OFFICIAL AGENDA

PLANNING & ZONING COMMISSION

CITY OF STARKVILLE, MISSISSIPPI

MEETING OF TUESDAY, October 13, 2015

CITY HALL - COURT ROOM,

101 LAMPKIN STREET, 5:30 PM

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE AND MOMENT OF SILENCE

III. ROLL CALL

IV. CONSIDERATION OF THE OFFICIAL AGENDA

V. CITIZEN COMMENTS

VI. OLD BUSINESS

A. PP 15-13 Request for Preliminary Plat approval for Subdividing one lot into five lots at the southwest corner of the intersection of Garrard Road and Hwy 12 East with the parcel number 117F-00-002.00

VII. NEW BUSINESS

A. CU15-11 Request for Conditional Use to allow a "Place of Worship" at 1437 Fire Station Road on a parcel with the parcel number 118 -27-020.03
B. CU 15-12 Request for Conditional Use to allow for a residential uses at a property currently zoned C-2 General Business with a parcel number of 118N-00-120.00.
C. EX 15-06 Use by Exception request for allowing a stormwater detention pond to be the only use on two lots zoned T-5. Parcel #118P-00-046.00 and 118P-00-047.00
D. RZ 15-05 Request for rezoning of several parcels located on the north side of University Drive between Camp Avenue and Rue Du Grand Fromage with parcel numbers 101C-00-002.00, 101C-00-001.00, 101D-00-001.00, 101D-00-002.00, 101D-00-003.00, and 101D-00-004.00

VIII. PLANNER REPORT

A. The Comprehensive Plan Workshop will be held at the Starkville Sportsplex on Monday, October 19th at 5:30pm-8:30pm
B. The Design Presentation for the Comprehensive Plan will be held at the Starkville Sportsplex on Thursday, October 22nd at 6:00pm-7:30pm

IX. ADJOURN

The City of Starkville is accessible to persons with disabilities. Please call the ADA Coordinator, Mr. Joyner Williams, at (662) 323-2525, ext. 121 at least forty-eight (48) hours in advance for any services requested.

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HISTORIC STARKVILLE
MISSISSIPPI'S COLLEGE TOWN
THE CITY OF STARKVILLE
COMMUNITY DEVELOPMENT DEPT
CITY HALL, 101 E. LAMPKIN STREET
STARKVILLE, MISSISSIPPI 39759

STAFF REPORT

TO: Members of the Planning & Zoning Commission

FROM: Daniel Havelin, City Planner (662-323-2525 ext. 136)

CC: HPM Development, LLC, Applicant

SUBJECT: PP 15-13 Request for Preliminary Plat approval for subdividing one lot into five lots at the southwest corner of the intersection of Garrard Road and Hwy 12 East with the parcel number 117F-00-002.00

DATE: OCTOBER 13, 2015

BACKGROUND INFORMATION:

The purpose of this report is to provide information regarding the request by HPM Development LLC for approval of a Preliminary Plat for subdividing one parcel into five lots. The proposed lots would be located at the southwest corner of the intersection of Garrard Road and Hwy 12 East. The current parcel is +/- 25.69 acres and is zoned C-2 General Business. HPM Development is current in the early planning stages for constructing car dealerships on several of the lots. As part of this development, they are proposing to construct a new public street that will connect Garrard road with Old West Point Road. The new road, labeled Parker-McGile Road on the plat, will service lots one, two, four, and five. Lot three will access Highway 12 by means of an easement through private property. The Development Review Committee has already review and commented on the plat on August 27th of 2015. Please see attachments 1-6.

Below is information pertaining to C-2 General Business Zoning District

Sec. L. - C-2 business (general business) zoning district regulations.

These [C-2 general business] districts are intended to be composed of the wide range of commercial goods and services to support community needs. Under special conditions some light industrial and distribution uses are also permitted. Usually located along arterial streets or near the intersection of two or more arterials, these districts are usually large and within convenient driving distance of the entire community. The district regulations provide for certain minimum yard and area standards to be met to assure adequate open space and compatibility with surrounding districts. [The following regulations apply in the C-2 districts:]

1. *See chart for uses permitted.*
2. *See chart for uses which may be permitted as an exception.*
3. *Minimum lot size: It is the intent of this ordinance that lots of sufficient size be used for any business or service use and to provide adequate parking and loading*

space in addition to the space required for the other normal operations of the business or service.

4. *Minimum yard size: Front, 20 feet; rear, 20 feet; side, a total of 20 feet, but one side shall be sufficient in width to provide vehicular access to the rear. On any lot [in] which the side lot line adjoins a residential district, the side yard on that side shall not be less than required by the residential district.*
5. *Maximum height of building or structures: 45 feet.*
6. *Off-street parking: One space for each 200 square feet of retail or office building area. See article VIII of this ordinance for requirements for other uses.*
7. *Off-street loading and unloading: The required rear or side yard may be used for loading and unloading.*
8. *All building facades that are visible from public right-of-way or adjacent property zoned residential shall meet these requirements.*
   a) *The following materials are allowed for use on a building façade: brick, wood, fiber cement siding, stucco, natural stone, and split faced concrete masonry units that are tinted and textured. Architectural metal panels may be used as long as the panels make up less than 40 percent of an individual façade.*
   b) *The following materials are not allowed for use on a building facade: smooth faced concrete masonry units, vinyl siding, tilt-up concrete panels, non-architectural steel panels (R Panels), and EIFS (exterior insulation and finish systems). EIFS is permitted to be used for trim and architectural accents.*
   c) *The primary facade colors shall be low reflectance, subtle, neutral or earth tones. The use of high intensity, metallic flake, or fluorescent colors is prohibited.*
9. *All parking lots adjacent to public right-of-way shall be paved either entirely or with a combination of the following: asphalt, concrete, porous pavement, concrete pavers, or brick pavers. Gravel can be used temporarily as a parking surface for a period on no longer than 12 months upon the approval of the community development director. All temporary gravel lots must provide ADA accessible parking and access ways in accordance with the ADA guidelines.*

(Ord. No. 2014-4, 9-16-14)

PLAT PROPOSAL

General Information
The proposed parcel is +/-25.69 acre. The parcel is located within a C-2 General Business district

Easements and Dedications
One street with a 50’ right of way will be dedicated as part of this plat. Ten foot easements for utilities are shown on the plat.

APPENDIX B – SUBDIVISIONS, ARTICLE VII. - IMPROVEMENTS

Sec. 1. - Required improvements.

Every subdivider shall be required to install at his own expense, or have installed by the appropriate public utility, the following improvements:

1. *Streets:*
   a. *Grading:*
      (1) *All streets shall be cleared and graded as approved by the city engineer.*
      (2) *All streets shall have been graded in conformity with the requirements set out in article VI, section 2.*
      (3) *Finished grades shall be at levels approved by the city engineer or the appropriate agency.*
   b. *Paving:*
      (1) *Street pavements shall be installed according to the city specifications as adopted by the city.*
      (2) *A suitable hard surface permanent type of pavement shall have been constructed meeting the requirements of the city's standard specifications.*
      (3) *Streets shall be paved to widths specified in article VI, section 1.6.*
      (4) *Water and sanitary sewer mains shall have been constructed prior to installation of paving and in accordance with article V, sections 1.3 through 1.5 of this ordinance.*
   c. *Curb and gutter: Curbs and gutters shall be installed on all streets, and shall be in accordance with the city specifications adopted by the city.*
2. *Sidewalks: Sidewalks shall be constructed if deemed essential for public safety by the board of aldermen and the city engineer.*
3. *Water supply:*
   a. *The subdivider shall install or have installed a system of water mains and shall connect this system to a public water supply system if one is located within a reasonable distance. Connections to each lot shall be installed prior to paving of the street.*
   b. *Where a public water supply system is not reasonably available, each lot in the subdivision shall be provided with an individual water supply system approved by the health department.*
4. *Sanitary sewage disposal:*
   a. *Where a public sanitary sewage system is located within a reasonable distance of any point of the subdivision, the subdivider shall connect his subdivision to the system, and provide a connection to each lot.*
   b. *Such sanitary sewage system shall be installed prior to the installation of the street pavement.*

c. *Where a public sanitary sewer is not accessible, an alternate method of sewage disposal for each lot or a community sewage disposal system may be used when in compliance with the standards of the health department and these regulations.*

d. *In the preceding paragraphs of section 1.4, the phrase, "Every subdivider shall be required to install" shall be interpreted to mean that the subdivider shall cause the improvements referred to herein to be installed, or whenever a septic tank and absorption system or private water supply is to be provided, that the subdivider shall require, as a condition in the bill of assurance of the subdivision, that those facilities shall be installed by the builders of the improvements of the lots in accordance with these rules and regulations.*

5. *Stormwater drainage:*

   a. *Every subdivision shall be served by storm drainage facilities, including drains, sewers, catchbasins, culverts and other facilities.*

   b. *In cases where the size of such storm sewer would make the cost prohibitive in relation to the value of the land, and the city does not have sufficient funds allocated to participate in the cost for such improvements, such areas shall be planned and shown on the plat in dotted lines. They shall be shown as areas of proposed future development, but shall be excluded from the proposed subdivision.*

   c. *All drainage facilities shall be designed to serve the entire drainage area.*

   d. *All surface water drainage shall be transported to existing storm sewers, or to drainage facilities approved by the city engineer.*

   e. *The city engineer shall approve all proposed drainage facilities.*

   f. *Lakes, ponds, creeks and similar areas will be accepted for public maintenance only if a sufficient amount of land is dedicated as a public recreation area or park, or if such area constitutes a necessary part of the drainage control system of the subdivision. All such areas must be approved by the park and recreation commission and accepted by the board of aldermen before approval is granted for the final plat.*

   g. *Areas subject to periodic flooding caused by poor drainage facilities will not be accepted by the board of aldermen unless the subdivider takes all the necessary steps specified by the city engineer to eliminate all such flooding.*

6. *Other utilities: All other utilities not specifically mentioned in sections 1.3 through 1.5 which are to be installed in a subdivision shall be located in the grass plot back of the curblines. If lateral lines are not installed to each property line, connections between the lots and the utility lines shall be made without tearing up the wearing surface of the street whenever possible. Jacking operations are recommended.*

7. *Monuments: Iron pins of no less than 30 inches long nor less than three-fourths inch in diameter shall be set flush with the ground at every lot corner.*

8. *Fire protection: Fire hydrants shall be placed so that no lot in a residential subdivision is more than 500 feet from a fire hydrant located along the same street. The commission may require other spacing requirements in commercial and/or industrial subdivisions.*

9. *Traffic control:*

    a. *All subdividers will be required to install or pay for approved street signs at points designated by the city engineer.*

    b. *Street name signs shall be placed on diagonally opposite corners of each street intersection in conformance with specifications adopted by the city.*

Sec. 2. - Performance bond.

In the event it is decided by the board of aldermen that the requirements set out in section 1 [of this article] need not be immediately complied with by the subdivider, arrangements can be made by the execution of an agreement as specified in article III, section 5.7; such improvements shall be installed to the satisfaction of the city engineer.

Sec. 3. - Maintenance bond.

In any case in which the city engineer may have reasonable doubt concerning the stability or proper construction of any improvement required herein, upon his recommendation, the board of aldermen may require the subdivider to post a maintenance bond for 18 months for street construction maintenance, and one year for sewer lines, water lines, and other utilities. This bond shall be in cash, or surety bond.

Findings and Comments
All utility connections are currently available for proposed parcels.

Is this lot a part of a previously platted subdivision? If so, were letters of authorization provided by adversely affect property owners adjacent to the parcel.
This parcel is not a part of a platted subdivision. No authorization needed

CONCLUSIONS

If the Planning and Zoning Commission decides to approve the Applicant's request for a preliminary plat for a lot subdivision, Staff request the following condition:

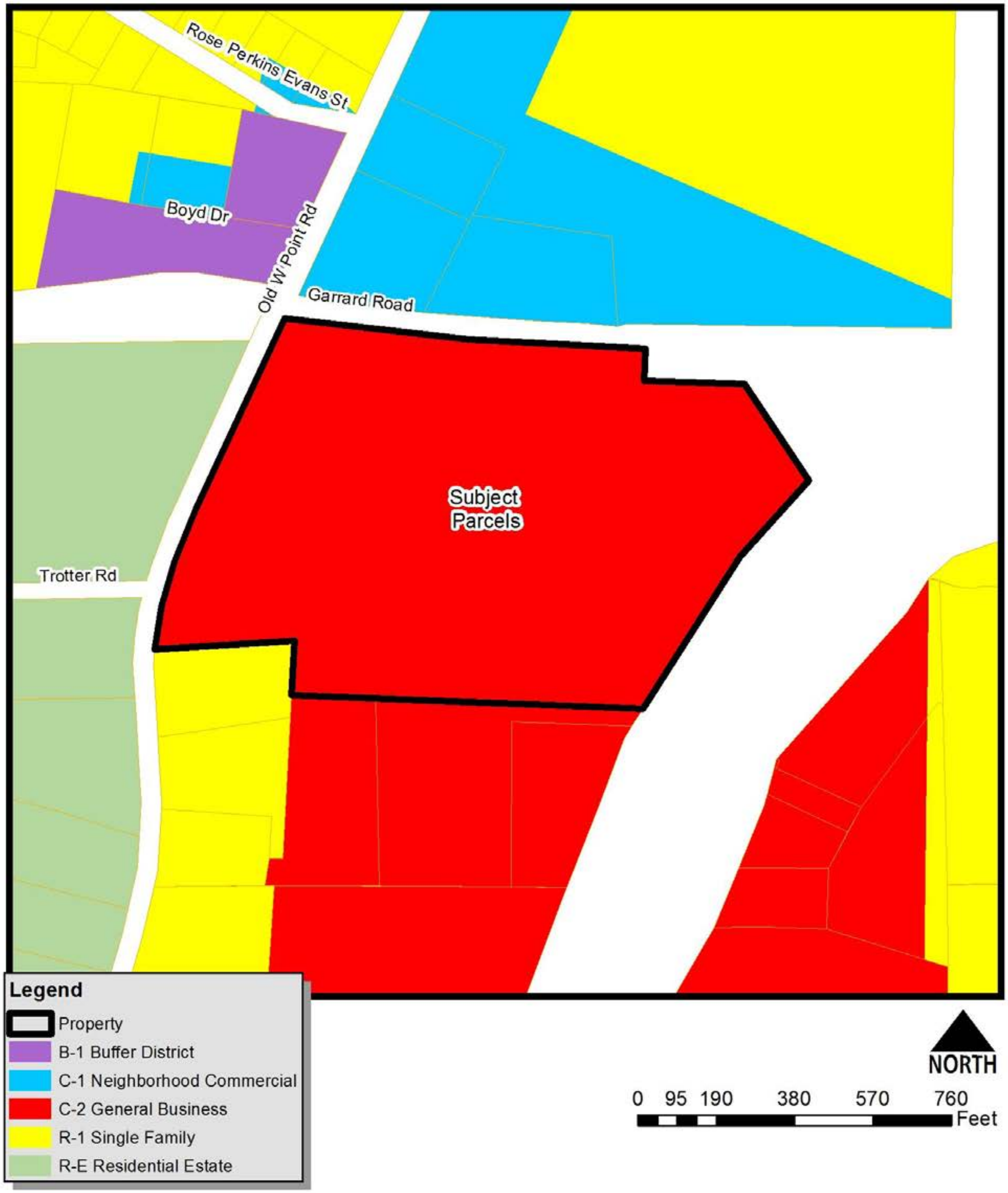
1. Infrastructure drawings will be required upon Preliminary Plat approval prior to construction.
2. When infrastructure plans have been approved for construction, a pre-construction conference shall be held with appropriate city staff prior to the commencement of any construction activities at the site.
3. When a final plat is submitted for review by the City's Development Review Committee, all required improvements must be complete and the applicant shall provide "as-built" drawings of all infrastructure improvements (water, sewer, storm drainage, roadways, sidewalks, etc.) in "AutoCAD" format as well as a paper copy that is signed and sealed by a licensed professional engineer, indicating that the improvements were installed under his/her responsible direction and that the improvements conform to the approved construction plans, specifications and the City's ordinances.

Attachment 1

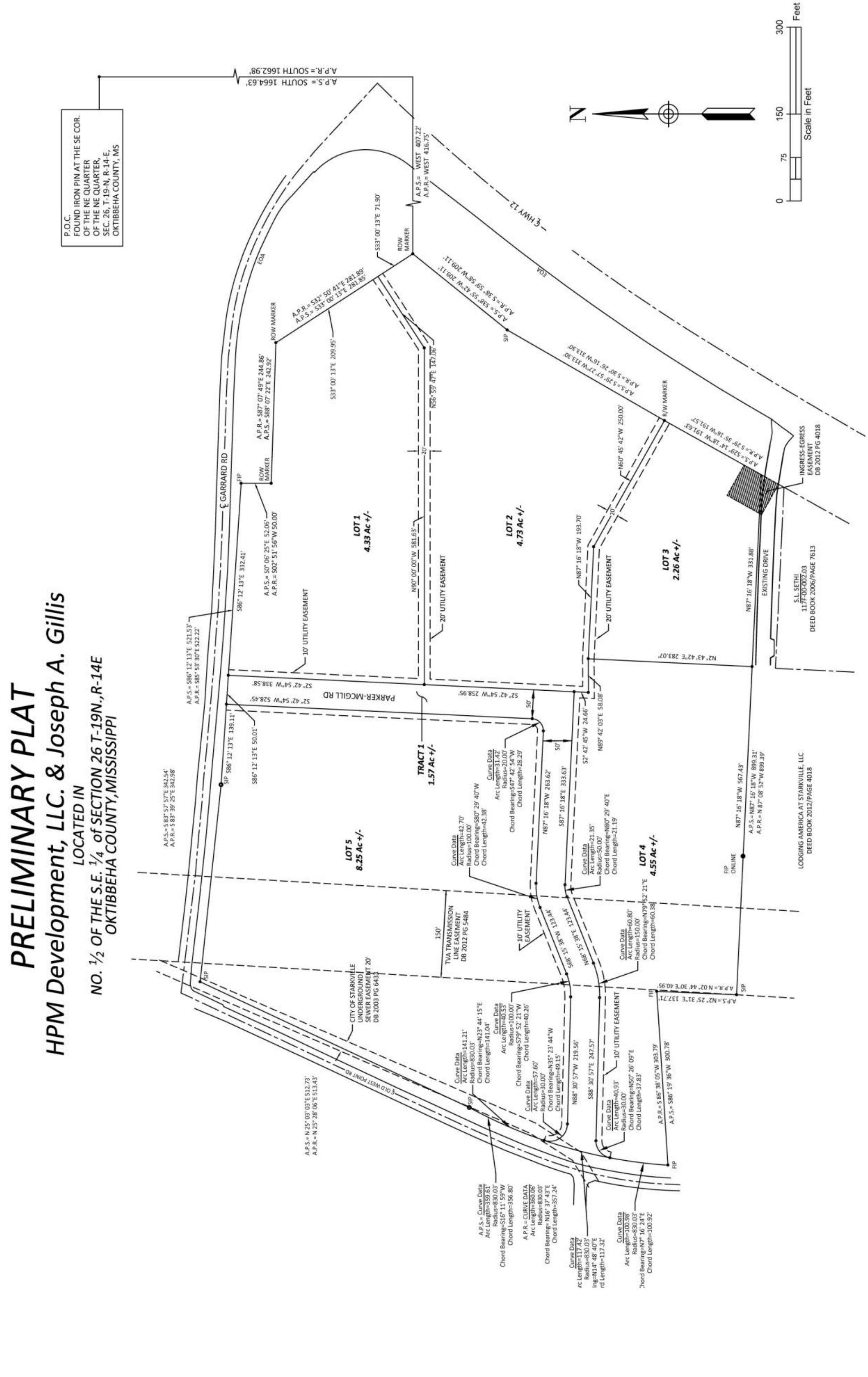
PP 15-13 Aerial

Attachment 2

PP 15-13 Zoning



Attachment 3



Attachment 4

View looking northwest at the subject property

Attachment 5

View looking southwest at the subject property

Attachment 6

View looking southeast at subject property

HISTORIC STARKVILLE
MISSISSIPPI'S COLLEGE TOWN

THE CITY OF STARKVILLE
COMMUNITY DEVELOPMENT DEPT
CITY HALL, 101 E. LAMPKIN STREET
STARKVILLE, MISSISSIPPI 39759

STAFF REPORT

TO: Members of the Planning & Zoning Commission

FROM: Daniel Havelin, City Planner (662-323-2525 ext. 136)

CC: Christian World Missions

subject: CU 15-11 Request for Conditional Use to allow a "Place of Worship" at 1437 Fire Station Road on a parcel with the parcel number 118 -27-020.03

DATE: October 13, 2015

The purpose of this report is to provide information regarding the request by Lee Ann Williamson with Christian World Missions for Conditional Use to allow for a Place of Worship in a B-1/R-4 zoning district on a +/-1.33 acre site. Please see attachments 1-6.

BACKGROUND INFORMATION

The current building is approximately +/-9,700 sqft with a small paved parking area in the front of the structure with additional parking in a field to the north and west. Currently, the 1/3 of the building is being used as office space and the remaining 2/3 as warehouse space for international and domestic missions. The applicant is planning on adding a 2nd story to contain more offices/classrooms, and changing the open warehouse space to an assembly space in order to conduct local missions among at-risk youth and families in the North Starkville area. Programs will include daily youth activities and occasional worship services.

Scale and intensity of use.

The size of the proposed existing building is approximately +/-9,700 sqft. The intensity of use will increase as the amount and volume of programs/services increase.

On- or off-site improvement needs.

No off-site improvements are required. Additional parking maybe required as part of the site plan review process

On-site amenities proposed to enhance the site.

No amenities are being proposed by the applicant for the site.

Site issues.

There are no known site issues regarding the intended use of the site.

The table below provides the zoning and land uses adjacent to the subject property:

Direction	Zoning	Current Use
North	R-4	Residential
East	C-2/C-1	Commercial
South	R-4/B-1	Residential
West	B-1	Vacant (Proposed Funeral Home)

26 property owners of record within 300 feet of the subject property were notified directly by mail of the request. A public hearing notice was published in the Starkville Daily News on September 25th and a placard was posted on the property concurrent with publication of the notice. As of this date, the Planning Office has received no phone call against this request.

ANALYSIS

Appendix A, Article VI, Section I of the City's Code of Ordinances provides five specific criteria for conditional use review and approval:

1. **Land use compatibility.**
   The property is currently used as a mission center.

2. **Sufficient site size and adequate site specifications to accommodate the proposed use.**
   The site is adequately sized to accommodate the proposed addition.

3. **Proper use of mitigative techniques.**
   None proposed

4. **Hazardous waste.**
   No hazardous wastes or materials would be generated, used or stored at the site.

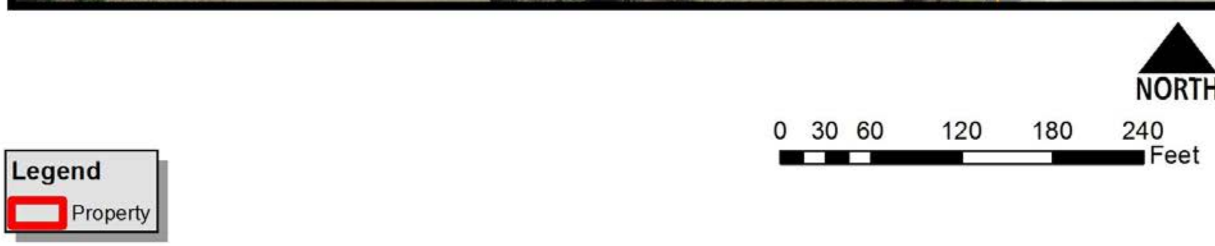
5. **Compliance with applicable laws and ordinances.**
   Building the proposed renovations will require building permits and inspections

REQUESTED CONDITIONS

1. A building permit shall be obtained prior to any construction activities
2. All of the above conditions shall be fully and faithfully executed or the conditional use shall become null and void.

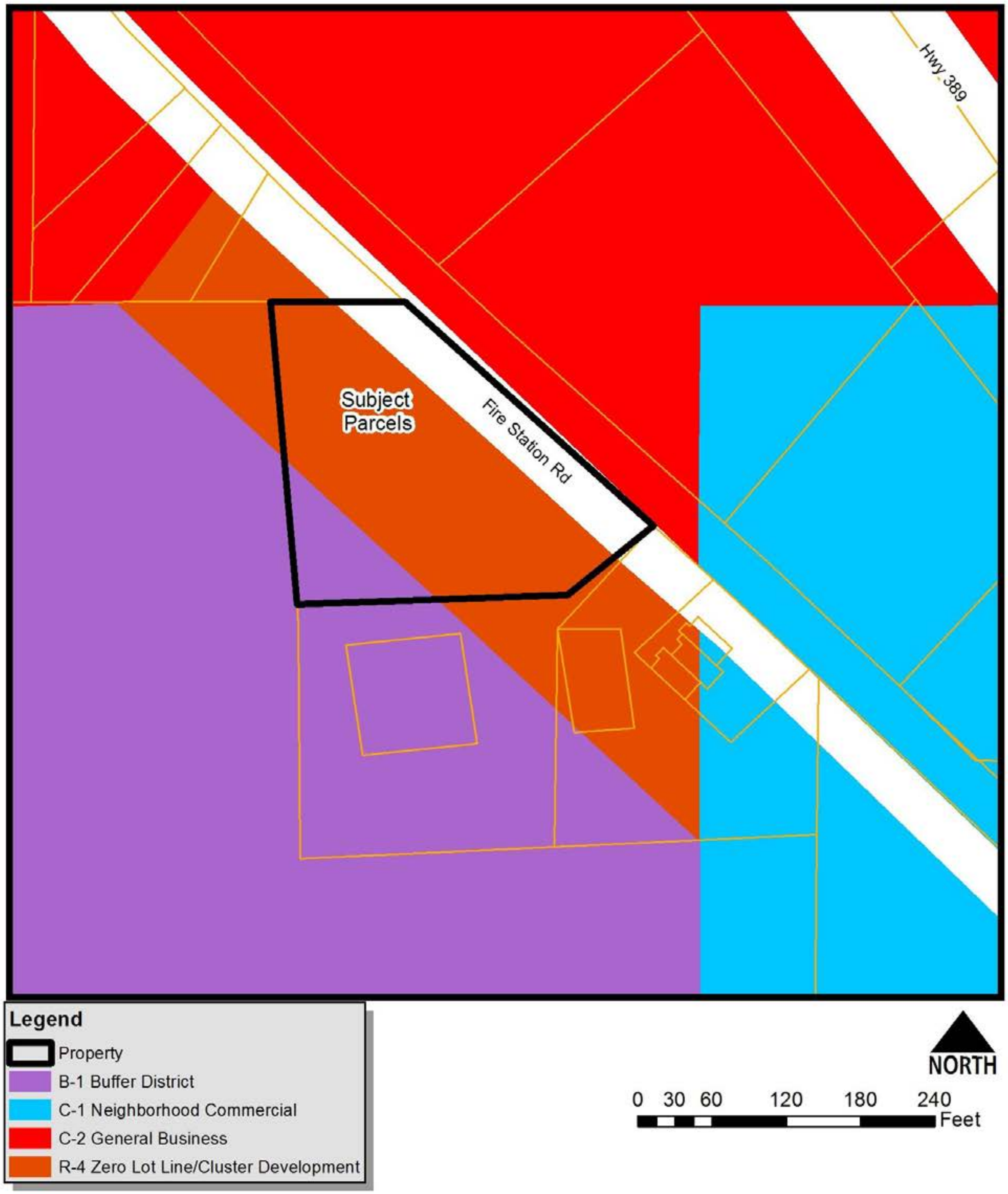
Attachment 1

CU 15-11 Aerial



Attachment 1

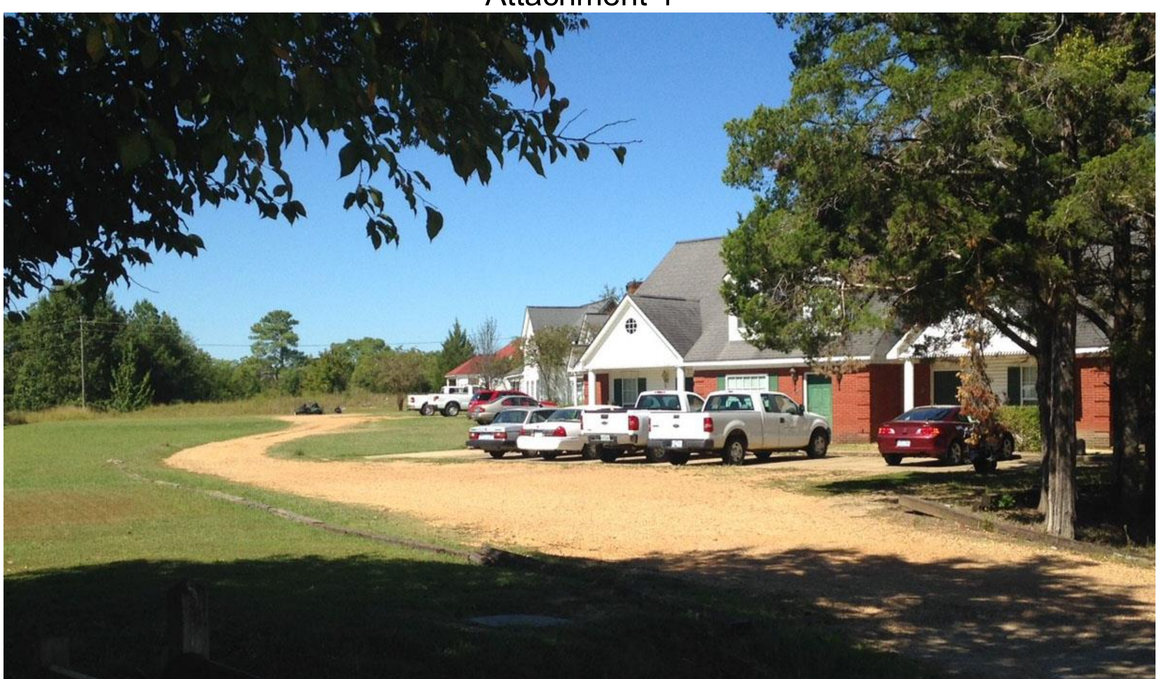
CU 15-11 Zoning



Attachment 3

View of front door

Attachment 4

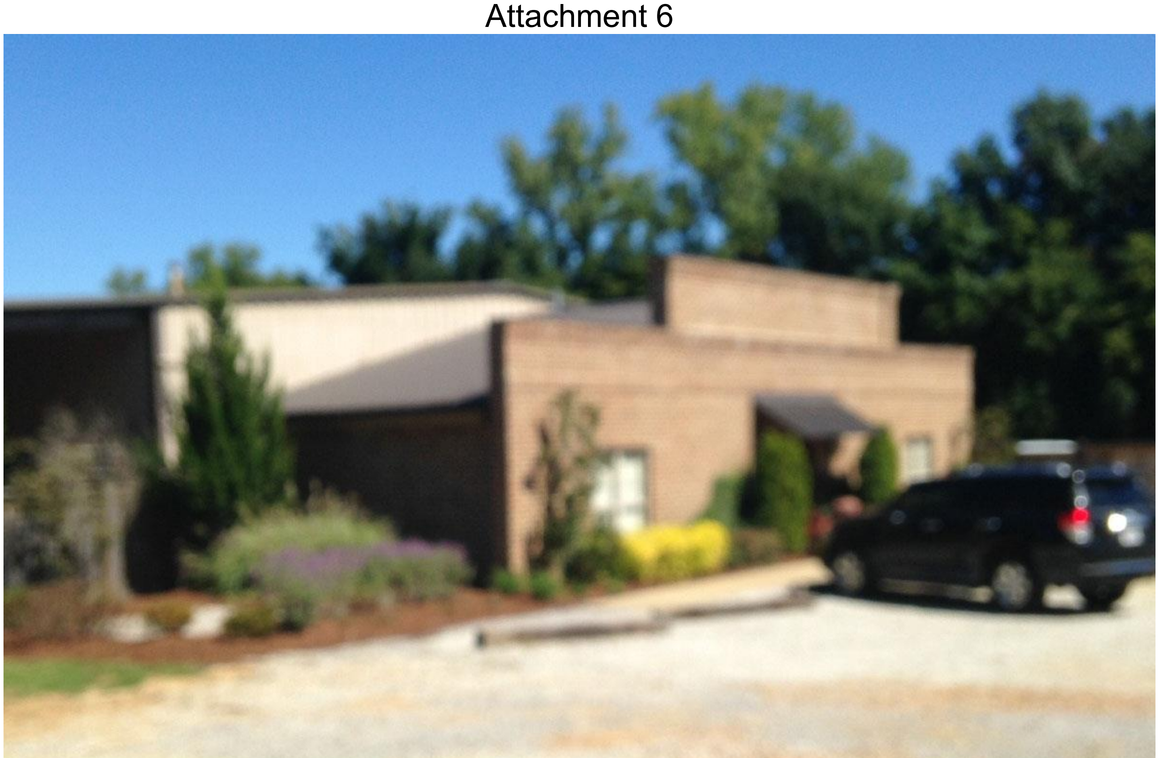


View of Residential property to the South

Attachment 5

View of Commercial property to the west

Attachment 6



View of Commercial property to the west

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THE CITY OF STARKVILLE
COMMUNITY DEVELOPMENT DEPT
CITY HALL, 101 E. LAMPKIN STREET
STARKVILLE, MISSISSIPPI 39759

STAFF REPORT

TO: Members of the Planning & Zoning Commission

FROM: Daniel Havelin, City Planner (662-323-2525 ext. 136)

CC: Ben Heath, Applicant, CNC Property Mgt LLC, Owner

SUBJECT: CU 15-12 Request for Conditional Use to allow for a residential uses at a property currently zoned C-2 General Business with a parcel number of 118N-00-120.00.

