City of Mt. Vernon, Iowa

Meeting:	**Mt. Vernon City Council Meeting**
Place:	**Mt. Vernon City Hall, 213 First Street NW, Mt. Vernon, Iowa 52314**
Date/Time:	**December 18, 2017 – 6:30 PM**
Web Page:	**www.cityofmtvernon-ia.gov**
Posted:	**December 15, 2017**

Mayor:	Jamie Hampton	**City Administrator:**	Chris Nosbisch
Mayor Pro-Tem:	Marty Christensen	**City Attorney:**	Robert Hatala
Councilperson:	Paul Tuerler	**Assis. Admin/City Clerk:**	Sue Ripke
Councilperson:	Scott Rose	**Deputy City Clerk:**	Marsha Dewell
Councilperson:	Tom Wieseler	**Chief of Police:**	Doug Shannon
Councilperson:	Eric Roudabush		

A. **Call to Order**
B. **Agenda Additions/Agenda Approval**
C. **Communications:**
   1. Unscheduled

If you wish to address the City Council on subjects pertaining to today's meeting agenda, please wait until that item on the agenda is reached. If you wish to address the City Council on an item **not** on the agenda, please approach the microphone and give your name and address for the public record before discussing your item. Each individual will be granted no more than five (5) minutes.

D. **Consent Agenda**

Note: These are routine items and will be enacted by one motion without separate discussion unless a Council Member requests separate consideration.

1. Approval of City Council Minutes – December 4, 2017 Regular Council Meeting
2. Approval of City Council Minutes – December 11, 2017 Goal Setting Session
3. Approval of Liquor License – Wilkie Liquors

E. **Public Hearing**

1. Public Hearing on the Proposed Spring Meadow Heights Urban Renewal Plan

F. **Ordinance Approval/Amendment**

1. Ordinance #12-4-2017A: An Ordinance Amending Chapter 41.11 Fireworks Permit of the Mt. Vernon Municipal Code
   i. Motion to approve second reading and proceed with third reading (Council may suspend rules and proceed to final reading after vote of second reading)

G. **Resolutions for Approval**

1. Resolution #12-18-2017A: Determining an Area of the City to be an Economic Development Area, and that the Rehabilitation, Conservation, Redevelopment, Development or a Combination Thereof, of Such Area is Necessary in the Interest of the Public Health, Safety or Welfare of the Residents of the City; Designating Such Area as Appropriate for Urban Renewal Projects; and Adopting the Spring Meadow Heights Urban Renewal Plan
2. Resolution #12-18-2017B: Designating the Sun as the Official Newspaper for Publications for the City of Mount Vernon from January1, 2017 to December 31, 2019

H. **Mayoral Proclamation**
   1. None

I. **Old Business**
   1. Discussion and Consideration of the Hwy 1/30 Roundabout Assessment – MSA Professional Services – Council Action as Needed (tabled from 12/4/17)

J. **Motions for Approval**
   1. Consideration of Claims List – Motion to Approve
   2. Discussion and Consideration of Establishing a Poet Laureate for the City of Mt. Vernon – Steve Maravetz – Council Action as Needed
   3. Discussion and Consideration of Setting a Public Hearing Date for an Ordinance Amending Chapter 90.03 Mandatory Connections of the Mt. Vernon Municipal Code – Council Action as Needed
   4. Discussion and Consideration of Alternative Council Meeting Dates for January 1, 2017 – Council Action as Needed

K. **Reports to be Received/Filed**
   1. Mt. Vernon Police Report
   2. Mt. Vernon Public Works Report
   3. Mt. Vernon Parks and Recreation Report

L. **Discussion Items (No Action)**
   1. Budget
   2. Water Leak – Excess Water Bill
   3. Fiber to the Home Options

M. **Reports of Mayor/Council/Administrator**
   1. Mayor's Report
   2. Council Reports
   3. Committee Reports
   4. City Administrator's Report

N. **Adjournment**

Pursuant to §21.4(2) of the Code of Iowa, the City has the right to amend this agenda up until 24 hours before the posted meeting time.

If anyone with a disability would like to attend the meeting, please call City Hall at 895-8742 to arrange for accommodations.

D. Consent Agenda

December 4, 2017
City Council Minutes
213 1st Street NW
Mount Vernon, Iowa 52314

The Mount Vernon City Council met December 4, 2017 at the Mount Vernon City Hall Council Chambers with the following members present: Roudabush, Tuerler, Wieseler, Christensen and Rose.

Call to Order. Mayor Jamie Hampton called the meeting to order at 6:30 p.m.

Agenda Additions/Agenda Approval. Motion made by Wieseler, seconded by Rose to approve the Agenda. Carried all.

Consent Agenda. Approval of City Council Minutes – November 20, 2017 Regular Council Meeting Motion made by Rose, seconded by Christensen to approve the Consent Agenda. Carried all.

Public Hearing
Public Hearing on the Amendment to Chapter 41.11 Fireworks Permit of the Mt. Vernon Municipal Code. Mayor Hampton declared the Public Hearing open.
Ed Shultz: feels strongly about banning fireworks, especially on July 4th. A ban would show that Council doesn't trust the citizens to be responsible. He believes that a ban will cause problems. This past year was the first year and was a learning experience for many. He suggested Council create a City ordinance modifying State laws to fit our needs of freedom of expression during the 4th of July holiday. Council could limit the days, hours, size or type of fireworks. He asked why the hurry to complete this to which Mayor Hampton explained that there is language in the State Code that allows the City a window of time for the first of the year celebrations as well. If Council wants an all-out ban by the first of the year then they need to act now in order to have enough time for the required amount of readings.

Dr. Mike Montgomery: Stated banning fireworks completely would be un-American but did agree to time restraints.

Francesca Thompson: As a nurse and veteran she is happy about not having fireworks in Mount Vernon. Has worked with vets that have PTSD. This past July 4th there were people who did not follow the rules/limits and it seemed to be a free for all. It's hard for the Police to track down the offenders. If people want fireworks they can donate to Heritage Days which has a great fireworks program.

Gary Ulch: Questioned verbiage in the ordinance stating that it's not very well written or specific enough.

Jay Delancey: As a veteran he likes to celebrate the freedom of this Country. Would be in favor of limiting time but not a total ban.

Don Swenson: Would like to see explosive fireworks banned without exception. Would like some tranquility and appreciate the peace that veterans won for us rather than celebrate the violence.

Mayor Hampton closed the Public Hearing.

Ordinance Approval/Amendment
Ordinance #11-6-2017A: An Ordinance for the Division of Revenues Under Iowa Code Section 403.19 for Amendment No. 5 to the Mount Vernon Urban Renewal Plan

Motion to approve third and final reading. Staff has not received any written or verbal communication on this ordinance. Motion to approve the third and final reading of Ordinance #11-6-2017A made by Christensen, seconded by Rose. Roll call vote. Motion carries.

Ordinance #12-4-2017A: An Ordinance Amending Chapter 41.11 Fireworks Permit of the Mt. Vernon Municipal Code. Motion to approve first reading and proceed with second reading (Council may suspend rules and proceed to final reading after vote of first reading). Council was given the proposed ordinance banning the recreational use of fireworks in the community. Punishment for violations will be a simple misdemeanor which will allow the Police to issue a ticket onsite. The City Attorney has reviewed this; his suggestions have been included in the ordinance. Roudabush stated that this should be a tolerant society. A society that tolerates different people's views, likes and dislikes. There are a lot of responsible people in this town that like fireworks but Council isn't tolerant enough to allow them to shoot off some fireworks for a few hours on the 4th of July. Tuerler said that when reviewing this ordinance he considered risk and risk management. His concerns are related to property damage and the risk of injury. He was elected to consider the best interest to the citizens of Mount Vernon and for him it's a total ban on fireworks. Wieseler said that his decision was based on those that have to deal with the consequences of fireworks. Of those residents that contacted him it was 4 or 5 to 1 favoring a total ban. Roudabush added that people that were in favor of fireworks contacted him. Tuerler motioned approval of Ordinance #12-4-2017A on its first reading, seconded by Rose. Roll call vote: Ayes: Tuerler, Wieseler, Christensen and Rose. Nayes: Roudabush. Motion carries.

Resolutions for Approval

Resolution #12-4-2017A: Determining the Necessity and Setting Dates of a Consultation and a Public Hearing on a Proposed Stonebrook Urban Renewal Plan for a Proposed Urban Renewal Area in the City of Mount Vernon, State of Iowa. This resolution set the public hearing and consultation dates for the Stonebrook Urban Renewal Plan. The previous urban renewal amendment isolated this subdivision from the original urban renewal area. The City is now creating a standalone urban renewal area that will be the basis for the development agreement between the City and Bryce Ricklefs. Christensen motioned approval for Resolution #12-4-2017A, seconded by Rose. Roll call vote. Motion carries.

Motions for Approval

Consideration of Claims List – Motion to Approve. Motion to approve the Claims List made by Rose, seconded by Wieseler. Carried all.

ALLIANT IES UTILITIES	ENERGY USAGE-WAT	468.18
ALTORFER INC	THERMOSTAT-SEW	39.36
ARAMARK	RUGS-FD	73.85
BANKERS TRUST COMPANY	DEBT SERVICE PAYMENTS	135,277.50
BARNYARD SCREEN PRINTER LLC	T-SHIRTS-P&REC	168.00
BAUMAN AND COMPANY	UNIFORMS-ALL DEPTS	256.16
BRADLEY HAUGE CPA	PROFESSIONAL SERVICES-P&A,WAT,SEW	1,285.00
BROWN SUPPLY COMPANY	HYDRANT ADAPTOR-WAT	328.00
BROWN SUPPLY COMPANY	CURB BOX-WAT	114.00
BSN SPORTS COLLEGIATE PACIFIC	BATTING HELMETS-P&REC	165.00
CAMPBELL SUPPLY CEDAR RAPIDS	GLOVES-RUT	51.96
CARQUEST OF LISBON	VEHICLE MAINT-PW	126.56
CARTER RODMAN	REFEREE-P&REC	45.00
CLIFTON LARSON ALLEN	AUDITOR FEES-P&A	900.00
COGRAN SYSTEMS	ONLINE REGISTRATION FEES-P&REC	48.00
DOORS INC	LOCK/OLD F.S.-PD	247.20
ELECTRONIC ENGINEERING CORP	INFORMATION SYSTEMS-PW	319.60
FAT GUYS MOTOR SPORTS	BELTS,PULLEY-RUT	310.99

FRANCESCA LEE THOMPSON	CLEANING SERVICE-P&A	60.00
FRANCESCA LEE THOMPSON	CLEANING SERVICE-P&A	60.00
GALLS INC	UNIFORMS-PD	184.60
GARY'S FOODS	SUPPLIES-P&REC	357.43
GORDON LUMBER COMPANY	BLDG SUPPLIES-RUT,P&REC	114.33
HOTSY CLEANING SYSTEMS INC	PRESSURE WASHER WAND-RUT	829.25
IOWA ASSOC OF MUNICIPAL UTILITIES	MEMBERSHIP-PW	980.48
IOWA SOLUTIONS INC	DBR BACKUP-ALL DEPTS	350.00
IOWA SOLUTIONS INC	PATCH MGMT,FIREWALL-PD	59.00
IRON LEAF	TROLLEY MAPS-P&REC	60.48
JAY A ARNOLD	REFEREE-P&REC	105.00
JOAN BURGE	CLEANING SERVICE-P&A	60.00
JOAN BURGE	CLEANING SERVICE-P&A	60.00
JORDAN AXTELL	REFEREE-P&REC	165.00
KONICA MINOLTA BUSINESS SOLUTIONS	MAINTENANCE PLAN/COPIES	482.70
LINN CO-OP OIL CO	FUEL-PW	1,817.05
MEDIACOM	PHONE/INTERNET-PD	256.23
MEDIACOM	PHONE/INTERNET-P&A	256.23
MIDWEST WHEEL CO	RUNNING BOARDS,GRILL COVER-RUT	328.28
MUNICIPAL SUPPLY INC	TOUCHPAD-WAT	87.50
NEAL'S WATER CONDITIONING SERVICE	WATER/SALT-P&A	32.90
NOLAN HINRICHS	REFEREE-P&REC	60.00
OFFICE EXPRESS	TONER,PENCILS-P&A	231.12
PAYROLL	CLAIMS	58,338.71
PAYROLL	CLAIMS	2,507.91
POSTMASTER	FIRST CLASS PRESORT	225.00
POSTMASTER	UTIL BILL POSTAGE-WAT,SEW,SW	365.86
R.A.D. SYSTEMS	CERTIFICATION-PD	75.00
RHINO INDUSTRIES INC	CHEMICALS-SEW	600.00
SIMMERING CORY IOWA CODIFICATION	CODE UPDATES-P&A	178.00
SIMMERING CORY IOWA CODIFICATION	CODE BOOK-P&A	139.00
SIMMONS PERRINE MOYER BERGMAN	LEGAL FEES-P&A	1,890.00
SIMMONS PERRINE MOYER BERGMAN	LEGAL FEES-P&A	705.00
SPRAY-LAND USA	BRINE EQUIP HOOK UP-RUT	325.65
SPRAY-LAND USA	CLAMPS,MISC-RUT	135.45
SPRAY-LAND USA	J-BOLTS-RUT	25.00
TASC	ADMIN FEE-ALL DEPTS	92.49
TREASURER STATE OF IOWA	SALES TAX	4,139.00
US BANK	PURCHASES-ALL DEPTS	5,413.17
US CELLULAR	CELL PHONE-RUT,P&REC,P&A	174.41
VAN METER INC	SHOP LIGHT UPGRADE-RUT	229.31
WAPSI WASTE SERVICE	GB,RECY,LEAF-SW	23,840.92
WATER SOLUTIONS UNLIMITED INC	PHOSPHATE-WAT	3,315.00
WENDLING QUARRIES	SAND-RUT	213.85
WENDLING QUARRIES	ROCK-RUT	103.87
WENDLING QUARRIES	ROAD STONE-RUT	74.70
	TOTAL	250,329.24

Discussion and Consideration of the Hwy 1/30 Roundabout Assessment – MSA Professional Services – Council Action as Needed. MSA has completed an audit of the Hwy 1/30 roundabout and is asking $14,000.00 to identify issues and make recommendations for corrections. Currently there is a balance of about $37,800.00 left over from the construction of the roundabouts that can be used to pay for the assessment. Chief Doug Shannon explained that this is a follow up with the issues that have come up with

the Hwy 1/30 roundabout and how to make it a better intersection, focused on safety. Roudabush said that he would like to see a breakdown of the $14,000.00 fee; hours and rates. He explained that he didn't want the City to be charged a senior engineers hourly rate for work done by a junior engineer or interns. Tuerler moved to table this motion until more information is available, seconded by Wieseler. Ayes: Roudabush, Tuerler, Wieseler, Rose. Nayes: Christensen. Motion carries.

Discussion and Consideration of Hosted Integrity GIS Website – Midland GIS Solutions – Council Action as Needed. Staff is not able to make updates to the current Arc GIS software so they began researching possible solutions. Midland GIS completed the original research and maintenance of the system until their contract lapsed about three years ago. Staff would like to renew this contract which would allow Midland to update our system. This would cost the City $1,000.00. After completed we would contract with Midland to web host our information for a cost of $3,600.00 a year plus $1,000.00 for training. The Arc View software along is $1,500.00 with an annual subscription of $800.00 for one user. Moving to a based system allows both the staff and general public access to the City's established data. Affirming the value of the return on investment Tuerler motioned approval to renew the agreement and allow Midland to update the system, seconded by Christensen. Carried all

Discussion Items (No Action)
Budget. No Discussion

Well/Septic Update. The City's intern did some research regarding the question of septic and well use in the surrounding areas. It appears that the majority of communities require connections if the property is located within a certain distance but there are also exceptions in certain circumstances. Staff would like to move forward with the creation of sample ordinances allowing both septic and wells for Council consideration. Council agreed with staff recommendation.

Reports of Mayor/Council/Administrator
Council Reports. Wieseler said the Sustainability Committee will be taking a hiatus. Christensen said the Housing Commission has had a lot of discussions regarding the details of the two new developments. The last meeting focused on strategic planning and reviewing the ordinance that established the commission.

City Administrator's Report. City Hall staff extended the leaf pickup schedule by one week for those individuals that had their leaves out prior to the Thanksgiving holiday. There will be a goal setting meeting at 6:30 p.m. on December 11, 2017. A majority of the City's portion of the sidewalk project has been completed. The consultation meeting for the Stonebrook urban renewal plan was held. The City did not receive any comments from the other taxing authorities. Nosbisch said he will be on vacation next week, Monday-Wednesday.

Adjournment. As there was no further business to attend to the meeting adjourned, the time being 7:28 p.m., December 4, 2017.

Respectfully submitted,
Sue Ripke
City Clerk

December 11, 2017
City Council Minutes
213 1st Street NW
Mount Vernon, Iowa 52314

The Mount Vernon City Council met December 11, 2017 at the Mount Vernon City Hall Council Chambers for a special Strategic Planning and Goal Setting session. Mayor Hampton was present as was the following council members: Roudabush, Wieseler, Christensen and Rose. Absent: Tuerler. Also participating was Chris Nosbisch, Stephanie West, Doug Shannon, Sue Ripke, Matt Siders, Nick Nissen, Joe Jennison and Margaret Stevens.

The City Council will be working with Callahan Consultants on establishing goals for the City of Mt. Vernon. Based upon the feedback from this meeting, a formal document will be created for Council approval at a later date. If you have any questions prior to the meeting, please contact City Hall at 319-895-8742. Pat Callahan gave a brief overview of the meeting and the Strategic Planning Report as well as a review of City accomplishments. Council and Department Heads were asked to complete several worksheets; the City's Major Accomplishments, Issues and Concerns, Initiatives, Programs & Policies, Capital Projects/ Equipment Purchases and Teamwork Suggestions. Council was asked to identify and prioritize the projects they felt most important. From that list Callahan will create a worksheet tabulating the results for future reference and discussions.

Adjournment: 9:17 p.m.

Respectfully submitted,
Sue Ripke
City Clerk

Marsha Dewell

From: Licensing2, ABD <licensing2@iowaabd.com> on behalf of licensing@iowaabd.com
Sent: Wednesday, December 06, 2017 4:01 AM
To: Marsha Dewell
Cc: Licensing@IowaABD.com
Subject: Liquor License Submitted to Local Authority

Insurance coverage/bond certification has been completed for the following application(s). The application(s) is awaiting local authority review. After local authority approval, the application will be submitted to the Iowa Alcoholic Beverages Division for review.

License #	License Status	Business Name
LE0002564	Submitted to Local Authority	Wilkie Liquors (724 1st Street NE Mount Vernon Iowa, 52314)

Please do not respond to this email.
To check the status of your application follow these steps:
1. Click https://elicensing.iowaabd.com
2. Log in to your eLicensing account
3. After reading the 'Beginning April 1st' statement, click ok
4. Click the View Completed Applications link to see your status

E. Public Hearing

AGENDA ITEM # E – 1 & G – 1

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Public Hearing – Spring Meadow Heights URP (#12-18-2017A)
ACTION:	Motion

SYNOPSIS: Attached with the resolution is the final draft of the Spring Meadow Heights urban renewal plan. A consultation meeting with the other taxing entities was held on November 29, 2017, with no other taxing authority in attendance. The Planning Commission met on Wednesday, December 13, 2017 to discuss the plan and found it to be in conformance with the 2016 Mt. Vernon Comprehensive Plan.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Open and Close Public Hearing – Proceed to G-1

ATTACHMENTS: None – See G-1 Resolution

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

F. Ordinance Approval/Amendment

AGENDA ITEM # F – 1

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Ordinance #12-4-2017A
ACTION:	Motion

SYNOPSIS: There has been no additional correspondence received by City Hall regarding this ordinance. There was a letter to the editor submitted to the Sun Newspaper this past week speaking against the ban on fireworks. In relation to the question regarding the definition of a competent person and other language of the ordinance; the information was derived from the State Code of Iowa. The State Code does not specifically define a competent person, although it uses such language in discussing display fireworks. City staff, in the past, has identified a competent person as any individual or business that is duly licensed with the State of Iowa and can show proof of the required insurance.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: Ordinance and Senate File 489

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

Prepared by:	City of Mt. Vernon, City Hall, Chris Nosbisch, City Administrator	213 First St. NW, Mt. Vernon, IA 52314 (319) 895-8742

ORDINANCE #12-4-2017A

AN ORDINANCE AMENDING CHAPTER 41.11 FIREWORKS PERMIT OF THE CITY OF MT. VERNON MUNICIPAL CODE

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF MT. VERNON, IOWA:

SECTION 1. AMENDMENT. Chapter 41.11 Fireworks Permit, is hereby amended as follows:

Chapter 41.11 Fireworks ~~Permit. The City may, upon application in writing, grant a permit for the display of fireworks by a City agency, fair associations, amusement parks and other organizations or groups of individuals approved by City authorities when such fireworks display will be handled by a competent operator. No permit shall be granted hereunder unless the operator or sponsoring organization has filed with the City evidence of insurance in the following amounts:~~

~~1. Personal Injury: $250,000.00 per person.~~
~~2. Property Damage: $ 50,000.00.~~
~~3. Total Exposure: $1,000,000.00.~~

A. Definitions.

(1.) Consumer fireworks means first-class consumer fireworks and second-class consumer fireworks as those terms are defined in subparagraphs (3.) and (5.) below.

(2.) Display Fireworks means any explosive composition, or combination of explosive substances, or article prepared for the purpose of producing a visible or audible effect.

(3.) First-class consumer fireworks means the following fireworks, as described in APA standard 87-1, chapter 3:

(a) Aerial shell kits and reloadable tubes
(b) Chasers
(c) Helicopters and aerial spinners
(d) Firecrackers
(e) Mine and shell devices
(f) Missile-type rockets

(g) Roman Candles
(h) Sky Rockets and bottle rockets
(i) Multiple tube devices under this paragraph (3) that are manufactured in accordance with APA standard 87-1, Section 3.5.

(4) Novelties means all novelties enumerated in chapter 3 of the APA's standard 87-1, and that comply with the labeling regulations promulgated by the United States consumer product safety commission. Novelties include party poppers, snappers, toy smoke devices, snakes and glow worms, and wire sparklers as defined in APA standard 87-1, section 3.2

(5) Second class fireworks means the following consumer fireworks, as described in APA standard 87-1, chapter 3:

(a) Cone fountains
(b) Cylindrical fountains
(c) Flitter sparklers
(d) Ground and hand-held sparkling devices, including multiple tube ground and hand-held sparkling devices that are manufactured in accordance with APA standard 87-1, section 3.5
(e) Ground spinners
(f) Illuminating torches
(g) Toy smoke devices that are not classified as novelties pursuant to APA standard 87-1, section 3.2
(h) Wheels
(i) Wire or dipped sparklers that are not classified as novelties pursuant to APA standard 87-1, section 3.2

B. Prohibitions. It shall be unlawful for any person to use or explode consumer fireworks within the city limits of the City of Mt. Vernon. It shall be unlawful for any person to use or explode display fireworks within the City of Mt. Vernon, unless a permit is properly obtained as set forth in subsection (D) below.

C. Exceptions. Chapter 41.11 shall not apply to the use of blank cartridges for the show or theater, or for signal purposes in athletic sports or by railroads or trucks, for signal purposes, or by a recognized military organization. Nor shall this section apply to any substance or composition prepared and sold for medicinal or fumigation purposes.

D. Display Fireworks. The Council may, upon application in writing, grant a permit for the use and explosion of display fireworks within the city limits of the City of Mt. Vernon by municipalities, fair associations, schools, and other organizations or groups of individuals when the use and explosion of such display fireworks will be handled by a competent operator, and when the applicant has provided proof of liability insurance in the amounts set forth below is shown.

1. Personal Injury: $250,000.00 per person.
2. Property Damage: $ 50,000.00.
3. Total Exposure: $1,000,000.00.

E. Violation. Violation of this section is a simple misdemeanor punishable by a fine of not less than two hundred fifty dollars ($250.00)

SECTION 3. **SAVINGS CLAUSE**. If any section, provision, sentence, clause, phrase or part of this Ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the Ordinance as a whole or any provision, section, subsection, sentence, clause, phrase or part hereof not adjudged invalid or unconstitutional.

SECTION 3. **EFFECTIVE DATE.** This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by law.

Approved and adopted this _____ day of _____, 201___.

ATTEST:

_____
Jamie Hampton - Mayor

_____
Sue Ripke – City Clerk

I certify that the foregoing was published as
Ordinance #12-4-2017B on the _____ day of _____, 201___.

_____
Sue Ripke, City Clerk

Senate File 489 - Enrolled

Senate File 489

AN ACT

RELATING TO THE POSSESSION, SALE, TRANSFER, PURCHASE, AND USE OF FIREWORKS, PROVIDING PENALTIES, AND INCLUDING EFFECTIVE DATE PROVISIONS.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

DIVISION I

FIREWORKS REGULATION

Section 1. Section 100.1, subsection 4, paragraph b, Code 2017, is amended to read as follows:

b. The storage, transportation, handling, and use of flammable liquids, combustibles, fireworks, and explosives;

Sec. 2. Section 100.1, Code 2017, is amended by adding the following new subsection:

NEW SUBSECTION. 8. To order the suspension of the use of consumer fireworks, display fireworks, or novelties, as described in section 727.2, if the fire marshal determines that the use of such devices would constitute a threat to public safety.

Sec. 3. NEW SECTION. **100.19 Consumer fireworks seller licensing — penalty — fund.**

1. As used in this section:

a. "APA 87-1" means the American pyrotechnics association standard 87-1, as published in December 2001.

b. "Community group" means a nonprofit entity that is open for membership to the general public which is exempt from federal income taxation pursuant to section 501(c)(3) of the Internal Revenue Code or a fraternal benefit society, as that term is defined in section 512B.3.

c. "First-class consumer fireworks" means the following consumer fireworks, as described in APA 87-1, chapter 3:

(1) Aerial shell kits and reloadable tubes.

(2) Chasers.

(3) Helicopter and aerial spinners.

(4) Firecrackers.

(5) Mine and shell devices.

(6) Missile-type rockets.

(7) Roman candles.

(8) Sky rockets and bottle rockets.

(9) Multiple tube devices under this paragraph *"c"* that are manufactured in accordance with APA 87-1, section 3.5.

d. "Retailer" means as defined in section 423.1.

e. "Second-class consumer fireworks" means the following consumer fireworks, as described in APA 87-1, chapter 3:

(1) Cone fountains.

(2) Cylindrical fountains.

(3) Flitter sparklers.

(4) Ground and hand-held sparkling devices, including multiple tube ground and hand-held sparkling devices that are manufactured in accordance with APA 87-1, section 3.5.

(5) Ground spinners.

(6) Illuminating torches.

(7) Toy smoke devices that are not classified as novelties pursuant to APA 87-1, section 3.2.

(8) Wheels.

(9) Wire or dipped sparklers that are not classified as novelties pursuant to APA 87-1, section 3.2.

2. *a.* The state fire marshal shall establish a consumer

fireworks seller license. An application for a consumer fireworks seller license shall be made on a form provided by the state fire marshal. The state fire marshal shall adopt rules consistent with this section establishing minimum requirements for a retailer or community group to be issued a consumer fireworks seller license.

b. A person shall possess a consumer fireworks seller license under this section in order to sell consumer fireworks.

3. *a.* The state fire marshal shall establish a fee schedule for consumer fireworks seller licenses as follows:

(1) For a retailer at a permanent building who devotes fifty percent or more of the retailer's retail floor space to the sale or display of first-class consumer fireworks, an annual fee of one thousand dollars.

(2) For a retailer at a temporary structure who devotes fifty percent or more of the retailer's retail floor space to the sale or display of first-class consumer fireworks, an annual fee of five hundred dollars.

(3) For a retailer who devotes less than fifty percent of the retailer's retail floor space to the sale or display of first-class consumer fireworks, an annual fee of four hundred dollars.

(4) For a community group that offers for sale, exposes for sale, or sells first-class consumer fireworks, an annual fee of four hundred dollars.

(5) For a retailer or community group that offers for sale, exposes for sale, or sells second-class consumer fireworks, but not first-class consumer fireworks, an annual fee of one hundred dollars.

b. A license issued to a retailer or community group pursuant to paragraph "*a*", subparagraph (1), (2), (3), or (4), shall allow the licensee to sell both first-class consumer fireworks and second-class consumer fireworks.

4. The state fire marshal shall adopt rules to:

a. Require that any retailer or community group offering for sale at retail any consumer fireworks, as described in APA 87-1, chapter 3, shall do so in accordance with the national fire protection association standard 1124, published in the code for the manufacture, transportation, storage, and retail

sales of fireworks and pyrotechnic articles, 2006 edition.

b. Require that a retailer or community group to be issued a license pursuant to this section provide proof of and maintain commercial general liability insurance with minimum per occurrence coverage of at least one million dollars and aggregate coverage of at least two million dollars.

c. Permit a retailer or community group issued a license pursuant to this section to sell consumer fireworks, as described in APA 87-1, chapter 3, at the following locations as specified:

(1) At a permanent building that meets the requirements of paragraph *"a"*, between June 1 and July 8 and between December 10 and January 3 each year, all dates inclusive.

(2) At a temporary structure that meets the requirements of paragraph *"a"* between June 13 and July 8 each year, both dates inclusive.

d. A retailer or community group shall not transfer consumer fireworks, as described in APA 87-1, chapter 3, to a person who is under eighteen years of age.

5. *a.* The state fire marshal shall adopt rules to provide that a person's consumer fireworks seller license may be revoked for the intentional violation of this section. The proceedings for revocation shall be held before the division of the state fire marshal, which may revoke the license or licenses involved as provided in paragraph *"b"*.

b. (1) If, upon the hearing of the order to show cause, the division of the state fire marshal finds that the licensee intentionally violated this section, then the license or licenses under which the licensed retailer or community group sells first-class consumer fireworks or second-class consumer fireworks, shall be revoked.

(2) Judicial review of actions of the division of the state fire marshal may be sought in accordance with the terms of the Iowa administrative procedure Act, chapter 17A. If the licensee has not filed a petition for judicial review in district court, revocation shall date from the thirty-first day following the date of the order of the division of the state fire marshal. If the licensee has filed a petition for judicial review, revocation shall date from the thirty-first

day following entry of the order of the district court, if action by the district court is adverse to the licensee.

(3) A new license shall not be issued to a person whose license has been revoked, or to the business in control of the premises on which the violation occurred if it is established that the owner of the business had actual knowledge of the violation resulting in the license revocation, for the period of one year following the date of revocation.

6. *a.* A consumer fireworks fee fund is created in the state treasury under the control of the state fire marshal. Notwithstanding section 12C.7, interest or earnings on moneys in the consumer fireworks fee fund shall be credited to the consumer fireworks fee fund. Moneys in the fund are appropriated to the state fire marshal to be used to fulfill the responsibilities of the state fire marshal for the administration and enforcement of this section and section 100.19A and to provide grants pursuant to paragraph *"b"*. The fund shall include the fees collected by the state fire marshal under the fee schedule established pursuant to subsection 3 and the fees collected by the state fire marshal under section 100.19A for wholesaler registration.

b. The state fire marshal shall establish a local fire protection and emergency medical service providers grant program to provide grants to local fire protection service providers and local emergency medical service providers to establish or provide fireworks safety education programming to members of the public. The state fire marshal may also provide grants to local fire protection service providers and local emergency medical service providers for the purchase of necessary enforcement, protection, or emergency response equipment related to the sale and use of consumer fireworks in this state.

7. The state fire marshal shall adopt rules for the administration of this section.

8. A person who violates a provision of this section or a rule adopted pursuant to this section is guilty of a simple misdemeanor.

Sec. 4. NEW SECTION. **100.19A Consumer fireworks wholesaler — registration — penalty.**

1. For purposes of this section:

a. "Consumer fireworks" means first-class consumer fireworks and second-class consumer fireworks, as those terms are defined in section 100.19.

b. "Wholesaler" means a person who engages in the business of selling or distributing consumer fireworks for the purpose of resale in this state.

2. The state fire marshal shall adopt rules to require all wholesalers to annually register with the state fire marshal. The state fire marshal may also adopt rules to regulate the storage or transfer of consumer fireworks by wholesalers and to require wholesalers to maintain insurance.

3. The state fire marshal shall establish an annual registration fee of one thousand dollars for wholesalers of consumer fireworks within the state. Registration fees collected pursuant to this section shall be deposited in the consumer fireworks fee fund created in section 100.19.

4. A person who violates a provision of this section or a rule adopted pursuant to this section is guilty of a simple misdemeanor.

