the average value of properties adjacent to the greenbelt was 32% higher than those located 3.200 walking feet away. These results are shown in Table 6.

One of the three neighborhoods had been able to take much greater advantage of the open space amenity in its planning than the other two neighborhoods, so the authors initiated further analyses on it. In this neighborhood, price decreased $10.20 for every foot one moved away from the greenbelt. This resulted in:

> the aggregate property value for the neighborhood being approximately $5.4 million greater than it would have been in the absence of greenbelt. This increment resulted in an annual addition of approximately $500,000 to the potential neighborhood property tax revenue. The purchase price of this greenbelt for the city was approximately $1.5 million, and thus, the potential property tax revenue alone would allow a recovery of initial costs in only three years (p. 215).

There is an important caveat to these positive results in that 86% of the $500,000 proximate increment of property tax revenue accrued to taxing entities other than the city, i.e. county, school district, and other independent districts. Thus, the incremental return to the city alone was not sufficient to pay the costs incurred by the city in purchasing the greenbelt. This creates a major policy issue. However, it should not inhibit the purchase of park and open space areas because overall economic benefits accrue to taxpayers whose revenues fund all the governmental entities. Resolution of this conundrum requires one of two actions. The first requires a city to be prepared to accept the inevitable criticism that is likely to occur when it raises taxes to purchase the land, knowing that its taxpayers indeed will benefit when return on the investment is viewed in the broader context of total tax payments to all governmental entities. The alternative strategy is to persuade the other taxing entities to jointly fund purchase of the open space areas, since all will reap proximate tax revenue increments deriving from them.

A study undertaken in Worcester, Massachusetts, in the early 1980s examined the relationship between four parks and the values of all properties sold within a 4,000 foot radius of each park during the preceding five years (n = 170) (Hagerty, Stevens, Allen & More, 1982; More, Stevens & Allen,

Table 6
Value of the Average House and Greenbelt Proximity

Walking Distance from Greenbelt	Average Value of House
30	$54,379
1,000	50,348
1,283	49,172
2,000	46,192
3,200	41,206

Source. Correll, M. R., Lillydahl, J. H., & Singell, L. D. (1978).

1982; More, Stevens & Allen, 1988). The multiple listing service from which the study's data were derived recorded actual sale price of a house, along with information on other characteristics that might effect the sale price including lot size, number of rooms, age, garage, taxes paid and condition. Distance to the park in feet was added to this set of variables. The results showed that, on average, a house located 20 feet from a park sold for $2,675 more than a house located 2,000 feet away. However, 80% of the aggregate increase in value derived from properties located within 500 feet of the parks. Effects could not be traced beyond 2,000 feet from the parks. Using these data, it was estimated that the aggregate property value increase attributable to these parks was $3.5 million.

The impact of two parks on the values of proximate residential developments in Dayton and in Columbus, Ohio was reported in 1985 (Kimmel, 1985). The 170 acre Cox Arboretum in Dayton was a wooded open space containing specialized herb, ornamental and other plant gardens. Its impact on an adjacent fairly new sub-division of 300 properties was assessed. The 152 acre Whetstone Park in Columbus, contained ball-fields, trails, natural areas and a 13 acre rose garden, and it was adjacent to an older residential area. In both cases, samples of approximately 100 residences were used in the study.

The regression analyses indicated that for every additional foot of distance a property was located away from Cox Arboretum and Whetstone Park, the selling price decreased $3.83 and $4.87, respectively. The average distance of properties in the study areas were 814 feet and 973 feet from Cox Arboretum and Whetstone Park, respectively, and these properties yielded proximate premiums of $3,100 and $4,700. Given the average selling prices of properties in the residential areas were $58,800 and $64,000, the park premium represented 5.13% in the Cox Arboretum subdivision and 7.35% at the Whetstone Park residential area. In neither case was an assessment made of how this average premium varied between properties immediately abutting the parks and those located (say) 2,000 feet away, which presumably were much less impacted by the parks.

An empirical investigation in Salem, Oregon, in 1986 reported that open space in the form of greenbelt at the fringe of the urban area exerted an influence on urban land values that extended inward from the urban boundary about 5,000 feet (Nelson, 1986). The researcher concluded that urban land adjoining farmland zoned exclusively for agriculture was worth $1,200 per acre more than similar land 1,000 feet away.

The Influence of Different Park Design and Use Characteristics

While the above studies consistently reported that parks and open space had a substantial positive impact on proximate property values, other studies have refined this conclusion by identifying differences in the magnitude of this impact based on a park's attributes. These differences pertained to (i) whether a park was designed to service active recreation users or to offer

users a more passive, contemplative experience; and (ii) whether a park was easily visible from adjacent streets or was sufficiently obscured from public view that it encouraged anti-social behavior.

Results from an early study undertaken in the city of Spokane, Washington, are shown in Table 7 (Sainsbury, 1964). This was a relatively naive study devoid of sophisticated statistical controls, but it was the first to empirically verify a continuum of effect between active and passive parks. Parks were classified into the three categories of active, combined active and passive, and passive. The values of residential properties adjacent to or surrounding parks were positively impacted regardless of the type of park, and magnitude of the impact declined with distance from the parks. However, there were substantial differences in impact along the active/passive continuum with active parks exercising the least positive impact and passive parks the most positive impact.

A more detailed study with better controls pertaining to this issue was undertaken soon after in Dallas (Hendon, Kitchen & Pringle, 1967). Ten parks were selected for study. The impact on properties within 500 feet of each park was compared with that on properties which were beyond 500 feet but still within the park's service area and zone of influence. In half of the parks the main feature was a playground, while the other five parks were larger and featured community playing fields.

The data in Table 8 show that properties within 500 feet of a playground park were of lesser value than other properties beyond 500 but within the park's service area. However, the inner area values were higher than those of properties that were outside the playground parks' service areas. In contrast, properties around the larger playing field parks were of higher value than properties that were more distant in the service area. The authors of the study stated: "In conclusion, it appears that the community playfield

Table 7
The Impact of Different Types of Parks on Residential Property Values

	Active Recreation Areas	Combined Active and Passive Recreation Areas	Passive Recreation Areas
% change in adjoining lots relative to average value of their census tracts	+10%	+33%	+70%
% change in residential blocks surrounding the parks relative to the average value of their census tracts	+7%	+14%	+63%

Source: Sainsbury, C. (1964).

Table 8
A Comparison of Mean Assessed Values of Properties Within 500 feet and Beyond 500 feet of 10 Parks in Dallas, Texas

Type of Park	Properties Within 500 Feet		Properties Over 500 Feet		Ratio: Under 500
	Mean Assessed Value ($)	Number of Properties	Mean Assessed Value ($)	Number of Properties	Over 500
Playground Parks					
Casa View	3,637 00	128	3,778.00	485	.96
Beckley Heights	3,390 00	141	4,197.00	760	.81
Hattie Rankin Moore	1,372.00	179	1,528.00	301	.90
Sleepy Hollow	2,683.00	39	2,556.00	55	1.05
Preston Hollow	9,039 00	154	11,207.00	516	.81
Playfield Parks					
Harry Stone	5,058 00	195	5,040.00	707	1.00
Pleasant Oaks	6,980 00	171	5,879.00	505	1.19
Beckley-Saner	3,436.00	250	2,742.00	494	1.25
Martin Weiss	3,335 00	262	3,258.00	741	1.02
Exline	2,382.00	113	2,254.00	594	1.06

Source: Hendon, W. S., Kitchen, J. W., & Pringle, B. (1967).

park, because of its large size, generally acts to increase property values of properties immediately adjacent to it while the playground generally decreases the values of similar properties" (p. 74).

The authors attributed the reasons for the adverse impact on nearby property of the playground parks not only to noise and the flow of additional people into the area, but to their quality. For example, in the Preston Hollow neighborhood, the park's adverse impact was relatively strong (20%). In this area property values were high, $9,039 within 500 feet compared to $11,207 in the rest of the service area (Table 8). The authors offered the following explanation for the adverse effect:

> The detrimental character of the park appears to lie in its appearance relative to the rest of the neighborhood. Probably if the appearance were improved, by plantings or some form of redesign, the adverse effect would be diminished.
>
> It seemed to be true in all cases, that the aesthetically pleasing park (one which had an attractive design, was well maintained, and highly landscaped) caused an increase in property values of properties around the park, relative to other properties...The parks which were well shaded, well designed and were of pleasing appearance had a positive impact, while those which were poorly designed had an adverse effect upon property values (p. 74).

Added dimensions to these findings were reported in a study which employed sophisticated statistical controls (Weicher & Zerbst, 1973). It fo-

cused on five parks in Columbus, Ohio: Audubon, Kenlawn and Linden parks were on the north side of the city, while Hauntz and Westgate were on the west side. All were located in neighborhoods comprised predominately of single family homes. However, the spatial relationships between the parks and adjacent residential properties differed in two ways. First, at Hauntz, Linden and Westgate, houses faced the park with a street between them; while at Audubon and Kenlawn, houses backed on to the parks separated from them only by a fence. Second, most houses had a view of open space, trees, grass etc., but those around Linden Park, and part of Audubon Park looked out on intensively used recreation facilities.

Prices of properties which had been sold in the previous five years that were immediately adjacent to these neighborhood parks constituted the dependent variable. The regression analysis controlled for house age, number of rooms, year of sale and lot size. The study differentiated between property (1) facing a park across a street; (ii) backing on to a park; and (iii) facing a heavy recreation use area or park building. The first category was comprised of properties facing Westgate and Hauntz Parks. These homes sold for approximately 7% more than identical properties located away from the park.

In contrast, there was no proximate premium associated with homes in the second category around Audubon and Kenlawn which backed on to the parks, since they sold for a similar price to those beyond the parks' view zones. Further investigation seeking an explanation of this finding revealed that the city's parks department received frequent complaints from neighborhood residents of drinking and other disturbing activities at night in Kenlawn and Audubon Parks. Kenlawn Park was almost completely surrounded by private residences, so it was almost invisible from the street. Therefore, it was an excellent gathering place for people who wanted to be undisturbed whether for legal or illegal purposes. Audubon Park contained a heavily-used baseball diamond, which meant that homeowners had strangers very close to their backyard for substantial time periods. This lack of privacy may have accounted for the lack of positive impact on property values.

Properties around Linden Park fell into the third category since the park consisted mainly of heavily used recreation facilities, such as baseball diamonds and a children's playground, rather than of passive open vistas. These homes sold for approximately 8% less than identical properties away from the park.

Another study reported in 1973 sought to identify the differential effects of four kinds of open space on property values: (1) public open space with recreation facilities (e.g. playgrounds, athletic fields; (2) public open space without recreational facilities (e.g. parks, arboretums, cemeteries); (3) private open space (e.g. large estates); and (4) institutional open space (e.g. colleges, private schools, country clubs) (Coughlin & Kawashima, 1973). The analysis was undertaken in a large area of northwest Philadelphia. The study compared the value of properties in census blocks that adjoined one of these

open space categories with other census blocks. A total of 1.955 census blocks were included in the analysis and they contained 300,000 inhabitants.

The regression analysis included a large number of other variables that could influence property values, and it identified separately the park impacts on blocks comprised mainly of homeowners and those on which renters predominated. Among both of these groups, access to public open space without recreation facilities was important. Accessibility to private and institutional open space impacted homeowner blocks but not rental blocks, while there was a positive relationship with open space containing recreation facilities and rental blocks but not homeowner blocks.

Table 9 summarizes the implications of the study's findings relating to public open space with no recreation facilities. Based on the average number of dwelling units per acre and the average housing unit value given in the table footnote, the incremental value attributable to three hypothetical different sized open space parks is computed using the analysis results. Computations are made for both individual dwelling units and for their aggregation in the four distance zones.