DATE: October 13, 2015

The purpose of this report is to provide information regarding the request by Ben Heath for a Conditional Use to use a commercially zoned property as a residence. The property is located in C-2 zone at 821 M L King Jr Drive West. Please see attachments 1-3.

BACKGROUND INFORMATION

The applicant is requesting a Conditional Use to use an existing building located at 821 M L King Jr Drive West as a residence. The previous use for the building was Residential. According to the City of Starkville Permitted and Conditional Use Chart, "Dwelling, single family, detached" is listed as a Conditional Use.

Scale and intensity of use.

The size of the existing building is +/-4,795 sqft.

On- or off-site improvement needs.

There are no off-site improvements being proposed

On-site amenities proposed to enhance the site.

No amenities are being proposed by the applicant for the site.

Site issues.

There are no known site issues regarding the intended use of the site.

The table below provides the zoning and land uses adjacent to the subject property:

Direction	**Zoning**	**Current Use**
North	C2	Commercial
East	C2	Vacant
South	R2	Residential
West	C2	Residential

20 property owners of record within 300 feet of the subject property were notified directly by mail of the request. A public hearing notice was published in the Starkville Daily News on September 25th 2015 and a placard was posted on the property concurrent with

publication of the notice. As of this date, the Planning Office has received no phone call against this request.

ANALYSIS
Appendix A, Article VI, Section I of the City's Code of Ordinances provides five specific criteria for conditional use review and approval:

Land use compatibility.
The property has previously been used as residential.

Sufficient site size and adequate site specifications to accommodate the proposed use.
The site is adequately sized to accommodate the proposed use.

Proper use of mitigative techniques.
None proposed

Hazardous waste.
No hazardous wastes or materials would be generated, used or stored at the site.

REQUESTED CONDITIONS

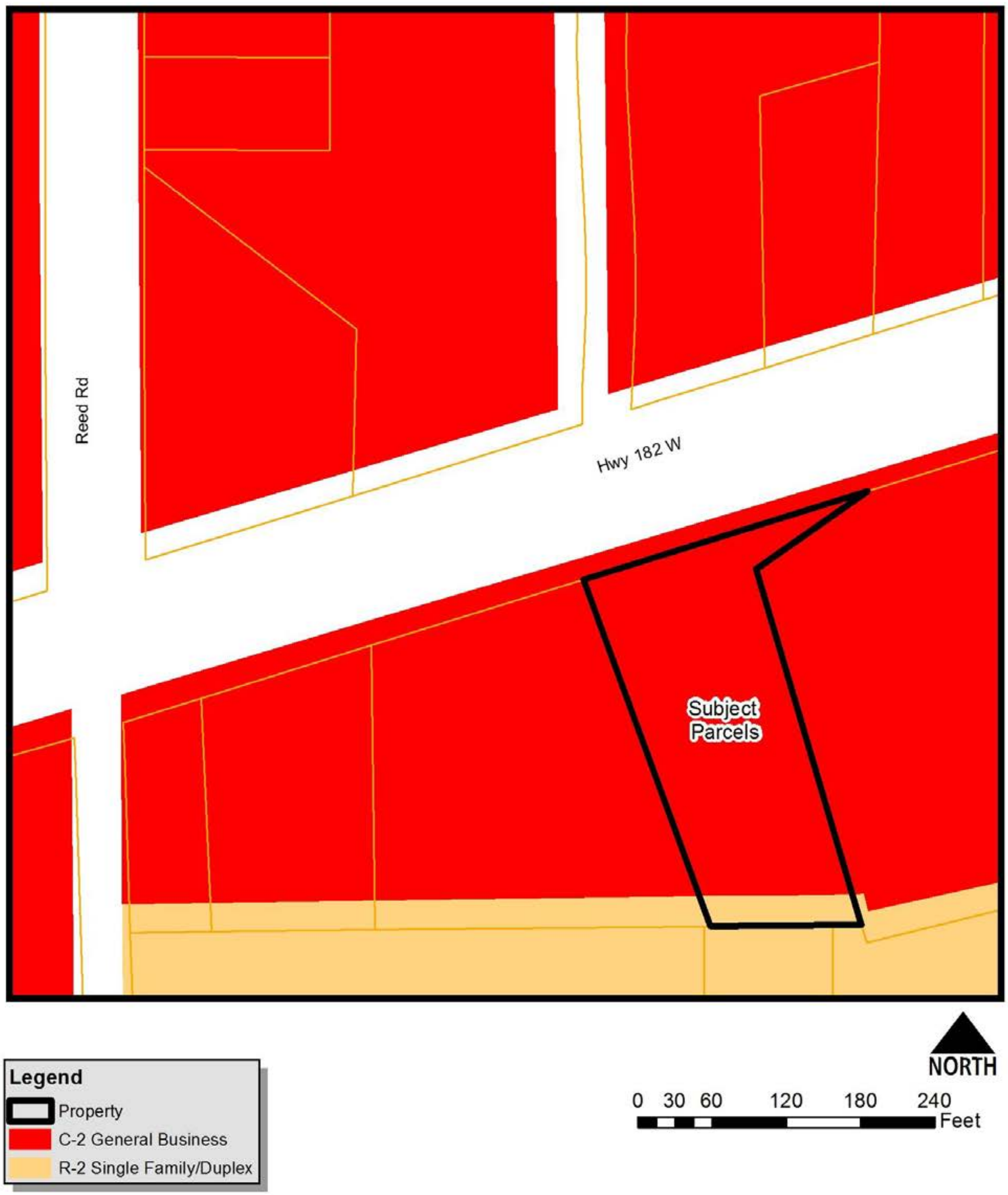
1. A building permit shall be obtained prior to any construction activities
2. All of the above conditions shall be fully and faithfully executed or the conditional use shall become null and void.

Attachment 1

CU 15-12 Aerial

Attachment 2

CU 15-12 Zoning



Attachment 3

View of front of house

HISTORIC STARKVILLE
MISSISSIPPI'S COLLEGE TOWN

THE CITY OF STARKVILLE
COMMUNITY DEVELOPMENT DEPT
CITY HALL, 101 E. LAMPKIN STREET
STARKVILLE, MISSISSIPPI 39759

STAFF REPORT

TO: Members of the Planning & Zoning Commission

FROM: Daniel Havelin, City Planner (662-323-2525 ext. 136)

CC: Rick Nail, Applicant; 236 Dr MLK JR Dr, LLC, Owner

SUBJECT: EX 15-06 Use by Exception request for allowing a stormwater detention pond to be the only use on two lots zoned T-5. Parcel #118P-00-046.00 and 118P-00-047.00

DATE: October 13, 2015

The purpose of this report is to provide information regarding the request by Rick Nail on behalf of 236 Dr MLK JR Dr, LLC for a Use by Exception to allow a non-permitted use on two parcel in a T5 District. Please see attachments 1-7.

BACKGROUND INFORMATION

The applicant is requesting a Use by Exception to construct a stormwater detention pond on the lots located on the northwest corner of Dr Martin Luther King Jr Dr West and North Jackson Street. The proposed detention pond will be used to meet the minimum requirement of *Chapter 54 – Environment, Artilce VI. – Stormwater Management Ordinance* for the parcel just north of the two subject parcels in a C-2 zone. The C-2 Parcel (#118P-00-045.00) is the proposed location for the Family Dollar store. An Approved Site plan was issued in October of 2014 for the Family Dollar site. The Approved Site plan showed stormwater detention an "Underground Detention" facility. The underground facility would have been place underneath a proposed driveway and would not prevent the placement of future buildings on the two subject parcels. If the stormwater detention facility were to place above ground on the two subject parcels, it would be the only use on those two parcels. The chart of permitted uses for transect district does not list Stormwater Facilities as a permitted use, therefore the applicant is seeking relief by means of a Use by Exception.

APPENDIX A – ZONING, ARTICLE VII. – DISTRICT REGULATIONS, Sec. T. – Transect districts

1.5 EXCEPTION AND VARIANCE

(a) There are two types of permitted deviations from the requirements of this Section:

i. Exception

a. Requests for Exception shall only be permitted as specifically indicated in this Section.

b. To apply for an Exception, the applicant shall provide the following:

i. The specific Exception(s) requested including citation from this Section and why the Exception is being sought.

ii. Maps, text, drawings and/or statistical data related to the requested Exception(s).

c. No Exception shall be approved unless the Planning and Zoning Commission finds the approval would:

i. Be consistent with § 1.2 Intent and 1.3 Transect Districts of this Section,

ii. and be consistent with the goals, objectives and policies of the City of Starkville's Comprehensive Plan.

d. Any decision regarding an approval or denial of an Exception shall state, in writing, the reasons for the approval or denial.

e. If the Planning and Zoning Commission denies any requested Exception, the applicant may appeal the decision to the Mayor and Board of Aldermen. The Mayor and Board of Aldermen shall review the application de novo.

ii. Dimensional Variance

a. A Dimensional Variance shall be processed pursuant to Chapter 2 - Administration, Article VI - Board of Adjustments & Appeals, Section 2 - 176 Variances and the Board of Adjustments & Appeals of the City of Starkville's Code of Ordinances.

(b) Exceptions shall be advertised and noticed in the same fashion as conditional uses in the City's Code of Ordinances in accordance with Appendix A, Article VI, Section 1.

TRANSECT DISTRICT PERMITTED USE CHART

TRANSECT DISTRICT	**T4**	**T5**	**T6**
Assisted Living Facility	■	■	
Dwelling, Accessory Unit	■	■	
Dwelling, Single Family	■	■	
Dwelling, 2-Family	■	■	
Dwelling, 3 & 4 Family	□	■	■
Dwelling, Multi-Family	□	■	■
Dwelling, Live/Work	□	■	■
Dormitory		■	■
Fraternity/Sorority House		■	■
Group Home		■	
Business Offices	□	■	■
Conference/Convention Center		□	■

Eating/Drinking Establishment	□	■	■
General Retail/Services	□	■	■
Personal Services	□	■	■
Recreation and Entertainment, Indoor		■	■
Recreation and Entertainment, Outdoor		■	■
Visitor Accommodations & Services		■	■
Parking Lot/Garage		□	□
Home Occupation	■	■	■
Bed & Breakfast Inn	■	■	□
Boarding/Rooming House		□	□
Hotel (no room limit)		□	■
Child Care		□	■
Community Services	■	■	■
Family Run Child Care	■	■	
Educational Facilities	■	■	■
Governmental Facilities	□	■	■
Institutional & Health Care Facilities	□	■	■
Places of Worship	□	□	□
Transportation			■
Utilities	■	■	■
Industrial, Light		□	
Manufacturing, Light		□	
Fire Station	■	■	■
Police Station	■	■	■
Post Office		■	■
Funeral Home	□	□	□

■ BY RIGHT

□ BY EXCEPTION

The table below provides the zoning and land uses adjacent to the subject property:

Direction	Zoning	Current Use
North	C-2	Undeveloped (Proposed Family Dollar Site)
East	T5	Commercial
South	T5	Commercial
West	T5	Undeveloped

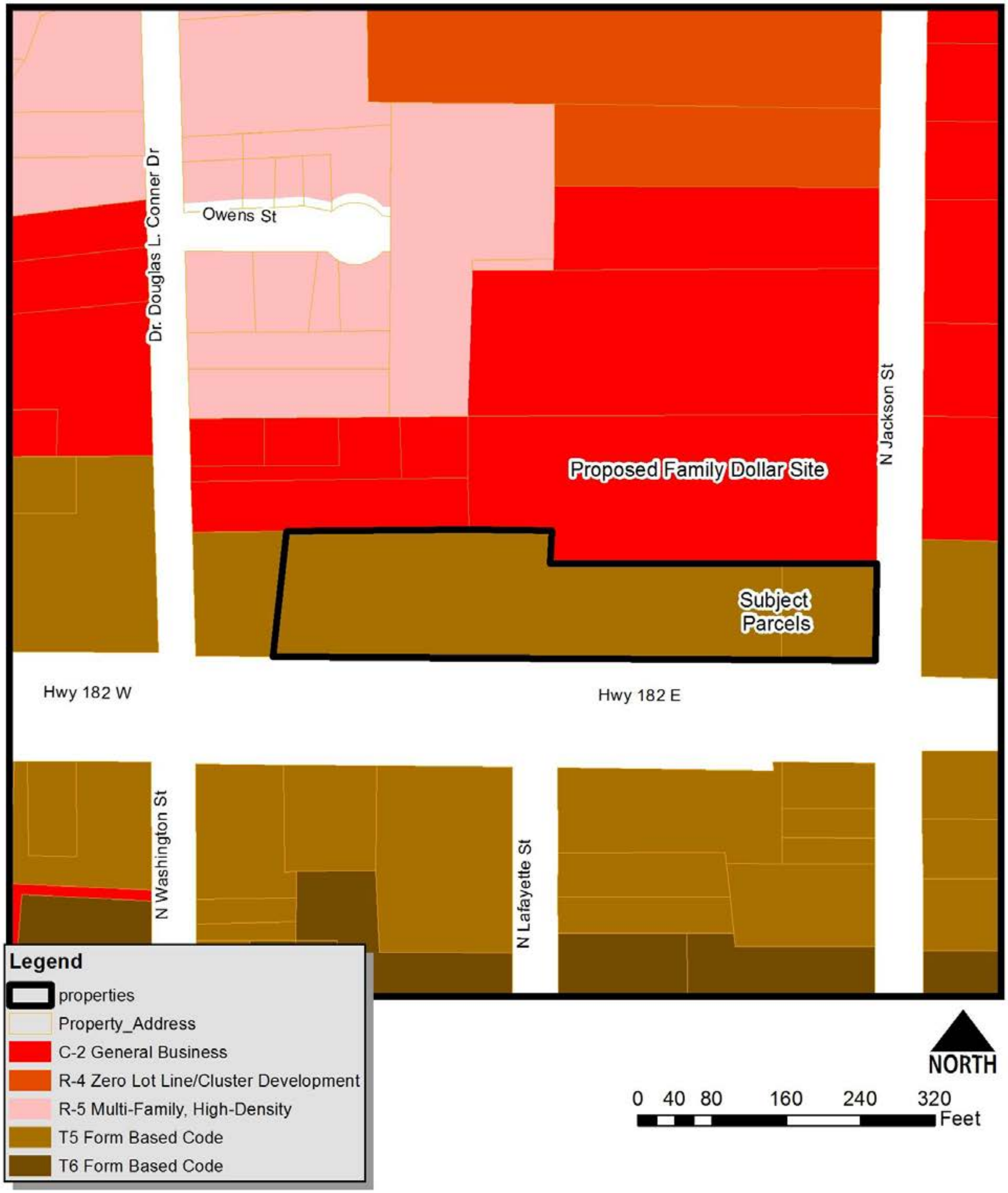
33 property owners of record within 300 feet of the subject property were notified directly by mail of the request. A public hearing notice was published in the Starkville Daily News on September 25^{th} and a placard was posted on the property concurrent with publication of the notice. As of this date, the Planning Office has received two phone calls for information.

Attachment 1

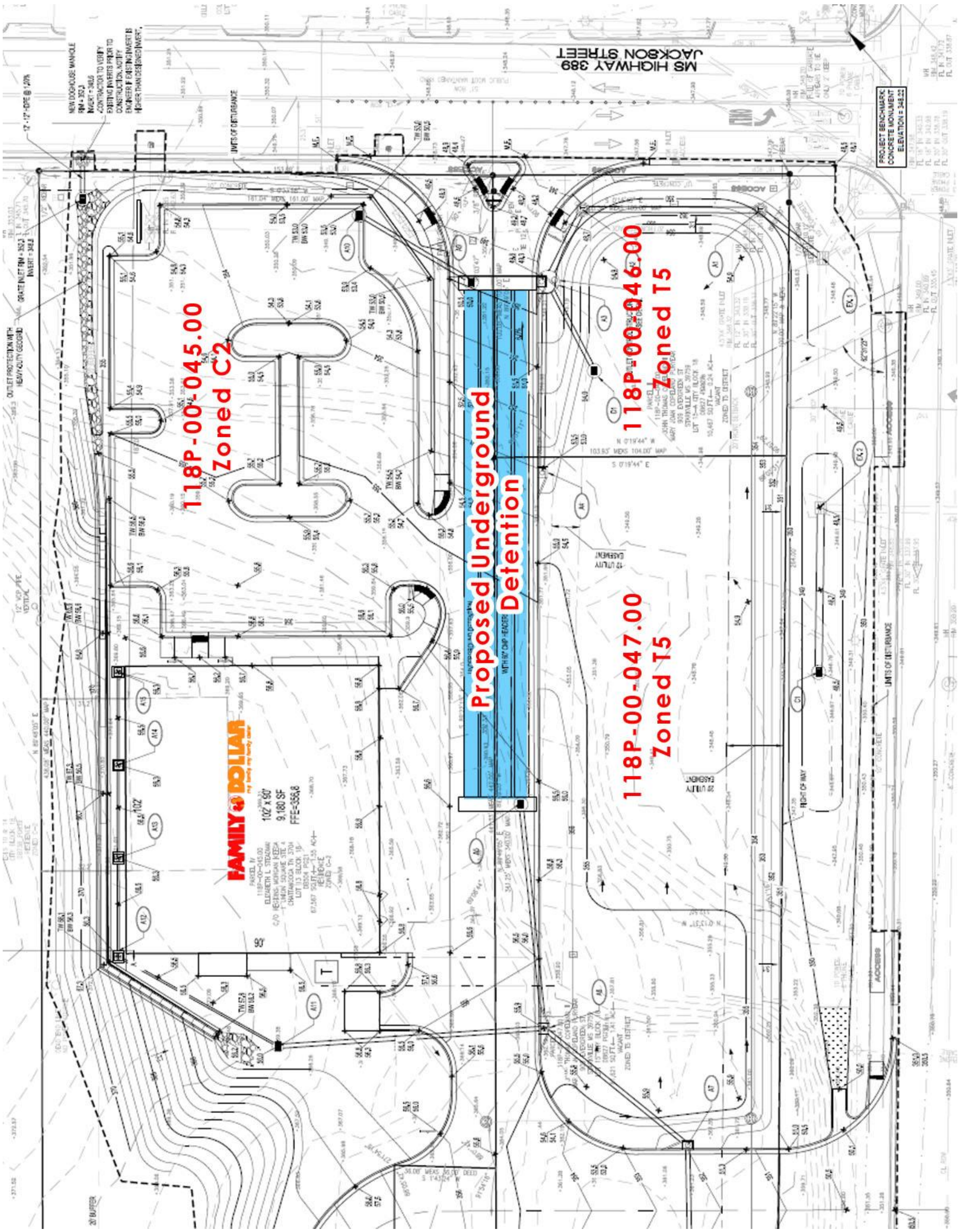
EX 15-06 Aerial

Attachment 1

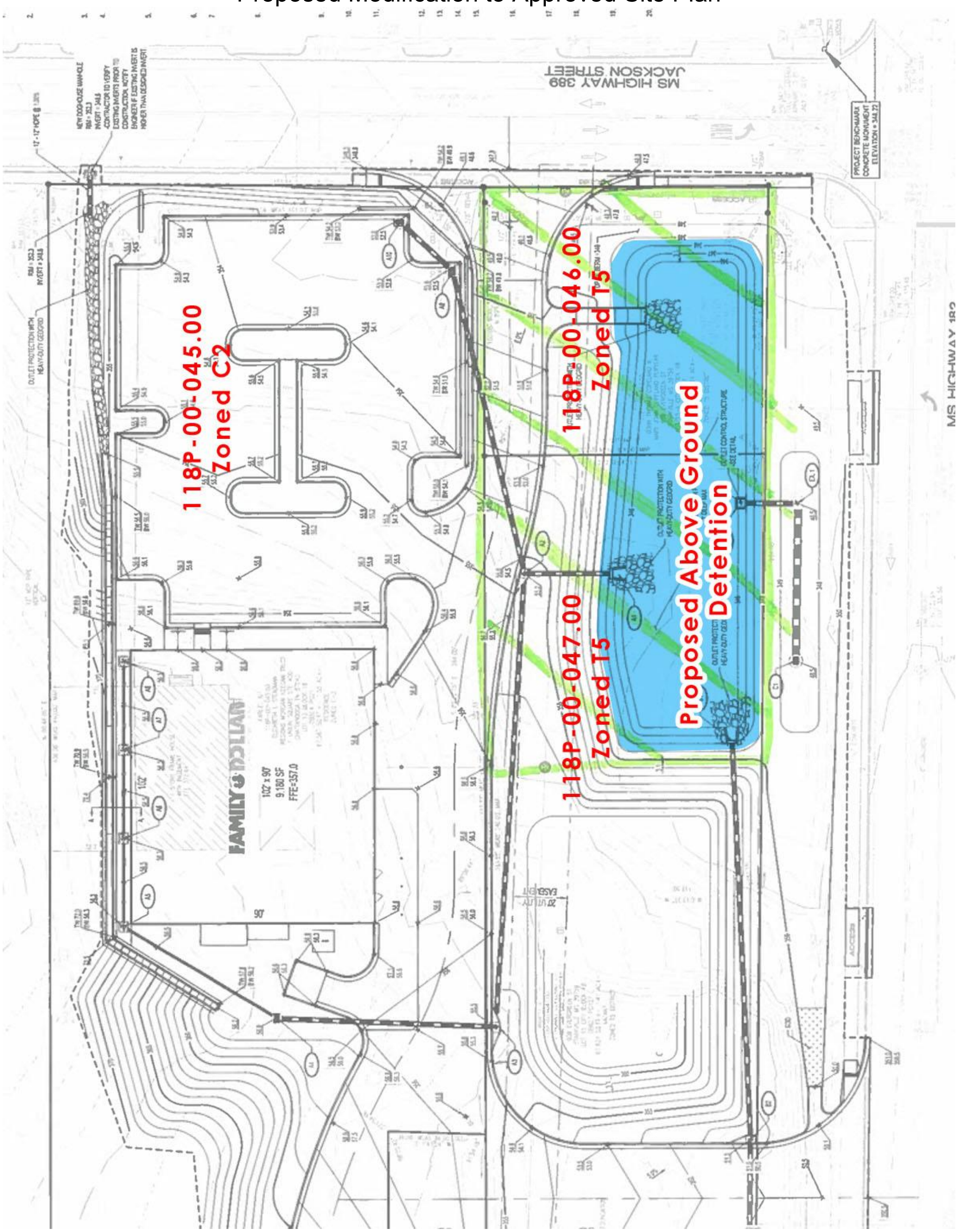
EX 15-06 Aerial



Attachment 3
Approved Site Plan



Attachment 4
Proposed Modification to Approved Site Plan



Attachment 5

View looking accross Dr MLK Dr at the subject parcels

Attachment 6

View looking northwest at the subject properties

Attachment 7

View looking west at proposed site of Family Dollar

HISTORIC STARKVILLE

MISSISSIPPI'S COLLEGE TOWN

THE CITY OF STARKVILLE

COMMUNITY DEVELOPMENT DEPT

CITY HALL, 101 E. LAMPKIN STREET

STARKVILLE, MISSISSIPPI 39759

STAFF REPORT

TO: Members of the Planning & Zoning Commission

FROM: Daniel Havelin, City Planner (662-323-2525 ext. 136)

CC: Christopher Kritzman/ Capital Growth Properties, Applicant

SUBJECT: RZ 15-05 Request for rezoning of several parcels located on the north side of University Drive between Camp Avenue and Rue Du Grand Fromage with parcel numbers 101C-00-002.00, 101C-00-001.00, 101D-00-001.00, 101D-00-002.00, 101D-00-003.00, and 101D-00-004.00

DATE: OCTOMBER 13, 2015

The purpose of this report is to provide information regarding the request by Christopher Kritzman/ Capital Growth Properties on behalf of HBC III, LLC, BSquare, LLC, and Mary Ann & Hall D. Fuller to rezone a total of six properties from C-2/T5/T4 to T6. The six parcel total +/- 7.58 acres. The parcels are located on the north side of University Drive between Camp Avenue and Rue Du Grand Fromage. Please see attachments 1-13.

BACKGROUND INFORMATION

The properties are currently under contract and plans for development are being made. In order to achieve the density with the mix of retail and residential, the applicant is request to rezone all the properties to T6.

Zoning Change Subject Properties					
Properties	1960s-1970s Map	1982-1991 Map	2000 Map	Current Map	Owner
101C-00-001.00	R-2A	C-2	C-2	C-2	BSquare
101C-00-002.00	C-2	C-2	C-2	T-4	HBC III
101D-00-001.00	C-2	C-2	C-2	T-5	Fuller
101D-00-002.00	C-2	C-2	C-2	T-5	Fuller
101D-00-003.00	C-2	C-2	C-2	T-5	Fuller
101D-00-004.00	C-2	C-2	C-2	T-5	Fuller
Zoning Change Adjacent Properties					
Properties	1960s-1970s Map	1982-1991 Map	2000 Map	Current Map	
North	R-2A	R-3	R-1	T4	
East	C-2	C-2	R-1	T4	
South	C-2	C-2	C-2	T5/T6	
West	C-2/R-2A	C-2	R-1	T6/R-1	

Zoning and land uses adjacent to the subject property		
Direction	Zoning	Current Use
North	T4	Undeveloped
East	T4	Undeveloped
South	T5	Commercial/Residential
West	T5/R1	Commercial/Residential

NOTIFICATION

43 property owners of record within 300 feet of the subject property were notified directly by mail of the request. A public hearing notice was published in the Starkville Daily News September 25th 2015 and a placard was posted on the property. As of this date, the Planning Office has received no phone call against this request. Two phone calls for request for information were received.

REZONING REQUEST

The subject rezoning requests are from C-2 General Business, T4 District, and T5 District to a T6 District. Differences between zones are:

Current Zoning District

Sec. L. - C-2 business (general business) zoning district regulations.

These [C-2 general business] districts are intended to be composed of the wide range of commercial goods and services to support community needs. Under special conditions some light industrial and distribution uses are also permitted. Usually located along arterial streets or near the intersection of two or more arterials, these districts are usually large and within convenient driving distance of the entire community. The district regulations provide for certain minimum yard and area standards to be met to assure adequate open space and compatibility with surrounding districts. [The following regulations apply in the C-2 districts:]

1. See chart for uses permitted.
2. See chart for uses which may be permitted as an exception.
3. Minimum lot size: It is the intent of this ordinance that lots of sufficient size be used for any business or service use and to provide adequate parking and loading space in addition to the space required for the other normal operations of the business or service.
4. Minimum yard size: Front, 20 feet; rear, 20 feet; side, a total of 20 feet, but one side shall be sufficient in width to provide vehicular access to the rear. On any lot [in] which the side lot line adjoins a residential district, the side yard on that side shall not be less than required by the residential district.
5. Maximum height of building or structures: 45 feet.
6. Off-street parking: One space for each 200 square feet of retail or office building area. See article VIII of this ordinance for requirements for other uses.