Sec. 5. Section 101A.1, subsection 3, Code 2017, is amended to read as follows:

3. *"Explosive"* means any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion ~~with substantially instantaneous~~ release of gas and heat, unless such compound, mixture, or device is otherwise specifically classified by the United States department of transportation. The term *"explosive"* includes all materials which are classified as a class 1, division 1.1, 1.2, 1.3, or 1.4 explosive by the United States department of transportation, under 49 C.F.R. §173.50, and all materials classified as explosive materials under 18 U.S.C. §841, and includes, but is not limited to, dynamite, black powder, pellet powders, initiating explosives, blasting caps, electric blasting caps, safety fuse, fuse lighters, fuse igniters, squibs, cordeau detonative fuse, instantaneous fuse, igniter cord, igniters, smokeless propellant, cartridges for propellant-actuated power devices, cartridges for industrial guns, and overpressure devices, but does not include ~~*"fireworks"*~~

~~as~~ *"consumer fireworks", "display fireworks", or "novelties"* as those terms are defined in section 727.2 or ammunition or small arms primers manufactured for use in shotguns, rifles, and pistols. Commercial explosives are those explosives which are intended to be used in commercial or industrial operations.

Sec. 6. Section 331.301, Code 2017, is amended by adding the following new subsection:

NEW SUBSECTION. 17. The board of supervisors may by ordinance or resolution prohibit or limit the use of consumer fireworks or display fireworks, as described in section 727.2, if the board determines that the use of such devices would constitute a threat to public safety or private property, or if the board determines that the use of such devices would constitute a nuisance to neighboring landowners.

Sec. 7. Section 331.304, subsection 8, Code 2017, is amended to read as follows:

8. The board, upon application, may grant permits for the ~~display~~ use of display fireworks as provided in section 727.2.

Sec. 8. Section 364.2, Code 2017, is amended by adding the following new subsection:

NEW SUBSECTION. 6. A city council may by ordinance or resolution prohibit or limit the use of consumer fireworks, display fireworks, or novelties, as described in section 727.2.

Sec. 9. Section 461A.42, subsection 2, Code 2017, is amended to read as follows:

2. The use of consumer fireworks or display fireworks, as defined in section 727.2, in state parks and preserves is prohibited except as authorized by a permit issued by the department. The commission shall establish, by rule adopted pursuant to chapter 17A, a fireworks permit system which authorizes the issuance of a limited number of permits to qualified persons to use or display fireworks in selected state parks and preserves.

Sec. 10. Section 727.2, Code 2017, is amended to read as follows:

727.2 Fireworks.

1. *Definitions.* For purposes of this section:

a. "Consumer fireworks" includes first-class consumer fireworks and second-class consumer fireworks as those terms

are defined in section 100.19, subsection 1. *"Consumer fireworks"* does not include novelties enumerated in chapter 3 of the American pyrotechnics association's standard 87-1 or display fireworks enumerated in chapter 4 of the American pyrotechnics association's standard 87-1.

b. ~~The term *"fireworks"*~~ *"Display fireworks"* includes any explosive composition, or combination of explosive substances, or article prepared for the purpose of producing a visible or audible effect by combustion, explosion, deflagration, or detonation, and includes ~~blank cartridges, firecrackers, torpedoes, skyrockets, roman candles, or other fireworks of like construction and~~ fireworks containing any explosive or flammable compound, or other device containing any explosive substance. ~~The term *"fireworks"*~~ *"Display fireworks"* does not include ~~goldstar-producing sparklers on wires which contain no magnesium or chlorate or perchlorate, flitter sparklers in paper tubes that do not exceed one-eighth of an inch in diameter, toy snakes which contain no mercury, or caps used in cap pistols~~ novelties or consumer fireworks enumerated in chapter 3 of the American pyrotechnics association's standard 87-1.

c. *"Novelties"* includes all novelties enumerated in chapter 3 of the American pyrotechnics association's standard 87-1, and that comply with the labeling regulations promulgated by the United States consumer product safety commission.

2. *Display fireworks.*

a. A person, firm, partnership, or corporation who offers for sale, exposes for sale, sells at retail, or uses or explodes any display fireworks, commits a simple misdemeanor~~.~~ ~~In addition to any other penalties, the punishment imposed for a violation of this section shall include assessment of~~, punishable by a fine of not less than two hundred fifty dollars. However, ~~the~~ a city council of a city or a county board of supervisors may, upon application in writing, grant a permit for the display of display fireworks by municipalities, fair associations, amusement parks, and other organizations or groups of individuals approved by the city or the county board of supervisors when the display fireworks ~~display~~ will be handled by a competent operator, but no such permit shall

be required for the display of display fireworks at the Iowa state fairgrounds by the Iowa state fair board, at incorporated county fairs, or at district fairs receiving state aid. Sales of display fireworks for such display may be made for that purpose only.

b. (1) A person who uses or explodes display fireworks while the use of such devices is prohibited or limited by an ordinance or resolution adopted by the county or city in which the firework is used commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars.

(2) A person who uses or explodes display fireworks while the use of such devices is suspended by an order of the state fire marshal commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars.

3. *Consumer fireworks and novelties.*

a. A person or a firm, partnership, or corporation may possess, use, or explode consumer fireworks in accordance with this subsection and subsection 4.

b. A person, firm, partnership, or corporation who sells consumer fireworks to a person who is less than eighteen years of age commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars. A person who is less than eighteen years of age who purchases consumer fireworks commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars.

c. (1) A person who uses or explodes consumer fireworks or novelties while the use of such devices is prohibited or limited by an ordinance adopted by the county or city in which the fireworks are used commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars.

(2) A person who uses or explodes consumer fireworks or novelties while the use of such devices is suspended by an order of the state fire marshal commits a simple misdemeanor, punishable by a fine of not less than two hundred fifty dollars.

4. *Limitations.*

a. A person shall not use or explode consumer fireworks on days other than June 1 through July 8 and December 10 through January 3 of each year, all dates inclusive.

b. A person shall not use or explode consumer fireworks at times other than between the hours of 9:00 a.m. and 10:00 p.m., except that on the following dates consumer fireworks shall not be used at times other than between the hours specified:

(1) Between the hours of 9:00 a.m. and 11:00 p.m. on July 4 and the Saturdays and Sundays immediately preceding and following July 4.

(2) Between the hours of 9:00 a.m. on December 31 and 12:30 a.m. on the immediately following day.

(3) Between the hours of 9:00 a.m. and 11:00 p.m. on the Saturdays and Sundays immediately preceding and following December 31.

c. A person shall not use consumer fireworks on real property other than that person's real property or on the real property of a person who has consented to the use of consumer fireworks on that property.

d. A person who violates this subsection commits a simple misdemeanor. A court shall not order imprisonment for violation of this subsection.

~~3.~~ 5. *Applicability.*

a. This section does not prohibit the sale by a resident, dealer, manufacturer, or jobber of such fireworks as are not prohibited by this section, or the sale of any kind of fireworks if they are to be shipped out of the state, or the sale or use of blank cartridges for a show or the theater, or for signal purposes in athletic sports or by railroads or trucks, for signal purposes, or by a recognized military organization.

b. This section does not apply to any substance or composition prepared and sold for medicinal or fumigation purposes.

c. Unless specifically provided otherwise, this section does not apply to novelties.

DIVISION II

RULEMAKING

Sec. 11. EMERGENCY RULES. The state fire marshal shall adopt emergency rules under section 17A.4, subsection 3, and section 17A.5, subsection 2, paragraph "b", to implement the provisions of this Act and the rules shall be effective

immediately upon filing unless a later date is specified in the rules. Any rules adopted in accordance with this section shall also be published as a notice of intended action as provided in section 17A.4.

DIVISION III

EFFECTIVE DATE

Sec. 12. EFFECTIVE UPON ENACTMENT. This Act, being deemed of immediate importance, takes effect upon enactment.

JACK WHITVER
President of the Senate

LINDA UPMEYER
Speaker of the House

I hereby certify that this bill originated in the Senate and is known as Senate File 489, Eighty-seventh General Assembly.

W. CHARLES SMITHSON
Secretary of the Senate

Approved _____, 2017

TERRY E. BRANSTAD
Governor

G. Resolutions for Approval

Council Member _____ then introduced the following Resolution entitled "RESOLUTION DETERMINING AN AREA OF THE CITY TO BE AN ECONOMIC DEVELOPMENT AREA, AND THAT THE REHABILITATION, CONSERVATION, REDEVELOPMENT, DEVELOPMENT, OR A COMBINATION THEREOF, OF SUCH AREA IS NECESSARY IN THE INTEREST OF THE PUBLIC HEALTH, SAFETY OR WELFARE OF THE RESIDENTS OF THE CITY; DESIGNATING SUCH AREA AS APPROPRIATE FOR URBAN RENEWAL PROJECTS; AND ADOPTING THE SPRING MEADOW HEIGHTS URBAN RENEWAL PLAN" and moved:

☐ that the Resolution be adopted.

☐ to defer action on the Resolution and the proposal to the meeting to be held at _____ _____.M. on the _____ day of _____, 2018, at this place.

Council Member _____ seconded the motion. The roll was called and the vote was,

AYES: _____

_____

NAYS: _____

Whereupon, the Mayor declared the measure duly adopted.

RESOLUTION NO. _____

RESOLUTION DETERMINING AN AREA OF THE CITY TO BE AN ECONOMIC DEVELOPMENT AREA, AND THAT THE REHABILITATION, CONSERVATION, REDEVELOPMENT, DEVELOPMENT, OR A COMBINATION THEREOF, OF SUCH AREA IS NECESSARY IN THE INTEREST OF THE PUBLIC HEALTH, SAFETY OR WELFARE OF THE RESIDENTS OF THE CITY; DESIGNATING SUCH AREA AS APPROPRIATE FOR URBAN RENEWAL PROJECTS; AND ADOPTING THE SPRING MEADOW HEIGHTS URBAN RENEWAL PLAN

WHEREAS, this Council has reasonable cause to believe that the area described below satisfies the eligibility criteria for designation as an urban renewal area under Iowa law; and

WHEREAS, a proposed Spring Meadow Heights Urban Renewal Plan ("Plan" or "Urban Renewal Plan") for the Spring Meadow Heights Urban Renewal Area ("Area" or "Urban Renewal Area") described below has been prepared, which proposed Plan has been on file in the office of the City Clerk and which is incorporated herein by reference; and

WHEREAS, this proposed Spring Meadow Heights Urban Renewal Area includes and consists of:

NE ¼ NE ¼ of Section 10-82-5 South of the right-of-way of Chicago & Northwestern Railroad Company except the West 326.4 feet thereof

And

SE ¼ NE ¼ Section 10-82-5

Except

Parcel A, Plat of Survey No. 591 as recorded in Book 3908, Page 662

And

The North 9 ½ acres of the NE ¼ SE ¼ of Section 10-82-5

All of the above being in Linn County, Iowa

WHEREAS, the proposed Spring Meadow Heights Urban Renewal Area includes land classified as agricultural land and consequently written permission of the current owners has been obtained; and

WHEREAS, it is desirable that the Urban Renewal Area be redeveloped as described in the proposed Spring Meadow Heights Urban Renewal Plan to be known hereafter as the "Spring Meadow Heights Urban Renewal Plan"; and

WHEREAS, the Iowa statutes require the City Council to submit the proposed Spring Meadow Heights Urban Renewal Plan to the Planning and Zoning Commission for review and recommendation as to its conformity with the general plan for development of the City as a whole, prior to City Council approval thereof; and

WHEREAS, creation of the Spring Meadow Heights Urban Renewal Area and adoption of the Spring Meadow Heights Urban Renewal Plan therefore has been approved by the Planning and Zoning Commission for the City as being in conformity with the general plan for development of the City as a whole, as evidenced by its written report and recommendation filed herewith, which report and recommendation is hereby accepted, approved in all respects and incorporated herein by this reference; and

WHEREAS, by resolution adopted on November 20, 2017, this Council directed that a consultation be held with the designated representatives of all affected taxing entities to discuss the proposed Spring Meadow Heights Urban Renewal Plan and the division of revenue described therein, and that notice of the consultation and a copy of the proposed Spring Meadow Heights Urban Renewal Plan be sent to all affected taxing entities; and

WHEREAS, pursuant to such notice, the consultation was duly held as ordered by the City Council and all required responses to the recommendations made by the affected taxing entities, if any, have been timely made as set forth in the report of the City Administrator, or his delegate, filed herewith and incorporated herein by this reference, which report is in all respects approved; and

WHEREAS, by resolution this Council also set a public hearing on the adoption of the proposed Spring Meadow Heights Urban Renewal Plan for this meeting of the Council, and due and proper notice of the public hearing was given, as provided by law, by timely publication in the Mount Vernon-Lisbon Sun, which notice set forth the time and place for this hearing and the nature and purpose thereof; and

WHEREAS, in accordance with the notice, all persons or organizations desiring to be heard on the proposed Spring Meadow Heights Urban Renewal Plan, both for and against, have been given an opportunity to be heard with respect thereto and due consideration has been given to all comments and views expressed to this Council in connection therewith and the public hearing has been closed.

NOW, THEREFORE, BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF MOUNT VERNON, STATE OF IOWA:

Section 1. That the findings and conclusions set forth or contained in the proposed "Spring Meadow Heights Urban Renewal Plan" for the area of the City of Mount Vernon, State of Iowa, legally described and depicted in the Plan and incorporated herein by reference (which

area shall hereinafter be known as the "Spring Meadow Heights Urban Renewal Area"), be and the same are hereby adopted and approved as the findings of this Council for this area.

Section 2. This Council further finds:

a) Although relocation is not expected, a feasible method exists for the relocation of any families who will be displaced from the Spring Meadow Heights Urban Renewal Area into decent, safe and sanitary dwelling accommodations within their means and without undue hardship to such families;

b) The Urban Renewal Plan conforms to the general plan for the development of the City as a whole; and

c) Acquisition by the City is not immediately expected, however, as to any areas of open land to be acquired by the City included within the Spring Meadow Heights Urban Renewal Area:

i. Residential use is expected, and, with reference to any portions thereof which are to be developed for residential uses, this City Council hereby determines that a shortage of housing of sound standards and design with decency, safety and sanitation exists within the City; that the acquisition of the area for residential uses is an integral part of and essential to the program of the municipality; and that one or more of the following conditions exist:

a. That the need for housing accommodations has been or will be increased as a result of the clearance of slums in other areas, including other portions of the urban renewal area.

b. That conditions of blight in the municipality and the shortage of decent, safe and sanitary housing cause or contribute to an increase in and spread of disease and crime, so as to constitute a menace to the public health, safety, morals, or welfare.

c. That the provision of public improvements related to housing and residential development will encourage housing and residential development which is necessary to encourage the retention or relocation of industrial and commercial enterprises in this state and its municipalities.

d. The acquisition of the area is necessary to provide for the construction of housing for low and moderate income families.

ii. Non-residential use is not expected; however, with reference to those portions thereof which are to be developed for non-residential uses, such non-residential uses are necessary and appropriate to facilitate the proper growth and development of the City in accordance with sound planning standards and local community objectives.

Section 3. That the Spring Meadow Heights Urban Renewal Area is an economic development area within the meaning of Iowa Code Chapter 403; that such area is eligible for designation as an urban renewal area and otherwise meets all requisites under the provisions of Chapter 403 of the Code of Iowa; and that the rehabilitation, conservation, redevelopment, development, or a combination thereof, of such area is necessary in the interest of the public health, safety or welfare of the residents of this City.

Section 4. That the Spring Meadow Heights Urban Renewal Plan, attached hereto as Exhibit 1 and incorporated herein by reference, be and the same is hereby approved and adopted as the "Spring Meadow Heights Urban Renewal Plan for the Spring Meadow Heights Urban Renewal Area"; the Spring Meadow Heights Urban Renewal Plan and all exhibits thereto for such area is hereby in all respects approved; and the City Clerk is hereby directed to file a certified copy of the Spring Meadow Heights Urban Renewal Plan with the proceedings of this meeting.

Section 5. That, notwithstanding any resolution, ordinance, plan, amendment or any other document, the original Spring Meadow Heights Urban Renewal Plan shall be in full force and effect from the date of this Resolution until the Council amends or repeals the Plan. Said Spring Meadow Heights Urban Renewal Plan shall be forthwith certified by the City Clerk, along with a copy of this Resolution, to the Recorder for Linn County, Iowa, to be filed and recorded in the manner provided by law.

PASSED AND APPROVED this 18th day of December, 2017.

_____
Mayor

ATTEST:

_____
City Clerk

Label the Plan as Exhibit 1 (with all exhibits) and attach it to this Resolution.

ATTACH THE PLAN LABELED AS
EXHIBIT 1 HERE

SPRING MEADOW HEIGHTS URBAN RENEWAL PLAN

for the

SPRING MEADOW HEIGHTS URBAN RENEWAL AREA

CITY OF MOUNT VERNON, IOWA

December 2017

Final

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EXHIBITS

Spring Meadow Heights Urban Renewal Plan
for the
Spring Meadow Heights Urban Renewal Area
City of Mount Vernon, Iowa

A. INTRODUCTION

The Spring Meadow Heights Urban Renewal Plan ("Plan" or "Urban Renewal Plan") for the Spring Meadow Heights Urban Renewal Area ("Area" or "Urban Renewal Area") has been developed to help local officials respond to and promote economic development in the City of Mount Vernon, Iowa (the "City"). The primary goal of the Plan is to stimulate, through public involvement and commitment, private investment in new housing and residential development as defined in the *Code of Iowa* Section 403.17(12).

In order to achieve this objective, the City intends to undertake Urban Renewal activities pursuant to the powers granted to it under Chapter 403 and Chapter 15A of the *Code of Iowa*, as amended.

B. DESCRIPTION OF THE URBAN RENEWAL AREA

The Urban Renewal Area is described in Exhibit "A" and illustrated in Exhibit "B." The property forming this Area has been removed from the Mount Vernon Urban Renewal Area by Amendment #5 to the Mount Vernon Urban Renewal Plan. This property has never been residential in nature nor part of a residential housing development.

The City reserves the right to modify the boundaries of the Area at some future date.

C. AREA DESIGNATION

With the adoption of this Plan, the City designates this Urban Renewal Area as an economic development area that is appropriate for the provision of public improvements related to housing and residential development.

D. BASE VALUE

If the Urban Renewal Area is legally established, a Tax Increment Financing (TIF) ordinance is adopted, and debt is certified prior to December 1, 2018, the taxable valuation as of January 1, 2017, will be considered the frozen "base valuation" for the portion of the Urban Renewal Area identified in the TIF ordinance. If a TIF ordinance is not adopted until a later date, or debt is not first certified prior to December 1, 2018, the frozen "base value" will be the assessed value of the taxable property within that area covered by the TIF ordinance as of January 1 of the calendar year preceding the calendar year in which the City first certifies the amount of any debt on the Area. It may be that more than one ordinance will be adopted on property within the Area. If so, the frozen base values may vary.

E. DEVELOPMENT PLAN

Mount Vernon has a general plan for the physical development of the City as a whole, outlined in the City of Mount Vernon, Iowa 2016 Comprehensive Plan. The goals and objectives identified in this Plan, and the urban renewal projects described herein, are in conformance with the goals and land use policies identified in the Comprehensive Plan.

This Urban Renewal Plan does not in any way replace the City's current land use planning or zoning regulation process. Currently the Area is zoned as TR – Traditional Residential.

The need, if any, for improved traffic, public transportation, public utilities, recreational and community facilities, or other public improvements within the Urban Renewal Area, is set forth in this Plan. As the Area develops, the need for public infrastructure extensions and upgrades will be evaluated and planned for by the City.

F. RESIDENTIAL DEVELOPMENT

The City's objective for the Urban Renewal Area is to promote new housing and residential development. Mount Vernon has had steady population growth, with a population growth rate of 16.4 percent from 2000 to 2010. Mount Vernon lies about 15 miles east of Cedar Rapids and 20 miles north of Iowa City, providing a convenient residential location within easy commuting distance for residents to a variety of employment opportunities, amenities, and services. Additionally, Mount Vernon's housing units must support the student population of Cornell College.

Mount Vernon's 2016 Comprehensive Plan estimated that the City would need approximately 426 new housing units by 2030 to match the population projections. Therefore, the Comprehensive Plan set forth goals and objectives for new housing development within city limits.

When a city utilizes tax increment financing to support residential development (such support is limited to reimbursement of "public improvement" costs, as defined by Iowa law), a percentage of the incremental revenues (or other revenues) generated by the development must be used to provide assistance to low and moderate income (LMI) families. LMI families are those whose incomes do not exceed 80% of the median Linn County income.

Unless a reduction is approved by the Iowa Economic Development Authority, the amount of incremental revenues (or other revenues) to be provided for low and moderate income family housing in the community shall be either equal to or greater than the percentage of the original project costs (i.e., the amount of TIF funds used to reimburse infrastructure costs serving the housing development in the Area) that is equal to the percentage of LMI families living in Linn County. That percentage is currently 37.23%.

The requirement to provide assistance for LMI housing may be met by one, or a combination, of the following three options:

1. Providing that at least 37.23% of the units constructed in the Area are occupied by residents and/or families whose incomes are at or below 80% of the median county income;

2. Setting aside an amount equal to or greater than 37.23% of the project costs to be used for LMI housing activities anywhere in the City; or,

3. Ensuring that 37.23% of the houses constructed within the Area are priced at amounts affordable to LMI families.

If funds are set aside, as opposed to constructing a sufficient percentage of LMI housing in the Area, the assistance for LMI family housing may be provided anywhere within the City. The type of assistance provided must benefit LMI residents and/or families and may include, but is not limited to:

1. Construction of LMI affordable housing.

2. Owner/renter-occupied housing rehabilitation for LMI residents and/or families.

3. Grants, credits, or other direct assistance for LMI residents and/or families.

4. Homeownership assistance for LMI residents and/or families.

5. Tenant-based rental assistance for LMI residents and/or families.

6. Down payment assistance for LMI residents and/or families.

7. Mortgage interest buy-down assistance for LMI residents and/or families.

8. Under appropriate circumstances, the construction of public improvements that benefit LMI residents and/or families.

G. PLAN OBJECTIVES

Renewal activities are designed to provide opportunities, incentives, and sites for new residential development within the Area. More specific objectives for development within the Urban Renewal Area are as follows:

1. To increase the availability of housing opportunities, which may, in turn, attract and retain area industries and commercial enterprises that will strengthen and revitalize the economy of the State of Iowa and the City of Mount Vernon.

2. To stimulate, through public action and commitment, private investment in new housing and residential development and redevelopment. The City realizes that the availability of affordable, decent, safe, and sanitary housing is important to the overall economic viability of the community.

3. To plan for and provide sufficient land for residential development in a manner that is efficient from the standpoint of providing municipal services.

4. To help finance the cost of constructing public utility and infrastructure extensions and improvements in support of residential development.

5. To improve housing conditions and increase housing opportunities, including LMI income families and/or individuals.

6. To provide a more marketable and attractive investment climate through the use of various federal, state, and local incentives.

7. To encourage residential growth and expansion through governmental policies which make it economically feasible to do business.

8. To encourage residential development that meets the needs of a growing population, while preserving the character of the community.

9. To promote development utilizing any other objectives allowed by Chapter 403 of the *Code of Iowa*.

H. TYPES OF RENEWAL ACTIVITIES

To meet the objectives of this Urban Renewal Plan and to encourage the development of the Area, the City intends to utilize the powers conferred under Chapter 403 and Chapter 15A, *Code of Iowa* including, but not limited to, tax increment financing. Activities may include:

1. To undertake and carry out urban renewal projects through the execution of contracts and other instruments.

2. To provide for the construction of site specific improvements, such as grading and site preparation activities, access roads and parking, fencing, utility connections, and related activities.

3. To arrange for, or cause to be provided, the construction or repair of public infrastructure in support of residential development, including, but not limited to, streets and sidewalks, traffic lights, pedestrian safety measures, trails, water mains, sanitary sewers, storm sewers, public utilities, or other facilities in connection with urban renewal projects.

4. To make loans, forgivable loans, or other types of grants or incentives to private persons, organizations, or businesses for economic development purposes or residential projects, on such terms as may be determined by the City Council.

5. To use tax increment financing to facilitate urban renewal projects, including, but not limited to, financing to achieve a more marketable and competitive land offering price and to provide for necessary physical improvements and infrastructure.

6. To use tax increment for LMI housing assistance.

7. To borrow money and to provide security therefor.

8. To acquire and dispose of property.

9. To make or have made surveys and plans necessary for the implementation of the Urban Renewal Plan or specific urban renewal projects.

10. To use any or all other powers granted by the Urban Renewal Act to develop and provide for improved economic conditions for the City of Mount Vernon and the State of Iowa.

Nothing herein shall be construed as a limitation on the power of the City to exercise any lawful power granted to the City under Chapter 15, Chapter 15A, Chapter 403, Chapter 427B, or any other provision of the *Code of Iowa* in furtherance of the objectives of this Urban Renewal Plan.

I. ELIGIBLE URBAN RENEWAL PROJECTS

Although certain project activities may occur over a period of years, the eligible urban renewal projects under this Urban Renewal Plan include:

1. **Rebate to Support Infrastructure Improvements in Residential Development:**

A. *Midwest Development Co (or a related entity):* The City expects to enter into a development agreement providing incentives to Midwest Development Co. (or a related entity) for the construction of public improvements in the development of an anticipated 149-unit residential subdivision. Midwest Development Co. is expected to invest approximately $2,624,750 in the development of the residential lots including, but not limited to, the construction of new streets, sanitary sewer, storm water, and water utilities. Construction is anticipated to begin in 2018 and be completed in multiple phases.

The development agreement would provide for several distinct public improvements to be constructed as urban renewal projects. As urban renewal projects, the City intends to provide assistance for Midwest Development Co.'s construction of these public improvements in the form of rebates of potential incremental property taxes. Under the proposal, some of the incremental property tax generated by the development of new homes to be constructed on the developer's land (pursuant to the *Code of Iowa* Section 403.19) would be rebated to the developer upon

substantiation of costs incurred by the developer in constructing the public improvements. Unless some other amount is determined by the City, these incentives are not expected to exceed the lesser of:

- The developer's certified and approved costs of public improvements; or
- $675,000.

These rebates will not be general obligations of the City but will be payable solely from incremental property taxes generated by the development and subject to annual appropriation. The proposal contemplates that multiple TIF ordinances may be placed over separate portions of the property to be developed. Each TIF ordinance would provide for the division of tax revenue on the TIF ordinance area up to a maximum of a ten (or fifteen, if consent is obtained from the other taxing entities) year period.

Unless LMI housing is constructed in this subdivision, the City will set aside an amount equal to 37.23% of the incentives provided to the developer (up to a maximum of the developer's certified costs of public improvements or $675,000) from the incremental taxes generated by the residential housing units and use those funds to support LMI housing anywhere in the community. The remaining incremental taxes will be available to reimburse the City for planning, legal, and other project costs and to fund property tax rebates to the developer, up to the above stated maximums.

The City believes that assistance to stimulate residential housing in this Area will promote economic development by providing needed housing opportunities for employees of area businesses, their families, and new or existing residents.

B. *Future Development Agreements*. The City expects to consider requests for Development Agreements for projects that are consistent with this Plan, in the City's sole discretion. Such Agreements are unknown at this time, but based on past history, and dependent on development opportunities and climate, the City expects to consider a broad range of incentives as authorized by this Plan, including but not limited to, land, loans, grants, tax rebates, public infrastructure assistance, and other incentives. The costs of such Development Agreements are estimated not to exceed $500,000.

2. **Planning, Engineering Fees (for Urban Renewal Plans), Attorney Fees, Administrative, and Other Related Costs to Support Urban Renewal Projects and Planning:**

Project	**Estimated Date**	**Estimated Cost to be funded by TIF Funds**
Fees and Costs	Undetermined	Not to Exceed $50,000

J. FINANCIAL INFORMATION

1.	July 1, 2017, Constitutional Debt Limit	$12,659,960.85
2.	Current Outstanding General Obligation Debt	$7,305,000
3.	Proposed amount of indebtedness to be incurred: A specific amount of debt to be incurred for the Eligible Urban Renewal Projects has not yet been determined. This document is for planning purposes only. The estimated project costs in this Plan are estimates only and will be incurred and spent over a number of years. In no event will the City's constitutional debt limit be exceeded. The City Council will consider each project proposal on a case-by-case basis to determine if it is in the City's best interest to participate before approving an urban renewal project or expense. It is further expected that such indebtedness, including interest on the same, may be financed in whole or in part with tax increment revenues from the Urban Renewal Area. Subject to the foregoing, it is estimated that the cost of the Eligible Urban Renewal Projects as described above to be funded by TIF Funds will be approximately as stated in the next column:	$1,225,000 plus the applicable percentage of LMI set-aside This does not include financing costs related to debt issuance, which may be incurred over the life of the Area.

K. AGREEMENT TO INCLUDE AGRICULTURAL LAND

Agricultural land owners have entered or will enter into agreements in which they agree to allow the City to include their real property defined as "Agricultural Land" in the Urban Renewal Area in accordance with Iowa Code Section 403.17(3). A copy of the signed agreement of each agricultural land owner within the Urban Renewal Area is attached or will be attached as Exhibit C. The original signed agreements will be on file at the City Clerk's office.

L. URBAN RENEWAL FINANCING

The City intends to utilize various financing tools such as those described below to successfully undertake the proposed urban renewal actions. The City has the statutory authority to use a variety of tools to finance physical improvements within the Area. These include:

A. Tax Increment Financing.

Under Section 403.19 of the *Code of Iowa*, urban renewal areas may utilize the tax increment financing mechanism to finance the costs of public improvements, economic development incentives, or other urban renewal projects. Upon creation of a tax increment district within the Area, by ordinance, the assessment base is frozen and the amount of tax revenue available from taxes paid on the difference between the frozen base and the increased value, if any, is segregated into a separate fund for the use by the City to pay costs of the eligible urban renewal projects. Certain increased taxes generated by any new

development, above the base value, are distributed to the taxing entities, if not requested by the City, and in any event upon the expiration of the tax increment district.

B. General Obligation Bonds.

Under Division III of Chapter 384 and Chapter 403 of the *Code of Iowa*, the City has the authority to issue and sell general obligation bonds for specified essential and general corporate purposes, including the acquisition and construction of certain public improvements within the Area and for other urban renewal projects or incentives for development consistent with this Plan. Such bonds are payable from the levy of unlimited ad valorem taxes on all the taxable property within the City. It may be, the City will elect to abate some or all of the debt service on these bonds with incremental taxes from this Area.

The City may also determine to use tax increment financing to provide incentives such as cash grants, loans, tax rebates, or other incentives to developers or private entities in connection with the urban renewal projects identified in this Plan. In addition, the City may determine to issue general obligation bonds, tax increment revenue bonds or such other obligations, or loan agreements for the purpose of making loans or grants of public funds to private businesses located in the Area for urban renewal projects. Alternatively, the City may determine to use available funds for making such loans or grants or other incentives related to urban renewal projects. In any event, the City may determine to use tax increment financing to reimburse the City for any obligations or advances.

Nothing herein shall be construed as a limitation on the power of the City to exercise any lawful power granted to the City under Chapter 15, Chapter 15A, Chapter 403, Chapter 427B, or any other provision of the *Code of Iowa* in furtherance of the objectives of this Urban Renewal Plan.

M. PROPERTY ACQUISITION/DISPOSITION

The City will follow any applicable requirements for the acquisition and disposition of property within the Urban Renewal Area.

N. RELOCATION

The City does not expect there to be any relocation required of residents or businesses as part of the eligible urban renewal projects; however, if any relocation is necessary, the City will follow all applicable relocation requirements.

O. STATE AND LOCAL REQUIREMENTS

All provisions necessary to conform to State and local laws will be complied with by the City in implementing this Urban Renewal Plan and its supporting documents.

P. SEVERABILITY

In the event one or more provisions contained in the Urban Renewal Plan shall be held for any reason to be invalid, illegal, unauthorized, or unenforceable in any respect, such invalidity, illegality, un-authorization, or unenforceability shall not affect any other provision of this Urban Renewal Plan, and this Urban Renewal Plan shall be construed and implemented as if such provisions had never been contained herein.

Q. URBAN RENEWAL PLAN AMENDMENTS

This Urban Renewal Plan may be amended from time to time for a number of reasons including, but not limited to, adding or deleting land, adding or amending urban renewal projects, or modifying objectives or types of renewal activities.

The City Council may amend this Plan in accordance with applicable State law.

R. EFFECTIVE PERIOD

This Urban Renewal Plan will become effective upon its adoption by the City Council and shall remain in effect until terminated by the City Council.

With respect to property included within the Urban Renewal Area, which is also included in an ordinance which designates that property as a tax increment area and is designated based on an economic development finding, to provide or to assist in the provision of public improvements related to housing and residential development, the use of incremental property tax revenues or the "division of revenue," as those words are used in Chapter 403 of the *Code of Iowa*, is limited to ten (10) years beginning with the second fiscal year following the year in which the City first certifies to the County Auditor the amount of any loans, advances, indebtedness, or bonds which qualify for payment from the incremental property tax revenues attributable to that property within the Urban Renewal Area.