The percentage increment attributable to the park, increases markedly with the size of the park. Thus, in the case of a 25 acre park, increments range from an average of 9.9% within 1,000 feet of the park, down to 0.17% in the 5,000 to 10,000 feet radius. Despite the low percentage increment in the outer bands, their aggregate incremental contribution to the tax base is substantial because the larger radi and greater width of the outer distance bands means that they embrace a quantumly greater number of properties than the closer bands.

The overall findings strongly supported the proximate principle, but there was one exception in that an anomalous negative impact occurred on properties which backed directly on to the park. The authors attributed this

Table 9
*Effect on Property Value of Public Open Space with No Recreation Facilities**

Distance to Residence (feet)	Total Size of Park			Per Dwelling Unit Size of Park		
	1-Acre Park	5 Acre Park	25-Acre Park	1-Acre Park	5-Acre Park	25-Acre Park
0-1,000	$51,904	$205,788	$498,513	$83.31	$349.98	$1,207.05
1,000-2,500	43,057	215,258	1,076,290	12.97	64.86	324.28
2,500-5,000	37,148	185,740	928,699	3.13	15.67	78.34
5,000-10,000	39,246	196,258	981,292	0.83	4.14	20.69
	$171,355	$803,044	$3,484,794			

*Assuming 8.8 dwelling units per acre, and base value of average housing unit is $12,185.
Source: Coughlin, R. E.,& Kawashima, T (1973).

to: "abutting owners feeling vulnerable from park users, who may cross over their land and cause annoyance to the owners or even physical damage to their properties. In an attitude survey carried out concurrently with this study, 21% of respondents rated the park poor or bad from the point of view of safety from crime, and an additional 45% rated it only fair" (p. 277).

Finally, results from the study of four parks in Worcester, Massachusetts discussed earlier strongly supported the proximate principle (Hagerty et al, 1985; More et al, 1982; More et al, 1988). However, the authors also reported that parks with natural landscapes created the highest values in adjacent property, while property next to active recreation facilities had slightly lower values which were attributed to noise and pedestrian traffic. Following the models described in Figure 4, these negative influences quickly dissipated and property values one block away from the active parks showed a positive proximate increment.

The empirical literature reviewed in this section offers evidence to support the proximate value curves shown in Figure 4. Properties that face or directly abut parks which primarily serve active recreation users are likely at best to show only a small positive value increment attributable to the park. This is attributable to the noise, nuisance and congestion emanating from the influx and egress of traffic and people. However, values are likely to rise substantially, and negative amounts are unlikely to be present, on properties located beyond the first block adjacent to the park. In contrast, the value of properties close to parks offering users a passive experience generally follow a classic distance decay curve with those closest to the park exhibiting the highest increments of value.

There is some evidence in these studies that parks in which there is anti-social behavior may create a negative impact on properties facing or abutting them. The probability of this type of behavior increases if parks are not easily visible from nearby streets. Again, however, any negative impact is likely to dissipate beyond the first block.

Findings from Non-Urban Studies

Most studies measuring impact of the proximate principle have been undertaken in urban settings. Their findings may not be useful for those whose focus is at the state or national level. For this reason, studies that have been undertaken in those contexts are discussed in this and the following sub-sections of the paper. State and national parks typically are not established and operated primarily to provide benefits to local residents. Their mandate is much broader so their economic contributions are likely to arise from visitor expenditures in the area, rather than be captured in proximate real estate values. Nevertheless, it seems likely that the proximate principle will apply, at least in some cases, even though such an impact may be perceived as incidental to the mission of these parks.

An empirical analysis of determinants of land values in the Adirondack Forest Preserve in New York State was reported in 1978 (Vrooman, 1978). The Preserve is a region within which privately-owned land and state-owned land are interspersed. Of its 6 million acres, 42% are owned publicly and one purpose of this study was to test whether the state-owned land which will remain undeveloped impacted the price of privately-owned land that was adjacent to it. The data consisted of the sale prices of 284 vacant land parcels during a three year period which did not contain buildings and were not waterfront properties. The regression analysis indicated that being adjacent to state land had a large positive impact on price. The price of such parcels was about $20 per acre higher than similar parcels that were not adjacent to state land. Given that the mean price for all sites in the sample was $114 per acre, this represented a 17.5% incremental increase in value.

A 1983 study of the impact of six New York State parks on surrounding property values reported that in four cases there was no impact (Brown & Connelly, 1983). The authors suggested two reasons which may explain these findings. First the areas lacked intense development and were characterized by predominantly mixed rural land uses, so proximate open space had little additional appeal. Second, in areas that were developed around these four parks, the lots were large incorporating backyard pools and other amenities which effectively discounted or nullified the importance of recreational opportunities offered by a nearby state park when the houses were sold.

At the remaining two parks, the analyses showed there was an impact. At Watkins Glen State Park for each 100 feet closer to the park a residence was located, its selling price increased by $50, while at Keewaydin State Park the increase was $72 per 100 feet. The authors used Keewaydin State Park to illustrate the magnitudes of these incremental increases on properties in the three local communities of Town of Alexandria Bay, Village of Alexandria Bay and Town of Orleans where the increments represented 4%, 16% and 16% of the tax base respectively. Table 10 shows the impact of these incremental increases on the tax revenues accruing to the three communities (in 1983 dollars).

A Maryland study reported in 1993 that the preservation of a significant tract of forest land accounted for at least 10% of the value of a house within one mile of the site in Baltimore County; at least 8% in Carroll County; and at least 4% in Howard County (Curtis, 1993). When the radius was reduced to a quarter mile, open space farm land accounted for a minimum of 15% of the value of a house in Baltimore County and 6% in Carroll County, but it depressed home values by at least 7% in Howard County.

Generally, findings from the non-urban studies mirror those from the urban studies in supporting the proximate principle. Despite the concerns of rural landowners relating to adjacent public lands facilitating access to trespassers (Gartner et al, 1996), these findings suggest that properties proximate to public park, forest or open-space land are likely to receive positive increments of value.

Table 10
*The Influence of Keewaydin State Park on the Property Tax Base and the Property Tax Revenue of Three Local Communities**

	Town of Alexandria Bay	Village of Alexandria Bay	Town of Orleans
Average sale price of properties	$44,272	$41,257	$40,296
Number of properties	557	600	476
Average enhanced assessed value of each property attributable to Keewaydin State Park	$1,703	$6,780	$6,302
Total enhanced assessed value	$948,482	$4,067,820	$2,999,638
Taxes paid attributable to incremental park values (town, village, fire/light district, school district, etc)	$117,981	$633,237	$70,911

*1983 dollar values
Source: Brown, T. L., & Connelly, N. A. (1983)

The Impact of Large Federal or State Park or Open Space Areas on the Local Tax Base

The conventional wisdom among many elected officials, especially in rural areas, is that public acquisition of land for outdoor recreation adversely effects the revenue generating capacity of local jurisdictions. The belief is that since publicly owned land is exempt from taxation, its removal from the tax rolls increases the burden on other taxpayers, and in some instances may lead to the demise of communities. A common context in which controversy on this issue arises is the acquisition and development of new state park sites.

The cumulative research findings of the studies reported in this paper to this point suggest that developing outdoor recreation amenities is likely to lead to a rise in proximate property values which will generate more revenue than is lost by removing the land from the tax base. Two empirical studies were identified which specifically addressed this controversial issue. In both cases, the findings offered support for the proximate principle and did not support the conventional wisdom.

A 1971 study reported the impact of 15 park land acquisitions made in Pennsylvania by the U.S. Corps of Engineers or Pennsylvania State Parks (Epp, 1971). The aggregate property values of the township in which each park was located were compared with the values of the rest of the county which were not subject to the park's immediate influence. Data were derived from assessed values. The values for both areas were tracked for an 11-year period, starting five years before acquisition of park land began. It was as-

sumed that the control sites, comprised of the rest of the county, gave a good approximation of the land values that would have prevailed if the park sites had not been acquired.

In 12 of the 15 park sites the total value of each township's taxable real estate was higher the year after acquisition began than it was in the previous year. At the other three sites, township land values recovered in the second, fourth and fifth years. The author concluded that these results indicated the increase in the value of land remaining on the tax rolls more than offset the loss of taxable land caused by acquisition, so the revenue base of school districts and other local government entities was not adversely affected.

To facilitate comparison between the park sites and the control areas, a dollar value index was developed which established the market value in the year the land was acquired at 100. In the five years before acquisition commenced the value index of land on average across the 15 park site townships was 84, while the value in the rest of the counties was 90. For the five years after acquisition the average values for the park townships and control areas were 115 and 108, respectively. Thus, as a group, the 15 park townships moved from 6% below the control areas values before acquisition, to 7% above them after acquisition. The study's author concluded, "It seems likely that public acquisition of recreational land in amounts up to 60,000 acres does not reduce the real property tax base"(p. 26).

Results of this study suggested that the proximate principle is likely to apply to state and federal parks, even though much of the evidence reviewed in this paper refers to municipal parks. However, in addition to proximate principle benefits, federal and state lands often bring additional revenue benefits to local governments because in some cases they receive payments in lieu of taxes from the federal and state governments.

The compensatory impacts of such payments on local government revenues were believed to explain the findings reported in a 1970 study (Barron & Jansma, 1970). The authors used multiple regression analysis to test the hypothesis that state or federal land ownership in a forested three county area of north-western Pennsylvania adversely affected the fiscal capacity of local government through removal of part of the property tax base. The hypothesis was rejected because it was found that neither higher tax rates on private lands, nor reduced levels of per capita local government expenditures (i.e. counties, townships and school district) were associated with large amounts of public land, indicating that local governments were not placed at an economic disadvantage by public land programs. Indeed, the data "appeared to indicate the reverse" (p. 370).

In the three counties comprising the study area, the proportions of state and federal land were 51%, 48% and 17%. The consequences of the loss of local tax base were recognized by the federal government and the Pennsylvania State government which both provided payments in lieu of taxes on these lands to local jurisdictions. The authors believed these payments explained their results, concluding that "the payments in lieu of taxes effectively substitute for foregone tax revenues" (p. 370).

Table 11
Comparison of Mean Value of Properties within 500 Feet and Over 500 Feet at Three Fort Worth Parks

	Mean Value Over 500 Feet	Number of Properties	Mean Value 500 Feet and Under	Number of Properties	Difference Significant at .01
Rosemont Park	$5,729	184	$6,562	59	Yes
Marine Park	4,565	162	5,571	48	Yes
Eastover Park	7,358	165	6,419	29	Yes

Source: Hendon, W. S. (1972)

These detailed findings were consistent with those reported by the National Park Service on the impact of two of its facilities (National Park Service, 1961). In Dare County, North Carolina, near Cape Hatteras National Seashore Area, the National Park Service reported that total assessed valuation within the county more than doubled soon after the area was opened. At the same time, tax rates were reduced from $1.00 to 80 cents per $100. Similar conclusions were reported after the expansion of Grand Teton National Park in Teton County, Wyoming.

Findings Not Supportive of the Proximate Principle

Five studies were located which reported findings that did not unequivocally support the proximate principle. A 1966 study used multiple regression to evaluate the relative influence of a combination of 14 independent variables on urban growth patterns, including distance to a playground or recreation area. However, this was not one of the four variables that had a significant influence on land values (Weiss, Donnelly & Kaiser, 1966).

Two studies undertaken in the late 1960s that were directed by the same researcher (Hendon) reported mixed results in that they offered only partial support for the proximate principle. The first site was a two and a half block area of housing (which equated to a depth of five lots) around a 10 acre park in Lubbock, Texas (Kitchen & Hendon, 1967). The area was characterized as "homogeneous" so the influence of other potential influencing variables was not measured. There were 550 properties within this zone of influence of the park, and data were available for 480 of them. Correlation analysis explained their relationship between distance from the park and (i) assessed value of the property; (ii) sale price of properties that had been sold in the previous five years; and (iii) assessed value of the land. There was a significant correlation only with the last of these three measures, and it was a fairly small correlation (−.17).