7. Off-street loading and unloading: The required rear or side yard may be used for loading and unloading.
8. All building facades that are visible from public right-of-way or adjacent property zoned residential shall meet these requirements.
   a) The following materials are allowed for use on a building façade: brick, wood, fiber cement siding, stucco, natural stone, and split faced concrete masonry units that are tinted and textured. Architectural metal panels may be used as long as the panels make up less than 40 percent of an individual façade.
   b) The following materials are not allowed for use on a building facade: smooth faced concrete masonry units, vinyl siding, tilt-up concrete panels, non-architectural steel panels (R Panels), and EIFS (exterior insulation and finish systems). EIFS is permitted to be used for trim and architectural accents.
   c) The primary facade colors shall be low reflectance, subtle, neutral or earth tones. The use of high intensity, metallic flake, or fluorescent colors is prohibited.
9. All parking lots adjacent to public right-of-way shall be paved either entirely or with a combination of the following: asphalt, concrete, porous pavement, concrete pavers, or brick pavers. Gravel can be used temporarily as a parking surface for a period on no longer than 12 months upon the approval of the community development director. All temporary gravel lots must provide ADA accessible parking and access ways in accordance with the ADA guidelines.

(Ord. No. 2014-4, 9-16-14)

§ 3 - SPECIFIC TO T4 DISTRICTS

Lots located within the T4 District shall be subject to the requirements of this section.

6.1 LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 96 feet, measured at the Frontage Line.

6.2 LOT OCCUPATION

(a) For Lots less than one-hundred and fifty (150) feet deep, one (1) Primary Building and one (1) Outbuilding may be built on each Lot.

(b) Primary Buildings may be positioned within the boundaries of a Lot to create an Edgeyard, Sideyard, or Rearyard. (see Table 3)

(c) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 9.

(d) Lot coverage by Buildings and impermeable surfaces shall be a maximum of 70% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 60% at the Setback.

6.3 BUILDING FORM

(a) The Principal Entrance of any Secondary Building shall be oriented toward a Frontage Line, Driveway or the Facade of an Outbuilding.

(b) The maximum height of a Primary Building shall be two (2) stories as specified on Table 3 and Table 9.

(c) The maximum height of a Secondary Building shall be two (2) stories as specified on Table 3 and Table 9.

(d) The maximum height of an Outbuilding shall be two (2) stories as specified on Table 3 and Table 9.

(e) Open porches, balconies, and bay windows may Encroach the first Lot Layer 50% of its depth.

(f) Reserved.

(g) Stoops, Lightwells, and Terraces may Encroach the first Lot Layer 100% of its depth.

6.4 BUILDING USE

(a) Buildings may combine up to two (2) Uses listed on Table 5.

(b) The number of dwelling units on each Lot shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7).

(c) The work quarters of Home Businesses shall be not be visible from the Public Frontage.

(d) Lodging Uses shall be owner occupied.

(e) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), up to twelve (12) bedrooms max and in addition to any parking requirement for any other Use.

(f) The building area available for Office Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to the parking requirement for any other Use.

(g) The building area available for Retail Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to the parking requirement for any other Use.

6.5 PARKING

(a) Driveways shall be no wider than 10 feet in the first Lot Layer.

(b) All parking areas and garages shall be located at the third Lot Layer as illustrated on Table 11.

6.6 LANDSCAPE

(a) The first Lot Layer may not be paved, with the exception of Driveways as specified in § 3.5(a).

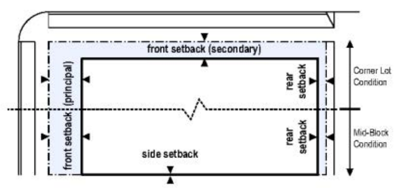
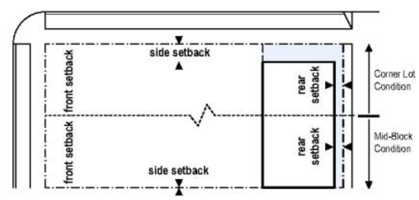
6.7 SIGNAGE

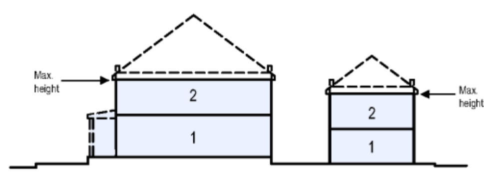
(a) Address, Awning, Blade, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

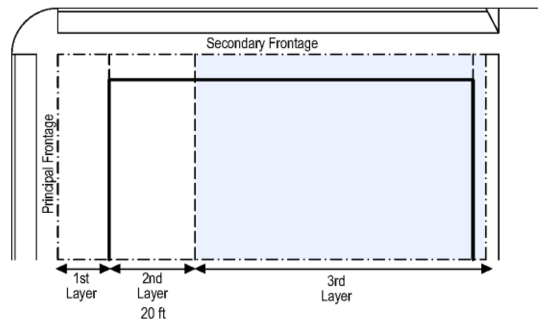
(b) Band Signs shall be permitted by Exception.

(c) Permitted signage types shall conform to the specifications of Table 8.

(d) Signage shall be externally illuminated, except that Window Signs may be neon lit.

	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Front Setback (Principal)	6 ft. min. 18 ft. max.	20 ft. min. + setback
Front Setback (Secondary)	6 ft. min. 18 ft. max.	n/a
Side Setback	0 ft. min.	0 ft. or 3 ft. at corner
Rear Setback	3 ft. min.	3 ft. min.
Illustration		

	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Height (in Stories)	2 stories	2 stories
Illustration		

PARKING PLACEMENT	
1. Uncovered parking spaces may be provided within the third Layer.	
2. Covered parking shall be provided within the third Layer.	
3. Trash containers shall be stored within the third Layer.	

Sec. T. - § 4 - SPECIFIC TO T5 DISTRICTS.

Lots located within the T5 District shall be subject to the requirements of this section.

7.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

7.2 - LOT OCCUPATION

(a) For Lots less than one-hundred and fifty (150) feet deep, one (1) Primary Building and one (1) Outbuilding may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 12.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Sideyard, Rearyard, or Courtyard. (see Table 3)

(d) Lot coverage by buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

7.3 - BUILDING FORM

(a) The Principal Entrance of any Secondary Building shall be oriented toward a Frontage Line, Driveway or the Facade of an Outbuilding.

(b) The maximum height of a Primary Building shall be four (4) stories as specified on Table 3 and on Table 12.

(c) The maximum height of a Secondary Building shall be four (4) stories as specified on Table 3 and on Table 12.

(d) The maximum height of an Outbuilding shall be two (2) stories as specified on Table 3 and on Table 12.

(e) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(f) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(g) A first Story Residential or Lodging Use shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(h) Loading docks and service areas shall be permitted on Frontages by Exception.

(i) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(j) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

(k) Buildings with a Commercial Use and paved setback may use the Setback area for outdoor seating.

7.4 - BUILDING USE

(a) Buildings may combine two (2) or more Uses listed on Table 5.

(b) The number of dwelling units on each Lot shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7).

(c) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use. Any restaurant food service provided shall be considered a separate Use.

(d) The building area available for Office Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use.

(e) The building area available for Retail Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use.

(f) Retail Uses under 1,500 square feet shall be exempt from parking requirements.

7.5 - PARKING LOCATION

(a) All parking lots, garages and Parking Structures shall be located at the third Lot Layer as illustrated on Table 14.

(b) Vehicular entrances to parking lots, garages and Parking Structures shall be no wider than twenty-four (24) feet at the Frontage.

(c) Pedestrian exits from all parking lots, garages, and Parking Structures shall be exited directly to a Frontage Line (i.e., not directly into a building) except underground levels which may be exited by pedestrians directly into a building.

7.6 - LANDSCAPE

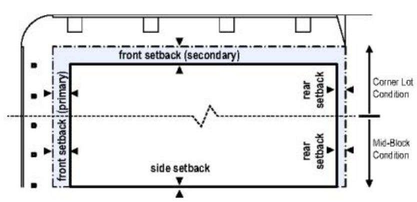
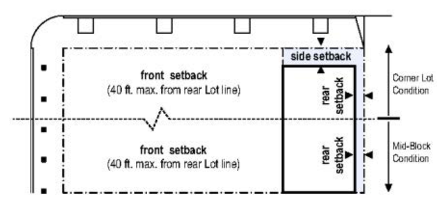
(a) The first Lot Layer may be paved.

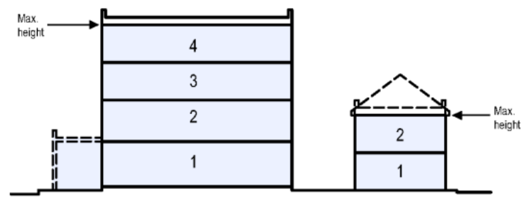
7.7 - SIGNAGE

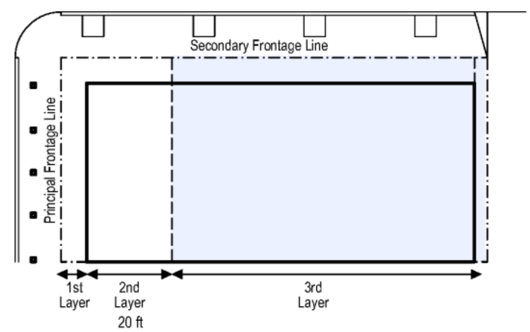
(a) Address, Awning, Band, Blade, Marquee, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Permitted signage types shall conform to the specifications of Table 8.

(c) Illuminated signage shall be externally illuminated only, except signage within a Shopfront window may be neon lit.

<table>
<tr><td colspan="3"></td></tr>
<tr><td></td><td>PRIMARY/SECONDARY BUILDING</td><td>OUTBUILDING</td></tr>
<tr><td>Front Setback (Principal)</td><td>2 ft. min. 15 ft. max.</td><td>40 ft. max. from rear</td></tr>
<tr><td>Front Setback (Secondary)</td><td>2 ft. min. 15 ft. max.</td><td>n/a</td></tr>
<tr><td>Side Setback</td><td>0 ft. min. 24 ft. max.</td><td>0 ft. or 3 ft. at corner</td></tr>
<tr><td>Rear Setback</td><td>3 ft. min.</td><td>3 ft. min.</td></tr>
<tr><td>Illustration</td><td>
</td><td>
</td></tr>
</table>

	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Height (in Stories)	4 stories	2 stories
Illustration		

PARKING PLACEMENT 1. Uncovered parking spaces may be provided within the third layer. 2. Covered parking shall be provided within the third layer. 3. Trash containers shall be stored within the third Layer.	

Proposed Zoning District
§ 5. - SPECIFIC TO T6 DISTRICTS.

Lots located within the T6 District shall be subject to the requirements of this section.

8.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

8.2 - LOT OCCUPATION

(a) One (1) Primary Building may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 15.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Rearyard or Courtyard. (see Table 3)

(d) Lot coverage by Buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

8.3 - BUILDING FORM

(a) The maximum height of a Primary building shall be five (5) Stories. (see Table 3 and on Table 15)

(b) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(c) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(d) A first Story Residential or Lodging Function shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(e) Loading docks and service areas shall be permitted on Frontages by Exception.

(f) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(g) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

(h) Buildings with a Commercial Use and paved setback may use the Setback area for outdoor seating.

(i) The Principal Entrance to a building shall be oriented toward the Frontage Line. Buildings on corner Lots may orient the Principal Entrance at a forty-five degree (45º) angle to the intersection of the Primary and Secondary Frontage Lines.

8.4 - BUILDING USE

(a) Buildings may combine two (2) or more Uses listed on Table 6.

(b) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use. Any restaurant food service provided shall be considered a separate Use.

8.5 - PARKING

(a) All parking lots, garages and Parking Structures shall be located in the third Lot Layer as illustrated on Table 17.

(b) Vehicular entrances to parking lots, garages and Parking Structures shall be no wider than twenty-four (24) feet at the Frontage.

(c) Pedestrian exits from all parking lots, garages, and Parking Structures shall be exited directly to a Frontage Line (i.e., not directly into a building) except underground levels which may be exited by pedestrians directly into a building.

8.6 - LANDSCAPE

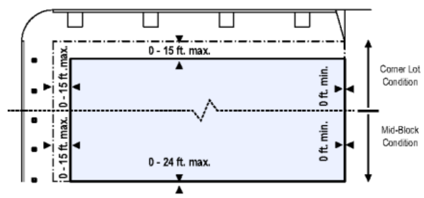
(a) The first Lot Layer may be paved.

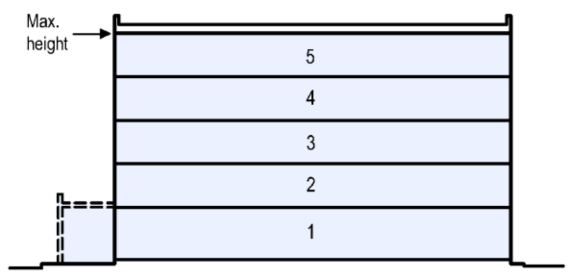
8.7 - SIGNAGE

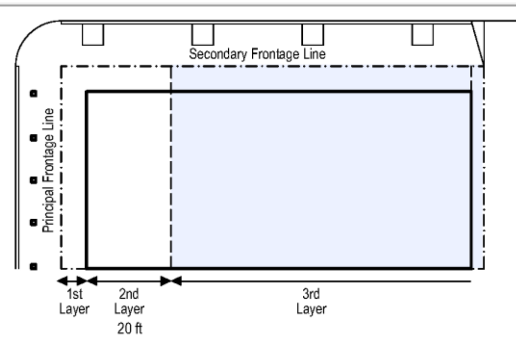
(a) Address, Awning, Band, Blade, Marquee, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Permitted signage types shall conform to the specifications of Table 8.

(c) Illuminated signage shall be externally illuminated only, except signage within a Shopfront window may be neon lit.

	PRINCIPAL BUILDING	OUTBUILDING
Front Setback (Principal)	0 ft. min. 15 ft. max.	n/a
Front Setback (Secondary)	0 ft. min. 15 ft. max.	n/a
Side Setback	0 ft. min. 24 ft. max.	n/a
Rear Setback	0 ft. min.	n/a
Illustration		n/a

	PRINCIPAL BUILDING	OUTBUILDING
Height (in Stories)	5 stories	n/a
Illustration		

PARKING PLACEMENT 1. Uncovered parking spaces may be provided within the third Layer. 2. Covered parking shall be provided within the third Layer. 3. Trash containers shall be stored within the third Layer.	

STATE REZONING CRITERIA

Per Title 17, Chapter 1, of the Mississippi Code of 1972, as amended, and Appendix A, Article IV, Section A, of the City of Starkville Code of Ordinances, the Official Zoning Map may be amended only when one or more of the following conditions prevail:

1. **Error:** There is a Manifest Error in the ordinance and a Public Need to correct the error:

2. **Change in conditions:** Changed or changing conditions in an existing area, or in the planning area generally, or the increased or increasing need for commercial or manufacturing sites or additional subdivision of open land into urban building sites make a change in the ordinance necessary and desirable, and in accord with the public need for orderly and harmonious growth.

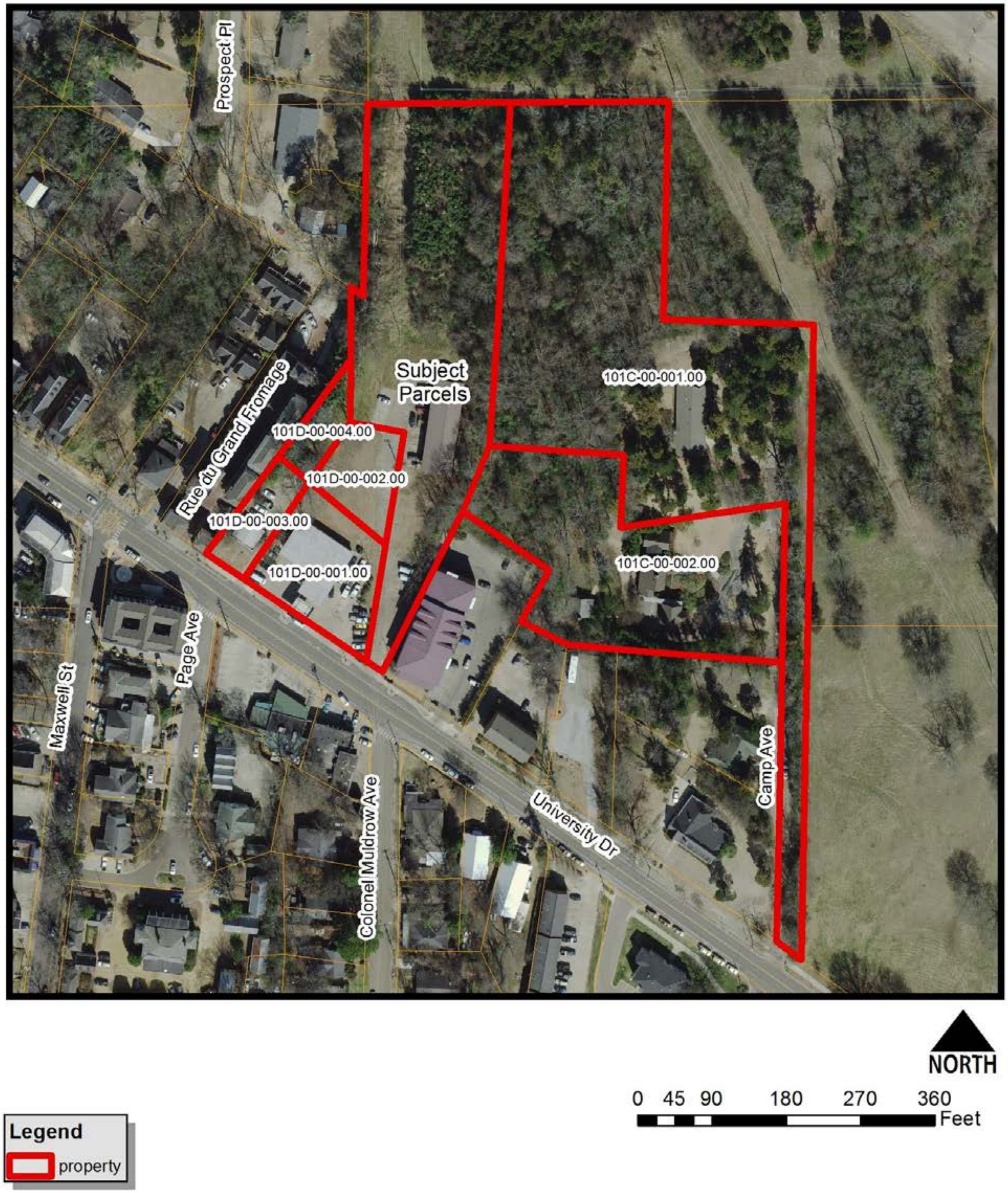
    - On January 12, 2012, the Board of Aldermen adopted Form Based Code for MS Highway 182, Main Street, University Drive, Lampkin Street, and Russell Street. As a result, 84 parcels were rezoned to either T District or Civic District. The subject parcels were a part of this code update.

REQUESTED CONDITIONS

1. Any building adjacent to University Drive must not exceed 4 stories in height.
2. The first floor of buildings adjacent to University Drive are to be retail.
3. Buildings along western line adjacent to R-1 property, will be required to have a buffer.
4. In addition to the site being required to meet all requirements of the current Stormwater Ordinance, post-development runoff cannot exceed pre-development runoff at the point of sub-basin discharge for a 2 and 10 year event.
5. A traffic study will need to submitted to City staff prior to Board of Aldermen meeting.

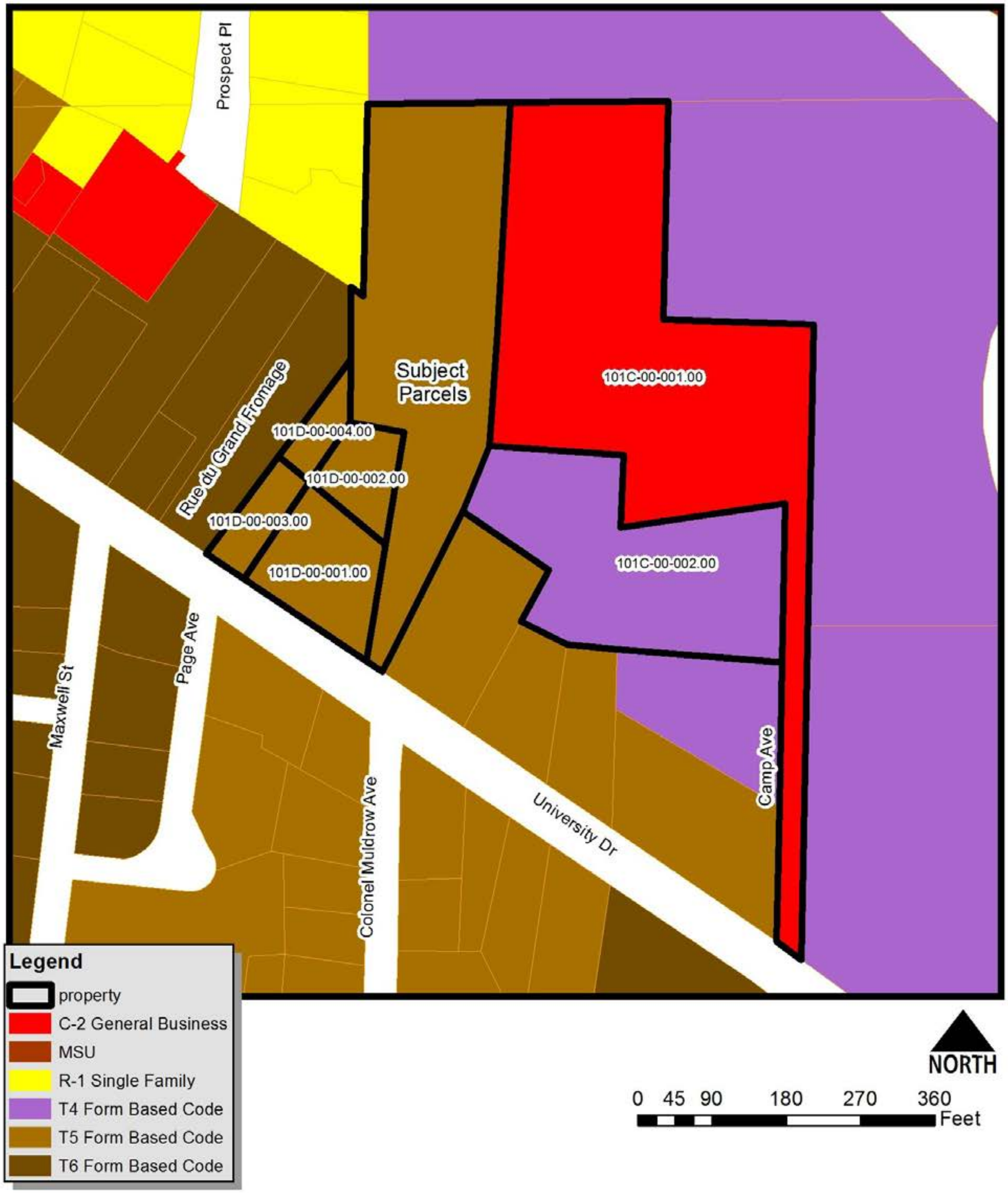
Attachment 1

RZ 15-05 Aerial



Attachment 2

RZ 15-05 Zoning



Attachment 3

View looking north at one of the subject properties

Attachment 4

View looking north at subject properties on Camp Avenue

Attachment 5

View looking north at existing apartment building on subject properties

Attachment 6

View looking west at rentail unit on subject properties

Attachment 7

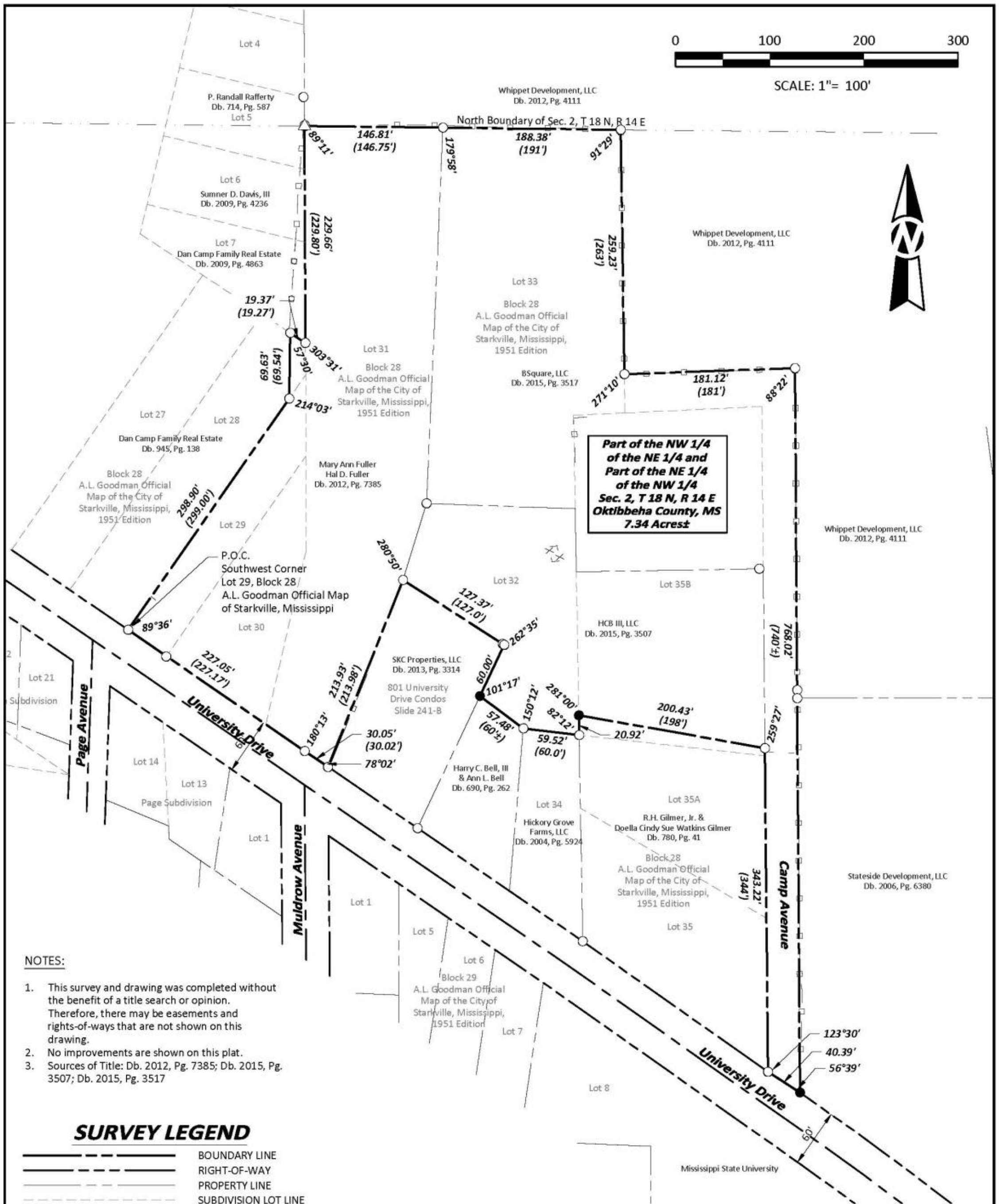
View of adjacent property to the west of subject properties

Attachment 8

View of adjacent properties to the west of subject properties

View of adjacent property to the east of subject properties

Attachment 10



NOTES:

1. This survey and drawing was completed without the benefit of a title search or opinion. Therefore, there may be easements and rights-of-ways that are not shown on this drawing.
2. No improvements are shown on this plat.
3. Sources of Title: Db. 2012, Pg. 7385; Db. 2015, Pg. 3507; Db. 2015, Pg. 3517

SURVEY LEGEND

	BOUNDARY LINE
	RIGHT-OF-WAY
	PROPERTY LINE
	SUBDIVISION LOT LINE
— o — o — o —	CHAIN LINK FENCE
— ◇ — ◇ — ◇ —	IRON FENCE
— X — X — X —	WIRE FENCE
— □ — □ — □ —	WOOD FENCE
○	IRON PIPE / PIN FOUND
◎	CAPPED REBAR FOUND
△	CONCRETE MONUMENT FOUND
●	CAPPED REBAR SET
SEC	SECTION
T	TOWNSHIP
R	RANGE
R.O.W.	RIGHT-OF-WAY
PB.	PLAT BOOK
DB.	DEED BOOK
PG.	PAGE
( )	RECORD DIMENSION

STATE OF MISSISSIPPI)
OKTIBBEHA COUNTY)

I, Blake M. Hindman, a Registered Professional Land Surveyor of the firm of Walker Associates, Inc., Tuscaloosa, Alabama, hereby certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Mississippi, to the best of my knowledge, information, and belief.

WITNESS my hand on this the 26th day of August, 2015.