With consent of all other affected taxing bodies (by written agreement), the use of incremental property tax revenues under the *Code of Iowa* Section 403.19 can be extended for up to five (5) years if necessary to adequately fund the housing project. The City may decide to seek such consent. It is also anticipated that separate TIF ordinances or amendments thereto for separate parcel(s) or subareas may be adopted as development in the Area warrants. In that case, each subarea may have a separate base and separate sunset or expiration date.

At all times, the use of tax increment financing revenues (including the amount of loans, advances, indebtedness, or bonds which qualify for payment from the division of revenue provided in Section 403.19 of the *Code of Iowa*) by the City for activities carried out under the Urban Renewal Area

shall be limited as deemed appropriate by the City Council and consistent with all applicable provisions of law.

EXHIBIT A

LEGAL DESCRIPTION OF URBAN RENEWAL AREA

LEGAL DESCRIPTION:

NE ¼ NE ¼ of Section 10-82-5 South of the right-of-way of Chicago & Northwestern Railroad Company except the West 326.4 feet thereof

And

SE ¼ NE ¼ Section 10-82-5

Except

Parcel A, Plat of Survey No. 591 as recorded in Book 3908, Page 662

And

The North 9 ½ acres of the NE ¼ SE ¼ of Section 10-82-5

All of the above being in Linn County, Iowa

EXHIBIT B

MAP OF URBAN RENEWAL AREA

EXHIBIT C

AGREEMENT TO INCLUDE AGRICULTURAL LAND IN THE SPRING MEADOW HEIGHTS URBAN RENEWAL AREA

WHEREAS, the City of Mount Vernon, Iowa, (the "City") has proposed to establish the Spring Meadow Heights Urban Renewal Area (the "Urban Renewal Area"), pursuant to Chapter 403 of the Code of Iowa, in order to undertake activities authorized by that Chapter; and

WHEREAS, it has been proposed that the boundaries of the Urban Renewal Area will include certain property which is owned by the Agricultural Land Owner listed below; and

WHEREAS, Section 403.17 of the Code of Iowa provides that no property may be included in an urban renewal area which meets the definition in that Section of "agricultural land," until the owners of such property agree to include such property in such urban renewal area; and

WHEREAS, it has been determined that the portion of the property owned by the Agricultural Land Owner within the Urban Renewal Area meets the definition of "agricultural land" in Section 403.17(3) of the Code of Iowa;

NOW, THEREFORE, it is hereby certified and agreed by the Agricultural Land Owner as follows:

1. The Agricultural Land Owner hereby certifies that he/she is the owner of certain Property contained within the Urban Renewal Area.

2. The Agricultural Land Owner hereby agrees that the City of Mount Vernon, Iowa, may include the portion of the property owned by the Agricultural Land Owner in the Urban Renewal Area.

3. The Agricultural Land Owner further authorizes the governing body of the City of Mount Vernon, Iowa, to pass any resolution or ordinance necessary to designate said property as an Urban Renewal Area under Chapter 403 of the Code of Iowa, and to proceed with activities authorized under said Chapter.

DATED this _____ day of _____, 2017.

Name of Agricultural Land Owner: (or person authorized to sign on Agricultural Land Owner's behalf)

Signature: _____ Date: _____

Print Name: _____

Witness: _____

01410431-1\13932-033

CERTIFICATE

STATE OF IOWA)
) SS
COUNTY OF LINN)

I, the undersigned City Clerk of the City of Mount Vernon, State of Iowa, do hereby certify that attached is a true and complete copy of the portion of the records of the City showing proceedings of the Council, and the same is a true and complete copy of the action taken by the Council with respect to the matter at the meeting held on the date indicated in the attachment, which proceedings remain in full force and effect, and have not been amended or rescinded in any way; that meeting and all action thereat was duly and publicly held in accordance with a notice of meeting and tentative agenda, a copy of which was timely served on each member of the Council and posted on a bulletin board or other prominent place easily accessible to the public and clearly designated for that purpose at the principal office of the Council pursuant to the local rules of the Council and the provisions of Chapter 21, Code of Iowa, upon reasonable advance notice to the public and media at least twenty-four hours prior to the commencement of the meeting as required by law and with members of the public present in attendance; I further certify that the individuals named therein were on the date thereof duly and lawfully possessed of their respective City offices as indicated therein, that no Council vacancy existed except as may be stated in the proceedings, and that no controversy or litigation is pending, prayed or threatened involving the incorporation, organization, existence or boundaries of the City or the right of the individuals named therein as officers to their respective positions.

WITNESS my hand and the seal of the Council hereto affixed this _____ day of _____, 2017.

_____
City Clerk, City of Mount Vernon, State of Iowa

(SEAL)

01429994-1\13932-033

URBAN RENEWAL
TRANSCRIPT CERTIFICATE

I, the undersigned, being first duly sworn, do hereby depose and certify that I am the duly appointed, qualified and acting City Clerk of the City of Mount Vernon, State of Iowa, and that as such City Clerk I have in my possession or have access to the complete corporate records of the City and of its Council and officials, and that I have carefully compared the transcript hereto attached with the aforesaid corporate records and that the transcript hereto attached is a true and complete copy of all the corporate records in relation to the authorization of the Spring Meadow Heights Urban Renewal Plan of the City, and that the transcript hereto attached contains a true and complete statement of all the measures adopted and proceedings, acts and things had, done and performed up to the present time, in relation to the authorization of Spring Meadow Heights Urban Renewal Plan, and that the Council consists of a Mayor and five (5) Council Members, and that such offices were duly and lawfully filled by the individuals listed in the attached transcript as of the dates and times referred to therein.

I further certify that the City is and throughout the period of such proceedings has been governed under the Mayor/Council form of municipal government authorized by Chapter 372, Code of Iowa, under the provisions of its charter as recorded with the Secretary of State.

I further certify that all meetings of the City Council of the City at which action was taken in connection with the Urban Renewal Plan were open to the public at all times in accordance with a notice of meeting and tentative agenda, a copy of which was timely served on each member of the Council and was duly given at least twenty-four hours prior to the commencement of the meeting by notification of the communications media having requested such notice and posted on a bulletin board or other prominent place designated for the purpose and easily accessible to the public at the principal office of the Council all pursuant to the provisions and in accordance with the conditions of the local rules of the Council and Chapter 21, Code of Iowa.

I further certify that attached hereto are true and accurate copies of the following:

1. Spring Meadow Heights Urban Renewal Plan (You do not need to attach the Plan to this Certificate if you have attached such Plan and all exhibits to the Authorizing Resolution labeled "Exhibit 1".);

2. Minutes of the meeting or other report of the Planning and Zoning Commission with respect to the conformance of the Spring Meadow Heights Urban Renewal Plan to the general plan for development of the City as a whole;

3. Report of City Administrator, or his delegate, to the City Council with respect to the consultation held with affected taxing entities on the Spring Meadow Heights Urban Renewal Plan, with attached copies of any and all written recommendations made with respect thereto and the responses of the City to any such recommendations.

4. Written agreement(s) with owner(s) of agricultural land. (You do not need to attach these if they are included as an exhibit in the Plan that is attached to the Authorizing Resolution.)

WITNESS my hand and the seal of the City hereto attached this _____ day of _____, 2017, at Mount Vernon, Iowa.

_____
City Clerk, City of Mount Vernon, State of Iowa

(SEAL)

STATE OF IOWA)
) SS
COUNTY OF LINN)

Subscribed and sworn to before me by _____, on this _____ day of _____, 2017.

_____
Notary Public in and for Linn County, Iowa

(SEAL)

Attach items listed above to this Transcript Certificate and send certificate and attachments to Ahlers & Cooney.

01429995-1\13932-033

December 18, 2017

The City Council of the City of Mount Vernon, State of Iowa, met in _____ session, in the Council Chambers, City Hall, 213 First Street NW, Mount Vernon, Iowa, at 6:30 P.M., on the above date. There were present Mayor _____, in the chair, and the following named Council Members:

_____

Absent: _____

Vacant: _____

* * * * * * *

This being the time and place fixed for a public hearing on the matter of the adoption of the proposed Spring Meadow Heights Urban Renewal Plan, the Mayor first asked for the report of the City Administrator, or his delegate, with respect to the consultation held with the affected taxing entities to discuss the proposed Plan. The Council was informed that the consultation was duly held as ordered by the Council, and that _____ written recommendations were received from affected taxing entities. The report of the City Administrator, or his delegate, with respect to the consultation was placed on file for consideration by the Council.

The City also was informed that the proposed Plan had been approved by the Planning and Zoning Commission as being in conformity with the general plan for development of the City as a whole, as set forth in the minutes or report of the Commission. The report or minutes of the Planning and Zoning Commission was placed on file for consideration by the Council.

The Mayor then asked the City Clerk whether any written objections had been filed with respect to the proposed Plan, and the City Clerk reported that _____ written objections thereto had been filed. The Mayor then called for any oral objections to the adoption of the Spring Meadow Heights Urban Renewal Plan and _____ were made. The public hearing was then closed.

{Attach summary of objections here}

AGENDA ITEM # G – 2

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Resolution #12-18-2017B
ACTION:	Motion

SYNOPSIS: This resolution establishes the Sun Newspaper as the official newspaper for the City of Mt. Vernon.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: Resolution

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

RESOLUTION #12-18-2017B

A Resolution designating The Sun as the official newspaper for publications for the City of Mount Vernon from January 1, 2018 to December 31, 2019.

Motion made by _____, seconded by _____ to _____
Resolution #12-18-2017B

Resolution #12-18-2017B _____ on December 18, 2017, by the following roll call vote:

YES:

NO:

ABSTAIN:

ABSENT:

MOUNT VERNON CITY COUNCIL
MOUNT VERNON, IOWA

_____
Jamie A. Hampton

ATTEST:

_____
Sue Ripke
Assistant City Administrator/Clerk

the SUN

PO Box 129, Mount Vernon, IA 52314 • 319-895-6216

Mount Vernon Mayor and City Council:

Please consider this a formal request to again name the Mount Vernon-Lisbon Sun the city's official newspaper for 2018 and 2019.

As you know, we're the only publication solely covering this community, and are proud to have served the city as its official newspaper for decades.

If you have any questions about this request, feel free to give me a call.

Sincerely,

Jake Krob
Publisher

I. Old Business

AGENDA ITEM # I - 1

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Roundabout Assessment
ACTION:	Motion

SYNOPSIS: Staff has included a further breakdown of expenses from MSA Consultants. They have also included the resumes of the Engineers in charge of the project (this may come in a separate email pending the distribution of this packet).

BUDGET ITEM: Hwy 30 Project Fund

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: MSA Proposal and Supporting Documents

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

J. Motions for Approval

CITY OF MOUNT VERNON
CLAIMS FOR APPROVAL, DECEMBER 18, 2017

PAYROLL	CLAIMS	58,486.59
FUTURE LINE TRUCK EQUIPMENT	F550-RUT,SEW	32,362.36
GROUP SERVICES INC	INSURANCE-ALL DEPTS	22,635.95
COMMUNITY DEVELOPMENT GROUP	HOTEL/MOTEL TAX PYMT-ECON DEV	21,308.56
SHOEMAKER & HAALAND	SOUTH ALLEY STREETSCAPE PROJECT	8,537.75
BRAUN INTERTEC	GEOTECHNICAL EVALUATION-LOST I	5,435.00
AHLERS & COONEY PC	LEGAL FEES-P&A	4,528.71
POLY VINYL ROOFING INC	CITY HALL ROOF-P&A	4,517.00
CORNELL COLLEGE	WATER CONNECTION REFUND-WAT	4,500.00
MOUNT VERNON ACE HARDWARE	SUPPLIES-ALL DEPTS	2,262.56
ALLIANT IES UTILITIES	ENERGY USAGE-WAT	2,160.35
CR/LC SOLID WASTE AGENCY	LEAVES-S/W	1,926.00
MUNICIPAL SUPPLY INC	3" METER-WAT	1,878.20
STATE HYGIENIC LAB	TESTING-SEW	1,714.00
WEX BANK	FUEL-PW	1,063.57
ALLIANT IES UTILITIES	ENERGY USAGE-RUT	866.43
MOUNT VERNON LISBON SUN	ADS/PUBLICATIONS-ALL DEPTS	845.20
IOWA SOLUTIONS INC	SERVER WARRANTY RENEWAL, PRINTER	785.50
OFFICE EXPRESS	PAPER,LAMINATOR-ALL DEPTS	602.19
THE CTK GROUP	TRAINING-PD	500.00
LYNCH FORD	VEHICLE MAINT-PD	483.97
WENDLING QUARRIES	SEPTIC GRAVEL-FD	469.84
NATHAN GOODLOVE	FIRE CHIEF PAY-FD	416.67
LINN COUNTY PLANNING & DEV	BLDG PERMIT FEES/INSPECTIONS	407.00
ACCESS SYSTEMS	NETWORK SECURITY AUDIT	350.00
BATTERIES PLUS	RADIOS (6)-RUT	323.70
ALLIANT IES UTILITIES	ENERGY USAGE-FD	320.25
ALLIANT IES UTILITIES	ENERGY USAGE-PD,P&A	310.90
EVER-GREEN LANDSCAPE NURSERY	TREES (2) DOG PARK	300.00
MARKET STREET TECHNOLOGIES INC	BASIC WORD PRESS MAINT-MVHPC	300.00
DIESEL TURBO SERVICES INC	OIL/GREASE DUMP SERVICE	290.63
HBK ENGINEERING LLC	WELLNESS CENTER/SURVEY SERVICE	264.00
MARKET STREET TECHNOLOGIES INC	WEBSITE HOSTING-MVHPC	180.00
MEDIACOM	PHONE/INTERNET-P&REC	158.89
OFFICE EXPRESS	STORAGE BOXES, TAPE-P&A	158.84
CHRIS NOSBISCH	MILEAGE-P&A	155.69
CAMPBELL SUPPLY CEDAR RAPIDS	GRINDING WHEELS,EAR PLUGS-RUT	150.83
ALLIANT IES UTILITIES	ENERGY USAGE-P&REC	138.97
IOWA POLICE CHIEFS ASSOCIATION	DUES-PD	125.00
IOWA SOLUTIONS INC	FIREWALL,MMM SETUP	125.00
WELTER STORAGE EQUIPMENT CO.	SHELVING/ELLIOTT SHOP-RUT	125.00
ALLIANT IES UTILITIES	ENERGY USAGE- ST LIGHTS	118.63
US CELLULAR	CELL PHONE-PD	116.17
GALLS INC	EQUIP-PD	115.99
MOUNT VERNON LISBON SUN	ADS/PUBLICATIONS-P&REC	112.50
RED LION RENEWABLES	SOLAR ELECTRIC PRODUCTIONS-P&A	75.87
MATT SIDERS	MILEAGE-P&REC	69.55
FRANCESCA LEE THOMPSON	CLEANING SERVICE-P&A	60.00
JOAN BURGE	CLEANING SERVICE-P&A	60.00
AIRGAS INC	CYLINDER RENTAL FEE-PW	55.80
CENTURY LINK	PHONE CHGS-PD	37.34
LETTER PERFECT	NAMEPLATE-P&A,P&Z	29.84
	TOTAL	183,322.79

AGENDA ITEM # J – 2

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Poet Laureate Request
ACTION:	Motion

SYNOPSIS: I have attached email correspondence that I have received from Steve Maravetz regarding the establishment of a Poet Laureate. It is my understanding that Steve will be in attendance Monday to further discuss the proposal and to answer Council questions.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: Supporting Documents

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

Chris Nosbisch

From: Mount Vernon Area Arts Council <mvartcouncil@gmail.com>
Sent: Wednesday, November 22, 2017 2:10 PM
To: Chris Nosbisch
Subject: Request to speak before the council.

Chris,

My name is Steve Maravetz. I am president of the Mount Vernon Area Arts Council. Recently I shared a proposal from the arts council with some members of the City Council who advised me to come to a council meeting to share our thoughts.

The arts council would like to ask the city to establish a position of Poet Laureate of Mount Vernon. If approved, the arts council will pay the person selected a $500 per year stipend.

I'm writing to request an opportunity to bring this before the council at its December 4 meeting for informational purposes. I will forward a copy of my correspondence to them which has more detail about the concept.

Thanks!

Steve Maravetz

Chris Nosbisch

From: Mount Vernon Area Arts Council <mvartcouncil@gmail.com>
Sent: Wednesday, November 22, 2017 2:12 PM
To: Chris Nosbisch
Subject: Proposal to establish poet laureate position in Mount Vernon

I'm writing as president of the Mount Vernon Area Arts Council to float a trial balloon and get your reaction before proceeding. The arts council would like to propose that the city establish the position of Poet Laureate of the City of Mount Vernon.

I offer for your consideration the following definition of a poet laureate: A **poet laureate** (plural: **poets laureate**) is a poet officially appointed by a government or conferring institution, who is often expected to compose poems for special events and occasions.

Positives

I think establishing the poet laureate position for Mount Vernon has the following positives:

1) We will be able to call ourselves the "Smallest City in America with a Poet Laureate"

    a. (The current smallest is Belfast, ME, which describes the position on their town website).

2) It will help underscore Mount Vernon's reputation as an arts-friendly community.

3) It will be a source of pride and a positive role model for the community.

4) It will help involve a segment of the community in our town celebrations that may have not been well-represented in the past.

Establishing the position

I would ask that in January 2018 the City Council discuss and vote on a proposal to establish the position of Poet Laureate of Mount Vernon. The Mount Vernon Area Arts Council will commit to funding a $500 yearly stipend for the person selected poet laureate. This will be a five-year commitment, to be reviewed at the end of the fourth year to determine viability of continuing the position.

Selecting a poet laureate

I have spoken with Glenn Freeman, professor of English and former head of the English department at Cornell. He has agreed to be a partner in the process.

I propose that we establish a selection committee composed of a representative of the MVAAC, the English Department at Cornell, and an English teacher in the Mount Vernon Community Schools.

Candidates will be identified by nomination of the individual, either by someone else or by the candidate him/herself.

The duties of the Poet Laureate

The expectation is that the poet laureate will seek out his or her own opportunities for public service. Expectations will be at minimum an original poem to be read at the annual Memorial Day service at Mount Vernon Cemetery, with one additional annual commitment to be determined by the selection committee and the city. One example might be a year-end poem summarizing what happened in Mount Vernon during the previous 12 months. This would be published in the Sun at the end of each calendar year.

Next steps

The next step would be to determine the viability of the concept through discussions with community leaders and residents. This might include a town hall meeting or a discussion at a council meeting.

Assuming the idea has support, the MVAAC would work with the city to draft a proposal upon which the City Council would vote.

Timeline

We would like to establish the position in time for the selected candidate to compose a poem for the 2018 Memorial Day event. Review of nominations would take place in February and March, with the selected candidate announced about April 1.

I am very interested in your reaction and thoughts regarding this concept. Please let me know if you have comments, questions or ideas. Thanks!

Steve Maravetz

President, Mount Vernon Area Arts Council

AGENDA ITEM # J – 3

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Set Date for a Public Hearing
ACTION:	Motion

SYNOPSIS: This is the time set for establishing a public hearing for an ordinance amending Chapter 90.03 Mandatory Connections (water system). This public hearing would take place on Monday, January 15, 2017 as there will be no printed paper the week of December 27, 2017.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: Supporting Documents

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

AGENDA ITEM # J – 4

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Alternative Council Dates
ACTION:	Motion

SYNOPSIS: The first regular City Council meeting in January would fall on the New Year's holiday. Staff would suggest moving the meeting to Tuesday or Wednesday of the same week.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: Motion

ATTACHMENTS: None

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

K. Reports-Received/File

Mount Vernon IOWA

Chris Nosbisch, City Administrator
Doug Shannon, Chief of Police

Jamie Hampton, Mayor

Council:
Eric Roudabush
Paul Tuerler
Marty Christensen
Scott Rose
Tom Wieseler

NOVEMBER 2017
POLICE REPORT

Vehicle Collisions

There were 9 reported collisions in November. Five of the collisions were in the Hwy 1 & 30 roundabout. The first of these occurred as a vehicle travelling south on Hwy 1 was approaching the Hwy 30 eastbound traffic lane, and a vehicle in the right lane of Hwy 30 eastbound failed to yield before entering the traffic circle and collided with the other vehicle. No injuries were reported, and damage was estimated at $5,000. The second collision at the intersection occurred when a semi tuck & trailer and a small sedan approached the Hwy 1 roundabout, travelling on Hwy 30 eastbound. The semi was in the north lane, and the sedan in the south lane. Both vehicles progressed into the intersection, and while the semi was attempting to maneuver the traffic circle, with both vehicle continuing east on Hwy 30, the semi-trailer collided with the sedan. No injuries were reported, and damage was estimated at $7,500. The third collision occurred when a vehicle travelling westbound on Hwy 30 approached the roundabout at Hwy 1 and failed to yield to t a vehicle that was maneuvering the roundabout and proceeding north on Hwy 1. No injuries were reported and damage was estimated at $12,500. The fourth & fifth collisions occurred when vehicles travelling east on Hwy 30 approached the roundabout and failed to yield to vehicles that were in the traffic circle and travelling south on Hwy 1. Damage was estimated at $600 in one of the collisions and $4,000 in the other. No injuries were reported. Officer responded to a collision in the Gary's Food parking lot. The collision occurred as two vehicle were backing next to each other. One was attempting to back into a parking stall, while the other was backing out to the parking stall next to the other vehicle. The vehicles collided while backing. Damage was estimated at $3,200 and no injuries were reported. Officers responded to an injury accident at Hwy 1 & 4th Street South. This collision occurred when a vehicle travelling east on 4th Street, attempting to cross Hwy 1, failed to yield right of way to a vehicle that was northbound on Hwy 1, colliding with the vehicle in the intersection. Damage was estimated at $25,000 and minor injuries were reported. On Thanksgiving morning, officers responded to a single vehicle accident at Hwy 30 & 10th Ave South. Investigation revealed that a vehicle was eastbound on Hwy 30, approaching the roundabout at 10th Ave S. The vehicle failed to maneuver the roundabout, striking the raised median on west side of the traffic circle, crossing straight across though the raised median center of the roundabout, striking the raised median on the east side of the intersection, before spinning 180 degrees and ending up facing west in the eastbound lane of Hwy 30 east of the roundabout. Investigation revealed the driver of the vehicle was impaired and the driver was arrested for OWI. Damage was estimated at $5,000 and no injuries were reported. The last collision occurred at Hwy on 3rd Street SE, in front of Ace Hardware. This collision occurred when a vehicle was backing onto 3rd Street from a parking spot and collided with a vehicle that was westbound on 3rd Street and approaching the stop sign. Damage was estimated at $5000 and no injuries were reported.

Incidents/Arrest

There were 33 reported incidents in November. Reports included burglary, public intoxication, damage to property, credit card fraud, possession of a controlled substance, theft, OWI, possession of drug paraphernalia, domestic assault, sexual assault, dog bite, harassment, counterfeit currency and arrest warrants. Additionally our office had 7 arrests in November. Arrests occurred for Criminal Mischief 4th

and public intoxication, OWI (3), possession of drug paraphernalia, interference with official acts, possession of controlled substance, and Assault causing bodily injury-domestic abuse.

Community Service:

- The Mount Vernon Masonic Lodge hosted Mount Vernon and Lisbon Police Officers and their families for an appreciation dinner on 11/2/2017
- Chief Shannon met with Sign Committee regarding uptown signage related the Streetscape improvements
- Chief Shannon attended the Linn County Hazard Mitigation Planning meeting in Cedar Rapids on 11/15/2017
- Chief Shannon and Officer Mehlert assisted Cornell provide Violent Intruder training for Cornell College staff
- Chief Shannon attended a Financial Crime meeting with local and Cedar Rapids financial institutions on 11/21/2017

Training

- Officer Blinks is continuing the FTO training and anticipated to complete the training in January.

GTSB

Officers worked 8.5 hours of STEP in November. During this enforcement, officers arrested 2 motorists for OWI, and contacted 1 driver's license violation, 3 equipment violations, 3 other traffic violation, 3 insurance violation, and investigated a motor vehicle collision.

LISBON

Per the 28E agreement our department provided the following service to Lisbon in November 2017:

- Patrol: 2,355 minutes
- Calls for service: 121 minutes (5 calls for service)
- Administrative time: 0

Total time for October: 41.27 hrs x $40/hr = $1,650.67

Respectfully Submitted,

Chief of Police

Mount Vernon
IOWA

Chris Nosbisch, City Administrator
Douglas Shannon, Chief of Police

Jamie A. Hampton, Mayor

Council:
Eric Roudabush
Paul Tuerler
Marty Christensen
Scott Rose
Tom Wieseler

Public Works Report
12/18/17

Right of Way
Tree trimming has finished in the northeast quadrant. Trimming in the southwest quad will start the week of 12/18/17.

Parks
Crews were able to clean leaves out of Memorial Park the week of Magical Night. Crews were also able to clean up around city hall, and Davis Park. They will be back out in the spring to clean up fence lines in our parks along with the city parking lots.

Spring Meadows
The dirt contractor has begun stock piling topsoil for the 1st phase of the development.

City Shops
The crews have started to do some winter clean up at both city shops. The shop on the north end of town has been organized to be more efficient for working on streets equipment and projects. The Elliott Garage is being transformed into a building that is organized for routine maintenance on the parks equipment. We invite anyone who may want a tour of our facilities to stop by. We are more then happy to give a tour.

Equipment
The Streets Department has recently started to undercoat our dump trucks that are exposed to corrosive chemicals during winter maintenance. We are hoping to extend the life expectancy of these very expensive pieces of equipment. Once the project is complete I will provide some before and after pictures of our '06 International dump truck.

Mount Vernon
IOWA

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Eric Roudabush
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Marty Christensen
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Parks and Recreation Department
Directors Report
November 15 – December 15

Parks

- ***Public Works have been performing quite a bit of tree removal of dead, diseased, or dying trees in Nature Park. Our plan is to apply for a Trees Forever grant to start replacing in this area.***

Sports

- ***Boys Basketball registration has started. Grades 3-6 deadline is Dec 18th and Grades 1-2 is Jan 4th.***
- ***Youth Wrestling for ages 4-6 registration going on now. Deadline is Jan 4th.***

Pool

- ***Pool Report…please see attached***

Misc

- ***Magical Night was a huge success. On Dec 15th we will host a Lessons Learned session and evaluate this year's event. Park and Recreation handed out approximately 740 cookies throughout the night. Many thanks to our Park and Rec Board members and to the MV HS Student Council for helping with our cookie decorating event and hats off to the many committee members who continue to make this a success year after year (27 awesome years).***
- ***Holiday Open Gyms Dec 27, 28 and 29 from 12pm-4pm. This is free and open to the public. We will be providing supervision, but we do ask that children under the age of 8 have adult supervision at the Open Gyms.***

POOL 4yr comparison	2013	2014	2015	2016	2017
Dates					
Open Date	5/25/2013	5/24/2014	6/1/2015	6/2/2016	5/27/2017
Close Date	9/2/2013	9/1/2014	9/7/2015	9/5/2016	9/4/2017
Days Fully Closed	15	18	16	2	2
Days Partially Closed	6	23	11	9	8
Staff					
Lifeguards - Part time	7	7	5	6	4
Lifeguards - Full time	13	16	15	15	16
Pool House	18	15	17	18	14
Passes					
NR Family	58	58	55	101	90
NR Double	19	9	9	14	9
NR Single	13	10	13	14	14
Res Family	169	143	144	155	191
Res Double	40	26	26	25	20
Res Single	35	33	31	20	27
Punch Pass	26	28	27	19	13
Total Passes	360	307	305	348	351
Revenue from Passes	$48,420	$41,075	$39,835	$49,845	**$51,915**
Lessons					
NR Lessons	247	259	274	262	241
NR Tadpole	51	61	67	69	61
NR Parent / Infant	7	9	14	8	10
Res Lessons	201	214	264	241	271
Res Tadpole	74	74	52	99	114
Res Parent / Infant	8	8	3	10	21
Private / Semi-Private	119	110	110	152	182
Total Lessons	707	735	735	841	900

Revenue from Lessons	$22,046	$22,760	$24,312	$26,756	**$27,972**
Daily Admiissions					
May	43	73	0	0	211
June	2087	1866	1930	2977	2656
July	3894	2093	2169	1827	2095
August	1097	1139	1211	1171	1223
September	134	10	607	77	201
Total Daily Admission	7.055	5,181	5,917	6,052	6386
Revenue from Daily Adm	$28,220	$20,724	$23,668	$24,208	**$25,544**
Lap Swim (Participants)					
May	1	0	0	0	9
June	25	14	21	62	63
July	45	42	44	54	99
August	22	19	21	60	66
September	3	0	8	5	11
Total Lap Swimmers	96	75	94	181	248
Revenue from Lap Swim	$288	$225	$282	$543	**$744**
Concessions					
May	115	180	0	0	809
June	4995	5758	5619	6,933	6729
July	4875	5247	5916	5,153	4994
August	2232	1647	3627	3,024	3789
September	148	120	495	339	519
Revenue from Conessions	$12,365	$12,946	$15,657	$15,450	**$16,840**
MISC					
Rentals	$1,200	$1,200	$1,110	(10) $2,148	(11) $2,348
Triathlon	$765 (9A / 18 K)	$150 (0A / 6 K)	$460 (6A / 10K)	$624 (5A / 18K)	$625 (6A / 19k)
Swim Diapers	$37.50	$30	$30	$24	$24
Theme Nights	$245	$90	$250	$196	$289

Duplicate Pass				$455	$545
Water Exercise Pass				$1,520	$1,328
Babysitter Pass				$1,170	$1,260
Movie Nights				$312	$412
Special Billed (Cornell,					
Boy Scouts, Solon, etc)	$4,874	$5,484	$4,401	$4,052	$4,152
Revenue from Misc	$6,877	$7,224	$6,251	$10,501	**$10,983**
TOTAL	***$118,216***	***$104,954***	***$110,005***	***$127,303***	***133,998***

- Manager: Katey Forest
- Assistant Manager: Christa Winders and Rick Povey
- Head Lifeguard: Rick Povey

General Information:

Opening Date: Saturday May 27th
Closing Date: September 4th (dog swim September 5th)
Daily Hours:

- Monday-Friday: 12:30-5:00 pm OPEN SWIM
  5:45-6:30 pm ADULT LAP SWIM
  6:30-8:30 pm OPEN SWIM
- Saturday: 11:30-12pm Lap Swim 12:00-5:00 pm OPEN SWIM
- Sunday: 1:00- 8:00 pm OPEN SWIM
- Sunday-Friday: 11:45-12:30pm ADULT LAP SWIM

Special Hours:

- July 4th: 12:30 pm- 5:00 pm
- Heritage Days (July 7): 12:30-5:00 pm OPEN SWIM/ 5:00-5:30 pm ADULT LAP SWIM (Friday only lap swim)
- August 23rd 2-7:30pm Open Swim/7:30-8pm adult lap swim
- Monday-Friday August 24th –September 5th 4-7pm OPEN SWIM/ 7-7:30pm ADULT LAP SWIM (weekend hours remained the same until pool closed on Monday, September 4th)

Swimming Lesson Session Dates:

- Session I: June 5th –June 16th
- Session II: June 19th –June 29th
- Session III: July 3rd – July 14th
- Session IV: July 17th- July 28th(night lessons)
- Saturday lessons May 27th-July 1st

Total Days Fully closed due to weather: 2
Total Days Partially closed due to weather/low attendance: 8

Staff Information:

Lifeguards-
4 Part Time Guards {Average of 5-20 hours per week}
16 Full Time Guards (Including the Head Lifeguard) {Average of 30-40 hours per week}

Pool House Staff-
14 Workers {Average of 20-35 hours per week}

Staff Training-

Meetings held every other Thursday mornings or Tuesday evenings for lifeguards and Monday mornings once a month for pool house.

Staff Evaluations-
Lifeguards received evaluations once a month.