The second study focused on three parks in the city of Forth Worth (Hendon, 1972). They were: (i) Eastover Park, which was 13.5 acres surrounded by low to middle income residential property primarily occupied by African-Americans; (ii) Marine Park, which was 12 acres with a surround-

ing population characterized as low to middle income and predominantly white; and (iii) Rosemont Park, a community park of 30 acres bordering a large boulevard. Results are summarized in Table 11. In Marine and Rosemont Parks, the mean values of properties within 500 feet of the parks were of significantly greater value than properties more distant from the park. However, this support for the proximate principle was partially offset by the findings at Eastover Park where the direction of the significant relationship was the antithesis of that which was anticipated.

Findings from a large scale study involving 18 park sites in 13 municipalities in Westchester County, New York were reported in 1986. Community parks of 25 acres or more were selected through a systematic process based on a number of pre-established criteria (Yoegel, 1986). The neighborhoods around the selected parks were characterized as being relatively homogeneous. The 18 sites generated approximately 2,500 individual house price/park relationship quantifiable data points. The impact of the park on three zones (termed tiers) was evaluated. Residential properties in Tier 1 were immediately adjacent to a park Tier 2 comprised the next two rows of residential properties directly behind Tier 1. Tier 3 consisted of the two rows of residential home plots lying behind Tier 2, that is, four and five rows from the park. Tiers 2 and 3 were perceived to be "control areas."

It was anticipated that the findings would endorse the proximate principle, but the regression analyses showed no difference in value between those properties adjacent to a community park and similar properties located in the other two tiers. The study's design may account for the unexpected result because it was different from the design used in most of the other studies reviewed. Given that fairly large community parks (at least 25 acres in size) were used in the study, the lack of a relationship may have reflected the proximity of all three tiers to the park. It seems possible that the adjacent properties of Tier 1 may have experienced a nuisance factor which depressed any incremental value increase to the level of that accruing to properties located 2-5 blocks away in Tiers 2 and 3. This would be consistent with the lower curve in Figure 4. There was no measure of how well the prices of properties in these three tiers compared to those a greater distance away. Thus, it seems reasonable to postulate that if a control area had been established 6-10 blocks away from the parks, instead of 2-5 blocks away, then a distance decay impact on residential properties may have emerged.

Methodological limitations may also have accounted for the findings of a 1982 study which failed to validate the proximate principle (Schroeder, 1982). Using 566 randomly selected residential properties located in several communities in Du Page County, Illinois, the study's objectives were to test for a significant relationship between the value of residential property and (i) per capita expenditures for parks and recreation in those communities; and (ii) the acreage of land per 1,000 population. The regression analysis indicated no evidence of a relationship in either case. It was subsequently suggested that inappropriate statistical procedures may have contributed to the findings of no relationship (Arthur, 1983), but the author rejected this criticism (Schroeder, 1983).

Both variables used in this study are inadequate surrogates for capturing the value of parks in residential property values. The failure of any other researchers working in this area to adopt these operationalizations suggests their fundamental weakness. Per capita expenditure is an input measure not an output measure, whereas the proximate principle relates to quantity and quality of output in the form of parks and open space. It is the tangible output assets which influence the sale price of proximate properties, not dollar inputs.

Both per capita expenditures and acres per 1,000 population are gross aggregate measures which do not relate proximity of residence and park. Any evaluation of the effect of the proximate principle must by definition include a measure of distance decay between park and residence, and this is absent when these gross measures are used.

In conclusion, one of the five studies reviewed in this section reported mixed results, but in two of the three parks which were investigated in it the proximate principle was supported. In three of the remaining studies, failure to verify the proximate principle may be attributed to unorthodox and flawed measurement measures that were used. These involved failure to control for other influencing variables, an inappropriate control area against which proximate value increments could be measured, and measures which failed to embrace the control element of distance decay.

Conclusions

Three key questions were posed in the introduction to the review of the later empirical studies. The first question asked whether parks and open space contributed to increasing proximate property values. Results from 25 studies that investigated this issue were reviewed and in 20 of them the empirical evidence was supportive. Examination of the five studies that did not support the proximate principle suggested that in four of those cases the ambivalent findings may be attributable to methodological limitations.

The support extended beyond urban areas to include properties that were proximate to large state parks, forests and open space in rural areas. The rural studies offered empirical evidence to support not only the proximate principle, but also to refute the conventional wisdom that creating large state or federal park or forest areas results in a net reduction in the value of an area's tax base.

Six of the supportive studies further investigated whether there were differences in the magnitude of impact among parks with different design features and different types of uses. The findings demonstrated that parks serving primarily active recreation areas were likely to show much smaller proximate value increases than those accommodating only passive use. However, even with the noise, nuisance and congestion emanating from active users, in most cases proximate properties tended to show increases in value when compared to properties outside a park's service zone. Impacts on prox-

imate values were not likely to be positive in those cases where (i) a park was not well maintained; (ii) a park was not easily visible from nearby streets and, thus, provided opportunities for anti-social behavior; and (iii) the privacy of properties backing on to a linear park was compromised by park users.

The second question posed related to the magnitude of the proximate effect. A definitive generalizable answer is not feasible given the substantial variation in both the size, usage and design of park lands in the studies, and the disparity in the residential areas around them which were investigated. However, some point of departure based on the findings reported here is needed for decision-makers in communities that try to adapt these results to their local context. To meet this need, it is suggested that a positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point guideline. If the park is large (say over 25 acres), well-maintained, attractive, and its use is mainly passive, then this figure is likely to be low. If it is small and embraces some active use, then this guideline is likely to be high. If it is a heavily used park incorporating such recreation facilities as athletic fields or a swimming pool, then the proximate value increment may be minimal on abutting properties but may reach 10% on properties two or three blocks away.

The diversity of the study contexts also makes it nonfeasible to offer a generalizable definitive answer to the final question posed in the introduction concerned with the distance over which the proximate impact of park land and open space extends. However, there appeared to be wide agreement that it had substantial impact up to 500 feet and that in the case of community sized parks it extended out to 2,000 feet. Few studies tried to identify impacts beyond that distance because of the compounding complexity created by other potentially influencing variables, which increases as distance from a park increases. Nevertheless, in the case of these larger parks there was evidence to suggest impact beyond this artificial peripheral boundary, since the catchment area from which users came extended beyond it (Allen et al, 1985).

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The impact of parks on property values: Empirical evidence from the past two decades in the United States

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The impact of parks on property values: empirical evidence from the past two decades in the United States

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The notion that parks have a positive impact on proximate property values was recognized in the debates surrounding the pioneering of large urban parks in England in the first half of the nineteenth century, and subsequently in the spread of this movement to the US in the latter half of that century. The empirical basis for these early assertions was rudimentary and naïve. This paper reviews contemporary research using the more advanced analytical procedures now available to social scientists that has examined this issue. The findings confirm the initial rationale and suggest that a positive impact of 20% on property values abutting or fronting a passive park is a reasonable starting point guideline for estimating such a park's impact.

INTRODUCTION

The premise that parks have a positive impact on proximate property values derives from the observation that people frequently are willing to pay a larger amount of money for a home located close to a park, than they are for a comparable home. In effect, this represents a 'capitalization' of park land into increased property values of proximate land owners. The increments of enhanced value attributable to a park were used to fund early parks; just as such increments are used to fund golf courses in community golf developments in contemporary US society. The premise of the proximate principle undergirded the earliest parks in England. It was the central principle in John Nash's development of London's Regent's Park which was commenced in 1812; it was the core rationale for Richard Vaughan Yates' investment in Prince's Park, Liverpool, in 1842; and it provided the rationale for investment of tax funds in the world's first publicly funded park in Birkenhead in 1847 (Crompton, 2004).

After touring Birkenhead Park in 1850, Frederick Law Olmsted was responsible for transitioning both its picturesque design principles and its proximate principle funding rationale to Central Park in New York City, and from there to urban park systems across the US. Thus, from the earliest days of urban park development in the United States from the 1850s through the 1930s, there was an insistent, almost inviolate conviction among park advocates of the legitimacy of the proximate principle. It was conventional wisdom among them, but it was also espoused by city planners and elected officials.

Olmsted and others undertook studies that appeared to confirm the intuitive validity of the proximate principle. Thus, for example, his studies at Central Park concluded that the annual debt charges incurred

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by New York City for acquisition and development of the park were $834,000 annually; the increase in property tax revenue received by the city as a result of the enhanced value of properties around the park amounted to $5.24 million annually; so the net annual income accruing to the city from its investment in the park was $4.4 million (Fox, 1990).

This study and others like it were fairly rudimentary and naïve, reflecting the underdeveloped nature of the statistical tools and research designs available at the time. All property value increases were attributed to the proximity of a park and the potential of other factors were ignored. As new tools evolved, the quality of the studies investigating this issue improved.

During the past couple of decades, there have been three developments that have facilitated the emergence of studies which are much stronger from a science perspective that have addressed the impact of parks on property values. First, the increased sophistication of hedonic analysis and the statistical tools associated with it have enabled the array of other factors that may contribute to changes in property values to be considered. These factors are identified in Figure 1.

The second development was the evolution in the 1980s of Multiple Listing Services in electronic form. In the US, it is standard practice for all real estate agents in a city to report the sales price of each transaction to a central data base that is accessible to all of them with details of the structural and physical attributes of the property. This data base is called the Multiple Listing Service. Now these data are available in electronic form. They can be transposed on to maps that are formulated as part of a city's geographic information system and spatially integrated with the location of parks.

Geographic information systems constitute the third development that has enhanced the quality of the science investigating the impact of parks on property

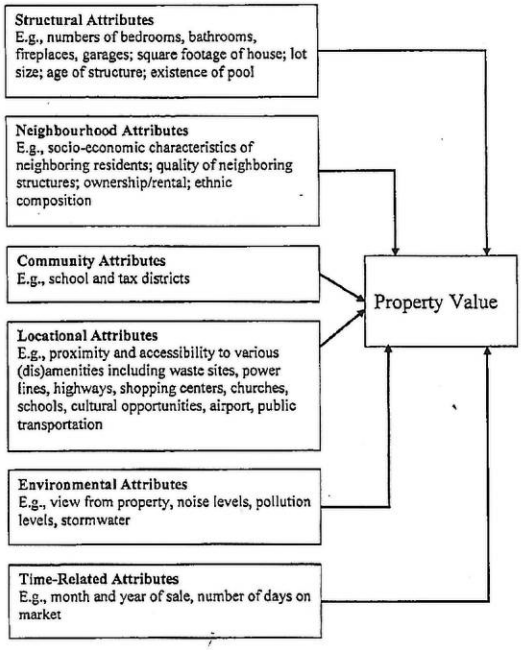

Fig. 1. Factors influencing property value. *Source*: Nicholls (2002)

values. A GIS is a computer-based system that stores and facilitates manipulation of geographic information. GIS enables Multiple Listing Service data to be mapped by individual street addresses. It permits accurate calculation of distances between locations such as a house and a park and can delineate areas within which affected properties are located.

These three developments have facilitated the efficient use of hedonic price modelling. The theoretical foundation of hedonic pricing techniques was laid down by Lancaster (1966) who proposed that utility was derived from the characteristics or attributes of goods. For example, the characteristics of a car from which utility is derived may include engine size, speed and acceleration, fuel economy, number of seats, comfort, luxury, colour, style and status. By estimating the contribution of each characteristic to the purchase decision, its relative

importance can be identified. Thus, the role of the factors shown in Figure 1 in the decision to pay a given price for a home can be identified through the use of regression models.

REVIEW OF 'MODERN' STUDIES

The era of 'modern' studies for the purposes of this review commenced in the 1970s and early 1980s, when the availability and greater capacity of computing stimulated an increased interest in investigating the issue. Early studies in the 1970s were conducted in Philadelphia, and in Boulder, Colorado.