Blake M. Hindman, P.L.S.
Mississippi Reg. No. 25127

PRELIMINARY
(NOT FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION)

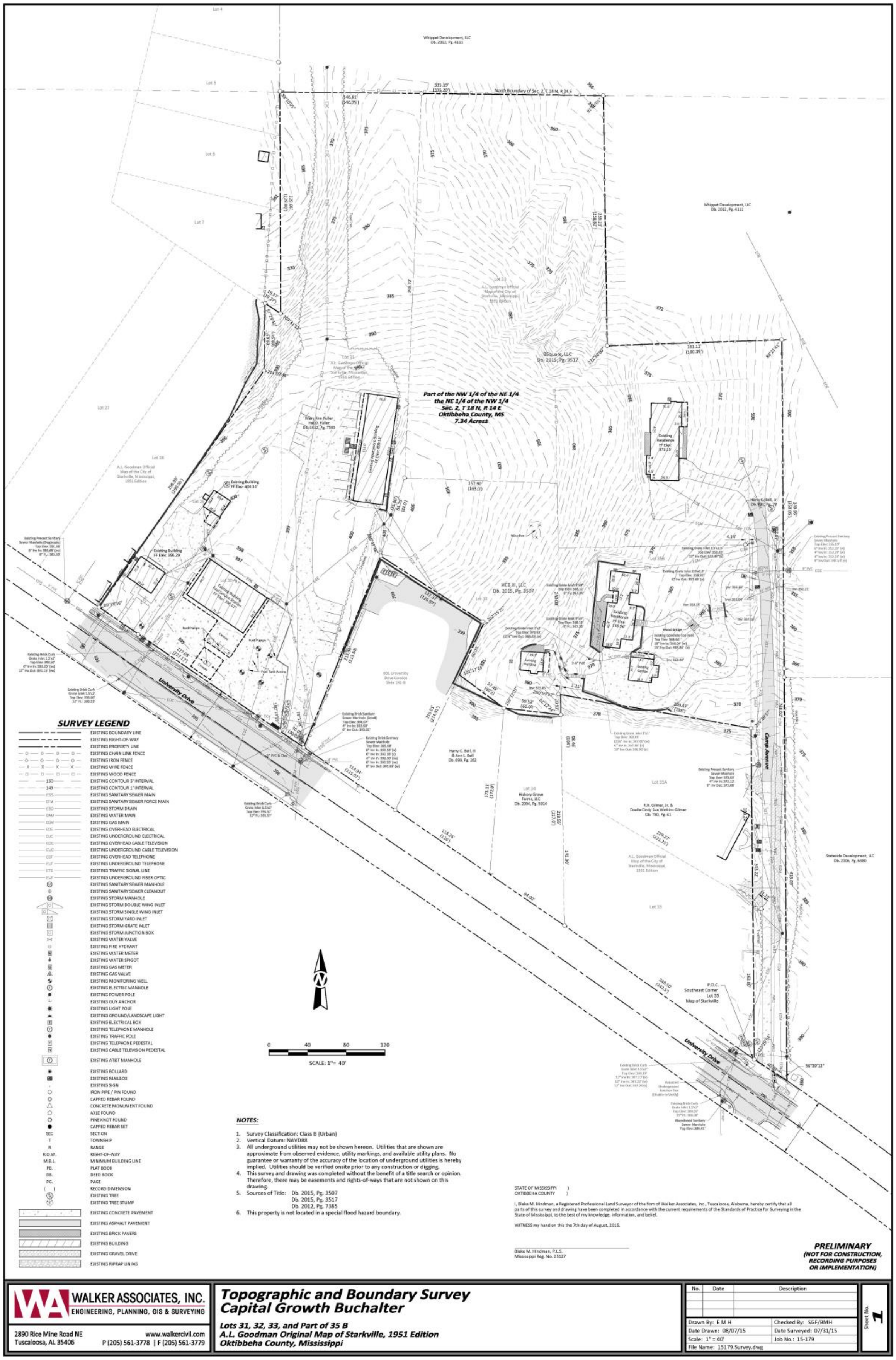
WALKER ASSOCIATES, INC.
ENGINEERING, PLANNING, GIS & SURVEYING
2890 Rice Mine Road NE
Tuscaloosa, AL 35406
www.walkercivil.com
P (205) 561-3778 | F (205) 561-3779

Boundary Survey
Capital Growth Buchalter Starkville Development
Lots 29, 30, 31, 31-A & 33 and Part of Lots 32 & 35-B
A.L. Goodman Official Map of the City of Starkville, Mississippi
Oktibbeha County, Mississippi

No.	Date	Description

File Name: 15179.All Parcels.dwg
Drawn By: E M H | Checked By: SGF/BMH
Date Drawn: 08/24/15 | Date Surveyed: 07/31/15
Scale: 1" = 100' | Job No.: 15-179
Sheet No. 1

Attachment 11



Attachment 12
Applicant Reports

MOORE LAW OFFICE

JOHN STUART MOORE
ATTORNEY AT LAW

108 S. LAFAYETTE
POST OFFICE BOX 924
STARKVILLE, MS 39760-0924

(662) 323-3784
(662) 323-7740
FAX (662) 324-2262

September 1, 2015

Buddy Sanders
Community Development Director
City of Starkville
101 East Main Street
Starkville, MS 39759

RE: Christopher Kritzman / Capital Growth Properties Rezoning - The Mary Ann and Hal D. Fuller Property - Lots 29, 30, 31, and 31-A of Block 28 in the City of Starkville, Mississippi.

Dear Mr. Sanders:

Background:

The subject property consists of Lots 29, 30, 31, and 31-A of Block 28 in the City of Starkville, Mississippi. These lots are currently owned by Mary Ann and Hal D. Fuller, but are under contract for sale to Capital Growth Properties. Capital Growth Properties intends to purchase the Mary Ann and Hal D. Fuller property, in conjunction with other surrounding properties, collectively referred to herein as the "Development Site", to build a new cohesive residential and retail development that will benefit the City of Starkville.

Area:

The subject property consists of Parcels 101D-00-001.00, 101D-00-002.00, 101D-00-003.00, and 101D-00-004.00. The lots are currently zoned T5. Property to the North is zoned T4, and is currently vacant. Property to the South is zoned T5, and is Multifamily Residential and Retail in use. Property to the East is zoned T5, T4, and C-2 and is Multifamily Residential in use. Property to the West is zoned T6 and R-1, and Multifamily and Single Family Residential in use.

Rezoning Request:

Capital Growth Properties is requesting to rezone the subject property from T5 to T6 to allow them to develop the subject property to meet the changing needs of the surrounding neighborhood. The subject property is currently zoned T5, and one of the primary factors in requesting a T6 zone is to utilize the unique topography of the subject property to construct a five (5) story building that will not impose on the surrounding properties. The current T5 zone will not allow Capital Growth Properties to develop the property in a manner that will provide a return on their investment.

According to the City of Starkville's Code of Ordinances, the intent of the Transect Districts is described as follows:

(a) Regulations on buildings equitably balance the rights of individual property owners and the interests of the community as a whole.

(b) Infrastructure, landscape and buildings shape the public realm, the spatial definition of which can be understood as a continuum from weak to strong.

(c) Transect Districts organize the individual characteristics of infrastructure, landscape and buildings into distinct physical environments, with the overall character of each differing from one another.

(d) Distinct physical environments provide a choice in living arrangement for citizens with differing physical, social, and emotional needs.

(e) Mixed Uses within Transect Districts and individual buildings provides access to daily needs within close proximity to dwellings so that residents may choose to work, recreate, and shop within walking distance to their home.

The differences between T5 and T6 zones, according to the City of Starkville's Code of Ordinances, Appendix A, Article VII, Section T are:

T5: **Sec. T - § 4. - SPECIFIC TO T5 DISTRICTS.**

Lots located within the T5 District shall be subject to the requirements of this section.

7.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

7.2 - LOT OCCUPATION

(a) For Lots less than one-hundred and fifty (150) feet deep, one (1) Primary Building and one (1) Outbuilding may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 12.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Sideyard, Rearyard, or Courtyard. (see Table 3)

(d) Lot coverage by buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

7.3 - BUILDING FORM

(a) The Principal Entrance of any Secondary Building shall be oriented toward a Frontage Line, Driveway or the Facade of an Outbuilding.

(b) The maximum height of a Primary Building shall be four (4) stories as specified on Table 3 and on Table 12.

(c) The maximum height of a Secondary Building shall be four (4) stories as specified on Table 3 and on Table 12.

(d) The maximum height of an Outbuilding shall be two (2) stories as specified on Table 3 and on Table 12.

(e) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(f) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(g) A first Story Residential or Lodging Use shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(h) Loading docks and service areas shall be permitted on Frontages by Exception.

(i) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(j) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

(k) Buildings with a Commercial Use and paved setback may use the Setback area for outdoor seating.

7.4 - BUILDING USE

(a) Buildings may combine two (2) or more Uses listed on Table 5.

(b) The number of dwelling units on each Lot shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7).

(c) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use. Any restaurant food service provided shall be considered a separate Use.

(d) The building area available for Office Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use.

(e) The building area available for Retail Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other

Use.

(f) Retail Uses under 1,500 square feet shall be exempt from parking requirements.

7.5 - PARKING LOCATION

(a) All parking lots, garages and Parking Structures shall be located at the third Lot Layer as illustrated on Table 14.

(b) Vehicular entrances to parking lots, garages and Parking Structures shall be no wider than twenty-four (24) feet at the Frontage.

(c) Pedestrian exits from all parking lots, garages, and Parking Structures shall be exited directly to a Frontage Line (i.e., not directly into a building) except underground levels which may be exited by pedestrians directly into a building.

7.6 - LANDSCAPE

(a) The first Lot Layer may be paved.

7.7 - SIGNAGE

(a) Address, Awning, Band, Blade, Marquee, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Permitted signage types shall conform to the specifications of Table 8.

(c) Illuminated signage shall be externally illuminated only, except signage within a Shopfront window may be neon lit.

TABLE 12. T5 BUILDING SETBACKS		
	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Front Setback (Principal)	2 ft. min. 15 ft. max.	40 ft. max. from rear

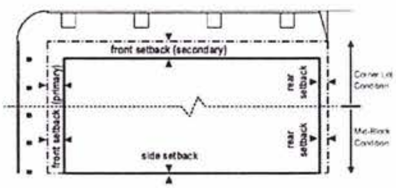
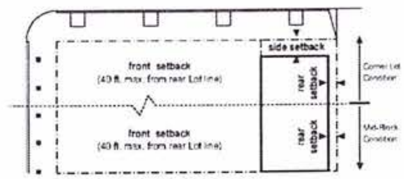
Front Setback (Secondary)	2 ft. min. 15 ft. max.	n/a
Side Setback	0 ft. min. 24 ft. max.	0 ft. or 3 ft. at corner
Rear Setback	3 ft. min.	3 ft. min.
Illustration		

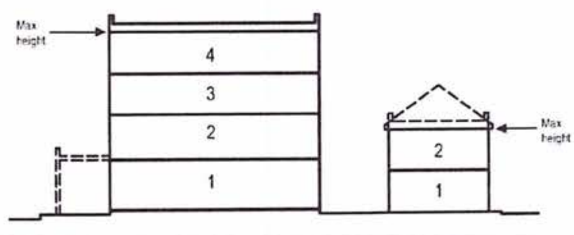
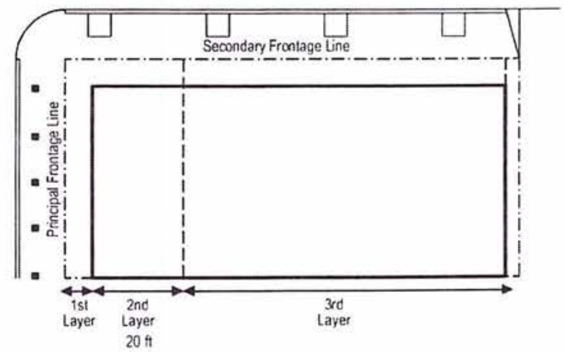
TABLE 13. T5 BUILDING HEIGHT		
	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Height (in Stories)	4 stories	2 stories
Illustration		

TABLE 14. T5 PARKING PLACEMENT	
PARKING PLACEMENT 1. Uncovered parking spaces may be provided within the third layer. 2. Covered parking shall be provided within the third layer. 3. Trash containers shall be stored within the third Layer.	

T6: **Sec. T - § 5. - SPECIFIC TO T6 DISTRICTS.**

Lots located within the T6 District shall be subject to the requirements of this section.

8.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

8.2 - LOT OCCUPATION

(a) One (1) Primary Building may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 15.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Rearyard or Courtyard. (see Table 3)

(d) Lot coverage by Buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

8.3 - BUILDING FORM

(a) The maximum height of a Primary building shall be five (5) Stories. (see Table 3 and on Table

15)

(b) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(c) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(d) A first Story Residential or Lodging Function shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(e) Loading docks and service areas shall be permitted on Frontages by Exception.

(f) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(g) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

(h) Buildings with a Commercial Use and paved setback may use the Setback area for outdoor seating.

(i) The Principal Entrance to a building shall be oriented toward the Frontage Line. Buildings on corner Lots may orient the Principal Entrance at a forty-five degree (45°) angle to the intersection of the Primary and Secondary Frontage Lines.

8.4 - BUILDING USE

(a) Buildings may combine two (2) or more Uses listed on Table 6.

(b) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use. Any restaurant food service provided shall be considered a separate Use.

8.5 - PARKING

(a) All parking lots, garages and Parking Structures shall be located in the third Lot Layer as illustrated on Table 17.

(b) Vehicular entrances to parking lots, garages and Parking Structures shall be no wider than twenty-four (24) feet at the Frontage.

(c) Pedestrian exits from all parking lots, garages, and Parking Structures shall be exited directly to a Frontage Line (i.e., not directly into a building) except underground levels which may be exited by pedestrians directly into a building.

8.6 - LANDSCAPE

(a) The first Lot Layer may be paved.

8.7 - SIGNAGE

(a) Address, Awning, Band, Blade, Marquee, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Permitted signage types shall conform to the specifications of Table 8.

(c) Illuminated signage shall be externally illuminated only, except signage within a Shopfront window may be neon lit.

TABLE 15. T6 BUILDING SETBACKS

	PRINCIPAL BUILDING	OUTBUILDING
Front Setback (Principal)	0 ft. min. 15 ft. max.	n/a
Front Setback (Secondary)	0 ft. min. 15 ft. max.	n/a

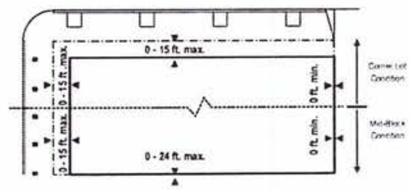
Side Setback	0 ft. min. 24 ft. max.	n/a
Rear Setback	0 ft. min.	n/a
Illustration		n/a

TABLE 16. T6 BUILDING HEIGHT

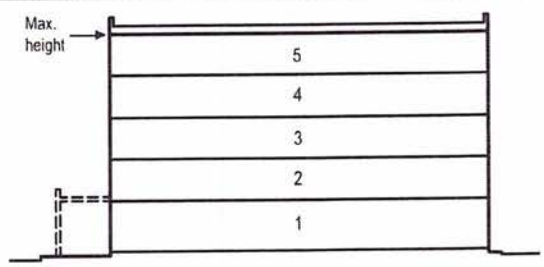
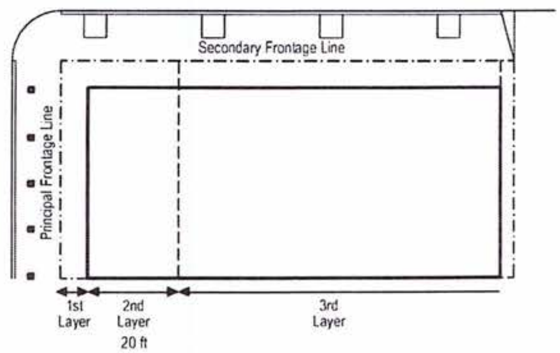
	PRINCIPAL BUILDING	OUTBUILDING
Height (in Stories)	5 stories	n/a
Illustration		

TABLE 17. T6 PARKING PLACEMENT

PARKING PLACEMENT

1. Uncovered parking spaces may be provided within the third Layer.
2. Covered parking shall be provided within the third Layer.
3. Trash containers shall be stored within the third Layer.



Rezoning Criteria:

The official zoning map of Starkville may be amended either when there is manifest error in the ordinance and/or if there has been a change in the conditions of an existing area according to Title 17, Chapter 1, of the Mississippi Code of 1972, as amended, and Appendix A, Article IV, Section A of the City of Starkville's Code of Ordinances. As there has been no error in either the ordinance or zoning map, Capital Growth Properties is requesting for the subject property to be rezoned based on changed or changing conditions in the existing area, or in the planning area generally, and the increasing need for mixed use development with a close proximity to Mississippi State University Campus that make the change in the ordinance necessary and desirable, and in accord with the public need for orderly and harmonious growth, as well as the specific evidence as outlined below.

Zoning Changes:

Recent zoning changes in the surrounding area include:

April 2013:	Charles and Kenneth Burns's property located on Highway 12 East Extended, also known as the Campus Haven Apartments project or RZ 13-06, was rezoned from R-1 to B-1.
April 2013:	Charles and Kenneth Burns's property located on Highway 12 East Extended, also known as the 300 Traditions project or RZ 13-07, was rezoned from R-1 to B-1.
October 2013:	Thad Cochran Research Park Property rezoned from

	R-1 to B-1 to allow for construction of C-Spire data center.
April 2014:	The Catholic Diocese of Jackson rezoned Lots 16, 17, and 18 of Block 28 from R-1 to B-1 to accommodate additional parking adjacent to St. Joseph Catholic Church.
August 2015:	Terry Parrish's property located on the east side of South Jackson Street and north of the railroad tracks was rezoned from C-2 to T5.

On January 12, 2012 the City of Starkville adopted the Form Based Code and changed a number of parcels from their existing zonings to either a T District or Civic District. The subject parcels were among those properties changed.

Public Need:

The argument for the Public Need for the rezoning is twofold:

(1) The proposed project Capital Growth Properties is intending to develop if the property is rezoned is consistent with the vision outlined in the 2011 ARC Design Presentation - specifically that Starkville will continue to thrive by promoting the unique character of its community and neighborhoods, such as the Cotton District, which emphasizes high quality, pedestrian-oriented mixed use development; and

(2) Students of Mississippi State University, key stakeholders within the Starkville community, have articulated in focus groups a forceful and unified desire to seek out student housing options which offer high quality, amenitized student housing which promotes walkability to Mississippi State University, downtown Starkville, and the Cotton District.

Capital Growth Properties conducted focus groups with 32 students on August 27, 2015 in Starkville. The findings of these three (3) focus groups are summarized below:

- Thirty-one (31) out of thirty-two (32) students, or 97% of the students polled, expressed a preference to live in the Cotton District over other popular students housing locations, such as those Blackjack Road, or new housing abutting Highway 12;
- The primary reasons to select student housing options in the Cotton District over other locations in Starkville was convenience to class rooms, to the student union, to

athletic facilities, and to Greek fraternity and sorority houses;

- Students also popularize housing in the Cotton District due to proximity to the restaurant, shops and other entertainment venues downtown and in the Cotton District;
- Cotton District housing is very popular, and housing in the Cotton District is often "handed down" or referred from Mississippi State University students that are graduating to underclassmen, indicating that demand is high and that another high quality, amenitized student project could be absorbed in the Cotton District;
- Housing that allows students to walk or bike to class minimizes students' need to purchase parking passes on campus and reduces students overall cost of attendance which is desirable to students;
- Students liked the fact that the proposed project will offer many unit plans, from studios to five bedroom units, thereby catering to both graduate students that tend to prefer the privacy of fewer bedrooms in each unit as well as undergraduates that prefer the lower price point that five bedroom units offer;
- Students commented that while other student housing communities offered utility packages, there is concern that some student housing communities are billing students for electric and water costs property-wide instead of billing based on individual use, and there is a desire for alternative housing options with personalized billing;
- Mississippi State University students are price sensitive in making housing choices. However the majority of focus group participants expressed a willingness to pay between one hundred to one hundred fifty dollars ($100.00 - $150.00) more per bedroom per month for housing in the Cotton District over housing in the county or further from campus due to convenience to campus and the attraction to the Cotton District entertainment venues.

Changed Conditions:

The area around the subject property has experienced tremendous growth and change in the past few years, and is currently experiencing a construction boom. Some of the new construction within walking distance from the subject property include: Starkville Apartments, LLC has begun the initial phases of construction on an apartment development located on the southeast corner of Spring Street and Russell Street; "The Whitney" is a luxury apartment development under construction at the intersection of Lumus and Jarnigan Street; "The Gin" development has begun initial construction on its luxury apartment complex located along Russell Street and Colonel Muldrow Drive; Ergon Properties is proposing to build a large scale multi-use development located at the southeast corner of Russell Street and Mercantile Street; The Courtyard Marriott on Mercantile Street is in its final phases of construction; and The Mill on Russell Street has just undergone an extensive renovation. Additionally, PLC Partners, LLC is building an apartment development immediately South of the Central Station Development on South Montgomery; and Jackson Square Development located on the corner of South Jackson Street and Lampkin Street has begun Phase I of their planned mixed use complex, which incorporates the recently rezoned Terry Parrish property.

New commercial businesses have been added to the area with the completion of The Cotton Mill Marketplace, which includes Salsarita's Fresh Cantina, Hungry Howie's Pizza, Insomnia Cookies, Maroon & Co., Pure Barre, Cobo's Boutique, and Jimmy John's Gourmet Sandwiches.

All of the previously stated examples of change around the subject property clearly demonstrate the changing conditions in the existing area and the increasing need for a mixed use district that makes the change in the ordinance necessary and desirable. The proposed rezoning of the subject property to a T6 is an attempt to combine the public need for residential housing and commercial amenities through orderly and harmonious growth. The proposed rezoning and use of the subject property has taken into account the impact it would have on the surrounding community, as further outlined below.

Land Use Compatibility:

Capital Growth Properties intends to use the architecture, form, style, and character of the surrounding neighborhood as their inspiration in building a development that will compliment and positively impact the surrounding properties. Capital Growth Properties plans to introduce an architectural style and form that will naturally incorporate into the surrounding neighborhood.

Currently, the Cotton District and surrounding area supports a combination of residential and commercial properties. In addition to the unique residential housing offered in the Cotton District, it is also home to, or is adjacent to, the following successful businesses: BIN 612, Two Brothers Smoked Meats, P.S. Salon, the

Cigar Lounge, Gringo's Taco Shop, District Salon, Drifters Bar, Commodore Bob's Yacht Club, Sweet Peppers Deli, and University Drive Laundromat. A T6 District will allow Capital Growth Properties to engage in similar commercial and retail ventures as the surrounding properties in addition to providing desirable residential housing units and off street parking.

Capital Growth Properties's intent is to find and develop a use that is compatible with both the residential and commercial characteristics of the area. Currently the Development Site is home to both neighboring, but separate, commercial and residential properties. The 2011 ARC Design Presentation urged the City of Starkville to capture regional traffic to the downtown area and allow for more mixed use development. Emphasis was placed on creating a gateway corridor between Mississippi State University and downtown. Capital Growth Properties is looking to expand on the gateway that the Cotton District has begun by updating the footprint that currently exists on the Development Site from many individualized use properties to a single mixed use property.

Although a T6 District would allow for the construction of a five (5) story development along University Drive, Capital Growth Properties is willing to self-impose a condition that the facade of the building that abuts University Drive be limited to no more than four (4) stories in height. Capital Growth Properties desire is to develop the subject property in a manner that will compliment and enhance the properties surrounding it, and not deter from the current architecture that makes the Cotton District so distinguishable.

Effect on Neighborhood:

In order to make this project financially feasible, Capital Growth Properties is seeking a T6 District specifically to capitalize on the ability to build a structure up to five (5) stories high. However, the effect on the surrounding neighborhood will feel like a lower density district due to the unique topography of the Development Site. The North side of the Development Site has an approximate thirty-seven (37) foot slope down the back of the property. Capital Growth Properties intends to utilize this natural topography to its advantage by building the five (5) story buildings along the slope. The end result of this design plan will reduce the impact a five (5) story building will have on the surrounding neighborhood as only approximately two to three (2 - 3) stories will be visible from street level at University Drive.

Capital Growth Properties has made an obvious effort to ease the transition for the property's neighbors by conducting focus groups, meeting with city officials and leaders, and by self-imposing the condition that they will limit the facade of the building facing University Drive to four (4) stories.

Furthermore, a mixed use neighborhood promotes public safety. Single use zones can lead to inactivity during the day in residential zones and at night in commercial zones, leading to the potential for increased crime or vandalism during these "dead zones". By combining residential with retail and commercial businesses to create mixed use neighborhoods, these "dead zones" are reduced dramatically, promoting a safer environment for the community at large.

A mixed use neighborhood also attracts a more diverse population to the area. Instead of strictly being a development for college students, young professionals and alumni will be drawn to the area for the easy and convenient access to retail and commercial services within walking distance of their front door and downtown.

Economic Effects:

If the subject property is rezoned, it will not only increase in value, but it will help increase the values of the surrounding properties as well, and help to bring increased revenue, taxes and jobs to the City. Based on initial estimates, the total direct, indirect and ongoing effect to the City of Starkville, upon construction completion at the end of year one (1), would be forty-five million one hundred forty-three thousand seven hundred ninety-six dollars ($45,143,796.00).

Conclusion:

The subject property needs to be rezoned to allow Capital Growth Properties to successfully develop it into a mixed use area that will benefit the City of Starkville, both economically and by helping further Starkville as a premiere college town.

As demonstrated herein, a tremendous change has occurred in the conditions surrounding the existing area, and there is a need for a mixed use area near Mississippi State University campus that will provide a gateway to the downtown area that makes the change in the ordinance necessary and desirable, and in accord with the public need for orderly and harmonious growth.

Based on the information included in this letter, along with further information to be presented at the public hearing, I am respectfully requesting, on behalf of my clients, that - Lots 29, 30, 31, and 31-A of Block 28 in the City of Starkville, Mississippi be rezoned from T5 to a T6 District.

Sincerely,

John Stuart Moore

MOORE LAW OFFICE

JOHN STUART MOORE
ATTORNEY AT LAW

108 S. LAFAYETTE
POST OFFICE BOX 924
STARKVILLE, MS 39760-0924

(662) 323-3784
(662) 323-7740
FAX (662) 324-2262

September 1, 2015

Buddy Sanders
Community Development Director
City of Starkville
101 East Main Street
Starkville, MS 39759

RE: Christopher Kritzman / Capital Growth Properties Rezoning - The BSquare, LLC Property - Lots 33 and Part of 35-B of Block 28 in the City of Starkville, Mississippi.

Dear Mr. Sanders:

Background:

The subject property consists of Lots 33 and Part of 35-B of Block 28 in the City of Starkville, Mississippi. These lots are currently owned by BSquare, LLC, but are under contract for sale to Capital Growth Properties. Capital Growth Properties intends to purchase the BSquare, LLC property, in conjunction with other surrounding properties, collectively referred to herein as the "Development Site", to build a new cohesive residential and retail development that will benefit the City of Starkville.

Area:

The subject property consists of Parcel 101C-00-001.00. The lot is currently zoned C-2 Business. Property to the North is zoned T4, and consists of both vacant and residential uses. Property to the South is zoned T4, and is Multifamily and Single Family Residential in use. Property to the East is zoned T4, and is currently vacant. Property to the West is zoned T5 and T4, and is Retail and Multifamily Residential in use.

Rezoning Request:

Capital Growth Properties is requesting to rezone the subject property from C-2 Business to T6 to allow them to develop the subject property to meet the changing needs of the surrounding neighborhood. The subject property is currently zoned C-2 with no direct road frontage or visibility from the street, and is surrounded by Transect District zoning on all sides. Based on the subject property's location, it is virtually unusable while classified as a C-2 Business zone. Capital Growth Properties seeks to rezone the property to a T6 District so that they can capture and utilize all of the benefits a mixed use zoning area would allow.

According to the City of Starkville's Code of Ordinances, the intent of the Transect Districts is described as follows:

(a) Regulations on buildings equitably balance the rights of individual property owners and the interests of the community as a whole.

(b) Infrastructure, landscape and buildings shape the public realm, the spatial definition of which can be understood as a continuum from weak to strong.

(c) Transect Districts organize the individual characteristics of infrastructure, landscape and buildings into distinct physical environments, with the overall character of each differing from one another.

(d) Distinct physical environments provide a choice in living arrangement for citizens with differing physical, social, and emotional needs.

(e) Mixed Uses within Transect Districts and individual buildings provides access to daily needs within close proximity to dwellings so that residents may choose to work, recreate, and shop within walking distance to their home.

The differences between C-2 and T6 zones, according to the City of Starkville's Code of Ordinances, Appendix A, Article VII, Sections L and T are:

C-2: **Sec. L. - C-2 business (general business) zoning district regulations.**

These [C-2 general business] districts are intended to be composed of the wide range of commercial goods and services to support community needs. Under special conditions some light industrial and distribution uses are also permitted. Usually located along arterial streets or near the intersection of two or more arterials, these districts are usually large and within convenient driving distance of the entire community. The district regulations provide for certain minimum yard and area standards to be met to assure adequate open space and compatibility with surrounding districts. [The following regulations apply in the C-2 districts:]

1. See chart for uses permitted.
2. See chart for uses which may be permitted as an exception.
3. Minimum lot size: It is the intent of this ordinance that lots of sufficient size be used for any business or service use and to provide adequate parking and loading space in addition to the space required for the other normal operations of the business or service.
4. Minimum yard size: Front, 20 feet; rear, 20 feet; side, a total of 20 feet, but one side shall be sufficient in width to provide vehicular access to the rear. On any lot [in] which the side lot line adjoins a residential district, the side yard on that side shall not be less than required by the residential district.
5. Maximum height of building or structures: 45 feet.
6. Off-street parking: One space for each 200 square feet of retail or office building area. See article VIII of this ordinance for requirements for other uses.
7. Off-street loading and unloading: The required rear or side yard may be used for loading and unloading.

T6: **<u>Sec. T - § 5. - SPECIFIC TO T6 DISTRICTS.</u>**

Lots located within the T6 District shall be subject to the requirements of this section.

8.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

8.2 - LOT OCCUPATION

(a) One (1) Primary Building may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 15.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Rearyard or Courtyard. (see Table 3)

(d) Lot coverage by Buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

8.3 - BUILDING FORM

(a) The maximum height of a Primary building shall be five (5) Stories. (see Table 3 and on Table 15)

(b) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(c) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(d) A first Story Residential or Lodging Function shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(e) Loading docks and service areas shall be permitted on Frontages by Exception.

(f) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(g) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

(h) Buildings with a Commercial Use and paved setback may use the Setback area for outdoor seating.

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8.4 - BUILDING USE

(a) Buildings may combine two (2) or more Uses listed on Table 6.

(b) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to any parking requirement for any other Use. Any restaurant food service provided shall be considered a separate Use.

8.5 - PARKING

(a) All parking lots, garages and Parking Structures shall be located in the third Lot Layer as illustrated on Table 17.

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(a) The first Lot Layer may be paved.