Financial Information:

Daily Admission: $4 per person
Lap Swim Daily Admission: $3
Pass Prices:

- Resident:
  - Single: $90
  - Double: $120
  - Family: $150
  - Babysitter pass: $45
- Non-Resident:
  - Single: $105
  - Double: $135
  - Family: $175

Swimming Lesson Prices:

- Resident:
  - Regular Lessons $35
  - Tadpole Class $27
  - Parent Infant $27
  - Adult Lessons $27
- Non-Resident:
  - Regular Lessons $40
  - Tadpole Class $32
  - Parent Infant $32
  - Adult Lessons $32

Private Lessons $15/30 minute lesson

2017 Financial Summary: (includes SE LINN passes)

Passes Sold	# Sold	Cash Total
Non-Resident Family($175):	90	**$15,750**
Non-Resident Double($135):	9	**$1,215**

Non-Resident Single($105):	14		$1,470
Resident Family($150):	191		$28,650
Resident Double($120):	20		$2,400
Resident Single($90):	27		$2,430
		$51,915	
Total Passes Sold:	**351**	**(increase)**	

2017 Swim Team- 62 participants

Babysitter Pass: 28X$45=$1,260

Water exercise pass:
6 X $100=$600

Water exercise punch pass:
13 X $56= $728

Duplicate passes:
109 X $5=$545

Swimming Lessons Sold	# Sold	Cash Total
Non-Resident Lesson ($40):	241	$9,640
Non-Resident Tadpole ($32):	61	$1,952
Non-Resident Infant ($32):	10	$320
Resident Group Lesson ($35):	271	$9,485
Resident Tadpole Class ($27):	114	$3,078
Resident Parent Infant ($27):	21	$567
Private	142	$2,130
Semi private	**40**	**$800**
Total	900	$45,454 (INCREASE)

Daily Admissions Open Swim	# Patrons	Cash
May	211	$844
June	2656	**$10,624**
July	2095	**$8,380**
August	1223	**$4,892**
September	201	**$804**

Total Daily Revenue 6,386 $25,544 (increase from last year)

Daily Admissions Lap Swim	# Patrons	Cash
May	9	$36
June	63	$189
July	99	$297
August	66	$198
September	11	$33

Total Daily Revenue 248 $744 (increase from last year)

Daily Concession Revenue	Cash
May	$809
June	$6,728.50
July	$4,993.75
August	$3,789.25
September	$518.75

Total Concession Revenue $18,839.25 (increase from last year)

Swim Diapers 16 X $1.50= $24

Pool Rentals 11 = $2,348

Triathlon

19 kids X $25=$475
6 adults X $35= $210
Total Triathlon Revenue= $625 (increase from last year)

Theme Nights Revenue= $288.50

Movie Nights Revenue= $412

Special Billed People Revenue not added in to daily revenue (Cornell, Lisbon and Solon daycares) =$4,152

Recommendations for Summer 2018

1. New signs

2. Rules on daycare pricing/billing
3. Bracelets for swimming designated areas
4. PA system

L. Discussion Items (No Action)

AGENDA ITEM # L – 1

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Budget
ACTION:	None

SYNOPSIS: This is a placeholder in case the City Council has any questions regarding the process or the current timeline. One item I would ask the Council to consider would be the establishment of two work sessions, one in January and one in February (if needed). After this Council meeting, we will have five regular Council meetings left prior to the required adoption date for the budget. The CIP will be updated and released as soon as the priorities are received from Pat Callahan.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: None

ATTACHMENTS: None

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

AGENDA ITEM # L – 2

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Excessive Water Bill
ACTION:	None

SYNOPSIS: It is staff's understanding that Myrt Bowers will be in attendance to describe her situation further (I had previously forwarded an email to you from Myrt). The first bill the Bowers received during their water leak was approximately $1,040 and their following month's bill is estimated to be just over $2,400. In talking to staff, there was a previous Council effort to seek volunteer donations from citizens in an effort to create a fund that could be utilized in these situations. Unfortunately, no one donated to the effort and the program never got off the ground. One item of note, if a program is instituted it must become a citywide standard for all utility users. I will be able to discuss more possibilities at the meeting.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: City Administrator

MAYOR/COUNCIL ACTION: None

ATTACHMENTS: None

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

AGENDA ITEM # L – 3

AGENDA INFORMATION
MT. VERNON CITY COUNCIL COMMUNICATION

DATE:	December 18, 2017
AGENDA ITEM:	Fiber to the Home Options
ACTION:	None

SYNOPSIS: Councilperson Christensen has been exploring possibilities for providing alternative fiber options to the City of Mt. Vernon. I have attached three documents that were provided by Councilperson Christensen as it relates to fiber and connectivity in smaller communities.

BUDGET ITEM: N/A

RESPONSIBLE DEPARTMENT: Council

MAYOR/COUNCIL ACTION: None

ATTACHMENTS: Supporting Articles

PREPARED BY: Chris Nosbisch **DATE PREPARED:** 12/15/17

ONE NATION, DIVISIBLE

Jeanne Wilson Johnson drives 4 miles from her 420-acre farm to a gas station in Caledonia, Mo., for better internet service.

RURAL AMERICA IS STRANDED IN THE DIAL-UP AGE

High costs and lack of access to broadband service prevent residents of far-flung communities from joining the modern economy

By Jennifer Levitz and Valerie Bauerlein | Photographs by Nick Schnelle for The Wall Street Journal

CALEDONIA, Mo.— Jeanne Wilson Johnson raises sheep and angora goats, and to sell the wool and mohair online she drives 4 miles to the parking lot of Roy's gas station, the closest spot for decent internet access.

At her 420-acre farm, Ms. Johnson pays $170 a month for a satellite internet service too slow to upload photos, much less conduct business.

As in many rural communities, broadband here lags behind in both speed and available connections. Federal data shows only a fraction of Washington County's 25,000 residents, including Ms. Johnson, have internet service fast enough to stream videos or access the cloud, activities that residents 80 miles away in St. Louis take for granted.

"We don't feel like we're worth it," said Ms. Johnson, 60 years old.

Jeanne Johnson, right, trims wool from a sheep with help from Virginia Lachance at Ms. Johnson's property in Caledonia, Mo.

Delivering up-to-date broadband service to distant reaches of the U.S. would cost hundreds of billions of dollars, experts estimate, an expense government, industry and consumers haven't been willing to pay.

In many rural communities, where available broadband speed and capacity barely surpass old-fashioned dial-up connections, residents sacrifice not only their online pastimes but also chances at a better living. In a generation, the travails of small-town America have overtaken the ills of the city, and this technology disconnect is both a cause and a symptom.

Counties without modern internet connections can't attract new firms, and their isolation discourages the enterprises they have: ranchers who want to buy and sell cattle in online auctions or farmers who could use the internet to monitor crops. Reliance on broadband includes any business that uses high-speed data transmission, spanning banks to insurance firms to factories.

Rural counties with more households connected to broadband had higher incomes and lower unemployment than those with fewer, according to a 2015 study by university researchers in Oklahoma, Mississippi and Texas who compared rural counties before and after getting high-speed internet service.

"Having access to broadband is simply keeping up," said Sharon Strover, a University of Texas professor who studies rural communication. "Not having it means sinking."

Many rural schools have a fraction of internet speeds common at most American campuses. "Sometimes it feels like they get more education, and they get more prepared for their futures than we do," said David Bardol, a 13-year-old sporting a crew cut and Star Wars T-shirt. He attends Kingston Junior High in Cadet, Mo., one of the communities in Washington County.

At the county's 911 center, dispatch director William Goad sometimes loses his connection to the state emergency system. That means dispatchers can't check license plates for police or relay arrest-warrant information.

As severe thunderstorms approached in late February, Mr. Goad tried to keep watch using an internet connection sputtering at speeds too slow to reliably map a tornado touchdown or track weather patterns.

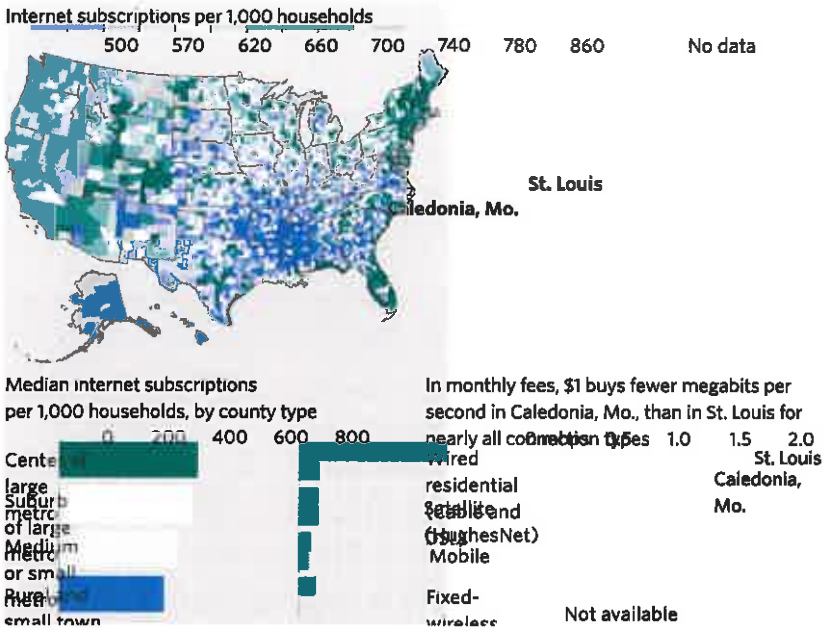
"We drill for oil above the Arctic Circle in some of the worst conditions known to man," Mr. Goad said. "Surely we can drop broadband across the rural areas in the Midwest."

About 39% of the U.S. rural population, or 23 million people, lack access to broadband internet service—defined as "fast" by the Federal Communications Commission—compared with 4% of the urban residents.

Fast service, according to the FCC, means a minimum download speed of 25 megabits per second, a measure of bandwidth known as Mbps. That speed can support email, web surfing, video streaming and graphics for more than one device at once. It is faster than old dial-up connections—typically, less than 1 Mbps—but slower than the 100 Mbps service common in cities.

Rural America Stuck in Time Lag

Sparsely populated parts of the U.S. have less access to broadband internet service, leaving rural communities with wireless alternatives that are slow and expensive.



*Average of four major providers. Monthly download caps vary for each. Notes: Subscriptions are defined as fixed internet connections of over 200 kbps in at least one direction; figures as of June 30, 2016.

Graphics by Andrew Van Dam and Kathryn Tam Sources: Federal Communications Commission (subscription ratio); BroadbandNow (advertised connection speeds and costs)

The intersection of Missouri state highways 8 and 21 in Potosi, Mo.

In St. Louis, speeds as fast as 100 Mbps start at about $45 a month, according to BroadbandNow, a data research company. Statewide, an estimated 61% of rural residents lack broadband access.

Expanding rural broadband is a priority of FCC Chairman Ajit Pai, who grew up in Parsons, Kan., population 9,900. "If you don't have a digital connection, you are less likely to be able to succeed," he said.

At a weekly gathering of wool producers at a 1930s-era Craftsman-style bungalow, Ms. Johnson and others snacked on local goat cheese and deer sausage. They talked about internet sites for buying and selling raw mohair, mohair locks and mohair yarn—of which they have a bounty.

But with limited internet service, Virginia LaChance, who keeps sheep and spins wool, said, "We're not in competition with them. That's the problem."

Costly connections

Rural America can't seem to afford broadband: Too few customers are spread over too great a distance. The gold standard is fiber-optic service, but rural internet providers say they can't invest in door-to-door connections with such a limited number of subscribers.

St. Louis has more than 5,000 people per square mile compared with 33 in Washington County, according to U.S. Census figures.

ONE NATION, DIVISIBLE

- Rural America Is the New 'Inner City'
- Struggling Americans Once Sought Greener Pastures—Now They're Stuck
- Rural America's Childbirth Crisis: The Fight to Save Whitney Brown

Fiber-optic trunk lines already make up much of the U.S. internet backbone. The trouble is reaching individual rural customers. It costs roughly $30,000 a mile to install optical fiber cable, according to industry estimates, to trench and secure right-of-way access.

Most rural communities rely on existing telephone technology that transmits data over copper lines. Even with upgrades, those lines can't deliver data at speeds common to fiber-optic networks.

Smartphone service is available but has coverage gaps and isn't always reliable in rural communities such as Washington County. Even when it works, cell service can't match the speed or capacity of broadband. "You just can't compete," said Brian Whitacre, an agricultural economics professor at Oklahoma State University. "Running a business with a smartphone is not going to happen."

Alternative internet technologies—satellite dish or fixed wireless, which uses cellular networks to beam data short distances using antennas and transmitters—struggle to handle video streaming or other high-data uses. Those services also typically cap the amount of data used each month.

The 25-bed Washington County Memorial Hospital, which has service of 10 Mbps, loses internet connections often enough that ambulance drivers are told to divert critical patients, whose CT scans are transmitted to specialists, to a hospital 40 minutes away, said Michele Meyer, the county's interim chief executive.

The city clerk in Irondale, who is connected to the internet through existing copper lines, can't attach financial reports to email because it is so slow.

The Red Wing Shoe Company's factory in Potosi, which invested in a fiber-optic line, lost internet service for 30 hours last summer and again in May, outages that delayed shipment of more than 10,000 pairs. The company couldn't access inventory or print stickers for shoeboxes, said John Gardner, the plant manager: "It brought us to our knees." Red Wing's other U.S. factories have backup internet providers, a company spokesman said.

Boots on the production line at the Red Wing Shoe factory in Potosi, Mo.

Such dependence illustrates how broadband has become a basic service alongside telephones and electricity, said Bonnie Prigge, executive director of the Meramec Regional Planning Commission, which aids economic development in eight rural Missouri counties including Washington. Installation of those utilities in the 20th century, she said, took investment and special effort.

In 1935, when just 10% of rural America had electricity, President Franklin D. Roosevelt pledged to get service to almost every far-flung farm. Two decades later, electrification had reached more than 90% of rural areas, said Richard Hirsh, a history professor at Virginia Tech.

By the end of 1954, a federal program had lent $2.9 billion, typically to farmers who formed cooperatives to build and operate electricity systems, said Christopher McLean, of the Agriculture Department: "It's one of the most amazing American success stories ever."

Some lawmakers are pressing the Trump administration to include rural broadband in an anticipated $1 trillion infrastructure package. The White House hasn't said how any such projects might be funded.

"Rural broadband, we need that quite honestly more than we need roads and bridges in many of the counties I represent," U.S. Rep. Austin Scott (R., Ga.) said at a May 17 House committee hearing on the rural economy.

Secretary of Agriculture Sonny Perdue said broadband connectivity should be seen as the "roads, sewers and water" of the modern age. "The good news is, this is square on the radar scope of the president," he said at the hearing.

Mr. Pai, President Donald Trump's FCC chairman, said rural broadband should be included in the expected infrastructure package. He would like to boost subsidies, rewrite regulations to cut red tape and accelerate the FCC's own processes, he said, which have slowed access to rural broadband.

The Obama administration earmarked $7 billion from the 2009 stimulus package for expanding rural broadband service. Half the money went to a program that the administration estimated would reach 840,000 households and businesses, according to a 2014 review by the Government Accountability Office. There still isn't a tally of how many were connected and at what speeds, government officials said.

Missouri broadband providers received $261 million of the stimulus money. "The intent was to spread accessibility throughout the state," said Luke Holtschneider, the state's Rural Development Manager. "But that program did not on its own continue to expand in the community like you would hope."

Big River Communications, a St. Louis telecommunications provider, collected about $20 million in stimulus money—half in grants, half in loans—to connect parts of southeast Missouri, including Washington County.

The company set up a tent at the Dickey Bub farming supply store in Potosi, the Washington County seat, and gave away hot dogs to potential subscribers. Plans started at $14.99 a month for students, seniors and low-income households. But the project didn't quite pan out, said Krista Snyder, executive director of the Washington County Industrial Development Authority.

Big River built a wireless network to transfer data between company towers and devices installed at homes and businesses. The technology is much slower than fiber-optic systems but better than dial-up service, said Big River President Kevin Cantwell.

The $14.99 promotion rose to monthly prices that range from $49.99 on a limited data plan to $99.99 for unlimited use. The prices are for "high-speed" connections—typically at speeds from 2 Mbps and 7 Mbps, the company said.

Big River estimated it would reach 52,000 homes and businesses with its share of the stimulus money. Nearly five years after its first tower began operation it has 4,000 subscribers in seven counties but is trying for more.

"I just want to know what happened to all the money and grant and things," said Ms. Johnson, the sheep farmer. "We didn't see any benefits."

Mr. Cantwell said parts of Washington County are too thinly populated—and, therefore, too expensive—to reach. "It wasn't a slight to anybody, but we have to pay the government back and be able to provide for our employees," he said. "We've got to make some money."

Jeanne Johnson pets a sheep at her farm in Caledonia, Mo.

Ronnie Trent, a 44-year-old electrician in Washington County, said more people would sign up if the service was better. "There are enough people out here who are hardworking people who pay their bills and who would pay for that," he said, but the speeds are "pretty much terrible." He subscribes, but his wife, a schoolteacher, finds it is too slow to work at home in the evenings.

Self-serve systems

Some rural communities have successfully done the job themselves.

In central Missouri, Co-Mo Electric Cooperative, Inc., a not-for-profit, customer-owned co-op formed in 1939 to deliver electricity, started a fiber-optic network that has built connections to 25,000 members in a region more sparsely populated than Washington County. So far, it has 15,000 subscribers, including non-members in neighboring communities..

Co-Mo's members, which include farms and businesses, realized they were falling behind, said John Schuster, board chairman of Co-Mo Connect, the internet service. Residents had to drive to the parking lot of a community college to work online. Students at local schools were cut off from the internet.

A fiber enclosure on a power pole belonging to the Co-Mo Electric Cooperative, Inc. in Smithton, Mo. The co-op started a customer-owned subsidiary that operates a fiber-optic broadband network that so far has more than 15,000 subscribers. Travis Bockoven, a contractor, below left, buries fiber cable connecting to a home in Windsor Place, Mo. Rolls of fiber cable at the co-op's headquarters in Tipton, Mo. *PHOTOS: NICK SCHNELLE FOR THE WALL STREET JOURNAL*

The cooperative, after failing to obtain government subsidies, borrowed $80 million from two private institutions that serve utilities and went door to door asking members to contribute $100 each. In 1939, the co-op asked each member to contribute $5 toward electrification.

Rather than only digging trenches for fiber-optic cable, Co-Mo strung cable along its own utility poles and rented space on others. An estimated 70% of Co-Mo internet subscribers have 100 Mbps service that costs $49.95 a month, Mr. Schuster said.

The co-op's internet service is doing well financially, Mr. Schuster said, but "the definition of making money for me and for a shareholder from AT&T is going to be two different things."

Such local broadband systems are tough to duplicate. Nearly all government subsidies go to major telecommunication providers, a legacy of the FCC's

long relationship with phone companies, said Jonathan Chambers, a former FCC strategic planning chief, now a consultant to cooperatives.

Mr. Pai, the agency chairman, said the next phase of FCC subsidies would be open to all types of providers.

While some rural communities have built their own systems, laws in at least 19 states restrict such efforts, generally on the grounds they pose a threat to private companies. A GOP-sponsored bill that set up obstacles to similar broadband efforts stalled this spring in the Missouri legislature.

Every other Thursday, Dr. Stuart Higano, a cardiologist from Missouri Baptist Medical Center in St. Louis, visits the family practice office of Gregory Terpstra in Potosi, Mo., to see patients.

Darrell Dostal, left, talks about his leg pain with Dr. Gregory Terpstra in Potosi, Mo.

The office has internet service at 10 Mbps from CenturyLink Inc., too slow for Dr. Higano to efficiently connect with the database at his hospital to access patient records or view heart images. "Everything in medicine now is electronic medical records," he said.

Dr. Terpstra, age 69, now has a copper line that connects his office to the fiber-optic cable that runs through town. To get a faster and more reliable connection, CenturyLink said it would have to install 1,000 feet of fiber-optic line to his office and charge the higher monthly fee.

Earlier this year, Dr. Terpstra, dressed in a bow tie and white coat, said he got a quote for fiber-optic service that ranged from $563 a month for 20 Mbps to $1,190 a month for 200 Mbps.

"Does that sound like a good deal?" he said.

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One Nation, Divisible | Rural America Is Stranded in the Dial-Up Age

By Jennifer Levitz and Valerie Bauerlein | Photographs by Nick Schnelle for The Wall Street Journal

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Measuring Broadband's Economic Impact

Final Report

Prepared for the U.S. Department of Commerce, Economic Development Administration

National Technical Assistance, Training, Research, and Evaluation Project #99-07-13829

February, 2006

Measuring the Economic Impact of Broadband Deployment

Final Report
National Technical Assistance, Training, Research, and Evaluation Project #99-07-13829

Submitted to
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U.S Department of Commerce
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Washington, DC 20230

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Executive Summary

Does broadband Internet access matter to the U.S. economy? Given how recently broadband has been adopted, little empirical research has investigated its economic impact. The analysis presented in this report represents a first attempt to measure the impact of already-deployed broadband technologies by applying controlled econometric techniques to data on broadband availability and economic performance for the entire U.S. In other words, this study differs from others in its definition of broadband as a here-and-now technology, its use of controlled statistical techniques, and its geographic scope encompassing the entire U.S. **The results support the view that broadband access does enhance economic growth and performance, and that the assumed economic impacts of broadband are real and measurable.**

We find that between 1998 and 2002, communities in which mass-market broadband was available by December 1999 experienced more rapid growth in employment, the number of businesses overall, and businesses in IT-intensive sectors, relative to comparable communities without broadband at that time. The analysis did not find a statistically significant impact of broadband on the average level of wages; however, the effects of broadband availability by 1999 can also be observed in higher property values in 2000.

These conclusions are based on a cross-sectional panel data set of communities across the United States, segmented by zip code, that we constructed and analyzed for this project. The data set matches broadband availability data from the Federal Communications Commission's Form 477 with demographic and other economic data from the U.S. Population Censuses and Business Establishment Surveys. The analysis differentiated 22,390 zip codes by their broadband availability as of December 1999, then compared economic indicators over a long enough period to see if consistent deviations from the secular trend were observable, while controlling for community-level factors known to influence broadband availability and economic activity, such as income, education levels, and urban vs. rural location.

The analysis reported in this study is necessarily preliminary; additional data and experience are needed to confirm broadband's impacts on the economy. The magnitude of impacts estimated by our models are larger than we expected, and given the many data limitations present at this early stage of the broadband transition, cautious optimism is advised in interpreting the numerical estimates. Economic development practitioners and government policy makers can contribute to the refinement of these results by participating in activities and programs designed to improve the availability of localized data on broadband usage and other economic indicators.

For most of the impacts studied here to appear, broadband had to be used, not just available. The implication for economic development professionals is that a portfolio of broadband-related policy interventions that is reasonably balanced (i.e., also pays attention to demand-side issues such as training) is more likely to lead to positive economic outcomes than a single-minded focus on availability.

The positive direction of broadband's impacts was found to be robust across the different models tested at the zip code level, including models of economically distressed areas such as the Appalachian region. Our findings thus support the conclusion that broadband positively affects economic activity in ways that are consistent with the qualitative stories told by broadband advocates. Economic development practitioners who have been spending their time or money promoting broadband have indeed been engaged in a worthwhile pursuit. Many significant programs are in place or under consideration at the federal, state, and local levels to ensure competitive availability of broadband to all U.S. citizens, stimulate ongoing investment in broadband infrastructure, and facilitate the education and training that small business and residential customers need to make effective use of broadband's capabilities. Such policies are indeed aimed at important goals. Broadband is clearly related to economic well-being and is thus a critical component of our national communications infrastructure.

Does broadband Internet access matter to the U.S. economy, and if so, how much?

Empirical estimates of broadband's impact are an important input to investment decisions related to economic development. Such estimates can, for example, help predict potential benefits obtainable from government investments that directly or indirectly subsidize broadband deployment or use. Examples of such investments – in place or proposed at the federal and state levels – include targeting of Universal Service Funds toward broadband; the broadband loan program of the U.S. Department of Agriculture; digital divide grants; and technology-led economic development programs. At the level of local government, an estimate of broadband's likely impact can inform a community's evaluation of the case for public sector investment in broadband-related programs.

The analysis presented in this report represents a first attempt to measure the impact of *already-deployed broadband technologies* by applying *controlled econometric techniques* to data on broadband availability and economic performance *for the entire U.S.* The results support the view that broadband access *does* enhance economic growth and performance, and that the assumed economic impacts of broadband are real and measurable. Economic development professionals who have been spending their time or money promoting broadband have indeed been engaged in a worthwhile pursuit.

Results

The analysis conducted for this study found that between 1998 and 2002, communities in which mass-market broadband was available by December 1999 experienced more rapid growth in employment, the number of businesses overall, and businesses in IT-intensive sectors, relative to comparable communities without broadband at that time.

The analysis did not find a statistically significant impact of broadband on the average level of wages; however, the effects of broadband availability by 1999 can also be observed in higher property values in 2000.

Empirical estimates of the magnitude of these impacts are shown in Table 1. Broadband's impact on the number of jobs and business establishments was particularly large relative to our expectations. While increases on the order of 1% may not appear large at first glance, in fact these figures represent increments to growth rates that are typically in the single digits. For example, in the overall sample of communities we tested, jobs grew on average by only 5.2% between 1998 and 2002. Thus even a 1% increase attributable to broadband represents a noticeably large impact.

These conclusions are based on a data set that we constructed and analyzed for this project, drawn from the sources shown in Table 2. The essence of the study's design was to differentiate geographic areas by their availability or use of broadband, then compare economic indicators for these areas over a long enough period to see if consistent deviations from the secular trend were observable, controlling for other factors known to distinguish among the areas. As discussed further below and in Appendix IV, both state- and zip-code-level analyses were conducted, but only the zip-code-level analysis yielded meaningful results.

The remainder of this report proceeds as follows. We begin with an overview of the research challenges involved in measuring broadband's impact at this early stage of transition to this new form of communications infrastructure. In this context we explain how broadband is defined and measured for the purposes of the analysis, and how the present study builds on and extends previous related work.

We then provide an overview of the methods we used to arrive at the results presented in Table 1. We discuss the

Table 1: Estimated Magnitude of Broadband's Impacts[1]

Economic Indicator	Results
Employment (Jobs)	Broadband added about 1-1.4% to growth rate, 1998-2002
Business Establishments (Proxy for Number of Firms)	Broadband added about 0.5-1.2% to growth rate, 1998-2002
Housing Rents (Proxy for property values)	More than 6% higher in 2000 in zip codes where broadband available by 1999
Industry Mix	Broadband added about 0.3-0.6% to share of establishments in IT-intensive sectors, 1998-2002
	Broadband reduced share of small (<10 employees) establishments by about 1.3-1.6%, 1998-2002

Table 2: Data Sources

Type of Data	Description	Availability	Source
Business Activity Indicators	Used for employment, establishments, wages (payroll), industry sector and size mix. Reported at zip code level; aggregated for state-level analysis.	Collected annually; most recent data from 2002. Industry sectors coded by SIC (1994-7) and NAICS (1998-2002).	U.S. Census Bureau -ZIP Code Business Patterns (ZCBP)[2]
Demographic Indicators / Controls	Used for income, rent, educational attainment, and # of households. Reported at both zip code and state level. Also used to compute % of population in urban areas for state-level analysis.	Collected every 10 years; most recent data from 2000.	(1) U.S. Census Bureau - 2000 Decennial Census (2) GeoLytics – CensusCD ("1990 Long form in 2000 boundaries")[3]
Geographic Controls	Used to indicate how urban or rural a zip code is, based on its population and proximity to metropolitan areas.	Computed every 10 years; most recent coding from 2003.	Economic Research Service, U.S. Department of Agriculture - Urban Influence Code (UIC)[4]
Broadband Metrics	Reports number of high-speed Internet providers by zip code, and number of lines in service by state.	Collected every 6 months (end of June and December) since 12/1999.	U.S. Federal Communications Commission - Form 477 databases[5]

hypotheses we formulated and the approaches we used for testing them statistically against the available data.

The body of the report concludes with a discussion of the implications of our results for broadband-related economic development policies.

Further details are incorporated into five appendices, the first of which provides biographical details for the authors. Appendix II provides further detail on data issues, including limitations imposed by the data sources available for use in the study. Appendix III specifies the econometric models used for the analyses. Appendix IV provides tables with all of the detailed regressions results and discusses their interpretation.

Finally, Appendix V discusses the results of applying the techniques developed in this study to the Appalachian Region, as a test of whether broadband has differential impacts in areas that are more economically distressed. This regional analysis finds positive directions of economic impact that are consistent with the nationally scoped study. In particular, the results suggest that the magnitude of broadband's impacts on employment are even larger in distressed areas. Additional analysis is warranted to understand the sources of this difference.

Research Challenges

Measurement of broadband's economic impacts poses many challenges. Foremost among these is the need to define what is meant by broadband and to develop a corresponding metric for use in the analysis.

While many previous studies have been based on a forward-looking definition of broadband (e.g. access at speeds on the order of 100 Mbps), the empirical nature of the present study dictated a definition consistent with the broadband capabilities that were reasonably widely deployed in the U.S. during the years under study (1998-2002). We therefore found it appropriate to use the Federal Communications Commission's "high-speed" classification to define broadband: any line with a speed higher than 200 Kilobits per second (Kbps) in at least one direction.

Adopting this definition allowed us to use the FCC's Form 477 data – the richest publicly available source we are aware of – to develop broadband metrics suitable for distinguishing among communities. Ideally, we would be able to differentiate by a community's actual use of broadband, since use is a prerequisite for most forms of economic impact. However, the FCC's data limited our metric to broadband availability at the zip code level, because the FCC only reports lines in service (a metric easily converted to penetration) at the state level. Although we do not expect availability to serve as a perfect proxy for broadband use, this metric is the best available at the zip code level.

Other challenges arise from broadband's relative novelty, from the general problems encountered when trying to measure impacts from any type of information technologies, and from the need for localized data. Widespread availability and use of inexpensive, always-on, faster-than-dialup access to the Internet is a relatively recent phenomenon in the U.S.

The first commercial deployments appeared only in the second half of the 1990s. About a third of U.S. households subscribed to broadband by 2004.[6] National economic data is only now becoming available to examine whether broadband actually does act on the economy in ways that have generally been assumed – accelerating growth, expanding productivity, and enhancing the quality of life.

Measuring the economic impact of broadband confronts the same types of measurement challenges that led to the so-called Productivity Paradox of Information Technology (IT), best articulated by economist Robert Solow's famous quip that we see computers everywhere but in the productivity statistics. Broadband does not act on the economy by itself, but in conjunction with other IT (primarily consisting of computers and software during the period studied here) and associated organizational changes. As with computers, the effects of broadband may be strongest in service (i.e. non-farm, non-manufacturing) industries, where productivity improvements are typically less well captured by economic data.

Finally, for many of its hypothesized modes by which broadband might effect the economy, there is no available data which would allow measurement of its impact. Early studies suggested that broadband should make individuals and businesses more productive through behaviors such as online procurement and telecommuting. Data is generally not available, however, to observe these behaviors at the local level across the entire nation.

Relation to Previous Studies of Broadband's Economic Impact

Many of these challenges are reflected in the progression of empirical work to date. The first generation of studies appeared in 2001-2, before broadband had been significantly adopted in the United States. These studies were of necessity hypothetical and forward-looking. As a report from the U.S. Department of Commerce aptly put it at the time: "Because broadband technologies are so new (and continue to evolve), there are no definitive studies of their actual impact on regional economic growth and tech-led economic development. Of course that never prevents economists and technologists from speculating or estimating."[7]

A well-known report from this period was prepared for Verizon by Criterion Economics.[8] It developed several forward-looking models to estimate broadband's economic impact. The study estimated that broadband, acting through changes to consumers' shopping, commuting, home entertainment and health care habits, would contribute an extra $500 billion in GDP by 2006.

Other forward-looking studies from the time include the New Millennium Research Council's estimate of 1.2 million jobs to be created from the construction and use of a nationwide broadband network.[9] Similarly, a Brookings Institution report estimated that failure to improve broadband performance could *restrict* U.S. productivity growth by 1% per year or more.[10]

By 2003, studies started becoming available based on the experiences of individual communities. One was a case study of a municipal fiber network built in 2001 in South Dundas Ontario. It was prepared for the UK's Department of Trade and Industry.[11] Similarly, a study compared Cedar Falls, Iowa, which launched a municipal broadband network in 1997, against its otherwise similar neighboring community of Waterloo.[12]

Each of these studies found positive economic impacts from the local government investment. More recently, Ford and Koutsky compared per capita retail sales growth in Lake County, Florida, which invested in a municipal broadband network that became operational in 2001, against ten Florida counties selected as controls based on their similar retail sales levels prior to Lake County's broadband investment. They found that sales per capita grew almost twice as fast in Lake County compared to the control group.[13]

The present study builds on the foundations laid by these earlier works, but differs along several important dimensions. First, as discussed above, the present study defines broadband by the level of technical capability that was generally deployed in the U.S. during the 1998-2002 period, as measured by the FCC. Second, the study employs a nationwide sample, incorporating more potential for statistical control. Finally, within the sample, the study distinguishes among communities by the availability of any type of broadband by December 1999, regardless of who provides it (e.g. private vs. municipal), with what technology (e.g. cable modem vs. DSL vs. fiber vs. wireless), or with what level of technical capability (e.g. 200 Kbps vs. 100 Mbps).

Hypotheses and Data Availability

Broadband does not act on the economy in isolation, but as a complement to other information technologies. In the pre-2003 period studied here, broadband typically consisted of always-on, faster-than-dialup access to the Internet, with the user's experience typically mediated by software running

on a personal computer. Broadband is a critical enabler for the use of computer-based applications that need to communicate. Adoption of broadband-enabled IT applications can thus affect the economy by changing the behaviors and productivity of both firms and individuals.

Rappoport, Kridel and Taylor demonstrated how the convenience and responsiveness of broadband led people to use it more intensively than its narrowband (dialup) predecessor.[14] Forman, Goldfarb and Greenstein[15] are among those who have focused on changes to firm behavior, finding that these generally lie on a spectrum, with the highest payoffs in enhanced productivity appearing in the firms that commit most intensively to integration of IT into new business processes.