A 1972 study in Philadelphia focused on seven sites, at three parks, three schools, and one school-park combination (Lyon, 1972). During the sample years of the study, 1,725 property sales were recorded in the neighbourhoods around the sites. As a percentage of total housing units in each area, the sample size ranged from 12% to 25.5%. In all seven neighbourhoods regression analyses indicated that distance from the site had an impact on property values, enabling the author to conclude, 'there appear to be locational advantages to school and park facilities, and these advantages have been capitalized in the sale price of nearby property' (Lyon, 1972, p. 126).

The Philadelphia study was one of the few to test for a 'net effects' curve which postulates that while there is a positive impact on the value of properties abutting a park, it may be lower than the impact on properties a block or two away which are not subjected to any nuisance created by access and egress. The polynomial equation used to test for this effect was found to be a good fit on one site – a junior high school site with an athletic field – with the maximum impact on property occurring 600 to 800 feet from the site.

Another Philadelphia study in 1974 analysed the impact on sales price of 336 properties in the vicinity of Pennypack Park (Hammer *et al.*, 1974). This 1,294-acre stream-valley park is in northeast Philadelphia. It was surrounded by residential areas developed at a density of approximately ten dwelling units per acre. The area around the park was comprised of 'unimaginative housing, heavy in scale with natural landscaping losing out to concrete and stone' (p. 275). Based on their subjective evaluation of the area, the researchers hypothesized that 'the residents do not consider natural amenity to be very important' so 'public open space would be expected to have a relatively low effect on land values compared to other neighborhoods' (p. 275).

Despite the authors' pessimistic prognosis, regression analysis indicated that the park accounted for 33% of land value at 40 feet. This dropped to 9% at 1,000 feet and 4.2% at 2,500 feet which was the peripheral limit set for the study. From these data, the authors concluded that a net increase in real estate value of almost $3.4 million (1974 values) was directly attributable to the park.

The most frequently cited study in the literature of this era examined the effect of greenbelts on property values in three different areas of Boulder, Colorado (Correll *et al.*, 1978). A total of 1,382 acres of greenbelt had been purchased adjacent to residential developments in the 10 years prior to the 1978 study. The sample consisted of properties from each area that sold in a selected calendar year which were located within 3,200 feet of the greenbelt ($n = 82$).

Variables in the regression model that were believed likely to influence the sales price of these single family homes were: (i) walking distance in feet to the greenbelt; (ii) age of each house; (iii) number of rooms in each house; (iv) square footage of each house; (v) lot size; (vi) distance to the city centre; and (vii) distance to the nearest major shopping centre. The regression results showed that, other things being

equal, there was a $4.20 decrease in the price of residential property for every foot one moved away from the greenbelt. This suggested that if other variables were held constant, the average value of properties adjacent to the greenbelt was 32% higher than those located 3,200 walking feet away. These results are shown in Table 1.

One of the three neighbourhoods had been able to take much greater advantage of the open space amenity in its planning than the other two neighbourhoods, so the authors initiated further analyses on it. In this neighbourhood, price decreased $10.20 for every foot one moved away from the greenbelt. This resulted in:

> the aggregate property value for the neighborhood being approximately $5.4 million greater than it would have been in the absence of greenbelt. This increment resulted in an annual addition of approximately $500,000 to the potential neighborhood property tax revenue. The purchase price of this greenbelt for the city was approximately $1.5 million and thus, the potential property tax revenue alone would allow a recovery of initial costs in only three years. (p. 215)

There is an important caveat to these positive results in that 86% of the $500,000 proximate increment of property tax revenue accrued to taxing entities other than the city, i.e., county, school district and other independent districts. Thus, the incremental return to the city alone was not sufficient to pay the costs incurred by the city in purchasing the greenbelt. This creates a major policy issue. However, it should not inhibit the purchase of park and open space areas because overall economic benefits accrue to taxpayers whose revenues fund all the governmental entities.

Table 1 Value of the average house related to greenbelt proximity

Walking distance from greenbelt	Average value of house
30	$54,379
1,000	50,348
1,283	49,172
2,000	46,192
3,200	41,206

Resolution of this conundrum requires one of two actions. The first requires that a city's elected officials be prepared to accept the inevitable criticism that is likely to occur when it raises taxes to purchase the land. This selfless, 'statesman-like' position is adopted because they recognize that in the long-term the city's taxpayers will benefit when return on the investment is viewed in the broader context of total tax payments to all governmental entities. The alternative strategy is to persuade the other taxing entities to jointly fund purchase of the open space areas, since all will reap proximate tax revenue increments deriving from them.

A study undertaken in Worcester, Massachusetts, in the early 1980s examined the relationship between four parks and the values of all properties sold within a 4,000 foot radius of each park during the preceding 5 years ($n = 170$) (More *et al.*, 1982, 1988; Hagerty *et al.*, 1982). The multiple listing service from which the study's data were derived recorded actual sale price of a house, along with information on other characteristics that might affect the sale price including lot size, number of rooms, age, garage, taxes paid and condition. Distance to the park in feet was added to this set of variables.

The results showed that, on average, a house located 20 feet from a park sold for $2,675 more than a house located 2,000 feet away. However, 80% of the aggregate increase in value was derived from properties located within 500 feet of the parks. Effects could not be traced beyond 2,000 feet from the parks. Using these data, it was estimated that the aggregate property value increase attributable to these parks was $3.5 million.

The impact of two parks on the values of proximate residential developments in Dayton and in Columbus, Ohio, was reported in 1985 (Kimmel, 1985). The 170-acre Cox Arboretum in Dayton was a wooded open space containing specialized herb, ornamental and other plant gardens. Its impact on an adjacent fairly new sub-division of 300 properties was assessed. The 152-acre Whetstone Park in Columbus, contained ballfields, trails, natural areas and a 13-acre rose garden, and it was adjacent to an older residential area. In both cases, samples of approximately 100 residences were used in the study.

The regression analyses indicated that for every additional foot of distance a property was located away from Cox Arboretum and Whetstone Park, the selling price decreased $3.83 and $4.87, respectively. The average distance of properties in the study areas were 814 feet and 973 feet from Cox Arboretum and Whetstone Park, respectively, and these properties yielded proximate premiums of $3,100 and $4,700. Given the average selling prices of properties in the residential areas were $58,800 and $64,000 respectively, the park premium represented 5.1% in the Cox Arboretum subdivision and 7.3% at the Whetstone Park residential area. In neither case was an assessment made of how this average premium varied between properties immediately abutting the parks and those located (say) 2,000 feet away, which presumably were much less impacted by the parks.

An empirical investigation in Salem, Oregon, in 1986 reported that open space in the form of greenbelt at the fringe of the urban area exerted an influence on urban land values that extended inward from the urban boundary about 5,000 feet (Nelson, 1986). The researcher concluded that urban land adjoining farmland zoned exclusively for agriculture was worth $1,200 per acre more than similar land 1,000 feet away.

Washington County, Wisconsin, is located 40 minutes northwest of Milwaukee and is growing rapidly. The impact of two parks in the county on property values was studied (Sielski, 2002). Jackson Park is a 25-acre park located in the Village of Germantown.

The study was provoked by two common concerns: (i) property owners adjacent to a proposed county park were concerned it would have a negative impact on their property value; and (ii) taking the property off the tax roles would put an undue burden on the rest of the residents.

The study used assessed values and measured the parks' impacts within a half-mile (2,640 feet) radius. It controlled for structural variables. The results for Jackson Park are illustrated in Figure 2. Properties within 200 feet increased by $113.36 in assessed value for each foot a property was closer to the park. Aggregated incremental assessed valuation attributable to the park was $1.58 million which generated $30,128 in annual tax revenues. 19.2% of the assessed value of properties within 200 feet of the park was attributable to the park. For example, if a property located outside the influence of the park was valued at $120,000, it would have a value of $143,000 if it were located within 200 feet of Jackson Park.

At Homestead Hollow County Park, assessed value decreased by $4.96 for each foot of distance from the park up to the half-mile radius. These results were similar to the Boulder greenbelts study reported earlier in the paper. Aggregate value attributable to the parks was $880,000, generating annual tax revenues of $18,100.

A county-wide analysis of 6,898 single family residences sold in a 2-year period in Leon County, Florida, reported that homes within 200 feet of the nearest park were worth an extra $6,015, while the premium for those between 200 feet and 1,320 feet (0.25 mile) was $1,773 (Cape Ann Economics, 2003). There was some evidence of the impact of a restricted supply since when

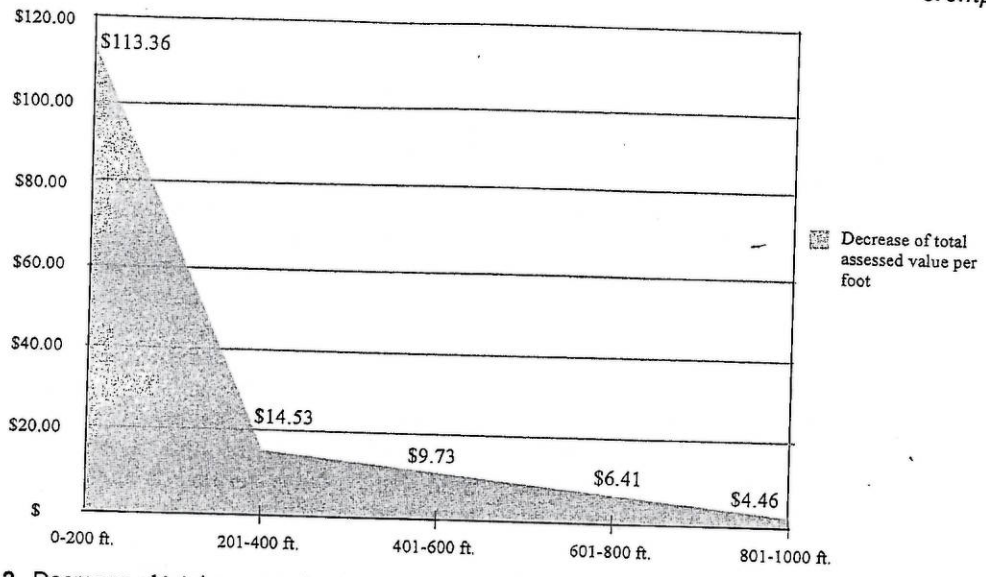

Fig. 2. Decrease of total assessed value per foot (Jackson Park)

the analysis focused on the most densely populated parts of the county (over 2,500 people per square mile, primarily within the city of Tallahassee), the premiums for parcels within 200 feet of a park rose to approximately $14,000.

In addition to the county-wide analysis, studies were undertaken on the specific impact of two parks. Myers Park in Tallahassee is a 47-acre natural area park. Data from 58 single family home sales in the previous 2 years were used in the analysis, which concluded that those within 200 feet of the park sold for $24,600 more than they would have brought had they not been close to the park. Since there were 75 properties within this 200-foot zone, the enhanced value attributable to the park was $1.845 million.

Maclay State Gardens on the fringe of Tallahassee is a Florida State Park embracing rolling hills, a picturesque lake and spectacular and extensive floral gardens featuring both native plants and exotic flora. It includes the 877 acre Lake Overstreet addition which also features a lake and surrounding woodlands. Over the 2-year period 442 single-family residential properties were sold in the census blocks immediately surrounding the gardens. Regression analyses indicated that properties physically abutting the park had a premium of $47,000 ($n = 104$), while for those not abutting but within 200 feet the premium was $21,000 ($n = 70$). These premiums when applied to all properties within the 200-foot zone, added $6.3 million to the property tax base.

A study of the impact of 14 neighbourhood parks on suburban areas of the Dallas-Fort Worth metroplex was based on 3,200 residential sales transactions recorded over a 2 $\frac{1}{2}$ year period (Miller, 2001). The parks were all between 2.5 acres and 7.3 acres in size except for two which were 0.5 and 0.3 of an acre. They were 'intermittently maintained' and were selected because of their ordinariness rather than their excellence. The author described them as 'a standard of park quality well within the range of an evenly marginally committed developer. National monuments these are not' (p. 169).