8.7 - SIGNAGE

(a) Address, Awning, Band, Blade, Marquee, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Permitted signage types shall conform to the specifications of Table 8.

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TABLE 15. T6 BUILDING SETBACKS

	PRINCIPAL BUILDING	OUTBUILDING
Front Setback (Principal)	0 ft. min. 15 ft. max.	n/a
Front Setback (Secondary)	0 ft. min. 15 ft. max.	n/a
Side Setback	0 ft. min. 24 ft. max.	n/a
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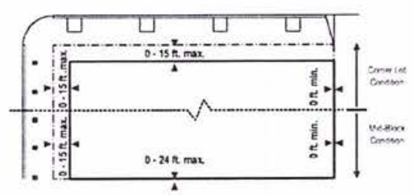
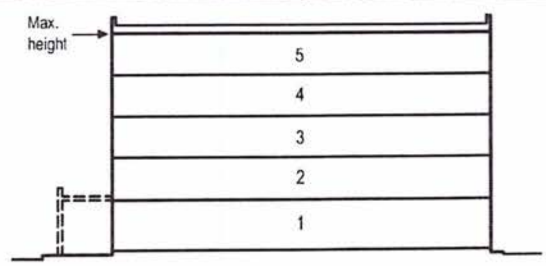
Illustration		n/a

TABLE 16. T6 BUILDING HEIGHT

	PRINCIPAL BUILDING	OUTBUILDING
Height (in Stories)	5 stories	n/a
Illustration		

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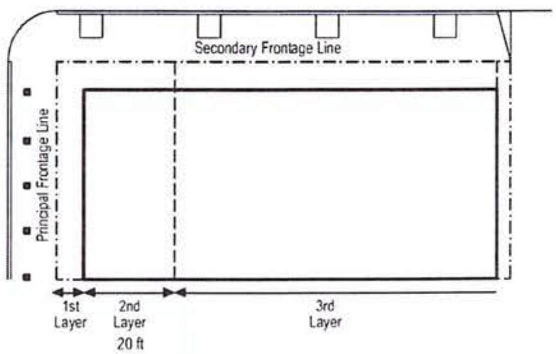
PARKING PLACEMENT 1. Uncovered parking spaces may be provided within the third Layer. 2. Covered parking shall be provided within the third Layer. 3. Trash containers shall be stored within the third Layer.	

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	R-1 to B-1.
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The argument for the Public Need for the rezoning is twofold:

(1) The proposed project Capital Growth Properties is intending to develop if the property is rezoned is consistent with the vision outlined in the 2011 ARC Design Presentation - specifically that Starkville will continue to thrive by promoting the unique character of its community and neighborhoods, such as the Cotton District, which emphasizes high quality, pedestrian-oriented mixed use development; and

(2) Students of Mississippi State University, key stakeholders within the Starkville community, have articulated in focus groups a forceful and unified desire to seek out student housing options which offer high quality, amenitized student housing which promotes walkability to Mississippi State University, downtown Starkville, and the Cotton District.

Capital Growth Properties conducted focus groups with 32 students on August 27, 2015 in Starkville. The findings of these three (3) focus groups are summarized below:

- Thirty-one (31) out of thirty-two (32) students, or 97% of the students polled, expressed a preference to live in the Cotton District over other popular students housing locations, such as those Blackjack Road, or new housing abutting Highway 12;
- The primary reasons to select student housing options in

the Cotton District over other locations in Starkville was convenience to class rooms, to the student union, to athletic facilities, and to Greek fraternity and sorority houses;

- Students also popularize housing in the Cotton District due to proximity to the restaurant, shops and other entertainment venues downtown and in the Cotton District;
- Cotton District housing is very popular, and housing in the Cotton District is often "handed down" or referred from Mississippi State University students that are graduating to underclassmen, indicating that demand is high and that another high quality, amenitized student project could be absorbed in the Cotton District;
- Housing that allows students to walk or bike to class minimizes students' need to purchase parking passes on campus and reduces students overall cost of attendance which is desirable to students;
- Students liked the fact that the proposed project will offer many unit plans, from studios to five bedroom units, thereby catering to both graduate students that tend to prefer the privacy of fewer bedrooms in each unit as well as undergraduates that prefer the lower price point that five bedroom units offer;
- Students commented that while other student housing communities offered utility packages, there is concern that some student housing communities are billing students for electric and water costs property-wide instead of billing based on individual use, and there is a desire for alternative housing options with personalized billing;
- Mississippi State University students are price sensitive in making housing choices. However the majority of focus group participants expressed a willingness to pay between one hundred to one hundred fifty dollars ($100.00 - $150.00) more per bedroom per month for housing in the Cotton District over housing in the county or further from campus due to convenience to campus and the attraction to the Cotton District entertainment venues.

Changed Conditions:

The area around the subject property has experienced tremendous growth and change in the past few years, and is currently experiencing a construction boom. Some of the new construction within walking distance from the subject property include:

Starkville Apartments, LLC has begun the initial phases of construction on an apartment development located on the southeast corner of Spring Street and Russell Street; "The Whitney" is a luxury apartment development under construction at the intersection of Lumus and Jarnigan Street; "The Gin" development has begun initial construction on its luxury apartment complex located along Russell Street and Colonel Muldrow Drive; Ergon Properties is proposing to build a large scale multi-use development located at the southeast corner of Russell Street and Mercantile Street; The Courtyard Marriott on Mercantile Street is in its final phases of construction; and The Mill on Russell Street has just undergone an extensive renovation. Additionally, PLC Partners, LLC is building an apartment development immediately South of the Central Station Development on South Montgomery; and Jackson Square Development located on the corner of South Jackson Street and Lampkin Street has begun Phase I of their planned mixed use complex, which incorporates the recently rezoned Terry Parrish property.

New commercial businesses have been added to the area with the completion of The Cotton Mill Marketplace, which includes Salsarita's Fresh Cantina, Hungry Howie's Pizza, Insomnia Cookies, Maroon & Co., Pure Barre, Cobo's Boutique, and Jimmy John's Gourmet Sandwiches.

All of the previously stated examples of change around the subject property clearly demonstrate the changing conditions in the existing area and the increasing need for a mixed use district that makes the change in the ordinance necessary and desirable. The proposed rezoning of the subject property to a T6 is an attempt to combine the public need for residential housing and commercial amenities through orderly and harmonious growth. The proposed rezoning and use of the subject property has taken into account the impact it would have on the surrounding community, as further outlined below.

Land Use Compatibility:

Capital Growth Properties intends to use the architecture, form, style, and character of the surrounding neighborhood as their inspiration in building a development that will compliment and positively impact the surrounding properties. Capital Growth Properties plans to introduce an architectural style and form that will naturally incorporate into the surrounding neighborhood.

Currently, the Cotton District and surrounding area supports a combination of residential and commercial properties. In addition to the unique residential housing offered in the Cotton District, it is also home to, or is adjacent to, the following successful businesses: BIN 612, Two Brothers Smoked Meats, P.S. Salon, the Cigar Lounge, Gringo's Taco Shop, District Salon, Drifters Bar, Commodore Bob's Yacht Club, Sweet Peppers Deli, and University Drive Laundromat. A T6 District will allow Capital Growth Properties to engage in similar commercial and retail ventures as the surrounding properties in addition to providing desirable residential housing units and off street parking.

Capital Growth Properties's intent is to find and develop a use that is compatible with both the residential and commercial characteristics of the area. Currently the Development Site is home to both neighboring, but separate, commercial and residential properties. The 2011 ARC Design Presentation urged the City of Starkville to capture regional traffic to the downtown area and allow for more mixed use development. Emphasis was placed on creating a gateway corridor between Mississippi State University and downtown. Capital Growth Properties is looking to expand on the gateway that the Cotton District has begun by updating the footprint that currently exists on the Development Site from many individualized use properties to a single mixed use property.

Although a T6 District would allow for the construction of a five (5) story development along University Drive, Capital Growth Properties is willing to self-impose a condition that the facade of the building that abuts University Drive be limited to no more than four (4) stories in height. Capital Growth Properties desire is to develop the subject property in a manner that will compliment and enhance the properties surrounding it, and not deter from the current architecture that makes the Cotton District so distinguishable.

Effect on Neighborhood:

In order to make this project financially feasible, Capital Growth Properties is seeking a T6 District specifically to capitalize on the ability to build a structure up to five (5) stories high. However, the effect on the surrounding neighborhood will feel like a lower density district due to the unique topography of the Development Site. The North side of the Development Site has an approximate thirty-seven (37) foot slope down the back of the property. Capital Growth Properties intends to utilize this natural topography to its advantage by building the five (5) story buildings along the slope. The end result of this design plan will reduce the impact a five (5) story building will have on the surrounding neighborhood as only approximately two to three (2 - 3) stories will be visible from street level at University Drive.

Capital Growth Properties has made an obvious effort to ease the transition for the property's neighbors by conducting focus groups, meeting with city officials and leaders, and by self-imposing the condition that they will limit the facade of the building facing University Drive to four (4) stories.

Furthermore, a mixed use neighborhood promotes public safety. Single use zones can lead to inactivity during the day in residential zones and at night in commercial zones, leading to the potential for increased crime or vandalism during these "dead zones". By combining residential with retail and commercial businesses to create mixed use neighborhoods, these "dead zones" are reduced dramatically, promoting a safer environment for the community at large.

A mixed use neighborhood also attracts a more diverse population to the area. Instead of strictly being a development for college students, young professionals and alumni will be drawn to the area for the easy and convenient access to retail and commercial services within walking distance of their front door and downtown.

Economic Effects:

If the subject property is rezoned, it will not only increase in value, but it will help increase the values of the surrounding properties as well, and help to bring increased revenue, taxes and jobs to the City. Based on initial estimates, the total direct, indirect and ongoing effect to the City of Starkville, upon construction completion at the end of year one (1), would be forty-five million one hundred forty-three thousand seven hundred ninety-six dollars ($45,143,796.00).

Conclusion:

The subject property needs to be rezoned to allow Capital Growth Properties to successfully develop it into a mixed use area that will benefit the City of Starkville, both economically and by helping further Starkville as a premiere college town.

As demonstrated herein, a tremendous change has occurred in the conditions surrounding the existing area, and there is a need for a mixed use area near Mississippi State University campus that will provide a gateway to the downtown area that makes the change in the ordinance necessary and desirable, and in accord with the public need for orderly and harmonious growth.

Based on the information included in this letter, along with further information to be presented at the public hearing , I am respectfully requesting, on behalf of my clients, that Lots 33 and Part of 35-B of Block 28 in the City of Starkville, Mississippi be rezoned from C-2 Business to a T6 District.

Sincerely,

John Stuart Moore

MOORE LAW OFFICE

JOHN STUART MOORE
ATTORNEY AT LAW

108 S. LAFAYETTE
POST OFFICE BOX 924
STARKVILLE, MS 39760-0924

(662) 323-3784
(662) 323-7740
FAX (662) 324-2262

September 1, 2015

Buddy Sanders
Community Development Director
City of Starkville
101 East Main Street
Starkville, MS 39759

RE: Christopher Kritzman / Capital Growth Properties Rezoning - The HCB III, LLC Property - Part of Lot 35-B and Part of Lot 32 of Block 28 in the City of Starkville, Mississippi.

Dear Mr. Sanders:

Background:

The subject property consists of Part of Lot 35-B and Part of Lot 32 of Block 28 in the City of Starkville, Mississippi. These lots are currently owned by HCB III, LLC, but are under contract for sale to Capital Growth Properties. Capital Growth Properties intends to purchase the HCB III, LLC property, in conjunction with other surrounding properties, collectively referred to herein as the "Development Site", to build a new cohesive residential and retail development that will benefit the City of Starkville.

Area:

The subject property consists of Parcel 101C-00-002.00. The lot is currently zoned T4. Property to the North is zoned C-2, and is Residential in use. Property to the South is zoned T5 and T4, and is Multifamily Residential in use. Property to the East is zoned T4, and is currently vacant. Property to the West is zoned T5 and T4, and is Retail and Multifamily Residential in use.

Rezoning Request:

Capital Growth Properties is requesting to rezone the subject property from T4 to T6 to allow them to develop the subject property to meet the changing needs of the surrounding neighborhood. The subject property is part of the Development Site on which Capital Growth Properties intends to construct a mixed use development consisting of multifamily residential apartment units and commercial retail space. In order for Capital Growth Properties to proceed with their plans, the subject property must be rezoned to allow for these uses. A T4 District does not allow for higher density housing or for the commercial uses that a T6 category permits. The benefits of a higher density mixed use development are outlined below.

According to the City of Starkville's Code of Ordinances, the intent of the Transect Districts is described as follows:

(a) Regulations on buildings equitably balance the rights of individual property owners and the interests of the community as a whole.

(b) Infrastructure, landscape and buildings shape the public realm, the spatial definition of which can be understood as a continuum from weak to strong.

(c) Transect Districts organize the individual characteristics of infrastructure, landscape and buildings into distinct physical environments, with the overall character of each differing from one another.

(d) Distinct physical environments provide a choice in living arrangement for citizens with differing physical, social, and emotional needs.

(e) Mixed Uses within Transect Districts and individual buildings provides access to daily needs within close proximity to dwellings so that residents may choose to work, recreate, and shop within walking distance to their home.

The differences between T4 and T6 zones, according to the City of Starkville's Code of Ordinances, Appendix A, Article VII, Section T are:

T4: **<u>Sec. T - § 3. - SPECIFIC TO T4 DISTRICTS.</u>**

Lots located within the T4 District shall be subject to the requirements of this section.

6.1 LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 96 feet, measured at the Frontage Line.

6.2 LOT OCCUPATION

(a) For Lots less than one-hundred and fifty (150) feet deep, one (1) Primary Building and one (1) Outbuilding may be built on each Lot.

(b) Primary Buildings may be positioned within the boundaries of a Lot to create an Edgeyard, Sideyard, or Rearyard. (see Table 3)

(c) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 9.

(d) Lot coverage by Buildings and impermeable surfaces shall be a maximum of 70% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 60% at the Setback.

6.3 BUILDING FORM

(a) The Principal Entrance of any Secondary Building shall be oriented toward a Frontage Line, Driveway or the Facade of an Outbuilding.

(b) The maximum height of a Primary Building shall be two (2) stories as specified on Table 3 and Table 9.

(c) The maximum height of a Secondary Building shall be two (2) stories as specified on Table 3 and Table 9.

(d) The maximum height of an Outbuilding shall be two (2) stories as specified on Table 3 and Table 9.

(e) Open porches, balconies, and bay windows may Encroach the first Lot Layer 50% of its depth.

(f) Reserved.

(g) Stoops, Lightwells, and Terraces may Encroach the first Lot Layer 100% of its depth.

6.4 BUILDING USE

(a) Buildings may combine up to two (2) Uses listed on

Table 5.

(b) The number of dwelling units on each Lot shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7).

(c) The work quarters of Home Businesses shall be not be visible from the Public Frontage.

(d) Lodging Uses shall be owner occupied.

(e) The number of bedrooms available for Lodging Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), up to twelve (12) bedrooms max and in addition to any parking requirement for any other Use.

(f) The building area available for Office Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to the parking requirement for any other Use.

(g) The building area available for Retail Uses listed on Table 5 shall be limited by the parking requirements of § 2.6 (see Table 6 and Table 7), in addition to the parking requirement for any other Use.

6.5 PARKING

(a) Driveways shall be no wider than 10 feet in the first Lot Layer.

(b) All parking areas and garages shall be located at the third Lot Layer as illustrated on Table 11.

6.6 LANDSCAPE

(a) The first Lot Layer may not be paved, with the exception of Driveways as specified in § 3.5(a).

6.7 SIGNAGE

(a) Address, Awning, Blade, Nameplate, Outdoor Display Case, Sidewalk, and Window Signs shall be permitted.

(b) Band Signs shall be permitted by Exception.

(c) Permitted signage types shall conform to the specifications of Table 8.

(d) Signage shall be externally illuminated, except that Window Signs may be neon lit.

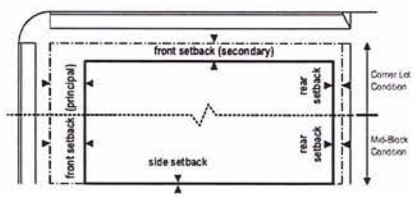
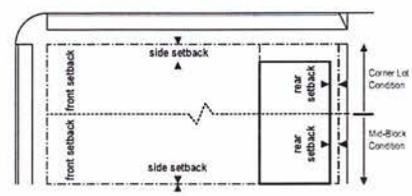
TABLE 9. T4 BUILDING SETBACKS		
	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Front Setback (Principal)	6 ft. min. 18 ft. max.	20 ft. min. + setback
Front Setback (Secondary)	6 ft. min. 18 ft. max.	n/a
Side Setback	0 ft. min.	0 ft. or 3 ft. at corner
Rear Setback	3 ft. min.	3 ft. min.
Illustration		

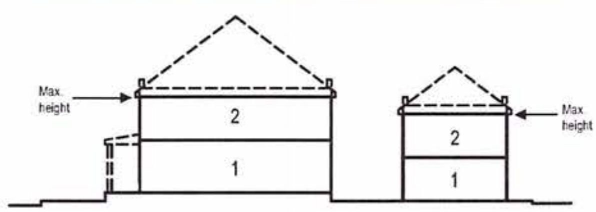
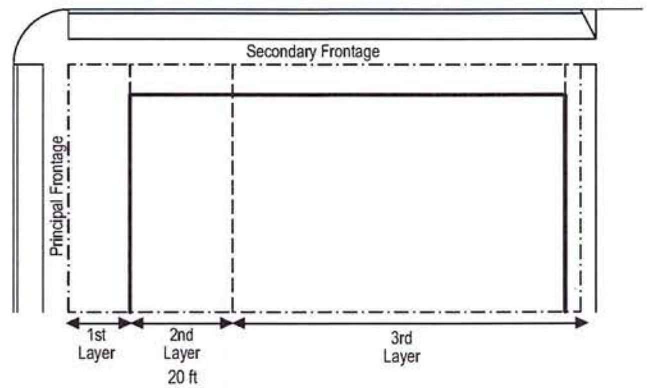
TABLE 10. T4 BUILDING HEIGHT		
	PRIMARY/SECONDARY BUILDING	OUTBUILDING
Height (in Stories)	2 stories	2 stories
Illustration		

TABLE 11. T4 PARKING PLACEMENT	
PARKING PLACEMENT	
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T6: **<u>Sec. T - § 5. - SPECIFIC TO T6 DISTRICTS.</u>**

Lots located within the T6 District shall be subject to the requirements of this section.

8.1 - LOTS

(a) Subdivisions of existing Lots and new combinations of Lots shall have a minimum width of 18 feet and a maximum width of 120 feet, measured at the Frontage Line.

8.2 - LOT OCCUPATION

(a) One (1) Primary Building may be built on each Lot.

(b) Buildings shall be setback in relation to the boundaries of their Lots as specified on Table 3 and on Table 15.

(c) Primary Buildings may be positioned within the boundaries of a Lot to create a Rearyard or Courtyard. (see Table 3)

(d) Lot coverage by Buildings shall be a maximum of 90% of the Lot area.

(e) Frontage Buildout of Primary building Facades shall be a minimum of 80% at the Setback.

8.3 - BUILDING FORM

(a) The maximum height of a Primary building shall be five (5) Stories. (see Table 3 and on Table 15)

(b) Awnings, Arcades, and Galleries may Encroach the Public Frontage 100% of its width but must clear the Sidewalk vertically by at least eight (8) feet.

(c) Stoops, Lightwells, balconies, bay windows and terraces may Encroach the first Lot Layer 100% of its depth.

(d) A first Story Residential or Lodging Function shall be raised a minimum of three (3) feet from the average grade of the Walkway.

(e) Loading docks and service areas shall be permitted on Frontages by Exception.

(f) In the absence of a building Facade along any part of a Frontage Line, a Streetscreen shall be built along the same vertical plane as the Facade.

(g) Streetscreens shall be between three and a half (3.5) and eight (8) feet in height. The Streetscreen may be replaced by a hedge or fencing by Exception. Streetscreens shall have openings no larger than necessary to allow automobile and pedestrian access.

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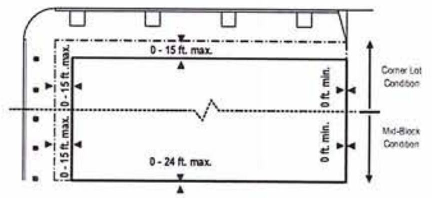
Illustration		n/a

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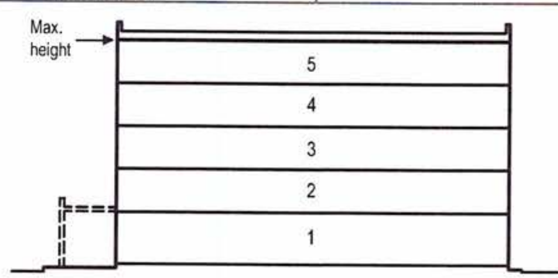
Illustration		

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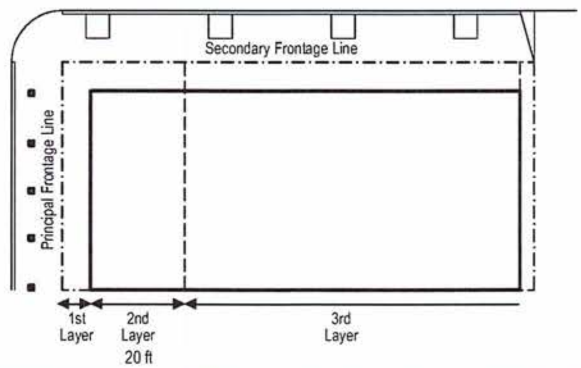

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(2) Students of Mississippi State University, key stakeholders within the Starkville community, have articulated in focus groups a forceful and unified desire to seek out student housing options which offer high quality, amenitized student housing which promotes walkability to Mississippi State University, downtown Starkville, and the Cotton District.

Capital Growth Properties conducted focus groups with 32 students on August 27, 2015 in Starkville. The findings of these three (3) focus groups are summarized below:

- Thirty-one (31) out of thirty-two (32) students, or 97% of the students polled, expressed a preference to live in the Cotton District over other popular students housing locations, such as those Blackjack Road, or new housing abutting Highway 12;
- The primary reasons to select student housing options in the Cotton District over other locations in Starkville

was convenience to class rooms, to the student union, to athletic facilities, and to Greek fraternity and sorority houses;

- Students also popularize housing in the Cotton District due to proximity to the restaurant, shops and other entertainment venues downtown and in the Cotton District;
- Cotton District housing is very popular, and housing in the Cotton District is often "handed down" or referred from Mississippi State University students that are graduating to underclassmen, indicating that demand is high and that another high quality, amenitized student project could be absorbed in the Cotton District;
- Housing that allows students to walk or bike to class minimizes students' need to purchase parking passes on campus and reduces students overall cost of attendance which is desirable to students;
- Students liked the fact that the proposed project will offer many unit plans, from studios to five bedroom units, thereby catering to both graduate students that tend to prefer the privacy of fewer bedrooms in each unit as well as undergraduates that prefer the lower price point that five bedroom units offer;
- Students commented that while other student housing communities offered utility packages, there is concern that some student housing communities are billing students for electric and water costs property-wide instead of billing based on individual use, and there is a desire for alternative housing options with personalized billing;
- Mississippi State University students are price sensitive in making housing choices. However the majority of focus group participants expressed a willingness to pay between one hundred to one hundred fifty dollars ($100.00 - $150.00) more per bedroom per month for housing in the Cotton District over housing in the county or further from campus due to convenience to campus and the attraction to the Cotton District entertainment venues.

Changed Conditions:

The area around the subject property has experienced tremendous growth and change in the past few years, and is currently experiencing a construction boom. Some of the new construction within walking distance from the subject property include: Starkville Apartments, LLC has begun the initial phases of construction on an apartment development located on the southeast corner of Spring Street and Russell Street; "The Whitney" is a luxury apartment development under construction at the intersection of Lumus and Jarnigan Street; "The Gin" development has begun initial construction on its luxury apartment complex located along Russell Street and Colonel Muldrow Drive; Ergon Properties is proposing to build a large scale multi-use development located at the southeast corner of Russell Street and Mercantile Street; The Courtyard Marriott on Mercantile Street is in its final phases of construction; and The Mill on Russell Street has just undergone an extensive renovation. Additionally, PLC Partners, LLC is building an apartment development immediately South of the Central Station Development on South Montgomery; and Jackson Square Development located on the corner of South Jackson Street and Lampkin Street has begun Phase I of their planned mixed use complex, which incorporates the recently rezoned Terry Parrish property.

New commercial businesses have been added to the area with the completion of The Cotton Mill Marketplace, which includes Salsarita's Fresh Cantina, Hungry Howie's Pizza, Insomnia Cookies, Maroon & Co., Pure Barre, Cobo's Boutique, and Jimmy John's Gourmet Sandwiches.

All of the previously stated examples of change around the subject property clearly demonstrate the changing conditions in the existing area and the increasing need for a mixed use district that makes the change in the ordinance necessary and desirable. The proposed rezoning of the subject property to a T6 is an attempt to combine the public need for residential housing and commercial amenities through orderly and harmonious growth. The proposed rezoning and use of the subject property has taken into account the impact it would have on the surrounding community, as further outlined below.

Land Use Compatibility:

Capital Growth Properties intends to use the architecture, form, style, and character of the surrounding neighborhood as their inspiration in building a development that will compliment and positively impact the surrounding properties. Capital Growth Properties plans to introduce an architectural style and form that will naturally incorporate into the surrounding neighborhood.

Currently, the Cotton District and surrounding area supports a combination of residential and commercial properties. In addition to the unique residential housing offered in the Cotton District, it is also home to, or is adjacent to, the following successful businesses: BIN 612, Two Brothers Smoked Meats, P.S. Salon, the Cigar Lounge, Gringo's Taco Shop, District Salon, Drifters Bar, Commodore Bob's Yacht Club, Sweet Peppers Deli, and University Drive Laundromat. A T6 District will allow Capital Growth Properties to engage in similar commercial and retail ventures as the surrounding properties in addition to providing desirable residential housing units and off street parking.

Capital Growth Properties's intent is to find and develop a use that is compatible with both the residential and commercial characteristics of the area. Currently the Development Site is home to both neighboring, but separate, commercial and residential properties. The 2011 ARC Design Presentation urged the City of Starkville to capture regional traffic to the downtown area and allow for more mixed use development. Emphasis was placed on creating a gateway corridor between Mississippi State University and downtown. Capital Growth Properties is looking to expand on the gateway that the Cotton District has begun by updating the footprint that currently exists on the Development Site from many individualized use properties to a single mixed use property.

Although a T6 District would allow for the construction of a five (5) story development along University Drive, Capital Growth Properties is willing to self-impose a condition that the facade of the building that abuts University Drive be limited to no more than four (4) stories in height. Capital Growth Properties desire is to develop the subject property in a manner that will compliment and enhance the properties surrounding it, and not deter from the current architecture that makes the Cotton District so distinguishable.

Effect on Neighborhood:

In order to make this project financially feasible, Capital Growth Properties is seeking a T6 District specifically to capitalize on the ability to build a structure up to five (5) stories high. However, the effect on the surrounding neighborhood will feel like a lower density district due to the unique topography of the Development Site. The North side of the Development Site has an approximate thirty-seven (37) foot slope down the back of the property. Capital Growth Properties intends to utilize this natural topography to its advantage by building the five (5) story buildings along the slope. The end result of this design plan will reduce the impact a five (5) story building will have on the surrounding neighborhood as only approximately two to three (2 - 3) stories will be visible from street level at University Drive.

Capital Growth Properties has made an obvious effort to ease the transition for the property's neighbors by conducting focus groups, meeting with city officials and leaders, and by self-imposing the condition that they will limit the facade of the building facing University Drive to four (4) stories.

Furthermore, a mixed use neighborhood promotes public safety. Single use zones can lead to inactivity during the day in residential zones and at night in commercial zones, leading to the potential for increased crime or vandalism during these "dead zones". By combining residential with retail and commercial businesses to create mixed use neighborhoods, these "dead zones" are reduced dramatically, promoting a safer environment for the community at large.

A mixed use neighborhood also attracts a more diverse population to the area. Instead of strictly being a development for college students, young professionals and alumni will be drawn to the area for the easy and convenient access to retail and commercial services within walking distance of their front door and downtown.

Economic Effects:

If the subject property is rezoned, it will not only increase in value, but it will help increase the values of the surrounding properties as well, and help to bring increased revenue, taxes and jobs to the City. Based on initial estimates, the total direct, indirect and ongoing effect to the City of Starkville, upon construction completion at the end of year one (1), would be forty-five million one hundred forty-three thousand seven hundred ninety-six dollars ($45,143,796.00).

Conclusion:

The subject property needs to be rezoned to allow Capital Growth Properties to successfully develop it into a mixed use area that will benefit the City of Starkville, both economically and by helping further Starkville as a premiere college town.

As demonstrated herein, a tremendous change has occurred in the conditions surrounding the existing area, and there is a need for a mixed use area near Mississippi State University campus that will provide a gateway to the downtown area that makes the change in the ordinance necessary and desirable, and in accord with the public need for orderly and harmonious growth.

Based on the information included in this letter, along with further information to be presented at the public hearing , I am respectfully requesting, on behalf of my clients, that Part of Lot 35-B and Part of Lot 32 of Block 28 in the City of Starkville, Mississippi be rezoned from T4 to a T6 District.

Sincerely,

John Stuart Moore

Attachment 13
Economic Impact

National Association of Home Builders

The Local Economic Impact of Catalyst Starkville

Income, Jobs, and Taxes Generated

October 2015

Housing Policy Department

NAHB®

The Local Economic Impact of Catalyst Starkville

Income, Jobs, and Taxes Generated

Contents

Executive Summary

Home building generates substantial local economic activity, including new income and jobs for residents, and additional revenue for local governments. The National Association of Home Builders has developed a model to estimate these economic benefits. The model captures the effect of the construction activity itself, the ripple impact that occurs when income earned from construction activity is spent and recycles in the local economy, and the ongoing impact that results from new homes becoming occupied by residents who pay taxes and buy locally produced goods and services. To fully understand the economic impact residential construction has on a local area, it is important to include the ripple effects and the ongoing benefits. Since the model was initially developed in 1996, NAHB has used it successfully to estimate the impacts of construction in over 800 projects, local jurisdictions, metropolitan areas, non-metropolitan counties, and states across the country.