Forman and his colleagues distinguish between IT-using and IT-enhancing firms. The former simply adopt existing Internet applications to make current business processes more productive. The latter develop and integrate more complex e-business applications that can enable whole new business processes and models, such as automated online supply chain management and online sales into geographically distant markets. To the extent that the availability and use of broadband fosters either type of IT adoption and usage by firms, we would expect productivity improvements and other associated economic impacts to follow.

Other studies have focused on the effects of IT on individual workers. IT tends to complement workers that perform non-routine problem-solving and complex communication tasks, but substitutes for workers who perform cognitive and manual tasks that can be accomplished by following explicit rules. While both effects could be expected to increase productivity, the overall effect on employment is ambiguous and would depend on the mix of different types of jobs in the economy.[16]

While much of the IT productivity literature has focused on workplace usage, much of the focus of broadband policy has been on residential deployments. Broadband at home may of course be used for leisure pursuits, but it can also be expected to affect the economy both directly and indirectly.

For many knowledge workers, a residential broadband connection is a prerequisite for working at home (enabling productive use of non-traditional working hours, flexible work arrangements, or remote employment), or for establishment of a home-based business.

Less directly, expanded broadband availability at home may raise the quality of the labor force, for example through improved access to educational opportunities via distance education programs, thus making a locale more attractive to potential employers. Similarly, home-based access may improve quality of life, for example by enabling more participation in community and civic activities, making a locale more attractive to potential residents.

Somewhat more directly, home access may enable online job hunting, thus reducing unemployment by making labor markets more efficient. It may also make workers more productive by reducing the overall time needed for them to fulfill non-work obligations, such as paying bills, shopping, telemedicine, and so forth. As with corporate use of IT, however, the overall effect of home-based broadband usage on local economic indicators is also mixed. While online banking and shopping may make local workers more productive, it is also likely to put competitive pressure on local banks and retail stores, leading to ambiguous effects on the number of local jobs.

Most of these hypothesized impacts are not measurable directly. Broadband availability varies by community, but statistics are not tallied at the community level to measure local output (GDP) or use of capabilities like e-commerce and telemedicine. To create hypotheses testable with available data, we focus instead on how broadband is likely to change other indicators that describe local economies. They include:

- Employment rate, share of high-skilled/high-wage jobs in the community, wage rates, and rate of self-employment.
- Wealth, as measured by personal income, housing values, or rents.
- Quality of the local labor force, as measured by educational attainment, dropout rates, or share of workforce in more skilled jobs.
- Community participation and quality of life as measured by voting participation, mortality rates, or local prices.

Our ability to test this list of indicators was limited by the collection frequency for different types of Census data, and geographic unit limitations for other types of data (for example, voting participation is not tallied by zip code).

For most indicators, it is reasonable to expect that broadband's impacts will be felt only after some time lag. Broadband has to be not only available, but adopted and then used. While the expected length of this process may vary depending on the particular indicator, for most indicators it is not reasonable to expect to see impacts in the most recent

decennial (2000) Census data, given that the FCC's earliest measurement of community broadband availability was taken only at the end of 1999.

This fact limited our ability to test broadband's impacts at the zip-code level on workforce-related indicators such as self-employment, the share of white-collar workers, educational attainment levels, and per capita expenditures on public assistance. We were, however, able to use rent in 2000 as a wealth indicator, justified because only broadband availability (not its actual use) should be sufficient to influence the value of rental housing, and the effect should be immediate.

Despite these limitations on workforce and societal impacts, the use of business Census data (for which 2002 was the most recent available during the time frame of this project) did allow testing of broadband's impacts on five key indicators of business activity:

- Total employment.
- Wages.
- Number of business establishments (used as a rough proxy for number of firms).
- Indicators of industry mix by sector. In particular, we examine broadband's effect on the share of business establishments in IT-intensive industry sectors. This is interesting in its own right because such jobs are about a fifth of all US jobs, but also as a proxy for the skill level of jobs in the community.
- Indicators of establishment mix by size (small vs. large).

Methodology

We used econometric regression analysis of two separate cross-sectional/time-series data sets that we constructed for the purposes of this study. The first of these consisted of state-level data, while the second incorporated data at the zip-code level. In both cases, the essence of the approach was to compare economic outcome measurements in different areas based on when broadband became available in that area (whether state or zip code), while controlling for other factors known to affect broadband availability and levels of local economic activity.

The types of control variables used in the analysis included:

- A time-lagged version of the dependent variable (i.e. the economic outcome metric being tested), as a way to control for the secular growth trend;
- Time-lagged industry composition (the share of firms in IT-intensive industry sectors) to control for factors other than broadband that are likely to affect local economic performance;
- Variables that describe demographic and geographic characteristics of a community such as educational attainment, per capita income, and rural vs. urban (see Table 2); and
- State "dummy variables" included to account for cross-state differences in regulatory environment.

For further discussion of the dependent and control variables used in particular regressions, see Appendices II-V.

While the state-level sample provided some interesting options in selection of variables (e.g. data on penetration of broadband), it proved too coarse a geographic aggregate to produce meaningful results. We discuss the state results in Appendix IV, but our substantive conclusions and empirical estimates are based on our analysis of the zip-code data set.

The construction of the data sets proceeded by matching data on economic activity metrics and controls from the 1990s through 2002 with a broadband metric constructed from the FCC data. For the zip-code analysis, we combined Census data on business activity from the 1990s through 2002, and community demographics through 2000, with a broadband availability indicator developed from the FCC's publicly available Form 477 data.[17] We identify the communities where broadband was available as those that report having broadband in the FCC's Form 477 data for 1999 (Table 3). Since this is the first date for which the FCC

Table 3. Zip Codes with Broadband, December 1999-December 2002.

Broadband Available by Date	Number of Zip Codes	Share of Zip Codes
December-1999	17,683	54.44%
June-2000	2,725	8.39%
December-2000	1,970	6.07%
June-2001	2,026	6.24%
December-2001	910	2.80%
June-2002	957	2.95%
December-2002	894	2.75%
No Broadband by December 2002	5,316	16.37%
Total	32,481	100.00%

Source: the authors, based on data from FCC Form 477 and US Census Bureau's Decennial Census and Zip Code Business Patterns

zip-code-level data is available, it includes communities that have had broadband for a number of years, as well as communities where broadband had become available only recently. For example, the relatively high penetration in 2000 in California, Connecticut, Massachusetts and New York (Table 4) attests to the fact that a number of communities in these states were early broadband adopters. Communities that show up in the Form 477 data in later periods are treated as non-broadband-available communities because we believe that it takes time for the impact of broadband to become available and we would not anticipate being able to see a measurable effect in the 2002 economic data.

Because there is no simple summary statistic with which to measure total economic activity (total output or GDP) by community, we examine a collection of economic variables for which we could reasonably expect to see a measurable impact of broadband (employment, wages, rent, and industry structure or mix as discussed above). For each category of variables, we tested three regression approaches:

1. Impact of broadband at the state level. Although we found these data to be too highly aggregated, and hence, rendered the results uninformative, we discuss these in Appendix IV for completeness and to provide a point of reference with earlier research.

2. Impact of broadband using community (zip-code) level data with instrumental variables.

3. Extend the community-level analysis with a matched sample analysis as the means to control for non-broadband, unobserved effects.

The detailed rationales and methodologies behind each of these approaches are discussed fully in Appendix III.

Table 4: State Level Penetration of Broadband Lines among Residential and Small Establishments Users 2000-2002.

State	2000	2001	2002	State	2000	2001	2002
Alabama	1.60%	5.95%	10.03%	Montana	1.49%	2.67%	4.13%
Alaska	0.20%	16.18%	18.62%	Nebraska	6.70%	9.11%	14.98%
Arizona	6.21%	10.26%	15.26%	Nevada	5.87%	10.73%	15.81%
Arkansas	2.14%	5.16%	7.79%	N.Hampshire	6.87%	10.96%	16.12%
California	8.20%	13.17%	19.96%	New Jersey	6.88%	15.00%	12.91%
Colorado	4.70%	8.19%	13.86%	New Mexico	2.62%	3.46%	6.30%
Connecticut	7.04%	12.43%	20.04%	New York	6.06%	12.77%	21.77%
Delaware	0.68%	6.70%	12.55%	N. Carolina	2.26%	8.46%	14.31%
D.C.	5.03%	9.92%	13.71%	N. Dakota	1.90%	1.68%	6.18%
Florida	3.33%	10.17%	15.92%	Ohio	3.51%	7.47%	12.68%
Georgia	1.98%	9.78%	16.00%	Oklahoma	2.73%	6.64%	11.62%
Hawaii	*	*	*	Oregon	4.34%	8.59%	15.89%
Idaho	2.39%	2.39%	8.77%	Pennsylvania	1.94%	5.84%	9.73%
Illinois	3.60%	6.46%	12.19%	Rhode Island	6.29%	13.06%	17.66%
Indiana	0.88%	3.79%	6.46%	S. Carolina	2.02%	6.32%	11.00%
Iowa	4.27%	6.03%	8.75%	S. Dakota	3.20%	2.45%	4.89%
Kansas	5.40%	10.15%	15.62%	Tennessee	3.04%	8.00%	12.94%
Kentucky	0.69%	2.59%	4.35%	Texas	4.95%	8.81%	14.16%
Louisiana	2.10%	7.71%	12.53%	Utah	3.70%	7.94%	13.39%
Maine	3.67%	6.88%	9.71%	Vermont	2.27%	6.55%	9.36%
Maryland	1.67%	10.15%	14.84%	Virginia	2.68%	8.47%	13.18%
Massachusetts	9.29%	16.24%	21.10%	Washington	6.51%	11.43%	16.01%
Michigan	2.73%	8.80%	13.32%	West Virginia	0.63%	3.56%	8.38%
Minnesota	4.79%	8.32%	14.33%	Wisconsin	2.40%	6.58%	12.80%
Mississippi	0.34%	2.37%	5.96%	Wyoming	*	2.87%	5.61%
Missouri	3.12%	6.47%	9.30%	Total	3.61%	7.91%	12.46%

Source: the authors, based on data from FCC Form 477 and US Census Bureau's Decennial Census and Zip Code Business Patterns

Conclusions

The analysis presented in this paper represents a first attempt to measure broadband's impact by applying controlled econometric techniques to national-scale data. The results support the view that broadband access *does* enhance economic growth and performance, and that the assumed (and oft-touted) economic impacts of broadband are real and measurable.

We find that between 1998 and 2002, communities in which mass-market broadband became available by December 1999 experienced more rapid growth in employment, number of businesses overall, and businesses in IT-intensive sectors. While the available data does not demonstrate statistically significant impacts on wages, the effects of broadband availability by 1999 can also be observed in higher market rates for rental housing (a proxy for property values) in 2000.

Table 1 summarizes the estimated magnitude of impacts resulting from the two analyses we conducted at the zip code level. Both of these analyses control for community-level factors known to affect both broadband availability and economic outcomes, including income, education, and urban vs. rural character.

Given broadband's novelty and associated data limitations, the analysis reported in this study is necessarily preliminary. Additional data and experience are needed to further explore the fundamental questions of how broadband affects the economy. The magnitude of impacts estimated by our models are larger than we expected. In light of the methodological challenges inherent in disentangling causality in any study of the relationships between infrastructure availability and economic development, we interpret our results cautiously. Further research is required to more fully address the causality issue. With this caveat in place, however, our finding of a positive impact of broadband is encouraging, and consistent with the qualitative stories told by broadband advocates.

The analysis presented in this study could be beneficially extended in several ways. One approach would be to use firm-level data to take a more micro-level view of broadband's impacts on the conduct of business within and between enterprises. This approach could be especially valuable for gaining a deeper understanding of broadband's impact on the size of firms and its relation to the growth of particular industry sectors.

Progression to this type of study in the case of broadband would parallel the development of studies on the so-called productivity paradox of IT. In that literature, studies within the firm added valuable insight into factors that interacted with each other to produce economic impact from computerization. Similar results could be expected in a study of broadband's impact since, like computers in general, we do not expect broadband to act in isolation to enhance productivity, but rather to act as part of a constellation of factors including related information technologies, innovative business practices, and more flexible organizational structures. The present study is relatively crude in attempting to relate broadband availability directly to economic performance. Futures studies could examine more intervening variables and concomitant investments to better characterize the firms and individuals who adopt broadband and realize its benefits.

Ultimately, the case for broadband as a cause of positive economic outcomes will rely on the accumulated results of many studies conducted using a variety of approaches. The passage of time will make more and different forms of data available, enabling the application of additional rigorous methodological approaches to the estimation of broadband's impact. New business census data will become available annually, and data in the next decennial census (2010) will make it feasible to look at broadband's impact on workforce-related indicators such as self-employment and the share of white-collar workers. The spread of broadband (and related data collection) in more countries will make cross-national impact studies more feasible over time. In addition, recent enhancements in the broadband availability data collected by the FCC through Form 477 will eventually make it possible to test for variations in impact based on different levels of broadband (e.g. "big" broadband such as fiber-to-the-home vs. "little" broadband such as DSL) supplied in any given area.[18]

The present study has several clear implications for economic development practitioners. The most obvious and important implication is that broadband *does* matter to the economy. Practitioners who have been spending their time or money promoting broadband should take comfort that their efforts and investments are not in vain.

Many significant public policy reforms and programs are in place or under consideration at the federal, state, and local levels to ensure competitive availability of broadband to all U.S. citizens, stimulate ongoing investment in broadband infrastructure, and facilitate the education and training that small business and residential customers need to make effective use of broadband's capabilities. Such policies are indeed aimed at important goals. Broadband is clearly related to

economic well-being and is thus a critical component of our national communications infrastructure.

Local policymakers in particular may wish to understand whether the economic advantages conferred by broadband are temporary (i.e. growth in the early have communities came at the expense of the early have nots) or longer-lasting (i.e. broadband stimulated growth of the overall economic pie). If the advantages are temporary, then the benefits to be gained from local public investments to speed broadband availability will be muted once neighboring communities catch up.

On the other hand, if broadband affects the base growth rate of the local economy, then the benefits from getting it sooner will continue to compound into the future. Because the present study only looks at one time period, it cannot address this important question directly. The results of our study can be seen as consistent with either hypothesis. Once broadband is available to most of the country, differences in economic outcomes are likely to depend more on how broadband is used than on its basic availability.

The implication for economic development professionals is that a portfolio of broadband-related policy interventions that is reasonably balanced (i.e., also pays attention to demand-side issues such as training) is more likely to lead to positive economic outcomes than a single-minded focus on availability.

Finally, the present study highlights the fundamental role that government data plays in shaping our understanding of how communications technologies and policies relate to national economic performance. As discussed above, public data about broadband focuses primarily on the supply side (availability), especially at the local level. Economic performance, however, also depends on demand-side factors such as broadband adoption and use. Such factors are of course competitively sensitive.

Given how important broadband appears to be to the economy, however, the time has come for policy makers to engage in a dialogue with industry and develop reasonable ways to measure more of the broadband indicators that matter.

Acknowledgments

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The revised version of the academic paper originally presented at TPRC 2005 is available at http://cfp.mit.edu/groups/broadband/docs/2005/MeasuringBB_EconImpact.pdf.

Endnotes

[1] Based on results found to be statistically significant at the 90% level or above, for the two types of controlled zip-code-level analyses described below in the Methodology section (except for the rent result, for which only one of the zip-code-level analyses proved applicable). Controls consist of community-level factors known to affect both broadband availability and economic outcomes, including income, education, and urban vs. rural character. Appendix IV lists all the regression results and discusses them in detail.

[2] See http://www.census.gov/epcd/www/zbp_base.html

[3] See http://www.census.gov/main/www/cen2000.html for data from the US Census Bureau, and http://www.geolytics.com/USCensus,Census-1990-Long-Form-2000-Boundaries,Products.asp for GeoLytics data. Use of the GeoLytics CD simplified the matching and aggregation of data for changes across zip codes between 1990 and 2000.

[4] See http://www.ers.usda.gov/Data/UrbanInfluenceCodes/ . The rationale for the UIC is based on growth-pole and central place theory, and the effect that an area's geographic context has on its development, as discussed in Parr (1973), North (1975), and Polenske (1988).

[5] These data and reports are available at http://www.fcc.gov/wcb/iatd/comp.html

[6] These estimates are based on 2004 U.S. penetration estimates from the Pew Internet Project, Nielsen/Net Ratings, eMarketer, the OECD, ITU, and FCC, and the authors' calculations based on the varying figures reported by these organizations.

[7] U.S. Department of Commerce (2002), Understanding Broadband Demand: a Review of Critical Issues, Technology Administration, Office of Technology Policy, available at http://www.ta.doc.gov/reports/TechPolicy/Broadband_020921.pdf.

[8] Crandall, R. and C. Jackson (2001), The $500 Billion Opportunity: The Potential Economic Benefit of Wide-spread Diffusion of Broadband Internet Access, mimeo, Criterion Economics, Washington, DC.

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[12] Kelley, D. J. (2003), A Study of the Economic and Community Benefits of Cedar Falls, Iowa's Municipal Telecommunications Network, available at http://www.iprovo.net/projectInfoDocs/economicAndCommunityBenefitsStudy.pdf. Summarized and updated in Broadband Properties Magazine, www.broadbandproperties.com, May, 2005.

[13] Ford, G. and Koutsky, T., 2005. Broadband and Economic Development: a municipal case study from Florida. http://www.publicpower.com/telecom_study/municipal_broadband_&_economic_development.pdf last visited on August 26, 2005.

[14] Rappoport, P., Kridel, D. and Taylor, L. (2002), "The Demand for Broadband: Access, Content, and the Value of Time," in Crandall, Robert and James Alleman (eds.), in Broadband: Should we regulate high-speed Internet access?, Brookings Institution Press: Washington, DC, available at http://www.aeibrookings.org/publications/abstract.php?pid=301.

[15] Forman, C., Goldfarb, A. and Greenstein, S. (2005), "Geographic Location and the Diffusion of Internet Technology," Electronic Commerce Research and Applications (4):1–113.

[16] Autor, D., Levy, F., and Murnane, R. (2003) "The Skill Content of the Technology Change," Quarterly Journal of Economics, November, Vol. 118, No. 4, pp. 1279–1333.

[17] This data reports broadband available from all types of providers, and does not distinguish between public- vs. private-sector provision, or among broadband technologies. The data also reports the number of providers in each zip code, in a limited way: the number of broadband operators who provide service in a zip code is listed if the number is four or more, and replaced with an asterisk (*) if the number is between one and three. Because of this limitation, this study does not use competitive information in its broadband indicator.

[18] In November 2004, the FCC revised the Form 477 reporting requirements and extended the data collection program for five more years. The new rules apply to data as of June 30, 2005, reported on Form 477 as of September 1, 2005. Under the new rules, all facilities-based providers will have to report their broadband deployments regardless of their reach or size, and provide more detailed information on speed and types of services offered. By removing the 250 lines threshold that previously exempted small-scale carriers from providing information, this change will address one of the two reporting issues that led to particularly unreliable data in rural areas, as discussed above. Further information about the revised reporting requirements is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-254115A1.pdf, http://www.fcc.gov/broadband/data.html, and http://www.fcc.gov/formpage.html#477.

Appendix I: Author Biographies

This appendix provides brief biographies of the report's authors.

WILLIAM LEHR (wlehr@mit.edu) is a Research Associate at the Massachusetts Institute of Technology (MIT) where he participates in the multidisciplinary research of the MIT Communications Futures Program (http://cfp.mit.edu). Dr. Lehr's research focuses on the economics of the Internet infrastructure industry, in particular the interrelationship between the evolution of Internet technology and industry structure, public policy, and competitive strategy. In recent years, he has focused on developments in last-mile access networks, including wired and wireless broadband. He is a frequent speaker at international conferences on telecommunications policy and business, teaches courses on eCommerce, Internet economics, and telecommunications economics and policy, and publishes regularly on matters related to his research. Over the past 15 years, he has been an active participant in the research program of the Columbia Institute of Tele-Information at Columbia University and in the Research Program on Internet and Telecoms Convergence at MIT. In addition, Dr. Lehr provides consulting services to private and government policymakers in the United States and abroad on matters related to the ICT industries. Dr. Lehr holds a PhD in Economics from Stanford (1992), an MBA from the Wharton Graduate School (1985), and MSE (1984), BS (1979) and BA (1979) degrees from the University of Pennsylvania.

SHARON EISNER GILLETT (sharoneg@mit.edu) is a Principal Research Associate at the Massachusetts Institute of Technology (MIT) and co-chair of the Broadband Working Group of MIT's Communications Futures Program. Her research and industry outreach work focuses on how emerging technologies, public policies, and business imperatives interact in broadband access networks, both wired and wireless. Sharon teaches courses at MIT and Cambridge (UK) on communications policy, and has published numerous articles, most recently focusing on municipal broadband and economic impact. Her previous experience includes software development and project management in computer networking at Bolt, Beranek & Newman, Inc. and at Thinking Machines Corporation. She received her MBA and MS in Technology and Policy from MIT (1995), and her AB in Physics from Harvard (1982).

MARVIN SIRBU (sirbu@cmu.edu) is a Professor of Engineering and Public Policy, Industrial Administration, and Electrical and Computer Engineering at Carnegie Mellon University (CMU). Professor Sirbu's interests are in telecommunications and information technology, policy and management. His work is concerned with how new communications technology impacts both public regulation and corporate decision making, and conversely how public policy influences the development of new information technologies. In 1989 he founded the Information Networking Institute at CMU, which is concerned with interdisciplinary research and education at the intersection of telecommunications, computing, business and policy studies.

For more than 20 years, Professor Sirbu has conducted in-depth studies of the economics of local access technologies and their competitive impact, including cable, wireless, DSL and fiber to the user. This work has been funded variously by Verizon, Bellcore, General Instruments, and the MIT ITC consortium of companies.

Dr. Sirbu has served on the boards of the Telecommunications Policy Research Conference and two telecommunications companies, and as a member of the FCC Technological Advisory Committee where he chaired the subcommittee on local access. He has also served on numerous panels for the National Research Council and the Office of Technology Assessment.

Dr. Sirbu received an Sc.D. in Electrical Engineering (1973), an S.M. in Electrical Engineering (1968), an S.B. in Mathematics (1967), and an S.B. in Electrical Engineering (1966) from the Massachusetts Institute of Technology.

CARLOS OSORIO (cosorio@mit.edu) is a Doctoral Candidate in Engineering Systems at the Massachusetts Institute of Technology (MIT) and a graduate research assistant with MIT's Communications Futures Program. His research focuses on technology and productivity, with special emphasis on broadband deployment and effects from the architectural evolution of engineering systems. He holds a M.Sc. in Technology and Policy from MIT, a Master in Public Policy from Harvard University, and a B.Sc. in Industrial Engineering and Engineer Degree from the University of Chile.

Appendix II: Data Limitations

This appendix discusses in more detail the limitations of the data sets used for the analysis: the FCC's data on broadband deployment, and Census data on economic activity in businesses (Zip Code Business Patterns) and households (Decennial Census). We also discuss the measure of penetration used for the state-level regressions. The appendix concludes with a discussion of the issues raised by the need to match observations across these different sources of data.

FCC Data on Broadband Deployment

A key component of our analysis is data on the availability of broadband services. Ideally, we would have liked to have had time-series data on the use of broadband, rather than just its availability. Unfortunately, the best publicly available data is from the FCC which has published data on broadband availability every six month, by zip code, starting in December 1999. This data is collected by the FCC via Form 477 and is available from the FCC's website (http://www.fcc.gov). After considering various options for using this data, we elected to code communities as either "having broadband" or "not having broadband" based on whether broadband was available in the community as of December 1999. There were several reasons for why we did this:

- **Timing of initial data collection:** The first available data collection reports broadband availability by December 1999. By this time, however, the FCC reported that 59% of U.S. zip codes already had at least one broadband provider. While we know that few communities had broadband before December 1996, we do not observe when broadband became available in particular communities between 1996 and 1999. Thus much of the timing variability that was present in the actual broadband rollout is not available in the data.
- **Non-monotonic broadband availability:** Given that broadband's economic impacts are likely to manifest themselves over time, it is important to be able to assume that broadband, once available, stays in place. However, we discovered several thousand zip codes in which broadband appeared to come and go over time. After discussing this issue with FCC staffers involved in the data collection, we concluded this effect was most likely noise in the data caused by oscillation above and below reporting thresholds, and by addition of new zip codes over time. We also observed that use of only December data collections produced a more stable data set, and it was therefore a reasonable approximation to assume that broadband actually stayed in place once it appeared in a December data set. The observation that June data appeared more noisy was consistent with our discussions with FCC staffers.

In addition, several other well-known limitations of the FCC data are also relevant to our analysis. First, the sampling methods produce particular inaccuracies of uncertain overall direction in rural areas:

- **Reporting Thresholds:** Prior to the June 2005 data collection, only providers with more than 250 lines in a state were required to report to the FCC. Thus, the data used in this study may systematically underestimate broadband availability in the predominantly rural states covered by smaller independent LECs or cable franchisees, whose total subscription base could fall below this threshold.
- **Larger Zip Codes in Rural Areas:** On the other hand, the FCC's data may also systematically overstate the availability of broadband in rural areas. As long as a provider mails a bill to one customer in a zip code, the entire zip code is presumed to have broadband available. Because rural zip codes are on average larger than urban ones, the inaccuracy of this assumption is likely to be more pronounced in rural areas.

Second, penetration data is limited to the state level. At the zip code level, FCC reports only the number of providers (availability), and not number of lines (adoption). Although broadband availability might adequately explain rapid changes in economic variables like rent, penetration would be a more accurate explanatory variable for most outcomes that depend on actual use of broadband. Thus, the FCC data provides only a crude proxy for analyzing the economic effects of broadband at the zip code level.

Finally, the zip code definitions used by the FCC posed challenges. Comparison of economic outcomes in zip codes with and without broadband requires a list of zip codes of both types. However, the FCC only makes available the list of zip codes with broadband. Researchers working with this data are left to infer the list of zip codes without broadband, by comparing the FCC's list of zip codes with broadband against other sources for the list of all zip codes in the U.S. (i.e., the zip code "universe").

Prior to this study, other researchers had observed inconsistencies between the FCC's reports of the percentage of zip codes with broadband (which imply a size for the zip code universe), and the larger size of the universe of zip codes listed by the U.S. Postal Service.[1] Investigating this inconsistency further with the assistance of FCC staffers involved in the Form 477 data collection, we learned that the FCC's zip-code universe is based on a proprietary set of zip-code

definitions that is built into the commercial mapping software used by the FCC. These definitions are known as GDT format, after Geographic Data Technology, Inc., a firm that was later acquired by TeleAtlas.

Further consultation with the FCC confirmed that their use of GDT format also explained the inclusion of zip codes in their data that otherwise appeared anomalous. Most zip codes in the U.S. are what is called "non-unique" i.e. they represent areas of land where people live and businesses are located. "Unique" zip codes, on the other hand, typically represent a single office building or corporate campus, and may be physically enclosed within a surrounding non-unique zip code (in which case both zip codes should not be reported). Some zip codes are also assigned only to post-office boxes, and these would not be meaningful in describing whether broadband is available in a particular physical area. When we used government sources for the zip code universe, it appeared that the FCC had applied inconsistent rules regarding whether to include these special types of zip codes in their list. This apparent inconsistency arose, however, because the government sources define the type of some zip codes differently from GDT.

The construction of the zip code universe for this study is discussed further below, after discussion of the other data sources that had to be matched to create the final database for analysis.

Zip Code Business Patterns (ZCBP)

For measurements of business activity, we used the annual Zip Code Business Patterns database provided by the U.S. Census. When this study was conducted in 2004-5, the most recent ZCBP data available was for 2002, limiting our ability to observe broadband's impact over a longer time period.

Another limitation involved in the use of this source was its change of classification scheme for identifying industry sectors. Data prior to 1998 is classified according to Standard Industrial Classification (SIC) codes, while later data uses North American Industry Classification System (NAICS) codes. Thus, data prior to 1998 that relies on industry classification is not directly comparable to later data. Specifically, this limited the controls available for the regression analysis about the effect of broadband on IT-intensive establishments.

Finally, the ZCBP data provides counts of establishments by size category for each NAICS category included and for each zip code. This does not allow one to distinguish between firms with one establishment and firms with two or more branches. Therefore, the data does not allow one to directly measure changes in the number of firms associated with the availability of broadband. An observation that broadband communities have a greater number of small establishments could mean that there are a larger number of small firms or more branch offices for the same number of larger firms.

Decennial Census (DC)

The household census provided the data necessary to construct socio-economic control variables. Potentially, it could also be used to develop metrics for testing a rich set of hypotheses regarding broadband's socio-economic impacts, such as its effects on commuting time, self-employment, or white-collar employment. However, this data is only collected every 10 years, and the most recent data collection was in 2000. Therefore, for most variables of interest, there was not enough lag time after the first reported broadband availability (1999) to expect to see impacts in these data.

Furthermore, in the selection of appropriate metrics of economic activity or controls for cross-community heterogeneity, it should be noted that many variables are correlated. Thus, communities with high per capita income also typically have high rates of educational attainment.

Matching Across Data Sources

Creation of the database for regression analysis required matching across the three sources of data discussed above, such that each observation in the database was not missing data for any of the variables included. The bottom half of Figure A.1 illustrates the process that resulted in our sample of 22,390 U.S. zip codes overall.

The most complex aspect of this matching had to do with the zip-code universe issue. As noted above, the FCC relies on GDT zip code boundaries to define their universe. The business patterns data, in contrast, relies on the U.S. Postal Service's apparently larger universe of zip codes, while the Census Bureau uses its own coding of areas, known as Zip Code Tabulation Areas (ZCTAs), to report the household data. ZCTAs are approximately, but not exactly, the same as USPS zip codes. Given that they are used for a household census, ZCTAs leave out areas where people don't live, such as unique and post-office only zip codes.

After consulting with the FCC and Census Bureau, we concluded that for our analysis, the best "universe" of zip codes was provided by the ZCTA coding. First, all data for socio-economic independent and control variables from the 2000 and 1990 Decennial Census was available by ZCTAs, as aggregated by the US Census Bureau.[2] Second, according

Zip Code Sources	USPS 2000 Census Zip Code File N=42,198	2000 Decennial Census (ZCTAs) N=33,633	2000 Zip Code Business Patterns N=40,005	Dec 99 FCC Zip Code N=17,889
Zip Code Definition	USPS file contains original and largest zip code universe (used for control)	ZCTAs: US Census' codes matching USPS zip code boundaries	Self reported by companies (using USPS Zip Codes)	Self reported by providers, adjusted by FCC using GDT file

	No. Zip Codes	%	Cumulative
Complete record	22,390	68.93%	68.93%
State is missing	11	0.03%	68.97%
Rent and/or labor date is missing	256	0.79%	69.75%
Salary of wage is missing	2,199	6.77%	76.52%
College Education data is missing	525	1.62%	78.14%
IT establishment data is missing	5,431	16.72%	94.86%
Population data is missing	747	2.30%	97.16%
Other data (small firms, urban, etc.) is missing	922	2.84%	100.00%
Sub Total	32,481	100.00	
(State is DC or Puerto Rico	156)		
Total	32,325		

Figure A1: Process of Matching Across Data Sources

to communications with US Census officials, the differences in boundary definition between using ZCTAs and USPS zip codes were insignificant for the purpose of econometric analysis at the zip code level.

In the matching, there were a number of zip codes that were dropped for the following reasons:

- Zip Code Tabulation Areas (ZCTAs): 1,152 ZCTAs were dropped because they corresponded to places with no land (781), no population (111)[3], or no match to 5-digit USPS Zip Codes (260). The last cases represented a population of 43,957 inhabitants.
- 2000 Zip Code Business Patterns: There were 7,524 zip codes that could not be matched either to ZCTA zip codes or to the FCC "broadband available" zip codes. These codes corresponded to PO Boxes and unique zip codes which could not be matched to ZCTAs.

After merging the zip code data sets, we obtained a database of 32,481 entries (See figure A1). We employed the USPS Zip Code database used by the US Census Bureau for the 2000 Decennial Census –USPS 2000 Census File- for the purpose of having a control for the universe of zip codes in 2000. In order to maintain homogeneity on the sample, we dropped an additional 156 zip codes corresponding to the District of Columbia and Puerto Rico, obtaining a final sample of 32,325 zip codes.

Finally, we dropped zip code observations with incomplete data (as shown in figure A1), resulting in a sub-sample with 22,390 observations. Table A1 compares the summary statistics of this sub-sample against the full sample for each variable used in the zip code analysis. Because most summary statistics did not differ substantially for the full and sub-samples, we simplify the analysis by using the consistent sub-sample of zip codes throughout. One important area of difference: many of the zip codes dropped did not have broadband in 1999, so that our sub-sample has a significantly higher percentage of zip codes with broadband than the total sample (67% vs. 54%). An alternative approach would have been to run each regression with the largest sample for which all data was available for that particular regression. When we did this, the results were not significantly different from the consistent sub-sample. Reporting only on the latter simplifies interpretation of results across the various regressions.