The selected parks were in neighbourhoods of single-family houses. As far as possible, parks near arterial or collector streets, shopping or commercial centres, or abrupt changes in demographic characteristics were excluded from the study to clarify the effect of the park. The comprehensive regression model incorporated 29 variables that could potentially influence sales price. Travel distances using a GIS program were used as the distance variable.

The price effects compared against home values a half-mile from the parks are shown in Figure 3. Homes adjacent to parks received an approximate price premium of 22% relative to properties a half-mile away. Approximately, 75% of the value associated with parks occurred within 600 feet of a park and 85% within 800 feet. This distance approximates a two to three minute walk and delineated the parks' principal areas of influence. The price effects of the parks were insignificant at a distance of approximately 1,300 feet (a quarter mile), the conventional estimate of a 5 minute walk.

This study also found that while large parks add more valuable to residents' property than small parks, the premium is small relative to that of proximity. All else equal, then, more value will be created by a series of small parks, which permit more total houses in their vicinity, than by a single large park of equivalent area.

Figure 4 demonstrates the outcome if this principle is applied to a 50 acre park illustration. It suggests that the tax base enhancement emanating from six 8.33 acre parks with dimensions of 400 yards × 100 yards, and non-overlapping impact zones, will be substantially greater in aggregate than the premium generated by the 1210 yards × 200 yards, 50 acre park. However, such a revenue benefit is likely to be partially offset by higher initial development and construction costs, and more expensive operations costs over time. Nevertheless, the scenario of a set of smaller parks rather than one large park may be appealing to developers because they do not have to incur the additional ongoing maintenance costs whereas governmental entities do.

A large data set to measure the impact of the proximate principle was assembled for the city of Portland, Oregon. It was comprised

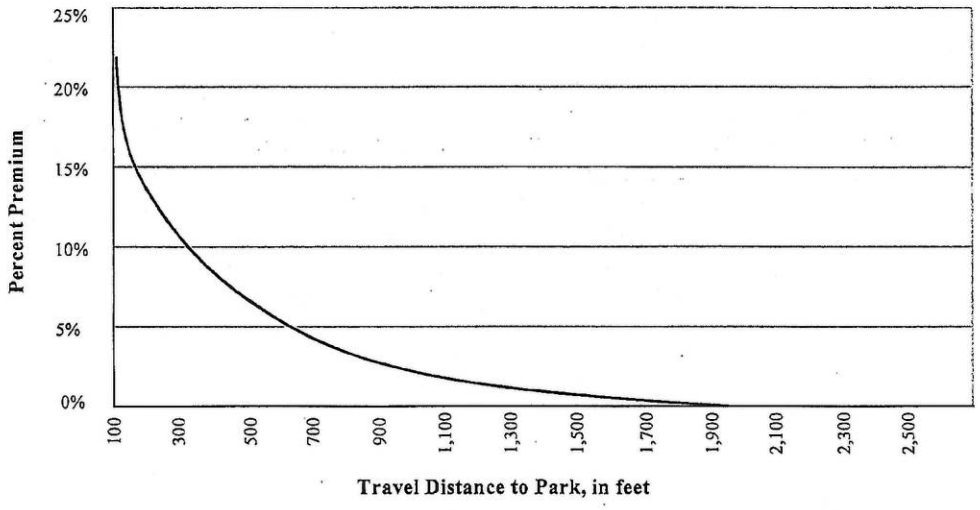

Fig. 3. Impact of proximity to parks (14 neighbourhood parks, Dallas-Fort Worth Metroplex)

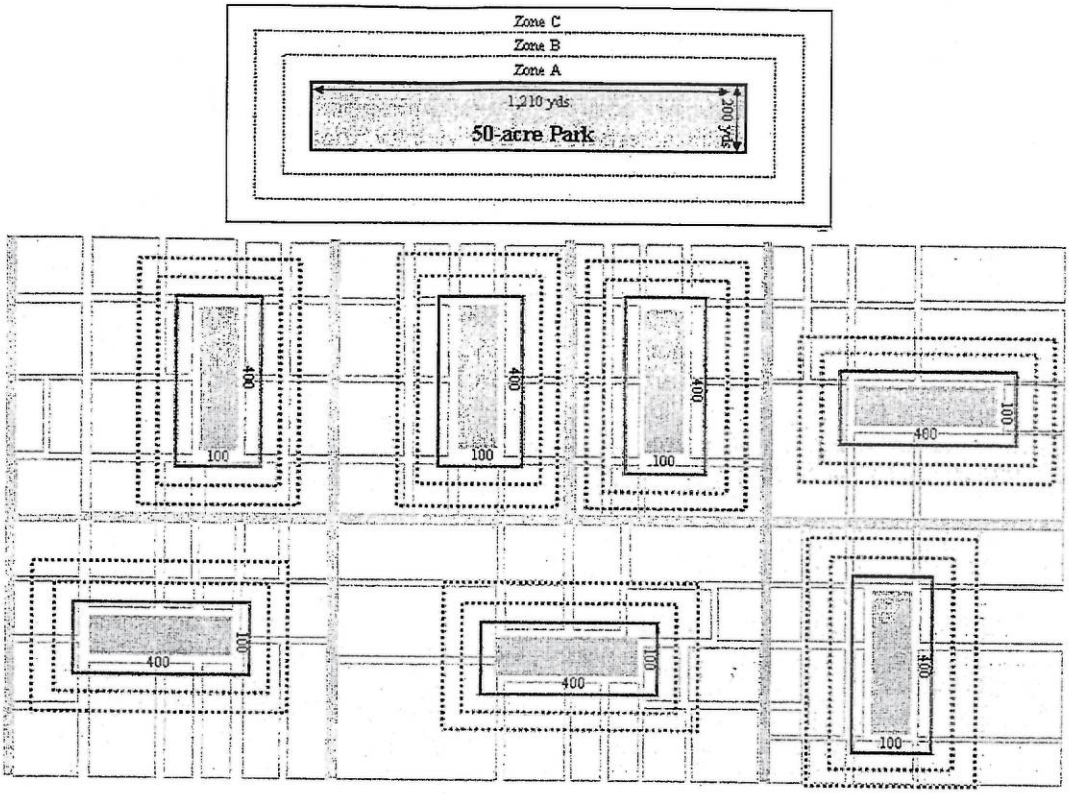

Fig. 4. Implications for proximate preminus of distributing 50 acres of parkland among six smaller parks rather than allocating it to a single large park

of 16,636 single family home sales during a three year time period. The mean home sale price was $66,198 (1990 dollars) and the average size was 1,396 square feet. The impact of parks on property within a 1,500-foot radius was measured. It was estimated that a block was 200 feet, so the 1,500 foot (0.28 mile) radius reflected an average distance of approximately 7.5 blocks.

Results from these analyses were reported in two different papers. In the first paper the 193 public parks were not differentiated by type (Bolitzer and Netusil, 2000). Two statistical models were applied to the data set. The authors concluded that homes within 1,500 feet of a public park increased in value by $2,262 (3.5%) or $845 (1.2%) depending on the model used, compared to property outside the 1,500 foot area. When the impact of different distances within the 1,500 foot radius was evaluated by the two models, the premium values ranged from $5,023 (7.6%) and $3,527 (5.3%) for properties within 100 feet of a park, to $2,109 (3.8%) and $1,004 (1.5%) for properties that were located 1,301 to 1,500 feet away.

In the second paper using this same data set, the authors classified the public parks into three different categories: urban parks, natural area parks, and specialty parks/facilities (Lutzenhiser and Netusil, 2001). These are defined in Table 2. The results

Table 2 Definition of open space categories

Open space type	Definition
Urban Park	More than 50% of the park is manicured or landscaped and developed for nonnatural resource dependent recreation (e.g., swimming pools, ballfields, sports courts).
Natural area park	More than 50% of the park is preserved in native and/or natural vegetation. Park use is balanced between preservation of natural habitat and natural resource-based recreation (e.g., hiking, wildlife viewing, boating, camping). This definition includes parcels managed for habitat protection only with no public access or improvements).
Specialty park/facility	Primary use at the park and everything in the park is related to the specialty category (e.g., boat ramp facilities).

showed that being within 1,500 feet of a natural area park accounted for $10,648 (16.1%) of a home's sale price holding all other factors constant. The impacts of urban parks and specialty parks/facilities were $1,214 (1.8%) and $5,657 (8.5%), respectively. The relatively low premium for the urban parks may be attributable in part to urban parks often having greater variations in quality.

The impact of distance from each of the three types of area on home values is reported in Table 3. This shows, for example, that a home located 401–600 feet away from a natural area park on average had a $12,621 premium (19.1%), while the average premium for a house adjacent to an urban park was $1,926 (2.9%). These data do suggest there are relative disadvantages to being located next to the facilities, since the largest premiums for the urban park, natural area park and specialty park/facilities were in the 201–400, 401–600, and 401–600 foot distance bands, respectively.

Another technically strong study was reported on the impact of the Barton Creek Greenbelt and Wilderness Park in Austin, Texas (Nicholls and Crompton, 2005). This is a linear 171-acre natural area to the west of downtown that includes 7.5 miles of multi-use trails. The authors examined its impact on three neighbourhoods that bordered this amenity: Barton, Lost Creek and Travis. Single-family home sales over a three year period constituted the data source. The sample sizes of home sales for

Table 3 Variations in proximate values at different distances for each open space type (1990 dollars)

Variable	Urban Park	Natural Park	Specialty Park/facility
Distance ≤200	$1,926	$11,210	$7,396
Distance 201–400	2,061	10,216	5,744
Distance 401– 600	1,193	12,621	10,283
Distance 601–800	817	11,269	5,661
Distance 801–1,000	943	8,981	4,972
Distance 1,001–1,200	1,691	8,126	4,561
Distance 1,201–1,500	342	9,980	3,839
Number of observations 16,747			

the Barton, Lost Creek and Travis neighbourhoods were 224, 240 and 236, respectively.

Results of the study are summarized in Table 4. The table shows that the premium for adjacency to the greenbelt was highest in the Barton neighbourhood and that it represented 20% of *the average price of all homes in that neighbourhood.* The comparison criterion is important because all the homes impacted by the greenbelt are included in the average price. If the comparison criterion had been with houses beyond the direct impact of the greenbelt (say 1,500 feet or more away), then it is likely that the premiums shown in Table 4 would have been substantially longer.

The last column in Table 4 shows the decline in value with each foot of distance away from the greenbelt. These figures are substantially higher than those reported earlier in the paper for the greenbelts in Boulder, Colorado, the two parks in Dayton, and for the parks in Washington County, Wisconsin, although in the first two cases the different values may be attributable to inflation in the two decade time difference between the two studies.

The lack of positive impact in the Lost Creek area was attributed to the different character of the greenway at that point. Homes directly adjacent to the greenway in Lost Creek were located on the edge of deep, thickly vegetated ravines which offered neither recreational access nor attractive views. The vegetation inhibited recreational access and the views were of other properties across the ravines rather than of the greenspace. In the Travis area where the proximate premium was relatively low, the topography of the land did not allow for non-adjacent properties to enjoy a greenbelt vista, so the premium was primarily a reflection of the value accorded proximate access.

A study conducted in a 1,350 square mile suburban and exurban region in central Maryland used a sample of 55,799 arms-length single transactions of owner-occupied residential properties that occurred in a 5 year time period (Irwin, 2002). It measured the proportions of areas within 400 meters of houses that were in different land uses. The study recognized that open space is heterogeneous and measured the impact on house sales price of different categories of open space. The author reported that in contrast to residential, commercial or industrial uses, open space had a positive impact on a residential property's value. However, the premium for proximity to privately owned open space protected by a perpetual easement was $4,503 or 2.6%, while that on properties close to government purchased open space was $2,038 or 1.2%. It was suggested that the privately protected land yielded a higher premium than the publicly owned land because the latter is available to people from outside the local area. They may generate a spillover nuisance cost by reducing privacy and increasing congestion which is not present at privately owned open space.