This report presents estimates of the local impacts of Catalyst Starkville, a student housing development consisting of 240 apartments and 8,000 square feet of retail space in the City of Starkville. Starkville, in turn, is located in Oktibbeha County, Mississippi (see map below).

Oktibbeha County, Mississippi

For purposes of the NAHB model, a local area must be large enough to include the places where construction workers live and spend their money, as well as the places where the new home occupants are likely to work, shop, and go for recreation. NAHB has determined that, outside of Metropolitan Statistical Areas (MSAs) defined by the U.S. Office of Management and Budget (OMB), a county will usually satisfy this criterion. Oktibbeha County does not appear on OMB's current list of MSAs. Therefore, in this report, wherever the term local is used, it refers to Oktibbeha County.

The NAHB model produces impacts on income and employment in 16 industries and local government, as well as detailed information about taxes and other types of local government revenue. Aggregate results are summarized below. Subsequent sections of the report show detail by industry and type of tax or fee revenue generated.

- The estimated one-time local impacts of Catalyst Starkville include
  - **$49.3 million** in local income,
  - **$6.0 million** in taxes and other revenue for local governments, and
  - **1,141** local jobs.

  These are local impacts, representing income and jobs for residents of Oktibbeha County, and taxes (and other sources of revenue, including permit and tax abatement fees) for all local jurisdictions within the county, including the county government. The impacts include both the direct and indirect impact of the construction activity itself, including construction of the housing units and retail space. The one-time impacts also include the "ripple" effect of local residents who earn money from the construction activity spending part of it within the local area.

  Local jobs are measured in full time equivalents—i.e., one reported job represents enough work to keep one worker employed full-time for a year, based on average hours worked per week by full-time employees in the industry.

- The additional, annually recurring impacts of Catalyst Starkville include
  - **$9.9 million** in local income,
  - **$3.2 million** in taxes and other revenue for local governments, and
  - **266** local jobs.

  These are ongoing, annual local impacts that result from increased property taxes and the housing becoming occupied, with the occupants paying taxes and otherwise participating in the local economy year after year. They include the effect of increased property taxes, based on the difference between the value of raw land and the value of a completed housing unit on a finished lot, assuming that raw land would be taxed at the same rate as the completed housing unit.

  The ongoing impacts do not include any direct estimate for the retail business, but some of this impact is captured indirectly, as a share of the local spending by occupants of the housing units is likely to be captured by the retail outlet in the same development. The ongoing impacts are also reduced to account for the natural vacancy rate that tends to prevail in multifamily properties (see page 23 of the Technical Documentation).

The above impacts were calculated assuming that the value of the average apartment in Catalyst Starkville is $292,083; which includes $37,917 in raw land value and $436 in permit and other fees paid to local governments; and incur an average annual property tax of $4,063 per year. In addition, the retail space will require $1,005,200 in construction work, including an allowance for tenant improvements that will result in an additional $14,279 in permit and other fees paid to local government and $11,638 in property taxes. This information was provided by Capital Growth Buchalter, LLC, the developer of Catalyst Starkville.

The Local Economic Impact of Catalyst Starkville

Income, Jobs, and Taxes Generated

Detailed Tables on Income, Jobs and Taxes

Economic Impact of Catalyst Starkville in Oktibbeha County, Mississippi

Summary

Total One-Year Impact: Sum of Phase I and Phase II:

Local Income	Local Business Owners' Income	Local Wages and Salaries	Local Taxes[1]	Local Jobs Supported
$49,264,100	$16,529,300	$32,734,900	$5,955,600	1,141

Phase I: Direct and Indirect Impact of Construction Activity:

Local Income	Business Owners' Income	Local Wages and Salaries	Local Taxes[1]	Local Jobs Supported
$35,039,200	$13,026,700	$22,012,500	$2,308,600	761

Phase II: Induced (Ripple) Effect of Spending the Income and Taxes from Phase I:

Local Income	Business Owners' Income	Local Wages and Salaries	Local Taxes[1]	Local Jobs Supported
$14,224,900	$3,502,600	$10,722,400	$3,647,000	380

Phase III: Ongoing, Annual Effect that Occurs When New Homes are Occupied:

Local Income	Local Business Owners' Income	Local Wages and Salaries	Local Taxes[1]	Local Jobs Supported
$9,907,900	$2,434,700	$7,473,200	$3,181,500	266

[1] The term local taxes is used as a shorthand for local government revenue from all sources: taxes, fees, fines, revenue from government-owned enterprises, etc.

Economic Impact of Catalyst Starkville in Oktibbeha County, Mississippi
Phase I—Direct and Indirect Impact of Construction Activity

A. Local Income and Jobs by Industry

Industry	Local Income	Local Business Owners' Income	Local Wages and Salaries	Wages & Salaries per Full-time Job	Number of Local Jobs Supported
Construction	$28,876,200	$11,106,400	$17,769,800	$30,000	594
Manufacturing	$1,900	$100	$1,800	$26,000	0
Transportation	$8,200	$4,000	$4,200	$14,000	0
Communications	$187,100	$64,400	$122,700	$43,000	3
Utilities	$31,700	$6,900	$24,800	$34,000	1
Wholesale and Retail Trade	$3,192,200	$704,400	$2,487,900	$22,000	111
Finance and Insurance	$170,600	$6,700	$163,900	$48,000	3
Real Estate	$722,000	$621,700	$100,300	$28,000	4
Personal & Repair Services	$118,000	$28,000	$90,000	$28,000	3
Services to Dwellings / Buildings	$70,800	$27,300	$43,500	$18,000	2
Business & Professional Services	$1,289,800	$315,300	$974,400	$32,000	30
Eating and Drinking Places	$36,700	$5,800	$30,900	$16,000	2
Automobile Repair & Service	$26,700	$8,000	$18,700	$28,000	1
Entertainment Services	$11,200	$1,100	$10,200	$9,000	1
Health, Educ. & Social Services	$3,400	$100	$3,300	$23,000	0
Local Government	$76,000	$0	$76,000	$53,000	1
Other	$216,700	$126,500	$90,100	$26,000	3
Total	$35,039,200	$13,026,700	$22,012,500	$29,000	761

B. Local Government General Revenue by Type

TAXES:		USER FEES & CHARGES:	
Business Property Taxes	$54,100	Residential Permit / Impact Fees	$118,900
Residential Property Taxes	$0	Utilities & Other Govt. Enterprises	$584,700
General Sales Taxes	$0	Hospital Charges	$1,378,600
Specific Excise Taxes	$400	Transportation Charges	$0
Income Taxes	$0	Education Charges	$68,500
License Taxes	$2,700	Other Fees and Charges	$100,700
Other Taxes	$0	TOTAL FEES & CHARGES	$2,251,500
TOTAL TAXES	$57,200	TOTAL GENERAL REVENUE	$2,308,600

Economic Impact of Catalyst Starkville in Oktibbeha County, Mississippi
Phase II—Induced Effect of Spending Income and Tax Revenue from Phase I

A. Local Income and Jobs by Industry

Industry	Local Income	Local Business Owners' Income	Local Wages and Salaries	Wages & Salaries per Full-time Job	Number of Local Jobs Supported
Construction	$1,081,500	$408,100	$673,400	$30,000	23
Manufacturing	$2,600	$100	$2,500	$26,000	0
Transportation	$59,300	$28,700	$30,500	$14,000	2
Communications	$817,300	$339,100	$478,300	$54,000	9
Utilities	$178,300	$37,600	$140,700	$34,000	4
Wholesale and Retail Trade	$2,280,500	$382,300	$1,898,200	$22,000	85
Finance and Insurance	$504,300	$20,300	$484,000	$43,000	11
Real Estate	$1,539,600	$638,100	$901,500	$28,000	32
Personal & Repair Services	$554,600	$210,900	$343,700	$28,000	12
Services to Dwellings / Buildings	$193,300	$74,600	$118,700	$18,000	7
Business & Professional Services	$2,072,700	$596,400	$1,476,400	$27,000	55
Eating and Drinking Places	$1,030,000	$200,800	$829,300	$16,000	51
Automobile Repair & Service	$459,600	$138,300	$321,300	$28,000	11
Entertainment Services	$126,700	$24,500	$102,200	$10,000	10
Health, Educ. & Social Services	$1,925,600	$249,900	$1,675,700	$42,000	40
Local Government	$1,086,900	$0	$1,086,900	$48,000	23
Other	$312,100	$152,900	$159,100	$28,000	6
Total	$14,224,900	$3,502,600	$10,722,400	$28,000	380

B. Local Government General Revenue by Type

TAXES:		USER FEES & CHARGES:	
Business Property Taxes	$279,500	Residential Permit / Impact Fees	$0
Residential Property Taxes	$0	Utilities & Other Govt. Enterprises	$2,386,100
General Sales Taxes	$0	Hospital Charges	$862,300
Specific Excise Taxes	$2,300	Transportation Charges	$0
Income Taxes	$0	Education Charges	$27,800
License Taxes	$13,900	Other Fees and Charges	$75,100
Other Taxes	$0	TOTAL FEES & CHARGES	$3,351,400
TOTAL TAXES	$295,700	TOTAL GENERAL REVENUE	$3,647,000

Economic Impact of Catalyst Starkville in Oktibbeha County, Mississippi
Phase III—Ongoing, Annual Effect That Occurs Because Units Are Occupied

A. Local Income and Jobs by Industry

Industry	Local Income	Local Business Owners' Income	Local Wages and Salaries	Wages & Salaries per Full-time Job	Number of Local Jobs Supported
Construction	$429,000	$168,500	$260,500	$30,000	9
Manufacturing	$2,100	$100	$2,000	$25,000	0
Transportation	$45,400	$22,000	$23,400	$14,000	2
Communications	$562,700	$233,200	$329,500	$55,000	6
Utilities	$72,900	$15,300	$57,600	$34,000	2
Wholesale and Retail Trade	$1,694,700	$252,500	$1,442,200	$24,000	59
Finance and Insurance	$325,300	$12,900	$312,400	$43,000	7
Real Estate	$1,935,300	$802,100	$1,133,200	$28,000	40
Personal & Repair Services	$292,400	$110,100	$182,300	$28,000	7
Services to Dwellings / Buildings	$125,700	$48,500	$77,200	$18,000	4
Business & Professional Services	$1,072,400	$297,900	$774,500	$26,000	30
Eating and Drinking Places	$746,100	$146,500	$599,600	$16,000	37
Automobile Repair & Service	$362,400	$109,000	$253,400	$28,000	9
Entertainment Services	$137,900	$18,900	$119,000	$11,000	11
Health, Educ. & Social Services	$992,200	$127,500	$864,700	$42,000	21
Local Government	$967,700	$0	$967,700	$48,000	20
Other	$143,700	$69,700	$74,000	$28,000	3
Total	$9,907,900	$2,434,700	$7,473,200	$28,000	266

B. Local Government General Revenue by Type

TAXES:		USER FEES & CHARGES:	
Business Property Taxes	$204,200	Residential Permit / Impact Fees	$0
Residential Property Taxes	$860,100	Utilities & Other Govt. Enterprises	$568,800
General Sales Taxes	$0	Hospital Charges	$1,463,500
Specific Excise Taxes	$1,700	Transportation Charges	$0
Income Taxes	$0	Education Charges	$19,400
License Taxes	$10,100	Other Fees and Charges	$53,600
Other Taxes	$0	TOTAL FEES & CHARGES	$2,105,300
TOTAL TAXES	$1,076,100	TOTAL GENERAL REVENUE	$3,181,500

The Local Economic Impact of Catalyst Starkville

Income, Jobs, and Taxes Generated

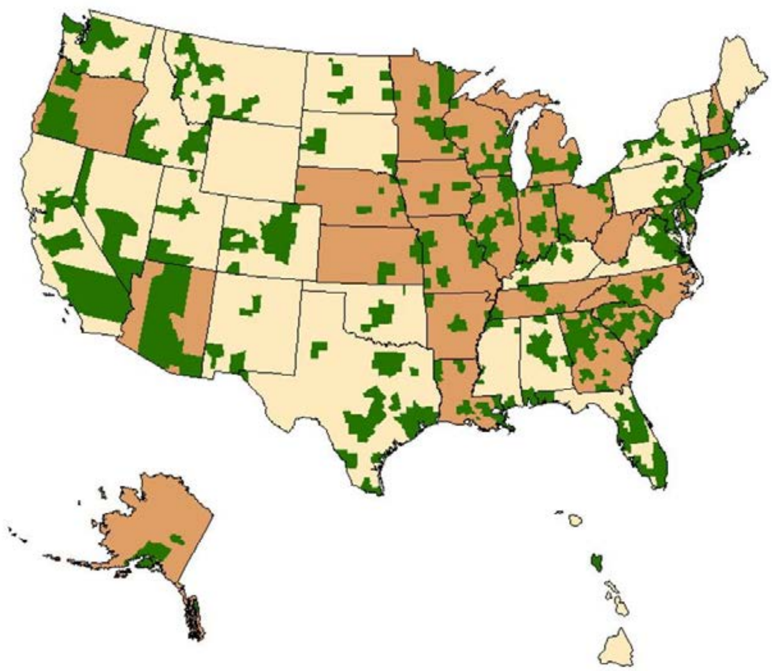
Background and a Brief Description of the Model Used to Estimate the Economic Benefits

In 1996, the Housing Policy Department of the National Association of Home Builders (NAHB) developed an economic model to estimate the local economic benefits of home building. Although at first calibrated to a typical metropolitan area using national averages, the model could be adapted to a specific local economy by replacing national averages with specific local data for key housing market variables. The initial version of the model could be applied to single-family construction, multifamily construction, or a combination of the two.

Since 1997, NAHB has used the model to produce customized reports on the impact of home building in various parts of the country. As of February 2012, NAHB has produced over 800 of these customized reports, analyzing residential construction in various metropolitan areas, non-metropolitan counties, and states (see map below).

Areas Covered by NAHB Local Impact Studies

The dark green shading indicates studies covering metro areas and non-metro counties; the orange shading studies covering an entire state.



The reports have analyzed the impacts of specific housing projects, as well as total home building in areas as large as entire states. In 2002, NAHB developed new versions of the model to analyze active adult housing projects and multifamily development financed with the Low-Income Housing Tax Credit, then in 2005 a version of the model that analyzes remodeling.

Results from NAHB's local impact model have been used by outside organizations such as universities, state housing authorities and affordable housing agencies:

- The Shimburg Center for Affordable Housing at the University of Florida used results from the NAHB model to establish that "the real estate taxes paid year after year are the most obvious long-term economic benefit to the community. Probably the second most obvious long-term economic benefit is the purchases made by the family occupying the completed home." www.shimberg.ufl.edu/pdf/Newslett-June02.pdf

- The Louisville Affordable Housing Trust Fund (AHTF) used results from the NAHB model to determine the initial one-year impact and the ongoing annual effect that occurs when new homes are occupied. This analysis was performed to help justify the creation of a commission to oversee the newly established AHTF to insure that it works at "finding creative ways to create a sustainable and renewable fund to provide affordable housing opportunities throughout the Louisville community." www.openthedoorlouisville.org/housing-trust/economic-growth

- The Illinois Housing Development Authority used the NAHB model to determine that "the Authority's new construction activity in single and multifamily housing….resulted in the creation of 4,256 full-time jobs in construction and construction-related industries." The Authority also used the NAHB impact model to determine the federal, state and local taxes and fees generated from new construction and substantial rehabilitation activity. www.ihda.org/admin/Upload/Files/94c0ecf7-a238-4be3-90bd-6043cfae81ea.pdf

- The Stardust Center at the Arizona State University used "the model used and developed by the NAHB to assess the immediate economic impacts of affordable housing" by phase including the construction effect, the construction ripple, and on-going impacts. This was done to show "that permanent, affordable and geographically accessible housing provides numerous benefits both to individual families and to the broader community." www.orangecountyfl.net/NR/rdonlyres/efo5wiffiqvqqgn2s35shus5i4lwdgqbcxpck2dddnds3msj5qs26ubzllsfl6s6rrwnmtkq4dypnjrdrdzei2llq5g/Socialeconomicimpacts.pdf

- The Center for Applied Economic Research at Montana State University used "results from an input-output model developed by the National Association of Home Builders to assess the impacts to local areas from new home construction." The results show that "the construction industry contributes substantially to Montana's economy accounting for 5.5 percent of Gross State Product."

- The Housing Education and Research Center at Michigan State University also adopted the NAHB approach: "The underlying basis for supporting the implementation of this [NAHB] model on Michigan communities is that it provides quantifiable results that link new residential development with commercial and other forms of development therefore illustrating the overall economic effects of residential growth."

- The Center for Economic Development at the University of Massachusetts found that "Home building generates substantial local economic activity, including income, jobs, and revenue for state and local governments. These far exceed the school costs-to-property-tax ratios. …these factors were evaluated by means of a quantitative assessment of data from the National Association of Home Builder's Local Impact of Home Building model."

- Similarly, the Association of Oregon Community Development Organizations decided to base its analysis of affordable housing on the NAHB model, stating that "This model is widely respected and utilized in analyzing the economic impact of market rate housing development," and that, compared to alternatives, it "is considered the most comprehensive and is considered an improvement on most previous models." www.aocdo.org/docs/EcoDevoStudyFinal.pdf

- The Boone County Kentucky Planning Commission included results from the NAHB model in its 2005 Comprehensive Report. The Planning Commission used values from the impact model to quantify the increase in local income, taxes, revenue, jobs, and overall local economic impacts in the Metro Area as a result of new home construction.

The NAHB model is divided into three phases. Phases I and II are one-time effects. Phase I captures the effects that result directly from the construction activity itself and the local industries that contribute to it. Phase II captures the effects that occur as a result of the wages and profits from Phase I being spent in the local economy. Phase III is an ongoing, annual effect that includes property tax payments and the result of the completed unit being occupied.

Phase I: Local Industries Involved in Home Building

The jobs, wages, and local taxes (including permit, utility connection, and impact fees) generated by the actual development, construction, and sale of the home. These jobs include on-site and off-site construction work as well as jobs generated in retail and wholesale sales of components, transportation to the site, and the professional services required to build a home and deliver it to its final customer.

Phase II: Ripple Effect

The wages and profits for local area residents earned during the construction period are spent on other locally produced goods and services. This generates additional income for local residents, which is spent on still more locally produced goods and services, and so on. This continuing recycling of income back into the community is usually called a ***multiplier*** or ***ripple*** effect.

Phase III: Ongoing, Annual Effect

The local jobs, income, and taxes generated as a result of the home being occupied. A household moving into a new home generally spends about three-fifths of its income on goods and services sold in the local economy. A fraction of this will become income for local workers and local businesses proprietors. In a typical local area, the household will also pay 1.25 percent of its income to local governments in the form of taxes and user fees, and a fraction of this will become income for local government employees. This is the first step in another set of economic ripples that cause a permanent increase in the level of economic activity, jobs, wages, and local tax receipts.

Modeling a Local Economy

The model defines a local economy as a collection of industries and commodities. These are selected from the detailed benchmark input-output tables produced by the U.S. Bureau of Economic Analysis. The idea is to choose goods and services that would typically be produced, sold, and consumed within a local market area. Laundry services would qualify, for example, while automobile manufacturing would not. Both business-to-business and business-to-consumer transactions are considered. In general the model takes a conservative approach and retains a relatively small number of the available industries and commodities. Of the roughly 400 industries and commodities provided in the input-output files, the model uses only 97 commodities and 99 industries.

The design of the model implies that a local economy should include not only the places people live, but also the places where they work, shop, typically go for entertainment, etc. This corresponds reasonably well to the concepts of Metropolitan Statistical Areas and Metropolitan Divisions, areas defined by the U.S. Office of Management and Budget based on local commuting patterns. Outside of these officially defined metropolitan areas, NAHB has determined that a county will usually satisfy the model's requirements.

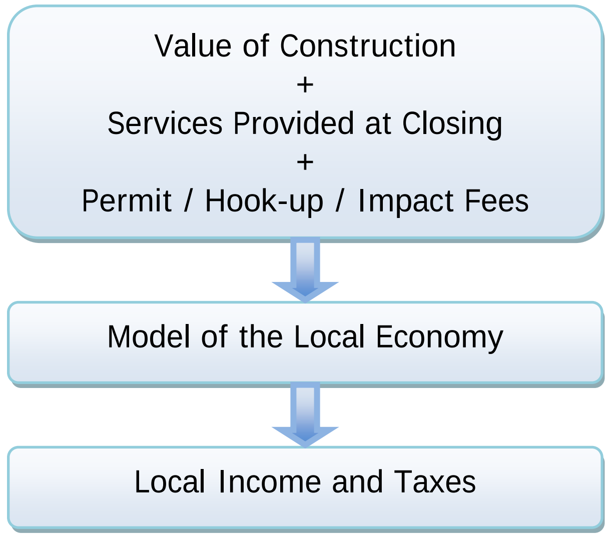
For a particular local area, the model adjusts the indirect business tax section of the national input-output accounts to account for the fiscal structure of local governments in the area. The information used to do this comes primarily from the U.S. Census Bureau's Census of Governments. Wages and salaries are extracted from the employee compensation section of the input-output accounts on an industry-by-industry basis. In order to relate wages and salaries to employment, the model incorporates data on local wages per job published by the Bureau of Economic Analysis.

Phase I: Construction

In order to estimate the local impacts generated by home building, it is necessary to know the sales price of the homes being built, how much raw land contributes to the final price, and how much the builder and developer pay to local area governments in the form of permit, utility connection, impact, and other fees. This information is not generally available from national sources and in most cases must be provided by representatives from the area in question who have specialized knowledge of local conditions.

The model subtracts raw land value from the price of new construction and converts the difference into local wages, salaries, business owners' income, and taxes. This is done separately for each of the local industries. In addition, the taxes and fees collected by local governments during the construction phase generate wages and salaries for local government employees. Finally the number of full time jobs supported by the wages and salaries generated in each private local industry and the local government sector is estimated.

Summary of Phase I



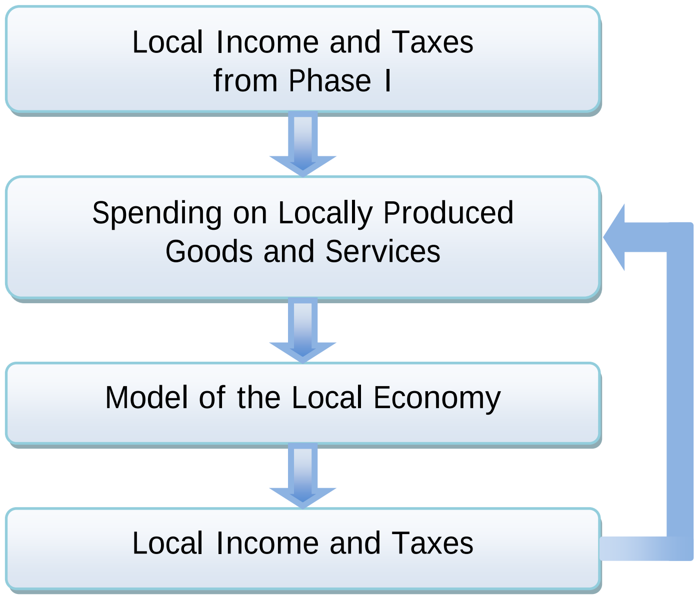
Phase II: The Construction Ripple

Clearly, the local residents who earn income in Phase I will spend a share of it. Some of this will escape the local economy. A portion of the money used to buy a new car, for example, will become wages for autoworkers that are likely to live in another city, and increased profits for stockholders of an automobile manufacturing company who are also likely to live elsewhere. A portion of the spending, however, will remain within, and have an impact on, the local economy. The car is likely to be purchased from a local dealer and generate income for a salesperson that lives in the area, as well for local workers who provide cleaning, maintenance, and other services to the dealership. Consumers also are likely to purchase many services locally, as well as to pay taxes and fees to local governments.

This implies that the income and taxes generated in Phase I become the input for additional economic impacts analyzed in what we call Phase II of the model. Phase II begins by estimating how much of the added income households spend on each of the local commodities. This requires detailed analysis of data from the Consumer Expenditure (CE) Survey, which is conducted by the U.S. Bureau of Labor Statistics primarily for the purpose of determining the weights for the Consumer Price Index. The analysis produces household spending estimates for 52 local commodities. The remainder of the 97 local commodities enter the model only as business-to-business transactions.

The model then translates the estimated local spending into local business owners' income, wages and salaries, jobs, and taxes. This is essentially the same procedure applied to the homes sold to consumers in Phase I. In Phase II, however, the procedure is applied simultaneously to 56 locally produced and sold commodities.
In other words, the model converts the local income earned in Phase I into local spending, which then generates additional local income. But this in turn will lead to additional spending, which will generate more local income, leading to another round of spending, and so on. Calculating the end result of these economics is a straightforward exercise in mathematics.

Summary of Phase II



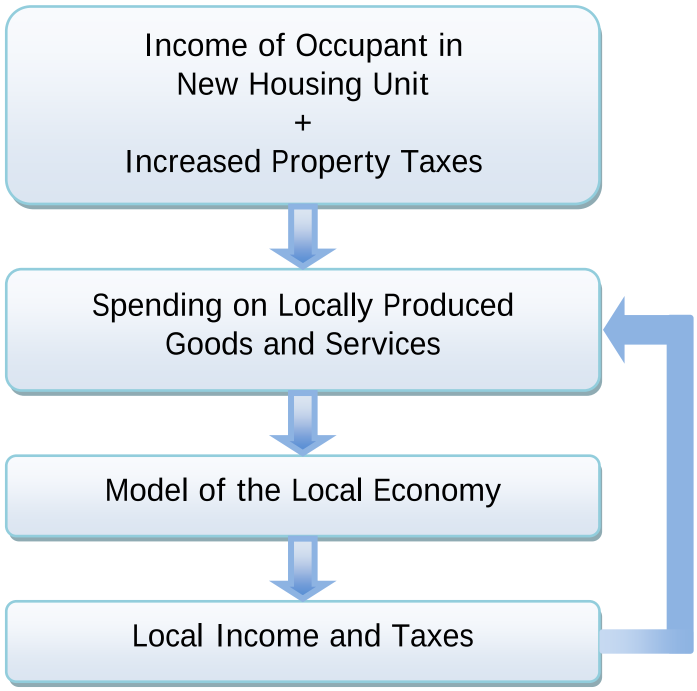
Phase III: Ongoing Impacts

Like Phase II, Phase III involves computing the sum of successive ripples of economic activity. In Phase III, however, the first ripple is generated by the income and spending of a new household (along with the additional property taxes local governments collect as a result of the new structure). This does not necessarily imply that all new homes must be occupied by households moving in from outside the local area. It may be that an average new-home household moves into the newly constructed unit from elsewhere in the same local area, while average existing-home household moves in from outside to occupy the unit vacated by the first household. Alternatively, it may be that the new home allows the local area to retain a household that would otherwise move out of the area for lack of suitable housing.

In any of these cases, it is appropriate to treat a new, occupied housing unit as a net gain to the local economy of one household with average characteristics for a household that occupies a new home. This reasoning is often used, even if unconsciously, when it is assumed that a new home will be occupied by a household with average characteristics—for instance, an average number of children who will consume public education.

To estimate the impact of the net additional households, Phase III of the model requires an estimate of the income of the households occupying the new homes. The information used to compute this estimate comes from several sources, but primarily from an NAHB statistical model based on decennial census data. Phase III of the local impact model then estimates the fraction of income these households spend on various local commodities. The spending tendencies are estimated with CE data in a fashion similar to that described under Phase II. The model also estimates the amount of local taxes the households pay each year. These estimates are based on Census of Governments data with the exception of residential property taxes, which are treated separately, most often with specific information obtained from a local source. Finally, a total ripple effect is computed in a way similar to the procedure outlined above under Phase II.

Summary of Phase III



The details covered here provide a brief description of the model NAHB uses to estimate the local economic benefits of home building. For a more complete description, see the technical documentation at the end of the report. For additional information about the model, or questions about applying it to a particular local area, contact one of the following in NAHB's Economics and Housing Policy Group:

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National Association of Home Builders

Local Impact of Home Building

Technical Documentation for the NAHB Model Used to Estimate Income, Jobs and Taxes

March 2015

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NAHB

Technical Documentation for the NAHB Model Used to Estimate Income, Jobs and Taxes

The Housing Policy Department of the National Association of Home Builders (NAHB) maintains an economic model that it uses to estimate the local economic benefits of home building. The NAHB model is divided into three phases. Phases I and II are one-time effects. Phase I captures the effects that result directly from the construction activity itself and the local industries that contribute to it. Phase II captures the effects that occur as a result of the wages and profits from Phase I being spent in the local economy. Phase III is an ongoing, annual effect that includes property tax payments and the result of the completed unit being occupied.

The model can be customized to a specific local economy by replacing key housing market variables. This document explains describes the sources of data used and explains how the estimates are generated.