For purposes of comparison, Table A2 reports the summary statistics for the state-level data set we constructed. As discussed in detail in Appendix IV, however, we do not base any of our substantive conclusions on the state-level analysis because it proved too coarse a level of geographic aggregation to produce meaningful results.

Endnotes

[1] See Flamm, K. "The Role of Economics, Demographics, and State Policy in Broadband Competition: An Exploratory Study," Telecommunications Policy Research Conference, Arlington, VA, October 2, 2004.

[2] For 1990 Census data by ZCTA see GeoLytics (2002) "CensusCD. 1990 long form in 2000 boundaries" E. Brunswick, NJ

[3] 70 of these correspond to 3-digit+"XX" ZCTAs representing large undeveloped areas, and 41 to 3-digit+"HH" ZCTAs representing areas covered at least partially by water.

Table A1: Summary Statistics for Variables Used in Zip Code Level Analysis

		Full Sample		Sub-Sample (N=22,390)		
Category	Variable	Obs	Mean (Std. Dev)	Mean (Std. Dev)	Description	Source
Dependent Variables	lnRent2K	30,659	6.167 (0.373)	6.218 (0.351)	Median Housing Rent, 2000 (Ln)	US Census, 2000 Decennial Census
	LnrSalary	27,421	0.066 (0.199)	0.068 (0.160)	Ratio of Average Salaries of 2002/1998 (Ln)	US Census, 2002 and 1998 ZCBP
	ptotIT02	27,659	0.233 (0.112)	0.226 (0.090)	Share of Establishments in IT-Intensive Sectors, 2002	US Census, 2002 ZCBP
	lnrEmplo	26,877	0.047 (0.389)	0.038 (0.316)	Ratio of Employment , 2002/1998 (Ln)	US Census, 2002 and 1998 ZCBP
	psm02	31,405	0.802 (0.131)	0.790 (0.098)	Share of Establishments with less than 10 Employees, 2002	US Census, 2002 ZCBP
	lnrEst	31,210	0.047 (0.273)	0.045 (0.171)	Ratio of Establishments 2002/ 1998 (Ln)	US Census, 2002 and 1998 ZCBP
Broadband	BB99	32,325	0.544 (0.498)	0.671 (0.470)	=1 if Zip Code had at least 1 broadband line by December 1999, =0 otherwise	FCC, Form 477 Database
Control Variables	dUrban	32,325	0.542 (0.498)	0.620 (0.485)	=1 if Zip Code in Urban Area (UIC=1,2,3), 0=otherwise	USDA, Economic Research Service
	gEmp9498	27,348	0.325 (5.525)	0.387 (6.072)	Growth Rate in the Number of Employees 1994 – 1998	US Census, 1994 and 1998 ZCBP
	grColl90s	30,359	7.986 (80.522)	8.822 (80.180)	Growth Rate in the Number of People (25+) with College Degree or Higher,1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	grEst9498	30,786	0.197 (3.119)	0.148 (1.195)	Growth Rate in the Number of Establishments, 1994 – 1998	US Census, 1994 and 1998 ZCBP
	grFInc90s	31,579	0.762 (44.808)	0.867 (53.213)	Growth Rate in Median Family Income, 1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	grLabor90s	31,579	4.997 (63.978)	5.026 (66.064)	Growth of the Civilian Employed Labor Force, 1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	grpIT9800	26,954	0.044 (0.273)	0.038 (0.249)	Growth Rate of Share of Establishment in IT-Intensive Sectors, 1998 – 2000	US Census, 1998 and 2000 ZCBP
	grSalary9498	26,203	0.202 (0.378)	0.191 (0.319)	Growth Rate of Average Salary, 1994 – 1998	US Census, 1994 and 1998 ZCBP
	lnRent90	31,528	5.838 (0.443)	5.902 (0.414)	Median Housing Rent, 1990 (Ln)	GeoLytics, 1990 Decennial Census
	pcollege2K	31,181	18.511 (13.622)	19.697 (13.662)	Share of Population (25+) with College Degree or Higher, 2000	US Census, 2000 Decennial Census
	pIT98	27,441	0.227 (0.110)	0.219 (0.088)	Share of Establishments in IT-Intensive Sectors, 1998	US Census, 1998 ZCBP
	psm98	31,436	0.804 (0.131)	0.792 (0.097)	Share of Establishments with fewer than 10 Employees, 1998	US Census, 1998 ZCBP

Table A2: Summary Statistics for Variables Used at State Level Analysis

Category	Variable	Mean (Std. Dev)	Description	Source
Dependent Variables	LnRent00	6.315 (0.171)	Median Housing Rent, 2000 (Ln)	US Census, 2000 Decennial Census
	lnrSalary	0.132 (0.018)	Ratio of Average Salaries of 2002/1998 (Ln)	US Census, 2002 and 1998 ZCBP
	ptotIT02	0.268 (0.024)	Share of Establishments in IT-Intensive Sectors, 2002	US Census, 2002 ZCBP
	psmall02	0.738 (0.021)	Share of Establishments with fewer than 10 Employees, 2002	US Census, 2002 ZCBP
	LnrEmplo	0.039 (0.037)	Ratio of Employment 2002/1998 (Ln)	US Census, 2002 and 1998 ZCBP
	lnrEst	0.034 (0.032)	Ratio of # Establishments 2002/1998 (Ln)	US Census, 2002 and 1998 ZCBP
Broadband	BBAvailHU99	0.864 (0.106)	% of Housing Units located in zip codes with available broadband by December 1999	FCC, Form 477 Database; US Census, 2000 Decennial Census
	BBPen00	0.035 (0.022)	No. lines for residential and small firms, divided by total number of housing units and business establishments with fewer than 10 employees	FCC, Form 477 Database; US Census, 2000 Decennial Census, 2000 ZCBP
	SqBBPen00	0.002 (0.002)	Squared term of BBPen00	FCC, Form 477 Database; US Census, 2000 Decennial Census, 2000 ZCBP
Independent Variables	gEmp9498	0.125 (0.044)	Growth Rate in the Number of Employees 1994 – 1998	US Census, 1994 and 1998 ZCBP
	grcollege90s	0.387 (0.137)	Growth Rate in the Number of People (25+) with College Degree or Higher 1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	pcollege2K	23.765 (4.347)	Share of Population (25+) with College Degree or Higher, 2000	US Census, 2000 Decennial Census
	grEst9498	0.074 (0.043)	Growth Rate in the Number of Establishments 1994 – 1998	US Census, 1994 and 1998 ZCBP
	grFaminc90s	0.401 (0.070)	Growth Rate in Median Family Income 1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	grLabor90s	0.147 (0.109)	Growth of the Civilian Employed Labor Force 1990 – 2000	US Census, 2000 Decennial Census; GeoLytics, 1990 Decennial Census
	grpIT9800	0.006 (0.010)	Growth Rate of Share of Establishment in IT Intensive Sectors 1998 – 2000	US Census, 1998 and 2000 ZCBP
	grSalary9498	0.177 (0.039)	Growth Rate on Average Salary 1994 – 1998	US Census, 1994 and 1998 ZCBP
	LnRent90	6.064 (0.234)	Median Housing Rent, 1990 (Ln)	GeoLytics, 1990 Decennial Census
	psmall98	0.742 (0.021)	Share of Establishments with less than 10 Employees, 1998	US Census, 1998 ZCBP
	ptotIT98	0.258 (0.023)	Share of Establishments in IT-Intensive Sectors, 1998	US Census, 1998 ZCBP
	pUrbHousing00	0.703 (0.153)	Share of Urban Housing Units 2000	US Census, 2000 Decennial Census
	pUrbPop00	0.714 (0.149)	Share of Urban Population 2000	US Census, 2000 Decennial Census

Appendix III: Econometric Methods

This appendix describes the estimating equations used in our regression analysis.

As noted in Appendix II: Data Issues, we expect that for broadband to show an impact on most measures of economic activity, it needs to be used. However, at the zip code level we can only observe broadband's availability, not its use.

Several earlier studies of IT's impact have looked at state-level data.[1] To provide a point of comparison with these studies, and because broadband penetration estimates are available at the state level, we conducted regression analysis on the state-sample database. However, we expected that state-level data would be too aggregated to meaningfully measure the local impact of broadband, because the "within-state" variation in broadband availability and adoption is greater than the "between-state" variation. The results confirmed our assumption that to be meaningful, analysis needs to be completed on a less geographically aggregated basis.

Therefore, the focus of our analysis of broadband's economic impact used zip-code level data. This analysis was implemented using two complementary econometric approaches: instrumental variables and matched-sample. In the first, we use independent control variables measuring cross-community differences other than broadband availability to explain variation in the dependent-variable measures of economic activity (e.g., controls included such things as employment growth during earlier periods or the share of firms in IT-intensive industries before the impact of broadband). In the second, we use a statistical procedure to construct a matched sample of communities with and without broadband – that is, communities that are similar with respect to the controls included. These approaches are discussed further below.

Our zip code regressions generally take the form:

$$Y(t)=a+\alpha Y(0)+ X\beta+\gamma BB+e \qquad \text{(Eq1)}$$

where,

- Y(.) is the economic variable of interest, for example, the share of establishments in IT intensive industries.
- X are control regressors for differences in community characteristics of the different zip codes
- BB=1 if community had Broadband in 1999 and 0 otherwise; and
- e are error terms.

Typically, Y(0) corresponds to 1998, prior to the known availability of broadband, and Y(t) is measured in 2002, the latest year for which we have data from the Business Patterns survey.

Since we are controlling for Y(0), we interpret γ as the impact of BB on the level of change in dependent variable Y(.) over the interval [0,t].

Zip codes vary widely in size, population, and other economic characteristics. Under these circumstances treating the impact of broadband as fixed additive amount may not be realistic. Treating the impact as a multiplier may make more sense, thus reducing the problem of heteroskedasticity. Accordingly, we may use $y(.) \equiv \ln Y(.)$ in place of Y(.). This is consistent with the following structural model:

$$Y(t)=AY(0)^{\alpha}e^{rt} \qquad \text{(Eq2)}$$

where

$$r=r^* + \gamma BB + X\beta + e \qquad \text{(Eq3)}$$

and e are distributed log-normally and t is defined by construction so that t=1 corresponds to 4 years after t=0.

Strictly speaking, if we view r as a growth rate, then we would expect A=1 and α=1. We can force α=1 by transforming our dependent variable to

$$\ln(Y(t)/Y(0)) = g(t) = a + X\beta+\gamma BB+e \qquad \text{(Eq4)}$$

where $a=\ln A+r^* = r^*$ if A=1.

When using equation 4, γ is interpreted as an increment to the growth rate of the dependent variable due to the availability of broadband.

As explained in the main text, we consider the impact of broadband on 6 different economic variables. Where the dependent variable is measured as a share (share of small establishments, share of establishments in IT-intensive industries) we use the specification in equation 1. For salaries, employment and number of establishments, we use $g(t) = \ln(Y(t)/Y(0))$ as the dependent variable as in equation 4. For median rents, we use a specification based on equation 2. We do this because the unconstrained value of α that we estimate is far from equal to 1 and so it did not seem appropriate to force it to be =1 as in equation 4.

At the state level, we have data on the actual number of broadband lines in use. We normalize this data to a penetration rate by dividing the number of residential and small business lines by the number of households and small businesses in the state. Across the states, penetration varies from near zero to as high as 22% by 2002. Because

broadband will be adopted within a state first by those who get the greatest benefit, and we expect later adopters within a state will realize a lesser benefit, we do not expect our dependent variables to be linearly related to statewide broadband penetration. Consequently, for the state level regressions, we modified our equations to incorporate both linear and quadratic terms for the impact of broadband penetration.

We know from the studies of Flamm (2004), Grubesic (2004), Prieger (2003), Gabel and Huang (2003), Gabel and Kwan (2000), and Gillett and Lehr (1999) that the decision by providers to deploy broadband is not unrelated to economic characteristics of the community, such as income and population density. As a result, if we look solely for an association between broadband availability and our economic variables, it may be hard to distinguish the direction of causality. In each equation, we introduce control variables in an attempt to separate the effects of broadband from the a priori economic characteristics of the community (zip code).

We are limited in the kinds of controls we can use by the availability of data at a zip code level over the relevant time periods. However, we have, for each equation we have estimated, identified a number of controls which improve our confidence in our estimates. We use the same controls in the regressions at the zip code level and the state level with one difference: at the zip code level we also include state dummies to account for fixed effects by state.

When analyzing data at the zip code level there is an alternative approach to the issue of controls and direction of causality when looking for the impact of broadband. Within our sample, a majority of zip codes had broadband available in 1999. These zip codes are on average in higher density, more urban areas, with greater proportions of college graduates, and higher growth rates in income and labor force. If we see differences in economic growth in communities with and without broadband, how do we know it is because of the lack of broadband, and not some other characteristic of the communities? We could try and take the (minority) set of zip codes that did not have broadband in 1999 and match them, using key economic characteristics, to a subset of the communities which did have broadband in 1999 in order to identify, insofar as possible, a "matched" sample. Then, if our dependent variable varies systematically between the two groups, we can infer that it must be due to the presence or absence of broadband.

Stata's NNMATCH function provides a method for selecting a control group to compare with a treatment group using a series of independent variables. It tries to identify a control group which has the same mean and variance across the independent variables as the treatment group—*i.e.* is statistically similar (Abadie et al. 2004). This is done by using nearest neighbor matching across these variables. In the case of our paper, we have used 1-to1 matching, which means the program has matched each control observation to the closest observation in the treatment group.[2] The function then estimates the average treatment effect on a dependent variable of being in one or the other group. In our analysis, we have assumed heteroskedastic standard errors, and used the robust option of nnmatch.

In some cases, it is not possible to find a control group which matches on all the characteristics of the treatment group. For example, if all the zip codes without broadband were rural, and only a small fraction of the zip codes with broadband were rural, it might not be possible to find a comparable number of rural zip codes among the "haves" group to match as a control with the non-broadband group. Thus, on a statistical measure such as degree of urbanness, the treatment group and the control group would not be truly similar along that dimension. Notwithstanding these difficulties, for each of our dependent variables, in addition to the regressions, we have used nnmatch to estimate whether broadband has a significant impact at the zip code level. Care should be taken in interpreting the results where the samples are not well matched.

Endnotes

[1] See Daveri, F. and Mascotto, A. (2002), "The IT Revolution across the U.S. States." Working Paper 226, Innocenzo Gasparini Institute for Economic Research. Daveri and Mascotto study the effect of computer diffusion at home and work on the growth rate of gross state product (GSP) per employed population. They conclude that, while there is an affect at aggregate level, most of the impact comes from states where the contribution to GSP of IT-producing and non-IT manufacturing sectors is above the US average. When these states are excluded from the sample, the authors find no evidence of an impact of IT on productivity acceleration.

[2] In most datasets, we find the treatment group to be smaller than the universe without the treatment, so the matching is done with respect to the smaller group. In this case, however, the set of zip codes without broadband was smaller than the group that got it by 12/99, which made the model results more complicated to interpret. Tests with NNMATCH showed no difference in results if the treatment was assigned to one group or the other. For this reason, we defined our treatment group as the one getting broadband by December of 1999 (i.e., BB99=1 forms the treatment group).

Appendix IV: Detailed Regression Results

This appendix presents a detailed discussion of our regression results for each economic indicator tested, with the accompanying output organized into tables grouped by indicator. As noted earlier, the state-level regressions are included and discussed herein as a point of reference – but as we explain – the results are not convincing. State-level data on broadband availability is simply aggregated at too coarse a level. The principal results of our analysis rely on our zip-code level regressions and the matched-sample regressions which yielded similar results in most cases.

For each indicator, we start with the simplest regression using a dummy variable set to 1 if broadband was available in the community by December 1999, and zero otherwise. We then add regressors to control for non-broadband exogenous influences that could be expected to affect the growth of the economic variable of interest. Although we ran multiple versions of these more complex regressions, we report only what we consider the best versions of these.[1] All of the zip code regressions were run with robust errors to control for heteroskedasticity in our data. Finally, we ran the matched sample regressions as a final method of controlling for exogenous effects. Because broadband was first deployed (as would be expected) in more urban, denser, and richer communities where it is reasonable to believe broadband service might be more profitable to providers, the demographics of broadband "haves" (by December 1999) and "have-nots" (after December 1999 or not at all) are systematically different. The "have-nots" represent a much smaller sample of communities and are typically more rural. Thus, the matched sample results attempt to compare a sample of otherwise similar "haves" to "have not" communities (where otherwise similar is determined relative to the exogenous regressors included in the standard regressions). As one can see from examining the results (Tables A-I-3C through A-I-8C) and, as will be discussed shortly, in a number of cases, the "have nots" sample was simply too different from the "haves" to be able to generate an acceptable match. However, when it is possible to construct a well-matched sample and these results are significant, they provide additional support for our zip-code results.

Our results are generally consistent with the view that broadband enhances economic activity, helping to promote job creation both in terms of the total number of jobs and the number of establishments in communities with broadband (see Table A-I-1). The positive impact on establishment growth was higher for larger establishments and for IT intensive sectors of the economy. We did not observe a significant impact of broadband on the average level of wages, but we do observe that residential property values (proxied by the average level of rent paid for housing) are higher in broadband-enabled communities. These results are discussed further in the following sub-sections.

Another way to see the results is to compare the sample means for communities with and without broadband ("haves" vs. "have nots") as of December 1999 (Table A-I-2). This comparison shows that the mean growth in rent, salaries, employment, number of establishments, and share of establishments in IT-intensive sectors were all higher in the communities with broadband, while only the share of small establishments declined. The regression results discussed below test this intuition further by adding additional controls to account for non-broadband influences that might account for these differences.

Employment

Our first group of results (Table A-I-3) examines the impact of broadband availability on total employment in each community. As explained earlier, theory does not provide strong guidance *a priori* as to the expected impact of broadband on total employment. On the one hand, broadband might stimulate overall economic activity resulting in job growth; while on the other hand, broadband might facilitate capital-labor substitution, resulting in slower job growth. Furthermore, we might anticipate that broadband would have asymmetric effects by industry sector and for occupation mix. These additional share effects might result in ambiguous changes in the direction of total employment growth.

In the state-level regressions (here and in subsequent subsections except where noted), we use state-level data on broadband penetration as a measure of broadband use. This is appropriate in those cases where it seems reasonable to believe that it is broadband use (rather than simply its availability) that produces the economic impact. As discussed in Appendix II, because we expect a saturation effect, when we use penetration in the state-level regressions, we also include the square of penetration as an additional regressor.

In the state-level regressions for employment (Table A-I-3A), it initially looks as if broadband penetration might have a positive impact on employment growth which diminishes as penetration gets higher (thus, demonstrating the hypothesized saturation effect), but the relevant coefficients are not significant (regression 3A1). However, when additional regressors are added to control for such exogenous effects as

the growth in employment from 1994 to 1998 (gEmp9498) and a dummy variable to account for urbanization (dUrban), the signs on the broadband variables are reversed and remain insignificant (regression 3A4). This is not surprising and points to the problems with using state-level data already discussed. Simply, it offers too high a level of aggregation – combining too many separate and potentially re-enforcing or countervailing forces (as suggested by the theory) – to permit us to observe a measurable impact.

However, when we turn to the zip code regressions (Table A-I-3B) and matched sample regressions (Table A-I-3C), we find a substantial positive impact for broadband availability on the growth in total employment. Progressing from simple (3B1) to more complex regressions (3B4), we observe that the magnitude of the estimated broadband effect declines. Nevertheless, it remains significant and positive. Regression 3B4 suggests that the availability of broadband added over 1 percent to the employment growth rate in the typical community (coefficient on BB99 is 0.01045). We also observe that the controls (gEmp9498 and dUrban) are significant and have positive signs as expected.

This result is also supported by the matched sample results (Table A-I-3C). The match appears reasonable and the impact of broadband on employment appears slightly higher in the results (0.014426), suggesting that broadband increased employment growth by almost 1.5 percent.

Wages

Perhaps the most likely place to expect to see an impact of broadband would be on wages. If one believes that broadband enhances productivity in a number of ways, it is reasonable to expect that some of the benefits of these effects would be captured by workers. Additionally, perhaps the most extensive empirical literature that exists has focused on the positive effects of IT for wages and employment mix effects. Finally, one might expect that these wage effects might be observed in the economic data more quickly than shifts in employment mix (by occupation or by industry sector) or the number of firms (reflecting entry and exit into the community).

Thus, we initially approached the analyses of community wage data (measured as total payroll associated with all businesses in the community) with the hope of finding significant measurable impacts. Unfortunately, although some of the simplest regressions looked promising (4A1), as soon as we included appropriate exogenous controls, the sign of the coefficient on broadband changed signs (4A4) and became insignificant.

The coefficients on the controls have the expected signs. The growth in salary 1994 to 1998 (grSalary9498), the share of the population with college degrees in 2000 (pcollege2K), the growth of labor from 1990 to 2000 (grLabor90s), the share of establishments that are in IT intensive sectors in 1998 (pIT98), and the urbanization dummy (dUrban) all have positive and significant coefficients. After controlling for these effects, we do not observe any additional significant effect attributable to broadband.

Rent

The third group of regressions we run look at the impact of broadband on rental rates as reported in the 2000 Census. Our measure of broadband availability only tells us whether a community has broadband by December 1999 or not, it does not tell us how long the community has had broadband. However, it seems reasonable that if broadband has an effect on rental rates, that effect ought to be observed relatively quickly. Since broadband is desirable, we would expect to see the availability of broadband resulting in higher rental rates.

The results reported in Tables A-I-5A and A-I-5B support the conclusion that rental rates were significantly higher in 2000 in communities that had broadband. The most meaningful zip-code regression shows that rental rates were almost 7 percent higher (coefficient on BB99 is 0.06557) for broadband communities (5B4). The state-level results (5A4) are consistent with the zip-code results, but for reasons already discussed, we do not place much stock in these. By contrast, the matched sample results show a significant negative impact of broadband on rents; however, in attempting to create a matched sample of zip codes with broadband in 1999 which is similar along the independent variables to the set of zip codes without broadband, we are unable to construct such a matched sample with equivalent levels of family income growth. Our attempts to find such a match reveal that otherwise comparable zip codes with broadband all had significantly higher levels of two control variables: family income growth and labor force growth. Because the matched set is not fully comparable, no conclusions should be drawn from this approach as to whether broadband availability affects rents.

Industry Structure and Mix

The last group of results we will discuss relate to the impact of broadband on industry structure and the mix of businesses by industry sector and size. These results are reported in Tables A-I-6 though 8. Table A-I-6 looks at the growth in

the total number of establishments; Table A-I-7 looks at the growth in the share of firms that are in IT intensive sectors; and Table A-I-8 looks at the share of firms that are small (10 or fewer employees). We discuss each of these in turn.

First, looking at Table A-I-6, we see that broadband has a significant positive effect on the growth in the number of business establishments, increasing growth, by almost one-half of a percent (BB99 coefficient is 0.00483) from 1998 to 2002 in the best zip code regression (6B4). This positive effect is retained in the matched sample regressions, but is two and half times larger (Table A-I-6C), although again, labor force growth is imperfectly matched. The state-level regressions also support this result (6A4). Moreover, in the zip-code regressions, the controls have the appropriate positive sign: growth in number of establishments from 1994 to 1998 (grEst4998), urbanization dummy (dUrban), and the growth in labor force from 1990 to 2000 (grLabor90s).

Second, turning to Table A-I-7, we see that the share of firms in IT intensive sectors is higher in broadband communities. In the best of the zip code regressions, the share of establishments that are in IT intensive sectors increased by an additional one half percent between 1998 and 2002 in communities that had broadband by December 1999 (7B4). This is a large effect and it is hardly surprising since we would expect there to be a positive feedback process underlying this observation. That is, IT intensive sectors are the most likely to demand and use broadband services, and if availability is an issue, IT intensive firms are more likely to expand operations in locales with broadband. This effect complements the positive effect we observe on total employment. This result is supported by matched sample regression (7C), although the magnitude of the effect is reduced by almost half. The state-level regressions (7A4) show conflicting results that suggest that broadband's impact on the change in the share of firms in a state that are in IT intensive sectors is negative for low penetration and becomes positive only for relatively high penetration.[2] These results are not very interesting because almost all of the variability in the share of IT intensive firms is already explained by the share of IT intensive firms in 1998.

Third, and in some ways most interesting, our data provides some suggestive results as to the impact of broadband on firm organization and the size of business establishments. One theory is that the availability of enhanced communication services facilitates more geographically distributed types of firm organization ("death of distance"). If true, this could explain why the number of establishments in 2002, normalized by population in 2000, is higher in broadband communities (0.030) than in communities without broadband (0.024). Additionally, broadband might lower entry barriers for new firms and may encourage the growth of self-employment. Since most of these establishments are likely to be quite small, we might expect to see faster growth in the number of small establishments in broadband enabled communities.

Table A-I-8 shows results of estimating the impact of broadband on the change in the share of firms that are small (less than 10 employees) between 1998 and 2002. The state-level results are consistent with the hypothesis explained in the previous paragraph (8A4), but are not significant, and since these are state-level regressions we do not place much stock in them in any case. When we turn to the zip-code regressions, however, we observe a significant effect that is contrary to our expectation. We observe that the share of firms that are small declined in broadband enabled communities relative to non-broadband communities by over one percent (8B4). In the overall sample, the relative size mix of establishments declined only slightly (sample means for psm98 and psm02 were 0.792 and 0.790, respectively, in Table A1 in Appendix II); however, the decline was greater in broadband communities. The matched sample results in Table A-I-8C are significant and consistent with the zip-code results.

Whn we tried to explore this further by looking at regressions with the number of establishments per population or using different measures of the size composition, the regressions failed to indicate a measurable impact for broadband.

Because we cannot control for the growth in the relative number of firms by different size classes (we observe only the number of establishments by industry sector and size class), our data do not really allow us to infer the impact of broadband on firm organization. To address this question, it may be more appropriate to use enterprise-level data like the data used by Greenstein, Forman et al. (2005).

Endnotes

[1] For example, we do not include variables that were consistently insignificant (e.g., population density).

[2] That is, the coefficient on broadband penetration is -0.27606 and on broadband penetration squared is 2.61798 (Table A-I-7A4), so the overall impact of broadband is negative for any penetration level below 11 percent.

[3] Dependent variable is growth rate from 1998-2002, with exception of rental rates, which are 1990-2000

[4] First sign refers to broadband penetration, second sign to square of broadband penetration.

Table A-I-1: Broadband Impact on Growth of Selected Economic Variables[3] (+/-=growth higher/lower in broadband communities; *=significant at 90% or above)

	State[4]	Zip	Matched Panel
Employment	-/+*	+*	+*
Wages	+/-	-	-
Rental rates	+*	+*	-*
Establishments	+/-*	+*	+*
IT-intensive share of establishments	-/+*	+*	+*

Table A-I-2: Means for Communities with (and without) Broadband by Dec99

		With Broadband by Dec 99 (N=15,020)	With No Broadband by Dec 99 (N=7,370)
Categories	Variable	Mean (Std. Dev.)	Mean (Std. Dev.)
Dependent Variables	lnRent2K	6.306 (0.341)	6.039 (0.298)
	LnrSalary	0.072 (0.131)	0.059 (0.206)
	ptotIT02	0.240 (0.088)	0.195 (0.088)
	lnrEmplo	0.049 (0.263)	0.015 (0.401)
	psm02	0.768 (0.087)	0.834 (0.102)
	lnrEst	0.054 (0.150)	0.027 (0.204)
Independent Variables	dUrban	0.739 (0.438)	0.374 (0.483)
	URinfl03	2.882 (2.632)	5.294 (3.253)
	gEmp9498	0.434 (7.356)	0.289 (1.315)
	grColl90s	11.526 (96.28)	3.310 (24.549)
	grEst9498	0.169 (1.428)	0.104 (0.425)
	grFinc90s	1.046 (64.969)	0.501 (0.370)
	grLabor90s	6.487 (79.518)	2.046 (18.969)
	grpIT9800	0.030 (0.193)	0.053 (0.334)
	grSalary9498	0.180 (0.243)	0.212 (0.432)
	lnRent90	5.995 (0.403)	5.711 (0.369)
	pcollege2K	22.387 (14.684)	14.211 (9.096)
	pEst98	0.029 (0.133)	0.024 (0.042)
	pIT98	0.232 (0.085)	0.191 (0.087)
	psm98	0.772 (0.086)	0.832 (0.102)

Employment - Table A-I-3A: Employment - State Level Regressions

	(3A1)	(3A2)	(3A3)	(3A4)
	LnrEmplo	LnrEmplo	LnrEmplo	LnrEmplo
BBPen00	0.44262	-0.39993		-0.45585
	[0.88115]	[0.79912]		[0.81443]
SqBBPen00	-0.73487	7.61773		7.43397
	[10.00182]	[8.99095]		[9.07825]
gEmp9498		0.42372	0.3912	0.41257
		[0.10915]***	[0.10807]***	[0.11250]***
pUrbPop00			0.03577	0.01914
			[0.03221]	[0.03961]
Constant	0.02467	-0.013	-0.03534	-0.02295
	[0.01621]	[0.01716]	[0.02399]	[0.02689]
Observations	48	48	48	48
R-squared	0.0531	0.2947	0.2801	0.2985

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-3B: Employment - Zip Code Regressions

	(3B1)	(3B2)	(3B3)	(3B4)
	lnrEmplo	lnrEmplo	lnrEmplo	lnrEmplo
BB99	0.03344	0.0333		0.01045
	[0.00515]***	[0.00515]***		[0.00560]*
gEmp9498		0.00094	0.00075	0.00075
		[0.00036]***	[0.00031]**	[0.00031]**
dUrban			0.0585	0.05548
			[0.00493]***	[0.00507]***
...				
Constant	0.01512	0.01485	0.04361	0.03571
	[0.00468]***	[0.00468]***	[0.03040]	[0.03070]
Observations	22390	22390	22390	22390
R-squared	0.0025	0.0028	0.0271	0.0273

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-3C: Employment - Zip Code nnmatch regressions

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	.0144264	1.94	0.052	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnrEmplo	0.0379408	0.238360	0.0329223	0.3475896
Independent Variables	gEmp9498	0.1832633	3.193463	0.1627447	0.9055611
	URinfl03	2.74577	2.341581	2.746226	2.342017

Wage Regressions - Table A-I-4A: State Level Salary Regressions

	(4A1)	(4A2)	(4A3)	(4A4)
	lnrSalary	lnrSalary	lnrSalary	lnrSalary
BBPen00	0.34782	0.42969		0.54628
	[0.42041]	[0.44506]		[0.41635]
SqBBPen00	-0.47119	-0.85803		-2.55233
	[4.77196]	[4.84982]		[4.58457]
grSalary9498		-0.04846	-0.08287	-0.15117
		[0.08110]	[0.07780]	[0.08060]*
grcollege90s			0.07534	0.07657
			[0.04023]*	[0.03871]*
pcollege2K			0.00282	0.00243
			[0.00074]***	[0.00074]***
grLabor90s			-0.08908	-0.09298
			[0.04953]*	[0.04814]*
pUrbPop00			-0.0274	-0.04813
			[0.02390]	[0.02514]*
pITfirms98			0.06221	0.11477
			[0.16172]	[0.15833]
Constant	0.1204	0.12675	0.06724	0.07492
	[0.00773]***	[0.01318]***	[0.03122]**	[0.03042]**
Observations	48	48	48	48
R-squared	0.1389	0.1458	0.3153	0.3971

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-4B: Zip Code Salary Regressions

	(4B1)	(4B2)	(4B3)	(4B4)
	LnrSalary	LnrSalary	LnrSalary	LnrSalary
BB99	0.01328	0.00932		-0.00269
	[0.00263]***	[0.00253]***		[0.00284]
grSalary9498		-0.12272	-0.12484	-0.12504
		[0.01042]***	[0.01056]***	[0.01059]***
grColl90s			-0.00001	-0.00001
			[0.00001]	[0.00001]
pcollege2K			0.00082	0.00083
			[0.00009]***	[0.00010]***
grLabor90s			0.00003	0.00003
			[0.00001]**	[0.00001]**
dUrban			0.00429	0.00493
			[0.00252]*	[0.00259]*
pIT98			0.02275	0.02443
			[0.01586]	[0.01604]
...				
Constant	0.05957	0.08564	0.08206	0.08359
	[0.00241]***	[0.00297]***	[0.01355]***	[0.01364]***
Observations	22390	22390	22390	22390
R-squared	0.0015	0.0614	0.0772	0.0773

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-i-4C: Zip Code Salary nnmatch regressions

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	.0003026	0.08	0.938	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	LnrSalary	0.0684275	0.1435969	0.0682071	0.1882474
Independent Variables	grSalary9498	0.1904726	0.3090776	0.1904069	0.3222383
	grColl90s	8.707712	80.1020	7.0213	49.18039
	pcollege2K	19.69874	13.62371	19.57184	13.54363
	grLabor90s	4.957307	65.87055	3.784536	29.32728
	URinfl03	3.673292	3.06596	3.683296	3.060917