Table 4 Results from three Austin neighborhoods proximate to the Barton Creek greenbelt and Wilderness Area

Neighborhood	Home sales prices ($'s)			Adjacency premium ($'s)	Adjacency premium percentage	Decline in value per foot from the Greenbelt ($'s)
	High	Low	Mean			
Barton	550,000	105,000	220,000	44,000	20%	13.51
Lost Creek	899,000	179,000	356,000	0	0%	3.97
Travis	392,000	130,000	233,000	16,000	6%	10.61

A similar study was undertaken in Berks County in southeastern Pennsylvania (Ready and Abdalla, 2003). The data base was 8,090 residences sold over a 4 year period in the suburban/exurban areas of the county. Again, the amount of land that was in open space, residential, commercial and industrial use within 400 meters of each house was measured. The authors concluded that within the 400-meter area, open space was the most desirable land use but the premiums on house prices were very small, even lower than those in the Maryland study.

The relatively low premium values reported in these two studies may be a function of three factors: (i) the self-cancelling effect of aggregating open space because both high quality amenity open space and dispirited open space that leads to decreased proximate property values are included in the mean averages; (ii) averaging the proximate premium over 400 meters because most proximate value is likely to be captured within 150 meters and the value decay beyond that distance is substantial so that at 400 meters it is likely to be zero; and (iii) some parts of the study areas were rural with zoning ranging from 1 to 5 acre minimum lot size, so the supply of private open space was relatively plentiful.

In 2003, comprehensive detailed studies of the impact of major renovations in five selected parks in New York City were undertaken (Ernst and Young, 2003). The authors did not use hedonic analysis. Rather, they compared the values of property sales transactions within Park Impacted Areas (PIAs), which consisted of 1–2 blocks immediately adjacent to the parks, with associated Control Areas (CAs) comprising the next 3–4 blocks beyond the PIAs. The CAs were used to hold constant the influence of the other factors that might impact real estate values. The comparisons were made over the time period from 1992 to 2001. All of the five parks selected for the case studies had benefited from substantial capital investment in renovation during this time period.

The five parks were Prospect (Brooklyn), Crotona (Bronx), Clove Lakes (Staten Island), St. Albans (Queens), and Serrano (Bronx). The graphs in Figure 5 compare the sales prices per square foot for single family homes and multi-family units (where these were present) over the 1992–2001 period. The sample sizes (n) of sales transactions from which the value data are derived are shown underneath each graph. The results show that the positive impacts of renovation at the first two parks were substantial; for the other three parks the results showed moderate enhancement of property values.

Olmsted and Vaux considered Prospect Park to be their masterpiece. In the 1992–2001 period, $103 million worth of capital renovation was undertaken in the 526 acre park, restoring it to its status as a first-class, signature park. The PIA and CA zones selected for comparison were in the Park Slope neighbourhood. In the most recent 4 year period, single family homes sold for between 32% and 153% more per square foot in the PIA than in the CA (Figure 5a). The same trend was apparent in the comparison of multi-unit properties but the difference was not as dramatic, ranging from 20% to 84% over the most recent four years Figure 5b). In the case of multi-unit properties, the prices were similar before the renovations commenced and as more improvements were made the value gap between the PIA and CA zones became more accentuated. However, the per square foot values of both the PIA and CA properties increased markedly. Some of this may be attributable to inflation and the vibrant economy at that time, but it is likely that some of the CA added value also is attributable to the renovations since being 3–6 blocks away from the park suggests the park exercises some proximate impact.

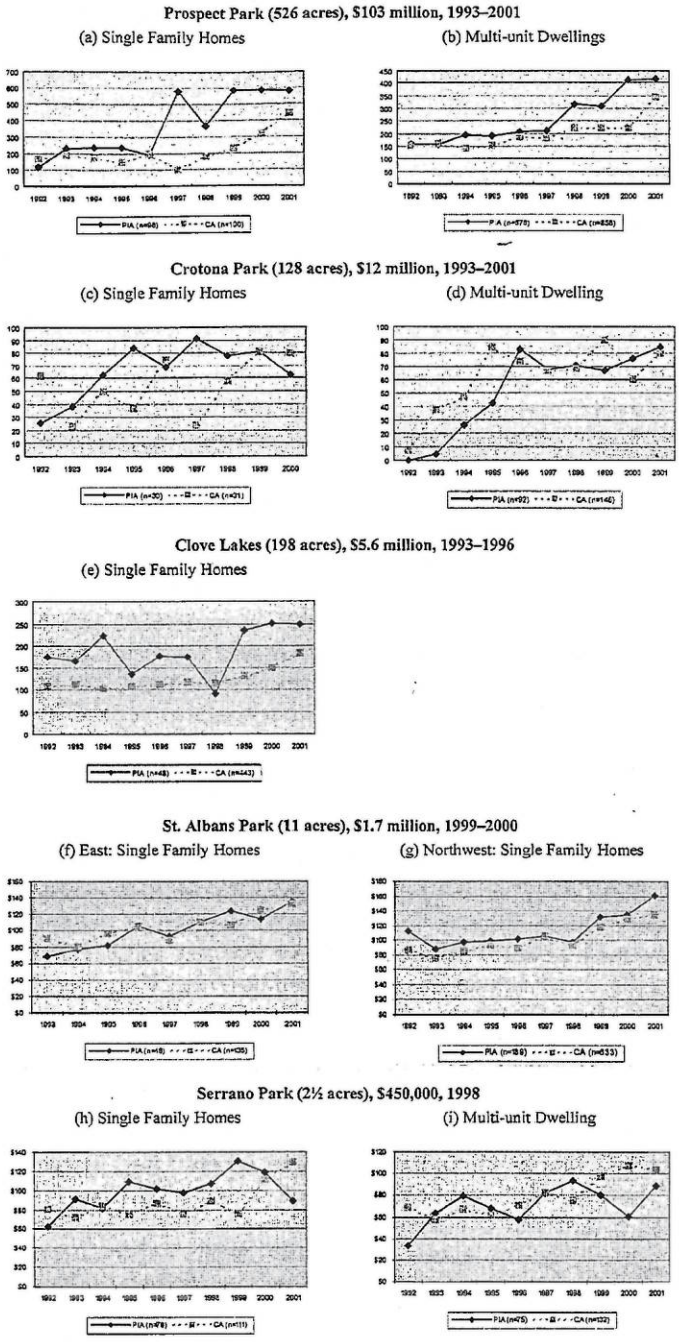

Fig. 5. Comparison of the sales price per square foot of properties within the impact area (PIA) of five parks with those of their controls areas (CA)

Renovation of Crotona Park took place from 1993 to 2001 at a cost of $12 million. During the 1970s and 1980s, the 128 acre park was situated within a decaying urban neighbourhood in the South Bronx, characterized by burned-out vacant buildings, drug dealers and crime. Efforts were made to upgrade the neighbourhood, but investment in the park only came later. However, in a few years it was transformed from a place to be ignored and avoided, to an attractive asset. Figure 5c shows that values in the PIA for the most part are higher for single family homes than in the CA, but the relatively small number of sales transactions means there is some volatility in the graph. Among multi-unit dwellings, the CA values were substantially higher than those in the PIA in the early years reflecting the blighted status of the park, but in the later years the situation was reversed (Figure 5d). There was a trend showing an increase in PIA values after the renovation work commenced in 1995.

Clove Lakes Park is a 198 acre natural area surrounded almost exclusively by single family homes. Between 1993 and 1996, $5.6 million was invested in renovating it. Since that time, it has become a weekend destination for Staten Island's residents as well as a staple of the community. Single family house prices in the PIA were higher than those in the CA before the renovation and that trend subsequently continued. Figure 5e shows that in the last 3 years of the study's time period, the value gap ranged from 36% to 80%. Although the gap has generally not widened, the values of properties in both the PIA and CA increased markedly, as they did in Prospect Park; again suggesting the CA experienced some positive proximate increment. The variability of the PIA sales price across years may be attributable to the relatively small sample size.

St. Albans Park (11 acres) was renovated in 1999 and 2000 at a cost of $1.7 million. Two PIAs were used to measure the proximate impact of the park. Data from its east side, summarized in Figure 5f, show no substantial difference between the sales value of properties in the two areas. The second PIA was on the park's northwest side. This is a more extensive residential area so the sample size was larger. The PIA values historically were slightly higher than the CA values, but this gap increased dramatically to 19% in 2001 after the improvements were completed (Figure 5g). Since the renovation took place in 1999 and 2000, if there is impact on the market price of properties, it was likely to become more obvious in the period beyond the timeframe of the study. Again, both the PIA and CA values increased substantially from the time the renovations commenced in 1999.

Serrano Park is a 2.5 acre playground and park located in the Castle Hill section of the Bronx in a densely populated area. Although $650,000 was invested in 1998 to renovate its structures, it remains aesthetically unappealing since the majority of it is 'a vast concrete field'. It is heavily used, so there is noise and congestion. The graph in Figure 5h and 5i reflect these unattractive qualities in that the facility appears to have no proximate impact on property values.

In addition to the proximate value data reported in Figure 5, the authors empirically addressed other impacts in their case studies. Thus, they were able to conclude: 'Single family turnover rate was generally lower near well improved parks as compared to adjoining ones. Quality parks serve to stabilize local communities and are a catalyst for the redevelopment of adjacent real estate' (p. 10).

CONCLUDING COMMENTS

The evidence that has emerged from relatively sophisticated analyses in the past two decades, essentially endorses the legitimacy of the proximate principle which was demonstrated in the early English urban

parks and later disseminated in the US by Olmsted in the nineteenth century. The evidence from these studies unequivocally supports the contention that parks and open space contributes to increasing proximate property values.

It is not possible to discern a generalizable answer with regards to the magnitude of the proximate effect, given the substantial variation in the size, usage and design of park lands in the studies, and disparities in the residential areas around them. However, some point of departure based on the findings reported here is needed for decision-makers in communities who try to adapt these results to their local context. To meet this need, it is suggested that a positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point guideline.

The diversity of the study contexts makes it feasible to offer a tentative generalizable answer regarding the distance over which the proximate impact of park land and open space extends. There was consensus among the studies that it has substantial impact up to 500–600 feet. In the case of community sized parks it tended to extend out to 1,500–2,000 feet, but after 500–600 feet the premium was small. Few studies tried to identify impacts beyond that distance because of the compounding complexity created by other potentially influencing variables, which increases as distance from a park increases. However, especially in the case of larger parks, it is likely there are additional economic benefits not captured by capitalization into increased property values beyond this peripheral boundary, since the catchment area from which users come frequently extends beyond it.

This type of work is useful in that it provides a measure of the value of parks, whereas elected officials tend to think only of their cost. However, the focus is myopic since the value of parks to a community involves many factors other than proximity such as level of maintenance, maturation level of the park, ratio of supply and demand and type of use.

Level of maintenance relates to quality. A useful analogy is with a well-groomed front garden which is likely to increase the value of a home, whereas if it is overgrown with weeds and littered with trash then the property value is likely to be diminished. Adverse impacts also may emanate from nuisances such as congestion, street parking, litter and vandalism, noise and ballfield lights intruding into adjacent residences, poorly maintained facilities, or anti-social behaviours.

Maturation level recognizes that it may take 30 to 40 years for new or renovated parks to mature. In the beginning trees are small and spindly, plantings are scattered and immature, shade is scarce, and the landscaping often is not aesthetically pleasing. Thus, the premium in the early years is likely to be less than in later years.

Like all other goods, the premiums that people are prepared to pay to be proximate to a park or open space are influenced by the available supply. If such amenities are relatively abundant, then the premiums will likely be relatively small or non-existent (Nicholls, 2002). Similarly, if houses in an area have large private gardens, then it is likely that premiums will be lower than in areas with little private space because privately owned space may act as a partial substitute for public park space (Miller, 2001).