Modeling a Local Economy

In the NAHB model, a local economy is defined as a collection of industries and commodities, selected from the 2007 benchmark input-output accounts produced by the U.S. Bureau of Economic Analysis (BEA). These accounts are generally based on the North American Industry Classification System (NAICS), although BEA combines and otherwise modifies the NAICS categories for purposes of the input-output estimates. NAHB's model uses the most detailed (6-digit) industry codes in order to parse industries and commodities as precisely as possible and include only those that are generally local in nature. BEA's 2007 benchmark input-output tables contain a total of 389 industries at the 6-digit level of detail. NAHB's local economy retains the following 99:

	IO Code	*Detailed Industry Name*
1	111400	Greenhouse, nursery, and floriculture production
2	212310	Stone mining and quarrying
3	221100	Electric power generation, transmission, and distribution
4	221200	Natural gas distribution
5	221300	Water, sewage and other systems
6	230301	Nonresidential maintenance and repair
7	230302	Residential maintenance and repair
8	233210	Health care structures
9	233411	Single-family residential structures
10	233412	Multifamily residential structures
11	323120	Support activities for printing
12	339950	Sign manufacturing
13	420000	Wholesale trade
14	441000	Motor vehicle and parts dealers
15	445000	Food and beverage stores
16	452000	General merchandise stores
17	485000	Transit and ground passenger transportation
18	492000	Couriers and messengers
19	493000	Warehousing and storage
20	511110	Newspaper publishers
21	515100	Radio and television broadcasting
22	515200	Cable and other subscription programming
23	517110	Wired telecommunications carriers
24	517210	Wireless telecommunications carriers (except satellite)

25	518200	Data processing, hosting, and related services
26	519130	Internet publishing and broadcasting and Web search portals
27	524200	Insurance agencies, brokerages, and related activities
28	525000	Funds, trusts, and other financial vehicles
29	531000	Real estate
30	532100	Automotive equipment rental and leasing
31	532400	Commercial and industrial machinery and equipment rental and leasing
32	533000	Lessors of nonfinancial intangible assets
33	541100	Legal services
34	541200	Accounting, tax preparation, bookkeeping, and payroll services
35	541300	Architectural, engineering, and related services
36	541400	Specialized design services
37	541511	Custom computer programming services
38	541512	Computer systems design services
39	541800	Advertising, public relations, and related services
40	541920	Photographic services
41	541940	Veterinary services
42	561100	Office administrative services
43	561200	Facilities support services
44	561300	Employment services
45	561400	Business support services
46	561600	Investigation and security services
47	561700	Services to buildings and dwellings
48	561900	Other support services
49	562000	Waste management and remediation services
50	611100	Elementary and secondary schools
51	621100	Offices of physicians
52	621200	Offices of dentists
53	621300	Offices of other health practitioners
54	621400	Outpatient care centers
55	621600	Home health care services
56	621900	Other ambulatory health care services
57	622000	Hospitals
58	624100	Individual and family services
59	624400	Child day care services
60	711100	Performing arts companies
61	711200	Spectator sports
62	712000	Museums, historical sites, zoos, and parks
63	713100	Amusement parks and arcades
64	713200	Gambling industries (except casino hotels)
65	713900	Other amusement and recreation industries
66	722110	Full-service restaurants
67	722211	Limited-service restaurants
68	811100	Automotive repair and maintenance
69	811200	Electronic and precision equipment repair and maintenance
70	811300	Commercial and industrial machinery and equipment repair and maintenance
71	811400	Personal and household goods repair and maintenance
72	812100	Personal care services
73	812200	Death care services
74	812300	Dry-cleaning and laundry services
75	812900	Other personal services
76	813100	Religious organizations
77	2332A0	Commercial structures, including farm structures
78	2332B0	Other nonresidential structures
79	2334A0	Other residential structures
80	4A0000	Other retail
81	517A00	Satellite, telecommunications resellers, and all other telecommunications

82	5191A0	News syndicates, libraries, archives and all other information services
83	522A00	Nondepository credit intermediation and related activities
84	523A00	Securities and commodity contracts intermediation and brokerage
85	52A000	Monetary authorities and depository credit intermediation
86	532A00	Consumer goods and general rental centers
87	54151A	Other computer related services, including facilities management
88	5419A0	Marketing research & other miscellaneous professional, scientific, & tech. services
89	611B00	Other educational services
90	623A00	Nursing and community care facilities
91	623B00	Residential mental retardation, mental health, substance abuse and other facilities
92	624A00	Community food, housing, and other relief services, including rehabilitation services
93	722A00	All other food and drinking places
94	813A00	Grantmaking, giving, and social advocacy organizations
95	813B00	Civic, social, professional, and similar organizations
96	S00201	State and local government passenger transit
97	S00202	State and local government electric utilities
98	S00203	Other state and local government enterprises
99	S00700	State and local general government

In contrast to the industry categories used in the previous (2002) version of the benchmark input-output tables, the 2007 version shows considerably more detail in the construction sector, and breaks retail trade into several categories.

In the input-output accounts, commodities generally correspond to industries, with the exception of "state and local government passenger transit" and "state and local government electric service," for which there is no distinct commodity (passenger transit and electric services are defined as input-output commodities irrespective of which industry produces them), so the local economy as defined in the NAHB model consists of 99 industries and 97 commodities.

The above list includes industries in trade, construction, finance, transportation, and services—but excludes virtually all manufacturing, mining, and agriculture, under the presumption that the markets for these products are regional—if not national or international—in nature.

The exclusion of many industries is a distinguishing feature of the NAHB local impact model and is consistent with the overall intent of the model: to analyze the impact of locating a housing unit and the household that occupies it in one place rather than another. From this perspective, a house built in Seattle, Washington should not cause additional airplanes to be built or additional software to be produced, even though the occupants of a home built in Seattle may use software produced in Seattle and travel on planes built in Seattle. Because these households would be likely to use these products the same way even if they lived in some other metropolitan area, use of these products is not a function of the home's location. Hence, industries like software publishing and aircraft manufacturing are excluded from the model.

Based on the industries and commodities described above, a "total local requirements" matrix is constructed that shows the total output required from each of the local industries to produce $1 of each local commodities.

To show the derivation of this matrix, let

$\boldsymbol{c}$ = a 97-element column vector of commodity outputs

$\boldsymbol{g}$ = a 99-element column vector of industry outputs

$\boldsymbol{V}$ = a 99×97 subset of the benchmark make table that shows how much of each commodity is produced by each industry

$\boldsymbol{h}$ = a 99-element column vector showing how much scrap is produced by each industry

$\boldsymbol{U}$ = a 97×99 subset of the benchmark use table that shows how much of each commodity used as an input by each industry. Coefficients for the wholesale trade commodity are set to zero, assuming that these transactions are often non-local in nature. The wholesale trade industry produces a considerable amount of the retail trade commodity. The effect of this is to retain retail trade in the model, irrespective of which industry produces it, but to exclude wholesale trade activities.

The following matrices can then be defined through standard input-output algebra:

$\boldsymbol{B} = \boldsymbol{U}\hat{\boldsymbol{g}}^{-1}$ the direct requirements matrix, showing the amount of each commodity needed as a direct input to produce $1 of each industry's output. (The symbol ˆ indicates a matrix created from a vector by placing the vector=s elements on the matrix diagonal.) This is simply the use table scaled by industry output.

$\boldsymbol{j} = \hat{\boldsymbol{g}}^{-1}\boldsymbol{h}$ a vector showing scrap as a fraction of each industry's output. Many of the elements of this vector are zero in the NAHB local impact model, which excludes most of the manufacturing sector.

$\boldsymbol{D} = \boldsymbol{V}\hat{\boldsymbol{c}}^{-1}$ a 99×97 market share matrix, or the make table scaled by commodity output. $\boldsymbol{D}$ shows the fraction of each commodity (excluding scrap) produced by each industry.

$\boldsymbol{F} = (\boldsymbol{I}\text{-}\hat{\boldsymbol{j}})^{-1}\boldsymbol{D}$ a 99×97 matrix showing, for $1 worth of each commodity, the fraction produced by each industry. In short, $\boldsymbol{F}$ is $\boldsymbol{D}$ adjusted for scrap. $\boldsymbol{F}$ is often called a transformation matrix, because it can be used to transform commodities into the output of industries and vice versa.

$$\textbf{\textit{Total Local Requirements}} = \boldsymbol{F}(\boldsymbol{I}\text{-}\boldsymbol{BF})^{-1}$$

The total local requirements matrix translates local commodities into the output of local industries. The NAHB model is designed to capture only a fraction of the output: the fraction that becomes either income for local households or revenue for local governments. These fractions are estimated from a combination of value added components of the input-output tables, plus information taken from other BEA industry accounts. In the BEA accounts, the final price of a commodity is the sum of intermediate outputs plus value added by the industry. To avoid double counting, the NAHB model retains only the value added in each local industry for further analysis.

BEA's input-output accounts break value added into three components: compensation of employees, taxes on production and imports (TOPI), and gross operating surplus. In the NAHB model, local income is derived from compensation of employees and gross operating surplus.

The following table shows information taken from BEA accounts used in this derivation:

	Wages & Salaries per $ of Employee Compensation	Other Corp. as a % of Gross Operating Surplus	Other Non-Corp. as a % of Gross Operating Surplus
Farms	85.98%	77.63%	28.12%
Mining, except oil and gas	82.18%	12.40%	71.60%
Utilities	74.17%	9.32%	84.32%
Construction	83.11%	68.10%	29.88%
Miscellaneous manufacturing	71.19%	10.16%	87.83%
Printing and related support activities	81.90%	11.75%	85.14%
Wholesale trade	85.93%	15.89%	82.08%
Motor vehicle and parts dealers	85.39%	27.06%	69.55%
Food and beverage stores	81.55%	27.06%	69.55%
General merchandise stores	81.30%	27.06%	69.55%
Other retail	84.09%	27.06%	69.55%
Transit and ground passenger transportation	81.66%	76.22%	22.04%
Other transportation and support activities	81.76%	23.56%	74.53%
Warehousing and storage	81.97%	34.38%	63.45%
Publishing industries (includes software)	84.22%	14.36%	84.75%
Broadcasting and telecommunications	81.49%	26.07%	71.94%
Information and data processing services	84.23%	24.24%	74.30%
Federal Reserve banks, credit intermediation, related act.	85.01%	1.98%	87.89%
Securities, commodity contracts, and investments	87.89%	-2.28%	107.02%
Insurance carriers and related activities	84.36%	6.88%	120.64%
Funds, trusts, and other financial vehicles	57.88%	-16.43%	114.13%
Real estate (estimated by NAHB)	85.90%	100.00%	0.00%
Rental & leasing services and lessors of intangible assets	86.04%	32.70%	64.08%
Legal services	84.92%	76.96%	21.03%
Computer systems design and related services	87.90%	42.09%	53.54%
Misc. professional, scientific, and technical services	86.62%	57.56%	40.53%
Administrative and support services	84.67%	57.36%	40.59%
Waste management and remediation services	79.35%	13.44%	84.75%
Educational services	81.12%	39.22%	54.48%
Ambulatory health care services	82.70%	53.75%	42.32%
Hospitals	82.54%	42.00%	45.89%
Nursing and residential care facilities	80.79%	42.00%	45.89%
Social assistance	82.09%	48.30%	47.41%
Performing arts, spectator sports, museums, related act.	86.80%	70.36%	28.48%
Amusements, gambling, and recreation industries	84.18%	8.46%	90.01%
Food services and drinking places	85.50%	38.55%	58.57%
Other services, except government	85.92%	82.52%	15.81%
State and local government enterprises	68.40%	NA	NA
State and local general government	68.17%	NA	NA

Due to data limitations, ratios from relatively broad categories are sometimes applied to more narrowly defined local industries. For example, ratios for the broad categories "farms" is applied to a much more narrowly defined local industry "Greenhouse, nursery, and floriculture production."

Treatment of real estate is less straightforward than it might be, because the input-output accounts provide one set of estimates for real estate with no detail within that relatively broad industry. When analyzing a local housing economy, it is desirable to account for residential real estate brokers and property managers, each which has well-known distinctive characteristics. NAHB uses data from the U.S. Census Bureau's 2007 Economic Census to estimate a separate set of coefficients for residential real estate brokers. Coefficients derived this way allocate a relatively small 8 percent of value added to wages and salaries, because most realtor offices are organized as a group of businesses where each broker legally counts as proprietor rather than an employee. The modified coefficients are applied to broker fees that arise in the transaction of single-family homes built for sale (as opposed to custom homes built by a general contractor on home owners' land) and individual multifamily condominiums to the ultimate owner-occupants. Any broker fees that that may be charged in the sale of multifamily rental buildings are assumed to be paid to non-local entities and excluded from the model.

Similarly, owners of rental buildings are considered non-local and excluded. However, for obvious reasons, managing the properties needs to be done locally. To handle this, except for the broker fees mentioned above, the NAHB model treats payments made to the real estate sector (primarily rental payments made by tenants in new multifamily buildings) as revenue for non-local property lessors (the federal government's term for what is elsewhere typically called a rental property owner) who then employ local businesses to manage the property. In practice this means subtracting about 57 percent of the rental payment and treating the remaining 43 percent as a local payment for management services. Again, this ratio was computed using detailed industry data from the 2007 Economic Census.

A key feature of the NAHB local impact model is the way it translates the wages and salaries from BEA accounts into local jobs, measured in full-time equivalents (FTEs); i.e., enough work to keep a person employed full-time for a year, based on the hours typically worked by full-time employees in a given industry. Indeed, when users of NAHB's local impact studies cite a single number from one of the studies, it is usually this one.

In general, the translation is accomplished using data on wages per job in each local industry from the Quarterly Census of Employment and Wages (QCEW) produced by the U.S. Bureau of Labor Statistics (BLS). The QCEW provides data for each county in the country, although it may be suppressed in particular cases for some industries due to a small sample size. To reduce the chances of missing data and produce an estimate that can more easily be adjusted for inflation, annual rather than quarterly QCEW data are used. If annual data for a particular industry in a particular local area are missing, they are imputed based on national wages per job in that industry, adjusted by the ratio of local to national wages per job across all industries. If QCEW data are not yet available for the year of construction being analyzed (as is typically the case), wages per job in each industry is inflated using HUD's estimates of median family income, which are available for the current year and for each state and local area in the country. Job counts in the QCEW are based on payroll employment and therefore include part-time as well as full-time workers. The QCEW job counts are converted to FTEs using the ratio of FTEs to jobs in each industry from BEA's national industry accounts.

The estimates of local income in the NAHB model exclude most corporate profits, based on the rationale that ownership of most corporations is national or international in scope. Even if a household living in a particular metropolitan area buys a product manufactured by a corporation located in in that metropolitan area, profits derived from the sale are likely to be distributed to shareholders living in other locations.

The model makes an exception for subchapter S corporations, which tend to be smaller and more local in nature than C corporations. S corporations also tend to be relatively common in particular industries, such as residential construction. The Internal Revenue Service (IRS) provides information on business receipts by form of business and industry, and this is used to decompose corporate profits into profits for S-corporations and C-corporations. The IRS tables provide relatively limited industry detail, so again percentages for a broadly defined industry are sometimes applied to several 6-digit NAICS industries. The S-corporation profits by industry are then counted as part of local income.

In general, local government revenue is estimated industry by industry, as a function of both local income and TOPI. TOPI includes taxes imposed at the federal, state and local level. BEA national accounts show that, in the year of the most recent Census of Governments, 9.2 percent of TOPI is federal (almost all excise taxes and custom duties). The Census of Governments is then used to further decompose TOPI into 42.4 percent collected by state governments and 48.4 collected by local governments (the largest components of state and local TOPI being sales and property taxes). Thus, the NAHB model uses a base of 90.8 or 48.4 percent of TOPI in each local industry as a starting point, depending on whether a state or local economy is being analyzed.

A distinctive feature of the NAHB model is the way it further employs Census of Governments data to customize the government finances to a particular area. Census of Governments data are available for each of the roughly 89,000 units of government in the U.S., and the NAHB model reads in every line item for every government within the local area being analyzed. Aggregated across all local (or state and local) governments in the U.S., the ratio of TOPI to personal income is 2.776 (or 6.595) percent. This ratio is also calculated for the area being analyzed and used to adjust TOPI by industry up or down. Personal income is used as the base of the ratio, because this is a measure that is available for every local area in the country.

There are two substantial exceptions to this procedure, as discussed below in the sections on Phase I and Phase III. In the case of residential property taxes and sales taxes paid on construction materials, specific information is collected for the construction being analyzed and fed into the model instead.

Census of Governments data is also used to customize taxes and fees paid by the workers and local proprietors who receive income as a result of the home building activity, and, where applicable, corporate income taxes to a local area. Aggregated over all local (or state and local) governments in the U.S., taxes and fees paid by individuals sum to 4.198 (or 7.843) percent of personal income. Again, equivalent ratios are calculated for the area being analyzed and used to customize the government revenue estimates.

To the extent that S corporations pay taxes to state and local governments, these taxes are also counted on the assumption that stockholders of S corps reside in the same area as the company income.

The general procedure for customizing government revenue to a specific local area (or state) can be summarized as follows:

Personal taxes =

4.198% (or 7.843%) × Local Personal Income × Local Factor 1

Business taxes =

48.4% (or 90.8%) × TOPI in Local Industries × Local Factor 2 +
6.349% × Corporate Profits in Local Industries × Local Factor 3

where the three local factors are derived on a case by case basis from data in the most recent Census of Governments. In practice, Local Factor 3 will usually be zero, as few local governments impose a tax on corporate profits.

The distinguishing aspect of this procedure is that it preserves the industry structure of the input-output accounts while being consistent with revenue being collected by all governments in the area of analysis, as reported by the governments themselves to the U.S. Census Bureau.

Phase I: Construction

As shown diagrammatically in "Background and a Brief Description of the Model Used to Estimate the Economic Benefits", Phase I of the model feeds the dollar amount of construction and ancillary locally produced items into the income and tax matrices derived from the model total local requirements. Accounting for everything that goes into building a home and delivering it to its customer is more complicated than it may at first appear.

For one thing, the Census Bureau subtracts several items from construction value before providing the numbers to BEA for use in the input-output and related GDP accounts. On new homes built for sale, the Census Bureau subtracts 1.1 percent of the sales price for landscaping, 0.5 percent for appliances, 2.9 percent for realtor and brokers fees, and 2.7 percent for marketing and finance costs. There are equivalent subtractions for custom homes (i.e., homes where the builder functions as a general contractor for a home built on the customer's lot).

However, the landscaping and purchases of appliances and marketing/broker services associated with a newly built home clearly are attributable to the construction of the home. Phase I of the NAHB model therefore accounts for these items as separate purchases of the local construction, retail trade, and real estate industries. For retail trade, only the gross margin of appliance purchases are counted. Gross margins for different types of retailers are available from the Census Bureau's Annual Retail Trade Survey.

In addition, there are settlement or closing costs associated with transferring property from a builder to the ultimate owner. In a typical case, these costs are shared between buyers and sellers. Construction value as defined in the input-output accounts includes closing costs if they are paid by the seller, but not the buyer. When the local impact model was first developed, NAHB verified these details with economists at BEA.

In order to estimate both closing costs as a fraction of the home's price and the share of these costs the buyer pays, the NAHB model uses national average data compiled by the U.S.

Department of Housing and Urban Development.[2] The share of settlement costs paid for by the buyer for loan origination and discount fees, title and private mortgage insurance, and legal fees are counted as output of the local depository credit intermediation, insurance, and legal services industries, respectively.

Another category of closing costs sometimes paid by the buyer is mortgage or deed transfer taxes. Phase I of the NAHB model does not automatically include an amount for transfer taxes. In most (but not all) instances, these taxes are imposed by state, rather than local, governments. To the extent that transfer taxes apply in a specific case, that information needs to be supplied by the local entity requesting the analysis.

The local entity requesting the analysis is also asked to provide information on whether or not sales taxes are imposed on construction materials and supplies; and, if so, the relevant sales tax rate. The model then applies the relevant rate to 34.1 percent of construction value, assuming that materials account for that share of the final value of a housing unit. The figure of 34.1 was calculated from the ratio of materials to construction value for several categories of construction businesses in the Economic Census, including trade contractors. The calculation takes subcontracing into account, as a large fraction of the final construction value of a housing unit is subcontracted to businesses that may also purchase materials.

Phase II: The Construction Ripple

Phase I of the model translates home building activity into income for local workers and business proprietors, and revenue for local governments. This output serves as the input for Phase II, as part of the local income generated will be spent, generating more income, generating more spending, and so on. These spending ripples damp and eventually converge to a limit, which is the ultimate ripple or multiplier effect.

To convert local income to local spending, the model requires information about local household spending tendencies. Detailed spending information at the household level is available from the Consumer Expenditure (CE) Survey, produced by the U.S. Bureau of Labor Statistics (BLS) primarily for the purpose of determining the weights for the Consumer Price Index.[3]

The CE consists of two different types of surveys: 1) an interview survey that collects data on monthly expenditures as well as information on income and household characteristics, and 2) a diary survey that collects data on weekly expenditures of frequently purchased items. These are two separate surveys, each designed individually with weights that aggregate to an estimate of total spending in the U.S. When it estimates aggregate measures of consumer spending, BLS combines results from the two different types of surveys in a manner it does not disclose.

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[2] Report to Congress on the Need for Further Legislation in the Area of Real Estate Settlements, 1981, Exhibits II-1 and II-6.

[3] Technically, in the Consumer Expenditure Survey, the unit of measurement is actually not a household, but a *Consumer Unit*, a group of individuals who live in the same house and make joint purchasing decisions. There may be more than one Consumer Unit in a household.

The NAHB local impact model uses only data from the interview survey, primarily to avoid the need for arbitrary decisions about which spending items to take from which survey. Based on its CE interview survey, BLS produces a public use microdata set consisting of quarterly files with household characteristics (including income), another set of quarterly files with income and other characteristics for each member of the household, and a set of fifty-one annual "EXPN" files with detailed information about various categories of expenditures.

These detailed files allow NAHB to maintain a conservative approach and exclude spending on items that may often be purchased from a vendor outside the local area. For example, BLS collects information on spending while on trips and vacations away from home in a separate "ETRV" and "ETRE" file. The NAHB local impact model does not include any spending information at all from these files. NAHB processes the information from the EXPN files along with information on household characteristics and income to estimate spending tendencies on 52 locally produced commodities, as shown in the following table:

Local Spending Extracted from the CE EXPN Files

	Local commodity	IO Code	CE File	Description of items included in local spending
01	Greenhouse, nursery, and floriculture production	111400	ECRB	Costs of all items and services for planting shrubs or trees, or otherwise landscaping the ground of the housing unit in which the consumer unit lives.
02	Electric power generation, transmission, and distribution	221100	EUTC	Electricity bills for the housing unit in which the consumer unit lives, including if combined with natural gas and/or water, sewerage. This is also the default category for generally combined expenses with particular utility not specified.
03	Natural gas distribution	221200	EUTC	Gas bills for the housing unit in which the consumer unit lives.
04	Water, sewage and other systems	221300	EUTC	Water and/or sewage bills, including water combined with trash collection, for the housing unit in which the consumer unit lives.
05	Residential maintenance and repairs	230302	ECRB	Costs of all items and services associated with building or repairing an addition to the house or a new structure including porch, garage or new wing; finishing a basement or an attic or enclosing a porch; remodeling one or more rooms; building outdoor patios, walks, fences, or other enclosures, driveways, or permanent swimming pools, inside painting or papering; outside painting; plastering or paneling; plumbing or water heating installations and repairs; electrical work; heating or air-conditioning jobs; flooring repair or replacement; insulation; roofing, gutters, or downspouts; siding; installation, repair, or replacement of window panes, screens, storm doors, awnings, etc.; and masonry, brick or stucco work; or other improvements or repairs for the housing unit in which the consumer unit lives.
For the four categories of retail trade, only gross margins rather than total spending is put into the model. Gross margins are applied industry by industry. A single factor is used to reduce the amount to account for loss of business to local retailers to E-commerce and mail order business. The source is the most recent data in the Census Bureau's 2012 Annual Retail Trade Report, released in 2014,				
06	Motor vehicle and parts dealers	441000	EOVB	Purchases of automobiles, including down payment and payment of principle on loans × 17.6% (gross margin for automobile dealers).
07	Food and beverage stores	445000	ETRF	Cost of food or beverages at grocery, convenient or liquor stores during local overnight stays x 27.9% (gross margin for food and beverage stores).

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
07	Food and beverage stores (cont.)	445000	EXPA	Expenditure for food, non-alcoholic beverages and nonfood items at grocery stores, food and non-alcoholic beverages from places other than grocery stores, and all alcohol to be served at the home × 27.9% (gross margin for food and beverage stores).
08	General merchandise stores	452000	EAPA	50 percent of major appliance purchases (assuming other 50 percent purchased from other retail) x 26.3% (gross margin for general merchandise stores), adjusted for losses to E-commerce and mail order business.
			EAPB	50 percent of purchases of other households appliances and other selected items (assuming other 50 percent purchased from other retail) x 26.3% (gross margin for general merchandise stores), adjusted for losses to E-commerce and mail order business.
			EFRA	50% of purchases of home furnishings (assuming other 50 percent purchased from other retail) x 32.1% (gross margin for department stores), adjusted for losses to E-commerce and mail order business
			ECLA	50% of purchases of clothing and accessories (assuming other 50 percent purchased from other retail) x 32.1% (gross margin for department stores), adjusted for losses to E-commerce and mail order business.
			EENT	50% of purchases of CDs or audio tapes, photographic film, video cassettes or tapes or discs, and books, but not through a mail order club or subscription x 32.1% (gross margin for department stores), adjusted for losses to E-commerce and mail order business.
09	Other retail	4A0000	EUTC	Bills for fuel oil, bottle or tank gas, or fuels not specifically identified, for the home in which the consumer unit lives x 37.8% (gross margin for nonstore retailers).
			ECRA	Purchase of building materials and supplies, either for or not for a specific project x 34.7% (gross margin for building materials and supplies dealers).
			EAPA	50 percent of major appliance purchases (assuming other 50 percent purchased from general merchandise stores) × 28.2% (gross margin for electronics and appliance stores), adjusted for losses to E-commerce and mail order business.
			EAPB	50 percent of purchases of other households appliances and other selected items (assuming other 50 percent purchased from general merchandise stores) × 28.2% (gross margin for electronics and appliance stores), adjusted for losses to E-commerce and mail order business.
			EFRA	50% of purchases of home furnishings (assuming other 50 percent purchased from general merchandise stores) × 46.6% (gross margin for furniture and home furnishing stores), adjusted for losses to E-commerce and mail order business.
			ECLA	50% of purchases of clothing and accessories (assuming other 50 percent purchased from general merchandise stores) × 45.8% (gross margin for clothing and clothing accessories stores), adjusted for losses to E-commerce and mail order business.
			EVOT	Purchases of gasoline and other fuels and fluids used in vehicles × 10.8% (gross margin for gasoline stations)
			EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to purchase prescription drugs and durable medical equipment × 30.0% (gross margin for health and personal care stores), adjusted for losses to E-commerce and mail order business.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for prescription drugs, other nondurable medical products, and durable medical equipment × 30.0% (gross margin for health and personal care stores), adjusted for losses to E-commerce and mail order business.

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
09	Other retail (cont)	4A0000	EMDB	Direct purchases of glasses, hearing aids, prescription medication, convalescent equipment, or other medical equipment × 30.0% (gross margin for health and personal care stores), adjusted for losses to E-commerce and mail order business.
			EEDA	Purchases of books or other equipment for elementary or high school for members of the consumer unit × 41.6% (gross margin for sporting goods, hobby, book and music stores), adjusted for losses to E-commerce and mail order business.
			EENT	50% of purchases of CDs or audio tapes, photographic film, video cassettes or tapes or discs, and books, but not through a mail order club or subscription (assuming other 50 percent purchased from general merchandise stores) × 41.6% (gross margin for sporting goods, hobby, book and music stores), adjusted for losses to E-commerce and mail order business.
			EMIS	Expenses for flowers, potted plants, pet supplies and medicines, toys, and games, and hobbies, including if combined with computer software for games × 45.4% (gross margin for miscellaneous store retailer), and adjusted for losses to E-commerce and mail order business.
			EXPB	Expenditures for cigarettes and other tobacco products × 29.4% (gross margin for all retailers excluding motor vehicle and parts dealers), adjusted for losses to E-commerce and mail order business.
10	Transit and ground passenger transportation	485000	EXPB	Costs for taxis, limousine service, and public transportation, except while on a trip.
11	Newspaper publishers	511110	EENT	Expenses for newspapers and other periodicals not through a subscription.
12	Wired telecom-munications carriers	517110	EUTA	Bills from telecommunications companies for residential service, internet access, non-telephone rental and purchases, and 71.2% of bills for cable or satellite television service (financial data compiled ions Multimedia Research Group, Inc indicates that satellite had a 28.8% share of the combined cable/satellite market).
			EUTP	Pre-paid phone card or public pay phone services.
			EUTI	Bills from internet service providers for internet connection and service (excluding those away from home), miscellaneous combined expenses, and 71.2% of bills for cable or satellite television service.
13	Wireless tele-communications carriers (except satellite)	517210	EUTA	Bills for mobile/cellular telephone service.
			EUTP	Pre-paid cellular minutes.
14	Satellite, telecommunications resellers, and all other tele-communications	517A00	EUTA	28.8% of the bills from telecommunications for cable or satellite television service, plus bills for Voice over IP service.
			EUTI	Bills from internet service providers for satellite radio, plus 28.8% of the bills for cable or satellite television service.
15	Data processing, hosting, and related services	518200	EUTA	Bills paid to providers of applications, games or ringtones.
16	Monetary authorities and depository credit intermediation	52A000	EHEL	Interest paid on lump sum home equity loans, based only on the home in which the consumer unit lives.

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
16	Monetary authorities and depository credit intermediation (cont)	52A000	EOPH	Interest paid on home equity lines of credit, based only on the home in which the consumer unit lives.
			EXPB	Charges for safe deposit boxes, checking accounts, and other banking services.
17	Nondepository credit intermediation and related activities	522A00	EOVB	Interest payment on automobile loans.
18	Insurance agencies, brokerages, and other insurance related activities	524200	EINB	Percent of premiums for all types of insurance other than health (percentage based on agent/brokers' share of industry).
			EIHB	Percent of premiums for health insurance (percentage based on agent/brokers' share of industry).
19	Real estate	531000	RNT	Total rental payments for the housing unit in which the consumer unit lives.
			OPI	Ground or land rent, regular HOA fees, special payments for property management services—for the property in which the consumer unit lives.
20	Automotive equipment rental and leasing	532100	ERTV	Expenses for renting vehicles, except if rented while on a vacation.
			ELSD	Expenses for leasing vehicles.
21	Consumer goods and general rental centers	532A00	EAPA	Expenses for renting major appliances.
			EAPB	Expenses for renting other household appliances and selected items.
			EFRB	Expenses for renting furniture.
			ECLD	Expenses for renting clothing.
			EMDB	Expenses for renting convalescent or other medical equipment.
			EENT	Amount paid for rental of Blu-ray Discs, DVDs, or VHS tapes.
22	Legal services	541100	EMIS	Expenses for services of lawyers or other legal professionals.
23	Accounting, tax preparation, bookkeeping, and payroll services	541200	EMIS	Accounting fees.
24	Photographic services	541920	EENT	Amount paid for film processing or printing digital photographs.
			EMIS	Amount paid for professional photography fees.
25	Veterinary services	541940	EMIS	Veterinarian expenses, including if combined with other pet services.
26	Investigation and security services	561600	EMIS	Home security service fees.
27	Services to buildings and dwellings	561700	EAPA	Charges for installing major appliances.