Rent Regressions - Table A-I-5A: State Level Rent Regressions

	(5A1)	(5A2)	(5A3)	(5A4)
	LnRent00	LnRent00	LnRent00	LnRent00
BBAvailHU99	0.94869	0.27693		0.29616
	[0.19152]***	[0.07635]***		[0.09454]***
LnRent90		0.6333	0.70058	0.71233
		[0.03474]***	[0.04779]***	[0.04370]***
grFamInc90s			0.26186	0.25361
			[0.13617]*	[0.12408]**
grLabor9200			0.23264	0.23224
			[0.06576]***	[0.05991]***
pUrbHousing00			0.10155	-0.08143
			[0.05463]*	[0.07674]
Constant	5.49514	2.23559	1.8596	1.66449
	[0.16676]***	[0.18804]***	[0.30911]***	[0.28840]***
Observations	48	48	48	48
R-squared	0.3478	0.9222	0.9441	0.9547

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-5B: Zip Code Rent Regressions

	(5B1)	(5B2)	(5B3)	(5B4)
	lnRent2K	lnRent2K	lnRent2K	lnRent2K
BB99	0.26704	0.10341		0.06557
	[0.00445]***	[0.00507]***		[0.00390]***
lnRent90		0.57686	0.41784	0.40158
		[0.01315]***	[0.01646]***	[0.01646]***
grFInc90s			0.00007	0.00007
			[0.00002]***	[0.00002]***
grLabor90s			0.00016	0.00015
			[0.00007]**	[0.00006]**
dUrban			0.16388	0.14939
			[0.00550]***	[0.00512]***
...				
Constant	6.03934	2.7445	3.73793	3.78442
	[0.00348]***	[0.07570]***	[0.10080]***	[0.09939]***
Observations	22390	22390	22390	22390
R-squared	0.1278	0.5439	0.6165	0.6227

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-5C: Zip Code Rent nnmatch regressions

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	-0.020979	-4.68	0.000	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnRent2K	6.227739	.3418756	6.184831	.3376517
Independent Variables	lnRent90	5.901608	.4138795	5.901871	.4118173
	grFInc90s	0.8652419	53.04271	0.4759079	.323962
	grLabor90s	4.979731	65.78181	3.964122	29.44959
	URinfl03	3.671208	3.061892	3.677066	3.059775

Total Establishments - Table A-I-6A: Total Establishments - State Level Regressions

	(6A1)	(6A2)	(6A3)	(6A4)
	lnrEst	lnrEst	lnrEst	lnrEst
BBPen00	1.12032	0.41932		0.19639
	[0.76148]	[0.40444]		[0.42569]
SqBBPen00	-8.83193	-1.20117		-0.06339
	[8.64342]	[4.58608]		[4.84344]
grEst9498		0.6161	0.51694	0.51294
		[0.05633]***	[0.11529]***	[0.11916]***
grLabor90s			0.03182	0.03725
			[0.04525]	[0.04880]
pUrbPop00			0.05317	0.03633
			[0.01648]***	[0.02019]*
Constant	0.00987	-0.02436	-0.04674	-0.04213
	[0.01401]	[0.00798]***	[0.01176]***	[0.01340]***
Observations	48	48	48	48
R-squared	0.0865	0.7376	0.7628	0.7740

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-6B: Total Establishments - Zip Code Regression

	(6B1)	(6B2)	(6B3)	(6B4)
	lnrEst	lnrEst	lnrEst	lnrEst
BB99	0.02625	0.02552		0.00483
	[0.00268]***	[0.00268]***		[0.00287]*
grEst9498		0.01122	0.00959	0.00957
		[0.00468]**	[0.00401]**	[0.00401]**
dUrban			0.04425	0.04285
			[0.00262]***	[0.00271]***
grLabor90s			0.00006	0.00006
			[0.00001]***	[0.00001]***
...				
Constant	0.02725	0.02608	0.03908	0.03542
	[0.00238]***	[0.00243]***	[0.02072]*	[0.02077]*
Observations	22390	22390	22390	22390
R-squared	0.0052	0.0114	0.0626	0.0627

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-6C: Total Establishments - Zip Code nnmatch regression

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	0.0123135	3.37	0.001	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnrEst	0.0480704	0.1595301	0.0361407	0.1881027
Independent Variables	grEst9498	0.1381222	1.145844	0.1260622	0.6235826
	grLabor90s	4.610127	63.30446	3.935026	28.74862
	URInfl03	3.599211	3.018462	3.603401	3.014999

Table A-I-7A: Establishments in IT Intensive Sectors - State Regressions

	(7A1)	(7A2)	(7A3)	(7A4)
	ptotIT02	ptotIT02	ptotIT02	ptotIT02
BBPen00	0.68198	-0.14742		-0.27606
	[0.54717]	[0.11538]		[0.08941]***
SqBBPen00	-3.60893	0.76199		2.61798
	[6.21081]	[1.28341]		[1.01144]**
ptotIT98		1.06976	1.0274	1.03108
		[0.03346]***	[0.03715]***	[0.03414]***
grcollege90s			0.00163	0.00271
			[0.00930]	[0.00849]
pcollege2K			-0.00014	-0.00003
			[0.00017]	[0.00016]
grLabor90s			0.01454	0.0169
			[0.01142]	[0.01051]
pUrbPop00			-0.00281	-0.00043
			[0.00572]	[0.00574]
grpIT9800			0.21154	0.21862
			[0.06271]***	[0.05792]***
Constant	0.25037	-0.00356	0.00476	0.004
	[0.01007]***	[0.00821]	[0.00725]	[0.00675]
Observations	48	48	48	48
R-squared	0.1299	0.9641	0.9778	0.9825

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-7B: Establishments in IT Intensive Sectors - Zip Code Regressions

	(7B1)	(7B2)	(7B3)	(7B4)
	ptotIT02	ptotIT02	ptotIT02	ptotIT02
BB99	0.04463	0.00994		0.00594
	[0.00125]***	[0.00089]***		[0.00085]***
pIT98		0.84724	0.86345	0.85988
		[0.00541]***	[0.00598]***	[0.00609]***
grColl90s			0.00001	0.00001
			[0.00000]***	[0.00000]***
pcollege2K			0.00065	0.00062
			[0.00003]***	[0.00003]***
dUrban			0.00314	0.00174
			[0.00075]***	[0.00076]**
grpIT9800			0.0795	0.07963
			[0.00242]***	[0.00241]***
...				
Constant	0.19566	0.03319	0.01977	0.01641
	[0.00103]***	[0.00112]***	[0.00496]***	[0.00508]***
Observations	22390	22390	22390	22390
R-squared	0.0539	0.7055	0.7619	0.7626

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-7C: Establishments in IT Intensive Sectors - Zip Code nnmatch regressions

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	.0028547	1.99	0.046	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	ptotIT02	0.2254862	0.0889145	0.22155	0.0898961
Independent Variables	pIT98	0.2190703	0.0874809	0.2180745	0.0862081
	grColl90s	8.685352	80.12625	6.908195	51.86047
	pcollege2K	19.69035	13.58824	19.51451	13.51298
	URinfl03	3.666503	3.05856	3.681733	3.056761
	grpIT9800	0.0381206	0.2466281	0.0360131	0.2491051

Table A-I-8A: Small Establishments - State Level Regressions

	(8A1)	(8A2)	(8A3)	(8A4)
	psmall02	psmall02	psmall02	psmall02
BBPen00	0.0625	0.24637		0.12979
	[0.51854]	[0.12967]*		[0.12543]
SqBBPen00	-0.70207	-2.73645		-1.7089
	[5.88580]	[1.47174]*		[1.40863]
psmall98		0.95164	1.00245	1.00152
		[0.03655]***	[0.03993]***	[0.04015]***
grcollege90s			0.01559	0.01374
			[0.00556]***	[0.00579]**
pcollege2K			-0.00023	-0.0002
			[0.00023]	[0.00025]
ptotlT98			0.01027	0.00199
			[0.04994]	[0.05073]
pUrbPop00			0.01172	0.01364
			[0.00724]	[0.00793]*
Constant	0.73681	0.02759	-0.01768	-0.0179
	[0.00954]***	[0.02735]	[0.03334]	[0.03353]
Observations	48	48	48	48
R-squared	0.0003	0.9349	0.9522	0.9459

Standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-8B: Small Establishments - Zip Code Regression

	(8B1)	(8B2)	(8B3)	(8B4)
	psm02	psm02	psm02	psm02
BB99	-0.06545	-0.01574		-0.01324
	[0.00139]***	[0.00103]***		[0.00110]***
psm98		0.81688	0.80843	0.79594
		[0.00541]***	[0.00555]***	[0.00583]***
pIT98			-0.04825	-0.04339
			[0.00605]***	[0.00601]***
grColl90s			0	0
			[0.00000]	[0.00000]
pcollege2K			-0.00001	0.00005
			[0.00003]	[0.00003]*
dUrban			-0.00952	-0.00694
			[0.00096]***	[0.00096]***
...				
Constant	0.83439	0.15403	0.15994	0.17797
	[0.00120]***	[0.00476]***	[0.00839]***	[0.00887]***
Observations	22390	22390	22390	22390
R-squared	0.0990	0.6958	0.6983	0.7013

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-I-8C: Small Establishments - Zip Code nnmatch regression

		Coefficient	z-statistic	P>|Z|	
N=22,390	BB99	-0.015714	-9.02	0.000	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	psm02	0.7875819	0.0944401	0.8049239	0.0993516
Independent Variables	psm98	0.792165	0.0957805	0.7944902	0.0954684
	pIT98	0.2191602	0.087082	0.217224	0.0848717
	grColl90s	8.698381	80.10981	6.833522	51.23653
	pcollege2K	19.70571	13.60049	19.34939	13.2098
	URinfl03	3.666324	3.058514	3.699777	3.044652

Appendix V: Effect of Broadband in the Appalachian Region

Economically distressed areas are of particular concern to economic development practitioners. Therefore, we focused a follow-on investigation on the question of whether broadband's impact on distressed communities looks statistically different from its impact on the nation as a whole. We used the counties listed as under the purview of the Appalachian Regional Commission (ARC) on their web site to define a list of zip codes for more focused study. We then analyzed broadband's impact within that sample of zip codes, using two approaches.

First, we applied the same statistical techniques used in the national-scale study. The first section of this appendix presents the results of regression analysis at the zip code level across the Appalachian Region, following the same rationale used in the zip code level analysis for the United States. The regression results are consistent with the national findings, and show that broadband had a positive effect on the growth of employment, the number of business establishments, and on the rents paid for housing. In particular, the results suggest that broadband is even more potent in distressed areas at stimulating employment, suggesting that economic development practitioners are indeed pursuing important goals when they focus on stimulating broadband availability and adoption.

The second section discusses our attempt to construct and analyze a matched sample to compare economic outcomes in ARC communities that stimulated broadband against otherwise-similar ARC communities that didn't. Unfortunately, as we explain, the lack of available data and the small size of the sample precluded statistically meaningful analysis at this time. Given the small number of cases available, future research based on qualitative methods might offer a better approach for assessing the relationship between local government broadband initiatives and economic impact.

A-V.1. Regression Analysis

Following up from the national-scale zip-code-level analysis, this section examines broadband's impact in economically distressed areas, by studying its socioeconomic effect across zip codes in the Appalachian Region. We followed the same rationale and performed the same regressions used in the national sample analysis. The detailed results for simple and matched sample regressions are reported in tables A-V.2 to A-V.7.

Table A-V.1 provides an "at-a-glance" summary of these results, which are consistent with our nation-wide study. Due to the smaller sample size, however, fewer statistically significant results are obtainable. The ARC regressions show that between 1998 and 2002, communities in which broadband became available by December 1999 experienced more rapid growth in (1) employment, and (2) overall number of businesses. Within the Appalachian Region, however, the available data (3) does not demonstrate statistically significant effects on wages and (4) does not show a significant effect on the share of businesses in IT-intensive sectors. The effects of broadband availability can also be observed in (5) higher market rates for rental housing. These results are discussed further in the following subsections.

Table A-V.1. Broadband Impact on Growth of Selected Economic Variables (+/- = growth higher/lower in broadband communities; *=significant at 90% or above)

	Zip	Matched Panel
Employment	+*	+*
Wages	+	-
Rental rates	+*	+
Establishments	+*	+*
IT-intensive share of establishments	+	-

A. Employment

Our analysis of the effect of broadband availability on employment in the Appalachian Region supports our previous finding for the nation-wide sample. The regressions in Table A-V.2A show that broadband communities had nearly a 5% higher rate of employment growth between 1998 and 2002. When we progress from the simplest (A-V.2A-1) to more complex regression (A-V.2A-4), the magnitude of the coefficient does not change very much. Furthermore, it is interesting to note that the coefficient is substantially higher than the 1.05% found for the United States (see Appendix IV, Table A-I-3B). Additional analysis is warranted to understand the sources of this difference.

The results from the matched panel regressions (Table A-V.2B) show similar results, but more robust than for the nation wide sample. Interestingly, the difference of these results with the national sample seem to be consistent with the view that broadband might have an especially important effect in smaller, more rural and economically distressed areas.

B. Wages

As with the national analysis, we did not find a statistically significant impact of broadband availability on wages for the ARC sub-sample (Tables A-V3A.1-4). The matched sample regressions also fail to show a measurable difference. One reason for this is there are no matched samples with equivalent levels of growth of college education and labor during the 1990-2000 period. As the treatment and control samples are not comparable, no conclusions can be drawn from these results.

C. Rent

Regression analysis (Table A-V.4A) shows that, at the zip code level, the relationship between broadband availability and market value of housing rent in the Appalachian Region is statistically significant, but of lower magnitude than for the national sample: 2.2% for the ARC as compared to 6.5% for the United States (Appendix IV, Table A-I-5B). This higher effect is consistent with an average higher valuation of broadband in urban and dense places as compared with small and rural areas, but once again, caution is advised before concluding that the observed differences in the magnitude of the coefficients is significant.

Matched sample regressions (Table A-V.4B) show better results than for the national analysis (Appendix IV, Table A-I-5C). As previously mentioned, the nation-wide results were biased because the samples were not perfectly matched in levels of growth of median family income of labor during the nineties. In the ARC case, however, while the problem persists around growth of labor in 1990-2000, there is almost a perfect match in the growth of median family income in the same period.

D. Industry Structure and Mix

In this subsection we study the effect of broadband availability on the total number of business establishments (regressions in Table A-V.5), business establishments in IT-intensive sectors (regressions in Table A-V.6), and business establishments with less than 10 employees (regressions in Table A-V.7).

First, our regression results for the Appalachian Region are consistent with the national results which found that broadband availability has a statistically significant effect on the number of business establishments (Table A-V.5A). Again, the higher estimated coefficient for the ARC region (1.9% v. 0.05% in Table A-I-6B) is consistent with concluding that the impact of broadband is larger in small and rural areas. The matched panel regressions support these results.

Second, our results from regressions on the effect of broadband on IT-intensive establishments (Table A-V.6A) show that, while the share of firms in IT intensive sectors is higher in zip codes where broadband was available by December of 1999, this relationship is not statistically significant. The significant effect of broadband appears in the simplest regression (A-V.6A-1), but is gradually lost after adding exogenous control variables (A-V.6A-4). This result differs from the one for our national sample, and could result from an *ex ante* lower share of IT-intensive firms in the region (19.9%), as compared to the national sample (21.9%). As in the national sample, almost all the variability here is explained by the share of IT-intensive firms in 1998. Results of our matched panel regression (A-V.6B) are similar, but the sign is reversed. Because of matching problems with the growth of college graduates, and data problems mentioned in the analysis of the nation wide study, we do not regard this change in sign and lack of significance as overly important.

Third, our analysis of the effect of broadband in small establishments (Table A-V.7) shows that the results for our zip code regressions for the Appalachian Region (A-V.7A) confirm our findings for the national sample: the share of firms that are small declined in communities with broadband. This effect is significant, and the effect of broadband availability is maintained along all regressions when exogenous control variables are included. This effect, however, is lower in communities in the Appalachian Region (-0.96%, in A-V.7A-4) than for the national sample (-1.32%, in Appendix IV, Table A-I-8B4). These results are confirmed by our results of matched sample regressions (Table A-V.7B). The results in both regressions are biased due to omitted variable: we could not control for growth in the number of firms by size class, which –among other data issues- do not allow inferences about broadband's impact in this case.

A-V.2. Comparison of Communities vis a vis Broadband Stimulation

The previous section shows that broadband's economic impact is hardly limited to areas where the economy is already thriving. In fact, broadband may be even more important to economically distressed areas, while at the same time less likely to be available given that many such communities are also rural. This paradoxical observation led us to investigate whether economic impacts could be observed from locally scoped initiatives intended to make broadband more available within distressed communities.

Our intention was to construct a sample of communities within the ARC region that had undertaken such initiatives,

drawing on three sources: data we already had on municipal electric utilities that offer communications services; data to be obtained from the ARC itself on locally scoped initiatives intended to stimulate broadband; and public reports of locally led[1] broadband wireless or fiber deployments in the region. We would then compare this sample against communities within the ARC region that had not undertaken a broadband stimulation initiative, but were otherwise similar, thus creating a matched sample for statistical analysis.

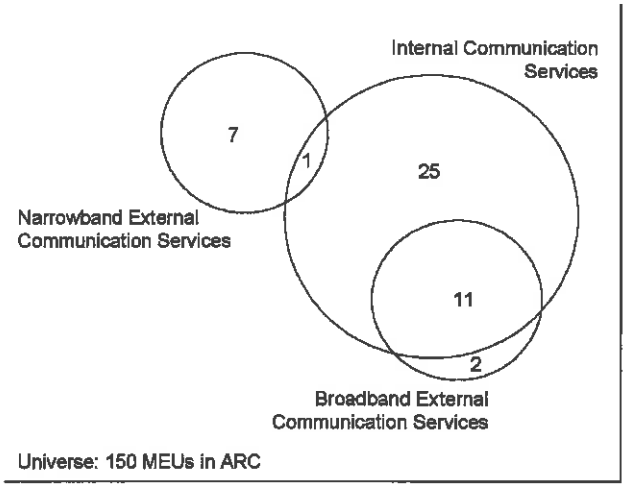
Unfortunately, meaningful statistical analysis of this sort did not prove possible due to several forms of data limitations. First, while we were able to gather reports of at least 11 locally led broadband initiatives, only one of these – the AllCoNet deployment in Allegany County, Maryland – was in operation prior to 2002, the latest year for which the U.S. Census Zip Code Business Patterns data (from which we constructed economic indicators) was available at the time of the study. Table A-V.9 reports the qualitative data we gathered about the initiatives we found. This data could form the basis of future study of the outcomes of such initiatives, possibly taking a more case-based approach given the limited number of communities available for study.

In contrast, as Table A-V.10 shows, many telecommunications-related projects funded by the ARC had longer time horizons, having begun in the 1990s. However, upon further investigation we learned that as a matter of policy, ARC projects did not involve construction of broadband infrastructure. In fact, our investigation revealed anecdotal evidence that some of the projects had in fact been limited by lack of available connectivity in remote areas, as for example would be necessary to take full advantage of telemedicine equipment. Thus, the list of ARC projects, while available to us, did not produce a list of communities where broadband infrastructure deployments had been stimulated.

We were thus left with the list of 150 Municipal Electric Utilities (MEUs) in the ARC region, of which 46 – across all 13 ARC states – offered some form of communication service in 2002 (see Table A-V.8). In lieu of regression results, which did not prove meaningful given the small number of communities involved, the remainder of this section simply provides an overview of what such utilities are doing.[2]

According to data from the American Public Power Association (APPA), only 13 of the 150 MEUs in the ARC region offered some form of external broadband service by 2002 (See Figure A-V.1). As an example, Barbourville Electric Utility in Knox County, Kentucky, started its Internet initiative in 1996 and –in collaboration with CommSys- serves 3,300 customers with high-speed Internet through fiber currently.[3] Other examples of fiber deployments are Hagerstown[4] in Washington County, Maryland, and Bristol in Scott County, Virginia.[5] In the wireless area, Tropos Networks created a wireless public safety network that covers 2 square miles in Jamestown, in Chautauqua County, New York, and a police public safety network covering 3 square miles.[6]

Figure A-V.1. Municipal Electric Utilities in the Appalachian Region



Source: American Public Power Association Annual Survey (2002)

An additional 8 MEUs offered external communication services, such as cable television, dial-up Internet access, and local or long distance telephony. Additionally, 37 electric utilities have deployed some form of communication service to serve internal operations or local government needs. These services are municipal data, System Control and Data Acquisition (SCADA), Automatic Meter Reading (AMR), and voice or video.

In sum, statistical approaches did not prove viable for assessing the economic impacts of broadband stimulation initiatives in the ARC region; there are simply too few of them. Such initiatives may well have an effect, but it will need to be studied by other methods, such as in-depth qualitative analysis of the relationship between local government broadband initiatives and local economic growth. Such case study research might also allow for identifying the factors that have contributed to or hindered locally led broadband deployments and their corresponding economic impacts.

Endnotes

[1] This category includes initiatives led by local governments (including municipalities and counties) as well as community groups, local institutions of higher education, etc.

[2] For comparison purposes, we include the summary statistics for communities with and without broadband in the ARC zip codes in Table A-V.11.

[3] See CommSys. "On Ramp to Information Superhighway." 4 Jun, 2001. <http://www.commsys.com/pdf/barbourville_ky.pdf>

[4] Appalachian Regional Commission Online Resource Center. "Best Practices in Telecommunications." <http://www.arc.gov/index.do?nodeId=977>

[5] Louisa County. "Technology Assessment and Master Plan." September 2004. <http://top.bev.net/archive/tamp/6-Louisa/Louisa_TAMP.pdf>

[6] Muniwireless.com. "March 2005 Report." <http://www.muniwireless.com/reports/docs/March2005Report.pdf>

Table A-V.2A Employment – Zip Code Regressions in ARC

	(A-V.2A-1)	(A-V.2A-2)	(A-V.2A-3)	(A-V.2A-4)
	lnrEmplo	lnrEmplo	lnrEmplo	lnrEmplo
BB99	0.05023	0.05019		0.0497
	[0.01579]***	[0.01581]***		[0.01576]***
gEmp9498		0.00181	0.00158	0.0017
		[0.00216]	[0.00212]	[0.00208]
dUrban			0.04352	0.03696
			[0.01415]***	[0.01397]***
...				
Constant	-0.02756	-0.02811	0.05924	0.02406
	[0.01411]*	[0.01405]**	[0.05573]	[0.05732]
Observations	2578	2578	2578	2578
R-squared	00049	0.0050	0.0216	0.0260

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.2B Employment – Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>|Z|	
N=2578	BB99	0. 052799	2.92	0.004	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnrEmplo	0 .026087	0. 307948	-0.0 19885	0.388651
Independent Variables	gEmp9498	0.3053506	2.28652	0.2704399	1.124838
	URinfl03	4.248697	2.902376	4.252048	2.904973

Table A-V.3A Wage – Zip Code Regressions in ARC

	(A-V.3A-1)	(A-V.3A-2)	(A-V.3A-3)	(A-V.3A-4)
	LnrSalary	LnrSalary	LnrSalary	LnrSalary
BB99	0.01522	0.01134		0.00679
	[0.00868]*	[0.00827]		[0.00870]
grSalary9498		-0.15916	-0.16064	-0.16013
		[0.02958]***	[0.02956]***	[0.02944]***
grColl90s			-0.00005	-0.00005
			[0.00005]	[0.00005]
pcollege2K			0.00094	0.00091
			[0.00048]**	[0.00049]*
grLabor90s			0.00011	0.00011
			[0.00011]	[0.00011]
dUrban			0.00794	0.00721
			[0.00740]	[0.00743]
pIT98			-0.04424	-0.04795
			[0.05382]	[0.05390]
...				
Constant	0.0443	0.07413	-0.01632	-0.02027
	[0.00791]***	[0.00849]***	[0.04072]	[0.04114]
Observations	2578	2578	2578	2578
R-squared	0.0016	0.0664	0.0780	0.0783

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.3B Wage – Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>|Z|	
N=2578	BB99	-0.002576	-0.30	0.762	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	LnrSalary	0.054533	0.156792	0.057399	0.201902
Independent Variables	grSalary9498	0.170462	0.281923	0.169609	0.272010
	grColl90s	8.80722	60.20856	6.818312	41.74212
	pcollege2K	13.5095	8.987972	13.32141	8.981346
	grLabor90s	4.076141	28.98165	2.732311	12.75855
	URinfl03	4.261443	2.899279	4.294802	2.894601

Table A-V.4A Rent – Zip Code Regressions in ARC

	(A-V.4A-1)	(A-V.4A-2)	(A-V.4A-3)	(A-V.4A-4)
	lnRent2K	lnRent2K	lnRent2K	lnRent2K
BB99	0.07734	0.04327		0.02193
	[0.00985]***	[0.00883]***		[0.00815]***
lnRent90		0.42416	0.37896	0.37323
		[0.05062]***	[0.05496]***	[0.05506]***
grFInc90s			0.12189	0.12055
			[0.03412]***	[0.03397]***
grLabor90s			0.00006	0.00004
			[0.00010]	[0.00010]
dUrban			0.0732	0.07099
			[0.01010]***	[0.01001]***
...				
Constant	5.9639	3.57121	3.81256	3.83009
	[0.00835]***	[0.28806]***	[0.31748]***	[0.31737]***
Observations	2578	2578	2578	2578
R-squared	0.0253	0.2611	0.3921	0.3940

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.4B Rent – Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>IZI	
N=2578	BB99	0.0058792	0.65	0.519	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnRent2K	6.023102	0.215061	6.012241	0.239147
Independent Variables	lnRent90	5.697824	0.244573	5.692681	0.253954
	grFInc90s	0.488176	0.408765	0.479925	0.299769
	grLabor90s	4.053074	29.04637	2.37974	12.37516
	URinfl03	4.282777	2.903095	4.27851	2.915312

Table A-V.5A Total Establishments – Zip Code Regressions in ARC

	(A-V.5A-1)	(A-V.5A-2)	(A-V.5A-3)	(A-V.5A-4)
	lnrEst	lnrEst	lnrEst	lnrEst
BB99	0.02252	0.02216		0.01904
	[0.00793]***	[0.00793]***		[0.00801]**
grEst9498		0.01292	0.00885	0.00888
		[0.00580]**	[0.00461]*	[0.00457]*
dUrban			0.02037	0.01788
			[0.00720]***	[0.00727]**
grLabor90s			0.00012	0.0001
			[0.00006]**	[0.00006]*
...				
Constant	0.00324	0.00188	0.01783	0.00434
	[0.00700]	[0.00704]	[0.03178]	[0.03228]
Observations	2578	2578	2578	2578
R-squared	0.0038	0.0067	0.0545	0.0570

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.5B Total Establishments – Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>|Z|	
N=2578	BB99	0.0219527	2.4	0.017	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	lnrEst	0.031407	0.171747	0.008261	0.190373
Independent Variables	grEst9498	0.123984	0.730279	0.116612	0.559189
	grLabor90s	4.108868	28.96746	2.834807	12.61747
	URinfl03	4.274206	2.91304	4.264524	2.91666

Table A-V.5B Total Establishments – Zip Code nnmatch Regressions in ARC

	(A-V.6A-1)	(A-V.6A-2)	(A-V.6A-3)	(A-V.6A-4)
	ptotIT02	ptotIT02	ptotIT02	ptotIT02
BB99	0.01555	0.00175		0.00004
	[0.00353]***	[0.00255]		[0.00246]
pIT98		0.76146	0.82015	0.82013
		[0.01844]***	[0.01895]***	[0.01929]***
grColl90s			0.00001	0.00001
			[0.00001]	[0.00001]
pcollege2K			0.00056	0.00056
			[0.00011]***	[0.00011]***
dUrban			0.00219	0.00218
			[0.00212]	[0.00212]
grpIT9800			0.065	0.065
			[0.00557]***	[0.00557]***
...				
Constant	0.19613	0.05399	0.00987	0.00985
	[0.00306]***	[0.00369]***	[0.00931]	[0.00936]
Observations	2578	2578	2578	2578
R-squared	0.0085	0.5597	0.6175	0.6175

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.6B Establishments in IT-Intensive Sectors – Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>|Z|	
N=2578	BB99	-.0017106	-0.56	0.579	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	ptotIT02	0.205419	0.076059	0.2061657	0.082174
Independent Variables	pIT98	0.198475	0.075890	0.1973134	0.074407
	grColl90s	8.83987	60.62926	6.716216	41.92712
	pcollege2K	13.50434	8.899843	13.2026	8.718149
	URinfl03	4.253685	2.678748	4.3045	2.8786
	grpIT9800	0.051238	0.280791	0.0504487	0.282351

Table A-V.7A Small Establishments– Zip Code Regressions in ARC

	(A-V.7A-1)	(A-V.7A-2)	(A-V.7A-3)	(A-V.7A-4)
	psm02	psm02	psm02	psm02
BB99	-0.03278	-0.01131		-0.0096
	[0.00431]***	[0.00302]***		[0.00310]***
psm98		0.77	0.76256	0.7588
		[0.01817]***	[0.01866]***	[0.01893]***
pIT98			-0.03758	-0.03309
			[0.01822]**	[0.01817]*
grColl90s			-0.00001	0
			[0.00001]	[0.00001]
pcollege2K			-0.00048	-0.00043
			[0.00015]***	[0.00015]***
dUrban			-0.00349	-0.00253
			[0.00261]	[0.00259]
...				
Constant	0.81276	0.18586	0.19435	0.20311
	[0.00377]***	[0.01568]***	[0.01883]***	[0.01959]***
Observations	2578	2578	2578	2578
R-squared	0.0257	0.6135	0.6159	0.6178

Robust standard errors in brackets. State dummies are not shown in table. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A-V.7B Small Establishments– Zip Code nnmatch Regressions in ARC

		Coefficient	z-statistic	P>|Z|	
N=2578	BB99	-0.00903	-2.35	0.019	
		Treatment BB99=1		Control BB99=0	
	Variable	Mean	Std. Dev.	Mean	Std. Dev.
Dep. Variable	psm02	0.788440	.0913369	0.799334	0.100214
Independent Variables	psm98	0.795724	0.094059	0.798230	0.095652
	pIT98	0.198535	0.075514	0.196356	0.073939
	grColl90s	8.809076	60.63085	6.536416	41.77187
	pcollege2K	13.48297	8.876144	13.08223	8.709112
	URinfl03	4.252521	2.897593	4.303336	2.874884

Table A-V.8: MEUs Providing Telecommunication Services – Appalachian Region

City	utility name	county	External Broadband Services (1)	Other External Communication Services (2)	Internal Communication Services (3)
Sylacauga, AL	Sylacauga Utilities Board	Talladega	1		1
Scottsboro, AL	Scottsboro Electric Power Board	Jackson	1		1
Cartersville, GA	Cartersville, City of	Bartow	1		1
Calhoun, GA	Calhoun, City of	Gordon	1		1
Elberton, GA	Elberton, City of	Elbert	1		1
Barbourville, KY	Barbourville, City of	Knox	1		1
Jamestown, NY	Jamestown Board of Public Utilities	Chautauqua	1		1
Covington, TN	Covington Electric System	Tipton	1		
Morristown, TN	Morristown Utility Commission	Hamblen	1		
McMinnville, TN	McMinnville Electric System	Warren	1		1
Chattanooga, TN	Chattanooga Electric Power Board	Hamilton	1		1
Bristol, VA	Bristol Virginia Utilities	City of Bristol	1		1
Radford, VA	Radford, City of	City of Radford	1		1
Florence, AL	Florence Utilities	Lauderdale		1	1
Hartselle, AL	Hartselle Utilities	Morgan		1	
Monticello, KY	Monticello Electric Plant Board	Wayne		1	
Morganton, NC	Morganton, City of	Burke		1	
Pitcairn, PA	Pitcairn Municipal Light System	Allegheny		1	
New Wilmington, PA	New Wilmington, Borough of	Lawrence		1	
Greer, SC	Greer Commission of Public Works	Greenville/ Spartanburg		1	
Philippi, WV	Philippi, City of	Barbour		1	
Muscle Shoals, AL	Muscle Shoals Electric Board	Colbert			1
Albertville, AL	Albertville Municipal Utilities Board	Marshall			1
Huntsville, AL	Huntsville Utilities	Limestone/ Madison			1
Hagerstown, MD	Hagerstown Light Department	Washington			1
Starkville, MS	Starkville Electric System	Oktibbeha			1
Endicott, NY	Endicott, Village of	Broome			1
Westfield, NY	Westfield, Village of	Chautauqua			1
Columbiana, OH	Columbiana, Village of	Mahoning/ Columbiana			1

Table A-V.8: MEUs Providing Telecommunication Services – Appalachian Region, *Continued*

City	utility name	county	External Broadband Services (1)	Other External Communication Services (2)	Internal Communication Services (3)
Dover, OH	Dover, City of	Tuscarawas			1
Leighton, PA	Lehighton, Borough of	Carbon			1
Easley, SC	Easley Combined Utilities	Pickens			1
Gaffney, SC	Gaffney Board of Public Works	Cherokee			1
Seneca, SC	Seneca, City of	Oconee			1
Alcoa, TN	Alcoa, City of, Electric Department	Blount			1
Knoxville, TN	Knoxville Utilities Board	Knox			1
Lenoir City, TN	Lenoir City Utilities Board	Loudon			1
Loudon, TN	Loudon, City	Loudon			1
Cleveland, TN	Cleveland Utilities	Bradley			1
Athens, TN	Athens Utilities Board	McMinn			1
Cookeville, TN	Cookeville, City of	Putnam			1
Greeneville, TN	Greeneville Light & Power System	Greene			1
Jellico, TN	City of Jellico Electric & Water System	Campbell			1
La Follette, TN	LaFollette Utilities	Campbell			1
Harriman, TN	Harriman Utility Board	Morgan/ Roane			1
Johnson City, TN	Johnson City Power Board	Carter/Sullivan/ Washington			1
Total			13	8	37

(1): Includes Cable Modem, DSL, Fiber Leasing, wireless broadband. Some MEUs in this category also offer narrowband services

(2): Includes CATV, Dial-up Internet access, local and long distance telephony

(3): Includes municipal data, AMR, SCADA, and internal voice and data services

Table A-V.9 Appalachian Broadband Infrastructure Initiatives

Project Name	Time Frame	Project Location	State	Regional Distribution	Project Description
OptiLink[1]	Marketing began in Fall 2003	Dalton, in Whitfield County, GA	GA	City	Broadband data and telecom services launched by Dalton Utilities. Connectivity: High-speed Internet through the fiber optic network OptiLink. Data speeds up to 2.5 Gbps. Market served: Business and residential customers.
WMDnet[2]		Allegany County, Garrett County, Frostburg State University, MD	MD	2 counties, 1 university	WMDnet helped develop Internet access for the public sector in three counties. It stimulated entry of private Internet service providers into the region and has been the focal point of various computer and telecommunications projects that benefit students and improve the use of public information.
Allconet/ WMDnet[3]	AllCoNet currently operational. AllCoNet2 expected to be launched in Aug 2005.	Allegany County, MD	MD	County	AllCoNet is the Intranet for Allegany County, linking agencies, schools, non-profits, and colleges while providing Internet access. Connectivity: IP-based high speed Intranet, currently supporting 622 Mbps. Internet linkages via a wireless hookup. Market served: Coverage for the whole county. Agencies, businesses, schools, non-profits, and colleges.
PANGAEA[4]	Fund awarded in 2002 PANGAEA. In operation since 2004.	Polk County, NC	NC	County	PANGAEA is a fiber optic network deployed by e-Polk, a community-owned non-profit company serving the development interests of Polk County, NC. Connectivity: Back operates at an initial 620 Mbps; expandable to 64 Gbps. PANGAEA allows subscriber connections up to 155 Mbps. Market served: Businesses, schools and residential customers.
BalsamWest FiberNET[5]	Project expected to be completed by July 2005	Jackson, Macon, Swain, Clay, Cherokee, Graham counties, NC	NC	6 Counties	The BalsamWest group has built a 255-mile fiber optic ring to bring high-speed Internet access to 6 Appalachian counties in Western NC. Connectivity: Metro/regional fiber network proving dark fiber, SONET, Ethernet, high-speed Internet and other solutions. Market served: College campuses, government agencies, health services, etc.
NuNet Fiber Technologies[6]	Initiative reported in Jan 2004. Initial build-out the and first of four stages has begun.	Hazleton, in Luzerne County, PA	PA	City	Hazleton will soon be completely wired with a fiber-optic network that will provide high-speed bandwidth for Internet access and related technologies. Connectivity: Fiber optic network, with connections ranging from 3-5 Mbps for standard service and up to 100 Mbps for premium service. Market served: Any business or residential customers in the city.