Parks serving primarily active recreation users are likely to show much smaller proximate value increases, than those accommodating only passive use (Sainsbury, 1964; Hendon *et al.*, 1967; More *et al.*, 1982). The superiority of passive parks in enhancing the tax base presents local governments with a conundrum because frequently they are under considerable pressure to give priority to creating facilities for active recreational use. This is often the more attractive option to conventional leisure services

agency thinking in that it responds to an overt and highly visible user need, accommodates a relatively large number of participants and generates revenues. Organized recreational sports groups are especially effective in politically lobbying for facilities. In contrast, users of passive parks, occasional users, and non-users of parks who are the primary beneficiaries of passive facilities rarely offer a counterorganized lobbying force.

Finally, it should be noted that appreciation of property values is not always perceived by homeowners to be positive. Its corollary is that their property taxes are higher. Some residents who have lived in a location for a long time and have no interest in selling their property, may see no personal benefits accruing to them from development or major renovation of a nearby park. Nevertheless, they are required to pay higher taxes because the appraised value of their property has increased.

In a broader context than a local neighbourhood, it should be noted that these types of analysis fail to capture the 'public' benefits of parks beyond those that accrue to proximate properties through the 'capitalization' captured by hedonic techniques. These public benefits include such factors as reduced soil erosion, water supply protection, wildlife habitat etc., and secondary benefits that may be attributed to parks' role in attracting visitors, businesses or retirees to a community.

A further limitation of the studies reported to this point is that they are confined to single family homes and do not address the impact of parks on proximate retail or other commercial properties. These properties often constitute the major elements around downtown parks. The lack of good empirical work in this context is attributable to three factors. First, hedonic analysis requires a threshold number of property sales to have occurred around a park to generate the market data needed to undertake the analyses. Business property tends to turn-over less frequently than residential property so this threshold is rarely available. Second, business properties often are not entered into the Multiple Listing Service data bases used for the analyses. Third, changes in annual rents, rather than property sales, could be used, but this information tends to be proprietary and not accessible to researchers.

There is a growing recognition among developers of the legitimacy of the proximate principle and of its utility for developers. Thus, in a careful, comprehensive and technically strong study that was commissioned by a developer the author concluded:

> Parks have traditionally been considered a cost center in neighborhood planning, an amenity that must be provided by local government or required of private developers by statute in order to be feasible. This research in contrast, suggests that providing parks in new neighborhoods offers clear financial benefits to developers, that those benefits are predictable using objective research methods, and that they can be captured through careful design and development practice. (Miller, 2001, p. 101)

Despite its limitations, the empirical findings reviewed in this paper are important because they provide park advocates with legitimate monetary indicators of value. Such indicators appear to be central in the decision-making paradigms used by many senior bureaucrats, and to be demanded by elected officials anxious to demonstrate 'accountability' for public expenditures.

In contemporary times, the power of the proximate principle appears to have been overlooked by park advocates since it has rarely been part of the political debate. The evidence reported here suggests that the principle should be resurrected. There are encouraging signs that this is occurring. For example, the city of Houston recently announced the construction of a 13 acre

downtown park to be completed by 2007 for $40 million. Mayor Bill White stated, 'Much of the city's investment will be recouped over time by increased tax revenues from the enhanced value of property around the park that the park will create'.

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John Krah
1920 4th Ave #2605
Seattle, WA 98101

City of Seattle Hearing Examiner
EXHIBIT
ADMITTED ✓
DENIED ___
5
FILE# CWF-0358

2020 February 4

Office of the City Clerk
Seattle City Hall
600 Fourth Ave, Floor 3
PO Box 94607
Seattle, WA 98124-6907

Dear Mr. LID Hearing Examiner,

I myself, John Krah, have lived in greater Seattle area over 30 years. I've been a home owner in downtown Seattle for 13 years, and my partner of 10 years Alex Rito and I have jointly owned property here at the Escala for 3 years. I and we both object to and appeal the final assessment levied against our property per the LID number 6751. My name, our property address, and mailing address read above. King county tax parcel number 238200-2440. LID cause number CWF-0358 scheduled hearing 2020 February 5 9:35 AM at Seattle Municipal tower room 4009.

Objection the first

I object to the use of Proximate Principle to create direct taxation or special assessment on property owners. We all know that there are only two sure things: death and taxes, but we still avoid them both as much as possible. That does make the job of city and other governments especially difficult, that every initiative, every measure, every action is checked and balanced and submitted to the public scrutiny. And so creative ways of attributing cost and benefit must be employed to persuade the general constituency of every incremental step in the right direction.

Olmsted, Crompton, and others have cleverly carved out a calculus for the attribution of city parks values to property tax revenues and back to the city capital and operational expenditures to build and maintain those parks. "The higher value of these residences means that their owners pay higher property taxes. In many instances, if the incremental amount of taxes paid by each property which is attributable to the presence of a nearby park is aggregated, it is sufficient to pay the annual debt charges required to retire the bonds used to acquire and develop the park. This process of capitalization of park land into the value of nearby properties is termed the 'proximate principle.'" The entire purpose of these works is to create new accounting for the innate and self-supporting and even profitable value of parks for the city without increasing taxation on its residents. "Before funding for Central Park was committed, Olmsted explained how the proximate principle would result in the park being self-financing and his argument convinced key decision-makers. Thus, the New York City Comptroller, writing in 1856 shortly after the city acquired title to the land for Central Park said, 'the increase in taxes by reason of the enhancement of values attributable to the park would afford more than sufficient means for the interest incurred for its purchase and improvements without any increase in the general rate of taxation' (Metropolitan Conference of City and State Park Authorities, 1926, p 12)."

As an example Crompton provided hypothetically "The aggregate property value for the neighborhood being approximately $5.4 million greater than it would have been in the absence of greenbelt. This increment resulted in an addition of approximately $500,000 to the potential neighborhood tax revenue. The purchase price of this greenbelt for the city was approximately $1.5 million and thus, the potential property tax revenue alone would allow a recovery of initial costs within 3 years" (p. 215).

"There is an important caveat to these positive results in that 86% of the $500,000 proximate increment of property tax revenue accrued to taxing entities other than the city, i.e., county, school district and other independent districts. Thus, the incremental return to the city alone was not sufficient to pay the costs

incurred by the city in purchasing the greenbelt. This creates a major policy issue. However, it should not inhibit the purchase of park and open space areas because overall economic benefits accrue to tax-payers whose revenues fund all the governmental entities.

"Resolution of this conundrum requires one of two actions. The first requires that a city's elected officials be prepared to accept the inevitable criticism that is likely to occur when it raises taxes to purchase the land. This selfless, 'statesman-like' position is adopted because they recognize that in the long-term the city's taxpayers will benefit when return on the investment is viewed in the broader context of total tax payments to all governmental entities. The alternative strategy is to persuade the other taxing entities to jointly fund purchase of the open space areas, since all will reap proximate tax revenue increments deriving from them." (pp203-218).

The city and assessors have indicated that these waterfront improvements will increase international tourism and regional visitors. "HR&A estimates that currently there are close to 8 million annual visitors to the existing waterfront area. This figure is split between day trip tourists, overnight tourists, City of Seattle residents, and regional metro visitors. The study indicates that the enhanced waterfront project has the potential to add 1.5 million net new visitors to the immediate area." Some areas more than others, for example "[Pike Place Market] draws tourists and locals alike on a year-round basis." While Pioneer Square "Due in part to its historic nature, the neighborhood attracts extensive tourism activity." (ABS) The city, assessors, and examiner would be wise to reconsider that if in fact the major benefit comes from an 18% increase in tourism, while the local property benefits from proximate principle are not zero they do not justify saddling residents with this burden. Instead look to the tourism businesses on the waterfront and find the incremental taxable revenue of $281 Million annually, that increment can pay off the proposed LID in just one year with plenty to spare.

Objection the second:

It is unlawful to include any property that will not receive special benefits, and it is an unconstitutional taking of private property. Heavens v. King County Rural Library District, 66 Wash.2d 558, 564, 404, P.2d 453 (1965), exhibit _. Such violation of our inalienable constitutional rights is an afront to our very way of life and civilized society.

As I understand it my district councilmember, the only person representing me in this city council resolution, was barred from voting due to his own personal interest in the area. Taxation without representation is tyranny and the very reason we proud Americans are not under British rule this very day.

Objection the third

The construction estimates are not based upon substantially complete construction documents, are out of date, and uncertain. In the words of Mr. Macaulay "The Pike/Pine corridor and Pioneer Square elements of the project have not yet reached the 30% design milestone." (ABS Valuation Summary of Final Special Benefit, 2019, p3) Final assessments will bind future city councils and budgets to complete the LID improvements regardless of cost. It is unlawful to bind future city councils and budgets to spend hundreds of millions of dollars on projects still early in the design process. Washington Attorney General Opinion 2012 Number 4 May 15, 2012, as exhibit _ https://www.atg.wa.gov/ago-opinions/power-county-legislative-authority-enter-contract-binds-county-legislative-authority.

For the purpose of calculating the correct assessment I will make some estimations based on the incomplete and uncertain documents. ABS Valuation states the "Pike/Pine Streetscape Improvements provide enhanced pedestrian access to and from the Pike Place Market and waterfront. Both streets, between First and Second avenues, will be reconstructed as 'shared space', without curbs. Single travel lanes (westbound on Pine and eastbound on Pike) designed for slow vehicle movement and local access will share the space with pedestrians and bicycles. Bollards and detectable warning strips help define the area to be used by vehicles, along with light poles, trees and paving treatments, and there will be more room available for sidewalk cafes." Let us assume that this will be quite similar to Bell Street which is 4 blocks in length and 1.33 acres,

then the corresponding 1 block of length on Pine street can account for 0.33 acres of similarly improved park. "Other improvements will be made in the various blocks of Pike and Pine streets between Second and Ninth avenues (planters protecting bike lanes, etc.) including construction of a new paved public plaza, a flexible space designed to accommodate diverse programming similar to Westlake Park, on the south side of Pine Street between Third and Fourth avenues." (p6) As suggested let us assume this will be similar in size and quality to Westlake Park, giving 0.1 acres.

Objection the fourth

Assessment valuation for parcel 238200-2440. My property on Fourth and Virginia is receiving special benefits from none or at best only one of the six proposed LID improvement projects.

The city's assessment relies on an article of academic work published in Journal of Leisure Research from 2001, updated 2014 "The Impact of Parks on Property Values: A Review of the Empirical Evidence" by Mr. John L Crompton, Department of Recreation, Park and Tourism Sciences, Texas A&M University, Texas USA. Additional 2005 article in Managing Leisure by the same author titled "The impact of parks on property values: Empirical evidence from the past two decades in the United States." I submit these as exhibits 1 and 2. The city and assessor have taken this work out of context and should pay close attention to the following details.

Crompton writes "The real estate market consistently demonstrates that many people are willing to pay a larger amount for a property located close to a park than for a house that does not offer this amenity." Regression analysis studies he reported on show that having a park or green space amenity provides benefit to homes nearby greatly exceeding those with no such amenity. There is no relationship showing that having more than 1 instance of an amenity is more beneficial than exactly 1 such amenity.

The proximity of a park is one significant factor in measuring the incremental value of property attributed to the park. "In all the studies reviewed in this paper, the capitalization of benefits ceased at a selected distance, usually somewhere between 500 feet and 3000 feet away from the park perimeter in urban contexts." Drawing a local improvement district that incorporates six distinct features and spans over 3.4 km or 2.1 miles begs for problems evaluating the valuation effects that are proven to diminish quickly over distances as short as $1/10^{th}$ of the district's length. Crompton 2005 Figure 2 shows that near 25 acre Jackson park in Germantown the proximity of property within 200 feet had a dramatic effect $113.36 decrease per foot distance and that diminished to approximately 3.9% of that effect $4.46 decrease per foot distance at 1,000 feet away. Crompton 2005 Figure 3 shows that near 14 neighborhood parks in Dallas Fort Worth the impact of proximity to parks varied from as high as 22% at 100 feet distance down to 0% at 2,000 feet distance. Crompton's 2001 Table 9 shows that the per dwelling benefit for parks of 1 acre size is diminishes to 1% at 5,000+ feet, and similarly 5 acre park diminishes to 1.2%, and 25 acre park diminishes to 1.7%. While at the same distance increasing park size is almost directly proportional to increasing value.