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
27	Services to buildings and dwellings (cont.)	561700	EEQB	Costs for pest control or repairing and servicing heating and air conditioning equipment.
			EMIS	Gardening or lawn care, housekeeping, or other home services and small repair jobs around the house.
28	Waste manage-ment and remed-iation services	562000	EUTC	Trash/garbage collection bills, including if combined with sewerage, and septic tank cleaning services, for the housing unit in which the consumer unit lives.
29	Elementary and secondary schools	611100	EEDA	Tuition and other expenses for elementary or high school for members of the consumer unit.
30	Offices of physicians	621A00	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for physician and clinical services.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for physician and clinical services.
			EMDB	Direct payments for eye care or physician services.
31	Offices of dentists	621200	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for dental services.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for dental services.
			EMDB	Direct payments for dental care
32	Offices of other health practitioners	621B00	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for other professional services.
			IHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for other professional services.
			EMDB	Direct payments for services by medical professionals other than physicians, lab tests, and other medical care.
33	Home health care services	621600	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for home health care.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for home health care.
34	Hospitals	622000	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for hospital care.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for hospital care.
			EMDB	Direct payments for hospital rooms or services.
35	Nursing and residential care facilities	623000	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for nursing home care.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures used to pay for nursing home care.
			EMDB	Direct payments for care in convalescent of nursing home.
36	Child day care services	624400	EEDA	Expenses for nursery school or child day care centers for members of the consumer unit.

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
36	Child day care services	624400	EMIS	Expenses for babysitting, nanny services, or child care in the consumer unit's or someone else's home.
37	Performing arts companies	711100	ESUB	Theater or concert season tickets.
			EENT	Single admissions to movies, theaters, and concerts.
38	Spectator sports	711200	ESUB	Season tickets to sporting events.
			EENT	Single admissions to spectator sporting events.
39	Gambling industries (except casino hotels)	713200	EMIS	Expenses for lotteries and games of chance.
40	Other amusement and recreation industries	713900	EEDA	Recreational lessons and instruction for members of the consumer unit.
			ESUB	Expenses for membership in golf courses. Country clubs, health clubs, fitness centers, or other sports and recreational organizations.
			EENT	Fees for participating in sports.
			ETRF	Amount paid for entertainment or admissions during local overnight stays
41	Full-service restaurants	722110	ETRF	50% of cost of meals, snacks, or beverages at restaurants, bars or fast food places during local overnight stays.
			EXPA	50% of expenditures for food and beverages at restaurants, cafeterias, cafes, drive-ins, etc. or t school for or pre-school for school-age children.
42	Limited-service restaurants	722211	ETRF	50% of cost of meals, snacks, or beverages at restaurants, bars or fast food places during local overnight stays.
			EXPA	50% of expenditures for food and beverages at restaurants, cafeterias, cafes, drive-ins, etc. or t school for or pre-school for school-age children.
43	All other food and drinking places	722A00	EMIS	Food and beverage for catered affairs.
44	Automotive repair and maintenance, except car washes	8111A0	EVEQ	Expenses for vehicle maintenance and repair.
			EVOT	Expenses for towing and automobile repair service policies.
45	Electronic and precision equipment repair and maintenance4	811200	EEQB	Cost for repairs and services to AV equipment (except if installed in a vehicle) and to computers and related equipment.
46	Personal and household goods repair and maintenance	811400	EEQB	Costs for repairing or servicing miscellaneous items such as appliances, tools, photographic, sports, and lawn and garden equipment.
			EFRB	Costs for repairing furniture.
			ECLD	Costs for repairing or altering clothing and accessories, or repairing watches or jewelry.
47	Personal care services	812100	EIHB	Share of health insurance premiums, after broker/agent share is subtracted, used to pay for other health, residential and personal care services.
			EIHC	Number of persons covered by Medicare if in a senior household x Medicare expenditure per enrollee x the share of Medicare expenditures for other health, residential and personal care services.

	Local commodity	NAICS Code	EXPN File	Description of items included in local spending
48	Death care services	812200	EMIS	Expenses for funerals, burials, cremation, and purchase and upkeep of cemetery lots or vaults.
49	Dry cleaning and laundry services	812300	EXPB	Expenses for clothing and other items at sent to drycleaners and laundry, as well as coin operated dry cleaning and laundry machines.
50	Other personal services	812900	ECLD	Costs of clothing storage services.
			EVOT	Fess for vehicle parking, boat docking and plane landing.
			EMIS	Pet services.
			EXPB	Expenses for haircuts, hair styling, manicures, massages, and other salon services.
51	Religious organizations	813100	ECNT	Contributions to religious organizations.
52	Civic, social, professional and similar organizations	813B00	ESUB	Expenses for membership in civic, service, or fraternal organizations.

There is somewhat more detail in a few input-output industries than is available in a spending line from the CE files. For example, the CE files do not distinguish spending in limited service eating places from spending in full service restaurants. According to the 2007 Economic Census, total sales in each category was $182 to $192 billion—close to a 50-50 split. Therefore, half of spending in eating places is allocated to full service restaurants; the other half to the limited service places. Similarly, the CE files don't distinguish items purchased in general merchandise stores from those purchased in more specialized retail outlets. For goods that likely could be purchased in either, again a 50-50 split is used, as shown for local commodities 08 and 09 in the table above.

For all items included under any retail sales category, only the gross margins are included, and in most cases a further adjustment is made to account for loss of local sales to E-commerce and mail order business. These adjustments are based on information in the Census Bureau's Annual Retail Trade Report for 2012. The report includes a table on gross margins by 6-digit NAICS code that can be used directly. The report also contains separate tables on total sales and mail order & E-commerce. An adjustment factor is calculated based on total E-commerce & mail order sales as a fraction of total retail sales, excluding food and beverage service and motor vehicle and parts dealers. For 2012, the adjustment factor is 1-322,543/4,344,140. In the above table, "adjusted for E-commerce and mail order loss" means that particular category of retail spending is multiplied by this factor.

Insurance payments are separated into a share going to brokers and agents and the insurance companies, based on the proportional share of revenue reported in the latest Economic Census. The share going to brokers and agents is counted as local income. However, it is also assumed that the share going to insurance companies comes back in some cases as these companies pay medical costs for policy holders that go to health care providers in the local area. This is estimated using "Personal Health Care Expenditures by object & Source of Payment" reported by the Census Bureau in the Table 138 of the 2012 Statistical Abstract of the United States. A similar calculation is made for expenses covered by Medicare. The CE data include the number of household members covered by Medicare. Payments made by Medicare to local health care providers are estimated using statistics on Medicare Enrollees from Table 146 of the 2012 Statistical Abstract, combined with the health care expenditure information from Table 138.

The consumer spending variables used in the model are all in the form of average propensities to consume—that is, average fractions of before-tax income spent on various items. As shown in the table above, The EXPN files generate consumer spending estimates for 52 locally produced commodities. In addition, seven categories of local commodities produced by local government enterprises are appended to the list:

1 Local government electric service
2 Local government natural gas distribution
3 Local government water & sewerage
4 Local government passenger transit
5 Local government liquor stores
6 Local government sanitary services
7 Local government hospitals

Although these seven extra commodities do not increase local spending in total, they allow the model to allocate consumption between the publicly produced and privately produced commodities based on information from the Census of Governments. In this sense, the model is consistent with both national household consumption patterns and revenue collected by all government enterprises in a particular local area.

To this is added one other local commodity, general government, to account for tax and fee payments (computed in Phase II primarily from BEA personal income estimates and Census of Governments revenue data).

The results can be collected in the 2×60 matrix, $\boldsymbol{A}$**:**

$$\boldsymbol{A} = \begin{bmatrix} a_1 & a_2 & a_3 & \cdots & a_{59} & 0 \\ 0 & 0 & 0 & \ldots & 0 & 1 \end{bmatrix}$$

The elements in the first row of $\boldsymbol{A}$ show the average fraction of income spent on each of the 59 local commodities (including those produced by local government enterprises such as publicly owned utilities or hospitals). The "0"s and "1" in the second row indicates that no taxes are spent directly by the household on any of the first 59 commodities; 100 percent is spent on the local general government commodity. This two-row structure is designed to align with the output from Phase I of the model, which comes in the form of before-tax local income and local tax estimates.

Several other matrices and vectors derived from the above concepts are needed to calculate the Phase II ripple or multiplier effect:

> $\boldsymbol{W}$: a 60×99 matrix that translates local commodities into local income,
>
> $\boldsymbol{G}$: a 60×99 matrix that translates local commodities into local government general revenue collected from persons, and

$\boldsymbol{T}$: a 60×99 matrix that translates local commodities into local government general revenue collected from businesses

$$\boldsymbol{L} = \begin{bmatrix} \boldsymbol{W} & \boldsymbol{G} & \boldsymbol{T} \end{bmatrix}$$ therefore defines a 60×297 matrix

$\boldsymbol{x}$ = a two element column vector containing local income and local taxes generated in Phase I

$$\boldsymbol{Y} = \begin{bmatrix} \boldsymbol{i} & \boldsymbol{0} & \boldsymbol{0} \\ \boldsymbol{0} & \boldsymbol{i} & \boldsymbol{0} \\ \boldsymbol{0} & \boldsymbol{0} & \boldsymbol{i} \end{bmatrix}$$ a 297×3 matrix where $\boldsymbol{i}$ is a 99-element unit column vector,

$$\boldsymbol{Z} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \\ 0 & 1 \end{bmatrix}$$

In summary, $\boldsymbol{x}$ is the income and tax output from Phase 1, $\boldsymbol{A}$ translates income and taxes into spending on particular commodities, $\boldsymbol{L}$ translates the detailed commodity spending into income and taxes in each of 99 local industries, and $\boldsymbol{Y}$ and $\boldsymbol{Z}$ are technical devices for summing results. $\boldsymbol{Y}$ collapses the components of a 297-element vector into a 3-element vector of income, personal taxes, and business taxes. $\boldsymbol{Z}$ converts a 3-element vector of this form into a 2-element income and tax vector.

The row vector defined as $\boldsymbol{x}'\boldsymbol{A}$ shows how much, in dollar terms, people who earn income during Phase I spend on each of the 60 local commodities (including local government employees, whose paychecks are supported by taxes and charges for particular government-run enterprises).

The calculation $\boldsymbol{x}'\boldsymbol{ALYZ}$ produces a 2-element local income and local tax vector of the same form as $\boldsymbol{x}'$. Postmultiplying a vector of this type by $\boldsymbol{ALYZ}$ will always produce a similar, 2-element income and tax vector. Either by construction, or by checking that both eigenvalues are smaller than 1, it is possible to show that $\boldsymbol{ALYZ}$ is a contracting matrix. This implies that the rounds below show successively smaller increments of income and taxes added to the local economy:

$$\begin{aligned} &Round\ 0: \ \boldsymbol{x}' \\ &Round\ \ 1: \ \boldsymbol{x}'\ \boldsymbol{ALYZ} \\ &Round\ \ 2: \ \boldsymbol{x}'\ \boldsymbol{ALYZ}\ \boldsymbol{ALYZ} \\ &Round\ \ 3: \ \boldsymbol{x}'\ \boldsymbol{ALYZ}\ \boldsymbol{ALYZ}\ \boldsymbol{ALYZ} \\ &\qquad\qquad\vdots \\ &Round\ \ K: \ \boldsymbol{x}' \prod_{k=1}^{K} \boldsymbol{ALYZ} \end{aligned}$$

The terms of this sequence can be summed in the usual manner to create an infinite series. Because $\boldsymbol{ALYZ}$ is a contracting matrix, the result is a convergent series, the limit of which is

$$\mathbf{x}' \, [\boldsymbol{I}\text{-}\boldsymbol{ALYZ}]^{-1}$$

This is the final multiplied effect on local income and local taxes at the end of Phase II. The factor $[\boldsymbol{I}\text{-}\boldsymbol{ALYZ}]^{-1}$ is a matrix version of the conventional Keynesian spending multiplier. Because $\mathbf{x}'$ is reported in Phase I, it is subtracted from the effect reported in Phase II.

For some purposes, especially estimating employment impacts, we are interested in tracking income in Phase II by industry. Calculations to accomplish this are based on the following sequence of 1×297 vectors:

$$
\begin{aligned}
&\textit{Round } 1: \ \mathbf{x}'\boldsymbol{AL} \\
&\textit{Round } 2: \ \mathbf{x}'\boldsymbol{AL}\,\boldsymbol{YZAL} \\
&\quad . \\
&\quad . \\
&\quad . \\
&\textit{Round } K: \ \mathbf{x}'\boldsymbol{AL} \prod_{k=1}^{K-1} \boldsymbol{YZAL}
\end{aligned}
$$

Note that sequence begins with the spending vector $\mathbf{x}'\boldsymbol{AL}$—that is, it excludes the income and taxes that have already been captured in Phase I. The limit of the series defined based on this sequence is

$$\mathbf{x}'\boldsymbol{AL}\,[\boldsymbol{I}\text{-}\boldsymbol{YZAL}]^{-1}$$

This is a 297-element row vector, the first 89 elements containing the final, multiplied effect on local income by industry generated during Phase II. As explained above, income by industry can be separated into business owners' income and wages and salaries, and the wages and salaries converted to full-time job equivalents.

From the standpoint of local governments, it may be desirable to track individual sources of revenue, such as particular fees and taxes. To facilitate this, it is useful to have a three element local income and local tax vector, where the tax revenue is decomposed into taxes collected from persons and taxes collected from businesses.

Consider the following sequence of such 3-element vectors:

$$
\begin{aligned}
&\textit{Round } 1: \ \mathbf{x}'\boldsymbol{ALY} \\
&\textit{Round } 2: \ \mathbf{x}'\boldsymbol{ALY}\,\boldsymbol{ZALY} \\
&\quad . \\
&\quad . \\
&\quad . \\
&\textit{Round } K: \ \mathbf{x}'\boldsymbol{ALY} \prod_{k=1}^{K} \boldsymbol{ZALY}
\end{aligned}
$$

This sequence begins after *Round 0*, implicitly excluding income earned and taxes paid during Phase I. The limit of the infinite series defined by this sequence is

$$x' ALY\, [I\text{-}ZALY\,]^{-1}$$

This is the final, multiplied effect on local income, local government revenue collected from persons, and local government revenue collected from businesses in Phase II of the model. The tax structure for a particular local area, derived primarily from Census of Governments data as described above, can be applied to this result in order to decompose local government revenue into particular types of taxes and fees.

Phase III: Ongoing Impacts

Another distinctive feature of the NAHB model is the way it uses CE and other data to model the average behavior of occupants that differs based on the type of housing being built. At present, there are six basic variants of the NAHB model designed to handle the following types of construction:

1. Generic Single-Family
2. Generic Multifamily
3. Active Adult
4. Family Low-Income Housing Tax Credit (LIHTC)
5. Elderly LIHTC
6. Remodeling

The remodeling version of the model does not in general incorporate ongoing impacts, so it requires no occupant income estimates. For the other five versions of the model, separate occupant income estimates are derived in a way that vary with location as well as with the type of units being built. The derivations are based on relationships between average income and standard variables that are typically available at the local level. The methods for establishing these relationships are summarized below.

Generic Single-Family. Regression of average income of home owners on area median family income and average value of the units using American Community Survey (ACS) microdata.

Generic Multifamily. Regression of average income of home owners on area median family income and average rent using ACS microdata.

Active Adult. Average income of movers into age-restricted owner occupied units and average income of all home buyers are computed from American Housing Survey (AHS) microdata, and the ratio of the two averages is used to adjust home buyers' income for the active adult case.

Family LIHTC. Average incomes of all movers into rental units who have less than 60 percent of median family income for the U.S. as a whole, computed from CE data.

Elderly LIHTC. Average incomes of all elderly movers into rental units who have less than 60 percent of median family income for the U.S. as a whole, computed from CE data.

The ACS is the Census Bureau's replacement for the long form questionnaire that until 2000 was used to collect information on income and structure type in the decennial Census. The AHS, funded by the U.S. Department of Housing and Urban Development (HUD) and conducted by the Census Bureau, is the federal government's primary vehicle for collecting detailed information about housing units and their occupants at the national level.

The ratios and regression results listed above allow the model to be simultaneously customized to a particular area and a particular type of construction by inputting specific local information that is generally available. When customizing to a local area, median family income for that particular area is used. HUD produces median income estimates for all parts of the country in a timely fashion as part of the process it uses to establish income limits for various housing programs.

When it is necessary to translate rents into value or vice versa, the median cap rate from the Rental Housing Finance Survey (RHFS), also funded by HUD and conducted by the Census Bureau, is used.

In addition to average income, estimated spending tendencies for movers into each type of construction are needed. Separate spending vectors are estimated for each using household information available in the CE data. The table on the following page shows average local propensities to consume computed from the 2012 CE.

This modeling of average spending by different types of households soon after they move in is another distinguishing feature of the NAHB local impact model. In addition to the function they serve in the local model, average spending tendencies computed from CE data have also proven to be of interest for their implications at the national level.[4]

Compared to home buyers, renters tend to spend more of their incomes locally—partly due to the tendency of lower-income households to spend a greater fraction of their incomes on necessities, but also due to rental payments that go to a local owner, or owner employing a management company with a local presence. The equivalent housing expense for a home buyer would be a mortgage payment. Because mortgage payments typically are made to non-local owners of the mortgage through non-local servicers, they are excluded from the spending estimates in the NAHB local impact model.

Average propensities to spend on virtually all categories of local health care services are higher for households moving into construction designed for older residents (age-restricted active adult and elderly LIHTC).

As was described in Phase II, seven categories of commodities produced by local government enterprises are added to the model, and a share of local spending (which may be zero) is allocated to these enterprises instead of private producers based on revenues reported in the Census of Governments for each local government enterprises in the area.

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[4] See, for example, the December 2008 Special Study "Spending Patterns of Home Buyers," written by Natalia Siniavskaia and published by NAHB in Housing Economics.com.

Average Local Spending Computed from CE Data

	Output of industry purchased locally	All House-holds	New Home Buyers	New Multifamily Renters	Active Adult Buyers	New Family LIHTC	New Elderly LIHTC
1	Greenhouse, nursery, and floriculture production	0.129%	0.172%	0.000%	0.176%	0.000%	0.000%
2	Electric power generation, transmission, and distr.	2.689%	2.410%	0.002%	3.428%	0.000%	0.000%
3	Natural gas distribution	0.674%	0.499%	0.000%	0.723%	0.000%	0.000%
4	Water, sewage and other systems	0.793%	0.802%	0.000%	1.108%	0.000%	0.000%
5	Residential maintenance and repair	3.059%	2.087%	0.000%	3.567%	0.170%	0.072%
6	Motor vehicle and parts dealers	1.218%	1.439%	5.098%	1.447%	1.408%	1.190%
7	Food and beverage stores	4.829%	3.303%	4.446%	3.567%	8.573%	8.793%
8	General merchandise stores	0.745%	0.840%	1.271%	0.723%	1.129%	0.437%
9	Other retail	3.119%	2.494%	3.088%	2.906%	3.896%	4.069%
10	Transit and ground passenger transportation	0.190%	0.030%	0.269%	0.028%	0.990%	0.990%
11	Newspaper publishers	0.027%	0.016%	0.042%	0.042%	0.057%	0.096%
12	Wired telecommunications carriers	2.392%	1.770%	1.878%	2.588%	2.868%	4.441%
13	Wireless telecom. carriers (except satellite)	2.081%	1.809%	3.565%	1.811%	3.323%	2.435%
14	Satellite, telecom. Resellers & all other telecom.	0.323%	0.249%	0.620%	0.335%	0.472%	0.494%
15	Data processing, hosting, and related services	0.003%	0.002%	0.000%	0.002%	0.006%	0.000%
16	Monetary authorities, depository credit intermediation	0.437%	0.298%	0.000%	0.366%	0.000%	0.000%
17	Nondepository credit intermediation+related activities	0.417%	0.616%	0.906%	0.463%	0.381%	0.327%
18	Insurance agencies, brokerages, and related activities	0.407%	0.387%	0.722%	0.462%	0.291%	0.288%
19	Real estate	8.301%	2.048%	27.078%	1.292%	33.130%	34.324%
20	Automotive equipment rental and leasing	0.795%	0.775%	0.000%	0.348%	0.426%	0.000%
21	Consumer goods and general rental centers	0.070%	0.055%	0.041%	0.046%	0.104%	0.030%
22	Legal services	0.335%	1.185%	0.006%	0.163%	0.852%	0.055%
23	Accounting, tax preparation, bookkeeping, and payroll	2.512%	1.939%	0.250%	1.691%	4.895%	0.904%
24	Photographic services	0.045%	0.039%	0.257%	0.017%	0.054%	0.015%
25	Veterinary services	0.236%	0.199%	0.006%	0.209%	0.149%	0.104%
26	Investigation and security services	0.024%	0.042%	0.055%	0.066%	0.009%	0.015%
27	Services to buildings and dwellings	0.385%	0.389%	0.093%	0.666%	0.181%	0.119%
28	Waste management and remediation services	0.219%	0.217%	0.000%	0.283%	0.000%	0.000%
29	Elementary and secondary schools	0.212%	0.314%	0.000%	0.134%	0.060%	0.022%
30	Offices of physicians	4.361%	2.732%	3.879%	5.881%	3.595%	10.321%
31	Offices of dentists	0.787%	0.693%	0.416%	1.036%	0.698%	1.082%
32	Offices of other health practitioners	0.670%	0.387%	0.280%	0.812%	0.453%	1.269%
33	Home health care services	0.884%	0.395%	0.625%	1.123%	0.755%	2.585%
34	Hospitals	3.761%	2.482%	5.133%	5.953%	2.682%	9.324%
35	Nursing and community care facilities	0.974%	0.386%	0.592%	1.140%	0.791%	2.808%
36	Child day care services	0.202%	0.345%	0.632%	0.013%	0.183%	0.000%
37	Performing arts companies	0.191%	0.235%	0.353%	0.403%	0.279%	0.062%
38	Spectator sports	0.070%	0.071%	0.109%	0.020%	0.156%	0.007%
39	Gambling industries (except casino hotels)	0.068%	0.036%	0.005%	0.083%	0.128%	0.351%
40	Other amusement and recreation industries	0.335%	0.490%	1.146%	0.416%	0.350%	0.058%
41	Full-service restaurants	2.415%	1.902%	3.289%	2.020%	4.756%	2.625%
42	Limited-service restaurants	2.415%	1.902%	3.289%	2.020%	4.756%	2.625%
43	All other food and drinking places	0.107%	0.699%	0.007%	2.638%	0.034%	0.008%
44	Automotive repair and maintenance	1.713%	1.289%	2.595%	1.961%	1.799%	1.746%
45	Electronic and precision equip. repair & maintenance	0.022%	0.019%	0.000%	0.031%	0.012%	0.005%
46	Personal and household goods repair & maintenance	0.105%	0.078%	0.027%	0.131%	0.084%	0.154%
47	Personal care services	0.144%	0.070%	0.107%	0.183%	0.121%	0.403%
48	Death care services	0.278%	0.067%	0.029%	0.163%	0.524%	0.259%
49	Dry-cleaning and laundry services	0.264%	0.103%	0.225%	0.116%	0.886%	0.752%
50	Other personal services	0.745%	0.707%	0.678%	0.859%	1.163%	0.988%
51	Religious organizations	0.746%	0.821%	0.746%	1.205%	0.337%	0.415%
52	Civic, social, professional, and similar organizations	0.011%	0.005%	0.000%	0.009%	0.000%	0.002%

Also as described in Phase II, Census of Governments data are used to estimate most categories of tax and fee revenue generated for general (non-enterprise) governments in the area. The exemption is residential property taxes. Perhaps surprisingly, residential and non-residential property taxes are not reported separately. Moreover, some states have restrictions on rate increases, or other laws that tend to make property tax rates different on new construction. Particular developments (for example, those financed by the LIHTC program) may also be granted special forms of property tax relief.

For these reasons, when customizing the local impact model to a specific area, information about property taxes on the units being built must be supplied by the entity requesting the analysis. Phase III of the model counts only property tax on the value of construction. Unless specific information is provided for an individual project or jurisdiction, this is calculated assuming that the raw land would be taxed at the same rate if not developed. Any residential property tax from existing units is treated as unrelated to the new homes being analyzed and excluded from the government revenue impact estimates.

Non-residential property taxes are treated much like other categories of government revenue, except that the aggregate for a jurisdiction to be estimated from a larger aggregate in the government data that does not distinguish residential from non-residential. This is accomplished by subtracting an estimated 53.37 percent from total property taxes to account for residential share of property taxes. The estimate is calculated as follows, from data available for 2012 in the ACS, RHFS and the Census Bureau's Summary of State and Local Government Tax Revenue (SSLGTR):

Aggregate real estate taxes paid by homeowners:	$206.04 billion (ACS)
Estimate for homeowners not reporting:	5.93 billion
Estimated real estate taxes paid on rental housing	41.85 billion (ACS and RHFS)
Total residential real estate taxes	$253.82 billion
Total property taxes	$475.83 billion (SSLGTR)
Residential share	53.37%

The estimate for homeowners not reporting in the ACS is based on the number of non-reporters multiplied by median tax payment for those who do report. The estimate for rental units is based on the number of rental units in the ACS multiplied by median tax per rental unit in the RHFS.

Multifamily Phase III impacts are reduced to account for vacant units. By default, the single-family version of the model assumes that units are intended for owner-occupancy and have negligible vacancies. In the Census Bureau's Housing Vacancy Survey homeowner vacancy rates are usually in the neighborhood of only one percent.

For multifamily units, the average multifamily rental annual vacancy rate over the prior decade and average annual multifamily homeowner vacancy rate over the prior decade are used, depending on whether the units are condominiums or rental apartments. In other respects, Phase III treats condo buyers the same as single-family home buyers (the income and spending tendencies discussed above being based on buyers of owner-occupied housing units, irrespective of structure type).

Although vacancy rates are known to fluctuate, the model estimates annual ongoing impacts that are expected to persist for an extended period, so a long-term "natural" measure of vacancy rates is more appropriate for Phase III than a very current, possibly anomalous, number. The reduction for vacancies is applied to all Phase III multifamily impacts except for property taxes, which are assumed to be paid by the owner of the property, whether the units are occupied or not.

Local spending and taxes (including fees and charges paid to local government entities) generate income for local residents, and this income will be spent and recycled in the local economy, much as in Phase II of the model.

Let $\boldsymbol{x}_n$ denote the initial income and tax column vector for new home occupants, $\boldsymbol{A}_n$ denote the matrix formed from the consumption spending patterns of new home occupants, and otherwise maintain the notation used in Phase II of the model. Then consider the following sequence:

$$\begin{aligned}
&Round\ 0:\ \boldsymbol{x}_n{}'\\
&Round\ 1:\ \boldsymbol{x}_n{}'\,\boldsymbol{A}_n\boldsymbol{LYZ}\\
&Round\ 2:\ \boldsymbol{x}_n{}'\,\boldsymbol{A}_n\boldsymbol{LYZ}\ \boldsymbol{ALYZ}\\
&Round\ 3:\ \boldsymbol{x}_n{}'\,\boldsymbol{A}_n\boldsymbol{LYZ}\ \boldsymbol{ALYZ}\ \boldsymbol{ALYZ}\\
&\qquad\vdots\\
&Round\ K:\ \boldsymbol{x}_n{}'\,\boldsymbol{A}_n\boldsymbol{LYZ}\ \prod_{k=1}^{K}\boldsymbol{ALYZ}
\end{aligned}$$

The sum of these terms forms an infinite series that converges to the limit

$$\boldsymbol{x}_n{}'\ [\boldsymbol{I}+(\boldsymbol{A}_n-\boldsymbol{A})\boldsymbol{LYZ}][\boldsymbol{I}-\boldsymbol{ALYZ}]^{-1}$$

When results are reported for Phase III the income earned by the occupants is subtracted from the final multiplied effect, so that only income generated for occupants of housing units already existing in the area is counted.

Note that, were new home occupants to spend the same fraction of their incomes on the various local commodities as average households, $\boldsymbol{A}_n = \boldsymbol{A}$ and the formula would simplify to

$$\boldsymbol{x}_n{}'\ [\boldsymbol{I}-\boldsymbol{ALYZ}]^{-1}$$

The formula that produces a 297-element vector, the first 99 of which contain the added income by industry, for Phase III is

$$\boldsymbol{x}_n{}'\ \boldsymbol{A}_n\boldsymbol{L}\,[\boldsymbol{I}-\boldsymbol{YZAL}]^{-1}$$

Again, the income in each industry can be disaggregated into business owners' income and wages and salaries, and the wages and salaries converted to full time jobs. These exclude any jobs filled by occupants of the new housing units.

The formula that produces a 3-element vector showing the final, multiplied effect on local income, local government general revenue from persons, and local general government revenue from business generated in Phase III is

$$x_n' A_n LY [I - ZALY]^{-1}$$

As in Phase II, the last two elements of the final 3-element vector can be disaggregated to show revenue generated by particular types of taxes, fees, and charges. The primary difference in Phase III is that the increase in residential property tax revenue (which is introduced into the model as a separate input independent of the Census of Government computations) needs to be subtracted before the decomposition procedure can be applied.

Final Notes

All of the matrix operations in the NAHB local impact model are performed using the O-Matrix package provided by Harmonic Software. The O-Matrix code used to generate Phase III impacts for single-family construction and the code used to compute a local total requirements matrix for a previous iteration of the NAHB model are published on the Harmonic Software web site as notable uses of the O-Matrix package (http://www.omatrix.com/userstories.html).

The technical documentation on the NAHB model used to estimate the local income, jobs, and taxes generated by home building was prepared by Paul Emrath, Vice President of Survey and Housing Policy Research. For questions on the technical documentation, or on NAHB's impact of home building models in general, he may be contacted in NAHB's Economics and Housing Policy Group by phone at 202-266-8449, or by email at pemrath@nahb.org.