Table A-V.9 Appalachian Broadband Infrastructure Initiatives, *Continued*

Project Name	Time Frame	Project Location	State	Regional Distribution	Project Description
Dickenson County Wireless Integrated Network (DCWIN)[8]	Started in Deployed in summer 2003. Expanded in 2004.	Dickenson County, VA	VA	County	DCWIN is a high-speed wireless network for Dickenson County and the surrounding region. Connectivity: Residential wireless Internet at 1540 Kbps; commercial wireless Internet at 3080 Kbps. Market served: Any commercial and residential customers.
Center for Appalachian Network Access (CANA)[7]	Started in 2003	Perryopolis, in Fayette County, PA	PA	City	CANA and the Fraizer School District implemented a canopy network to provide Internet connectivity to the business community. The operation and expansion of the network has been turned over to CANA's private enterprise partner American Broadband. CMU Professor Bruce Maggs and his team of student volunteers deployed Motorola wireless equipment to connect the local business community in 7 days as part of the CANA initiative. The Perryopolis network's operations and finances have been transferred to a private company. Connectivity: Wireless broadband. Market served: Businesses.
Haysi Electronic Village[9]	Received funding in May 2003. Became operational in May 2004.	Haysi, in Dickenson County, VA	VA	Town	Haysi Electronic Village, in Dickenson County, has deployed local access Fiber to the Premise to deliver Gigabit Ethernet to each premise. Connectivity: Fiber optic network. Subscribers may connect at any of 3 common Ethernet speeds at 10 Mbps, 100 Mbps, or 1 Gbps. Market served: Town's citizens, local businesses and medical facilities.
Center for Appalachian Network Access (CANA)[10]	Ongoing	McDowell County, WV	WV	County	CANA is setting up Ashland West Virginia ATV Resort with wireless broadband access. Connectivity: Wireless broadband. Market served: ATV resort.
Gilmer and Braxton County Research Zone[11]	Created by legislation in 2004. Ongoing activities.	Gilmer and Braxton Counties, WV	WV	2 Counties	Glenville is capable and ready to be the first site to receive a high-speed network. The Glenville wireless network will be implemented in two phases: first, school, government and nonprofit organizations; second, local business and residents. In phase one, the college, high school, and the county court house will be connected to the wireless network. In phase two, local businesses and residents will have access to the network. The project has expanded into the Gilmer and Braxton County Research Zone, the mission of which is to bring high-speed access to the two counties. Connectivity: Wireless broadband. Market served: Schools, colleges, government agencies, organizations, businesses.

[1] Kane County Chronicle. "Towns prove success with broadband." 29 Mar, 2004. <http://www.tricitybroadband.com/news20.htm>

[2] Appalachian Regional Commission Online Resource Center. "Best Practices in Telecommunications." <http://www.arc.gov/index.do?nodeId=977>

[3] AllCoNet.org. <http://www.allconet.org>

[4] Get Ready for PANGAEA. <http://www.pangaea.us/index2.html>

[5] BalsamWest. <http://www.balsamwest.net>

[6] NuNet Fiber Technologies. <http://www.nunetfiber.com>

[7] CANA. «CANA Projects.» <http://canacenter.org/projects.htm>

[8] DCWIN. <http://www.dcwin.org>

[9] Dickenson County. "Technology Assessment and Master Plan." Sep 2004. <http://top.bev.net/archive/tamp/3-Dickenson/Dickenson_TAMP.pdf>

[10] Center for Appalachian Network Access (CANA). "CANA: McDowell Team." <http://canacenter.org>

[11] CANA. "Glenville Status Documentation." July 2005. <http://canacenter.org/doc/Camp.doc>

Table A-V.10. Telecommunications projects funded by the Appalachian Regional Commission

Project Name	Time Frame	Project Location	State	Regional Distribution	Project Description
Leatherstocking Telecommunications Consortium	Established in 1994	Multiple school districts		In the process of expanding to 9 counties	Sophisticated telecommunications providing Internet access, distance learning, telemedicine, and website setup services to local government and businesses. The consortium involved educational institutions in New York State, exposing the population to uses of high speed Internet access and helping the government build an understanding about the benefits of broadband.
Southern Tier Central Telecommunications Initiative				2 or more, but not all ARC counties	Purchasing and installing telecommunications equipment; providing relevant training. This initiative also involved a planning district in the central part of NY State. The ARC funded video conferencing equipment between the districts, and worked to raise awareness about the potential of broadband.
Acquiring mobile technology for Towns County High School	Late 1990s - 2003	Towns County, GA	GA	Towns County High School	Purchasing laptops equipped with wireless; allowing access to software, Internet, email and computer-based applications; assisting adults in completing GED, and improving computer and work skills. Wireless technology was deployed in junior-high and high school, and was used in all classes. The number of Graduate Equivalence Diplomas (GEDs) increased as a result of the project.
ChattoogaNet		Chattooga County, GA	GA	County	ChattoogaNet is an ISP run by local students, teaching students operation of an Internet server and providing free Internet access to all segments of the community. The project made 20 laptops available to students, teachers, parents through a loan program, allowing access to the Internet; its students in the technology class at the high school offer outreach services, web design and technical assistance to the community. Based on a high school, the idea behind ChattoogaNet was to teach children about the Internet, software and the WWW. The school went online and introduced laptops into the community. In the process, the school had to become a non-profit ISP. Connectivity: 2 ISDN lines 2x128 Kbps Market served: High school students, community
Big Sandy Telecommunications Center	Completed in early 2000	Pikeville, KY	KY	County	Establishing and maintaining the community's only ISP. The ARC provided all equipment, but a third party paid for the network connectivity. The ISP at the time was Big Sandy Telecommunications Center. Market served: Pikeville County
WMDnet		Hagerstown, Garrett County, Allegany County, MD	MD	At least 3 counties	Helping develop Internet access for the public sector; stimulating entry of private ISPs into the region; Internet linkages via a wireless hookup. The project eventually created the need for wireless connectivity among businesses.

Table A-V.10. Telecommunications projects funded by the Appalachian Regional Commission, *Continued*

Project Name	Time Frame	Project Location	State	Regional Distribution	Project Description
Golden Triangle Telecommunications Network System	Between fiscal years 1996 - 1998	Starkville, MS	MS	2 or more, but not all ARC counties	Connecting 7 county governments and agencies within each county; providing training through a software package. The Golden Triangle is a planning district in Mississippi. The idea behind its formation was to provide service to county officials. T1 lines were deployed from county office to county office, and the ARC project involved buying laptops, software and train county officials in digital government. Connectivity: T1 Market served: 7 county governments
Alleghany High School Cyber Campus	Late 1990s, early 2000	Sparta, NC	NC	2 or more, but not all ARC counties	Installing equipment, technology lessons, Internet courses for distance learning, an internship program, and a lab for training and public access to computers and the Internet The Cyber Campus is a community access center which the school uses during the day, and the community uses at other times. Connectivity: T1 Market served: Community
Tompkins County Collaborative Communication		Ithaca, NY	NY	County	Improving the standard of county agency equipment and accessibility to improve communication, e.g. via email and the Internet; equipment purchases, training, developing websites, technical support. The idea behind the project was to get a sector of the community to start adopting applications that would drive the demand for many communities.
Medical and Government Internet Coalition Network (MAGICnet)	Went online in Sep 1997	Athens, OH	OH	Other	Providing access to message boards, email, information databases; providing separate training for physicians and government officials; helping local ISPs in widening service. The idea behind MAGICnet was to enable telemedicine to help doctors in hard-case diagnosis by connecting small clinics, doctors and small hospitals. The project paid for computers and software. Much of the connectivity was dialup. Connectivity: Dialup Market served: Small clinics, small hospitals, and doctors
Sunday Creek Associates/ ARC Managing Information with Rural America (MIRA)		Shawnee, OH	OH	2 or more, but not all ARC counties	Upgrading computers, purchase of copier machines; providing technical and project assistance to local initiatives

Table A-V.10. Telecommunications projects funded by the Appalachian Regional Commission, *Continued*

Project Name	Time Frame	Project Location	State	Regional Distribution	Project Description
Susquehanna Economic Development Association-Council of Governments (SEDA-COG) Info-Structure Technology Assistance Center	Late 1990s	Lewisburg, PA	PA	2 or more, but not all ARC counties	Providing basic and advanced telecommunications services, and training for access to data for daily governmental operations in a planning district in Northeast PA. The idea behind this project was to provide training in e-government, website building, and various ways to raise civil participation and awareness. Connectivity: Certain information not available. However, most government offices were struggling to get T1 in place. Market served: Government agencies

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Table A-V.11 Zip Code Level Summary Statistics for the Appalachian Region*

	(1) All ARC Zip Codes	(2) ARC Zip codes with BB by 1999	(3) ARC Zip Codes with No BB by 1999	(4) ARC Zip Codes with MEU BB (as of 2002) (N=39)		(5) ARC Zip Codes with Local Gov't Broadband Initiatives (N=45)	
	(N=2,578)	BB99=1 (N=1,723)	BB99=0 (N=830)	BB99=1 (N=28)	BB99=0 (N=11)	BB99=1 (N=30)	BB99=0 (N=15)
Variables	Mean (Std. Dev.)	Mean (Std. Dev.)	Mean (Std. Dev.)	Mean (Std. Dev.)	Mean (Std. Dev.)	Mean (Std. Dev.)	Mean (Std. Dev.)
lnRent2K	6.016 (0.229)	6.041 (0.216)	5.967 (0.244)	5.982 (0.211)	6.014 (0.164)	5.980 (0.211)	5.740 (0.271)
LnrSalary	0.054 (0.180)	0.060 (0.149)	0.044 (0.234)	0.049 (0.120)	0.060 (0.136)	0.065 (0.177)	0.044 (0.122)
ptotIT02	0.207 (0.079)	0.212 (0.073)	0.197 (0.089)	0.221 (0.070)	0.152 (0.082)	0.183 (0.060)	0.184 (0.128)
lnrEmplo	0.006 (0.339)	0.023 (0.294)	-0.023 (0.410)	0.025 (0.325)	-0.217 (0.629)	0.074 (0.274)	-0.139 (0.307)
psm02	0.791 (0.096)	0.780 (0.087)	0.812 (0.111)	0.763 (0.089)	0.836 (0.053)	0.829 (0.079)	0.842 (0.089)
lnrEst	0.018 (0.173)	0.026 (0.155)	0.002 (0.203)	0.006 (0.134)	0.151 (0.247)	0.028 (0.140)	-0.055 (0.250)
BB99	0.668 (0.471)	1.000 (0.000)	0.000 (0.000)	1.000 (0.000)	0.000 (0.000)	1.000 (0.000)	0.000 (0.000)
dUrban	0.508 (0.500)	0.572 (0.495)	0.387 (0.487)	0.429 (0.504)	0.182 (0.405)	0.300 (0.466)	0.067 (0.258)
gEmp9498	0.320 (2.344)	0.326 (2.759)	0.295 (1.096)	0.185 (0.426)	0.618 (1.064)	0.148 (0.380)	0.760 (1.502)
grColl90s	9.060 (60.735)	11.738 (72.345)	3.733 (23.448)	13.975 (48.246)	2.372 (4.574)	9.464 (24.590)	0.759 (1.893)
grEst9498	0.124 (0.723)	0.133 (0.810)	0.104 (0.506)	0.106 (0.232)	0.187 (0.159)	0.042 (0.151)	0.127 (0.347)
grFInc90s	0.486 (0.417)	0.498 (0.456)	0.471 (0.326)	0.414 (0.248)	0.503 (0.214)	0.553 (0.234)	0.294 (0.234)
grLabor90s	4.141 (28.991)	5.310 (34.861)	1.825 (8.918)	12.200 (51.746)	0.643 (1.433)	4.607 (12.572)	0.266 (1.475)
grpIT9800	0.052 (0.287)	0.044 (0.246)	0.071 (0.356)	0.059 (0.317)	-0.027 (0.310)	0.078 (0.247)	-0.004 (0.307)
grSalary9498	0.171 (0.289)	0.163 (0.269)	0.189 (0.327)	0.218 (0.356)	0.070 (0.236)	0.206 (0.329)	0.182 (0.292)
lnRent90	5.695 (0.265)	5.721 (0.243)	5.641 (0.299)	5.728 (0.173)	5.717 (0.222)	5.595 (0.166)	5.584 (0.203)
pcollege2K	13.500 (9.064)	14.583 (9.297)	11.336 (8.185)	9.868 (4.706)	9.864 (2.891)	14.790 (9.045)	10.820 (9.312)
pIT98	0.199 (0.078)	0.205 (0.073)	0.188 (0.086)	0.215 (0.078)	0.148 (0.051)	0.187 (0.064)	0.167 (0.062)
psm98	0.796 (0.097)	0.786 (0.087)	0.814 (0.112)	0.767 (0.072)	0.843 (0.114)	0.827 (0.069)	0.807 (0.090)

* Includes only the sub-sample of entries with available data for all variables. Standard errors in parenthesis.

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Fiber broadband has an impact on home values

Published on July 13 2015.

G+

Internet speed impacts home values.

Valuation professionals know the importance of an Internet connection in the field when they're conducting an appraisal, but the ability to connect to the Web impacts the valuation process beyond accessing data on comparable properties during a walkthrough.

A recent study commissioned by the Fiber to the Home Council Americas (FTTH) and conducted by researchers from the University of Colorado at Boulder and Carnegie Mellon University found broadband Internet connections have a positive impact on home values. Specifically, fiber optic broadband that produces download speeds of 1 gigabyte per second can add about $5,400 to a home's value. This equals a 3.1 percent increase in value.

The home value improvement breaks down to a 1.3 percent improvement simply for offering access to fiber broadband. The aforementioned download speed contributes a 1.8 percent increase.

"Some buyers believe high-speed Internet is as essential as electricity."

Why fiber broadband is important to consumers

Internet connectivity has become ubiquitous in many areas of the U.S. Consumers utilize it for school, work and entertainment, and slow speeds aren't acceptable. The Web has progressed from slow dial-up connections to cable modems and digital subscriber lines (DSL), and people want faster speeds.

Fiber is often seen as the upper echelon of connection types, and the Federal Communications Commission (FCC) noted it transmits data tens or hundreds of megabytes per second faster (http://www.broadband.gov/broadband_types.html#fiber) than DSL or cable Internet. Additionally, fiber is available in limited locations, making the service more of a unique feature.

ISPreview study: Homebuyers want houses with fast connections

FTTH's study isn't the only source to track the relationship between Internet speed and residential real estate trends. An ISPreview survey of its readers found broadband access could make or break a home sale (http://www.ispreview.co.uk/index.php/2015/05/survey-finds-uk-house-buyers-rejecting-homes-with-slow-broadband.html). Not only would most respondents pay more for a home with download speeds of at least 25 megabytes per second, but also nearly 72 percent said they wouldn't purchase a house with subpar broadband speeds. Moreover, 22.8 percent reported they would shoot for a lower asking price if the speed didn't meet their standards.

While the ISPreview report surveyed U.K. residents, the sentiment is the same in the U.S. The Wall Street Journal spoke with homebuyers Tom Cairns and Kara Burke, and Burke told the publication high-speed Internet is as essential as electricity (http://www.wsj.com/articles/SB[illegible]). In fact, they passed on a home that met most of their needs but lacked a sufficient connection.

This action may seem a bit extreme to some, but the FTTH study said the fiber access was akin to adding a fireplace, a quarter of a swimming pool or half of a bathroom. If that doesn't indicate the value of fiber and broadband overall, consider that David Mans, a real estate agent in Boulder, Colorado, told the Journal certain buyers won't view listings that don't have broadband.

Some homebuyers won't even consider a home if it doesn't have broadband access.

Factoring fiber broadband into an appraisal

The impact of any unique home element on an appraiser's opinion of value is always affected by local trends. If consumers in a city don't see fiber as a valuable service, the figure from the FTTH data could be lower. Additionally, the FCC noted several factors can lower or improve fiber speeds.

The FTTH and other broadband advocacy groups hope fiber will be more widely available in the near future. FTTH President and CEO Heather Gold said the study results could convince more local governments to facilitate greater access to fiber, and a few providers have announced their intention to expand their offerings.

Considering homebuyers' opinions and the data from the FTTH and ISPreview studies, valuation professionals may want to keep an eye on the proliferation of fiber and whether it affects home values in the areas where they operate.

Some appraisers feel the respondents to this study may not meet the definition of a "typical buyer" but admit it is a trend that appears to be more mainstream and reflective of a growing portion of the buying public.

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M. Reports Mayor/Council/Admin.

CITY OF MT. VERNON
CITY ADMINISTRATOR
REPORT TO THE CITY COUNCIL
December 18, 2017

- City Hall will be closed on Monday, December 25, 2017 and Tuesday, December 26, 2017 for the holidays.
- The City's intern, Jordan Poole, has accepted a position with the City of Madison, Wisconsin and will be leaving us within the next month. Staff will be presenting a staffing plan during the budget process to compensate for this loss (and other operational changes).
- The preliminary draft of the Spring Meadow Heights development agreement has been sent to Kyle Skogman. It is expected to be in front of the Council in January.
- I have attached the proposed Mediacom rate changes as an FYI to the Council.
- Also included is a copy of the letter received from the Iowa Department of Natural Resources regarding the City's positive environmental review of the UV disinfection project.

November 12, 2017

Mr. Michael Beimer
City of Mt. Vernon
213 1st St. W
Mt. Vernon, Iowa 52314-9998

Dear Mr. Beimer:

The purpose of this letter is to inform you that, on or about January 1, 2018, Mediacom will be implementing the following rate adjustments:

Product:	Old Rate:	New Rate:	Net Change:
Local Broadcast Station Surcharge[1]	$8.38	$11.15	$2.77
Regional Sports Surcharge	$2.61	$2.98	$0.37
Family TV	$74.95	$78.49	$3.54
HD DTA	$2.99	$3.99	$1.00
SD DTA	$1.99	$3.99	$2.00
DVR Service (non TiVo)	$10.95	$14.99	$4.04
Standard Installation Fee	$49.99, $74.99 or $99.99	$99.99	Varies

The decision to make price adjustments is always a difficult one. We are very reluctant to raise video prices because, when we do, we lose subscribers. However, cable and satellite companies are constantly being pressured by the programmers we buy from to pay more for the channels we carry.

The fees we pay to retransmit local broadcast stations like ABC, CBS, FOX and NBC are by far our fastest growing programming cost component. All told, the fees charged by broadcasters, according to SNL Kagan, grew from $800 million to $9.3 billion annually or 1063% between 2009 and 2017.

[1] Mediacom bills monthly in advance. As a result, the increases for both the Local Broadcast Surcharge and Regional Sports Surcharge are based on our best estimate of the cost increases our company will incur for broadcast and regional sports programming. Mediacom will "true up" customer bills in a subsequent month if it turns out that our estimate was too high or too low.

The problems with sports programming is equally as alarming. One look at the skyrocketing rights fees announced with recent deals and it is easy to see that the marketplace for live televised sports is out of control. Broadcast networks and national and regional sports networks are shelling out billions of dollars for the rights to the NFL, NBA, MLB, NHL, the Olympic Games, World Cup and NCAA football and basketball. Unrestrained spending has become the hallmark of the sports programming business, and the American consumer, whether a sports fan or not, is left to pay the price.

In an effort to bring more transparency to the unjustified fee increases being taken by the owners of broadcast and sports television channels, Mediacom previously introduced a Local Broadcast Surcharge and a Regional Sports Surcharge. By identifying the cumulative fee increases being taken by these channel owners, we hope to draw the attention of consumers and their elected representatives to this rapidly escalating problem.

Despite the challenges we face, Mediacom has continued to aggressively invest in the communities we serve. As part of a 3-year, $1 billion capital investment plan announced in 2016, Mediacom has been aggressively installing the newest generation of broadband technology throughout its entire internet service territory. As a result, virtually all of the 3 million homes and businesses across our 22 state footprint now have access to 1 Gig broadband speeds.

In addition, Mediacom has broadly launched a low-cost high-speed internet service for low-income customers featuring 10 Mbps download speeds for $9.95 per month. The service, called Connect2Compete, is offered in partnership with EveryoneOn and is available to families with students participating in the National School Lunch Program. Additional information is available at www.mediacomc2c.com.

Mediacom appreciates the opportunity to continue to serve your community's telecommunications needs. If you have any questions, please contact me directly **319-395-9699 ext. 3461** or email lgrassley@mediacomcc.com

Yours sincerely,

Lee Grassley
Senior Manager, Government Relations

Why You Should Read This: The document below reviews the environmental impact likely from a project. This project is planned to be federally funded through your tax dollars; therefore, you are entitled to take part in its review. If you have concerns about the environmental impact of this project, raise them now. We encourage public input in this decision making process.

IOWA STATE REVOLVING FUND
CATEGORICAL EXCLUSION

December 13, 2017

To: All Interested Citizens, Government Agencies, and Public Groups
An environmental review has been performed based on the procedures for implementing the National Environmental Policy Act (NEPA), for the proposed agency action below:

Applicant: City of Mount Vernon
County: Linn
State: Iowa

SRF Number: CS1920853 01
Iowa DNR Project Number: S2017-0177

The City of Mount Vernon, Iowa is planning an upgrade to their wastewater treatment plant. The city has applied for financial assistance through the State Revolving Fund (SRF) loan program to build the project. SRF is a program authorized by the Environmental Protection Agency (EPA) and administered by the Iowa Department of Natural Resources (DNR) in partnership with the Iowa Finance Authority.

The proposed project includes construction ultraviolet (UV) disinfection units and associated piping and splitter box at the wastewater treatment plant. In addition, the project includes replacement of existing pumps and rehabilitation of clarifiers.

The proposed project was reviewed for eligibility for a categorical exclusion from NEPA review specified in the 40 CFR (Code of Federal Regulations) Part 6.204. The project meets all criteria described in the above reference and was determined that this project is eligible for a categorical exclusion. Consequently, a preliminary decision has been made that a Finding of No Significant Impact (FNSI) will not be prepared.

Justification for granting categorical exclusion:

- The project as proposed is solely directed toward minor upgrading or minor expansion of system capacity, rehabilitation of the existing system and system components; or construction of new minor ancillary facilities adjacent to or on the same property as existing facilities.
- This project will not involve new or relocated discharges to surface or ground water.
- This project will not result in substantial increase in the volume or the loading of pollutant to the receiving water.
- The project will not serve a population 30% greater than the existing population.
- The project is not directly or indirectly involved or related to upgrading or extending infrastructure systems primarily for the purposes of future development.
- The project is not counter to the state, or other regional growth plan or strategy.
- The proposed action is not known or expected to have potentially significant environmental impacts on the quality of the human environment either individually or cumulatively over time.
- The proposed action is not known or expected to have disproportionately high and adverse human health or environmental effects on any community, including minority communities, low-income communities, or federally-recognized Indian tribal communities.
- The proposed action is not known or expected to significantly affect federally listed threatened or endangered species or their critical habitat.
- The proposed action is not known or expected to significantly affect national natural landmarks or any property with nationally significant historic, architectural, prehistoric, archeological, or cultural value, including but not limited to, property listed on or eligible for the National Register of Historic Places.
- The proposed action is not known or expected to significantly affect environmentally important natural resource areas such as wetlands, floodplains, significant agricultural lands, aquifer recharge zones, coastal zones, barrier islands, wild and scenic rivers, and significant fish or wildlife habitat.
- The proposed action is not known or expected to cause significant adverse air quality effects.
- The proposed action is not known or expected to have a significant effect on the pattern and type of land use (industrial, commercial, agricultural, recreational,

residential) or growth and distribution of population including altering the character of existing residential areas, or may not be consistent with state or local government, or federally-recognized Indian tribe approved land use plans or federal land management plans.

- The proposed action is not known or expected to cause significant public controversy about a potential environmental impact of the proposed action.
- The proposed action is not known or expected to be associated with providing financial assistance to a federal agency through an interagency agreement for a project that is known or expected to have potentially significant environmental impacts.
- The proposed action is not known or expected to conflict with federal, state or local government, or federally-recognized Indian tribe environmental, resource-protection, or land-use laws or regulations.

The Department of Natural Resources shall revoke the categorical exclusion and shall require a full environmental review if, subsequent to the granting of an exclusion, the state determines that:

- The proposed project no longer meets the requirements for a categorical exclusion due to changes in the proposed project; or
- New evidence reveals that serious local or environmental issues exist; or
- Federal, State, local or tribal laws are being violated.

This action is taken on the basis of a careful review of supporting information that is on file at the Department of Natural Resources' Des Moines, Iowa office. This information is available upon request. This Department will not take any administrative action on the project for at least thirty (30) calendar days from the above date. Persons disagreeing with the above environmental decision may submit comments to the Department during this period. Please direct your comments to me at Tiffany.WilsonLillard@dnr.iowa.gov or (515) 725-0261.

Sincerely,

TWLillard

Tiffany Wilson Lillard
Environmental Review Specialist

502 E. 9th Street
Des Moines, IA 50319-0034

Enclosure: Project Map

Distribution List (email):
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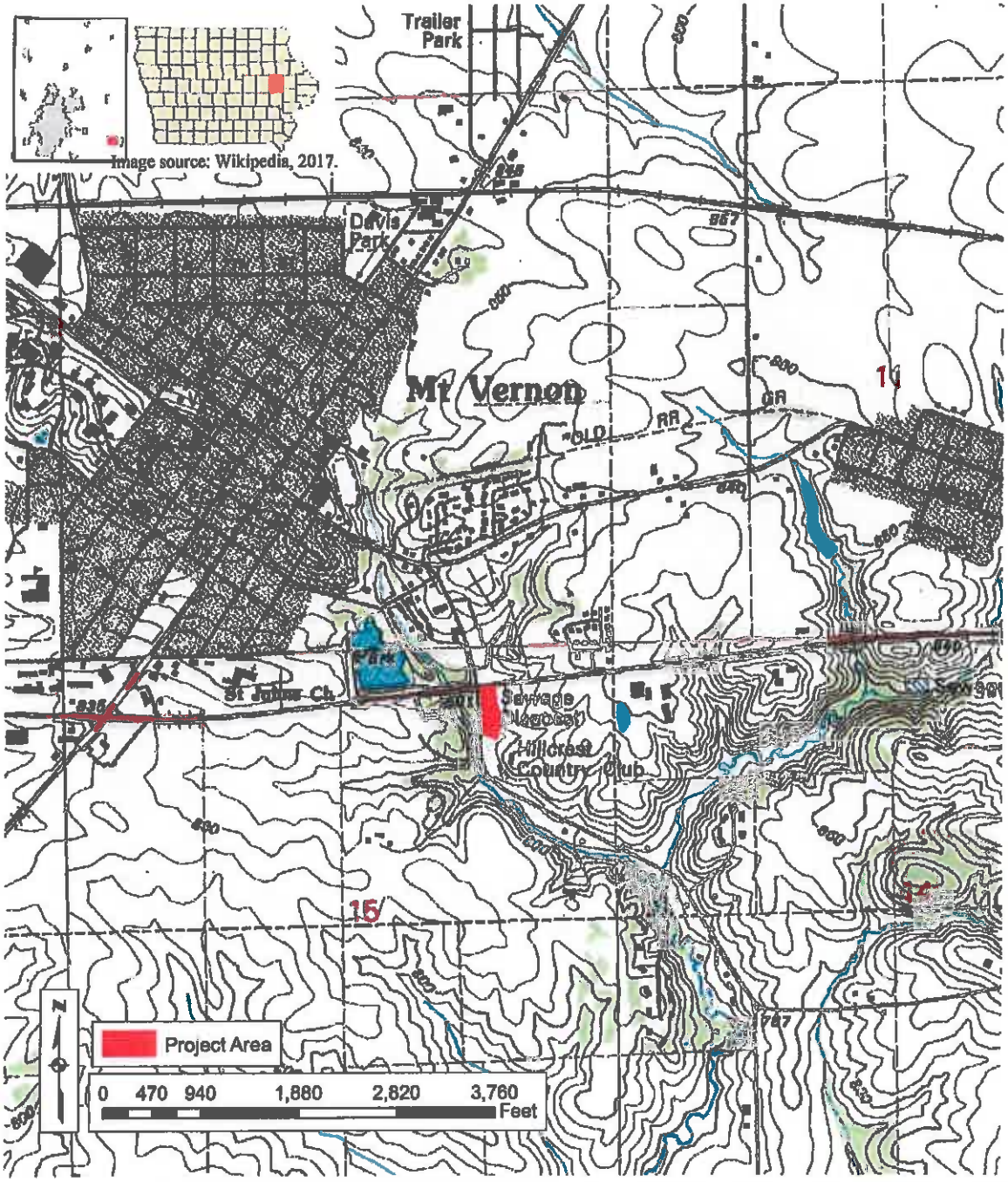
Mount Vernon-Lisbon Sun

USGS 7.5 Minute Quadrangle: Mount Vernon
Section: 15, **Township:** 82 N, **Range:** 05 W
Date: 1993



USGS Topographic Map

Location information provided by Veenstra & Kimm, Inc.

Mount Vernon Wastewater Treatment Plant Upgrade
Mount Vernon, IA

State Revolving Fund
502 East 9th Street
Des Moines, IA 50319-0034

Aerial Photograph

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Google Map

Provided by Veenstra & Kimm, Inc.

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