Table 1: (Crompton 2001 Table 9) Effect on Property Value of Public Open Spaces with No Recreational Facilities (assuming 8.8 dwelling units per acre, and base value of average housing unit is $12,185.)

Distance to Residence (feet)	Total Size of Park			Per Dwelling Unit Size of Park		
	1 acre	5 acre	25 acre	1 acre	5 acre	25 acre
0-1,000	$51,904	$205,788	$498,513	$83.31	$349.98	$1,207.05
1,000-2,500	43,057	215,258	1,076,290	12.97	64.86	324.28
2,500-5,000	37,148	185,740	928,699	3.13	15.67	78.34
5,000-10,000	39,246	196,258	981,292	0.83	4.14	20.69
	$171,355	$803,044	$3,484,794			

Table 2: Relative unit value comparing size and distance to residence

Distance to Residence (feet)	Per Dwelling Unit, Relative to adjacent Size of Park			Per Dwelling Unit, Relative to 1 acre Size of Park		
	1 acre	5 acre	25 acre	1 acre	5 acre	25 acre
0-1,000	100.0%	100.0%	100.0%	100.0%	420.1%	1448.9%
1,000-2,500	15.6%	18.5%	26.9%	100.0%	500.1%	2500.2%

2,500-5,000	3.8%	4.5%	6.5%	100.0%	500.6%	2502.9%
5,000-10,000	1.0%	1.2%	1.7%	100.0%	498.8%	2492.8%

The magnitude of proximate principle is weighted heavily to the closest properties directly adjacent or within 2 layers of buildings. "80% of the aggregate increase in value was derived from properties located within 500 feet of the parks. Effects could not be traced beyond 2,000 feet from the parks." (Crompton 2005 p206). Although the tables above include figures up to 2 miles away it is clear that they are vanishingly small, for example attributing $0.83 of special benefit to a home valued at $12,185 represents 0.0068% or just 68 parts per million and with the multiple layers of hedonic analysis it's extremely difficult to create a direct cost value link at that distance.

"There are qualitative differences among [parks and open spaces] that are likely to result in different impacts on proximate property values." "It is important to recognize that some types of parks are more desirable than others as places to live nearby. For example, there is convincing evidence that large flat open spaces which are used primarily for athletic activities and large social gatherings, are much less preferred than natural areas containing woods, hills, ponds, or marsh (Kaplan & Kaplan, 1990)." Crompton goes on "The studies' results suggest that a positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point. If it is a heavily used park catering to large numbers of active recreational users, then the proximate value increment may be minimal on abutting properties, but may reach 10% on properties two to three blocks away." Parks that are used for observation and contemplation are significantly more beneficial than heavy use parks or specialty facilities. In the words of the LID Project Before and After "Pike/Pine Streetscape Improvements, absent the project, would not occur. Both streets, between First and Ninth avenues, remain as they currently exist, with westbound vehicular traffic on Pine Street ending at the entrance to the Pike Place Market, where there are typically crowds of vehicles, pedestrians and bicyclists visiting the market, and eastbound traffic continuing on Pike Street, as is the current situation" (p121). Hence we can deduce that the use of these park areas will be even more heavy and congested as the attraction to that area increases with the proposed improvements.

Table 3: (Crompton 2005 table 2) Definition of open space categories

Open space type	Definition
Urban Park	More than 50% of the park is manicured or landscaped and developed for nonnatural resource dependent recreation (e.g., swimming pools, ballfields, sports courts).
Natural area park	More than 50% of the park is preserved in native and/or natural vegetation. Park use is balanced between preservation of natural habitat and natural resource-based recreation (e.g., hiking, wildlife viewing, boating, camping). This definition includes parcels managed for habitat protection only with no public access or improvements.
Specialty park/facility	Primary use at the park and everything in the park is related to the specialty category (e.g., boat ramp facilities).

Table 4: (Crompton 2005 table 3) Variations in proximate values at different distances for each open space type (1990 dollars)

Variable (feet)	Urban park	Natural park	Specialty park/facility
Distance < 200	$1,926	$11,210	$7,396
Distance 201-400	2,061	10,216	5,744
Distance 401-600	1,193	12,621	10,283
Distance 601-800	817	11,269	5,661
Distance 801-1,000	943	8,981	4,972
Distance 1,001-1,200	1,691	8,126	4,561
Distance 1,201-1,500	342	9,980	3,839

Table 5: Relative unit value comparing type of park and distance to residence

	Relative to Natural Park			Relative to adjacent distance		
Distance (feet)	Urban park	Natural park	Specialty park/facility	Urban park	Natural park	Specialty park/facility
< 200	17.2%	100.0%	66.0%	100.0%	100.0%	100.0%
201-400	20.2%	100.0%	56.2%	107.0%	91.1%	77.7%
401-600	9.5%	100.0%	81.5%	61.9%	112.6%	139.0%

601-800	7.2%	100.0%	50.2%	42.4%	100.5%	76.5%
801-1,000	10.5%	100.0%	55.4%	49.0%	80.1%	67.2%
1,001-1,200	20.8%	100.0%	56.1%	87.8%	72.5%	61.7%
1,201-1,500	3.4%	100.0%	38.5%	17.8%	89.0%	51.9%

The special benefit to having multiple parks is accumulated as a single park of comparable size to the sum of all parks' sizes with coefficient of each individual proximity, size, and type.

The proposed waterfront promenade along Alaskan Way from S Washington Street to Pine Street, proposed overlook walk between Pike Place MarketFront and the proposed promenade, proposed Union Street pedestrian connection, and proposed pier 58 formerly known as Waterfront Park would each be over 2950 feet walking distance away to the south of my property. The proposed Pioneer Square Street improvements at or south of Yesler Way are 5000 feet away or further. The proposed Pike/Pine corridor improvements are at the nearest point only 918 feet walking distance away from my property, the only one of six proposals that are close enough to presume any special benefit from any kind of park installation.

Table 6: Parks and green spaces within approximately 1 mile of 1920 4th Ave Seattle WA 98101-5126.

Proximity	Location	Acres	Type	Specific Amenities	Special Benefit
250 m = 820 ft	Westlake Square	0.01	Urban	Paved street triangle with trees and decorative plantings.	
260 m = 853 ft	McGraw Square	0.01	Urban	Landmark statue, plaza, tables.	
280 m = 918 ft	Westlake Park	0.1	Urban	Fountain, mall, "town square," seating, games, carousel.	
280 m = 918 ft	Proposed Pike/Pine Street Improvements	0.43	Urban	"Woonerf."	
400 m = 1312 ft	The Spheres	0.07	Specialty	Conservatory of 40k plants, dog park.	
450 m = 1476 ft	Victor Steinbrueck Park	0.8	Urban	Totem poles, seating, children's play area, landscaping.	
450 m = 1476 ft	Bell Street Park	1.33	Urban	"Woonerf."	
500 m = 1640 ft	Urban Triangle Park	0.01	Urban	Open lawn, new central play structure, seating edge, lighting.	
850 m = 2788 ft	Freeway Park	5.2	Urban	Brutalist architecture and greenery.	
900 m = 2952 ft	Proposed Union Street Pedestrian Connection	1.1?	Urban	Walkway, elevator, stairs, art, lighting.	
900 m = 2952 ft	Proposed Pier 58 f/k/a Waterfront Park	1.5	Urban	Gathering and performance spaces, children's play area, waterfront view, railings, raised lawns.	
900 m = 2952 ft	Waterfront Park	1.5	Urban	Boardwalk, sculptures, lamps, benches, and high, curving railings, The Great Wheel.	
900 m = 2952 ft	Denny Park	0.105	Urban	Off-leash area, broad walkways and trees.	
1.0 km = 3280 ft	Tilikum Place	0.1	Urban	Chief Seattle statue, tables, benches, lighting.	
1.0 km = 3280 ft	Plymouth Pillars Park	0.2	Urban	Off-leash area, benches, pedestrian corridor, art.	
1.0 km = 3280 ft	Proposed Promenade	5.2?	Urban	Continuous open space with amply green landscaped spaces, street art, tree plantings, walkways, lighting.	
1.1 km = 3608 ft	Belltown Cottage Park & P-Patch	0.1	Urban	Three historic cottages, community garden.	
1.1 km = 3608 ft	Seattle Center	74	Urban	World's fair attractions, Space Needle, arts, athletics, festivals.	
1.2 km = 3937 ft	Proposed Overlook Walk	1.1	Urban	Walkway, landscaping.	
1.4 km = 4593 ft	Olympic Sculpture Park	9	Specialty	Outdoor museum, beach.	
1.4 km = 4593 ft	Cascade Playground & P-Patch	1.9	Urban	Play areas, field, tables, restrooms, community garden.	
1.4 km = 4593 ft	First Hill Park	0.2	Urban	Benches, flowers, grass, brickwork paths, water fountain.	
1.5 km = 4921 ft	Myrtle Edwards Park	4.8	Natural	Bird watching, bike/walk paths.	

1.6 km = 5249 ft	Proposed Pioneer Square Street Improvements	u/k	Urban	Sidewalk paving, landscaping, traffic redirection.	
1.7 km = 5577 ft	Cal Anderson Park	7.37	Specialty	Fountain, pool, promenade, sports fields, lighting, games, plaza, all gender restrooms.	

Table 7: Acreage of existing and proposed parks by type and proximity

	Existing			Proposed		
Distance (feet)	Urban park	Natural park	Specialty park/facility	Urban park	Natural park	Specialty park/facility
< 200	0	0	0	0	0	0
201-400	0	0	0	0	0	0
401-600	0	0	0	0	0	0
601-800	0	0	0	0	0	0
801-1,000	0.12	0	0	0.43	0	0
1,001-1,200	0	0	0	0	0	0
1,201-1,500	2.14	0	0.07	0	0	0
1,501-2,000	0.01	0	0	0	0	0

Proposed improvements in the 801-1,000 feet distance create approximately 1.33 acres of park where there was previously only 0.12 acres. Arguably there was already a park in this distance and increasing its size has a limited effect, but I'm willing to concede that it is a significant improvement on the 1 acre scale, and at that distance the parks in aggregate would have a proximate principle property value of $83.31 / $12,185 = 0.683%. Proportioned to the size of parks that becomes 0.683% * 0.55 acres = 0.376% And of that the proposed improvements constitute 0.43 / 0.55 = 78.2%, yielding a total 0.376% * 78.2% = 0.294%.

Our property is currently estimated at $1,553,475 this proximate principle calculation finds a potential special benefit of $1,553,475 * 0.294% = $4567 instead of the 0.75% and $11,651 originally assessed. The city had originally calculated a need of 39% of the special benefit which results in $4567 * 39% = $1781.13 for the Pike/Pine corridor improvement project.

As the remaining LID improvement projects are outside of the 2,000 feet distance allowed by proximate principle methodology they will not be considered any special benefit to this property.

I suggest that by extension the other parcels sharing the same lot as mine and in general all parcels are ill-served by the assessment methodology and forecasting presented by Mr. Macaulay and ABS Valuation.

In conclusion, I object to the assessment amount of special benefit to my parcel and evidence demonstrates that the assessed value is inconsistent with empirical property values relating to parks and recreation in North America for the past 40 years. I insist that the examiner carefully consider the evidence and calculations leading to this result and make a fair and proportionate decision for all members of this LID. Furthermore, I beg that the examiner, assessors, and city councilmembers review the purpose of local improvement districts and proximate principle as tools for the public good of all.

Sincerely,

John Krah

2020-Feb-05

Aerial/LID Boundary Map